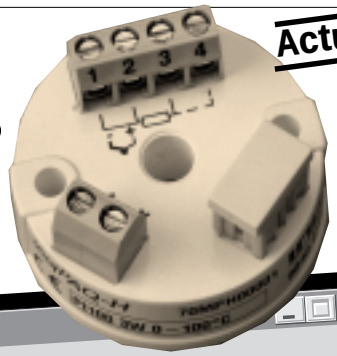
INOR PROCESS AB

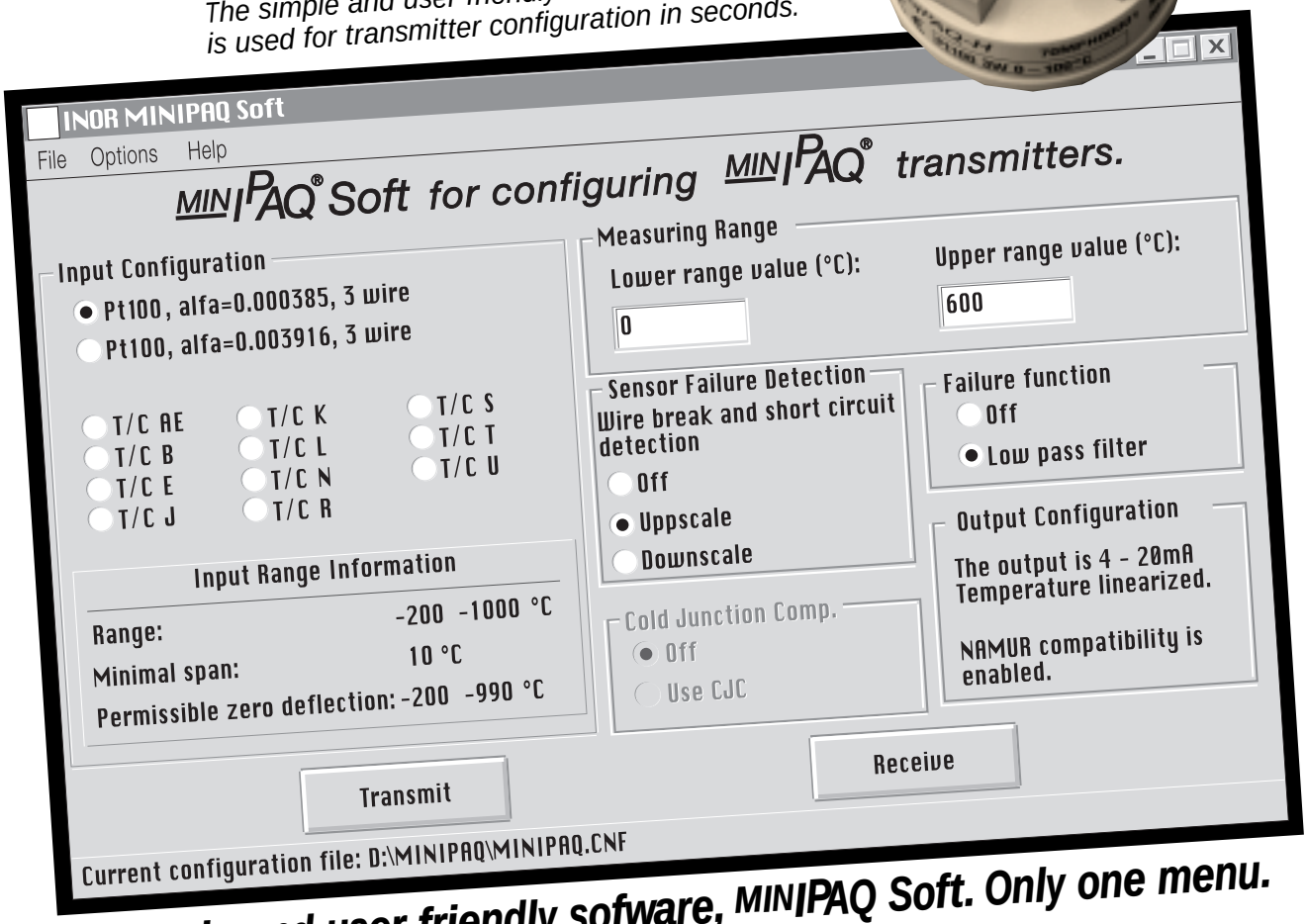
MINIPAQ®-H

Basic Programmable Transmitter for RTD and T/C

MINIPAQ-H is an easy to use transmitter for in-head mounting in standard DIN-B and similar heads.



