

## MMTCP8TC - 8 Thermocouple Input Module

The MMTCP8TC module is a 8 thermocouple input module. The module uses differential inputs to reduce effects of electrical noise and mains pickup. The thermocouple inputs are isolated from the logic. If inter channel isolation is required then the MMTCP8TCISO should be used.

The thermocouple voltage is read by the module circuitry, linearised and converted to degrees Centigrade. No ranging is required as the module covers the full temperature range of the thermocouple. The value that is read from the Modbus register is the actual temperature in degrees centigrade to 0.1°C resolution. ie: a value of 3451 corresponds to a temperature of 345.1°C.

The thermocouple type is setup by writing a value to the TC Type register. The value is obtained from the table below. For example to select type K thermocouples, the value "2" must be written to the TC Type register. All 8 thermocouple inputs adopt the same TC type.

A value of -32767 is used to indicate downscale burnout.

The module has built in Cold Junction Compensation. Use must be made of the correct thermocouple extension wire to avoid reading errors.

The thermocouple module can also be configured for a 0 - 50mV input range. The TC Type register must be set to 9 for this option. The value in the register which is read back over the network is 0 - 50,000.

Note: As there is no inter-channel isolation, isolated thermocouples must be used in order to prevent ground loops and reading errors.



MMTCP8TC – 8 THERMOCOUPLE INPUTS	
Input	8 x Thermocouple Inputs
TC Types	J,K,E,T,N,B,S,R,mV,C,D and G
Resolution	0.1 Deg.C
Sample rate	0.71 samples/sec
Drift	100 ppm/Deg.C typ.
Isolation (Field & Logic)	1500VAC RMS