

Section II - Electrical

11. Emergency Exit Light

FEATURES & SPECIFICATIONS

INTENDED USE — Suitable for applications requiring both exit sign and unit equipment. Attractive, less than 10 inches tall, streamlined design is great for above-the-door applications and other tight fits. High-output version with remote lamps are ideal for outdoor emergency egress lighting.

CONSTRUCTION — Engineering-grade thermoplastic housing is impact-resistant, scratch-resistant and corrosion-proof. UL94V-0 flame rating. UV-stable white resin resists discoloration from natural and man-made light sources.

Rugged unibody housing snaps together with no additional fasteners. Faceplate and back cover are interchangeable on housing. Positive snap-fit tabs hold faceplate securely, yet are easily removable for lamp compartment access. Universal, directional chevron inserts are easily removed and reinserted.

Lamp head has multi-faceted reflector and acrylic lenses to provide superior optical control. Unique swivel-and-point arrangement permits full-range adjustment in lamp head direction.

Uniform graphics illumination without shadows or hot spots. Letters 6" high with 3/4" stroke., with 100 ft. viewing distance rating, based upon UL924 standard.

Special wording available with Panel Face in red lettering only. See notes.

U.S. Patent No. D484,272; 5,526,251; 5,611,163; 5,797,673; 5,954,423; 6,142,648 and 6,848,798. Canada Patent No. 80,141, 2,180,495.

OPTICS — Two 5.4WT-5 wedge-base krypton lamps. The typical life of the exit LED lamp is 10 years, based on continuous operation. Low energy consumption — **only 3.3 watts.**

ELECTRICAL — Custom microchip charger, developed by Lithonia Lighting Emergency Systems, provides increased reliability and maximizes battery life. AC/LVD reset allows battery connection before AC power is applied and prevents battery damage from deep discharge.

Battery: Sealed, maintenance free lead-acid (SLA) battery standard delivers 90 minutes capacity to emergency lamps. Nickel-cadmium battery is optional.

Two-rate regulated charger minimizes energy consumption and provides low operating costs. Filtered charger output minimizes charge voltage ripple and extends battery life. Thermal protection senses circuitry temperature and maintenance. Optional high-output battery (HO) to power up to 6-volt, 12-watt remote load. See chart on back for details.

INSTALLATION — Top, end or back mounting. Housing snaps to canopy with four positive-locking tabs. Cam locking pin secures housing to canopy.

Easily removed mounting knockouts. Conduit entry knockout for 1/2" flexible conduit. J-box pattern on back panel.

LISTING — UL listed. Damp location 60°F to 90°F (15°-32°C) standard. Meets UL 924, NFPA 101 (current Life Safety Code), NEC and OSHA illumination standards. NEMA Premium certified.

WARRANTY — 3-year limited warranty (five-year for nickel-cadmium battery) including LED lamps.

Complete warranty terms located at

www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx

NOTE: Actual performance may differ as a result of end-user environment and application.

All values are design or typical values, measured under laboratory conditions at 25°C.

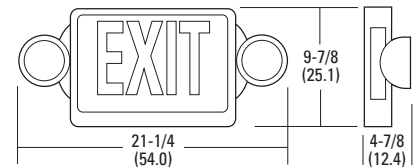
Specifications subject to change without notice.

Catalog Number
Notes
Type

QUANTUM[®]
Thermoplastic Exit/Unit Combo



LHQM



Specifications

Length: 21-1/4 (54.0)

Depth: 4-7/8 (12.4)

Height: 9-7/8 (25.1)

Weight: 7.36 (3.3 kg)

All dimensions are inches (centimeters) unless otherwise specified.

ORDERING INFORMATION

For shortest lead times, configure product using **standard options (shown in bold)**.

Example: LHQM P W 3 R N SW01

LHQM	P		3		
Family	Face type	Housing color	Number of faces	Letter color	Options ¹
LHQM LED exit with two external 5.4 watt krypton lamps	P Panel ¹	(blank) Black W White	3 Single face with extra faceplate and color panel	R Red G Green	(blank) None N Maintenance-free nickel-cadmium battery ² HO High-output lead-calcium battery ³ HO RO High-output lead-calcium battery, less lamp heads ³ NOM Meets Mexican standards

Accessories: Order as separate item.	
ELA MR24 K0606	Compact MR24 remote head (6W, 6V) ^{5,7}
ELA T MR24 K0606	Compact MR24 twin remote head (12W total) ^{5,7}
ELA MR24 K0906	Compact MR24 remote head (9W, 6V) ^{5,7}
ELA NX H0606	NEMA 4X, sealed-beam remote fixture (6V, 6W halogen) ^{5,8}
ELA WG3	Wireguard (back mount only) ⁴
ELA W US12	12" pendant-mount kit with white canopy ⁹

Notes

- 1 Only available in custom signage. See spec sheet, [Custom-Signage](#).
- 2 Not available with any other options.
- 3 Not available with nickel-cadmium battery option.
- 4 See spec sheet [ELA-WG](#).
- 5 Only available with HO option.
- 6 Only available with HO RO option.
- 7 See spec sheet [ELA-MR24](#).
- 8 See spec sheet [ELA-IND-NX](#).
- 9 See spec sheet [ELA-Stemkits](#). To order black canopy, replace "W" with "B". To order 24" or 36" length, replace "12" with "24" or "36".

LHQM Quantum® Thermoplastic Exit/Unit Combo

SPECIFICATIONS

ELECTRICAL				
Primary Circuit				
	Typical LED life ¹	Supply voltage	Max. amps	Max. watts
Red & Green LED	10	120	.23	3.3
	years	277	.23	3.3

BATTERY					
Sealed Lead Acid (SLA) *with lead calcium alloy grids					
	Voltage	Shelf life ²	Typical life ²	Maintenance ³	Optimum temperature ⁴
Lead-acid	6	12 months	3 - 5 years	none	60°-90°F (15°-32°C)
Ni-cad (N)	6	3 years	7 - 9 years	none	32°-100°F (0°-37°C)

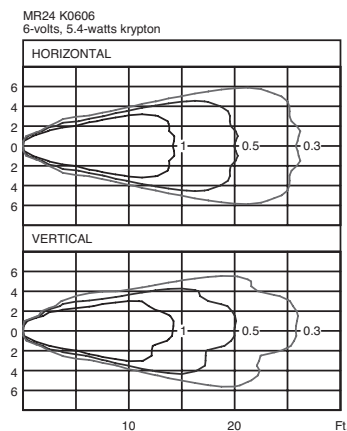
Notes:

- Based on continuous operation.
- At 77°F (25°C).
- All life safety equipment, including emergency lighting for path of egress must be maintained, serviced, and tested in accordance with all National Fire Protection Association (NFPA) and local codes. Failure to perform the required maintenance, service, or testing could jeopardize the safety of occupants and will void all warranties.
- Optimum ambient temperature range where unit will provide capacity for 90 minutes. Higher and lower temperatures affect life and capacity. Consult factory for detailed information.

