

Pt100 or Thermocouple Input DIN Rail Converter

KOS1603

- **CONFIGURATION USING USB PORT POWERED**
- **Pt100 or THERMOCOUPLE / mV**
- **ISOLATED INPUT**
- **INPUT LINEAR TO TEMPERATURE**
- **(4 to 20) mA TWO WIRE OUTPUT**
- **3 YEARS WARRANTY**

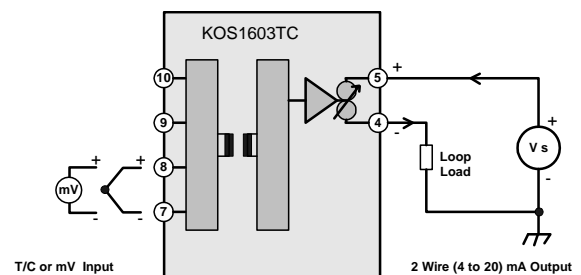
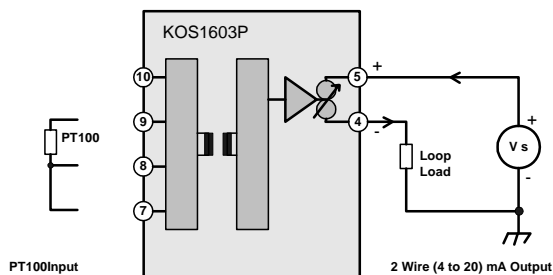


INTRODUCTION

The KOS1603 series is a cost effective DIN rail mounted temperature converter from DITEL. The range consists of two versions, the KOS1603P accepts Pt100 inputs, and the KOS1603TC accepts seven common thermocouple types plus mV input.

Designed for ease of use, this range is configured with our KOS USB port powered configuration module. The module interfaces a PC USB port to the KOS1603, using the (4 to 20) mA loop to communicate. Using our free configuration software, you will be able to read the current configuration data, and then perform any changes you wish to make to the configuration. To further help save time, the KOS1603 and configuration module do not need to be wired to a power supply during the configuration process, both are powered by the USB interface on your PC. The following parameters are configurable:

MODEL	INPUT TYPE	LOW RANGE	HIGH RANGE	UNITS	BURNOUT
KOS1603P	Pt100	Input @ 4 mA	Input @ 20 mA	°F, °C	Up/Scale Down/Scale
KOS1603TC	K, J, E, N, T, R, S, mV				



Pt100 or Thermocouple Input DIN Rail Converter

SPECIFICATION

INPUTS

INPUT	RANGE	ACCURACY (Note 1)	STABILITY	O/C	CJ (Note 3)	Sensor excitation (Note 4)	IMPEDANCE
K	(-200 to 1370) °C	0.1 % of FSR ±0.5 °C (Type T 0.2 % FSR. ± 0.5 °C)	± 0.01 % of FSR	Yes	Yes	-	1 MΩ (Note 5)
J	(-100 to 1200) °C						
E	(-100 to 1000) °C						
N	(-180 to 1300) °C						
T	(-100 to 400) °C						
R	(-10 to 1760) °C	± 0.5 °C ±0.1 % of FSR (Note 2)	± 0.005 % of FSR		-	<450 uA	-
S	(-10 to 1760) °C	± 0.5 °C ±0.1 % of FSR (Note 2)					
mV	(-40 to 75) mV	± 0.04 mV					
P	(-200 to 850) °C	± 0.1 °C / ±0.05 % of rdg					

Key Rdg = Reading; FSR = Full Scale Range; O/C = programmable open circuit sensor detect; CJ = Cold junction error

Notes

1. Accuracy for Pt100 and T/C do not include sensor and cold junction errors.
2. Only over the range (800 to 1600) °C
3. Cold junction range (-20 to 70) °C, Accuracy ± 0.5 °C , Tracking ± 0.05 °C
4. PT100 input Maximum lead resistance 20 R, Lead effect 0.015 °C / Ω.
5. Impedance – not including 0.2 uA open circuit detect bias current effect.

OUTPUT

Type

Two wire current sink; signal range (4 to 20) mA; full range (3.8 to 24) mA

Supply

(11 to 30) V dc, 24 V nominal giving Max loop load of 600 R @ 24 V

Response time

< 500 ms to reach 95% of final value; Start up time < 3 s

Calibration Accuracy

± 5 uA

Loop Effects

Loop ripple 0.03 % of FSR; Supply sensitivity 0.05 uA / °C; supply ripple rejection < ± 5 uA error @ 1 V rms 50 Hz ripple

Protection

Reverse connection and over-voltage protection. Max over voltage current 100 mA.

GENERAL

Isolation

Input to output tested at 500 V dc.

Ambient

operating (-20 to 70) °C (10 to 95) % RH non condensing. Storage (-40 to 85) °C

Approvals

CE tested to EN 61326

MECHANICAL

Material

Polmide 6.6

Self extinguishing

Terminals

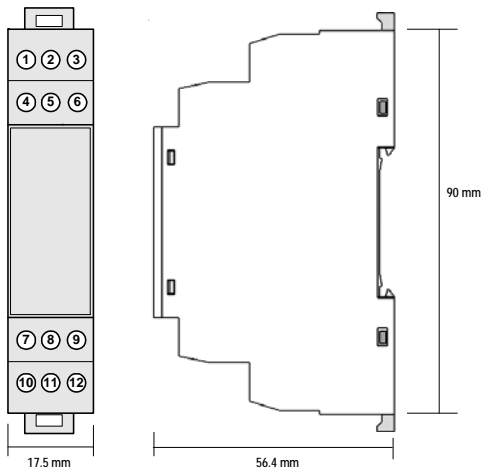
Screw terminal

Cable

2.5 mm Max.

Colour

Grey



CODE: KOS1603 /

VERSIONS

Pt100 INPUT

Enter P

THERMOCOUPLE

Enter TC

ASSOCIATED PRODUCTS CODE

KOS USB MODULE USB

USB LINK (Software) Available free on www.ditel.es

KOS1610 UNIVERSAL DIN RAIL TRANSMITTER mA OUTPUT

KOS1620 UNIVERSAL DIN RAIL TRANSMITTER VOLTAGE OUTPUT

KOS1630 UNIVERSAL DIN RAIL TRIP AMPLIFIER

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