

Snap-On-Transmitter

WTA

2-wire Transmitter

Fixed ranges

Temperature linear

Resistance transducer Pt100

Compact design

GENERAL

The transmitter is designed for mounting on a standard rail at a wall or inside a distribution box.

DESCRIPTION

The sensor is supplied from the transmitter with a constant current of 0,8 mA. The difference between the voltage loss across the sensing element and a high precision voltage source is being measured, amplified, linearized and will be provided as a current signal. In the 3-wire connection, the lead resistance will be additionally measured and compensated for.

For 2-wire connections, the lead resistance effects the measurement, thus it is not recommended to use this transmitter for long distances between sensing element and transmitter.

TECHNICAL DATA

INPUT

Pt 100 DIN , 2- and 3-wire connection
Sensor current: approx. 0,8 mA
Max. lead resistance: 45 Ω per lead.
Effect of lead resistance:
(3-wire-connection): $\leq 0,025 \%$ / 10 Ω

Measuring ranges

Span start min	Span end max	Span min	Span max
-100 °C	+100 °C	30 K	600 K

Reaction due to break or short circuit

Break lead 1	$I_a \leq 3,7 \text{ mA}$
Break lead 2	$I_a \leq 3,7 \text{ mA}$
Break lead 3	$I_a \geq 25 \text{ mA}$
Short circuit lead 1-2	function as 2-wire Pt 100
Short circuit lead 2-3	$I_a \leq 3,7 \text{ mA}$
Short circuit lead 1-3	$I_a \leq 3,7 \text{ mA}$

OUTPUT

Standard signal: 4...20 mA

Load

$$R_{\text{Load}} = \frac{U_{\text{Supply}} 10 \text{ V}}{0,02 \text{ A}} - R_{\text{Lead}} (75) [\Omega]$$

Output current limitation: max. 36 mA

Characteristic

temperature linear to DIN IEC 751

Conformity error: $\leq \pm 0,1 \%$ fsd

Calibration error ex factory: $\leq \pm 0,1 \%$ of span

SUPPLY

Direct voltage: 10...36 V

Effect of supply: $\leq 0,02 \%$ of fsd

Permissible ripple: max. 10 % of supply voltage.

ENVIRONMENTAL CONDITIONS

Operating temperature:

-40...+85 °C,
for short periods up to +125 °C

With double error: -55...125 °C

Relative humidity: max. 90 %
no condensation

Vibration: 10...2000 Hz, 5g

Shock: IEC 68 2.27 GN 15

Dynamic behaviour

Response 10 / 90 % < 1 ms

Start-up delay: < 10 ms

GENERAL

Mode of protection: IP 20,

Weight: 0,1 kg

Dimensions: Width x height x depth
22,5 x 75 x 98,5 mm

ORDERING DATA

Description	Order-No..
Transmitter for Pt100	
0...50 °C	9407-202-01001
0...100 °C	9407-202-01011
0...150 °C	9407-202-01021
0...200 °C	9407-202-01031
0...250 °C	9407-202-01041
0...300 °C	9407-202-01051
0...400 °C	9407-202-01061
0...500 °C	9407-202-01071
0...600 °C	9407-202-01081
-40...+60 °C	9407-202-01101
-50...+100 °C	9407-202-01111
-100...+50 °C	9407-202-01121
to specification	9407-202-01091

ACCESSORIES

Transmitter Supply Units

230 VAC, Standard	9404-202-08231
230 VAC HRT. 70 mA	9404-202-08401
115 VAC HRT, 70 mA	9404-202-08411

Isolating supply units

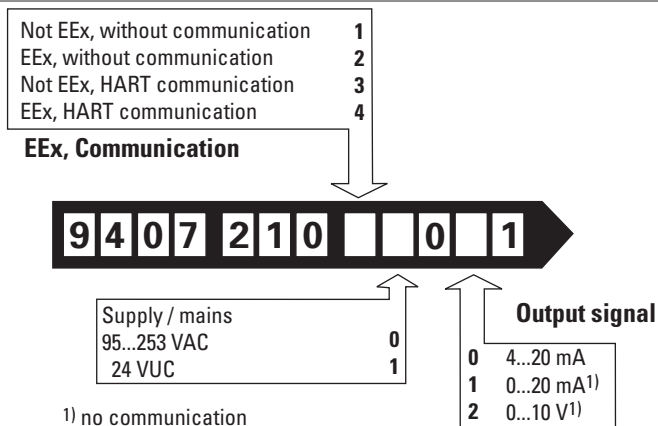


Fig. 1 Dimensions

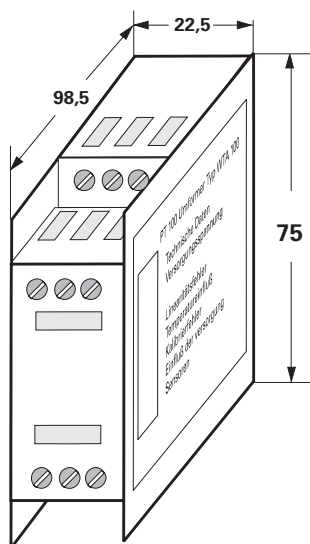


Fig. 2 Connections 3-wire

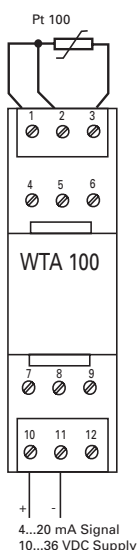
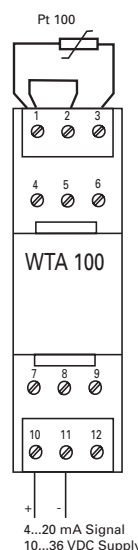


Fig. 3 Connections 2-wire



PMA
 Prozess- und Maschinen- Automation
 GmbH
 P.O Box 31 02 29
 D - 34058 Kassel
 Tel.: +49 - 561 - 505 1307
 Fax: +49 - 561 - 505 1710
 E-mail: mailbox@pma-online.de
 Internet: http://www.pma-online.de

Your local representative