LEVITON

PowerSwitch®

Enclosed Disconnect Switch with Receptacle (EDSR)

Cat. No. EDSR
Rated: 30A-600VAC Max.

Mechanically Interlocked Switch with Receptacle (MIDSR)

Cat. No. MIDSR
Rated: 30A-600VAC Max.

INSTALLATION INSTRUCTIONS

PK-93786-10-00-0A

Enclosed Disconnect Switch with Receptacle (Figure 4) and Mechanically Interlocked Disconnect Switch with Receptacle (Figure 5)

NOTE: Receptacle sold separately.

- For use with 20A -30A NEMA Locking Receptacles and any mating NEMA 20A-30A Locking Plug.
- The EDSR and the MIDSR have an environmental rating of IP66, UL Standard 50 and NEMA environmental ratings of 4X and 12K, when in use with Leviton **WETGUARD™** locking plugs.
- The EDSR and the MIDSR have enviornmental ratings of IP54 and 3R when not in use (with cover closed).

NOTE: The hinged cover of the MIDSR includes an interlock mechanism (Patent US7119292) that prevents the 20A - 30A **NEMA** Locking Configuration Plug to be inserted or removed from the switched Receptacle while power at the receptacle is **"ON"**.

PARTS LIST:

1. Enclosure Base with Hinged Cover, Receptacle Mounting Bracket and the following DIN Rail mounted hardware:

A. Rotary Switch 30A, 660V with Normally Open Auxiliary Contact.

B. Terminal Blocks, Color Coded. Blue terminal block is Neutral. Green/Yellow terminal blocks are ground.

2. Inside Enclosure Base

A. Grounding Bracket with Screw.

B. Four (4) Enclosure Mounting Feet with Screws.

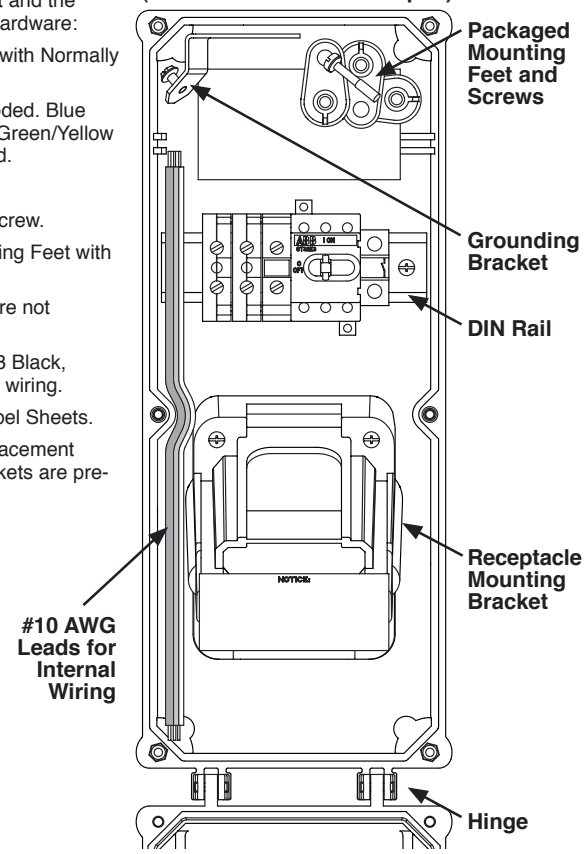
Note: Wall Mounting Hardware not included.

3. Six (6) 12" #10 AWG Leads (3 Black, 2 Green, 1 White) for internal wiring.

4. Adhesive-backed Ratings Label Sheets.

5. 20A **WETGUARD™** seal replacement (shown in Figure 6). 30A gaskets are pre-assembled.

Figure 1
Enclosure Bottom as Packaged (Shown with Enclosure Open)



FEATURES

- Meets the requirements of Outdoor/Indoor installations conforming to IP 54 and 3R with cover closed (when not in use).
- Meets the requirements of Outdoor/Indoor installations, conforming to IP 66, UL Standard 50, and NEMA Environmental Ratings of 4X,12K, **only** when used in conjunction with Leviton **WETGUARD™** plugs.
- For use with 20A - 30A NEMA locking plugs.
- Provides ON-OFF switched control for a connected load.
- This enclosure provides lockout capability in compliance with OSHA Lockout/Tagout Regulation 29 CFR Part 1910.147 (in the OFF position) with an acceptable padlock/shackle, thereby assuring the connected equipment cannot be energized.
- Auxiliary contact open prior to the line contacts for pilot duty switching.

