

Analog Signal Conditioners

picoPak TC/V

Thermocouple Type J
-200°C...+760°C
Terminal Block



picoPak TC/I

Thermocouple Type J
0°C...+500°C
Terminal Block



picoPak TC/V

Thermocouple Type J
0°C...+500°C
Terminal Block



Ordering Data	Type	Part No.	Type	Part No.	Type	Part No.
Screw clamp for TS 35 rail						
Screw clamp for TS 32 rail						
Screw clamp for combi-foot, TS 35 or TS 32 rail	picoPak TC/V	998348	picoPak TC/I	998339	picoPak TC/V	998349
Tension clamp for TS 35 rail						
Technical Data						
Input signal type	Thermocouple Type J		Thermocouple Type J		Thermocouple Type J	
Material or excitation	Fe / CV-Ni		Fe / CV-Ni		Fe / CV-Ni	
Input range (min...max.)	-200°C...+760°C*		0°C...+500°C*		0°C...+500°C*	
Input impedance						
Line resistance						
Input maximum						
Supply voltage (min./max.)	15...30 VDC		15...30 VDC		15...30 VDC	
Supply current (min./max.)	25...30 mA		25...45 mA		25...30 mA	
Current/power consumption						
Power requirements	External		External		External	
Continuous current rating						
Response or switching freq. max.						
Supply current to PT 100 sensor						
Zero setting (4.0 mA) adjustment						
Span adjustment (20 mA)						
Output signal type	Voltage		Current		Voltage	
Output range	0...10 V*		4...20 mA*		0...10 V*	
Output load/loop resistance	2 kΩ min., 4 kΩ min.		600 Ω max.		2 kΩ min., 4 kΩ min.	
Output supply voltage (min./max.)						
Output supply current (max.)						
Cold junction comp error	0.6°C / 0.1°C		0.6°C / 0.1°C		0.6°C / 0.1°C	
Common mode rejection						
Accuracy input/output	0.05% of full scale nominal, 0.2% max. for voltage output		0.05% of full scale nominal, 0.2% max. for voltage output		0.05% of full scale nominal, 0.2% max. for voltage output	
Linearity input/output						
Temperature coefficient						
Transmission frequency	10 Hz		10 Hz		10 Hz	
Coupling method	Optically Isolated		Optically Isolated		Optically Isolated	
Cross-connections on pin						
Operating Specifications						
Dielectric isolation input to output	1500 VAC RMS, 3 port		1500 VAC RMS, 3 port		1500 VAC RMS, 3 port	
Dielectric isolation I/O to power supply						
Dielectric isolation I/O to DIN-rail						
Storage temperature range	-40°C...+85°C		-40°C...+85°C		-40°C...+85°C	
Operating temperature range	-40°C...+75°C		-40°C...+75°C		-40°C...+75°C	
Relative humidity (non-condensing)						
Wire size	#26...12 AWG / 0.5...2.5 mm ²		#26...12 AWG / 0.5...2.5 mm ²		#26...12 AWG / 0.5...2.5 mm ²	
Clamp screw tightening torque Nm (lb.in.)	0.6 (5.31)		0.6 (5.31)		0.6 (5.31)	
Mechanical dimensions (WxLxH) mm (in.)	12x88x68 (.47x3.46x2.68)		12x88x68 (.47x3.46x2.68)		12x88x68 (.47x3.46x2.68)	
Dimensional diagram	Page 404 Fig. 4		Page 404 Fig. 4		Page 404 Fig. 4	
Insulation stripping length mm (in.)						
Certification standards	UL, CSA, CE		UL, CSA, CE		UL, CSA, CE	
Accessories	Type	Part No.	Type	Part No.	Type	Part No.
End plate side cover	-	-	-	-	-	-
PC software kit†	-	998471	-	998471	-	998471
Cross-connection, black						
Cross-connection, red						
Cross-connection, blue						
Cross-connection, yellow						