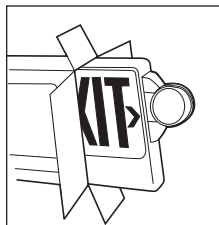
REMOTE OUTPUT CAPACITY

BATTERY			
Standard combo	Combo ni-cad battery	Combo high-output battery (HO)	Combo\no heads (RO) & high-output
NA	NA	12W	24W

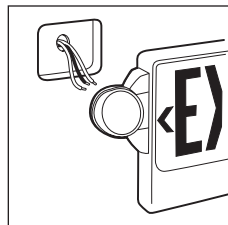
PHOTOMETRICS



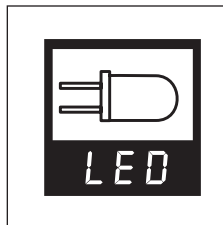
KEY FEATURES



Fully assembled at factory.



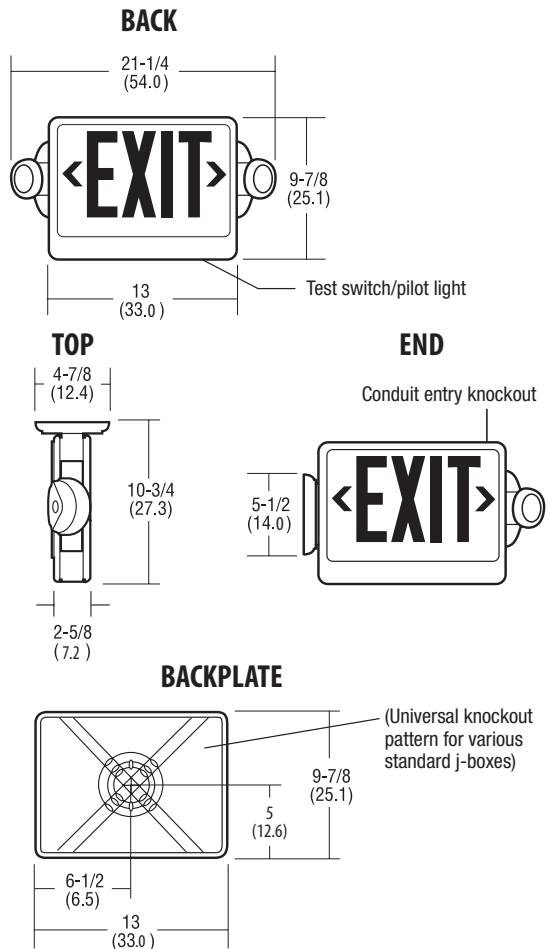
Install only one fixture instead of two.



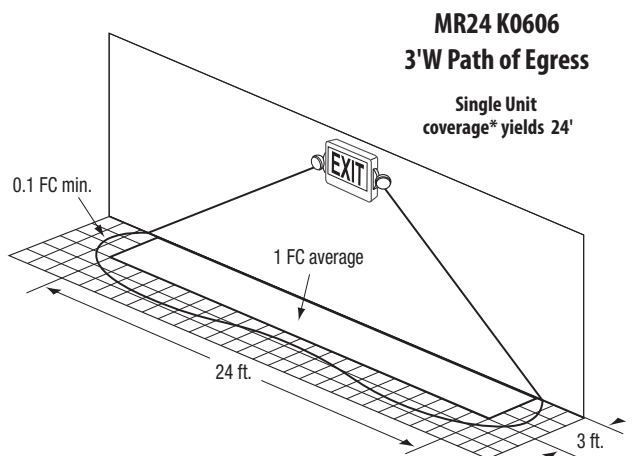
The typical life of the LED lamp is 10 years.

MOUNTING

All dimensions are inches (centimeters).
Shipping weight: 7.36 lbs. (3.3 kgs.).



FIXTURE PERFORMANCE



* Meets Life Safety Code standard minimum illuminance of 0.1 FC and average illuminance of 1.0 FC. Assumes open space with no obstructions, mounting height: 7.5'; ceiling height: 9'; and reflectances: 80/50/20. Analysis based on independently tested photometrics.

Section II - Electrical

12. Duplex Receptacles

Straight Blade Devices

2 Pole, 3 Wire Grounding

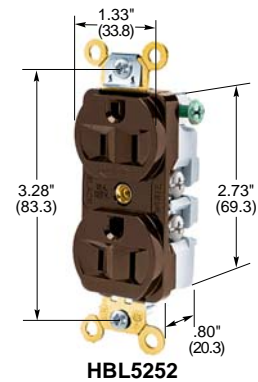
15 and 20 Ampere, 125 Volts

Compact, Heavy Duty, Specification Grade Duplex and Single Receptacles



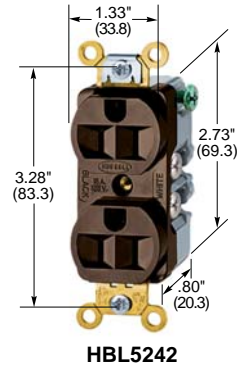
Duplex Receptacles, Back and Side Wired

Description	Color	Catalog Numbers	
Flush, nylon face, back and side wired.	Brown	HBL5252	HBL5352
	Ivory	HBL5252I	HBL5352I
	Gray	HBL5252GY	HBL5352GY
	Red	HBL5252R	HBL5352R
	White	HBL5252W	HBL5352W
	Blue	—	HBL5352BL
	Black	HBL5252BK	HBL5352BK
On a 4" (101.6) round cover.	Brown	HBL5253	—



Duplex Receptacles, Side Wired Only

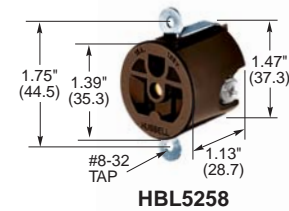
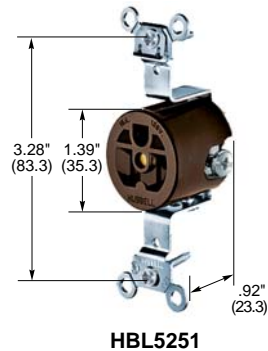
Description	Color	Catalog Numbers	
Flush, nylon face, side wired only.	Brown	HBL5242	HBL5342
	Ivory	HBL5242I	HBL5342I
	Gray	HBL5242GY	HBL5342GY
	White	HBL5242W	HBL5342W



Single Receptacles

Description	Color	Catalog Numbers	
Flush, side wired only.	Brown	HBL5251	—
	Ivory	HBL5251I	—
Panel mount 1.75" (44.5) centers.	Brown	HBL5258	HBL5358
	Ivory	HBL5258I	—

Notes: Horsepower ratings listed above are AC only.
See page A-38 for accessories.
See page A-46 for technical information.



