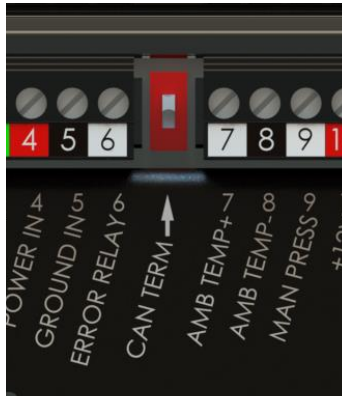
WIRING DIAGRAMS

CONTENTS

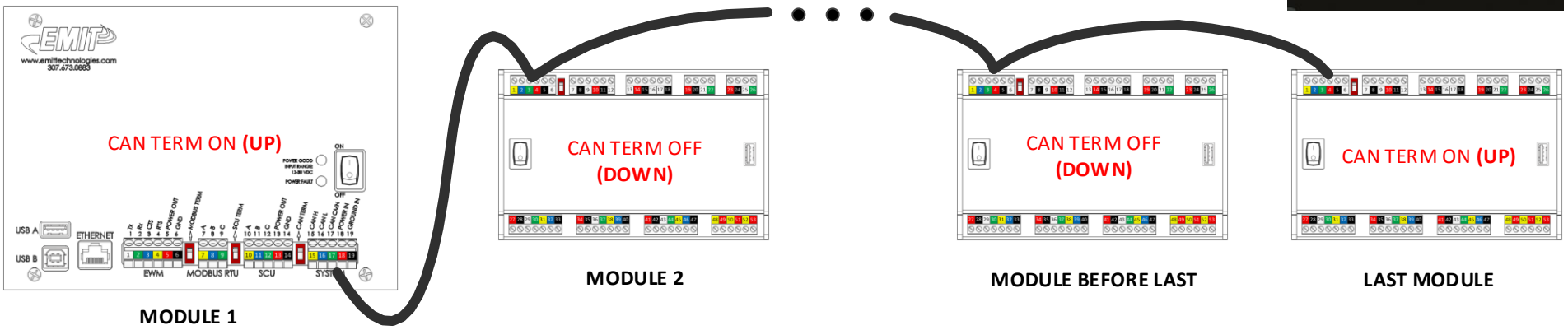
Page 1 – Cover and multiple-module wiring
Page 2 – EMIT Interface Module (EIM) Wiring
Page 3 – AFRC Lite (AFRCL) Wiring
Page 4 – Emissions Management Device (EMD) Wiring
Page 5 – AFRC Advanced (AFRCA) Wiring
Page 6 – AFRC Advanced v0100 (AFRCAv0100) Single Bank Wiring

INSTALLATIONS WITH MULTIPLE MODULES (CAN TERMINATION)

