

## INSTALLATION INSTRUCTIONS

### WARNINGS

- **TO AVOID FIRE, SHOCK, OR DEATH; TURN OFF POWER AT CIRCUIT BREAKER OR FUSE AND TEST THAT POWER IS OFF BEFORE WIRING!**
  - **TO AVOID FIRE, SHOCK OR DEATH, DISCONNECT ALL POWER SUPPLIES TO ENCLOSURE BEFORE EXPOSING INTERIOR. MORE THAN ONE SUPPLY DISCONNECT MAY BE REQUIRED TO DE-ENERGIZE THIS EQUIPMENT BEFORE SERVICING.**
  - Separate over current protection must be provided in accordance with the NEC® Article 220 or CEC, Section B as appropriate.
  - This enclosure includes a lockout provision (in the OFF position) for a suitable padlock. Use up to three (3x) padlocks with a shackle diameter of 1/4 in. (6 mm) only to isolate power from the connected equipment in compliance with OSHA Lockout/Tagout Regulation 29 CFR Part 1910.147.
- NOTE:** Lockout feature does NOT interrupt the power supplied to the switch within the enclosure.

### CAUTIONS

- Check to see that the rating marked on the device is correct for the intended installation. Connected equipment electrical rating must not exceed the ampere rating of this device.
- Device is suitable for use on a circuit capable of delivering not more than 600 VAC maximum. For fused items, use Class J fuses.
- This device must be mounted vertically with the line side at the top.
- Suitable as Motor Disconnect (non-fused models only) on a circuit capable of delivering not more than:
  - LDS30-AX, LDS30-AC – 10kA rms symmetrical amperes, 600V max., when protected by a 60A Class J fuse.
  - LDS60-AX, LDS60-AC – 100kA rms symmetrical amperes, 600V max., when protected by a 100A Class J or T fuse.
  - LDS10-AX, LDS10-AC – 65kA rms symmetrical amperes, 600V max., when protected by a 100A Class J fuse.
- Use this device with **copper or copper clad wire only**.
- **For installation only by an electrician** in accordance with the National Electrical Code® (NEC®) or the Canadian Electrical Code® (CEC®), local codes, and the installation instructions.
- Use of a UL Listed Watertight conduit fitting (*Not provided*) is required to maintain the desired environmental ratings. Rating of the fitting/hub must be equal to or better than the desired installation ingress protection rating.

**NOTES:** Feed-thru configurations are possible.

### Step 1A: Mounting - Wall Mount with Mounting Feet (*Feet and hardware provided*)

**NOTE:** Leviton® Safety Disconnect Switches may be mounted for top or bottom feed of supply wires.

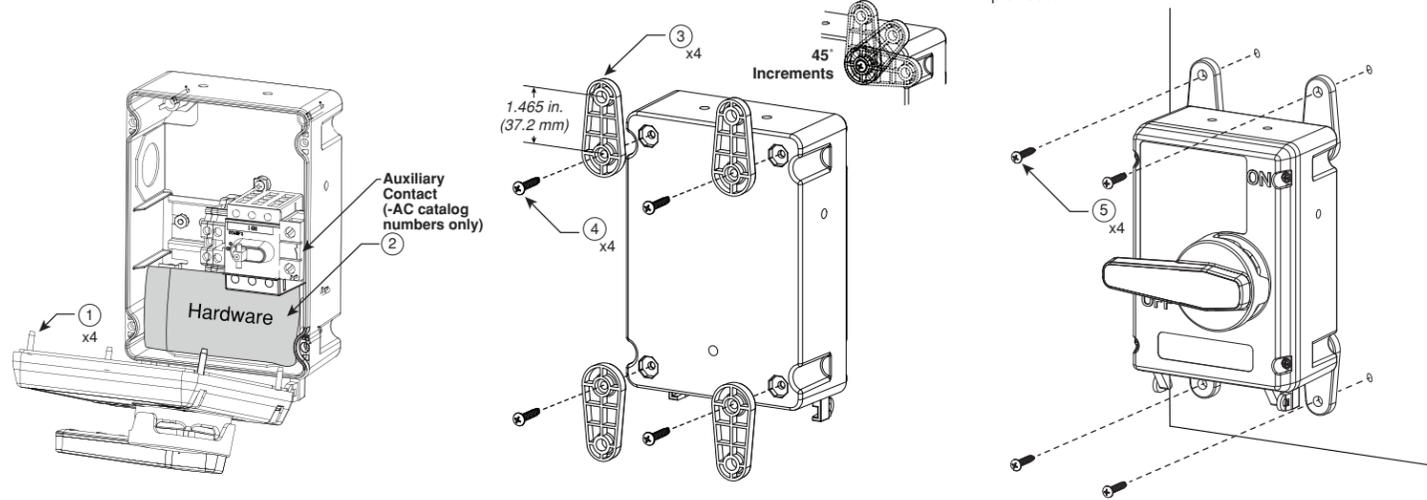
**NOTE:** When mounting with provided feet drilling through enclosure is not required.