NOTE: This enclosure must not be used as a junction box for feed-through connections.

INSTALLATION INSTRUCTIONS

WARNING: FOR INSTALLATION ONLY BY A QUALIFIED ELECTRICIAN IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE (NEC) OR THE CANADIAN ELECTRICAL CODE (CEC), LOCAL CODES, AND THE INSTALLATION INSTRUCTIONS.

WARNING: RISK OF ELECTRICAL SHOCK. DISCONNECT ALL POWER SUPPLIES TO ENCLOSURE BEFORE EXPOSING INTERIOR. MORE THAN ONE SUPPLY DISCONNECT MAY BE REQUIRED TO DE-ENERGIZE THIS EQUIPMENT BEFORE SERVICING.

WARNING: RECEPTACLE MUST BE INSTALLED BEFORE CONNECTION TO A POWER SUPPLY. 30A MAXIMUM RECEPTACLE RATING. REFER TO RATINGS TABLES AND WIRING DIAGRAMS.

WARNING: SEPARATE OVERCURRENT PROTECTION MUST BE PROVIDED IN ACCORDANCE WITH THE NEC ARTICLE 220 OR CEC, SECTION B AS APPROPRIATE. OVERCURRENT PROTECTION MUST NOT EXCEED THE AMPERE RATING OF THE RECEPTACLE PER NEC SECTION 430-42(C) OR CEC PART 1, RULE 28-602 (3)(C)(I).

OTHER CAUTIONS AND NOTES:

1. USE THIS DEVICE ONLY WITH COPPER OR COPPER CLAD WIRE. WITH ALUMINUM WIRE USE ONLY DEVICES MARKED CO/ALR OR CU/AL.
2. CHECK TO SEE THAT RATING MARKED ON DEVICE IS CORRECT FOR THE INTENDED INSTALLATION.
3. THE LOCKOUT FEATURE DOES NOT INTERRUPT THE POWER SUPPLIED TO THE SWITCH.
4. DEVICE IS SUITABLE FOR USE ON A CIRCUIT CAPABLE OF DELIVERING NOT MORE THAN 600 VAC MAXIMUM.
5. COVER CANNOT BE REMOVED WHEN SWITCH HANDLE IS IN THE “ON” POSITION.
6. THESE ENCLOSURES MUST ALWAYS BE MOUNTED VERTICALLY WITH RECEPTACLE END DOWN.

TO INSTALL:

NOTE: Leviton EDSR and MIDSR Switches may be mounted for Top or Bottom feed of supply wires **(refer to Figures 2 and 3)**.

MOUNTING:

WARNING: TO AVOID FIRE, SHOCK, OR DEATH; **TURN OFF POWER** AT THE CIRCUIT BREAKER OR FUSE, AND TEST THAT THE POWER IS OFF BEFORE ATTEMPTING TO INSTALL ENCLOSURE.

CAUTION: THESE ENCLOSURES MUST ALWAYS BE MOUNTED VERTICALLY WITH RECEPTACLE END DOWN.

Note: Hinged cover will open only when the rotary switch knob is turned to the **"OFF"** position.

1. Remove the six (6) #10-32 x 1-1/4" cover mounting screws, and lift the hinged cover open **(refer to Figure 1)**.
2. Determine if the installation is "top" or "bottom" feed.
3. Drill appropriate hole size for conduit hub **(not included)** as indicated below in one of the four drill points indicated on the top and bottom of enclosure base. Drill points provided for top left, top right, bottom left and bottom right conduit entry **(see Conduit Hub Mounting)**.

Enclosure Mounting Using Mounting Feet:

1. Orient mounting feet as desired **(refer to Figures 2, 3)** and secure to the enclosure base with the provided mounting screws #10-32 x 1-1/4". Torque to 10 - 12 in.-lbs (1.2 N-m).

