

Solenoid driver - PI-EX-SD-24-48 - 2865298


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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 IIC gases, loop-powered. Electrical isolation.



Key Commercial Data

Packing unit	1 pc
GTIN	 4 046356 147101
GTIN	4046356147101

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	≤ 278 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 195
	ASCO Coil 302 (12 V)
	Bürkert Coil AC 10 standard
	Bürkert Coil AC 10 high resistance
	Bürkert Coil AC 21 standard 700 mW / 65°C
	Bürkert Coil AC 21 high resistance 700 mW / 65°C
	Bürkert Coil AC 21 standard 900 mW / 45°C
	Bürkert Coil AC 21 high resistance 900 mW / 45°C
	Bürkert Coil AC 21 standard 900 mW / 60°C
	Bürkert Coil AC 21 high resistance 900 mW / 60°C
	Bürkert Coil G1 642735 standard 800 mW / 40°C
	Bürkert Coil G1 642735 high resistance 800 mW / 40°C
	Bürkert Coil G1 642735 standard 1000 mW / 40°C
	Bürkert Coil G1 642735 high resistance 1000 mW / 40°C
	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
	Norgren Herion Coil 2080 / 2082
	Norgren Herion Coil 2081 / 2083
	Norgren Herion Coil 2084
	Norgren Herion Coil 3039
	Nass Coil 1259 30.1-00
	Nass Coil 1259 50.1-00
	Parker Coil VZ07 488650.01
	Parker Coil VZ33 494035.10
	Parker Coil VZ08 488660.01
	Parker Coil VZ09 488670.01
	Parker Coil VZ95 482160.01 EEx ia IIB T6
	Parker Coil VZ23 482870.01
	Samson Coil 3701-12 (12 V)
	Samson Coil 3701-13 (24 V)
	Samson Coil 3963-12 (12 V)
	Samson Coil 3963-13 (24 V)
	Samson Coil 3964-12 (12 V)
	Samson Coil 3964-13 (24 V)
	Seitz Pilot valve PV 12F73 Ci oH
	Seitz Pilot valve PV 12F73 Xi oH

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Compatible valves

	Seitz Pilot valve PV 12F73 Xi oH-2
	Seitz Solenoid coil 11 G 52

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] IIC / 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)
Diagnostic coverage (DC)	DC _S =0 %, DC _D =0 %

Safety data

Max. output voltage U _o	27.7 V
Max. output current I _o	101 mA
Max. output power P _o	697 mW
Group	IIA

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Safety data

Max. external inductivity L_o	20 mH
Max. external capacity C_o	0.44 μ F
Group	IIB
Max. external inductivity L_o	2 mH
Max. external capacity C_o	0.29 μ F
Group	IIC
Max. external inductivity L_o	0.5 mH
Max. external capacity C_o	0.067 μ F
Max. ratio L_o/R_o	51.1 μ H/ Ω
Additional text	Please follow the technical data regarding the connecting cables used.
Safety-related maximum voltage U_m	250 V AC (125 V DC)

Standards and Regulations

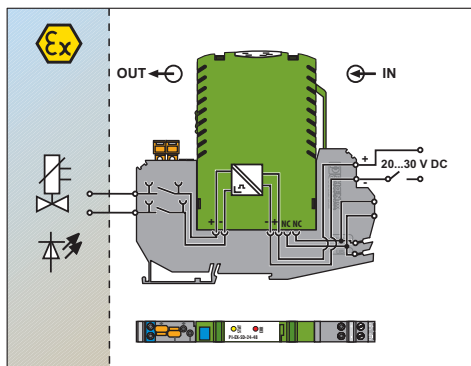
Flammability rating according to UL 94	V0
Conformance	CE-compliant
ATEX	# II (1) GD [Ex ia] IIC / IIB / IIA
	# II 3 G Ex nA II T4 X
Group	IIA
	IIB
	IIC

Environmental Product Compliance

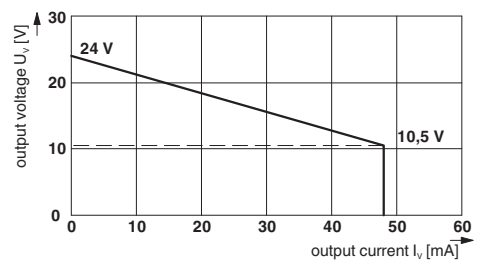
China RoHS	Environmentally Friendly Use Period = 50
	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"

Drawings

Block diagram

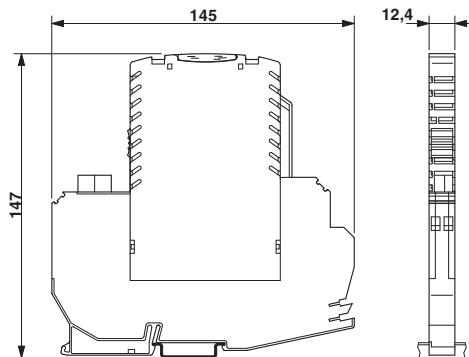


Diagram



Solenoid driver - PI-EX-SD-24-48 - 2865298

Dimensional drawing



Approvals

Approvals

Approvals

Functional Safety

Ex Approvals

Approval details

Functional Safety	06/06-05 R004 V2R0
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