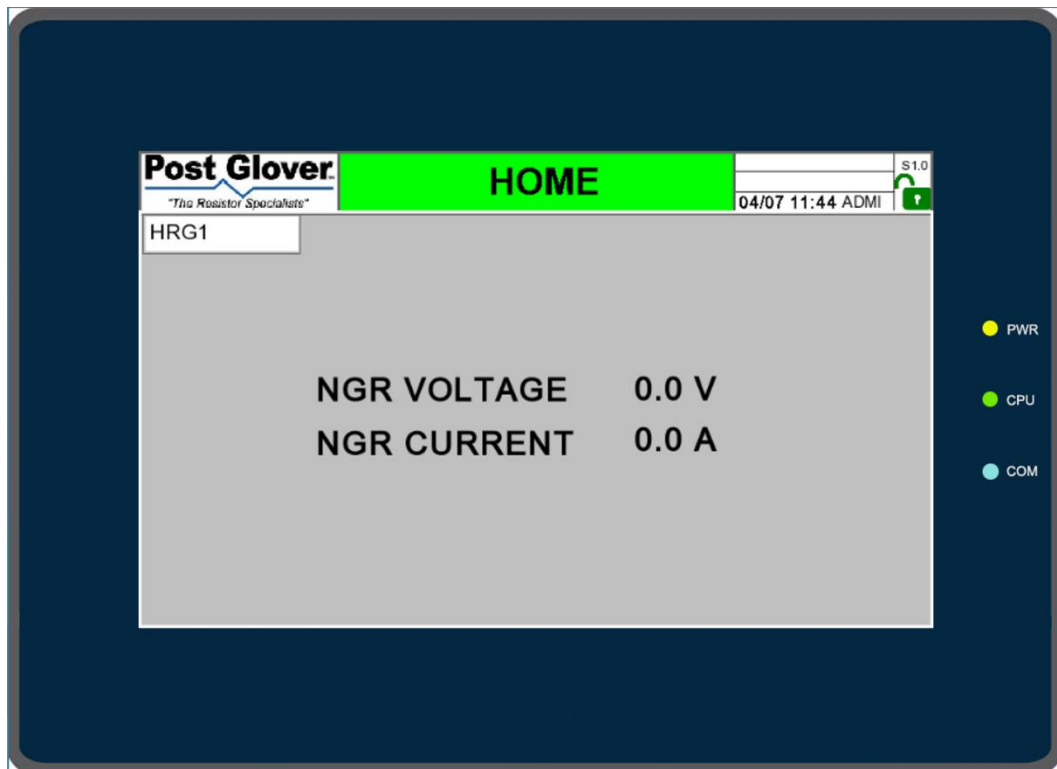


SMARTPULSE™ Low Voltage High Resistance Grounding System

OEM Kit / Wall-Mount Unit Addendum Installation Instructions



Addendum 1 – Installation Requirements for OEM Kits / Wall Mount Units

A1.1 Introduction

In addition to the procedure listed in the Operations and Maintenance manual, there are specific steps required to connect the components and render operational an OEM kit or Wall-Mount installation. This addendum provides information on the additional installation wiring requirements for the OEM kit.

The Wall-Mount kit requires the system neutral and one phase be brought to the self-contained controls cabinet, the system ground be connected to the resistor assembly, and finally the resistor assembly be wired to the controls cabinet. The OEM kit requires the same, but also needs the factory supplied cabling to connect the HMI to the back-panel.

For each wire, the two ending termination locations are given along with the wire type, size, color and termination requirements.

A1.2 Wiring from resistor assembly to control plate

In this section, the wiring requirements to connect the NGR assembly to the control plate are listed.

Terminal 1	Termination 1	Terminal 2	Termination 2	Wire Type	Wire Size	Wire Color
LDEM-4	Panduit FSD83-80-8-D	TBR-T	Burndy YAV14	SIS	#14	Black
LDEM-6	Panduit FSD83-18-C	TBR-N	Thomas & Betts 54104	SIS	#8	White
LDEM-7	Panduit FSD83-18-C	TBR-P	Thomas & Betts 54104	SIS	#8	Green

The #8 white & green wires are required to meet NEC Section 250.36.

