

## **Stainless Steel Hazardous Location Junction Box C1D2 - Flanged Backplate Mount - Type 4X - (3) Total Hubs Instruction Manual**

Thank you for your purchase of the Larson Electronics EPL-AEH-SS-8.12.6-N4X-MOD4.

### **WARNING:**

**READ CAREFULLY BEFORE INSTALLING FIXTURE. RETAIN THESE INSTRUCTIONS FOR FUTURE REFERENCE.  
CRITICAL SAFETY INSTRUCTIONS:**

- INSTALLATION SHOULD ONLY BE CONDUCTED BY A QUALIFIED ELECTRICIAN IN ACCORDANCE WITH NEC AND ANY RELEVANT LOCAL BUILDING CODES.
- RISK OF FIRE OR ELECTRIC SHOCK. FIXTURE INSTALLATION REQUIRES KNOWLEDGE OF FIXTURE'S ELECTRICAL SYSTEMS. IF NOT QUALIFIED, CONTACT A QUALIFIED ELECTRICIAN.
- BE CERTAIN ELECTRICAL POWER IS OFF BEFORE AND DURING INSTALLATION AND MAINTENANCE.
- MAKE SURE THE SUPPLY VOLTAGE IS THE SAME AS THE FIXTURE'S RATED VOLTAGE.
- TO PREVENT WIRING DAMAGE OR ABRASION, DO NOT EXPOSE WIRING TO EDGES OF SHEET METAL OR SHARP OBJECTS. SUITABLE FOR DAMP LOCATIONS.

### **IMPORTANT**

READ CAREFULLY BEFORE INSTALLING THIS FIXTURE. SAVE THESE INSTRUCTIONS FOR FUTURE REFERENCE. THE EPL-AEH-SS-8.12.6-N4X-MOD4 MUST BE WIRED IN ACCORDANCE WITH NATIONAL ELECTRICAL CODE AND ALL APPLICABLE LOCAL CODES. PROPER GROUNDING IS REQUIRED FOR SAFETY.

**WE STRONGLY ENCOURAGE ONLY A LICENSED ELECTRICIAN INSTALL, OPERATE AND MAINTAIN THIS PRODUCT. IF YOU ARE NOT QUALIFIED OR UNFAMILIAR WITH ANY ASPECT OF THIS INSTRUCTION SHEET, CONSULT AN ELECTRICIAN. THERE ARE NO SERVICEABLE PARTS INSIDE.**



**WARNING: MAKE SURE POWER IS TURNED OFF BEFORE STARTING THE  
INSTALLATION OR PERFORMING ANY MAINTENANCE.**

**RISK OF FIRE/ELECTRIC SHOCK – DISCONNECT POWER AT BREAKER BEFORE INSTALLING OR SERVICING.**

**RISK OF PERSONAL INJURY – FIXTURE MAY BECOME UNSTABLE OR DAMAGED IF NOT INSTALLED PROPERLY.**

**RISK OF BURN – ALLOW FIXTURE TO COOL BEFORE SERVICING.**

### **WARNING**

TO AVOID THE RISK OF FIRE, EXPLOSION OR ELECTRIC SHOCK, THIS PRODUCT SHOULD BE INSTALLED, INSPECTED AND MAINTAINED BY A QUALIFIED ELECTRICIAN ONLY, IN ACCORDANCE WITH ALL APPLICABLE ELECTRICAL CODES.

#### **TO AVOID ELECTRIC SHOCK:**

- BE CERTAIN ELECTRICAL POWER IS OFF BEFORE AND DURING INSTALLATION AND MAINTENANCE.
- PRODUCT MUST BE CONNECTED TO A WIRING SYSTEM WITH AN EQUIPMENT-GROUNDING CONDUCTOR.