Conduit Hub Mounting (Conduit Hub not included):

1. Route wires. Install 3/4" or 1" hub **(not included)** to conduit and enclosure. For 3/4" hub, drill a 1-1/16" mounting hole. For a 1" hub, drill a 1-5/16" mounting hole. Ensure that the "O" ring seats on the enclosure base outside wall. Install grounding bracket and secure tightly with hub nut.
2. Secure enclosure to the desired surface. Mounting hardware accept up to a 1/4" diameter screw **(not included)**.
3. Make connections as per wiring instructions.

Figure 2
Top Conduit
Connection/Wire Entry
(EDSR depicted)

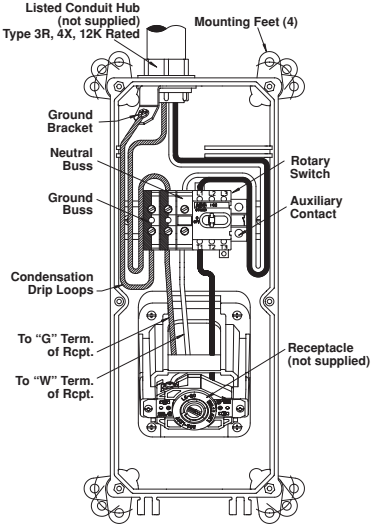
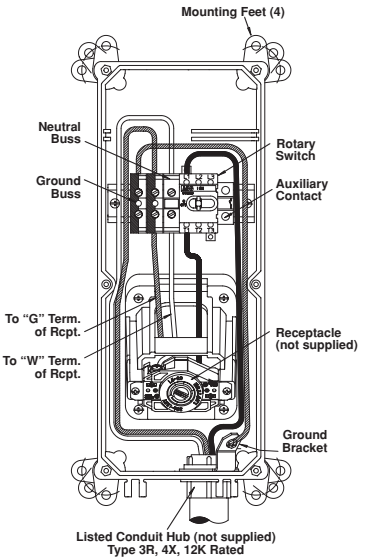


Figure 3
Bottom Conduit
Connection/Wire Entry
(EDSR depicted)



⚠ CAUTION

THESE ENCLOSURES MUST ALWAYS BE MOUNTED VERTICALLY WITH RECEPTACLE END DOWN.

Top or Bottom Feed:

NOTE: A metal closure plug must be grounded (bonded) back to an unused ground terminal. Use of a UL Listed Watertight conduit fitting **(not included)** required to maintain Type 4X and Type 12K ratings **(refer to Figures 2, 3)**.

1. When using Top feed conduit entrance, always form condensation drip loops in wiring as shown in **Figure 2**.

Wiring:

NOTE: Use conductors with insulation rated 75˚C or higher having sufficient ampacity in accordance with the 60˚C column of Table 310-16 of the NEC or Table 2 of the Canadian Electrical Code. **DO NOT** tin conductors.

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. From conduit, route Ground wire and Neutral wire to DIN mounted color coded Ground and Neutral terminals. Connect Hot wire(s) to terminal(s) L1, L2, L3 on DIN mounted Rotary Switch, as per wiring Diagrams **shown on pages 8 to 9** (loop wires as necessary). Route provided leads through receptacle mounting bracket *and* connect load side of switch T1, T2, T3 to appropriate receptacle terminals as per Wiring Diagrams. Connect Ground and Neutral Terminal (if applicable) of Receptacle to corresponding terminals on DIN mounted Terminal Blocks. Blue color terminal block is Neutral. Green/Yellow terminal block is ground. Tighten all screws to specified torques. Make sure that there are no loose strands.

   NOTE: The Conduit Hub steel bracket must be grounded (bonded) to the DIN rail mounted color coded Ground Terminal **(refer to Figures 2, 3)**.
3. Strip Gages and Torques for LINE and LOAD terminals:
   - For Neutral and Ground terminals, use #14-#8 AWG conductors, strip to 15/32" (12.0 mm) Torque 7.1 - 8.9 in-lbs (0.8-1 N-m).
   - For Rotary Switch terminals, use #14-#8 AWG conductors, strip to 11/16" (17.5 mm) Torque 7 in-lbs (0.8 N-m).
   - For Auxiliary terminals, use #18-#14 AWG conductors, strip to 5/16" (8.0 mm) Torque 7.1 - 8.9 in-lbs (0.8-1 N-m).
   - For Receptacle, refer to wiring instruction sheet supplied with device.
4. To wire the Locking Receptacle, feed the enclosed wires from Load side of switch, Ground terminal, and Neutral terminal up through the Receptacle Mounting Bracket **(refer to Figures 2, 3)**.
5. Make sure there are no stray conductor strands.
6. Mount the Locking Receptacle to the Mounting Bracket. Use the two (2) mounting screws provided with the Receptacle.
7. Make sure there are no stray conductor strands.
8. Looping of wires as shown in **Figure 2** is mostly necessary for top feed installations to prevent possible condensation from dripping on to terminals.
9. Ensure that the enclosure cover's gasket is in the groove. Close cover and tighten cover screws alternately to 10 in.-lbs. (1.2 N-m) of torque.

