

PI-EX-NAM/TO-P


Order No.: 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.



Commercial data	
GTIN (EAN)	 4 017918 961541
Note	Made-to-order
sales group	H703
Pack	1 pcs.
Customs tariff	85437090
Catalog page information	Page 460 (IF-2009)

Product notes

WEEE/RoHS-compliant since:
11/15/2006



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Technical data

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)

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)

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
Degree of protection	IP20
Color	green
Electrical isolation input / output	375 V (Peak value as per EN 50020 / EN 60079-11)
Electrical isolation input / supply	375 V (Peak value as per EN 50020 / EN 60079-11)
Electrical isolation output / supply	1.5 kV (50 Hz, 1 min., test voltage)
Conformance	CE-compliant
ATEX	Ex II (1) GD [Ex 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})	1.62×10^{-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. 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
Safety-related maximum voltage U _m	250 V AC

Certificates / Approvals

Certification Ex: KEMA-EX, PxC-EX

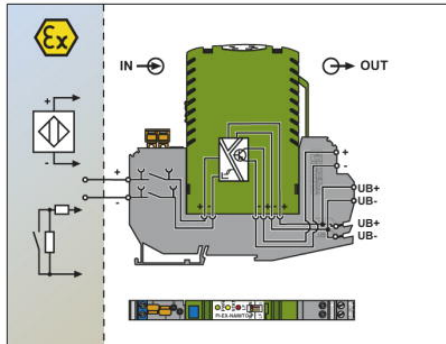
Additional products

Item	Designation	Description
General		
2835325	PI-EX-ES-1/3	Ex basic terminal block, with three terminal points to the field level (Ex area)

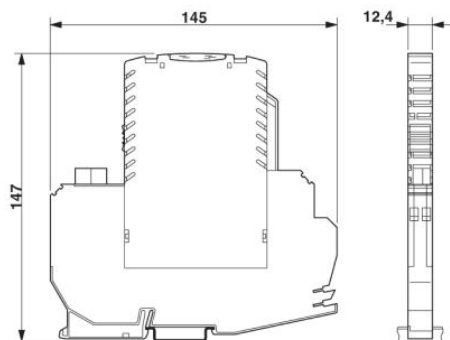
2835901	PI-EX-TB	Ex base terminal block for intrinsically safe signals with knife disconnection and test connections
2858386	TT-PI-EX-TB	Intrinsically safe basic terminal block with isolating connector, test connections and surge protection, for mounting on NS 35/7.5

Diagrams/Drawings

Block diagram



Dimensioned drawing



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