

# DC/DC Signal Conditioners

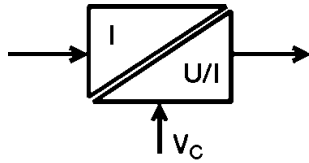
## WAVEANALOG DC/DC

- Voltage supply on output side
- 2-way-isolation
- Analog signal conditioning
- Galvanic isolation between input/output signal
- Input loop powered
- Cross-connectable voltage supply via cross-connectors

### Approvals:



#### Block diagram



## CCC DC

4...20 mA/4...20 mA



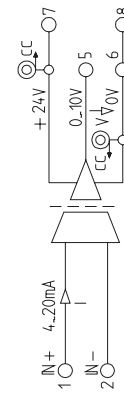
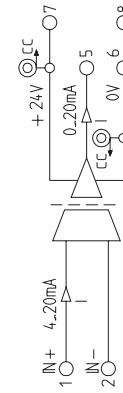
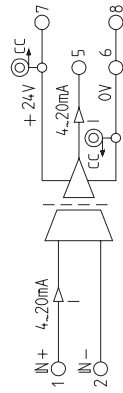
## CCC DC

4...20 mA/0...20 mA



## CVC DC

4...20 mA/0...10 V



Ordering data	
Screw connection	
Tension clamp connection	
Input/output	
Technical data*	
<b>Input signal</b>	4...20 mA
Input voltage max. drop	7 V
Input current max	25 mA
<b>Output signal</b>	4...20 mA
Load resistance	≤ 500 Ω
Accuracy at T <sub>U</sub> =23°C	± 0.2% of FS
Temperature coefficient	≤ 250 ppm/K of FS
Response time	≤ 30 ms (typ. 20 ms)
Cut-off frequency (-3 dB)	≥ 15 Hz (typ. 20 Hz)
General	
Voltage supply	24 VDC ±20% (19.2...28.8 VDC)
Power consumption	< 32 mA at I <sub>out</sub> = 20 mA
Current carrying capacity of cross-connection	≤ 2 A
Operating temperature	0°C...+55°C (horiz. mounted)
Storage temperature	-20°C...+85°C
Dimensions W/L/H	mm (in.) 12.5/92.4/112.5 (49/3.64/4.43)
Approvals	CE, UL, CSA
Coordination of insulation according to EN 50178, 04/98	
Rated voltage	300 V
Rated surge voltage	4 kV
Overvoltage category	III
Contamination class	2
Clearance and creepage distance	mm (in.) ≥ 3 (.12)
Isolation voltage, voltage strength	
Input/output to mounting rail	4 kV <sub>eff</sub> /1 min
Standards/specifications	EN 50178
EMC standards	EN 50081, EN 50082, EN 55011
Dimensions and accessories see	Page 356 + 366
*T <sub>U</sub> = 23°C single module	

Type	Part No.
WAS4 CCC DC	8444980000
WAZ4 CCC DC	8444990000
4...20 mA/4...20 mA	
4...20 mA	
7 V	
25 mA	
4...20 mA	
≤ 500 Ω	
± 0.2% of FS	
≤ 250 ppm/K of FS	
≤ 30 ms (typ. 20 ms)	
≥ 15 Hz (typ. 20 Hz)	
24 VDC ±20% (19.2...28.8 VDC)	
< 32 mA at I <sub>out</sub> = 20 mA	
≤ 2 A	
0°C...+55°C (horiz. mounted)	
-20°C...+85°C	
12.5/92.4/112.5 (49/3.64/4.43)	
CE, UL, CSA	
300 V	
4 kV	
III	
2	
≥ 3 (.12)	
4 kV <sub>eff</sub> /1 min	
EN 50178	
EN 50081, EN 50082, EN 55011	
Page 356 + 366	

Type	Part No.
WAS4 CCC DC	8445010000
WAZ4 CCC DC	8445020000
4...20 mA/0...20 mA	
4...20 mA	
7 V	
25 mA	
0...20 mA	
≤ 500 Ω	
± 0.2% of FS	
≤ 250 ppm/K of FS	
≤ 30 ms (typ. 20 ms)	
≥ 15 Hz (typ. 20 Hz)	
24 VDC ±20% (19.2...28.8 VDC)	
< 32 mA at I <sub>out</sub> = 20 mA	
≤ 2 A	
0°C...+55°C (horiz. mounted)	
-20°C...+85°C	
12.5/92.4/112.5 (49/3.64/4.43)	
CE, UL, CSA	
300 V	
4 kV	
III	
2	
≥ 3 (.12)	
4 kV <sub>eff</sub> /1 min	
EN 50178	
EN 50081, EN 50082, EN 55011	
Page 356 + 366	

Type	Part No.
WAS4 CVC DC	8445040000
WAZ4 CVC DC	8445050000
4...20 mA/0...10 V	
4...20 mA	
7 V	
25 mA	
0...10 V	
≥ 1 kΩ	
± 0.2% of FS	
≤ 250 ppm/K of FS	
≤ 30 ms (typ. 20 ms)	
≥ 15 Hz (typ. 20 Hz)	
24 VDC ±20% (19.2...28.8 VDC)	
< 20 mA at I <sub>out</sub> = 10 mA	
≤ 2 A	
0°C...+55°C (horiz. mounted)	
-20°C...+85°C	
12.5/92.4/112.5 (49/3.64/4.43)	
CE, UL, CSA	
300 V	
4 kV	
III	
2	
≥ 3 (.12)	
4 kV <sub>eff</sub> /1 min	
EN 50178	
EN 50081, EN 50082, EN 55011	
Page 356 + 366	