

# VRU Pro™ Controller Vapor Recovery Unit

The VRU Pro controller is designed specifically for vapor recovery applications. This flexible, out-of-the-box solution pairs with single-stage reciprocating, screw or scroll compressors in vapor recovery.

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.

The controller panels can be ordered with AC or DC power options. The controller operates on DC 12 or 24 VDC and 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 is certified for CSA Class I, Division 2 hazardous-area operations.

## 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

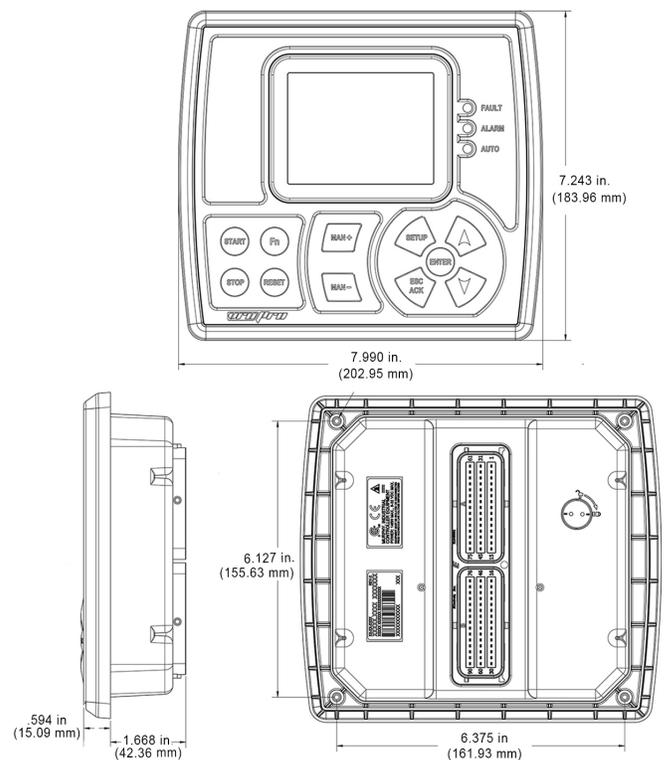
**Connection:** Delphi SICMA 90-way connector, 1.5 mm

**Keyboard:** 11 tactile, feedback buttons

(See next page)



## Dimensions



## Specifications (continued)

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### 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

CSA, CLASS 1, DMSION 2, Groups B, C and D certifications

## How to Order

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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	
50001188	VRU Pro Harness	