**NOTE:** Provided mounting hardware ships inside the enclosure.

a. Loosen cover screws ① (*See Table 1 for tool selection*), open cover and remove the provided bag of mounting hardware ②.

b. Attach mounting feet ③ with provided Plastite® #8-16 x 7/8 in. thread cutting screws ④. Torque to 15 in-lbs. (1.7 N-m).

c. Mount unit to the wall using the 0.28" (7.1 mm) diameter clearance holes in the mounting feet. Mounting screws ⑤ not provided.



**NOTE:** LDS30-AX and LDS30-AC shown.

### Step 2: Conduit Connection (*Top or Bottom feed*)

**NOTE:** All conduit hubs must be grounded (bonded) to an unused grounding terminal inside the enclosure. This is not required for 30A versions which has an internal grounding bracket.

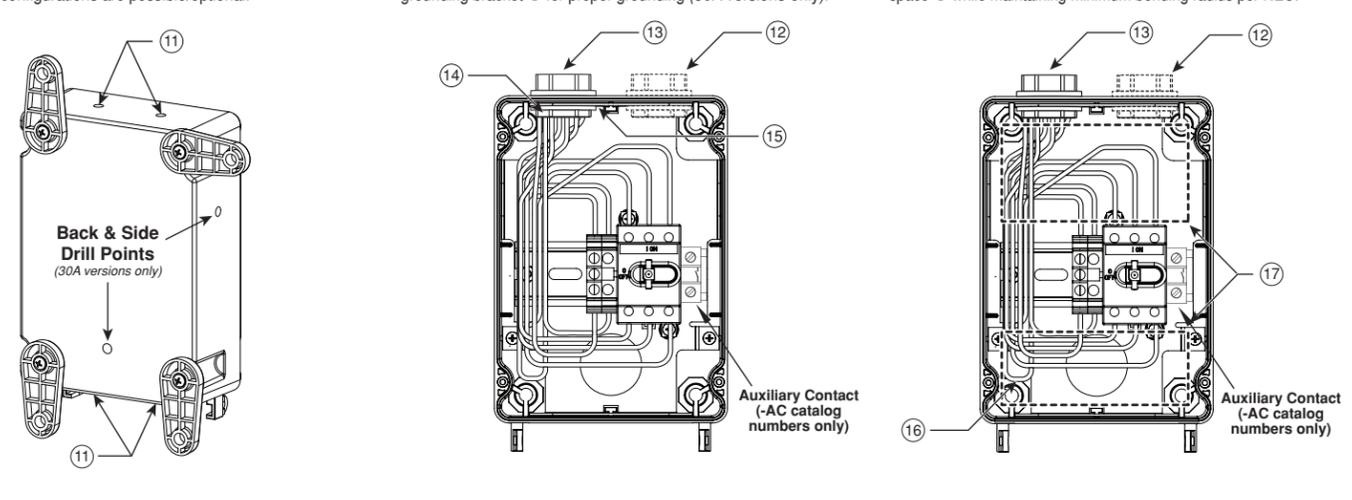
**NOTE:** For installations subject to condensation and/or non-conforming with above, use of a sealing filling per NEC 300.7 and/or use of a Leviton accessory drain plug (*No. DNPLG*) or equivalent required.

**NOTE:** Back and side feed available on the 30A versions only.

a. Select drill point(s) ⑩ and drill hole(s) for conduit entry. Consult hub manufacturers specifications or Table 2 for hole dimensions. Feed-thru ⑪ configurations are possible/optional.

b. Install the hub ⑬ and conduit per manufacturer's instructions. Ensure the hub locking ring ⑭ is seated tightly against the inner grounding bracket ⑮ for proper grounding (30A versions only).

c. In top feed installations, use of condensation drip loops ⑯ is recommended. Loops are to be made in the top or bottom bending space ⑰ while maintaining minimum bending radius per NEC.



