

*** DRILL 0.173" (#17) CHASSIS MOUNTING HOLE CLOSE TO THE DEVICE. TRIM LEAD TO DESIRED LENGTH. STRIP APPROX. 1/8" TO 1/4" WIRE INSULATION FROM WIRE END. CRIMP SUPPLIED RING TERMINAL ONTO STRIPPED WIRE END. INSTALL RING TERMINAL ONTO BARE CHASSIS USING SUPPLIED GROUNDING SCREW. ***

U.S. PATENT NO.: 11,196,245

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DRAWN	NAME	DATE
JRT		5-16-18
CHECKED		
ENG APPR.	RMF	5-16-18
MFG APPR.		
Q.A.		
DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL \pm 1/32 ANGULAR: MACH \pm BEND \pm TWO PLACE DECIMAL \pm .010 THREE PLACE DECIMAL \pm .005		

SHALLCO
 308 COMPONENTS DRIVE, SMITHFIELD, NC 27577 USA
 DO NOT SCALE DRAWING

TITLE: **LOAD MONITORING DISCONNECT**

BLANK WEIGHT: PART WEIGHT: 5.8 LBS

SCALE: 1:4 DWG. NO. SHEET 1 OF 4 REV. WWW.SHALLCO.COM

REV.	DESCRIPTION	DATE	APP'D	REV.	DESCRIPTION	DATE	APP'D	REV.	DESCRIPTION	DATE	APP'D	REV.	DESCRIPTION	DATE	APP'D
	REVISIONS				REVISIONS				REVISIONS				REVISIONS		

	DRAWING NUMBER	REV.
B	SHEET 2 OF 4	

Technical Data:

Temperature Range: -40C to +50C/-40F to 122F
 Environmental Sealing: IP65 (IEC-60529)
 Shock: 6G, (11ms, Saw Tooth)
 Vibration: 4G (SAE-1455 10 Hz to 2,000Hz)

Electrical Characteristics:

Minimum Insulation Resistance: 100MOhms.
 Dielectric Withstanding Voltage: 1,025V / 1 min.
 Voltage Drop: 200mVDC (Normal Operation).
 Overload: 1,500 Amps 1 sec.
 Continuous Current Rating: 75Amps @ 85C Ambient.
 Time to Trip: (approximate)
 14 sec. - 300 Amps
 17 sec. - 270 Amps
 23 sec. - 250 Amps
 31 sec. - 220 Amps
 43 sec. - 200 Amps
 98 sec. - 170 Amps
 126 sec. - 150 Amps
 268 sec. - 130 Amps
 5,647 sec. - 100 Amps
 15,505 sec. - 80 Amps
 +86,400 sec. - 75 Amps

12VDC Contact Rating:

Resistive Load: 200 Amps
 Inductive Load: 100 Amps
 Break: 5msec.


12VDC Coil Data:

A. Bi-Stable Relay

Voltage Range: 9 - 16VDC
 Pull Closed: 1.9 Ohms +/- 10% (75W)
 Pull Open: 2.3 Ohms +/- 10% (63W)
 Maximum Operations Per Minute: 6

B. Mono-Stable Relay

Nominal Voltage: 12VDC
 Voltage Range: 80% to 110% of Nominal
 Pull In: 155 Ohms +/- 10% (0.9W)
 Drop Out Voltage Threshold: 10% of Nominal
 Maximum Operations Per Minute: Continuous

	NAME	DATE	 308 COMPONENTS DRIVE, SMITHFIELD, NC 27577 USA DO NOT SCALE DRAWING
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MFG APPR.			
Q.A.			TITLE: LOAD MONITORING DISCONNECT
SIZE	DWG. NO.	REV.	
B			SHEET 2 OF 4
SCALE:1:4	WWW.SHALCO.COM		

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DWG. NO.:

Important information:

Normal operation is described below. Any deviation from the following directions could possibly result in damage to the device or to the entire electrical system.

Turn "ON" Operation:

1. Turn the "RED" handle to the "On" position (clockwise rotation).
This handle internally connects the battery to the device.
Wait 10 seconds before proceeding.
2. The "RED" LED illuminates, indicating device "TRIPPED" state and a satisfactory internal diagnostic test. If "RED" LED fails to illuminate, rotate "RED" handle to the "Off" position (counterclockwise) and wait 10 seconds before repeating Step 1. If Device fails to illuminate "RED" LED, after several attempts, device needs to be serviced or replaced by qualified factory technician.
3. Depress Manual Reset button for 1 to 2 seconds.
Depressing this button for longer periods should be avoided. This switch is thermally protected and could lengthen the time between resets.
4. The "GREEN" LED illuminates, indicating "ON" state, normal operation.
If "GREEN" LED fails to illuminate system is "TRIPPED", fault has not been removed.
If "GREEN" LED fails to illuminate after several failed attempts. Device needs to be serviced or replaced by qualified factory technician.

Turn "OFF" Operation:

1. Rotate the "RED" handle to the "OFF" position (counterclockwise rotation).
This internally disconnects the battery from the device and all attached loads.
2. No LED illumination.

Device "Tripped" Operation:


1. "RED" LED illumination during normal operation. Followed by loss of operation to attached auxiliary loads.
2. Rotate "RED" Master Disconnect to "OFF" and allow device to cool. Device has recognized an overcurrent condition that exceeds normal operational limits. System needs to be checked by a qualified Technician before returning to normal operation.
3. Use Turn "ON" Operation procedures listed above to proceed with normal operation.

