KOS1605P RTD DIN RAIL TEMPERATURE TRANSMITTER

> **PT100, Cu100, Cu53, Ni100, Ni120**

> **(4 to 20) mA TWO WIRE OUTPUT**

> **USER OUTPUT TRIM (ZERO and SPAN)**

> **SIMPLE CONFIGURATION VIA USB PORT**

> **FREE CONFIGURATION SOFTWARE**

> ## INTRODUCTION

The KOS1605P is the next generation DIN rail mounted temperature transmitter from Status Instruments. It has been designed to accept most common RTD temperature sensor inputs and provide the user with a standard two wire (4 to 20) mA output signal.
All temperature ranges are linear to temperature.

Designed for ease of use, our latest USB interface is fitted for quick and easy configuration. Just connect a standard USB cable between the KOS1605P and your PC. Our free configuration software will guide you through any changes you wish to make. To further help save time, the KOS1605P does not need to be wired to a power supply during the configuration process, it is powered via the USB interface from your PC.

KOS1605P

> ## FEATURE HIGHLIGHTS

ACTIVE RANGE
The KOS1605P is provided with a user push button ranging option, allowing adjustments at both 4 mA and 20 mA for a live value.
The 'user adjust' function can be locked during configuration if not required. The state LED indicates out of range input during normal operation, during 'user adjust' it is also used to indicate the stage of adjustment.

(4 and 20) mA TRIM
The buttons can also be used for 4 mA and 20 mA current trim adjustment to add small offsets to (4 or 20) mA output.

SENSOR REFERENCING
The KOS1605P sensor referencing via the Windows based USBSpeedlink software allows for close matching to a known reference sensor eliminating possible sensor errors.
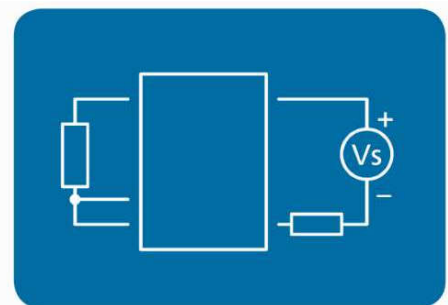
SENSOR BURN OUT DETECTION
If a sensor wire is broken or becomes disconnected the KOS1605P output will automatically go to its user defined level (upscale or downscale) or a pre-set value.

STABILITY
The KOS1605P DIN rail transmitter incorporates the latest digital technology to ensure accurate low drift performance.

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SENSOR INPUT RTD		SPECIFICATIONS @20˚C
Type	Range	Accuracy/ Stability
PT100 (IEC)	(-200 t0 850) ˚C	
PT100 0.391	(-200 to 630) ˚C	
PT100 0.392	(-200 to 630) ˚C	0.2˚C + (˚0.05% of reading)
PT100 0.393	(-200 to 630) ˚C	Plus sensor error
Cu53	(-40 to 180) ˚C	
Cu100	(-80 to 260) ˚C	
Ni100	(-70 to 180) ˚C	
Ni120	(-70 to 180) ˚C	
Excitation current		660 uA
Maximum lead resistance	2 or 3 wire	20 Ω
Thermal stability		± 0.02 ˚C / ˚C

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
Thermal stability		± 2 uA/ ˚C

USB USER INTERFACE		
Type/ Function	Range/ Description	Notes
Configuration hardware		USB A to mini B lead
Configuration software	USBSpeedLink	Download www.ditel.es
Sensor configuration	Sensor type	RTD list
	Temperature range for (4 to 20) mA retransmission	˚C or ˚F Active or manual range
	Sensor offset	±10 ˚C or ±18˚F
	Burnout current	Upscale, downscale or user set
Pre-set temperature (diagnostics)	Any within sensor range	˚C or ˚F
Pre-set output current (diagnostics)	Any within output range	mA
Tag		20 characters
Button function		Trim, active range, off
Read live data	Temperature Output	˚C or ˚F mA
Save/ open configuration	To/ from PC file	

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USER PUSH BUTTON INTERFACE		
Function	**Description**	
Active range	Range 4 mA and 20 mA points against live input	
User trim	Adjust at maximum and minimum input range value	Offset (4 mA) and span (20 mA) adjustment

