

## OVERVIEW

The **MPplus II MVC** Volume Corrector combines an ultra-low power processor and high accuracy digital transducer together make it the most accurate corrector produced by Eagle Research Corporation.

The **MPplus II MVC** is the perfect solution for natural gas distribution companies who are looking for a compact, robust, and user-friendly corrector to accommodate their measurement needs. The MVC starts with Eagle's all-new Ultra-Low Power processor contained in a lightweight, outdoor rated polycarbonate enclosure with a lockable, quick release latch. The MVC has a large easy to read LCD with flashing alarm indicator and magnetic scroll switch included. An optional scroll pad for navigating parameters and alarm acknowledgement is also available. The design of the Composite Vertical Index (CVI) allows for an easy selection of either CW or CCW meter rotations. The CVI is also available in bi-directional versions for forward and reverse flowing conditions.

New for the **MPplus II MVC** are dual IoT sockets for ultimate flexibility in add on communications modules. True two way communication between host and field for inbound alarming and set point adjustments. Modules consist of cellular, radio, Bluetooth, RS232, RS485, and many more. Also included are high accuracy digital pressure transducers and a four lead wire compensated RTD for increased accuracy. Additional features include dual Form-C pulses from the CVI Index for comparison and auto input switching upon a switch failure, a configuration lock out jumper to maintain configuration integrity, and an optional open door switch for immediate notification of entry/intrusion. Expanded memory capacity allowing for months of data storage.



## APPLICATIONS

- Positive Displacement Meters
- Custody Transfer Integrity
- Commercial & Industrial Metering
- AMR/AMI Compatibility
- Volume/Pulse Accumulator Versions
- Ultrasonic Metering
- Commercial and Industrial Metering

## HIGHLIGHTS

- Ultra-Low-Power processor for extended battery life (Up to 10 years - life based on configuration)
- High-Accuracy digital pressure transducer(s)
- Optional Low-Power cellular modem for IoT connectivity
- Versatile IoT sockets for a future-proof design
- Fully programmable
- Simple start-up for fast Return on Investment (ROI)
- AMI/AMR compatibility with industry leading companies
- Measurement based on AGA and API standards
- Flexible mounting options: Instrument Drive, Wall Mount or Pole Mount
- Lightweight 6"x 6"x 5" outdoor rated polycarbonate enclosure with quick-release latches (Other sizes available up to 18"x 16"x 10" to accommodate a variety of options)
- Simple configuration using any of Eagle's software, which includes: Field Manager™, Talon Lite™, Talon SCE™, or Talon Enterprise™
- Support for ERC-HexASCII and MODBUS protocols without adding additional hardware

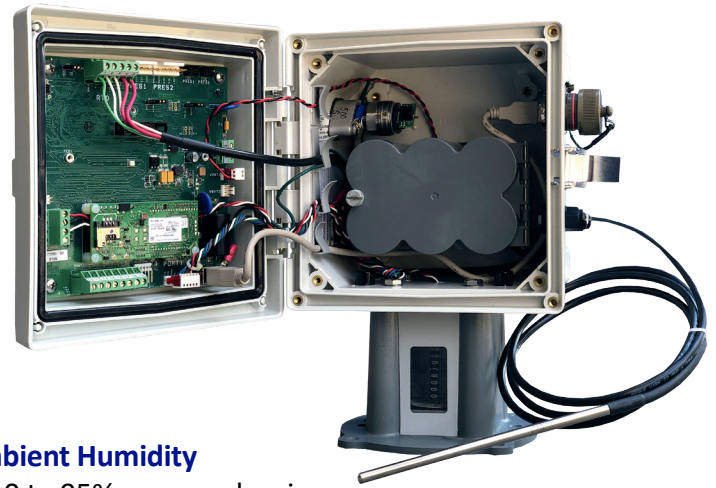
## TECHNICAL SPECIFICATIONS

### Performance

- Processor: Ultra-Low-Power Arm® Cortex®-M4 32-bit MCU with hardware floating point support
- SRAM Memory: 2MB, supports multiple months/years of Data Storage depending on configuration
- Flash Memory: 1MB, for Firmware Storage
- 16-Bit Analog to Digital converter

### Available On-Board

- USB Device port
- (1) Serial port (RS232) for local communications or communication devices
- (1) Additional communications port for cellular modems or other communications devices
- (4) Pressure Inputs (high-accuracy (2) digital or (2) analog strain gauge)
- (1) RTD (Temperature Probe)
- (2) Form A / Form C pulse inputs
  - Software selectable high and low speed operation
- (4) Form A Pulse Outputs
  - Support for cut-wire alarm
- MPPT (Maximum Power Point Tracking) based solar charger supports up to 40W solar panels



### Ambient Humidity

- 0 to 95% non-condensing

### Operating Temperature

- -40°C to +70°C (-40°F to +158°F)

### Power Monitoring

- Supply voltage monitoring through A/D with low supply voltage alarm

### Backup Battery

- Replaceable 3.6 Volt lithium battery (with low voltage detection) to back up database, time/date and historical records when main power is removed

## ACCURACY SPECIFICATIONS

### (Standard) High-Accuracy Digital Pressure Transducer:

- Accuracy over -40°C to 85°C (-40°F to 185°F) (including linearity, hysteresis and repeatability)  
Pressure Measurement 0.1% of full scale  
Temperature Measurement  $\pm 0.5^\circ\text{F}$
- Long Term Stability  
Pressure Measurement  $\pm 0.05\%$  of full scale/year typical

\* Detailed specification available on request

### (Optional) Strain Gauge Analog Transducer:

- Accuracy over -4°C to 60°C (-20°F to 140°F) (including linearity, hysteresis and repeatability)  
Pressure Measurement 0.25% of full scale  
Temperature Measurement  $\pm 0.5^\circ\text{F}$
- Long Term Stability  
Pressure Measurement  $\pm 0.5\%$  of full scale/year

## OPTIONS

### Power Options

- Input power: 5 – 30 VDC
- Alkaline D Cell battery pack
- Lithium battery pack
- Rechargeable Lead Acid for Solar Applications

### Index Features

- Composite Vertical Index (CVI) for meters with 10 ft<sup>3</sup> and above mechanical drives
- Horizontal Cast Index for meters with 5 ft<sup>3</sup> and above mechanical drives
- Universal turbine and positive-displacement meter mounting plate
- Available for single or bi-directional meter rotation