   NOTE: For EDSR, switch knob must be in the "OFF" position to close cover. For MIDSR, both interlock handle and switch knob must be in the "OFF" position to close cover.
10. Select Receptacle Voltage Label from label sheet provided. Affix Receptacle Voltage Label to cover **(refer to Figures 4, 5)**.
11. When mating Receptacle with a **WETGUARD™** Plug, affix IP66 ratings label below Receptacle label as shown in **Figures 4 and 5**.

    NOTE: If using a 30A Receptacle, your installation is complete. If using a 20A receptacle, use the appropriate gasket and clamp as per the following instructions:

Figure 4
EDSR Front View

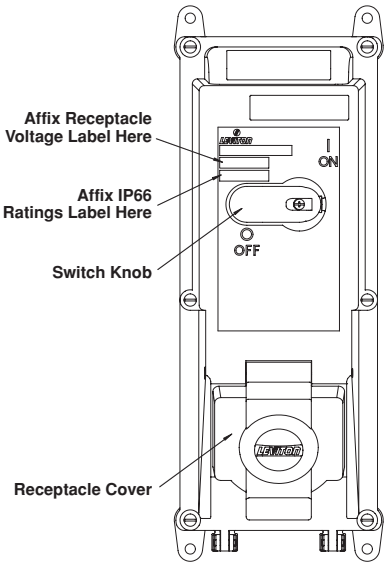
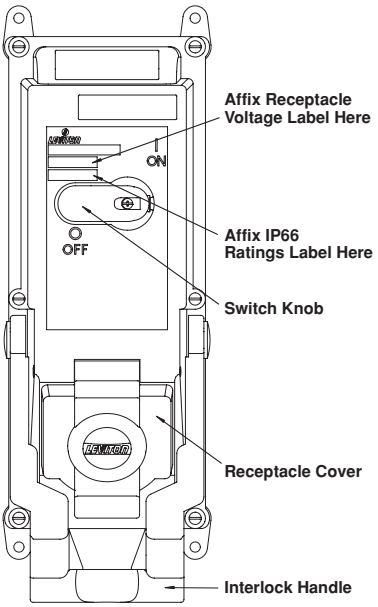


Figure 5
MIDSR Front View



20A RECEPTACLE SEAL INSTALLATION (Figure 6)

NOTE: 20A Receptacle seal components are **only** to be used when a 20A Receptacle is installed. If installing a 30A Receptacle no components are required to be replaced.

- Leviton EDSR and MIDSR are pre-assembled with Gaskets for a 30A Receptacle. When using with a 20A Receptacle, the 20A Gasket and Gasket Clamp (included) must be used along with a **WETGUARD™** Plug to maintain an environmental rating of IP66, UL Standard 50 and a NEMA environmental rating of 3R 4X and 12K.
- All parts are self aligning to mating parts **(refer to Figure 6)**.

NOTE: The Gasket, and the Gasket Clamp are a **mated pair**. The parts are identified with a **visible mark ("20A" or "30A")** to be used either for 20A or 30A installation.

EDSR and MIDSR are shipped with a 30A Gasket Clamp. For 30A applications, mate with 30A Gasket. For 20A applications use 20A Gasket and 20A Gasket Clamp.

NOTE: DO NOT MIX ASSEMBLY CONFIGURATIONS.

