FEDERAL SIGNAL
Safety and Security Systems / Industrial

Advancing security and well-being.

Model WV450XL Series GRP LED Beacon

for Use in Hazardous and Marine Locations

**magenta and yellow not shown*

Installation and Maintenance Instructions

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Rev. A0 1113
Printed in U.S.A.

Warranty – Seller warrants all goods for five years on parts and 2-1/2 years on labor, under the following conditions and exceptions: Seller warrants that all goods of Seller's manufacture will conform to any descriptions thereof for specifications which are expressly made a part of this sales contract and at the time of sale by Seller such goods shall be commercially free from defects in material or workmanship. Seller reserves the right at the Seller's discretion to "Repair and Return" or "Replace" any item deemed defective during the warranty period. This warranty does not cover travel expenses, the cost of specialized equipment for gaining access to the product, or labor charges for removal and reinstallation of the product. This warranty shall be ineffective and shall not apply to goods that have been subjected to misuse, neglect, accident, damage, improper maintenance, or to goods altered or repaired by anyone other than Seller or its authorized representative, or if five years have elapsed from the date of shipment of the goods by Seller with the following exceptions: lamps and strobe tubes are not covered under this warranty. Outdoor warning sirens and controllers manufactured by Federal Warning Systems are warranteed for two years on parts and one year on labor. No agent, employee, representative or distributor of Seller has any authority to bind the Seller to any representation, affirmation, or warranty concerning the goods and any such representation, affirmation or warranty shall not be deemed to have become a part of the basics of the sales contract and shall be unenforceable. THE FOREGOING WARRANTIES ARE EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES OR MERCHANTABILITY, FITNESS FOR PURPOSE AND OF ANY OTHER TYPE, WHETHER EXPRESS OR IMPLIED. These warranties shall not apply unless Seller shall be given reasonable opportunity to investigate all claims for allegedly defective goods. Upon Seller's instruction a sample only of allegedly defective goods shall be returned to Seller for its inspection and approval. The basis of all claims for alleged defects in the goods not discoverable upon reasonable inspection thereof pursuant to paragraph 8 hereof must be fully explained in writing and received by Seller within thirty days after Buyer learns of the defect or such claim shall be deemed waived.

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Safety Messages to Installers and Users

⚠ WARNING

It is important to follow all instructions shipped with this product. This device is to be installed by a trained electrician who is thoroughly familiar with and will follow all applicable national and local codes in the country of use.

This device should be considered a part of the warning system and not the entire warning system.

The selection of the mounting location for the device, its controls and the routing of the wiring are to be accomplished under the direction of the facilities engineer and the safety engineer. In addition, listed below are some other important safety instructions and precautions you should follow:

- Read and understand all instructions before installing or operating this equipment.
- The circuitry of the beacon can be damaged by an electrostatic discharge. Follow antistatic procedures while installing the beacon.
- Never alter the unit in any manner. Safety in hazardous locations may be endangered if additional openings or other alterations are made in units specifically designed for use in these locations.
- Do not connect this beacon to the system when power is on.
- After installation, ensure that all threaded joints are properly tightened.
- Keep the unit tightly closed when in operation.
- After installation, test the beacon system to ensure that it is operating properly.
- After testing is complete, provide a copy of this instruction sheet to all personnel.
- Establish a procedure to routinely check the beacon system for proper activation and operation.

Failure to follow all safety precautions and instructions may result in property damage, serious injury, or death.

Overview of Model WV450XL Series

The Federal Signal Model WV450XL Series is ideally suited for explosive atmospheres and harsh environments. It is designed to serve the demanding needs of offshore marine and land based industrial applications. The housing is made of corrosion resistant components, which dramatically reduces the cost of long-term maintenance.

The WV450XL Series beacons use all of the latest techniques in non-metallic housing construction. The body of the product is glass reinforced polyester (GRP) and 316 stainless steel hardware. The use of GRP in the design improves corrosion resistance and reduces weight as compared to traditional metal housings. The GRP construction also saves time and money over the life of the product by reducing or, in most cases, completely eliminating the need to perform regular field inspections of the flame path.

