

Isolators

Electronic relay For Zone 1

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9174/12-15-01 Art. No. 282457



- Requires little space – width of 12 mm
- Durable module thanks to maintenance-free electronic switching: Ideal for frequent switching operations
- Enables use in Zone 1

MY R. STAHL 9174A



The Series 9174 compact electronic relay module allows Ex e loads to be switched by an intrinsically safe control system. This complements intrinsically safe binary outputs, e.g. in a remote I/O system. The electronic switch prevents mechanical wear, extending the life of the relay, particularly where frequent switching operations are concerned.

Technical Data

Explosion Protection

Application range (zones)	1 2
Ex interface zone	0 1 2 20 21 22
IECEX gas certificate	IECEX TUR 20.0035X
IECEX gas explosion protection	Ex eb mb [ja Ga] IIC T4 Gb
IECEX dust certificate	IECEX TUR 20.0035X
IECEX dust explosion protection	[Ex ia Da] IIIC
ATEX gas certificate	TÜV 20 ATEX 8551 X
ATEX gas explosion protection	II 2 (1) G Ex eb mb [ja Ga] IIC T4 Gb
ATEX dust certificate	TÜV 20 ATEX 8551 X
ATEX dust explosion protection	II (1) D [Ex ia Da] IIIC
Certificates	ATEX (TUR), IECEX (TUR), Korea (KTL)
Declaration of Conformity	ATEX (EUK)
Further information	For other Ex markings, see the operating instructions.

Safety Data

Input electrical circuit	X1.4 (+) X1.3 (-)
Max. voltage U_i (input)	32 V
Max. current I_i (input)	Internally limited
Max. power P_i (input)	Internally limited
Internal capacitance C_i (input)	0 nF
Internal inductance L_i (input)	0 mH
Max. safety voltage U_m (input)	60 V DC

Safety Data

Output electrical circuit	X2.5 (+) X2.6 (-)
Max. safety voltage U_m (output)	253 V AC

Electrical Data

Number of channels	1
Notes	Switching between Ex i and non-Ex i (Ex e) operation of the input is permitted without restrictions.

Auxiliary Power

Auxiliary power	without
Max. power dissipation	1 W per A switching current
Polarity reversal protection	Yes

Galvanic Isolation

Test voltage as per standard	IEC EN 60079-11
Ex i input to output	1800 V AC

Input

Nominal voltage input U_n X1	24 V DC
Voltage range input X1	18 to 32 V DC
Nominal current input I_n X1	8 mA \pm 2 mA
Input	Ex i or non-Ex i (Ex e)
Input voltage for ON	> 17.5 V
Input current for ON	> 8.5 mA
Input voltage for OFF	< 16 V
Input current for OFF	< 1 mA

Output

Output	non-Ex i (Ex e) AC
Output voltage range X2	20 to 253 V AC
Max. output current	5 A
Note output current	Output current depends on mounting and ambient temperature
Switching delay	\leq 10 ms @ 50 Hz \leq 8,3 ms @ 60 Hz
Resistive load switching frequency	< 50 Hz
Switching cycle resistive load	Unlimited
Switching state indication	Yellow "OUT" LED
Note	The output is switched in the alternating voltage zero crossing.

Ambient Conditions

Ambient temperature	-40 °C ... +75 °C
Ambient temperature	-40 °F ... +167 °F
Storage temperature	-40 °C ... +80 °C
Storage temperature	-40 °F ... +176 °F
Maximum relative humidity	95%
Use at the height of	< 2000 m
Electromagnetic compatibility	Tested to the following standards and regulations: EN 61326-1 For use in industrial areas: NAMUR NE 21
Note	Temperature reduction depending on switching current and mounting

Mechanical Data

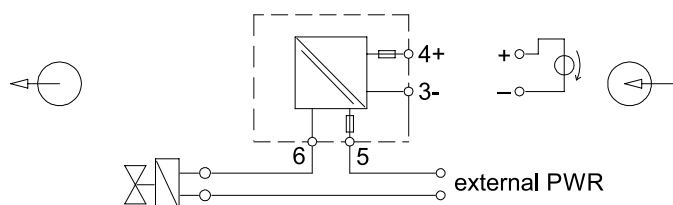
Degree of protection (IP)	IP40
Degree of protection (IP) (IEC 60529)	IP20
Fire resistance (UL 94)	V2
Pollutant class	Corresponds to G3
Enclosure material	Polyamide 6GF
Grid dimension	12 mm
Width	12.5 mm
Width, inches	0.49 in
Height	79 mm
Height, inches	3.11 in
Length	101.5 mm
Length, inches	4 in
Weight	110 g
Weight	0.24 lb

Mounting / Installation

Mounting type	DIN rail NS35/15, NS35/7.5
Mounting orientation	any
Connection type	Screw terminal, push-in terminal
Min. rigid conductor cross section	0.2 mm ²
Max. rigid conductor cross section	4 mm ²
Min. flex conductor cross section	0.2 mm ²
Max. flex conductor cross section	4 mm ²
Connection cross-section AWG	24 – 12
Connection type X1	Screw terminal
Connection type X2	Push-in spring connection

Technical Drawings – Subject to Alterations

non-I.S. Hazardous area I.S. / non-I.S.



Connection diagram 9174/12

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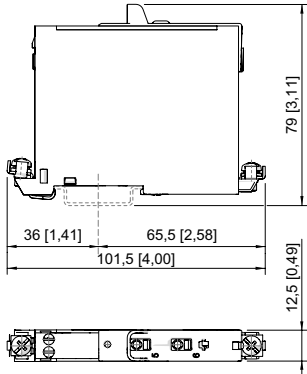
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Dimensional Drawings (All Dimensions in mm [inches]) – Subject to Alterations



We reserve the right to make alterations to the technical data, dimensions, weights, designs and products available without notice. The illustrations cannot be considered binding.