

Analog Signal Conditioners

UPAC AC Voltage

0...10 mV to 0...200 VAC
Enclosed



UPAC AC Voltage / Relay Output

0...100 mV to 0...200 VAC
Enclosed



UPAC Strain Gauge

0...10 mV to 0...100 mV
Enclosed



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	UPAC AC TX V-In	828034	UPAC AC Trip V-In	828033	UPAC Bridge Basis	828843
Tension clamp for TS 35 rail						
Technical Data	Input signal type	AC Voltage	AC Voltage Setpoint	Strain Gauge		
Material or excitation					1...10 VDC, 120 mA max.	
Input range (min...max.)	0...100 mV to 0...200 VAC	0...100 mV to 0...200 VAC	0...100 mV to 0...200 VAC	0...10 mV to 0...100 mV		
Input impedance	>100 kΩ	>100 kΩ	>100 kΩ	>1 MΩ		
Line resistance						
Input maximum	300 VAC	300 VAC	300 VAC	200 VDC		
Supply voltage (min./max.)	9...30 VDC	9...30 VDC	9...30 VDC	9...30 VDC		
Supply current (min./max.)	83...166 mA	83...166 mA	83...166 mA	83...166 mA		
Current/power consumption	1.5 to 2.5 W	1.5 to 2.5 W	1.5 to 2.5 W	1.5 to 2.5 W		
Power requirements	External	External	External	External		
Continuous current rating		1.0 A				
Response or switching freq. max.	200 ms typ., 400 ms max.	100 ms min.		200 ms typ., 400 ms max.		
Supply current to PT 100 sensor						
Zero setting (4.0 mA) adjustment	0% to 50% of full scale input	0% to 50% of full scale input	0% to 50% of full scale input	0% to 50% of full scale input		
Span adjustment (20 mA)	100% to 50% of full scale input	100% to 50% of full scale input	100% to 50% of full scale input	100% to 50% of full scale input		
Output signal type	Current or Voltage	Relay Contacts	Current or Voltage	Relay Contacts		
Output range	0...20 mA, 4...20 mA (load<600 Ω)	240 VAC / 30 VDC @1 A	0...20 mA, 4...20 mA (load<600 Ω)	0...20 mA, 4...20 mA (load<600 Ω)		
	0...1 mA (load<7.5 kΩ)		0...1 mA (load<7.5 kΩ)	0...1 mA (load<7.5 kΩ)		
	0...5 V, 0...10 V (load>1 kΩ)		0...5 V, 0...10 V	0...5 V, 0...10 V		
Output load/loop resistance	see spec above			see spec above		
Output supply voltage (min./max.)						
Output supply current (max.)						
Cold junction comp error						
Common mode rejection						
Accuracy input/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	At 20°C ± 0.1% typ., ± 0.2% max. of full scale	At 20°C ± 0.1% typ., ± 0.2% max. of full scale		
Linearity input/output						
Temperature coefficient	±0.025% of span.	±0.025% of span	±0.025% of span	±0.025% / °C		
Transmission frequency						
Coupling method	Optically Isolated	Optically Isolated	Optically Isolated	Optically Isolated		
Cross-connections on pin						
Operating Specifications						
Dielectric isolation input to output	1800 VDC	1800 VDC	1800 VDC	1800 VDC		
Dielectric isolation I/O to power supply	1800 VDC	1800 VDC	1800 VDC	1800 VDC		
Dielectric isolation I/O to DIN-rail	1800 VDC	1800 VDC	1800 VDC	1800 VDC		
Storage temperature range	-25°C...+70°C	-25°C...+70°C	-25°C...+70°C	-25°C...+70°C		
Operating temperature range	0°C...+55°C	0°C...+55°C	0°C...+55°C	0°C...+55°C		
Relative humidity (non-condensing)	-25°C...+70°C	-25°C...+70°C	-25°C...+70°C	-25°C...+70°C		
Wire size	#20...12 AWG / 0.5...2.5 mm ²	#20...12 AWG / 0.5...2.5 mm ²	#20...12 AWG / 0.5...2.5 mm ²	#20...12 AWG / 0.5...2.5 mm ²		
Clamp screw tightening torque Nm (lb.in.)	0.5 (4.38)	0.5 (4.38)	0.5 (4.38)	0.5 (4.38)		
Mechanical dimensions (WxLxH) mm (in.)	17.7x90x111.5 (.70x3.54x4.39)	17.7x90x111.5 (.70x3.54x4.39)	17.7x90x111.5 (.70x3.54x4.39)	17.7x90x111.5 (.70x3.54x4.39)		
Dimensional diagram						
Insulation stripping length mm (in.)	7 (.28)	7 (.28)	7 (.28)	7 (.28)		
Certification standards	UL, CSA, CE	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†						
Cross-connection, black						
Cross-connection, red						
Cross-connection, blue						
Cross-connection, yellow						