picoPak TC/I

Thermocouple Type J
-100°C...+300°C
Terminal Block



picoPak TC/V

Thermocouple Type J
-100°C...+300°C
Terminal Block



UPAC Thermocouple T/C

-270°C...+1820°C
Enclosed



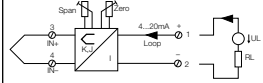
UPAC Thermocouple T/C Relay Output

-270°C...+1820°C
Enclosed



DKT / TC/1

Thermocouple Type K
0°C...+200°C
Terminal Block



Type	Part No.	Type	Part No.	Type	Part No.	Type	Part No.	Type	Part No.
picoPak TC/I	998340	picoPak TC/V	998350	UPAC Thermo Basis	832767	UPAC Alarm Thermo	828029	DKT / K-I / 35	980251
Thermocouple Type J		Thermocouple Type J		Thermocouple		Thermocouple		Thermocouple Type K	
Fe / CV-Ni		Fe / CV-Ni		Types B, E, J, K, R, S and T		Types B, E, J, K, R, S and T		Ni-Cr / Ni-Al	
-100°C...+300°C*		-100°C...+300°C*		-270°C...+1820°C		-270°C...+1820°C		0°C...+200°C	
				>1 MΩ		> 1 MΩ			
				±10 V differential		±10 V differential		25 mA DC	
15...30 VDC				9...30 VDC		9...30 VDC			
25...45 mA				83...166 mA		83...166 mA			
				1.5 to 2.5 W		1.5 to 2.5 W			
External		External		External		External		External	
				1.0 A		1.0 A			
				400 ms typ., 750 ms max.		100 ms min.			
				0% to 50% of full scale input		0% to 50% of full scale input		-50°C...+50°C	
				100% to 50% of full scale input		100% to 50% of full scale input		180°C...220°C	
Current		Voltage		Current or Voltage		Relay Contacts		Current	
4...20 mA*		0...10 V*		0...20 mA, 4...20 mA (load<600 Ω)		240 VAC / 30 VDC @ 1 A		4...20 mA	
				0...1 mA (load<7.5 kΩ)					
				0...5 V, 0...10 V (load>1 kΩ)					
600 Ω max.		2 kΩ min., 4 kΩ min.		see spec above				0...1 kΩ	
		15...30 VDC						18...32 VDC	
		25...30 mA							
0.6°C / 0.1°C		0.6°C / 0.1°C						±1°C (for amb change of 0-40°C)	
0.05% of full scale nominal, 0.2% max. for voltage output		0.05% of full scale nominal, 0.2% max. for voltage output		At 20°C ± 0.1% typ., ± 0.2% max. of full scale		At 20°C ± 0.1% typ., ± 0.2% max. of full scale		±0.5% of FS	
				±0.04% of max. input temp.		±0.04% of max. input		0.05% max.	
10 Hz		10 Hz						0.012%/°C max.	
Optically Isolated		Optically Isolated		Optically Isolated		Optically Isolated		Direct	
1500 VAC RMS, 3 port		1500 VAC RMS, 3 port		1800 VDC		1800 VDC			
				1800 VDC		1800 VDC			
				1800 VDC		1800 VDC			
-40°C...+85°C		-40°C...+85°C		-25°C...+70°C		-25°C...+70°C		-20°C...+70°C	
-40°C...+75°C		-40°C...+75°C		0°C...+55°C		0°C...+55°C		-10°C...+55°C	
				-25°C...+70°C		-25°C...+70°C		Up to 95%	
#26...12 AWG / 0.5...2.5 mm ² 0.6 (5.31)		#26...12 AWG / 0.5...2.5 mm ² 0.6 (5.31)		#20...12 AWG / 0.5...2.5 mm ² 0.5 (4.38)		#20...12 AWG / 0.5...2.5 mm ² 0.5 (4.38)		#20...12 AWG / 0.5...2.5 mm ² 0.5 (4.38)	
12x88x68 (.47x3.46x2.68)		12x88x68 (.47x3.46x2.68)		17.7x90x111.5 (.70x3.54x4.39)		17.7x90x111.5 (.70x3.54x4.39)		6x65x57 (.24x2.56x2.24)	
Page 404 Fig. 4		Page 404 Fig. 4						Page 404 Fig. 2	
UL, CSA, CE		UL, CSA, CE		7 (.28)		7 (.28)		9 (.35)	
Type	Part No.	Type	Part No.	Type	Part No.	Type	Part No.	Type	Part No.
-	-	-	-	-	-	-	-	AP (1.5)	68756
-	998471	-	998471						

*Consult factory for custom configurations.