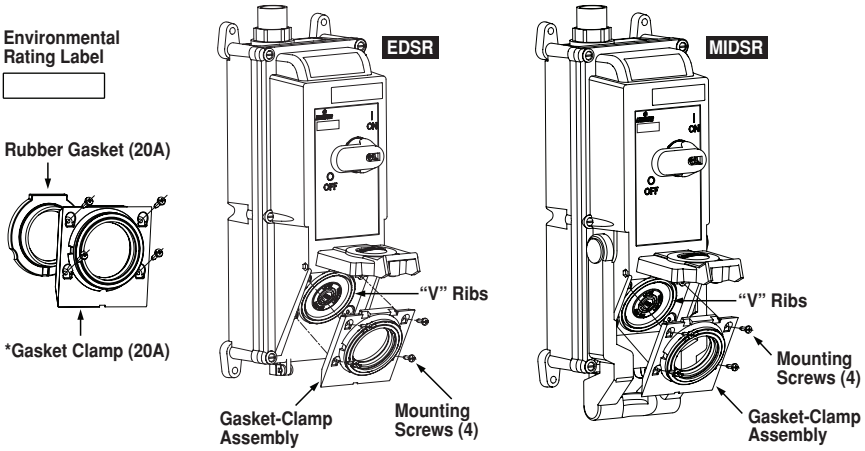
TO INSTALL SEAL COMPONENTS FOR A 20A RECEPTACLE:

FOR SAFETY, MAKE SURE SWITCH IS IN THE "OFF" POSITION.

1. Lift Receptacle Cover. Unscrew pre-assembled Gasket Clamp assembly and remove from box. Set mounting screws aside.
2. 20A Gasket and Gasket Clamp are indentified with a "20A" visible mark (30A Gasket and Gasket Clamp are marked "30A").
3. With Receptacle Cover open, align Gasket Clamp with rubber Gasket and place this loose assembly over the Receptacle Opening. Make sure that the circular **"V"** ribs of the Gasket are within the **"V"** grooves of the Receptacle Opening and secure with (4) screws previously removed to 8-10 in. lbs. of torque.

NOTE: New environmental ratings label for 4X, 12K & IP66, are included for device cover when using a mating Leviton **WETGUARD™** Plug.

Figure 6
Wetguard™ Accessory Seal Replacement



*** 30A Rubber Gasket and Gasket Clamp are pre-installed with EDSR and MIDSR.**

EDSR DEVICE OPERATION

To use, turn EDSR switch to the OFF position. Raise Receptacle Cover and insert mating plug. Refer to Ratings chart **(page 7)** for the list of mating configurations. The EDSR will work with 20A and 30A NEMA Configurations. For an environmental rating of IP66 "while-in-use", a Leviton **WETGUARD™** plug must be used.

MIDSR DEVICE OPERATION

With the Interlock Handle down, the power at the Receptacle is "OFF", the Switch knob is locked and cannot be turned "ON". In this position the Receptacle Cover can be raised, and a mating NEMA Configuration plug can be inserted into the receptacle.

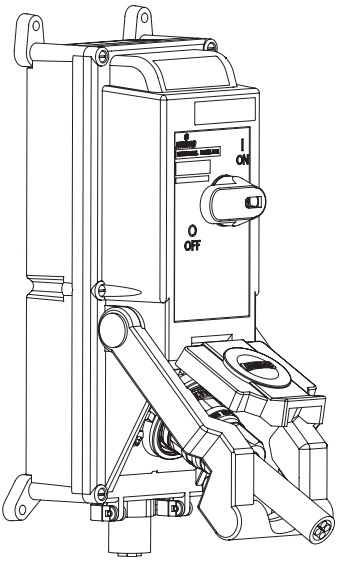
After inserting the plug, in order to turn the power "ON" at the Receptacle, the interlock Handle must be raised as per **Figure 7.** This operation unlocks the Switch knob, which then can be manually turned 90º clockwise to the "ON" position.

While the Interlock Handle is raised and the rotary switch unlocked, the plug is constrained and prevented from being removed from the Receptacle.

If the Interlock Handle is pushed down while the rotary switch is ON, the switch knob is automatically rotated back to the "OFF" position. The power at the Receptacle is turned OFF, the switch knob is locked in place, as in the starting position, and the plug can then be removed.

The MIDSR will work with 20A and 30A NEMA Configurations to achieve mechanical interlock, that is, to allow the user to insert or remove a plug only when there is no power present at Receptacle. For an environmental rating of IP66 "while-in-use", a mating Leviton **WETGUARD™** plug must be used.

