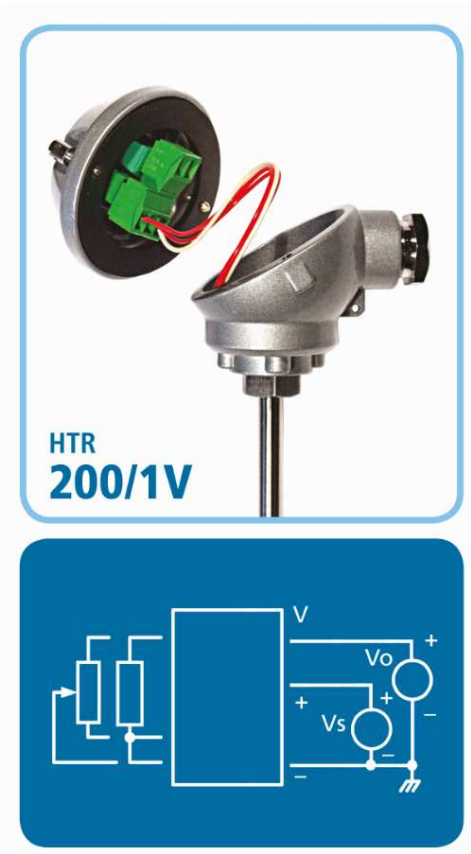
HTR200V HTR201V TEMPERATURE TRANSMITTER

- **MAA TYPE HEAD WITH INTEGRAL TRANSMITTER**
- **INPUT: RTD, SLIDE WIRE, KTY, SENSORS PLUS RESISTANCE**
- **USER LINEARIZATION**
- **PC PROGRAMABLE**
- **VOLTAGE OUTPUT**



INTRODUCTION

The HTR200V 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 (52 mm 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 LINEARIZATION
As standard the HTR200V has all common RTD sensors available from its software library.
Additionally, the HTR200V 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 HTR200V output will automatically go to its user-defined level (upscale or downscale) or a pre-set value.

STABILITY
The HTR200V integral transmitter incorporates the latest digital technology to ensure accurate, low drift performance.

VOLTAGE OUTPUT
Three wire voltage output with user-adjustable range, configuration between (0 to 10) Vdc.

STATUS INSTRUMENTS

ELECTRICAL INPUT RESISTIVE		SPECIFICATIONS @20°C
Type	**Range**	**Accuracy/ Stability *1**
Slide Wire		
(0 to 100) % Travel	Wire resistance (0 to 1) KΩ up to (0 to 100) KΩ sensors	± 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 Zero at 20 °C	(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
Lead effect	Max lead resistance 20 Ω per leg	0.002 °C / Ω
*1 Basic measurement accuracy includes the effects of calibration, linearization and repeatability		

SENSOR INPUT RTD *2		SPECIFICATIONS @20°C
Type	**Range**	**Accuracy/ Stability *1**
Pt100 (IEC)	(-200 to 850) °C	minimum span 25 °C ± 0.2°C ± (0.05% of reading) (Plus sensor error)
Pt100 IPT-68	(-200 to 630) °C	
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	
Excitation current		< 200 uA
Lead effect	Max lead resistance 20 Ω per leg	0.002 °C / Ω
Temperature stability: - Refer to resistance stability values for thermal effect		
*1 Basic measurement accuracy includes the effects of calibration, linearization and repeatability		
*2 Library contains more (standards/types)		

SENSOR INPUT BMS/ HVAC/ SILICON SENSORS *2		SPECIFICATIONS @20°C
Type	**Range**	**Accuracy/ Stability *1**
KTY81-110 KTY81-120 KTY81-150 KTY82-110 KTY82-120 KTY82-150	(-55 to 150) °C	minimum span 25 °C ± 0.2°C ± (0.05% of reading) (Plus sensor error)
KTY81-121 KTY82-121		
KTY81-122 KTY82-122		
KTY81-210 KTY81-220 KTY81-250 KTY82-210 KTY82-220 KTY82-250		
KTY81-221 KTY82-221		
KTY81-222 KTY82-222		
KTY81-151 KTY82-151	(-55 to 175) °C	
KTY83-210 KTY83-220 KTY83-250		

KTY83-121	(-55 to 175) ˚C	minimum span 25 ˚C ± 0.2˚C ± (0.05% of reading) (Plus sensor error)
KTY83-122		
KTY84-130 KTY84-150	(-30 to 300) ˚C	
KTY84-151		
Excitation current		< 200 uA
Lead effect	Max lead resistance 20 Ω per leg	0.002 ˚C / Ω
Temperature stability: - Refer to resistance stability values for thermal effect		
*1 Basic measurement accuracy includes the effects of calibration, linearization and repeatability		
*2 Library contains more (standards/types)		

OUTPUT		**SPECIFICATIONS @20˚C**
Type/ Function	**Range/ Description**	**Accuracy/ Stability/ Notes**
Three wire voltage Selectable within	(0 to 10) volts	± (voltage output/ 1000) or ±5 mv whichever is greater
Output limits	(-0.1 to 10.5) volts	
Current drive	2 mA maximum	
Minimum output load	5000 Ω	
Thermal drift	Zero at 20 ˚C	1 mV/ ˚C

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 (0 to 10) Vdc output	˚C or ˚F
	Sensor offset	˚C or ˚F
	Burnout signal	Upscale, downscale or user set
Type/ Function	**Range/ Description**	**Notes**
Process mode configuration	Input type	Ohms or slide wire
	Process range for (0 to 10) Vdc output	User engineering units, 4 characters
	User linearization	(2 to 22) segments
Tag number		20 characters
Filter	(0 to 100) s time constant	Adjustable
Read live data	Temperature / process output	˚C, ˚F or user units for process Voltage
Save/ open configuration	From file	

GENERAL	
Function	**Description**
Update time	200 ms
Response time	0.5 s (160 ms input update rate)
Start-up time	1 s (v out = 0.0 v during start up)
Warm up time	120 s to full accuracy
Default configuration	PT100 (0 to 100) ˚C, upscale burnout, (0 to 10) Vdc output
Power supply	(12 to 30) vdc

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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	
HTR200V	Probe entry M10 x 1.0
HTR201V	Probe entry 1/8" BSP
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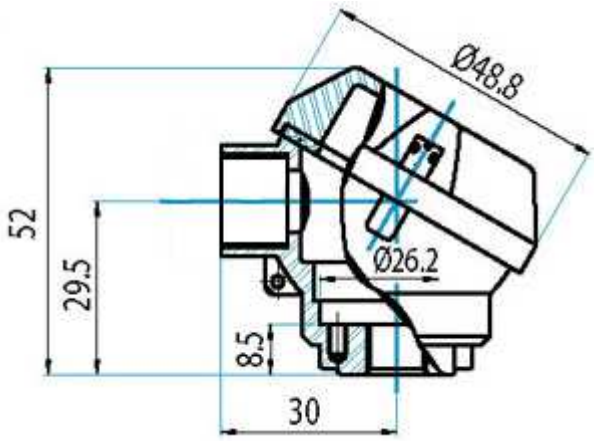
Dimensions in mm



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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STATUS INSTRUMENTS