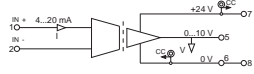
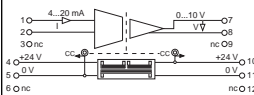


# Analog Signal Conditioners

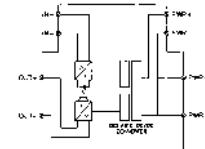
**NEW**  
**WAS4/WAZ4 CVC DC**  
 Current Input / 4...20 mA  
 Enclosed Pluggable



**NEW**  
**WAS5/WAZ5 CVC HF**  
 Current Input / 4...20 mA  
 Enclosed Pluggable



**UPAC Current Input**  
 0...10 mA to 0...100 mA  
 Enclosed



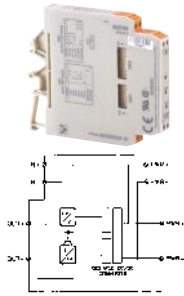
Ordering Data	WAS4/WAZ4 CVC DC		WAS5/WAZ5 CVC HF		UPAC Current Input	
	Type	Part No.	Type	Part No.	Type	Part No.
Screw clamp for TS 35 rail						
Screw clamp for TS 32 rail						
Screw clamp for combi-foot, TS 35 or TS 32 rail	WAS4 CVC DC	<b>844504</b>	WAS5 CVC HF	<b>844728</b>	UPAC Basis I-In	<b>832765</b>
Tension clamp for TS 35 rail	WAZ4 CVC DC	<b>844505</b>	WAZ5 CVC HF	<b>844729</b>		
Technical Data	WAS4/WAZ4 CVC DC		WAS5/WAZ5 CVC HF		UPAC Current Input	
<b>Input signal type</b>	<b>Current</b>		<b>Current</b>		<b>Current</b>	
Material or excitation						
<b>Input range (min...max.)</b>	<b>4...20 mA</b>		<b>4...20 mA</b>		<b>0...10 mA to 0...100 mA</b>	
Input impedance					20 Ω	
Line resistance						
Input maximum	7 V		50 mA		200 V RMS max.	
Supply voltage (min./max.)	24 VDC ± 20%		24 VDC ± 25% (18...30 VDC)		9...30 VDC	
Supply current (min./max.)					83...166 mA	
Current/power consumption	< 20 mA at I <sub>out</sub> = 10 mA				1.5 to 2.5 W	
<b>Power requirements</b>	<b>External</b>		<b>External</b>		<b>External</b>	
Continuous current rating					1.0 A	
Response or switching freq. max.					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	
Span adjustment (20 mA)					100% to 50% of full scale input	
<b>Output signal type</b>	<b>Voltage</b>		<b>Voltage</b>		<b>Current or Voltage</b>	
<b>Output range</b>	<b>0...10 V</b>		<b>0...10 V</b>		<b>0...20 mA, 4...20 mA (load&lt;600 Ω)</b> <b>0...1 mA (load&lt;7.5 kΩ)</b> <b>0...5 V, 0...10 V, ±5 V, ±10 V</b>	
Output load/loop resistance	≥ 1 kΩ					
Output supply voltage (min./max.)						
Output supply current (max.)						
Cold junction comp error						
Common mode rejection						
Accuracy input/output	± 0.2% from end value		± 0.2% from FS		At 20°C ± 0.1% typ., ± 0.2% max. of full scale	
Linearity input/output						
Temperature coefficient	≤ 250 ppm/K from FS		≤ 250 ppm/K from FS		± 0.025% of span	
Transmission frequency	≤ 30 ms (typ 20 ms)		≤ 40 μs (typ 30 μs)			
<b>Coupling method</b>	<b>Magnetic</b>		<b>Magnetic</b>		<b>Optically Isolated</b>	
Cross-connections on pin						
Operating Specifications						
Dielectric isolation input to output					1800 VDC	
Dielectric isolation I/O to power supply					1800 VDC	
Dielectric isolation I/O to DIN-rail	4 kV <sub>eff</sub> / 1 min		4 kV <sub>eff</sub> / 1 min		1800 VDC	
Storage temperature range	-20°C...+85°C		-20°C...+85°C		-25°C...+70°C	
Operating temperature range	0°C...+55°C		0°C...+55°C		0°C...+55°C	
Relative humidity (non-condensing)					-25°C...+70°C	
Wire size	#22...12 AWG		#22...12 AWG		#20...12 AWG / 0.5...2.5 mm <sup>2</sup> 0.5 (4-38)	
Clamp screw tightening torque Nm (lb.in.)						
Mechanical dimensions (WxLxH) mm (in.)	12.5x92.4x112.5 (.49x3.64x4.43)		17.5x92.4x112.5 (.69x3.64x4.43)		17.7x90x111.5 (.70x3.54x4.39)	
Dimensional diagram	Page 402 Fig. 1		Page 402 Fig. 2			
Insulation stripping length mm (in.)					7 (.28)	
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	AP MCZ 1.5	<b>838903</b>	AP MCZ 1.5	<b>838903</b>	-	-
PC software kit†						
Cross-connection, black	ZQV 2.5N/2	<b>171808</b>	ZQV 2.5N/2	<b>171808</b>		
Cross-connection, red	ZQV 2.5N/2	<b>171790</b>	ZQV 2.5N/2	<b>171790</b>		
Cross-connection, blue	ZQV 2.5N/2	<b>171799</b>	ZQV 2.5N/2	<b>171799</b>		
Cross-connection, yellow	ZQV 2.5N/2	<b>169380</b>	ZQV 2.5N/2	<b>169380</b>		

†Kit includes PC based Windows® software, cable and configuration manual.