The WV450XL Series comes standard with metric entries, a 316 stainless steel dome guard and an extended life LED emitter. The flameproof "D" versions come standard with a 316 stainless steel mounting brackets and two M20 entries for field cable gland connections. The increased safety "E" versions have the added feature of a terminal chamber with three M20 entries. The increased safety design allows for quick field termination and pass-through wiring.

There are seven dome colors: amber, blue, clear, green, magenta, red, and yellow.

Product features:

- 316 stainless steel mounting bracket included
- Available voltages: 24 Vdc and 110-220 Vac
- Eight selectable flash patterns (Table 1 on page 18)
- Corrosion resistant GRP (glass reinforced polyester) housing
- Included dome guard

- M20 entries standard
- Body color natural black
- IP66 rated
- Zone 1 rated, IECEx, ATEX, Ex d IIB +H2 T6 Gb, Ex de IIB +H2 T6 Gb

Certification

Certificate Nos.: ATEX Cert No.: UL DEMKO 06 ATEX04259693X
IECEx Cert No.: IECEx UL 06.0010X

ATEX coding: Ⓔx II 2

Protection: Ex d IIB+H2 T6 Gb [-55°C ≤Ta≤ 55°C]
Ex de IIB+H2 T6 Gb [-20°C ≤Ta≤ 55°C]

Standards: EN60079-0: 2012, EN60079-1: 2007, EN60079-7: 2007.
IEC60079-0: 5th Ed., IEC 60079-1 6th Ed., IEC 60079-7: 4th Ed.

Special Conditions for Safe Use:

1) Potential electric static charging hazard. Use only a water dampened cloth when cleaning the exterior of the unit.
2) The capacitance value of unearthed metal parts is 10 pF, when measured per IEC/EN 60079-0.
3) Contact the manufacturer for information on the dimension of the flameproof joints.

Condições especiais para o uso seguro:

1) Perigo de potencial carga eletroestática. Ao limpar a parte externa da unidade, utilize apenas um pano úmido.
2) O valor de capacitância de peças metálicas desenterradas é 10 pF, quando medido por IEC / EN 60079-0.
3) Contate o fabricante para obter informação sobre a dimensão das juntas à prova de fogo.

Unpacking the Beacon

⚠ WARNING

EXPLOSION HAZARD—Damaged dome covers can lead to explosions that could result in serious injury or death. Replace damaged dome covers.

After unpacking the beacon, examine it for damage that may have occurred in transit. If it has been damaged, do not attempt to install or operate it. File a claim immediately with the carrier, stating the extent of the damage. Carefully check all envelopes, shipping labels, and tags before removing or discarding them. Disposal of all shipping materials must be carried out in accordance with national and local codes and standards. If any parts are missing, please call Federal Signal Customer Support at +1 708-534-4756 or +1 877-289-3246.

Mounting the Beacon

⚠ WARNING

SECURE TO FLOOR OR WALL—To prevent injury, this apparatus must be securely attached to the floor or wall in accordance with the installation instructions.

