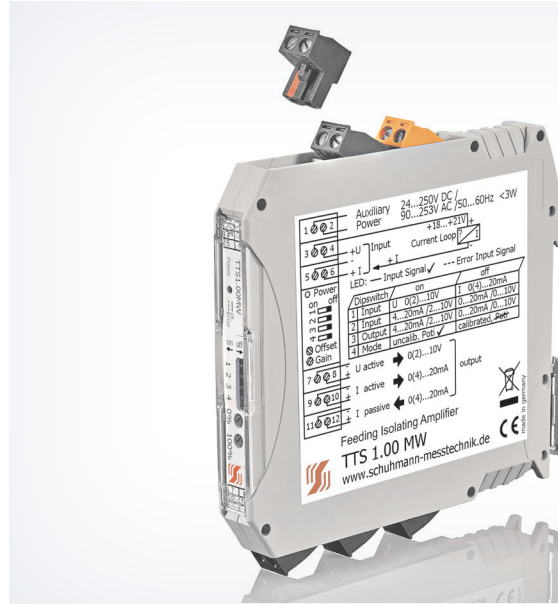




FEATURES

- **Input:**
Current 0(4)...20 mA or
Voltage 0(2)...10 V
- **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 1.00 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.

Fixed calibrated standard measurement ranges, for input and output, are stored in the device: 0(4)...20 mA/ 0(2)...10 V = DIP-switch 4 OFF.

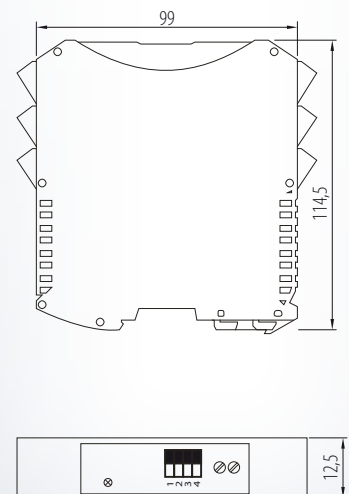
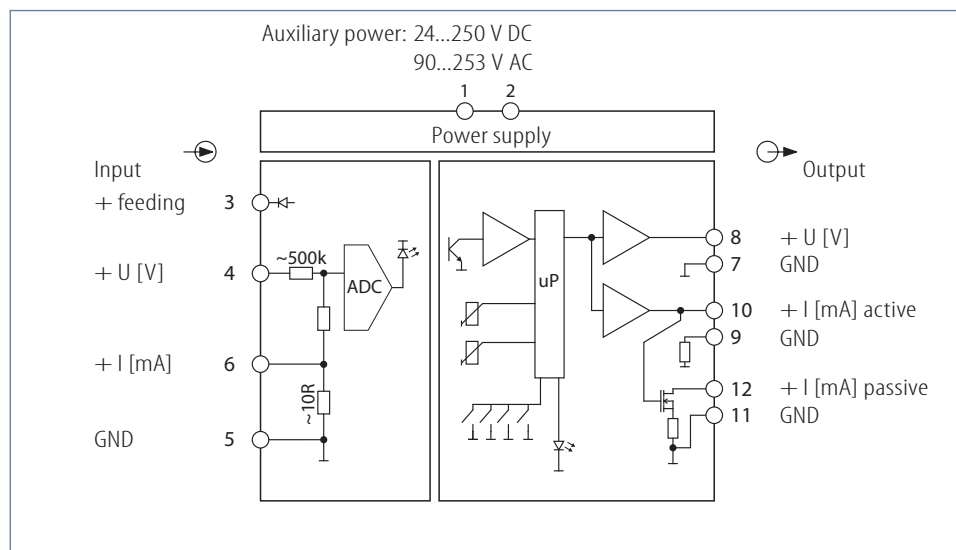
The fine adjustment of the offset and the final value is carried out by trimmer = DIP-switch 4 ON.

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

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

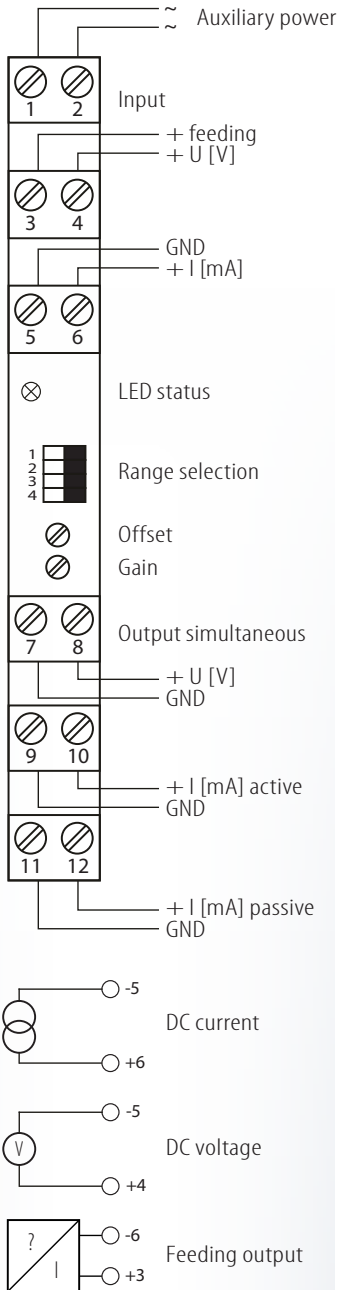
The galvanic 3-way isolation is used to protect against faulty measurement or damage downstream equipment such as analog control units, control rooms, control systems, PLC units.

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



TTS 1.00 MW

Connection diagram:



Input:

I: DC current:	0(4)...20 mA	input resistance approx. 10 Ω
connection:	terminal 5 -, 6 +	
U: DC voltage:	0(2)...10 V	input resistance approx. 500 kΩ
connection:	terminal 5 -, 4 +	
transmitter feeding:	approx. 18...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
on	Switch	Function	ON	OFF
off	1	input	U [V]	I [mA]
	2*	input	4...20 mA / 2...10 V	0...20 mA / 0...10 V
	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	IP 30 housing
Type of protection:	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 mm ²

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 1.00 MW wide range

Schuhmann GmbH & Co. KG
Römerstraße 2
D-74363 Güglingen
Tel. +49 71 35 50 56
Fax +49 71 35 53 55
www.schuhmann-messtechnik.de