

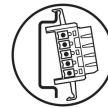
MACX MCR-EX-SL-SD-21-25-LP

Order No.: 2865492




<http://eshop.phoenixcontact.de/phoenix/treeViewClick.do?UID=2865492>

Ex-i solenoid driver For controlling Ex-i solenoid valves, alarm modules or LEDs installed in Ex areas. Current limitation at 25 mA. For gases up to Group II C, loop-powered, electrical isolation, SIL 3.



Commercial data

| | |
|--------------------------|--|
| GTIN (EAN) |  4 046356 160551 |
| sales group | H723 |
| Pack | 1 pcs. |
| Customs tariff | 85437090 |
| Catalog page information | Page 450 (IF-2011) |

Product notes

WEEE/RoHS-compliant since:
08/03/2006



<http://www.download.phoenixcontact.com>
Please note that the data given here has been taken from the online catalog. For comprehensive information and data, please refer to the user documentation. The General Terms and Conditions of Use apply to Internet downloads.

Technical data

Output data

| | |
|--|---|
| Output characteristic curve: Output resistor | 641 Ω (Internal resistance R_i) |
| Response time | 20 ms |

Compatible valves

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

| | |
|-------------------|-------|
| Power consumption | < 1 W |
|-------------------|-------|

Connection data

| | |
|--|---------------------|
| Conductor cross section solid min. | 0.2 mm ² |
| Conductor cross section solid max. | 2.5 mm ² |
| Conductor cross section stranded min. | 0.2 mm ² |
| Conductor cross section stranded max. | 2.5 mm ² |
| Conductor cross section AWG/kcmil min. | 24 |
| Conductor cross section AWG/kcmil max | 14 |
| Screw thread | M3 |
| Connection method | Screw connection |
| Tightening torque, min | 0.5 Nm |
| Tightening torque max | 0.6 Nm |

General data

| | |
|---|--|
| No. of channels | 1 |
| Maximum temperature coefficient | 0.01 %/K |
| Ambient temperature (operation) | -20 °C ... 60 °C (Any mounting position) |
| Ambient temperature (storage/transport) | -40 °C ... 80 °C |
| Permissible humidity (operation) | 10 % ... 95 % (no condensation) |
| Status display | Yellow LED (switching state / status, lights up when output circuit is active) |
| Width | 12.5 mm |
| Height | 99 mm |
| Depth | 114.5 mm |
| Inflammability class acc. to UL 94 | V0 |
| Pollution degree | 2 |
| Surge voltage category | II |
| Housing material | PA 66-FR |
| Degree of protection | IP20 |
| Color | green |
| Electrical isolation input / output | 2.5 kV (50 Hz, 1 min., test voltage) |
| Conformance | CE-compliant, additionally EN 61326 |
| ATEX | Ex II (1) GD [Ex ia] IIC / IIB / IIA Ex II 3 G Ex nA II T4 X |
| IECEX | [Ex ia] IIC/IIB/IIA; [Ex iaD]; Ex nA IIC T4 X |
| UL, USA / Canada | Class I Div 2; IS for Class I, II, III Div 1 |
| Functional safety (SIL) | SIL 3 |

Safety characteristic data

| | |
|------------------------------|---------------------------------|
| Integrity requirement | for 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. voltage U _o | 25.1 V |
| Max. current I _o | 39 mA |
| Max. power P _o | 245 mW |
| Gas group | II C |
| Max. external inductivity L _o | 32 mH |
| Max. external capacity C _o | 0.1 µF |
| Gas group | II B |
| Max. external inductivity L _o | 133 mH |
| Max. external capacity C _o | 0.8 µF |
| Gas group | II A |
| Max. external inductivity L _o | 266 mH |
| Max. external capacity C _o | 2.9 µF |
| Safety-related maximum voltage U _m | 253 V AC (125 V DC) |

Certificates / Approvals



Certification

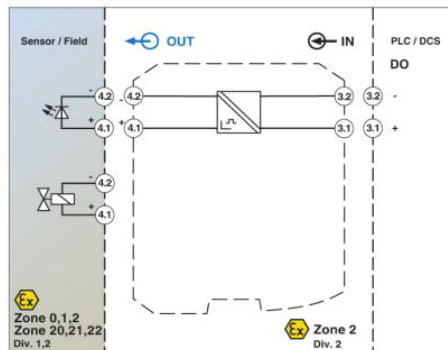
CUL Listed, UL Listed

Certification Ex:

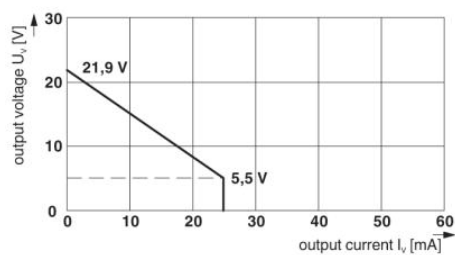
CUL-EX LIS, IECEx, PxC-EX, UL-EX LIS

Diagrams/Drawings

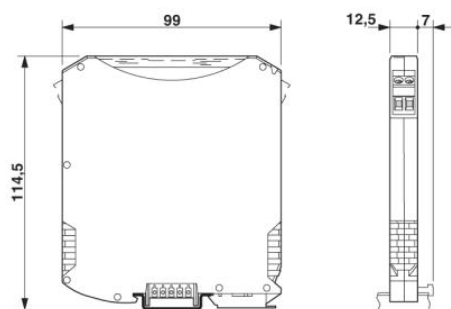
Block diagram



Diagram



Dimensioned drawing



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