

Solenoid driver - PI-EX-SD-21-60 - 2865188

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Ex i solenoid driver, pluggable. To control intrinsically safe solenoid valves, alarm modules as well as simple electric equipment installed in Ex areas. For Group IIB gases, loop-powered. Electrical isolation.



Key Commercial Data

Packing unit	1 pc
GTIN	 4 046356 134828
GTIN	4046356134828

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)	-20 °C ... 55 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Permissible humidity (operation)	10 % ... 95 % (relative humidity, non-condensing)

Output data

Output characteristic curve: Output resistor	136 Ω (Internal resistance R _i)
Response time	< 30 ms

Compatible valves

Note	This is an extract of possible combinations of valves and solenoid drivers.
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Compatible valves

Compatible valve	ASCO Coil 302 (12 V)
	ASCO Coil 302 (24 V)
	FESTO Coil MFH-...IA-SA-EX GBXE022AIAD03
	FESTO Coil (J)MFH-...BIA-SA-EX GBXE022AIAD03
	Norgren Herion Coil 2050
	Norgren Herion Coil 2051
	Norgren Herion Coil 2052
	Norgren Herion Coil 2053
	Parker Coil VZ95 482160.01 EEx ia IIB T6

Power supply

Max. current consumption	< 110 mA (at 24 V)
Power dissipation	max. 1.5 W (at 24 V)

General

Maximum temperature coefficient	0.01 %/K
Status display	Yellow LED (status display)
	Red LED (line errors)
Flammability rating according to UL 94	V0
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)
	2.5 kV (50 Hz, 1 min., test voltage)
Conformance	CE-compliant
ATEX	# II (1) GD [Ex ia] IIB / IIA
	# II 3 G Ex nA II T4 X
Functional Safety (SIL)	SIL 3
SIL	3

Safety characteristic data

Integrity requirement	IEC 61508 - Low demand
Equipment type	Type A
Safety Integrity Level (SIL)	3
Safe Failure Fraction (SFF)	100 %
λ_{SU}	2.84×10^{-7} (284 FIT)
λ_{SD}	0
λ_{DU}	0
λ_{DD}	0
Probability of a hazardous failure on demand (PFD _{AVG})	0 (1 year)
	0 (5 years)
	0 (10 years)

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Safety characteristic data

Diagnostic coverage (DC)	DC _S =0 %, DC _D =0 %
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Safety data

Max. output voltage U _o	25.1 V
Max. output current I _o	188 mA
Max. output power P _o	1180 mW
Group	IIA
Max. external inductivity L _o	5.2 mH
Max. external capacity C _o	0.51 µF
Group	IIB
Max. external inductivity L _o	2.7 mH
Max. external capacity C _o	0.28 µF
Safety-related maximum voltage U _m	250 V AC (125 V DC)

Standards and Regulations

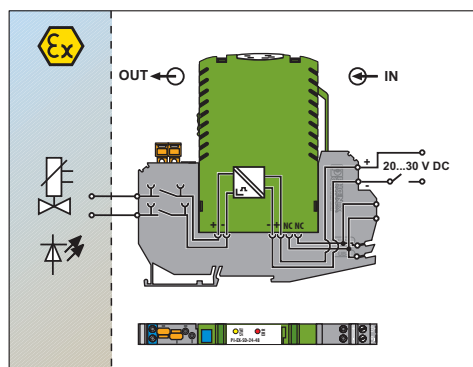
Flammability rating according to UL 94	V0
Conformance	CE-compliant
ATEX	# II (1) GD [Ex ia] IIB / IIA
	# II 3 G Ex nA II T4 X
Group	IIA
	IIB

Environmental Product Compliance

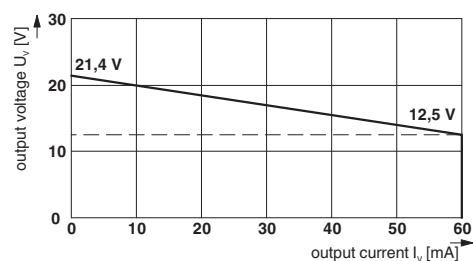
China RoHS	Environmentally Friendly Use Period = 50
	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"

Drawings

Block diagram

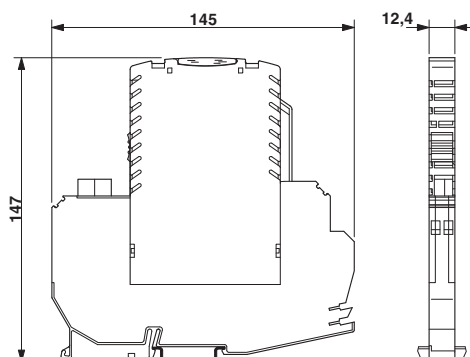


Diagram



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Dimensional drawing



Approvals

Approvals

Approvals

Functional Safety

Ex Approvals

Approval details

Functional Safety	06/06-05 R004 V2R0
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