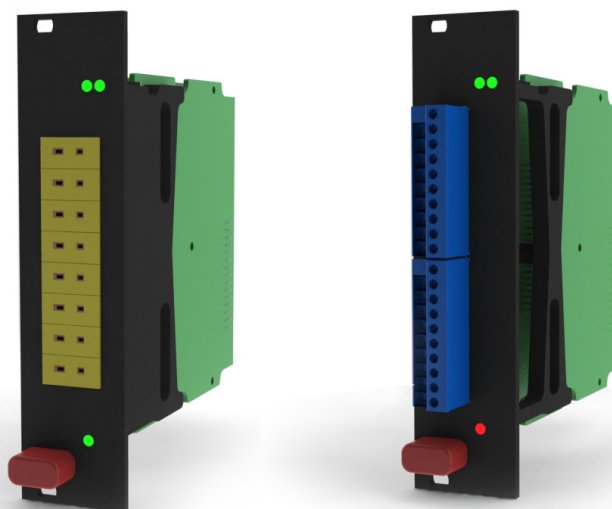


DS NET Hardware

DS NET TH8 THERMOCOUPLE EXPANSION MODULE

Black line

19 inch



MAIN FEATURES

- **8 galvanic isolated input channels**
Thermocouples and voltages in the range of ± 80 mV
Isolation voltage 100 VDC
- **Cold junction compensation**
Good thermal coupling by means of cold junction compensation per connector
- **Dynamic linearization**
Optimized positioning of the interpolation points within the selected range, type B, E, J, K, L N, R, S, T, U
- **High accuracy digitalization**
24 bit ADU, 100 Hz sample rate per channel with 8 active channels, sum sample rate 800 Hz
- **Signal conditioning**
Digital filter, average, scaling, min/max storage, arithmetic, alarm
- **Galvanic isolation**
of I/O-signals, power supply and interface
Isolation voltage 500 VDC
- **Electromagnetic Compatibility**
according EN 61000-4 and EN 55011
- **Accuracy class 0,01**

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ANALOG INPUTS	
Number of channels	8
Accuracy	0.01 % typical 0.02 % in controlled environment ¹ 0.05 % in industrial area ²
Linearity error	0.01 % of the final value typical
Repeatability	0.003 % typical (within 24 h)
Input resistance	>10 MΩ
Acceptable common mode voltage	100 V permanent
Isolation voltage	500 V
VOLTAGE MEASUREMENT	
Range	±80 mV
Max error	±30 μV
Resolution	320 nV
Long term drift	<1 μV/24 h
Temperature influence	on zero: <50 μV/10 K on sensitivity: <0.01 %/10 K
Signal-noise-ratio	100 dB at 100 Hz bandwidth
THERMOCOUPLE MEASUREMENT	
Type B	better than ±5°C ³
Type E, J, K, L, T, U	better than ±1°C ³
Type N	better than ±2°C ³
Type R, S	better than ±3°C ³
ANALOG/DIGITAL CONVERSION	
Resolution	24 bit
Sample rate	100 Hz at 8 active channels
Conversion method	Sigma-Delta
Analog Aliasing Filter	low pass 3rd order per channel (-3 dB at 20 Hz)
Filter	variable digital low pass filter 3rd order averaging
POWER SUPPLY	
Power supply	10 up to 30 V _{DC} , overvoltage and overload protection
Power consumption	approx. 2 W
Influence of the voltage	<0.001 %/V

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ENVIRONMENTAL	
Operating temperature	-20°C up to +50°C
Storage temperature	-40°C up to +85°C
Relative humidity	5 % up to 95 % at 50°C, non condensing
Vibration	MIL-STD 810F 514.5, procedure I
Shock	MIL-STD 810F 516.5, procedure I
MECHANICAL	
Case	Aluminum
Dimensions (W x H x D)	(27 x 120 x 105) mm
Weight	approx. 200 g
CONNECTION	
Standard	20 pin screw terminal
Option	8 thermocouple connectors

¹ according EN 61326: 1997

² according EN 61326: 1997

³ with activated mains rejection 50Hz resp. 60 Hz

Warm up time

All declarations are valid after a warm up time of 45 minutes.