

USER INSTRUCTIONS

English

Passive Isolator

IsoPAQ-611/-612




CE

INOR

Read these instructions before using the product and retain for future information.

IsoPAQ-611/-612

Before Startup




When operating the signal converter, certain parts of the module can carry dangerous voltage! Ignoring the warnings can lead to serious injury and/or cause damage!

The signal converter should only be installed and put into operation by qualified staff. The staff must have studied the warnings in these operating instructions thoroughly.

The signal converter may not be put into operation if the housing is open.

In applications with high operating voltages sufficient distance and isolation as well as shock protection must be ensured.

Safe and trouble-free operation of this device can only be guaranteed if transport, storage and installation are carried out correctly and operation and maintenance are carried out with care.

 Appropriate safety measures against electrostatic discharge (ESD) should be taken during range selection and assembly on the transmitter.

Short description

The Passive Isolator (input loop-powered isolator) is used for electrical isolation and processing of 0(4) ... 20 mA standard signals.

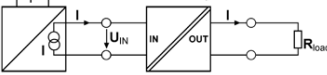
The galvanic isolation guarantees reliable decoupling of the sensor circuit from the processing circuit and prevents linked measurement circuits from influencing each other. The Protective Separation with high isolation level provides protection for personnel and downstream devices against impermissibly high voltage.

Functioning

The input signal is modulated and then electrically decoupled using a transformer. The isolated signal is then made available at the output, demodulated and filtered.

When using Passive Isolators, ensure that the current-driving voltage of the power source U_S is sufficient for driving the maximum current of 20 mA over the isolator with voltage drop of $U_{drop} \approx 2.3\text{ V}$ and the load R_{load} .

$U_S \geq U_{IN} = 2.3\text{ V} + 20\text{ mA} \times R_{load}$



Mounting, electrical connection

The passive isolator is mounted on standard 35 mm DIN rail.

Terminal assignments	
Channel 1	Channel 2
1 Input +	3 Input +
2 Input -	4 Input -
5 Output +	7 Output +
6 Output -	8 Output -

Technical Data

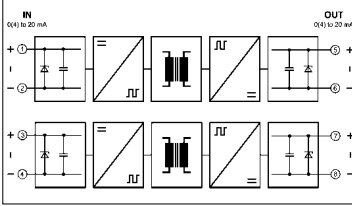
Input	
Input signal	0(4) ... 20 mA
Start up current	< 200 μA
Voltage drop	approx. 2.3 V at 20 mA
Overload	$\leq 50\text{ mA} / \leq 30\text{ V}$
Output	
Output signal	0(4) ... 20 mA
Load	$\leq 600\ \Omega$
Response time T_{90}	7 ms at 600 Ω load
Cut-off frequency -3 dB	100 Hz
Residual ripple	< 10 mV _{rms}
General data	
Transmission error	< 0.1 % full scale
Load error	< 0.05 % of measured value / 100 Ω load
Temperature coefficient ¹⁾	< 100 ppm/K
Test voltage	3 kV, 50 Hz, 1 min. between all circuits
Working voltage ²⁾	600 V AC/DC for overvoltage category II and contamination class 2 acc. to EN 61010-1 (Basic insulation)
Protection against dangerous body currents ³⁾	Protective Separation by reinforced insulation acc. to EN 61010-1 up to 300 V AC/DC for overvoltage category II and contamination class 2 between all circuits.
Ambient temperature	Operation -25 °C to +70 °C (-13 to +158 °F) Transport and storage -40 °C to +85 °C (-40 to +185 °F)
EMC ³⁾	EN 61326-1
Construction	6.2 mm (0.244") housing, protection type: IP 20 mounting on 35 mm DIN rail acc. to EN 60715
Connection	Solid: 0.5 mm ² - 4 mm ² / AWG 20-12 Fine-stranded: 0.5 mm ² - 2.5 mm ² / AWG 20-14 Stripped length: 6-8 mm / 0.28 in Screw terminal torque 0.8 Nm / 7 lbf in
Weight	Approx. 70 g

1) Average TC in specified operating temperature range

2) As far as relevant the standards and rules mentioned above are considered by development and production of our devices. In addition relevant assembly rules are to be considered by installation of our devices in other equipment. For applications with high working voltages, take measures to prevent accidental contact and make sure that there is sufficient distance or insulation between adjacent situated devices.

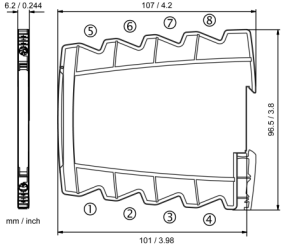
3) Minor deviations possible during interference

Block Diagram



Order Information		
Product		Order No.
IsoPAQ-611	1 Channel	70ISL61100
IsoPAQ-612	2 Channel	70ISL61200

Dimensions



LIMITED WARRANTY


INOR Process AB, or any other affiliated company within the Inor Group (hereinafter jointly referred to as "Inor"), hereby warrants that the Product will be free from defects in materials or workmanship for a period of five (5) years from the date of delivery ("Limited Warranty"). This Limited Warranty is limited to repair or replacement at Inor's option and is effective only for the first end-user of the Product. This Limited Warranty applies only if the Product.

- is installed according to the instructions furnished by Inor;
- is connected to a proper power supply;
- is not misused or abused; and
- there is no evidence of tampering, mishandling, neglect, accidental damage, modification or repair without the approval of Inor or damage done to the Product by anyone other than Inor.

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Customer pays freight to Inor, and Inor will pay the return freight by post or other "normal" way of transport. If any other type of return freight is requested, customer pays the whole return cost.

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