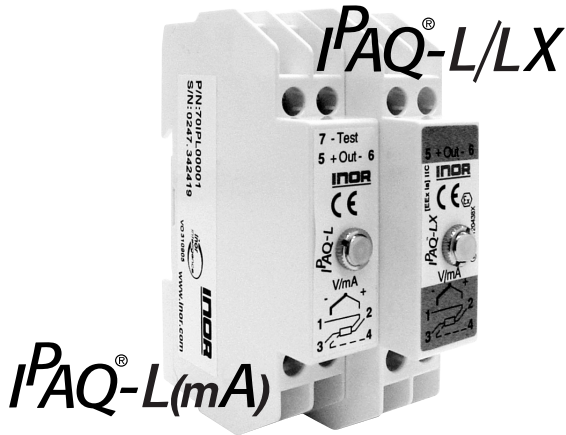


USER INSTRUCTIONS

**Intelligent 2-wire
DIN Rail Temperature & mA
Transmitters**



The user instruction must be read prior to adjustment and/or installation.
All information subject to change without notice.

MEASURE OF SUCCESS



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www.inor.com, www.inor.se



This product should not be mixed with other kind of scrap, after usage.
It should be handled as an electronic/electric device.

MEASURE OF SUCCESS

INTRODUCTION

IPAQ-L is a universal and intelligent 2-wire rail-mounted transmitter for temperature and other measurement applications. IPAQ-LX is the Intrinsic Safe version for use in Ex-applications. IPAQ-L(mA) is a version for current input only, up to 50 mA.

GENERAL INFORMATION

The transmitter is configured from a standard IBM compatible PC by using the IPRO-Software version 4.14 or later. The latest version of IPRO can be downloaded from <http://www.inor.com>. When the transmitter is set from a PC no calibration is needed.

⚠ When calibrate/configure "online" with the input connected to hazardous area the ATEX certified version of IPRO-X cable must be used.

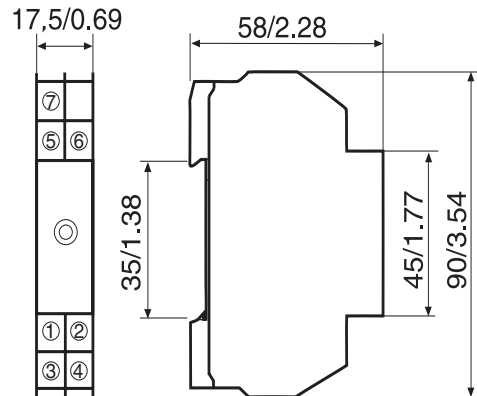
The transmitter is polarity protected and will not be damaged by connecting the power supply with the wrong polarity, but the output will be 0 mA.

The maximum load in the output loop depends on the supply voltage, see "DATA shortform"

⚠ "Isolation input/output/PC" mentioned in the data sheet, indicates signal isolation only. It shall not be interpreted as an IS galvanic isolation like an isolating barrier. Therefore ordinary care in selecting barrier and grounding should be considered for the IPAQ-LX. Maximum common-mode voltage on the input is restricted to 50 VAC / 75 VDC.

Sensor wire check: the transmitter uses a pulsating technique to monitor sensor break or sensor shortened to avoid measuring errors. This pulsating signal may interfere with some electronic calibrators. By selecting "Sensor Break = None" in the IPRO software and download the configuration into the transmitter the pulsating signal is turned off.

DIMENSIONS



CONFIGURATION

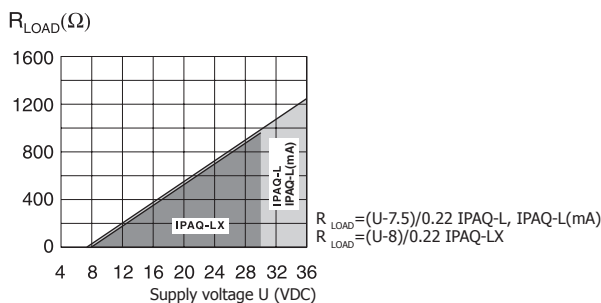
The IPAQ-L/LX transmitter must be powered, when you configure the transmitter, (see "Connections" fig.1). If IPRO (the IPAQ software) isn't installed in your PC, install the software.

⚠ For keeping the safety of the internal circuits in the IPAQ-LX, always use Ex-power supply or a zener barrier with limitations according to Ex-data and IPRO-X configuration cable when making a configuration.

