

# mTC002

## GRAIN TEMPERATURE CABLE INTERFACE



### Features and Benefits

- Seamlessly integrates thermocouples into CMC's digital HazMon network
- Straightforward to upgrade to more accurate and reliable digital system
- Eliminate antiquated scanners and bring data into a PLC – more reliable data at control center
- Fast data scan times – read thousands of thermocouples in minutes rather than hours!
- Automatic detection of open thermocouples - straightforward troubleshooting

### Product Description

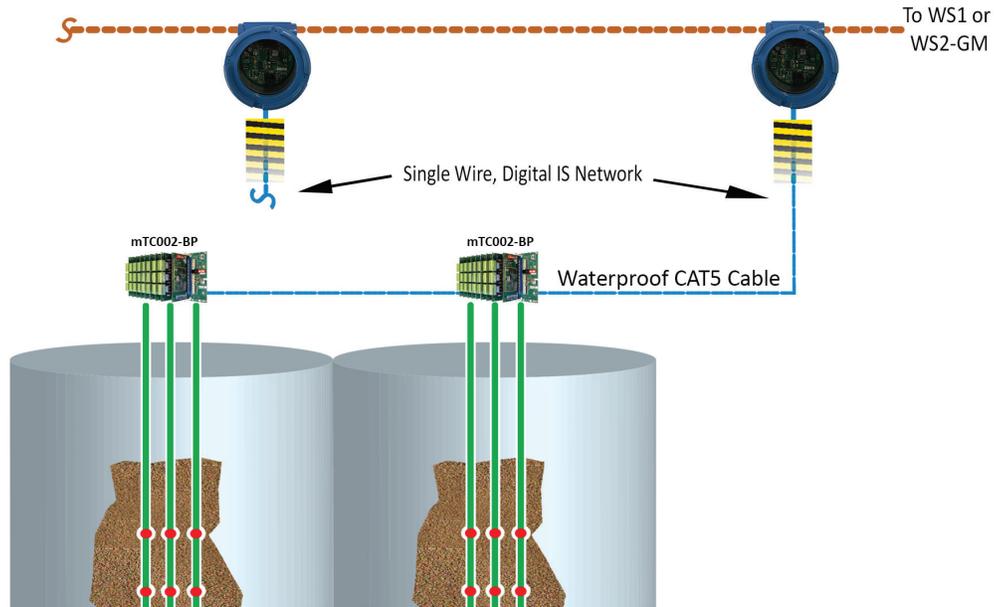
The mTC002 converts type T Thermocouples to CMC's Single Wire Digital, Intrinsically Safe Network, converting up to 168 thermocouples into absolute temperature values in minutes. It uses only one device address by multiplexing the 168 temperatures into a single address word on the network, and is de-multiplexed at the PLC or HMI. Each mTC002 connects to the single-wire bus with 110 punch-down terminals for fast and secure terminations.

One input and two output connections are provided to offer easy branch and T networked system configurations, connecting multiple boxes to the network via water-proof, direct-burial CAT5 cable.

The mTC002 Thermocouple Converter is supplied pre-installed in a tough, NEMA 4X plastic enclosure (see main image). This enclosure has been selected to prevent condensation from forming on the internal electronics due to external temperature variations. A "Gore" vent has been installed to remove water vapor from the enclosure.

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## Typical Single-Wire Network Layout



Specifications	Description	Characteristic
IS Sensor Bus	Voltage	5 VDC
	Current	3.5 mA maximum
	Communications	Single-Wire Bus
Type T Inputs	T/C Inputs	168 arranged as 24 groups of 7 inputs
	Resolution	2°F (1°C)
	Range	-40°F to +417°F (-40°C to +214°C)
Accuracy	Span Accuracy	±3.6°F (-40°F to +122°F case temperature)
	Offset Accuracy	±1.8°F for each 18°F ambient change
	Calibration Temperature	68°F (20°C)
Environment	Recommended Operating Range	-40°F to +158°F (-40°C to +70°C)
	Relative Humidity	0 to 95% non condensing
Dimensions	Length	10.10" (257mm)
	Width	6.60" (168mm)
	Height	4.75" (121mm)

MTC002 DS A00

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