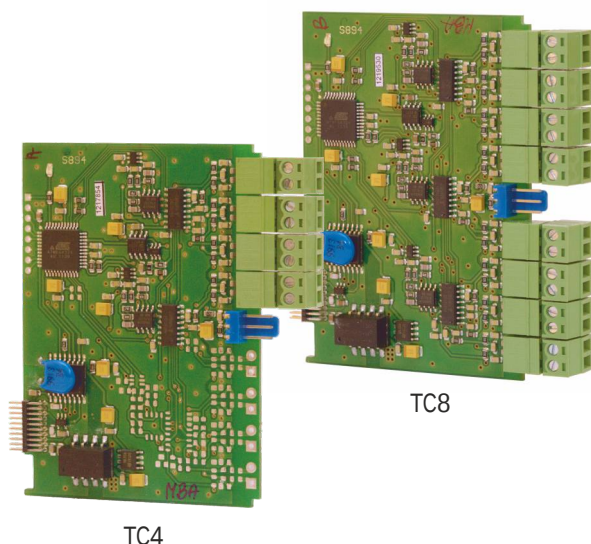


Input modules - thermocouple



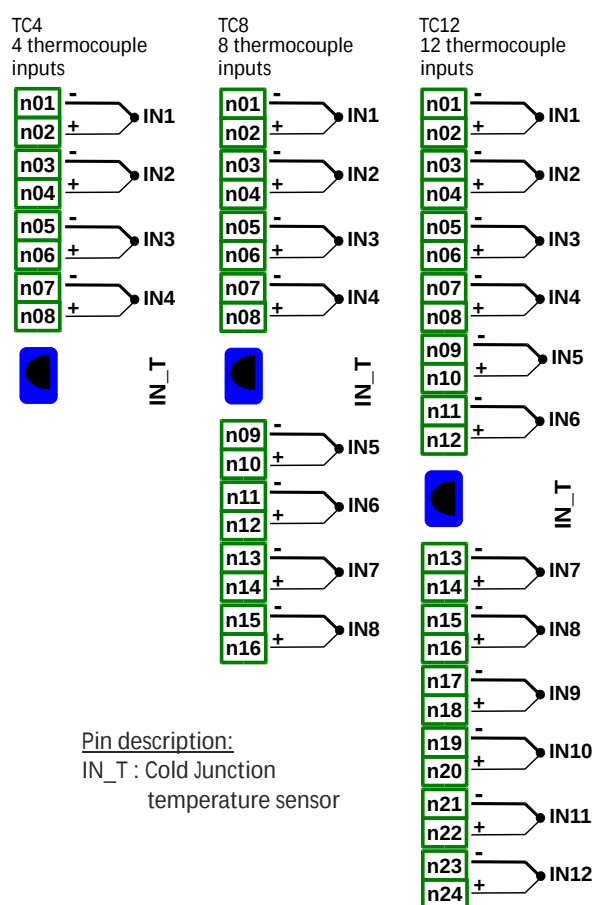
- TC4: 4 thermocouple inputs
- TC8: 8 thermocouple inputs
- TC12: 12 thermocouple inputs

The range of TC modules consist of 4, 8 and 12 thermocouple input modules, each equipped with 1 input for connectors temperature measurement. Primary destination of these modules is temperature measurement using thermocouple sensors, but it is also possible to measure voltage with typical thermocouple ranges.

TC modules parameters are:

- Name - read-only input name given by the device,
- Unit - read-only field which displays „°C” or „mV”, depending on Mode parameter settings,
- Mode - allows to set type of thermocouple or mV measurement range,
- Low limit - defines measurement level below which in logical channel „Lo” state will be displayed,
- High limit - defines measurement level above which in logical channel „Hi” state will be displayed,
- Wire compensation - allows to compensate measurement errors, which can be caused by wrong sensor readings,
- Compensation - parameter which allows to manually compensate sensor error, written here value is added or subtracted from measured sensor value,
- Actual temperature - parameter in which user enters actual temperature near the sensor, which is measured by a more reliable thermometer,
- Compensate - button which activates the compensation,
- Compensation - read only parameter; displays voltage value calculated to compensate temperature measurement.

MODULE PIN ASSIGNMENT



TECHNICAL DATA

	TC4	TC8	TC12
Number of inputs	4	8	12
Measurement range	thermocouple J, K, S, T, N, R, B, E (PN-EN), L (GOST); voltage: -10 ÷ 25 mV, ±25 mV, -10 ÷ 100 mV, ±100 mV	thermocouple J, K, S, T, N, R, B, E (PN-EN), L (GOST); voltage: -10 ÷ 25 mV, ±25 mV, -10 ÷ 100 mV, ±100 mV	thermocouple J, K, S, T, N, R, B, E (PN-EN), L (GOST); voltage: -10 ÷ 25 mV, ±25 mV, -10 ÷ 100 mV, ±100 mV
Hardware limitation	-30 mV ÷ 30 mV, -120 mV ÷ 120 mV	-30 mV ÷ 30 mV, -120 mV ÷ 120 mV	-30 mV ÷ 30 mV, -120 mV ÷ 120 mV
Hardware resolution	1 µV (± 30 mV), 4 µV (± 120 mV)	1 µV (± 30 mV), 4 µV (± 120 mV)	1 µV (± 30 mV), 4 µV (± 120 mV)
Voltage precision	0,1% @ 25°C	0,1% @ 25°C	0,1% @ 25°C
Permissible long time overload	20%	20%	20%
Permissible voltage difference	0.5 V between channels	0.5 V between channels	0.5 V between channels
Input impedance	typ. 1 MΩ	typ. 1 MΩ	typ. 1 MΩ
Sampling period	385 ms *	385 ms *	385 ms *
Weight	32 g	42 g	52 g
Part number	M99-TC4-001	M99-TC8-001	M141-TC12-001

* CMC reads data from modules every 100 ms