Figure 1 Mounting hole locations Ex d version

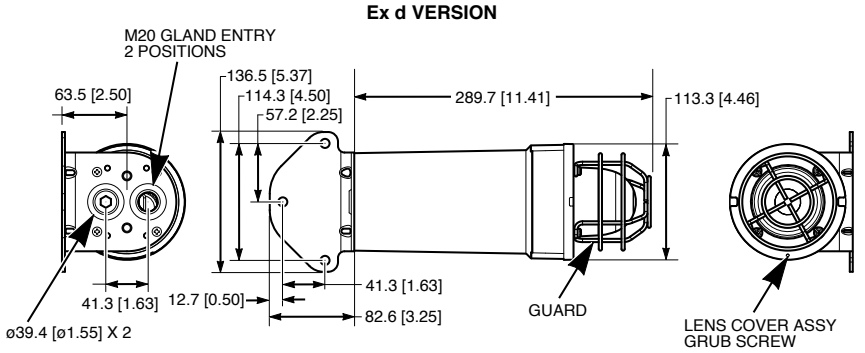
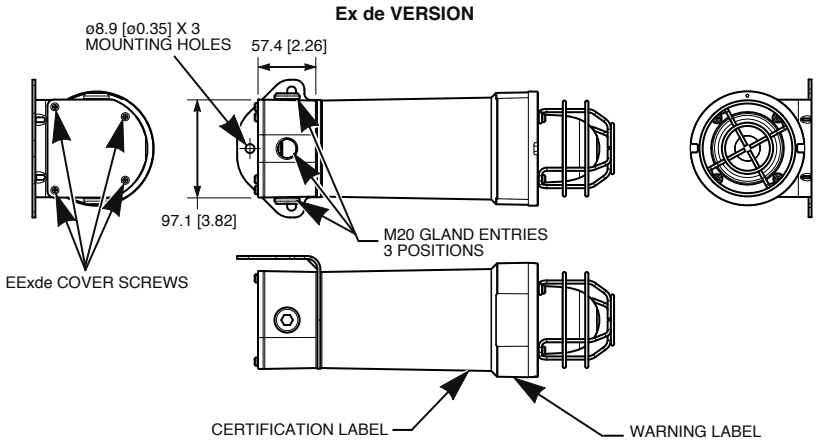


Figure 2 Mounting hole locations Ex de version



See Figures 1 and 2. The Federal Signal WV450XL Series LED beacon is mounted using a mounting bracket fixed to the base of the unit. Install the enclosure on the selected support surface using the three 9.0 mm (0.35 in) mounting holes. Use installer-supplied fasteners suitable for the surface to which the device will be mounted.

Safety Messages for Wiring

When installing and operating explosion-proof electrical equipment, the relevant national regulations for installation and operation (e.g., EN60079-14 and IEC Wiring Regulations) must be observed.

- To maintain the explosion-proof integrity of the enclosure, DO NOT damage the dome or threads while disassembling or reassembling unit.
- Painting and surface finishes, other than those applied by Federal Signal Corporation are not permitted.
- Cable termination should be in accordance with specifications applying to the application. Federal Signal recommends that all cables and cores should be fully identified.
- Ensure that only the correct component certified glands are used and that the assembly is shrouded and correctly earthed. Gland entries are M20-1.5 6H. Supply wires to be rated 85 °C minimum.

- Certifique-se de utilizar apenas as juntas componentes certificadas corretas e de que o equipamento instalado esteja blindado e devidamente conectado à terra. As entradas das juntas são de M20-1,5 6 H. Os cabos de alimentação são certificados para temperatura mínima de 85 °C.

- Ensure there is not too much slack of cable cores within the unit, due to space limitations.
- Ensure that only the supplied stopping plugs are used to blank off unused gland entry points. Failure to do so may negate the IP rating on the unit.
- In all countries, the wiring must comply with all national and local codes and standards.
- Ensure that all nuts, bolts and fixings are secure.

Wiring the WV450XLD Flameproof Models

⚠ WARNING

SHOCK HAZARD—To avoid electrical shock hazards, do not connect wires when power is applied.

This section has wiring instructions for the two flameproof models:

- WV450XLD 24 Vdc
- WV450XLD 110-220 Vac

The maximum wire gauge is 2.5 mm^2 (12 AWG). The wire must be rated 85 °C or higher. Use only stranded or multiple strand cable to terminate the beacon.

Cable termination for these models should be in accordance with specifications applying to the application. It is recommended that all cables and cores should be fully identified. Use the appropriate cable gland for the application. Gland entry threads are M20-1.5 x 6H.