The simple and user friendly software, MINIPAQ Soft, is used for transmitter configuration in seconds.



Simple and user friendly sofware, MINIPAQ Soft. Only one menu. No learning time required.

- ***No external power supply for configuration.*** *Edit or read the configuration off-line by just connecting a PC.*
- ***Linearization.*** *Fully temperature linear output for RTD and thermocouples.*
- ***Sensor failure monitoring.*** *Selectable sensor failure action, upscale or downscale.*
- ***NAMUR-compliant.*** *Output limitations and fail currents according to NAMUR recommendations.*
- ***Designed for harsh conditions.***
- ***2-wire, loop-powered.***
- ***5 year limited warranty.***

Main features of MINIPAQ-H

Measurements with RTDs

MINIPAQ-H accepts inputs from standardized Platinum RTDs, Pt100, acc. to IEC 751 (α=0.00385) andPt100 acc. to JIS 1604 (α=0.003916). 3-wire connection is used.

Measurements with thermocouples

MINIPAQ-H accepts inputs from 11 types of standardized thermocouples.

For T/C input, the CJC (cold junction compensation) is fully automatic, by means of an accurate measurement of the terminal temperature. Alternatively, the CJC can be disabled.

Sensor failure monitoring

MINIPAQ-H monitors sensor break and short-cicuit and forces the output signal upscale or downscale (selectable), when *any* sensor lead is broken, disconnected or short-circuited. The sensor monitoring can be switched off. The monitoring is furnished with a *pulsed excitation current*. This eliminates the voltage drop in the lead wires (giving a measuring error), caused by a standard DC excitation current.

Power supply

MINIPAQ-H is loop-powered and will work on voltages down to 8 VDC, thus giving good margins for high loads in the current loop. Reversed polarity will not damage the transmitter.

Warranty

MINIPAQ-H is covered by a 5 year limited warranty.

MINIPAQ Soft Simple Configuration Software

MINIPAQ Soft is used for the configuration of MINIPAQ-H.

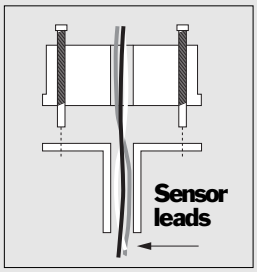
- Measurement configuration: Sensor type, range, filter activation, CJC, etc.
- Monitoring of sensor status: Sensor failure upscale or downscale action of the output signal.
- Documentation: Configuration files can be saved for future use.

MINIPAQ-H is configured without need for power supply.

A communication cable is included in the configuration kit, MINIPAQ Soft off-line package.

MINIPAQ Soft is compatible with Windows 3.1,Windows 3.11, Windows 95, Windows 98 and Windows NT Workstation 4.0. The program is menu-driven and extremely easy to use.