**NOTE:** LDS30-AX and LDS30-AC shown.

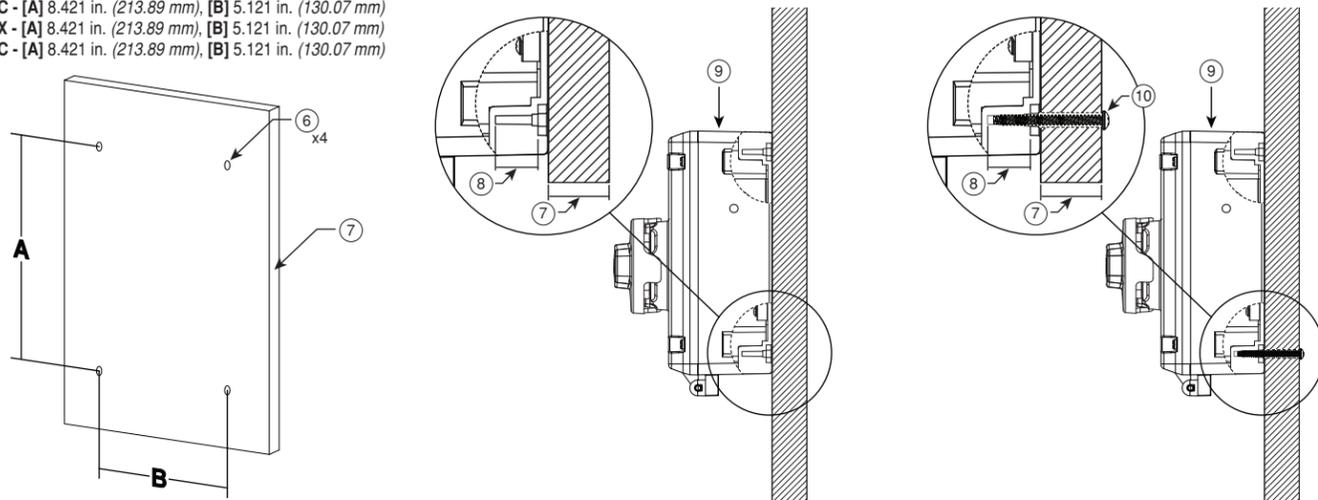
### Step 1B: Mounting - Thru-Panel without Mounting Feet (*Hardware not provided*)

**NOTE:** Leviton® Safety Disconnect Switches may be mounted for top or bottom feed of supply wires.

a. Drill holes ⑥ in the board/wall ⑦.

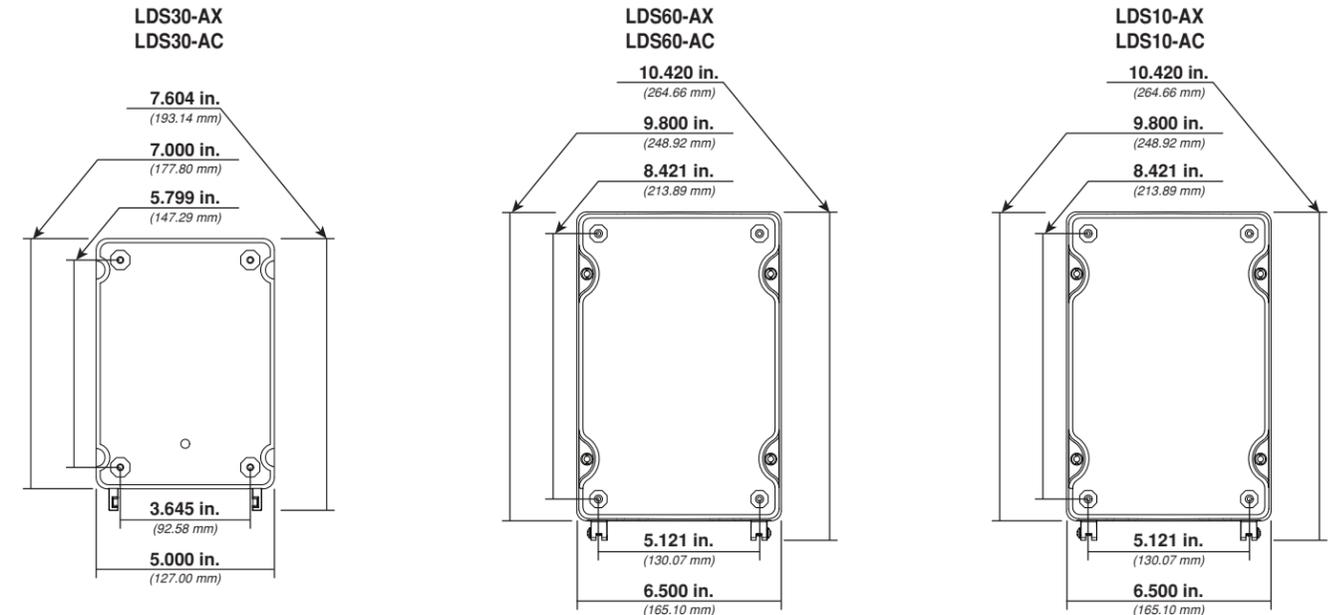
b. To calculate mounting screw length, add the board/wall ⑦ thickness to the thread engagement ⑧. Thread engagement into enclosure ⑨ must be between 0.5 in. and 1.0 in.

