

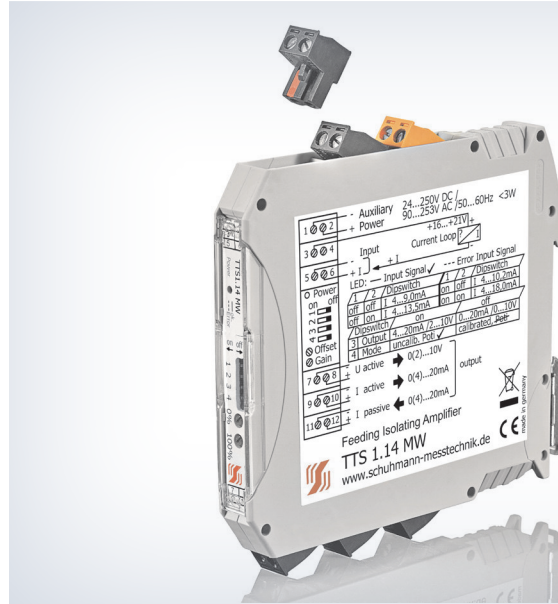


Feeding Isolating Amplifier with Special Input for Current

TTS 1.14 MW

FEATURES

- **Input:**
Current 4...9,0 mA/ 4...10,2 mA/
4...13,5 mA or 4...18,0 mA
- **Output, simultaneous:**
Current 0(4)...20 mA (active or
passive) and voltage 0(2)...10 V
- **Integrated transmitter feeding**
- **Function, switchable:**
- fixed calibration or
- adjustable by trimmer
- **Pluggable screw-clamps**
- **Galvanic 3-way isolation**



FUNCTION

The TTS 1.14 MW is used for the precise potential isolation of different measuring signals. The unit has 4 DIP-switches on frontside.

To select the transmission or the signal conversion ranges, use the DIP-switches 1 - 3.

The calibrated measurement ranges for input 4...9,0 mA/ 4...10,2 mA/ 4...13,5 mA/ 4...18,0 mA as well as on the output side the ranges 0(4)...20 mA/ 0(2)...10 V, are stored in the device = DIP-switch 4 OFF.

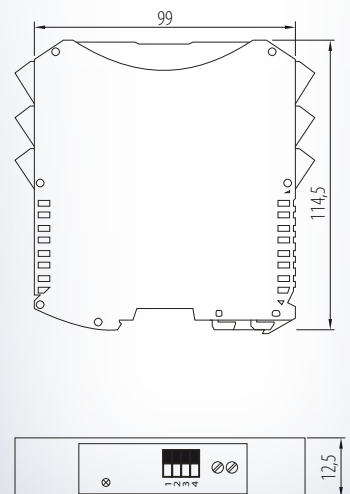
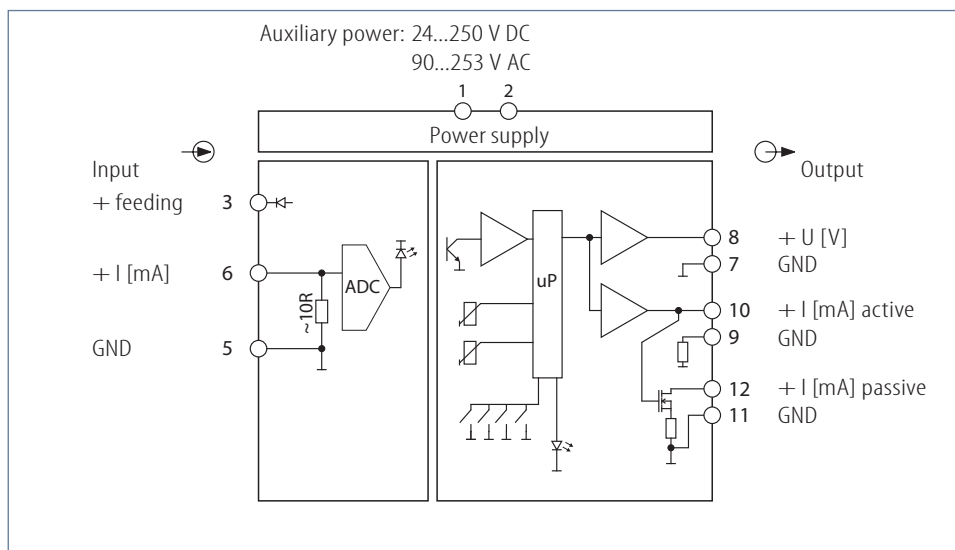
The fine adjustment of the offset and the final value is carried out by trimmer = DIP-switch 4 ON.

Its output can do current (active or passive) and voltage simultaneous.

Because of the integrated transmitter feeding, 2-/3-wire transmitters will be fed.

