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INSTALLATION/OPERATION

WCS1-4 Environmental Power Supply



C561M-I (4/08)

Important Safety Instructions

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Installation should be done only by qualified service personnel and conform to all local codes.
6. Use only installation methods and materials capable of supporting four times the maximum specified load.
7. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
8. Only use attachments/accessories specified by Pelco.
9. Use only with the cart, stand, tripod, bracket, or table specified by Pelco, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
10. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as liquid has been spilled or objects have fallen into the apparatus, the apparatus does not operate normally, or has been dropped.
11. Only use parts recommended by Pelco.
12. Use stainless steel hardware to fasten the enclosure to outdoor surfaces.
13. An all-pole mains switch with a contact separation of at least 3 mm in each pole shall be incorporated in the electrical installation of the building (permanent 240 VAC product only).

Description

The WCS1-4 is a single power supply designed for indoor or outdoor applications and is ideal for use with cameras, domes, and integrated positioning systems such as Spectra® and Esprit®.

The WCS1-4 power supply has one fused output and is capable of handling up to 4 A (100 VA) of total load. The unit features selectable 100/120/240 VAC input power, selectable 24/26/28 VAC output power, and a stainless steel link-lock latch that can be secured with padlock (padlock not supplied).

Installation

MOUNTING INSTRUCTIONS

To mount the power supply directly to wallboard, wall, or concrete, refer to Figure 1 through 3 and perform the following steps:

1. Remove the retaining screw from the door latch of the WCS1-4 power supply.
2. Open the door of the WCS1-4 power supply, and then remove the plug(s) from the required conduit hole(s) located on the bottom of the unit. Install 3/4-inch (1.91 cm) conduit fitting(s) (not supplied). Close the lid to the power supply.
3. Determine the mounting location for the WCS1-4.
4. Use the WCS1-4 power supply as a template and mark the four fastener positions on the mounting surface.
5. Prepare the holes for installation.
6. Attach the WCS1-4 power supply securely to the mounting surface with four fasteners of appropriate length. Fasteners between 1/4-inch and 5/16-inch diameter (not supplied) can be used.

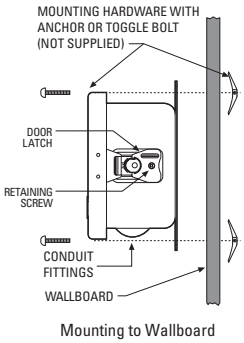


Figure 1.
Mounting to Wallboard

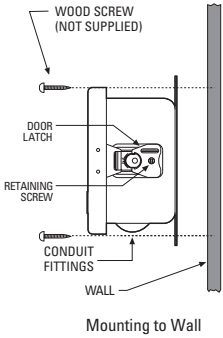


Figure 2.
Mounting to Wall

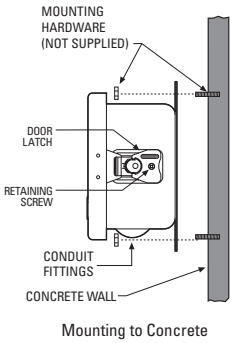


Figure 3.
Mounting to Concrete

WARNING: Under light load conditions and high input power voltage, output voltage from the WCS1-4 power supply may reach 32 VAC. Pelco recommends that all equipment connected to the WCS1-4 power supply be rated to handle 32 VAC. Pelco's Spectra domes and Esprit integrated positioning systems meet this requirement. Pelco cannot be liable for any damages resulting from incorrect wiring of the WCS1-4 power supply.

FUSE INSTALLATION

The WCS1-4 power supply is shipped from the factory with a 1.6 A fuse installed for 100/120 VAC input power. To use input power of 240 VAC, change the 1.6 A fuse to a 500 mA fuse (supplied).

To change the fuse, remove the lid to the fuse holder (refer to Figure 4) located inside the power supply and then install the new fuse. Store extra fuses (supplied) in the spare fuse holders.

INPUT POWER WIRING

⚠ **WARNING:** The WCS1-4 does not have an on/off switch. Turn off power at the circuit breaker before wiring the power supply.