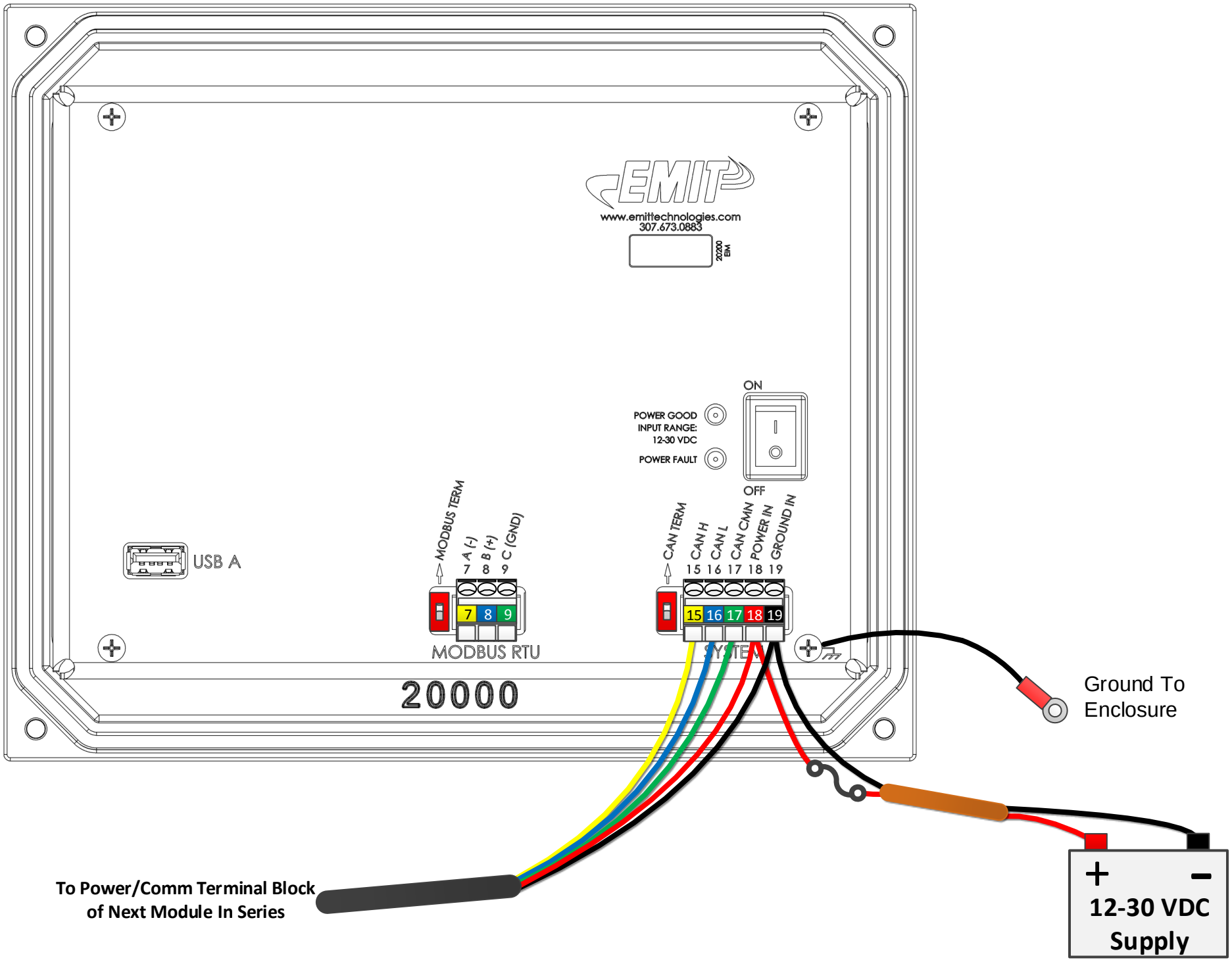


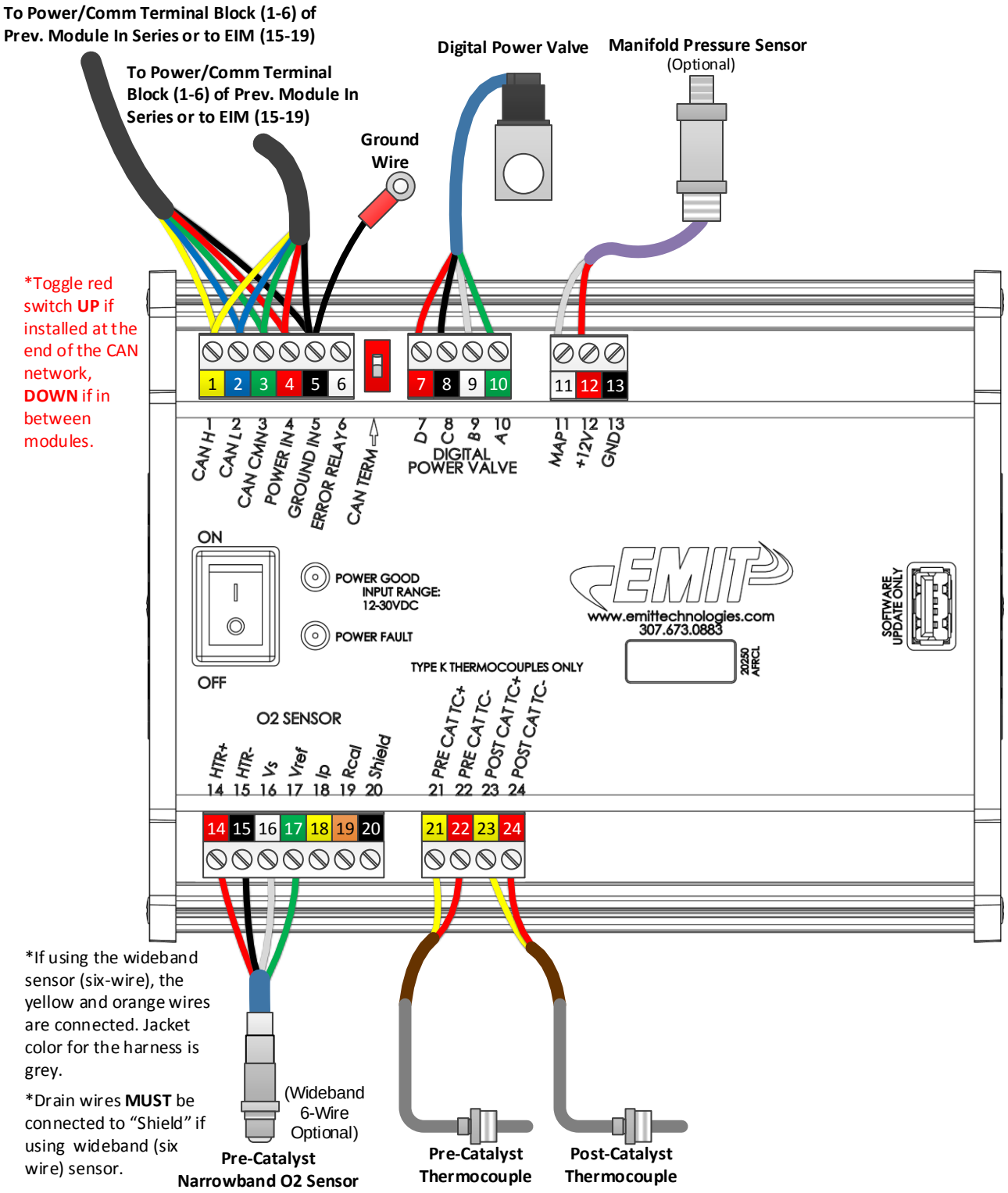
Installations that include more than two ETS modules require that switch settings on the individual modules be set appropriately. Failing to set the switches may result in faulty communication between the modules and may display erroneous data on the EIM screen.

The communication protocol between the EIM and the individual modules operates on a daisy chain topology. The protocol requires that the modules on both ends of the communication network be terminated (switched up), while the modules in between remain unterminated (switched down).



Termination of the module is selectable by sliding the red switch next to the module's power and communication connecter in the up position. The up, or terminated, position is defined by the arrow displayed on the cover next to the switch.


www.emittechnologies.com
307.673.0883
20200
EIM
ON
OFF
POWER GOOD
INPUT RANGE:
12-30 VDC
POWER FAULT
USB A
MODBUS TERM
A (-)
B (+)
C (GND)
7 8 9
MODBUS RTU
CAN TERM
CAN H
CAN L
CAN CMN
POWER IN
GROUND IN
15 16 17 18 19
SYSTEM
20000
Ground To
Enclosure
To Power/Comm Terminal Block
of Next Module In Series
+
-
12-30 VDC
Supply