c. Mount unit to the board/wall ⑦ with four #8-16 Plastite® thread forming screws ⑩ (*not provided*). Torque to max. of 15 in-lbs. (1.7 N-m).



**NOTE:** LDS30-AX and LDS30-AC shown.

### Dimensions



**Step 3: Wiring**

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**NOTE:** All Leviton Disconnects are rated "Break all Lines" configurations and are suitable for motor circuits.

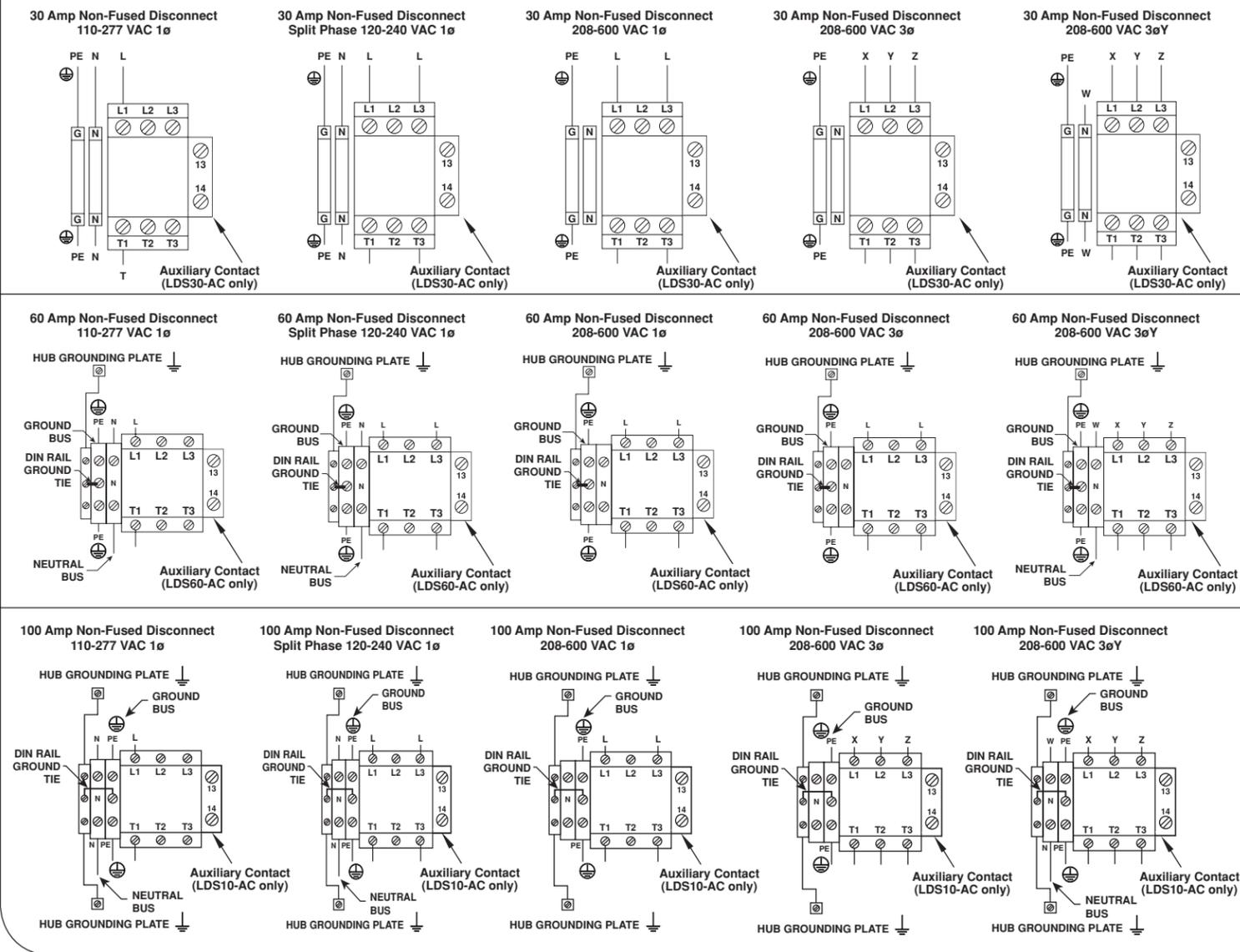
**NOTE:** Select conductor in accordance with ampacity of Table 310-15 of the National Electrical Code or Table 2 of the Canadian Electrical Code.

