powerswitch®

Safety Disconnect Switch in Watertight Enclosure

Cat. No. MDS3-AX - Rated: 30/32A-600VAC Max. Cat. No. MDS8-AX - Rated: 80A-600VAC Max.
Cat. No. MDS6-AX - Rated: 60A-600VAC Max. Cat. No. MDS1-AX - Rated: 100A-600VAC Max.

LEVITON®

PK-A3191-10-00-0A

WARNING AND CAUTIONS

- **WARNING: TO AVOID FIRE, SHOCK, OR DEATH; TURN OFF POWER** AT CIRCUIT BREAKER OR FUSE AND TEST THAT POWER IS OFF BEFORE WIRING, OR SERVICING DEVICE.
- **WARNING: 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.
- For installation only by an electrician in accordance with the National Electrical Code® (NEC®), the Canadian Electrical Code (CEC) and local codes.
- Separate overcurrent protection must be provided in accordance with the NEC® Article 220 or CEC, Section B as appropriate.
- Use this device with **copper or copper clad wire only**.

WARNING AND CAUTIONS

- This enclosure includes a lockout provision (in the OFF position) for a suitable padlock. USE ONLY a padlock with a shackle diameter of 1/4 inch (6.35 mm) 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.
- Ensure that the rating marked on the device is correct for the intended installation.
- Suitable as Motor Disconnect on a circuit capable of delivering not more than:
  - **MDS3-AX** - 10kA rms symmetrical amperes, 600V max., when protected by 60A, Class J fuses.
  - **MDS6-AX** - 100kA rms symmetrical amperes, 600V max., when protected by 100A, Class J or T fuses.
  - **MDS8-AX** - 100kA rms symmetrical amperes, 600V max., when protected by 100A, Class J or T fuses.
  - **MDS1-AX** - 65kA rms symmetrical amperes, 600V max., when protected by 100A, Class J fuses.

INSTALLATION INSTRUCTIONS — ENGLISH

FEATURES

- Provides ON-OFF switched control of a directly connected load.
- Meets the requirements of Outdoor/Indoor (IP66, IP67, IP68, IP69K NEMA Type 3R, 4X, 12, 13 Watertight, Corrosion Resistant) and Indoor (Type 12 Dust tight) installations.
- The cover cannot be opened or removed when the handle is in the "ON" position.
- This product is certified by NSF® International for use in food processing facilities.
- Normally open and normally closed auxiliary contact (sold separately) is rated 10A-600VAC.

INSTALLATION

STEPS

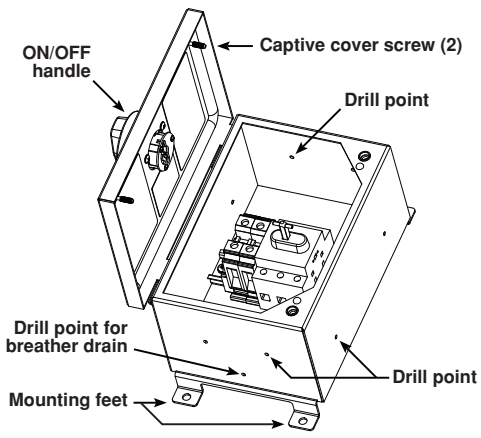
1. Mount Safety Disconnect Switch.
2. Remove enclosure cover by loosening two cover screws and lifting cover off hinges.
3. Remove switch **(see REMOVE SWITCH section)**. This is recommended to prevent steel debris from entering switch components.
4. Drill or punch conduit hole in desired location(s). See **Table 1** for fitting size.
5. Install conduit fitting. Ensure "O" ring is properly seated and the inside locking ring is seated tightly against the inside surface of enclosure to ensure proper grounding.
6. Re-install switch **(see REPLACE SWITCH section)**.
7. Connect wires **(see WIRING section)**.
8. Replace cover and hand thread screws to engagement. **NOTE:** Handle must be in the "OFF" position to close cover. Tighten screws to 15-18 in.-lbs. (1.7-2.0 N-m) torque.