#### **TO AVOID EXPLOSION:**

- MAKE SURE THE SUPPLY VOLTAGE IS WITHIN THE VOLTAGE RATING.
- ENSURE THE MARKED T RATING IS LESS THAN THE IGNITION TEMPERATURE OF THE HAZARDOUS ATMOSPHERE.
- DO NOT OPERATE IN AMBIENT TEMPERATURES ABOVE THOSE INDICATED ON THE PRODUCT NAMEPLATE.
- DO NOT OPERATE IF THE LENS, CORD, SEALS, HOUSING, RECEPTACLES, ETC. IS CRACKED OR DAMAGED. IF SO, DISCONTINUE USE AND CONTACT MANUFACTURER FOR REPLACEMENT PARTS.
- ALL FASTENERS SHOULD BE PROPERLY SEATED.

The Larson Electronics EPL-AEH-SS-8.12.6-N4X-MOD4 Stainless Steel Explosion Proof Junction Box provides operators with a rugged enclosure that is designed to hold and protect equipment in flammable environments. This explosion proof enclosure is ideal for Class I, Division 2 sites and indoor or outdoor applications where flammable vapors, gases, or dusts exist or stand the potential to exist.

## WIRING

### Standard pigtail(flying leads) wiring

**We strongly encourage a licensed electrician install this product**, in all locations especially in outdoor areas where weatherproofing may be required.

**Warning:** Check product label for correct input voltage!

**Attach supply line wires to the appropriate light fixture wires as shown in the diagram →**

Secure each pair of wires according to the diagram. Utilize a junction box or similar device and take precautionary steps for weatherproofing all connections if installed in a location where water may come in contact with the unit. Ensure the unit is properly grounded and that wiring is done according to all local and national electrical/building codes.



## HUBS

The EPL-AEH-SS-8.12.6-N4X-MOD4 is equipped with three hubs. (1) 3/4" NPT hub on the west side of the enclosure, and (2) 3/4" NPT hubs on the south side of the enclosure. All holes include galvanized hubs and are centered on the enclosure.

## ENCLOSURE AND COVER INSTALLATION

**WARNING:** Enclosures that are powder coated have a potential electrostatic charging hazard. Wipe the enclosure down with a moist cloth before servicing.

**a:** Using a screwdriver with a #2 Phillips Head, a Standard Slotted or Robertson style head, remove the cover screws. Securely fasten the enclosure to the mounting location, using up to a 1/4" (M6) diameter steel bolt and washer. The mounting location must be flat and provide proper clearance, rigidity and strength to support the enclosure and all contained devices. Mounting dimensions are shown in this document.

**b:** Install Internal Components per the Mfrs. installation instructions. (See "Wiring and Terminal Block" and "Cable Gland / Conduit Entry" Installation Instructions Sections below).

**c:** Grounding connections are available at the din rail, earth continuity plate and internal- external ground stud.

**d:** Bonding connections are available on covers and boxes of all enclosures. All exposed metal should be bonded per local electrical codes.

**e:** Closing / Installing the enclosure cover: Thread each cover screw half way into the threaded insert without completely tightening in a diagonal pattern. Then complete installation of cover by tightening screws in the same diagonal pattern to a minimum torque of 3 Nm (26 lb-ins.) to a maximum of 4 Nm (35 lb-ins.). **DO NOT OVERTIGHTEN OR USE AN IMPACT TOOL.** A consistent fit over the entire length of the cover joint should be verified at the time of installation.

**f:** This enclosure is provided without cable glands / conduit sealing devices. Proper selection of cable glands / conduit sealing devices must occur in the field.

**g:** Cable fittings must be certified "Ex e" components per EN 60079-7. For lines which are not permanently installed, only cable fittings appropriate for this purpose can be used. They are to be protected from loosening and locked against rotation, i.e. clips, cemented, etc., per EN 60079-7. The operating (service) temperature of the enclosure is limited to the temperature of the gland fitting if less than the enclosure.

**h:** Optional drain and breather may be installed. The operating temperature of the enclosure is limited to the temperature of the drain and breathers if lower than the enclosure's. **Other drain and breathers may be installed, the user is responsible for ensuring that the protection concept, temperature class and relevant IP rating is maintained.**

**i:** All unused conduit openings must be fitted with a certified close-up plug of equivalent minimum required IP rating as required.