To install the input power wires to the WCS1-4 power supply, refer to Figure 4 on page 6 and perform the following steps:

1. Determine the size of the input wire needed.
2. Pull the wiring into the WCS1-4 through the conduit fitting.
3. Attach the line input power wire to the 100 V, 120 V, or 240 V connection on the Primary Line Input connector strip. Attach the neutral wire to the COM connection on the same strip.

   NOTE: If the mains power is isolated or does not have a neutral and hot polarity, it is not critical. All primary inputs of the power supply are isolated from the chassis and earth ground.
4. Attach the input ground wire to the No. 6 ground stud, located between the conduit holes, and then tighten the wire with the nut and washer (supplied).

OUTPUT WIRING

To install the output wiring to the camera, dome, or positioning system, refer to Figure 4 on page 6 and perform the following steps:

1. Refer to Table A on page 7 and determine the output connection needed for your camera, dome, or positioning system. Refer to Figure 4 on page 6, for the proper connector strip connections.
2. Attach one output wire to either the Tap A (24 VAC), Tap B (26 VAC), or Tap C (28 VAC) connections on the Secondary Output Tap connector strip and attach the second wire to the COM connection on the same strip. Be sure that you have the proper wiring size and distances installed if you plan to change connections later.
3. Close the lid to the WCS1-4 power supply, replace the retaining screw to the door latch, and then turn on the power.

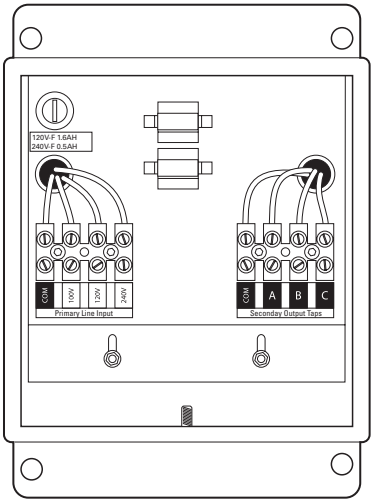


Figure 4. Wiring Connector Diagram

CABLE CONNECTIONS AND REQUIREMENTS

Table A shows the recommended maximum distances to wire the WCS1-4 to a Spectra or Esprit positioning system.

To determine the correct voltage tap:

1. Pick the unit type.
2. Find the wire gauge used (22 gauge is not recommended).

Determine which secondary output tap (A, B, or C) is appropriate for the distance between the dome or positioning system and the WCS1-4.

NOTE: Distance is in feet; values in parenthesis are in meters.

Table A. Maximum Wiring Distance from Transformer to Load

Power Consumption (25 VA)	**20 AWG (0.5 mm²)**	**18 AWG (1.0 mm²)**	**16 AWG (1.5 mm²)**	**14 AWG (2.5 mm²)**	**12 AWG (4.0 mm²)**
Tap A (24 VAC, 50/60 Hz)	113 (34)	180 (55)	287 (87)	455 (139)	725 (221)
Tap B (26 VAC, 50/60 Hz)	133 (40)	212 (64)	337 (103)	536 (163)	852 (260)
Tap C (28 VAC, 50/60 Hz)	155 (47)	246 (75)	392 (119)	623 (190)	990 (302)

Power Consumption (50 VA)	**20 AWG (0.5 mm²)**	**18 AWG (1.0 mm²)**	**16 AWG (1.5 mm²)**	**14 AWG (2.5 mm²)**	**12 AWG (4.0 mm²)**
Tap A (24 VAC, 50/60 Hz)	56 (17)	90 (27)	143 (43)	228 (69)	362 (110)
Tap B (26 VAC, 50/60 Hz)	66 (20)	105 (32)	168 (51)	268 (81)	425 (129)
Tap C (28 VAC, 50/60 Hz)	77 (23)	122 (37)	195 (59)	311 (94)	493 (150)

Power Consumption (70 VA)	**20 AWG (0.5 mm²)**	**18 AWG (1.0 mm²)**	**16 AWG (1.5 mm²)**	**14 AWG (2.5 mm²)**	**12 AWG (4.0 mm²)**
Tap A (24 VAC, 50/60 Hz)	41 (12)	64 (19)	102 (31)	163 (50)	259 (79)
Tap B (26 VAC, 50/60 Hz)	49 (15)	78 (24)	124 (38)	198 (60)	315 (96)
Tap C (28 VAC, 50/60 Hz)	55 (17)	88 (27)	135 (41)	222 (68)	353 (107)

Maintenance

There are no user-serviceable parts except for the fuse. If the transformer in the WCS1-4 does not work properly, the entire environmental power supply needs to be returned to the factory for repair. Refer to Warranty and Return Information located on the inside back cover of this manual for instructions on returning the WCS1-4.

