

WAVESERIES Signal Conditioners DC/DC CCC HF with 3-Way Separation

Type	Cat. No.
Screw-type connection	
WAS5 CCC HF 0 ... 20 mA/0 ... 20 mA	8447160000
WAS5 CCC HF 0 ... 20 mA/4 ... 20 mA	8447190000
WAS5 CVC HF 0 ... 20 mA/0 ... 10 V	8447220000
WAS5 CCC HF 4 ... 20 V/0 ... 20 mA	8447250000
WAS5 CVC HF 4 ... 20 mA/0 ... 10 V	8447280000
WAS5 VCC HF 0 ... 10 V/0 ... 20 mA	8447310000
WAS5 VCC HF 0 ... 10 V/4 ... 20 mA	8447340000
WAS5 VVC HF 0 ... 10 V/0 ... 10 V	8447370000
WAS5 VVC HF - 10 ... + 10 V/- 10 ...+ 10 V	8561610000
Tension clamp connection	
WAZ5 CCC HF 0 ... 20 mA/0 ... 20 mA	8447170000
WAZ5 CCC HF 0 ... 20 mA/4 ... 20 mA	8447200000
WAZ5 CVC HF 0 ... 20 mA/0 ... 10 V	8447230000
WAZ5 CCC HF 4 ... 20 mA/0 ... 20 mA	8447260000
WAZ5 CVC HF 4 ... 20 mA/0 ... 10 V	8447290000
WAZ5 VCC HF 0 ... 10 V/0 ... 20 mA	8447320000
WAZ5 VCC HF 0 ... 10 V/4 ... 20 mA	8447350000
WAZ5 VVC HF 0 ... 10 V/0 ... 10 V	8447380000
WAZ5 VVC HF - 10 ... + 10 V/- 10 ...+ 10 V	8587000000

Read these instructions before using the product
and retain for future information.

1 General instructions

The WAVESERIES signal conditioner DC/DC CCC HF with 3-way separation should only be installed by qualified staff and be powered up following professional installation.

2 Application

The WAVESERIES signal conditioner DC/DC CCC HF with 3-way separation converts feedback-free all standardised in- and output signals. These signal conditioners are supplied with voltage from the controller and feed the input side through a DC/DC-conditioner. Thereby is not only the input/output circuitry galvanically separated but also the supply side.

3 Mounting and dismounting

Warning!! Mounting and dismounting may only be carried out when the power supply has been disconnected. Failure to observe will lead to considerable damage!

3.1 Mounting onto TS 35 DIN rails

(s. Fig. 1)

3.2 Pluggable electronic components for range alteration (depending on model)

(s. Fig. 2)

1. Remove connector, (depending on model either screw-type or tension clamp).
2. Press locking clips on both sides of the enclosure.
3. Pull out the circuit board.

Warning!! The circuit board can only be inserted in one position. The connectors have been coded by the manufacturer, ensuring that they cannot be reversed.

3.3 Pluggable cross-connections for voltage supply

(s. Fig. 3)

A maximum feed through of 2 A is possible.

If a signal conditioner is accidentally rotated through 180°, the cross-connection cannot be inserted.

3.4 Labelling possibilities

(s. Fig. 4)

WS 10 connector markers can be used to label module.

4 Electrical connection

(s. Fig. 5)

Cat. No. 8447160000

(s. Fig. 6)

Cat. No. 8447280000

5 Dimensions

(s. Fig. 7)

6 Notes on CE labelling of WAVESERIES modules

WAVESERIES modules, that carry CE-labelling, fulfil the requirements of the EU-Guidelines 89/336/EU "electromagnetic compatibility" and the therein listed harmonised European Norms (EN).

The declarations of conformity are, in accordance with the above-mentioned EU-Guideline, Article 10, held at the following address for the relevant authorities:

Weidmüller Interface GmbH & Co.

Postfach 3030

32720 Detmold

7 Technical data

Input

Input signal

0 ... 20 mA or 4 ... 20 mA

0 ... 10 V or -10 ... +10 V

Input voltage, max.

± 15 V (0 ... 10 V, -10 V...+10 V)

Input current, max.

50 mA (0 ... 20 mA, 4 ... 20 mA)

Input resistance

50 Ω (0 ... 20 mA, 4 ... 20 mA)

500 kΩ (0 ... 10 V)

Output

Output signal

0 ... 20 mA or 4 ... 20 mA

0 ... 10 V or -10 ... +10 V

Load resistance

≤ 500 Ω (0 ... 20 mA, 4 ... 20 mA)

≥ 2 kΩ (0 ... 10 V)

Accuracy by $T_u = 23\text{ °C}$

± 0.2 % from measuring range

Temperature coefficient	≤ 250 ppm/K from measuring range
Step response time	≤ 40 μs (typ. 30 μs)
Cut-off frequency (-3 dB)	≥ 15 Hz (typ. 20 kHz)

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 distances	≥ 3 mm
Coupling capacity	
Input/output/supply	1 nF
Isolation voltage	
Voltage endurance	
Input/output/to mounting rail	4 kV _{eff} /1 min

Connection data

Connection	BLZ/SL
Insulating stripping length	8 ± 0.5 mm
Solid core	0.5 ... 2.5 mm ²
Flexible core	0.5 ... 2.5 mm ²
With ferrules	0.5 ... 1.5 mm ²

EMC specification

according to EN 55011,
class B, group 1
according to EN 50081-1
according to EN 50082-2

General

Voltage supply	24 Vdc ± 25 % (18 ... 30 Vdc)
Power consumption	< 1.5 W at I _{out} = 20 mA (at output 0 ... 20 mA, 4 ... 20 mA) < 1.3 W at I _{out} = 5 mA (at output 0 ... 10 V)
Cross-connection, upper	24 V, max. 2 A
Cross-connection, lower	0 V, max. 2 A
Operating temperature	0 ... +55 °C
Storage temperature	-20 ... +85 °C

Approvals

CE, CSA, UL

8 Accessories

Cross-connection ZQV 2,5N/2 red	1717900000
Cross-connection ZQV 2,5N/2 blue	1717990000
Cross-connection ZQV 2,5N/2 yellow	1693800000

Terminal connector, 3-pole for screw-type connection

BLZ 5.08/3 SN OR

- orange	1526560000
- black	1526510000

Terminal connector, 3-pole for tension clamp connection

BLZF 5.08/3

- orange	1707470000
- black	1707700000

Connector markers

WS 10/5 Multicard for plotter labelling	1635010000
WS 10/5 blank	1060860000
WS 10/5 blank	1060860000

In the interest of protecting the environment, return any spare operating instructions to your local stockist for re-use.

Printed on chlorine-free bleached paper.

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