Straight Blade Receptacles

Duplex Receptacles*Features and Benefits*

Heavy duty wrap around bridge locked into body.

Thick wall thermoset base.

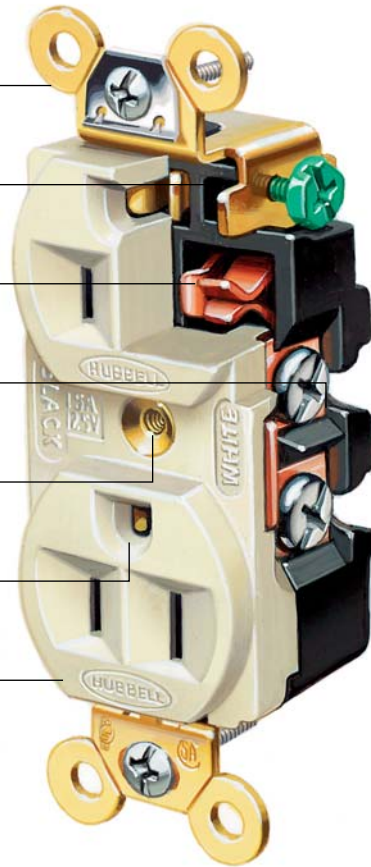
.032" thick brass triple wipe power contacts.

Eight hole clamp type back wiring.

Brass center rivet.

All brass grounding system.

Impact resistant nylon face.

**Value Engineered Design**

The Hubbell HBL5252 Series. Equal to or better than all competitors' imitation of Hubbell's HBL5262. Available in a side wire only version (HBL5242 series). Our concern for quality, safety and innovative design isn't restricted to the top of our product line. Every device in our catalog is built to uncompromising standards, no matter what the catalog number is. You can benefit from the performance features of an industrial receptacle at a fraction of the price of other 5262s.



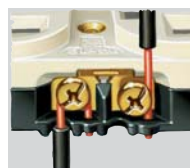
Pretensioned ground contact feature allows for easy insertion and removal of ground blades without sacrificing superior ground blade retention.



Compact heavy duty design provides users with a superior device which fits into narrow "cut-in" or handy boxes.



Heavy duty triple wipe bronze contacts deliver reliable uninterrupted power supply. Material has superior spring properties. Contact assembly includes large #8 brass screws.



Patented anchor hole and wire restraint feature. Anchor hole helps form solid wire around terminal screw. Wire restraint feature provides strain relief when pushing receptacle into the wall box (HBL5242/HBL5342 series).

Section II - Electrical

13. GFI Receptacle



Tamper-Resistant and Weather-Resistant Receptacles 2008 NEC Code Requirements... What you need to know



Tamper-Resistant Receptacles

Comply with NEC 406.11
Comply with NEC 210.52



All 125 volt, 15 and 20 amp receptacles shall be listed Tamper-Resistant receptacles per NEC® Article 406.11, Tamper-Resistant Receptacles in Dwelling units.

- It is estimated that 2,400 children are injured annually by electrical outlet related incidents.
- Tamper Resistant receptacles incorporate internal mechanisms to limit access to energized internal components.
- Dwelling units are a single unit, providing complete and independent living facilities for one or more persons, including permanent provisions for living, sleeping cooking and sanitation.
- The new requirement applies to all dwelling unit outlets.
- Listed devices are required to have a “TR” marking visible when installed without the cover plate.



Day Care Centers



Waiting Rooms



Lobbies

All 15 and 20 amp, 125 and 250 volt non-locking receptacles shall be listed as Weather-Resistant type per NEC® Article 406.8, Receptacles in Damp and Wet Locations.

- Receptacles installed outdoors and other wet /damp locations are subject to demanding temperature variations, direct sunlight and unusual mechanical abuse than those in a typical dry environments.
- Weatherproof covers do not offer complete environmental protection.
- Weather resistance increases corrosion resistance, cold impact, resistance to ultraviolet and water exposure and effects of aging.
- Damp locations include receptacles installed outdoors and locations requiring a weatherproof enclosure.
- Listed devices are required to have a “WR” marking on the face visible when installed.

Weather-Resistant Receptacles

Comply with NEC 406.8(A)



Washdown Areas



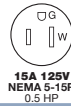
Transit Centers



Amusement Parks



Ordering Information



Duplex Receptacles

Tamper Resistant

Description	Color	15A 125V	20A 125V
Commercial Side Wired	Brown	CR15TR	CR20TR
	Black	CR15BLKTR	CR20BLKTR
	Gray	CR15GRYTR	CR20GRYTR
	Ivory	CR15ITR	CR20ITR
	White	CR15WHITR	CR20WHITR
Commercial Side & Back Wired	Brown	BR15TR	BR20TR
	Black	BR15BLKTR	BR20BLKTR
	Gray	BR15GRYTR	BR20GRYTR
	Ivory	BR15ITR	BR20ITR
	White	BR15WHITR	BR20WHITR



CR15BLKTR



BR20TR

Weather-Resistant Receptacles

Description	Color	15A 125V	20A 125V
Commercial Side & Back Wired	Brown	BR15WR	BR20WR
	Black	BR15BLKWR	BR20BLKWR
	Gray	BR15GRYWR	BR20GRYWR
	Ivory	BR15IWR	BR20IWR
	White	BR15WHIWR	BR20WHIWR



BR15IWR



BR20WRTR

Weather-Resistant & Tamper-Resistant Receptacles

Description	Color	15A 125V	20A 125V
Commercial Side & Back Wired	Brown	BR15WRTR	BR20WRTR
	Black	BR15BLKWRTR	BR20BLKWRTR
	Gray	BR15GRYWRTR	BR20GRYWRTR
	Ivory	BR15IWRTR	BR20IWRTR
	White	BR15WHIWRTR	BR20WHIWRTR