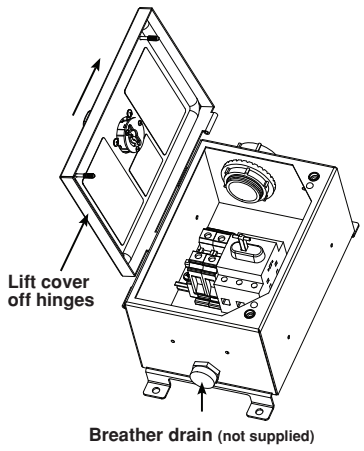
NOTES:

- For NEMA Type 4X, Type 12 and IP69K applications, enclosure must be mounted by means of mounting feet. Do not drill or punch any holes into enclosure for mounting purposes.
- Use of a UL Listed Watertight conduit fitting required to maintain the NEMA Type 4X, Type 12 and IP69K ratings. Leviton conduit hubs **(see Table 1)** are rated for Type 4X and Type 12 applications. **NOTE:** If required, use only a listed/certified breather drain rated for Type 4X, Type 12 and/or IP69K depending on required environmental application. Drill or punch a 0.796" (20.2 mm) diameter hole through the bottom of the enclosure at the drill point provided.
- Mounting feet will accept up to 1/4" (6 mm) screws.
- Drill points provided for conduit entry.
- When using top or side feed conduit entrance, always form condensation drip loops in wiring as shown.

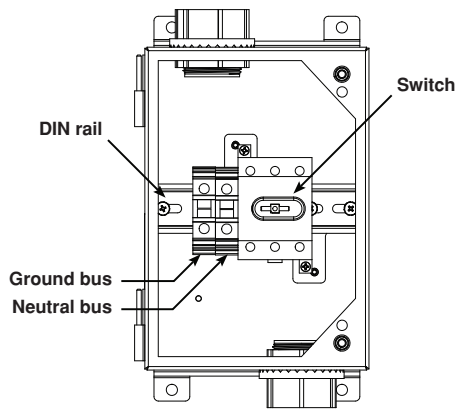
TABLE 1

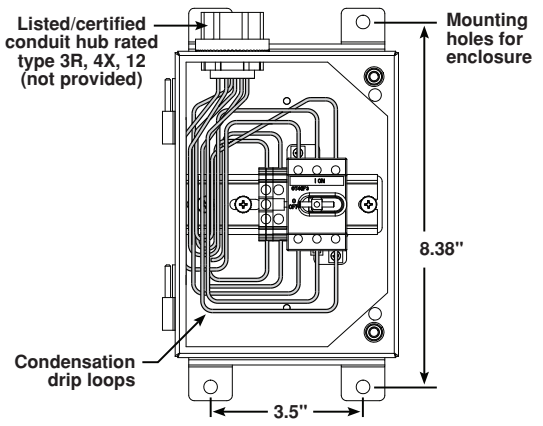
Cat. No.	Hub Trade Size	Min QTY Required	Leviton Part No.	Conduit Hole
MDS3	3/4" (19.05 mm)	1	00HUB-034	1.05" (26.67 mm)
MDS6	1-1/4" (31.75 mm)	1	00HUB-114	1.66" (42.16 mm)
MDS8	1-1/4" (31.75 mm)	2	00HUB-114	1.66" (42.16 mm)
MDS1	1-1/4" (31.75 mm)	2	00HUB-114	1.66" (42.16 mm)



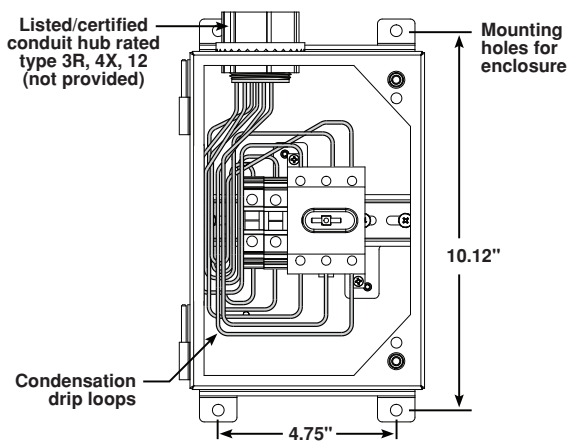


NOTE: Enclosure to be mounted such that drain will always be on the bottom as shown)