The terminal block uses a spring clamp connection to engage the wire. To disengage the clamp, insert the tip of the screwdriver into the small openings near the top and press down. Insert the stripped wire into the larger opening and remove the screwdriver to engage the wire clamp.

Tools needed:

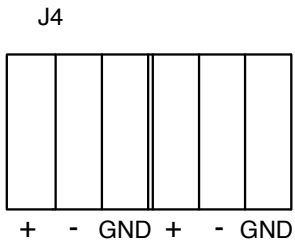
- 2.0 mm A/F hexagon key
- 2 mm blade tip screwdriver
- Wire stripper

Wiring the 24 Vdc Model WV450XLD

To wire the beacon:

1. Use the hexagon key to unscrew the grub screw on the dome cover assembly one full turn.
2. Remove the cover from the housing by turning the cover counter-clockwise. If the dome cover assembly will not unscrew, back out the grub screw a few additional turns.
3. Slide out the PCB until the terminals clear the case. Strip the wire insulation 5 mm to 6 mm (0.22 in).
4. See Figure 3. Connect the positive (+) power source wire to the terminal block screw marked "**+**."
5. Connect the negative (–) power source wire to the terminal block screw marked "**–**."

Figure 3 Connections for 24 Vdc model



6. Insert the PCB into the enclosure with the terminal block/ wires facing the largest side of the PCB offset inside the enclosure. Ensure that the bottom edge of PCB is trapped between the holding pegs in the bottom of the enclosure.

7. Place the cover on the housing and tighten it by turning it clockwise.

8. To ensure O-ring compression, there should be a maximum gap of 0.3 mm (0.012 in) between the faces of the enclosure and cover. Turn the grub screw one full turn or until the screw contacts the housing.

9. Ensure that the unused wire entry is sealed with the provided brass M20-1.5 x 6 g stopping plug (component-certified).

Wiring the 110-220 Vac Model WV450XLD

To wire the beacon:

1. Use the hexagon key to unscrew the grub screw on the dome cover assembly one full turn.

2. Remove the cover from the housing by turning the cover counter-clockwise. If the dome cover assembly will not unscrew, back out the grub screw a few additional turns.

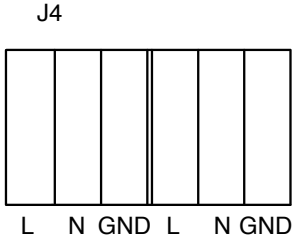
3. Slide the PCB out until the terminals clear the case. Strip the wire insulation 5 mm to 6 mm (0.22 in).

4. See Figure 4 . Connect the line (hot) power source wire to the terminal block screw marked "**L**."

5. Connect the neutral (common) power source wire to the terminal block screw marked "**N**."

6. Connect the ground wire to the terminal block clamp marked GND.

Figure 4 Connections for 110-220 Vac model



7. Insert the PCB into the enclosure with the terminal block/wires facing the largest side of the PCB offset inside the enclosure. Ensure that the bottom edge of PCB is trapped between the holding pegs in the bottom of the enclosure.

8. Place the cover on the housing and tighten it by turning it clockwise.

9. To ensure O-ring compression, there should be a maximum gap of 0.3 mm (0.012 in) between the faces of the enclosure and cover. Turn the grub screw one full turn or until the screw contacts the housing.

10. Ensure that the unused wire entries are sealed with the provided brass M20-1.5 x 6 g stopping plug (component-certified).

Wiring the WV450XLE Increased Safety Models

⚠ WARNING

SHOCK HAZARD—To avoid electrical shock hazards, do not connect wires when power is applied.

This section has wiring instructions for the two increased safety models:

- WV450XLE 24 Vdc
- WV450XLE 110-220 Vac

The maximum wire gauge is 2.5 mm^2 (12 AWG). The wire must be rated 85 °C or higher. Use only stranded or multiple strand cable to terminate the beacon.

Cable termination should be in accordance with specifications applying to the application. It is recommended that all cables and cores should be fully identified. Use the appropriate cable gland for the application gland entry threads are M20-1.5 6H.

