

Electrical specifications:
Specifications range: -20°C to +60°C
Common specifications:
Supply voltage, universal 21.6...253 VAC, 50...60 Hz
or 19.2...300 VDC
Max. consumption ≤ 2.5 W
Fuse 400 mA SB / 250 VAC
Isolation voltage, test / operation 2.3 kVAC / 250 VAC
Communications interface Programming front 4501
Signal / noise ratio Min. 60 dB (0...100 kHz)
Response time (0...90%, 100...10%):
Temperature input ≤ 1 s
mA / V input ≤ 400 ms
Calibration temperature 20...28°C
Accuracy, the greater of the general and basic values:

General values		
Input type	Absolute accuracy	Temperature coefficient
All	≤ ±0.1% of span	≤ ±0.01% of span / °C

Basic values		
Input type	Basic accuracy	Temperature coefficient
mA	≤ ±4 µA	≤ ±0.4 µA/°C
Volt	≤ ±20 µV	≤ ±2 µV/°C
RTD	≤ ±0.2°C	≤ ±0.01°C/°C
Lin. R	≤ ±0.1 Ω	≤ ±0.01 Ω/°C
Potentiometer	≤ ±0.1 Ω	≤ ±0.01 Ω/°C
TC type: E, J, K, L, N, T, W3, W5, LR	≤ ±1°C	≤ ±0.05°C/°C
TC type: B, R, S, W3, W5, LR	≤ ±2°C	≤ ±0.2°C/°C

EMC immunity influence < ±0.5% of span
Extended EMC immunity:
NAMUR NE 21, A criterion, burst < ±1% of span

Auxiliary supplies:
2-wire supply (terminal 44...43) 25...16 VDC / 0...20 mA
Max. wire size 1x2.5 mm² stranded wire
Screw terminal torque 0.5 Nm
Relative humidity < 95% RH (non-cond.)
Dimen., without display front (HxBxD): 109 x 23.5 x 104 mm
Dimensions, w. display front (HxBxD): 109 x 23.5 x 116 mm
Tightness (enclosure / terminals) IP50 / IP20
Weight 170 g / 185 g with 4501
RTD, linear resistance and potentiometer input:

Input type	Min. value	Max. value	Norm
Pt100	-200°C	+850°C	IEC 60751
Ni100	-60°C	+250°C	DIN 43760
Lin. R	0 Ω	10000 Ω	-
Potentiometer	10 Ω	100 kΩ	-

Cable resistance p. wire (max.), RTD 50 Ω
Sensor current, RTD Norm. 0.2 mA

All specifications are at room temperature unless otherwise specified.
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Effect of sensor cable resistance (3- / 4-wire), RTD < 0.002 Ω / Ω
Sensor error detection, RTD Yes
Short circuit detection, RTD < 15 Ω

TC input:

Type	Min. value	Max. value	Norm
B	+400°C	+1820°C	IEC 60584-1
E	-100°C	+1000°C	IEC 60584-1
J	-100°C	+1200°C	IEC 60584-1
K	-180°C	+1372°C	IEC 60584-1
L	-200°C	+900°C	DIN 43710
N	-180°C	+1300°C	IEC 60584-1
R	-50°C	+1760°C	IEC 60584-1
S	-50°C	+1760°C	IEC 60584-1
T	-200°C	+400°C	IEC 60584-1
U	-200°C	+600°C	DIN 43710
W3	0°C	+2300°C	ASTM E968-90
W5	0°C	+2300°C	ASTM E968-90
LR	-200°C	+800°C	GOST 30444-84

Cold junction compensation (CJC):
via internally mounted sensor < ±1.0 °C
Sensor error detection, all TC types Yes
Sensor error current:
when detecting Norm. 2 µA
else 0 µA

Current input:

Measurement range -1...25 mA
Programmable measurement ranges 0...20 and 4...20 mA
Input resistance Norm. 20 Ω + PTC 50 Ω

Voltage input:

Measurement ranges -20 mV...12 VDC
Programmable measurement ranges 0/0.2...1; 0/1...5; 0/2...10 V
Input resistance Norm. 10 MΩ

Current output:

Signal range (span) 0...20 mA
Programmable signal ranges 0/4...20 and 20...4/0 mA
Load (max.) 20 mA / 800 Ω / 16 VDC
Load stability ≤ 0.01% of span / 100 Ω
Sensor error detection 0 / 3.5 / 23 mA / none
NAMUR NE 43 Upscale / Downscale 23 mA / 3-5 mA
Current limit ≤ 28 mA

Voltage output:

Signal range 0...10 VDC
Programmable signal ranges 0/0.2...1; 0/1...5; 0/2...10;
1...0.2/0; 5...1/0; 10...2/0 V
Load (min.) 500 kΩ

Relay outputs:

Relay functions Setpoint, Window, Sensor error, Power and Off
Hysteresis, in % / display counts 0.1...25% / 1...2999
On and Off delay 0...3600 s
Max. voltage 250 VRMS
Max. current 2 A / AC or 1 A / DC
Max. AC power 500 VA
Sensor error detection Break / Make / Hold

Observed authority requirements:

Standard:
EMC 2004/108/EC;
Emission and immunity EN 61326
LVD 73/23/EEC EN 61010-1
UL, Standard for Safety UL 508

OPTIONAL VERSIONS

Optional versions have identical specifications and accessories as listed for the standard model except where noted below. More than one option may be used.
N/A

NOTES:



See PCB Declaration of Conformance PS057 for details.