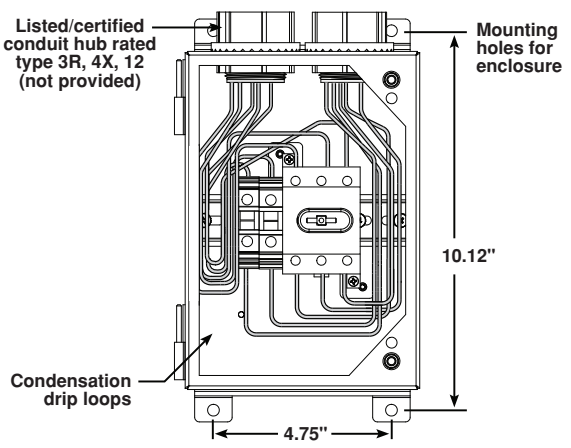




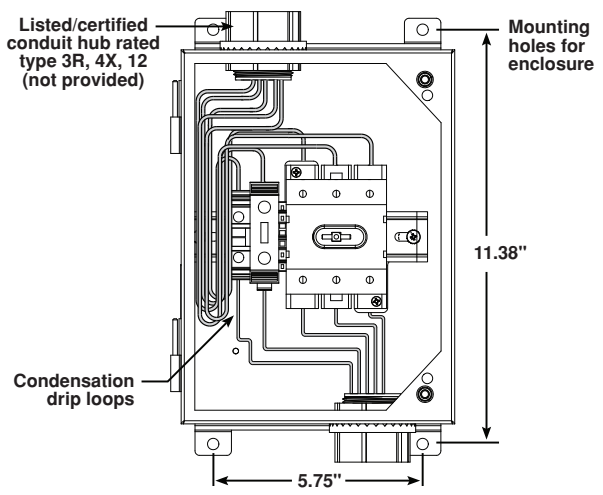
Top or bottom conduit connection/wire entry
MDS3-AX depicted (30A)



Top or bottom conduit connection/wire entry
MDS6-AX depicted (60A)



Dual top or bottom conduit connection/wire entry
MDS8-AX depicted (80A)



Feed through conduit connection/wire entry
MDS1-AX depicted (100A)

WIRING

NOTE: Use conductors with insulation rated 75˚C or higher having sufficient ampacity in accordance with the 60˚C column of Table 310.15(B)(16) of the 2014 NEC® or Table 2 of the Canadian Electrical Code.
NOTE: Ensure that there are no stray conductor strands. 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, OR SERVICING DEVICE.
2. Strip all conductors approximately 1/2" (13.0 mm). **NOTE:** Refer to conductor sizes accepted for specific switch below.
3. Connect conductors per appropriate **WIRING DIAGRAM (see reverse side)**.
4. Tighten all terminal screws per specific torque values below:

MDS3-AX

Torque:
Switch terminals: 7 in-lbs. (0.8 N-m)
Neutral terminals: 7.1-8.9 in-lbs. (0.8-1.0 N-m)
Ground terminals: 7.1-8.9 in-lbs. (0.8-1.0 N-m)
Auxiliary contact*: 7 in-lbs. (0.8 N-m)
*(sold separately)

Conductor sizes accepted:
Switch terminals: #14 - #8 AWG.
Neutral terminals: #14 - #8 AWG.
Ground terminals: #14 - #8 AWG.
Auxiliary contact*: #18 - #14 AWG.
*(sold separately)

MDS3-AX - SSCR Rating:
Suitable for use on a circuit capable of delivering not more than 10kA rms symmetrical amperes, 600V max., when protected by 60A, Class J fuses.

