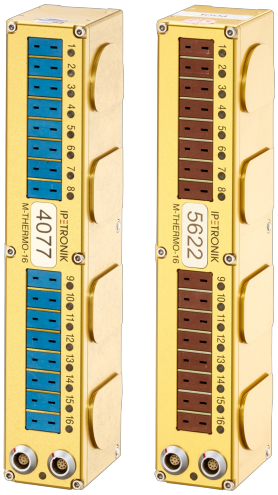
IPETRONIK

M-THERMO 16 T

16-channel thermocouple inputs type T (Cu/CuNi)

- 4 PT100 for cold junction compensation
- Status LED at each measurement channel
- Measurement data output to CAN
- Galvanic isolation (inputs, CAN, supply, enclosure)
- Designed for engine compartment applications
- Toolless module to module connection
- Ruggedized and compact modules for harsh environments



General channel properties	
AD converter	16 bit / SAR (successive approximation register)
Special functions	Sensor breakage detection (activation via software setting)
Channel sampling rates	1 / 2 / 5 / 10 / min -- 1 / 2 / 5 / 10 / 20 Hz
Aggregate sample rate	320 Hz
Hardware filter (fixed)	1 Hz, filter type RC low pass
Channel impedance	10 MΩ (sensor break detection inactive) 1 MΩ (sensor break detection active)
Channel LED	Yes Channel LED is flashing during configuration Sensor break detection - always active
Channel LED	Yes
Channel temperature	
Measurement range temperature	Type T (Cu/CuNi) -60 … 400 °C (-76 … 752 °F)
Accuracy at ambient temperature 25 °C (77 °F)	±0.15 % in the range -60 … 400 °C (-76 … 752 °F)
Drift for ambient temperature -40 … 85 °C	±40 ppm/K
Drift for ambient temperature 85 … 120 °C	±40 ppm/K
Linearization of sensor characteristic line	Numerical interpolated
Cold junction compensation (CJC)	4 PT100 (1 for 4 channels)
Galvanic isolation	
Input ↔ module power supply	±100 V (indefinitely), ±200 V (short-time, t < 2 ms)

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Input ↔ CAN	±100 V (indefinitely), ±200 V (short-time, t < 2 ms)
Input ↔ enclosure	±100 V (indefinitely), ±200 V (short-time, t < 2 ms)
Input ↔ input	±100 V (indefinitely), ±200 V (short-time, t < 2 ms)
Device	
Inputs	16
Maximum input protection voltage (channel)	±50 V (continuous), ±200 V (short-term, t < 2 ms)
Voltage supply	9 … 36 VDC
Supply voltage thresholds	On 9 ±0.3 VDC / Off 6 ±0.3 VDC
Power consumption, typical	1.2 W
Working temperature range	-40 … 125 °C (-40 … 257 °F)
Storage temperature range	-55 … 150 °C (-67 … 302 °F)
IP-Code	IP 67 (ISO 20653 - 2013)
Relative humidity	5 ... 95 %
Dimensions	W204 mm x H41 mm x D55 mm (8.03 in x 1.61 in x 2.17 in)
Weight	630 g (0.69 lb)
Configuration interface	CAN high speed
Data transfer rate	Software selectable up to 1 MBit/s (ISO11898-2)
Input sockets	Miniature TC connector brown (DIN IEC 584) Miniature TC connector blue (ANSI MC 96.1)
Status LED	Yes
Accessories	
System cable	M-CAN-ABS 620-502 M-CAN cable SUBD/S Term. 620-560 M-CAN cable 620-561 M-PWR term cable, banana 620-567 M-CAN/PWR term: cable SubD/S, banana

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