Isolation Amplifier

Vario-Isolation-Amplifier

AD-TV 33 GL

Description

Business data

Order number	AD-TV 33 GL

Technical specifications

Input current	
Measuring range	0 ... 20 mA
Input resistance	50 Ohm
Input voltage	
Measuring range	0 ... 10 V
Input resistance	200 kOhm
Output current	
Output range	0 ... 20 mA
Max. burden	500 Ohm
Residual ripple	20 µAss
Output voltage	
Output range	0 ... 10 V
Min. burden	500 Ohm
Residual ripple	10 mVss
Supply	
Voltage range AC	50 ... 253 V AC, 50/60 Hz
Nominal voltage AC	230 V AC
Voltage range DC	20 ... 253 V DC
Nominal voltage DC	24 V DC
Power consumption AC / DC	2,8 VA / 1,5 W
Transmission behaviour	
Basic accuracy	< 0,2 %
Temperature influence	100 ppm/K
Response time	~ 40 ms (10...90 % output signal)
Housing	
Dimensions (WxHxD)	18x78x103 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	~ 140 g
Manner of fastening	35 mm DIN rail 35mm
Environmental conditions	
Ambient temperature	0 ... 50 °C
Storage and transport	-10 ... 70 °C (no thawing)
EMC	
Product family standard	EN 61326 [1]
Emitted interference	EN 55011, CISPR11 Cl. B
Electrical safety requirements	
Product family standard	EN 61010-1
Overvoltage category	II
Pollution degree	2
Galvanic isolation, test voltages	
Input / output	3,75 kV, 50 Hz (1 min.)
Signal / supply unit	4 kV, 50 Hz (1 min.)
Protection circuits	
Input	electrical surge protection
Output	electrical surge protection
Power supply	electrical surge and reverse current protection

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

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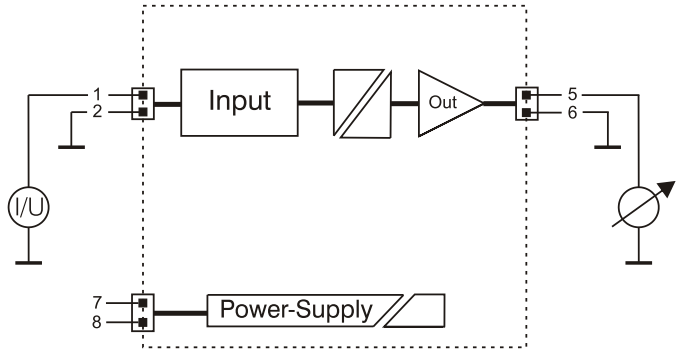
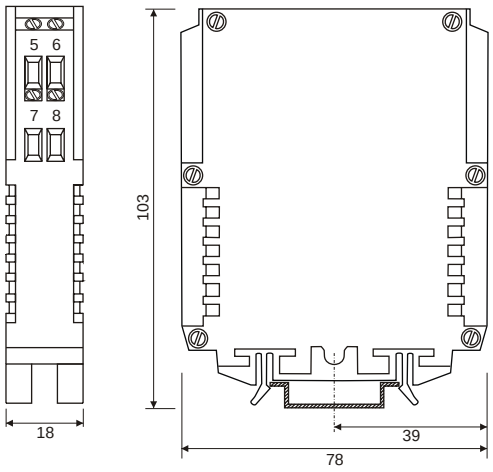
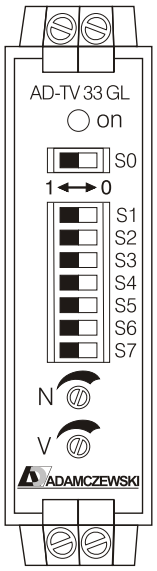
Block and wiring diagram

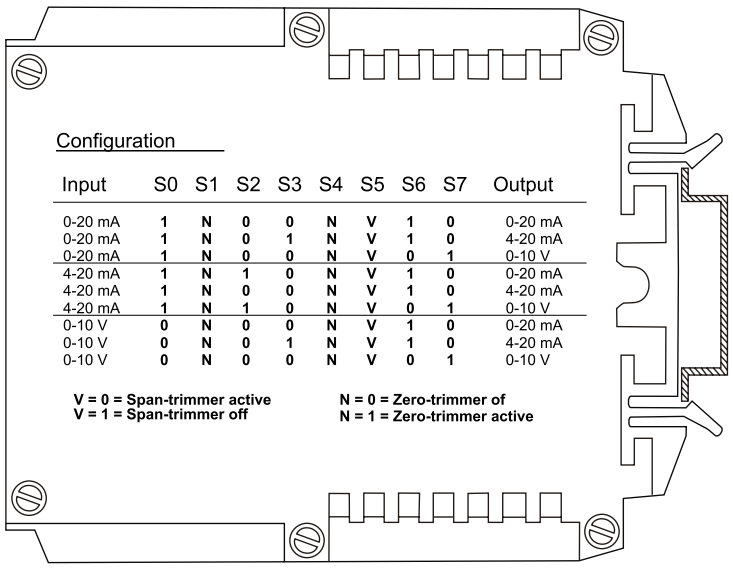


Dimensions



Circuit examples





Configuration

Input	S0	S1	S2	S3	S4	S5	S6	S7	Output
0-20 mA	1	N	0	0	N	V	1	0	0-20 mA
0-20 mA	1	N	0	1	N	V	1	0	4-20 mA
0-20 mA	1	N	0	0	N	V	0	1	0-10 V
4-20 mA	1	N	1	0	N	V	1	0	0-20 mA
4-20 mA	1	N	0	0	N	V	1	0	4-20 mA
4-20 mA	1	N	1	0	N	V	0	1	0-10 V
0-10 V	0	N	0	0	N	V	1	0	0-20 mA
0-10 V	0	N	0	1	N	V	1	0	4-20 mA
0-10 V	0	N	0	0	N	V	0	1	0-10 V

V = 0 = Span-trimmer active
V = 1 = Span-trimmer off

N = 0 = Zero-trimmer of
N = 1 = Zero-trimmer active

Switch Operation:

S0: Input signal current or voltage
S1: Activation zero-trimmer
S2: Input signal 4...20 mA
S3: Output signal 4...20 mA
S4: Activation zero-trimmer
S5: Activation span-trimmer
S6: Output signal current
S7: Output signal voltage

After activation of the trimmer the calibrated values can be adjusted. If activation is restored, the device has the default values.