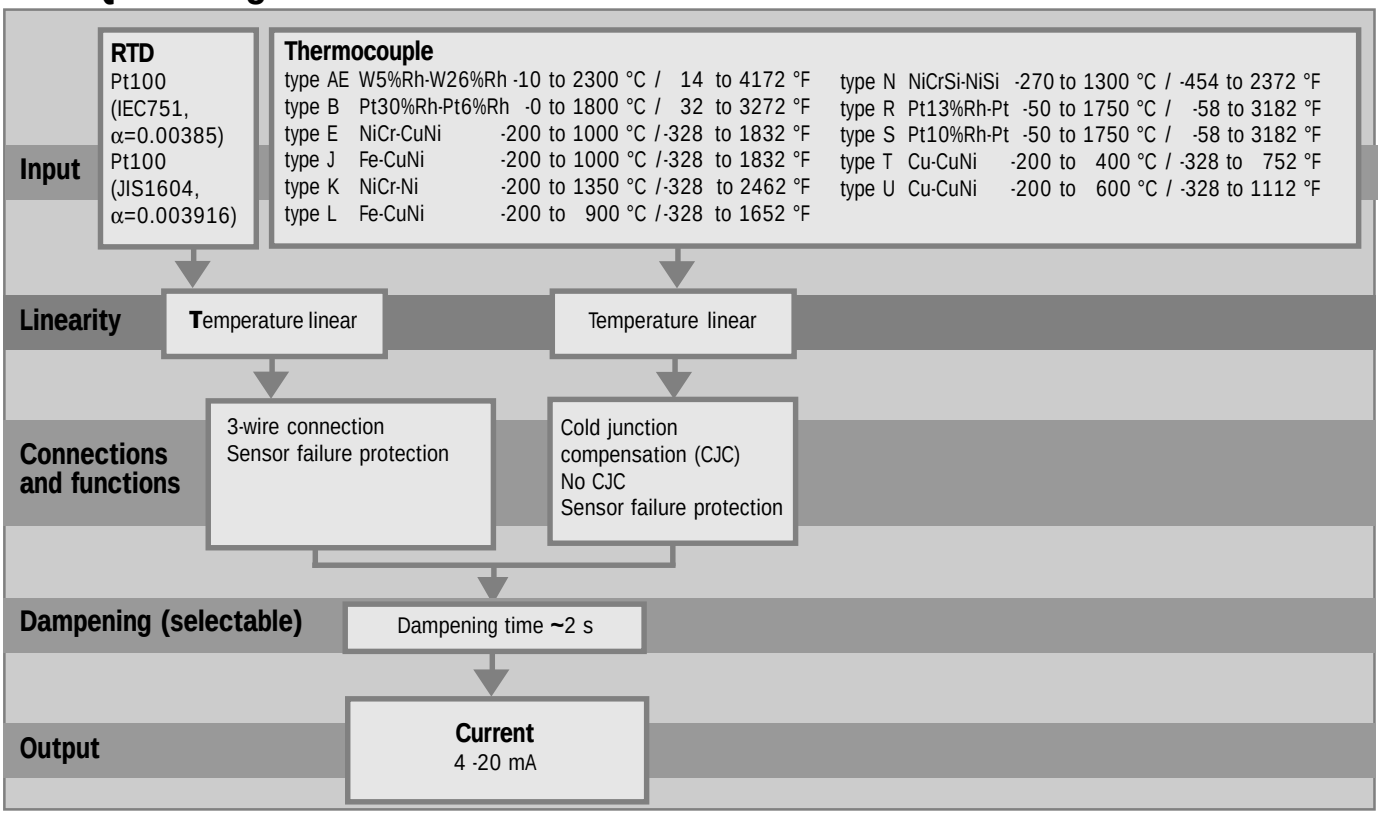
Mounting



MINIPAQ-H is designed to fit inside connection heads type DIN B or larger.

The large center hole, dia. 7 mm / 0.28 inch, facilitates the pulling through of the sensor leads or an insert tube, greatly simplifying the mounting procedure.

MINIPAQ-H Configuration scheme



Specifications

Input		
RTD's		
Pt100 (IEC751, α = 0.00385)	3-wire connection	-200 to +1000 °C / -328 to +1832 °F
Pt 100 (JIS1604, α = 0.003916)	3-wire connection	-200 to +1000 °C / -328 to +1832 °F
Sensor current		~ 0.4 mA
Maximum sensor wire resistance		25 Ω/wire
Thermocouples		
Range	Type: AE, B, E, J, K, L, N, R, S, T, U	See Configuration scheme
Input impedance		>10 MΩ
Maximum sensor wire resistance		500 Ω (total loop)
Monitoring		
Sensor failure monitoring		Upscale or downscale
Adjustments		
Zero adjustment	All inputs	Any value within range limits
Minimum spans	Pt100	10 °C / 18 °F
	T/C	2 mV
Output		
Analog		4-20 mA, temperature linear
Resolution		5 µA
Minimum output signal	Measurement/Failure	3.8 mA / 3.5 mA
Maximum output signal	Measurement/Failure	20.5 mA / 21.6 mA
Permissible load, *see load diagram*		725 Ω @ 24 VDC, 22 mA
Temperature		
Ambient, storage and operation		-40 to +85 °C / -40 to +185 °F
General data		
Selectable dampening time		~ 2 s
Update time		~ 1.5 s
Isolation In - Out		Non isolated
Humidity (non-condensing)		0 to 95 %RH
Power supply, polarity protected		
Supply voltage		8 to 36 VDC 2-wire
Permissible ripple		4 V p-p @ 50/60 Hz
Accuracy		
Typical accuracy	RTD	±0.2 % [1]
	T/C	±0.3 % [1]
Cold Junction Compensation (CJC)	T/C	±0.5 °C / ±0.9 °F
Temperature influence [4]	All inputs	Max. of ±0.25 °C/25 °C or ±0.25%/25 °C [1] [3]
		Max. of ±0.5 °F/50 °F or ±0.28%/50 °F [1] [3]
Temperature influence CJC [4]	T/C	±0.5 °C/25 °C / ±1.0 °F/50 °F
Sensor wire resistance influence		Negligible [2]
Load influence		Negligible
Power supply influence		Negligible
RFI influence, 0.15 to 1000 MHz, 10 V or V/m		±0.5% [1] (typical)
Long-term stability		±0.2 % [1] /year
Housing		
Material / Flammability (UL)		PC + ABS/V0, Polyamide/V2
Mounting		DIN B-head or larger, DIN rail (with mounting kit)
Connection	Single/stranded wires	≤1.5 mm², AWG 16
Weight		50 g
Protection, housing / terminals		IP 50 / IP 10