Figure 7
MIDSR Operation



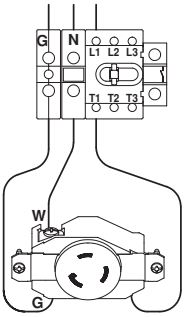
Ratings

Amps	Wiring	Voltage, AC	NEMA CONFIG	HP Rating	Receptacle		Plug		Wiring Diagram
					Type**	Cat. No.	Type**	Cat. No.	
20	2P, 3W	125	L5-20	1	V0 Max Std	2310	Power Indicator	2311-PLC	1
20	2P, 3W	125	L5-20	1	V0 Max CR	23CM10	Wetguard	26W47	1
20	2P, 3W	250	L6-20	2	V0 Max Std	2320	Power Indicator	2321-PLC	2
20	2P, 3W	250	L6-20	2	V0 Max CR	23CM20	Wetguard	26W48	2
20	2P, 3W	277	L7-20	2	V0 Max Std	2330	Power Indicator	2331-PLC	3
20	2P, 3W	277	L7-20	2	V0 Max CR	23CM30	Wetguard	26W49	3
20	2P, 3W	480	L8-20	3	V0 Max Std	2340	Black&White	2341	4
20	2P, 3W	600	L9-20	NA	V0 Max Std	2350	Black&White	2351	5
20	3P, 4W	125/250	L14-20	2L-L 1L-N	V0 Max Std	2410	Black&White	2411	6
20	3P, 4W	125/250	L14-20	2L-L 1L-N	V0 Max CR	24CM10	Wetguard	26W74	6
20	3P, 4W	3Ø250	L15-20	3	V0 Max Std	2420	Black&White	2421	7
20	3P, 4W	3Ø250	L15-20	3	V0 Max CR	24CM20	Wetguard	26W75	7
20	3P, 4W	3Ø480	L16-20	5	V0 Max Std	2430	Black&White	2431	8
20	3P, 4W	3Ø480	L16-20	5	V0 Max CR	24CM30	Wetguard	26W76	8
20	4P, 5W	3Ø120/208	L21-20	2	V0 Max Std	2510	Black&White	2511	9
20	4P, 5W	3Ø120/208	L21-20	2	V0 Max Std	2510	Wetguard	26W81	9
20	4P, 5W	3Ø277/480	L22-20	5	V0 Max Std	2520	Black&White	2521	10
20	4P, 5W	3Ø277/480	L22-20	5	V0 Max Std	2520	Wetguard	26W82	10
20	4P, 5W	3Ø347/600	L23-20	NA	V0 Max Std	2530	Black&White	2531	11
20	4P, 5W	3Ø347/600	L23-20	NA	V0 Max Std	2530	Wetguard	26W83	11
30	2P, 3W	125	L5-30	2	V0 Max Std	2610	Power Indicator	2611-PLC	12
30	2P, 3W	125	L5-30	2	V0 Max CR	26CM10	Wetguard	28W47	12
30	2P, 3W	250	L6-30	2	V0 Max Std	2620	Power Indicator	2621-PLC	13
30	2P, 3W	250	L6-30	2	V0 Max CR	26CM20	Wetguard	28W48	13
30	2P, 3W	277	L7-30	3	V0 Max Std	2630	Power Indicator	2631-PLC	14
30	2P, 3W	277	L7-30	3	V0 Max Std	2630	Wetguard	28W49	14
30	2P, 3W	480	L8-30	5	V0 Max Std	2640	Black&White	2641	15
30	2P, 3W	600	L9-30	NA	V0 Max Std	2650	Black&White	C2651	16
30	3P, 4W	125/250	L14-30	2L-L 2L-N	V0 Max Std	2710	Black&White	2711	17
30	3P, 4W	125/250	L14-30	2L-L 2L-N	V0 Max CR	27CM10	Wetguard	28W74	17
30	3P, 4W	3Ø250	L15-30	3	V0 Max Std	2720	Black&White	2721	18
30	3P, 4W	3Ø250	L15-30	3	V0 Max CR	27CM20	Wetguard	28W75	18
30	3P, 4W	3Ø480	L16-30	10	V0 Max Std	2730	Black&White	2731	19
30	3P, 4W	3Ø480	L16-30	10	V0 Max Std	2730	Wetguard	28W76	19
30	3P, 4W	3Ø600	L17-30	NA	V0 Max Std	2740	Black&White	2741	20
30	3P, 4W	3Ø600	L17-30	NA	V0 Max Std	2740	Wetguard	28W77	20
30	4P, 5W	3Ø120/208	L21-30	3	V0 Max Std	2810	Black&White	2811	21
30	4P, 5W	3Ø120/208	L21-30	3	V0 Max Std	2810	Wetguard	28W81	21
30	4P, 5W	3Ø277/480	L22-30	10	V0 Max Std	2820	Black&White	2821	22
30	4P, 5W	3Ø277/480	L22-30	10	V0 Max Std	2820	Wetguard	28W82	22
30	4P, 5W	3Ø347/600	L23-30	NA	V0 Max Std	2830	Black&White	2831	23
30	4P, 5W	3Ø347/600	L23-30	NA	V0 Max Std	2830	Wetguard	28W83	23

