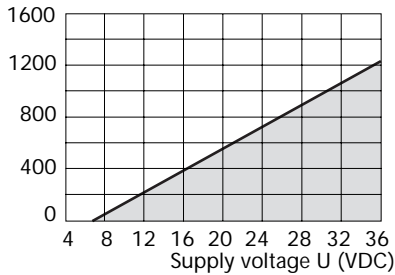


Output load diagram

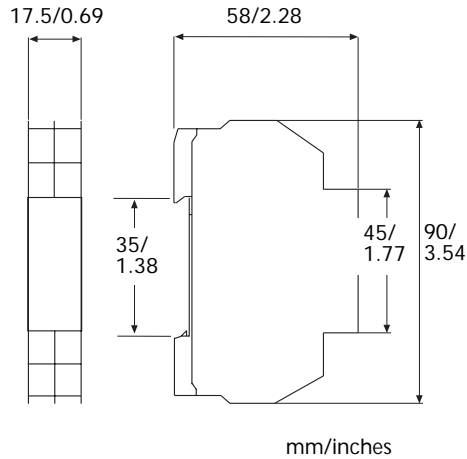
Permissible R_{Load} at 23 mA output

R_{Load} (Ω)



$$R_{Load} = (U - 7) / 0.023$$

Dimensions



mm/inches

Ordering table

Item	Part No.
Transmitter	
IPAQ-L ^{PLUS}	70IPLP0001
IPAQ-LX ^{PLUS} (Cenelec)	70IPLPX001
IPAQ-LX ^{PLUS} (FM)	70IPLPX101
Options	
Configuration	70CAL00001
Configuration with 5-point calibration certificate	70CAL00051
Software and cable	
I ^{PRO} -X (I ^{PRO} with cable)	70IPRX0001
I ^{PRO} +	70IPRS0001
(I ^{PRO} with I ^{PRO} + cable)	
Software I ^{PRO} upgrade	70IPRS0001

Short form data:

Power supply	7 - 36 VDC
Ambient temperature	-20 to + 70 °C - 4 to +158 °F
Isolation input/output/PC	3750VAC
Mounting	DIN Rail



IPAQ[®]-L PLUS

User Instructions



Intelligent Precision Temperature Transmitter



INOR

Measurably better transmitters

<http://www.inor.com>
E-mail: support@inor.se

The manual must be read prior to adjustment and/or installation.
Made in Sweden All information subject to change without notice

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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. Upon receipt of a warranty claim, Inor shall respond within a reasonable time period as to its decision concerning:

- 1 Whether Inor acknowledges its responsibility for any asserted defect in materials or workmanship; and, if so,
- 2 the appropriate cause of action to be taken (i.e. whether a defective product should be replaced or repaired by Inor).

This Limited Warranty applies only if the Product:

- 1 is installed according to the instructions furnished by Inor;
- 2 is connected to a proper power supply;
- 3 is not misused or abused; and
- 4 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.

This Limited Warranty is provided by Inor and contains the only express warranty provided.

INOR SPECIFICALLY DISCLAIMS ANY EXPRESS WARRANTY NOT PROVIDED HEREIN AND ANY IMPLIED WARRANTY, GUARANTEE OR REPRESENTATION AS TO SUITABILITY FOR ANY PARTICULAR PURPOSE, PERFORMANCE, QUALITY AND ABSENCE OF ANY HIDDEN DEFECTS, AND ANY REMEDY FOR BREACH OF CONTRACT, WHICH BUT FOR THIS PROVISION, MIGHT ARISE BY IMPLICATION, OPERATION OF LAW, CUSTOM OF TRADE OR COURSE OF DEALING, INCLUDING IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. EXCEPT AS PROVIDED HEREIN, INOR FURTHER DISCLAIMS ANY RESPONSIBILITY FOR LOSSES, EXPENSES, INCONVENIENCES, SPECIAL, DIRECT, SECONDARY OR CONSEQUENTIAL DAMAGES ARISING FROM OWNERSHIP OR USE OF THE PRODUCT.

Products that are covered by the Limited Warranty will either be repaired or replaced at the option of Inor. 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.

Introduction

IPAQ-L^{PLUS} is a loop-powered intelligent precision temperature transmitter. The size and versatility makes an ideal choice for all industrial instrumentation. The transmitter give you the possibility to use a customized linearization using 40 points, or 8 third degree polynomials to give you the best possible precision.

IPAQ-L^{PLUS} also have SmartSense, an intelligent way to monitor the isolation resistance.

General information

IPAQ-L^{PLUS} is a two-wire precision rail-mounted transmitter intended to be used in industrial environment.

The transmitter is configured from a standard IBM compatible PC by using the IPRO software (version 4.1 or later). When the transmitter is reconfigured by a PC no recalibration is needed.

You can connect a digital display to the transmitter for a local readings. The display is connected to the communication port and is powered from the transmitter.

The transmitter will update the display every second once it is connected.

