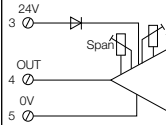


# Analog Signal Conditioners

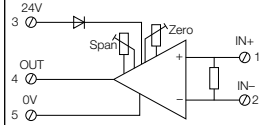
**picoPak I/V**  
Current Input /  $\pm 20$  mA  
Terminal Block



**DK5 / V-I**  
Voltage Input / 0...10 VDC  
Terminal Block



**DK5 / V-V**  
Voltage Input / 0...10 VDC  
Terminal Block

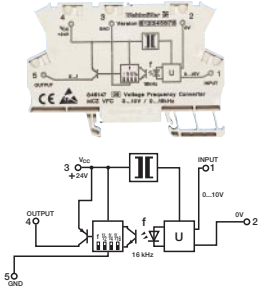


Ordering Data	picoPak I/V		DK5 / V-I		DK5 / V-V	
	Type	Part No.	Type	Part No.	Type	Part No.
Screw clamp for TS 35 rail						
Screw clamp for TS 32 rail						
Screw clamp for combi-foot, TS 35 or TS 32 rail	picoPak I/V	998409	DK5 / V-I	980644	DK5 / V-V	980646
Tension clamp for TS 35 rail						
Technical Data	Input signal type	Current	Voltage	Voltage	Voltage	Voltage
Material or excitation						
<b>Input range (min...max.)</b>	<b><math>\pm 20</math> mA*</b>		<b>0...10 VDC</b>		<b>0...10 VDC</b>	
Input impedance	82.5 $\Omega$ max.		800 k $\Omega$		800 k $\Omega$	
Line resistance						
Input maximum			15 VDC		15 VDC	
Supply voltage (min./max.)	15...30 VDC					
Supply current (min./max.)	25...30 mA					
Current/power consumption						
<b>Power requirements</b>	<b>External</b>		<b>External</b>		<b>External</b>	
Continuous current rating						
Response or switching freq. max.						
Supply current to PT 100 sensor						
Zero setting (4.0 mA) adjustment			$\pm 5\%$		$\pm 5\%$	
Span adjustment (20 mA)			$\pm 5\%$		$\pm 5\%$	
<b>Output signal type</b>	<b>Voltage</b>		<b>Current</b>		<b>Voltage</b>	
<b>Output range</b>	<b>0...10 V*</b>		<b>4...20 mA</b>		<b>0...10 VDC</b>	
Output load/loop resistance	2 k $\Omega$ min., 4 k $\Omega$ min.		0-1 k $\Omega$		0-1 k $\Omega$	
Output supply voltage (min./max.)			20...30 VDC		20...30 VDC	
Output supply current (max.)			30 mA max.		20 mA max.	
Cold junction comp error						
Common mode rejection			80 db min.		80 db min.	
Accuracy input/output	0.05% of full scale nominal, 0.2% max. for voltage output		$\pm 0.1\%$ of FS		$\pm 0.1\%$ of FS	
Linearity input/output			0.1% of FS		0.1% of FS	
Temperature coefficient			$\pm 0.01\%$ of FS/ $^{\circ}$ C		$\pm 0.01\%$ of FS/ $^{\circ}$ C	
Transmission frequency	10 Hz		1 kHz typical		1 kHz typical	
<b>Coupling method</b>	<b>Optically Isolated</b>		<b>Direct</b>		<b>Direct</b>	
Cross-connections on pin						
Operating Specifications						
Dielectric isolation input to output	1500 VAC RMS, 3 port					
Dielectric isolation I/O to power supply						
Dielectric isolation I/O to DIN-rail						
Storage temperature range	-40 $^{\circ}$ C...+85 $^{\circ}$ C		-25 $^{\circ}$ C...+85 $^{\circ}$ C		-25 $^{\circ}$ C...+85 $^{\circ}$ C	
Operating temperature range	-40 $^{\circ}$ C...+75 $^{\circ}$ C		0 $^{\circ}$ C...+55 $^{\circ}$ C		0 $^{\circ}$ C...+55 $^{\circ}$ C	
Relative humidity (non-condensing)			0 to 80%		0 to 80%	
Wire size	#26...12 AWG / 0.5...2.5 mm <sup>2</sup>		#20...12 AWG / 0.5...2.5 mm <sup>2</sup>		#20...12 AWG / 0.5...2.5 mm <sup>2</sup>	
Clamp screw tightening torque Nm (lb.in.)	0.6 (5.31)		0.5 (4.38)		0.5 (4.38)	
Mechanical dimensions (WxLxH) mm (in.)	12x88x68 (.47x3.46x2.68)		6x77x62 (.24x3.03x2.44)		6x77x62 (.24x3.03x2.44)	
Dimensional diagram	Page 404 Fig. 4		Page 404 Fig. 3		Page 404 Fig. 3	
Insulation stripping length mm (in.)			9 (.35)		9 (.35)	
Certification standards	UL, CSA, CE		CE		CE	
Accessories	Type	Part No.	Type	Part No.	Type	Part No.
End plate side cover	-	-	AP (1.5)	C9039986	AP (1.5)	C9039986
PC software kit†	-	998471				
Cross-connection, black						
Cross-connection, red						
Cross-connection, blue						
Cross-connection, yellow						



