

VECTOR FIELD CONTROL UNIT

The following items for the VECTOR may be ordered:

Accessories:

Calibration Magnet, P/N 120-0076
RS-485 to USB Converter, P/N 260-0021
HART Connection Cable, P/N 260-0009

Detectors:

PGU Sensor Assembly-Methane, P/N 100-0015-C1
PGU Sensor Assembly-Propane, P/N 100-0015-C3
PGU Sensor Assembly-Carbon Monoxide, P/N 100-0015-CO
PGU Sensor Assembly-Carbn Dioxide, P/N 100-0015-CO2
PGU Sensor Assembly-Hydrogen, P/N 100-0015-H2
PGU Sensor Assembly-Hydrogen Sulfide, P/N 100-0015-H2S
PGU Sensor Assembly-Ammonia, P/N 100-0015-NH3
PGU Sensor Assembly-Oxygen, P/N 100-0015-O2
PGU Sensor Assembly-Sulfur Dioxide, P/N 100-0015-SO2
PGU Sensor Assembly-Nitrogen Dioxide, P/N 100-0015-NO2

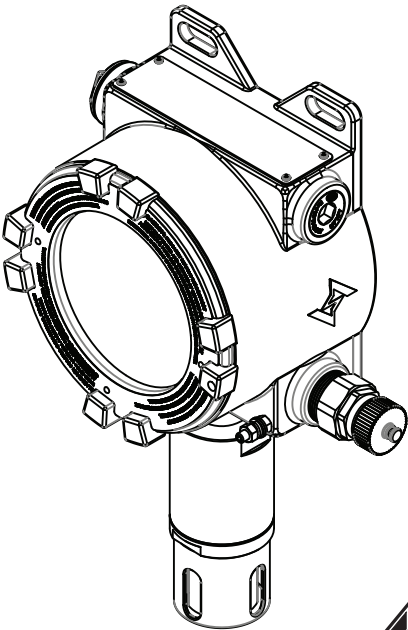
For applications not listed above, please contact ESP Safety

Contact ESP Safety:

USA

555 North First Street
San Jose, CA 95112
USA
Tel: (408) 886-9746
Fax: (408) 668-0848
email: info@espsafetyinc.com

VECTOR Field Control Unit, P/N 100-0008
PGU Sensor Assembly, P/N 100-0015-xx



This Quick Start Guide provides basic guidelines for mechanical and electrical installation of the VECTOR Field Control Unit in preparation for product startup. For detailed testing, troubleshooting and operation instructions, refer to the VECTOR Operating Manual.

The VECTOR Operating Manual can be downloaded from the ESP Safety website: www.espsafetyinc.com

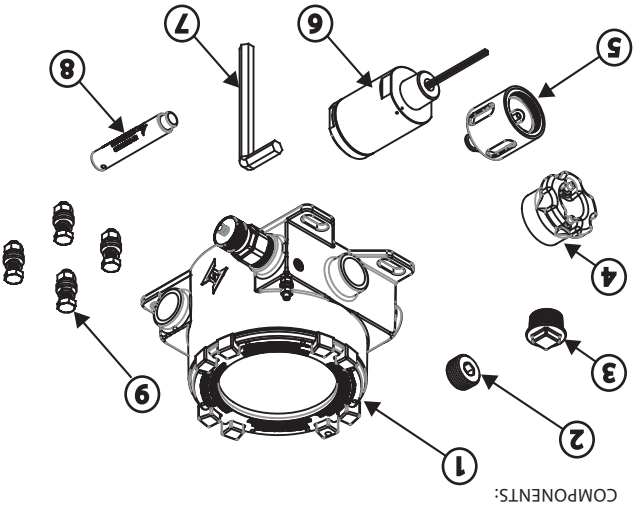
Prior to startup of the VECTOR Filed Control Unit, review that the following have been completed:

Pre Startup Checklist:

1. Verify that the VECTOR has been properly mounted.
2. Verify that all conduit/cable gland entries have been tightened and sealed, if necessary
3. Verify that all sensor wiring has been installed correctly.
4. Verify that the enclosure is properly earth-grounded.
5. If using a remotely located gas detector(s), verify that the connections between the VECTOR and the gas detector(s) are secure and functional.
6. Verify that the Vector cover is securely fastened.
7. Disconnect or power down all output devices and alarms to prevent false actuation during functional testing.

