# SUBMITTAL COVER SHEET

CCB# 198478
1485 20th Street SE
Salem, OR 97302
Phone: 503.584.1416
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**Project:** **Student Services Building**

| | | |
|---|---|---|
| **TO:** | Attn: Drew Cornedi<br>CBTWO Architects<br>500 Liberty St Se, Suite 100<br>Salem, OR 97301 | Sabina Frank<br>Andy Medcalf Construction Co.<br>1485 20th Street SE<br>Salem, Oregon 97302 |

## SUBMITTAL REVIEW

**THIS REVIEW IS ONLY FOR GENERAL CONFORMANCE WITH INFORMATION GIVEN AND THE DESIGN CONCEPT EXPRESSED IN THE CONTRACT DOCUMENTS. IN NO CASE IS A SUB-CONTRACTOR RELIEVED OF RESPONSIBILITY FOR ADHERENCE TO THE CONTRAT DOCUMENTS AND SATISFACDTORY CONSTRUCTION OF ALL WORK. THE INTENT OF THIS SUBMITTAL REVIEW IS TO COORDINATE ALL TRADES, THE GENERAL CONTRACTOR, AND THE ARCHITECT FOR PRODUCTS AND SERVICES ASSOCTIATED WITH THIS PROJECT**

| | | | |
|---|---|---|---|
| **SUBMITTAL #:** | 28 00 00 - 1 Electronic Safety and Security | **REVIEWED BY:** | **Sabina Frank** |
| **DATE SUBMITTED** | Friday, April 22, 2022 | **SCHEDULE IMPACT:** | YES |
| **COPIED TO:** | | | |

| | ***INFORMATION SUBMITTED:*** |
|---|---|
| | **DOCUMENTS** |
| | **PLANS / PRINTS** |
| x | **PRODUCT INFORMATION** |
| | **PRODUCT MANUAL** |
| | **SAMPLES** |
| | **SHOP DRAWINGS** |
| | ***PROCESSED SUBMITTAL*** |
| | **REVIEWED** |
| | **PROCEED AS NOTED** |
| | **REVISE & RESUBMIT** |
| | **SUBMIT SPECIFIED ITEM** |
| | **NOT REVIEWED** |
| | **REJECTED** |

| | ***SUBMITTED BY:*** |
|---|---|
| | **EMAIL** |
| x | **SMARTSHEETS** |
| | **POSTAL SERVICE** |
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**ARCHITECTURAL SUBMITTAL REVIEW STAMP**

No Exception Taken
MFIA, Inc
Gary Adovnik
Checking is only for general conformance with the design concept of the project and general compliance with the information given in the contract documents. Any action shown is subject to the requirements of the plans and specifications. Contractor is responsible for: Dimensions, which shall be confirmed and correlated at the job site; fabrication processes and techniques of construction; coordination of his work with that of all other trades; and the satisfactory performance of his work.
04/25/2022

Northside Electric

# *ELECTRICAL SUBMITTALS – Division 28*

***Student Services Building***
***2575 Commercial St. SE***
***Salem, Oregon 97302***

***Andy Medcalf Construction Co.***
***1485 20th St. SE***
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**OCCB# 80593**

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04/25/2022

# Access Control

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Post Falls, ID 83854
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F 208.777.4708

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Issaquah, WA 98027
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**Idaho**
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ADVANCED NETWORK DEVICES

# ZONEC2

## Zone Controller

## OVERVIEW

The Zone Controller (ZONEC2) allows for integration of non-network devices to the network. The full-featured, multi-purpose unit interacts directly with an organization's mass notification system, acting as a hub for a variety of devices.

### ANALOG INTEGRATION

Connect to an existing amplifier, sensor, contact closure, access control device, microphone, CD/ MP3 player, strobe, and more

### SIP INTEGRATION

Call to page analog speakers

### SOFTWARE

Diagnostic software included
Compatible with third-party software, including InformaCast, Revolution, and Cisco CallManager

## SOLUTIONS

- Paging
- Bell scheduling
- Code alerts
- Emergency notification
- Access control
- Security monitoring
- Sound Masking
- Music streaming

## ADDITIONAL FEATURES

- Built-in web server
- Full multicast and broadcast support
- Requires Cat5 or Cat6 cable
- Audio line in
- Audio line out
- 2 general purpose inputs
- 1 general purpose output with option to provide 12V DC power
- 8-ohm speaker output
- Microphone input

## COMPATIBLE PERIPHERALS

**Strobe Kit**
AND-STROBE-KIT-1

**Call Button Kit**
AND-BTN-KIT-1

## SOFTWARE

The ZONEC2 integrates easily with third-party mass notification software, as well as SIP and VoIP phone systems, enabling a facility to take advantage of all the device capabilities. The device also comes with diagnostic software (compatible to run alongside third-party software), and an on-board web server interface, both which provide the ability to monitor and troubleshoot the ANetD devices on the network.

### Third-Party Software

- InformaCast (Singlewire)
- Revolution (Syn-Apps)
- IPSession (IPCelerate)
- MessageNet Systems
- BellComander (Acro Vista)

And more!

### VoIP Phone Systems

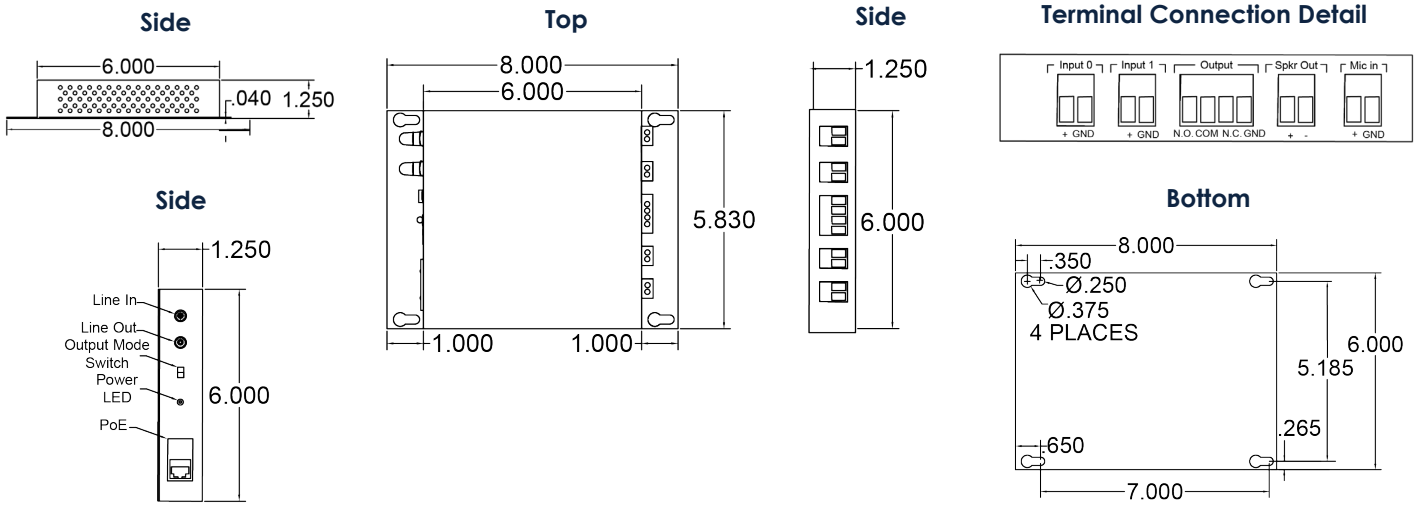
- Cisco CallManager
- Mitel
- Avaya
- 3CX
- Polycom

And more!

### IPClockWise

- Diagnostic tool included with device purchase
- Complements investment in third-party software
- Developed and supported by Advanced Network Devices

## DIMENSIONS




| SPECIFICATIONS | ZONEC2 |
|---|---|
| ETHERNET I/F | 10/100 Mbps |
| AUDIO POWER | 8 W / 16 W |
| POWER INPUT | PoE (IEEE802.3af) 15.4 W or PoE+ (IEEE802.3at) 30.0 W |
| SUPPORTED PROTOCOLS | SIP, IPv4, IPv6, 802.1X, HTTP, SLP, TFTP, NTP, SNMPV1 & SNMPV2c, DHCP, IGMP, ICMP, TCP/IP, LLDP-MED, UDP, MDNS & MDNS-SD |
| OPERATING TEMPERATURE | 0˚ TO 50˚ C (34˚ TO 122˚ F) |
| DIMENSIONS | 8.0" W x 1.25" H x 6.0" D |
| WEIGHT | 1 lb 8 oz (680 g) |
| WARRANTY | 2 Year Limited |

*Due to continual product development, specifications are subject to change without notice.*


**Advanced Network Devices | 3820 N. Ventura Dr. Arlington Hts. IL 60004**
**847-463-2236 | sales@anetd.com | www.anetd.com**

# Copper Patch Cables

CEX Copper Patch Cables give you affordable and reliable networking. With many different cable color and gauge options[i], this product family will fit the vast majority of your data connectivity needs.

Pictured: CEXC6V8F1B-C__006F (BK, WH, GY, BU, YE, GN)

**CAT5e, CAT6, or CAT6a**

- 23 AWG (Solid), 24 AWG (Solid or Stranded), 26 & 28 AWG (Stranded)

**RJ45 Shielded or Unshielded**

- 8-pin, 8-connector (8P8C)

**28 AWG Stranded Tinned Copper up to 50 meters**

- 68% the size of standard CAT6
- 48% smaller cross sectional area
- Improved Cable Density

**note that `Length (ranges)` refers to overall length as measured from connector tips, excluding industry standard tolerances**

| CEX | 6A | S | 3D | 2 | B | - | X | BU | 123 | F |
|---|---|---|---|---|---|---|---|---|---|---|

**Copper Category**

| | |
|---|---|
| 6A | Cat6a |
| C6 | Cat6 |
| 5E | Cat5e |

**Cable Jacket[ii]**

| | |
|---|---|
| S | Shielded CMP |
| P | CMP (Plenum) |
| H | Shielded CM |
| V | CM (PVC) |

**Wire Gauge / Type**

| | |
|---|---|
| 3D | #23 Solid |
| 4D | #24 Solid |
| 4F | #24 Stranded |
| 6F | #26 Stranded |
| 8F | #28 Stranded |

**Connectors**

| | |
|---|---|
| 1 | RJ45 Unshielded 8P8C |
| 2 | RJ45 Shielded 8P8C |

**Polarity / Wiring[iii]**

| | |
|---|---|
| A | T568A Straight |
| B | T568B Straight |
| D | T568A FullyCrossed |
| E | T568B FullyCrossed |
| H | T568A Rollover |
| I | T568B Rollover |
| J | "RJ45 Crossover" (HalfCrossed/T568A-to-T568B) |

**Boot Types**

| | |
|---|---|
| X | NO BOOT |
| B | Bubble, Color-matched |
| C | Snag-less, Clear |
| D | Snag-less, Color-matched |

**Color**

| | |
|---|---|
| WH | White |
| BN | Brown |
| GN | Green |
| YE | Yellow |
| GY | Grey |
| PK | Pink |
| BU | Blue |
| RD | Red |
| BK | Black |
| VT | Violet |
| OG | Orange |
| SG | Spring Green |
| LB | Light Blue |

**Length (ranges)**

| | |
|---|---|
| 001-100 | Meters |
| 005-999 | Decimeters |
| 001-328 | Feet |
| 006-999 | Inches |

**Unit of Measure**

| | |
|---|---|
| M | Meters |
| D | Decimeters |
| F | Feet |
| I | Inches |

i. subject to availability -- color options may vary depending on other component selections

ii. `S`,`H` -- overall foil shielding (F/UTP) or better

iii. wiring diagrams available upon request

# PART NUMBER 002391

UL Listed and Rated Type CMP Multi-Conductor Non-Shielded Plenum Cable

SMARTWIRE GLIDE TECHNOLOGY

## CABLE SPECIFICATIONS

| | |
|---|---|
| **DESCRIPTION** | 18 AWG 6 Conductor Bare Copper, Non-Shielded Plenum, UL Listed C(UL)US CMP |
| **CONDUCTOR** | 18 (7/26 Bare Copper) |
| **INSULATION** | Low-Smoke PVC .008" |
| **COLOR CODE** | Black/White/Red/Green/Brown/Blue |
| **LAY LENGTH** | 3.75" LHL (approx. 3.2 TPF) |
| **SHIELD** | N/A |
| **DRAIN WIRE** | N/A |
| **JACKET** | Low-Smoke PVC .018" |
| **JACKET COLOR** | White Jacket |
| **MARKING** | SMARTWIRE DEVICE / ZONE A B C D E 0 1 2 3 4 5 6 7 8 9 18 AWG C(UL)US CMP ROHS MADE IN THE USA |
| **OVERALL DIAMETER** | .208" Nom. |
| **CABLE WEIGHT** | 46 Lbs/Mft. |
| **CAPACITANCE** | 27 pF/Ft. Nom. |
| **IMPEDANCE** | 70 Ohms |
| **DC RESISTANCE** | 6.66 Ohms/Mft. maximum @ 20 C |
| **TEMPERATURE RATING** | 0 C to 75 C / 300 Volt |

## INDUSTRY STANDARDS

| | |
|---|---|
| **FLAME RATING** | Approved For Plenum Use Without Conduit Per NFPA 262 Flame Test |
| **AGENCY APPROVALS** | NEC Article 800; UL Listed C(UL)US CMP, RoHs Compliant, Made in the USA |

All specifications referenced are nominal measurements unless otherwise noted.

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# PART NUMBER 002380

UL Listed and Rated Type CMP Multi-Conductor Non-Shielded Plenum Cable

## CABLE SPECIFICATIONS

| | |
|---|---|
| **DESCRIPTION** | 18 AWG 4 Conductor Bare Copper, Non-Shielded Plenum, UL Listed C(UL)US CMP |
| **CONDUCTOR** | 18 (7/26 Bare Copper) |
| **INSULATION** | Low-Smoke PVC .008" |
| **COLOR CODE** | Black/White/Red/Green |
| **LAY LENGTH** | 3.5" LHL (approx. 3.4 TPF) |
| **SHIELD** | N/A |
| **DRAIN WIRE** | N/A |
| **JACKET** | Low-Smoke PVC .018" |
| **JACKET COLOR** | White Jacket |
| **MARKING** | SMARTWIRE DEVICE / ZONE A B C D E 0 1 2 3 4 5 6 7 8 9 18 AWG C(UL)US CMP ROHS MADE IN THE USA |
| **OVERALL DIAMETER** | .184" Nom. |
| **CABLE WEIGHT** | 32 Lbs/Mft. |
| **CAPACITANCE** | 26 pF/Ft. Nom. |
| **IMPEDANCE** | 72 Ohms |
| **DC RESISTANCE** | 6.66 Ohms/Mft. maximum @ 20 C |
| **TEMPERATURE RATING** | 0 C to 75 C / 300 Volt |

## INDUSTRY STANDARDS

| | |
|---|---|
| **FLAME RATING** | Approved For Plenum Use Without Conduit Per NFPA 262 Flame Test |
| **AGENCY APPROVALS** | NEC Article 800; UL Listed C(UL)US CMP, RoHs Compliant, Made in the USA |

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# PART NUMBER 002320

UL Listed and Rated Type CMP Multi-Conductor Shielded Plenum Cable

## CABLE SPECIFICATIONS

| | |
|---|---|
| **DESCRIPTION** | 18 AWG 2 twisted Conductors Bare Copper, Shielded Plenum, UL Listed C(UL)US CMP |
| **CONDUCTOR** | 18 (7/26 Bare Copper) |
| **INSULATION** | Low-Smoke PVC .008" |
| **COLOR CODE** | Black/White |
| **LAY LENGTH** | 2.5" LHL (4.8 TPF) |
| **SHIELD** | Aluminum Mylar |
| **DRAIN WIRE** | 24 AWG 7 Strand Tinned Copper |
| **JACKET** | Low-Smoke PVC .018" |
| **JACKET COLOR** | White Jacket |
| **MARKING** | SMARTWIRE DEVICE / ZONE A B C D E 0 1 2 3 4 5 6 7 8 9 18 AWG C(UL)US CMP ROHS MADE IN THE USA |
| **OVERALL DIAMETER** | .158" Nom. |
| **CABLE WEIGHT** | 21 Lbs/Mft. |
| **CAPACITANCE** | 68 pF/ft Nom. |
| **IMPEDANCE** | 28 Ohms |
| **TEMPERATURE RATING** | 0Â° C to 75Â° C / 300 Volt |

## INDUSTRY STANDARDS

| | |
|---|---|
| **FLAME RATING** | Approved For Plenum Use Without Conduit Per NFPA 262 Flame Test |
| **AGENCY APPROVALS** | NEC Article 800; UL Listed C(UL)US CMP, RoHs Compliant, Made in the USA |

All specifications referenced are nominal measurements unless otherwise noted.

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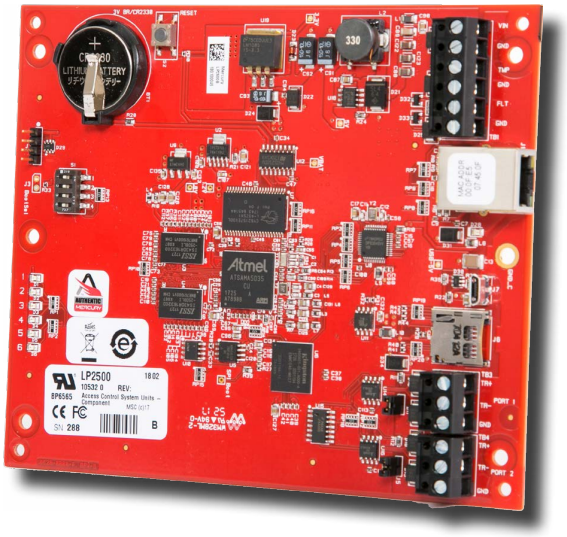
# LP Series - AC-MER-CONT-LP2500 Master Intelligent Controller

The Avigilon Access Control Manager (ACM) system supports open field hardware from Mercury Security allowing organizations to leverage investments in non-proprietary field hardware, with retrofit programs available for industry standard multi-device interface panels, power and communication controller boards, and intelligent controllers. The new Authentic Mercury LP Series Intelligent Controllers are Mercury Security's enhanced platform that offers an improved processor and increased memory, plus feature an embedded crypto memory chip that provides a secured layer of encryption to onboard sensitive data.



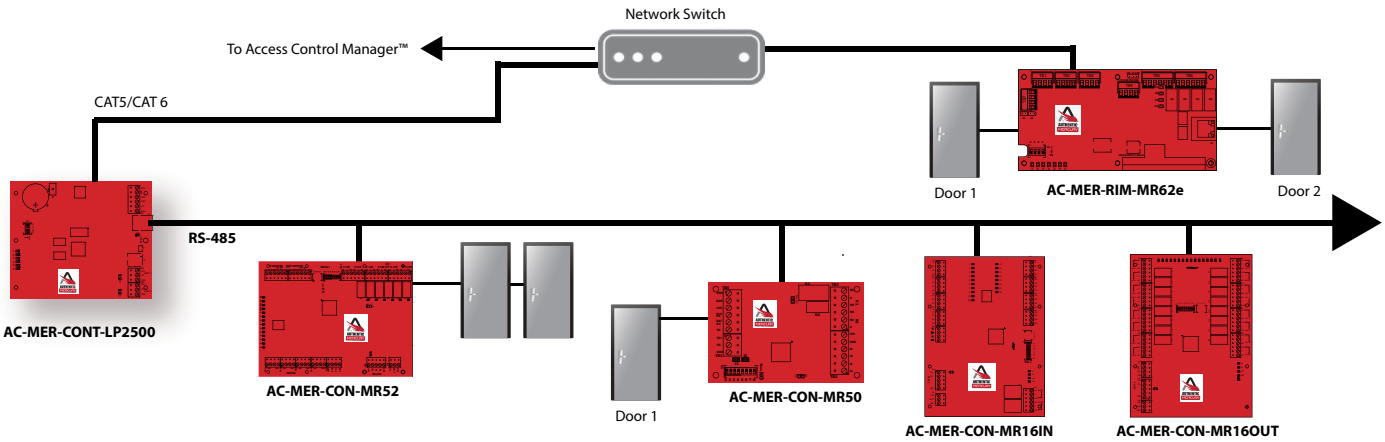

The AC-MER-CONT-LP2500 is a powerful intelligent controller with native network support and is scalable to 64 doors/openings. Capable of elaborate processes and procedures without host intervention, the intelligent controller, once programmed, can function independently of the host.

## KEY FEATURES

| |
|---|
| Enhanced Security: Embedded crypto memory chip and data at rest encryption provides secured layer of protection of sensitive data |
| Host communications protected by TLS 1.2/1.1 |
| Controller/IO Expansion connection protected by AES (Series 3 SIO) |
| Port based network access control using 802.1X |
| FIPS 140-2 user of OpenSSL |
| Encrypted database with configurable sizing |

# Specifications

| | | | |
|---|---|---|---|
| **TECHNICAL SPECIFICATIONS** | Access Control | 380,136 cardholder capacity<br>50,000 transaction buffer<br>Supports up to 2 RS-485 IO protocols<br>16 access levels per cardholder<br>Cardholder - 19 Digit (64 Bit) User ID with 8 digit PIN MAX<br>Activation/Deactivation | If/Then macro capabilities<br>Anti-passback support<br>Nested, area, hard, soft and timed forgiveness<br>Adjustable cardholder capacity<br>Supports up to 512 inputs or 512 outputs |
| | Door Control | Natively does not support any readers or openings<br>Use in conjunction with IO expansion modules to support up to 64 readers and openings | |
| | Primary Power | 12 to 24 Vdc ± 10%, 250 mA maximum (USB port current not included) | |
| | Micro USB Port | 5 Vdc, 500 mA maximum (add 270 mA to primary power current) | |
| | Battery | Memory/ Clock Backup: 3 Volt Lithium, type BR2330 or CR2330 | |
| | microSD Card | Format: microSD or microSDHC; 2GB to 8GB | |
| | Host Comm. | Ethernet: 10-BaseT/100Base-TX and Micro USB port (2.0) with optional adapter: pluggable model USB2-OTGE100 | |
| | Serial I/O Device | Two each: 2-wire RS-485, 2,400 to 115,200 bps, asynchronous, half-duplex, 1 start bit, 8 data bits, and 1 stop bit | |
| | Inputs | Two unsupervised dedicated for cabinet tamper and UPS fault monitoring | |
| **CABLE REQUIREMENTS** | Power and Relays | 1 twisted pair, 18 to 16 AWG | |
| | Ethernet | CAT-5, minimum | |
| | Reader RS-485 | 1 twisted pair, shielded, 120 ohm impedance, 24 AWG, 4,000 ft. (1,219 m) maximum cable length | |
| **ENVIRONMENTAL** | Temperature | -55 to 85 °C storage, 0 to 70 °C, operating | |
| | Humidity | 5 to 95% RHNC | |
| **MECHANICAL** | Dimensions | 5 in. (127 mm) W x 6 in. (152.4 mm) L x 1 in. (25 mm) H | |
| | Weight | 4.1 oz. (115 gm) nominal, board only | |
| **COMPLIANCE** | Product Compliance | UL294 Recognized, FCC Part 15 Class A, CE Compliant, RoHS, NIST Certified Encryption | |




| | | |
|---|---|---|
| **ORDERING INFORMATION** | AC-MER-CONT-LP2500 | LP Series - AC-MER-CONT-LP2500 - Master Intelligent Controller |

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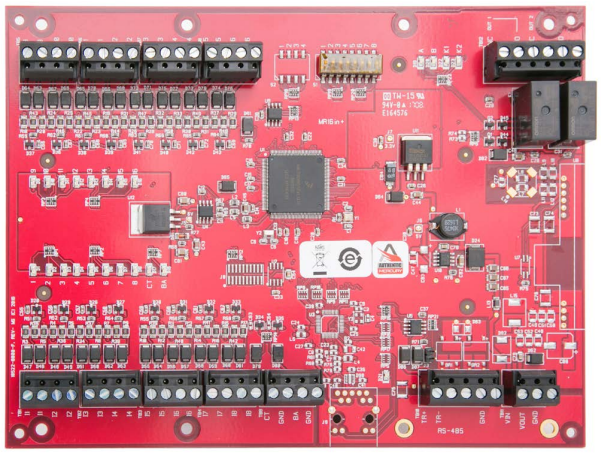
# Series 3 - Serial I/O 16-input Interface panel

The Avigilon™ Access Control Manager (ACM)™ system supports open field hardware from Mercury Security allowing organizations to leverage investments in non-proprietary field hardware, with retrofit programs available for industry standard multi-device interface panels, power and communication controller boards, and intelligent controllers.



The Mercury Security AC-MER-CONT-MR16in Series 3 from Avigilon is an enhanced, high performance, reliable interface panel for monitoring high concentrations of inputs with the Access Control Manager system. It offers an improved processor and increased memory with an embedded crypto memory chip for encryption support – enabling organizations to stay ahead of internal and external threats to achieve data security.

Each AC-MER-CONT-MR16in supports 16 general-purpose dry-contact inputs, configurable to be individually set for normally open, normally closed, supervised and non-supervised circuits. The AC-MER-CON-MR16in provides access control and security monitoring through the AC-MER-CONT-1DR, AC-MER-CONT-2DR or the AC-MER-CONT-64DR intelligent controllers. The result is the flexibility, versatility and reliability required for demanding access control solutions.

The Access Control Manager system and Mercury Security Series 3 open field hardware provides the ultimate platform to complete the Avigilon physical access control security solution.

**Open Architecture:** High performance, reliable platform enables use of hardware with the Access Control Manager system

**Easy Expansion:** Adds functionality and flexibility to existing access control systems

**Enhanced Security:** Embedded crypto memory chip provides a secure layer of encryption to protect sensitive data

**Versatile Interoperability:** Same reliable interface and identical footprint as Series 2 Mercury IO modules, enabling seamless upgrades for existing deployments

## KEY FEATURES

| |
|---|
| Compact footprint and RS-485 connectivity |
| 12 or 24V DC input power support |
| Supports being clustered or distributed to best suit the installation environment |
| Two programmable Form C relay outputs are configurable for fail-safe or fail secure operation, supporting “On”, “Off”, and “Pulse” |
| Inputs and the output relays support assignment to door related functions or to general purpose I/O |
| Inputs support normally open, normally closed, supervised and non-supervised circuits |
| Output relays are configurable for fail-safe or fail secure operation |
| Capable of controlling outboard devices, by the condition of selected system devices locally without ACM intervention |

## APPLICATION NOTES

The Mercury AC-MER-CONT-MR16IN is an essential component that supports Mercury's flexible, building-block approach to access control system design. The AC-MER-CONT-MR16IN provides the capacity to link, control and respond to an array of sensors. With its RS-485 connectivity, the AC-MER-CONT-MR16IN can be clustered or distributed to best suit each installation environment.

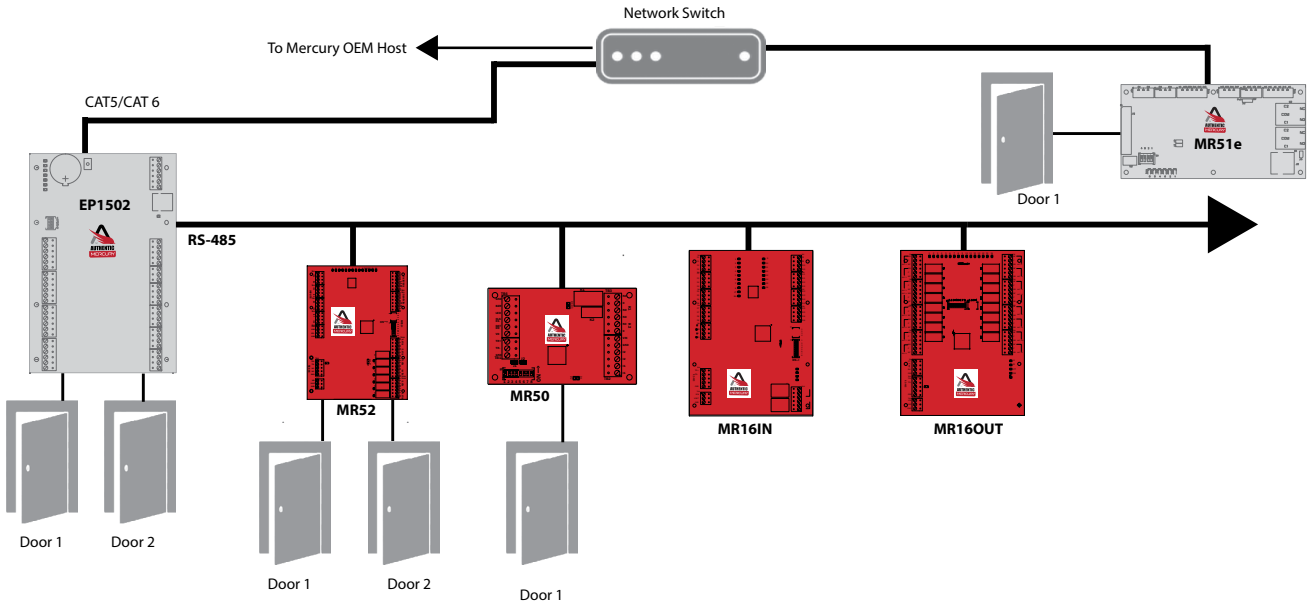
# Specifications

**TECHNICAL SPECIFICATIONS**

| | |
|---|---|
| Primary Power | 12-24 Vdc +/- 10%, 350mA maximum |
| Host Communication | RS–485, 2-wire, 4,000'<br>(twisted pair with shield, Belden 9841) |
| Inputs | 16 General Purpose: Programmable circuit type<br>2 Dedicated: Tamper and Power Monitor |
| Output Relays | Two Form-C Relays:<br>Normally open contact (NO): 5A @ 30 Vdc resistive<br>Normally closed contact (NC): 3A @ 30 Vdc resistive |
| Dimensions | 6.0' W x 8.0' L x 1.0' H,<br>(152mm W x 203mm L x 25mm H) |
| Temperature | 0-70 °C operational, -55-85 °C storage |
| Humidity | 5 to 95% RHNC |
| Standards | UL 294 recognized, CE compliant, RoHS,<br>FCC Part 15 Subpart B |

**ORDERING INFORMATION**

| | |
|---|---|
| AC-MER-CONT-MR16IN | 16 Zone Input Monitor Module (with 2 relays) (Mercury MR16IN-S3) |

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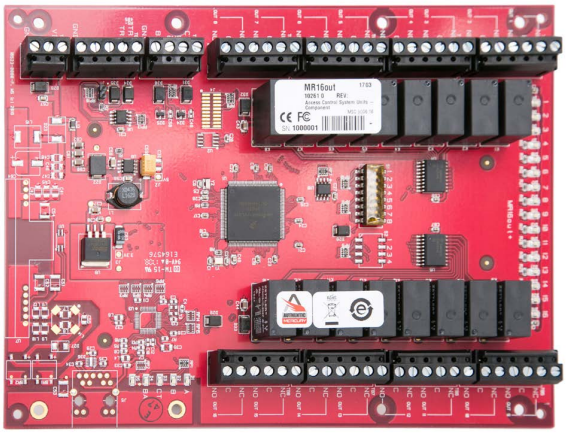
# Series 3 - Serial I/O 16-output Interface panel

The Avigilon™ Access Control Manager (ACM)™ system supports open field hardware from Mercury Security allowing organizations to leverage investments in non-proprietary field hardware, with retrofit programs available for industry standard multi-device interface panels, power and communication controller boards, and intelligent controllers.



The Mercury Security AC-MER-CONT-MR16OUT Series 3 from Avigilon is an enhanced, high performance, reliable interface panel that offers the ability to control high concentrations of outputs with the Access Control Manager system. It offers an improved processor and increased memory with an embedded crypto memory chip for encryption support – enabling organizations to stay ahead of internal and external threats to achieve data security.

Each AC-MER-CONT-MR16OUT is capable of supporting 16 general-purpose outputs as Form C relay contacts. Each output is configurable for fail-safe or fail secure operation, supporting “On”, “Off”, and “Pulse” commands through the AC-MER-CONT-1DR, AC-MER-CONT-2DR or the AC-MER-CONT-64DR intelligent controllers. The result is the flexibility, versatility and reliability required for demanding access control solutions.

The Access Control Manager system and Mercury Security Series 3 open field hardware provides the ultimate platform to complete the Avigilon physical access control security solution.

**Open Architecture:** High performance, reliable platform enables use of hardware with the Access Control Manager system

**Easy Expansion:** Adds functionality and flexibility to existing access control systems

**Enhanced Security:** Embedded crypto memory chip provides a secure layer of encryption to protect sensitive data

**Versatile Interoperability:** Same reliable interface and identical footprint as Series 2 Mercury IO modules enabling seamless upgrades for existing deployments

### KEY FEATURES

| |
|---|
| Compact footprint and RS-485 connectivity |
| 12 or 24 V DC input power support |
| Supports being clustered or distributed to best suit the installation environment |
| Output relays support assignment to door related functions or for general purpose use |
| Initiates commands by operator, by time schedules, or by events |
| Output relays are configurable for fail-safe or fail secure operation |
| Capable of controlling outboard devices, by the condition of selected system devices locally without ACM intervention |

## APPLICATION NOTES

The AC-MER-CONT-MR16OUT is an essential component to support Mercury's flexible, building-block approach to access control system design. The versatile AC-MER-CONT-MR16OUT offers unmatched power to broaden the range of devices and building controls (such as lighting or HVAC) that can be included in system design.

Relay operation can be initiated by direct operator commands, by time schedules, or by event-based procedures. The relays support "On," "Off," and "Pulse" commands. A pulse can range from 0.1 seconds to over 9 hours.

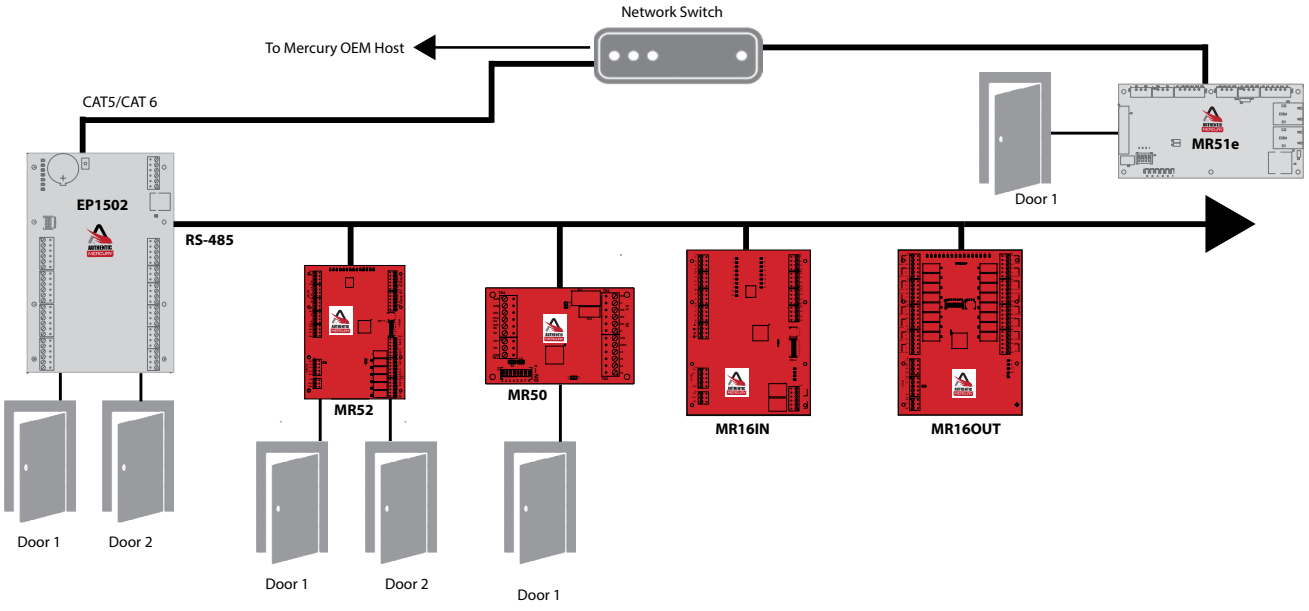
# Specifications

**TECHNICAL SPECIFICATIONS**

| | |
|---|---|
| Primary Power | 12-24 Vdc +/- 10%, 1100mA maximum |
| Host Communication | RS–485, 2-wire, 4,000'<br>(twisted pair with shield, Belden 9841) |
| Inputs | 2 Dedicated: Tamper and Power Monitor |
| Output Relays | Sixteen Form-C Relays:<br>Normally open contact (NO): 5A @ 30 Vdc resistive<br>Normally closed contact (NC): 3A @ 30 Vdc resistive |
| Dimensions | 6.0' W x 8.0' L x 1.0' H,<br>(152mm W x 203mm L x 25mm H) |
| Temperature | 0-70 °C operational, -55-85 °C storage |
| Humidity | 5 to 95% RHNC |
| Standards | UL 294 recognized, CE compliant, RoHS,<br>FCC Part 15 Subpart B |

**ORDERING INFORMATION**

| | |
|---|---|
| AC-MER-CONT-MR16OUT | 16 Relay Output Control Module (Mercury MR16OUT-S3) |

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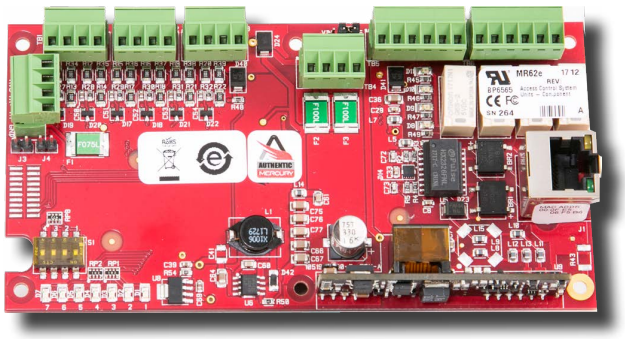
# Series 3 - AC-MER-RIM-MR62E
# IP-enabled Serial I/O Interface Module

The Avigilon Access Control Manager (ACM) system supports open field hardware from Mercury Security allowing organizations to leverage investments in non-proprietary field hardware, with retrofit programs available for industry standard multi-device interface panels, power and communication controller boards, and intelligent controllers. The new Authentic Mercury MR Series 3 Serial Input/ Output modules enable system expansion of Authentic Mercury intelligent controllers as part of Mercury's distributed architecture. The enhanced modules offer an improved processor and increased memory, plus feature an embedded crypto memory chip that provides a secured layer of encryption to onboard sensitive data.



The AC-MER-RIM-MR62E Series 3 is an IP-enabled interface module with on-board flexibility to connect a wide range of security devices. The AC-MER-RIM-MR62E is easy to install and provides the required I/O for interfacing four card readers using OSDP protocol, six general-purpose input monitor points and four control relays to any Authentic Mercury series intelligent controller.

The AC-MER-RIM-MR62E's provides increased power output using PoE+ and provides one reader port supporting OSDP Secure Channel readers, including non-keypad, keypad and biometric readers.

**KEY FEATURES**

| |
|---|
| OSDP Protocol: Supports OSDP and Secure Channel communications |
| Enhanced Security: Embedded crypto memory chip provides secured layer of encryption to protect sensitive data |
| Edge-capable input/output module supporting PoE+ power |
| Provides up to 1.5 A of power at door for reader, lock and more |
| IPv4/6 |
| Intelligent controller to AC-MER-RIM-MR62E communications protected by TLS 1.2/1.1 or AES-256/128 |
| Generate and load custom peer certificates for TLS |
| FIPS 140-2 user of OpenSSL |
| Port based network access control using 802.1X |
| Zerconf Device Discovery (mDNS) |
| Supports OSDP Readers Only, multiple card formats, paired and alternate readers, elevator, turnstile and biometric devices |
| Anti-passback support (area, reader and time based) |

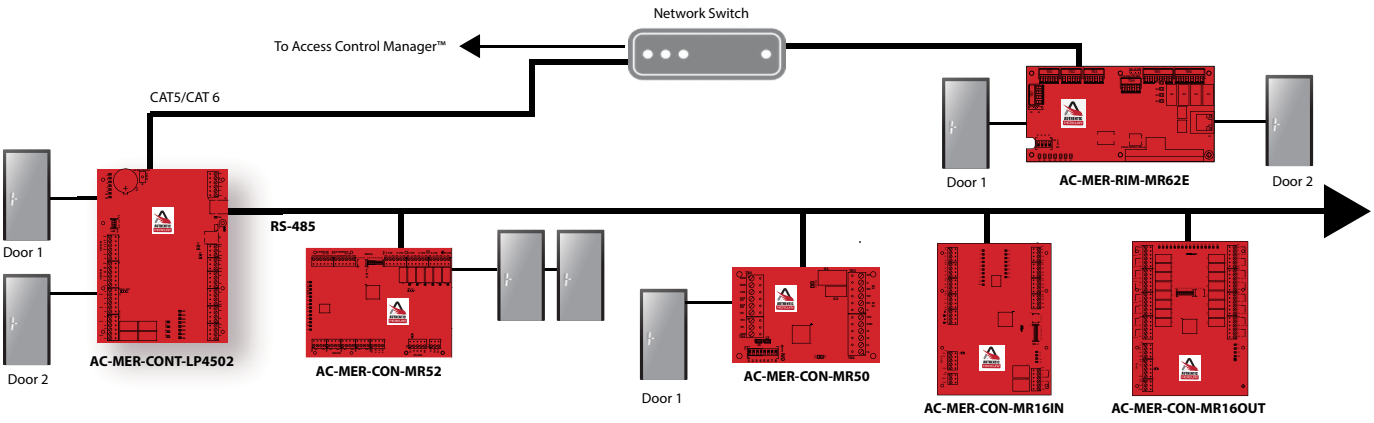
# Specifications

| | | |
|---|---|---|
| **TECHNICAL SPECIFICATIONS** | Door Control | Natively supports for up to 4 OSDP. Does not support Wiegand readers. AC-MER-RIM-MR62E, when linked to an Authentic Mercury Intelligent Controller, controls up to 2 openings |
| | Card Formats | Eight active card formats per intelligent controller. Entire card number reported on invalid read 19 digit (64-bit) User ID and 15 digit PIN numbers maximum PIV, CAC, TWIC card compatible |
| | Power Input | PoE (12.95 W), compliant to IEEE 802.3af or PoE+ (25 W), compliant to IEEE 802.3at or 12 Vdc ± 10 %, 1.7 A maximum |
| | Power Output | PoE: Locks and Reader, combined: 12 Vdc @ .66 A MAX, PoE+ or 12 Vdc: Lock 12 Vdc @ 1 A MAX, Readers 12 Vdc @ .5 A MAX |
| | Output | Four relays, Form-C contacts rated at 2 A @ 30 Vdc |
| | Inputs | Six unsupervised/supervised, End of Line resistors, 1k/1k ohm, 1%, ¼ watt standard |
| **READER INTERFACE** | Power | 12 Vdc @ .5 A MAX |
| | Communication | 2-Wire RS-485, OSDP protocol, four devices maximum |
| **CABLE REQUIREMENTS** | Ethernet | CAT-5, minimum |
| | External Input Power | 1 twisted pair, 18 AWG (if required) |
| | Alarm Inputs | 1 twisted pair per input, 30 ohm maximum |
| | Relay Outputs | As required for the load |
| | Reader Data RS-485 Power | 2 twisted pair with shield, 24 AWG, 120 ohm impedance, 4000 foot (1220 m) MAX or RS-485: 1 twisted pair with shield, 24 AWG, 120 ohm impedance, 4000 foot (1220 m) MAX Power: 1 pair 18 AWG* |

* Type of cable(s) and gauge determined by length and voltage/ current requirements. Local power source may be required

| | | |
|---|---|---|
| **ENVIRONMENTAL** | Temperature | -55 to 85 °C storage, 0 to 70 °C, operating |
| | Humidity | 5 to 95% RHNC |
| **MECHANICAL** | Dimensions | 5.5 in. (140 mm) W x 2.75 in. (70 mm) L x 0.96 in. (24 mm) H without bracket 5.5 in. (140 mm) W x 3.63 in. (92 mm) L x 1.33 in. (34 mm) H with bracket |
| | Weight | 4 oz. (112 g) without bracket 5 oz. (142 g) with bracket |
| **COMPLIANCE** | Product Compliance | UL294 Recognized*, FCC Part 15 Class A, CE Compliant, RoHS, NIST Certified Encryption |

* For UL, the Power Sourcing Equipment (PSE) such as a PoE or PoE+ enabled network switch and/or PoE or PoE+ power injectors must be UL Listed under UL294B.




| | | |
|---|---|---|
| **ORDERING INFORMATION** | AC-MER-RIM-MR62E | Series 3 - AC-MER-RIM-MR62E - IP-enabled Serial I/O Interface Module |

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LifeSafetyPower®

# FLEXPOWER FPO150/150-2C82D8E4

300W, 16 Door Access
Dual Voltage
16 Lock Outputs, 16 Auxiliary Outputs

## DESCRIPTION

The FLEXPOWER FPO150/150-2C82D8E4 is a dual voltage, offline switch-mode power supply-battery charger system specifically designed for the access control segment of the lifesafety industry.

