

INSTALLATION, OPERATION AND MAINTENANCE INSTRUCTIONS FOR



Industrial Products Series

Hazardous (Classified) Location Emergency Lighting Listed For:

Class I, Division 2 Groups B, C, D	Class I, Zone 2 Group IIB + H2	Type 3R
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WARNING:

Before installation, ensure that units comply with hazardous area classification. Failure to do so may result in bodily injury and/or property damage. To prevent ignition of hazardous atmospheres, area must be free of hazardous vapors before opening enclosure or servicing fixtures. To reduce the possibility of static sparking, do not attach metallic parts to the outside of unit (i.e., metallic screws, tags, decals, etc.)

DO NOT ATTEMPT INSTALLATION UNTIL YOU ARE FAMILIAR WITH THE FOLLOWING PRECAUTIONS AND PROCEDURES.

**CAUTION: SERVICE BY QUALIFIED PERSONNEL ONLY.
DE-ENERGIZE BEFORE OPENING.**

READ AND FOLLOW ALL SAFETY INSTRUCTIONS

IMPORTANT SAFEGUARDS

When using electrical equipment, basic safety precautions should always be followed including the following:

Do not mount near gas or electric heaters.

Equipment should be mounted in locations and at heights where it will not readily be subjected to tampering by unauthorized personnel.

The use of accessory equipment not recommended by the manufacturer may cause an unsafe condition.

Caution: Halogen cycle lamp(s) are used in this equipment. To avoid shattering: Do not operate lamp in excess of rated voltage, protect lamp against abrasion and scratches and against liquids when lamp is operating, dispose of lamp with care.

Halogen cycle lamps operate at high temperatures. Do not store or place flammable materials near lamp.

Do not use this equipment for other than intended use.

Servicing of this equipment should be performed by qualified service personnel.

Wiring and installation should be performed in accordance with the National Electrical Code (NEC) and other applicable local code requirements.

To reduce the risk of electric shock, disconnect AC power before servicing. To prevent arcing, avoid shorting battery terminals.

Do not attempt to service the battery. This unit uses a sealed, pure lead battery, which requires no maintenance. For replacement, contact the factory.

Refer to fixture nameplate for suitability in specific hazardous locations.

Input Voltage: 120, 220, 240 or 277VAC, 60Hz.

Input Wattage (Maximum): 25W

Output: 6VDC & 12VDC

36 Watts Maximum for 2 hours (C1D2-6V36, C1D2-12V36)

72 Watts Maximum for 2 hours (C1D2-6V72, C1D2-12V72)

Listed Lighting Fixtures:

Voltage: 6VDC 8W, 12VDC 8W

Lamp Type: Halogen PAR 36 Sealed Beam, 12W Option for 6 & 12V

Maximum Ambient

Temperature: 40°C

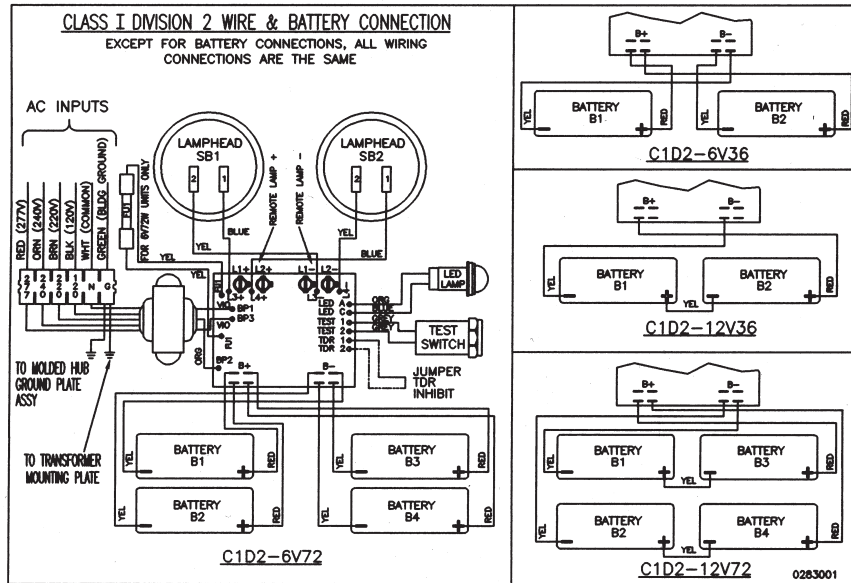
Temperature Code: T5 (100°C)

