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Isolating converter

Fast isolating converter for unipolar and bipolar signals with switchable calibrated ranges

- isolation and mutual conversion of 4 to 20mA, 0 to ±20mA and 0 to ±10V signals
- setting range by slid switch DIP on the board
- power supply 18VDC for loop powered transmitter on input
- input-output-power supply isolation: 4000Vrms
- auxiliary power supply in wide range 19 to 300VDC and 90 to 250VAC
- DIN 35 rail-mounted design
- conversion accuracy: < 0,1%
- time response: 0,1ms without transmission delay
- bandwidth : 0..5kHz for -0,5dB

The module is designed to isolate and convert standard unipolar and bipolar current or voltage ranges, namely 0 to ±20mA, 4 to 20mA and 0 to ±10V. The module also provides a 18V power supply for powering the input current loop 4-20mA. Typically, the module can be used as an supply for power and isolation for converter powered by current loop. The output of the converter is isolated from the input and the auxiliary power supply.

Elektrical specifications:

- operating temperature range: -25...+ 70°C
- storage temperature range: -40...+ 80°C
- auxiliary power supply standard: wide range 19 – 300VDC a 90 – 250 VAC
 to order: 20 – 60VAC
- power consumption: max. 1,5VA
- power supply for two-wire converter: 18V for 20mA
- signal conversion settings

DIP switch on the board

SWITCH (+ = ON)					Input signal	Output signal
1	2	3	4	5		
	+				0..±20mA	0..±20mA
	+	+			0..±10V	0..±20mA
		+			4..20mA	0..20mA
+	+		+	+	0..±20mA	0..±10V
+	+	+	+	+	0..±10V	0..±10V
+		+	+	+	4..20mA	0..10V
					0..20mA	4..20mA
+					0..10V	4..20mA



- output voltage amplitude: 15V / Iout (ohm)
- voltage output load: max. 10mA
- input resistance of voltage input: 1Mohm
- drop in current input: 0,54V
- output current limit: typ. 25mA (electronic cut-out)
- transfer function maximum error: < 0,1%
- linearity error: < 0,05%
- temperature induced error: < 50ppm /°C
- output signal ripple: < 10mV RMS
- input to output capacity: 20pf
- time response: typ.0,1ms
- enclosure: casing / terminal board: IP40 / IP10
90g
- weight:
- environment: pollution degree 2
 overvoltage category installation III

Type test:

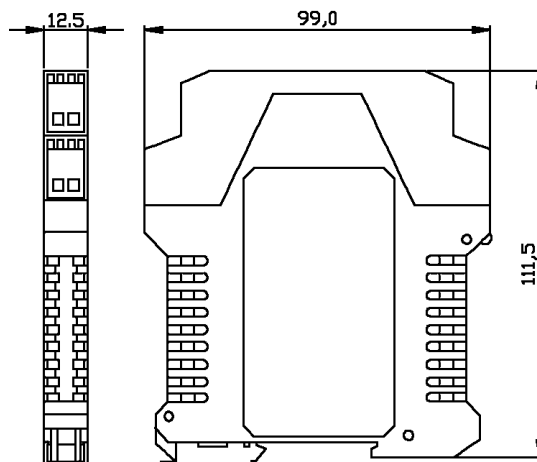
- Standard type test: to ČSN EN 60770-1ed.2
- EMC: to ČSN EN 61326-1
- Safety: assessed acc. to ČSN EN61010-1

Terminals connection:

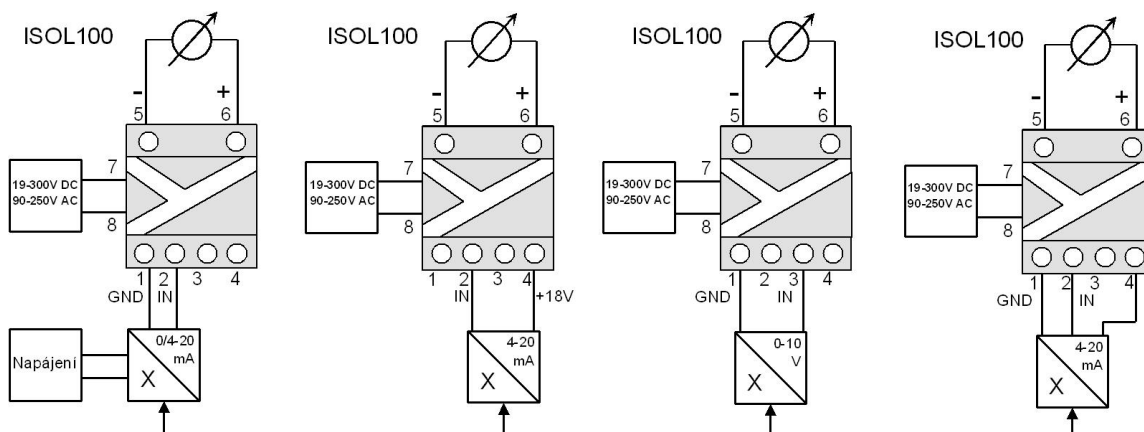
- 1...GND minus pole for input and 18V power supply
- 2...plus pole for input current
- 3...plus pole for input voltage
- 4...plus pole for 18V power supply
- 5,6..output (6 is +)
- 7,8..auxiliary power supply without polarity

7	8
5	6+
ISOL 100	
3+	4+
1	2+

Dimensional drawing:



Exmples of using the module:



Ordering instructions:

Your order should include:

- module type ISOL100
- input range – if you wish to set up
- output range– if you wish to set up
- basic settings – switch 2 is on
- basic setting range 0/4-20mA to 0/4-20mA

Ordering examples:

- ISOL100 = basic settings – switch 2 is on
- ISOL100 4-20mA / 4-20mA = customer settings – switch 2 is on
- ISOL100 0-20mA / 0-10V = customer setting switches 1,2,4,5 are on
- ISOL100 0-10V / 4-20mA = customer settings – switch 1 is on
- ISOL100 0-10V / 0-10V = customer setting switches 1,2,3,4,5 are on

Installation:

The terminals accept wires up to 2.5 mm². We recommend using a cable with a cross section of 0.5mm². Mechanically, the transducers are mounted on 35 mm DIN rail. After hanging to the rail has to be the bottom of the unit pushed to the rail. The latch on the bottom of the unit snaps it to the rail.

Demounting is done with a screwdriver. After releasing the latch you can removed unit from the rail.

Replacing the converter:

The converter allows a very simple device replacement without removing the wires. Push by screwdriver under the original clips see figure 1 and 2, replace the unit and slide the clamps back.

Fig.1



Fig.2



Setting the required range of the transducer:

To set the required range is necessary the device open. Use a screwdriver press down orange stripes on the sides of the device see Fig.3 and after remove the enclosure. We got to to the setting of DIP switch. Complete the enclosures after setting . The setting is done.

Fig. 3



Setting DIP switch range selection.



Notes:

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Likvidaci po ukončení životnosti provést odděleným sběrem.
Rawet s.r.o. je členem sdružení RETELA www.retela.cz

rev.5

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