The unit is configured in a painted, steel, locking enclosure with tamper switch and integral battery space, and provides two power supplies, each of which can be set to 12 or 24V.

Sixteen auxiliary outputs are provided for readers, REX devices, or other similar units with each output selectable for either power supply.

Sixteen access controlled trigger inputs control sixteen relay based lock outputs, with each output selectable for either power supply, and programmable for fire alarm disconnect, failsafe, failsecure, or dry contact operation.

Complete fault detection and reporting, with programmable fault delays, is provided along with datalogging capability of fault occurrence, battery usage time and power supply status.

## BENEFITS

- Agency Listed for Access Control, Fire, Security, CCTV, and Mass Notification
- ***FlexPower®*** Feature Set
  - ***SureCharge*** Microprocessor controlled battery charging
  - ***PowerCom*** Power supply programming / monitoring software
  - ***VSelect*** Installer selectable output voltage
  - ***TruWatt*** Delivers twice the current at 12V than at 24V
  - ***PwrHealth*** Intelligent battery charging and battery state monitoring
  - ***FlexConnect*** Dual voltage bus / pre-wired accesory board interconnects
  - ***Reliability+*** Full fault protection / high efficiency / fiberglass pcb
  - ***GreenSmart*** RoHS compliant, lead free, energy efficient design
  - ***DataLink*** Network communication interface option
- ***System Features***
  - Fully modular power management system
  - Multiple outputs for system power, direct lock control and accessory power distribution modules
  - Each distributed output is selectable for either continuous or switched DC in single voltage systems, or 12/24VDC in dual voltage systems
  - Fire alarm interface for egress lock control (FAI)
  - Configurable fail-safe / fail-secure modes of operation
  - Comprehensive fault detection and reporting including optional earth ground and battery presence
  - AC and System fault output relays can be delayed via PowerCom
  - Microprocessor dual rate charging restores battery sets from 4 to 80Ah
- ***Power Management & Reporting*** *(U.S. Patent 8,566,651)*
  - PowerCom® s/w monitors, programs, and reports on power supply core functions through a computer USB or network connection
  - NetLink module option connects power system to a LAN/WAN network for remote programming and live diagnostics. NetLink monitors and reports power status, tests battery state and alerts via email/SNMP on system faults, AC loss, low battery or pre-scheduled service due
- ***Lifetime Warranty***

## ELECTRICAL RATINGS

| Parameter | Rating FPO150 | Rating FPO150 | Unit |
|---|---|---|---|
| Input Voltage | 120 / 230 | 120 / 230 | VAC |
| Input Power (max) | 170 | 170 | Watts |
| Output Voltage | 12 or 24 | 12 or 24 | VDC |
| Output Current | 12 or 6 | 12 or 6 | Amps |
| Battery Charge Capacity | 80 | 80 | Ah |
| Efficiency | 88 | 88 | % |
| Output Ripple | 120 | 120 | mVp-p |
| Line Regulation | 0.1 | 0.1 | ±% |
| Load Regulation | 2 | 2 | ±% |
| BTU Rating | 132 | | BTU/Hr |
| Continuous Power Outputs | 16 | | |
| Switched Power Outputs | 16 | | |
| Fire Alarm Interface | Yes | | |

## AGENCY LISTINGS

| USA | | CANADA |
|---|---|---|
| UL 294 | UL 1481 | ULC S318 |
| UL 603 | UL 2044 | ULC S319 |
| UL 864 | UL 2572 | ULC S527 |
| UL 1076 | | CSA C22.2 #107.1 |
| FCC Part 15, Subpart B | | CSA 22.2 #60950 |
| CSFM Approved | | |

## FLEXPOWER® STANDARD FEATURES

***SureCharge*** The microprocessor controlled charging process used by the FlexPower power supply guarantees both proper charging current for the battery and fastest charge time. The constant current charger provides a linear, predictable charge time for any lead acid, gel battery set from 4 to 80 amphours (based on charger rating) without stress or damage to the battery.

***PowerCom/PowerCom-USB*** LifeSafety Power's proprietary software interface for communication with FlexPower equipment through a DATALINK or USB connection. PowerCom is used for power supply monitoring, programming, and reporting.

The NL1 DATALINK network module enhances PowerCom's capability with remote diagnostics, battery management, trouble / service email alerts via LAN/WAN, and remote on/off reset control.

The DL1 USB cable and a computer laptop USB connection, enables PowerCom-USB to be used by service personnel for onsite power supply programming and system diagnostic evaluation.

***VSelect*** One single switch for configuring the output between 12 and 24VDC eliminates field errors and allows for the reduction and simplification of service inventory by eliminating the necessity of stocking units in each voltage.

***TruWatt*** Output power capability of the power supply remains constant regardless of the output voltage setting. For example, a FlexPower 250 watt supply will provide 10 amps at 24VDC and 20 amps at 12VDC, allowing the same number of locking devices to be used at either the 12 or 24V setting.

***FlexConnect*** The FlexPower series provides a prewired interconnection system between the power supply and accessory boards of the power system that introduces the concept of a dual voltage bus structure throughout all system modules and eliminates intermodule wiring by the field installer.

Field upgrading or expansion is as simple as using common mounting footprints, predrilled mounting holes, snap-in standoffs, and pluggable wires to add additional system capability or capacity when needed, all without restrictive agency listing issues.

***Reliability+*** All power supplies within the FlexPower system are fully fault protected and feature fiberglass printed circuit boards rather than paper-based to protect the electronics from water and other corrosive elements found in industrial settings. High efficiency power supply design promotes low heat generation leading to a longer service life.

***GreenSmart*** All members of the FlexPower family are RoHs compliant, lead-free, and meet the latest state, federal and European requirements for energy efficiency.

***DataLink - Smart Power Management Communication Interface***

Monitor, program, control, and report key power supply functions by computer or local/wide area network using a browser interface or LifeSafety Power's PowerCom® remote management software.

Power supply network connection requires the optional NL1 network module. Power supply computer connection requires the optional DL1 USB cable.

| Model No. | Type | Mechanical Info |
|---|---|---|
| FPO150/150-2C82D8E4 | Fused | Size: 20" x 24" x 4.5" |
| FPO150/150-2C8P2D8PE4 | Power Limited | Weight: 18 lb. |

**FlexPower Numbering System**

FPO 75/150 – C8 D8 – E4

- FPO 75/150 – *FlexPower series PS1 / PS2 (watts)*
- C8 – *Enclosure*
- D8 – *Accessory module*
- E4 – *Accessory quantity* (more than 1)

## FAULT DETECTION AND REPORTING

The comprehensive fault detection and reporting mechanism of the FPO series provides for both local and remote fault reporting.

On-board visual indicators are provided to give immediate installer feedback. Independent form C relay contacts are provided to report AC and system fault conditions to remote or auxiliary equipment. A door tamper switch is included.

**Detected Fault Conditions:**

- *AC Power*
  - AC loss, AC low
- *DC Power and System*
  - Abnormal or loss of power supply operation
  - Over current, over temperature condition
  - DC output high, low
  - Battery Presence, Earth Ground (user optional)
  - Reversed battery condition, blown fuse or loss of output voltage on selected accessory boards (detected on the power supply)

## FIRE ALARM INTERFACE (FAI)

- *Activation Methods*
  - DC voltage: 9 to 33VDC, 3 to 15mA
  - Dry contact NO/NC
- *Latch Enable: NC contact set or switch (typically for Canadian use)*

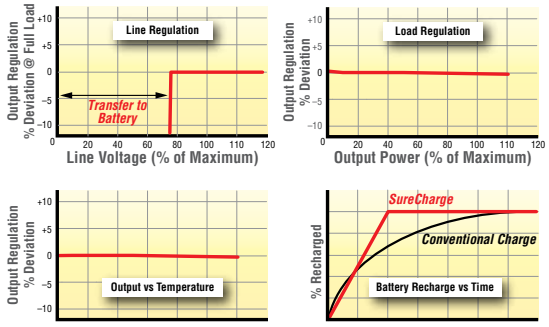
## LOCK CONTROL MODULE (C8, C8P)

- *Eight access control trip inputs*
  - Capable of activation by voltage or NO/NC dry contact
- *Eight individually protected lock control outputs*
  - Supervised for blown fuse or loss of output voltage
  - Individually programmable at either voltage for: fail-safe, fail-secure, NO/NC, dry contact, and fire alarm interface for control of egress locks
  - ***C8*** 3A fused per output
  - ***C8P*** 2.5A class 2, power limited per output
- *DC Presence: Green LED per output*
- *Removable terminals: accepts #14 to #24 AWG*

## POWER DISTRIBUTION MODULE (D8, D8P)

- *Eight power distribution outputs Individually programmable to a continuous output drawn from either buss 1 or buss 2, typically used to program an output for either 12 or 24VDC*
  - ***D8*** 3A fused per output
  - ***D8P*** 2.5A class 2, power limited per output
- *DC Presence: Green LED per output*
- *Removable terminals: accepts #14 to #24 AWG*

## PERFORMANCE GRAPHS

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# TM250

Compact Enclosure for Altronix Power and Mercury/LenelS2 Boards

## Description

Altronix TM250 accommodates various combinations of Mercury EP1501 or MR51e boards with or without Altronix power supply for access systems. It features ample knockouts that are suitable for 0.75" and 1" conduit.

TM250

** Boards not included*

## Features

- Accommodates the following Mercury/LenelS2 controllers:
  - Up to two (2) EP1501 or MR51e.
- Accommodates one (1) Altronix eFlow or Tango power supply/charger.

### Agency Listings

CE European Conformity

### Features

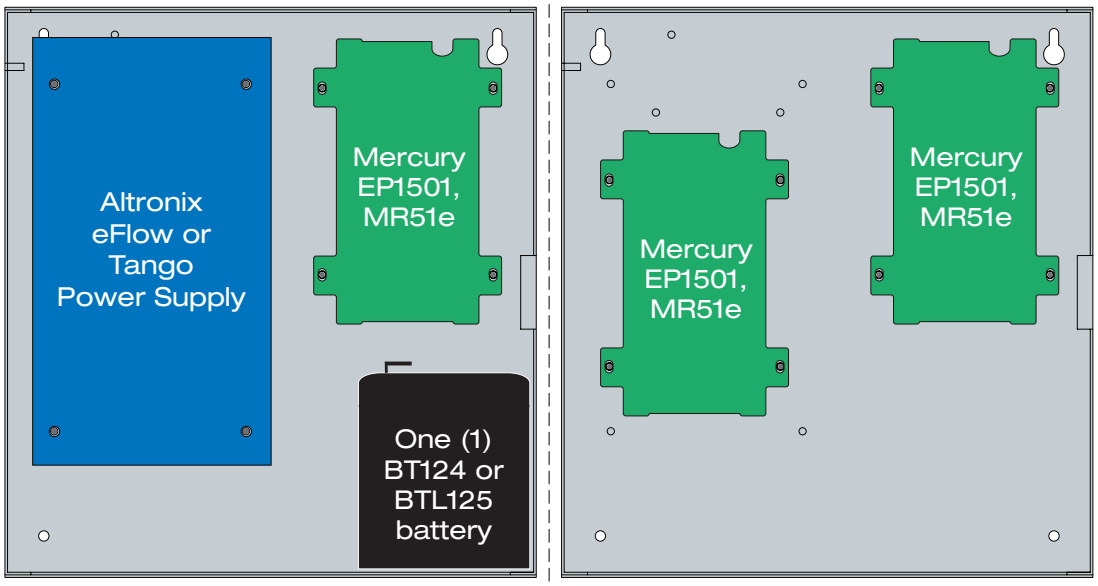
- Simplifies board layout and wire management.
- Convenient knockout configuration:
  - Twelve (12) double knockouts (accommodate 0.75" and 1" conduit).
- Accommodates one (1) 12VDC/4AH battery.
- 16 AWG powder coated steel.
- Includes cam lock, tamper switch and mounting hardware.

### Dimensions (H x W x D):

11.0" x 10.25" x 3.5" (279.4mm x 260.4mm x 88.9mm).

### Weights:

Product - 5.1 lb. (2.31 kg).
Shipping - 6.4 lb. (2.9 kg).

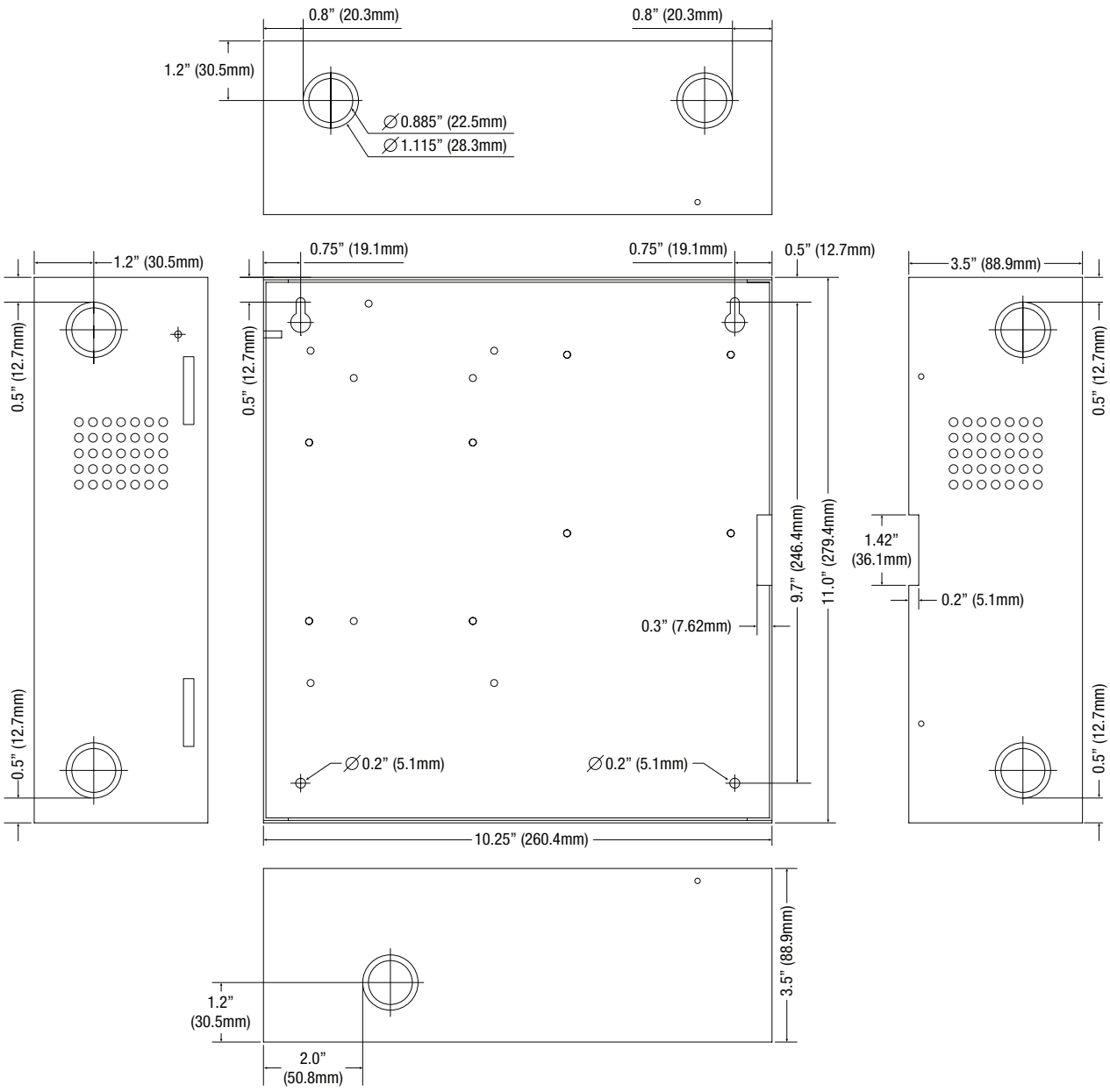



Rev. TM250 - 05142021

## Dimensions and Drawing

Dimensions (H x W x D approximate)

11.0" x 10.25" x 3.5" (279.4mm x 260.4mm x 88.9mm)



# SD-80

# RECESSED CONTACTS

## 1"(25mm) Steel Door Recessed Type

Contact Size: 1"×.84"(25mm×21.3mm)

Standard Magnet Size: 1"×.84"(25mm×21.3mm)

Standard Gap: 1.1"(28mm)

Colors: White, Brown

12"(305mm) 22 AWG Leads Standard

Longer leads available.

## Specifications

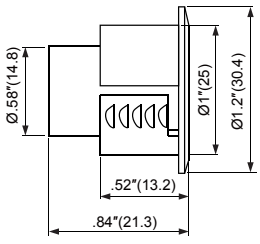
| Part Number | Gap Inch(mm) | Loop Open/Closed | Reed Form | Max. Contact Rating (W) | Max. Initial Contact Resistance (mΩ) | Max. Switching Voltage (V) | Max. Switching Current (A) |
|---|---|---|---|---|---|---|---|
| **SD-80** | 1.1"(28) | CLOSED | Normally Open | 10 | 100 | AC110/DC100 | 0.5 |
| **SD-81B** | 1.1"(28) | OPEN | Normally Closed | 3 | 100 | AC30/DC30 | 0.2 |
| **SD-80 WG** | 1.26"(32) | CLOSED | Normally Open | 10 | 100 | AC110/DC100 | 0.5 |
| **SD-82C** | 1.1"(28) | SPDT | SPDT | 3 | 100 | AC30/DC30 | 0.2 |
| **SD-84C** | .75"(19) | DPDT | DPDT | 3 | 100 | AC30/DC30 | 0.2 |

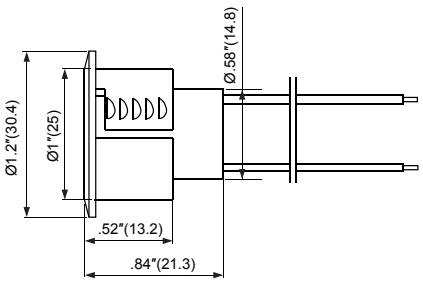
OPERATING TEMPERATURE:-40°C to +60°C

## Outline Dimensions

Unit: inch(mm)

### SD-80/SD-81B

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# SD-80

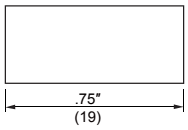
## RECESSED CONTACTS

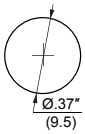
### Outline Dimensions

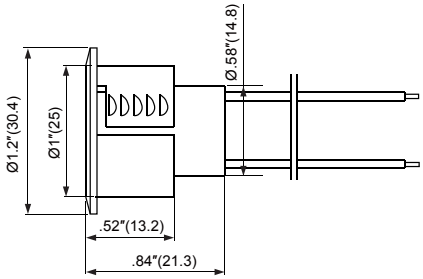
Unit: inch(mm)

**SD-80 WG**

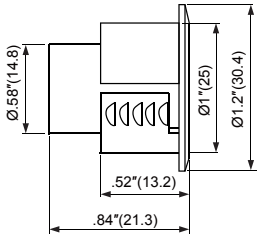
Bare Rare Earth
(BT 3/8"×3/4")

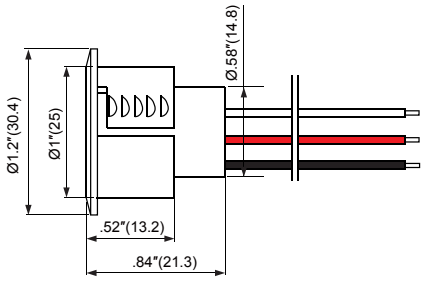


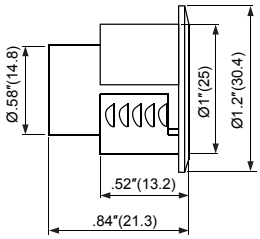



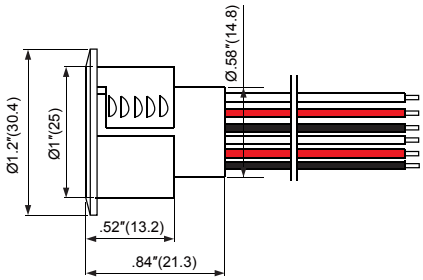

**SD-82C**



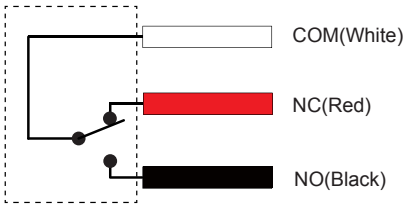

**SD-84C**



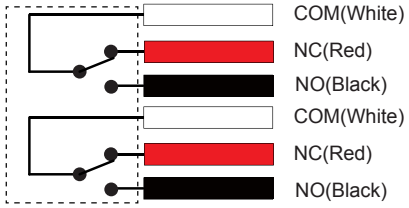




### Wiring Diagram

**SD-82C**




**SD-84C**



# SPEC SHEET

W BOX TECHNOLOGIES

# HIGH IMPACT MAGNETIC CONTACTS

0E-STLDRMAG
DOOR CHANNEL MAGNET

High Impact means , no loss of performance due to adverse stress caused by building movement, sudden impacts, or temperature change.

**SPECIFICATIONS**

**Diameter** 3/4”

**Metal Door Mount**

**Rare Earth Magnet**

PART #: 0E-STLDRMAG

UPC: 811914026259

**Simple Installation**

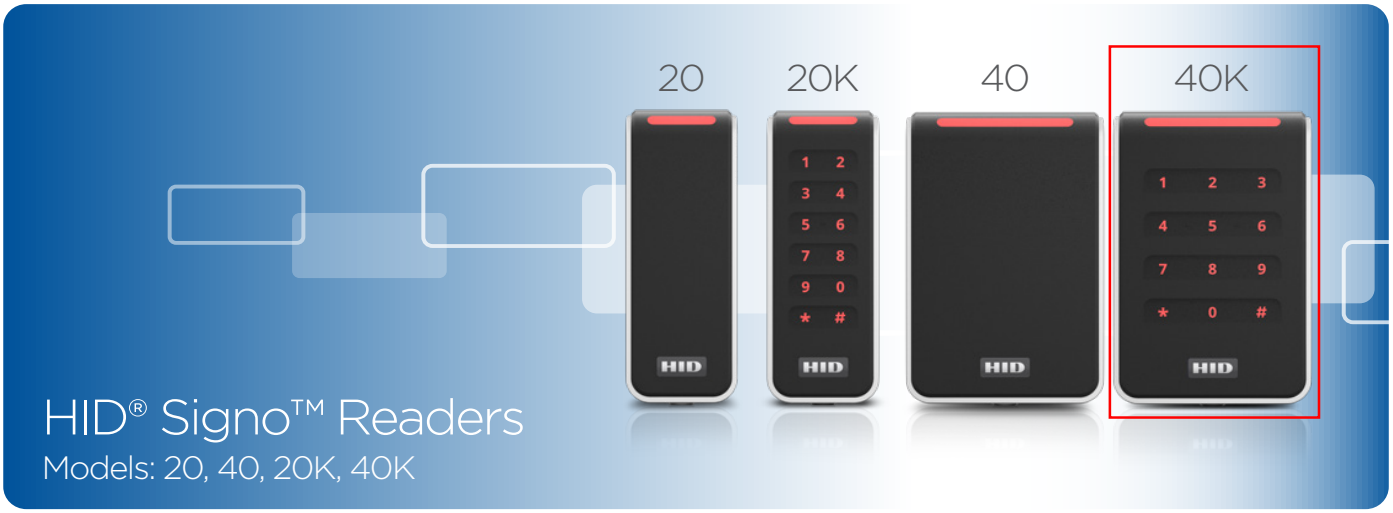
Product Certification:

RoHS COMPLIANT

W BOX TECHNOLOGIES

FOR MORE INFORMATION,
CONTACT YOUR SALES PERSON.

wboxtech.com




### READY FOR THE FUTURE NOW

- Mobile-ready by default, including Apple's Enhanced Contactless Polling (ECP) to support credentials in Apple Wallet
- Sleek, innovative design to suit modern architecture
- Integrated OSDP for secure authentication and configuration post installation
- Built on a hardware platform designed to be adaptable to support future technology
- Designed to seamlessly integrate into the HID Origo® ecosystem

## THE SIGNATURE LINE OF READERS FROM HID GLOBAL

- **Highly Versatile —** Support for the widest range of credential technologies, including HID Mobile Access® via native Bluetooth and Near Field Communication (NFC).
- **Unparalleled Performance —** Ultra secure storage of cryptographic keys on certified secure element hardware, plus a new surface detection feature that enables the reader to automatically recalibrate and optimize read range performance.
- **Connected to the Future —** All readers include out-of-the-box support for Open Supervised Device Protocol (OSDP) for secure bidirectional communication.

HID Signo™ is the signature line of physical access control readers from HID Global. The versatility, performance and connected capabilities of HID Signo readers set a new industry benchmark for the most highly adaptable, interoperable and secure approach to electronic access control.

Offering an unparalleled breadth of functionality, HID Signo affords security system installers and administrators a simple and effective approach to secure access control for almost any scenario.

With support for the widest array of credential technologies — past, present and future — HID Signo is the perfect choice for those looking to make the transition to a secure authentication technology.

HID Signo readers transcend the traditional approach to security by being designed to be connected and managed remotely without needing to physically touch each device. This functionality empowers access control systems to dynamically respond as new needs, configurations or threats arise.

### POWERFULLY SECURE

- Multi-Layered security to ensure data authenticity and privacy
- EAL5+ Certified Secure Element Hardware
- Native OSDP secure channel capability
- Trusted secure authentication using the SIO data model
- Supports iCLASS Elite™ and Corporate 1000 Programs

### MEET EVERY NEED, ADAPT TO ANY SITUATION

- Go mobile with native Bluetooth and NFC support
- Integrated 125 kHz credential read support for easy migration
- Supports over 15 common credential technologies
- Flush mount terminal block and pigtail wiring options
- Robust outdoor performance with an IP65 rating

### MANAGE, UPGRADE AND CONFIGURE

- Easily and securely managed using HID Reader Manager®
- Configure via a mobile device or OSDP
- Update firmware in response to threats
- Personalize by configuring audio visual or keypad settings
- Deactivate legacy credential technology to conclude secure migration

## SPECIFICATIONS

| HID Signo Reader Model | 20 | 20K | 40 | 40K |
|---|---|---|---|---|
| **2.4 GHz (Bluetooth) Credential Compatibility** | Mobile Credentials powered by Seos® (HID Mobile Access) | | | |
| **13.56 MHz (NFC) Credential Compatibility** | Seos, iCLASS SE®, iCLASS SR®, iCLASS®, MIFARE Classic, MIFARE DESFire EV1/EV2, Mobile Credentials powered by Seos (HID Mobile Access) | | | |
| **125 kHz Credential Compatibility** | HID Proximity®, Indala® Proximity, AWID Proximity, and EM Proximity | | | |
| **Typical Read Range**[1] | Seos®, MIFARE Classic, MIFARE DESFire EV1/EV2 & ISO14443A Single Technology Cards – 1.6 to 4 in (4 to 10 cm)<br>HID / AWID Proximity®, Indala Proximity®, EM Proximity & 125 kHz Single Technology Cards – 2.4 to 4 in (6 to 10 cm) | | | |
| **Mounting** | Suited for mullion-mount door installations or any flat surface mounting | | Suited to mount and cover single gang switch boxes with a slotted mounting plate for alternate back-box spacing | |
| **Color** | Black bezel with silver trim baseplate [2] | | | |
| **Keypad** | No | Yes (2 x 6 layout) | No | Yes (3 x 4 layout) |
| **Dimensions (width x length x depth)** | 1.77 in x 4.78 in x 0.77 in (45 mm x 121.5 mm x 19.5 mm) | 1.78 in x 4.79 in x 0.85 in (45 mm x 121.5 mm x 21.5 mm) | 3.15 in x 4.78 in x 0.77 in (80 mm x 121.5 mm x 19.5 mm) | 3.16 in x 4.79 in x 0.85 in (80 mm x 121.5 mm x 21.5 mm) |
| **Product Weight** | Pigtail: 3.35 oz (95 g)<br>Terminal: 2.65 oz (75 g) | Pigtail: 3.88 oz (110 g)<br>Terminal: 3.17 oz (90 g) | Pigtail: 4.94 oz (140 g)<br>Terminal: 4.23 oz (120 g) | Pigtail: 5.64 oz (160 g)<br>Terminal: 4.94 oz (140 g) |
| **Operating Voltage** | 12V DC | | | |
| **Current Draw**[3] | NSC[4]: 60 mA<br>Peak: 250 mA<br>Max. Avg: 70 mA<br>IPM[5]: 45 mA | NSC[4]: 65 mA<br>Peak: 250 mA<br>Max. Avg: 75 mA<br>IPM[5]: 48 mA | NSC[4]: 65 mA<br>Peak: 250 mA<br>Max. Avg: 75 mA<br>IPM[5]: 45 mA | NSC[4]: 70 mA<br>Peak: 250 mA<br>Max. Avg: 80 mA<br>IPM[5]: 55 mA |
| **Device Input and Output** | Input: Tri-color LED, Buzzer, Hold @ Active Low<br>Output: Tamper Relay 0-60V DC @ 100mA Max (Dry Contact) | | | |
| **Operating Temperature & Humidity** | -31° F to +150° F (-35° C to +66° C)<br>0% to 95% non-condensing | | | |
| **Storage Temperature** | -40° F to +185° F (-40° C to +85° C) | | | |
| **Environmental Rating** | UL294 Outdoor and Indoor rated, IP65 | | | |
| **Transmit Frequency** | 125 kHz, 13.56 MHz, and 2.4 GHz | | | |
| **Communications & Panel Connection** | Wiegand and RS-485 Half Duplex (OSDP) via Pigtail (18 in / 0.5 m) or Terminal Strip | | | |
| **Device Management** | HID Reader Manager / OSDP configuration | | | |
| **Certifications** | UL294/cUL (US), FCC (US), IC (Canada), CE (EU), RCM (Australia, New Zealand), SRRC (China), KCC (Korea), NCC (Taiwan), iDA (Singapore), RoHS, MIC (Japan), GreenCircle, Bluetooth SIG, and additional regions.<br>www.hidglobal.com/certifications | | | |
| **Security Ratings** | EAL 5+ Certified Secure Element Hardware | | | |
| **Patents** | www.hidglobal.com/patents | | | |
| **Housing Materials** | Polycarbonate – UL94 V0 | | | |
| **UL Reference Number** | 20 | 20K | 40 | 40K |
| **Warranty** | Limited Lifetime | | | |

1 Read range listed is statistical mean rounded to nearest centimeter increment for ID-1 or clamshell credentials. HID Global testing occurs in open air. Form factor, technology and environmental conditions, including metallic mounting surface, can degrade read range performance; plastic spacers are recommended to improve performance on metallic mounting surfaces.
2 Black trim baseplate & reader spacers available as an additional accessory at an additional cost.
3 Measured in accordance with UL294 standards; see Installation Guide for details.
4 NSC – Normal Standby Current; see Installation Guide for details.
5 Intelligent Power Management (IPM) – Reduces reader current consumption up to 43%, based on model, compared to standard operating mode.

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2020-05-20-pacs-signo-reader-family-ds-en PLT-04831

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Latin America: +52 55 9171 1108

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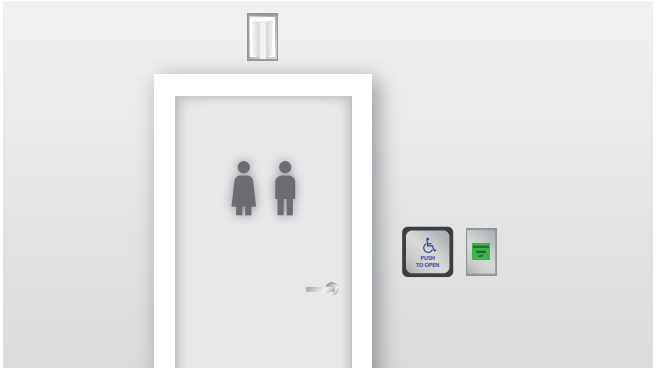
ASSA ABLOY

# BR3-X

## PROGRAMMABLE 3-RELAY LOGIC MODULE

### PRIMARY APPLICATIONS

1. BR3-X Receives Input
2. BR3-X Relay 1 Releases Maglock
3. BR3-X Relay 2 Activates Door



### DESCRIPTION

BEA's BR3-X provides both simple and advanced logic controls.

Functions include: timer, ratchet/latching, inhibitor, 2 relay sequencer + inhibitor, 2 relay sequencer + door position deactivation timer, 3 relay sequencer + "1-shot", 3 relay sequencer with "independent relay", interlock timer, interlock ratchet / latching, 2 way 2 relay sequence, normally locked restroom, normally unlocked restroom, 3 relay sequencer + "day / night mode".

Common uses for the Br3-X include automatic pedestrian doors, access control, industrial automation and single-occupancy restrooms.

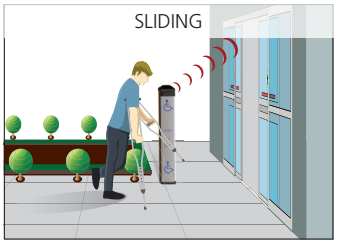
### FEATURES & BENEFITS

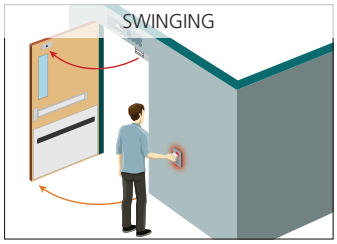
- Versatility with 13 programmable logic functions for the BR3-X
- Two-button programming combined with dual seven-segment display provides simple setup
- Two 3-AMP relays and one 1-AMP relay, all with built-in surge suppression, eliminates the need for external components when installing some electric locking devices
- WET output with AC / DC voltage for powering an electric locking device directly from the module

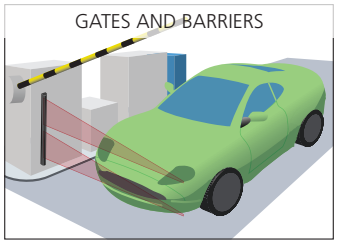
BEA, Inc.
RIDC Park West
100 Enterprise Drive
Pittsburgh, PA 15275-1213

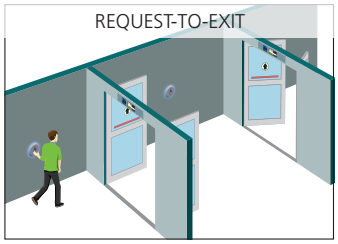
Customer Service: 800.523.2462
Technical Support: 800.407.4545
www.BEAinc.com

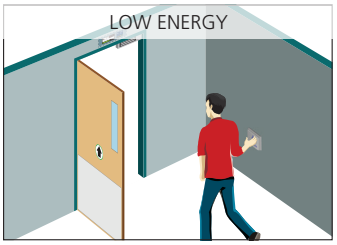
## APPLICATIONS

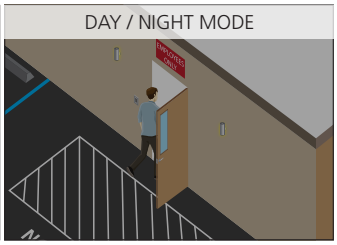





## FUNCTION DETAILS

| Br3-X FUNCTION | DESCRIPTION |
|---|---|
| **10** | Timer |
| **11** | Ratchet / Latching |
| **22** | 2 Relay Sequence + Inhibitor |
| **28** | 2 Relay Sequence + Door Position |
| **29** | Deactivation Timer |
| **36** | 3-Relay Sequencer + '1-shot' |
| **37** | 3-Relay Sequence with 'Independent Relay' |
| **50** | Interlock Timer |
| **55** | Interlock Ratchet / Latching |
| **65** | 2-Way, 2 Relay Sequence |
| **nL** | Normally Locked Restroom |
| **nU** | Normally Unlocked Restroom |
| **dn** | 3-Relay Sequencer + 'Day / Night mode' |
| **00** | Disable |

## TECHNICAL SPECIFICATIONS

| | |
|---|---|
| **Supply Voltage** | 12 – 24 VAC / VDC ±10% |
| **Power Consumption** | 30 – 130 mA; DRY Output |
| **Temperature Range** | –15 °F – 150 °F*<br>*If powered by AC voltage and using WET output to convert to DC voltage and current draw of device is greater than 0.9 A, the upper temperature range is 130 °F |
| **Dimensions** | 5.2 in (W) × 1.0 in (H) × 2.2 in (D) |
| **Relay Hold Time** | Up to 60 seconds per relay |
| **Delay Between Relays** | Up to 60 seconds per relay with ¼, ½ and ¾ second options |
| **Housing Material** | ABS Plastic |
| **Input Specification** | |
| Inputs 1, 2, 3, 4 | DRY contact |
| WET Input | 5 – 24 VAC / VDC ±10% |
| **Contact Rating** | |
| Relay 1 (DRY) | 3 A @ 24 VAC / 30 VDC |
| Relay 1 (WET) | 1 A |
| Relay 2 | 3 A @ 24 VAC / 30 VDC |
| Relay 3 | 1 A @ 24 VAC / 30 VDC |

## RELATED PRODUCTS

10BR3X
3-RELAY LOGIC MODULE

10RESTROOMKIT
RESTROOM KIT

10EMERGENCYKIT
EMERGENCY ADD-ON KIT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BEA, Inc.
RIDC Park West
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Pittsburgh, PA 15275-1213

Customer Service: 800.523.2462
Technical Support: 800.407.4545

# TS-18, TS-19, TS-20
## Under Desk Door Release

The TS-18, TS-19, and TS-20 are push button controlled under desk/counter door releases for remote control of doors and access controls. Ideal for front desk and reception or hard to wire areas that require discreet control of locking devices.

## Features

### Standard Features

- **TS-18** with momentary action switch
- **TS-19** with one N/O and one N/C momentary action switch, can be used with either provided switch
- **TS-20** with alternate action switch ; can be used with either provided switch
- Black ABS plastic box with two mounting ears
- Surface mounted push button protected with 1" guard ring
  - Depressing push button operates switch contacts

### Options

- **TS-18D** with DPDT switch
- **TS-20D** with DPDT switch

## Specifications

### Certifications & Listings

- UL 636 listed
- CSA certified components

### Electrical

- SPDT contacts rated 10A at 35 VDC
- **TS-18, TS-20** Switch terminated with 12" leads



www.alarmcontrols.com | 800.645.5538
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# STI STOPPER® STATION SERIES

## PRODUCT OVERVIEW

These ADA Compliant, multipurpose push button switches cover a wide range of applications both indoors and outdoors. They're called Stopper Stations. They incorporate a unique, patented design that helps dramatically to stop accidental activation. A number of standard models are available or we can create custom units to meet your needs exactly. You have your choice of any of five universal shell colors, several button styles, standard or custom wording and language.

## HOW THEY WORK

Because of their superior, patented design combined with quality construction throughout, you can expect outstanding performance for years to come. In fact, many STI customers are surprised to find that all this quality is available at no increase in price. Plus, customers appreciate the option to protect the switches with STI protective covers that carry a three year guarantee against breakage in normal use, one year on electro mechanical and electronic components. For indoor applications, you can order your Stopper Station with a pre-alarm cover to help stop malicious and accidental activation.

## KEY FEATURES

**General Information**

- Multipurpose push button switches cover a wide range of applications both indoors and outdoors.
- Three year guarantee against breakage of polycarbonate in normal use (one year on electro mechanical and electronic components).

**Design**

- Unique, curved design helps protect against accidental activation.

**Construction**

- Station housing molded of tough polycarbonate.
- UL Listed to U.S. and Canadian safety standards.
- Models used with LT-1UL Latching Timer Module are Listed for access control.
- Stainless steel backplate.
- Push buttons are ADA Compliant (excludes "3" key switch button).

**Installation**

- 5VA flammability rating on backplate and spacer.
- Typical working properties of polycarbonate are -40° to 250°F (-40° to 121°C).
- Polycarbonate complies with FDA regulations for food contact applications.

**Options**

- Your choice of colors — red, green, yellow, white or blue.
- Standard or custom text or hi-res logo.
- Custom text in any language.
- Protect with STI indoor/outdoor protective covers.

For more information, call 1-800-888-4784 (4STI) or visit www.sti-usa.com

Safety Technology International

# STI Stopper® Station Series

Dimensions and Technical Information

## UNIQUE BUTTON FEATURES

**Models SS2xy0, SS2xy1, SS2xy3, SS2xy4**

- Interchangeable or replaceable N.O. or N.C., SPST gold-plated contact blocks rated for 6 amps @ 600 VAC or 1 amp @ 250 VDC.
- Standard switch includes one N.O. and one N.C. contact. Holds up to three sets of isolated contacts.
- SS2xy0 and SS2xy1 rated for 6000 operations.
- SS2xy4 rated for 100,000 operations.

**Note:** some standard single gang boxes need additional depth. To add 5/8" depth, order KIT-102722-color (B=blue, G=green, R=red, Y=yellow, W=white, E=orange).

**Models SS2xy2, SS2xy5, SS2xy9**

- Two (2) Form "C" contacts, DPDT, rated 10 amps @ 125/250 VAC, 1/2 HP, 6 amps @ 30 VDC.
- 12-24VAC/VDC LED (LED red, green, and white).
- Over 100,000 operations.

**Model SS2xy6**

- Two (2) Form "C" contacts, DPDT, rated 10 amps @ 125/250 VAC, 1/2 HP, 6 amps @ 30 VDC.
- 12-24VAC/VDC LED
- 100,000 operations.

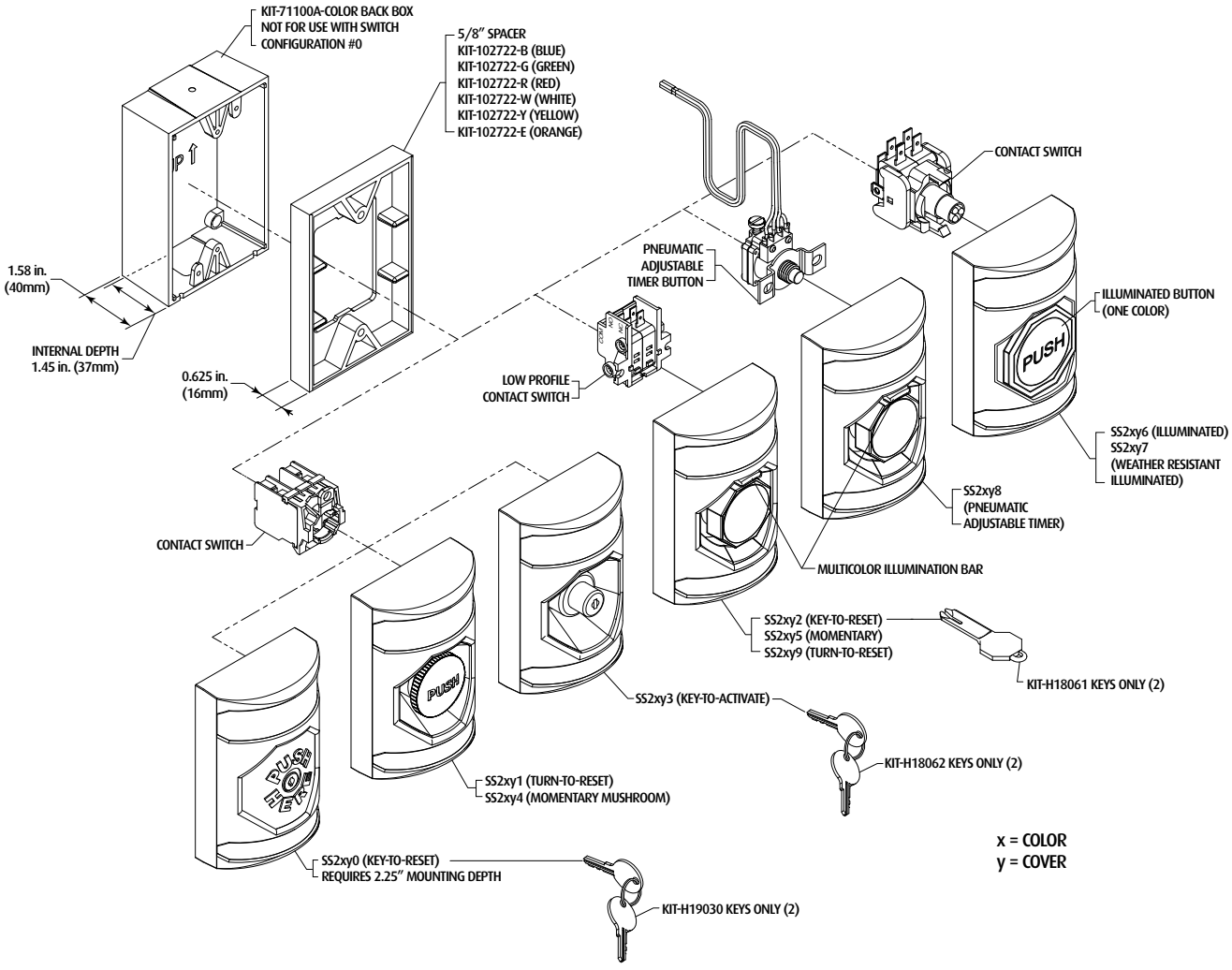
**Model SS2xy7**

- Two (2) Form "C" contacts, DPDT, rated 10 amps @ 125/250 VAC, 1/2 HP, 6 amps @ 30 VDC, -31°F to 150°F (-35°C to 66°C).
- 12-24VAC/VDC LED
- Weather resistant, suitable for indoor or outdoor use without a cover.
- 100,000 operations.

