SMARTPULSE™
Feeder Monitoring System

FMS Addendum
Installation Instructions


Post Glover
"The Resistor Specialists"

PGR Document #HR520-25
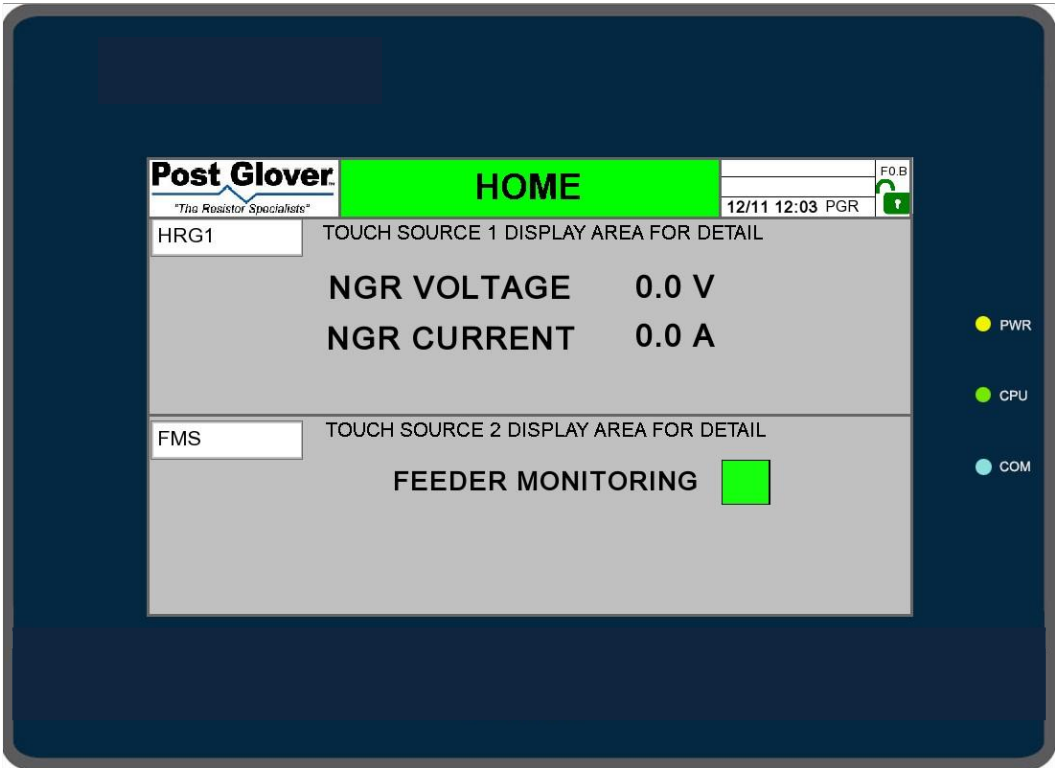
Section 1 – Equipment Overview

1.1 Interior View – FMS Control Panel

In addition to the equipment listed in the Operations and Maintenance manual, there is an additional control panel in the bottom compartment of the unit. This addendum provides information on the additional controls and software functions.

