

Solenoid driver - MACX MCR-EX-SL-SD-21-25-LFD-SP - 2905674

Please be informed that the data shown in this PDF Document is generated from our Online Catalog. Please find the complete data in the user's documentation. Our General Terms of Use for Downloads are valid (<http://phoenixcontact.com/download>)



Ex i solenoid driver for controlling Ex i solenoid valves in hazardous areas, logic input, off-load voltage 21.1 V, current limitation at 25.1 mA, line fault transparency, error message output, up to SIL 3 according to IEC 61508; Push-in connection.

Why buy this product

- Input: logic
- Output: intrinsically safe [Ex ia]; off-load voltage > 21.1 V DC; current limitation > 25.1 mA
- Line fault detection (can be enabled/disabled), via the signal circuit or via a separate error message output
- Transparent for test pulses
- Up to SIL 3 according to IEC/EN 61508
- Safe electrical isolation between output, input, supply, and error message output
- Power supply and error indication possible via DIN rail connector
- Plug-in connection terminals, push-in connection technology
- Installation in zone 2 permitted
- Housing width: 12.5 mm

Key Commercial Data

Packing unit	1 STK
GTIN	
GTIN	4046356985345

Technical data

Note

Utilization restriction	EMC: class A product, see manufacturer's declaration in the download area
-------------------------	---------------------------------------------------------------------------

Dimensions

Width	12.5 mm
Height	116 mm
Depth	114.5 mm

Solenoid driver - MACX MCR-EX-SL-SD-21-25-LFD-SP - 2905674

Technical data

Ambient conditions

Ambient temperature (operation)	-20 °C ... 60 °C (Any mounting position)
Ambient temperature (storage/transport)	-40 °C ... 80 °C
Maximum altitude	≤ 2000 m
Permissible humidity (operation)	10 % ... 95 % (non-condensing)
Noise immunity	EN 61000-6-2 When being exposed to interference, there may be minimal deviations.
Degree of protection	IP20

Input data

Signal input	Signal input
--------------	--------------

Output data

Output characteristic curve: Output resistor	≥ 641 Ω (Internal resistance R _i)
Response time	< 30 ms

Power supply

Nominal supply voltage	24 V DC
Supply voltage range	19.2 V DC ... 30 V DC (24 V DC -20%...+25%)
Power dissipation	< 0.8 W

Connection data

Conductor cross section solid min.	0.2 mm ²
Conductor cross section solid max.	1.5 mm ²
Conductor cross section flexible min.	0.2 mm ²
Conductor cross section flexible max.	1.5 mm ²
Conductor cross section AWG min.	24
Conductor cross section AWG max.	16
Stripping length	8 mm
Connection method	Push-in connection

General

Status display	Green LED (supply voltage)
	LED yellow (switching state)
	Red LED (line errors)
Flammability rating according to UL 94	V0
Degree of pollution	2
Overvoltage category	II
Electromagnetic compatibility	Conformance with EMC directive
Interference emission	EN 61000-6-4
Housing material	PA 6.6-FR
Color	green
Designation	Output/input, error message output
Electrical isolation	375 V (Peak value in accordance with EN 60079-11)

Solenoid driver - MACX MCR-EX-SL-SD-21-25-LFD-SP - 2905674

Technical data

General

	300 V _{rms} (Rated insulation voltage (overvoltage category II; degree of pollution 2, safe isolation as per EN 61010-1))
	2.5 kV (50 Hz, 1 min., test voltage)
Designation	Output/supply, DIN rail connector
Electrical isolation	375 V (Peak value in accordance with EN 60079-11)
	300 V _{rms} (Rated insulation voltage (overvoltage category II; degree of pollution 2, safe isolation as per EN 61010-1))
	2.5 kV (50 Hz, 1 min., test voltage)
Designation	Input/error message output/supply
Electrical isolation	1.5 kV (50 Hz, 1 min., test voltage)
Conformance	CE-compliant, additionally EN 61326
ATEX	# II (1) G [Ex ia Ga] IIC
	# II (1) D [Ex ia Da] IIIC
	# II 3(1) G Ex nA [ia Ga] IIC T4 Gc X
IECEX	[Ex ia Ga] IIC
	[Ex ia Da] IIIC
	Ex nA [ia Ga] IIC T4 Gc
UL, USA/Canada	UL 61010 Listed
SIL	3

Safety data

Max. internal inductance L _i	negligible
Max. internal capacitance C _i	11 nF
Max. output voltage U _o	23.98 V
Max. output current I _o	37.4 mA
Max. output power P _o	224 mW
Group	IIC
Max. external inductivity L _o	22 mH
Max. external capacity C _o	110 nF
Group	IIB
Max. external inductivity L _o	100 mH
Max. external capacity C _o	910 nF
Group	IIA
Max. external inductivity L _o	200 mH
Max. external capacity C _o	3330 nF
Safety-related maximum voltage U _m	253 V AC/DC

Standards and Regulations

Electromagnetic compatibility	Conformance with EMC directive
Noise emission	EN 61000-6-4
Flammability rating according to UL 94	V0
Conformance	CE-compliant, additionally EN 61326

Solenoid driver - MACX MCR-EX-SL-SD-21-25-LFD-SP - 2905674

Technical data

Standards and Regulations

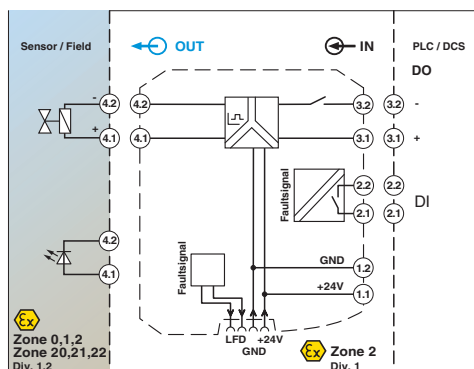
ATEX	# II (1) G [Ex ia Ga] IIC
	# II (1) D [Ex ia Da] IIIC
	# II 3(1) G Ex nA [ia Ga] IIC T4 Gc X
IECEX	[Ex ia Ga] IIC
	[Ex ia Da] IIIC
	Ex nA [ia Ga] IIC T4 Gc
UL, USA/Canada	UL 61010 Listed
Group	IIC
	IIB
	IIA

Environmental Product Compliance

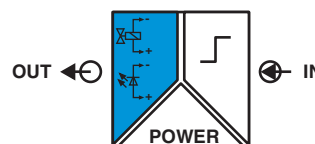
China RoHS	Environmentally Friendly Use Period = 50
	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"

Drawings

Block diagram



Pictogram



Approvals

Approvals

Approvals

GL / Functional Safety / EAC

Ex Approvals

IECEX / ATEX


Solenoid driver - MACX MCR-EX-SL-SD-21-25-LFD-SP - 2905674

Approvals

Approval details

GL		http://exchange.dnv.com/tari/	11564-14 HH
----	-----------------------------------------------------------------------------------	---------------------------------------------------------------------------	-------------

Functional Safety	BVS Pb 11/13
-------------------	--------------

EAC		RU C- DE.A*30.B.01082
-----	-----------------------------------------------------------------------------------	--------------------------

Phoenix Contact 2018 © - all rights reserved
<http://www.phoenixcontact.com>

PHOENIX CONTACT GmbH & Co. KG
Flachsmarktstr. 8
32825 Blomberg
Germany
Tel. +49 5235 300
Fax +49 5235 3 41200
<http://www.phoenixcontact.com>