GENERAL	
Function	**Description**
Update time	500 ms
Response time	1 s
Start-up time	8 s
Warm up time	120 s to full accuracy
Default configuration	PT100 (0 to 100) °C, upscale burnout
LED (red)	If mA output < -0.1% or > 100.1 % LED ON
Protection	Reverse connection

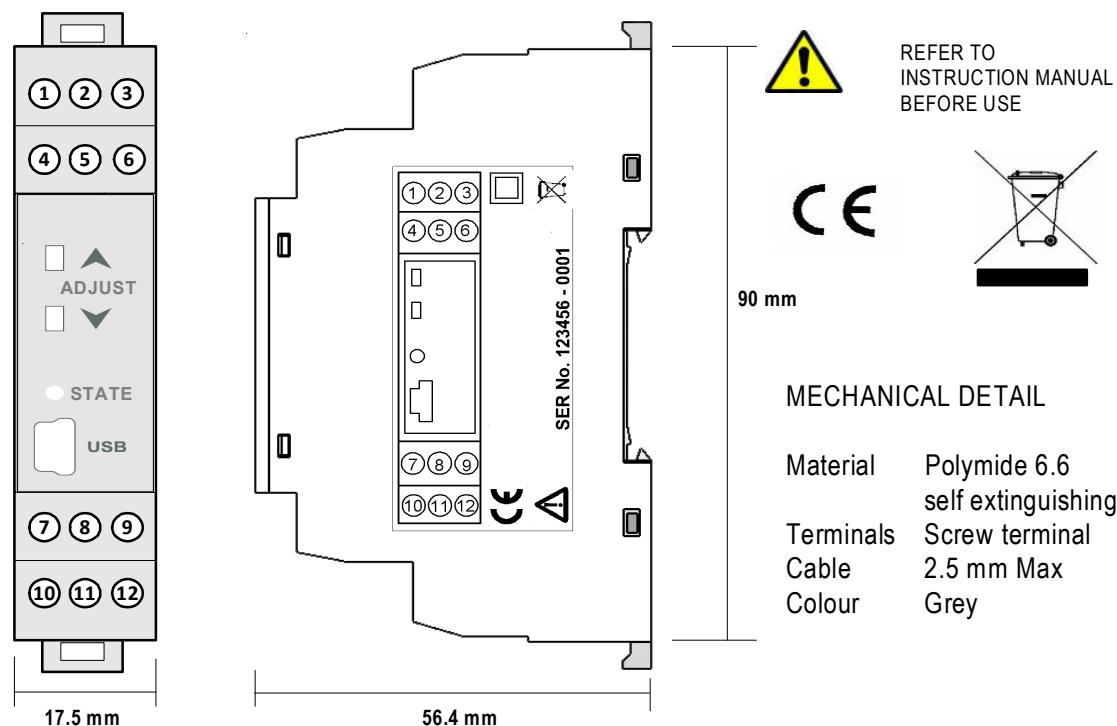| ENVIRONMENTAL	
Function	**Description**
Ambient temperature	Operating (-30 to 70) °C Storage (-40 to 85) °C
Ambient Humidity	Operating/Storage (10 to 90) %RH non-condensing
Protection requirement	Device must be installed in an enclosure offering >IP65 Protection
USB configuration ambient	(10 to 30) °C

MECHANICAL	
Function	**Description**
Dimensions	17.5 mm width, 56.4 mm depth from rail, 90 mm height
Enclosure	DIN rail mount
Material	Polymide 6.6 self-extinguishing: Grey
Connections	Screw terminals 2.5 mm wire maximum
Weight	60 g approximate

APPROVALS	
EMC	BS EN 61326: Note - Sensor input wires to be less than 30 m to comply
Ingress protection	BS EN 60529
RoHS	Directive 2011/65/EU

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Mechanical

REFER TO
INSTRUCTION MANUAL
BEFORE USE

90 mm

17.5 mm   56.4 mm

MECHANICAL DETAIL

Material	Polymide 6.6 self extinguishing
Terminals	Screw terminal
Cable	2.5 mm Max
Colour	Grey

ORDER CODE	KOS1605P

ACCESSORIES	
USB configuration software	USBSpeedLink free of charge from www.ditel.es
Probe options	Refer to www.ditel.es

To maintain full accuracy annual calibration is required contact support@ditel.es for details

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