Style Line® Decorator Receptacles

Tamper-Resistant Receptacles

Description	Color	15A 125V	20A 125V
Style Line, Decorator Side & Back Wired	Brown	DR15TR	DR20TR
	Black	DR15BLKTR	DR20BLKTR
	Gray	DR15GRYTR	DR20GRYTR
	Ivory	DR15ITR	DR20ITR
	White	DR15WHITR	DR20WHITR



DR20ITR



DR20GRYWRTR

Weather-Resistant & Tamper-Resistant Receptacles

Description	Color	15A 125V	20A 125V
Style Line, Decorator Side & Back Wired	Brown	DR15WRTR	DR20WRTR
	Black	DR15BLKWRTR	DR20BLKWRTR
	Gray	DR15GRYWRTR	DR20GRYWRTR
	Ivory	DR15IWRTR	DR20IWRTR
	White	DR15WHIWRTR	DR20WHIWRTR

GFCI Receptacles

Weather-Resistant & Tamper-Resistant Receptacles

Description	Color	15A 125V	20A 125V
Commercial GFCI Side & Back Wired	Brown	GFTR15	GFTR20
	Black	GFTR15BK	GFTR20BK
	Gray	GFTR15GY	GFTR20GY
	Ivory	GFTR15I	GFTR20I
	White	GFTR15W	GFTR20W



GFTR20I

Brown in Color



Tamper-Resistant Receptacle



Weather-Resistant Receptacle



This logo indicates that products comply with all requirements of the European Union's directive to limit the use of specific materials in electrical and electronic product.



To view the latest Receptacle Brochure featuring Tamper-Resistant and Weather-Resistant Receptacles, visit www.hubbell-wiring.com.

Section II - Electrical

14. 50 Amp Receptacle Battery charger

Twist-Lock® Devices

50A, 125/250V AC, 3 Pole, 4 Wire Grounding

Receptacle

HUBBELL



Features

- Thermoset construction offers high heat resistance
- Armored housing provides superior impact resistance
- One piece contacts provide low operating temperatures

Ordering Information

Description	Device Color	UPC	Catalog Number
Phenolic	Black	783585828107	CS6369



Standards

Listed to UL 498
Certified to CSA C22.2 No.42

Specifications

Body	Phenolic
Face	Phenolic
Contacts	Brass
Terminal Screws	Steel
Insulator	Phenolic

Performance

Electrical
Current Interrupting Certified for current interrupting at full rated current

Dielectric Voltage Withstands 2,000V minimum

Mechanical
Terminal Accommodation #10 AWG - #6 AWG solid or stranded copper wire only

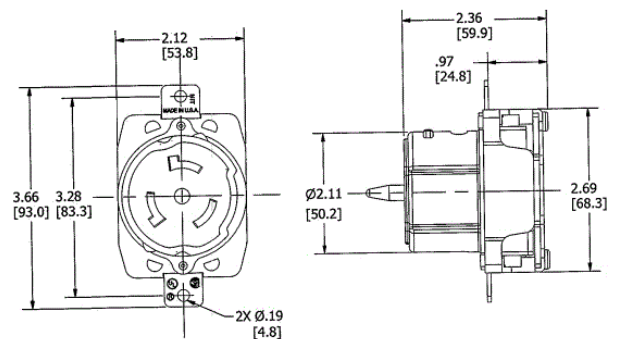
Environmental
Flammability UL 94 V0
Operating Temperatures Maximum continuous 75°C; minimum -40°C (w/o impact)

Accessories

Plug	CS6365C
Weatherproof Lift Cover	HBL7774WO
Single Gang Stainless Steel Wallplate	SS750
4" Square Raised Cover	HBL50SC

Online Resources

Customer Use Drawing
eCatalog
Installation Instructions



Dimensions in Inches (mm)

Hubbell Wiring Device-Kellems • Hubbell Incorporated (Delaware) • 40 Waterview Drive • Shelton, CT 06484

Phone (800) 288-6000 • Fax (800) 255-1031 • Specifications subject to change without notice.



Section II - Electrical

15. Hydrogen Sensor

SBS-H2 Hydrogen Gas Detector

Complete Hydrogen Monitoring System



Includes

- Main body/display
- Hydrogen sensor
- 25 ft. cable

Applications

- Substations
- Battery rooms
- Uninterruptible power supply (UPS)
- Battery cabinet systems
- Battery charging areas
- Hydrogen fueled back-up power systems

Available Accessories



Test Kit



Additional Hydrogen Sensor/25 ft. Cable
(Optional 50 ft. and 100 ft. Cables)



2-Gang Junction Box
(Hardwired AC or DC)

The SBS-H2 Hydrogen Detector is a complete hydrogen monitoring system with visual and audible alarms.

The system comes complete with the main display, a highly accurate hydrogen gas sensor and a 25 ft. cable. This unit can be powered with either AC or DC power and can be mounted directly to a wall or to an electrical box making it extremely versatile and very user friendly.

The SBS-H2 includes relays for remote connection to alarm/monitoring systems and for control of external relays or an exhaust fan.

