

Telemetry Control Unit Comparison



TCU001

VS

TCU800

- **Processing Core:** Dual-20 MHz 8051 Microcontroller
- **Current:** 150 mA (typical); 200 mA (maximum)
- **Display:** 4-line LCD User Interface display, with membrane type keypad
- **Integrated Radio:** 2W @ 200 MHz Radio; 5W @ 400 MHz Radio
- **Integrated Network:** Ethernet
- **Integrated Cellular:** Cellular (Verizon)
- **Simultaneous Communication Modes:** Not available
- **Service Port:** RJ-11 Modular
- **Digital Monitoring:**
 - (3) Motor run status
 - (6) Float contacts
 - (1) External phase monitor bypass
 - (1) Auxiliary input (pulse-counting capable)
 - (1) Alarm silence override
- **Analog Input Rating:**
 - 4-20 mA @ 250 Ω
 - 1-5 V @ 100 kΩ
 - 12-bit precision
- **Analog Monitoring:**
 - Analog1 Voltage or current mode
 - Analog2 Current mode only
- **DC Bias:** 24 VDC, 100 mA

- + **Processing Core:** GHz ARM Cortex A8 Microprocessor
- + **Current:** 300 mA (typical); 750 mA (maximum)
- + **Display:** 5" 800X480, TFT Touchscreen Graphical User Interface (GUI), with 750 nits brightness for viewing outdoors
- **Integrated Radio:** 2W @ 200 MHz Radio; 5W @ 400 MHz Radio
- **Integrated Network:** Ethernet
- + **Integrated Cellular:** Cellular (Verizon); **Physical HSS & Cloud-Server**
- + **Simultaneous Communication Modes:**
 - Integrated Radio AND External Cellular**
 - Integrated Radio AND Network**
 - Integrated Cellular AND Network**
- + **Service Port:** **Dual USB 2.0 Allows Users to download newly released Firmware and update TCU's locally**
- + **Digital Monitoring:**
 - (3) Motor run status
 - (6) Float contacts
 - (1) External phase monitor bypass
 - (1) Auxiliary input (pulse-counting capable)
 - (1) Alarm silence override
 - (3) Seal failure trip**
 - (3) High temperature trip**
- + **Analog Input Rating:**
 - 4-20 mA @ 250 Ω
 - 1-5 V or **0-10 V @ 120 kΩ**
 - 15-bit precision**
- + **Analog Monitoring:**
 - Analog1 Voltage or current mode
 - Analog2 Current mode only
 - Analog3 Voltage or current mode**
 - Analog4 Voltage or current mode**
- + **DC Bias:** 24 VDC, **300 mA**

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- **3-Phase Current Monitoring:** Not available
- **Battery Backup:** Supports external 12V sealed lead-acid battery
- **Input Protection:** MOV, TVS, Opto-isolated
- **RS-232 port:** 9600 baud (MODBUS Server)
- **RS-485:** 9600 baud (MODBUS Client)
- **Ethernet:** 10 Mbit/s
- **Station Addressing:** Address Strap
- **Local I/O Expandability:** Expandable with RS485 modules (RDP, RIO, etc.)
- **Environmental Protection:** Factory-applied acrylic conformal coating
- **Environmental Rating:** Relative Humidity: 0-100%; Atmosphere Pressure: 75-106 Kpa; Pollution Degree 2
- **Voltage:** 120VAC, 60Hz
- **Digital Input Reading:** 10-30 VDC/VAC; 30-300 VDC/VAC with external resistors
- **Digital Input Impedance:** 6 kΩ
- **H-O-A Switch:** 3 x 3-position switches for Hand-Off-Auto operation
- **Pump Output Rating:** 120-240 VAC, 60 Hz, 1 A, Pilot Duty
- **Alarm Output Rating:** 120 VAC, 60 Hz @ 0.5 A; 24 VDC @ 1 A
- **3-Phase Voltage Monitoring:** 240VAC single- or three-phase; 480VAC three-phase using external resistors
- **Control Programming:** Fixed Speed motor/pump control **OR** User selectable VFD Mode control (Optional Expandable I/O required)
- **Operating Temperatures:** -10°C (14°F) to 60°C (140°F); (up to 50°C when using recommended backup battery)
- **Dimensions:** 5.75" x 8.75" x 5.45"
- **Enclosure:** Black Anodized Aluminum

- + **3-Phase Current Monitoring:** Configurable 0-250A per-phase using external current transformers
- **Battery Backup:** Supports external 12V sealed lead-acid battery
- + **Input Protection:** MOV, TVS, **on-chip transformer isolation; Tested to IEC 61000-4-5 (Level 4)**
- + **RS-232 port:** **9600-115200 baud** (MODBUS Server)
- + **RS-485:** **9600-115200 baud** (MODBUS Client)
- + **Ethernet:** **100 Mbit/s**
- + **Station Addressing:** **USB Configuration Stick**
- + **Local I/O Expandability:** Expandable with RS485 modules (RDP, RIO); **Extension card slot for future integrated I/O products**
- + **Environmental Protection:** **Sealed enclosure with EPDM rubber gaskets**
- **Environmental Rating:** Relative Humidity: 0-100%; Atmosphere Pressure: 75-106 Kpa; Pollution Degree 2
- **Voltage:** 120VAC, 60Hz
- **Digital Input Reading:** 10-30 VDC/VAC; up to 300 VDC/VAC with external resistors
- **Digital Input Impedance:** 5.5 kΩ
- **H-O-A Switch:** 3 x 3-position switches for Hand-Off-Auto operation
- **Pump Output Rating:** 120-240 VAC, 60 Hz, 1 A, Pilot Duty
- **Alarm Output Rating:** 120 VAC, 60 Hz @ 0.5 A; 24 VDC @ 1 A
- **3-Phase Voltage Monitoring:** 240VAC single- or three-phase; 480VAC three-phase using external resistors
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