Options: -0 Unit supplied without lighting heads

-1 Unit supplied with single lighting head

SAVE THESE INSTRUCTIONS FOR FUTURE REFERENCE

Figure 1



3001

Figure 2

Unit shown with cover removed

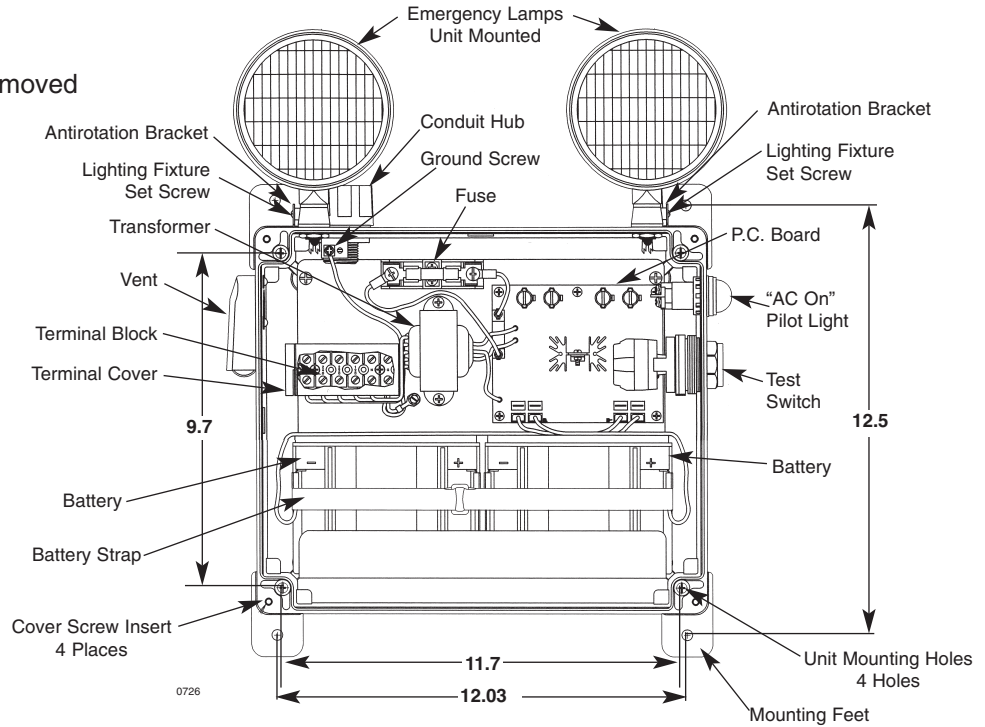
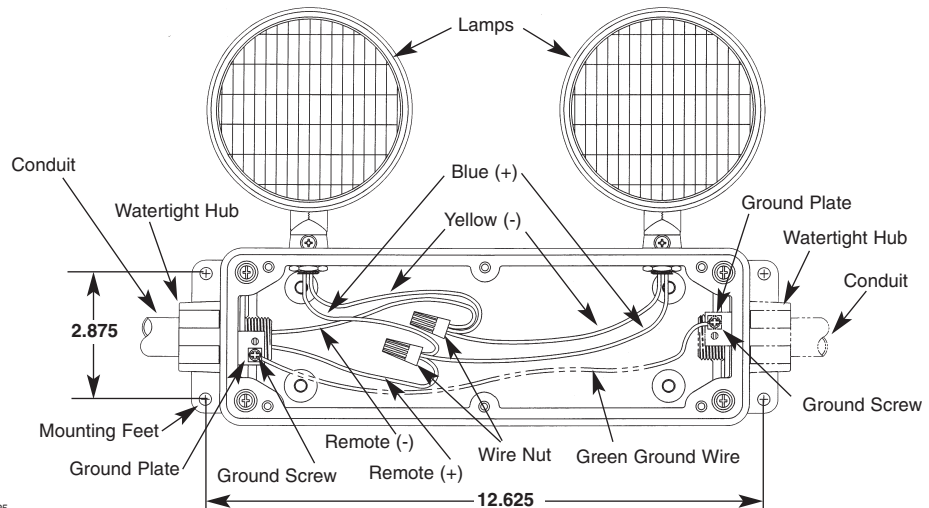


Figure 3

Listed Remote Fixture (shown with cover removed)



Installation:

Be sure intended AC power supply to the enclosure is “off” before proceeding.

Refer to: wiring diagram (**Figure 1** opposite, and on the back of the enclosure cover), for all electrical connections; **Figure 2** for enclosure and components layout; and **Figure 3** for Listed Remote Fixtures.

1. Select a mounting location that will provide suitable strength and rigidity for supporting enclosure and mounted lighting fixtures.
2. Loosen (do not remove) the 4 captive cover screws. Set the cover safely aside for later reassembly.
3. Attach the four mounting feet (included in the hardware package) to the enclosure. Securely fasten the unit to the desired mounting location. See **Figure 2**.