Benefits

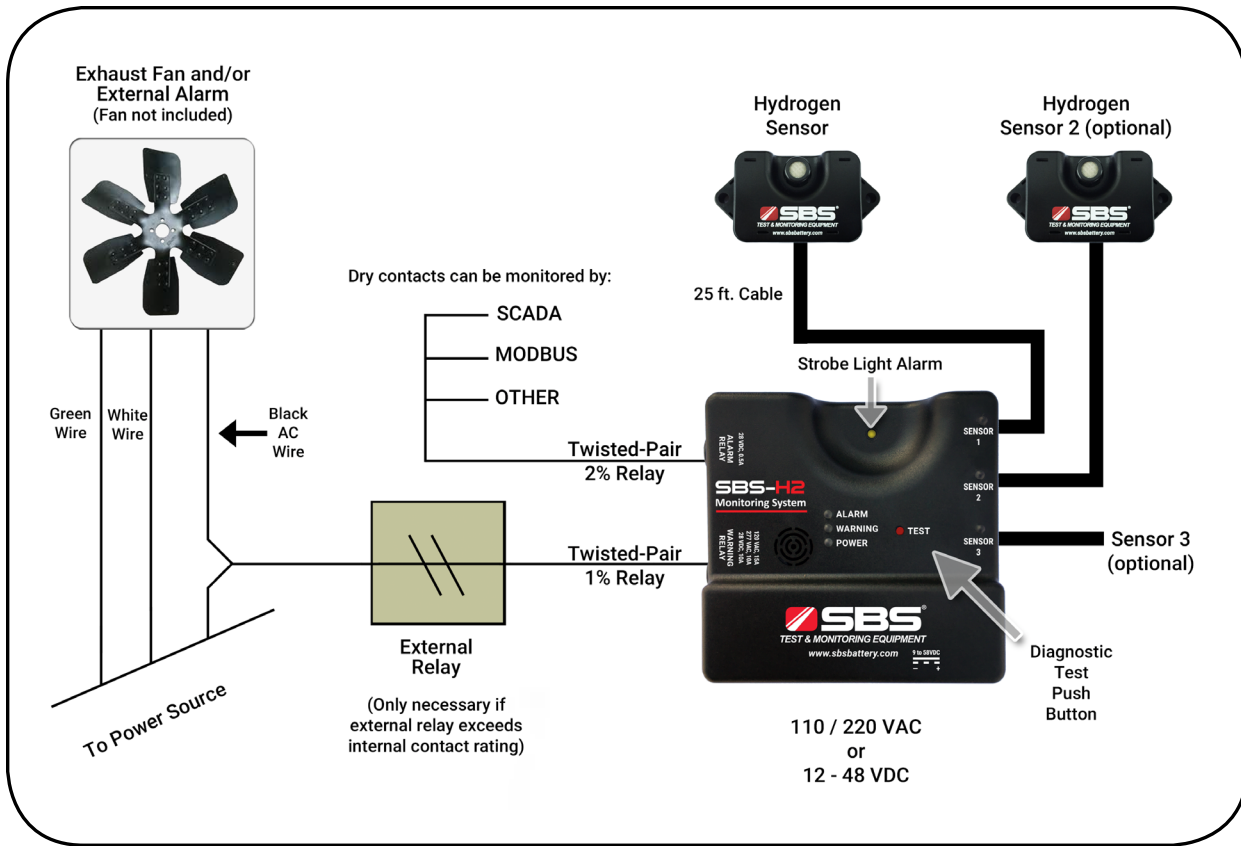
- Dual AC or DC power supply connections
- Ideal for remote locations
- Provides coverage redundancy in large monitoring spaces (up to 3 sensors)
- Strobe light for visual alerts
- Sensor LEDs indicate which sensor is detecting hydrogen
- If loss of power, system will open 1% relay
- Protects life, property and company profits
- Modular design detector does not require complete replacement for repairs

Features

- Universal power inputs: 110/220 Vac and/or 12 – 48 Vdc input
- Push button diagnostic test
- Audible and visual alarms
- Sensor has a temperature rating of -4° F to 176° F
- Can operate in a wide range of temperatures and humidity

Installation

- Wall or 2-gang junction box mountable
- Mechanical relays are easily accessible:
 - Warning 1% relay, 15A @ 120VAC; 10A @ 277VAC; 10A @ 28VDC
 - Alarm 2% relay 0.5A resistive @ 28VDC
- Redundant power supply capability (DC power supply will operate as backup power source)
- SBS-H2 display allows for 3 sensor inputs to increase coverage area
- Indicator LEDs can be tested by pushing the red "TEST" button
- Sensors can be tested in the field with the P/N H2-TESTKIT option



Warning Settings: When 1% hydrogen is present in the air the yellow warning light will come on and the warning relay contact will close allowing power to peripherals, such as a vent fan or other devices. The corresponding sensor's LED will flash indicating which sensor detected H₂.

Alarm Settings: When at least 2% hydrogen is present in the air the red warning light will come on and an audible alarm and strobe activate with corresponding Sensor LED. In addition, a second alarm relay contact will close, which can be used to shut down the system or notify a building alarm system or other devices.

Ordering Information

Part No.	Description
SBS-H2	Hydrogen Detector Package

Accessory Ordering Information

Part No.	Description
H2-SENSOR-25FT	Additional hydrogen sensor with 25 ft. cable
H2-SENSOR-50FT	Additional hydrogen sensor with 50 ft. cable
H2-SENSOR-100FT	Additional hydrogen sensor with 100 ft. cable
H2-TESTKIT	Test kit (includes 1% & 2% hydrogen, regulator, tubing and case) Note: cannot ship via air freight!
H2-JB	4 11/16" x 4 11/16" 2-gang junction box
E190399	AC Cord 110V, 10A, 10 ft. with plug

Specifications

1% Hydrogen	Energizes a relay which can activate exhaust fan or SCADA system/alarm
2% Hydrogen	Sounds audible and visual alarms energizing relay which can be used on SCADA system
Power source	110 / 220 Vac, 50/60 Hz OR 12-48 Vdc (9-58 Vdc operating voltage)
Size	4.7" L x 4.7" W x 1.2" D (main body/display)

Main Body/Display:

Mounting and Power Options



Wall-mountable

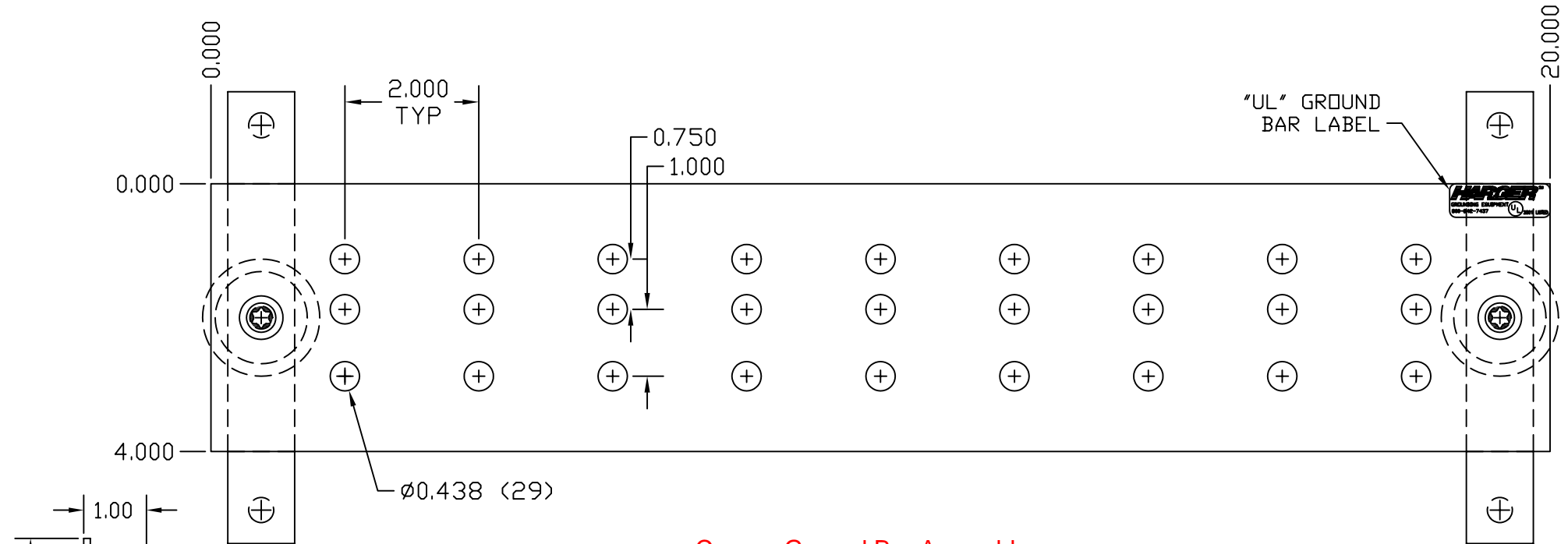
2-Gang Junction Box
(Hardwired AC or DC - optional)



