

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	
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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. $R_i = 47$ k Ω . Max. overload 32 V AC
Current input :	Switchable, 0..20 mA or 4..20 mA. $R_i = 48$ 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



1 ON
0..20mA
4..20mA

2 ON
0..20mA
4..20mA

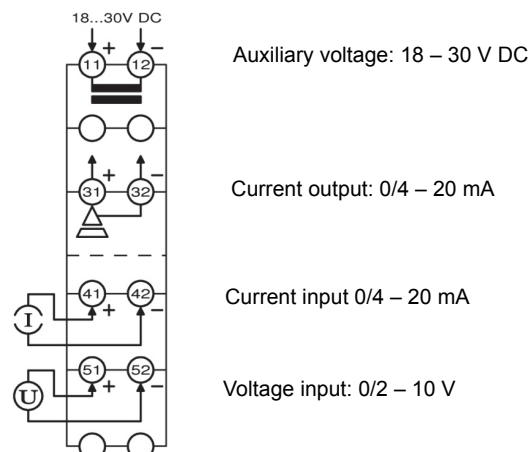
GHM

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!

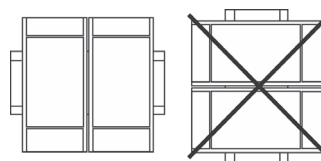
Configuration

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

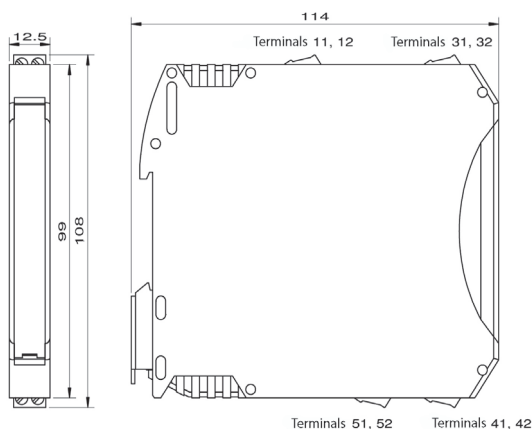


Installation



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