

Signal isolator - PI-EX-NAM/TO-P - 2865117

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Ex i binary input: NAMUR isolation amplifiers. For operating proximity sensors and switches in Ex areas. The signals are transmitted to a safe area. Transistor output (passive), line fault detection. Galvanic 3-way isolation.



Key Commercial Data

Packing unit	1 pc
GTIN	 4 017918 961541
GTIN	4017918961541

Technical data

Note

Utilization restriction	EMC: class A product, see manufacturer's declaration in the download area
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Dimensions

Width	12.4 mm
Height	145 mm
Depth	147 mm

Ambient conditions

Ambient temperature (operation)	max. -20 °C ... 60 °C (see data sheet)
Ambient temperature (storage/transport)	-40 °C ... 85 °C

Input data

Non-load voltage	8.2 V DC $\pm 10\%$
Switching points (attenuated)	< 1.2 mA (blocking)
Switching points (unattenuated)	> 2.1 mA (conductive)
Signal input	Intrinsically safe
Available input sources	NAMUR proximity sensors (EN 60947-5-6)

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Output data

Switching output	Transistor output, passive, npn
Configurable/programmable	Can be inverted via slide switch
Switching current	100 mA (short-circuit resistant)
Switching frequency	max. 2 kHz (DC)

Power supply

Supply voltage range	20 V DC ... 30 V DC
Max. current consumption	25 mA
Power consumption	max. 0.6 W (24 V)

Connection data

Connection method	Screw connection
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General

Status display	Green LED (supply voltage)
	Yellow LED (status display)
	Red LED (line errors)
Flammability rating according to UL 94	V0
Standards/regulations	NAMUR recommendation NE 21
Housing material	PBT and polyamide PA non-reinforced
Color	green
Designation	Input/output
Electrical isolation	375 V (Peak value as per EN 50020 / EN 60079-11)
Designation	Input/power supply
Electrical isolation	375 V (Peak value as per EN 50020 / EN 60079-11)
Designation	Output/supply
Electrical isolation	1.5 kV (50 Hz, 1 min., test voltage)
Conformance	CE-compliant
ATEX	# II (1) GD [Ex ia] IIC
	# II 3 G Ex nA II T4 X
UL, USA/Canada	UL applied for
Functional Safety (SIL)	SIL 2
SIL	2

Safety characteristic data

Integrity requirement	IEC 61508 - Low demand
Equipment type	Type A
Safety Integrity Level (SIL)	2
Safe Failure Fraction (SFF)	84 %
λ_{SU}	1.83×10^{-7} (183 FIT)
λ_{SD}	6×10^{-9} (6 FIT)
λ_{DU}	3.7×10^{-8} (37 FIT)

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Safety characteristic data

λ_{DD}	8×10^{-9} (8 FIT)
Probability of a hazardous failure on demand (PFD _{AVG})	1.62×10^{-4} (1 year)
	8.08×10^{-4} (5 years)
	1.62×10^{-3} (10 years)
Diagnostic coverage (DC)	DC _S = 3%, DC _D = 17%

Safety data

Max. output voltage U _o	10.6 V
Max. output current I _o	33 mA
Max. output power P _o	86 mW
Group	IIA
Max. external inductivity L _o	230 mH
Max. external capacity C _o	72 µF
Group	IIB
Max. external inductivity L _o	110 mH
Max. external capacity C _o	16.2 µF
Group	IIC
Max. external inductivity L _o	30 mH
Max. external capacity C _o	2.3 µF
Safety-related maximum voltage U _m	250 V AC

Standards and Regulations

Standards/regulations	NAMUR recommendation NE 21
Flammability rating according to UL 94	V0
Conformance	CE-compliant
ATEX	# II (1) GD [EEx ia] IIC
	# II 3 G Ex nA II T4 X
UL, USA/Canada	UL applied for
Group	IIA
	IIB
	IIC

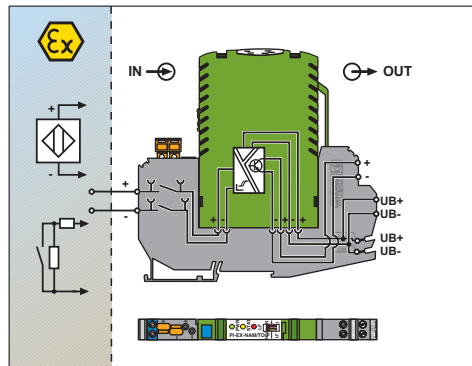
Environmental Product Compliance

China RoHS	Environmentally Friendly Use Period = 50
	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"

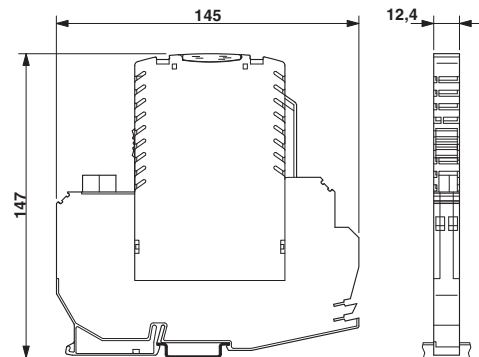
Drawings

Signal isolator - PI-EX-NAM/TO-P - 2865117

Block diagram



Dimensional drawing



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