A1.3 Wiring from resistor assembly to customer ground

In this section, the wiring requirements to connect the NGR assembly to the customer ground are listed

Terminal 1	Termination 1	Terminal 2	Termination 2	Wire Type	Wire Size	Wire Color
TBR-F	Thomas & Betts 54104	Cust. Grnd.	By customer	SIS	#8	Green
LDEM-8	Panduit FSD83-18-C	Cust. Grnd.	By customer	SIS	#8	Green
TB2-GND	Panduit FSD77-8-D	Cust. Grnd	By customer	SIS	#18	Green

The #8 green wires are required to meet NEC Section 250.36.

SMARTPULSE™ OEM KIT / WALL-MOUNT UNIT ADDENDUM

A1.4 Customer connections to switch SW1 and control power

In this section, the wiring requirements to connect switch SW1 to the customer switchgear are listed.

Control power wiring, with CPT						
Terminal 1	Termination 1	Terminal 2	Termination 2	Wire Type	Wire Size	Wire Color
SW1-1	stripped wire	Xfmr/Gen Neut	By customer	SIS	#8-6	White
SW1-3	stripped wire	Swgr, L2	By customer	SIS	#12-6	Black
SW1-5	stripped wire	Swgr. L3	By customer	SIS	#12-6	Black
Control power wiring, w/o CPT						
CFU5	Panduit DVF18-250-CY (#18) Panduit DVF14-250-C (#14)	120V Line		SIS	#18-14	Black
TB1-N	Panduit FSD76-8-D (#18) Panduit FSD80-8-D (#14)	120V Neutral		SIS	#18-14	White

The #8-6 white & #12-6 black wires are required to meet NEC Section 250.36.

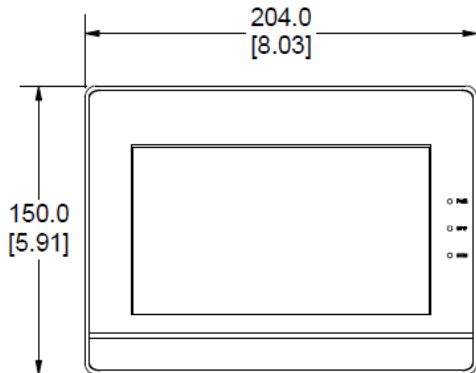
A1.5 Customer connections to HMI & ethernet switch (optional)

In this section, the wiring requirements to connect to the HMI and ethernet switch are listed.

Terminal 1	Termination 1	Wire Type
HMI COM1	DB9 Connector	RS-485 Cable
Ethernet Switch Port 5	RJ45 WITH CAT 5E/6	Ethernet Cable

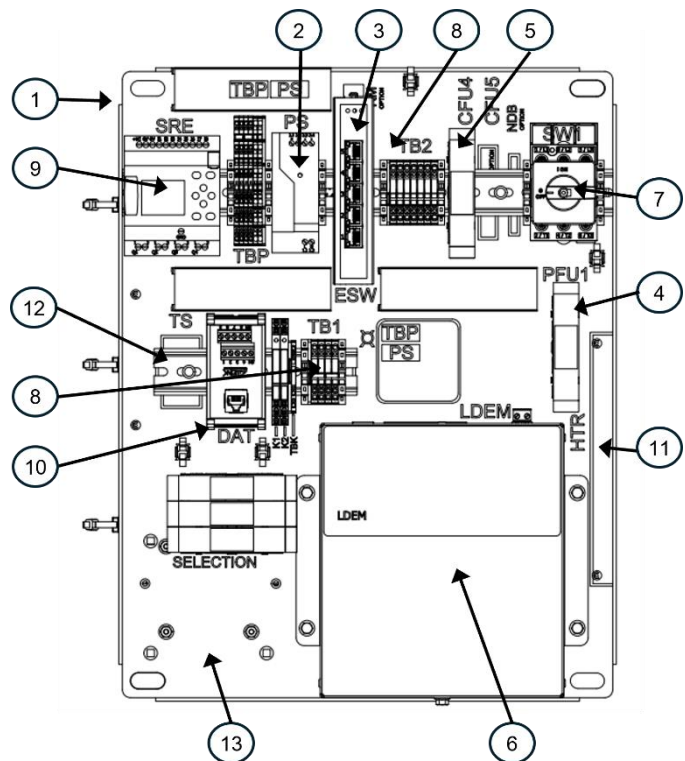
SMARTPULSE™ OEM KIT / WALL-MOUNT UNIT ADDENDUM

