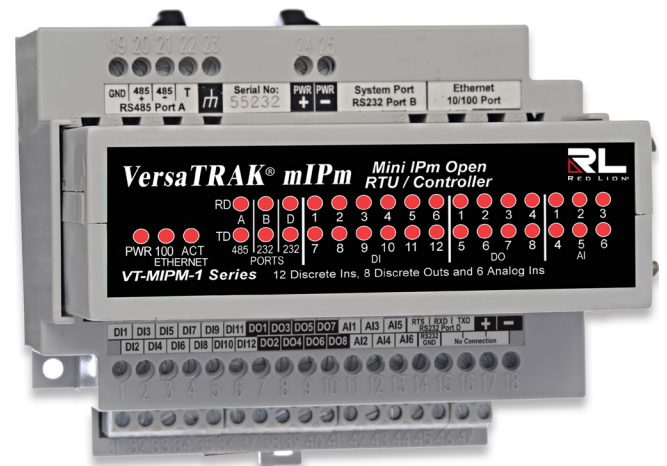


# VersaTRAK mIPm

## Sixnet® Series Industrial RTU

The VT-MIPM industrial controller with onboard I/O is ideal for advanced automation environments. Available with communication ports, on-board I/O options, Class I Division 2, and an operating temperature range of -40 to 70 °C T<sub>AMB</sub>. Our industrial RTUs provide the control required for today's toughest industrial applications. A robust IEC 61131 programming and configuration environment in Red Lion Workbench enables extensive programming and troubleshooting. Features include:

- Datalogging and timestamping, trending, alarm logging, and sequence of events
- Standalone control of remote sites IEC 61131 Red Lion Workbench and high level C programming
- Multi-user connectivity; 10/100 Ethernet plus up to 4 comm ports
- Advanced communication capabilities report on exception, store & forward, peer to peer
- True open system design, Ethernet TCP, Modbus, Linux® & more
- Small to large applications, scalable from 1 to 1,000+ stations
- Embedded Linux open source software, add applications, I/O drivers & much more
- An OEM's dream platform, pre-certified, add your application



## Ordering Guide

### Main Unit

Part Number	DI	DO	AI	AO	RS232	RS485	Ethernet
VT-MIPM-138-D	12	8	6	0	2	1	10/100
VT-MIPM-248-D	12	4	8	2	2	2	10/100

# VersaTRAK mIPm Specifications

## Specifications

### Performance Specifications

Industrial PowerPC: 333MHz (32 bit data bus)  
Operating system: embedded open-source Linux  
Dynamic memory (RAM): 512 MB for program execution, dynamic variables, dynamic file system, etc.  
Program memory (Flash): 512 MB for Linux OS, program storage and file system  
Retained memory (RAM): 8MB (battery-backed) for datalogging and retained variables  
Real-time clock battery-backed for time stamping and other operations  
I/O Expansion: RS-485 or Ethernet  
Sixlog datalogging support  
IEC 61131 programming, ISaGRAF for backward compatibility  
High Level C programming

### Red Lion Workbench (IEC 61131-3 Programming and Configuration)

Programming languages: LD, FBD, SFC, Free Form SFC, ST and IL  
Supports portable User Defined Function Blocks  
Data types supported: BOOL, BYTE, INT, DINT, DWORD, REAL, LREAL, TIME, STRING  
Datalogging  
Protocols: Modbus TCP/IP master and slave, distributed protocol and custom  
I/O transfers

### Ethernet Port

10 BASE-T/100 BASE-TX (auto-detecting)  
RJ45 connection (auto-crossover)  
Protocols TCP/IP, ARP, UDP, ICMP, DHCP, Telnet, SSH, Modbus/TCP, Sixnet UDR

### Serial Ports

Up to 115,200 baud  
RS-485 Port A Screws (485+, 485-, GND, T) 2-wire half-duplex  
RS-232 Port B RJ45 (TD, RD, CTS, RTS, CD, DTR, DSR, GND)  
RS-485 Port C (GND, 485+, 485-, T)  
RS-232 Port D Screws (TD, RD, RTS, GND)  
Protocols master and slave modes; Sixnet and Modbus RTU/ASCII;

