

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 configured 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)

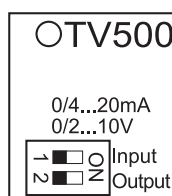
Output

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

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 mm ² 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

Ordering code

1. 2. 3.
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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 $t_{90} < 100 \mu\text{s}$

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