**UPAC Current Input**

0...10 mA to 0...100 mA  
Enclosed



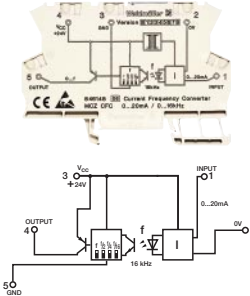
**UPAC Current Input / Relay Output**

0...10 mA to 0...100 mA  
Enclosed



**MCZ CFC**

Current Input / 0...20 mA  
Terminal Block



**picoPak I/I**

Current Input / 0...20 mA  
Terminal Block



**picoPak I/I**

Current Input / 0...20 mA  
Terminal Block



Type	Part No.	Type	Part No.	Type	Part No.	Type	Part No.	Type	Part No.
UPAC Bipolar Current InP	833173	UPAC Alarm DC / I-In	833020	MCZ CFC	846148	picoPak I/I	998300	picoPak I/I	998296
<b>Current</b>		<b>Current</b>		<b>Current</b>		<b>Current</b>		<b>Current</b>	
0...10 mA to 0...100 mA		0...10 mA to 0...100 mA		0...20 mA		0...20 mA*		0...20 mA*	
20 Ω		20 Ω		50 Ω		82.5 Ω max.		82.5 Ω max.	
200 V RMS max.		200 V RMS max.		50 mA					
9...30 VDC		9...30 VDC				15...30 VDC		15...30 VDC	
83...166 mA		83...166 mA				2...45 mA		2...45 mA	
1.5 to 2.5 W		1.5 to 2.5 W							
<b>External</b>		<b>External</b>		<b>External</b>		<b>External</b>		<b>External</b>	
1.0 A		1.0 A							
200 ms typ., 400 ms max.		100 ms min.							
0% to 50% of full scale input		0% to 50% of full scale input							
100% to 50% of full scale input		100% to 50% of full scale input							
<b>Current or Voltage</b>		<b>Relay Contacts</b>		<b>Frequency</b>		<b>Current</b>		<b>Current</b>	
0...20 mA, 4...20 mA (load<600 Ω)		240 VAC / 30 VDC @ 1 A		1 kHz, 4 kHz, 8 kHz, 16 kHz		4...20 mA*		0...20 mA*	
0...1 mA (load<7.5 kΩ)									
0...5 V, 0...10 V, ±5 V, ±10 V									
						600 Ω max.		600 Ω max.	
				24 VDC ± 10%					
				20 mA					
At 20°C ± 0.1% typ., ± 0.2% max. of full scale		At 20°C ± 0.1% typ., ± 0.2% max. of full scale		0.2% 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	
±0.025% of span		±0.05% of full scale		< 250 ppm/°C					
						10 Hz		10 Hz	
<b>Optically Isolated</b>		<b>Optically Isolated</b>		<b>Optically Isolated</b>		<b>Optically Isolated</b>		<b>Optically Isolated</b>	
1800 VDC		1800 VDC		1 kVDC		1500 VAC RMS, 3 port		1500 VAC RMS, 3 port	
1800 VDC		1800 VDC							
1800 VDC		1800 VDC		4 kV <sub>eff</sub> / 1 min					
-25°C...+70°C		-25°C...+70°C		-25°C...+85°C		-40°C...+85°C		-40°C...+85°C	
0°C...+55°C		0°C...+55°C		0°C...+50°C		-40°C...+75°C		-40°C...+75°C	
-25°C...+70°C		-25°C...+70°C							
#20...12 AWG / 0.5...2.5 mm <sup>2</sup>		#20...12 AWG / 0.5...2.5 mm <sup>2</sup>		#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>	
0.5 (4.38)		0.5 (4.38)		Tension Clamp		0.6 (5.31)		0.6 (5.31)	
17.7x90x111.5 (.70x3.54x4.39)		17.7x90x111.5 (.70x3.54x4.39)		6x91x63.2 (.24x3.58x2.49)		12x88x68 (.47x3.46x2.68)		12x88x68 (.47x3.46x2.68)	
						Page 404 Fig. 4		Page 404 Fig. 4	
7 (.28)		7 (.28)		UL, CSA, OE pending		UL, CSA, CE		UL, CSA, CE	
UL, CSA, CE		UL, CSA, CE							
<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>	<b>Type</b>	<b>Part No.</b>
-	-	-	-	AP MCZ 1.5	838903	-	-	-	-
						-	998471	-	998471

\*Consult factory for custom configurations.