

VRU Pro™ Controller Panel

Vapor Recovery Unit

The VRU Pro Controller Panel is designed specifically for tank battery vapor recovery compressors. This full-featured vapor recovery controller can be panel-mounted as a standalone application or integrated with EICS® or AFR1/9/64 package, thus creating an off-the-shelf standardized panel solution for your application needs.

Features of the VRU Pro Controller include:

- Comprehensive signal monitoring and control
- Automatic start and stop based on suction pressure
- Driver speed / recycle valve / bypass valve / capacity slide valve / 2 stage poppet control options using 3 PID loops monitoring suction pressure, discharge pressure and driver load
- Fit for purpose, multifunction I/O including analog inputs / outputs and thermocouple inputs
- Engine / electric motor monitoring and protection features are selectable
- CAN SAE J1939 engine communications with option to adjust speed via TSC1 messages
- Setup configurable through keypad
- CSA C1D2 hazardous-area rated; standard
- Modbus RTU monitoring and remote control ready (RS-485)

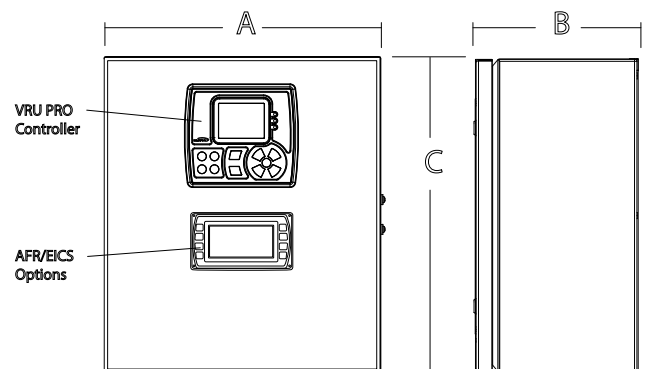
The controller keeps the compressor in a ready-to-start condition until tank pressure reaches a preset level. At that point, it starts the compressor to recover the vapors and draws pressure back down to the set point, when it then turns off the compressor.

It's designed to utilize either AC or DC power. The controller is equipped with 18 fit-for-purpose fixed digital, analog, thermocouple and frequency inputs and nine field-effect transistor (FET) and analog outputs.

The VRU Pro Controller pairs with single stage reciprocating, screw or scroll compressors and is certified for CSA Class I, Division 2 hazardous-area operations.



Panel Dimensions



	Standard	AFR1/9/64	EICS
A	20"	24"	24"
B	9"	9"	9"
C	20"	24"	24"

Option:

A 30-inch stand is available with a 24 x 24-inch panel.

Specifications

Electrical

Display: 3.8 in. monochrome, transfective, white backlight LCD

Operating Voltage: DC 12 or 24 VDC, protected against reverse battery polarity and load-dump

Power Consumption: 18 W max

Communications

1-CAN: J1939

USB: 2.0B (Only supported for programming)

RS485: Modbus RTU slave

Connection: Delphi SICMA 90-way connector, 1.5 mm

Keyboard: 11 tactile, feedback buttons

Inputs

8-Digital Inputs: Active high (+DC) or Active low (DC-)

5-Analog Inputs: 4-20 mA

4-Thermocouple Inputs: Type J or K

1-Frequency Input: Supporting magnetic pickup (2 Hz – 10 KHz, 3.6 VAC – 120 VAC)

Outputs

7-FET Outputs: 1.5 A DC- (sinking)

2-Analog Output: 4-20 mA

Real-Time Clock: With battery backup

Environmental

Operating Temperature: -40° F to 185° F (-40° C to 85° C)

Storage Temperature: -40° F to 185° F (-40° C to 85° C)

Protection: IP67 front and back, when using accessory gasket and properly mounted, the panel seal retains IP66

Emissions: SAE J1113

Immunity: SAE J1113

Vibration: Random vibration, 7.86 Grms (5-2000 Hz), 3 axes

Shock: ± 50 G in axis

Mechanical

Case Material: Polycarbonate/ABS

Keypad/Gasket Material: Silicone

Approvals

VRU Pro Controller: CSA, CLASS 1, DIVISION 2, Groups B, C and D certifications

Panel: Certification at request

Panel Package Options



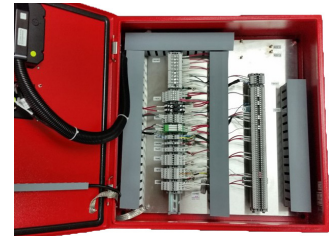
VRU Pro with DC Power



VRU Pro with AC Power



VRU Pro with AFR Option



VRU Pro with EICS Option

How to Order

The VRU Pro is sold as a standard panel configuration. The items listed here are for replacement service parts.

Part Number	Model and Description	Notes
50703841	VRU Pro Controller	Included in panel
50001188	VRU Pro Harness	
40000566	Programming Harness	
40051031	IP66 Panel Gasket	
53702325	RS485 PC Interface Kit	
For VRU Pro Panel and Panel Stand options, find your FW Murphy distributor at www.fwmurphy.com		

NOTE: Panel certification available upon request for additional fee.