California Standard Twist-Lock

50-Amp Male Plug

INSTRUCTION MANUAL

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California Standard Twist-Lock 50-Amp Male Plug
Instruction Manual

Thank you for your purchase of a Larson Electronics' XLE-PA-IP20-CS.50-50A series plug.

WARNING

Standard Warning (General)

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.
- ENSURE THAT THE LOCKING PLUG AND/OR CONNECTOR HAS THE PROPER ELECTRICAL RATING FOR THE SYSTEM ON WHICH IT IS BEING INSTALLED.
- THESE DEVICES ARE FOR GROUNDING CIRCUITS, OR EQUIPMENT GROUNDING ONLY. DO NOT USE IN NON-GROUNDING APPLICATIONS.

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.

Standard Warnings (Cord Cap/Receptacles/Extension Cords)

WARNING:

USER SHOULD BE TRAINED IN THE PROPER USE AND MAINTENANCE OF THIS DEVICE. THIS LINE CORD IS INTENDED TO ALLOW OPERATORS TO EXTEND POWER TO EQUIPMENT WHEN STATIONARY OUTLETS ARE NOT READILY AVAILABLE.

IMPROPER USE OF THIS CORD, PLUG, AND RECEPTACLE CAN LEAD TO SERIOUS INJURIES OR DEATH TO PERSONNEL.

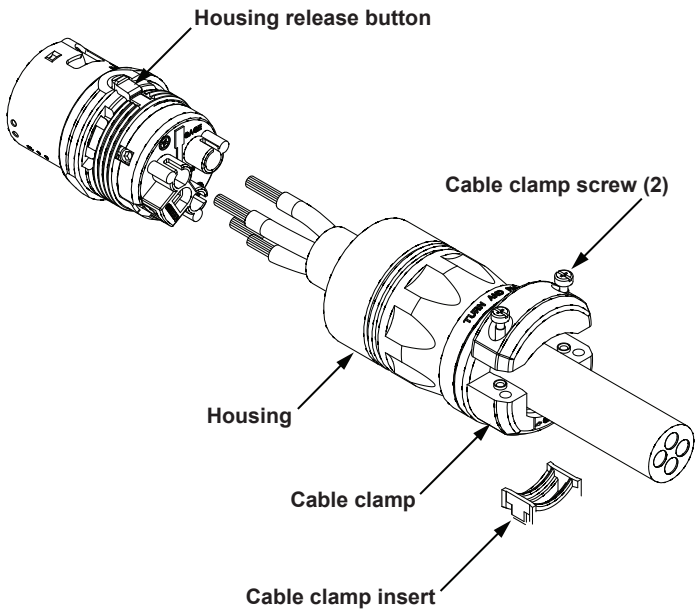
PERIODIC INSPECTION OF THE CORD IS NECESSARY.
THE CORD MUST BE ROUTINELY CHECKED FOR CUTS, BREAKS, OR ANY SEVERE ABRASIONS, AND IF ANY ARE FOUND, THE CORD MUST BE REPLACED BEFORE RESUMING USE.

Installation Instructions

NOTE: WIRE SIZE AND TYPE MUST COMPLY WITH APPROPRIATE LOCAL ELECTRICAL CODES. IN USA REFER TO NEC TABLES ARTICLE 400. **USE COPPER WIRE ONLY.** SELECT A CABLE OF SUITABLE AMPACITY, SERVICE, AND TEMPERATURE RATING.
THE CORD TYPES ARE: S, SO, SOO, SOW, ST, STO, STOO.
THE CORD GAGES ARE FROM # 10 AWG TO # 4 AWG.
THE CORD STRAIN RELIEF FOR BOTH THE CLAMP TYPE, AND THE NUT TYPE DESIGN, WILL ACCOMMODATE CORD DIAMETERS FROM .680" (17.3 mm) TO 1.200" (30.5 mm).

