

MINI MCR-EX-SD-23-38-LP - Solenoid driver



1277111

<https://www.phoenixcontact.com/in/products/1277111>

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 documentation. Our general terms of use for downloads are valid.



Ex i-Solenoid driver for controlling Ex i solenoid valves in the Ex area. no-load voltage: 23 V DC, current limitation: 38 mA, Standard configuration, Loop-powered, Safety Integrity Level (SIL, IEC 61508): 3, Screw connection

Commercial data

Item number	1277111
Packing unit	1 pc
Minimum order quantity	1 pc
Product key	DK1224
GTIN	4063151471521
Weight per piece (including packing)	118.5 g
Country of origin	DE

Technical data

Product properties

Product type	Solenoid driver
Product family	MINI Analog Pro

Electrical properties

Electrical isolation

Overvoltage category	II (≤ 5000 m)
Pollution degree	2 (≤ 5000 m)

Electrical isolation Input/output IEC/EN 61010-1

Standards/regulations	IEC/EN 61010-1
Rated insulation voltage	300 V _{rms}
Test voltage	2.5 kV AC (50 Hz, 60 s)
Insulation	Double/reinforced insulation

Electrical isolation Input/output IEC/EN 60079-11

Standards/regulations	IEC/EN 60079-11
Rated insulation voltage	265 V _{rms}

Electrical isolation Input/output IEC/EN 60079-7

Standards/regulations	IEC/EN 60079-7
Rated insulation voltage	251 V _{rms}

Supply

Supply voltage range	loop-powered, no external supply necessary
Power consumption	< 1.5 W

Input data

Signal: Voltage

Number of inputs	1
Voltage input signal	19.2 V DC ... 30 V DC (24 V DC, -20 % ... +25 %)

Output data

Signal: Voltage

Number of outputs	1
Output voltage	≥ 12.5 V DC (38 mA)
Output resistor	$\geq 270 \Omega$ (Internal resistance R _i)
Current limitation	> 38 mA
Response time	< 50 ms
Non-load voltage	> 23 V DC
Short-circuit-proof	yes

MINI MCR-EX-SD-23-38-LP - Solenoid driver



1277111

<https://www.phoenixcontact.com/in/products/1277111>

Connection data

Connection method	Screw connection
Stripping length	10 mm
Screw thread	M3
Conductor cross section rigid	0.2 mm ² ... 1.5 mm ² (with ferrule) 0.14 mm ² ... 2.5 mm ² (without ferrule)
Conductor cross section flexible	0.14 mm ² ... 2.5 mm ²
Conductor cross section AWG	24 ... 12 (flexible)
Tightening torque	0.5 Nm ... 0.6 Nm

Ex data

Ex installation (EPL)	Gc
	Div. 2
Ex i circuits (EPL)	Ga
	Da
	Ma
	Div. 1

Safety data

Max. internal inductance L_i	negligible
Max. internal capacitance C_i	11 nF
Max. output voltage U_o	27.1 V
Max. output current I_o	101 mA
Max. output power P_o	685 mW
Safety-related maximum voltage U_m	253 V AC
	125 V DC
IIA (simple circuit): Max. external inductivity L_o / Max. external capacitance C_o	23 mH / 2.3 μ F
IIB/IIIC (simple circuit): Max. external inductivity L_o / Max. external capacitance C_o	12 mH / 686 nF
IIC (simple circuit): Max. external inductivity L_o / Max. external capacitance C_o	3 mH / 78 nF
I (simple circuit): Max. external inductivity L_o / Max. external capacitance C_o	30 mH / 4.1 μ F

Dimensions

Width	6.2 mm
Height	109.81 mm
Depth	119.2 mm

Material specifications

Color	gray (RAL 7042)
-------	-----------------

Environmental and real-life conditions

Ambient conditions

MINI MCR-EX-SD-23-38-LP - Solenoid driver



1277111

<https://www.phoenixcontact.com/in/products/1277111>

Degree of protection	IP20
Ambient temperature (operation)	-40 °C ... 70 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Permissible humidity (operation)	5 % ... 95 % (non-condensing)

Altitude range (IEC/EN 61010-1)