## TERMINAL BLOCK INSTALLATION

**a:** Attention to detail is highly recommended when installing and wiring the Terminal Blocks. Proper installation is required to ensure the component Certification Ratings are not invalidated.

**b:** Care should be taken not to damage or crack the DIN-Rail mounting clips when removing or installing polymeric terminal blocks. **Damaged or loose-fitting terminal blocks should be replaced before energizing the device.**

**c:** Refer to each Terminal Block Manufacturer's Installation Instructions for suitable wire types (ie: Solid, Stranded), proper wire stripping lengths, and terminal torques. **OVERTIGHTENED or LOOSE WIRE TERMINALS MAY CAUSE OVERHEATING, WHICH CAN RESULT IN AN ELECTRIC SHOCK OR EXPLOSION HAZARD.**

**d:** Care shall be taken to ensure proper separation of circuits (voltages), and spacings (creepage and clearance distances between live parts of opposite polarity, and between all live parts and dead metal) are maintained. Refer to IEC/EN/UL/CSA 60079-7, Table 2, for minimum creepage and clearance distances.

**e:** Grounding connections are available at the din rail, earth continuity plate and internal- external ground stud. Bonding connections are available on covers and boxes of all enclosures. All exposed metal should be bonded per local electrical codes.

**f:** Wiring must be carried out in accordance with the relevant local and national electrical codes (ie: IEC/EN 60079-14, IEC/EN 61241-0 and IEC/EN 61241-1).

**g:** **All conductor insulation and terminal block service temperature ratings shall be suitable for (exceed) the minimum ambient and maximum temperature (defer to T-Code) achieved in service. All conductors shall be sized per the National or Local Electrical Codes for the max. continuous current or max. motor load of the installation.**

**h:** **Conductors at entry points may reach 73°C in a +55°C ambient, and may reach 108°C in a +90°C ambient.**

**i:** Only the terminal blocks listed on product certificates may be installed in the enclosures. See **Table A** below.

**j:** No more than one conductor shall not be permitted in a wire terminal, unless the device has been evaluated specifically for multiconductor installation (See Terminal Block Mfr's Installation Instructions). Ferrules may be used if the Terminal Block has been approved for use with Solid Wires of equivalent diameter.

**k:** When installing Terminal blocks, the maximum voltage, current and dissipated power shown on the Junction Box nameplate must not be exceeded.

**l:** When Weidmuller **WDU 1.5 or WDU 2.5** Series Terminal Blocks are installed, they are limited to a **maximum current of 15A**.

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TABLE A: Terminal Blocks Approved For Use in Junction Boxes