Installation Procedure w/ Clamp Type Strain Relief

CLAMP TYPE STRAIN RELIEF



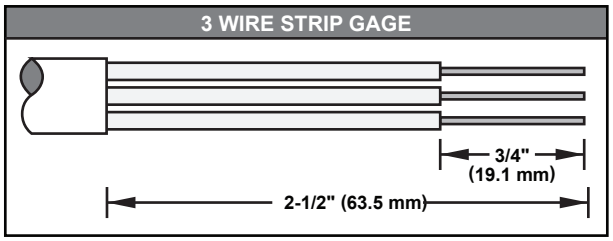
1. Separate housing from wiring module by grasping device firmly from front. With thumb, press and hold the release button and twist housing counterclockwise.

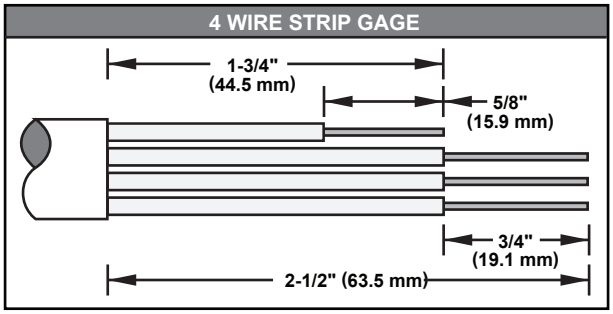
2. Loosen (or remove) the two cable clamp screws from housing. Remove, or keep cable clamp insert, depending on cable size, as per gage on device, or see **CABLE CLAMP STRAIN RELIEF CHART**.

3. Feed cable through housing, and strip 2-1/2" (63.5 mm) from cord jacket, making sure not to cut insulation on conductors.

4. On 3 wire installations: Strip all insulation from conductors 3/4" (19.1 mm), as per strip GAGE molded on the back of wiring module.

5. On 4 wire installations: The length of the grounding conductor is shorter because the wiring chamber is located higher on the back cover: Cut GROUNDING conductor to a length of 1-3/4" (44.5 mm) and strip insulation 5/8" (15.9 mm). Strip insulation on the other conductors 3/4" (19.1 mm), as per strip GAGE molded on the back of wiring module.





6. Make sure that stripped conductors are clean, and of a bright copper color. If necessary twist strands of each stripped conductor tightly. **DO NOT TIN CONDUCTORS**.

7. **NOTE:** DO NOT LOOSEN TERMINAL SCREWS.

8. Attach grounding wire first by inserting stripped conductor into grounding wire well, and tighten terminal to 35 in-lb of torque, using a 5/32" Allen wrench.

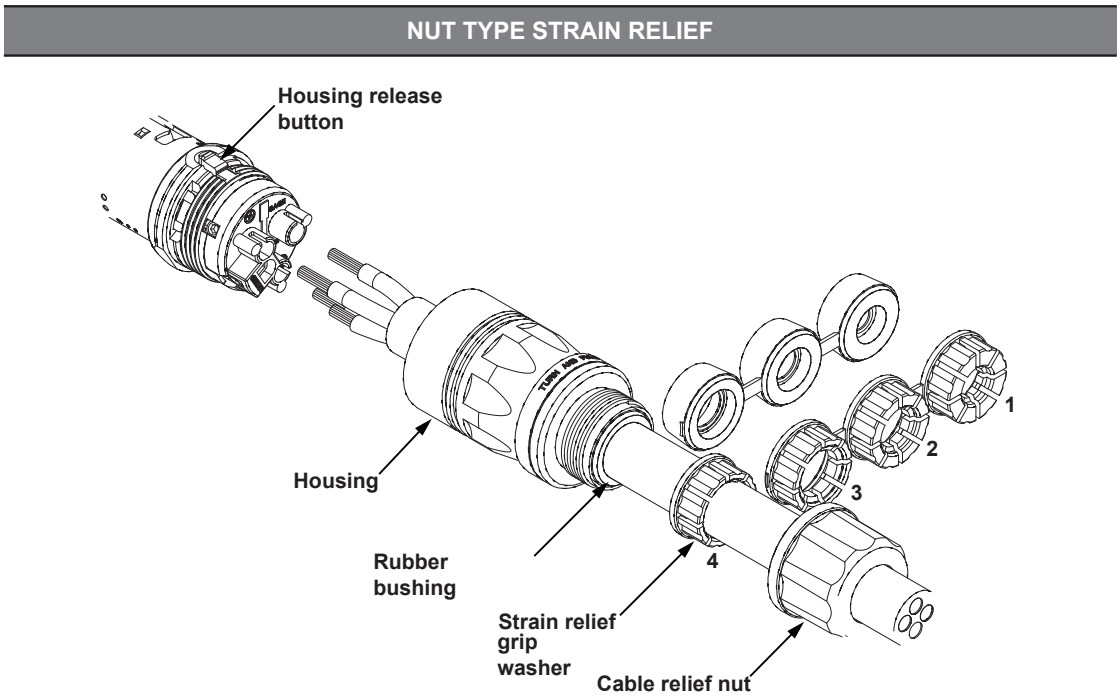
9. **CAUTION:** TERMINALS MUST TIGHTEN ONTO CONDUCTORS, NOT INSULATION.