When choosing differential temperature measurements with Pt100 be sure to select "sensor break" = none. Configuration from PC is "on-line", that is, the transmitter can be configured while in operation if the area is known to be non-hazardous. The output is frozen while transmission from PC to IPAQ take place. When transfer is done the transmitter uses the new parameters.

DATA (shortform)

Power supply: IPAQ-L, IPAQ-L(mA) 7.5 to 36 VDC
 IPAQ-LX 8 to 30 VDC
 Isolation in/out: 1500 VAC
 Output: 4-20 mA
 Operating temperature: -20 to +70 °C



IPAQ-LX EX-DATA

Approval Demko 03 ATEX 134461X
 CE 0539 II (1)G [Ex ia] IIC
 Control Drawing 88DRW00022

Approval FM, J.I. 0D6A8.AX, CSA 2007 Certificate 1863602
 Class I, II and III, Division 1, Group A, B, C, D, E, F and G
 Control Drawing 3-7852

Output (terminals 5-6)

(current loop)
 U_i : 30 VDC
 I_i : 100 mA
 P_i : 0,9 W
 L_i : 0 mH
 C_i : 1 nF

Input (terminal 1-2-3-4)

(Intrinsically safe sensor terminals)
 U_o : 30 V
 I_o : 27 mA
 L_o : 50 mH
 C_o : 52 nF



The equipment must be electrically connected (terminal 5 and 6) via a certified isolating interface/zener barrier -and shall be placed outside the hazardous area.

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:

- Whether Inor acknowledges its responsibility for any asserted defect in materials or workmanship; and, if so,
- 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:

- 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, accident 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 MER-CHANTABILITY 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.

INSTALLATION

IPAQ-L/LX/L(mA) are designed to fit on a standard DIN Rail.

IPAQ-LX must be installed in safe area.

Connect input, output and power supply acc. to fig. 1-10.

Fig 3 1 2 3 4 **RTD**
4-wire connection

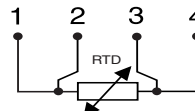


Fig 4 1 2 3 4 **RTD**
3-wire connection

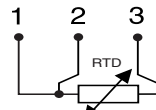


Fig 5 1 2 3 4 **Pt100**
Diff temperature $T_1 > T_2$

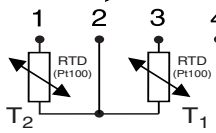


Fig 6 1 2 3 4 **Potentiometer**
3-wire connection

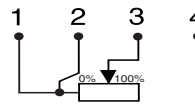


Fig 7 1 2 3 4 **Potentiometer**
4-wire connection

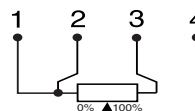


Fig 8 1 2 3 4 **Voltage**
mV

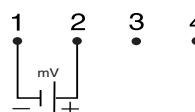
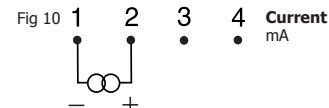
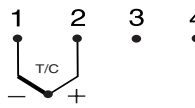
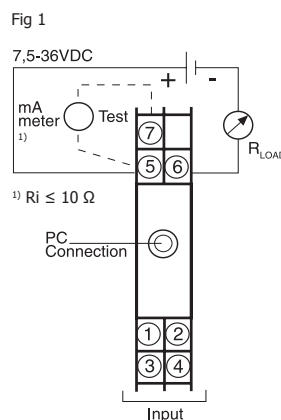


Fig 9 1 2 3 4 **Thermocouple**

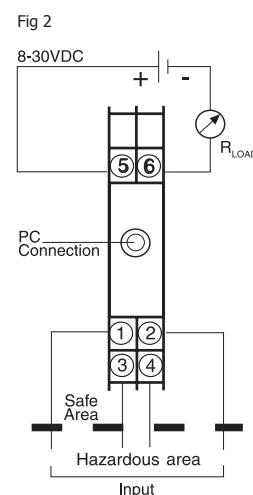


CONNECTIONS

IPAQ-L, IPAQ-L(mA)



IPAQ-LX



ORDERING TABLE

| Item | Part No. |
|------------------------------------|------------|
| IPAQ-L | 70IPL00001 |
| IPAQ-LX (ATEX) | 70IPLX0001 |
| IPAQ-LX (FM, CSA) | 70IPLX1001 |
| IPAQ-L(mA) Current input only | 70IPL00003 |
| Software and cable | |
| Configuration kit IPRO with cables | 70CFG00092 |