TOP CONNECTORS

1 – CAN H
2 – CAN L
3 – CAN Common
4 – Power In
5 – Ground In
6 – Error Relay

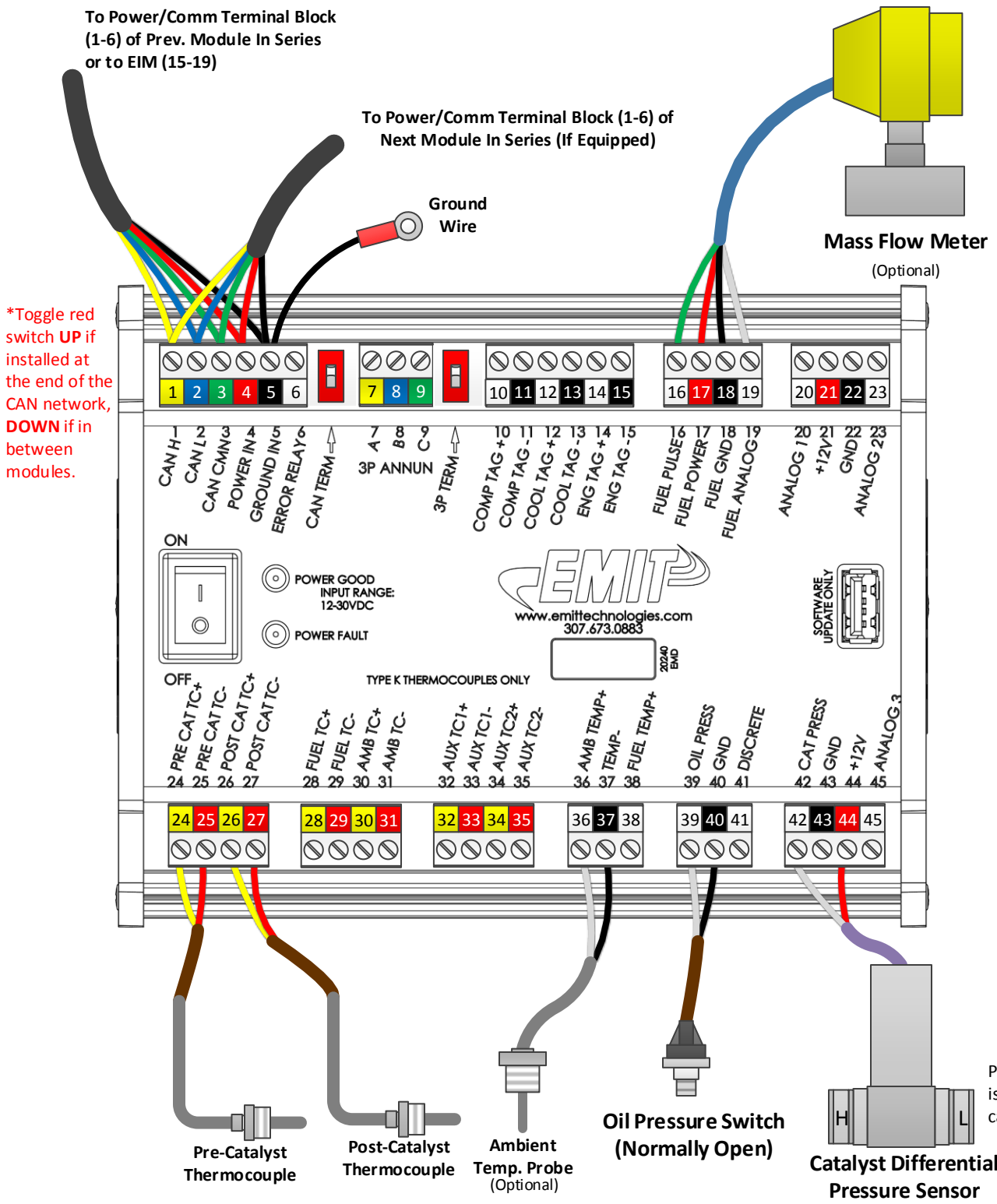
7 – Valve D
8 – Valve C
9 – Valve B
10 – Valve A

11 – Manifold Pressure (MAP)
12 – Analog +12V Power
13 – Analog Ground

BOTTOM CONNECTORS

14 – O2 H+
15 – O2 H-
16 – O2 Vs
17 – O2 Vref
18 – O2 Ipump
19 – O2 Rcal
20 – O2 Shield

21 – Pre-Cat TC+
22 – Pre-Cat TC-
23 – Post-Cat TC+
24 – Post-Cat TC-



TOP CONNECTORS

1 – CAN H
2 – CAN L
3 – CAN Common
4 – Power In
5 – Ground In
6 – Error Relay

7 – RS-485 A
8 – RS-485 B
9 – RS-485 C

10 – Compressor Tag+
11 – Compressor Tag-
12 – Cooler Tag+
13 – Cooler Tag-
14 – Engine Tag+
15 – Engine Tag-