**Model SS2xy8**

- Switch rating 10 amps @ 240 VAC resistive and has a timer range: 2 - 60 seconds (± 15%).
- Indoor use only. Not recommended for outdoor/water applications, temperature range of button 15° to 120°F (-9° to +49°C).
- Timer life of over 1,000,000 operations.
- Pneumatic adjustable timer opens or closes a circuit and has a timed delay before reset. No electricity to operate.
- Ideal for security applications.
- 1 Form Z, 1 N.O. and 1 N.C. contact.

***Note:** x = color, y = cover, see page 4 for details.



# STI Stopper® Station Series

Dimensions and Technical Information

## APPROVALS & WARRANTY

**TESTING**

It has been tested and approved or listed by:

- UL/cUL File No. S7255
- Complies with UL 2017. UL Listed for indoor and outdoor use ("8" button indoor only, temperature range 15° to 120°F). When mounting outdoor, must use an STI weather cover.
- UL/cUL Type NM suitable for indoor or outdoor use without a cover (#7 button only)
- UL 294 (models used with LT-1UL)
- CSA C22.2 No. 205
- ADA Compliant (excludes "3" button)

**WARRANTY**

Three year guarantee against breakage of polycarbonate in normal use (one year on electro mechanical and electronic components).

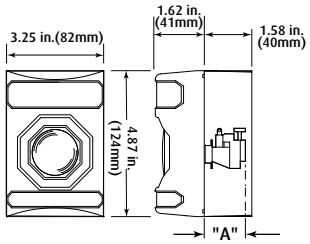
**Accessories**

| | |
|---|---|
| **LT-1UL** | UL Latching/Timer Module |
| **KIT-71100A-*** | Back box for 2, 5, 8 and 9 switch |
| **KIT-71101A-*** | Back box & Spacer Kit for 1, 3 or 4 switch |
| **KIT-E10196** | N.O. contact for 0, 1, 3 or 4 switch |
| **KIT-M10197H** | Replacement contact holder for 0, 1, 3 & 4 switch |
| **KIT-E10198** | N.C. contact for 0, 1, 3 or 4 switch |
| **KIT-102722-*** | Plastic Spacer - adds 5/8" depth |
| **KIT-H19030** | Two Extra Keys for 0 switch |
| **KIT-H18061** | Two Extra Keys for 2 switch |
| **KIT-H18062** | Two Extra Keys for 3 switch |

***** R=red, B=blue, G=green, Y=yellow, W=white, E=orange

| "A" - Contact Depth | |
|---|---|
| SS2xy0* | 2.16" |
| SS2xy1 | 2.04" |
| SS2xy2 | 1.00" |
| SS2xy3* | 2.13" |
| SS2xy4 | 2.04" |
| SS2xy5 | 1.00" |
| SS2xy6 | .875" |
| SS2xy7 | .875" |
| SS2xy8 | 1.4" |
| SS2xy9 | 1.00" |

* If extra depth needed in electrical box order KIT-102722-color.




## Covers to protect your STI Stopper Station from damage or weather and to help stop malicious or accidental activation.

**Stopper® Station Shield (Cover 2, A)**

This inexpensive and highly durable cover, with or without alarm, was invented to mount directly onto the Stopper Station series of buttons with two tabs that snap into the Stopper Station shell. It takes hard knocks in stride while protecting the button against vandalism, damage and accidental activation. Ideal for use when space is limited.

No labeling can be placed on the Stopper Station shield.

**Universal Stopper® (Covers 3, 4, 7, 8)**

This indoor/outdoor cover helps stop false fire alarms and can protect Stopper Stations against damage as well as malicious or accidental activation. It consists of a clear polycarbonate shield that fits easily over any STI Stopper Station model. When it is lifted to gain access to the Stopper Station, the optional piercing 105 dB warning horn sounds. Legitimate activation is not affected. The protective cover options include: dome or low profile, with or without horn, flush mount, surface mount.

Additional labeling may be placed on the Universal Stopper.

**Note:**

Stopper Station #7 button is UL/cUL Listed for outdoor use without a cover. All others are approved for outdoor use with an outdoor rated protective cover. Excludes pneumatic button.

# STI Stopper® Station Series

Dimensions and Technical Information

SS2 4 2 5 LD-EN

**COLOR**
0. Red
1. Green
2. Yellow
3. White
4. Blue
5. Orange

**COVER**
**Flush**
3. Universal Stopper, label shell*
4. Universal Stopper, horn*
**Surface**
7. Universal Stopper, label shell*
8. Universal Stopper, horn*
**Flush or Surface**
2. Shield
A. Shield with sound
0. No Cover

*Orange coming soon

**SWITCH CONFIGURATION**
2. Key-to-Reset (Illuminated Bar)
5. Momentary (Illuminated Bar)
9. Turn-to-Reset (Illuminated Bar)
8. Pneumatic (Illuminated Bar)
6. Momentary (Illuminated)
7. Weather Resistant Momentary (Illuminated)
0. Key-to-Reset*
1. Turn-to-Reset
3. Key-to-Activate
4. Momentary

*Not available in orange

**LANGUAGE**
EN = English
ES = Spanish
FR = French
ZL = Other Language

**TEXT**
AB = ABORT
EM = EMERGENCY
EX = EMERGENCY EXIT
PO = EMERGENCY POWER OFF
ES = EMERGENCY STOP
EV = EVACUATION
XT = EXIT
PS = FUEL PUMP SHUT-DOWN
HV = HVAC SHUT-DOWN
LD = LOCKDOWN
PX = PUSH TO EXIT
NT = No Text
ZA = Custom Text

**CUSTOMIZE YOUR TEXT** - text option ZA.

CUSTOM TEXT FOR TOP OF SHELL: 2 LINES, 20 CHARACTERS EACH (INCLUDES SPACES)

CUSTOM TEXT FOR BOTTOM OF SHELL: 1 LINE, 20 CHARACTERS (INCLUDES SPACES)

CUSTOM TEXT COVER 3, 4, 7, 8: 2 LINES, 40 CHARACTERS EACH (INCLUDES SPACES)

White text on blue, red and green; black text on yellow, white and orange.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# 2N® IP FORCE

## TOUGHEST IP INTERCOM IN THE WORLD

2N® IP Force is an extremely durable IP intercom that can withstand even the most demanding conditions. It provides for visitor communication monitoring and access control. Take advantage of its superior features for maximum site security.

- **Built for extreme conditions**
- **Professional night vision**
- **Clear sound in noisy environments**
- **Durable access control solution**
- **Wide-angle HD camera**
- **Easy integration into CCTV and VMS**

## VARIANTS

**1 button**

With HD camera 01337-001
Without camera 01336-001

**1 button, keypad**

01339-001
01338-001

**4 buttons**

01343-001
01342-001

**2 buttons, card reader ready**

01340-001
01341-001

**1 button, pictograms, card reader ready**

01334-001
01335-001

## TECHNICAL PARAMETERS

**Signalling protocol**

SIP (UDP, TCP, TLS)

**Button**

| | |
|---|---|
| Button design | Transparent, white backlit buttons with easily replaceable label |
| Count of buttons | 1, 2 or 4 |
| Numerical keypad | Optional |

**Audio**

| | |
|---|---|
| Microphone | 2 integrated microphones |
| Amplifier | 10 W (class D) |
| Speaker | 10 W |
| Volume control | Adjustable with automatic adaptive mode |
| Full duplex | Yes (AEC) |

**Audio stream**

| | |
|---|---|
| Protocols | RTP/RTSP |
| Codecs | G.711, G.722, G.729, L 16/16kHz |

**Camera HD**

| | |
|---|---|
| Sensor | 1/3'' colour CMOS |
| JPEG resolution | 1280 (H) x 960 (V) |
| Video resolution | 640 (H) × 480 (V) |
| Frame rate | Up to 30 snapshots/s |
| Sensor sensitivity | 5.6 V/lux-sec (550 nm) / 1.9 V/lux-sec (550 nm) |
| View angle | 135° (H), 109° (V) |
| Infrared light | Yes |

**Video stream**

| | |
|---|---|
| Protocols | RTP/RTSP/HTTP |
| Codecs | H.263, H.263+, H.264, MPEG-4, M-JPEG |
| IP camera function | Yes, ONVIF v2.4 profile S compatible |

**Interface**

| | |
|---|---|
| Power supply | 12 V / 2A DC or PoE |
| PoE | PoE 802.3af (Class 0 – 12,95 W) |
| LAN | 10/100BASE-TX with Auto-MDIX, RJ-45 |
| Recommended cabling | Cat-5e or higher |
| Passive switch | NO/NC contacts, max. 30 V/1A AC/DC |
| Active switch output | 9 up to 13 V DC depending on power supply, max. 700 mA |

**RFID card reader**

| | |
|---|---|
| Supported frequencies | 125kHz and 13.56MHz |
| 125 kHz | EM4100, EM4102, HID Proximity |
| 13.56 MHz | ISO14443A, ISO14443B, ISO15693, NFC support<br>reads UID (CSN)<br>reads PACs ID (iCLASS SIO-enabled cards)<br>- only secured cards |

**Mechanical properties**

| | |
|---|---|
| Mechanical properties | |
| Cover | Robust aluminium casting |
| Operating temperature | −40°F to 131 °F |
| Storage temperature | −40 °F to 158 °F |
| Operating relative humidity | 10 % – 95 % (non-condensing) |
| Dimensions | 8.543 x 4.291 x 3.268 inch<br>9.528 x 5.354 x 3.268 inch incl. frame |
| Weight | Netto max. 4.409 lb / brutto max. 5.511 lb |
| Covering level | IP69K and IK10 |

# SECURITY RELAY

The security relay is a simple accessory which we recommend using with each intercom and reader. It signifi cantly improves the security of the installation at minimum additional cost. It prevents doors from being opened with a 12V battery – a technique which allows burglars to open low-power locks if they reach the cables connecting the intercom/reader to the lock.

ORDER NUMBER:
9159010

## TECHNICAL SPECIFICATION

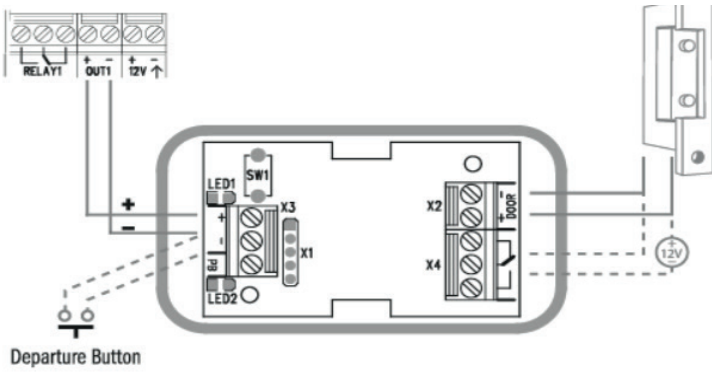
**Passive switch:** NO and NC contacts, up to 30 V / 1 A AC/DC

**Switched output:**

- Where the security relay is fed from the intercom, 9 to 13 V DC is available on the output depending on the power supply (PoE: 9 V; adapter: source voltage of minus 1 V) / 400 mA DC.
- Where the security relay is fed from an external power supply, 12 V / 700 mA DC is available on the output.

**Dimensions:** (56 x 31 x 24) mm

**Weight:** 20 g



# Cisco IP Phone 8865

Would you like to increase your personal productivity with an engaging experience that is powerful and easy-to-use? The business-class Cisco® IP Phone 8865 combines high-fidelity voice and entry to HD video communications with Cisco Intelligent Proximity for telephony integration with your personal mobile devices.

The IP Phone 8865 combines an attractive new ergonomic design with 720p HD video and wideband audio for crystal-clear voice communications, “always-on” reliability. Encrypted voice communications for enhanced security. And access to a comprehensive suite of unified communications features.

In addition, with Cisco Intelligent Proximity you can use your desk and mobile phones together when you are at your desk. During mobile calls you can move the audio path over to the 8865 for better acoustics. You then could share a conversation with a colleague who listens in. This capability gives you greater flexibility and a superior user experience when at your desk.

The 8865 comes standard with two USB ports so you can charge your personal mobile devices when at your desk and stay connected when away from your desk.

The IP Phone 8865 offers five programmable line keys. You can configure keys to support either multiple directory numbers or calling features such as speed dial. You can also boost productivity by handling multiple calls for each directory number using the multicall-per-line feature. Fixed-function keys give you one-touch access to applications, messaging, directory, as well as often-used calling features such as hold/resume, transfer, and conference. A five-way navigation cluster helps you transition through menus more easily. Backlit acoustic keys provide flexibility for audio path selection and switching.

Other key features of the phone include:

- The phone offers a 5-in. high-resolution (800 x 480) widescreen VGA backlit color display. Localized language support, including right-to-left on-screen text, meets the needs of global users.
- The phone offers a built-in Gigabit Ethernet switch for both network connection and your PC connection.
- The phone also supports campuses with 802.11a/b/g/n/ac wireless LAN (WLAN) enabled.
- An optional wall-mount kit is orderable as a spare part for customers who want this capability.

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## Features and Benefits

Table 1 lists features and benefits of the Cisco IP Phone 8865.

**Table 1.** Features and Benefits

| Features | Benefits |
|---|---|
| **Hardware Features** | |
| **Ergonomic design** | • The phone offers an easy-to-use interface and provides a traditional telephony-like user experience |
| **Graphical display** | • The 800 × 480, 24-bit color, 5-in. WVGA display provides scrollable access to calling features and text-based XML applications |
| **Video** | • 720p HD video (encode and decode)<br>• H.264 and Cisco Application Visibility and Control (AVC) |
| **Handset** | • The handset is a standard wideband-capable audio handset (connects through an RJ-9 port)<br>• The standard coiled cord has a custom end for concealed cable routing beneath the phone (cord length is approximately 21 in. [55 cm] coiled and up to 72 in. (183 cm) extended)<br>• The handset is hearing aid-compatible (HAC) and meets Federal Communications Commission (FCC) loudness requirements for the Americans with Disabilities Act (ADA). You can achieve Section 508 loudness requirements by using industry-standard inline handset amplifiers such as Walker Equipment W-10 or CE-100 amplifiers. The dial pad is also ADA-compliant |
| **Speakerphone** | • The full-duplex speakerphone gives you flexibility in placing and receiving calls with hands free. For added security, the audible dual tone multifrequency (DTMF) tones are masked when the speakerphone mode is used. |
| **Analog headset** | • The analog headset jack is a standard wideband-capable RJ-9 audio port |
| **AUX port** | • You can use an auxiliary port to support electronic hookswitch control with a third-party headset connected to it |
| **External audio ports** | • The phone has a 3.5-mm stereo line in/out jack (for optional external headset, speakers, or headphones) |
| **USB** | • Two USB ports enhance the usability of call handling by enabling wired or wireless headsets, in addition to providing charging capability to mobile devices such as smartphones or tablets<br>◦ A side USB port provides up to 500mA power output at 5V or 2.5W<br>◦ A back USB (in yellow) port provides 500mA power output and is upgradable to support up to 2.1A power output at 5V or 10.5W |
| **Ethernet switch** | • An internal 2-port Cisco Ethernet switch allows for a direct connection to a 10/100/1000BASE-T Ethernet network (IEEE 802.3i/802.3u/802.3ab) through an RJ-45 interface with single LAN connectivity for both the phone and a co-located PC<br>• The system administrator can designate separate VLANs (IEEE 802.1Q) for the PC and phone, providing improved security and reliability of voice and data traffic |
| **Bluetooth** | • The phone offers Bluetooth 4.1 LE, Enhanced Data Rate (EDR) Class 1 technology (up to 66-ft [20m] range)<br>• Hands-Free Profile (HFP) is supported for untethered headset connections and voice communications<br>• Phone Book Access Profile (PBAP) is supported for phone book object exchange between devices |
| **Wi-Fi client** | • As an alternative to wired Ethernet, the 8865 supports a Wi-Fi radio with integrated antenna enabling connectivity to a Wi-Fi access-point infrastructure, thereby saving on the labor costs of pulling Ethernet cables to every work location. Complete Wi-Fi specifications are included in Table 3 later in this document |
| **Keys** | • The phone has the following keys:<br>◦ Line keys<br>◦ Soft keys<br>◦ Back and release keys<br>◦ Four-way navigation and select keys<br>◦ Hold/Resume, Transfer, and Conference keys<br>◦ Messaging, Application, and Directory keys<br>◦ Standard keypad<br>◦ Volume-control toggle key<br>◦ Speakerphone, Headset, and Mute keys |
| **Backlit indicator** | • The phone supports backlit indicators for the audio path keys (Handset, Headset, and Speakerphone), select key, line keys, and message waiting |
| **Replaceable bezel** | • The phone includes a black bezel; an optional silver bezel is also orderable separately |

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| Features | Benefits |
|---|---|
| **Dual-position foot stand** | • The display is easy-to-view and the buttons and keys are easy-to-use. The two-position foot stand supports viewing angles of 35 and 50 degrees; you can remove the foot stand for wall mounting, with mounting holes located on the base of the phone |
| **Wall-mountable** | • You can install the phone on a wall using an optional wall-mount kit (orderable separately) |
| **Key expansion module (KEM)** | • The phone supports up to three KEMs to expand from 5- to 113-line buttons. You have the convenience of many speed dials or programmable features |
| **Physical security** | • The phone is compatible with the Kensington Security Slot (K-Slot) antitheft system |
| **Power Features** | |
| **IEEE Power over Ethernet (PoE)** | • IEEE Power over Ethernet class 4 is supported. The phone is compatible with IEEE 802.3af, 802.3at and UPOE switch blades and supports both Cisco Discovery Protocol and Link Layer Discovery Protocol - Power over Ethernet (LLDP-PoE) |
| **Cisco IP Phone Power Cube 4** | • This optional power cube is used as an AC-to-DC (48V) power supply for non-PoE deployments. Use of the power cube 4 also requires the use of one of the corresponding AC country cords |
| **Call-Control Support** | |
| **Cisco Unified Communications Manager** | • 8.5.1 (non-secured mode only)<br>• 8.6.2<br>• 9.1.2<br>• 10.5.2<br>• 11.0 and later |
| **Cisco Unified Communications Manager Express (Unified CME)** | • Planned to be supported in 11.5 |
| **Cisco Business Edition 6000 (BE 6000)** | • 8.6.2<br>• 9.1.2<br>• 10.5.2<br>• 11.0 and later |
| **Cisco Hosted Collaboration Solution (HCS)** | • 8.6.2 and later (using supported Cisco Unified UCM versions listed previously) |

## Licensing

The Cisco IP Phone 8865 requires an Enhanced User Connect License (UCL) in order to connect to Cisco Unified Communications Manager.

## Product Specifications

Table 2 lists the features and specifications of the IP Phone 8865.

**Table 2.** Features and Specifications of Cisco IP Phone 8865

| Features | Specifications |
|---|---|
| **Audio codec support** | • G.711 a-law and mu-law, G.722, G.729a, Internet Low Bitrate Codec (iLBC), and Internet Speech Audio Codec (iSAC) |
| **Key call features support** | • + Dialing<br>• Abbreviated dialing<br>• Adjustable ring tones and volume levels<br>• Adjustable display brightness<br>• Agent greeting<br>• Application launch pad<br>• Auto-answer<br>• Auto-detection of headset<br>• cBarge<br>• Busy Lamp Field (BLF)<br>• BLF Pickup<br>• BLF speed dial |

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| Features | Specifications |
| --- | --- |
| | • Callback<br>• Call forward<br>• Call forward notification<br>• Call filter<br>• Call history lists<br>• Call park<br>• Call pickup<br>• Call timer<br>• Call waiting<br>• Call chaperone<br>• Caller ID<br>• Corporate directory<br>• Conference, including traditional Join feature<br>• Cross Cluster Extension Mobility (EMCC)<br>• Direct transfer<br>• Extension mobility<br>• Fast-dial service<br>• Forced access codes and client matter codes<br>• Group call pickup<br>• Hold<br>• Intercom<br>• Immediate divert<br>• Malicious-caller ID<br>• Message-waiting indicator (MWI)<br>• Meet-me conference<br>• Mobility<br>• Music on hold (MoH)<br>• Mute<br>• Network profiles (automatic)<br>• On- and off-network distinctive ringing<br>• Personal directory<br>• PickUp<br>• Predialing before sending<br>• Privacy<br>• Private Line Automated Ringdown (PLAR)<br>• Redial<br>• Ring tone per line appearance<br>• Service URL<br>• Shared line<br>• Silent monitoring and recording<br>• Speed dial<br>• Time and date display<br>• Transfer<br>• Uniform Resource Identifier (URI) dialing<br>• Visual Voicemail<br>• Voicemail<br>• Whisper coaching |
| **Mobility and remote access** | You can deploy the phones remotely with the following two options:<br>• You can have your phone remotely registered to the on-premises network through a built-in VPN client if the administrator has provisioned this VPN feature<br>• You also can directly connect to the on-premises network without VPN through Cisco Expressway if you are provided with log-in credentials. Contact your system administrator |
| **Electronic hookswitch** | • You can control the hookswitch electronically with a third-party headset connected to either the USB or auxiliary port, or directly paired with the phone through Bluetooth |

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| Features | Specifications |
|---|---|
| **Cisco Intelligent Proximity** | • Audio path moving sends audio through the phone for a mobile device-connected call<br>• Call-history synchronization allows you to view placed and missed calls of your mobile device from the 8865<br>• Contact synchronization allows you to synchronize the contact objects from your mobile device to your 8865 |
| **Quality-of-service (QoS) options** | • The phone supports Cisco Discovery Protocol and 802.1Q/p standards, and you can configure it with an 801.1Q VLAN header containing the VLAN ID overrides configured by the Admin VLAN ID |
| **Network features** | • Session Initiation Protocol (SIP) for signaling<br>• Session Description Protocol (SDP)<br>• IPv4 and IPv6<br>• User Datagram Protocol (UDP) (used only for Real-Time Transport Protocol [RTP] streams)<br>• Dynamic Host Configuration Protocol (DHCP) client or static configuration<br>• Gratuitous Address Resolution Protocol (GARP)<br>• Domain Name System (DNS)<br>• Trivial File Transfer Protocol (TFTP)<br>• Secure HTTP (HTTPS)<br>• VLAN<br>• Real-Time Transport Protocol (RTP)<br>• Real-Time Control Protocol (RTCP)<br>• Cisco Peer-to-Peer Distribution Protocol (PPDP)<br>• Cisco Discovery Protocol<br>• LLDP (including LLDP Media Endpoint Discovery [LLDP-MED])<br>• Switch speed auto-negotiation |
| **Security features** | • Secure boot<br>• Secure credential storage<br>• Device authentication<br>• Configuration file authentication and encryption<br>• Image authentication<br>• Random bit generation<br>• Hardware cryptographic acceleration<br>• Certificate Authority Proxy Function (CAPF)<br>• Manufacturer-Installed Certificates (MIC)<br>• Locally Significant Certificates (LSC)<br>• Ethernet 802.1x supplicant options: Extensible Authentication Protocol-Flexible Authentication via Secure Tunneling (EAP-FAST) and Extensible Authentication Protocol-Transport Layer Security (EAP-TLS)<br>• Signaling authentication and encryption using TLS<br>• Media authentication and encryption using SRTP<br>• HTTPS for client and server<br>• Secure Shell (SSH) Protocol server<br>• Secure Sockets Layer (SSL)-based VPN client |
| **Physical dimensions (H × W × D)** | • 9.01 x 10.13 x 3.87 in. (228.78 x 257.34 x 98.39 mm) (excluding foot stand) |
| **Weight** | • 2.97 lb (1.35 kg) |
| **Phone-casing composition** | • Polycarbonate acrylonitrile butadiene styrene (ABS) textured plastic; Cosmetic class A |
| **Operating temperature** | • 32 to 104°F (0 to 40°C) |
| **Nonoperating temperature shock** | • 14 to 140°F (-10 to 60°C) |
| **Humidity** | • Operating 10 to 90%, noncondensing<br>• Nonoperating 10 to 95%, noncondensing |

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| Features | Specifications |
| --- | --- |
| **Language support** | • Arabic (Arabic Area)<br>• Bulgarian (Bulgaria)<br>• Catalan (Spain)<br>• Chinese (China)<br>• Chinese (Hong Kong)<br>• Chinese (Taiwan)<br>• Croatian (Croatia)<br>• Czech (Czech Republic)<br>• Danish (Denmark)<br>• Dutch (Netherlands)<br>• English (United Kingdom)<br>• Estonian (Estonia)<br>• French (Canada)<br>• French (France)<br>• Finnish (Finland)<br>• German (Germany)<br>• Greek (Greece)<br>• Hebrew (Israel)<br>• Hungarian (Hungary)<br>• Italian (Italy)<br>• Japanese (Japan)<br>• Latvian (Latvia)<br>• Lithuanian (Lithuania)<br>• Korean (Korea Republic)<br>• Norwegian (Norway)<br>• Polish (Poland)<br>• Portuguese (Portugal)<br>• Portuguese (Brazil)<br>• Romanian (Romania)<br>• Russian (Russian Federation)<br>• Spanish (Columbia)<br>• Spanish (Spain)<br>• Slovak (Slovakia)<br>• Swedish (Sweden)<br>• Serbian (Republic of Serbia)<br>• Serbian (Republic of Montenegro)<br>• Slovenian (Slovenia)<br>• Thai (Thailand)<br>• Turkish (Turkey) |
| **Certification and compliance** | • Regulatory compliance<br>◦ CE Markings per directives 2004/108/EC and 2006/95/EC<br>• Safety<br>◦ UL 60950 Second Edition<br>◦ CAN/CSA-C22.2 No. 60950 Second Edition<br>◦ EN 60950 Second Edition (including A11 and A12)<br>◦ IEC 60950 Second Edition (including A11 and A12)<br>◦ AS/NZS 60950<br>◦ GB4943<br>• EMC - Emissions<br>◦ 47CFR Part 15 (CFR 47) Class B<br>◦ AS/NZS CISPR22 Class B<br>◦ CISPR22: 2005 w/Amendment 1: 2005 Class B<br>◦ EN55022: 2006 w/Amendment 1: 2007 Class B<br>◦ ICES003 Class B<br>◦ VCCI Class B<br>◦ EN61000-3-2<br>◦ EN61000-3-3<br>◦ KN22 Class B |

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| Features | Specifications |
|---|---|
| | • EMC - Immunity<br>◦ EN55024<br>◦ CISPR24<br>◦ EN60601-1-2<br>◦ KN24<br>◦ Armadillo Light<br>• Telecom<br>◦ FCC Part 68 HAC<br>◦ CS-03-HAC<br>◦ AS/ACIF S004<br>◦ AS/ACIF S040<br>◦ NZ PTC 220<br>◦ Industry Standards: TIA 810 and TIA 920<br>◦ Industry Standards: IEEE 802.3 Ethernet, IEEE 802.3af and 802.3at<br>◦ Korea (RRA Public Notification 2010-36, Nov. 1, 2010)<br>◦ Korea (RRA Announce 2011-2, Feb. 28, 2011)<br>• Radio<br>◦ FCC Part 15.247 (CFR 47)<br>◦ FCC Part 2.1093 (BT RF Exposure TR)<br>◦ RSS-102 (BT RF Exposure TR)<br>◦ RSS-210<br>◦ EN 300.328<br>◦ EN50385 (BT RF Exposure TR)<br>◦ EN 301-489-1<br>◦ EN 301-489-17<br>◦ EN 301-893<br>◦ NCC LP0002<br>◦ Korea (RRL No. 2006-128, RRL No. 2006-129)<br>• Japan Bluetooth GFSK/EDR |

Table 3 gives the Wi-Fi features and specifications of the Cisco IP Phone 8865.

**Table 3.** Wi-Fi Features and Specifications

| Feature | Specifications |
|---|---|
| **Protocols** | IEEE 802.11a, 802.11b, 802.11g, 802.11n, and 802.11ac |
| **Frequency bands and operating channels** | • 2.412-2.472 GHz (channels 1-13)<br>• 5.180-5.240 GHz (channels 36-48)<br>• 5.260-5.320 GHz (channels 52-64)<br>• 5.500-5.700 GHz (channels 100-140)<br>• 5.745-5.825 GHz (channels 149-161)<br>IEEE 802.11d is used to identify available channels. |
| **Nonoverlapping channels** | • 2.4 GHz (20-MHz channels): Up to 3 channels<br>• 5 GHz (20-MHz channels): Up to 24 channels<br>• 5 GHz (40-MHz channels): Up to 9 channels<br>• 5 GHz (80-MHz channels): Up to 4 channels |
| **Operating modes** | • Auto (default), preference to strongest RSSI for 2.4 or 5 GHz<br>• 2.4 GHz only<br>• 5 GHz only |
| **Data rates** | • 802.11a: 6, 9, 12, 18, 24, 36, 48, and 54 Mbps<br>• 802.11b: 1, 2, 5.5, and 11 Mbps<br>• 802.11g: 6, 9, 12, 18, 24, 36, 48, and 54 Mbps<br>• 802.11n: HT MCS 0, MCS 1, MCS 2, MCS 3, MCS 4, MCS 5, MCS 6, and MCS 7<br>• 802.11ac: VHT MCS 0, MCS1, MCS 2, MCS 3, MCS 4, MCS 5, MCS 6, MCS 7, MCS 8, and MCS 9 (MCS 9 available with VHT40 and VHT80 only) |

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| Feature | Specifications | | |
|---|---|---|---|
| **2.4-GHz receiver sensitivity** | IEEE 802.11b:<br>• 1 Mbps: -98 dBm<br>• 2 Mbps: -96 dBm<br>• 5.5 Mbps: -93 dBm<br>• 11 Mbps: -91 dBm | IEEE 802.11g:<br>• 6 Mbps: -95 dBm<br>• 9 Mbps: -94 dBm<br>• 12 Mbps: -93 dBm<br>• 18 Mbps: -90 dBm<br>• 24 Mbps: -87 dBm<br>• 36 Mbps: -84 dBm<br>• 48 Mbps: -79 dBm<br>• 54 Mbps: -77 dBm | IEEE 802.11n HT20:<br>• MCS 0: -95 dBm<br>• MCS 1: -92 dBm<br>• MCS 2: -90 dBm<br>• MCS 3: -87 dBm<br>• MCS 4: -83 dBm<br>• MCS 5: -78 dBm<br>• MCS 6: -77 dBm<br>• MCS 7: -75 dBm |
| **5-GHz receiver sensitivity** | IEEE 802.11a:<br>• 6 Mbps: -94 dBm<br>• 9 Mbps: -93 dBm<br>• 12 Mbps: -92 dBm<br>• 18 Mbps: -89 dBm<br>• 24 Mbps: -86 dBm<br>• 36 Mbps: -83 dBm<br>• 48 Mbps: -78 dBm<br>• 54 Mbps: -76 dBm | IEEE 802.11n HT20:<br>• MCS 0: -94 dBm<br>• MCS 1: -91 dBm<br>• MCS 2: -89 dBm<br>• MCS 3: -86 dBm<br>• MCS 4: -82 dBm<br>• MCS 5: -77 dBm<br>• MCS 6: -76 dBm<br>• MCS 7: -74 dBm | IEEE 802.11n HT40:<br>• MCS 0: -91 dBm<br>• MCS 1: -88 dBm<br>• MCS 2: -86 dBm<br>• MCS 3: -83 dBm<br>• MCS 4: -79 dBm<br>• MCS 5: -75 dBm<br>• MCS 6: -73 dBm<br>• MCS 7: -72 dBm |
| | IEEE 802.11ac VHT20:<br>• MCS 0: -93 dBm<br>• MCS 1: -90 dBm<br>• MCS 2: -87 dBm<br>• MCS 3: -84 dBm<br>• MCS 4: -81 dBm<br>• MCS 5: -76 dBm<br>• MCS 6: -75 dBm<br>• MCS 7: -74 dBm<br>• MCS 8: -70 dBm | IEEE 802.11ac VHT40:<br>• MCS 0: -90 dBm<br>• MCS 1: -87 dBm<br>• MCS 2: -85 dBm<br>• MCS 3: -82 dBm<br>• MCS 4: -79 dBm<br>• MCS 5: -73 dBm<br>• MCS 6: -72 dBm<br>• MCS 7: -72 dBm<br>• MCS 8: -67dBm<br>• MCS 9: -66 dBm | IEEE 802.11ac VHT80:<br>• MCS 0: -87 dBm<br>• MCS 1: -83 dBm<br>• MCS 2: -81 dBm<br>• MCS 3: -78 dBm<br>• MCS 4: -75 dBm<br>• MCS 5: -73 dBm<br>• MCS 6: -68 dBm<br>• MCS 7: -68 dBm<br>• MCS 8: -64 dBm<br>• MCS 9: -62 dBm |
| **Transmitter output power** | 2.4 GHz:<br>• 802.11b: Up to 17 dBm<br>• 802.11g: Up to 16 dBm<br>• 802.11n HT20: Up to 13 dBm | 5 GHz:<br>• 802.11a: Up to 16 dBm<br>• 802.11n HT20: Up to 13 dBm<br>• 802.11n HT40: Up to 13 dBm<br>• 802.11ac VHT20: Up to 12 dBm<br>• 802.11ac VHT40: Up to 12 dBm<br>• 802.11ac VHT80: Up to 12 dBm | |
| **Antenna** | • 2.4 GHz: 2.08-dBi peak gain<br>• 5 GHz: 1.88-dBi peak gain | | |
| **Access-point support** | • Cisco Wireless Access Points<br>◦ Minimum: 7.0.240.0<br>◦ Recommended: 7.4.121.0, 7.6.110.0, or later<br>• Cisco Aironet Access Points in Autonomous Mode<br>◦ Minimum: 12.4(21a)JY<br>◦ Recommended: 12.4(25d)JA2 or later<br>• Cisco Meraki® access points | | |
| **Wireless security** | Authentication:<br>• Wi-Fi Protected Access (WPA) Versions 1 and 2 Personal and Enterprise<br>• EAP-FAST<br>• Protected Extensible Authentication Protocol - Microsoft Challenge Handshake Authentication Protocol Version 2 (PEAP-MSCHAPv2) | Encryption:<br>• 40- and 128-bit static Wired Equivalent Privacy (WEP)<br>• Temporal Key Integrity Protocol (TKIP) and Message Integrity Check (MIC)<br>• Advanced Encryption Standard (AES) | |

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| Feature | Specifications |
|---|---|
| **Fast secure roaming** | • 802.11r (FT)<br>• Cisco Centralized Key Management (CKM) |
| **QoS** | • IEEE 802.11e and Wi-Fi Multimedia (WMM)<br>• Traffic Specification (TSPEC)<br>• Traffic Classification (TCLAS)<br>• Enhanced Distributed Channel Access (EDCA)<br>• QoS Basic Service Set (QBSS) |
| **Radar detection** | Dynamic frequency selection (DFS) and transmit power control (TPC) according to IEEE 802.11h |

## Product Specifications

Table 4 gives ordering information for the phone and its accessories.

**Table 4.** Ordering Information

| Product Number | Description |
|---|---|
| **CP-8865-K9=** | Cisco IP Phone 8865, Charcoal |
| **CP-8865-W-K9=** | Cisco IP Phone 8865, White |
| **CP-DX-HS=** | Spare Handset for Cisco IP Phone 7800, 8800, DX600 Series, Charcoal |
| **CP-DX-CORD=** | Spare Handset Cord for Cisco IP Phone 8800, DX600 Series, Charcoal |
| **CP-8800-V-KEM =** | Key Expansion Module for Cisco IP Phone 8800 Series, Charcoal |
| **CP-8800-VIDEO-WMK=** | Spare Wallmount Kit for Cisco IP Phone 8800 Video Series |
| **CP-8800-FS=** | Spare Foot stand for Cisco IP Phone 8800 Series |
| **CP-8800-B-VID-BEZEL=** | Spare Black Bezel for Cisco IP Phone 8800 Video Series |
| **CP-8800-S-VID-BEZEL=** | Spare Silver Bezel for Cisco IP Phone 8800 Video Series |
| **CP-PWR-CUBE-4** | Cisco Power Cube 4 |
| **CP-PWR-CORD-AP=** | Power Cord Asia Pacific |
| **CP-PWR-CORD-AR=** | Power Cord Argentina |
| **CP-PWR-CORD-AU=** | Power Cord Australia |
| **CP-PWR-CORD-BZ=** | Power cord for Brazil |
| **CP-PWR-CORD-CE=** | Power Cord European |
| **CP-PWR-CORD-CN=** | Power Cord China |
| **CP-PWR-CORD-JP=** | Power Cord Japan |
| **CP-PWR-CORD-NA=** | Power Cord North America |
| **CP-PWR-CORD-SW=** | Power Cord Switzerland |
| **CP-PWR-CORD-UK=** | Power Cord United Kingdom |

## Warranty

The Cisco IP Phone 8865 phones are covered by a Cisco standard 1-year replacement warranty.

## Cisco Unified Communications Services

Cisco and our certified partners can help you set up a secure, dependable Cisco Unified Communications Solution, meeting aggressive deployment schedules and accelerating business advantage. Cisco's portfolio of services is based on proven methodologies for unifying voice, video, data, and mobile applications on fixed and mobile networks.

Our unique lifecycle approach to services defines what’s needed at each phase of the solution lifecycle. Customized planning and design services help you create a solution that meets your business needs.

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Award-winning technical support helps you boost your operational efficiency. Remote management services simplify day-to-day operations. And optimization services let you modify and improve your network solution when business needs change.

## Cisco Capital

**Flexible Payment Solutions to Help You Achieve Your Objectives**

Cisco Capital makes it easier to get the right technology to achieve your objectives, enable business transformation and help you stay competitive. We can help you reduce the total cost of ownership, conserve capital, and accelerate growth. In more than 100 countries, our flexible payment solutions can help you acquire hardware, software, services and complementary third-party equipment in easy, predictable payments. Learn more.

## More Information

For additional details about the Cisco IP Phone 8800 Series, please visit: https://www.cisco.com/go/ipphones/8800.

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Printed in USA C78-734731-06 10/18

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# Intrusion Detection

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**Washington**
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Kennewick, WA 99337
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F 509.955.2201

**Oregon**
13535 SW 72nd Ave. Ste. 140
Tigard, OR 97223
T 971.888.7801
F 971.888.7802

**Idaho**
3070 E Franklin Rd Ste. 301
Meridian, ID 83642
T 208.501.0030
F 208.501.0031

# B9512G Control Panels

www.boschsecurity.com

BOSCH
Invented for life

- Fully integrated intrusion, fire, and access control allows users to interface with one system instead of three
- Provides up to 599 points using a combination of hardwired or wireless devices for installation flexibility, and up to 32 areas and 32 doors for up to 2,000 users
- On-board Ethernet port for Conettix IP alarm communication and remote programming, compatible with modern IP networks including IPv6/IPv4, Auto-IP, and Universal Plug and Play
- Installer-friendly features for simple installation and communications, including plug-in PSTN and cellular communication modules
- Remote Security Control app which allows users to control their security systems - and view system cameras - remotely from mobile devices such as phones and tablets

The B9512G Control Panel and the B8512G Control Panel are the new premier commercial control panels from Bosch. B9512G control panels integrate intrusion, fire, and access control providing one simple user interface for all systems.
With the ability to adapt to large and small applications, the B9512G provides up to 599 individually identified points that can be split into 32 areas.
The control panel can communicate through its built-in Ethernet port (not applicable to “E” control panels), or through compatible plug-in modules that can send events over the public switched telephone network (PSTN) or over cellular network communications.
For users, programmable keypad shortcuts, situation sensitive on-screen help, and a bilingual user interface make system operation simple and easy.
With the B9512G Control Panel, you can:

- Monitor alarm points for intruder, gas, or fire alarms.
- Program all system functions local or remote using Remote Programming Software (RPS) or the Installer Services Portal programming tool (available in Europe, Middle East, Africa, and China) or by using basic programming through the keypad.
- Add up to 32 doors of access control using the optional B901 Access Control Module. Optionally use the D9210C Access Control Interface Module for up to eight of the 32 doors.

The B9512G is a direct replacement for previous control panel models D9412GV4, D9412GV3, D9412GV2, and D9412G.

## Functions

**Programmable outputs**

- Four alarm-output patterns
- Programmable bell test

**Point response**
- Selectable point response time
- Selectable EOL values and configuration
- Cross point capability
- Fire alarm verification
- Dangerous gas indicator includes carbon monoxide (NFPA 720)
- Watch mode
- 63 point profiles

**User interface**
- Supervision of up to 32 keypads
- Custom keypad text is fully programmable through RPS or the Installer Services Portal programming tool (available in Europe, Middle East, Africa, and China)
- Full function menu including customizable shortcuts
- Authority by area and 32 character name for each user
- 14 custom authority levels to restrict system features that each user can access
- Programmable primary and secondary language by user and keypad
- 9 available languages

**User interface languages**
The following table shows the available languages per keypad type.

| | B915/ B915I | B920 | B921C | B930 | B942/ B942 W |
|---|---|---|---|---|---|
| English | ✔ | ✔ | ✔ | ✔ | ✔ |
| Chinese | ✔ | | | | ✔ |
| French | ✔ | ✔ | ✔ | ✔ | ✔ |
| Greek | ✔ | | | | ✔ |
| Hungarian | ✔ | ✔ | ✔ | ✔ | ✔ |
| Italian | ✔ | ✔ | ✔ | ✔ | ✔ |
| Polish | ✔ | | | | ✔ |
| Portuguese | ✔ | ✔ | ✔ | ✔ | ✔ |
| Spanish | ✔ | ✔ | ✔ | ✔ | ✔ |

**Area configurations**
Link multiple areas to a shared area such as a lobby or common entryway. The shared area then automatically turns On (arms) when all associate areas are armed and turns Off (disarms) when any one associate area is disarmed. For higher security applications, the Area Re-Arm feature guarantees that areas are always rearmed, and are disarmed for no longer than a specific, configurable, amount of time (for example, service time).

**Custom functions**
For added convenience, the installer can program custom functions that allow customers to complete complex tasks with one simple action. For example, a custom function can bypass a group of points and arm the system, allowing the user to perform these functions with one easy command. Users can activate custom functions with a keypad, keyfob, token, or card, or the control panel can activate a function in reaction to a faulted point, or automatically through a scheduled event (SKED).

**Passcode security**
- Two-man rule. Requires two people with two unique passcodes to be present at the time of opening.
- Early ambush. Allows users to verify that the facility is safe by requiring two passcodes. The control panel sends a duress event if the user does not enter the passcode a second time after inspecting the premises.
- Dual authentication. Requires two forms of identification before processing certain system commands, including turning off the system and opening doors. A standard system user must have a passcode, a credential (token or card), and appropriate command authority permissions.

**Door control**
Using the B901 Access Control Module or D9210C Access Control Interface Module, the control panel provides a fully supervised access control solution. The solution offers 14 programmable levels of access authority. Authority for door access is controlled by the user level, the group of the user, the time of day, the door state, and the area armed (On/Off) state.

**Easy exit control**
The control panel changes from one On (armed) state to another without turning off (disarming) the system. For example, if you change the state from Part On (Perimeter Arm) to All On (Master Arm), the control panel complies and reports the change. Easy exit control reduces the number of keystrokes, simplifying system operation.

**Programmable passcode-controlled menu list**
Passcode-controlled shortcuts provide users only with the options and information pertinent to them, simplifying system operation.

**Flexible control**
The system provides the flexibility to choose added convenience or high security. For example, you can restrict to a keypad's immediate local area turning on (arming) and turning off (disarming) the system with a passcode, even if the user has access to other areas. This is particularly useful for high security areas, where a user may have access to the area, but would prefer to only turn off (disarm) the area individually rather than with the rest of the system.

**Monitor Delay/Delayed Response**
Create a special point profile that delays the reaction of a point for a specified time (up to 1 hour in minutes and seconds). This delay provides time for the specified condition to reset before activating any annunciation. The system can annunciate locally and send a report, if desired. When the system is armed, the point can respond like a normal point - providing

dual functionality. Use this feature to ensure that perimeter doors have not been propped open, or to monitor critical areas such as computer rooms and safes, for example.

**System users**
The system supports up to 2,000 users. Each user can have a personalized passcode, a wireless keyfob, and an access credential to control the system. You can assign passcodes to one of 14 customized authority levels in each area that can be restricted to operate only during certain times. You can program a primary and secondary language for each user and by keypad (select from English, Chinese, French, Greek, Hungarian, Italian, Polish, Portuguese, and Spanish). The keypad changes to the user's programmed language when the user enters his passcode or holds the Help key.