Clean the outer surface of the WCS1-4 box with a nonabrasive cleaning cloth and antistatic cleaner. Do not use kerosene or similar substances that may damage the surface.

Specifications

ELECTRICAL

Input Voltage	Selectable 100, 120, 240 VAC, 50/60 Hz through the Primary Line Input connector strip
Output Voltage/Power	Selectable 24 VAC (Tap A), 26 VAC (Tap B), or 28 VAC (Tap C) at 100 VA through the Secondary Output Tap connector strip
Fusing	1 fuse. Select from one of the following supplied fuses: 3, 1.6 A fast-acting fuses (120 VAC) 3, 500 mA fast-acting fuses (240 VAC)
Spare Fuse Holder	2 spare fuse holders (attached to transformer cover)
Required Input Current	1 A

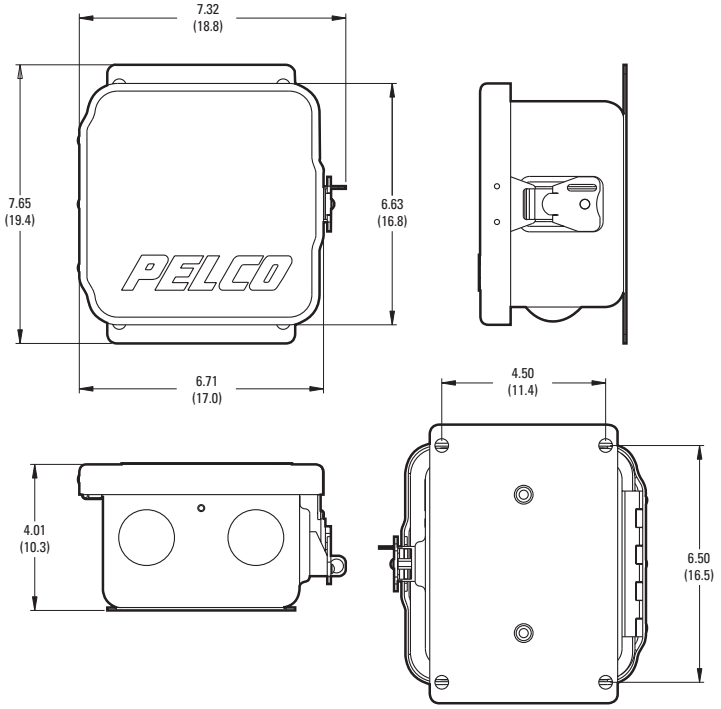
MECHANICAL

Contruction	Aluminum
Finish	Gray polyester powder coat
Cable Entry	2 hole plugs will accommodate 3/4-inch (1.91 cm) conduit fittings (not supplied) that meet NEMA Type 4X standards.
Mount Method	4, 0.375-inch (0.95 cm) holes on mounting plate.
Latch	1 stainless steel link-lock latch secured with screw; latch also can be secured with padlock (not supplied)

GENERAL

Environment	Indoor/outdoor
Operating Range	-50° to 122°F (-45.56° to 50°C)
Weight	6.84 lb (3.10 kg)

(Design and product specifications subject to change without notice.)



NOTE: VALUES IN PARENTHESIS ARE CENTIMETERS; ALL OTHERS ARE INCHES.

Green The materials used in the manufacture of this document and its components are compliant to the requirements of Directive 2002/95/EC.



This equipment contains electrical or electronic components that must be recycled properly to comply with Directive 2002/96/EC of the European Union regarding the disposal of waste electrical and electronic equipment (WEEE). Contact your local dealer for procedures for recycling this equipment.

