

# Universal Isolating Amplifier TV125L



- **Safe galvanic isolation between input / output / auxiliary voltage with reinforced isolation in accordance with DIN EN 61010-1**
- **Step response  $T_{90}$  40ms**
- **Output deviation < 0.2% of the limit value**
- **Overload protection of the current input with automatically resetting fuse**
- **Operating display and status messages via two-colour LED**
- **Configuration via front DIP switches**
- **Plug-in terminal strips**
- **Narrow installation width of 12.5 mm for carrier rail mounting TS 35**

## Characteristics

Isolating amplifiers of the series TV125L are suitable for potential isolation or for conversion of unit signals. The universal layout of the inputs and the output enables a broad range of applications with only one type of device. The plug-in terminal strips enable simple and time-saving wiring. The configuration is also quick and easy with the front DIP switches.

## Brief information

The input measuring ranges can be switched between 0..20 mA and 4..20 mA or 0..10 V and 2..10 V with a DIP switch on the front. The input measuring ranges can be switched between 0..20 mA and 4..20 mA or 0..10 V and 2..10 V with a DIP switch on the front.

With the microprocessor-controlled measurement logging, undercutting and exceeding of the measurement range are detected and indicated via a two-colour status LED on the front side. Then the current output is set to a defined starting or final value.

The current input is protected with an automatically resetting fuse (PTC) against static overvoltages up to 32 V AC/DC.

The required auxiliary energy is less than 0.5 VA.

The three circuits: Inputs, outputs, and auxiliary voltage, are galvanically separated with amplified isolation.

## Technical data

### Auxiliary power

Auxiliary voltage :	18 - 30V DC
Power consumption :	< 0.5 VA
Conformity :	CE; Directive 2004/108/EC

EMC :	DIN EN 61326-1: 2013-07
Standards :	DIN EN 61010-1: 2011-07, DIN EN 61010-2: 2011-07

Rated voltage:	300 V AC/DC in accordance with DIN EN 61010-1 with Overvoltage category 2 and Degree of contamination 2 between all circuits. Safe separation with amplified isolation
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Test voltage :	3 kV AC, 50 Hz, 1 min
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Input / Output /  
Auxiliary power

### Environmental conditions

Working temperature :	-10..60°C
Storage temperature :	-20..60°C
Air humidity :	< 95% (no condensation)

### Inputs

Voltage input :	Switchable, 0..10V or 2..10 V. Ri = 47 kΩ. Max. overload 32 V AC
Current input :	Switchable, 0..20 mA or 4..20 mA. Ri = 48 Ω + 15 Ω (RiPTC). Max. overload 32 V AC/DC in accordance with DIN EN 61010-2-30

### Output

Current output	Switchable, 0..20 mA or 4..20 mA. Load < 150 Ω.
Step response :	40 ms
Standard error :	< 0.2 % of final value
Temperature coefficient :	< 0.01 % / K

### Casing

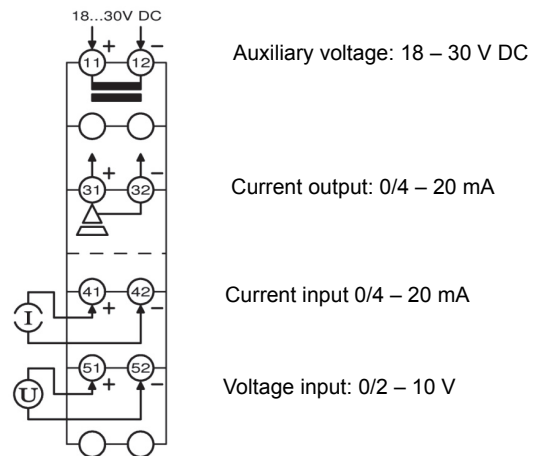
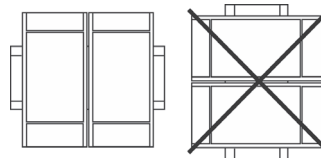
Material :	Polyamide (PA) 6.6 , UL94V-0,
Weight :	91g
Protection rating :	Housing IP30, terminals IP20 BGV A3
Colour :	light grey
Installation width :	12.5 mm
Dimensions (HxD) :	108 x 114 mm
Installation :	Carrier rail mounting TS35 DIN EN 60715

**Operation**

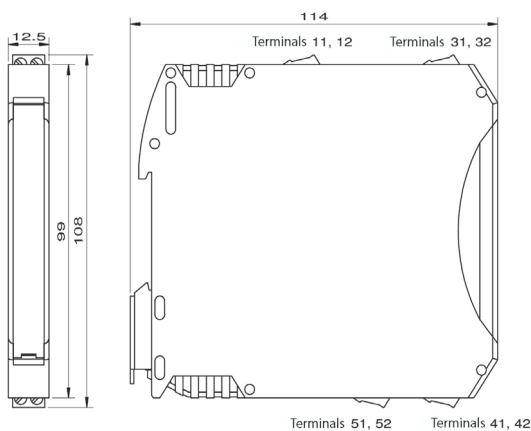
TV 125L	Status LED	Message
	Green LED illuminates	Operating voltage applied
	Red and green LED blink alternately with 2 Hz	measuring range undercutting or measuring range exceeding
	Red LED illuminates	Failure of the unit, please return to manufacturer!

**Configuration**

S1	S2	Input	Output
Off	Off	4..20 mA, 2..10 V	4..20 mA
Off	On	4..20 mA, 2..10 V	0..20 mA
On	Off	0..20 mA, 0..10 V	4..20 mA
On	On	0..20 mA, 0..10 V	0..20 mA


**Connection diagram**

**Installation**


Carrier rail mounting TS35, DIN EN 60715  
The gapless installation of multiple devices is now permissible with horizontally installed carrier rails.

**Dimensions**

**Ordering code**

TV -  1. -  2. -  3. -  4.

1. Device version	
125L	Auxiliary voltage 18..30 V DC
125LP	Auxiliary voltage 18..30 V DC Tragschienenbusanschluss *)
2. Metering range	
10	Inputs 0/4..20 mA and 0/2..10 V Outputs 0/4..20 mA
3. Auxiliary voltage	
5	18..30 V DC
4. Options	
00	without option
01	Push-in-clamp (plug-in)

\*) siehe gesondertes Informationsblatt Power-Rail