**Communication formats**
The control panel prioritizes and sends reports to four route groups. Network and phone communications can use either Modem4 or Contact ID communication format. Each group has a programmable primary and backup destination.
The control panel provides flexible communications for most central stations with reporting capabilities such as:
- Individual point numbers
- Opening or closing reports by user and area number
- Remote programming attempts
- Diagnostic reports

**Notice**
For premises equipment used in the communication path, such as routers, use only UL listed equipment.

**IP communication**
The control panel can use IP to communicate with a Conettix D6600 or a Conettix D6100IPv6 Communications Receiver/Gateway. Use one of the following for IP:
- The on-board Ethernet connection (not applicable to "E" control panels)
- Ethernet Communication Module: B426
- Plug-in cellular communicator: B442/B443/B444

Conettix IP communication provides a secure path that includes anti-replay/anti-substitution features, and enhanced security with up to AES 256-bit encryption (using Cipher Block Chaining (CBC)).
The control panel supports Domain Name System (DNS) for both remote programming and central station communication. DNS provides ease of use, eliminating the need to use static IP addresses as your reporting destination, and accommodates a simple solution for central station disaster recovery. The control panel supports both IPv6 and IPv4 networks.

**Communication paths**
The control panel accommodates up to four separate phone and four separate network paths to the central station receiver. When resetting alarms or turning a system on and off, the user is identified by name and number.

**Personal notification**
The control panel can send text messages and emails for personal notification over Ethernet or using a cellular communicator. You can configure up to 32 destinations using a combination of cellular phone numbers and email addresses. The control panel sends notifications in the user's programmed primary language.

**Bosch Remote Connect (Cloud)**
Remote Connect simplifies connections from RPS, and the Remote Security Control app, using Bosch Cloud services. This service creates a secure connection to the control panel without specific router settings or the need for a static IP address or DNS.

**Notice**
The Bosch Remote Connect service is not available in Europe, the Middle East, or Africa.

**Firmware updates**
Remote firmware updates are available.

**A wide variety of input options**
Each point:
- Single 1 kΩ, single 2 kΩ, dual 1 kΩ (1 kΩ + 1 kΩ), and No EOL (end-of-line) (EOL) resistor options (for on-board and B208 inputs)
- Programmable for Fire, Intrusion, Access, Gas, and Supervisory devices
- Supports hardwired and wireless devices
- Supports IP cameras by Bosch as point and output devices

**IP camera support**
The control panel can integrate directly with Bosch IP cameras, using them as fully supervised points and outputs.
Integration of cameras allows the camera's video motion detection to activate points on the control panel. The control panel's virtual outputs can be configured to trigger camera actions, including sending video snapshots via email.

**Security and fire detection**
The control panel provides eight on-board points, and up to 591 additional off-board points (depending on model and expansion interfaces). You can program individual points to monitor some types of burglar alarms, fire alarms, and supervision devices.

**Event log**
The event log stores up to 10192 local and reported events. The event log includes time, date, event, area, point, and user. View the event log from a keypad or use RPS or the Installer Services Portal programming

tool (available in Europe, Middle East, Africa, and China) to remotely retrieve event information. When the event log reaches a programmed threshold of stored events, it can send an optional report to a receiver.

**Scheduled events (SKEDs)**
The internal clock and calendar start individually scheduled events (SKEDs). SKEDs perform several functions such as turn on or off, relay control, or point bypassing.
The control panel offers:
- 80 scheduled events with up to 31 different functions
- 32 opening windows and 32 closing windows
- 32 user group windows
- Day-of-week, date-of-month, or holiday only schedules
- 8 holiday schedules of 366 days (leap year)

**Dual bus and SDI keypad retrofits**
The dual SDI2 device bus design provides greater installation flexibility, such as bus isolation for Intrusion and Fire. To use popular SDI keypads (for example D1255 and D1260), program one of the two SDI2 buses for SDI operation.

**ZONEX and POPEX retrofits**
To retrofit legacy Bosch control panels that use ZONEX and POPEX devices, the control panel is compatible with the B600 Retrofit (ZONEX) Module. The B600 adds two ZONEX buses to the control panel which can connect to existing legacy point bus (POPEX) devices (for example, the D8125).

**Programming**
Installers can perform limited programming on-site with a keypad (critical parameters; such as account IDs, central station and RPS IP addresses and phone numbers, reporting formats, and more). They can also do full programming on-site or remotely (attended or unattended) with RPS. A programmable system passcode prevents unauthorized remote programming. Full programming is also possible with the web-based Installer Services Portal programming tool. The Installer Services Portal programming tool is available for panel firmware version 3.06 or higher.

**Notice**
The Installer Services Portal programming tool is available in Europe, Middle East, Africa, and China.

The following table shows the available languages for RPS and Installer Services Portal programming tool.

| | Installer Services Portal programming tool | RPS programming | RPS custom text* |
|---|---|---|---|
| English | ✔ | ✔ | ✔ |
| Chinese | ✔ | | |
| French | ✔ | | ✔ |
| Greek | ✔ | | |
| Hungarian | ✔ | | ✔ |
| Italian | ✔ | | ✔ |
| Polish | ✔ | | |
| Portuguese | ✔ | | ✔ |
| Spanish | ✔ | | ✔ |

* RPS custom text is text, that can be entered in RPS and which will then be displayed on keypads and on the Remote Security Control app.

**Diagnostics**
Keypads, RPS and the Installer Services Portal programming tool (available in Europe, Middle East, Africa, and China) offer diagnostic help for monitoring and troubleshooting. The diagnostics features allow you to view the status of the wired and wireless devices. The features provide the status of the control panel and its connected devices, such as firmware version, power, and missing conditions. View the status of each area.

**Remote Security Control app**
The Remote Security Control app allows users to control their security systems remotely from their devices. Users can:
- Turn their security system On or Off
- Turn specific areas On or Off
- Control outputs for applications such as lighting control
- View live video from Bosch IP cameras
- Grant access remotely by unlocking and locking doors

The app requires the installing dealer to create a Remote Access Profile for users, and to install the profile on their devices.

**Bosch Video Management System integration**
With Bosch Video Management System (Bosch VMS) and an intrusion system, the VMS operator has a single user interface to monitor and control the intrusion system combined with video surveillance. With Bosch VMS and a control panel, the operator can, for example:
- View videos triggered by intrusion events, including all relevant information such as areas, point, and user show in the display with the event.
- View areas, points, outputs, and doors - with their statuses - on the Bosch VMS map, providing the exact location in the system.
- Turn on (arm) and turn off (disarm) areas.
- Bypass and unbypass points.
- Lock and unlock doors (Bosch VMS 6.0 and higher).

Requirements to integrate Bosch VMS with a control panel:

- A licensed Bosch VMS system using Professional Editions v5.5 or higher or Bosch VMS Enterprise Edition v5.5 or higher.
- Expansion license to integrate the intrusion control panel. One license needed per control panel. Order number MBX-XINT-xx for the expansion license added to a Bosch VMS base license. Refer to the Bosch Video Management Software product page on the Bosch website, www.boschsecurity.com.
- Access to the control panel account and Remote Programming Software (RPS) and the Installer Services Portal programming tool (available in Europe, Middle East, Africa, and China).

## Certifications and approvals

| Region | Regulatory compliance/quality marks | |
|---|---|---|
| USA | ANSI-SIA | CP-01-2010-Control Panel Standard - Features for False Alarm Reduction |
| Australia | RCM | [B9512G] |
| | RCM | [B8512G] |
| | RCM | ACMA |
| Europe | CE | EMC, LVD, RoHS [B9512G, B9512G-E, B8512G, B8512G-E] |
| USA | UL | [B9512G, B9512G-E, B8512G, B8512G-E, B299, B600, B901, B925F, B926F] |
| | UL | UL 294 - Standard for Access Control Units and Systems |
| | UL | UL 365 - Police Station Connected Burglar Alarm Units |
| | UL | UL 609 - Standard for Local Burglar Alarm Units and Systems |
| | UL | UL 636 - Holdup Alarm Units and Systems |
| | UL | UL 864 - Standard for Control Units and Accessories for Fire Alarm Systems |
| | UL | UL 985 - Household Fire Warning System Units |
| | UL | UL 1023 - Household Burglar Alarm System Units |
| | UL | UL 1076 - Proprietary Burglar Alarm Units and Systems |
| | UL | UL 1610 - Central Station Burglar Alarm Units |
| | UL | UL 1635 - Standard for Digital Alarm Communicator System Units |
| | FM | Central Station |
| | FM | Local Protective Signaling |
| | FM | Remote Station |
| | CSFM | California State Fire Marshal (see our website) |
| | FCC | Part 15 Class B |
| | FDNY-CoA | Fire Department of New York City [B9512G, B9512G-E, B8512G, B8512G-E] |
| Canada | ULC | [B9512G, B9512G-E, B8512G, B8512G-E, B299, B600, B901, B925F, B926F] |
| | ULC | CAN/ULC S303 - Local Burglar Alarm Units and Systems |
| | ULC | CAN/ULC S304 - Standard for Signal Receiving Center and Premise Burglar Alarm |
| | ULC | CAN/ULC S545 - Residential Fire Warning System Control Units |
| | ULC | CAN/ULC S559 - Fire Signal Receiving Centres and Systems |
| | ULC | ULC-ORD C1023 - Household Burglar Alarm System Units |
| | ULC | ULC-ORD C1076 - Proprietary Burglar Alarm Units and Systems |
| | IC | ICES-003 - Information Technology Equipment (ITE) |
| Brazil | ANATEL | 04450-16-01855 [B9512G, B8512G when used with B430 or B442] |

## Installation/configuration notes

**Notice**
Not all products and features are available in all regions. Consult your local Bosch representative for availability details.

### Compatible products

#### Keypads

B942/B942W Touch Screen Keypad (SDI2)

B930 ATM Style Alphanumeric Keypad (SDI2)

B926F Fire Keypad (SDI2)

B925F Fire Keypad (SDI2)

B921C Two-line Capacitive Keypad (SDI2)

B920 Two-line Alphanumeric Keypad (SDI2)

B915/B915I Basic Keypad (SDI2)

D1255 Series Keypads

D1260 Series Keypads

D1256RB Fire Keypad

D1257RB Remote Fire Alarm Annunciator

#### Power

D1640 16.5 VAC 40 VA Transformer

DE-45-18 Transformer

D126 Standby Battery (12 V, 7 Ah)

D1218 Battery (12 V, 18 Ah)

D122 Dual Battery Harness

D122L Dual Battery Harness with Long Leads

**Enclosures**

B8103 Universal Enclosure (White)

D8103 Universal Enclosure (Gray)

D8108A Attack Resistant Enclosure

D8108A-CE Attack Resistant Enclosure with Built-in Transformer

D8109 Fire Enclosure

**Accessories**

B56 Keypad Surface Mount Box

B96 Keypad Trim Bezel

B99 USB Direct Connect Cable

B501-10 Interconnect wiring cables (pack of 10)

D161 Dual Modular Telephone Cord (7 f)

D162 Modular Telephone Cord (2 ft)

D166 Telephone Jack (RJ31X)

**Detectors**

D7050 Series Addressable Photoelectric Smoke and Smoke Heat Detector Heads

F220-B6PM/S 12/24 VDC Addressable Detector Bases with POPITs

F220-B6 12/24 VDC Two-wire Base

F220-B6R Standard 12/24 VDC Four-wire Base)

F220-P Photoelectric Smoke Detector

F220-PTH Photoelectric Smoke Detector with +135°F (+57°C) Heat Sensor

F220-PTH Photoelectric Smoke Detector with +135°F (+57°C) Heat Sensor and Carbon Monoxide Sensors

F220-B6C 12/24 VDC Four-wire Base with Auxiliary Form C Relay

FCC-380 Carbon Monoxide Detector

FCH-T320 Heat Detector

FCP-OT320 Multisensor Detector Optical/Thermal

FCP-O320 Optical Smoke Detector

MX775i Addressable PIR Detector

MX794i Long Range Multiplex PIR Detector

MX934i Addressable PIR Detector

MX938i Addressable PIR Detector

ZX776Z PIR Detector

ZX794Z Long Range PIR Detector

ZX835 TriTech Microwave/PIR Detector

ZX935Z PIR Detector

ZX938Z PIR Detector

ZX970 PIR/Microwave Detector

Bosch conventional detectors, including Professional Series, Blue Line Gen2, Blue Line, Classic Line, Commercial Line, and Ceiling Mount motion detectors, as well as glass break, seismic, request-to-exit, photoelectric, heat, and smoke detectors.

**Modules**

B208 Octo-input Module

B299 POPEX Module

B308 Octo-output Module

B426 Conettix Ethernet Communication Module

B430 Plug-in Telephone Communicator

B442 Conettix Plug-in Cellular Communicator (using GPRS)

B443 Conettix Plug-in Cellular Communicator (using HSPA+)

B444 Conettix Plug-in Cellular Communicator

B450 Conettix Plug-in Communicator Interface

B520 Auxiliary Power Supply Module

B600 Retrofit (ZONEX) Module

B810 wireless receiver (RADION)

B820 SDI2 Inovonics Interface Module

B901 Access Control Module

D113 Battery Lead Supervision Module

D125B Dual Class B Initiating Module

D126 Standby Battery (12 V, 7 Ah)

D129 Class A Initiating Module

D130 Auxiliary Relay Module

D132A Smoke Detector Reversing Relay Module

D133 Single Relay Module

D134 Dual Relay Module

D185 Reverse Polarity Signaling Module

D192G Class “B”, Style Y Bell Circuit Supervision

D1218 Battery (12 V, 18 Ah)

D8125 Addressable Expansion Module

D8125MUX Multiplex Bus Interface

D8128D OctoPOPIT Eight-point Expander

D8129 Octo-relay Module

D8130 Door Release Module

D9127U/T POPIT Module

DS7461i Single-zone Input Module

DS7465i Input-output Module

D9210C Access Control Interface Module

ICP-EZTS Cover and Wall Tamper Switch

ICP-SDI-9114 SDI Splitter

**Applications**

Remote Programming Software (RPS or RPS-LITE) v6.03 and higher

Installer Services Portal programming tool

Bosch Video Management System v5.5 and higher

Remote Security Control

**Conettix receivers**
(Managed and configured with Conettix D6200 Programming/ Administration Software v2.10)

Conettix D6600 Communications Receiver/Gateway (with only D6641 line cards installed) with CPU version 01.10.00

Conettix D6100IPv6 Communications Receiver/Gateway with CPU version 61.10.00

Conettix D6100i Communications Receiver/Gateway with CPU version 61.10.00

**RADION wireless from Bosch**

B810 wireless receiver (RADION)

RFBT-A/RFBT bill trap

RFDL-11-A/RFDL-11 TriTech motion detector

RFDW-RM-A/RFDW-RM recessed mount door/window contact

RFDW-SM-A/RFDW-SM surface mount door/window contact

RFGB-A/RFGB glass break detector

RFKF-A/RFKF two-button keyfob

RFKF-FBS-A/RFKF-FBS four-button keyfob

RFKF-TBS-A/RFKF-TBS two-button keyfob

RFPB-SB-A/ RFPB-SB single-button panic

RFPB-TB-A/RFPB-TB two-button panic

RFRP-A/RFRP repeater

RFSM-A/RFSM smoke detector

RFPR-12-A/RFPR-12 PIR motion detector

RFPR-C12-A/RFPR-C12 PIR curtain motion detector

RFUN-A/RFUN universal transmitter

**Inovonics Wireless**

B820 SDI2 Inovonics Interface Module

ENKIT-SDI2 SDI2 Inovonics Interface and Receiver Kit. Includes B820 and EN4200

EN1210 Universal Transmitter (Single-input)

EN1210EOL Universal Transmitter with EOL Resistor

EN1210W Door-Window Transmitter with Reed Switch

EN1215EOL Universal Transmitter with Wall Tamper, Reed Switch, and EOL Resistor

EN1223D Water-resistant Pendant Transmitter (Double-button)

EN1223S Water-resistant Pendant Transmitter (Single-button)

EN1224-ON Multiple-Condition Pendant Transmitter

EN1233D Necklace Pendant Transmitter (Double-button)

EN1233S Necklace Pendant Transmitter (Single-button)

EN1235D Beltclip Pendant Transmitter (Double-button)

EN1235DF Fixed-location Transmitter (Double-button)

EN1235S Beltclip Pendant Transmitter (Single-button)

EN1235SF Fixed-location Transmitter (Single-button)

EN1247 Glass-break Detector Transmitter

EN1249 Bill Trap Transmitter

EN1242 Smoke Detector Transmitter

EN1260 Wall Mount Motion Detector

EN1261HT High Traffic Motion Detector

EN1262 Motion Detector with Pet Immunity

EN1265 360° Ceiling Mount Motion Detector

EN4200 Serial Receiver

EN5040-T High Power Repeater with Transformer

## Technical specifications

### Properties

| | |
|---|---|
| Dimensions | 10.625 in x 7.75in x 1.875 in (26.99 x 19.69 x 4.76 cm) |
| Weight | 1.95 lbs (0.88 kg) |

### Communications

| | |
|---|---|
| Ethernet | 10/100 full duplex (N/A for “E” control panels) |

| Environmental considerations | |
|---|---|
| Relative humidity | 5% to 93% at +32°C (+90°F) |
| Temperature (operating) | 0°C to +49°C (+32°F to +120°F) |

| Power requirements | |
|---|---|
| Current (maximum) | Standby: 180 mA<br>Alarm: 260 mA |
| Output (alarm) | 2 A at 12 VDC |
| Output (auxiliary, continuous power, and switched auxiliary combined) | 1.4 A at 12 VDC nominal |
| Voltage (operating) | 12 VDC nominal |
| Voltage (AC) | 16.5 - 18 VAC |

| Wiring | |
|---|---|
| Terminal wire size | 12 AWG to 22 AWG (2.0 mm to 0.65 mm) |
| SDI2 wiring | Maximum distance – Wire size (unshielded wire only): 7,500 ft (2,286 m) - 22 AWG (0.65 mm) |

| Number of... | |
|---|---|
| Areas | 32 |
| Custom functions | 32 |
| Keypads | 32 keypads, including 16 SDI keypads |
| Events | Up to 10,192 |
| Passcode users | 2000, plus 1 installer passcode |
| Points | 599 (8 on-board, up to 591 off-board and virtual) |
| Programmable outputs | 599 (3 on-board, up to 596 off-board and virtual) |
| RF points | 504 |
| IP cameras | 16 |
| SKEDs | 80 |

## Ordering information

**B9512G IP control panel, 32 areas, 599 points**
Supports up to 599 points, 3 on-board outputs, and 32 areas for intrusion, commercial fire. On-board Ethernet.
Order number **B9512G**

**B9512G-E Control panel 32 areas 599 points, no IP**
The B9512G-E is available only in kits.
Order number **B9512G-E**

**B901 Door Controller**
Fully supervised, addressable SDI2/SDI bus device that allows access control integration for Bosch G and B Series Control Panels.
Order number **B901**

**D1640-CA 16VAC 40VA xfmr Canada**
For use in Canada. System transformer rated at 16.5 VAC, 40 VA.
Order number **D1640-CA**

**Accessories**

**B520 Auxiliary power supply module, 2A 12V**
Provides auxiliary power to 12 VDC devices or to SDI2 modules.
Order number **B520**

**B208 SDI2 8-Input Expansion Module**
Provides 8 programmable inputs.
Order number **B208**

**B308 SDI2 8-Output Expansion Module**
Provides 8 programmable relays.
Order number **B308**

**B810 Wireless SDI2 bus interface**
Receives RF signals from RADION transmitters, repeaters, and glassbreaks. Operates at 433.42 MHz. For use with compatible SDI2 bus control panels.
Order number **B810**

**D122 Dual battery harness, 17" 18AWG**
Harness with circuit breaker. Connects two batteries (in parallel) to a compatible control panel.
Order number **D122**

**D122L Dual battery harness, 35", 12V**
Harness with circuit breaker and leads measuring 35 in. (89 cm). Connects two batteries (in parallel) to a compatible control panel in a separate enclosure.
Order number **D122L**

**D126 Battery, 12V 7Ah**
A rechargeable sealed lead-acid power supply used as a secondary power supply or in auxiliary or ancillary functions.
Order number **D126**

**D1218 Battery, 12V 18Ah**
The D1218 is a 12 V 18 Ah sealed lead-acid battery with two bolt-fastened terminals. It is used for standby and auxiliary power. It connects to a compatible control panel using a D122 or D122L Dual battery harness.
Order number **D1218**

**D1238 BATTERY, 12V 38 AH**
A 12 V sealed lead-acid battery for standby and auxiliary power with two bolt-fastened terminals. Includes hardware for attaching battery leads or spade connectors.
Order number **D1238**

**D137 Accessory mounting bracket for enclosure**
Used to mount accessory modules in B8103, D8108A, and D8109 enclosures.
Order number **D137**

**D1640 Transformer plug-in, 16V 40VA**
System transformer rated at 16.5 VAC, 40 VA.
Order number **D1640**

**D9002-5 Mounting plate, 6 location 3-hole, 5 pcs**
5 pack of mounting skirts for B8103, D8103, D8108A, and D8109 enclosures. Each skirt can hold up to six standard 3-hole mounting modules.
Order number **D9002-5**

**D101 Enclosure lock and key set**
Short-body lock set with one key supplied. Uses the D102 (#1358) replacement key.
Order number **D101**

**D110 TAMPER SWITCH 2/PKG**
Screw-on tamper switch that fits all enclosures. Shipped in packages of two.
Order number **D110**

**ICP-EZTS TAMPER SWITCH-DUAL**
Combination tamper switch with a wire loop for additional tamper outputs.
Order number **ICP-EZTS**

**B8103 Universal enclosure, white**
White steel enclosure measuring 41 cm x 41 cm x 9 cm (16 in. x 16 in. x 3.5 in.).
Order number **B8103**

**D8108A Attack resistant enclosure, large, grey**
Grey steel enclosure measuring 41.5 cm x 41.5 cm x 9 cm (16 in. x 16 in. x 3.5 in.).
UL Listed. Includes a lock and key set.
Order number **D8108A**

**D8109 Fire enclosure, 16x16x3.5", red**
Red enclosure measuring 16 in. x 16 in. x 3.5 in. (41 cm x 41 cm x 9 cm). Made from 16 gauge (1.5 mm) cold-rolled steel with a full-length hinge. Includes a lock and key set. UL Listed for commercial fire/burglary alarm applications.
Order number **D8109**

**D8004 Transformer enclosure kit, grey**
For applications that might require a remote transformer in an enclosure. Can be used with B Series control panels and D9412GV4/D7412GV4 control panels.
Order number **D8004**

**BATB-40 Battery box/enclosure, 22x20.75x7.25"**
22 x 20.75 x 7.25" (56 x 53 x 18.5 cm). Holds two dry or wet cell batteries. Optional BATB-SHELF battery shelf increases number of batteries. Suitable for residential/commercial fire or burglary applications.
Order number **BATB-40**

**BATB-80 Battery box/enclosure, 14x20.75x7.25"**
14 x 20.75 x 7.25" (36 x 53 x 18.5 cm). Battery box/enclosure with shelf holds up to four dry or wet cell batteries. Suitable for residential/commercial fire or burglary applications.
Order number **BATB-80**

**B99 USB direct connect cable**
Male A to Male A USB cable for local programming of control panels with on-board USB ports.
Order number **B99**

**B915 Basic Keypad**
Two-line alphanumeric basic keypad with language function keys.
Available languages: English, Chinese, French, Greek, Italian, Hungarian, Polish, Portuguese, Spanish.
Order number **B915**

**B915I LCD keypad, icon keys, SDI2**
Two-line alphanumeric basic keypad with icon function keys.
Available languages: English, Chinese, French, Greek, Italian, Hungarian, Polish, Portuguese, Spanish.
Order number **B915I**

**B920 2 Line Alpha Numeric Keypad (SDI2)**
Two-line alphanumeric keypad
Available languages: English, French, Hungarian, Italian, Portuguese, Spanish.
Order number **B920**

**B921C Two-line Keypad w/Touch keys, Inputs**
Two-line alphanumeric keypad with inputs and capacitive touch keys in black.
Available languages: English, French, Hungarian, Italian, Portuguese, Spanish.
Order number **B921C**

**B930 ATM Style-Alpha Numeric Keypad (SD12)**
Five-line ATM style alphanumeric keypad
Available languages: English, French, Hungarian, Italian, Portuguese, Spanish.
Order number **B930**

**B942 Touch Screen KP Prox/Input/Output, black**
Black SDI2 touch screen keypad with inputs and one output.
Available languages: English, Chinese, French, Greek, Italian, Hungarian, Polish, Portuguese, Spanish.
Order number **B942**

**B942W Touch screen KP, prox/input/output,white**
White SDI2 touch screen keypad with inputs and one output.
Available languages: English, Chinese, French, Greek, Italian, Hungarian, Polish, Portuguese, Spanish.
Order number **B942W**

**B925F Fire and intrusion keypad, SDI2**
Two-line alphanumeric fire and intrusion keypad.
Order number **B925F**

**B926F Fire keypad, SDI2**
Two-line alphanumeric fire keypad
Order number **B926F**

**Software Options**

**D5500C-USB Kit with DVD and USB security dongle**
Remote Programming Software (RPS) with USB security key (dongle).
Order number **D5500C-USB**

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www.boschsecurity.asia

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13825787531 | en, V28, 30. Jul 2018

# TR1850 Transformer

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## Ordering information

**TR1850 Transformer**
For use in North America. Plug-in transformer with input: 120 VAC, 60 Hz, 0.50 A; output 18 VAC, 50 VA output.
Order number **TR1850**

**Accessories**

**D8004 Transformer Enclosure**
For applications such as fire alarm that might require a transformer enclosure.
Order number **D8004**

# SDI-2 MOLEX CABLE 10 PACK

Bosch
Model #: B501-10

**Overview** | **Specifications**

**Marketing Information**

Sdi-2 Molex Cable 10 Pack

**Information**

- Name: Internal Power Cord, Bosch
  SDI-2 MOLEX CABLE 10 PACK, Bosch
- Category: Other Power Supplies, Power
- UPC Code: 800549691871

Note: All product information is subject to change without notice.

# SDI-2 MOLEX CABLE 10 PACK

Bosch
Model #: B501-10

Overview | **Specifications**

**General Information**

| | |
|---|---|
| UPC | 800549691871 |
| Weight | 0.18 lbs |

Note: All product information is subject to change without notice.

# D122 Dual Battery Harness

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The D122 Dual Battery Harness protects the installer and the battery when connecting two batteries, in parallel, to compatible control panels. The D122 eliminates the hazards of batteries connected in parallel by utilizing a thermal circuit breaker to govern the circuit. The positive side of the harness is in series with the circuit breaker. It breaks the electrical circuit of the second battery when the thermal rating is exceeded. This prevents the battery circuit from creating a potentially harmful current overload condition.

## Certifications and approvals

| Region | Certification | |
|---|---|---|
| USA | UL | AOTX: Local Alarm Units (ANSI/UL 609 and ANSI/UL 464) and APAW: Police-station-connected Alarm Units (ANSI/UL 365 and ANSI/UL 464) |
| | CSFM | see our website |

## Parts included

| Quantity | Component |
|---|---|
| 1 | Cable |
| 4 | Locknuts |
| 4 | Screws |
| 4 | Battery contacts |
| 2 | Adapters |
| 1 | Literature – Installation instructions |

## Technical specifications

### Mechanical

| | |
|---|---|
| Cable length | 17 in. (432 mm) |
| Wire gauge | 18 AWG (ISO 0.75 $mm^2$) |

## Ordering information

**D122 Dual Battery Harness**
Harness with circuit breaker. Connects two batteries to a compatible control panel.
Order number **D122**

# B308 Octo-output Module

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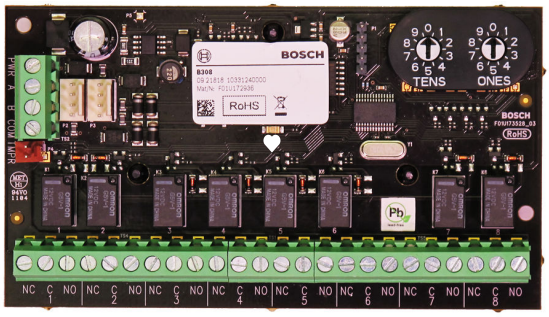


- Programmable output functions
- Easy to read switch addressing
- Provides eight Form C relays
- 1 A at 5-24 VDC relay contact rating
- Allows remote control of outputs

The B308 Octo-output Module is suitable for applications requiring Form C outputs to operate auxiliary systems or to display fire system status at remote annunciators. The B308 can interface with building components such as HVAC, door lock releases, and stairwell pressurization for complete system control and monitoring.
Industrial, commercial, and institutional facilities are typical installations for the B308 module. The eight on-board outputs can be programmed to activate on system alarm, system trouble, individual zone or point faults, and through remote control by authorized users.

## System overview

The B308 Octo-output Module provides eight programmable outputs. Each relay provides dry contact switching rated for 1.0 A at 5-24 VDC. The outputs are accessed through on-board screw terminal connections.
The B308 is compatible with the SDI2 bus. The on-board switches are used to specify module addresses. Control panel programming will determine output response to specific events.
The B308 receives serial data from the control panel and activates outputs in response to control panel conditions and settings. Outputs can be programmed for remote control from a keypad.

## Functions

**Output Relays**
Each output provides a normally-open and a normally-closed output. Outputs can be configured in control panel programming to indicate system events.

## Certifications and approvals

| Region | Certification | |
|---|---|---|
| Australia | RCM | ACMA |
| Europe | CE | EMC, RoHS |
| USA | UL | |
| | UL | UL 365 - Police Station Connected Burglar Alarm Units |
| | UL | UL 609 - Standard for Local Burglar Alarm Units and Systems |
| | UL | UL 864 - Standard for Control Units and Accessories for Fire Alarm Systems |
| | UL | UL 985 - Household Fire Warning System Units |
| | UL | UL 1023 - Household Burglar Alarm System Units |
| | UL | UL 1076 - Proprietary Burglar Alarm Units and Systems |

| Region | Certification | |
|---|---|---|
| | UL | UL 1610 - Central Station Burglar Alarm Units |
| | CSFM | see our website |
| | FCC | Part 15 Class B |
| | FDNY-CoA | 6174 |
| | FDNY-CoA | 6196 |
| Canada | ULC | CAN/ULC S303 - Local Burglar Alarm Units and Systems |
| | ULC | CAN/ULC S304 - Standard for Signal Receiving Center and Premise Burglar Alarm |
| | ULC | ULC-ORD C1023 - Household Burglar Alarm System Units |
| | ULC | ULC-ORD C1076 - Proprietary Burglar Alarm Units and Systems |
| | IC | ICES-003 - Information Technology Equipment (ITE) |

## Installation/configuration notes

### Mounting considerations

Mount the B308 Octo-input module onto a variety of control panel enclosures with the compatible control panel or D203 remote enclosure. Remote mounting, at longer distances is a benefit of the new SDI2 bus.
Up to four B308 Octo-output Modules can be mounted in a control panel enclosure using the 3-hole mounting pattern. For additional modules, use the optional D137 Mounting Bracket.

### Wiring considerations

The B308 connects to a control panel using the PWR, A, B, COM terminals on the control panel using the screw terminal strip or the pluggable interconnect wiring connector. Use 12 AWG to 22 AWG (1.5 mm to 0.6 mm) wires from the module to the control panel. Observe relay specifications (up to 24 VDC), verifying not to exceed the relay ratings.

### Compatibility

For UL 864 compliance, use a UL commercial fire approved control panel.

| | |
|---|---|
| Control panels | B9512G/B9512G-E (Up to 59 modules)<br>B8512G/B8512G-E (Up to 9 modules)<br>B6512 (Up to 9 modules)<br>B5512/B5512E (Up to 5 modules)<br>B4512/B4512E (Up to 3 modules)<br>D9412GV4 (Up to 12 modules)<br>D7412GV4 (Up to 6 modules)<br>D7212GV4 (Up to 2 modules) |

## Parts included

| Quantity | Component |
|---|---|
| 1 | Module |
| 1 | Hardware pack |
| 1 | Interconnect cable |
| 1 | Installation manual |

## Technical specifications

### Properties

| | |
|---|---|
| Dimensions | 2.9 in x 5.0 in x 0.60 in<br>(7.35 cm x 12.7 cm x 1.5 cm) |
| Weight | 5 oz (0.14 kg) |

### Environmental considerations

| | |
|---|---|
| Relative humidity | 5% to 93% at +32°C (+90°F) |
| Temperature (operating) | 0°C to +49°C (+32°F to +120°F) |

### Power requirements

| | |
|---|---|
| Current (maximum) | Alarm: 150 mA (22 mA for digital section + 16 mA per energized relay) |
| Relay outputs | Dry contacts rated for .001 to 1.0 A at 5 to 24 VDC (resistive load). |
| Voltage | 12 VDC nominal |

### Wiring

| | |
|---|---|
| Terminal wire size | 12 AWG to 22 AWG (2.0 mm to 0.65 mm) |
| SDI2 wiring | Maximum distance – Wire size (unshielded wire only):<br>400 ft (137 m) - 22 AWG (0.65 mm)<br>1000 ft (305 m) - 18 AWG (1.02 mm) |

## Ordering information

**B308 Octo-output Module**
Provides 8 programmable relays.
Order number **B308**

**Represented by:**

**Europe, Middle East, Africa:**
Bosch Security Systems B.V.
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5600 JB Eindhoven, The Netherlands
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2536923531 | en, V26, 17. Feb 2017

# B208 Octo-input Module

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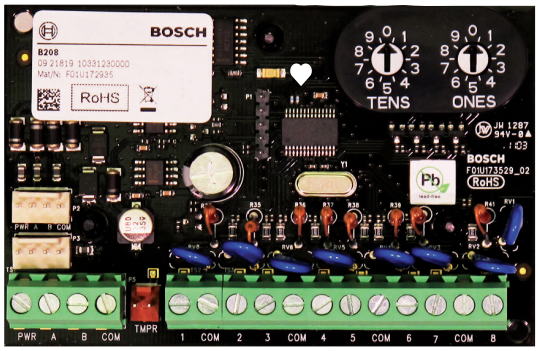


- Programmable input point functions
- Easy to read switch addressing
- 2 interconnect wiring connectors
- Provides eight points

The B208 Octo-input Module is an 8 point expansion device that connects to the control panel through the SDI2 bus. This module is fully supervised and communicates back to the control panel all point status changes. The module expansion points operate the same as the points on the control panel. Industrial, commercial, and institutional facilities are typical installations for the B208 module. The B208 connects to the SDI2 bus on the control panel using SDI2 terminals, or using the interconnect cable. You can connect multiple B208 modules to a single control panel. The B208 address switches allow for ease of use in device addressing.

## System overview

The B208 Octo-input Module connects to a control panel through the SDI2 bus. This module is supervised and communicates back to the control panel all point status changes. The module's expansion points operate the same as the points on the control panel.

## Functions

**Loop inputs**
The B208 uses up to eight inputs which may be Normally Open (NO), or Normally Closed (NC) with 1k Ω EOL resistor(s) for supervision.

## Certifications and approvals

| Region | Certification | |
|---|---|---|
| Australia | RCM | ACMA |
| Europe | CE | EMC, RoHS |
| USA | UL | |
| | UL | UL 365 - Police Station Connected Burglar Alarm Units |
| | UL | UL 609 - Standard for Local Burglar Alarm Units and Systems |
| | UL | UL 636 - Holdup Alarm Units and Systems |
| | UL | UL 864 - Standard for Control Units and Accessories for Fire Alarm Systems |
| | UL | UL 985 - Household Fire Warning System Units |
| | UL | UL 1023 - Household Burglar Alarm System Units |
| | UL | UL 1076 - Proprietary Burglar Alarm Units and Systems |
| | UL | UL 1610 - Central Station Burglar Alarm Units |
| | FM | FM 3010 - Fire Alarm Signaling Systems |
| | CSFM | see our website |

| Region | Certification | |
|---|---|---|
| | FCC | Part 15 Class B |
| | FDNY-CoA | 6174 |
| | FDNY-CoA | 6196 |
| Canada | ULC | CAN/ULC S303 - Local Burglar Alarm Units and Systems |
| | ULC | CAN/ULC S304 - Standard for Signal Receiving Center and Premise Burglar Alarm |
| | ULC | ULC-ORD C1023 - Household Burglar Alarm System Units |
| | ULC | ULC-ORD C1076 - Proprietary Burglar Alarm Units and Systems |
| | IC | ICES-003 - Information Technology Equipment (ITE) |

## Installation/configuration notes

### Wiring considerations

The module to the control panel using the PWR, A, B, COM terminals on the control panel using the screw terminal strip or the interconnect wiring connector. Use 12 AWG to 22 AWG (1.5 mm to 0.6 mm) wires from the module to the control panel.

### Compatibility

For UL 864 compliance, use a UL commercial fire approved control panel.

| | |
|---|---|
| Control panels | B9512G/B9512G-E (Up to 59 modules)<br>B8512G/B8512G-E (Up to 9 modules)<br>B6512 (Up to 9 modules)<br>B5512/B5512E (Up to 4 modules)<br>B4512/B4512E (Up to 2 modules)<br>D9412GV4 (Up to 24 modules)<br>D7412GV4 (Up to 7 modules)<br>D7212GV4 (Up to 3 modules) |

## Parts included

| Quantity | Component |
|---|---|
| 1 | Module |
| 1 | Hardware pack |
| 1 | Interconnect cable |
| 1 | Installation manual |

## Technical specifications

### Properties

| | |
|---|---|
| Dimensions | 2.5 in x 3.8 in x 0.60 in<br>(6.37 cm x 9.6 cm x 1.5 cm) |

### Environmental considerations

| | |
|---|---|
| Relative humidity | 5% to 93% at +32°C (+90°F) |
| Temperature (operating) | 0°C to +49°C (+32°F to +120°F) |

### Power requirements

| | |
|---|---|
| Current | 35 mA |
| Voltage | 12 VDC nominal |

### Wiring

| | |
|---|---|
| SDI2 wiring | Maximum distance – Wire size (unshielded wire only): 1000 ft (305 m) – 22 AWG (0.65 mm)<br>1000 ft (305 m) – 18 AWG (1.02 mm)<br>Unshielded wire only |

### Loop inputs

| | |
|---|---|
| Loop Inputs | Up to eight inputs. Input contacts may be Normally Open (NO) or Normally Closed (NC) with 1kΩ EOL resistor(s) for supervision. Note: Normally Closed (NC) is not permitted in Fire installations. |

## Ordering information

**B208 Octo-input Module**
Provides 8 programmable inputs.
Order number **B208**

**Represented by:**

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2536957579 | en, V25, 17. Feb 2017

# B600 ZONEX retrofit module

www.boschsecurity.com

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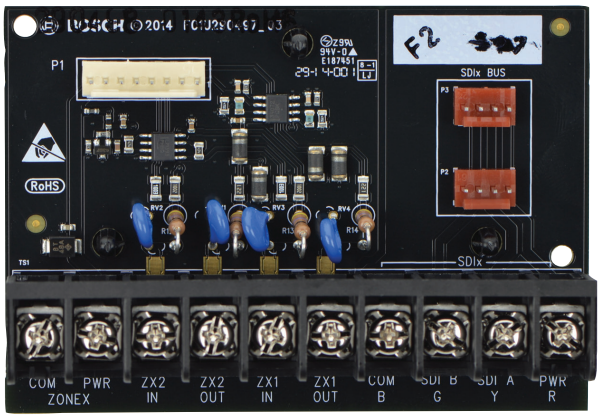


- 3-hole mounting footprint and compact size allow for easy installation
- Provides legacy ZONEX input/output support
- Compact size
- Includes two ZONEX busses allowing for continued ZONEX support on a compatible control panel

The B600 Retrofit (ZONEX) Module communicates to the control panel through a proprietary connection, and provides support for two ZONEX busses. Connect the B600 module to the control panel through a proprietary connection.

## System overview

Each module installs in the control panel enclosure or in an adjacent approved enclosure. Each ZONEX bus supports up to 15 D8128D modules, and/or up to 8 D8129 Octo-relay modules per bus. D8128D and D8129 modules can be combined on a single ZONEX bus. Total number of modules cannot exceed 15 modules.
Using your existing terminal block wiring strip, retrofitting your current ZONEX devices for use on your new control panel is effortless and easy. Simply remove the existing ZONEX terminal strip from your current control panel, and insert onto the B600.

## Functions

The B600 Retrofit (ZONEX) Module gives you the flexibility to continue using legacy ZONEX products with either the B9512G or B8512G control panels.

## Certifications and approvals

| Region | Regulatory compliance/quality marks | |
|---|---|---|
| USA | UL | Underwriters Laboratories |
| | UL | UL 1023 - Household Burglar Alarm System Units |
| | UL | UL 1076 - Proprietary Burglar Alarm Units and Systems |
| | UL | UL 1610 - Central Station Burglar Alarm Units |
| | UL | UL 365 - Police Station Connected Burglar Alarm Units |
| | UL | UL 609 - Standard for Local Burglar Alarm Units and Systems |
| | UL | UL 636 - Holdup Alarm Units and Systems |
| | UL | UL 864 - Standard for Control Units and Accessories for Fire Alarm Systems (10th edition) |
| | UL | UL 985 - Household Fire Warning System Units (6th edition) |
| | UL | UL 294 - Standard for Access Control Units and Systems |

| Region | Regulatory compliance/quality marks | |
|---|---|---|
| | UL | UL 1635 - Standard for Digital Alarm Communicator System Units |
| | FM | Central Station |
| | FM | Local Protective Signaling |
| | FM | Remote Station |
| | CSFM | California State Fire Marshal (see our website) |
| | FCC | Part 15 Class B |
| Canada | ULC | Underwriters Laboratories of Canada |
| | ULC | CAN/ULC S303 - Local Burglar Alarm Units and Systems |
| | ULC | CAN/ULC S304 - Standard for Signal Receiving Center and Premise Burglar Alarm |
| | ULC | CAN/ULC S545 - Residential Fire Warning System Control Units |
| | ULC | ULC-ORD C1023 - Household Burglar Alarm System Units |
| | ULC | ULC-ORD C1076 - Proprietary Burglar Alarm Units and Systems |
| | IC | ICES-003 - Information Technology Equipment (ITE) |

## Installation/configuration notes

### Mounting

Mount the module into the enclosure's 3-hole mounting pattern using the mounting screws and mounting bracket.

### Wiring

Use the control panel SDI2 terminals labeled R, Y, G, B (PWR, A, B, COM) when wiring to the module. Connect the control panel terminals to the module terminals labeled R, Y, G, B (PWR, A, B, COM). You can also use the SDI2 interconnect cable.

### Compatibility

| | |
|---|---|
| Accessories | D8125 Zone Expansion Module<br>D8128D OctoPOPIT Eight-point Expander<br>D8129 Octo-relay Module |

The B600 ZONEX module includes two ZONEX busses (ZONEX1, ZONEX2).

| Compatible module | ZONEX 1 | ZONEX 2 |
|---|---|---|
| D8125 Zone Expansion Module | 1 | 1 |
| D8128D OctoPOPIT Eight-point Expander | 15 | 15 |
| D8129 Octo-relay Module | 15 | 15 |

**Notice**
ZONEX, D812x, and POPIT capacities are dependant upon the control panel's specified capacities.

## Parts included

| Quantity | Component |
|---|---|
| 1 | ZONEX module |
| 1 | Hardware pack |
| 1 | Literature pack |
| 1 | ZONEX connection cable |

## Technical specifications

### Properties

| | |
|---|---|
| Dimensions | 2.76 in x 3.86 in x 1.03 in (70.3 mm x 98 mm x 26 mm) |
| Weight | 11.2 oz (0.30 kg) |

### Environmental considerations

| | |
|---|---|
| Relative humidity | 5% to 93% at +32°C (+90°F) |
| Temperature (operating) | 0°C to +49°C (+32°F to +120°F) |

### Power requirements

| | |
|---|---|
| Current | Standby: 12 mA + total device current<br>Alarm: 12 mA + total device current |
| Voltage (input) | 12 VDC nominal |

### Wiring

| | |
|---|---|
| Terminal wire size | 12 AWG to 22 AWG (2.0 mm to 0.65 mm) |
| SDI wiring | Use the supplied interconnect cable (P/N: F01U079745) |
| ZONEX wiring | Use the supplied ZONEX connection cable (P/N: F01U295103) |

## Ordering information

**B600 ZONEX retrofit module**
Retrofit (ZONEX) module providing legacy support for ZONEX products with B9512G/B8512G control panels.
Order number **B600**

**Represented by:**

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16673934603 | en, V11, 25. Jun 2020

# B942 Touch Screen Keypad

www.boschsecurity.com

BOSCH
Invented for life

- Color graphic touch screen display uses a combination of simple icons and text for easy operation
- Built-in presence detector lights the display when user approaches keypad
- Built-in proximity reader allows use of a token or card as replacement for a passcode, or for use with dual authentication for high security areas
- Four inputs and one output provide cost effective expansion
- Slim, modern design blends with any decor

The keypad is an SDI2 bus compatible device. The keypad features an illuminated touch screen and graphical interface. With an elegant design and low profile, the keypad fits with any modern decor. Each keypad has user adjustable options such as volume and brightness. They have four inputs and one output. The keypad shows system messages for all areas.