Short circuit ratings at 600VAC		
kA	Fuse / A	Class of fuse
10	60	J

HP Rating: 30/32A-600VAC Max.

Rating	Poles	HP Rating	
30/32A	2	120 VAC 1 Ø	2 HP
30/32A	2	208-240 VAC 1Ø	5 HP
30/32A	2	480 VAC 1 Ø	5 HP
30/32A	2	600 VAC 1 Ø	5 HP
30/32A	3	120/208 VAC 3 Ø	10 HP
30/32A	3	208-240 VAC 3 Ø	10 HP
30/32A	3	480 VAC 3 Ø	20 HP
30/32A	3	600 VAC 3 Ø	25 HP
Auxiliary Contact Rating			
10A	1	600 VAC	

MDS6-AX

Torque:
Switch terminals: 18 in-lbs. (2 N-m)
Neutral terminals: 31 in-lbs. (3.5 N-m)
Ground terminals: 31 in-lbs. (3.5 N-m)
Auxiliary contact*: 7 in-lbs. (0.8 N-m)
*(sold separately)

Conductor sizes accepted:
Switch terminals: #14 - #4 AWG.
Neutral terminals: #14 - #1/0 AWG.
Ground terminals: #14 - #2 AWG.
Auxiliary contact*: #18 - #14 AWG.
*(sold separately)

MDS6-AX - SSCR Rating:
Suitable for use on a circuit capable of delivering not more than 100kA rms symmetrical amperes, 600V max., when protected by 100A, Class J or T fuses.

Short circuit ratings at 600VAC		
kA	Fuse / A	Class of fuse
100	100	J or T

HP Rating: 60A-600VAC Max.

Rating	Poles	HP Rating	
60A	2	120 VAC 1 Ø	2 HP
60A	2	208-240 VAC 1 Ø	10 HP
60A	2	480 VAC 1 Ø	20 HP
60A	2	600 VAC 1 Ø	20 HP
60A	3	208-240 VAC 3 Ø	20 HP
60A	3	480 VAC 3 Ø	40 HP
60A	3	600 VAC 3 Ø	40 HP
Auxiliary Contact Rating			
10A	1	600 VAC	

MDS8-AX

Torque:
Switch terminals: 18 in-lbs. (2 N-m)
Neutral terminals: 31 in-lbs. (3.5 N-m)
Ground terminals: 31 in-lbs. (3.5 N-m)
Auxiliary contact*: 7 in-lbs. (0.8 N-m)
*(sold separately)

Conductor sizes accepted:
Switch terminals: #14 - #4 AWG.
Neutral terminals: #14 - #1/0 AWG.
Ground terminals: #14 - #2 AWG.
Auxiliary contact*: #18 - #14 AWG.
*(sold separately)

MDS8-AX - SSCR Rating:
Suitable for use on a circuit capable of delivering not more than 100kA rms symmetrical amperes, 600V max., when protected by 100A, Class J or T fuses.

Short circuit ratings at 600VAC		
kA	Fuse / A	Class of fuse
100	100	J or T

HP Rating: 80A-600VAC Max.

Rating	Poles	HP Rating	
80A	2	120 VAC 1 Ø	2 HP
80A	2	208-240 VAC 1 Ø	10 HP
80A	2	480 VAC 1 Ø	20 HP
80A	2	600 VAC 1 Ø	20 HP
80A	3	208-240 VAC 3 Ø	20 HP
80A	3	480 VAC 3 Ø	40 HP
80A	3	600 VAC 3 Ø	40 HP
Auxiliary Contact Rating			
10A	1	600 VAC	

MDS1-AX

Torque:
Switch terminals: 27 in-lbs. (3 N-m)
Neutral terminals: 53 in-lbs. (6.0 N-m)
Ground terminals: 31 in-lbs. (3.5 N-m)
Auxiliary contact*: 7 in-lbs. (0.8 N-m)
*(sold separately)

Conductor sizes accepted:
Switch terminals: #8 - #1/0 AWG.
Neutral terminals: #6 - #1/0 AWG.
Ground terminals: #14 - #2 AWG.
Auxiliary contact*: #18 - #12 AWG.
*(sold separately)

MDS1-AX - SSCR Rating:
Suitable for use on a circuit capable of delivering not more than 65kA rms symmetrical amperes, 600V max., when protected by 100A, Class J fuses.

