Isolation Converter

AD-TW 41 GM

AD-TW 41 ST

Description

The separation converter serves the galvanic separation of impressed currents. It obtains its auxiliary energy form the input signal. The connection of an additional auxiliary voltage is not necessary. The output current is independent of the connected load up to the maximum value. The isolating transformer is also available as a TWB variant, which does not interrupt the input current if its output current is interrupted (bypass function).

Application

Economic separation of computer inputs, protection of sensitive units against potential delay, galvanic decoupling in complex measuring units. Optional available FSK-capable (HART® Communications Protocol). Caution: with open output the input becomes high-impedance! To avoid this behavior, the version can be used with bypass.



Business data

Order number

AD-TW 41 GM	design GM
AD-TWB 41 GM	design GM with Bypass-Function
AD-TWH 41 GM	design GM, FSK-transparency (HART®-Protokoll)
AD-TW 41 ST	design ST
AD-TWB 41 ST	design ST with Bypass-Function

Information

Downloads

Safety instructions	ad-safety-instructions.pdf

Technical specifications

Input current

Measuring range	0 ... 20 mA
Input voltage	< 25 V
Voltage drop device	< 2,5 V

Output current

Output range	0 ... 20 mA
Max. burden	1000 Ohm
Burden error	-0,03% / 100 Ohm
Residual ripple	0,5 % (1000 Ohm; 20 mA)

Transmission behaviour

Basic accuracy	< 0,2 % of full scale
Input / output	1 : 1
Temperature influence	50 ppm/K of full scale
Response time	~ 20 ms
Transmission frequency	500 Hz (500 Ohm)

Housing GM

Dimensions (WxHxD)	15x42,5x102 mm
Type of protection	IP 20
Connection method	screw clamp
Terminals, wire cross section	2,5 mm² flex wire / 4 mm² one wire
Bolting torque terminals	0,5 Nm
Weight	~ 60 g
Manner of fastening	35 mm DIN rail 35mm

Housing ST

Dimensions (WxHxD)	15x42,5x102 mm
Type of protection	IP 20
Pluggable	
Connection method	screw clamp
Terminals, wire cross section	2,5 mm² flex wire / 4 mm² one wire
Bolting torque terminals	0,5 Nm
Weight	~ 50 g
Manner of fastening	35 mm DIN rail 35mm

Environmental conditions

Ambient temperature	-10 ... 50 °C
Storage and transport	-10 ... 70 °C (no condensation)

EMC

Product family standard	EN 61326-1 [1]
Emitted interference	EN 55011, CISPR11 Cl. B, Gr. 1

Galvanic isolation

Base isolation, functional separation	
Working voltage	50 VDC
Test voltages input / output	500 V, 50 Hz (1 min.)

Protection circuits

Input	electrical surge protection
Output	electrical surge protection

[1] During checking, slight signal deviations are possible.

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MANUFACTURER
ADAMCZEWSKI Elektronische Messtechnik

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Isolation Converter

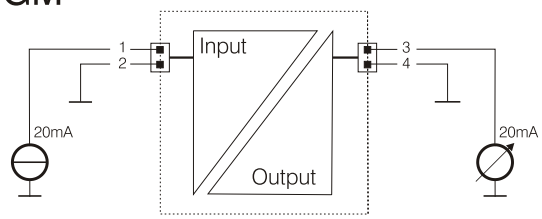
AD-TW 41 GM

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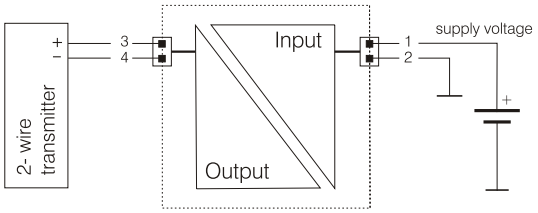
Block and wiring diagram

GM

Isolation of active current signals

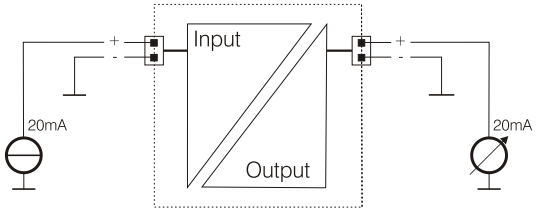


Isolation of transmitter signals

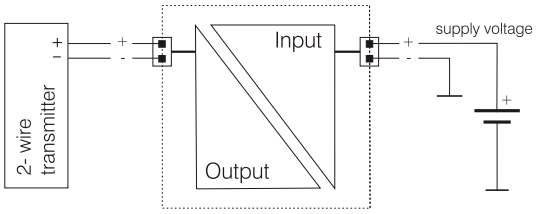


ST

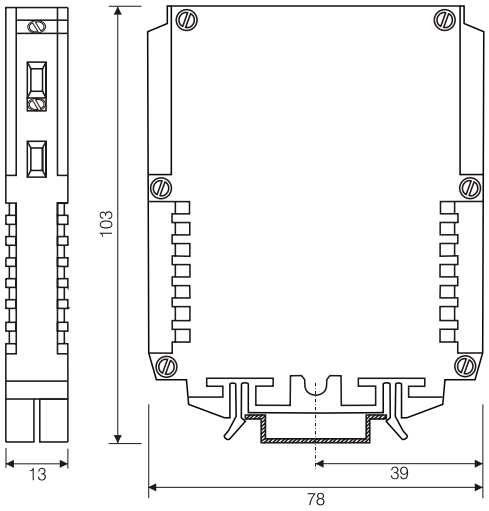
Isolation of active current signals

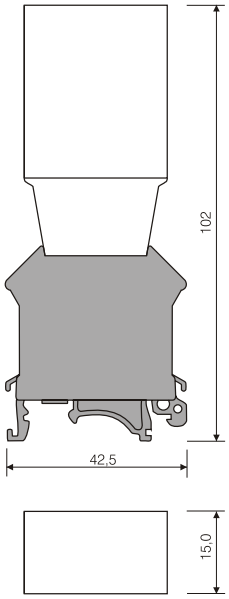


Isolation of transmitter signals



Dimensions





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