**Keypad languages**
The following languages are available:

- English
- Chinese
- French
- Greek
- Italian
- Hungarian
- Polish
- Portuguese
- Spanish

## System overview

- For commercial use, install the keypad in building entrances and areas with unrestricted access. Mounting a keypad near exterior doors in hotel or business lobbies allows people to identify the type and location of the emergency.
- For residential use, install the keypad near the front and rear entrances to the home. Install additional keypads in a kitchen or in a bedroom.
- Use multiple keypads in a large building with many separate areas of security. Program multiple keypads to control multiple areas.
- Audible tones from the keypad sounder alert personnel to fire events and assist fire fighters in locating the keypad.

## Functions

**Display**
The touch screen display uses icons, words, numbers, and symbols to show the status of the security system and for interacting with the security system. When several events occur, the keypad shows each event in order of priority. The keypad detects when a user approaches and automatically activates the display.

**User icons and keys**
The keypad greets the user with a home screen that shows the system status at one glance using a large icon. The user can change the system status by simply touching this home screen icon. The touch screen display also offers icons on the ribbon bar. These visually pleasing graphical icons are easy to use for

accessing menus and other options. The keypad has a variety of keyboards for entering alphanumeric characters. The keypad screen has numeric keys and one function [CMD] key. When pressed, keys emit a muted beep. Use the keyboards for entering passcodes, activating commands, and entering alphanumeric characters.

**Audible tones**
The keypad has a built-in speaker that produces several distinct warning tones. The tones are differentiated so that the user can recognize an event simply by hearing its associated tone. The keypad backlight illuminates when it emits an audible tone. Users can use a passcode or credential to silence the tone.

**Status indicators**
The status indicators on the keypad provide a quick visual reference for system status.

| | |
|---|---|
| ✓ | The indicator lights when the system is ready to turn on (arm). |
| | The indicator lights when the system is on (armed). |
| ⚠ | The indicator lights when there is a trouble condition. |
| GAS | The indicator lights when dangerous gases are present including carbon monoxide (NFPA 720). |
| | The indicator lights when the system has power. |

**Proximity reader**
The proximity reader allows users to use a token or card in place of a passcode to turn on or off the security system. The proximity reader supports EM4102 (125 kHz) credentials. The Bosch ACA-ATR13-RFID tag and Bosch ACD-ATR11ISO-RFID card are examples.

## Certifications and approvals

| Region | Regulatory compliance/quality marks | |
|---|---|---|
| Australia | RCM | ACMA |
| Europe | CE | RED, EMC, LVD, RoHS [B942 B942W] |
| USA | UL | UL 365 - Police Station Connected Burglar Alarm Units |
| | UL | UL 609 - Standard for Local Burglar Alarm Units and Systems |
| | UL | UL 636 - Holdup Alarm Units and Systems |
| | UL | UL 985 - Household Fire Warning System Units |
| | UL | UL 1023 - Household Burglar Alarm System Units |
| | UL | UL 1076 - Proprietary Burglar Alarm Units and Systems |
| | UL | UL 1610 - Central Station Burglar Alarm Units |
| | CSFM | see the Bosch website (www.boschsecurity.com) |
| | FCC | Part 15 Class B |
| Canada | ULC | CAN/ULC S303 - Local Burglar Alarm Units and Systems |
| | ULC | CAN/ULC S304 - Standard for Signal Receiving Center and Premise Burglar Alarm |
| | ULC | CAN/ULC S545 - Residential Fire Warning System Control Units |
| | ULC | ULC-ORD C1023 - Household Burglar Alarm System Units |
| | ULC | ULC-ORD C1076 - Proprietary Burglar Alarm Units and Systems |
| | IC | ICES-003 - Information Technology Equipment (ITE) |

## Installation/configuration notes

**Power supply**
A compatible control panel supplies the power and data requirements to the keypad through a four-wire connection.

**Mounting and wiring**
Mount in dry indoor locations.
Includes a slim mounting plate for recessing wiring, and a surface mounting plate for surface mounting and wiring.

**Compatible control panels**
B9512G/B9512G-E
B8512G/B8512G-E
B6512
B5512/B5512E firmware v2.03 and higher
B4512/B4512E firmware v2.03 and higher
B3512/B3512E firmware v2.03 and higher
D9412GV4/D7412GV4 v2.03 and higher

## Technical specifications

**Properties**

| | |
|---|---|
| Dimensions | 6.2 in x 4.7 in x 0.65 in (158 mm x 120 mm x 16.5 mm) |
| Weight | 11.3 oz (0.32 kg) |
| Material | Acrylonitrile butadiene styrene (ABS)<br>Poly(methyl methacrylate) (PMMA) |
| Display window | Touch screen<br>Multi-line messages |
| Indicators | Power indicator LED<br>Status indicators<br>Main icon<br>Warning and indicating tones |

| | |
|---|---|
| Inputs | 4 (four) 1k Ω supervised inputs |
| Output | 1 (one) NO (normally open) contact |

### Environmental considerations

| | |
|---|---|
| Relative humidity | 5% to 93% at +32°C (+90°F) non-condensing |
| Temperature (operating) | 0°C to +50°C (+32°F to +122°F) |

### Power requirements

| | |
|---|---|
| Current with proximity reader disabled | Standby: 200 mA<br>Alarm: 300 mA |
| Current with proximity reader enabled | Standby: 300 mA<br>Alarm: 400 mA |
| Voltage (input) | 12 VDC nominal |

### Wiring

| | |
|---|---|
| Terminal wire size | 18 AWG to 22 AWG (1.02 mm to 0.65 mm) |
| SDI2 wiring with prox detector disabled | Maximum distance - wire size (unshielded wire only):<br>200 ft (61 m) - 22 AWG (0.65 mm)<br>520 ft (159 m) - 18 AWG (1.02 mm) |
| SDI2 wiring with prox detector enabled | Maximum distance - wire size (unshielded wire only):<br>150 ft (46 m) - 22 AWG (0.65 mm)<br>390 ft (119 m) - 18 AWG (1.02 mm) |

### Inputs and output

| | |
|---|---|
| On-board points voltage ranges | Open: 2.2 to 5.0 VDC<br>Normal: 1.4 to 1.8 VDC<br>Short: 0.0 to 1.0 VDC<br>Short circuit current: 2.3 mA |
| Relay contact rating | 24 VDC, 1 A, power factor: 1 |

## Ordering information

**B942 Touch Screen KP Prox/Input/Output, black**
Black SDI2 touch screen keypad with inputs and one output.
Available languages: English, Chinese, French, Greek, Italian, Hungarian, Polish, Portuguese, Spanish.
Order number **B942**

**B942W Touch screen KP, prox/input/output,white**
White SDI2 touch screen keypad with inputs and one output.
Available languages: English, Chinese, French, Greek, Italian, Hungarian, Polish, Portuguese, Spanish.
Order number **B942W**

**B942-CHI Touch Screen KP Prox/Input/Output, black**
Black SDI2 touch screen keypad with inputs and one output.
Available language: Chinese.
Order number **B942-CHI**

**B942W-CHI Touch Screen KP Prox/Input/Output, white**
White SDI2 touch screen keypad with inputs and one output.
Available language: Chinese.
Order number **B942W-CHI**

### Accessories

**B56 Keypad surface mount box**
Surface mount box for mounting a keypad to concrete or block.
Order number **B56**

**B96 Trim plate for keypad**
Cover the wall footprint of previous keypads when replacing them with the new, slim design of B Series keypads. The white trim bezel is 8.6 in x 6.3 in x 0.12 in (22 mm x 16 mm x 3 mm).
Order number **B96**

**GV4-ROM-KEY Kit for GV4 version 2.x ROM**
Firmware updates current D9412GV4/D7412GV4 v1.xx control panels to GV4 v2.xx.
Order number **GV4-ROM-KEY**

**Represented by:**

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14472973195 | en, V18, 23. Aug 2018

ednetics®

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**Idaho**
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Meridian, ID 83642
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F 208.501.0031

# QNV-8080R

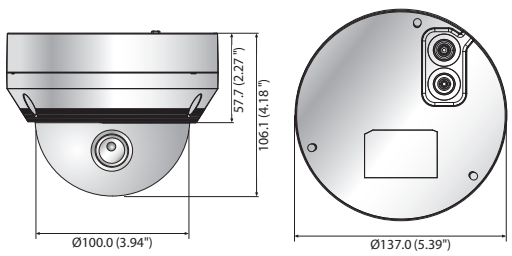
5 MP Network IR Dome Camera

## Key Features

- 5 Megapixel (2592 x 1944) resolution
- 3.2~10mm(3.1x) motorized varifocal lens
- 0.15Lux (Color), 0Lux (B/W, IR LED on)
- 30fps@5 MP (H.265 / H.264)
- H.265, H.264, MJPEG codec support, Multiple streaming
- Day & Night, WDR (120dB)
- Defocus detection, Directional/Virtual Line detection, Motion detection, Enter/Exit, Tampering
- Micro SD / SDHC / SDXC memory slot (Maximum 128GB)
- Hallway view, WiseStream II support
- IR Viewable length 30m
- IP66, IK10, PoE

## Dimensions

Unit : mm (inch)




## Accessories (Optional)

SBP-137WMW

SBP-301HMW2

SBP-300LMW

SBP-300CMW

SBP-300WMW1

SBP-300WMW

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| | QNV-8080R |
|---|---|
| **VIDEO** | |
| Imaging Device | 1/2.8" 5 MP CMOS |
| Effective Pixels | 2592(H) x 1944(V) |
| Minimum Illumination | Color : 0.15Lux (F1.6, 1/30sec)<br>BW : 0Lux (IR LED on) |
| Video Out | CVBS : 1.0 Vp-p / 75Ω composite, 720 x 480 for installation |
| **LENS** | |
| Focal Length (Zoom Ratio) | 3.2~10mm (3.1x) motorized varifocal |
| Maximum Aperture Ratio | F1.6 (Wide)~F2.9 (Tele) |
| Angular Field of View | H : 100.3°(Wide)~31.2°(Tele) / V : 72.3°(Wide)~23.5°(Tele) / H : 133.1°(Wide)~38.8°(Tele) |
| Focus Control | Simple focus |
| **PAN / TILT / ROTATE** | |
| Pan / Tilt / Rotate Range | 0˚~350˚ / 0˚~67˚ / 0˚~355˚ |
| **OPERATIONAL** | |
| IR Viewable Length | 30m (98.42ft) |
| Camera Title | Displayed up to 85 characters, 5 lines, English / Numeric / Special & International characters, 6 colors, Transparency, Auto scale by resolution |
| Day & Night | Auto (ICR) |
| Backlight Compensation | BLC, WDR, SSDR |
| Wide Dynamic Range | 120dB |
| Digital Noise Reduction | SSNR |
| Motion Detection | 4ea, polygonal zones |
| Privacy Masking | 6ea, rectangular zones |
| Gain Control | Low / Middle / High |
| White Balance | ATW / AWC / Manual / Indoor / Outdoor |
| LDC | Support |
| Electronic Shutter Speed | Minimum / Maximum / Anti flicker (1/5~1/12,000sec) |
| Video Rotation | Flip, Mirror, Hallway view (90˚/270˚) |
| Analytics | Defocus detection, Directional/Virtual Line detection, Motion detection, Enter/Exit, Tampering |
| Alarm I/O | Input 1ea / Output 1ea |
| Alarm Triggers | Analytics, Network disconnect, Alarm input |
| Alarm events | File upload via FTP and e-mail, Notification via e-mail,<br>SD/SDHC/SDXC or NAS recording at event triggers, Alarm output, Handover |
| **NETWORK** | |
| Ethernet | RJ-45 (10/100BASE-T) |
| Video Compression | H.265/H.264 : Main/High, MJPEG |
| Resolution | 2592 x 1944, 1920 x 1080, 1280 x 960, 1280 x 720, 800 x 600, 800 x 448, 720 x 576, 720 x 480,<br>640 x 480, 640 x 360 |
| Maximum Framerate | H.265/H.264 : Maximum 30fps<br>MJPEG : Maximum 15fps |
| Smart Codec | Manual (5ea area), WiseStream II |
| Video Quality Adjustment | H.264/H.265 : Target bitrate level control / MJPEG : Quality level control |
| Bitrate Control | H.264/H.265 : CBR or VBR / MJPEG : VBR |
| Streaming | Unicast (6 users) / Multicast, Multiple streaming (Up to 3 profiles) |
| Protocol | IPv4, IPv6, TCP/IP, UDP/IP, RTP(UDP), RTP(TCP), RTCP, RTSP, NTP, HTTP, HTTPS, SSL/TLS, DHCP, FTP,<br>SMTP, ICMP, IGMP, SNMPv1/v2c/v3(MIB-2), ARP, DNS, DDNS, QoS, UPnP, Bonjour, LLDP |
| Security | HTTPS(SSL) login authentication, Digest login authentication, IP address filtering,<br>User access log, 802.1X authentication(EAP-TLS, EAP-LEAP) |
| Edge Storage | Micro SD/SDHC/SDXC 1 slot maximum 128GB |
| Application Programming Interface | ONVIF Profile S/G/T<br>SUNAPI (HTTP API)<br>Wisenet open platform |
| Webpage Language | English, Korean, Chinese, French, Italian, Spanish, German, Japanese, Russian, Swedish,<br>Portuguese, Czech, Polish, Turkish, Dutch |

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| | QNV-8080R |
|---|---|
| Web Viewer | Supported OS : Windows 7, 8.1, 10, Mac OS X 10.10, 10.11, 10.12, 10.13, 10.14<br>Recommended Browser : Google Chrome<br>Supported Browser : MS Explorer 11, MS Edge, Mozilla Firefox (Windows 64 bit only), Apple Safari (Mac OS X only) |
| Memory | 512MB RAM, 256MB Flash |
| **ENVIRONMENTAL** | |
| Operating Temperature / Humidity | -30°C ~ +55°C (-22°F ~ +131°F) / Less than 90% RH<br>* Start up should be done at above -20°C |
| Storage Temperature / Humidity | -30°C ~ +60°C (-22°F ~ +140°F) / Less than 90% RH |
| Certification | IP66, IK10 |
| **ELECTRICAL** | |
| Input Voltage | PoE (IEEE802.3af, Class3) |
| Power Consumption | PoE : Maximum 8.9W, typical 6.6W |
| **MECHANICAL** | |
| Color / Material | White / Aluminum |
| RAL Code | RAL9003 |
| Product dimensions / weight | Ø137.0 x 106.1mm (Ø5.39 x 4.18"), 700g (1.543 lb) |

* The lastest product information / specification can be found at hanwhasecurity.com
* Design and specifications are subject to change without notice.
* Wisenet is the proprietary brand of Hanwha Techwin.

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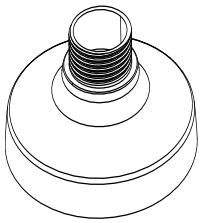
Hanwha Techwin

# Hanging Mount Adaptor

SBP-301HMW2

Hanwha Techwin

## Package



HANGING MOUNT ADAPTOR

SCREW 3EA

## Product Overview

**ENG** This product is used to install the Anti Vandal Camera into the Wall Mount Adaptor (SBP-300WMW1), Ceiling Mount Adaptor (SBP-300CMW).

**FRA** Ce produit permet de monter la caméra anti-vandalisme dans l'adaptateur de fixation murale (SBP-300WMW1) ou l'adaptateur de fixation au plafond (SBP-300CMW).

**GER** Dieses Produkt dient zum Montieren der Anti-Vandalismus-Kamera im Wandadapter (SBP-300WMW1) oder Deckenadapter (SBP-300CMW).

**SPA** Este producto se utiliza para instalar la Cámara antivandálica en el Adaptador de montaje en pared (SBP-300WMW1) o Adaptador de montaje en techo (SBP-300CMW).

**ITA** Questo prodotto è utilizzato per installare la telecamera antivandalismo nell'adattatore per montaggio a parete (SBP-300WMW1) o nell'adattatore per montaggio a soffitto (SBP-300CMW).

**RUS** Этот продукт используется для установки антивандальной видеокамеры на настенный (SBP-300WMW1) или потолочный (SBP-300CMW).

**POL** Ten produkt jest używany do montażu kamer kopułkowych zabezpieczonych przez wandalizmem na przystawcie ściennej (SBP-300WMW1) lub przystawce sufitowej (SBP-300CMW).

**TUR** Bu ürün, Anti Vandal Kameranın Duvara Montaj Adaptörüne (SBP-300WMW1) veya Tavana Montaj Adaptörüne (SBP-300CMW) monte edilmesi için kullanılır.

**CZ** Tento produkt je určen k instalaci protivandalské kamery do adaptéru pro upevnění na stěnu (SBP-300WMW1) nebo adaptéru pro upevnění na strop (SBP-300CMW).

**JAP** この製品を使用して、アンチ・バンダル・カメラを、ウォール・マウント・アダプタ（SBP-300WMW1）、天井取付け用アダプタ（SBP-300CMW）に取り付けます。

**CHI** 本产品用于将 Anti Vandal 摄像机安装到墙上安装适配器（SBP-300WMW1）或天花板安装适配器（SBP-300CMW）中。

**KOR** 본 제품은 당사 Anti Vandal Camera를 Wall Mount Adaptor (SBP-300WMW1), Ceiling Mount Adaptor (SBP-300CMW)에 설치 시 사용하는 Adaptor 입니다.

## Installation Precautions

- Make sure that the installation place can endure at least 4 times of the total weight of the Hanging Mount Adaptor, Camera, and Wall/Ceiling Mount Adaptor.
- The Hanging Mount Adaptor can be also connected to 1-1/2" PF screw-thread pipe as well as to the Wall/Ceiling Mount Adaptor.

- Assurez-vous que l'emplacement de l'installation peut supporter au moins 4 fois le poids total de l'adaptateur pour fixation suspendue, de la caméra et de l'adaptateur de fixation au plafond/mur.
- L'adaptateur pour fixation suspendue peut également être connecté à un tube fileté au pas de 1-1/2 pouce PF ainsi qu'à l'adaptateur de fixation au plafond/mur.

- Stellen Sie sicher, dass der Montageort das 4-fache Gesamtgewicht des Hängeadapters, der Kamera und des Wand-/Deckenadapters tragen kann.
- Der Hängeadapter kann auch in das Rohr mit 1-1/2" PF-Schraubgewinde eingedreht werden, sowie am Wand-/Deckenadapter befestigt werden.

- Asegúrese de que el lugar de instalación puede soportar al menos 4 veces el peso total del adaptador de montaje en suspensión, la cámara y el adaptador de montaje en pared/techo.
- El adaptador de montaje en suspensión también se puede conectar a un tubo con rosca para tornillo PF de 1-1/2 pulg. así como para el adaptador de montaje en pared/techo.

- Assicurarsi che il punto prescelto per l'installazione possa sopportare un peso 4 volte superiore a quello totale di adattatore per montaggio sospeso, videocamera e adattatore per montaggio a parete/a soffitto.
- L'adattatore per montaggio sospeso può anche essere collegato a un tubo filettato PF da 1-1/2" e all'adattatore per montaggio a parete/a soffitto.

- Убедитесь, что место установки выдерживает вес примерно в 4 раза больший общего веса навесного адаптера, камеры, а также адаптера для крепления к стене/потолку.
- Навесной адаптер присоединять и к трубке с резьбой 1-1/2" PF, и к адаптеру для крепления к стене/потолку.

- Upewnij się, że miejsce instalacji może utrzymać ciężar czterokrotnie większy od łącznej wagi Przystawki wiszącej, Kamery, Przystawki ściennej/sufitowej.
- Przystawkę wiszącą można przymocować do rury o gwincie 1-1/2" PF oraz do przystawki ściennej/sufitowej.

- Montaj yerinin Askılı Montaj Adaptörünün, Kamera'nın ve Duvar/Tavan Montaj Adaptörünün toplam ağırlığının en az 4 katına dayanıklı olduğundan emin olun.
- Askılı Montaj Adaptörü ayrıca 1-1/2 inçlik PF vida dişli boruya ve Duvar/Tavan Montaj Adaptörüne de bağlanabilir.

- Ujistěte se, že místo, kam chcete zařízení instalovat, unese nejméně čtyřnásobek součtu hmotností závěsného montážního adaptéru, kamery a adaptéru pro upevnění na stěnu.
- Závěsný montážní adaptér lze také připojit k 1-1/2" PF závitové trubici nebo k adaptéru pro upevnění na stěnu nebo strop.

- 設置場所が、ハンギング・マウント・アダプタ、カメラ、およびウォール・マウント/天井取付け用アダプタの合計重量の最大4倍まで耐えられることを確認してください。
- 天井取付け用アダプタは、1-1/2インチのPFネジとウォール・マウント/天井取付け用アダプタにも接続します。

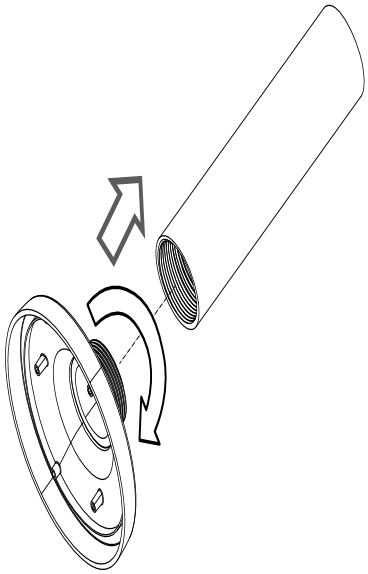
- 请确保安装位置至少可以承受悬挂支架、摄像机和墙壁/天花板支架总重量的 4 倍的力度。
- 也可以将悬挂支架连接到 1-1/2 英寸 PF 螺纹管和墙壁/天花板支架。

- 설치장소가 Hanging Mount Adaptor, Camera, Wall/Ceiling Mount Adaptor의 총중량의 4배이상을 충분히 견딜 수 있는 곳에 설치하세요.
- Hanging Mount Adaptor는 Wall/Ceiling Mount Adaptor 외에도 1-1/2" PF 나사산이 가공된 "파이프(Pipe)"에 연결하여 사용 가능합니다.

## Installation

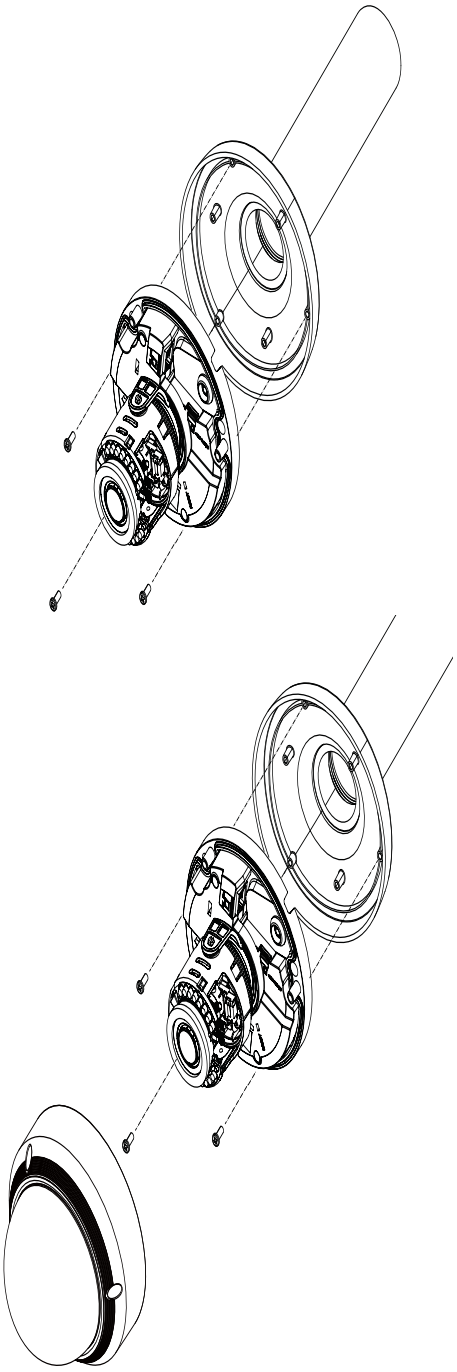
**1** Insert the Hanging Mount Adaptor to 1-1/2" PF screw-thread (female) pipe or to the Wall/Ceiling Mount Adaptor (SBP-300WMW1/300CMW) and turn it clockwise to secure to the Pipe or Adaptor.

- Make sure you fix the Pipe or Adaptor so that it reaches to the end of the 1-1/2" PF screw thread on the Hanging Mount Adaptor. If not secured tightly, the Hanging Mount Adaptor may loosen from the Pipe or Adaptor, causing physical damage or malfunction.
  (Make sure you check the connection between two components before proceeding with the next step.)



**2** Install the camera on the Hanging Mount Adaptor.

- Make sure you insert the camera in the right direction.

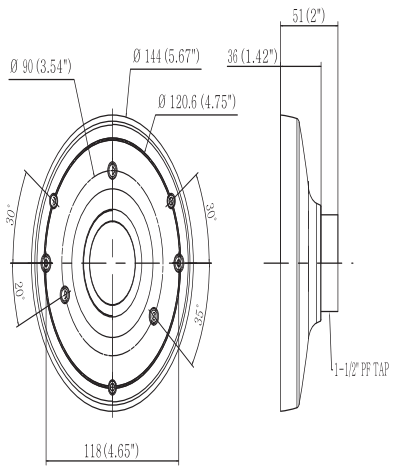


## Product Specifications

| | |
|---|---|
| • Weight : 193g<br>• Material : Aluminum<br>• Operation temp. : -50°C~60°C<br>• Operation hum. : 0~100% | • Ciężar : 193g<br>• Materiał : Aluminium<br>• Temperatura robocza : -50°C~60°C<br>• Wilgotność robocza : 0~100% |
| • Poids : 193g<br>• Matériau : Aluminium<br>• Température de fonctionnement : -50°C~60°C<br>• Humidité de fonctionnement : 0~100% | • Ağırlık : 193g<br>• Malzeme : Alüminyum<br>• Çalışma sıcaklığı : -50°C~60°C<br>• Çalışma nem değeri : 0~100% |
| • Gewicht : 193g<br>• Material : Aluminium<br>• Betriebstemperatur : -50°C~60°C<br>• Betriebsluftfeuchte : 0~100% | • Hmotnost : 193g<br>• Materiál : Hliník<br>• Provozní teplota : -50°C~60°C<br>• Provozní vlhkost : 0~100% |
| • Peso : 193g<br>• Material : Aluminio<br>• Temp. funcionamiento : -50°C~60°C<br>• Hum. funcionamiento. : 0~100% | • 重量 : 193g<br>• 材質 : アルミニウム<br>• 動作温度 : -50°C~60°C<br>• 動作湿度 : 0~100% |
| • Peso : 193g<br>• Materiale : Alluminio<br>• Temperatura di esercizio : -50°C~60°C<br>• Umidità di esercizio : 0~100% | • 重量 : 193g<br>• 材料 : 铝<br>• 工作温度 : -50°C~60°C<br>• 工作湿度 : 0~100% |
| • Вес : 193g<br>• Материал : Алюминий<br>• Температура при работе : -50°C~60°C<br>• Влажность при работе : 0~100% | • 무게 : 193g<br>• 재질 : Aluminum<br>• 사용 온도 : -50℃~60℃<br>• 사용 습도 : 0~100% |

## Product Outline

mm(inch)



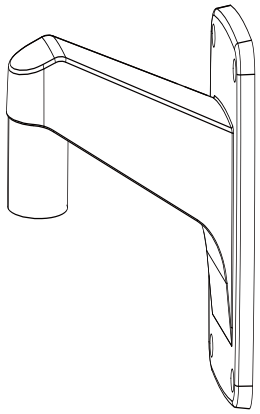

PT01-005169B

# Wall Mount Adaptor

SBP-300WMW1

Hanwha Techwin

## Package



WALL MOUNT ADAPTOR

## Product Overview

**ENG** This product is used to install the Smart Dome Camera and Anti Vandal Camera on a wall or vertical structure.

**FRA** Ce produit permet de monter la caméra SmartDome et la caméra anti-vandalisme sur un mur ou une structure verticale.

**GER** Dieses Produkt dient zum Montieren der SmartDome-Kamera und der Anti-Vandalismus-Kamera an einer Wand oder einem senkrechten Untergrund.

**SPA** Este producto se utiliza para instalar la Cámara Domo inteligente y la Cámara antivandálica en una pared o en una estructura vertical.

**ITA** Questo prodotto è utilizzato per installare la videocamera Smart Dome e la telecamera antivandalismo su una parete o su una struttura verticale.

**RUS** Этот продукт используется для установки купольной видеокамеры Smart Dome и антивандальной видеокамеры на стену или вертикальную поверхность.

**POL** Ten produkt jest używany do montażu kamer kopułkowych i kamer kopułkowych zabezpieczonych przez wandalizmem na ścianie lub konstrukcji pionowej.

**TUR** Bu ürün, duvara veya dikey bir yapıya Smart Dome Kamera ve Anti Vandal Kamera kurulumu için kullanılır.

**CZ** Tento produkt je určen k instalaci kupolové kamery Smart a protivandalské kamery na stěnu nebo svislou strukturu.

**JAP** この製品を使用して、スマート・ドーム・カメラとアンチ・バンダル・カメラを壁または垂直な面に設置します。

**CHI** 本产品用于在墙上或垂直结构上安装 Smart Dome 摄像机和 Anti Vandal 摄像机。

**KOR** 본 제품은 벽 또는 수직 구조물에 당사 Smart Dome Camera, Anti Vandal Camera 설치 시 사용하는 Adaptor입니다.

## Installation Precautions

- Make sure that the installation place can endure at least 4 times of the total weight of the Wall Mount Adaptor, Hanging Mount Adaptor, and Camera.
- This product is designed to use M10 Anchor Bolts (Nuts) for the installation.
- For a concrete wall, it is recommended to use M10 Anchor Bolts (Nuts) along with plain and spring washers.
- Each anchor bolt must be capable of withstanding an extraction force of 700 kg.
- When installing the product outdoors, use interlocking devices made of stainless steel.

- Assurez-vous que l'emplacement de l'installation peut supporter au moins 4 fois le poids total de l'adaptateur de fixation murale, de l'adaptateur pour fixation suspendue et de la caméra.
- Pour installer ce produit, vous avez besoin de boulons d'ancrage M10 (écrous à river).
- Si le mur est en béton, nous vous conseillons d'utiliser des boulons d'ancrage M10 (écrous à river) avec rondelles de ressort et plates.
- Chaque boulon doit pouvoir résister à une force d'extraction de 700 kg.
- Si vous installez le produit à l'extérieur, utilisez des dispositifs de verrouillage en acier inoxydable.

- Stellen Sie sicher, dass der Montageort das 4-fache Gesamtgewicht des Wand- bzw. Hängeadapters und der Kamera tragen kann.
- Bei der Montage dieses Produkts benötigt man Ankerbolzen und Muttern (M10).
- Bei einer Betonwand wird die Verwendung von M10 Ankerbolzen (Muttern) und von Unterlegbzw. Spannscheiben empfohlen.
- Jeder Ankerbolzen muss einer Ausziehkraft von 700 kg standhalten können.
- Wenn das Produkt im Freien montiert wird, müssen Verriegelungseinrichtungen aus Edelstahl verwendet werden.

- Asegúrese de que el lugar de instalación puede soportar al menos 4 veces el peso total del adaptador de montaje en pared, el adaptador de montaje en suspensión y la cámara.
- Este producto se ha diseñado para utilizar tornillos de anclaje M10 (tuercas) para la instalación.
- En un muro de hormigón, se recomienda utilizar pernos de anclaje M10 (tuercas) junto con arandelas planas y de muelle.
- Cada perno de anclaje debe tener la capacidad de soportar una fuerza de extracción de 700 kg.
- Al instalar el producto en exteriores, utilice dispositivos de interbloqueo de acero inoxidable.

- Assicurarsi che il punto prescelto per l'installazione possa sopportare un peso 4 volte superiore a quello totale di adattatore per montaggio a parete, adattatore per montaggio sospeso e videocamera.
- Questo prodotto è progettato per utilizzare bulloni di ancoraggio M10 (dadi) per l'installazione.
- Per una parete in calcestruzzo, si raccomanda di utilizzare bulloni di ancoraggio M10 (dadi) con rondelle piane e elastiche.
- Ogni bullone di ancoraggio deve poter resistere ad una forza di estrazione di 700 kg.
- Per installare il prodotto all'aperto, utilizzare dispositivi di ancoraggio in acciaio inossidabile.

- Убедитесь, что место установки выдерживает вес примерно в 4 раза больший общего веса навесного, настенного адаптера и камеры.
- Для установки этого продукта необходимо использовать крепежные болты (гайки) M10.
- Для установки на стену рекомендуется использовать крепежные болты (гайки) M10 вместе с пружинными и плоскими шайбами.
- Необходимо, чтобы каждый крепежный болт мог выдержать силовую отдачу в 700 кг.
- Если продукт устанавливается вне помещения, необходимо использовать устройство блокировки из нержавеющей стали.

- Upewnij się, że miejsce instalacji może utrzymać ciężar czterokrotnie większy od łącznej wagi Przystawki ściennej, Przystawki wiszącej i Kamery.
- Produkt ten należy montować za pomocą kotew (nakrętek) M10.
- W przypadku ściany betonowej zalecane są kotwy (nakrętki) M10 oraz podkładki zwykłe i sprężyste.
- Każda kotwa musi mieć zdolność wytrzymania siły wyciągania 700 kg.
- W przypadku montażu produktu na zewnątrz należy używać blokad ze stali nierdzewnej.

- Montaj yerinin Duvar Montaj Adaptörünün, Askılı Montaj Adaptörünün ve Kamera'nın toplam ağırlığının en az 4 katına dayanıklı olduğundan emin olun.
- Bu ürün, M10 ankraj cıvatalarıyla (somunlar) birlikte kullanılmak için tasarlanmıştır.
- Beton duvarda, düz ve yaylı rondelaya sahip M10 ankraj cıvatalarının (somunlarını) kullanılması önerilir.
- Her ankraj cıvatası, 700 kg güce dayanabilmelidir.
- Ürünü dış mekana kurarken, paslanmaz çelikten yapılmış iç kilit mekanizmaları kullanın.

- Ujistěte se, že místo, kam chcete zařízení instalovat, unese nejméně čtyřnásobek součtu hmotností adaptéru pro upevnění na stěnu, závěsného montážního adaptéru a kamery.
- Tento produkt je navržen pro použití kotevních šroubů a matic M10 při instalaci.
- U betonových stěn se doporučuje použít kotevní šrouby a matice M10 spolu s plochými a pérovými podložkami.
- Každý kotevní šroub musí být schopen odolat tahu 700 kg.
- Při instalaci produktu ve venkovních prostorách použijte zajišťovací prvky z nerezové oceli.

- 設置場所が、ウォール・マウント・アダプタ、ハンギング・マウント・アダプタ、およびカメラの合計重量の最大4倍まで耐えられることを確認してください。
- この製品は、M10アンカー・ボルト（ナット）を使用して設置します。
- コンクリート製の壁に設置する場合は、M10アンカー・ボルト（ナット）とともに、平ワッシャーおよびスプリング・ワッシャーを使用することをお勧めします。
- 各アンカー・ボルトは、700kgの抜去力に耐えられます。
- この製品を屋外に設置する場合は、ステンレス製の連動装置を使用してください。

- 请确保安装位置至少可以承受墙上安装适配器、悬挂安装适配器和摄像机总重量的 4 倍的力度。
- 本产品设计为使用 M10 固定螺丝（螺母）进行安装。
- 对于混凝土墙，建议将 M10 固定螺丝（螺母）与扁平有弹性的垫圈结合使用。
- 每个固定螺丝都必须能够抵抗 700 公斤拔出力度。
- 在室外安装产品时，请使用不锈钢制作的联锁装置。

- 설치장소가 Wall Mount Adaptor, Hanging Mount Adaptor, Camera 의 총중량의 4배 이상을 충분히 견딜 수 있는 곳에 설치하세요.
- 이 제품은 M10의 앙카 볼트(너트)를 사용하도록 설계되어 있습니다.
- 콘크리트벽에 설치할 경우 M10 의 앙카 볼트(너트)를 평와셔 및 스프링와셔와 함께 사용하세요.
- 설치된 각각의 앙카 볼트는 700kg의 발가력에 견디어야 합니다.
- 옥외에 설치 시 체결류는 스테인레스 재질을 사용하세요.

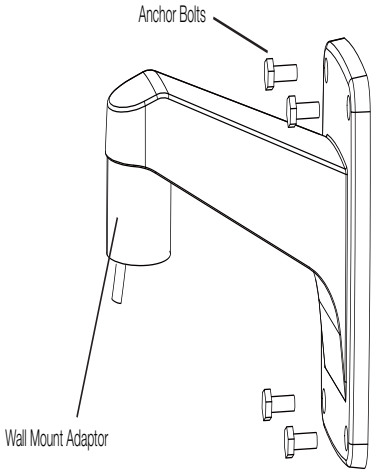
## Installation

**1** Pull out the external power cable, BNC cable and communications cable (for connecting to the "camera") through the rear of the Wall Mount Adaptor into the Pipe.

- Then, it is recommended to keep the cables in a distance of about 100 mm from the pipe.

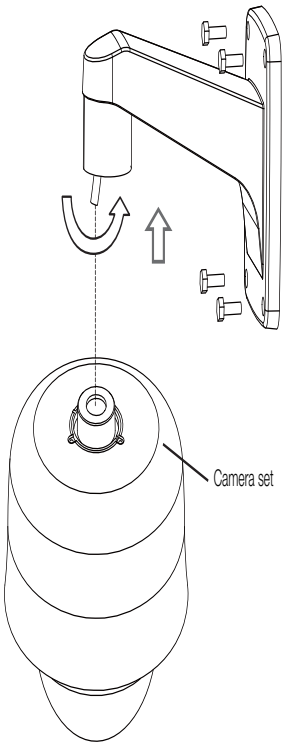
**2** Secure the Wall Mount Adaptor to the wall using the "Anchor Bolts or Nuts (M10)".

- When installing the product on a wall, mark and drill 4 holes into the Wall Mount Adaptor and insert the Anchor Bolts or Nuts (M10) before installation.




**3** Mount the Camera set on the Pipe.

- Install the camera according to the camera's installation guide.

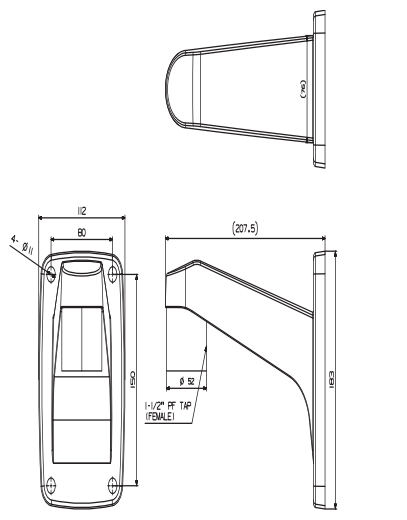



## Product Specifications

| | |
|---|---|
| • Weight : 625g<br>• Material : Aluminum<br>• Operation temp. : -50°C~60°C<br>• Operation hum. : 0~100% | • Ciężar : 625g<br>• Materiał : Aluminium<br>• Temperatura robocza : -50°C~60°C<br>• Wilgotność robocza : 0~100% |
| • Poids : 625g<br>• Matériau : Aluminium<br>• Température de fonctionnement : -50°C~60°C<br>• Humidité de fonctionnement : 0~100% | • Ağırlık : 625g<br>• Malzeme : Alüminyum<br>• Çalışma sıcaklığı : -50°C~60°C<br>• Çalışma nem değeri : 0~100% |
| • Gewicht : 625g<br>• Material : Aluminium<br>• Betriebstemperatur : -50°C~60°C<br>• Betriebsluftfeuchte : 0~100% | • Hmotnost : 625g<br>• Materiál : Hliník<br>• Provozní teplota : -50°C~60°C<br>• Provozní vlhkost : 0~100% |
| • Peso : 625g<br>• Material : Aluminio<br>• Temp. funcionamiento : -50°C~60°C<br>• Hum. funcionamiento. : 0~100% | • 重量 : 625g<br>• 材質 : アルミニウム<br>• 動作温度 : -50°C~60°C<br>• 動作湿度 : 0~100% |
| • Peso : 625g<br>• Materiale : Alluminio<br>• Temperatura di esercizio : -50°C~60°C<br>• Umidità di esercizio : 0~100% | • 重量 : 625g<br>• 材料 : 铝<br>• 工作温度 : -50°C~60°C<br>• 工作湿度 : 0~100% |
| • Вес : 625g<br>• Материал : Алюминий<br>• Температура при работе : -50°C~60°C<br>• Влажность при работе : 0~100% | • 무게 : 625g<br>• 재질 : Aluminum<br>• 사용 온도 : -50℃~60℃<br>• 사용 습도 : 0~100% |

## Product Outline

mm(inch)




PT01-005168B

# PNM-9085RQZ

5MP x 4CH IR PTRZ Multi-directional Camera

## Key Features

- Motorized PTRZ support
- 30fps@5MP(H.265, H.264)
- 4.13~9.4mm(2.3x) motorized varifocal lens
- IR viewable length : 30m
- H.265, H.264, MJPEG codec, Multi streaming
- Video analytics, WiseStream II
- IP66, IK10, NEMA4X
- IEEE 802.3bt Type 3 HPoE, injector included

## Accessories (Optional)

SBP-390WMW2

SBP-317HMW

SBP-302CMB

SBP-300LMW

SBP-300NBW

SBP-300KMW

SBP-300PMW

SBP-300CMW

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| Video | |
|---|---|
| Imaging Device | 1/1.8" 5MP CMOS x 4CH |
| Resolution | 2560x1920, 2560x1440, 1920x1080, 1600x1200, 1280x1024, 1280x960, 1280x720, 1024x768, 800x600, 800x448, 720x576, 720x480, 640x480, 640x360, 320x240 |
| Maximum Framerate | 30fps/25fps (60Hz/50Hz) at all resolutions |
| Minimum Illumination | Color: 0.11lux(F1.6,30 IRE)<br>BW: 0Lux(IR LED on) |
| **Lens** | |
| Focal Length (Zoom Ratio) | 4.13~9.4mm(2.3x) motorized varifocal |
| Maximum Aperture Ratio | F1.92(Wide)~F2.67(Tele) |
| Angular Field of View | H: 87.58°(Wide)~37.34°(Tele) / V: 64.58°(Wide)~28.04°(Tele) / D: 112.46°(Wide)~46.85°(Tele) |
| Minimum Object Distance | 1.2m(3.94ft) |
| Focus Control | Simple focus |
| Lens Type | DC auto iris |
| **Pan / Tilt / Rotate** | |
| Pan / Tilt / Rotate Range | Remote adjustment (Max. 200cycles)<br>0~360 ° / 35~80 ° / 0~90 ° |
| **Operational** | |
| Camera Title | Displayed up to 85 characters |
| Day & Night | Auto(ICR) |
| Backlight Compensation | BLC, HLC, WDR, SSDR |
| Wide Dynamic Range | 120dB |
| Digital Noise Reduction | SSNRV |
| Digital Image Stabilization | Support |
| Defog | Support |
| Motion Detection | 8ea, 8point polygonal zones |
| Privacy Masking | 32ea, polygonal zones<br>- Color: Grey, Green, Red, Blue, Black, White<br>- Mosaic |
| Gain Control | Low / Middle / High |
| White Balance | ATW / AWC / Manual / Indoor / Outdoor |
| LDC | Support |
| Electronic Shutter Speed | Minimum / Maximum / Anti flicker (2~1/12,000sec) |
| Video Rotation | Flip, Mirror |
| Analytics | Defocus detection, Directional detection, Fog detection, Face detection, Motion detection, Appear/Disappear, Enter/Exit, Loitering, Tampering, Virtual line, Audio detection |
| Alarm I/O | Input 1ea / Output 1ea |
| Alarm Triggers | Analytics, Network disconnect, Alarm input |

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| | |
|---|---|
| Alarm Events | File upload via FTP and e-mail<br>Notification via e-mail<br>SD/SDHC/SDXC at event triggers<br>Alarm output<br>Handover |
| Audio In | Selectable(microphone in/line in)<br>Supply voltage: 2.5VDC(4mA), Input impedance: 2K Ohm |
| Audio Out | Line out, Maximum output level: 1Vrms |
| **Network** | |
| Ethernet | Metal shielded RJ-45(10/100/1000BASE-T) |
| Video Compression | H.265/H.264: Main/Baseline/High, MJPEG |
| Audio Compression | G.711 u-law /G.726<br>G.726(ADPCM) 8KHz, G.711 8KHz<br>G.726: 16Kbps, 24Kbps, 32Kbps, 40Kbps<br>AAC-LC: 48Kbps at 16KHz |
| Smart Codec | Manual(5ea area), WiseStream II |
| Bitrate Control | H.264/H.265: CBR or VBR<br>MJPEG: VBR |
| Streaming | Unicast(20 users) / Multicast<br>Multiple streaming(Up to 10 profiles) |
| Protocol | IPv4, IPv6, TCP/IP, UDP/IP, RTP(UDP), RTP(TCP), RTCP,RTSP, NTP, HTTP, HTTPS, SSL/TLS, DHCP, FTP, SMTP, ICMP, IGMP, SNMPv1/v2c/v3(MIB-2), ARP, DNS, DDNS, QoS, PIM-SM, UPnP, Bonjour, LLDP |
| Security | HTTPS(SSL) Login Authentication<br>Digest Login Authentication<br>IP Address Filtering<br>User access log<br>802.1X Authentication(EAP-TLS, EAP-LEAP)<br>Device Certificate(Hanwha Techwin Root CA) |
| Application Programming Interface | ONVIF Profile S/T<br>SUNAPI(HTTP API)<br>Wisenet open platform |
| **General** | |
| Webpage Language | English, Korean, Chinese, French, Italian, Spanish, German, Japanese, Russian, Swedish,, Portuguese, Czech, Polish, Turkish, Dutch, Hungarian, Greek |
| Edge Storage | Micro SD/SDHC/SDXC 4 slots maximum 256GB each, per channel |
| Memory | 5GB RAM, 1280MB Flash |
| **Environmental & Electrical** | |
| Operating Temperature / Humidity | -40°C~+55°C(-40°F~+131°F) / Less than 90% RH |
| Storage Temperature / Humidity | -50°C~+60°C(-58°F~+140°F) / Less than 90% RH |
| Certification | IP66, IK10, NEMA4X |
| Input Voltage | HPoE(IEEE802.3bt, Class6, Type3, Injector included), 12VDC |
| Power Consumption | PoE: Maximum 45 W, Typical 33.7 W<br>12VDC: Maximum 42 W, Typical 32 W |
| **Mechanical** | |
| Color / Material | White / Aluminum |

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| | |
|---|---|
| RAL Code | RAL9003 |
| Product Dimensions / Weight | Ø315x145.9 mm(12.40"x5.74") / 5.2 kg(11.5lb),<br>compatible gangboxes: Single, Double 4" Square, 4" Octagon |

| DORI (EN62676-4 standard) | |
|---|---|
| Detect (25PPM/ 8PPF) | Wide: 53.4m(175.2ft) / Tele: 151.5m(497.1ft) |
| Observe (63PPM/ 19PPF) | Wide: 21.4m(70.1)ft) / Tele: 60.6m(198.9ft) |
| Recognize (125PPM/ 38PPF) | Wide: 10.7m(35.0ft) / Tele: 30.3m(99.4ft) |
| Identify (250PPM/ 76PPF) | Wide: 5.3m(17.5)ft) / Tele: 15.2m(49.7ft) |

- The lastest product information / specification can be found at hanwhasecurity.com
- Design and specifications are subject to change without notice.
- Wisenet is the proprietary brand of Hanwha Techwin, formerly known as Samsung Techwin.