18 AWG AC Cord
Recommended
(optional)

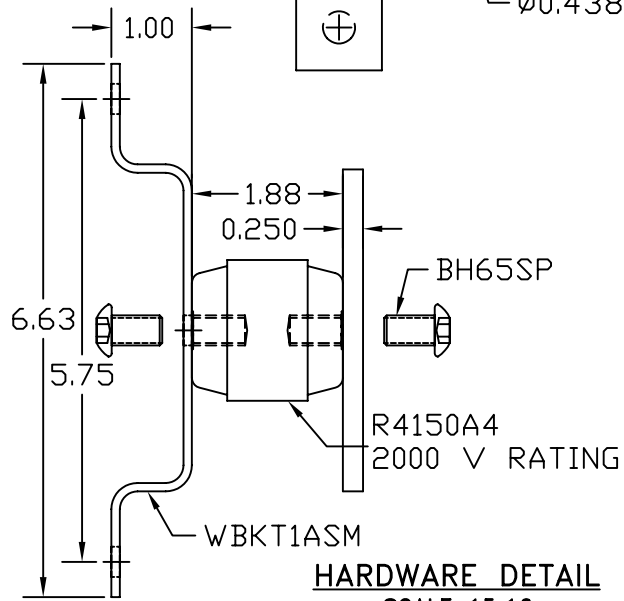
Section II - Electrical

16. Ground Bar



Copper Ground Bar Assembly

One 1/4" x 4" x 12" and one 1/4" x 4" x 20"



HARDWARE DETAIL
SCALE 15:16

EST. WEIGHT 7.21 LBS

APPROVED

AS DRAWN: _____
 AS NOTED: _____
 DATE: _____

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LET	REVISION	DATE	BY
TOLERANCES UNLESS NOTED:		3RD ANGLE PROJECTION	
FRACTIONAL	+/- 1/16		
.00	+/- .030		
.000	+/- .010		

PART NO. GBI14420C
 CU GROUND BAR ASSEMBLY

DRAWN BY:
LAL
 CHECKED BY:
-
 DATE:
071497



301 ZIEGLER DRIVE
 GRAYSLAKE, IL 60030
 (847) 548-8700

REVISION:
A
 SCALE:
7/16
 SHEET:
1 OF 1

Section II - Electrical

17. Smoke Detector

Photoelectric System Smoke Detector

8000/8003

Applications

The Gentex 8000/8003 Series of photoelectric detectors is designed for commercial, industrial, residential and institutional applications. The 8000/8003 is engineered to provide outstanding performance wherever reliable fire protection is required.

The Gentex 8000/8003 Series provides an exclusive patented three position test feature that simulates a 0.85% and a 3.5% actual smoke condition, in full compliance with NFPA 72 and UL 268 Standards. The test feature has the capability to let you know when maintenance is required.

A standard Form A dry relay contact for connection to the system initiating circuit and an auxiliary Form C dry relay contact is provided on all models for use for remote annunciation as a releasing device services. Other options include reverse/local 90dBA solid-state piezo horns and 135°F fixed temperature self-restoring integral or isolated thermals to meet your specific requirements.

The 8003 Series provides the temporal 3 evacuation tone as a standard feature. When testing the 8003 Series it may take up to 16 seconds longer to go in or out of alarm.

Standard Features

- Available in 120VAC and 24VDC
- Horn Frequency 3100 Hz (Nominal)
- Nominal 2.5% Sensitivity
- Functional Test Switch — Patented Three Position Test
- On Site Maintenance Washing Program
- Form A/Form C Dry Relay Contacts
- Quick-Disconnect Wiring Harness
- 2 Year Warranty from Date of Purchase
- 5-to-1 Signal-to-Noise Ratio
- Pulsing LED Sensing Chamber
- Fully Insect Screened
- Solid-State LED Condition Indicator
- Mounting Hardware Adapts to Standard Junction Boxes
- Dust Cover to Prevent Contamination During Installation
- Protective High Air Velocity Gasket
- Suitable for release device service
- Temporal 3 Evacuation Sounding Device (8003 Series)

S E R I E S



Product Listings



This symbol on the product's nameplate means it is Listed by UNDERWRITERS LABORATORIES, INC.

- BS+A/MEA #928-84-SA
- CSFM Listings (7272-0569:102)
- MSFM Listing #1929
- UL 268 Listed

