


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

Order No.: 2865492

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

Product notes

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

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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
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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 according 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	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, IECEEx, PxC-EX, UL-EX LIS

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