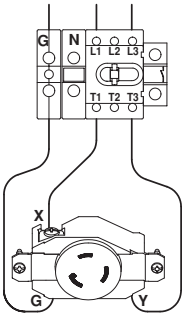
** To maintain an environmental rating of IP66, UL Standard 50, and NEMA environmental ratings of 4X and 12K, a Leviton **WETGUARD™** mating locking plug must be used.

Wiring Diagrams

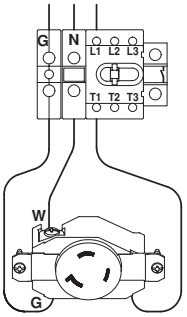
Wire Diagram 1
NEMA L5-20



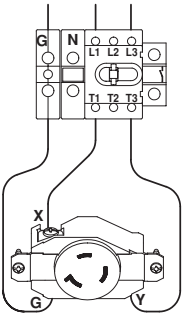
Wire Diagram 2
NEMA L6-20



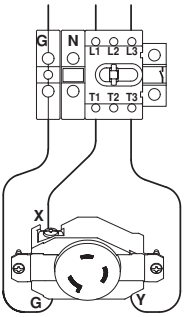
Wire Diagram 3
NEMA L7-20



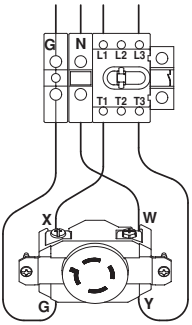
Wire Diagram 4
NEMA L8-20



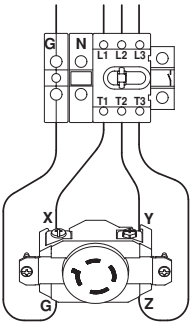
Wire Diagram 5
NEMA L9-20



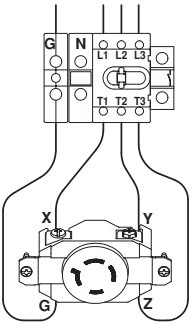
Wire Diagram 6
NEMA L14-20



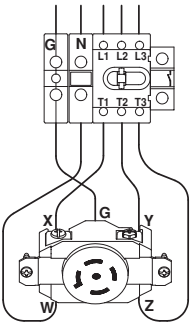
Wire Diagram 7
NEMA L15-20



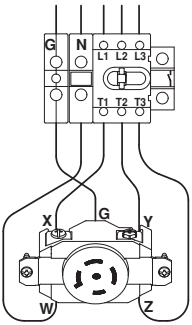
Wire Diagram 8
NEMA L16-20



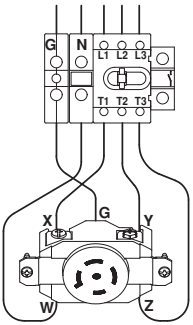
Wire Diagram 9
NEMA L21-20



Wire Diagram 10
NEMA L22-20

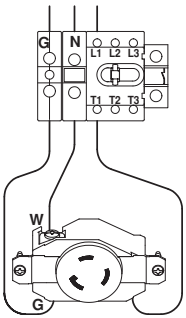


Wire Diagram 11
NEMA L23-20

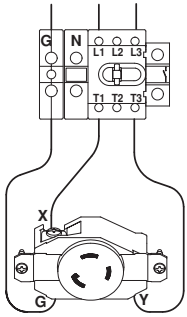


Wiring Diagrams

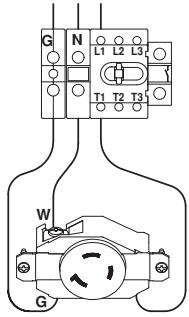
Wire Diagram 12
NEMA L5-30



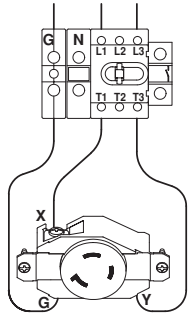
Wire Diagram 13
NEMA L6-30



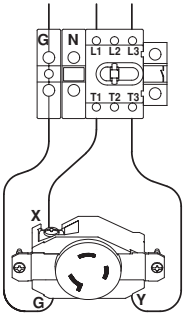
Wire Diagram 14
NEMA L7-30



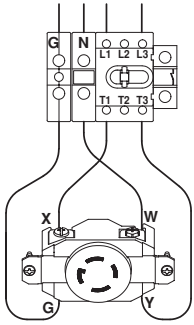
Wire Diagram 15
NEMA L8-30



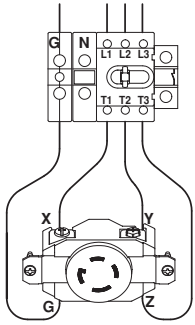
Wire Diagram 16
NEMA L9-30



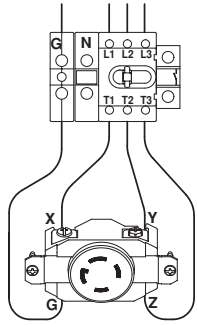
Wire Diagram 17
NEMA L14-30



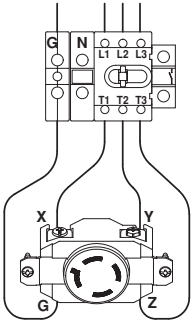
Wire Diagram 18
NEMA L15-30



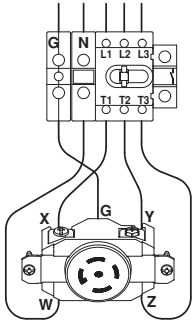
Wire Diagram 19
NEMA L16-30



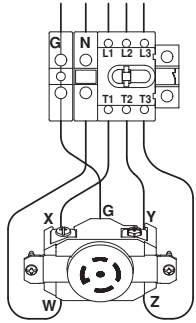
Wire Diagram 20
NEMA L17-30



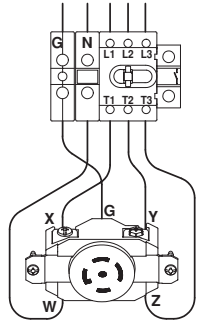
Wire Diagram 21
NEMA L21-30



Wire Diagram 22
NEMA L22-30



Wire Diagram 23
NEMA L23-30



NOTES

