

PROGRAMMABLE TRANSDUCER OF D.C. CURRENT AND D.C. VOLTAGE P11H



APPLICATION

The P11H programmable transducer is destined to the conversion of d.c. voltage $\pm 100\text{ V}$, $\pm 600\text{ V}$ and d.c. current $\pm 1\text{ A}$, $\pm 5\text{ A}$ into a current signal or voltage standard signal.

The output is galvanically isolated from the input signal and the supply.

The P11H transducer is offered in two basic versions:

- P11H-1, with programmed parameters by the producer acc. the ordered version.
- P11H-2, with programmed parameters by the producer acc. the ordered version and with the possibility to change the parameters by the user by means of a computer through the PD11 programmer.

The PD11 programmer is a universal device serving to programme all the P11 and P12 series.

The P11H-2 transducer realises also following functions:

- conversion of the measured value into an optional output signal on the base of the individual linear characteristic.
 - store of maximal and minimal values.
 - programming of the measurement averaging time.
 - blocking of the parameter introduction by means of a password.
- Using the PD11 programmer, one can read out in any time from the P11H-2 transducer:
- the measured value,
 - the maximal and minimal value, the signal on the analogue output in percentage of the range

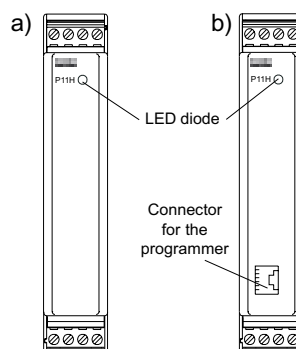


Fig.1 View of the P11T transducer

- a) P11H-1
- b) P11H-2

INSTALLATION

The P11H transducer is designed to be installed on a 35 mm DIN rail acc. EN 60715. On the external side of the transducer there are screw or self-locking terminal strips enabling the connection of 2.5 mm² external leads. The lighted diode situated on the upper front of the transducer signals the connection of this transducer to the mains.

EXTERNAL AND ASSEMBLY DIMENSIONS

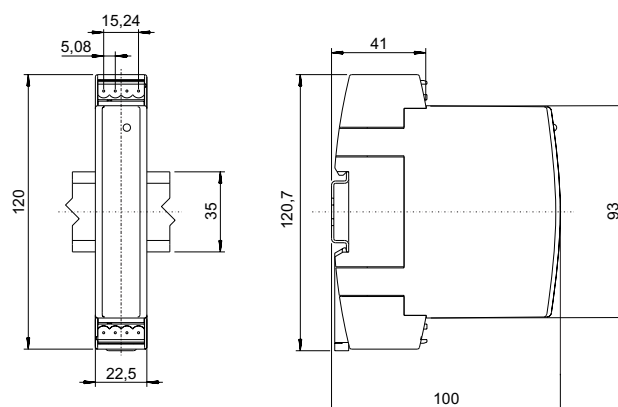


Fig.2. Overall dimensions and fixing way of the P11H transducer

CHANGE OF PARAMETERS IN THE P11H-2 TRANSDUCER

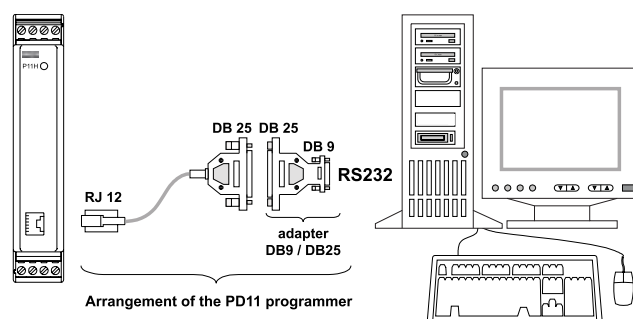


Fig.3 Connection way of the P11H-2 transducer with a computer.

The P11H-1 transducer works with programmed parameters acc. the ordering code and there is no possibility to change these parameters.

In case of P11H-2 transducers, there is the possibility to change these parameters by means of a PD11 programmer and a computer.

The way of the P11H-2 transducer connection to the computer is shown below: The programming of parameters is possible after the introduction of the right password.