Label Sequence is as follows:

Directions:

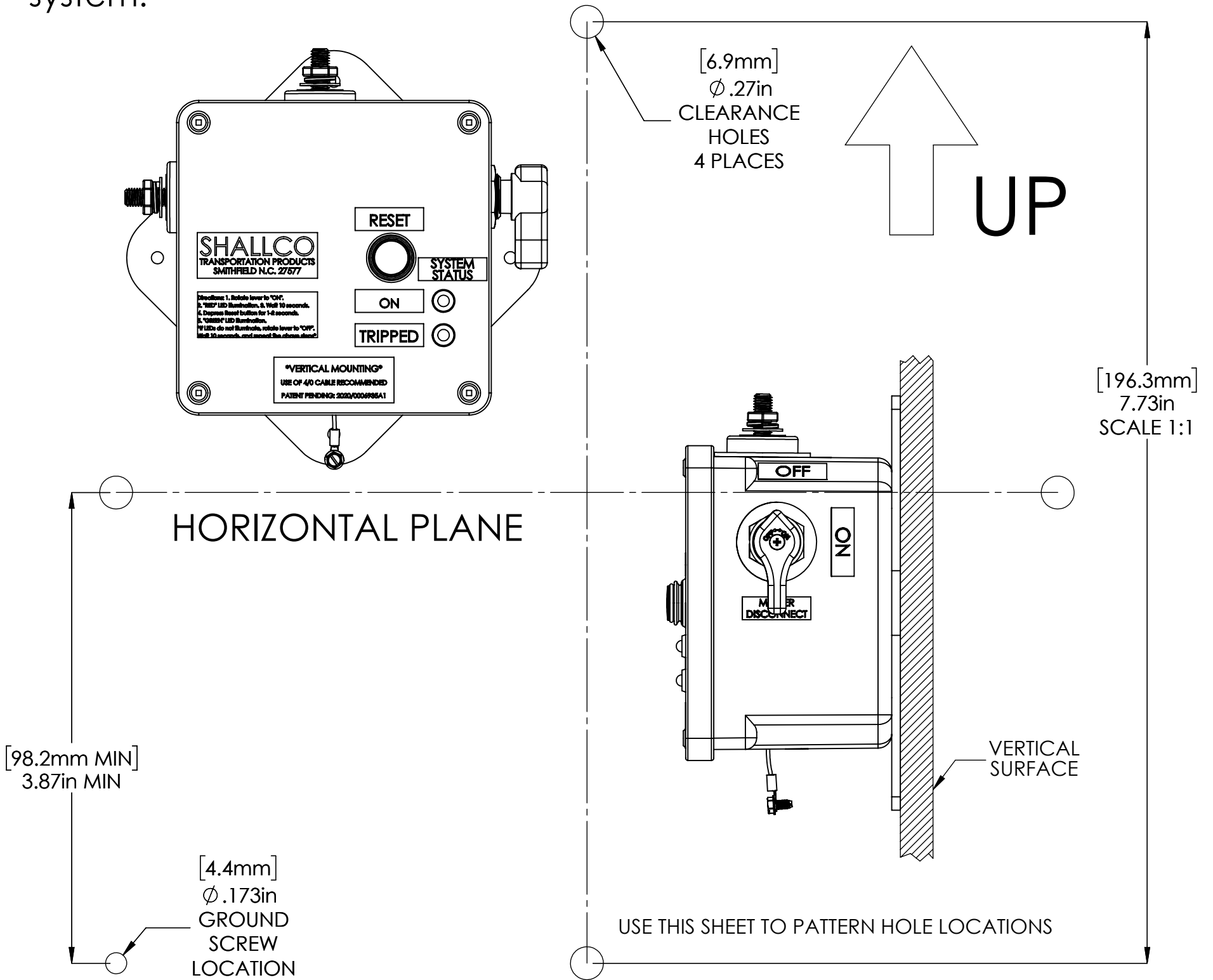
1. Rotate lever to "On".
2. "RED" LED illumination.
3. Wait 10 seconds.
4. Depress Reset button for 1-2 seconds.
5. "GREEN" LED illumination.

If LED's do not illuminate, rotate lever to "OFF", wait 10 seconds, and repeat above steps

			 308 COMPONENTS DRIVE, SMITHFIELD, NC 27577 USA DO NOT SCALE DRAWING	TITLE: LOAD MONITORING DISCONNECT	DWG. NO.: SHEET 3 OF 4
DRAWN	JRT	5-16-18			
CHECKED					
ENG APPR.	RMF	5-16-18			
MFG APPR.					
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Important information:

Standard mounting is described below. Any deviation from the following directions could result in damage to the device or to the entire electrical system.



MOUNTING INSTRUCTIONS:

1. Mounting location should be as close to the battery as possible.
2. Vertical mounting is required. Labels readable when viewed from horizontal plane.
3. Mount to an appropriate solid surface. This includes fire walls, chassis plates, etc.. Consult with factory or have device installed by qualified factory technician.
4. Drill mounting hole pattern in selected location (page 1).
5. Drill grounding screw hole. Locate outside of box requirements (page 1).
6. Use of four, 1/4" (6.36mm) diameter bolts and/or screws is required (not included).
7. Install black grounding wire to low resistance chassis ground. See page 1 for more details.
8. Install electrical +load wire to the left side of box. Torque connection to 155in/Lbs.
9. Install battery positive +lead to the top side of box. Torque connection to 155in/Lbs.

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	DRAWN	JRT			1-13-21
	CHECKED				
	ENG APPR.	RMF			1-14-21
	MFG APPR.		TITLE:	LOAD MONITORING DISCONNECT	
	Q.A.		SCALE: 1:1	REV.	