



$V/I/\Omega > 4..20\text{mA}$ Converter

1 mod. DIN

2000.35.017



User manual

Introduction

Thanks for choosing a Pixsys device.

The **Signal converter code 2000.35.017** converts a resistance, current or voltage signals into a current signal for 4..20mA loop (2 wires).

Main features are:

- High accuracy;
- 16bit conversion;
- Programmable by RFid (NFC);
- 2624 Word non-volatile memory (circular buffer) for data-logging with sampling time selectable by the user;
- Possibility to rescale the output 4..20mA compared to input value;
- Compact dimensions;
- The software **RF Programmer** (available for download on Pixsys website) and the **RF Programmer** allow:
 - complete configurability of the device;
 - download on PC of logged data;
 - visualization/printing of the resistance - time / current - time and voltage - time trend.

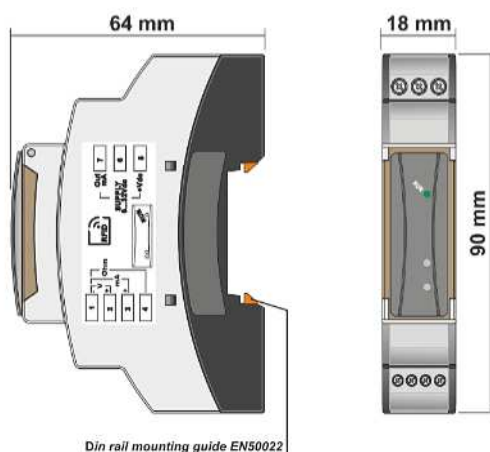
1 Safety guide lines

Read carefully the safety guidelines and programming instructions contained in this manual before using/connecting the device.

Only qualified personnel should be allowed to use the device and/or service it and in accordance to technical data and environmental conditions listed in this manual.

Do not dispose electric tools together with household waste material. In observance European Directive 2002/96/EC on waste electrical and electronic equipment and its implementation in accordance with national law, electric tools that have reached the end of their life must be collected separately and returned to an environmentally compatible recycling facility.

2 Dimensions



3 Technical Data

3.1 General data

1	Operating range	6-32 Vdc
2	Current output	4..20 mA (2 wires)
3	Functional insulation	1K Vac
4	Output resolution	2 μ A
5	Upper Linearity Limit	f.s. + 5°C
6	Lower Linearity Limit	f.s. - 5°C
7	Failure output	selectable 21mA, 3,8mA or anyone
8	Current output protection	30 mA approx.
9	Rejection	50-60 Hz
10	Max transmission error	0,1% f.s.
11	EMI	< 0,5%
12	Temperature coefficient	< 100 ppm
13	Sampling time	300 ms
14	Response time (10..90%)	approx. 600 ms
15	Sealing	IP 20
16	Conformity	CE, EN 61000-6-4, EN 61000-6-2

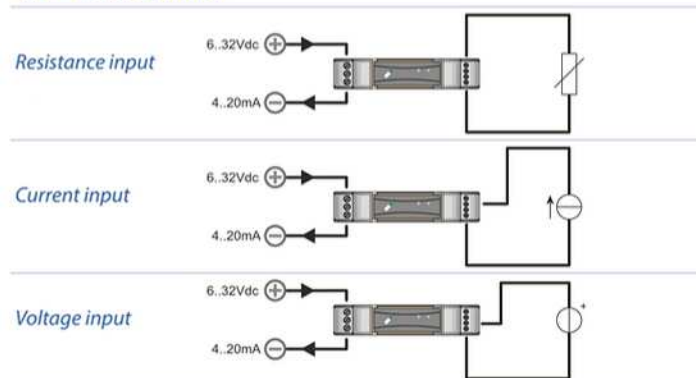
3.2 Thermo-mechanic features

1	Operating temperature	-40..+85 °C
2	Humidity	30-90% @ 40°C (non condensing)
3	Storage temperature	-40..+105°C
4	Connections	screw pins
5	Conductors section	1 mm ²
6	Wires strip	8 mm
7	Enclosure	nylon (PA66)
8	Dimensions	23 mm, Ø 45 mm

4 Inputs

Current input	Measuring range: 0..20 mA (default 4 - 20 mA)
Voltage input	Measuring range: 0..10 V
Resistance input	Measuring range: 0..4000 Ω

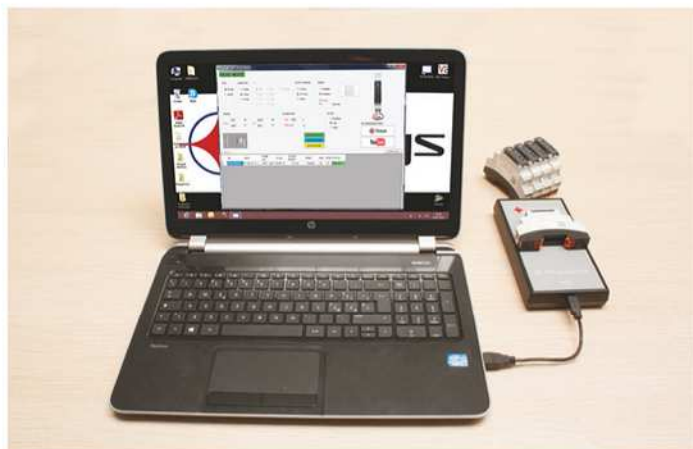
4.1 Connections



5 Configuration

To configure this signal converter it is necessary to use a **RF Programmer** and the configuration software **RF Programmer**, available on download area www.pixsys.net.

After connecting the RF Programmer via USB and activating the software is possible, in "EDIT" mode, to configure the device input sensor, measuring range, output current value and sampling frequency for the registration. The keys "WRITE" and "READ" allow to write and read data on the devices quickly and easily. On the lower side of the display a list of all programmed devices is showed; it can be printed to confirm that the programming has been completed successfully.



The input range can be set manually through the button placed under the frontal closing cover. Press this button for 6s to access the configuration mode and set the min. input value (slow flashing LED). Release the button to store the input value which will be related to the min. output value (set on the corresponding parameter, modification is possible only by a specific application, default 4mA). Pressing the button for a further 6s it is possible to set the max. input value (fast flashing LED). Release the button to store the input value which will be related to the max. output value (set on the corresponding parameter, modification is possible only by a specific application, default 4mA). Input/output correspondence can be also set by a linearization table which is editable through a specific software or smartphone application. More instructions are available on the software manual.

6 Data Logger

This signal converter is provided with a datalogging function for the input signal. Fixing the sampling time (1..3600 seconds) each time the loop 4..20mA powers the device up, this will store the input value into a non-volatile memory. Through the RF Programmer it is possible to download/display/print all data.



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