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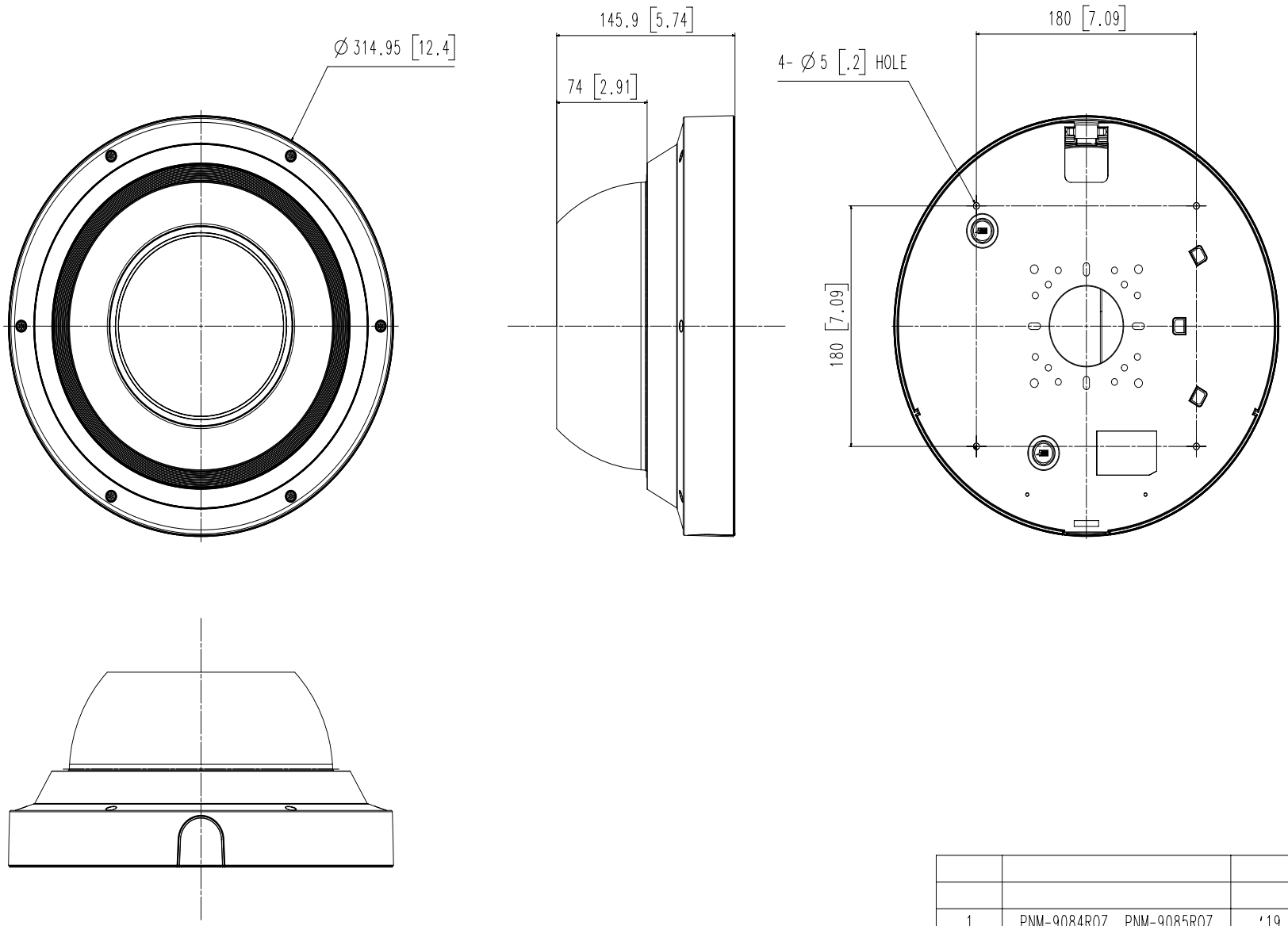


| | | |
|---|---|---|
| | | |
| | | |
| 1 | PNM-9084RQZ, PNM-9085RQZ | '19.10.01 |
| No. | MODEL NAME | DATE |
| Unit:mm[inch] | SCALE:1/1 | Hanwha Techwin |

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WISENET

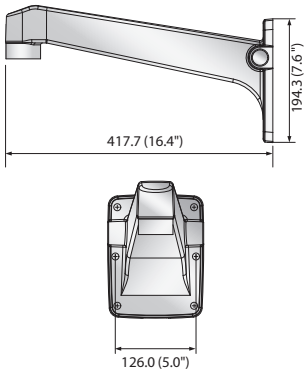
# Wall Mounts

| | Wall Mount | Wall Mount | Wall Mount |
|---|---|---|---|
| | **SBP-390WM1** | **SBP-390WM2** | **SBP-390WMW2** |
| Materials | Aluminum | Aluminum | Aluminum |
| Dimensions (WxHxD) | 126.0 x 194.3 x 417.7mm<br>(5.0" x 7.6" x 16.4") | 115.0 x 183.0 x 417.3mm<br>(4.5" x 7.2" x 16.4") | 115.0 x 183.0 x 417.3mm<br>(4.5" x 7.2" x 16.4") |
| Pipe Thread | 1½" PT TAP | 1½" PT TAP | 1½" PT TAP |
| Weight | 1.65Kg (3.64 lb) | 1.79Kg (3.95 lb) | 1.79Kg (3.95 lb) |
| Color | Ivory | Ivory | White |
| Applicable Model | SBP-317HM<br>SBP-329HM<br>SBP-276HM<br>SBP-300HM6<br>SBP-201HM<br>PNM-9080VQ<br>PNM-9081VQ<br>PNM-7000VD<br>PNM-9030V<br>PNM-9000VQ<br>PNM-9020V<br>PNM-9320VQP<br>HCM-9020VQ | SBP-317HM<br>SBP-329HM<br>SBP-276HM<br>SBP-300HM6<br>SBP-201HM<br>SBP-300PM<br>SBP-300KM<br>PNM-9080VQ<br>PNM-9081VQ<br>PNM-7000VD<br>PNM-9030V<br>PNM-9000VQ<br>PNM-9020V<br>PNM-9320VQP<br>HCM-9020VQ | SBP-317HM<br>SBP-329HM<br>SBP-276HM<br>SBP-300HM6<br>SBP-201HM<br>SBP-300PM<br>SBP-300KM<br>PNM-9080VQ<br>PNM-9081VQ<br>PNM-7000VD, PNM-9000VD<br>PNM-9030V<br>PNM-9000VQ<br>PNM-9020V<br>PNM-9320VQP<br>HCM-9020VQ |

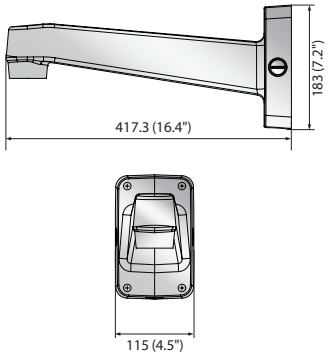
* The lastest product information / specification can be found at hanwhasecurity.com
* Design and specifications are subject to change without notice.
* Wisenet is the proprietary brand of Hanwha Techwin.

## Dimensions

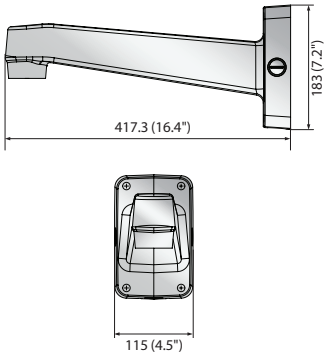
Unit : mm (inch)




SBP-390WM1




SBP-390WM2




SBP-390WMW2

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Hanwha Techwin

# Corner Mount Adaptor
# Pole Mount Adaptor

SBP-300KM (IVORY)
SBP-300PM (IVORY)
SBP-300KMW(WHITE)
SBP-300PMW (WHITE)

Hanwha Techwin

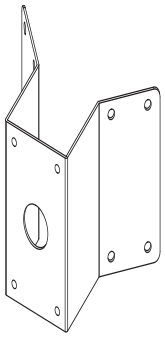
## Package

**SBP-300KM/SBP-300KMW**

STAINLESS BOLT
(M10XL30) 4EA

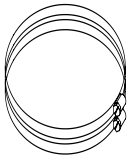
SPRING WASHER 4EA

PLAIN WASHER 4EA


CONER MOUNT ADAPTOR

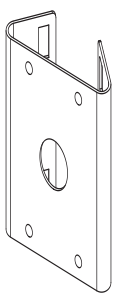
**SBP-300PM/SBP-300PMW**

STAINLESS BOLT
(M10XL30) 4EA


STAINLESS STEEL
MOUNT STRAP

SPRING WASHER 4EA

PLAIN WASHER 4EA


POLE MOUNT ADAPTOR

## Product Overview

**ENG**
SBP-300KM/SBP-300KMW : This is an adaptor that is used to install the Wall Mount Adaptor in a corner of the wall.
SBP-300PM/SBP-300PMW : This product is used to install the Wall Mount Adaptor onto a pole of at least 80 mm in diameter.

**FRA**
SBP-300KM/SBP-300KMW : Adaptateur permettant d'installer l'adaptateur de fixation murale dans l'angle du mur.
SBP-300PM/SBP-300PMW : Ce produit permet de monter l'adaptateur de fixation murale sur un pylône d'au moins 80 mm de diamètre.

**GER**
SBP-300KM/SBP-300KMW : Das ist ein Adapter, der zur Montage des Wandadapters in einer Wandecke verwendet wird.
SBP-300PM/SBP-300PMW : Dieses Produkt dient zum Montieren des Wandadapters an einem Mast mit einem Durchmesser von mind. 80 mm.

**SPA**
SBP-300KM/SBP-300KMW : Éste es un adaptador que se utiliza para instalar el adaptador de montaje en pared en una esquina de un muro.
SBP-300PM/SBP-300PMW : Este producto se utiliza para instalar el Adaptador de montaje en pared en un poste de al menos 80 mm de diámetro.

**ITA**
SBP-300KM/SBP-300KMW : Questo è un adattatore utilizzato per installare l'adattatore per montaggio a parete in un angolo della parete.
SBP-300PM/SBP-300PMW : Questo prodotto è utilizzato per installare l'adattatore per montaggio a parete su un palo di almeno 80 mm di diametro.

**RUS**
SBP-300KM/SBP-300KMW : этот переходник используется для установки настенного адаптера в углу.
SBP-300PM/SBP-300PMW : этот продукт используется для установки настенного кронштейна на столб, минимальный диаметр которого составляет 80 мм.

**POL**
SBP-300KM/SBP-300KMW : Ta przystawka używana jest do montowania Przystawki ściennej w kącie pomiędzy ścianami.
SBP-300PM/SBP-300PMW : Ten produkt jest używany do montażu przystawek ściennych na słupie o średnicy co najmniej 80 mm.

**TUR**
SBP-300KM/SBP-300KMW : Bu, Duvar Montaj Adaptörünü duvar köşelerine monte etmek için kullanılan bir adaptördür.
SBP-300PM/SBP-300PMW : Bu ürün, Duvara Montaj Adaptörünü en az 80 mm çapa sahip bir direğe monte etmek için kullanılır.

**CZ**
SBP-300KM/SBP-300KMW : Adaptér určený k instalaci adaptéru pro upevnění na stěnu do rohu na stěně.
SBP-300PM/SBP-300PMW : Tento produkt je určen k instalaci adaptéru pro upevnění na stěnu na stožár o průměru alespoň 80 mm.

**JAP**
SBP-300KM/SBP-300KMW : ウォール・マウント・アダプタを壁の隅に設置するために使用するアダプタです。
SBP-300PM/SBP-300PMW : この製品を使用して、ウォール・マウント・アダプタを直径が80mmを超える柱に設置します。

**CHI**
SBP-300KM/SBP-300KMW : 这是用于在墙角安装墙上安装适配器 的适配器。
SBP-300PM/SBP-300PMW : 本产品用于将墙上安装适配器 安装到直径至少为 80 毫米的柱子上。

**KOR**
SBP-300KM/SBP-300KMW : 본 제품은 벽의 모서리부에 Wall Mount Adaptor을 설치 시 사용하는 Adaptor 입니다.
SBP-300PM/SBP-300PMW : 본 제품은 80mm이상의 원기둥에 Wall Mount Adaptor 를 설치 시 사용하는 Adaptor 입니다.

## Installation Precautions

- Make sure that the installation place can endure at least 4 times of the total weight of the Corner/Pole Mount Adaptor, Wall Mount Adaptor, Hanging Mount Adaptor, and Camera.
- Each anchor bolt to use must be capable of withstanding an extraction force of 700 kg.
- When installing the product outdoors, use interlocking devices made of stainless steel.
- This product is designed to use M10 Anchor Bolts (Nuts) for the installation.
- If you install the Corner Mount Adaptor on a concrete wall, it is recommended to use M10 Anchor Bolts (Nuts) along with plain and spring washers.

- Assurez-vous que l'emplacement de l'installation peut supporter au moins 4 fois le poids total de l'adaptateur de fixation sur pylône/d'angle, de l'adaptateur de fixation murale, de l'adaptateur pour fixation suspendue et de la caméra.
- Chaque boulon utilisé doit pouvoir résister à une force d'extraction de 700 kg.
- Si vous installez le produit à l'extérieur, utilisez des dispositifs de verrouillage en acier inoxydable.
- Pour installer ce produit, vous avez besoin de boulons d'ancrage M10 (écrous à river).
- Si vous fixez l'adaptateur de fixation murale sur un mur en béton, nous vous conseillons d'utiliser des boulons d'ancrage M10 (écrous à river) avec rondelles de ressort et plates.

- Stellen Sie sicher, dass der Montageort das 4-fache Gesamtgewicht der Eck-/Masthalterung, des Wand- bzw. Hängeadapters und der Kamera tragen kann.
- Jeder Ankerbolzen muss einer Ausziehkraft von 700 kg standhalten können.
- Wenn das Produkt im Freien montiert wird, müssen Verriegelungseinrichtungen aus Edelstahl verwendet werden.
- Bei der Montage dieses Produkts benötigt man Ankerbolzen und Muttern (M10).
- Wenn Sie die Eckhalterung an einer Betonwand befestigen, wird die Verwendung von M10 Ankerbolzen (Muttern) und von Unterleg- bzw. Spannscheiben empfohlen.

- Asegúrese de que el lugar de instalación puede soportar al menos 4 veces el peso total del adaptador de montaje en esquina/poste, el adaptador de montaje en pared, el adaptador de montaje en suspensión y la cámara.
- Cada perno de anclaje debe tener la capacidad de soportar una fuerza de extracción de 700 kg.
- Al instalar el producto en exteriores, utilice dispositivos de interbloqueo de acero inoxidable.
- Este producto se ha diseñado para utilizar tornillos de anclaje M10 (tuercas) para la instalación.
- Si instala el adaptador de montaje en esquina en un muro de hormigón, se recomienda utilizar pernos de anclaje M10 (tuercas) junto con arandelas planas y de muelle.

- Assicurarsi che il punto prescelto per l'installazione possa sopportare un peso 4 volte superiore a quello totale di adattatore per montaggio ad angolo/su palo, adattatore per montaggio a parete, adattatore per montaggio sospeso e videocamera.
- Ogni bullone di ancoraggio da utilizzare deve poter resistere ad una forza di estrazione di 700 kg.
- Per installare il prodotto all'aperto, utilizzare dispositivi di ancoraggio in acciaio inossidabile.
- Questo prodotto è progettato per utilizzare bulloni (dadi) di ancoraggio M10 per l'installazione.
- Se si installa l'adattatore per montaggio ad angolo su un muro di cemento, si raccomanda di utilizzare bulloni (dadi) di ancoraggio M10 con rondelle piane ed elastiche.

- Убедитесь, что место установки выдерживает вес примерно в 4 раза больший общего веса углового адаптера/для крепления к колонне, а также навесного адаптера и камеры.
- Каждый используемый крепежный болт должен выдерживать силу извлечения, равную 700 кг.
- Если продукт устанавливается вне помещения, необходимо использовать устройство блокировки из нержавеющей стали.
- Для установки этого продукта используются крепежные болты (гайки) M10.
- При установке углового адаптера на бетонной стене рекомендуется использовать крепежные болты (гайки) M10, а также плоские и пружинные шайбы.

- Upewnij się, że miejsce instalacji może utrzymać ciężar czterokrotnie większy od łącznej wagi Przystawki do montażu na słupie/przystawki kątowej, Przystawki ściennej, Przystawki wiszącej i Kamery.
- Każda kotwa musi mieć zdolność wytrzymania siły wyciągania 700 kg.
- W przypadku montażu produktu na zewnątrz należy używać blokad ze stali nierdzewnej.
- Produkt ten należy montować za pomocą kotew (nakrętek) M10.
- W przypadku montażu Przystawki kątowej na ścianie betonowej zalecane są kotwy (nakrętki) M10 oraz podkładki zwykłe i sprężyste.

- Montaj yerinin Köşe/Direk Montaj Adaptörünün, Duvar Montaj Adaptörünün, Askılı Montaj Adaptörünün ve Kamera'nın toplam ağırlığının en az 4 katına dayanıklı olduğundan emin olun.
- Kullanılacak her ankraj cıvatası, 700 kg'lık bir çekme kuvvetine dayanıklı olmalıdır.
- Ürünü dış mekana kurarken, paslanmaz çelikten yapılmış iç kilit mekanizmaları kullanın.
- Bu ürün, M10 ankraj cıvatalarıyla (somunlar) birlikte kullanılmak için tasarlanmıştır.
- Köşeye Montaj Adaptörünü beton bir duvarda kullanacaksanız, düz ve yaylı rondelalara sahip M10 ankraj cıvatalarının (somunların) kullanılması önerilir.

- Ujistěte se, že místo, kam chcete zařízení instalovat, unese nejméně čtyřnásobek součtu hmotností rohového adaptéru nebo montážního adaptéru pro stožáry, adaptéru pro upevnění na stěnu, závěsného montážního adaptéru a kamery.
- Každý kotevní šroub musí být schopen odolat tahu 700 kg.
- Při instalaci produktu ve venkovních prostorách použijte zajišťovací prvky z nerezové oceli.
- Tento produkt je navržen pro použití kotevních šroubů a matic M10 při instalaci.
- Při instalaci rohového adaptéru na betonové stěny se doporučuje použít kotevní šrouby a matice M10 spolu s plochými a pérovými podložkami.

- 設置場所が、コーナー/ポール・マウント・アダプタ、ウォール・マウント・アダプタ、ハンギング・マウント・アダプタおよびカメラの合計重量の最大4倍まで耐えられることを確認してください。
- 使用する各アンカー・ボルトは、700kgの抜去力に耐えられます。
- この製品を屋外に設置する場合は、ステンレス製の連動装置を使用してください。
- この製品は、M10アンカー・ボルト(ナット)を使用して設置します。
- コンクリート製の壁にコーナー・マウント・アダプタを設置する場合は、M10アンカー・ボルト(ナット)と、平ワッシャーおよびスプリング・ワッシャーを使用することをお勧めします。

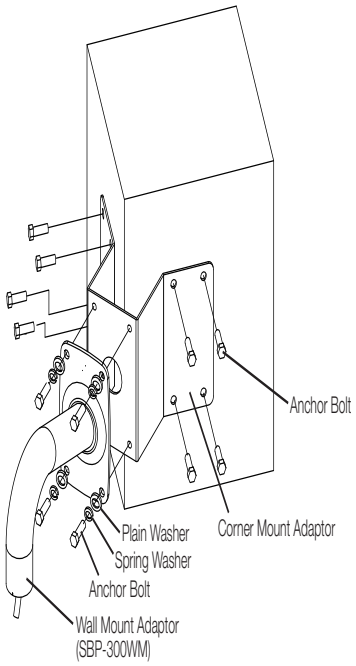
- 请确保安装位置至少可以承受角落/柱式安装适配器、墙上安装适配器、悬挂安装适配器和摄像机总重量的 4 倍的力度。
- 要使用的每个膨胀螺丝都必须能够承受 700 公斤的拔出力度。
- 在室外安装产品时，请使用不锈钢制作的联锁装置。
- 本产品设计为使用 M10 固定螺丝（螺母）进行安装。
- 如果将角落安装适配器安装在混凝土墙上，建议将 M10 固定螺丝（螺母）与扁平有弹性的垫圈结合使用。

- 설치장소가 Corner/Pole Mount Adaptor, Wall Mount Adaptor, Hanging Mount Adaptor, Camera 의 총중량의 4배 이상을 충분히 견딜 수 있는 곳에 설치하세요.
- 설치된 각각의 앙카 볼트는 700kg의 발거력에 견디어야 합니다.
- 옥외에 설치시 체결류는 스테인레스 재질을 사용하세요.
- 이 제품은 M10의 앙카 볼트(너트)를 사용하도록 설계되어 있습니다.
- Corner Mount Adaptor를 콘크리트벽에 설치할 경우 M10의 앙카 볼트(너트)를 평와셔 및 스프링와셔와 함께 사용하세요.

## Installation

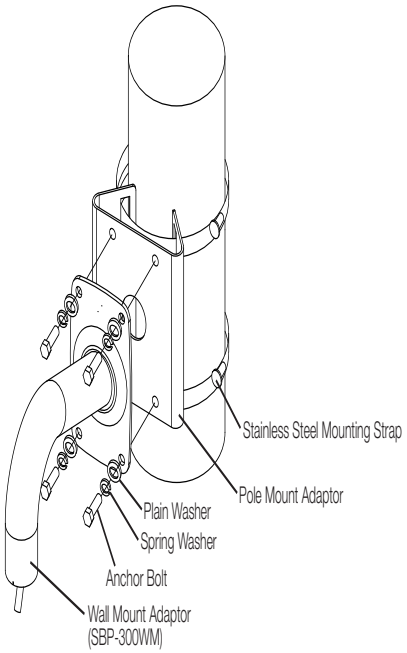
**SBP-300KM/SBP-300KMW**

1. Mark and drill 8 holes into the Corner Mount Adaptor where you will insert the Anchor Bolts or Nuts (M10), and fasten the Corner Mount Adaptor with the Bolts, plain and spring washers.
2. Insert the cables through the Corner Mount Adaptor.
3. Use the provided Bolts, Spring Washers and Plain Washers to mount the Wall Mount Adaptor onto the product.
   - For more information, refer to the installation guide of the Wall Mount Adaptor.

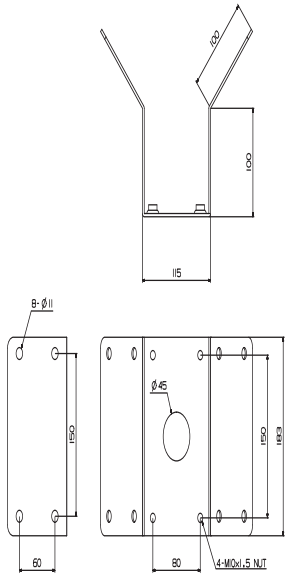



**SBP-300PM/SBP-300PMW**

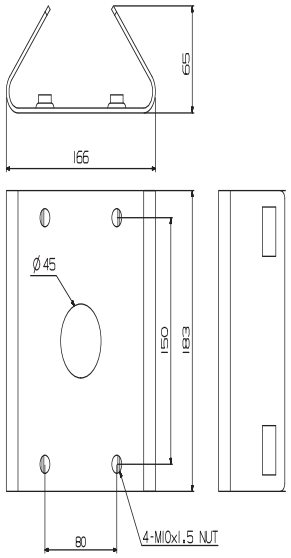
1. Select a pole to install and confirm the installation height.
2. Use the Stainless Steel Mounting Strap to secure the Pole Mount Adaptor to the pole.
3. Insert the cables through the Pole Mount Adaptor.
4. Use the provided Bolts, Spring Washers and Plain Washers to mount the Wall Mount Adaptor onto the product.
   - For more information, refer to the installation guide of the Wall Mount Adaptor.




## Product Outline




## Product Outline




## Product Specifications

| SBP-300KM/SBP-300KMW | SBP-300PM/SBP-300PMW |
|---|---|
| • Weight : 2200g<br>• Material : Steel<br>• Operation temp. : -50°C~60°C<br>• Operation hum. : 0~100% | • Weight : 1400g<br>• Material : Steel<br>• Operation temp. : -50°C~60°C<br>• Operation hum. : 0~100% |
| • Poids : 2200g<br>• Matériau : Acier<br>• Température de fonctionnement : -50°C~60°C<br>• Humidité de fonctionnement : 0~100% | • Poids : 1400g<br>• Matériau : Acier<br>• Température de fonctionnement : -50°C~60°C<br>• Humidité de fonctionnement : 0~100% |
| • Gewicht : 2200g<br>• Material : Stahl<br>• Betriebstemperatur : -50°C~60°C<br>• Betriebsluftfeuchte : 0~100% | • Gewicht : 1400g<br>• Material : Stahl<br>• Betriebstemperatur : -50°C~60°C<br>• Betriebsluftfeuchte : 0~100% |
| • Peso : 2200g<br>• Material : Acero<br>• Temp. funcionamiento : -50°C~60°C<br>• Hum. funcionamiento. : 0~100% | • Peso : 1400g<br>• Material : Acero<br>• Temp. funcionamiento : -50°C~60°C<br>• Hum. funcionamiento. : 0~100% |
| • Peso : 2200g<br>• Materiale : Acciaio<br>• Temperatura di esercizio : -50°C~60°C<br>• Umidità di esercizio : 0~100% | • Peso : 1400g<br>• Materiale : Acciaio<br>• Temperatura di esercizio : -50°C~60°C<br>• Umidità di esercizio : 0~100% |
| • Вес : 2200g<br>• Материал : Сталь<br>• Температура при работе : -50°C~60°C<br>• Влажность при работе : 0~100% | • Вес : 1400g<br>• Материал : Сталь<br>• Температура при работе : -50°C~60°C<br>• Влажность при работе : 0~100% |
| • Ciężar : 2200g<br>• Materiał : Stal<br>• Temperatura robocza : -50°C~60°C<br>• Wilgotność robocza : 0~100% | • Ciężar : 1400g<br>• Materiał : Stal<br>• Temperatura robocza : -50°C~60°C<br>• Wilgotność robocza : 0~100% |
| • Ağırlık : 2200g<br>• Malzeme : Çelik<br>• Çalışma sıcaklığı : -50°C~60°C<br>• Çalışma nem değeri : 0~100% | • Ağırlık : 1400g<br>• Malzeme : Çelik<br>• Çalışma sıcaklığı : -50°C~60°C<br>• Çalışma nem değeri : 0~100% |
| • Hmotnost : 2200g<br>• Materiál : Ocel<br>• Provozní teplota : -50°C~60°C<br>• Provozní vlhkost : 0~100% | • Hmotnost : 1400g<br>• Materiál : Ocel<br>• Provozní teplota : -50°C~60°C<br>• Provozní vlhkost : 0~100% |
| • 重量 : 2200g<br>• 材質 : スチール<br>• 動作温度 : -50°C~60°C<br>• 動作湿度 : 0~100% | • 重量 : 1400g<br>• 材質 : スチール<br>• 動作温度 : -50°C~60°C<br>• 動作湿度 : 0~100% |
| • 重量 : 2200g<br>• 材料 : 钢<br>• 工作温度 : -50°C~60°C<br>• 工作湿度 : 0~100% | • 重量 : 1400g<br>• 材料 : 钢<br>• 工作温度 : -50°C~60°C<br>• 工作湿度 : 0~100% |
| • 무게 : 2200g<br>• 재질 : Steel<br>• 사용 온도 : -50℃~60℃<br>• 사용 습도 : 0~100% | • 무게 : 1400g<br>• 재질 : Steel<br>• 사용 온도 : -50℃~60℃<br>• 사용 습도 : 0~100% |

# Installation Box

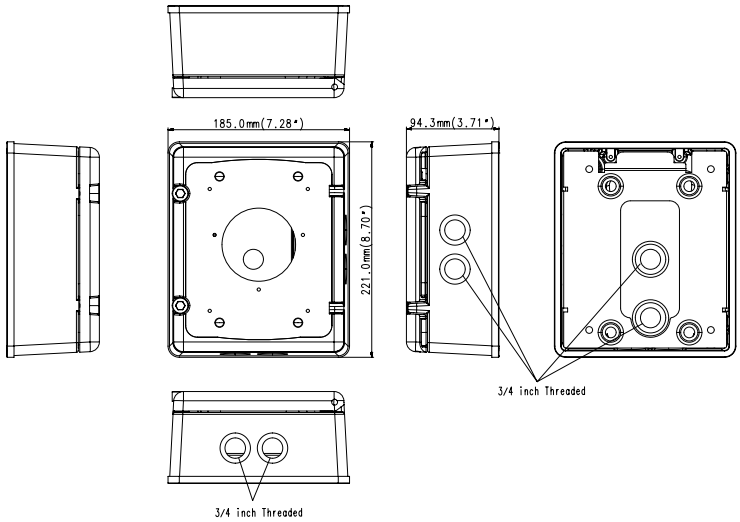
Installation Box

| | SBP-300NB / SBP-300NBW | |
|---|---|---|
| Materials | Steel / Aluminum | |
| Dimensions (WxHxD) | 185.0 x 221.0 x 94.3mm<br>(7.28 x 8.7 x 3.71") | |
| Applicable Model | SBP- 300WM / 300WM1 / 300KM / 300PM<br>SBP-300WMW / 300WMW1 / 300KMW / 300PMW | |
| Weight | 3.4Kg (7.49 lb) | |
| Color | Ivory | White |
| Ingress Protection | IP66 | |

* You can find applicable models with accessory selector www.hanwha-security.com/en/products/accessory-selector/
* The lastest product information / specification can be found at hanwhasecurity.com
* Design and specifications are subject to change without notice.
* Wisenet is the proprietary brand of Hanwha Techwin.

## Dimensions

Unit : mm (inch)

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Hanwha Techwin

SALEM FIRE ALARM
Phone: 503.364.4566
Fax: 503.364.0617

SAFIRE INTEGRATION, INC
Phone: 503.305.5448
Fax: 503.387.5925

SKSD Support Services Center
2575 Commercial St. SE
Salem OR. 97302
(SFA Job # 22022)

Low Voltage Wiring & Equipment for Fire Alarm

# Submittals Package

No Exception Taken
MFIA, Inc
Gary Adovnik
Checking is only for general conformance with the design concept of the project and general compliance with the information given in the contract documents. Any action shown is subject to the requirements of the plans and specifications. Contractor is responsible for: Dimensions, which shall be confirmed and correlated at the job site; fabrication processes and techniques of construction; coordination of his work with that of all other trades; and the satisfactory performance of his work.
04/25/2022

3160 22nd St. SE
P O Box 12789
Salem, OR 97309
CCB # 76884

**SIEMENS**

**Data Sheet**
Fire Safety & Security Products

# Specialized Detection Devices

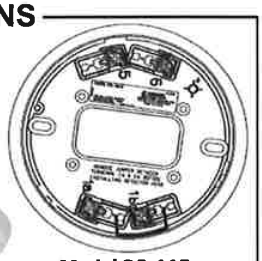
## 'DB' Series Detector Bases
### Models DB2-HR, DB-11 and DB-11E

**ARCHITECT AND ENGINEER SPECIFICATIONS**

- **Each detector base is compatible with Model 'H', "11" and "121" series of conventional detectors**
  - All bases compatible with the optional Model LK-11 detector-locking kit
- **Each detector base also functions with the addressable Model 'H' series, as well as Models FDO421, FDOT421, FDOOT441, FDOOTC441 and FDT421 intelligent devices**
  - Model DB2-HR is also compatible with ASA*technology*™ detectors
  - Model DB2-HR has backwards compatibility with Siemens Model 'H'-series intelligent detectors
- **Models DB-11 and DB-11E mount on a 4-inch square, octagon or single-gang electrical box**
  - Model DB-11 has plugs to cover the outer-mounting screw holes
- **Model DB2-HR mounts on a 4"-square, double-gang electrical box**

**Model DB2-HR**

**Model DB-11**



**Model DB-11E**

- **UL 268 Listed, ULC-S529 Listed; FM, CSFM and NYC Fire Department Approved**

## Product Overview

The detector bases are low-profile, surface-mounting bases used on various Siemens – Fire Safety conventional and addressable detectors.

Model DB2-HR, which is a redesign of Model DB-HR, is compatible with the standard, addressable type of intelligent detectors, as well as those detection devices that operate with ASA*technology*™.

Additionally, Model DB2-HR is backward compatible with the Siemens Model 'H'-series intelligent detectors and detector-assigned FACPs. Model DB2-HR can also operate with Siemens' 50-point addressable; 252-point addressable; 504-point addressable, and FireFinder® XLS fire systems. A relay output from the fire detector base for signaling other devices is provided by Model DB2-HR.

The detector bases use screw-clamp contacts for electrical connections and self-wiping contacts for better reliability. Further, the bases can be used with the optional Model LK-11 detector locking kit, which contains 50 detector locks and an installation tool, to prevent unauthorized removal of the detector head.

## Specifications

Models DB-11 and DB-11E are the standard bases for Model 'H'-series "11" and Model "121"-series conventional detectors, as well as the Model 'H'-series addressable detectors. Model DB-11 has a 6-inch (15.2 cm) diameter. The diameter for Model DB-11E is 4.5 inches (11.4 cm).

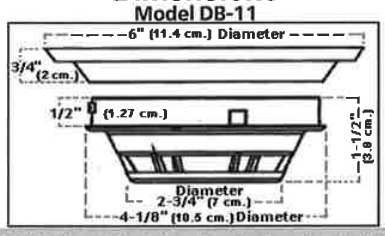
## Specifications – (continued)

Moreover, Models DB-11 and DB-11E mount on a 4"-square, (10.2 cm) octagon or single-gang box. Model DB-11 has integral, decorative plugs to cover the outer screw holes.

However, Model DB2-HR mounts on a double-gang, 4-inch (10.2 cm.) square electrical box.

## Dimensions

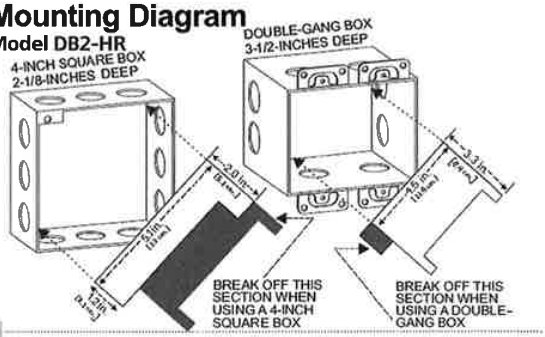
**Model DB-11**




**Note:** Model DB-11E base detector has a diameter dimension of 4.5" (11.4 cm.).

## Mounting Diagram

**Model DB2-HR**

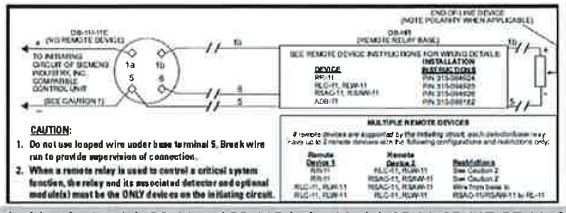



**Notes:** The Module Barrier (*shown to the right*) must be used when Model DB2-HR relay contacts are connected to non-power-limited circuits. Break apart the barrier to the correct size and shape for either the 4-inch square or double-gang box. Install the barrier diagonally into the back box to create two (2), separate compartments with the back box, in order to separate the wires.

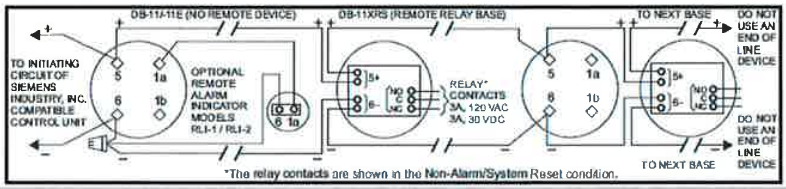



**SIEMENS Industry, Inc.**
**Building Technologies Division**

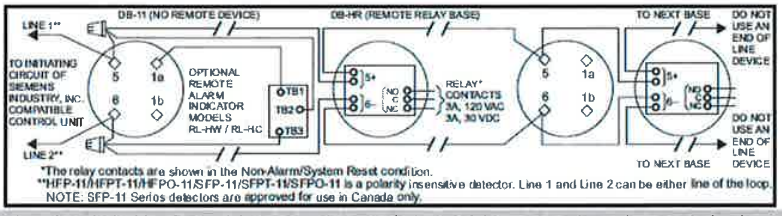
## Wiring Diagrams



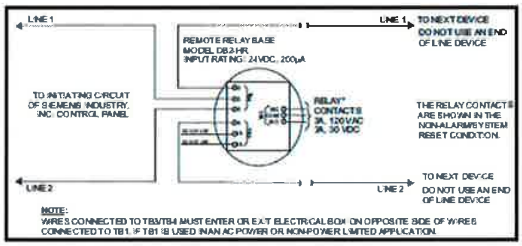
**Note:** The illustration above is typical wiring for Models DB-11 and DB-11E (using Models PE-11, PE-11T, DT-11, OP121, OH121, and HI121 detectors).




**Note:** The illustration above is typical wiring for Models DB-11 and DB-11E (using Models FP-11, FPT-11, FS-DP, FS-DPT, and FS-DT detectors).




**Note:** The illustration above is typical wiring for Models DB-11 and DB-11E (using Models HFP-11 Series and SFP-11 Series detectors).




**Note:** The illustration above is typical wiring for Model DB2-HR for polarity-insensitive detectors).

## Details for Ordering

| Model Number | Part Number | Description |
|---|---|---|
| AD2-P | 500-649706 | Air-Duct Housing |
| AD2-PR | 500-649707 | Air-Duct Housing with Relay |
| DB-11 | 500-094151 | Low-Profile Surface-Mount Base |
| DB-11C | 500-095687 | Low-Profile Surface-Mount Base [Canada] |
| DB-11E | 500-094151E | Smaller-Diameter Detector Base |
| DB-HR | 500-033220 | Relay Base for 'H'-Series Intelligent Detector |
| DB2-HR | S54370-F12-A1 | Relay base compatible with 'S'-Line and 'C'-line detectors; backwards compatible with Model 'H'-series detectors |
| DT-11 | 500-095430 | 135°F (57.2°C) Low-Profile Thermal Detector |
| DT-11C | 500-095983 | Low-Profile Thermal Detector [Canada] |
| FDO421 | S54320-F4-A1 | Photoelectric Smoke Detector |
| FDOT421 | S54320-F6-A1 | Addressable Multi-Criteria Fire Detector |
| FDT421 | S54320-F5-A1 | Thermal (Heat) Detector |
| FDOOT441 | S54320-F7-A1 | Multi-Criteria Fire Detector with ASA*technology*™ |
| FDOOTC441 | S54320-F8-A1 | Multi-Criteria Fire / CO Detector with ASA*technology*™ |
| LK-11 | 500-695350 | Base Locking Kit for Model '11'-series detectors |

| Model Number | Part Number | Description |
|---|---|---|
| FP-11 | 500-095112 | *FirePrint*™ Intelligent Detector |
| FP-11C | 500-095112C | *FirePrint*™ Intelligent Detector [Canada] |
| FPT-11 | 500-095918 | Thermal Detector |
| FPT-11C | 500-095918C | Thermal Detector [Canada] |
| HFPO-11 | 500-034800 | FS-250 Addressable Detector |
| HFP-11 | 500-033290 | *FirePrint*™ Detector |
| HFPT-11 | 500-033380 | Thermal Detector |
| HI121 | S54372-F3-A1 | Heat Detector |
| OH121 | S54372-F2-A1 | Multi-Sensor Smoke Detector |
| OP121 | S54372-F1-A1 | Photoelectric Smoke Detector |
| PE-11 | 500-094150 | Conventional Photoelectric Smoke Detector |
| PE-11T | 500-095150 | Photoelectric Smoke Detector with 135°F (57.2°C) Thermal Sensor |
| SFP-11 | 500-33290C | Photo / Thermal Detector [Canada] |
| SFPO-11 | 500-34800C | Photo Detector [Canada] |
| SFPT-11 | 500-033380C | Detector Package [Canada] |

**Notice:** This marketing data sheet is not intended to be used for system design or installation purposes. For the most up-to-date information, refer to each product's installation instructions.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Building Technologies Division

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(SII-FS)
Printed in U.S.A.

**September 2012**
Supersedes sheet dated 4/12
(Rev. 1)

# Peripheral and Detection Devices
# Initiating Devices

## Intelligent Device Interface Modules
## Model XTRI-D | XTRI-R | XTRI-S

### Architect & Engineer Specifications

- ☐ Built-in dual isolators:
  - Modern technology supports comprehensive system-and-interface communication
  - Allows up to 190 isolators per loop and 30 devices between isolators
- ☐ Dual input on Model XTRI-D, via a single address
- ☐ Integral single-pole, double-throw (SPDT) relay on Model XTRI-R:
  - Up to 4 Amps.
- ☐ Meets Class X (Style 7) survivability requirements
- ☐ Low current draw
- ☐ Polarity insensitive (in non-isolation mode) via *SureWire™* technology:
  - Modern technology supports comprehensive system and interface communication
- ☐ Multi-color light-emitting diode (LED) indicates system status:
  - GREEN | AMBER | RED
- ☐ Mounts in a 4-inch (10.2 cm.) square, 2–⅛" (5.7 cm.) deep single-gang or double-gang back box
- ☐ Non-obstructive front-end access to programming port and wiring terminals
- ☐ Device Programmer | Test Unit programs and verifies address, as well as tests device functionality
- ☐ Restriction of Hazardous Substances (RoHS) compliant
- ☐ UL864 | UL2572 | UL2017 Listed; CAN/ULC-S527 & CAN/ULC-S576 Listed
  - File S24304, Vol. 3

### Product Overview

The Siemens – Fire Safety XTRI-series Intelligent Interface Modules are designed to provide the means of interfacing direct shorting devices to the fire-alarm control panel (FACP) loop circuit. All modules take up one (1) address on the loop.