### Discrete Inputs

12 channels sourcing or sinking (jumper/software selectable)  
Guaranteed ON voltage: 9 VDC  
Maximum voltage: 30 VDC  
Guaranteed OFF voltage: 5.0 VDC and 1.5 mA DC  
Input resistance and current: 10K ohms and 3 mA @ 24 VDC  
Filtered ON/OFF delay: 25 mS (20 Hz max. counting) for contact bounce filtering  
Fast ON/OFF delay: 4 mS (100 Hz max. counting)  
Count rate (see above) (10 KHz on channel 1 only)  
Counter modes: pulse, rate, and run time  
Poll time (all channels): 5 mS to 20 mS configuration dependent

### Discrete Outputs

Up to 8 channels – sourcing 10-30 VDC  
Min. and max. output load: 1 mA to 1 Amp sourcing per channel

Max. OFF state leakage: 0.05 mA  
Inrush current: 5 Amps (100 mS surge)  
Typical ON characteristics: 0.3 ohms resistance and 0.3 VDC voltage drop @ 1A  
Poll time (all channels): 5 mS to 20 mS configuration dependent

### Analog Inputs

Up to 8 channels  
Full scale range: 4-20 mA (both models); 0-5 VDC, 0-2 VDC, and 0-10 VDC (VT-MIPM-248-D only)  
A/D and input resolution: 16 bits (0.003%); 2 uA (current range) or 0.5 mV (voltage range)  
Full scale accuracy: +/-0.1% (@20 °C) (factory calibration)  
Span and offset temp. coeff.: +/-50 ppm per °C  
Input impedance: 100 ohm (current range), 80K ohm voltage  
Current protection: self-resetting fuses (for 4-20 mA range)  
DMRR (Differential Mode Rejection): 66 dB at 50/60 Hz  
CMRR (Common Mode Rejection): not applicable since analog inputs are single ended  
Fastest update time: 50 mS (both channels) – configurable for longer integration times for better noise filtering

### Analog Outputs

Up to 2 channels (4-20 mA)  
A/D resolution: 16 bits (0.003%)  
Full scale accuracy: +/-0.1% (@20 °C)  
Span and offset temp. coeff.: +/-50 ppm per °C  
Input impedance: 100 Ohm  
Current protection: self-resetting fuses  
DMRR: 66 dB at 50/60 Hz

### Environmental

Input power: 10-30 VDC  
Input current: 100 mA @ 24 VDC (typical)  
Operating temperature: -40 to 70 °C T<sub>AMB</sub>  
Storage temperature: -40 to 85 °C T<sub>AMB</sub>  
Humidity: 5% to 95% RH (non-condensing)  
Vibration: IEC 68-2-6

### Certifications & Compliances

Flammability: UL 94V-0 materials  
Electrical safety: UL 508, CSA C22.2/14; EN610101-1:2010; CE  
EMI emissions: FCC part 15, EN 61000-6-4:2007; EN 300 386 v1.5.1  
EMC immunity: EN 61000-6-2:2005  
Vibration: IEC 60068-2-6 Test Fc; 60870-2-2 Class Cm; IEC 60068-2-27  
Hazardous locations: ISA12.12.01, CSA C22.2/213, Class I, Division 2, Groups A, B, C, D  
ATEX (Zone 2) II 3 G, Ex nA T4A T<sub>AMB</sub> ≤ 70 °C  
**ABS Type Approval for Shipboard Applications**