Proper mounting position is with the rear of the enclosure fastened to a vertical supporting surface, with the pilot light and push-to-test switch located on the right side of the enclosure. Any other mounting position may impair operation or damage the equipment.

5. Feed the AC power conductors through the hub assembly on the top of the unit.

An Appleton polymeric enclosed hub with ground lug is provided for entrance of AC power supply. Following final conductor routing, use a thread sealant in the conduit-to-hub joint to maintain maximum environmental protection.

Remove the cover from the terminal block assembly and connect the AC power supply as shown on the wiring diagram. The printed circuit board, mounting plate and hub must be grounded.

6. Install and connect Listed remote lighting fixture(s) (if applicable). Note connections on the wiring diagram. Refer to Figure 3 for mounting methods. Note: Hub must be grounded.
7. Place the battery(ies) flat on the bottom of the enclosure, with the terminals facing “up” and to the front of the enclosure. Connect the battery leads, following the placement and connections exactly as shown on the wiring diagram. Do not short the battery leads against the metal shelf during installation. For 12-volt units, a jumper connector is attached to the battery leads with the label. Connect battery strap to secure batteries to the enclosure. Emergency lamps will not light at this time.
8. Loosen (do not remove) the set screws at the base of the lighting fixture mounting stems. Adjust the lighting fixtures to the desired position, and tighten the set screws.
9. A time delay circuit holds the unit in emergency operation for 15 minutes following restoration of normal utility power, after a power failure.
10. Check all connections for continuity and grounding integrity. Reinstall terminal block cover. Reinstall enclosure cover, and securely tighten (4) cover screws. Energize AC power supply; AC pilot light should illuminate. After 15 minutes, push “test” switch; emergency lamps should be illuminated. Releasing “test” switch extinguishes emergency lamps.

Installation complete.

Troubleshooting Guide

Trouble	Possible Cause	Remedy
Emergency lamps do not illuminate — pilot light out before test	AC Power is not connected	Check AC power
	Open fuse (6V/72W units only)	Replace fuse
Pilot light illuminated, but lamps do not illuminate when “test” switch is pushed	Output circuit is overloaded	Remove excess load
	Battery not connected	Check battery
	15 minute Time Delay Circuit activated	Wait 15 minutes, push “test” switch
AC power is on, but pilot light is not illuminated	Pilot light burned out	Replace
	Defective transformer	Replace
Enclosure-mounted emergency lamps are dim	Battery not fully charged	Charge battery
	Charger not functioning	Replace charger board
	Battery will not charge	Replace battery
Remote-mounted lamps are dim	Incorrect wire run size	Check wire run size

Maintenance

- Sealed pure-lead batteries require no maintenance.
- Test operation of the emergency circuit monthly for 30 seconds minimum, using the TEST SWITCH. Emergency lamps must illuminate.
- Once a year, conduct a 90-minute discharge test. Lamps should operate for at least 90 minutes.

Replacement Parts

Lighting Fixture Head Assemblies: If lamp fails, entire assembly must be replaced.		Charger Circuit Board	
Model No.	Description:	Model Volts, Watts	Part Number
EXT-MK6V8W	6V, 8W halogen lamp	6V, 36W	0980932
EXT-MK12V8W	12V, 8W halogen lamp	6V, 72W	0980932-01
EXT-MK6V12W	6V, 12W halogen lamp	12V, 36W	0980933
EXT-MK12V12W	12V, 12W halogen lamp	12V, 72W	0980933

Batteries See Unit Model Label
Contact Dual-Lite Service Department for all other parts

Transformer: **6V Units** 0230847 **12V Units** 0230848

Voltage Drop Table

Total Watts On Wire Run	6-Volt System				Total Watts On Wire Run	12-Volt System			
	Wire Gauge					Wire Gauge			
	#12	#10	#8	#6		#12	#10	#8	#6
	Max. Length of Wire Run (Feet)					Max. Length of Wire Run (Feet)			
6	89	141	225	357	6	356	566	900	1431
7.2	74	118	187	298	7.2	296	471	750	1193
8	67	106	168	268	8	267	424	675	1073
9	59	94	150	238	9	237	377	600	954
12	44	70	112	178	12	178	283	450	715
13	42	65	103	165	13	164	261	415	660
18	30	47	75	119	18	118	188	300	477
25	21	34	54	85	25	85	135	216	343
28	19	30	48	77	28	76	121	193	306
36	15	23	37	60	36	59	94	150	238
44	12	19	30	48	44	48	77	122	195
50	10	17	27	43	50	42	67	108	171
56	9	15	24	38	56	38	60	96	153
70	7	12	19	30	70	30	48	77	122

0283001 D
1300725 B
1300726 C



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