**NOTE:** For bending radius refer to specific UL standard and NEC® article.

**NOTE:** Handle must be in the "OFF" position to install cover.

**NOTE:** DO NOT tin conductors.

- a. Select wire gauge per Table 3. To ensure compliance with UL/NEC wire bending space requirements, use wire sizes and strip lengths per Table 4.
- b. Tighten terminal screws per Table 5.
- c. Close cover and tighten cover screws per Table 6.



**Tables**

**Table 1 - Tools for opening cover**

Cover Screws	Tools
LDS30-AX, LDS30-AC	(Only one tool shown below required) Flat head screwdriver, Phillips #2, Robertson #0
LDS60-AX, LDS60-AC	Flat head screwdriver wider than 1/4", Phillips #3, Robertson #3
LDS10-AX, LDS10-AC	

**Table 2 - Recommended conduit hub size & hole diameter**

Model	Fitting/Hub (Trade size)	Hole Diameter	Max Hub Size
LDS30-AX, LDS30-AC	3/4 in.	1 in. (25.4 mm)	N/A
LDS60-AX*, LDS60-AC	1-1/4 in.**	1.625 in. (41.3 mm)	2" Trade Size
LDS10-AX*, LDS10-AC	1-1/4 in.**	1.625 in. (41.3 mm)	2" Trade Size

\* NOTE: Refer to NEC Annex C for additional information.  
\*\* NOTE: Leviton provides hub grounding brackets for these sizes. All others use grounding hub.

**Table 3 - Wiring Size**

Model	Rated Current	UL Rating	Min. Wire (AWG) copper conductors to meet NEC table 310-15 (Phase and Neutral Wires)		Min. Wire (AWG) copper conductors to meet protective earth requirements***
			(60°C) Wire (AWG)*	(>75°C) Wire (AWG)**	
LDS30-AX, LDS30-AC	30A/32A	UL 60947-4-1	#10	#10	#10
LDS60-AX, LDS60-AC	60A	UL 60947-4-1	#4	#6	#10
LDS10-AX, LDS10-AC	100A	UL 60947-4-1	N/A	#3	#8/#6

\* - Wire types TW, UF  
\*\* - Wire types RHW, THHW, THW, THWN, XHHW, USE, ZW, TBS, SA, SIS, FEP, FEPB, MI, RHH, RHW-2, THHN, THHW, THW-2, THWN-2, USE-2, XHH, XHHW, XHHW-2, ZW-2  
\*\*\* - NEC table 250.122 for unit rated ampacities. For other types/styles refer to NEC.