| Manufacturer     | Series    | Style            | ATEX Certificate                                                                                                                        | IECEX Certificate                                                                    | Minimum Ambient "Ta" of Overall Junction Box When Installed           |
|------------------|-----------|------------------|-----------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|-----------------------------------------------------------------------|
| Weidmuller       | WDU       | Screw            | KEMA 98ATEX1683U                                                                                                                        | N/A                                                                                  | -50°C                                                                 |
| Weidmuller       | WDU       | Screw            | KEMA 01ATEX2186U<br>KEMA 08ATEX0014U<br>KEMA 98ATEX1686U<br>KEMA 99ATEX6545U<br>SIRA 02ATEX3153U<br>SIRA 02ATEX3242<br>SIRA 02ATEX3242U | IECEX SIR<br>05.0040U IECEX SIR<br>05.0039U<br>IECEX ULD 05.0008U                    | -50°C                                                                 |
| Weidmuller       | ZDU       | Cage clamp       | KEMA 97ATEX4677U                                                                                                                        | N/A                                                                                  | -50°C                                                                 |
| Weidmuller       | ZDU       | Cage clamp       | KEMA 97ATEX2755U<br>KEMA 99ATEX5514U<br>KEMA 97ATEX2521U<br>KEMA 01ATEX2106U<br>KEMA 00ATEX2107U                                        | IECEX ULD<br>05.0009U IECEX KEM<br>07.0061U IECEX KEM<br>06.0048U                    | -50°C<br>(-40°C for devices covered by Cert. Number KEMA 01ATEX2106U) |
| Weidmuller       | PDU       | Spring (push in) | KEMA 06ATEX0177U                                                                                                                        | IECEX KEMA 06.0032U                                                                  | -50°C                                                                 |
| Klemsan Elektrik | AVK       | Screw            | FTZU 10ATEX0071U                                                                                                                        | IECEX FTZU 10.0012U                                                                  | -20°C                                                                 |
| Klemsan Elektrik | MVK       | Screw            | FTZU 09ATEX0252U                                                                                                                        | IECEX FTZU 10.0011U                                                                  | -50°C                                                                 |
| Klemsan Elektrik | PIK       | Screw            | FTZU 09ATEX0252U                                                                                                                        | IECEX FTZU 10.0011U                                                                  | -50°C                                                                 |
| Klemsan Elektrik | PUK       | Screw            | FTZU 09ATEX0252U                                                                                                                        | IECEX FTZU 10.0011U                                                                  | -50°C                                                                 |
| Klemsan Elektrik | PYK       | Cage clamp       | FTZU 09ATEX0252U                                                                                                                        | IECEX FTZU 10.0011U                                                                  | -50°C                                                                 |
| ABB              | ZS        | Screw            | LCIE 08ATEX0007U                                                                                                                        | IECEX LCI 08.0031U                                                                   | -50°C                                                                 |
| ABB              | ZK        | Cage clamp       | LCIE 13ATEX3042U                                                                                                                        | IECEX LCI 13.0025U                                                                   | -50°C                                                                 |
| WAGO             | 2001-**** | Cage clamp       | PTB 05ATEX1094U                                                                                                                         | IECEX PTB 11.0093U                                                                   | -50°C                                                                 |
| WAGO             | 2002-**** | Cage clamp       | PTB 03ATEX1162U                                                                                                                         | IECEX PTB 03.004U                                                                    | -50°C                                                                 |
| WAGO             | 2004-**** | Cage clamp       | PTB 05ATEX1095U                                                                                                                         | IECEX PTB 05.0033U                                                                   | -50°C                                                                 |
| WAGO             | 2006-**** | Cage clamp       | PTB 05ATEX1030U                                                                                                                         | IECEX PTB 05.0014U                                                                   | -50°C                                                                 |
| WAGO             | 2010-**** | Cage clamp       | PTB 05ATEX1070U                                                                                                                         | IECEX PTB 06.0003U                                                                   | -50°C                                                                 |
| WAGO             | 2016-**** | Cage clamp       | PTB 05ATEX1031U                                                                                                                         | IECEX PTB 05.0015U                                                                   | -50°C                                                                 |
| Phoenix          | UKH       | Screw            | KEMA 98ATEX1786U<br>KEMA 99ATEX8332U                                                                                                    | IECEX KEM 06.0029U<br>IECEX KEM 06.0030U                                             | -50°C                                                                 |
| Phoenix          | UT        | Screw            | KEMA 04ATEX2048U<br>KEMA 06ATEX0017U                                                                                                    | IECEX KEM 06.0027U<br>IECEX KEM 06.0013U                                             | -50°C                                                                 |
| Phoenix          | PT        | Push in          | PTB 09ATEX1111U<br>PTB 09ATEX1112U                                                                                                      | IECEX PTB<br>10.0021U IECEX KEM<br>10.0046U                                          | -50°C                                                                 |
| Phoenix          | ST        | Cage clamp       | KEMA 01ATEX2129U<br>KEMA 00ATEX2052U<br>KEMA 01ATEX2260U                                                                                | IECEX KEM 06.0051U<br>IECEX KEM 06.0050U<br>IECEX KEM 06.0033U<br>IECEX KEM 06.0043U | -50°C                                                                 |
| Phoenix          | QT        | Cage clamp       | KEMA 04ATEX2226U<br>KEMA 03ATEX2557U<br>KEMA 05ATEX2148U                                                                                | IECEX KEM 07.0015U<br>IECEX KEM 07.0010U                                             | -45°C                                                                 |
| Phoenix          | UK        | Screw            | KEMA 96ATEX4370U<br>KEMA 06ATEX0119U<br>KEMA 98ATEX1651U<br>KEMA 98ATEX1786U<br>KEMA 99ATEX4487 U<br>KEMA 96ATEX4370U                   | IECEX KEM<br>06.0034U IECEX KEM<br>06.0029U IECEX KEM<br>06.0035U                    | -50°C                                                                 |