Product Compliance

- NFPA 72

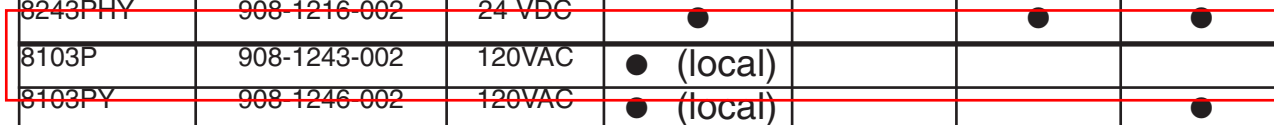


**8000 (8240/8100) Series - 4 Wire Photoelectric System Detectors
24 VDC and 120 VAC**

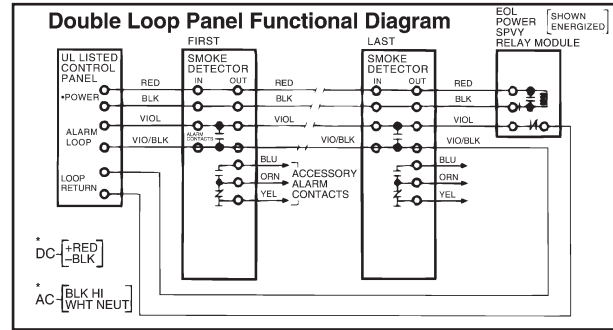
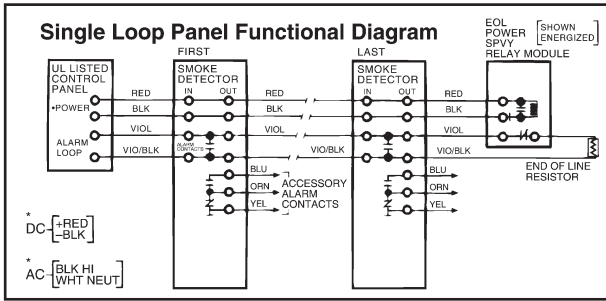
Model Number	Part Number	Voltage	Reverse/ Local 90dBA Piezo	Integral 135°F Thermal	Isolated 135°F Thermal	Non- Latching Circuit "Y"
8240	908-1201-002	24 VDC				
8240Y	908-1207-002	24 VDC				●
8240T	908-1203-002	24 VDC		●		
8240P	908-1202-002	24 VDC	●			
8240PT	908-1205-002	24 VDC	●	●		
8240PTY	908-1209-002	24 VDC	●	●		●
8240PY	908-1208-002	24 VDC	●			●
8240PH	908-1206-002	24 VDC	●		●	
8240PHY	908-1210-002	24 VDC	●		●	●
8100	908-1233-002	120VAC				
8100Y	908-1239-002	120VAC				●
8100T	908-1234-002	120VAC		●		
8100P	908-1236-002	120VAC	● (local)			
8100PY	908-1240-002	120VAC	● (local)			●

**8003 (8243/8103) Series - 4 Wire w/Temporal 3 Sounder Photoelectric
System Detectors 24 VDC and 120 VAC**

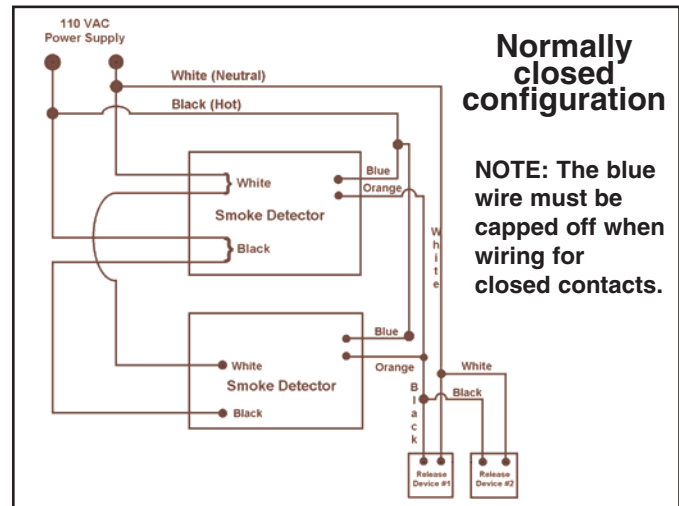
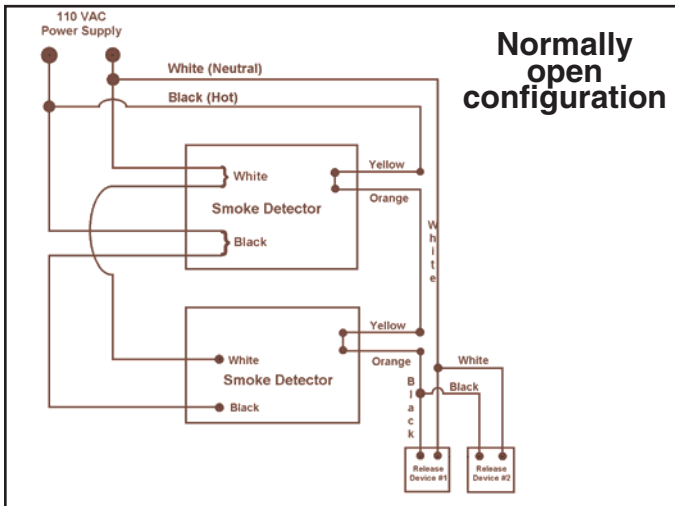
Model Number	Part Number	Voltage	Reverse/ Local 90dBA Piezo	Integral 135°F Thermal	Isolated 135°F Thermal	Non- Latching Circuit "Y"
8243P	908-1211-002	24 VDC	●			
8243PT	908-1212-002	24 VDC	●	●		
8243PTY	908-1215-002	24 VDC	●	●		●
8243PY	908-1214-002	24 VDC	●			●
8243PH	908-1213-002	24 VDC	●		●	
8243PHY	908-1216-002	24 VDC	●		●	●
8103P	908-1243-002	120VAC	● (local)			
8103PY	908-1246-002	120VAC	● (local)			●



