



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 k Ω ; 12-bit precision

Analog Monitoring: Analog1 Voltage or current mode; Analog2 Current mode only

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 k Ω ; 15-bit precision

Analog Monitoring: Analog1 Voltage or current mode; Analog2 Current mode only; Analog3 Voltage or current mode; Analog4 Voltage or current mode

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TCU001

VS

TCU800

DC Bias: 24 VDC, 100 mA

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

+ **DC Bias:** 24 VDC, 300 mA

+ **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; 24VDC@1A

3-Phase Voltage Monitoring: 240VAC single- or three-phase; 480VAC three-phase using external resistors

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