UPAC Potentiometer

100 Ω...100 kΩ
Enclosed



picoPak POT/I

Potentiometer Input
100 Ω...1 mΩ
Terminal Block



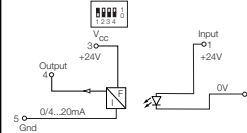
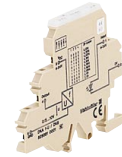
picoPak POT/V

Potentiometer Input
100 Ω...1 mΩ
Terminal Block



DK5 / F-I

Frequency Input / Variable Range
Terminal Block



1	2	3	4	DIP Switch
0	0	0	X	0...50 Hz
1	0	0	X	0...100 Hz
0	1	0	X	0...500 Hz
1	1	0	X	0...1 kHz
0	1	1	X	0...5 kHz
1	0	1	X	0...10 kHz
1	1	1	X	0...16 kHz
0	0	1	X	Customer specific
X	X	X	0	0...20 mA
X	X	X	1	4...20 mA

Type	Part No.	Type	Part No.	Type	Part No.	Type	Part No.
UPAC POT/I Basis	828032	picoPak POT/I	998369	picoPak POT/V	998370	DK5 / F-I	831187
Potentiometer		Potentiometer		Potentiometer		Frequency	
500 mV, 5 mA drive							
100 Ω...100 kΩ		100 Ω...1 mΩ*		100 Ω...1 mΩ*		‡See below	
>1 MΩ		≥1 GΩ		≥1 GΩ		10 kΩ	
200 VDC							
9...30 VDC		15...30 VDC		15...30 VDC			
83...166 mA		25...45 mA		25...45 mA			
1.5 to 2.5 W							
External		External		External		External	
200 ms typ., 400 ms max.							
0% to 50% of full scale input						No	
100% to 50% of full scale input						No	
Current or Voltage		Current		Voltage		Current	
0...20 mA, 4...20 mA (load<600 Ω)		4...20 mA*		0...10 V*		(0)4...20 mA	
0...1 mA (load<7.5 kΩ)							
0...5 V, 0...10 V (load >1 kΩ)							
see spec above		600 Ω max.		4 kΩ min.			
						24 VDC ±10%	
At 25°C ±0.1% typ., ± 0.2% max. of full scale		0.05% of full scale nominal, 0.2% max. for voltage output		0.05% of full scale nominal, 0.2% max. for voltage output		0.5% of FS (8 bit res)	
±0.05% / °C max. of FS							
Optically Isolated		Optically Isolated		Optically Isolated		Optically Isolated	
1800 VDC		1500 VAC RMS, 2 port		1500 VAC RMS, 2 port		2.5 kV	
1800 VDC							
1800 VDC						2.5 kV	
-25°C...+70°C		-40°C...+85°C		-40°C...+85°C		-25°C...+60°C	
0°C...+55°C		-40°C...+75°C		-40°C...+75°C		0°C...+50°C	
-25°C...+70°C							
#20...12 AWG / 0.5...2.5 mm²		#26...12 AWG / 0.5...2.5 mm²		#26...12 AWG / 0.5...2.5 mm²		#20...12 AWG / 0.5...2.5 mm²	
0.5 (4.38)		0.6 (5.31)		0.6 (5.31)			
17.7x90x111.5 (.70x3.54x4.39)		12x88x68 (.47x3.46x2.68)		12x88x68 (.47x3.46x2.68)		6x77x62 (.24x3.03x2.44)	
		Page 404 Fig. 4		Page 404 Fig. 4		Page 404 Fig. 3	
7 (.28)						9 (.35)	
UL, CSA, CE		UL, CSA, CE		UL, CSA, CE		CE	
Type	Part No.	Type	Part No.	Type	Part No.	Type	Part No.
-	-	-	998471	-	998471	AP (1.5)	C9039986

*Consult factory for custom configurations.

‡0...50 / 100 / 500 Hz

0...1 / 5 / 10 / 16 kHz