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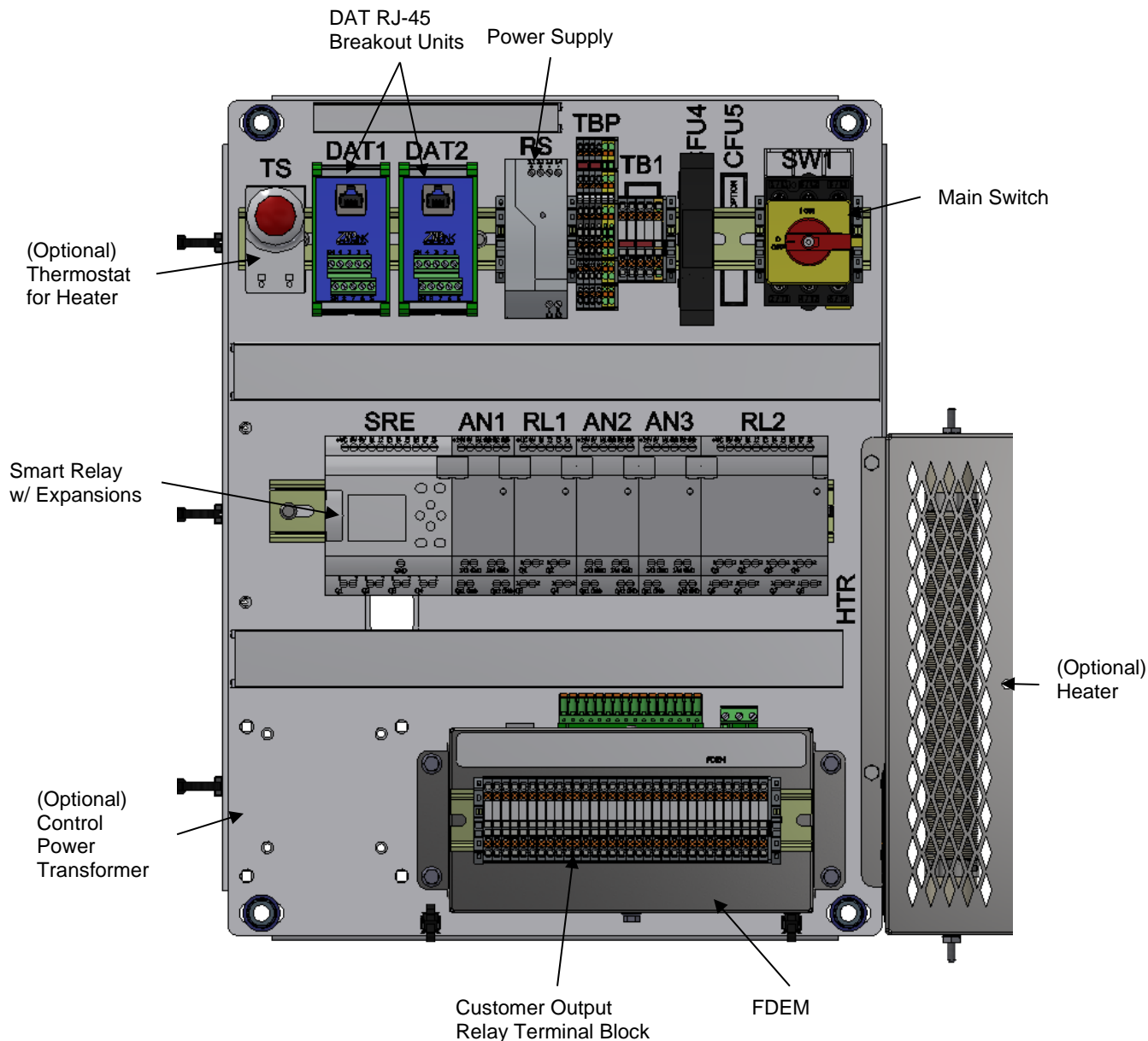
Section 2 – FMS Startup

2.1 FMS Settings

After completing the X0 Neutral Health Sensing page during the startup procedure (3.3.9 in the Operations and Maintenance Manual) the FMS Settings screens will be available. There will be two settings pages for 8 feeder units and four settings pages for 16 feeder units.

These setting pages will allow the Feeders to be re-named, the Alarm values to be set, and CT ratios to be entered.
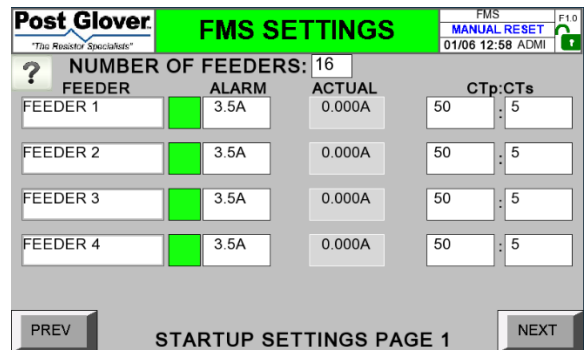
Section 3 – FMS Operational Descriptions

3.1 Home Screen

The HMI is used to monitor, set up, test, communicate, and provide diagnostic tools for the SmartPulse FMS. The HRG Functions and information about logging in/out of the HMI can be found in the Operations and Maintenance Manual.