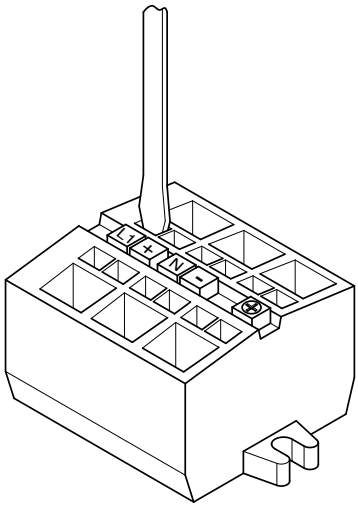
Conductive metalwork, including cable glands, must be a minimum of 5 mm away from the terminals.

Leads connected to the terminals shall be insulated for the appropriate voltage and this insulation shall extend to within 1 mm of the metal of the terminal throat.

The WV450XLE terminal block is supplied with three poles and two conductors per pole. The terminal block allows for easy supply-in and loop-out wiring to connect beacons in series.

See Figure 5. The terminal block uses a spring clamp connection to engage the wire. To disengage the clamp, insert the tip of the screwdriver into the small openings near the top. Insert the stripped wire into the larger opening and remove the screwdriver to engage the wire clamp.

Figure 5 Terminal block for Model 450XLE



Tools needed:

- 2.0 mm A/F hexagon key
- #2 Phillips screwdriver
- 2 mm blade-tip screwdriver
- Wire stripper

Wiring the 24 Vdc Model WV450XLE

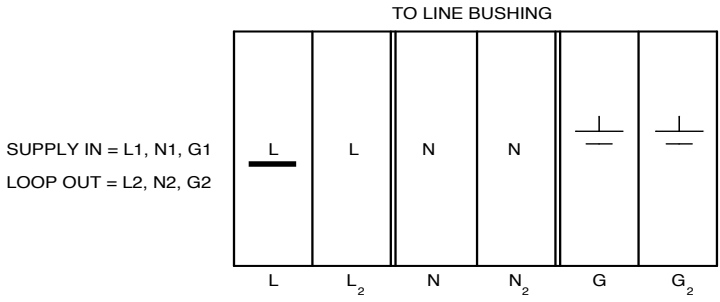
To wire the beacon:

1. Unscrew the four M4 screws and remove the terminal box cover.
2. Strip the wire insulation 8 mm to 9 mm (0.33 in).

   NOTE: When using more than one single or multiple strand lead, the connection into either side of any terminal must be joined in a suitable manner, e.g. two conductors into a single insulated crimped bootlace ferrule.

3. See Figure 5 on page 14. Connect the positive (+) power source wire to the terminal block pole marked "**L1**/**+**."
4. Connect the negative (-) power source wire to the terminal block pole marked "**N1**/**–**."
5. Secure the cover on the terminal box with the four M4 screws. Ensure that the gasket is properly seated to maintain the IP rating. **Do not overtighten the cover screws.**

Figure 6 Connections Ex de DC or AC beacons



Wiring the 110-220 Vac Model WV450XLE

See Figuere 6 on page 15. To wire the beacon:

1. Unscrew the four M4 screws and remove the terminal box cover.
2. Strip the wire insulation 8 mm to 9 mm (0.33 in).

   NOTE: When using more than one single or multiple strand lead, the connection into either side of any terminal must be joined in a suitable manner, e.g. two conductors into a single insulated crimped bootlace ferrule.
3. See Figure 5 on page 14. Connect the line (hot) power source wire to the terminal block pole marked "**L1**/**+**."
4. Connect the neutral (common) power source wire to the terminal block pole marked "**N1**/**–**."
5. Connect the ground wire to the terminal block pole marked with the ground symbol.
6. Secure the cover on the terminal box with the four M4 screws. Ensure the gasket is properly seated to maintain the IP rating. **Do not overtighten the cover screws.**

Changing the Flash Pattern

⚠ WARNING

LIGHT HAZARD—To be an effective warning device, the beacon produces bright light that can be hazardous to your eyesight when viewed at close range. Do not stare directly into the light at close range or permanent damage to your eyesight may occur.