16 – Flow Pulse
17 – Fuel Flow Power
18 – Fuel Flow Ground
19 – Fuel Flow Analog

20 – Analog1 Input
21 – Analog +12V Power
22 – Analog Ground
23 – Analog2 Input

BOTTOM CONNECTORS

24 – Pre-Cat TC+
25 – Pre-Cat TC-
26 – Post-Cat TC+
27 – Post-Cat TC-

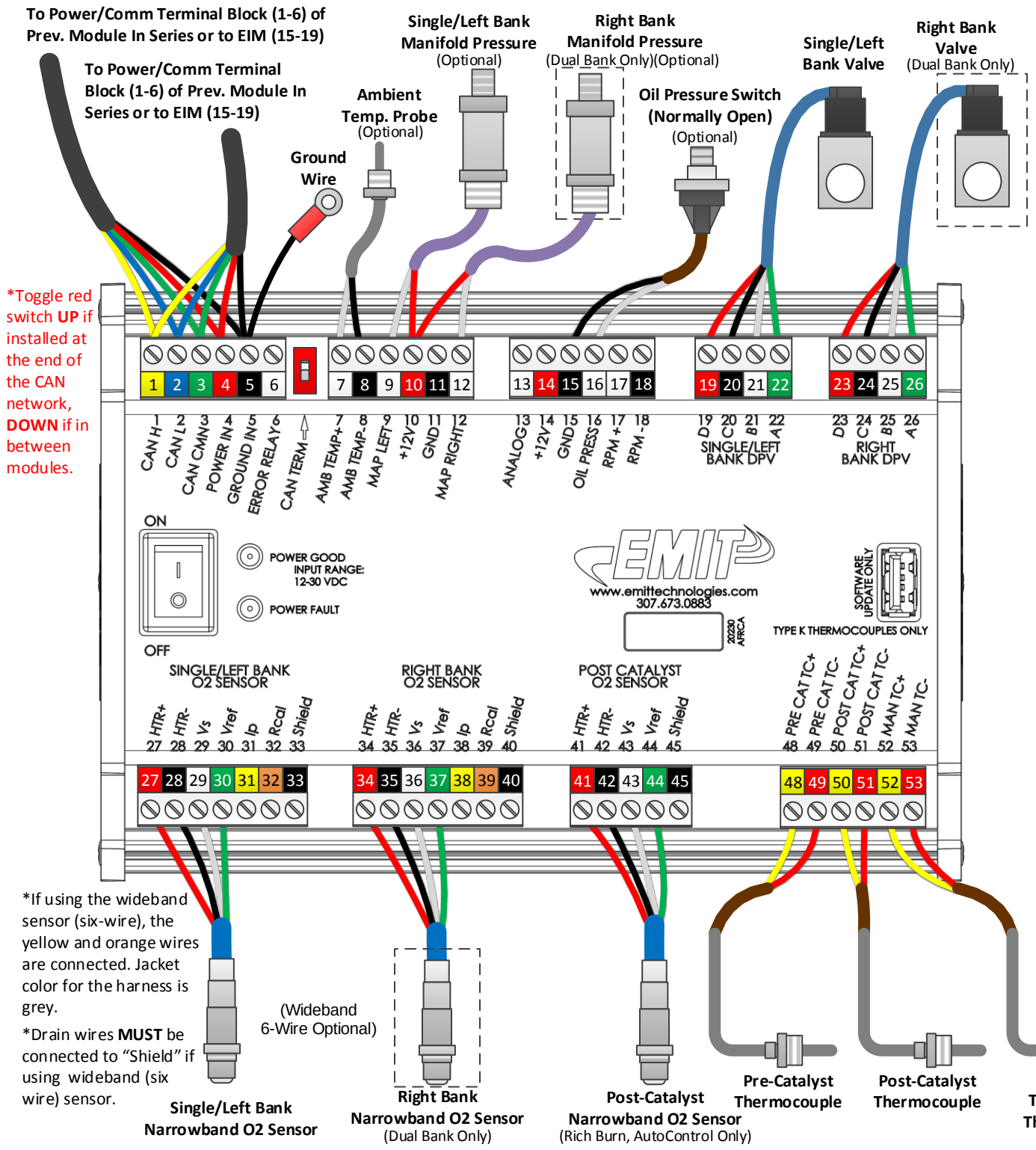
28 – Fuel TC+
29 – Fuel TC-
30 – Ambient TC+
31 – Ambient TC-