Short circuit ratings at 600VAC		
kA	Fuse / A	Class of fuse
65	100	J

HP Rating: 100A-600VAC Max.

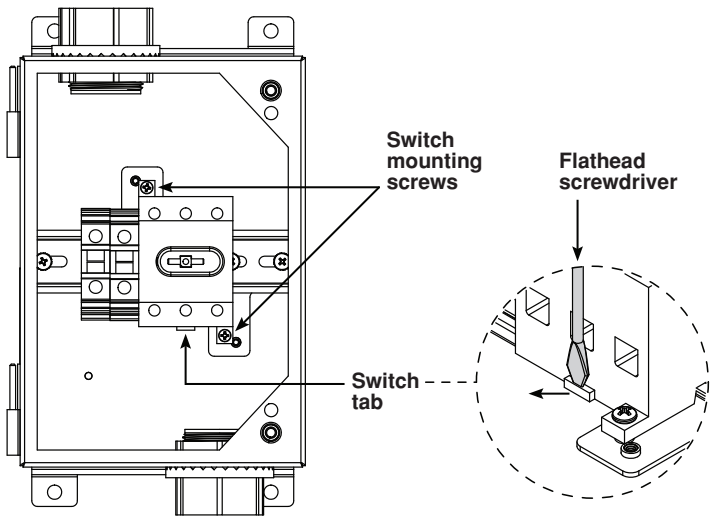
Rating	Poles	HP Rating	
100A	2	110-120 VAC 1 Ø	7.5 HP
100A	2	220-240 VAC 1 Ø	20 HP
100A	2	277 VAC 1 Ø	25 HP
100A	2	440-480 VAC 1 Ø	30 HP
100A	3	550-600 VAC 3 Ø	30 HP
100A	3	110-120 VAC 3 Ø	15 HP
100A	3	220-240 VAC 3 Ø	40 HP
100A	3	440-480 VAC 3 Ø	60 HP
100A	3	550-600 VAC 3 Ø	50 HP
Auxiliary Contact Rating			
10A	1	600 VAC	

VERSION

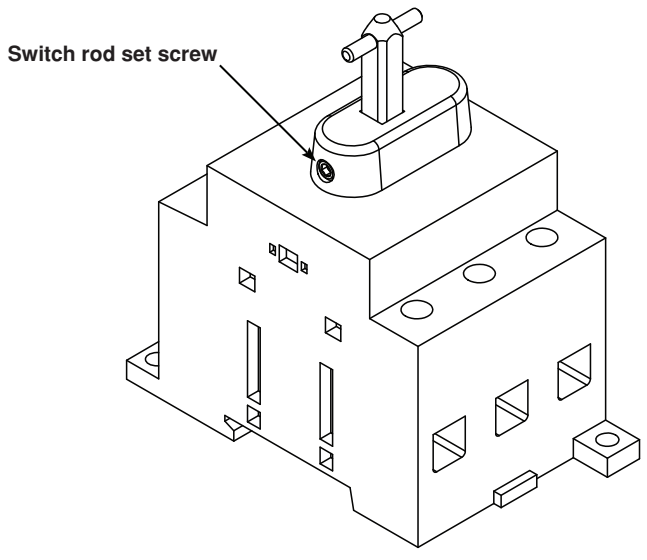
REMOVE SWITCH

NOTE: DO NOT REMOVE DIN RAIL.
1. Remove both mounting screws securing the switch.
2. Insert a flathead screwdriver in switch tab **(A)**. Gently pull tab outward while pulling switch up; beginning with tab side and then opposite side.
NOTE: If replacing the switch component remove switch rod by loosening set screw **(B)**, pulling rod out of switch and set rod aside.
NOTE: If replacing the switch component you can remove auxiliary contact on switch by inserting flathead screwdriver tip between switch and auxiliary contact and pressing outward.