A1.6 Component Layout Drawings



Cutout size for HMI Panel in SWGR Door:
138 mm x 192 mm

Item	Panel Layout
1	Pulsar Backplate
2	Power Supply, 24 VDC
3	Ethernet Switch
4	1 Pole Fuseblock
5	2 Pole Fuseblock (1 if CPT supplied)
6	LDEM
7	Disconnect Switch
8	Terminal Blocks
9	Smart Relay
10	DAT
11	Heater*
12	Thermostat*
13	CPT w/ Fuses mounted on back of panel

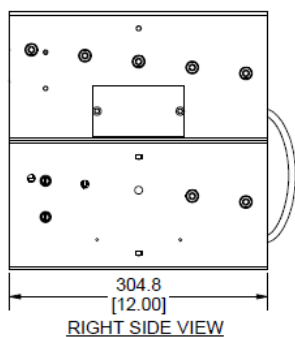
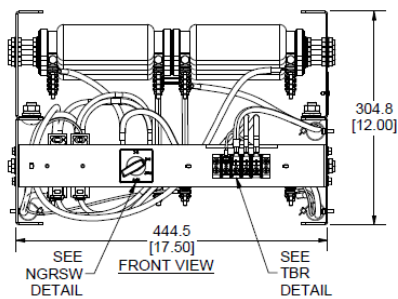
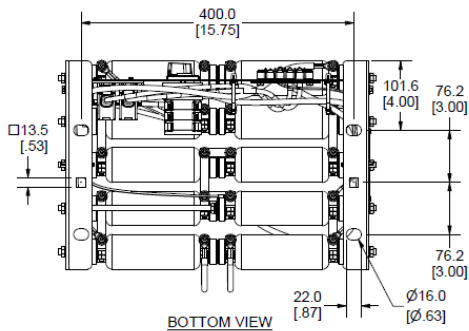


*Heater and Thermostat are standard for wall mount units and optional for OEM kits.

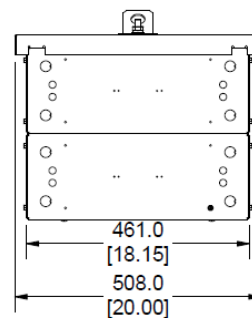
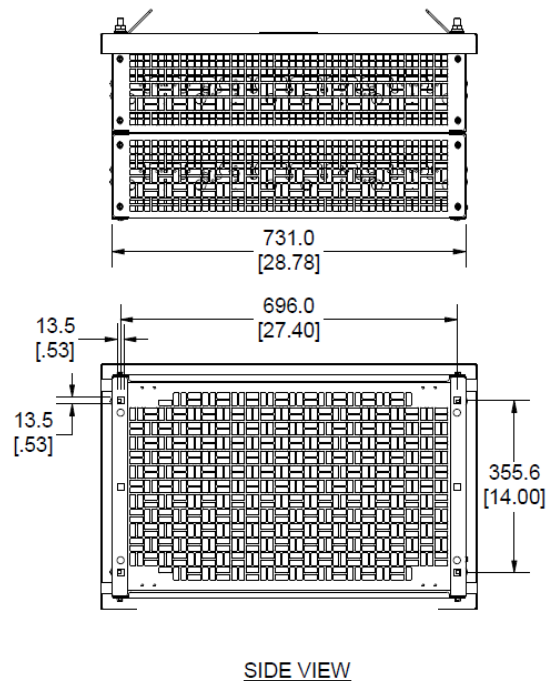
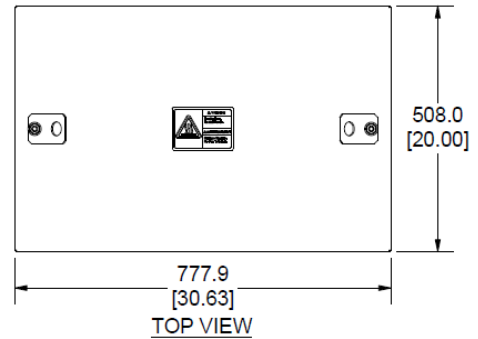
SMARTPULSE™ OEM KIT / WALL-MOUNT UNIT ADDENDUM

