

PI-EX-NAM/TO-P

Order No.: 2865117



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.



SIL 2

Commercial data	
EAN	4017918961541
Pack	1
Customs tariff	85438997
Weight/Piece	99.40 g
Country of Origin	DE
Catalog page information	Page 460 (IF-2009)

Product notes

WEEE/RoHS-compliant since:
01/04/2009



Please note that the data given here has been taken from the online catalog. For comprehensive information and data, please refer to the user documentation at <http://www.download.phoenixcontact.com>. The General Terms and Conditions of Use apply to Internet downloads.

Technical data

Measuring input	
Non-load voltage	8.2 V DC $\pm 10\%$
Switching points (attenuated)	< 1.2 mA (blocking)
Switching points (unattenuated)	> 2.1 mA (conductive)

Measurement output

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

General data

Ambient temperature (operation)	max. -20 °C ... 60 °C (See data sheet)
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Status display	Green LED (supply voltage) Yellow LED (status display) Red LED (line errors)
Width	12.4 mm
Height	145 mm
Depth	147 mm
Inflammability class acc. to UL 94	V0
Standards/regulations	NAMUR recommendation NE 21
Housing material	PBT and polyamide PA non-reinforced
Color	green
Conformance	CE-compliant
ATEX	Ex II (1) GD [EEx ia] IIC Ex II 3 G Ex nA II T4 X
UL, USA / Canada	UL applied for
Functional safety (SIL)	SIL 2 according to EN 61508

Safety characteristic data

Integrity requirement	for IEC 61508 - Low demand
Equipment type	Type A
Safety integrity level (SIL)	Up to 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)

λ_{DD}	8×10^{-9} (8 FIT)
Probability of a hazardous failure on demand (PFD _{AVG})	$1,62 \times 10^{-4}$ (1Jahr)
	$8,08 \times 10^{-4}$ (5 Jahre)
	$1,62 \times 10^{-3}$ (10 Jahre)
Diagnostic coverage (DC)	(DC _S = 3%, DC _D = 17%)

Safety data

Max. voltage U _o	10.6 V
Max. current I _o	33 mA
Max. power P _o	86 mW
Gas group	II A
Max. external inductivity L _o	230 mH
Max. external capacity C _o	72 µF
Gas group	II B
Max. external inductivity L _o	110 mH
Max. external capacity C _o	16.2 µF
Gas group	II C
Max. external inductivity L _o	30 mH
Max. external capacity C _o	2.3 µF

Certificates

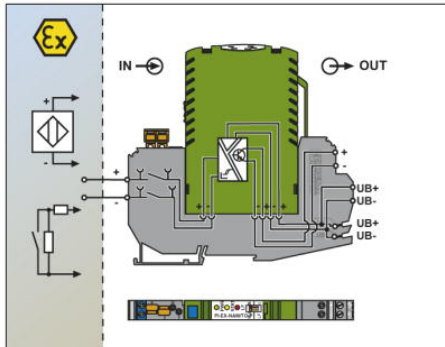
Certification Ex: KEMA-EX, PxC-EX

Additional products

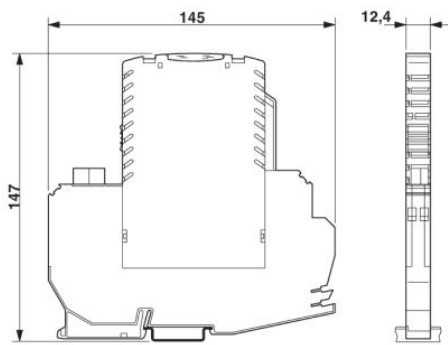
Item	Designation	Description
General		
2835325	PI-EX-ES-1/3	Ex basic terminal block, with three terminal points to the field level (Ex area)
2835901	PI-EX-TB	Ex base terminal block for intrinsically safe signals with knife disconnection and test connections
2858386	TT-PI-EX-TB	Intrinsically safe basic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

Drawings

Block diagram



Dimensioned drawing



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