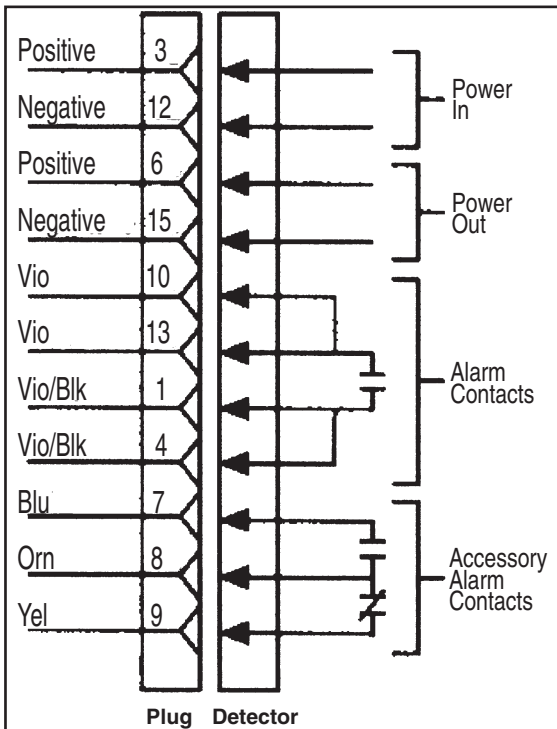
Wiring Diagrams



Wiring for Releasing Device Service

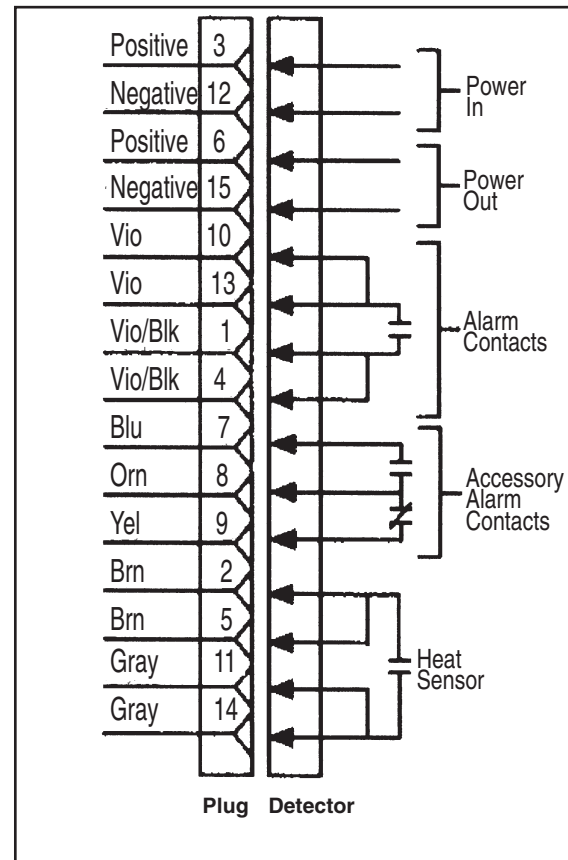


Detector Wiring Diagram



NOTE: Supervision of power is necessary and is accomplished by installing an End of Line Relay Assembly. The EOL Relay Assembly contacts are closed when energized and are wired in series with the alarm loop. Power failure or a break in the power loop de-energizes the EOL Relay, causing the relay contacts to open. This results in a trouble signal at the control panel.

For "H" — Isolated Thermal



8000/8003

SERIES

Electrical Specifications

Model Numbers	8240	8100
Operating Voltage Nominal:	24 VDC	120 VAC
Range Min:	18 VDC	110 VAC
Max:	30 VDC	130 VAC
Frequency	—	60HZ
Current Consumption at Nominal Operating Voltage (Milliamperes):		
Standby	6mA	70mA
Alarm	60mA	70mA
Note: For "P" Option (Horn), Alarm Current Consumption is unchanged.		
Sensitivity	2.5% Nominal	
Alarm Contacts	1 Form A -N.O. (Resistive) 1 Amp at 24 VDC 0.6A at 120 VAC	
Auxiliary	1 Form C -N.O. (Resistive) 1 Amp at 24 VDC 0.6A at 120 VAC	
Temperature	40°-100°F. (4.4°C-38°C)	
Humidity	10%-93% Relative Humidity	
Size	Diameter: 6 1/2 OD (5 3/4 in. at ceiling) Depth: 2 5/8 in.	

Architect & Engineering Specifications

The Photoelectric Smoke Detector shall be a Gentex Model 8100/8103/8240/8243 or approved equal and shall operate on the photoelectric light scattering principle and shall be listed by Underwriter's Laboratories, Inc., the State of California Fire Marshal and the Bureau of Standards and Appeals (NYC).

The smoke detector shall contain an infrared LED light source and a light sensing photodiode. These components shall be positioned such that when smoke particles enter the sensing area, light from the LED reflects onto the photodiode. When the amount of light reflected onto the photodiode reaches a predetermined level, the detector shall latch into alarm.

The smoke detector shall contain a test knob that, when in TEST 1 Position, scatters the detector's LED light source to the equivalent of a nominal .85% actual smoke condition, when in Test 2 position the detector shall simulate an equivalent of a nominal 3.5% actual smoke condition. Test feature shall indicate when maintenance is required without the need of additional equipment. A magnetic switch closure or other switch closure, or smoke generating equipment which does not scatter the light beam or test sensitivity is not sufficient.

The smoke detector shall be able to contain an optional internal 90dBA horn (at 10 feet) which emits an intermittent tone when the detector alarms. Also have the provision of reverse polarity operation. The horn shall have the capability of being self-restoring.

The smoke detector shall be able to provide a self-restoring integral/isolated heat sensor set to alarm at 135°F fixed temperature.

The smoke detector shall be provided from the manufacturer with all internal wiring (power in, power out and alarm contacts have 2 wires, auxiliary relay contacts each have 1 wire) leading into a plug-in terminal socket for ease of field installation. Screws are not acceptable since they make service more difficult. The manufacturer shall further supply the field wiring harness with plug connector for connection to insulated wire connectors. The smoke detector shall mount to a 2" x 3" switch box or 4" octagon junction box using a standard bracket that does not have to be purchased separately. The smoke detector shall be listed for wall or ceiling mounting.

24 units per carton
32 pounds per carton

GENTEX CORPORATION

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Section II - Electrical

18. Cam Lock

Generator Connection Box

400A., Posi-Lok™ Panel



Model Shown: GCP-N-0-3-400-5-1-1-0-0

- Outdoor rated Type 3R input panel for portable generator hookup.
- Designed for use in waste treatment, community centers, gas stations, hospitals, fire / police stations and other facilities requiring portable power during utility outages.
- Direct connection of generator cable to facility via Posi-Lok™ panel.
- Hinged door on bottom provides portable cable access to Type 3R enclosure.
- Options:
 - ✦ Recessed or Pad mounting
 - ✦ Type 4X enclosure
 - ✦ Aluminum Enclosure
 - ✦ Main Circuit Breaker
 - ✦ Series 16 Cam Inlets
 - ✦ Mechanical Lug input connection
 - ✦ Phase sequence meter

Enclosure: TYPE 3R, Galvanized Steel, ANSI 61 Grey powder-coat finish, surface mount w/mounting tabs, and hinged front door with continuous hinge and locking hasp. Hinged door on bottom of enclosure for portable cable entry, with lock access inside enclosure. Cable connectors remain inside enclosure when connected to inlets.

Dimensions: 30"H. x 24"W. x 10" D.

Building Connection: Phase/Neutral direct to inlet or mechanical lugs mounted on inlet. Ground direct to enclosure ground stud.

