control solutions
TERACOM

TSA200
1-Wire current loop transmitter

Short description

TSA200 is 0-20mA/4-20mA current loop transmitter with a 1-Wire digital interface. The current loop input is electrically isolated from the 1-Wire bus.

The transmitter can be connected to almost any industrial sensor with a 0-20/4-20mA output. Output readings in mA can be converted to other units, using offset and multiplier of the controller.

TSA200 can be used for measuring of electrical and non-electrical parameters - liquid levels, air pressure, gas concentration, illumination, acidity (pH), etc. The transmitter is a passive device, for some applications external DC power supply will be needed - typically 12/24/36VDC.

TSA200 has two RJ11 connectors, for easy daisy chain arranging of the 1-Wire bus.

Technical parameters

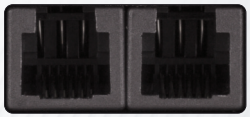
Supply voltage range (1-Wire bus)	4.5 to 5.5 V
Maximum supply current (1-Wire bus)	40 mA
Input DC current range	0 to 20 mA
Resolution	0.01 mA
Accuracy	±2 %
Isolation voltage	1000 VDC
Operating temperature range	0 to +40 °C
Operating relative humidity range	0 to 85 %RH (non-condensing)
Dimensions	85 x 35.1 x 23.5 mm

Usage

Can be used with following TERACOM controllers:

- TCW241
- TCW220
- TCW240B

Pinout



Pin	Description	Corresponding UTP wires color
1	1-Wire GND	White/Brown
2	1-Wire GND	White/Green
3	1-Wire Data	Green
4	1-Wire GND	White/Orange
5	1-Wire + VDD	Orange
6	1-Wire + VDD	Brown

LED indicator

The status of the device is shown by single LED, located on the front panel:

- If the LED blinks on a period of 1 second, the sensor works properly;
- If the LED blinks on a period of 3 seconds, there isn't communication with the controller;
- If LED doesn't blink, there isn't power supply.

Sensor connection

It is strongly recommended to use only UTP/FTP cables. It is strongly recommended to use daisy-chained (linear) topology for multiple sensors and keep total cable length up to 30 meters.

„Star" topology can be used only as a last resort for up to 4 sensors and total cable length up to 10 meters.

1-Wire Bus

1-Wire is a registered trademark of Maxim Integrated Products, Inc. We strongly recommend read Maxim's 1-Wire tips at http://www.maxim-ic.com/app-notes/index.mvp/id/148.