LIMITED 2 YEAR WARRANTY AND EXCLUSIONS

Leviton warrants to the original consumer purchaser and not for the benefit of anyone else that this product at the time of its sale by Leviton is free of defects in materials and workmanship under normal and proper use for two years from the purchase date. Leviton's only obligation is to correct such defects by repair or replacement, at its option, if within such two year period the product is returned prepaid, with proof of purchase date, and a description of the problem to **Leviton Manufacturing Co., Inc., Att: Quality Assurance Department, 201 North Service Road, Melville, New York 11747.** This warranty excludes and there is disclaimed liability for labor for removal of this product or reinstallation. This warranty is void if this product is installed improperly or in an improper environment, overloaded, misused, opened, abused, or altered in any manner, or is not used under normal operating conditions or not in accordance with any labels or instructions. **There are no other or implied warranties of any kind, including merchantability and fitness for a particular purpose**, but if any implied warranty is required by the applicable jurisdiction, the duration of any such implied warranty, including merchantability and fitness for a particular purpose, is limited to two years. **Leviton is not liable for incidental, indirect, special, or consequential damages, including without limitation, damage to, or loss of use of, any equipment, lost sales or profits or delay or failure to perform this warranty obligation**. The remedies provided herein are the exclusive remedies under this warranty, whether based on contract, tort or otherwise.

PRODUCT INFORMATION

- For technical assistance, contact us at **1-800-824-3005**
- Visit our website at **www.leviton.com**