

Rail Temperature Transmitter With HART Protocol PEK301HR



Application Area

DIN Rail Temperature transmitter with HART-protocol convert various input signals into a scalable 4 to 20mA analogue output signal 2 wire technology

Input Types

RTD, TC, Ohm, mV

- DIN Rail mounted transmitter with HART protocol for
- Converting various input signals into a scalable 4 to 20mA
- Analogue output signal
- Internal cold junction
- Galvanic isolation
- Customer specific measurement range setting or expanded SETUP
- Simple and user friendly software
- Wide voltage supply range
- Expanded resistance input (max 2K Ω)

Technical Data

Power Supply			
Supply Voltage	Minimum	18V DC without load	
	Maximum	36V DC	
Output			
Output Signal		4 to 20 mA	
Load		Max. 23mA	
Transmission Behavior		Loop Current Linear in Input Range	
Input Types and Ranges			
Input Sensor	Type	Measurement ranges	Min. meas. Ranges
Resistance thermometer (RTD)	Pt100	-200 °C to 850 °C (-328 °F to 1562 °F)	10K
	PT500	-200 °C to 250 °C (-328 °F to 482 °F)	10K
	PT1000	-200 °C to 250 °C (-328 °F to 482 °F)	10K
	CU100	-50 °C to 150 °C (-58 °F to 302 °F)	10K
	Ni500	-60 °C to 180 °C (-76 °F to 356 °F)	10K
Thermocouple	B(PtRh30-PtRh6)	0 to 1820 °C (-32°F to 3308 F)	500K
	E(NiCr-CuNi)	-270°C to 1000°C (-454°F to 1832°F)	50K
	J(Fe-CuNi)	-210°C to 1200°C (-346°F to 2192°F)	50K
	K(NiCr-Ni)	-270 °C to 1372°C (-454°F to 2501°F)	50K
	N(NiCrSi-NiSi)	-270 to 1300°C (-454°F to 2372°F)	50K
	R(PtRh13-Pt)	-50 to 1768°C (-58°F to 3214.4°F)	500K
	S(PtRh10-Pt)	-50 to 1768°C (-58°F to 3214.4°F)	500K
	T(Cu-CuNi)	-270 to 400°C (-454°F to 752°F)	50K
Input Connections			
Connection of sensors for resistance (RTD) measurement		2, 3 & 4 wire connections	
Thermocouple Temperature compensation		Internal	
Performance Characteristic			
Accuracy		± 0.1°C to ± 1°C according to sensor type	
Stability	RTD (for 24 month)	±0.2% of output reading or ±0.2°C (whichever is greater)	
	Thermocouple (for 12 month)	±0.3% of output reading or ±0.5°C (whichever is greater)	

5 Years Stability	RTD	±0.5% of output reading or ±0.5°C (whichever is greater)
	Thermocouple	±0.7% of output reading or ±1°C (whichever is greater)
Noise suppression for noise frequency		50/60 Hz
Update time		< 0.5 sec
Response Time		2 sec
Switch on Delay		3 sec
Influence of Ambient		Negligible
Load Influence		Negligible
Power Supply Influence		Negligible
Resolution		1µA
Electromagnetic Compatibility (EMC) standards		
Electromagnetic Compatibility (EMC) standards		IEC/EN 61326-1: 2006 IEC/EN 61326-2-3: 2006
EMC	ESD	4KV Contact 8KV Air
	Radiated	80-1000MHz @ 10V/m AM
	Burst	1KV
	Surge	0.5KV Line-Line 1KV Line-Earth
	Conducted	150KHz to 80MHz @ 10V
	Magnetic	50Hz @ 30A/m
	Emission	30-230MHz, 30dB (uV/m) @ 10m 230-1000MHz, 37dB (uV/m) @ 10m
Vibration Effect	10 to 60 Hz : 0.21mm peak Displacement 60 to 500 Hz : 3g	
Operating Temperature	Without LCD: -40°C to +85°C	
Relative humidity	0% to 95%	
Protection rating (Enclosure)	IP41	
Others		
Weight	Approx. 300 g	
Display Range	N/A	
Materials	Plastic	

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