# Performance Monitoring Unit

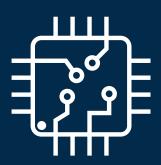




Designed for Heavy Haul Freight Rail







sales@ IntegralControls.com 1-825-551-0388 Understand the demands on your fleet with medium and long term tracking of:

throttle, voltage, amperage, direction control, dynamic braking, and more.





## **Performance Monitoring** Unit

## **Key Benefits**

- Compatible with nearly every locomotive model in service
- Records: system voltage, amperage per motor, throttle position, direction control, dynamic braking, speed, engine RPM, oil, fuel levels, and much more
- Adjustable polling rate
- Compact design for easy placement
- Quick and simple installation
- Data downloadable via USB
- Can store over 4 months of data (at 1Hz)
- Can connect to Wi-Tronix or other 3<sup>rd</sup> party telemetry systems

#### **Function**

This device can record power consumption, control settings, and basically anything desired in most modern locomotives. This allows you to get the clearest possible understanding of your locomotive's performance, both when demands are at peak and overall totals/averages.

It records up to 32 different digital inputs and 10 analog inputs at an adjustable polling rate (default 1Hz).

Data can be downloaded with Integral's provided software to a laptop via the PMU's USB port.

### **Specifications**

- Cooling: integrated forced air
- Operating ambient temperature: -40°C to 70°C+
- Dimensions: ~ 8" (W) x 9" (H) x 13" (D)
- Shock and vibration: MIL-STD-810G
- Weight fully loaded: ~15lbs
- Isolated EN50155 rated internal power supply
- 10x Isolated current loop inputs
- 32x 24-74Vdc dual mode inputs
- 2x isolated RS232 inputs

#### Kit Includes

- PMU electronic control module
- 4Gb non-volatile FLASH memory storage
- Analog sensors, which can include: voltage, current (per motor), pressure, temperature, flow rate, volume, and more!
- locomotive interface harnesses and required cables
- Remote telemetry (optional)

Control Systems Speed

Power Electronics

System Integration Operator Displays

Air Brake Integration

Design Services

**Monitoring**