

PI-EX-RTD-I

Order No.: 2835066



<http://eshop.phoenixcontact.de/phoenix/treeViewClick.do?UID=2835066>

Ex-i resistance thermometer input: Converts signals of Pt 100 resistance thermometers installed in the Ex zone and transfers a 4 mA ... 20 mA signal to a load in the safe zone. Freely programmable. Galvanic 3-way isolation.



Commercial data

Note	Made-to-order
sales group	H710
Pack	1 pcs.
Customs tariff	85437090
Catalog page information	Page 383 (IF-2007)

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Technical data	
Input data	
Input	Intrinsically safe
Configurable/programmable	Freely programmable, configured
Sensor types (RTD) that can be used	2 or 3-conductor Pt 100 sensors as well as resistance-type sensors
Connection method	2, 3-wire
Input signal range	0 Ω ... 400 Ω (Minimum measuring range 10 Ω)
Input accuracy	± 80 mΩ

Output data

Signal output	Current output
Current output signal	4 mA ... 20 mA
Load/output load current output	$\leq 600 \Omega$
Behavior in the event of a sensor error	upscale, downscale or off, LED flashes
Measuring accuracy	$\pm 11 \mu\text{A}$

Power supply

Supply voltage range	20 V DC ... 35 V DC
Max. current consumption	64 mA (24 V DC/ 20 mA)
Power consumption	1.5 W (24 V DC/ 20 mA)

Connection data

Conductor cross section solid min.	0.2 mm ²
Conductor cross section solid max.	2.5 mm ²
Conductor cross section stranded min.	0.2 mm ²
Conductor cross section stranded max.	2.5 mm ²
Conductor cross section AWG/kcmil min.	24
Conductor cross section AWG/kcmil max	14
Tightening torque, min	0.5 Nm
Tightening torque max	0.6 Nm

General data

No. of channels	1
Maximum transmission error	< 0.1 % (of end value 20 mA, at 0 Ω ... 400 Ω input range, 20°C)
Ambient temperature (operation)	-20 °C ... 55 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Status display	Green LED, for power supply, flashes in the case of sensor defect
Width	12.4 mm
Height	145 mm
Depth	147 mm
Inflammability class acc. to UL 94	V0
Housing material	PBT and polyamide PA non-reinforced
Degree of protection	IP20
Color	green
Electrical isolation input / output	250 V
Electrical isolation input / supply	250 V

Electrical isolation output / supply	1.5 kV (50 Hz, 1 min., test voltage)
Conformance	CE-compliant
ATEX	Ex II (1) GD [EEx ia] IIC
UL, USA / Canada	cULus

Safety data

Max. voltage U_o	6.6 V
Max. current I_o	27 mA
Max. power P_o	50 mW
Gas group	II B
Max. external inductivity L_o	178.4 mH
Max. external capacity C_o	500 μ F
Gas group	II C
Max. external inductivity L_o	48.7 mH
Max. external capacity C_o	22 μ F
Safety-related maximum voltage U_m	250 V AC

Certificates / Approvals

Certification

GOST

Configuration options

Connection systems	2-conductor [2] 3-conductor [3]
Unit of measurement	Celsius [C] Fahrenheit [F] Ohm [O]
Filter frequency	50 Hz [50] 60 Hz [60]
Alarm signal transmitter error	High [H] Low [L] Off [O]

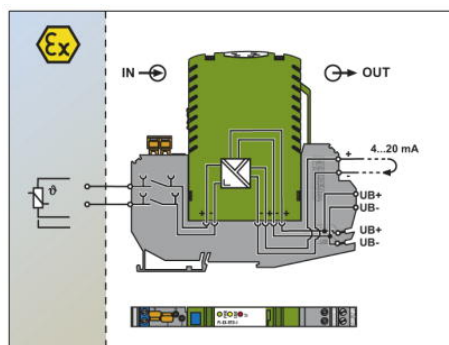
Alarm signal sensor break	High [H] Low [L] Off [O] 0 mA [I000] 3,5 mA [I035] 21,5 mA [I215]
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Additional products

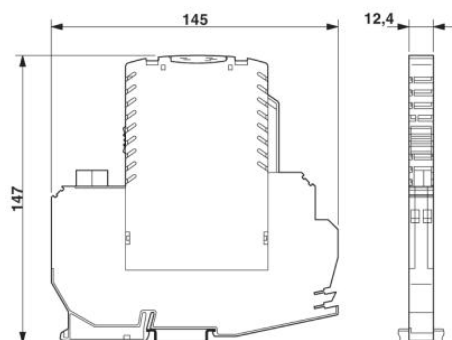
Item	Designation	Description
General		
2835325	PI-EX-ES-1/3	Ex basic terminal block, with three terminal points to the field level (Ex area)
2835901	PI-EX-TB	Ex base terminal block for intrinsically safe signals with knife disconnection and test connections
2858386	TT-PI-EX-TB	Intrinsically safe basic terminal block with isolating connector, test connections and surge protection, for mounting on NS 35/7.5

Diagrams/Drawings

Block diagram



Dimensioned drawing



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