⚠ WARNING

EXPLOSION HAZARD—To prevent ignition of hazardous atmosphere, disconnect the device from the supply circuit before opening it. Do not open the device in the presence of explosive gases in the atmosphere.

⚠ CAUTION

BURN HAZARD—The LED emitter gets hot enough to burn you. Always allow the emitter to cool before handling it.

The Model WV450XL Series beacon has eight flash patterns that are selected by setting a DIP switch on the PCB. See Figure 7 and Table 1.

Tool needed:

- 2.0 mm A/F hexagon key
- 2 mm blade-tip screwdriver

To select a pattern:

1. Disconnect power to the beacon.

2. Use the hexagon key to unscrew the grub screw on the dome cover assembly one full turn.

3. Remove the cover from the housing by turning the cover counter-clockwise. If the dome cover assembly will not unscrew, back out the grub screw a few additional turns

4. Remove the PCB assembly from the housing by pulling up on the base of the LED array (not the LEDs).

5. See Figure 7 and Table 1 on page 18. Select a flash pattern by setting the DIP switches on SW1. Strobe Simulation (60 FPM) is the default.

6. Insert the PCB into the enclosure with the terminal block/wires facing the largest side of the PCB offset inside the enclosure. Ensure that the bottom edge of PCB is trapped between the holding pegs in the bottom of the enclosure.

7. Place the cover on the housing and tighten it by turning it clockwise.

8. To ensure O-ring compression, there should be a maximum gap of 0.3 mm (0.012 in) between the faces of the enclosure and cover. Turn the grub screw one full turn or until the screw contacts the housing.

9. Reconnect power to the beacon.

10. Test the beacon by applying power and verifying the pattern.

Figure 7 Location of DIP switch for flash patterns

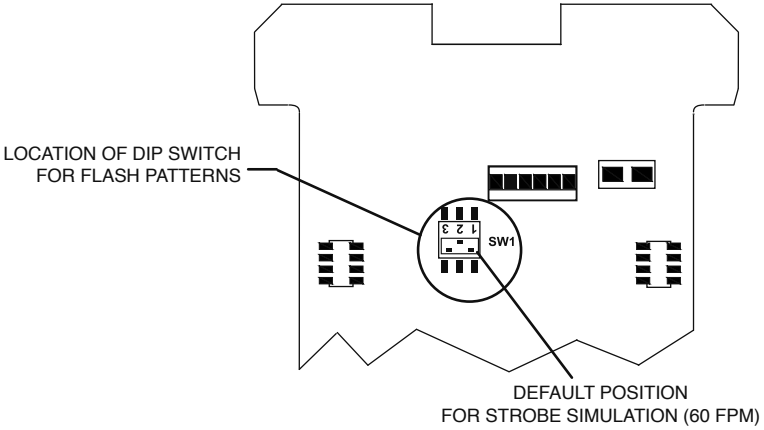
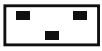


Table 1 SW1 settings for flash patterns

	1 2 3	Description
ON		Steady On
ON		Blink (60 FPM)
ON		Random Blink
ON		Rotate (120 RPM)
ON		Variable Pulse
ON		Strobe Simulation (60 FPM)
ON		Strobe Simulation (90 FPM)
ON		Severe Alert

Safety Messages to Maintenance Personnel

⚠ WARNING

Listed below are some important safety instructions and precautions you should follow:

- Read and understand all instructions before operating this system.
- Any competent site personnel can carry out the replacement of the LED array. Other repairs should be undertaken by returning the unit to Federal Signal Corporation or by an authorized repairer of Ex equipment.
- If you acquired a significant quantity of units, then it is recommended that spares are also made available.
- Any maintenance to the beacon system must be done with power turned off.
- Any maintenance to the beacon system must be performed by a trained electrician who is thoroughly familiar with all applicable national and local codes in the country of use.
- Never alter the unit in any manner. Safety of the unit may be affected if additional openings or other alterations are made to the internal components or housing.
- The nameplate, which may contain cautionary or other information of importance to maintenance personnel, should NOT be obscured in any way. Ensure that the nameplate remains readable.
- After performing any maintenance, test the beacon system to ensure that it is operating properly.