10. With grounding conductor tightened, align each stripped conductor to marked wire well on wiring module as per **TABLE 1**. Insert each conductor and tighten each wiring terminal 35 in-lb of torque, using a 5/32" Allen wrench. Check for stray wire strands.

11. Reattach wiring module to housing by engaging the thread of the two parts. Press and hold the release button and turn housing clockwise until completely tightened.

12. Alternately tighten cord clamp screws to 20 in-lb (2.3 Nm).

Installation Procedure w/ Nut Type Strain Relief



1. **WARNING: TO AVOID FIRE, SHOCK, OR DEATH TURN OFF POWER AT CIRCUIT BREAKER OR FUSE AND TEST THAT POWER IS OFF BEFORE WIRING!**
2. Separate housing from wiring module by grasping device firmly from front. With thumb, press and hold the release button and twist housing counterclockwise.
3. Remove nut from back of housing by turning counterclockwise. Select proper size of rubber bushing and strain relief grip washer. Break off from the four sizes supplied. See **NUT TYPE STRAIN RELIEF CHART**.
4. Insert selected rubber bushing right side up on back of housing as shown in **DIAGRAM 2**.
5. Insert cord through nut, strain relief grip washer, and feed cable through housing. See **DIAGRAM 2. DO NOT REVERSE ORIENTATION OF STRAIN RELIEF GRIP WASHER AND RUBBER BUSHING.**
6. Strip 2-1/2" (63.5 mm) from cord jacket, making sure not to cut conductors insulation.
7. On 3 wire installations: Strip all conductors insulation 3/4" (19.1 mm), or as per strip GAGE molded on the back of wiring Module.
8. On 4 wire installations: The length of the grounding conductor is shorter because the wiring chamber is located higher on the back cover: Cut **GROUNDING** conductor to a length of 1-3/4" (44.5 mm) and strip insulation 5/8" (15.9 mm). Strip insulation on the other conductors 3/4" (19.1 mm), as per strip GAGE molded on the back of wiring module.
9. Make sure that stripped wires are clean, and of a bright copper color. If necessary, twist strands of each stripped conductor tightly.
10. **DO NOT TIN CONDUCTORS.**
11. **NOTE: DO NOT LOOSEN TERMINAL SCREWS.**
12. Attach grounding wire first by inserting stripped conductor into grounding wire well and tightening terminal to 35 in-lb of torque, using a 5/32" Allen wrench. **CAUTION: TERMINALS MUST TIGHTEN ONTO CONDUCTORS, NOT INSULATION.**
13. With grounding conductor tightened, align each stripped conductor to marked wire well on wiring module as per **TABLE 1**. Insert each conductor and tighten each wiring terminal to 35 in-lb of torque, using a 5/32" Allen wrench. Check for stray wire strands.
14. Reattach wiring module to housing by engaging the thread of the two parts. Press and hold the release button and turn housing clockwise until completely tightened.
15. Push strain relief grip washer up against rubber bushing. Push up the cable relief nut to engage housing thread. Firmly hold housing, and tighten the cable relief nut, turning clockwise, until completely tightened.