The Home screen displays the NGR Voltage and Current on the top half of the screen and shows the status of the Feeder Monitoring System on the bottom half. If the box next to "Feeder Monitoring" is green, then all feeders are reading current values below their Alarm value. If the box next to "Feeder Monitoring" is red, then at least one of the feeders has a current reading above its set Alarm value.
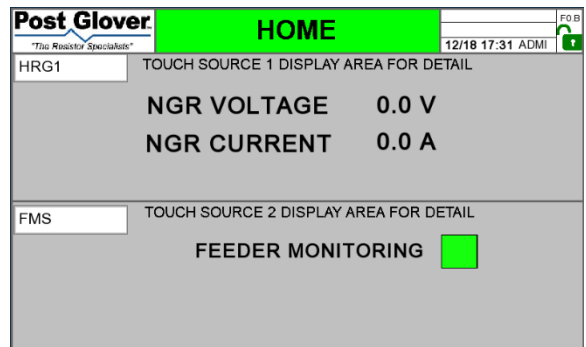
3.2 FMS System Screen

The FMS System screen will show each feeder, its status, and the current through the feeder. The top of the screen shows the number of feeders currently in use. This number of feeders, each feeder's name, and the Alarm value can be changed on the settings screen (see 3.3 below).

If the box next to the feeder is green, then the current is below its Alarm value. If the box next to the feeder is red, then the current is above its Alarm value.

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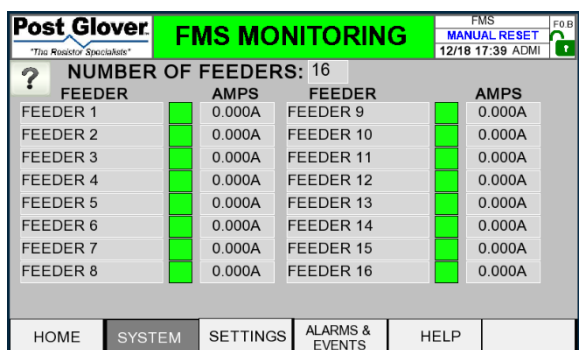
3.3 FMS Settings Screen

Just like Section 2.1 above, the FMS Settings screen will allow for the Feeder name, Alarm value, and CT ratio to be updated. There is also a field at the top for the Number of Feeders. There are 4 Feeders displayed per screen and the screens can be changed using the Page buttons at the top right corner of the screen. A maintenance level login is required.

3.4 FMS Alarms & Events

3.4.1 Alarms Screen

This table displays the historical data of alarms on the system. The Date, Time, Feeder, and Current at the time of alarm will be displayed. It is capable of recording 200 alarms with FIFO alarm management. They are arranged chronologically with the most recent alarm appearing on top. Once alarm conditions have been cleared from a unit the data table can be cleared by pressing the CLEAR ALARMS button. An administrator level login is required.

3.4.2 Events Screen

This table displays the historical data of events that have occurred on the FMS. It is capable of recording 200 events with FIFO event management. They are arranged chronologically with the most recent event appearing on top. The events table can be cleared by pressing the CLEAR button. An administrator level login is required.

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Section 4 – FMS Customer Connections

In this section, the control power, current transformer and alarm output terminal block wiring requirements are listed:

Control power wiring, with CPT						
Terminal 1	**Termination 1**	**Terminal 2**	**Termination 2**	**Wire Temp**	**Wire Size**	**Wire Color**
SW1-3	Ferrule / 0.5 in. wire strip	Swgr. L2	By customer	60/75C	#12-6	By customer
SW1-5	Ferrule / 0.5 in. wire strip	Swgr. L3	By customer	60/75C	#12-6	By customer
Control power wiring, w/o CPT						
CFU5	Ferrule / 0.33 in. wire strip	120V Line	By customer	60/75C	#18-14	By customer
TB1-N	Ferrule / 0.33 in wire strip	120V Neutral	By customer	60/75C	#18-14	By customer

FDEM and TB2 wiring						
Terminal 1	**Termination 1**	**Terminal 2**	**Termination 2**	**Wire Temp**	**Wire Size**	**Wire Color**
R1+ - R16+	Ferrule / 0.33 in. wire strip		By customer	60/75C	#18-14	By customer
R1- - R16-	Ferrule / 0.33 in. wire strip		By customer	60/75C	#18-14	By customer
ZSCT#-X1	Ferrule / 0.33 in. wire strip	CT-X1	By customer	60/75C	#14-12	By customer
ZSCT#-X2	Ferrule / 0.33 in. wire strip	CT-X2	By customer	60/75C	#14-12	By customer