

# TRANSDUCER SUPPLIED FROM A CURRENT LOOP

## P17 TYPE



- dimensions (A x B x C) 76.9 x 99.1 x 6.2 mm
  - weight 80 g
  - fixing on a rail acc. to EN 60715
- Inputs:**
- type and input range acc. to the version code
  - input resistance > 1 M $\Omega$  for P17-00XXX version
  - current flowing through RTD < 400  $\mu$ A
  - resistance of wires connecting the RTD with the transducer  $\leq$  10  $\Omega$  / wire
  - characteristics of TC acc. to EN 60584-1
  - characteristics of RTD acc. to EN 60751+A2

- Outputs:**
- range of analog input 4...20 mA
  - output definition 0.005 mA
  - output load (Rload) < 500  $\Omega$

- Electromagnetic compatibility:**
- noise immunity, acc. to EN 61000-6-2
  - noise emissions, acc. to EN 61000-6-4

- Safety requirements acc. to EN 61010-1**
- installation category III
  - pollution grade 2
  - phase-to-earth working voltage: 50 V

### APPLICATION

The P17 transducer supplied from a current loop, converts the signal from temperature sensors or a standard voltage signal into a 4...20 mA current. Working in such a configuration, the transducer conducts itself as an active load, and consumed current by this load is proportional to the modification of the signal measured on the transducer input.

### INSTALLATION

P17 transducers are designed to be installed on a 35 mm rail acc. to EN 60715 standard. The housing with dimensions: 6.5 x 99.1 x 76.9 mm is made of a self-extinguishing plastic. Terminal strips, with screw terminals, enable the connection of external wires of 2.5 mm<sup>2</sup> cross-section.

### TECHNICAL DATA

**Basic parameters:**

- conversion error  $\pm$  0.5% of the range
- additional error from ambient temperature changes  $\pm$  (0.25 % of range /10K)
- conversion time 1 s
- supply voltage (U) 19...30 V d.c.  
(for Rload  $\leq$  500  $\Omega$ )
- power consumption < 0.7 VA
- transducer preheating time 15 min
- ambient temperature -20...+23...+55°C
- storage temperature -25...+85°C
- relative air humidity <95% (inadmissible condensation)
- operating position any
- sustained overload capacity 1% (TC and RTD)  
20% (voltage and resistance)
- momentary overload (3 s) 30 V (input of sensors and voltage)
- guaranteed protection grade IP50 (housing)  
IP20 (electrical connections, terminals)

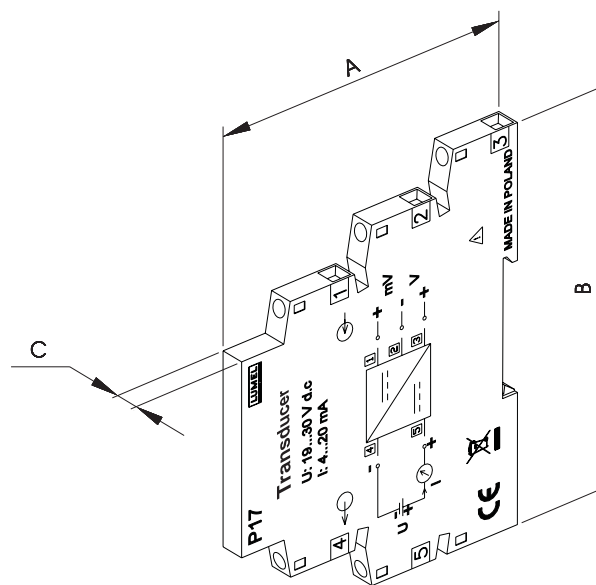


Fig.1. View of the P17 transducer.

## EXTERNAL CONNECTIONS

Measured signal	Connection way
Thermocouple	
Resistance thermometer or resistance measurement in a three-wire system.	
Resistance thermometer or resistance measurement in a two-wire system.	
Voltage 0 ... 10 V	
Voltage 0 ... 60 V	

Fig.2. Connections of external signals.

## ORDER CODES

Version codes of the P17 transducer

Transducer supplied from a current loop P17 -	XX	XX	X
<b>Input signal:</b>			
Voltage	(0 ... 10) V	.....	00
Thermocouple J	(-100 ... +1200) °C	.....	01
Thermocouple K	(-100 ... +1370) °C	.....	02
Thermocouple N	(-100 ... +1300) °C	.....	03
Thermocouple E	(-100 ... +900) °C	.....	04
Resistance thermometer Pt100	(-50 ... 100) °C	.....	05
Resistance thermometer Pt100	(-50 ... 400) °C	.....	06
Resistance	(0 ... 150) Ω	.....	07
Resistance	(0 ... 250) Ω	.....	08
Voltage	(0 ... 60) mV	.....	09
<b>Kind of option:</b>			
Standard	.....	.....	00
On order*	.....	.....	XX
<b>Acceptance tests:</b>			
Without additional requirements	.....	.....	8
With a quality inspection certificate	.....	.....	7
Acc. to customer's agreement*	.....	.....	X

\* after agreement with the manufacturer

### ORDERING EXAMPLE:

The code: **P17-05.00.8** means a transducer version supplied from a current loop,  
**05** - Input signal: Pt100 RTD, range: -50...100°C  
**00** - Standard option  
**8** - Without additional quality inspection requirements