The typical VECTOR delivery set consists of the following components

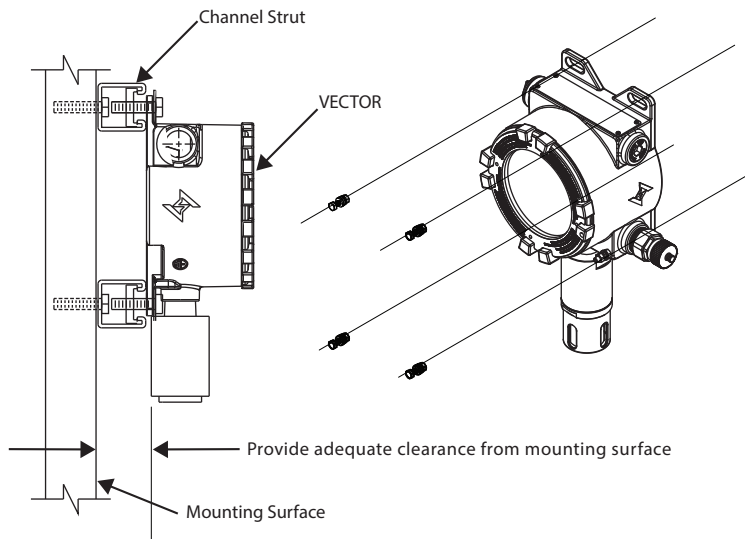
1. VECTOR Field Control Unit (Qty 1), P/N 100-0008
2. 3/4" NPT Threaded Plug (Qty 1), P/N 420-0210
3. 3/4" NPT Threaded Plug w Raised Head (Qty 1), P/N 125-0015
4. PGU Calibration Cup (Qty 1), P/N 120-0015-01 *one provided per 1-10 VECTOR
5. PGU Protective Cap (Qty 1), P/N 125-0007
6. PGU Sensor Assembly (Qty 1), 100-0015-xx
7. 10mm Hex Wrench (Qty 1), P/N 120-0078 *one provided per 1-10 VECTOR
8. Calibration Magnet, (Qty 1), P/N 120-0076 *one provided per 1-10 VECTOR
9. Mounting Hardware, P/N 125-0020



VECTOR FIELD CONTROL UNIT QUICK INSTALLATION GUIDE

MECHANICAL INSTALLATION:

1. Secure mounting bracket to a stable surface using the VECTOR's integral mounting lugs



2. Provide a minimum 1.5" clearance between the VECTOR and the mounting surface.
3. Orient the VECTOR with the sensor assembly (PGU) at the 6-o'clock position (pointed down).

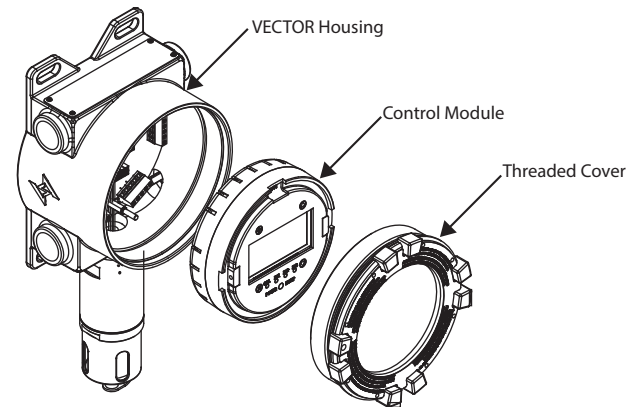
Additional mounting details can be found on page 13 of the VECTOR Operating Manual.