Charts & Tables

CABLE CLAMP STRAIN RELIEF CHART		
Cable clamp with insert	.650 – .835	AWG 10/3, 10/4, 8/3
Cable clamp with out insert	.930 – 1.20	AWG 8/4, 6/3, 6/4, 4/3

NUT TYPE STRAIN RELIEF CHART		
No. 1 Bushing and Grip Washer (smallest diameter)	.650 – .710	AWG 10/3 - 10/4
No. 2 Bushing and Grip Washer	.835	AWG 8/3
No. 3 Bushing and Grip Washer	.930 – .990	AWG 8/4 - 6/3
No. 4 Bushing and Grip Washer (largest diameter)	1.055 – 1.200	AWG 6/4 - 4/3

TABLE 1	
Terminal Designation	**Conductor Color**
G, GRND, GREEN, or **Eq G** (Grounding terminal)	**Bare, Green,** or **Green/Yellow** wire
W, or **WHITE** (Neutral terminal)	**White** or **Gray** wire
X, Y, Z, or **BLANK** (Hot terminal)	**Other than** White, Green, Gray, Green/Yellow or Bare wire

CONFIGURATION - CS California Style				
Locking Connector	**Locking Plug**	**Locking Flanged Inlet**	**Locking Receptacle**	**APPLICATION**
				
XLE-PA-IP20-CS.50-50A-1PH-125V-2P3W-C	XLE-PA-IP20-CS.50-50A-1PH-125V-2P3W-P	XLE-PA-IP20-CS.50-50A-1PH-125V-2P3W-B	XLE-PA-IP20-CS.50-50A-1PH-125V-2P3W-R	**50A, 2 Pole, 3 Wire, 125 V Grounding Non-NEMA**
XLE-PA-IP20-CS.50-50A-1PH-250V-2P3W-C	XLE-PA-IP20-CS.50-50A-1PH-250V-2P3W-P	XLE-PA-IP20-CS.50-50A-1PH-250V-2P3W-B	XLE-PA-IP20-CS.50-50A-1PH-250V-2P3W-R	**50A, 2 Pole, 3 Wire, 250 V Grounding Non-NEMA**
XLE-PA-IP20-CS.50-50A-1PH-480V-2P3W-C	XLE-PA-IP20-CS.50-50A-1PH-480V-2P3W-P	XLE-PA-IP20-CS.50-50A-1PH-480V-2P3W-B	XLE-PA-IP20-CS.50-50A-1PH-480V-2P3W-R	**50A, 2 Pole, 3 Wire, 480 V Grounding Non-NEMA**
XLE-PA-IP20-CS.50-50A-1PH-125.250V-3P4W-C	XLE-PA-IP20-CS.50-50A-1PH-125.250V-3P4W-P	XLE-PA-IP20-CS.50-50A-1PH-125.250V-3P4W-B	XLE-PA-IP20-CS.50-50A-1PH-125.250V-3P4W-R	**50A, 3 Pole, 4 Wire, 125/250 V Grounding Non-NEMA**
XLE-PA-IP20-CS.50-50A-3PH-250V-3P4W-C	XLE-PA-IP20-CS.50-50A-3PH-250V-3P4W-P	XLE-PA-IP20-CS.50-50A-3PH-250V-3P4W-B	XLE-PA-IP20-CS.50-50A-3PH-250V-3P4W-R	**50A, 3 Pole, 4 Wire, 3Ø, 250 V Grounding Non-NEMA**
XLE-PA-IP20-CS.50-50A-3PH-480V-3P4W-C	XLE-PA-IP20-CS.50-50A-3PH-480V-3P4W-P	XLE-PA-IP20-CS.50-50A-3PH-480V-3P4W-B	XLE-PA-IP20-CS.50-50A-3PH-480V-3P4W-R	**50A, 3 Pole, 4 Wire, 3Ø, 480 V Grounding Non-NEMA**

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 XLE-PA-IP20-CS.50-50A series 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 OR BY PHONE AT 1-877-348-9680 FOR FURTHER ASSISTANCE.

PLEASE VISIT LARSONELECTRONICS.COM FOR **WARRANTY** AND **RETURN** INFORMATION.