[1] Of input span

[2] With equal wire resistance for RTD

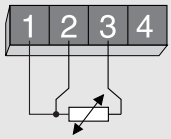
[3] If zero-deflection > 100% of input span: add 0.125% of input span/25 °C or 0.14% of input span/50 °F per 100% zero-deflection

[4] Reference temperature 23 °C / 73°F

INPUTS

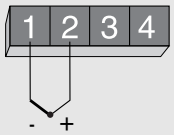
RTD

Pt100 (α= 0.00385), Pt100 (α= 0.003916)
3-wire connection



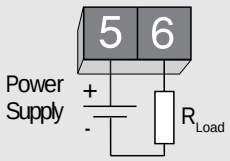
Thermocouple

Type: AE, B, E, J, K, L, N, R, S, T, U

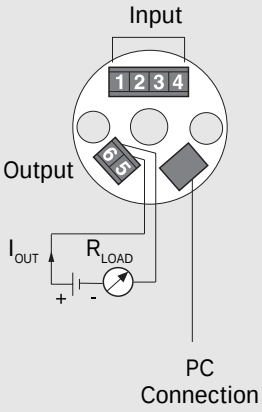


OUTPUT

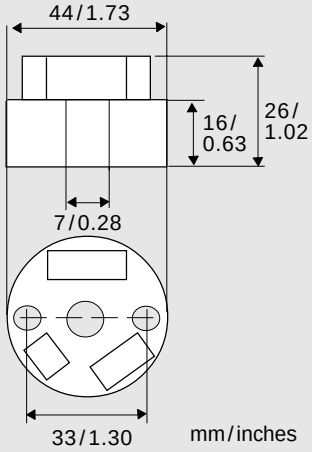
4-20 mA Output



Connections

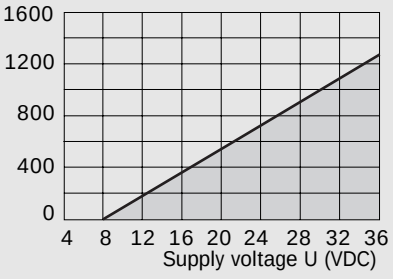


Dimensions



Output load diagram

Permissible R_{Load} at 22 mA output



R_{Load}=(U-8)/0.022

Ordering table

Item	Part No.
Transmitter	
MINIPAQ-H	70MQH00001
Options	
Configuration	70CAL00001
Software and cable	
MINIPAQ Soft off-line package	70CFG00003
MINIPAQ Soft (software)	70MQS00001
Accessories	
Surface mounting box	70ADA00008
Rail mounting box	70ADA00009
Head mounting kit	70ADA00012
Rail mounting kit	70ADA00013

The User Instructions must be read prior to adjustment and/or installation.

INOR® PROCESS AB

Measurably better transmitters

PO Box 9125,
S-200 39 MALMÖ, Sweden.
Phone: +46-40-31 25 60.
Fax: +46-40-31 25 70
E-mail: support@inor.se
http://www.inor.com

Your distributor

86DMQH0001 0499

All information subject to change without notice