

# 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
Weight per Piece (excluding packing)	99.4 g
Custom tariff number	85437090
Country of origin	Germany
Note	Made to Order (non-returnable)

## 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
Degree of protection	IP20

### Input data

Non-load voltage	8.2 V DC ±10 %
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## Technical data

### Input data

Switching points (attenuated)	< 1.2 mA (blocking)
Switching points (unattenuated)	> 2.1 mA (conductive)

### Output data

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

### 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)
Inflammability class 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 [EEx ia] IIC
	# II 3 G Ex nA II T4 X
UL, USA / Canada	UL applied for
Functional Safety (SIL)	SIL 2

### Safety characteristic data

Integrity requirement	IEC 61508 - Low demand
Equipment type	Type A
Safety Integrity Level (SIL)	Up to 2
Safe Failure Fraction (SFF)	84 %
$\lambda_{SU}$	$1.83 \times 10^{-7}$ (183 FIT)
$\lambda_{SD}$	$6 \times 10^{-9}$ (6 FIT)

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## Technical data

### Safety characteristic data

$\lambda_{DU}$	$3.7 \times 10^{-8}$ (37 FIT)
$\lambda_{DD}$	$8 \times 10^{-9}$ (8 FIT)
Probability of a hazardous failure on demand (PFD <sub>AVG</sub> )	$1.62 \times 10^{-4}$ (1 year)
	$8.08 \times 10^{-4}$ (5 years)
	$1.62 \times 10^{-3}$ (10 years)
Diagnostic coverage (DC)	DC <sub>S</sub> = 3%, DC <sub>D</sub> = 17%

### Safety data

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

## Classifications

### eCl@ss

eCl@ss 4.0	27210121
eCl@ss 4.1	27210121
eCl@ss 5.0	27210121
eCl@ss 5.1	27210121
eCl@ss 6.0	27210121
eCl@ss 7.0	27210121
eCl@ss 8.0	27210121

### ETIM

ETIM 2.0	EC001430
ETIM 3.0	EC001599
ETIM 4.0	EC001599
ETIM 5.0	EC001599

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## Classifications

### UNSPSC

UNSPSC 6.01	30211506
UNSPSC 7.0901	39121008
UNSPSC 11	39121008
UNSPSC 12.01	39121008
UNSPSC 13.2	39121008

## Accessories

### Additional products

Basic terminal block - PI-EX-TB - 2835901



Ex base terminal block for intrinsically safe signals with knife disconnection and test connections

Surge protection device - TT-PI-EX-TB - 2858386



Intrinsically safe basic terminal block with isolating connector, test connections and surge protection, for mounting on NS 35/7.5

Basic terminal block - PI-EX-ES-1/3 - 2835325

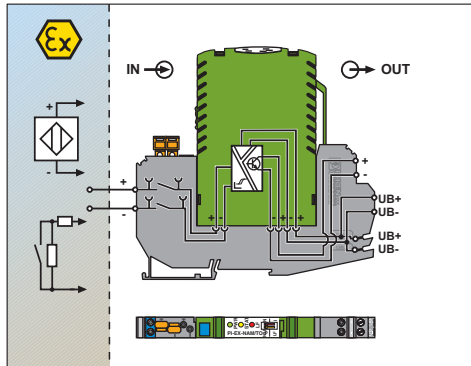


Ex basic terminal block, with three terminal points to the field level (Ex area)

## Drawings

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Block diagram



Dimensional drawing

