Isolating Signal Converter TV500L

Characteristics

Isolating signal converter TV500L can be used to isolate and convert unipolar or bipolar field signals into industry standard unipolar 0/4..20 mA and 0/2..10 V DC or bipolar signals for process control systems. The output characteristic curve is programmable for increasing or decreasing performance.

Technical data

Power supply

Supply voltage	: 230 V AC ± 10 % or 24 V DC ± 15 %
Frequency AC	: 47..63 Hz
Power consumption	: < 3 VA (at 24 V DC, 80 mA)
Operating temperature	: -10..+50 °C
CE-conformity	: EN 55022, EN 60555, IEC 61000-4-3/4/5/11/13
EMC	: EN 61326-1:2013; EN 60664-1:2007

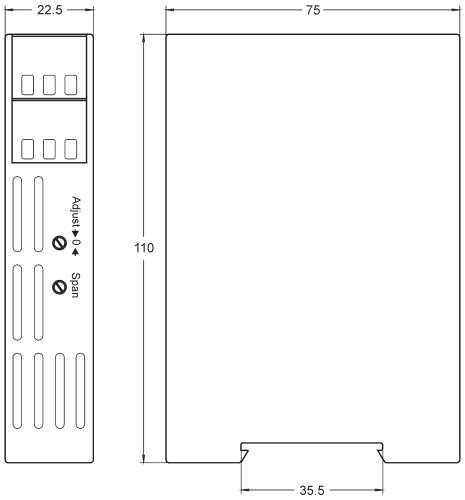
Inputs

Current	: ± 20 mA or 0/4..20 mA selectable, R_i = 43 Ω, overload max. 100 mA
Voltage	: ± 10V or 0/2..10 V selectable, R_i = 40 kΩ, overload max. 100 V
Start value	: adjustable ± 1.5 %
End value	: adjustable ± 1.5 %
Accuracy	: < 0.3 %, (single range adjustment < 0.1 %)

Output

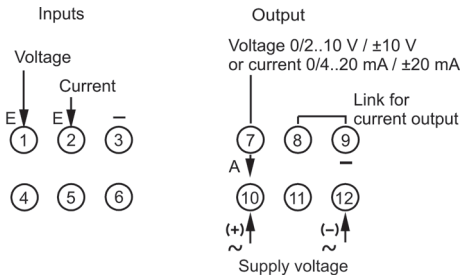
Programmable output	
Voltage → current	: link between terminal 8 and 9
Current	: 0/4..20 mA selectable, burden ≤ 400 Ω; ± 20 mA, burden ≤ 150 Ω
Burden error	: < 0.1 % (R_L = 0..200 Ω), < 0.2 % (R_L = 0..400 Ω)
Voltage	: 0/2..10V selectable, load max. 10 mA; ± 10 V, load max. 5 mA
Rise time (T_{90})	: < 40 ms
Case	: standard case polycarbonate 8020 UL94V-1 acc. to DIN EN 60715:2001-09, TS35
Weight	: approx. 200 g
Electrical connection	: screw terminals, max. 2.5 mm²
Protection class	: case IP30, terminals IP20, acc. to BGV A3

Dimensions



DIN rail mounting TS35

Connection diagram



Ordering code

TV500L - 1. 2. 3. - 4.

1.	**Inputs**	
	1	0/4..20 mA and 0/2..10 V DC
	2	± 20 mA and ± 10 V DC
2.	**Outputs**	
	0	0/4..20 mA and 0/2..10 V DC
	1	± 20 mA and ± 10 V DC
3.	**Characteristic curve**	
	0	increasing
	1	decreasing (inverted)*
4.	**Supply voltage**	
	0	230 V AC ± 10 %
	5	24V DC ± 15 %

* please state input- and output signal in clear text