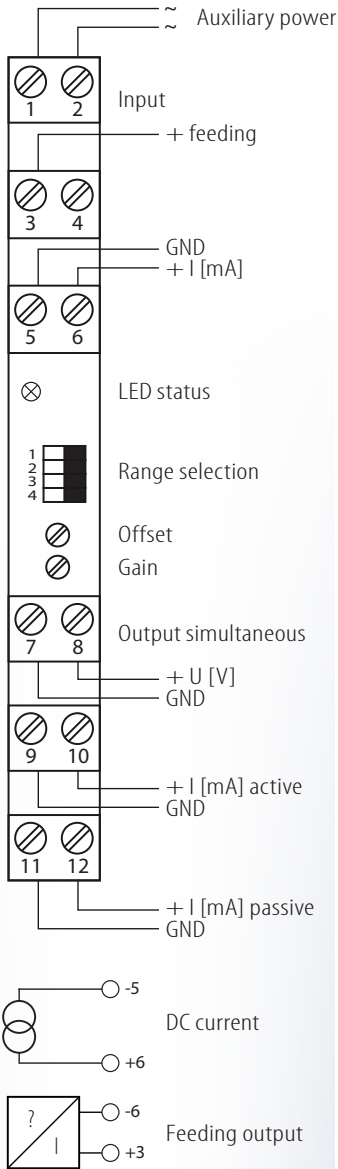
The galvanic 3-way isolation is used to protect against faulty measurement or damage downstream equipment such as analog control units, control rooms, control systems, PLC units.

The integrated protection circuit with suppressor diode protects the secondary circuit from voltage spikes and transient surges.



TTS 1.14 MW

Connection diagram:



Input:

I: DC current: 4...9,0 mA / 4...10,2 mA / 4...13,5 mA / 4...18,0 mA input resistance approx. 10 Ω
 connection: terminal 5 -, 6 +
 transmitter feeding: approx. 16...21 V
 connection: terminal 6 -, 3 +

Output:

I: load-independent DC current: 0(4)...20 mA permissible load max. 540 Ω
 Output current limiting: 22,0 mA
 connection: terminal 9 -, 10 +
 or:
 loop-powered DC current: 0(4)...20 mA max. permissible voltage 30 V
 connection: terminal 11 -, 12 +

Caution: do not use output I active (load-independent) and I passive (loop pow.) at the same time!

U: load-independent DC voltage: 0(2)...10 V permis. load ≥ 5 kΩ simultaneous
 permis. load ≥ 1 kΩ exclusive
 connection: terminal 7 -, 8 +
 Gain adjustment: trimmer ± 25 % (DIP-switch 4 = ON)
 Offset adjustment: trimmer ± 25 % (DIP-switch 4 = ON)

Adjustment:

DIP-switch for range selection:

	1	2	3	4
Switch 1 + 2	1 OFF / 2 OFF	input 4...9,0 mA	1 ON / 2 OFF	input 4...10,2 mA
Switch 1 + 2	1 OFF / 2 ON	input 4...13,5 mA	1 ON / 2 ON	input 4...18,0 mA

on off

Switch	Function	ON	OFF
3*	output	4...20 mA / 2...10 V	0...20 mA / 0...10 V
4	calibration	adjustment with trimmer	fixed calibrated*

*unchangeable factory setting: DIP4=OFF (trimmers are inactive)

Display:

LED status green, active input signals are in standard range, device ready for use
 green, flashing input signals are not in standard range

Environmental conditions:

Storage temperature: -40...+70 °C
 Operating temperature: -40...+55 °C
 Isolation voltage:
 2,5 kV eff. 1 sec. input/output
 4 kV eff. 1 sec. auxiliary power

Auxiliary power:

Wide range: 24...250 V DC
 90...253 V AC
 < 3 W
 Influence of aux. power: < 0,1 %

Characteristics of transmission:

Transmission error: < 0,12 %
 Linearity error: < 0,1 %
 Temperature error: < 100 ppm/ K
 Load influence I: < 50 ppm
 of final value
 Load influence U: < 0,2 %
 at 1 kΩ load
 Setting time: < 30 msec.

Directive:

EMC Directive: 2014/30/EU*
 Low Voltage Directive: 2014/35/EU
 *minimum deviations possible during
 HF-radiation influence

Mounting details:

Housing for top hat rail
 Type of protection: IP 30 housing
 IP 20 clamps
 Rail-mounting fixed according to
 EN 50022-35 x 7,5 mm
 Width: 12,5 mm
 Weight: 90 g
 Material: Polyamide (PA)
 Flammability class: V0 (UL94)
 Approval: CE
 Connection: pluggable
 screw clamps
 0,2...2,5 mm²

For safety reasons we recommend to mount the housing for top hat rail with a distance of approx. 5 mm to each other. Please check DIP-switch before initial operation!

Ordering information:

Type: TTS 1.14 MW wide range

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