Failure to follow all safety precautions and instructions may result in property damage, serious injury, or death.

Maintaining the Beacon

⚠ WARNING

EXPLOSION HAZARD—To prevent ignition of hazardous atmosphere, disconnect the device from the supply circuit before opening it. Do not open the device in the presence of explosive gases in the atmosphere.

⚠ AVISO DE PERIGO

PERIGO DE EXPLOSÃO—Para prevenir a ignição de gases perigosos, desconecte o dispositivo do circuito de alimentação antes de abri-lo. Não abra na presença de gases explosivos na atmosfera.

⚠ WARNING

POTENTIAL ELECTRIC STATIC CHARGING HAZARD—If the unit requires cleaning, then ONLY clean exterior with a water dampened cloth to avoid electrostatic charge buildup.

⚠ AVISO DE PERIGO

PERIGO DE POTENCIAL CARGA ELETROESTÁTICA—Em caso de ter que limpar a unidade, limpe APENAS a parte externa com um pano úmido, a fim de evitar o acúmulo de carga eletroestática.

During the working life of the beacon, it should require little or no maintenance. GRP (glass reinforced polyester) will resist attack by most acids, alkalis, and chemicals and is as resistant to concentrated acids and alkalis as most metal products. However, if abnormal or unusual environment conditions occur due to plant damage or accident, etc., then visual inspection of the beacon is recommended.

Cleaning the Enclosure

The fixture should be cleaned periodically to maintain maximum light output. Use only mild, non-abrasive cleaning agents. The glass dome should be regularly inspected for scratches and chips, and if damaged must be replaced.

Replacing the LED Array

⚠ WARNING

EXPLOSION HAZARD —To maintain the explosion-proof integrity of the enclosure, DO NOT damage the dome or threads while disassembling or reassembling unit.

⚠ WARNING

LIGHT HAZARD—To be an effective warning device, the beacon produces bright light that can be hazardous to your eyesight when viewed at close range. Do not stare directly into the light at close range or permanent damage to your eyesight may occur.

⚠ CAUTION

BURN HAZARD—The LED emitter gets hot enough to burn you. Always allow the emitter to cool before handling it.

NOTICE

STATIC SENSITIVE DEVICE—The circuitry of the beacon can be damaged by an electrostatic discharge (ESD). Always follow anti-static procedures while handling the PCB.

Tools needed:

- 2.0 mm A/F hexagon key
- No. 2 Phillips screwdriver

To replace the LED array:

1. Remove the PCB:
   - **a.** Disconnect power to the beacon.
   - **b.** Use the hexagon key to unscrew the grub screw on the dome cover assembly one full turn.
   - **c.** Remove the cover from the housing by turning the cover counter-clockwise. If the dome cover assembly will not unscrew, back out the grub screw a few additional turns.

d. Remove the PCB assembly from the housing by pulling up on the base of the LED array (not the LEDs).

2. Disconnect the LED array:

a. Locate the 6-position connector joining the LED array to the PCB (J2), and unplug it from the PCB.

b. Unplug the **SPADE** connector next to **J2**.

3. Remove the LED array and install the replacement:

a. Use a #2 Phillips screwdriver to remove two #8-32 pan-head screws holding the array to the aluminum bracket.

b. Carefully remove the LED array from the bracket.

c. Insert the leads from the new LED array through the hole in the bracket.

d. Secure the bracket in place by re-installing the two #8-32 pan-head screws through the LED array and into the bracket.

e. Reconnect the two leads from the LED array to the PCB (**J2** and **SPADE** connections).

