

# Telemetry Control Unit Comparison





**TCU001**



**TCU800**

Dual-20 MHz 8051 Microcontroller	<b>Processing Core</b>	1 GHz ARM Cortex A8 Microprocessor
120VAC, 60Hz	<b>Voltage</b>	120VAC, 60Hz
150 mA (typical) 200 mA (maximum)	<b>Current</b>	<b>300 mA (typical)</b> <b>750 mA (maximum)</b>
10-30 VDC/VAC 30-300 VDC/VAC with external resistors	<b>Digital Input Rating</b>	10-30 VDC/VAC up to 300 VDC/VAC with external resistors <b>Aux Input accepts only DC voltage</b>
6 k $\Omega$	<b>Digital Input Impedance</b>	<b>5.5 k<math>\Omega</math></b>
(3) Motor run status (6) Float contacts (1) External phase monitor bypass (1) Auxiliary input (pulse-counting capable) (1) Alarm silence override	<b>Digital Monitoring</b>	(3) Motor run status (6) Float contacts (1) External phase monitor bypass (1) Auxiliary input (pulse-counting capable) (1) Alarm silence override <b>(3) Seal failure trip</b> <b>(3) Thermal overload trip</b>
4-20 mA @ 250 $\Omega$ 1-5 V @ 100 k $\Omega$ 12-bit precision	<b>Analog Input Rating</b>	4-20 mA @ 250 $\Omega$ 1-5 V or <b>0-10 V @ 120 k<math>\Omega</math></b> <b>15-bit precision</b>
(Analog1) Voltage or current mode (using shunt pin) (Analog2) Current mode only	<b>Analog Monitoring</b>	(Analog1) Voltage or current mode (using shunt pin) (Analog2) Current mode only <b>(Analog3) Voltage or current mode (using shunt pin)</b> <b>(Analog4) Voltage or current mode (using shunt pin)</b>
24 VDC 100 mA	<b>DC Bias</b>	24 VDC <b>300 mA</b>
3 x 3-position switches for Hand-Off-Auto operation	<b>H-O-A Switches</b>	3 x 3-position switches for Hand-Off-Auto operation

120-240 VAC, 60 Hz, 1 A, Pilot Duty	<b>Pump Output Rating</b>	120-240 VAC, 60 Hz, 1 A, Pilot Duty
120 VAC, 60 Hz @ 0.5 A 24 VDC @ 1 A	<b>Alarm Output Rating</b>	120VAC, 60Hz @ 1 A 24VDC @ 1 A
240VAC single- or three-phase 480VAC three-phase using external resistors	<b>3-Phase Voltage Monitoring</b>	240VAC single- or three-phase 480VAC three-phase using external resistors
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Supports external 12V sealed lead-acid battery	<b>Battery Backup</b>	Supports external 12V sealed lead-acid battery
MOV, TVS, Opto-isolated	<b>Input Protection</b>	MOV, TVS, <b>on-chip transformer isolation</b> <b>Tested to IEC 61000-4-5 (Level 4)</b>
2W @ 200 MHz	<b>Integrated Radio</b>	2W @ 200 MHz <b>5W @ 400 MHz</b>
9600 baud (MODBUS slave)	<b>RS-232</b>	<b>9600-115200 baud</b> (MODBUS slave)
9600 baud (MODBUS master)	<b>RS-485</b>	<b>9600-115200 baud</b> (MODBUS master)
10 Mbit/s	<b>Ethernet</b>	100 Mbit/s
RJ-11 Modular	<b>Service Port</b>	<b>Dual USB 2.0</b>
Address Strap 	<b>Station Addressing</b>	USB Configuration Stick 
LCD w/ soft-touch keypad	<b>Display</b>	5" TFT LCD w/ capacitive touchscreen Resolution: 800 x 480 Brightness: 750 nits
Expandable with RS485 modules (RDP, RIO, etc.)	<b>Expandability</b>	Expandable with RS485 modules (RDP, RIO) <b>Extension card slot for future integrated I/O products</b>
-10°C (14°F) to 60°C (140°F) (up to 50°C when using recommended backup battery)	<b>Operating Temperature</b>	-10°C (14°F) to 60°C (140°F) (up to 50°C when using recommended backup battery)
Relative Humidity: 0-100% Atmosphere Pressure: 75-106 KPa Pollution Degree 2	<b>Environmental Rating</b>	Relative Humidity: 0-100% Atmosphere Pressure: 75-106 KPa Pollution Degree 2
Factory-applied acrylic conformal coating	<b>Environmental Protection</b>	Sealed enclosure with EPDM rubber gaskets
5.75" x 8.75" x 5.45"	<b>Dimensions</b>	5.75" x 8.75" x 5.45"
Black Anodized Aluminum	<b>Enclosure</b>	Black Anodized Aluminum