USER INSTRUCTIONS

Intelligent 2-wire In-head Temperature Transmitter

IPAQ-H/HX

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.

The transmitter must not be connected to a computer, when the transmitter is in hazardous area.

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”

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

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.

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.

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CONFIGURATION

The IPAQ-H/HX 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 (follow the instructions in “IPRO User instructions”).

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

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.

MEASURE OF SUCCESS

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

- **Power supply:** IPAQ-H: 6.5 to 36 VDC  
  IPAQ-HX: 8 to 30 VDC  
- **Isolation in/out:** 1500 VAC  
- **Output:** 4-20 mA  
- **Operating temperature:**  
  - IPAQ-H: -40 to +50 °C (T6)  
  - IPAQ-HX: -40 to +65 °C (T5)  
  - IPAQ-HX: -40 to +85 °C (T4)

### IPAQ-HX EX-DATA

**Approval Demko 02 ATEX 132033X**

CE 0539 ☝ II 1G  Ex ia IIC T4-T6  

- **Class I, Division 1, Group A, B, C and D**  
- **Approval FM, J.I 0D6A8.AX, CSA 2007 Certificate 1863602**

### INSTALLATION

IPAQ-H/HX are designed to fit inside connection heads type DIN B or larger.  

#### Instruction

IPAQ-HX must be installed in an enclosure having an Ingress Protection suitable for the actual use but at least IP20.  

**If IPAQ-HX is mounted in a housing (head) made of light metals and installed in hazardous area** make sure the content of magnesium (Mg) in the light metal is less than 6%.  

**If IPAQ-HX is mounted in a housing which is isolated from ground and can be charged to an ignition capable level,** then the housing shall be electrostatically grounded when installed in hazardous area.

Connect input, output and power supply acc. to fig. 1-9.  

A convenient way to install the transmitter is to use the INOR mounting kits for in-head and DIN rail mounting, (see “Ordering table”). In order to minimize measuring errors make sure the connecting screws are tightened enough.

### POWER (in.head)

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  - IPAQ-H: 6.5 to 36 VDC  
  - IPAQ-HX: 8 to 30 VDC  
- **Isolation in/out:** 1500 VAC  
- **Output:** 4-20 mA  
- **Operating temperature:**  
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  - IPAQ-HX: -40 to +65 °C (T5)  
  - IPAQ-HX: -40 to +85 °C (T4)

### OUTPUT (current loop)

- **Output (current loop):**  
  - $U_i \leq 30$ VDC  
  - $I_i \leq 100$ mA  
  - $P_i \leq 900$ mW  
  - $L_i \approx 0$ mH  
  - $C_i \approx 0$ nF

### INPUT (sensor)

- **Input (sensor):**  
  - $U_o \leq 30$ VDC  
  - $I_o \leq 25$ mA  
  - $P_o \leq 188$ mW  
  - $L_o \approx 50$ mH  
  - $C_o \approx 66$ nF

### LIMITD 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,
   1. 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, accidenta damage, modification or repair without the approval of Inor or damage done to the Product by anyone other than Inor.

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Products that are covered by the Limited Warranty will either be replaced or repaired 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.