32 – Auxiliary1 TC+
33 – Auxiliary1 TC-
34 – Auxiliary2 TC+
35 – Auxiliary2 TC-

36 – Ambient Thermistor
37 – Thermistor Ground
38 – Fuel Thermistor

39 – Oil Pressure Switch
40 – Discrete Ground
41 – Discrete Switch

42 – Cat Pressure Input
43 – Analog Ground
44 – Analog +12V Power
45 – Analog3 Input



TOP CONNECTORS

1 – CAN H
2 – CAN L
3 – CAN Common
4 – Power In
5 – Ground In
6 – Error Relay

7 – Ambient Thermistor +
8 – Ambient Thermistor -
9 – Left Manifold Pressure
10 – +12V Sensor Power
11 – Sensor Ground
12 – Right Manifold Press.

13 – Analog Input
14 – +12V Analog Power
15 – Analog Ground
16 – Oil Pressure Switch
17 – RPM+ Pulse Input
18 – RPM- Pulse Input

19 – Left Valve D
20 – Left Valve C
21 – Left Valve B
22 – Left Valve A

23 – Right Valve D
24 – Right Valve C
25 – Right Valve B
26 – Right Valve A

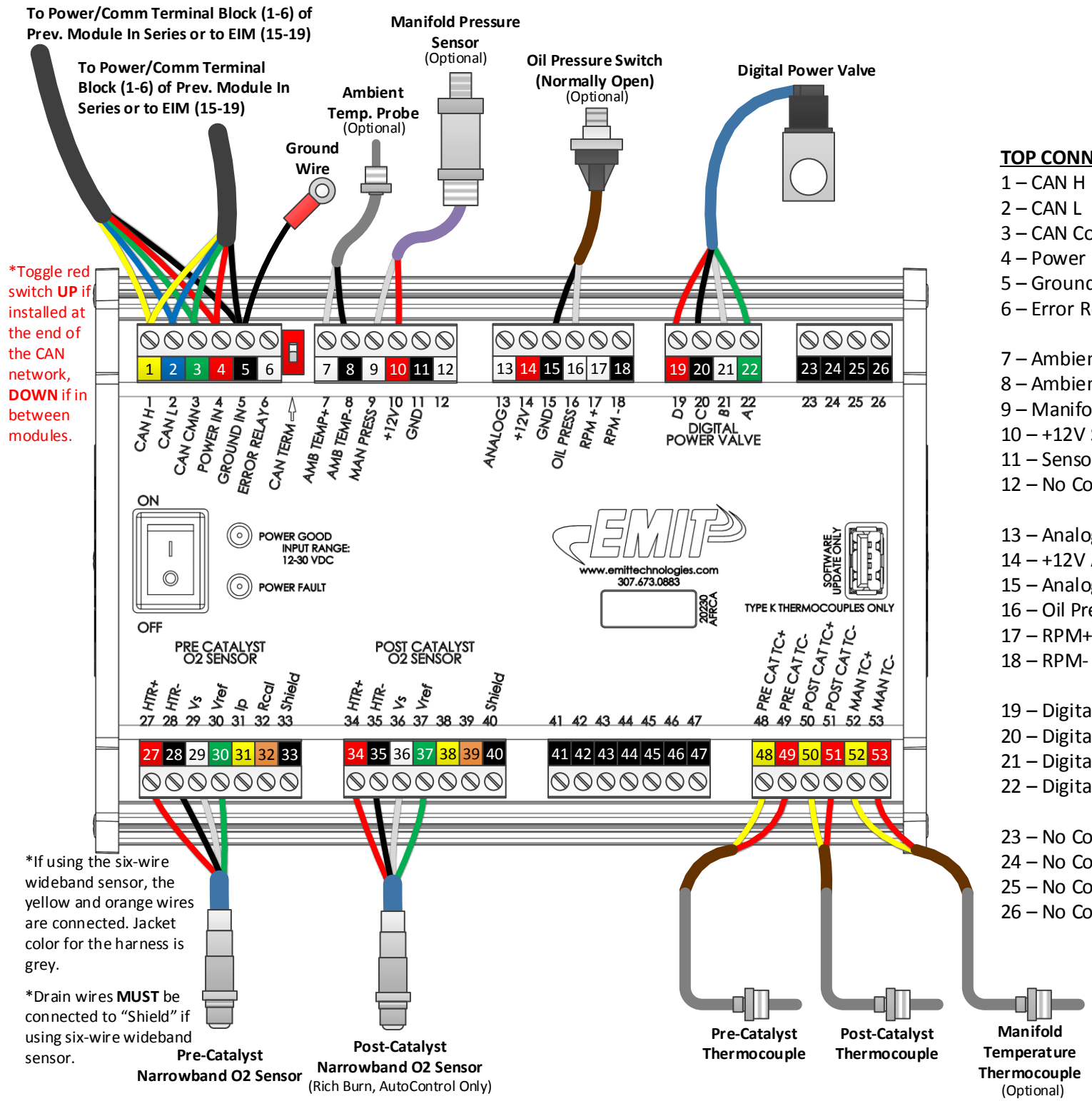
BOTTOM CONNECTORS

27 – Left O2 H+
28 – Left O2 H-
29 – Left O2 Vs
30 – Left O2 Vref
31 – Left O2 Ipump
32 – Left O2 Rcal
33 – Left O2 Shield

34 – Right O2 H+
35 – Right O2 H-
36 – Right O2 Vs
37 – Right O2 Vref
38 – Right O2 Ipump
39 – Right O2 Rcal
40 – Right O2 Shield

41 – Post O2 H+
42 – Post O2 H-
43 – Post O2 Vs
44 – Post O2 Vref