Connection

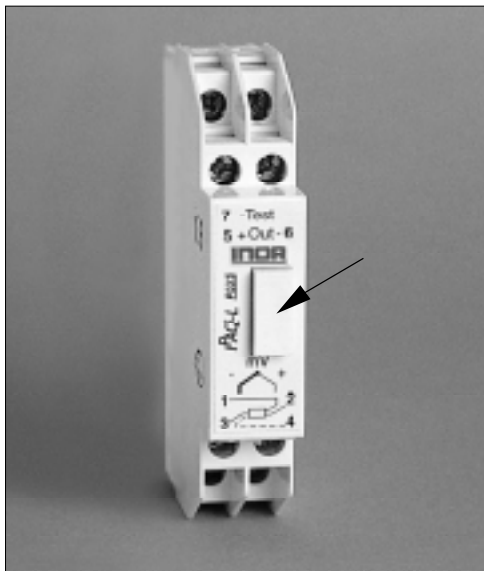
1. Power supply and output signal are connected according to figures to the right. Power supply IPAQ-L^{PLUS} with 7 - 36V.
2. Input signal is connected according to figures to the right.
3. Communication cable and the digital display are connected according to figures to the right.

Configuration

The IPAQ-L^{PLUS} transmitter do not have to be externally powered when you configure with the IPRO+ communication cable. If you use the IPRO-X communication cable you need to power the transmitter. To configure the transmitter you need IPRO (the IPAQ software). If IPRO is not installed in your PC, install the software following the instructions in "IPRO User instructions".

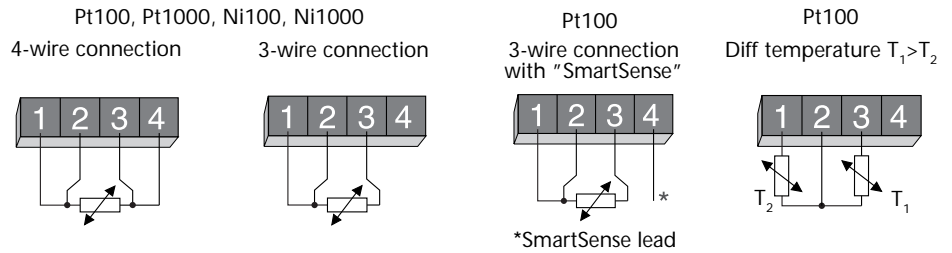
Configuration from PC is "on-line", that is, the transmitter can be installed in the process with the input connected during configuration. The output is frozen while transmission from PC to IPAQ takes place. When the transfer is done, the transmitter uses the new parameters.

Jack for connecting PC and digital display

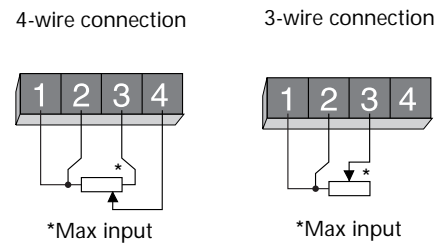


INPUTS

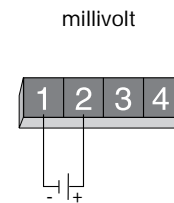
RTD



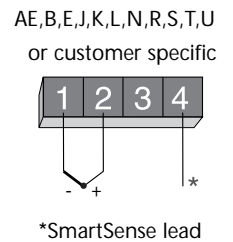
Potentiometer



Voltage

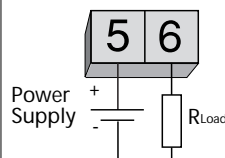


Thermocouple

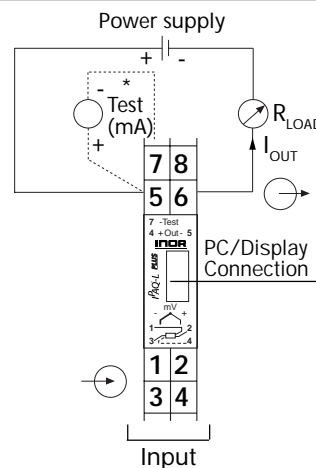


OUTPUT

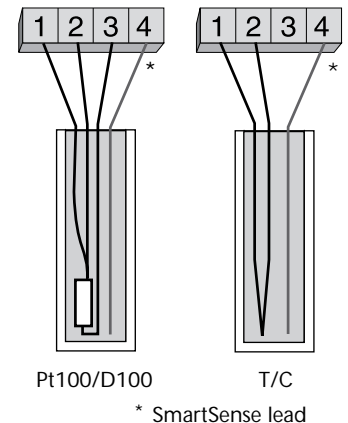
4-20 mA Output



Connections



SmartSense



SmartSense:

The transmitter continuously supervises the isolation resistance in thermocouples and 3-wire-connected Pt100/D100 including the connection wires. If the isolation resistance is low it causes error in the measurements and consequently a faulty output. The transmitter indicates low isolation resistance by forcing the output to a preprogrammed value. This function requires setting by the PC-program IPRO and the use of a temperature sensor with an extra wire.

Calibration

Since IPAQ-L^{PLUS} is a precision instrument it's recommended checking the calibration once a year. Use equipment with an inaccuracy of at least 5 times better than the checked one, e.g. if you are checking a transmitter with an inaccuracy of 0.05% use instrument with an inaccuracy of maximum 0.01%.

You can either perform a full recalibration of the transmitters stored calibration parameters (Basic Calibration) or make a System Error Correction (recommended). In each case use the IPRO software and follow the instructions on the screen. When performing a System Error Correction, please note that this is only a compensation for errors at the measuring range in use.