4. Insert the PCB into and test the beacon:

a. Insert the PCB into the enclosure with the terminal block/wires facing the largest side of the PCB offset inside the enclosure. Ensure that the bottom edge of PCB is trapped between the holding pegs in the bottom of the enclosure.

b. Place the cover on the housing and tighten it by turning it clockwise.

c. To ensure O-ring compression, there should be a maximum gap of 0.3 mm (0.012 in) between the faces of the enclosure and cover. Turn the grub screw one full turn or until the screw contacts the housing.

d. Reconnect power to the beacon.

e. Test the device by applying power and verifying the pattern.

Ordering Accessories and Replacement Parts

⚠ WARNING

EXPLOSION HAZARD–Damaged domes can lead to explosions that could result in serious injury or death. If the dome is damaged, it MUST be replaced.

Spare parts are listed in Table 2. Due to certification, certain component parts are not available for field replacement. Beacons with this type of damage must be either replaced entirely or returned to Federal Signal for service. To order accessories and replacement parts, call Federal Signal Customer Support at 708-534-4756 or 877-289-3246.

Table 2 Replacement parts

Description	Part Number
Cover Dome Assy., Amber	K859500582
Cover Dome Assy., Blue	K859500582-01
Cover Dome Assy., Clear	K859500582-02
Cover Dome Assy., Green	K859500582-03
Cover Dome Assy., Magenta	K859500582-04
Cover Dome Assy., Red	K859500582-05
Cover Dome Assy., Yellow	K859500582-06
LED Array, Amber Beacon	K14700030-A
LED Array, Blue Beacon	K14700030-B
LED Array, White Beacon	K14700030-W
LED Array, Green Beacon	K14700030-G
LED Array, Magenta Beacon	K14700030-W
LED Array, Red Beacon	K14700030-R
LED Array, Yellow Beacon	K14700030-W
Dome Guard	K8595107

CE

EC Declaration of Conformity
Issued: October 30, 2013

We (manufacturer): Federal Signal Corporation
2645 Federal Signal Drive
University Park, IL 60484 U.S.A

declare under our sole responsibility that the following

Model: WV450XD, WV450XE, WV450XL
Type of Equipment: Flameproof and Increased Safety Strobe / LED Beacon

To which this declaration is in conformity with the following standard(s)

ATEX	
EN60079-0:2009	Electrical apparatus for potentially explosive atmospheres – General
EN60079-1:2007	Electrical apparatus for potentially explosive atmospheres – Flameproof 'd'
EN60079-7:2007	Electrical apparatus for potentially explosive atmospheres – Increased safety 'e'
LVD	
IEC 60204-1:1997	Safety of Machinery, Electrical Equipment of Machines
EMC	
EN61000-6-2:2005	Generic Immunity for Industrial Environments
EN61000-6-4:2007	Generic Emissions for Industrial Environments
EN55022: 2010	IT Equipment - Radio disturbance characteristics
EN55024: 2010	IT Equipment - Immunity characteristics

and therefore conforms with EC Directive requirements
of
94/9/EC relating to equipment and protective systems intended for use in explosive atmospheres (ATEX)
and,
73/23/EEC (as amended by 93/68/EEC) relating to electrical safety (LVD)
and,
2004/108/EC (as amended) relating to the electromagnetic compatibility (EMC)

(ATEX) Certified by: UL/DEMKO Lyskaer 8, 2730 Herlev, Denmark
Certificate Number 06 ATEX 0425693X

Technical File maintained at: Federal Signal Corporation
2645 Federal Signal Drive
University Park, IL 60484 U.S.A

I, the undersigned, herby declare that the products(s) specified above conform to the listed directive(s) and standard(s).

Paul Weber
Paul Weber
Engineering Section Manager
Industrial Systems Group

Date: 10|30|2013
(month/date/year)