

Product information

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 |
|----------------|--|

| | |
|----------------|-----------------------|
| Test voltage : | 3 kV AC, 50 Hz, 1 min |
|----------------|-----------------------|

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 |

Product information

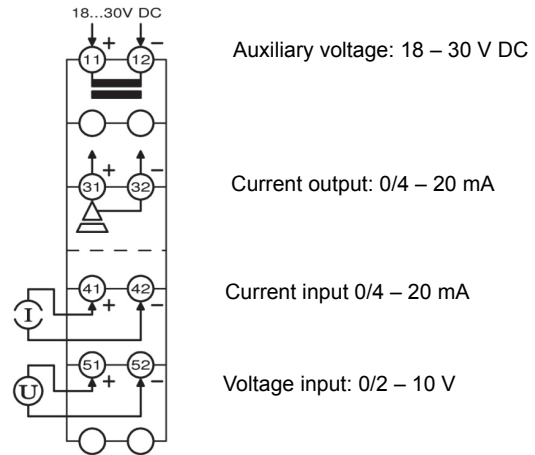
Operation

| | | |
|---|---|---|
| TV 125L Inp. 1 ON 0..20mA Outp. 2 ON 4..20mA | 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! |

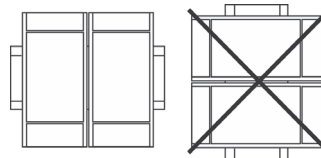
Configuration

| 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

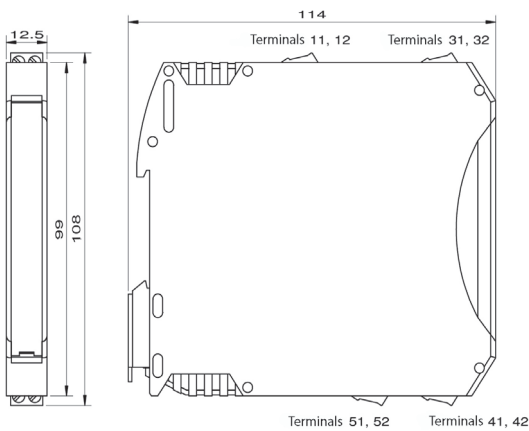


Installation



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