Each XTRI-series interface module provides built-in, intelligent dual isolation, and meets Class X (Style 7) wiring requirements. Up to 190 isolators per loop and up to 30 devices between isolators (wired in polarity-insensitive mode). Additionally, the devices between isolators can either be 'H'-series or the more contemporary 'X'-series detection devices.

### Specifications

The Siemens – Fire Safety XTRI-series Intelligent Interface Modules are available in three (3) individual types:

- One (1) Dual-Input: XTRI-D
- Two (2) Single-Inputs: XTRI-R (with relay) | XTRI-S
  - The single-input versions are each designed to monitor a normally open (N.O) or (N.C) normally closed dry contact

XTRI-D | XTRI-R | XTRI-S incorporates configurable, built-in dual isolators. Additionally, an XTRI-series interface module has Class X (Style 7) survivability requirements for shorts while providing reliable alarm communication to the Siemens FACP. The isolation feature found on the XTRI-series Intelligent Interface Modules gives information as to the location of the fault. When a short occurs, the panel can identify the fault automatically, and the module recognizes the short location (in front of the device or behind the device).

Overall, the built-in isolators improve the diagnostics and location of the short and report when a Class X module is misconfigured.

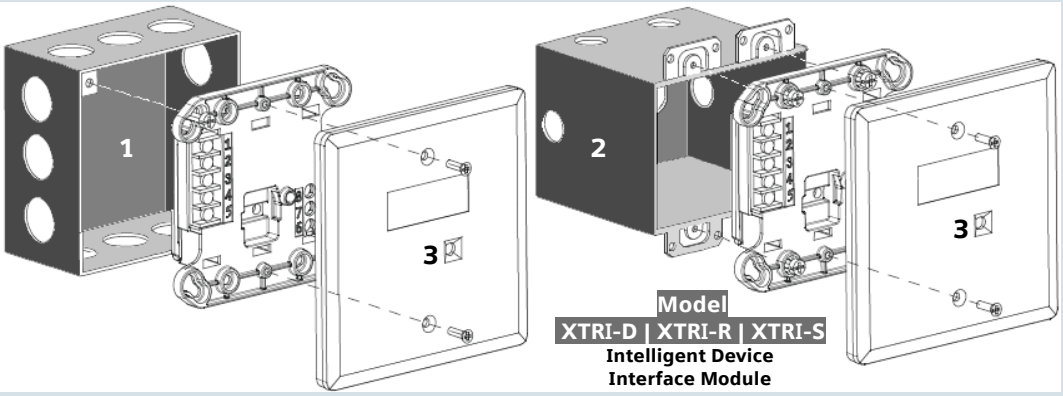
The modules are configurable by a Siemens compatible FACP (or panels) in an isolator (polarity sensitive) or non-isolator (polarity insensitive) mode.
When a XTRI-series interface module is configured as an isolator, that module has the capacity of functioning as both an in/out device, as well as an isolator.

Advanced troubleshooting is provided by compatible panels by identifying when a XTRI-series interface module is configured as an isolator, but is wired incorrectly in a polarity-insensitive mode.
Each Model XTRI-series device has a multi-color LED that flashes when GREEN operating in Normal mode; AMBER if the unit is in a `Trouble' condition, and RED to indicate a change of status.

**Model XTRI-D | XTRI-R | XTRI-S**
**Intelligent Device Interface Module**

**Model XTRI-S**

This single-input interface module can only monitor and report the status of a N.O. or N.C. contact.




**Model**
**XTRI-D | XTRI-R | XTRI-S**
**Intelligent Device Interface Module**

1. 4" (10.2 cm.) square box | 2– 1/8" (5.4 cm.) back box
2. 3.5" (8.9 cm.) double -gang back box
3. 5" (12.7 cm.) square switch plate, (supplied)

## Specifications – (continued)

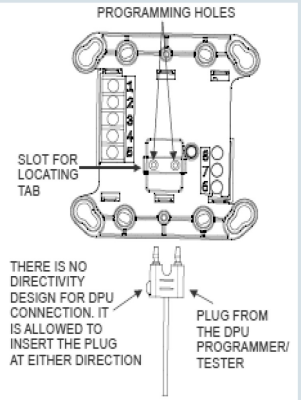
**Model XTRI-R**

Through the use of an addressable 'Form C' relay, the Model XTRI-R relay and contact device input are controlled at the same address. The relay and input contact can be controlled as a separate function from a Siemens compatible FACP. The relay is typically used where control or shunting of external equipment is required. When a LED blinks twice on a Model XTRI-R, it indicates a change of relay status.

**Model XTRI-D**

Model XTRI-D is a dual-input module that is designed to supervise and monitor two (2) sets of dry contacts. Model XTRI-D only requires one (1) address, but responds independently to each input. Model XTRI-D is ideal for monitoring a water-flow switch and its respective valve tamper switch. Model XTRI-D flashes twice: once for each address.

## Mounting Data




NOTES: Each interface module mounts directly to a user-supplied switchbox. The electrical boxes, seen above, are supplied-by-others (BO).

Models XTRI-D, XTRI-R and XTRI-S mount directly onto a 4-inch (10.2 cm.) square, 2 ¼'' (5.7 cm.)–deep box back box, or to a user-supplied double-gang 3 ½" deep back box.

A 5" (12.7 cm.) square, off-white faceplate is included in each shipment of a Siemens Model XTRI-series module.

## Operation

**Field-Device Programmer / Test Unit**

Siemens – Fire Safety innovative technology allows Model XTRI-series intelligent interface modules to be programmed via the Siemens field-device programmer / test unit (Model DPU), which is a compact, portable and menu-driven accessory for electronically programming and testing Siemens peripheral modules and devices promptly and reliably. For instance, the field technician selects the accessory's program mode, and enters the desired address.

Vibration, corrosion and other conditions that deteriorate mechanical-addressing mechanisms are no longer a cause for concern. Model XTRI-series interface module is connected to Model DPU with the programming cable provided with the tester. This programming cable **(P/N 110-694927)** utilizes two (2) alligator-clip connectors.

**NOTE**: Since the XTRI-series of interface modules are advanced initiating devices, the latest Model DPU firmware update is required.

Model DPU eliminates the need for cumbersome, unreliable mechanical programming methods (e.g. – dials and rotary switches), and reduces installation and service costs by electronically programming and testing the detector prior to installation. When set in `test' mode, Model DPU will perform a series of diagnostic tests without altering the address or other stored data, allowing technicians to determine if the detector is operating properly.

Each field-device programmer / test unit operates on AC power or rechargeable batteries, providing flexibility and convenience in the programming / testing of fire-safety equipment from practically any location. Additionally, with the use of a Model DPU unit, there is no longer a cause for concern with any vibration, corrosion and other deteriorating conditions that can accompany the vitality of a mechanical-addressing mechanism.

The encompassing result is an intelligent detector that provides enhanced detection capability to a wide range of products of combustion – while offering unsurpassed rejection to nuisance-alarm sources, including: dust | steam | aerosols and other deceptive phenomena that could cause false alarms.

## Compatibilities

Siemens `X' modules may be used along with Model `H'-series intelligent detectors; Model `HMS'-series addressable manual stations, or any other `H'-series addressable intelligent module (e.g. Model HZM or Model HCP).

Interspersing `X' & `H'-series devices on the same loop is mostly permitted, but there are exceptions:
Models HLIM (isolation module) and SBGA-34 (audible base) cannot be used with `X' devices on the same loop.

## Temperature and Humidity Range

Models XTRI-D | XTRI-R | XTRI-S intelligent interface modules are UL Listed | ULC Listed. Environmental operating conditions for each interface module is 32°F (0°C) to 120°F (49°C) with a relative humidity of no greater than 95%, non-condensing.

## Technical Data

| | |
|---|---|
| **OPERATING VOLTAGE RANGE:** | 18VDC – 32VDC |
| **RELATIVE HUMIDITY:** | 0 – 95% (non-condensing) |
| **`ACTIVE' OR `STANDBY' CURRENT, MAX.:** | 500µA |
| **LINE SIZES AMERICAN WIRE GAUGE (AWG)** | 14 AWG, max.<br>18 AWG, min. |
| **CURRENT DRAW, MAX \| AVG.** | XTRI-S: 650µA |
| | XTRI-R: 750µA |
| | XTRI-D: 950µA |
| **RELAY RATINGS:** (for Model XTRI-R) | |
| **RESISTIVE:** | 4 Amps \| 125 VAC |
| | 4 Amps \| 30 VDC |
| **INDUCTIVE:** | 3.5A, 120 VAC (0.6 pF) |
| | 3.0A, 30 VDC (0.6 pF) |
| | 2.0A, 120 VAC (0.4 pF) |
| | 2.0A, 120 VAC (0.35 pF) |
| | 2.0A, 30 VDC (0.35 pF) |

## Details for Ordering

| MODEL OR TYPE | PART NUMBER | PRODUCT |
|---|---|---|
| XTRI-S | S54370-B3-A1 | Single Input Module |
| XTRI-R | S54370-B1-A1 | Single Input Module (with relay) |
| XTRI-D | S54370-B2-A1 | Dual Input Module |
| DPU | 500-033260 | Device Programmer / Test Unit |

**NOTE**: Refer to installation manual: **P/N – A6V101055479** to ensure Model XTRI-D | XTRI-R | XTRI-S compatibility with the Siemens FACPs intended for use in the given application.

## Electrical Ratings

| FLASH COLOR | CONDITION | FLASH INTERVALS [in seconds] |
|---|---|---|
| GREEN*: | Normal supervisory operation. | 10 |
| YELLOW: | Device is in trouble and needs to be replaced. | 4 |
| RED: | Locate \| `Alarm' | 1 |
| | Output Device (XTRI-R only) | 10 |
| NO FLASH: | Power is not being received. Replacement is needed. | – |

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Copies of install-type, instruction sheets – as well as the *General Product Warning and Limitations* document, which also contains important data, are provided with the product, and are available from the Manufacturer.

Data contained in the aforesaid type of documentation should be consulted with a fire-safety professional before specifying or using the product.

Any further questions or assistance concerning particular problems that might arise, relative to the proper functioning of the equipment, please contact the Manufacturer.

SIEMENS

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**September 2017** – New Issue
(Rev. 0)

SIEMENS
Ingenuity for life

# Peripheral and Detection Devices
# Initiating Devices

## XMS-Series Manual Pull Stations

### Models XMS-S | XMS-D | XMS-M

## Architect & Engineer Specifications

- ☐ Built-in loop isolation:
  - Meets Class X (Style 7) survivability requirements
  - Supports up to 190 X-Series isolation peripherals per loop and 30 addressable devices
- ☐ Low current draw
- ☐ Polarity insensitive (in non-isolation mode) via SureWire technology
- ☐ Multi-color status LED
- ☐ T-45 reset key
- ☐ Reduced mounting depth for compatibility with single gang electrical boxes for retrofit applications
- ☐ Trouble indication during service and maintenance
- ☐ Single action, double action, and metal versions available
- ☐ Portuguese and Spanish versions available
- ☐ RoHS compliant
- ☐ UL38 Listed

## Product Overview

The XMS-Series of manual pull stations are a complete addressable and conventional pull station portfolio that include single action, double action, and metal versions. The addressable versions feature built-in Class X (Style 7) isolation capability for increased system survivability. All models feature a T-45 reset key to match the fire alarm panel enclosure. Addressable models also feature a tri-color status LED to indicate normal, alarm, and trouble status. All modules utilize one address.

The manual stations can be commissioned non-isolation (polarity insensitive) or isolation "X-Series" modes of operation.

## Specifications

Models XMS-S, XMS-D, and XMS-M are compatible with Siemens FACPs. The Model XMS-S is a single action pull station in a plastic housing that requires one action by the user to initiate the alarm. The Model XMS-D is a double action pull station in a plastic housing that requires two actions by the user to initiate an alarm. The Model XMS-M is a single action pull station in a metal housing that requires one action by the user to initiate the alarm. These models are field installed addressable devices containing advanced control panel communication technology.

The XMS-Series manual pull stations feature a "maintenance trouble" that places the fire alarm panel into a trouble condition if an XMS is accidentally left in an armed status when the cover is removed for maintenance work.

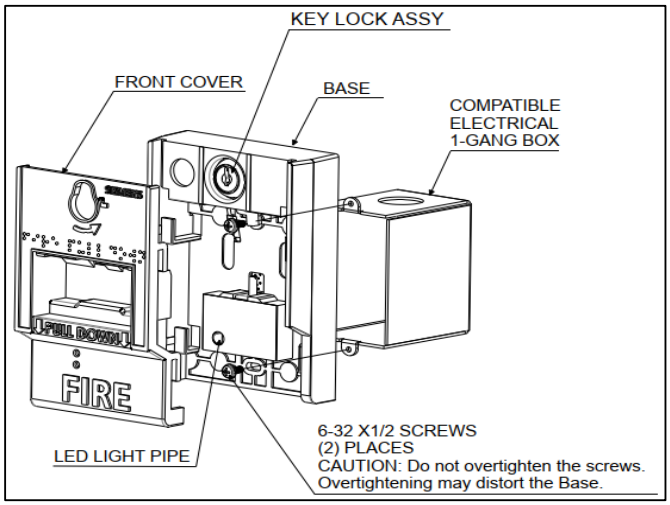
Model XMS-D

This technology provides two-direction communication with the control panel. To reset the stations, insert the Siemens T45 key provided into the key lock and turn the key 10-15 degrees counter-clockwise as the arrow shows. The cover will move upward to the normal position. Rotate the key clockwise and remove key from the lock. At Normal position the top of the Cover is flush with the top surface of the Base. Reset the Fire Alarm Control Panel to clear the alarm.

The XMS-S, XMS-D, and XMS-M manual stations operate with the Desigo Fire Safety Modular / Cerberus PRO Modular via the XDLC. These devices can be wired in either Isolation Mode or Polarity Insensitive Mode Wiring. The XMS-S/XMS-M manual station front cover has a recess pocket to pull down and locks in position after the alarm is initiated. The XMS-D manual station has an additional lever labeled "PUSH HERE THEN" to get access to the front cover pocket to initiate the alarm.

UL RoHS

## Mounting Diagram




## Technical Data

| | |
|---|---|
| Operating Voltage Range | 13 - 32VDC |
| Max Average Operating Current @ 24v: | 500µA |
| Operating Temperature Range | 32° — 120°F (0° — 49°C) |
| Operating Humidity Range | 0 — 95%, RH |

## Physical Properties

| | |
|---|---|
| Construction: | High impact polycarbonate plastic |
| | Aluminum |
| Shipping weight: | 1.0 lbs |
| Dimensions: | 5.50" H x 4.0" W x 1.250" D |
| Compliance: | ADA |
| Compatible electrical boxes: | 2-1/2" deep 1-gang box |

## Details for Ordering

| Model or Type | Part Number | Description |
|---|---|---|
| XMS-S | S54321-F7-A1 | Addressable Single Action Manual Pull Station with Isolation |
| XMS-D | S54321-F8-A1 | Addressable Double Action Manual Pull Station with Isolation |
| XMS-M | S54321-F19-A1 | Addressable Single Action Metal Pull Station with Isolation |
| XMS-SP | S54321-F9-A1 | Addressable Single Action Manual Pull Station with Isolation - Portugese Text |
| XMS-DP | S54321-F10-A1 | Addressable Double Action Manual Pull Station with Isolation - Portugese Text |
| XMS-SE | S54321-F11-A1 | Addressable Single Action Manual Pull Station with Isolation - Spanish Text |
| XMS-DE | S54321-F12-A1 | Addressable Double Action Manual Pull Station with Isolation - Spanish Text |
| XMH-501 | S54321-F18-A1 | Conventional Double Action Manual Pull Station for Agent Release |
| XMS-501 | S54321-F16-A1 | Conventional Double Action Manual Pull Station |
| XMS-51 | S54321-F15-A1 | Conventional Single Action Manual Station with Auxiliary Relay and Key Switch |
| SMBOX-XMP | S54321-F20-A1 | Surface Mounting Backbox for X-Series Manual Stations |
| APLT-XMP | S54321-F21-A1 | Adapter Plate for X-Series Manual Stations to Legacy Surface Backboxes |
| 4DGBOX-XMP | S54321-F22-A1 | Adapter Plate for X-Series Manual Stations to 4" and Double-Gang Backboxes |

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SIEMENS

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**December - 2019**
**(New Issue)**

Data Sheet

# Intelligent Detection Devices

## Photoelectric Smoke Detector
## Model OP921

### ARCHITECT AND ENGINEER SPECIFICATIONS

- Compatible with Siemens Model 'H'-series devices on the same loop (with Model FC9–series fire-alarm control panels)
- Compatible with Model 8720 / DPU (device programmer / loop tester)
- Utilizes advanced microprocessor-based signal processing
- Extended temperature and humidity operating range
- Each detector is self-testing:
  - self monitored for sensitivity within ®UL Listed limits
  - complete diagnostics performed every 10 seconds
- Polarity insensitive utilizing *SureWire*™ technology
- Compatible with Model DB-11–series mounting bases
- Tri-color detector status LED with 360° viewing
- Field-selectable application sensitivity profiles
- Remote sensitivity-measurement capability
- Utilizes advanced signal processing
- Superior EMI / RFI immunity
- RoHS compliant

- Automatic environment compensation
- ®UL268A Listed [for direct air-duct use], ®ULC Pending; CSFM Approved

### Product Overview

The Photoelectric Smoke Detector (Model OP921) uses state-of-the-art microcontroller circuitry and surface-mount technology for maximum reliability. Model OP921 incorporates an optical sensor using a light-scattering detection principle. The device utilizes advanced software algorithms to analyze the signals, and provides highly stable and accurate smoke detection.

Further, Model OP921 uses state-of-the-art microprocessor circuitry with error check; detector self-diagnostics, and supervision programs.

### Field-Device Programmer / Test Unit

Model OP921 is compatible with the Siemens field-device programmer / test unit (Model 8720 / DPU), which is a compact, portable, menu-driven accessory for electronically programming and testing detectors easily and reliably.

Model 8720 / DPU eliminates the need for cumbersome, unreliable mechanical programming methods, such as dials or switches, and reduces installation and service costs by electronically programming and testing the detector prior to installation.

For proper operation of the field-device programmer / test unit, the technician selects the accessory's program mode, and enters the desired address. In turn, Model 8720 / DPU automatically sets and verifies the address, as well as tests the detector. When in the 'test' mode, Model 8720 / DPU will perform a series of diagnostic tests without altering the address or other stored data, allowing technicians to determine if the detector is operating properly.

Model 8720 / DPU operates on AC power or rechargeable batteries, providing flexibility and convenience in programming and testing equipment from practically any location.

## Product Overview — (continued)

Model 8720 / DPU operates on AC power or rechargeable batteries, providing flexibility and convenience in programming and testing equipment from practically any location.

Model OP921 is a plug-in, two-wire and addressable photoelectric smoke detector. Model OP921 is Underwriters' Laboratories Listed [UL268A Listed for direct in-air duct usage].

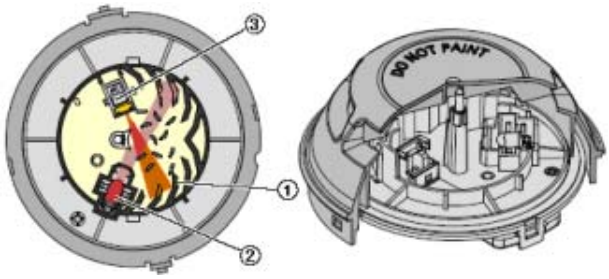
Each detector consists of a dust-resistant photoelectric chamber and microprocessor-based electronics with a low-profile plastic housing. Every Model OP921 fire detector is shipped with a protective dust cover:

1. Dust cover
2. Smoke detector

## Operation

Model OP921 is a wide-spectrum, photoelectric smoke detector incorporating an infrared light-emitting diode (IRLED), and infrared light-sensing photodiode. Under normal conditions, light transmitted by the LED is directed away from the photodiode and scattered through the smoke chamber in a controlled pattern.

The smoke chamber is designed to manage light dissipation and extraneous reflections from dust particles or other non-smoke, airborne contaminants in such a way as to maintain stable, consistent detector operation. When smoke enters the detector chamber, light emitted from the IRLED is scattered by the smoke particles, and is received by the photodiode:




1. Labyrinth
2. Optical transmitter
3. Optical receiver

### Sensitivity Settings

#### Application Parameter Sets

Model OP921 provides four (4) pre-programmed sensitivity parameter sets that can be selected by the FACP to match the expected application or environmental conditions:

- Sensitive
- Standard
- Robust
- Air-duct

***Sensitive*:** This application parameter set is practically suitable for areas where few misleading sources of false alarm are present, and is appropriate where priority is given to detecting open fires as soon as possible (e.g. – typically a clean application with controlled environmental conditions.)

***Standard*:** This application parameter set is practically apt for normal office, hotel-lobby-type applications, and is the default setting.

***Robust*:** This application parameter set offers improved resistance to false alarms in areas where misleading sources, such as cigarette smoke or exhaust fumes, may cause a nuisance alarm.

***Air-Duct*:** This application parameter set is used when the detector is used a UL268A (DI) compliant direct in-air duct application without a duct housing.

Model OP921 does not require a field sensitivity test. Model OP921 is UL Listed as a self-testing device and complies with NFPA 72 as a self monitoring detector and control panel arrangement. This parameter set is also used when Model OP921 is used in air-duct housings (Models FDBZ492 and FDBZ492-HR).

The visible LED flashes green every 10 seconds to indicate communication with the FACP, and to notify Model OP921 has passed its self-test. Should Model OP921 sense a fault or failure within its system, the LED will flash amber, and the detector will transmit the data to the FACP.

A quick visual inspection is sufficient to indicate the condition of Model OP921 at any time. If more detailed information is required, a printed report can be provided from the compatible FACP, indicating the status and settings assigned to each individual detector. When Model OP921 moves to *Alarm* mode, the detector will flash red and continue flashing until the system is reset at the FACP. At that same time, any user-defined, system-alarm functions programmed into the system are activated.

Model OP921 contains a tri-color LED indicator, capable of flashing any one (1) of three (3) distinct colors: green, yellow, or red. During each flash interval, the microprocessor-based detector monitors the following:

## Operation — (continued)

- Smoke sensitivity is within the range indicated on the nameplate label
- Smoke in its sensing chamber
- Internal sensors and electronics are functional

Based on the monitoring results, the LED indicator flashes the following colors based on the following conditions:

| Flash Color | Condition | Flash Interval (in seconds) |
|---|---|---|
| **Green*:** | Normal supervisory operation. Smoke sensitivity is within rated limits. | 10 |
| **Yellow:** | Detector is in trouble and needs replacement. | 4 |
| **Red:** | Alarm condition. | 1 |
| **No Flash:** | Detector is not powered. | — — |

* LED can be turned OFF.
Please follow the corresponding description of the panel used.

A quick, visual inspection is sufficient to indicate the condition of the detector at any time. If more detailed information is required, a printed report can be provided from the Model FC9-series FACPs indicating the status and settings assigned to each individual detector.

## Installation

All Model OP921 detectors use a surface-mounting base, Model DB-11 or Model DB-11E, which mounts on a 4-inch octagonal, square or single-gang electrical box. The base utilizes screw-clamp contacts for electrical connections and self-wiping contacts for increased reliability.

The Model DB-11 base can be used with the optional Model LK-11 detector locking kit, which contains 50 detector locks and an installation tool to prevent unauthorized removal of the detector head. Model DB-11 has decorative plugs to cover the outer-mounting screw holes.

Model OP921 may be installed on the same initiating circuit with the Siemens Model 'H'-series detectors [when used with the Model FC9-series of FACPs] —

- Model HFP-11
- Model 'HMS'-series manual stations
- Model 'HTRI'-series interfaces
- Model HCP output-control devices
- Model 'HZM'-series of addressable, conventional zone modules

## Application Data

Installation of Model OP921 detectors requires a two-wire circuit. In many retrofit cases, existing wiring may be used. 'T-tapping' is permitted only for Style 4 (Class B) wiring. Model OP921 is polarity insensitive, which can greatly reduce installation and debugging time.

Model OP921 can be applied within the maximum 30-feet center spacing (900 sq. ft. areas), as referenced in NFPA 72. This application guideline is based on ideal conditions — specifically, smooth ceiling surfaces, minimal air movement, and no physical obstructions between potential fire sources and the actual detector. Do not mount detectors in close proximity to ventilation or heating and air conditioning outlets. Exposed joints or beamed ceilings may also affect safe spacing limitations for detectors.

Should questions arise regarding detector placement, observe NFPA 72 guidelines. Good fire-protection system engineering and common sense dictate how and when fire detectors are installed and used. Contact your local Siemens Industry — Fire Safety distributor or sales office whenever you need assistance applying Model OP921 in unusual applications. Be sure to follow NFPA guidelines and ULUL Listed / ULCULC Pending installation instructions — included with every Siemens – Fire Safety detector — and local codes as for all fire-protection equipment.

## Technical Data

**Operating Temperature Range:** +32°F (0°C) to 120°F (49°C)

**Relative Humidity:** 0 — 95%; non-condensing

**Air Pressure:** No effect

**Air Velocity:** 0 — 4,000 ft. / min (0-20m / sec)

**Input Voltage Range:** 16VDC – 30VDC

***Alarm* Current (max.):** 410µA

**Standby Current (max.):** 250µA, max. (average)

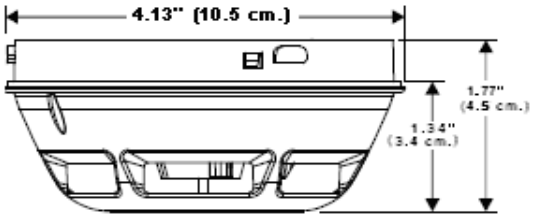
**Maximum Spacing:** 30-foot centers (900 sq. ft.), per NFPA 72

**Detector Weight:**
0.317 lbs.
(0.144 kg.)

**Mechanical Protection Guard:**
ULUL Listed / ULCULC Pending
with STI Guard Model STI-9604

## Mounting Diagram

### Dimensions




## FACP Compatibility Table

| Model Number | Data Sheet Number | Description |
|---|---|---|
| FC901 | 9813 | 50-point panel |
| FC922 | 9815 | 252-point system (networkable) |
| FC924 | 9815 | 504-point system (networkable) |

## Details for Ordering

| Model Number | Part Number | Description |
|---|---|---|
| OP921 | S54320-F4-A2 | Photoelectric Smoke Detector |
| DB-11 | 500-094151 | Detector Mounting Base |
| DB-11E | 500-094151E | Detector Base {small} |
| DB2-HR | S54320-F12-A1 | Relay Base |
| RL-HC | 500-033230 | Remote Alarm Indicator: 4" octagon-box mount, red |
| RL-HW | 500-033310 | Remote Alarm Indicator: single-gang box mount, red |
| FDBZ492 | S54319-B22-A1 | Addressable Air-Duct Housing |
| FDBZ492-HR | S54319-B23-A1 | Addressable Air-Duct Detector with Relay |
| LK-11 | 500-695350 | Base Locking Kit |

### In Canada, order:

| Model Number | Part Number | Description |
|---|---|---|
| DB-11C | 500-095687 | Detector Mounting Base for ULC (pending) |

**SIEMENS** Cerberus™ PRO

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Building Technologies Division
SII – Fire Safety
[Printed in U.S.A ]

**September 2011** — New Issue
(Rev. 0)

Data Sheet

# Specialized Devices

## Air-Duct Housings (FDBZ Series)

### Models FDBZ492, FDBZ492-HR, FDBZ492-R and FDBZ492-PR {with FDBZ-WT and FDBZ-RTL}

## ARCHITECT AND ENGINEER SPECIFICATIONS

- **Four (4) models available**
  - Addressable and conventional with and without relays
- **Compatible with various Siemens – Fire Safety fire-alarm control panels (FACPs)**
- **Magnet test feature with the Model OP121 conventional detector**
- **Design for air-velocity range of 100 to 4,000 feet-per-minute (fpm)**
- **Robust, compatible conventional remote indicator test switch that incorporates tri-color light-emitting diode (LED)**
- **Clear housing cover with smoke test port on cover for quick identification of detector type**
  - Removable with only four (4) captive-thumb screws (no tools required)
  - Includes a smoke / aerosol detector test port
- **Optional NEMA 4X-reinforced, stainless-steel and watertight enclosure available, Model FDBZ-WT**
- **No tools required for cover removal, sampling and exhaust-tube installations**
- ***Trouble*-event activation upon front-cover removal**
- ***Alarm* LED visible from front**

**Remote alarm indicator**
[FDBZ-RTL]

**FDBZ-series of air-duct housings**
[FDBZ492, FDBZ492-HR, FDBZ492-R and FDBZ492-PR]

**Watertight housing**
[FDBZ-WT]

- **Self-contained model available with 'on-board' power supply for conventional detectors**
- **Expanded temperature range**
- **Relay models available**
- **UL268A Listed, ULC-S529 Listed**

## Product Overview

The Siemens — Fire Safety Model 'FDBZ'-series of air-duct-detector housings are designed for use with the Siemens Model 'H'-series; as well as with Models OOH941, OOHC941, OP121; OP921; 8710; 8713, and PE-11 detectors.

Designed for installation directly to heating, ventilating and air-conditioning (HVAC) duct systems, the Model 'FDBZ'-series of duct housings complies with National Fire Protection Association Standard (NFPA) No.'s 72 and 90A, and is Underwriters' Laboratories Listed.

When equipped, the air-duct detector housing will signal the presence of smoke being carried through the duct system. Air-duct detectors are not intended to be substituted for open-area detection.

**Notes:** Most conventional time-control equipment guarantee only one (1) detector per zone when the detector's operated relay function is critical. The connection of a remote lamp and a remote relay – per detector – is allowed. Refer to the installation manual for the respective conventional fire system.

**Notes - (cont.'d):** With either the Cerberus™ PRO series or FireFinder™ XLS series of FACPs, up to 252-addressable detectors with relays per circuit may be used. The connection of an intelligent remote lamp (ILED) and a remote relay is allowed for each detector simultaneously.

## Specifications

The Model 'FDBZ'-series of air-duct housings are uniquely designed to use with the photoelectric detector. Sensitivity of Models PE-11 and OP121 detectors can be verified for calibration via LED visual status or a Model RSAW-11, Model RSAC-11 or FDBZ-RTL multi-color remote lamp. A green flash indicates the detector has passed its self test. Amber indicates a *Trouble* condition, and red indicates an *Alarm* event.

Sensitivity for Models HFP-11, FP-11, HFPO-11, OP921, OOH941 and OOHC941can be verified from the multi-color LED of the respective detector, or its sensitivity reading may be printed by command from the corresponding FACP to an optional printer.

## Specifications — (continued)

The remote alarm indicator (Model FDBZ-RTL) allows for manual testing via a key-switch for the conventional detector as well as the conventional air-duct housing with relay. Model FDBZ-RTL, which mounts remotely from the conventional air-duct housing, allows for manual relay-output control. The duct-detector remote indicator key-switch also indicates the current state of the detector.

The watertight housing (Model FDBZ-WT), which allows the air-duct detector housing to be installed inside the separate NEMA 4X enclosure, is for installations for either an outdoor area or in environments where excessive moisture is prevalent.

Each detector unit employs a cross-sectional sampling principle of operation. Inlet sampling tubes are available in four (4) lengths (see: **Sampling Tube Selection Table**). Outlet sampling tubes are one (1) common length and draw. A continuous, cross-sectional sample of air moves through the duct. Stratification or skin affect phenomenon that occurs in the duct can prevent smoke (especially in large ducts) from reaching a spot-type detector.

In addition, the unique design of the sampling chamber insures uniform sensitivity in air velocities, ranging from a low of 100 fpm to as high as 4,000 fpm. Each air-duct housing comes with three (3) wiring entry ports:

- Two (2) 3/4" conduit knockouts
- One (1) 1/2" conduit opening

The inlet sampling tube length is determined by the width of the air duct being protected. The inlet tube — greater than and nearest to the duct width — should be used (see: **Sampling Tube Selection Table**). The inlet tube can then be trimmed at the job site to the exact width of the duct. The outlet sampling tube for all ducts — irrespective of width — has a fixed length of approximately 5.5 inches (14cm.), and is supplied with the air-duct housing.

**Note:** When the use of a remote relay is required, order Model FDBZ492-R for conventional systems; Model FDBZ492-HR for addressable systems. When required, a separate watertight enclosure (Model FDBZ-WT), which is designed to contain the air-duct housings is available.

(For full details, refer to installation instructions for the respective air-duct housing.)

**Note:** When a self-contained duct detector with power supply is required, order Model FDBZ492-PR.

(For full details, refer to installation instructions part number A6V10330327.)

**Sampling Tube Selection Table**

| Duct Width | Sampling Tube (Model No.) |
|---|---|
| For duct widths 6" to 1' | ST-10 |
| For duct widths 1' to 3' | ST-25 |
| For duct widths 3' to 5' (requires support) | ST-50 |
| For duct widths 5' to 10' (requires support) | ST-100 |

Maintenance of the detector is easily accomplished via the removal of the duct-housing sampling chamber cover. The detector, which plugs into the housing, is easily removed for cleaning or replacing by a trained technician.

All that is necessary for installation of the air-duct detector is the cutting of three (3) small holes for the Sampling Tube installation (template included), and the drilling of two (2) holes for mounting the air-duct housing. The unit is then easily mounted in place, and connection made to the existing wires or terminals — if optional accessories are utilized. No mechanical tools are required for removing the cover or connecting the sampling and exhaust tubes to an air-duct housing.

Models ST-50 and ST-100 require support. However, Model ST-100 is shipped in two (2) 5-ft. (152 cm.) pieces with a coupling for field assembly.

## Technical Data

**Operating Temperature Ranges:** +32°F (0°C) to 120°F (49°C)

**Sampling Tube Pressure Range of Differences:** > 0.01 inches; < 1.2 inches of water column

**Relative Humidity:** 0 — 95%; non-condensing

**Air Pressure / Altitude Range:** No effect / No limitations

**Air-Duct Velocity:** 100 — 4,000 ft. / min (0.51— 20m / sec)

**Dimensions:** **{H -x- W -x- D}**

- **Rectangular:** 14.38" -x- 5" -x- 2.5" (37 cm. -x- 12.7 cm. -x- 6.36 cm.)
- **Square:** 7.75" -x- 9" -x- 2.5" (19.7 cm. -x- 22.9 cm. -x- 6.36 cm.)

**Detector Weight:** 1.8 Lbs. (0.82 Kg.)

## Operation

Based on the monitoring results, the LED indicator flashes the following colors based on the following conditions:

| Flash Color | Condition | Flash Interval (in seconds) |
|---|---|---|
| **Green*:** | Normal supervisory operation. Smoke sensitivity is within rated limits. | 10 |
| **Yellow:** | Detector is in *Trouble* condition, and needs either repair or replacement. | 4 |
| **Red:** | *Alarm* condition. | 1 |
| **No Flash:** | Detector is not powered. | — — |

***** LED can be turned OFF.
Please follow the corresponding description of the panel used.

## Compatible FACPs

| Model Number | Data Sheet Number | Description |
|---|---|---|
| FC901 | 9813 | 50-point panel |
| FC922 | 9815 | 252-point addressable system |
| FC924 | 9815 | 504-point addressable system |

### Products included with the air-duct housing:

- (1) short-return (outlet) tube
- (1) stopper
- (2) #12 + 3/4" sheet-metal screws
- (1) mounting template

**Note:** Detector and sampling tube to be purchased separately. Minimum hardware required is: one (1) air-duct housing assembly; one (1) sampling tube and one (1) detector.

## Details for Ordering

| Model Number | Part Number | Description |
|---|---|---|
| FDBZ492 | S54319-B22-A1 | A two-wire addressable or conventional duct detector (without relays) designed for direct use on heating, ventilating and air-conditioning (HVAC) air-duct systems. When equipped, the air-duct detector housing will signal the presence of smoke being carried through the duct system.<br>For use with the following Models:<br>– 8710 – 8713<br>– 8854 – HFPO-11<br>– FP-11 – HFP-11<br>– OOH941 – OP121<br>– OOHC941 – PE-11 |
| FDBZ492-HR | S54319-B23-A1 | A two-wire addressable duct detector (with relays) designed for direct use to HVAC air-duct systems. This part has a programmable relay base, and when equipped, the addressable air-duct detector housing will signal the presence of smoke being carried through the duct system.<br>For use with the following Models:<br>– 8710<br>– 8713<br>– OOH941<br>– OOHC941<br>– FP-11<br>– HFP-11<br>– HFPO-11<br>– OP921 |
| FDBZ492-R | S54319-B24-A1 | A two-wire conventional duct detector with relays designed for direct use on HVAC air-duct systems. This detector has a relay base, and when equipped with conventional air-duct housing, will signal the presence of smoke being carried through the duct system.<br>For use with the following Models:<br>– PE-11<br>– OP121 – 8854 |
| FDBZ492-PR | S54319-B25-A1 | A four-wire conventional duct detector with relays and a built-in power supply. Housing is designed for direct use to HVAC air-duct systems. It has a relay base with a built-in power source. When equipped with conventional air-duct housing, this duct detector will signal the presence of smoke being carried through the duct system.<br>For use with the following Models:<br>– PE-11<br>– OP121 – 8854 |
| FDBZ-RTL | S54319-S27-A1 | Device is used for manual testing via a key-switch for the conventional detector, as well as the conventional air-duct housing with relay. It mounts remotely from the conventional air-duct housing, allowing for manual relay-output control. The duct-detector remote key-switch also indicates the current state of the detector.<br>For use with the following Models:<br>– PE-11<br>– OP121 – 8854 |
| FDBZ-WT | S54319-B26-A1 | An optional, separate watertight NEMA 4X enclosure (Model FDBZ-WT) that provides added watertight protection for any of the Model FDBZ492-series duct housings. The duct housing fits into the separate 4X enclosure. This part allows the air-duct detector housing to be installed in the separate enclosure, and can be used in either an outdoor area or in environments where excessive moisture is prevalent.<br>For use with the following Models:<br>– FDBZ492<br>– FDBZ492-HR<br>– FDBZ492-R<br>– FDBZ492-PR |
| ST-10 | 500-649710 | Sampling tube for Ducts 6" to 1' |
| ST-25 | 500-649711 | Sampling tube for Ducts over 1' to 3' |
| ST-50 | 500-649712 | Sampling tube for Ducts 3" to 5' |
| ST-100 | 500-649713 | Sampling tube for Ducts 5' to 10' |

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**SIEMENS** Cerberus™ PRO

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**NOTICE** – The information contained in this data-sheet document is intended only as a summary, and is subject to change without notice. The devices described here have specific instruction sheets that cover various technical, limitation and liability information.

Copies of these instruction sheets and the *General Product Warning and Limitations* document, which also contains important information, are provided with the product and, are available from the Manufacturer.

Information contained in these documents should be consulted before specifying or using the product. For further information or assistance concerning particular problems contact the Manufacturer.

Building Technologies Division
SII – Fire Safety
[Printed in U.S.A ]

**March 2012** – New Issue
(Rev. 0)

SIEMENS
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# Notification Appliances

## 'SL' Series – Horns | Strobes | Horn- Strobes

**Applications**: Indoor, Wall-Only

### Architect & Engineer Specifications

- ☐ Sophisticated series of notification appliances that meets fire-industry codes and regulations for commercial-building applications
- ☐ Compatible with the Siemens 50-point, 252-point and 504-point addressable fire alarm control panels (FACPs), and with:
  - Siemens Modular FACPs
  - Siemens PAD-series of NAC extenders
  - FireFinder® XLS / XLSV FACPs
  - Siemens dual-sync control (DSC) modules
- ☐ Innovative LED strobe technology provides an energy-efficient means for a significantly reduced current draw
  - Capability to have existing Xenon and new LED strobes in the same field-of-view
  - Fewer power supplies required, smaller wire gage, reduced wire runs
- ☐ Straightforward installation coupled with compact, modern design
  - No visible mounting screws
  - Manual (index finger) slide-setting adjustor
  - Four (4) field-selectable settings in one (1) device: 15cd | 30cd | 75cd | 110cd
- ☐ Faceplates ship in four (4) distinctive types:
  - "FIRE" | "ALERT" | "AGENT" | (blank)
- ☐ Two (2) audible settings in each notification appliance
  - Temporal or steady horn output
  - High or Low setting
- ☐ UL (2034 | 1971 | 464) and ULC Listed (ULC-S525 | - S526)
  - ADA | NFPA | FCC | ANSI | OSHA compliant

### Product Overview

Formed as the 'SL'-series, Siemens is now offering horns, strobes, and horn-strobes with LED based strobes to its notification-appliances portfolio. With the 'SL'-series, Siemens offers a full range of products with low and high candela settings that makes these sophisticated notification appliances ideal for new installs and retrofit applications.

Innovative light-emitting diode (LED) strobe technology provides an energy-efficient means for a significantly reduced current draw.

The strobe portion of these appliances meets the 20 millisecond light-pulse-duration requirements of the 2016 edition of NFPA 72. This feature allows existing Xenon and the new LED devices to be used in the same field-of-view.

In a single device, the 'SL'-series can provide alarm-signaling tones for dual applications. All strobe models in the series feature multi-Candela settings (15 | 30 | 75 | 110cd) on a single appliance.

Additionally, there are two (2) modes of operation for the audible portion of these notification appliances:

- T3 (coded)
- Continuous

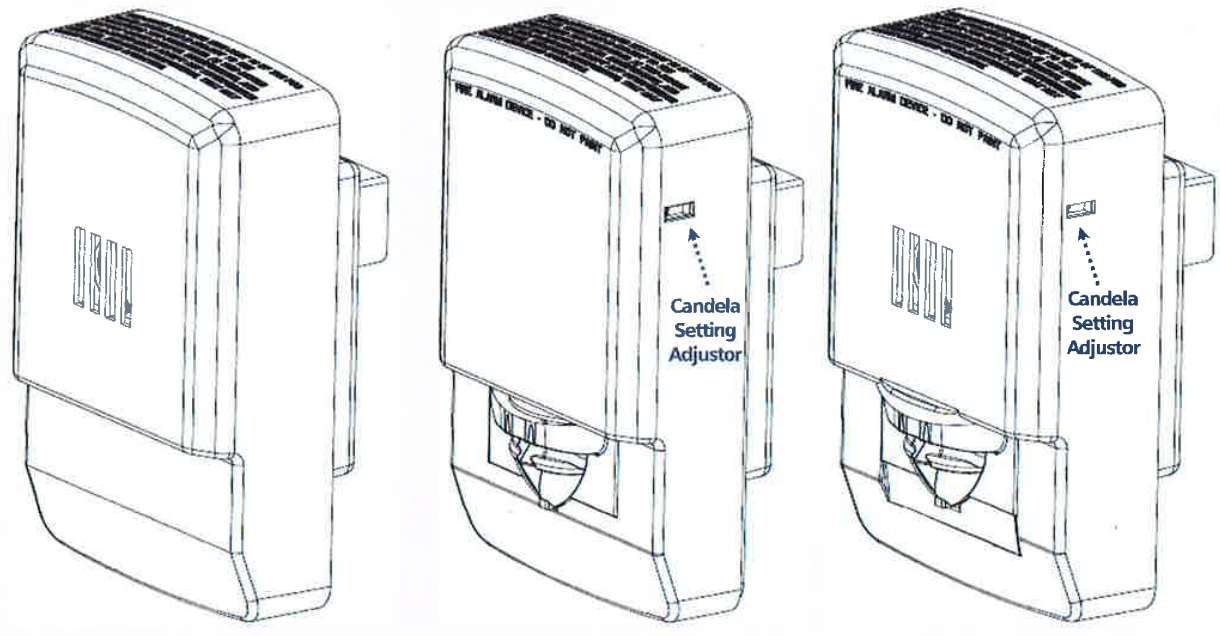
The 'SL'-series of horns, strobes and horn-strobes devices are produced in a sleek, modern design. Its single-gang form factor provides high-quality energy efficiency in an aesthetically pleasing, low-profile design that is consistent to the look of the interior composition of the building application.

The 'SL'-series is apt for indoor wall-mount applications. The Model 'SLH'-series horn appliances work in either 12V or 24VDC, whereas the Series 'SLSW' and 'SLHSW' strobe and horn-strobe devices are specifically for 24V operation.

**Model SLHR-N**
**Horn**

**Model SLSWW-ALA**
**Strobe**

**Model SLHSWR-F**
**Horn-Strobe**




**'SLHW' Series**
**Horn**

**TRIMPLATE DIMENSIONS:**
5.25 inches (13.34 cm.) **{H}**;
4.58 inches (11.6 cm.) **{W}**;
0.32 inches (0.81 cm.) **{D}**

**'SLSW' Series**
**Strobe**

**MOUNTING OPTIONS INCLUDE:**
- Model SLSBBR or SLSBBW to any single-gang backbox
- 4" (10.2 cm.) square backboxes with the Model SLESB-KIT-R or SLESB-KIT-W adapter kit

**'SLHSW' Series**
**Horn-Strobe**

## Specifications

In terms of composition and functionality, Models `SLHW'-series, `SLSW'-series, and `SLHSW'-series provide added value to the installer for the types of applications for operation:

- Compact | sleek | low-profile design
- Comprehensive feature list
- Convenient mounting options
- Easy-to-adjust selection-slider switch for Candela settings
  - No tools required for setting changes
  - Multi-level settings: 15cd | 30cd | 75cd | 110cd
- High and Low audible outputs
- Reduced current draw, via cutting-edge LED technology

The LED portions of the Siemens `SL'-series of strobes and horn-strobes meet the 20 millisecond light-pulse-duration requirements of the 2016 edition of NFPA 72. By meeting this latest requirement, existing Xenon as well as the new LED-technology devices can now be in the same field-of-view.