### MCZ VFC

Voltage Input / 0...10 V  
Terminal Block



### picoPak V/I

Voltage Input / 0...10 V  
Terminal Block



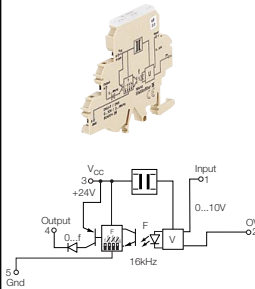
### picoPak V/V

Voltage Input / 0...10 V  
Terminal Block



### DK5 / V-F

Voltage Input / 0...10 VDC  
Terminal Block



1	2	3	4	DIP Switch
1	0	0	0	0...16 kHz
0	1	0	0	0...8 kHz
0	0	1	0	0...4 kHz
0	0	0	1	0...1 kHz

Type	Part No.	Type	Part No.	Type	Part No.	Type	Part No.
		picoPak V/I	998311	picoPak V/V	998315	DK5 / V-F	824204
MCZ VFC	846147						
<b>Voltage</b>		<b>Voltage</b>		<b>Voltage</b>		<b>Voltage</b>	
0...10 V		0...10 V*		0...10 V*		0...10 VDC	
100 kΩ		100 kΩ min.		100 kΩ min.		100 kΩ	
30 V		15...30 VDC		15...30 VDC		100 VDC	
		25...30 mA		25...30 mA			
<b>External</b>		<b>External</b>		<b>External</b>		<b>External</b>	
<b>Frequency</b>		<b>Current</b>		<b>Voltage</b>		±10% FS	
1 kHz, 4 kHz, 8 kHz, 16 kHz		4...20 mA*		0...10 V*		<b>Frequency</b>	
						0...1, 4, 8 or 16 kHz	
		600 Ω max.		2 kΩ min., 4 kΩ min.		1 kΩ	
24 VDC ± 10%						24 VDC ±10%	
20 mA						14 mA	
0.2% v. FSR		0.05% of full scale nominal, 0.2% max. for voltage output		0.05% of full scale nominal, 0.2% max. for voltage output		≤0.2% of FS at Tu=20°C	
< 250 ppm/°C						≤250 ppm/°C	
<b>Optically Isolated</b>		<b>Optically Isolated</b>		<b>Optically Isolated</b>		<b>Optically Isolated</b>	
1 kVDC		1500 VAC RMS, 3 port		1500 VAC RMS, 3 port		1 kV	
4 kV <sub>eff</sub> / 1 min						4 kV	
-25°C...+85°C		-40°C...+85°C		-40°C...+85°C		-25°C...+60°C	
0°C...+50°C		-40°C...+75°C		-40°C...+75°C		0°C...+50°C	
#22...12 AWG		#26...12 AWG / 0.5...2.5 mm <sup>2</sup>		#26...12 AWG / 0.5...2.5 mm <sup>2</sup>		#20...12 AWG / 0.5...2.5 mm <sup>2</sup>	
Tension Clamp		0.6 (5.31)		0.6 (5.31)		0.5 (4.38)	
6x91x63.2 (.24x3.58x2.49)		12x88x68 (.47x3.46x2.68)		12x88x68 (.47x3.46x2.68)		6x77x62 (.24x3.03x2.44)	
		Page 404 Fig. 4		Page 404 Fig. 4		Page 404 Fig. 3	
UL, CSA, CE pending		UL, CSA, CE		UL, CSA, CE		9 (.35)	
<b>Type</b>	<b>Part No.</b>	<b>Type</b>	<b>Part No.</b>	<b>Type</b>	<b>Part No.</b>	<b>Type</b>	<b>Part No.</b>
AP MCZ 1.5	838903	-	-	-	-	AP (1.5)	C9039986
		-	998471	-	998471		

\*Consult factory for custom configurations.