A1.7 Resistor Layout Drawings

Open Assembly
(Approx. Weight 38 lbs)

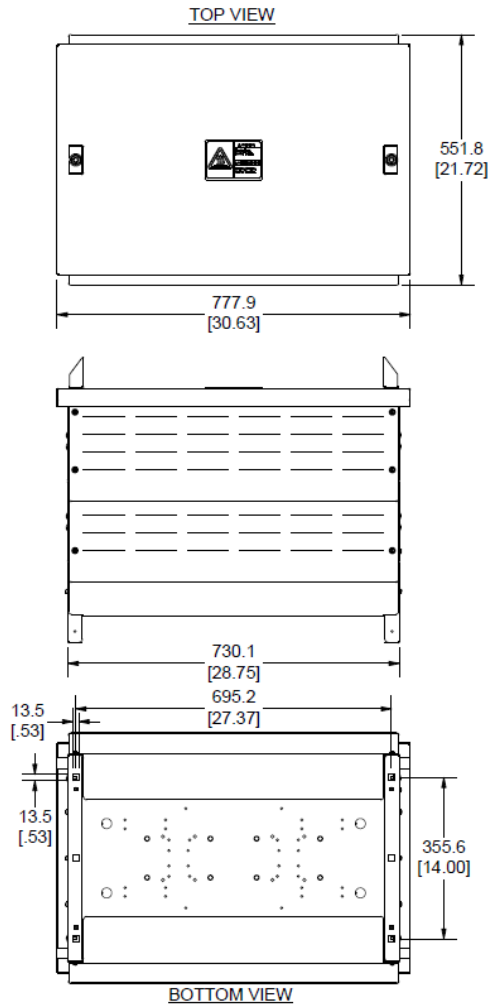


Typical Indoor Enclosure
(Approx. Weight 54 lbs)

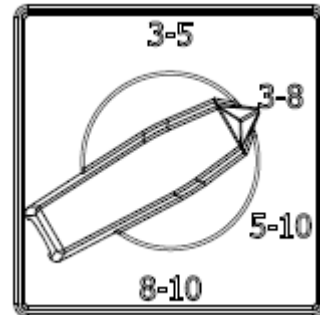


SMARTPULSE™ OEM KIT / WALL-MOUNT UNIT ADDENDUM

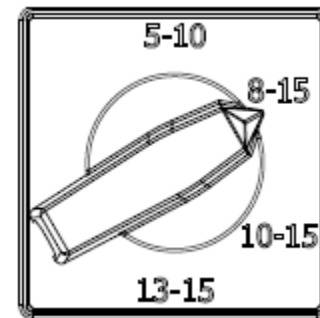
Outdoor Enclosure (Approx. Weight 85 lbs)



NGRSW DETAIL



3-10 Amp Switch



5-15 Amp Switch

TBR Detail