**Table 4 - Terminal Wiring Size & Strip Length**

Model	Switch Terminal		Neutral Terminal		Protective Earth Terminal		Shield Ground Terminal		Aux Contact Terminal	
	AWG	Strip length	AWG	Strip length	AWG	Strip length	AWG	Strip length	AWG	Strip Length
LDS30-AX, LDS30-AC	#14-8	0.5"(12mm)	#24-8	0.4"(10mm)	#26-8	0.4"(10mm)	N/A		#18-14	0.5" (12mm)
LDS60-AX, LDS60-AC	#10-2	0.5"(12mm)	#16-1/0	0.7"(18mm)	#16-2	0.7"(18mm)	#24-8	0.4"(10mm)		
LDS10-AX, LDS10-AC	#8-0(1/0)	0.7"(18mm)	#16-2/0	0.7"(18mm)	#16-2	0.7"(18mm)	#20-6	0.4"(10mm)		

**Table 5 - Terminal Screw Torque Ratings**

Model	Switch	Neutral	Earth	Shield Ground	Aux Contact
LDS30-AX, LDS30-AC	7 in-lbs (0.8 N-m)	15 in-lbs (1.7 N-m)	15 in-lbs (1.7 N-m)	N/U	7 in-lbs (0.8 N-m)
LDS60-AX, LDS60-AC	18 in-lbs (2 N-m)	30 in-lbs (3.4 N-m)	30 in-lbs (3.4 N-m)	15 in-lbs (1.7 N-m)	
LDS10-AX, LDS10-AC	35 in-lbs (4 N-m)	30 in-lbs (3.4 N-m)	30 in-lbs (3.4 N-m)	15 in-lbs (1.7 N-m)	

**Table 6 - Cover Screw Torque Ratings**

LDS30-AX, LDS30-AC	LDS60-AX, LDS60-AC	LDS10-AX, LDS10-AC
10 in-lbs. (1.2 N-m)	18 in-lbs. (2 N-m)	18 in-lbs. (2 N-m)

**Table 7 - Horsepower Ratings**

LDS30-AX, LDS30-AC		LDS60-AX, LDS60-AC		LDS10-AX, LDS10-AC	
600 VAC	30/32 A	600 VAC	60 A	600 VAC	100 A
110 VAC 1Ø	2 Hp	110 VAC 1Ø	2 Hp	110-120 VAC 1Ø	7.5 Hp
208-240 VAC 1Ø	5 Hp	208-240 VAC 1Ø	10 Hp	220-240 VAC 1Ø	20 Hp
480 VAC 1Ø	5 Hp	480 VAC 1Ø	10 Hp	277 VAC 1Ø	25 Hp
600 VAC 1Ø	5 Hp	600 VAC 1Ø	10 Hp	440-480 VAC 1Ø	30 Hp
208-240 VAC 3Ø	10 Hp	208-240 VAC 3Ø	20 Hp	550-600 VAC 1Ø	30 Hp
480 VAC 3Ø	20 Hp	480 VAC 3Ø	40 Hp	110-120 VAC 3Ø	15 Hp
600 VAC 3Ø	25 Hp	600 VAC 3Ø	40 Hp	220-240 VAC 3Ø	40 Hp
N/A	N/A	N/A	N/A	440-480 VAC 3Ø	60 Hp
N/A	N/A	N/A	N/A	550-600 VAC 3Ø	50 Hp

**Cleaning Procedures**

**WARNING: RISK OF ELECTRIC SHOCK. TURN OFF POWER AT CIRCUIT BREAKER OR FUSE. DO NOT** clean this product while undergoing electrical maintenance or service.

**CAUTION:** Use only chemicals and cleaning solutions that are safe for use with plastics and rubber gaskets.

**CAUTION: DO NOT** direct or concentrate high pressure water or cleaning solution on the enclosure gasket seams, switch handle area or exterior labels.

**NOTE:** Follow general cleaning procedures established by your facility

**NOTE:** This product is certified by NSF® International to NSF/ANSI/3-A 14159-1

- a. Use hose directed water or cleaning solution to remove any collected contaminants from behind the enclosure.
- b. Use hose directed water or cleaning solution to remove soil and contaminants from the exterior surfaces of the enclosure.
- c. Use a dry clean cloth to wipe away any excess water.

**Statements**

**FOR CANADA ONLY**

For warranty information and/or product returns, residents of Canada should contact Leviton in writing at **Leviton Manufacturing of Canada ULC** to the attention of the **Quality Assurance Department, 165 Hymus Blvd, Pointe-Claire (Quebec), Canada H9R 1E9** or by telephone at **1 800 405-5320**.

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