Isolating signal converter TV 500
... with integr. transmitter supply ST 500

Features

- Switch selectable inputs
  0/4 ... 20 mA and 0/2 ... 10 V
- Switch selectable outputs
  0/4 ... 20 mA simultaneous 0/2 ... 10 V
- Supply voltage 100 ... 265 V AC
  or 10.8 ... 30V AC/DC
- Full 3-port isolation
- Integrated transmitter supply
  (only ST500)
- Power on LED
- 22.5mm case for DIN rail mounting

General information

TV500 isolating signal converter can be used to isolate and convert field signals 0/4 ... 20 mA or 0/2 ...10 V DC into industry standard signals for process control systems. The ST500 provides a fully floating isolated transmitter supply.

Short information

Current output	max. burden 1 kΩ for direct controlling of I/P transmitter and 20 mA proportional valves
Multi-range	input and output can be configurated by DIP-switch at the front panel for 0/4 ... 20 mA or 0/2 ... 10 V DC
Transmission frequency	measuring range 10: max. 18 Hz (T_{90} <20 ms), measuring range 11: max. 1 kHz (T_{90} <100 µs) .

Technical data

Power supply

Supply voltage	: 100 ... 265 V AC or 10.8 ... 30 V AC/DC
Frequency AC	: 47 ... 63 Hz
Power consumption	: < 3.5 VA
Working temperature	: -10 ... +60 °C
Rated voltage	: 500 V AC according to VDE 0110 Gr. 2 between input/output/supply
Test voltage	: 4 kV DC between input/output/supply
-conformity	: EN55022, EN60555-2, IEC61000-4-4/5/11/13

Input

Current input	: 0 ... 20 mA, 4 ... 20 mA switch selectable, Ri = 25 Ohm max. 100 mA overload
Voltage input	: 0 ... 10 V DC, 2 ... 10V DC switch selectable, Ri approx. 40kOhm, max. 100V overload
Measuring range and 4mA	: adjustable approx. +/-5%

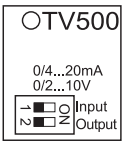
Transmitter supply	: approx. 24 V DC, Ri approx. 150 Ω, short circuit current approx. 35 mA (ST500 only)

Output

Current output	: 0 ... 20 mA, 4 ... 20 mA switch selectable, burden max. 1 Ω
Voltage output	: 0 ... 10V, 2 ... 10V switch selectable, max. load 15 mA, short circuit protected(simultaneous to current output max. 5mA)
Rise time (t_{90})	: measuring range 10: < 20 ms, max. frequency 18 Hz measuring range 11: <100 µs, max. frequency 1 kHz
Accuracy	: ≤ 0,2 % (single range adjusted ≤ 0.1 %)
Temperature coefficient	: ≤ 0.01%/K
Repeat accuracy	: < 0.1%
Supply error	: < 0.1%
Malfunction	(input/output 4 ... 20 mA, both DIP-switches on)
- break of wire	: output current < 2.5 mA
- shorted wire	: output current > 23 mA, < 27 mA (between term. 1 and 2, only ST500)

Case	: standard case of polycarbonate 8020 UL94V
Weight	: approx. 200 g
Protection	: case IP30, terminals IP20 finger safe acc. German BGV A3
Connection	: screw terminals with pressure plate, max. 2,5 mm² wire

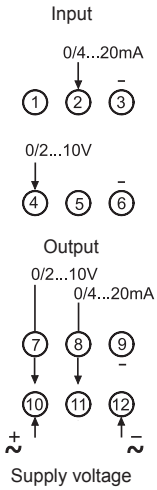
Front panel controls



	0 ... 20 mA 0 ... 10 V	4 ... 20 mA 2 ... 10 V
Input	S1 OFF	S1 ON
Output	S2 OFF	S2 ON

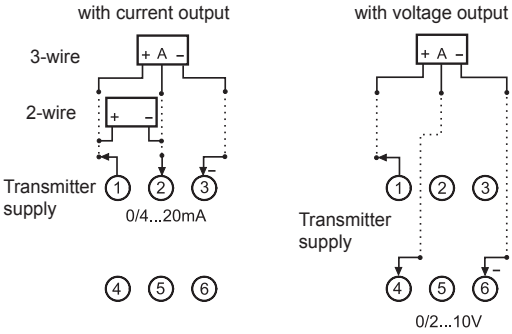
Connection diagrams

TV500

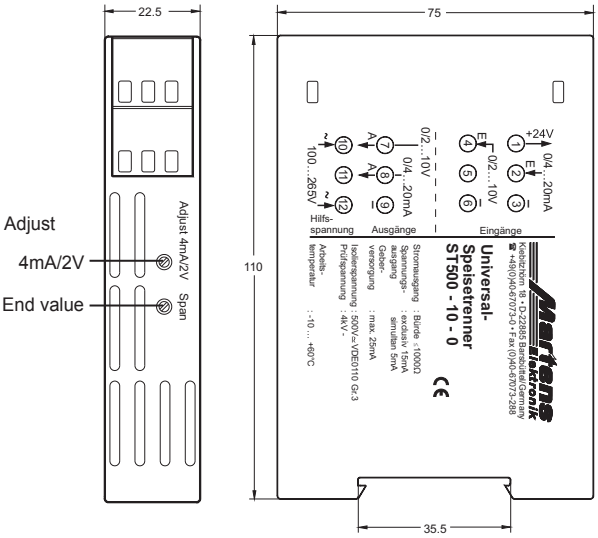


ST500

Connection of sensors



Dimensions



TS35 DIN rail mounting
acc. to DIN 46277 and DIN EN 50022

Caution!
Mounting of multiple units without distance is only permitted in horizontal orientation.

Ordering code

1. - 2. - 3.

1. Device type

TV500	Isolating Signal converter
ST500	Power feed signal converter

2. Measuring ra

10	Inputs 0/4 ... 20 mA and 0/2 ... 10 V DC Outputs 0/4 ... 20 mA and 0/2 ... 10 V DC
11	as 10, but rise time t_{90} <100 µs

3. Hilfsspannung

0	100 ... 265 V AC
5	10,8 ... 30 V AC/DC

Isolating converter are available as EX-i devices.
Please ask for more details