45 – Post O2 Ipump
46 – Post O2 Rcal
47 – Post O2 Shield

48 – Pre-Catalyst TC+
49 – Pre-Catalyst TC-
50 – Post-Catalyst TC+
51 – Post-Catalyst TC-
48 – Manifold TC+
48 – Manifold TC-



TOP CONNECTORS	BOTTOM CONNECTORS
1 – CAN H	27 – Pre-Cat O2 H+
2 – CAN L	28 – Pre-Cat O2 H-
3 – CAN Common	29 – Pre-Cat O2 Vs
4 – Power In	30 – Pre-Cat O2 Vref
5 – Ground In	31 – No Connect
6 – Error Relay	32 – No Connect
	33 – Shield
7 – Ambient Thermistor +	
8 – Ambient Thermistor -	34 – Post-Cat O2 H+
9 – Manifold Pressure Sensor	35 – Post-Cat O2 H-
10 – +12V Sensor Power	36 – Post-Cat O2 Vs
11 – Sensor Ground	37 – Post-Cat O2 Vref
12 – No Connect	38 – No Connect
	39 – No Connect
13 – Analog Input	40 – Shield
14 – +12V Analog Power	
15 – Analog Ground	41 – No Connect
16 – Oil Pressure Switch	42 – No Connect
17 – RPM+ Pulse Input	43 – No Connect
18 – RPM- Pulse Input	44 – No Connect
	45 – No Connect
19 – Digital Power Valve D	46 – No Connect
20 – Digital Power Valve C	47 – No Connect
21 – Digital Power Valve B	
22 – Digital Power Valve A	48 – Pre-Catalyst TC+
	49 – Pre-Catalyst TC-
23 – No Connect	50 – Post-Catalyst TC+
24 – No Connect	51 – Post-Catalyst TC-
25 – No Connect	48 – Manifold TC+
26 – No Connect	48 – Manifold TC-