

# Universal Transmitter UT125



- Transmitter for electrical signals
- Universal input for standard signals, Pt100, thermocouple, potentiometer
- Configuration via front-side DIP switch
- Analog output 4..20 mA
- With Pt100 sensors, monitoring of sensor break and short-circuit
- Wide-range power supply or 24 V DC
- Housing width 12.5 mm
- Removal coded screw terminals
- Carrier rail mounting TS35 EN60715

## Characteristics

The UT125 series of universal transmitters are designed for the affordable transformation of standard signals, temperatures and potentiometer statuses into a current signal of 4..20 mA. The universal configurability of the measuring inputs reduces the stock requirement for various applications. The measuring inputs and actual value output are not galvanically isolated. The housing width of only 12.5 mm enables space-saving installation in the switch cabinet.

## Measurement inputs

### Configuration via DIP switch

Standard signals	: 0/2..10 V and 0/4..20 mA
Potentiometer	: Rated value 500 Ω..20 kΩ
Pt100	: -50..50 °C 0..100 °C 0..150 °C 0..200 °C 0..300 °C 0..500 °C
Thermocouple FeCuNi, Type J	: 0..250 °C 0..500 °C
NiCrNi, Type K	: 0..500 °C 0..750 °C 0..1000 °C
PtRhPt, Type S	: 0..1500 °C

(Special measurement ranges available on request)

## Technical data

### Wide-range power supply

Supply voltage : 20..125 VDC and  
20..250 VAC (47..63 Hz), max. 1.5 W

### 24V power supply

Supply voltage : 24 V DC +/-15 %, max. 1.5 W

### Combined data

Rated voltage : 253 V AC  
 Test voltage : 3 kV AC between  
 power supply // input = output

Working temperature : -10..60 °C  
 Storage temperature : -20..80 °C  
 Air humidity : 10..90% (no condensation)

### Measurement inputs

Voltage : 0/2..10 V, Ri approx. 20 kΩ  
 Current : 0/4..20 mA, Ri approx. 60 kΩ  
 Pt100 : linearised,  
 measurement current 1.6 mA  
 Recognition of sensor break or  
 short circuit: Actual value drops to  
 approx. 0mA

Thermocouple : linearised  
 with comparison point compensation

Resistance : Potentiometer (3-wire)  
 Rated value 500 Ω..20 kΩ  
 Intern. reference voltage approx. 1.5 V

Analog output : 4..20 mA, max. burden 400 Ω,  
 No galvanic isolation from the  
 input signal

Input signal	Basic precision-actual value output	Temperature deviation *)
0/2..10 V	0.2 %	0.004 %/K
0/4..20 mA	0.2 %	0.004 %/K
Potentiometer	1 %	0.007 %/K
Pt100 -50.. 50 °C	0.5 %	0.03 %/K
Pt100 0.. 50 °C	0.9 %	0.04 %/K
Pt100 0..100 °C	0.5 %	0.03 %/K
Pt100 0..150 °C	0.2 %	0.02 %/K
Pt100 0..200 °C	0.4 %	0.02 %/K
Pt100 0..300 °C	0.3 %	0.01 %/K
Pt100 0..500 °C	0.2 %	0.007 %/K
FeCuNi 0..250 °C	1.0 %	0.04 %/K
FeCuNi 0..500 °C	0.5 %	0.03 %/K
NiCrNi 0..500 °C	0.5 %	0.04 %/K
NiCrNi 0..750 °C	0.4 %	0.03 %/K
NiCrNi 0..1000 °C	0.3 %	0.02 %/K
PtRhPt 0..1500 °C	1.0 %	0.04 %/K

\*) Measurement deviation depending on the environmental temperature in the switch cabinet (-10..+60°C)

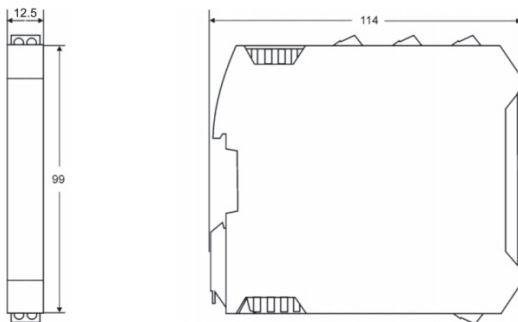
### Housing

Dimensions (W x D x H) : 12.5 x 114 x 108 mm  
 Material : PA6.6, light grey,  
 Flammability class V0 (UL94)  
 Weight : 120 g  
 Protection rating : IP20  
 Screw terminals : 0.2..2.5 mm<sup>2</sup>, AWG 24..14,  
 removable, coded  
 Push-in terminals : 0.5..1.5 mm<sup>2</sup>, AWG 25..16,  
 (spring-type terminal) Double connection (12A between the  
 connections), removable, coded  
 Power Rail : 8A over the entire bus system  
 (Supply via removable terminals  
 0.2..2.5 mm<sup>2</sup>, AWG 24..14)

**Product Information**

**Industrial Electronic**

**Dimensions**



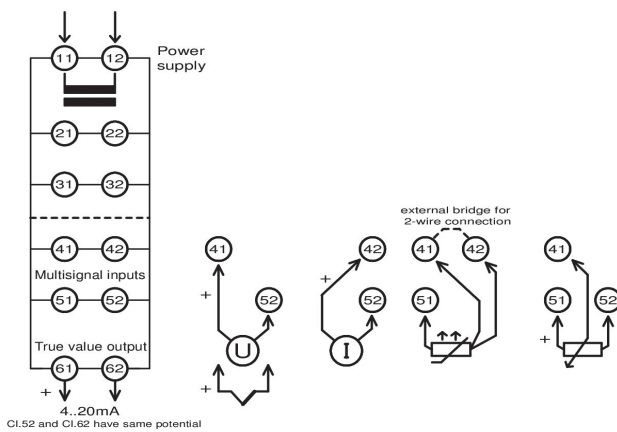
**Ordering code**

UT  1. -  2.

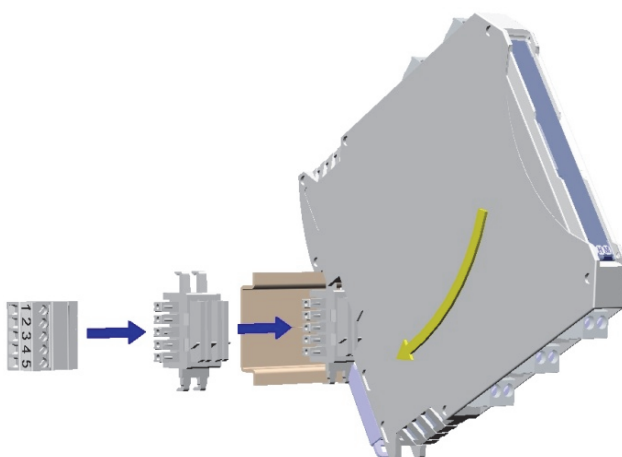
1. Device version	
125L	Supply voltage 24 V DC +/- 15 %
125LP	Supply voltage 24 V DC +/- 15 % with carrier rail bus connection *)
125M	Wide-range power supply 20..125 V DC / 20..253 V AC
2. Options	
00	No options
01	Push-in terminals (plug-in)

\*) Supply including matching bus adapter piece; see also separate Power Rail information sheet

**Connection diagram**



**Power Rail**



The power supply of multiple devices can be concentrated in the mounting carrier rail (TS35) of a bus system.

An equivalent version is available for the entire series of GHM power rail devices in 12.5 mm wide housing.