Ⓐ



Ⓑ



REPLACE SWITCH

NOTE: If replacing the switch component re-install switch rod ensuring it is fully seated in bottom of pocket. Tighten set screw to 8-10 in.-lbs. (0.9-1.1 N-m).
NOTE: If replacing the switch component attach auxiliary contact (if applicable) to switch by fitting the tabs on top and pressing in auxiliary contact in a downward motion.
1. Mount switch onto DIN rail by hooking back side hinge onto DIN rail, then gently pull switch tab outward and push switch down until it snaps into place.
2. Slide switch into position and align the two screw holes with threaded holes in base plate. Tighten 2 mounting screws to 6-8 in.-lbs. (0.67-0.9 N-m).
3. Verify switch cover properly mates with switch mechanism with cover closed and ON/OFF handle moves freely.

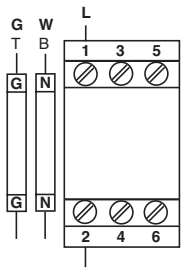
CLEANING

CAUTION: RISK OF ELECTRIC SHOCK. 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.
1. Follow general cleaning procedures established by your facility.
2. This product is certified by NSF® International for use in food processing facilities.
3. Recommended cleaning procedures are:
- **a.** Use hose directed water or cleaning solution to remove any collected contaminants from behind the enclosure. Ensure water completely cleans the area between the enclosure and the mounting surface.
- **b.** Use hose directed water or cleaning solution to remove soil and contaminants from the exterior surfaces of the enclosure.
- **c. CAUTION: DO NOT** direct or concentrate high pressure water or cleaning solution on the enclosure gasket seams, switch handle area or exterior labels.
- **d.** After cleaning the exterior surfaces of the enclosure, open the enclosure door and use a clean damp cloth to manually remove and soil or contaminants from the gasket seam area and flanged lip on enclosure body.
- **e.** If needed, the door can be lifted off the enclosure body to clean hinge cavities.
- **f.** Use a dry clean cloth to wipe away any excess water.

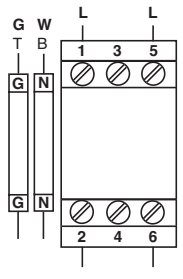
WIRING DIAGRAMS

Break All Lines

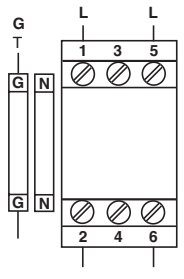
120 VAC 1 Ø
277 VAC 1 Ø



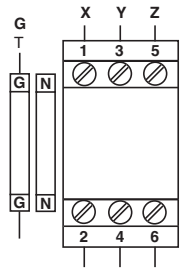
120/240 VAC 1 Ø



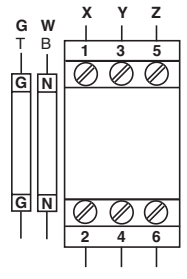
240 VAC 1 Ø
480 VAC 1 Ø
600 VAC 1 Ø



240 VAC 3 Ø
480 VAC 3 Ø
600 VAC 3 Ø



120/208 VAC 3 ØY
277/480 VAC 3 ØY
347/600 VAC 3 ØY



NSF is a registered trademark of NSF International.

Powerswitch is a trademark of Leviton Mfg. Co., Inc., registered in the U.S.A.

FOR CANADA ONLY
For warranty information and/or product returns, residents of Canada should contact Leviton in writing at **Leviton Manufacturing of Canada Ltd 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.**

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. **For details visit www.leviton.com or call 1-800-824-3005.** 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.

WEB VERSION

© 2017 Leviton Mfg. Co., Inc.