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ELECTRICAL INSTALLATION:

Access the Vector terminal board

1. Remove the VECTOR's threaded front cover by turning counter-clockwise.



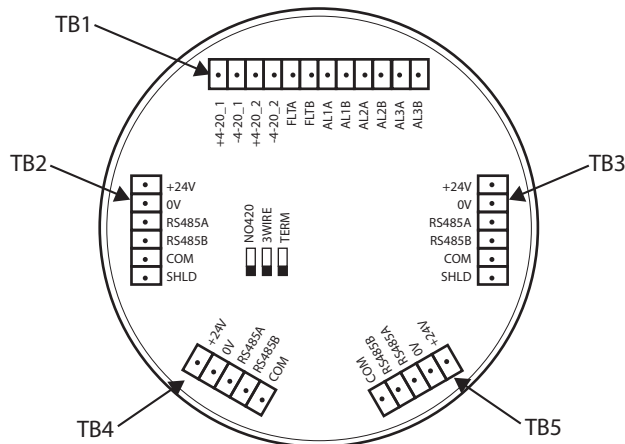
2. Separate the Control Module from the Terminal Board.
3. Connect wiring to the appropriate locations on the Terminal Board.
4. When completed, reattach the Control Module to the Terminal Board. Ensure that the control module is fully seated.
5. Run the earth ground wire to the external ground stud on the detector cover.

Additional wiring details can be found on pages 14-19 of the VECTOR Operating Manual.

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ELECTRICAL INSTALLATION:

VECTOR Terminal Board



TERMINAL BLOCK TB1	LABEL	FUNCTION
TB1-1	+4-20_1	Channel 1 +4-20mA output (sourcing)
TB1-2	-4-20_1	Channel 1 4-20mA loop common
TB1-3	+4/20_2	Channel 2 +4-20mA output (sourcing)
TB1-4	-4/20_2	Channel 2 4-20mA loop common
TB1-5	FLTA	Fault contact
TB1-6	FLTB	Fault contact
TB1-7	AL1A	Alarm Level 1 contact
TB1-8	AL1B	Alarm Level 1 contact
TB1-9	AL2A	Alarm Level 2 contact
TB1-10	AL2B	Alarm Level 2 contact
TB1-11	AL3A	Alarm Level 3 contact
TB1-12	AL3B	Alarm Level 3 contact

TERMINAL BLOCK TB2	LABEL	FUNCTION
TB2-1	+24V	+24VDC power in
TB2-2	0V	+24VDC supply return (common/GND)
TB2-3	RS485A	RS-485A RTU connection
TB2-4	RS485B	RS-485B RTU connection
TB2-5	COM	RS-485 common
TB2-6	SHLD	Shield

TERMINAL BLOCK TB3	LABEL	FUNCTION
TB3-1	+24V	+24VDC power in
TB3-2	0V	+24VDC supply return (common/GND)
TB3-3	RS485A	RS-485A RTU connection
TB3-4	RS485B	RS-485B RTU connection
TB3-5	COM	RS-485 common
TB3-6	SHLD	Shield

TERMINAL BLOCK TB4	LABEL	FUNCTION
TB4-1	+24V	+24VDC power to sensor
TB4-2	0V	+24VDC sensor GND
TB4-3	RS485A	Sensor RS-485A connection
TB4-4	RS485B	Sensor RS-485B connection
TB4-5	COM	Sensor RS-485 common

TERMINAL BLOCK TB5	LABEL	FUNCTION
TB5-1	+24V	+24VDC power to sensor
TB5-2	0V	+24VDC sensor GND
TB5-3	RS485A	Sensor RS-485A connection
TB5-4	RS485B	Sensor RS-485B connection
TB5-5	COM	Sensor RS-485 common

Additional wiring details can be found on pages 14-19 of the VECTOR Operating Manual.

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