REVISION HISTORY

Manual #	Date	Comments
C561M	11/97	Original version.
C561M-A	12/98	Changed model number. Revised Table A to update vA ratings for Spectra.
	5/00	Changed model number.
C561M-B	6/00	Revised manual to support changes required for UL listing.
C561M-C	5/03	Revised Wiring Distance section to include Spectra III and Esprit information. Updated manual to new format.
C561M-D	11/03	Revised cover photo and Figure 5 to show new conduit hole plug per ECO 01-6947.
C561M-E	8/05	Revised manual per ECO 05-11280 to change input power and a fuse value from 230 VAC to 240 VAC.
C561M-F	8/06	Revised Figures 1 through 5 to reflect a new box shape. Revised the weight in the *Specifications* section.
C561M-G	5/07	Revised Figure 4 to reflect label change. Updated manual to meet department style guidelines.
C561M-H	3/08	Revised input power wiring instructions.
C561M-I	4/08	Updated wiring and voltage information, including labels. Also added mains power warning.

PRODUCT WARRANTY AND RETURN INFORMATION

WARRANTY

Pelco will repair or replace, without charge, any merchandise proved defective in material or workmanship **for a period of one year** after the date of shipment.

Exceptions to this warranty are as noted below:

- Five years on fiber optic products and TW3000 Series unshielded twisted pair (UTP) transmission products.
- Three years on Spectra® IV products.
- Three years on Genex® Series products (multiplexers, server, and keyboard).
- Three years on DX Series digital video recorders, DVR5100 Series digital video recorders, DigitalSENTRY® Series hardware products, DVX Series digital video recorders, NVR300 Series network video recorders, and Endura® Series distributed network-based video products.
- Three years on Camclosure® and Pelco-branded fixed camera models, except the CC3701H-2, CC3701H-2X, CC3751H-2, CC3651H-2X, MC3651H-2, and MC3651H-2X camera models, which have a five-year warranty.
- Three years on PMCL200/300/400 Series LCD monitors.
- Two years on standard motorized or fixed focal length lenses.
- Two years on Legacy®, CM6700/CM6800/CM9700 Series matrix, and DF5/DF8 Series fixed dome products.
- Two years on Spectra III™, Spectra Mini, Esprit®, ExSite®, and PS20 scanners, including when used in continuous motion applications.
- Two years on Esprit and WW5700 Series window wiper (excluding wiper blades).
- Two years (except lamp and color wheel) on Digital Light Processing (DLP®) displays. The lamp and color wheel will be covered for a period of 90 days. The air filter is not covered under warranty.
- Two years on Intelli-M® eIDC controllers.
- One year (except video heads) on video cassette recorders (VCRs). Video heads will be covered for a period of six months.
- Six months on all pan and tilts, scanners, or preset lenses used in continuous motion applications (preset scan, tour, and auto scan modes).

Pelco will warrant all replacement parts and repairs for 90 days from the date of Pelco shipment. All goods requiring warranty repair shall be sent freight prepaid to a Pelco designated location. Repairs made necessary by reason of misuse, alteration, normal wear, or accident are not covered under this warranty.

Pelco assumes no risk and shall be subject to no liability for damages or loss resulting from the specific use or application made of the Products. Pelco's liability for any claim, whether based on breach of contract, negligence, infringement of any rights of any party or product liability, relating to the Products shall not exceed the price paid by the Dealer to Pelco for such Products. In no event will Pelco be liable for any special, incidental, or consequential damages (including loss of use, loss of profit, and claims of third parties) however caused, whether by the negligence of Pelco or otherwise.

The above warranty provides the Dealer with specific legal rights. The Dealer may also have additional rights, which are subject to variation from state to state.

If a warranty repair is required, the Dealer must contact Pelco at (800) 289-9100 or (559) 292-1981 to obtain a Repair Authorization number (RA), and provide the following information:

1. Model and serial number
2. Date of shipment, P.O. number, sales order number, or Pelco invoice number
3. Details of the defect or problem

If there is a dispute regarding the warranty of a product that does not fall under the warranty conditions stated above, please include a written explanation with the product when returned.

Method of return shipment shall be the same or equal to the method by which the item was received by Pelco.

RETURNS

To expedite parts returned for repair or credit, please call Pelco at (800) 289-9100 or (559) 292-1981 to obtain an authorization number (CA number if returned for credit, and RA number if returned for repair) and designated return location.

All merchandise returned for credit may be subject to a 20 percent restocking and refurbishing charge.

Goods returned for repair or credit should be clearly identified with the assigned CA or RA number and freight should be prepaid.

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