HTR200/201 TEMPERATURE TRANSMITTER

- MAA TYPE HEAD WITH INTEGRAL TRANSMITTER
- INPUT: RTD, SLIDE WIRE, RESISTANCE
- USER LINEARIZATION
- PC PROGRAMABLE
- (4 to 20) mA OUTPUT

INTRODUCTION

The HTR200 is a cost effective "smart" transmitter integrated into an MAA type connection head that accepts resistance signals including RTD sensors and converts them to a standard industrial (4 to 20) mA transmission signal over a user programmed range. There are two versions available with either 1/8" BSP or M10 probe connections. Its small size (52mm swing diameter), allows for installations where space is critical and being 60% lighter than a conventional transmitter installed in a KNE type alloy head, means smaller stem diameter and head threads can be used in the temperature probe. Temperature probes are sold separately and our style 1 and 2 are the most popular with this product.

FEATURE HIGHLIGHTS

SENSOR REFERENCING (Temperature mode)
The HTR200 sensor referencing via the Windows based USBSpeedlink software allows for close matching to a known reference sensor eliminating possible sensor errors.

CUSTOM LINEARISATION
As standard the HTR200 has all common RTD sensors available from its software library.
Additionally, the HTR200 can be programmed with up to 22-point custom linearization for ohms and slidewire inputs.

SENSOR BURN OUT DETECTION (Temperature mode)
If a sensor wire is broken or becomes disconnected the HTR200 output will automatically go to its user defined level (upscale or downscale) or a pre-set value.

STABILITY
The HTR200 integral transmitter incorporates the latest digital technology to ensure accurate, low drift performance.

STATUS INSTRUMENTS

ELECTRICAL INPUT		SPECIFICATIONS @20°C
Type	**Range**	**Accuracy/ Stability**
Slide Wire		
(0 to 100) % Travel	Wire resistance (1 to 100) KΩ	± 0.1 %
Resistance		
Ohms	(10 to 500) Ω (500 to 2500) Ω (2500 to 10500) Ω	± 0.055 Ω ± 0.5 Ω ±10.0 Ω
Thermal drift	(10 to 500) Ω (500 to 2500) Ω (2500 to 10500) Ω	Ω 0.013 Ω/°C Ω 0.063 Ω/°C Ω 0.27 Ω/°C
Excitation current		< 200 uA

SENSOR INPUT RTD		SPECIFICATIONS @20°C
Type	**Range**	**Accuracy/ Stability**
Pt100 (IEC)	(-200 to 850) °C	± 0.2°C ± (0.05% of reading) (Plus sensor error)
Pt500 (IEC)	(-200 to 850) °C	
Pt1000 (IEC)	(-200 to 600) °C	
Ni100	(-60 to 180) °C	
Ni120	(-70 to 180) °C	
Ni1000	(-40 to 150) °C	
Cu53	(-40 to 180) °C	
Cu100	(-80 to 260) °C	
Cu1000	(-80 to 260) °C	
Lead effect	Max lead resistance 20 Ω per leg	0.002 °C / Ω
Library contains more (standards/types) Including silicon sensors		
Temperature stability: - Refer to resistance stability values for thermal effect		

OUTPUT		SPECIFICATIONS @20°C
Type/ Function	**Range/ Description**	**Accuracy/ Stability/ Notes**
Two wire current	(4 to 20) mA	(mA output /2000) or 5 uA (Whichever is the greater)
Thermal drift	Zero at 20°C	2 uA /°C
Maximum output current	21.5 mA	In high burnout condition
Minimum output current	< 3.9 mA	In low burnout condition
Loop voltage effect	0.2 uA / V	
Maximum output load	[(V supply – 10)/20] KΩ	700 Ω @ 24 V DC
Loop supply	(10 to 30) V DC	SELV
Power	< 1 W full power	

USB USER INTERFACE		
Type/ Function	**Range/ Description**	**Notes**
Configuration hardware	USB configuration module	USB-CONFIG-MKII
Configuration software	USBSpeedLink	Download www.status.co.uk
Temperature mode configuration	Sensor type	RTD list
	Temperature range for (4 to 20) mA retransmission	°C or °F
	Sensor offset	°C or °F
	Burnout current	Upscale, downscale or user set

STATUS INSTRUMENTS

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Type/ Function	Range/ Description	Notes
Process mode configuration	Input type	Ohms or slide wire
	Process range for (4 to 20) mA retransmission	User engineering units, 4 characters
	User linearisation	(2 to 22) segments
Tag number		20 characters
Filter	(0 to 100) s time constant	Adjustable
Read live data	Temperature / process output	˚C or ˚F or user units for process mA
Save/ open configuration	From file	

GENERAL	
Function	**Description**
Update time	500 ms
Response time	0.5 s (160 ms input update rate)
Start-up time	5
Warm up time	120 s to full accuracy
Default configuration	PT100 (0 to 100) ˚C, upscale burnout

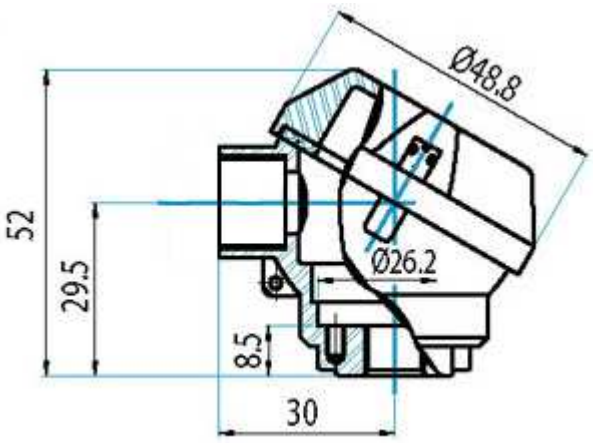
ENVIRONMENTAL	
Function	**Description**
Ambient temperature	Operating/Storage (-40 to 85) ˚C Full accuracy only between (-30 to 75)˚C
Ambient Humidity	Operating/Storage (10 to 90) %RH non-condensing
Protection	IP66
USB configuration ambient	(10 to 30) ˚C

MECHANICAL	
Function	**Description**
Dimensions	52 mm height
Probe entry	See order codes below
Cable entry	M16 x 1.5 (use IP66 cable gland to maintain full protection)
Connections	2-part connectors
Weight	Approximately 80 g (encapsulated) without probe

APPROVALS	
EMC	BS EN 61326: Note - Sensor input wires to be less than 3 m to comply
Ingress protection	BS EN 60529
RoHS	Directive 2011/65/EU

ORDER CODE	
HTR200	Probe entry M10 x 1.0
HTR201	Probe entry 1/8“ BSP

Dimensions in mm



ACCESSORIES	
USB configuration software	USBSpeedLink free of charge from www.status.co.uk
Configuration device	USB-CONFIG-MKII
Probe options	Refer to www.status.co.uk

To maintain full accuracy annual calibration is required contact support@status.co.uk for details

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