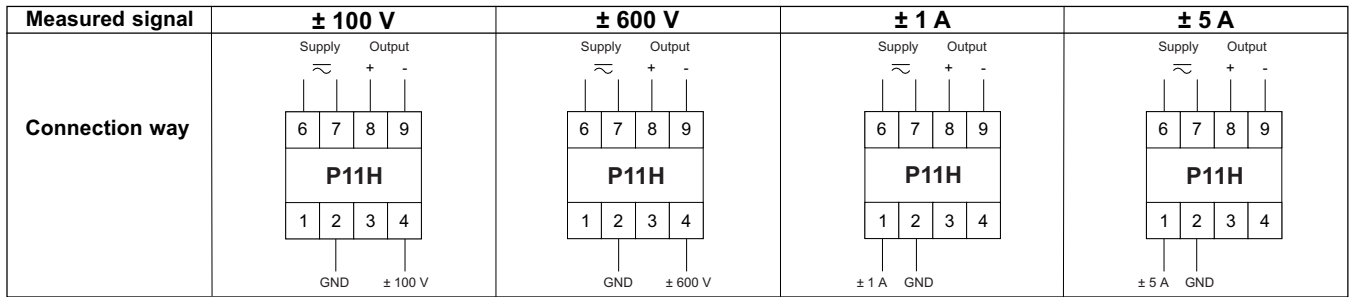


Fig. 4. Description of terminal strips of the P11H transducers.

TECHNICAL DATA

Basic parameters:

- Input signals

Input type	Full range	Minimal sub-range with preservation of class	
Voltage	(-100... 100) V	50 V	input resistance > 3.4 MΩ
Voltage	(-600... 600) V	300 V	input resistance > 3.4 MΩ
Current	(-1... 1) A	0.5 V	input resistance = 10 mΩ±10%
Current	(-5... 5) A	2.5 V	input resistance = 10 mΩ±10%

- analogue output galvanically isolated with a resolution 0.01% of the range
 - current programmable 0/4...20 mA load resistance ≤ 500 Ω
 - voltage programmable 0...10 V load resistance ≥ 500 Ω
 - current programmable 0...5 mA load resistance ≤ 2000 Ω
- accuracy class 0.2; minimal subrange in P11H-2: 4 times smaller than the full range
- additional error from the ambient temperature change ± (0.1% of the range/10 K)
- conversion time:
 - P11H-1 < 200 ms
 - P11H-2 min 200 ms (averaging time min 100 ms + output response time 100 ms)
- power input ≤ 3 VA
- preheating time of the transducer 10 min.

Nominal operating conditions:

- supply voltage depending on the ordering code 85...230...253 V a.c./d.c. or 20...24...50 V a.c./d.c.
- frequency of the supply a.c. voltage 40...50...440 Hz
- ambient temperature -25...23...55°C
- storage temperature -25°C ...+85°C
- relative humidity < 95% (condensation inadmissible)
- working position assembling on a 35 mm DIN rail

Voltage overload:

- of short duration (3 s) 2*Un (< 1000 V)
- long-lasting 20%

Current overload:

- of short duration (3 s) 10·In
- long-lasting 20%

Ensured protection degree:

- by the housing IP 40
- from the terminal side IP 20

Dimensions

22.5 × 120 × 100 mm

Weight

125 g

Fixing

on a 35 mm DIN rail

Electromagnetic compatibility:

- immunity EN 61000-6-2
- emission EN 61000-6-4

Security requirements acc. EN 61010-1:

- installation category III
- pollution level 2
- maximal working voltage in relation to earth:
 - supply 300 V a.c.
 - input 600 V a.c.
 - output 50 V a.c.

ORDERING CODES

TRANSSDUCER	P11H	X	XX	X	X	X	XX	X
Kind of transducer:								
programmed by the producer 1								
programmed by the user* 2								
Input signal:								
-100... +100 V 00								
-600... +600 V 01								
-1... +1 A 02								
-5... +5 A 03								
Custom-made version:								
± 300 mV 04								
± 10 mV 05								
± 60 mV 06								
± 15 mV 07								
on order** XX								
Output signal:								
voltage, 0... 10 V 1								
current, 0... 20 mA 2								
current, 4... 20 mA 3								
current, 0... 5 mA 4								
on order** 9								
Supply:								
85... 253 V a.c./d.c. 1								
20... 50 V a.c./ d.c. 2								
Kind of terminals:								
socket - screw plug 0								
socket - self-locking plug 1								
Version:								
standard 00								
custom-made** XX								
Acceptance tests:								
without a quality inspection certificate 0								
with a quality inspection certificate 1								
acc. user's agreement*** X								

* The programmable transducer has a universal input. When ordering give the code of the input signal which has to be programmed

** After agreeing by the producer

*** The producer will settle the ordering code number

Coding example:

The P11H-1-02-1-1-0-00-0 code means: the version of a P11H transducer programmed by the producer without the possibility to re-programme it by the user, with an input signal: -1 A ...1 A, output voltage signal: 0...10 V, supply voltage: 85...253 V a.c./d.c., with a socket-screw plug, standard version, without a quality inspection certificate.