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Programmable insulated DC transmitter

- input for RTD, resistor, DC current, voltage or thermocouple
- designed for DIN 35 rail mounting
- input and output are isolated
- conversion accuracy < 0.1%
- output signal is standard 4...20 mA
- input is digitally adjustable

Variations of input signals:

User-adjustable range: (Actual range may be set within the maximum range)

	Input		Range (linearization table)	error
Thermocouple (Tc), internal compensation	Fe-CuNi	J	-210..1200°C	0,1% from -137°C
			-210..1050°C	0,1% from -144°C
			-210..300°C	0,1% from -186°C
	Fe-Ko	L	0..899°C	0,05%
			-60..999°C	0,05%
	NiCr-NiAl	K	-210..400°C	0,1% from -177°C
			-270..1372°C	0,1% from -99°C
			-60..1372°C	0,05%
	Pt10Rh-Pt	S	-50..1768°C	0,1% from 40°C
	Pt30Rh-Pt6Rh	B	0..1820°C	0,1% from 386°C
	NiCr-CuNi	E	-270..1000°C	0,1% from -153°C
	NiCrSi-NiSi	N	-270..1300°C	0,1% from -122°C
	Pt13Rh-Pt	R	-50..1768°C	0,1% from 54°C
	Cu-CuNi	T	-270..400°C	0,1% from -163°C
	Ni-Ni18Mo	M	-50..1410°C	0,1%
	W5Re-W26Re	C	0..2301°C	0,05%
	W3Re-W25Re	D	0..2301°C	0,1% from 49°C
W-W26Re	G	0..2301°C	0,1% from 286°C	
	F	-30..1400°C	0,05%	
	U	-200..400°C	0,1%	
Resistance thermometer (RTD) 2w or 3w	Pt100		-200..400°C	0,18°C
	Pt100		-30..600°C	0,18°C
	Pt1000		-200..400°C	0,18°C
	Pt1000		-100..500°C	0,18°C
	Ni100, Ni1000 TKR6180 (5000)		-60..180°C	0,18°C
Linear temp. sensor (KTY)	KTY81..KTY85		-55..150°C	0,25°C
Resistance transmitter			0..320Ω, 0..2,5kΩ	0,03%
Potentiometer (POT)			0..320Ω, 0..2,5kΩ	0,03%
DC voltage (U)	-0,5V..1V		-70mV..140mV, 0..1V	0,03%

Other design of inputs: (custom manufacturing)

- Thermocouple with external compensation of cold junction by Pt100
- Resistance thermometer with four-wire connection (4w)
- Resistance transmitter or potentiometer 3kΩ .. 10 kΩ
- Thermistors NTC 10k, 15k, 20k, 25k ...
- Linear temperature sensor KTY

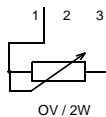
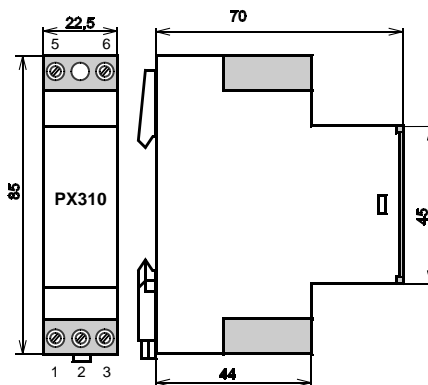
Technical data:

- supply voltage	8...30V DC by output loop
- custom linearization	by table (32 section)
- sampling	16 / 20ms for RTD , 52 / 80ms for Tc, U, I
- damping	programmable 0..30 s
- max lead resistance of sensor	< 10 Ω / 1 lead
- sensor current	< 0,5mA
- cold junction compensation:	-30 ..70°C, accuracy \pm 1°C
- output:	4-20mA
- output resolution	0,033%
- output current limit	min 3mA, max. 21mA
- accuracy:	conformity error max. 0,05% by range Temperature effect max. 0,03% / 10K
- operating/storage temperature range	-30...+ 70°C
- protection type	housing/terminals IP40 / IP20
- screw terminal	lead 0,5 .. 2,5mm ²
- option	programming adapter AX-USB (setting by SW Rawet Studio)

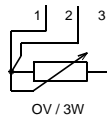
Dimension chart and terminal connections:

PX310:

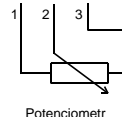
5(-) - 6(+):	output 4..20mA
1,2 - 3:	input RTD 3W
1 - 3:	input RTD 2W
1 - 2 - 3:	input potentiometer (slider= 2)
2 - 3(+):	input Tc (U)



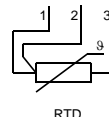
OV / 2W



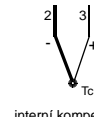
OV / 3W



Potenciometr



RTD



interni kompenzace

Mechanical installation:

The converter is mounted on the 35 mm DIN rail. The units can operate in any position. They snap onto the rail and are removed without using any other tools.

Type tests:

Basic type test in compliance with ČSN EN 60770

EMC: -in compliance with ČSN EN 61326-1

Safety: -in compliance with ČSN EN 61010-1

Ordering instruction:

Your purchase order should include the following:

- type of transmitter (PX310)
- quantity (number of pieces)
- input signal type and range (if not specified, it will be shipped 0..100 ° C Pt100, range can be adjusted by the AX-USB, see tab.)

Examples: PX310; 10 pc; Pt100; 3W; -20..80°C; filter 0,3s
PX310, 5 pc; Tc „J“, 0..800°C; filter 1s



Dispose of after-life to a separate collection.

rev.1