## Maintenance Instructions:

**WARNING:** Before servicing the enclosure, be sure ALL electrical power is OFF and LOCKED OUT.

**WARNING:** Enclosures that are powder coated have a potential electrostatic charging hazard. Wipe the enclosure down with a moist cloth before servicing.

**WARNING:** Maintenance on the end product should be carried out by authorized and trained personnel only. Following any maintenance, the enclosure gasket must be checked for damage before the cover is replaced / reinstalled.

**a:** After initial installation, the unit should be inspected at regular intervals to verify the cover is tight; that all conduit or gland connections are intact and free of corrosion and that the enclosure mounting bolts are tight and in good condition.

**b:** Inspect flanged surfaces of the box and of the cover gasket. Surfaces must be free of nicks, dirt or any foreign particle build-up that would prevent a proper seal. Check hinges to ensure they are improper working order.

**c:** Should the surfaces be damaged, consult factory. Never attempt to rework the surfaces in the field. Surfaces must seat fully against each other to provide the proper joint.

**d:** Apply a light coating of lubricant to the box flange before closing the cover. All cover screws must be installed tightly (25 to 36 lb-ins.) to ensure the joint between the box and cover is sealed prior to powering the unit. An improper joint can result in an explosion with the possibility of physical injury and property damage.

**e:** **Series USF** hinged covers are permanent and are not field removable or replaceable. Prior to securing the cover add lubrication to the hinge pin to aid in operation and the free movement of the cover. **Important:** Care is to be taken opening the cover to help prevent accidental damage to the cover and cover gasket. Never apply excess force to the cover when closing the hinged cover. Never hammer the cover, this will deform the covers and possibly reduce the protection level of the enclosure.

## Conditions For Safe Use (IECEX/ATEX):

**WARNING:** Enclosures that are powder coated have a potential electrostatic charging hazard. Wipe the enclosure down with a moist cloth before servicing. Conductors at entry points may reach 73°C in a +55°C ambient, and may reach 108°C in a +90°C ambient.

**a:** The range of enclosures shall only be used in a service temperature range of -55 °C to +135 °C.

**b:** When Junction Boxes are equipped by the manufacturer with wired terminals, a routine electric strength test is required per EN 60079, Clause 6.1.

**c:** The maximum dissipated power in watts for each model of junction box shall be calculated in accordance with EN 60079-7, Annex E, E.2, and shall not exceed the maximums given in Table 6 below.

## USE AND CARE

Unauthorized modification may impair the function and/or safety of this device and could affect the life of the equipment.

-Always check for damaged or worn out parts before using the device. Store it in a secure place out of the reach of children when not in use. Inspect for good working condition prior to storage and before re-use.

## REPLACEMENT PARTS

The EPL-AEH-SS-8.12.6-N4X-MOD4 is designed to provide years of reliable performance. Should the need for replacement parts arise, please contact Larson Electronics.

THESE INSTRUCTIONS MAY NOT COVER ALL DETAILS OR VARIATIONS OF THIS PRODUCT FOR YOUR EQUIPMENT OR INSTALLATION REQUIREMENTS. SHOULD FURTHER INFORMATION NOT COVERED BY THESE INSTRUCTIONS BE REQUIRED, PLEASE CONTACT LARSON ELECTRONICS BY EMAIL AT [SALES@LARSONELECTRONICS.COM](mailto:SALES@LARSONELECTRONICS.COM) OR BY PHONE AT 1-800-369-6671 FOR FURTHER ASSISTANCE.

PLEASE VISIT [LARSONELECTRONICS.COM](http://LARSONELECTRONICS.COM) FOR **WARRANTY** AND **RETURN** INFORMATION.