### Mounting

DIN-rail or panel-mount

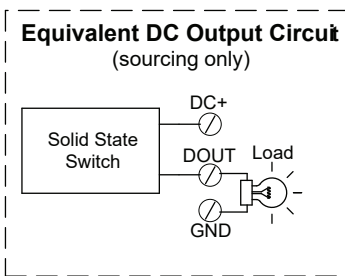
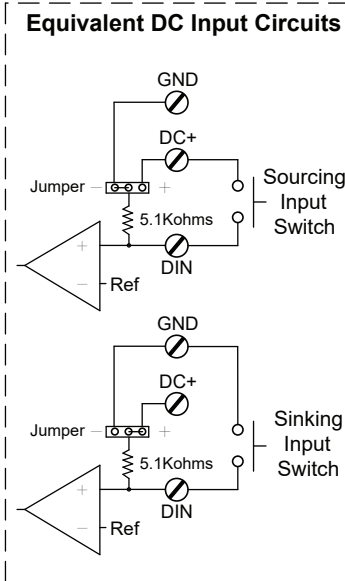
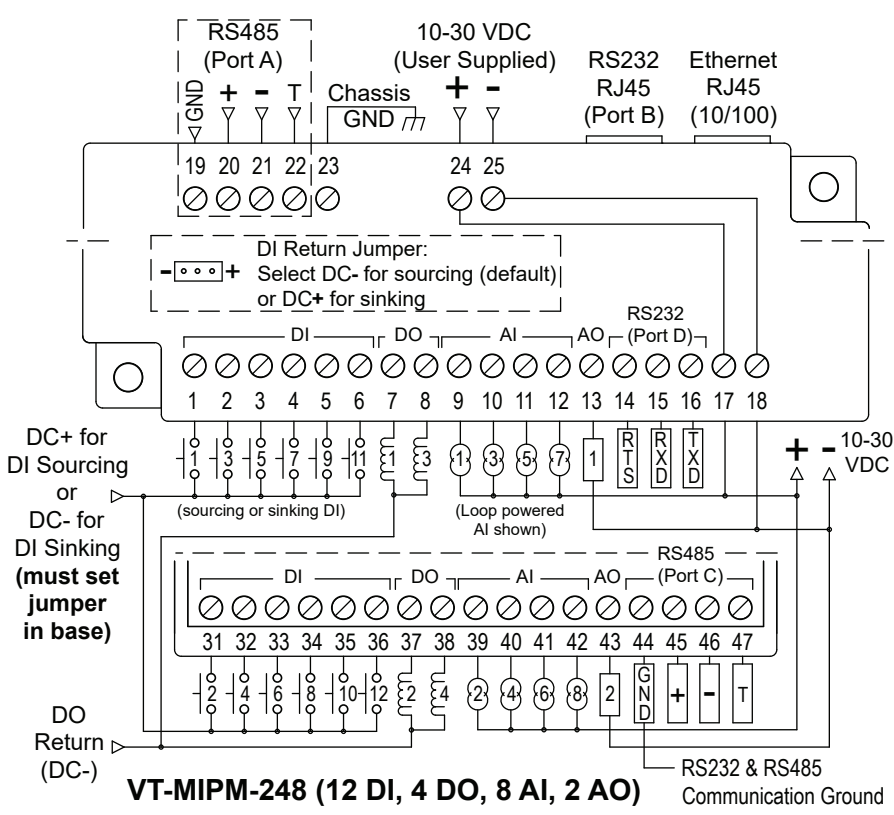
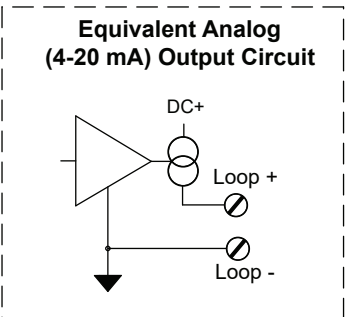
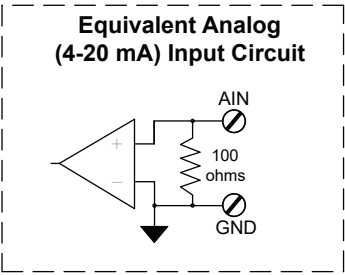
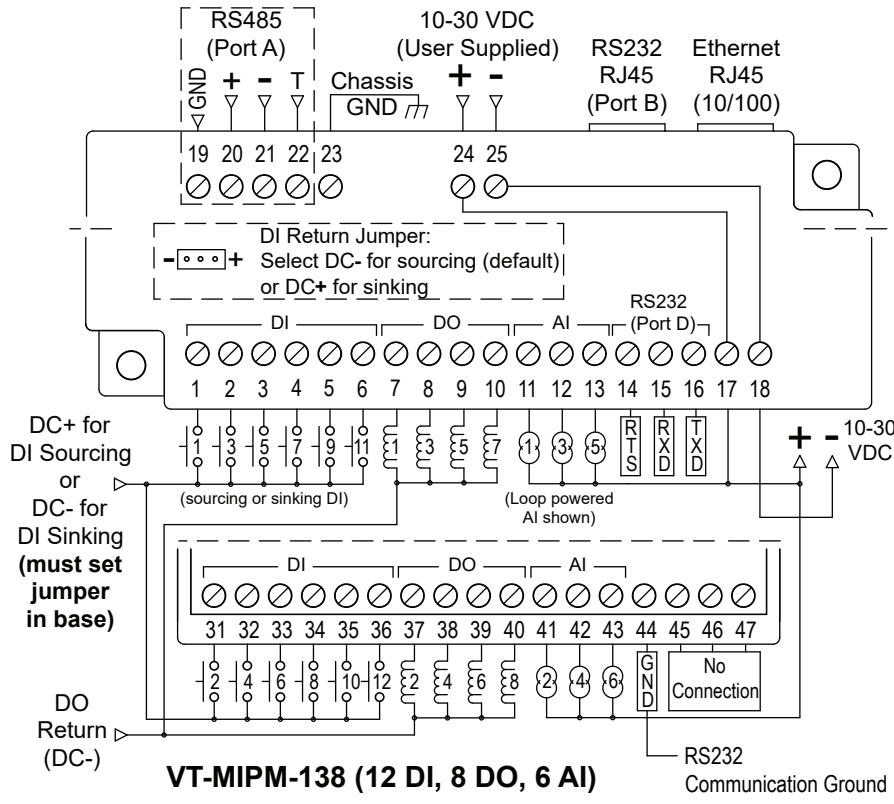
### Warranty