The horn, strobe and horn-strobes in this Siemens `SL'-series of notification appliances have received UL / ULC Listed status by attaining compatible testing standards with all of the Siemens fire-alarm control panels (FACPs) and accessories that have been determined to be aligned with existing Siemens strobe-based appliances.

This would include the following existing model-types: `CH'|`HS'|`MTH' |`S-HQ'|`SA'|`SE'|`SEF'|`SET' |`ST' |`STH' |`ZR' and `ZH' Series notification appliances. The regulatory listing also includes the capability for installing the Siemens `SL'-series LED-based strobes in the same notification zone and field-of-view with any existing Siemens Notification Appliance Xenon-based strobes.

All types of these horns, strobes and horn-strobes are UL Listed (for indoor use under Standard 1971 and464), as well as ULC-S525|ULC-S526 Listed. The Siemens `SL'-series sounder-strobes also have ADA | RoHS and ICES approval.

## Technical Data

### Wall-Mount | Horn-Strobes | Output Current Draw

| MODEL `SLHSW' SERIES:^ | Current Ratings (HIGH dB \| in Amps) 16.0 – 33.0VDC | | | | |
|---|---|---|---|---|---|
| | Setting | 15cd | 30cd | 75cd | 110cd |
| | Code 3 | 0.034 | 0.046 | 0.105 | 0.214 |
| | Continuous | 0.042 | 0.052 | 0.110 | 0.217 |

### Wall-Mount | Horn-Strobes | Output Current Draw

| MODEL `SLHSW' SERIES: | Current Ratings (LOW dB \| in Amps) 16.0 – 33.0VDC | | | | |
|---|---|---|---|---|---|
| | Setting | 15cd | 30cd | 75cd | 110cd |
| | Code 3 | 0.032 | 0.042 | 0.102 | 0.213 |
| | Continuous | 0.036 | 0.044 | 0.104 | 0.216 |

### Wall-Mount | Strobe-Only | Output Current Draw

| MODEL `SLHW' SERIES:^ | Current Ratings (Code 3 \| in Amps) RMS Current @ 24VDC | | |
|---|---|---|---|
| | Regulated Voltage Range | High | Low |
| | 8.0 – 17.50 VDC | 0.024 | 0.018 |
| | 16.0 – 33.0 VDC | 0.030 | 0.022 |

### Wall-Mount | Strobe-Only | Output Current Draw

| MODEL `SLSW' SERIES:^ | Current Ratings (Code 3 \| in Amps) RMS Current @ 24VDC | | | | |
|---|---|---|---|---|---|
| | Regulated Voltage Range | 15cd | 30cd | 75cd | 110cd |
| | 16.0 – 33.0 VDC | 0.030 | 0.040 | 0.102 | 0.201 |

### Wall Mount | Horn | Output Ratings (UL)

| MODEL `SLHW'– and – `SLHSW' SERIES:^ | UL Sound Output Ratings (dBA) Reverberant per UL464 @ 10 feet | | | | | |
|---|---|---|---|---|---|---|
| | Volume | SLHW @ 12VDC | | | SLHW -and- SLHSW @ 24VDC | | |
| | | 8.0V | 12.0V | 17.5V | 16.0V | 24.0V | 33.0V |
| | Code 3 \| High dBA | 75 | 80 | 83 | 76 | 79 | 81 |
| | Code 3 \| Low dBA | 73 | 77 | 80 | 75 | 77 | 77 |
| | Continuous \| High dBA | 80 | 84 | 87 | 80 | 83 | 86 |
| | Continuous \| Low dBA | 78 | 79 | 84 | 78 | 81 | 81 |

### Wall Mount | Horn | Output Ratings (ULC)

| MODEL `SLHW'– and – `SLHSW' SERIES:^ | ULC Sound Output Ratings (dBA) Anechoic per ULCS525-16 @ 3.05 meters | | | | | |
|---|---|---|---|---|---|---|
| | Volume | SLHW @ 12VDC | | | SLHW -and- SLHSW @ 24VDC | | |
| | | 8.0V | 12.0V | 17.5V | 16.0V | 24.0V | 33.0V |
| | Code 3 \| High dBA | 85 | 89 | 92 | 91 | 95 | 96 |
| | Code 3 \| Low dBA | 79 | 84 | 87 | 86 | 90 | 91 |
| | Continuous \| High dBA | 85 | 89 | 92 | 91 | 94 | 97 |
| | Continuous \| Low dBA | 79 | 84 | 87 | 86 | 90 | 92 |

*^RMS current ratings are per UL maximum RMS method. UL max current rating is the maximum RMS current within the listed voltage range (16 - 33V for 24V units)*

*^ For audible appliances, the max current is usually at the maximum listed voltage (16 - 33V for 24V units)*

*^ For unfiltered FWR ratings, see installation instructions*

GENERAL NOTES:

1. Strobes are designed to flash at 1-flash-per-second minimum over their " Regulated Voltage Range."
2. NFPA-72 specifies a flash rate of 1-to-2 flashes-per-second, and guidelines for the Americans with Disabilities Act (ADA) specify a flash rate of 1-to-3 flashes-per-second.
3. All Candela ratings represent minimum effective Strobe intensity based on UL 1971.

## Technical Data

### General Properties

| | MODEL `SL'-series |
|---|---|
| OPERATING TEMPERATURE: | - 32°F (0°C) to 122°F (50°C)<br>- for indoor-applications' use only |
| RELATIVE HUMIDITY: | 93%, maximum |
| OPERATING VOLTAGE RANGES: | - 12 VDC / VFWR → 8 - 17.5 VDC / VFWR;<br>- 24 VDC / VFWR → 16 - 33 VDC/VFWR<br>(12 VDC for Model SLHW only) |
| STROBE OUTPUT RATING: | - UL 1971, ULC-S526<br>- Field-selectable 15cd \| 30cd \| 75cd \| 110cd Candela outputs |
| STROBE FLASH RATE: | Strobes are designed to flash at one-flash-per-second |
| STROBE SYNCRONIZATION: | - all Siemens addressable panels<br>- Siemens PAD-series NAC extenders<br>- Siemens dual-sync (DSC) modules, which provide the unique Siemens proprietary synchronization protocol |
| TEMPORAL PATTERN: | - Continuous<br>- Code 3 (1/2 second on, 1/2 second off; then 1/2 second on, 1/2 second off; followed by 1/2 second on, 1-1/2 second off and repeat)<br>NOTES: The Code 3 pattern is specified by ANSI and NFPA 72 for Standard Emergency Evacuation Signaling. |

### Physical Properties

| | MODEL `SL'-series | |
|---|---|---|
| MATERIAL: | - White-or-red textured, ultraviolet (UV) stabilized, colored impregnated engineered plastic<br>- Exceeds 94V-0 UL flammability rating | |
| WEIGHT: | 0.35 Lbs. (0.16 Kg.) | |
| LENS TYPE: | LED strobe situated in a rugged Lexan lens | |
| DIMENSIONS: | Actual Appliance: | Single-Gang Trim Plate: |
| | 4.53" (11.5 cm.) { H };<br>2.76" (7.0 cm.) { W };<br>1.27" (3.23 cm.) { D } | 5.25" (13.3 cm.) { H };<br>4.58" (11.6 cm.) { W };<br>0.32" (0.81 cm.) { D } |

### Mounting and Wiring Properties

| | MODEL `SL'-series |
|---|---|
| INDOOR MOUNTING: | - Wall-mount applications<br>- Single-gang (Model SLSBB) backboxes or to 4" (10.2 cm.) square with Model SLESB-KIT-R or SLESB-KIT-W adapter kit |
| WIRING TYPE: | #12 – #18, American Wire Gauge (AWG) |

## Details for Ordering

| MODEL | PART NUMBER | APPLIANCE TYPE | UL | ULC | MOUNTING TYPE | STROBE TYPE | FACEPLATE COLOR | FACEPLATE LETTERING |
|---|---|---|---|---|---|---|---|---|
| SLHWR-N | S54329-F23-A1 | Horn | ✓ | ✓ | WALL | – None – | RED | – None – |
| SLHWW-N | S54329-F23-A2 | | ✓ | ✓ | WALL | Clear | WHITE | – None – |
| SLHSWR-F | S54329-F22-A1 | Horn-Strobe | ✓ | — | WALL | Clear | RED | FIRE |
| SLHSWW-F | S54329-F22-A2 | | ✓ | — | WALL | Clear | WHITE | FIRE |
| SLHSWR-FB | S54329-F24-A1 | Horn-Strobe | — | ✓ | WALL | Clear | RED | – Pictogram – |
| SLHSWW-FB | S54329-F24-A2 | | — | ✓ | WALL | Clear | WHITE | – Pictogram – |
| SLHSWR-A | S54329-F31-A2 | Horn-Strobe | ✓ | ✓ | WALL | Clear | RED | AGENT |
| SLHSWW-A | S54329-F34-A2 | | ✓ | ✓ | WALL | Clear | WHITE | AGENT |
| SLHSWR-N | S54329-F34-A1 | Horn-Strobe | ✓ | — | WALL | Clear | RED | – None – |
| SLHSWW-N | S54329-F37-A1 | | ✓ | — | WALL | Clear | WHITE | – None – |
| SLHSWW-AL | S54329-F35-A1 | Horn-Strobe | ✓ | ✓ | WALL | Clear | WHITE | ALERT |
| SLHSWR-AL | S54329-F32-A1 | | ✓ | ✓ | WALL | Clear | RED | ALERT |
| SLSWR-F | S54329-F25-A1 | Strobe | ✓ | — | WALL | Clear | RED | FIRE |
| SLSWW-F | S54329-F25-A2 | | ✓ | — | WALL | Clear | WHITE | FIRE |
| SLSWW-FB | S54329-F26-A1 | Strobe | — | ✓ | WALL | Clear | WHITE | – Pictogram – |
| SLSWR-FB | S54329-F26-A2 | | — | ✓ | WALL | Clear | RED | – Pictogram – |
| SLSWR-A | S54329-F27-A1 | Strobe | ✓ | — | WALL | Clear | RED | AGENT |
| SLSWW-AL | S54329-F27-A2 | Strobe | ✓ | ✓ | WALL | Clear | WHITE | ALERT |
| SLSWR-AL | S54329-F28-A1 | | ✓ | ✓ | WALL | Clear | RED | ALERT |
| SLSWW-ALA | S54329-F28-A2 | Strobe | ✓ | ✓ | WALL | Amber | WHITE | ALERT |
| SLSWR-ALA | S54329-F29-A1 | | ✓ | ✓ | WALL | Amber | RED | ALERT |
| SLSWR-NA | S54329-F29-A2 | Strobe | ✓ | ✓ | WALL | Amber | RED | – None – |
| SLSWW-NA | S54329-F30-A1 | | ✓ | ✓ | WALL | Amber | WHITE | – None – |
| SLSWW-N | S54329-F30-A2 | Strobe | ✓ | — | WALL | Clear | WHITE | – None – |
| SLSWR-N | S54329-F31-A1 | | ✓ | — | WALL | Clear | RED | – None – |
| SLSBBR | S54329-F21-A1 | Backbox | ✓ | ✓ | WALL | – None – | RED | – None – |
| SLSBBW | S54329-F21-A2 | | ✓ | ✓ | WALL | – None – | WHITE | – None – |
| SLESB-KIT-R | S54329-F64-A1 | Optional Single-Gang Trim Plate | ✓ | ✓ | WALL | – None – | RED | – None – |
| SLESB-KIT-W | S54329-F64-A2 | | ✓ | ✓ | WALL | – None – | WHITE | – None – |

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Copies of install-type, instruction sheets – as well as the *General Product Warning and Limitations* document, which also contains important data, are provided with the product. All are available from the Manufacturer.

Data contained in the aforesaid type of documentation should be consulted with a fire-safety professional before specifying or using the product.

Any further questions or assistance concerning particular problems that might arise, relative to the proper functioning of the equipment, please contact the Manufacturer.

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**October - 2019**
**(Rev. 3)**

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# Notification Appliances

## `SL' Series – Horns | Strobe | Horn-Strobes

**Applications:** Indoor, Ceiling-Only

### Architect & Engineer Specifications

- ☐ Sophisticated series of notification appliances that meets fire-industry codes and regulations for commercial-building applications
- ☐ Compatible with the Siemens 50-point, 252-point and 504-point addressable fire alarm control panels (FACPs), and with:
  - Siemens Modular FACPs
  - Siemens PAD-series of NAC extenders
  - FireFinder® XLS / XLSV FACPs
  - Siemens dual-sync control (DSC) modules
- ☐ Innovative LED strobe technology provides an energy-efficient means for a significantly reduced current draw
  - Capability to have existing Xenon and new LED strobes in the same field-of-view
  - Fewer power supplies required, smaller wire gage, reduced wire runs
- ☐ Straightforward installation coupled with compact, modern design
  - No visible mounting screws
  - Manual (index finger) slide-setting adjustor
  - Four (4) field-selectable settings in one (1) device: 15cd | 30cd | 75cd | 95cd
- ☐ Faceplates ship in four (4) distinctive types:
  - ``FIRE" | ``ALERT" | ``AGENT" | (blank)
- ☐ Two (2) audible settings in each notification appliance
  - Temporal or steady horn output
  - High or Low setting
- ☐ UL (2034 | 1971 | 464) and ULC Listed (ULC-S525 | - S526)
  - ADA | NFPA | FCC | ANSI | OSHA compliant

### Product Overview

Formed as the `SL'-series, Siemens is now offering horns, strobes, and horn-strobes to its notification-appliances portfolio. With the `SL'-series, Siemens now offers an additional range of products with low and high candela settings that makes these sophisticated notification appliances ideal for new installs and retrofit applications.

Innovative light-emitting diode (LED) strobe technology provides an energy-efficient means for a significantly reduced current draw.

The strobe portion of these appliances meets the 20 millisecond light-pulse-duration requirements of the 2016 edition of NFPA 72. This feature allows existing Xenon and the new LED devices to be used in the same field-of-view.

In a single device, the `SL'-series can provide alarm-signaling tones for dual applications. All strobe models in the series feature multi-candela settings (15 | 30 | 75 | 95cd) on a single appliance.

Additionally, there are two (2) modes of operation for the audible portion of these notification appliances:

- T3 (coded)
- Continuous

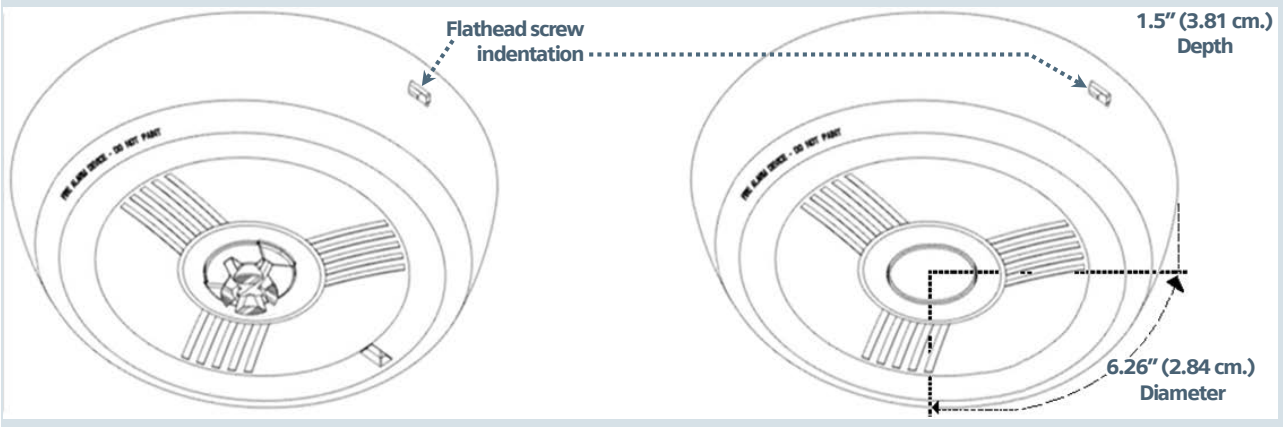
The `SL'-series of horns, strobes and horn-strobes devices are produced in a sleek, modern design. Its single-gang form factor provides high-quality energy efficiency in an aesthetically pleasing, low-profile design that is consistent to the look of the interior composition of the building application.

This `SL'-series is exclusive to indoor ceiling-mount applications. The Model `SLHC'-series horn appliances work in either 12V or 24VDC, whereas the Series `SLSC' and `SLHSC' strobe and horn-strobe devices are specifically for 24V operation.

**Model SLHSCR-F**
**Horn-strobe**

**Model SLSCW-AL**
**Strobe**

**Model SLHCR-N**
**Horn**




**`SLSHC' Series**
**Ceiling Horn-Strobe**

**`SLHC' Series**
**Ceiling Horn**

## Specifications

In terms of composition and functionality, Models `SLHC'-series, `SLSC'-series, and `SLHSC'-series provide added value to the installer for the types of applications for operation:

- Compact | sleek | low-profile design
- Comprehensive feature list
- Convenient mounting options
- Easy-to-adjust selection-slider switch for candela settings
  - No tools required for setting changes
  - Multi-level settings: 15cd | 30cd | 75cd | 95cd
- High and Low audible outputs
- Reduced current draw, via cutting-edge LED technology

The LED portions of the Siemens `SL'-series of strobes and horn-strobes meet the 20 millisecond light-pulse-duration requirements of the 2016 edition of NFPA 72. By meeting this latest requirement, existing Xenon as well as the new LED-technology devices can now be in the same field-of-view.

The horn, strobe and horn-strobes in this Siemens `SL'-series of notification appliances have received UL / ULC Listed status by attaining compatible testing standards with all of the Siemens fire-alarm control panels (FACPs) and accessories that have been determined to be aligned with existing Siemens strobe-based appliances.

This would include the following existing model-types: `CH' | `HS' | `MTH' | `S-HQ' | `SA' | `SE' | `SEF' | `SET' | `ST' | `STH' | `ZR' and `ZH' Series notification appliances. The regulatory listing also includes the capability for installing the Siemens `SL'-series sounder-strobes in the same notification zone and field-of-view with any existing Siemens Notification Appliance Xenon-based strobes.

All these horns, strobes and horn-strobes models are UL Listed
(for indoor use under Standard 1971 and 464), as well as ULC-S525 | ULC-S526 Listed.
The Siemens `SL'-series sounder-strobes also have ADA | RoHS and ICES approval.

## Electrical Ratings

### Ceiling-Mount | Horn-Strobes Output Current Draw

| MODEL `SLHSC' SERIES:^ | UL Current Ratings (HIGH dB \| in Amps) Reverberant per UL464 @ 10 feet Anechoic per ULC-S525-16 @ 3.05 meters | | | | |
|---|---|---|---|---|---|
| | Regulated Voltage Range | 15cd | 30cd | 75cd | 95cd |
| | 16.0 – 33.0 Volts DC | 0.044 | 0.065 | 0.182 | 0.268 |

### Ceiling-Mount | Horn-Strobes Output Current Draw

| MODEL `SLHSC' SERIES: | UL Current Ratings (LOW dB \| in Amps) Reverberant per UL464 @ 10 feet Anechoic per ULC-S525-16 @ 3.05 meters | | | | |
|---|---|---|---|---|---|
| | Regulated Voltage Range | 15cd | 30cd | 75cd | 95cd |
| | 16.0 – 33.0 Volts DC | 0.042 | 0.064 | 0.181 | 0.256 |

### Ceiling-Mount | Horn-Only Output Current Draws

| MODEL `SLHC' SERIES:^ | Current Ratings (Code 3 \| in Amps) RMS Current @ 24 Volts DC | | |
|---|---|---|---|
| | Regulated Voltage Range, VDC | High | Low |
| | 8.0 – 17.50 VDC | 0.024 | 0.018 |
| | 16.0 – 33.0 VDC | 0.030 | 0.022 |

### Ceiling-Mount | Strobe Output Current Draws

| MODEL `SLSC' SERIES:^ | Current Ratings (in Amps) RMS Current @ 24 Volts DC | | | | |
|---|---|---|---|---|---|
| | Regulated Voltage Range | 15cd | 30cd | 75cd | 95cd |
| | 16.0 – 33.0 Volts DC | 0.040 | 0.058 | 0.171 | 0.256 |

^ *RMS current ratings are per UL maximum RMS method. UL max current rating is the maximum RMS current within the listed voltage range (16 - 33V for 24V units)*

^ *For audible appliances, the max current is usually at the maximum listed voltage (16 - 33V for 24V units)*

^ *For unfiltered FWR ratings, see installation instructions*

**GENERAL NOTES:**

1. Strobes are designed to flash at 1-flash-per-second minimum over their ``Regulated Voltage Range."
2. NFPA-72 specifies a flash rate of 1-to-2 flashes-per-second, and guidelines for the Americans with Disabilities Act (ADA) specify a flash rate of 1-to-3 flashes-per-second.
3. All candela ratings represent minimum effective Strobe intensity based on UL 1971.

## Technical Data

### General Properties

| | MODEL `SL'-series |
|---|---|
| OPERATING TEMPERATURE: | - 32°F (0°C) to 122°F (50°C)<br>- for indoor-applications' use only |
| RELATIVE HUMIDITY: | 93%, maximum |
| OPERATING VOLTAGE RANGES: | - 12 VDC / VFWR → 8 - 17.5 VDC / VFWR;<br>- 24 VDC / VFWR → 16 - 33 VDC/VFWR<br>(12 VDC for Model SLHC only) |
| STROBE OUTPUT RATING: | - UL 1971, ULC-S526<br>- Field-selectable 15cd \| 30cd \| 75cd \| 95cd candela outputs |
| STROBE FLASH RATE: | Strobes are designed to flash at one-flash-per-second |
| STROBE SYNCRONIZATION: | - all Siemens addressable panels<br>- Siemens PAD-series NAC extenders<br>- Siemens dual-sync (DSC) modules, which provide the unique Siemens proprietary synchronization protocol |
| TEMPORAL PATTERN: | - Continuous<br>- Code 3 (1/2 second on, 1/2 second off; then 1/2 second on, 1/2 second off; followed by 1/2 second on, 1-1/2 second off and repeat)<br>NOTES: The Code 3 pattern is specified by ANSI and NFPA 72 for Standard Emergency Evacuation Signaling. |

### Physical Properties

| | MODEL `SL'-series |
|---|---|
| MATERIAL: | - White-or-red textured, ultraviolet (UV) stabilized, colored impregnated engineered plastic<br>- Exceeds 94V-0 UL flammability rating |
| WEIGHT: | 0.55 Lbs. (0.25 Kg.) |
| LENS TYPE: | LED strobe situated in a rugged Lexan lens |
| DIMENSIONS: | 3.13" (7.95 cm.) { H };<br>3.13" (7.95 cm.) { W };<br>1.5" (3.81 cm.) { D } |

### Mounting and Wiring Properties

| | MODEL `SL'-series |
|---|---|
| INDOOR MOUNTING: | - Ceiling-mount applications<br>- Single-gang (Model SLSBBC) backboxes or to 4" (10.2 cm.) square<br>- 1.5" (cm.) -or- 2.125" (cm.) octagonal<br>- 1.5" (cm.) -or- 2.125" (cm.) deep |
| WIRING TYPE: | #12 – #18, American Wire Gauge (AWG) |

## Details for Ordering

| Model | Part Number | Appliance Type | Mounting Type | Strobe Type | Faceplate Color | Faceplate Lettering |
|---|---|---|---|---|---|---|
| SLHCR-N | S54329-F12-A1 | **Horn** | Ceiling | – None – | **RED** | – None – |
| SLHCW-N | S54329-F12-A2 | | | – None – | WHITE | – None – |
| SLHSCW-F | S54329-F13-A1 | Horn-Strobe | Ceiling | **Clear** | WHITE | **FIRE** |
| SLHSCR-F | S54329-F13-A2 | | | **Clear** | **RED** | **FIRE** |
| SLHSCR-FB | S54329-F14-A1 | Horn-Strobe (for ULC) | Ceiling | **Clear** | **RED** | – Pictogram – |
| SLHSCW-FB | S54329-F14-A2 | | | **Clear** | WHITE | – Pictogram – |
| SLSCW-F | S54329-F15-A1 | Strobe | Ceiling | **Clear** | WHITE | **FIRE** |
| SLSCR-F | S54329-F15-A2 | | | **Clear** | **RED** | **FIRE** |
| SLSCW-FB | S54329-F16-A1 | Strobe (for ULC) | Ceiling | **Clear** | **RED** | – Pictogram – |
| SLSCR-FB | S54329-F16-A2 | | | **Clear** | WHITE | – Pictogram – |
| SLSCW-AL | S54329-F17-A1 | Strobe | Ceiling | **Clear** | WHITE | **ALERT** |
| SLSCR-AL | S54329-F17-A2 | | | **Clear** | **RED** | **ALERT** |
| SLSCW-ALA | S54329-F18-A1 | **Strobe** | Ceiling | **Amber** | WHITE | **ALERT** |
| SLSCR-ALA | S54329-F18-A2 | | | **Amber** | **RED** | **ALERT** |
| SLSCW-NA | S54329-F19-A1 | **Strobe** | Ceiling | **Amber** | WHITE | – None – |
| SLSCR-NA | S54329-F19-A2 | | | **Amber** | **RED** | – None – |
| SLSCW-N | S54329-F20-A1 | **Strobe** | Ceiling | **Clear** | WHITE | – None – |
| SLSCR-N | S54329-F20-A2 | | | **Clear** | **RED** | – None – |
| SLHSCR-A | S54329-F32-A2 | Horn-Strobe | Ceiling | **Clear** | **RED** | **AGENT** |
| SLHSCW-A | S54329-F35-A2 | | | **Clear** | WHITE | **AGENT** |
| SLHSCR-AL | S54329-F33-A1 | Horn-Strobe | Ceiling | **Clear** | **RED** | **ALERT** |
| SLHSCW-AL | S54329-F36-A1 | | | **Clear** | WHITE | **ALERT** |
| SLHSCR-N | S54329-F33-A2 | Horn-Strobe | Ceiling | **Clear** | RED | – None – |
| SLHSCW-N | S54329-F36-A2 | | | **Clear** | WHITE | – None – |
| SLSCW-A | S54329-F65-A1 | **Strobe** | Ceiling | **Clear** | WHITE | **AGENT** |
| SLSCR-A | S54329-F37-A2 | | | **Clear** | **RED** | **AGENT** |
| SLSBBCR | S54329-F55-A1 | Backbox | Ceiling | – None – | **RED** | – None – |
| SLSBBCW | S54329-F55-A2 | | | – None – | WHITE | – None – |

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Copies of install-type, instruction sheets – as well as the *General Product Warning and Limitations* document, which also contains important data, are provided with the product, and are available from the Manufacturer.

Data contained in the aforesaid type of documentation should be consulted with a fire-safety professional before specifying or using the product.

Any further questions or assistance concerning particular problems that might arise, relative to the proper functioning of the equipment, please contact the Manufacturer.

SIEMENS

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**April 2018** – Supersedes sheet dated 3/2018
(Rev. 1)

Data Sheet

# Cerberus PRO

## Remote Annunciator for the 50-Point Addressable System

### Models FSD901-U3, FSD901-R3

## ARCHITECT AND ENGINEER SPECIFICATIONS

- Displays the existing status of the 50-point addressable fire alarm control panel (FACP)
- Liquid-crystal display (LCD) screen shows the same event message display as the main FACP display
- Includes light-emitting diodes (LEDs) for system status
- Supports 'Acknowledge'; 'Alarm Silence'; 'Unsilence,' and 'Reset' controls
- Keyswitch prevents unauthorized access

- ®UL 864 9th Edition Listed; FM, CSFM & NYC Fire Department Approved

## Product Overview

Model FSD901-U3 / R3 are separate LED / LCD remote annunciators that show the existing status of the 50-point addressable FACP (Model FC901). Each remote annunciator connects to the 50-point FACP through a built-in RS–485 connection on the main board.

A 3.5-inch (8.9 centimeters) by 1.5" (3.8 centimeters) LCD screen will give details of the event in alphanumeric form. The display screen can be scrolled to reveal additional events. Each screen supports 182 characters: seven (7) lines with 26 characters per line.

Optional remote-system-control capabilities are also available. A keyswitch is also provided to prevent unauthorized access to the control operations.

Additionally, Model FSD901-U3 / R3 contains navigation keys that are used for scrolling through the list of FACP events. The programming software is held in flash electrically erasable programmable read-only memory (EEPROM).

The remote annunciators are FM (#3010); CSFM (#7165-0067:0259) and FDNY (#6104) Approved.

Each Model FSD901-U3 / R3 Remote Annunciator supports the following LEDs for system-status conditions: *Power*, *Alarm*, *Trouble*, *Supervisory* and *Ground-Fault*.

**Note:** Each remote annunciator can have its own 'Normal' system message. Further, Model FSD901-U3 / R3 can be configured to display any aforesaid system command, or any combination of FACP events.

There are also LEDs to indicate when audible circuits are 'active' or 'silenced.' Each remote annunciator supports four (4) system-control buttons, including: 'Acknowledge'; 'Alarm Silence'; 'Unsilence', and 'Reset'.

The dimensions for each Model FSD901-U3 / R3 remote annunciator are as follows:

Approximate size: 8.5" (21.6 cm.) [H];
11.25" (28.8 cm.) [W];
2.5" (6.4 cm.) [D]

**Note:** Up to eight (8) remote annunciators are supported for each 50-point addressable FACP.

The weight of each remote annunciator is approximately 4 Lbs [1814 g].

**Cerberus™ PRO** **9817**

**Fire Safety & Security Products** **Remote Annunciator for the 50-Point Fire Alarm Control Panel**

## Temperature and Humidity Range

Each Model FSD901-U3 / R3 Remote Annunciator is UL 864 9th Edition Listed for indoor dry locations within a temperature range of 120+/-3°F (49+/-2°C) to 32+/-3°F (0+/-2°C) and a relative humidity of 93+/-2% at a temperature of 90+/-3°F (32+/-2°C).

## Related Documentation

| Product | Data Sheet Number |
|---|---|
| 50-point Addressable System | 9813 |

## Details for Ordering

| Model Number | Part Number | Description |
|---|---|---|
| FSD901-U3 | S54433-C102-A1 | Remote Annunciator, Black {for the 50-point addressable system} |
| FSD901-R3 | S54433-C102-A2 | Remote Annunciator, Red {for the 50-point addressable system} |

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Building Technologies Division
SII – Fire Safety
[Printed in U.S.A ]

**June 2013** — Supersedes sheet dated 2/2013
(Rev. 3)

Data Sheet

# Cerberus PRO

## 50-Point Addressable Fire Alarm Control Panel
## Model FC901

## ARCHITECT AND ENGINEER SPECIFICATIONS

- **Fire alarm control panel (FACP) for up to 50 addressable points that is comprised of the following three (3) system components:**
  - Main board (Model FCM901-U3)
  - 6.5 Amps (170-Watt power supply (Model FP2011-U1)
  - System enclosure (Model FH901-U3 / R3)

- **System features:**
  - Supports 50 addressable devices on one (1) 'Class A', or two (2) 'Class B' circuits
  - Includes one (1) 'Class A', or two (2) 'Class B' notification appliance circuits (NACs)
  - Built-in digital alarm communication transmitter (DACT)
  - Supports Carbon Monoxide (CO) detection
  - Downloads, prints system-event history & detector sensitivity
  - Supervised remote printer (Model FCA2018-U1)
  - Optional connectivity to a leased-line / city-tie module (Model FCI2020-U1)
  - Built-in RS–485 connection for remote annunciators
  - Resettable and non-resettable 24VDC auxiliary power
  - Off-normal warning message prior to reset
  - Fast and easy set-up with custom-configuration tool
  - Supports a 182-character display

- **Alphanumeric keypad**
  - for manual configuration

- **℗UL 864 9th Edition Listed; FM, CSFM & NYC Fire Department Approved**

## Product Overview

Model FC901 is an intelligent FACP that provides a cost-effective, feature-rich solution for small fire-alarm system applications.

Small and compact in design, Model FC901 is ideal for small fire-protection applications using less than 50 addressable devices:

- Retail outlets / strip malls
- Dry-cleaner shops
- doctors' offices
- restaurants, etc.

With its built-in DACT and two (2) NACs, Model FC901 is powerful enough to economically meet the needs of these applications. Each 50-point FACP is FM (#3010); FDNY (#6104) and CSFM (#7165-0067:0259) Approved.

## Specifications

The Model FC901 FACP consists of a main board (Model FCM901-U3); a 170-Watt power supply (Model FP2011-U1), and a Model FH901-U3 / R3 system enclosure. The programming software for Model FC901 is held in flash electrically erasable programmable read-only memory (EEPROM).

### Main Board

The Model FCM901-U3 main board provides system display and control, as well as connections for system field wiring, via removable terminal blocks.

The 3.5-inch (8.9 centimeters) by 1.5" (3.8 centimeters) liquid-crystal display (LCD) screen shows all system messages and event status. Each screen supports 182 characters: seven (7) lines with 26 characters per line. Each event may have a custom message up to 40 characters that describes the event's location.

The backlit LCD screen illuminates on any system event or manual key press. New, 'unacknowledged' events are indicated by a flashing exclamation point ('**!**'). Once 'acknowledged,' the exclamation point changes to a check mark ('**√**'). A system-status line shows the quantity of events presently active.

Since each main board contains a built-in RS–485 communication bus, Model FCM901-U3 readily supports system-status light-emitting diodes (LEDs) for *Power*, *Alarm*, *Trouble*, *Supervisory* and *Ground Fault* system commands.

**Cerberus® PRO**
**Fire Safety Products**

**9813**
**Feature-rich solution for 50-pt. addressable FACPs**

## Specifications

### Main Board — (continued)

There are also LEDs to indicate when audible circuits are 'active' or 'silenced.' The main board supports four (4) system-control buttons, including: *Acknowledge*; *Alarm Silence*; *Unsilence*, and *Reset*.

The system offers an off-normal warning feature, alerting users when active devices are not ready for reset. These active devices may include manual stations that have not been reset; smoke detectors with smoke remaining in the optical chamber, etc.

Additionally, the main board supports an alphanumeric keypad, as well as navigation keys, which are used for scrolling maintenance functions and system configuration.

The main board supports connection for up to 50 addressable devices, via one (1) 'Class A', or two (2) 'Class B' circuits. The loop supports all C-NET devices, including the Cerberus PRO intelligent and Model 'H'-series devices. The main board also supports one (1) 'Class A' or two (2) 'Class B' NACs.

Each NAC supports a maximum 2.5 Amps — with 2.5 Amps, max, allowed between the NACs. Each NAC can be set to a synchronized strobe, for horn-strobe devices, or for audible devices. Audible devices can be set for:

- 'STEADY'
- 'ANSI Temporal 3' / 'ANSI Temporal 4'
- 'March Time 30 / 60 / 120 Codes'

The main board supports four (4) 'Form C' relays for *Alarm*, *Trouble*, *Supervisory* and *User Programmable* events. Each relay is rated at 2 Amps at 30VDC maximum, resistive. The main board supports two (2) auxiliary 24VDC connections. Upon system reset, one (1) connection interrupts the power for five seconds for use with (4) four-wire conventional detectors. Each auxiliary-power output is 24VDC, nominal — rated at 0.75 Amps.

The main board contains a built-in DACT that provides communication between Model FC901 and with the central or remote monitoring station. The built-in DACT supports two (2) separate programmable accounts, as well as two (2) connections to the public-switched telephone network. The connections support RJ31X male connectors.

(For compatibility with each Model FC901 FACP, see the **Central Station Receiver Compatibility Table** on the last page of this data-sheet document.)

The main board contains a battery-charging circuit, providing connection to lead-acid batteries rated at 24VDC, nominal. The main board can charge up to 18 AH batteries.

The main board contains a universal serial bus (USB) connector that supports connection for system configuration and module firmware upload, via the custom-configuration tool.

Model FC901 can be configured using the custom-configuration tool or manually from the alphanumeric keypad on the main board. An auto-configuration feature creates a basic system configuration of all connected devices to accelerate initial system commissioning.

### 50-Point Addressable System Enclosure

The Model FH901-U3 / R3 enclosure for the 50-point addressable fire system, Model FC901, supports all system modules. The enclosure also supports up to 12AH batteries.

**Note:** For systems requiring larger than 12AH batteries, use a ®UL Listed battery box.

The Model FH901-U3 / R3 enclosure for the 50-point panel is comprised of a dual-mounting setup that allows the main board to be partially mounted in a lower-to-upper position. When temporarily installed in the lower position, technicians are allowed more space to install field wiring at the time of system set-up. When field-wiring installation is complete, the main board shall be moved to the upper position for standard mounting prior to applying power to the system.

Additionally, the enclosure supports an optional battery bracket (Model FHA901-U1) that can be used to secure batteries up to 12AH. Model FHA901-U1 is required to comply with seismic certification, pursuant to ASC / SEI 7-05, Section 13.2.2.

A flush-mount trim kit (Model FHA902-U1 / R1) is also available for use when flush mounting Model FH901-U3 / R3.

### 50-Point Power Supply

The Model FCM901-U3 main board also supports connection to the system power supply. The 6.5A (170-Watt) power supply (Model FP2011-U1) incorporates a 4.0A, non-resettable slow-blow fuse on the primary input, and includes a built-in AC-line filter for surge and noise suppression. Model FP2011-U1 mounts in a standard Siemens – Fire Safety enclosure, and there are no serviceable Siemens – Fire Safety parts to be maintained.

## Specifications – (continued)

– Optional Accessories –

### Leased-Line / City-Tie Module

The Model FC901 FACP has the capability of operating an optional leased-line, city-tie module (Model FCI2020-U1) that provides a local-energy output for municipal call-box connection. The leased-line, city-tie module is installed on the back of the main board of the Model FC901 FACP, and field wiring is connected to the main board.

### 50-Point Remote Annunciator

The fire-system displays (FSD901-U3 / R3) are remote LED / LCD units that show the existing status of the Model FC901 FACP.

The Model FSD901-U3 / R3 optional display supports the following LEDs for system-status conditions:

- *Power*
- *Alarm*
- *Trouble*
- *Supervisory*
- *Ground-Fault*

There are also LEDs to indicate when audible circuits are 'active' or 'silenced.' The main board supports four (4) system-control buttons, including: *Acknowledge*; *Alarm Silence*; *Unsilence*, and *Reset*.

For Model FSD901-U3 / R3, a LED will illuminate for any given *Alarm*, *Supervisory* and *Trouble* Cerberus PRO-system event. A 3.5-inch (8.9 centimeters) by 1.5" (3.8 centimeters) LCD screen will give details of the event in alphanumeric form. The display screen can be scrolled to reveal additional events. Optional remote-system-control capabilities are also available.

The Remote Peripheral Module (FCA2018-U1) provides a means of connecting a Cerberus PRO 50-point addressable panel to a parallel printer for creating a hard copy of system-status events.

This supervised, intelligent module contains built-in transient protection and plain-decimal addressing.

When Model PAL-1 is used with the remote peripheral module, Model FCA2018-U1 supervises the printer for **ON / OFF Line**, **Power ON**, **Paper Out**, **Paper Jam**, and wiring-fault conditions, as required by ®UL for NFPA 72 proprietary systems.

The dimensions – based upon connection to a one-height-unit enclosure (1HU) for Model FC901– are as follows:

*Approximate size*: 16.5" (41.9 cm.) [**H**];
18.13" (46.1 cm.) [**W**];
5.11" (13 cm.) [**D**]

The weight (without operating unit or batteries) is approximately 9 pounds [4082 g].

### LED Annunciator Driver: 32 Outputs | 16 Inputs

Model FT2007-U1 serves as the main component for allowing custom graphic annunciators to operate on Model FC901 FACPs. There are 16 inputs on each Model FT2007-U1 to accommodate user-defined system commands, which include: *Reset*; *Silence/Unsilence*; *Acknowledge*, and *Lamp Test*. Inputs can also be programmed as ``Generic", which allows additional flexibility for customized functionality.

Shipments of each Model FT2007-U1 driver include two (2) PC boards [PCBs]; one (1) built-in RS–485 interface, and one (1) LED driver. Additionally, one (1) ribbon cable is packaged, allowing connectivity between the two (2) PCBs.

### Tabular Annunciator Drivers: 16 Zones | 32 Zones

The Tabular Annunciators allow system events sent from Cerberus PRO 50-point addressable panels to be displayed remotely in real-time. The Model FT2008 series of tabular annunciators has 16 zones and the Model FT2009 series uses up to 32 zones. Additionally, no more than two (2) light-emitting diodes (LEDs) can be used per zone.

A built-in RS–485 communication bus controls the operation and supervision of the 16-zone and 32-zone Tabular Annunciators, which are available in **black** or red.

## Temperature and Humidity Range

Model FC901 is ®UL 864 9th Edition Listed for indoor dry locations within a temperature range of 120+/-3°F (49+/-2°C) to 32+/-3°F (0+/-2°C) and a relative humidity of 93+/-2% at a temperature of 90+/-3°F (32+/-2°C).

## Related Documentation

| Product | Data Sheet Number |
|---|---|
| 170-Watt power supply | 9806 |
| Leased-Line / City-Tie Module | 9810 |
| Remote Peripheral Module | 9811 |
| 50-Point Remote Annunciator | 9817 |
| LED Annunciator Driver, FT2007-U1 | 9824 |
| 16-Zone (FT2008-U1) / 32-Zone (FT2009-U1) Tabular Annunciators | 9825 |

## Central Station Receiver Compatibility Table

The following table shows a list of central station receivers that are compatible with the Cerberus PRO 50-point addressable system, Model FC901 —

| Protocol | MX-8000 | Sur-Gard System III | Sur-Gard System IV | Telguard TG7GFS04 | Silent Knight 9800 | Bosch D6600 | Bosch D6100 |
|---|---|---|---|---|---|---|---|
| SIA 8 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| SIA 20 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Ademco Contact ID | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | |
| 4/2 | ✓ | ✓ | ✓ | | | | |
| 3/1 | ✓ | ✓ | ✓ | | | | |

**Note**: Multiple central station receivers are compatible with the Cerberus PRO 50-point FACP, Model FC901.

Although the table above illustrates central station receivers that have been verified by Siemens with the Model FC901 FACP, additional receivers and formats can also be used with each 50-point addressable system.

After completing the installation, communication between the Digital Alarm Communication Transmitter (Model DACT) and Central Station Receiver must be tested and verified.

## Details for Ordering

| Model | Part Number | Description |
|---|---|---|
| FCM901-U3 | S54433-B101-A1 | Cerberus PRO Main Board {for the 50-point FACP} |
| FH901-U3 | S54433-B103-A3 | System Enclosure, **Black** {for the 50-point FACP} |
| FH901-R3 | S54433-B103-A4 | System Enclosure, Red {for the 50-point FACP} |
| FP2011-U1 | 500-450222 | 170-Watt Power Supply |

### Optional Accessories

| Model | Part Number | Description |
|---|---|---|
| FCA2018-U1 | S54400-A65-A1 | Remote Peripheral Module |
| FCI2020-U1 | S54400-A57-A1 | Leased-Line / City-Tie Module |
| FHA901-U1 | S54433-B107-A1 | Battery Bracket |
| FHA902-U1 | S54433-B106-A1 | Flush-Mount Trim Kit, **Black** |
| FHA902-R1 | S54433-B106-A2 | Flush-Mount Trim Kit, Red |
| FSD901-U3 | S54433-C102-A1 | System Display, **Black** {specifically for the 50-point FACP} |
| FSD901-R3 | S54433-C102-A2 | System Display, Red {specifically for the 50-point FACP} |
| FT2007-U1 | S54400-A142-A1 | LED Annunciator Driver {32 Outputs \| 16 Inputs } |
| FT2008-U1 | S54400-A143-A1 | 16-Zone Tabular Annunciator, **Black** |
| FT2008-R1 | S54400-A144-A1 | 16-Zone Tabular Annunciator, Red |
| FT2009-U1 | S54400-A145-A1 | 32-Zone Tabular Annunciator, **Black** |
| FT2009-R1 | S54400-A146-A1 | 32-Zone Tabular Annunciator, Red |

### Electronics Package

| Model | Part Number | Description | |
|---|---|---|---|
| FC901-U3 | S54433-C105-A1 | Cerberus PRO Kit for the 50-Point Addressable FACP | |
| | | **Includes:** | ▪ 170W power supply, Model FP2011-U1 (Qty. 1)<br>▪ System main board, Model FCM901-U3 (Qty. 1) |

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Building Technologies Division
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[Printed in U.S.A ]

**August 2015** – Supersedes sheet dated 2/2015
(Rev. 12)