

## Solenoid driver - PI-EX-SD-21-25 - 2865201


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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 134842
GTIN	4046356134842

### 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	654 Ω (Internal resistance R <sub>i</sub> )
Response time	< 30 ms

#### Compatible valves

Note	This is an extract of possible combinations of valves and solenoid drivers.
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## Technical data

### Compatible valves

Compatible valve	Norgren Herion Coil 2080 / 2082
	Norgren Herion Coil 2081 / 2083
	Norgren Herion Coil 2084
	Hörbiger Piezo P8 38x RF-Nx-SPN65 30 V type
	Hörbiger Piezo P20 381RF-NG-CPN61 30 V type
	Samson Coil 3701-11 (6 V)
	Samson Coil 3701-12 (12 V)
	Samson Coil 3701-13 (24 V)
	Samson Coil 3963-11 (6 V)
	Samson Coil 3963-12 (12 V)
	Samson Coil 3963-13 (24 V)
	Samson Coil 3964-11 (6 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
	Seitz Pilot valve PV 12F73 Xi oH-2

### Power supply

Max. current consumption	50 mA (at 24 V)
Power dissipation	max. 0.9 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

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## Technical data

### Safety characteristic data

Safe Failure Fraction (SFF)	100 %
$\lambda_{SU}$	$2.84 \times 10^{-7}$ (284 FIT)
$\lambda_{SD}$	0
$\lambda_{DU}$	0
$\lambda_{DD}$	0
Probability of a hazardous failure on demand (PFD <sub>AVG</sub> )	0 (1 year)
	0 (5 years)
	0 (10 years)
Diagnostic coverage (DC)	DC <sub>S</sub> =0 %, DC <sub>D</sub> =0 %

### Safety data

Max. output voltage U <sub>o</sub>	25.1 V
Max. output current I <sub>o</sub>	39 mA
Max. output power P <sub>o</sub>	245 mW
Group	IIA
Max. external inductivity L <sub>o</sub>	20 mH
Max. external capacity C <sub>o</sub>	0.66 µF
Group	IIB
Max. external inductivity L <sub>o</sub>	5 mH
Max. external capacity C <sub>o</sub>	0.43 µF
Group	IIC
Max. external inductivity L <sub>o</sub>	0.5 mH
Max. external capacity C <sub>o</sub>	0.093 µF
Safety-related maximum voltage U <sub>m</sub>	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

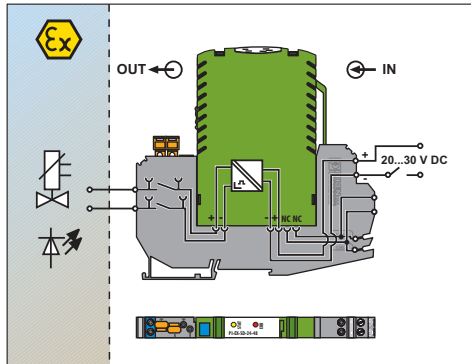
### Environmental Product Compliance

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

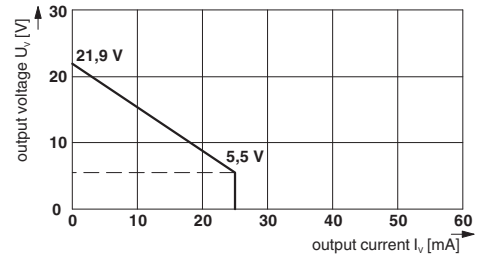
## Drawings

# Solenoid driver - PI-EX-SD-21-25 - 2865201

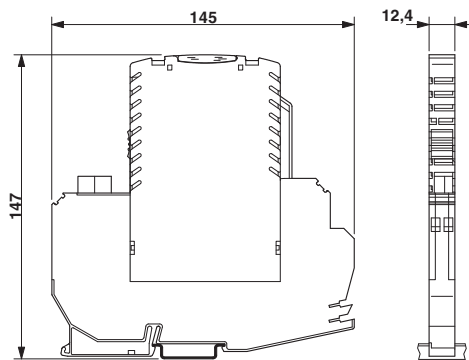
Block diagram



Diagram



Dimensional drawing



## Approvals

Approvals

Approvals

Functional Safety

Ex Approvals

Approval details

Functional Safety	06/06-05 R004 V2R0
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