1 year on design and manufacturing defects.

Specifications are subject to change.  
Visit [www.redlion.net](http://www.redlion.net) for more information.

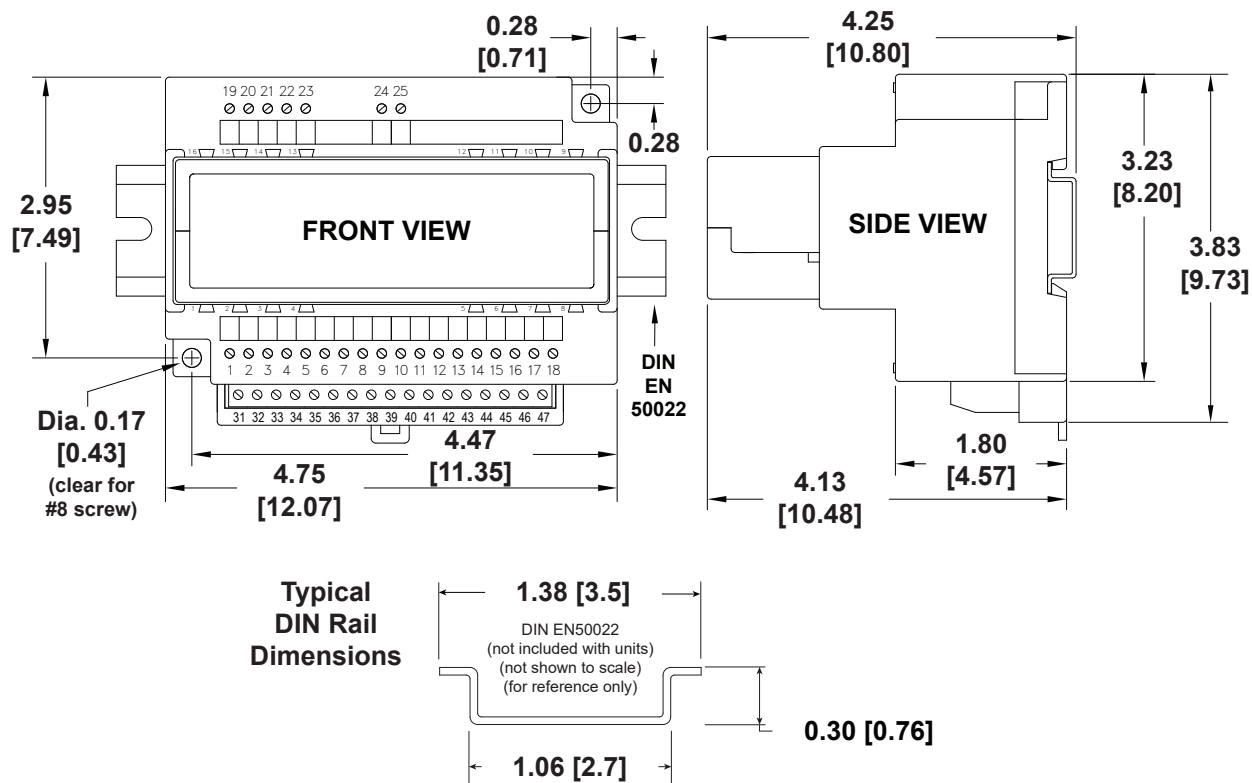
# VersaTRAK mIPm Wiring Diagram

## Wiring Diagram



# VersaTRAK mIPm Dimensions

## Dimensions In inches [cm]



[www.redlion.net](http://www.redlion.net)  
[contact us](#)

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