Height range	> 2000 m ... 3000 m
Ambient temperature (operation)	-40 °C ... 63 °C
Rated insulation voltage	300 V _{rms} (Input/output)
Insulation	Double/reinforced insulation

Altitude range (IEC/EN 61010-1)

Height range	> 3000 m ... 4000 m
Ambient temperature (operation)	-40 °C ... 56 °C
Rated insulation voltage	300 V _{rms} (Input/output)
Insulation	Double/reinforced insulation

Altitude range (IEC/EN 61010-1)

Height range	> 4000 m ... 5000 m
Ambient temperature (operation)	-40 °C ... 49 °C
Rated insulation voltage	150 V _{rms} (Input/output)
Insulation	Double/reinforced insulation

Altitude range (IEC/EN 60079-11)

Height range	> 2000 m ... 3000 m
Ambient temperature (operation)	-40 °C ... 63 °C
Safety-related maximum voltage U _m	121 V AC
	110 V DC
Rated insulation voltage	150 V _{rms} (Input/output)

Altitude range (IEC/EN 60079-11)

Height range	> 3000 m ... 4000 m
Ambient temperature (operation)	-40 °C ... 56 °C
Safety-related maximum voltage U _m	33 V AC/DC
Rated insulation voltage	60 V _{rms} (Input/output)

Altitude range (IEC/EN 60079-11)

Height range	> 4000 m ... 5000 m
Ambient temperature (operation)	-40 °C ... 49 °C
Safety-related maximum voltage U _m	33 V AC/DC
Rated insulation voltage	60 V _{rms} (Input/output)

Altitude range (IEC/EN 60079-7)

Height range	> 2000 m ... 3000 m
Ambient temperature (operation)	-40 °C ... 63 °C
Rated insulation voltage	162 V _{rms} (Input/output)

Altitude range (IEC/EN 60079-7)

MINI MCR-EX-SD-23-38-LP - Solenoid driver



1277111

<https://www.phoenixcontact.com/in/products/1277111>

Height range	> 3000 m ... 4000 m
Ambient temperature (operation)	-40 °C ... 56 °C
Rated insulation voltage	60 V _{rms} (Input/output)

Altitude range (IEC/EN 60079-7)

Height range	> 4000 m ... 5000 m
Ambient temperature (operation)	-40 °C ... 49 °C
Rated insulation voltage	60 V _{rms} (Input/output)

Approvals

CE

Certificate	CE-compliant
-------------	--------------

ATEX

Identification	⊕ II (1) G [Ex ia Ga] IIC
	⊕ II (1) D [Ex ia Da] IIIC
	⊕ II 3 (1) G Ex ec [ia Ga] IIC T4 Gc
	⊕ I (M1) [Ex ia Ma] I
Certificate	TÜV 21 ATEX 8651 X

IECEx

Identification	[Ex ia Ga] IIC
	[Ex ia Da] IIIC
	Ex ec [ia Ga] IIC T4 Gc
	[Ex ia Ma] I
Certificate	IECEx TUR 21.0043 X

UKCA Ex (UKEX)

Identification	⊕ II (1) G [Ex ia Ga] IIC
	⊕ II (1) D [Ex ia Da] IIIC
	⊕ II 3 (1) G Ex ec [ia Ga] IIC T4 Gc
	⊕ I (M1) [Ex ia Ma] I
Certificate	TÜV 21 UKEX 7021 X

CCC / China-Ex

Identification	[Ex ia Ga] IIC
	[Ex ia Da] IIIC
	Ex ec [ia Ga] IIC T4 Gc
Certificate	2023122310116238

UL, USA/Canada

Identification	UL 61010-2-201
----------------	----------------

Safety Integrity Level (SIL, IEC 61508)

Identification	3
----------------	---

EMC data

MINI MCR-EX-SD-23-38-LP - Solenoid driver



1277111

<https://www.phoenixcontact.com/in/products/1277111>

Electromagnetic compatibility	Tested in accordance with the following standards and regulations: EN 61326-1 For industrial use, NAMUR NE 21
Noise immunity	IEC/EN 61000-6-2
	IEC/EN 61326-3-2
Noise emission	IEC/EN 61000-6-4

Standards and regulations

GB Standard

Standards/regulations	GB/T 3836.1
	GB/T 3836.3
	GB/T 3836.4

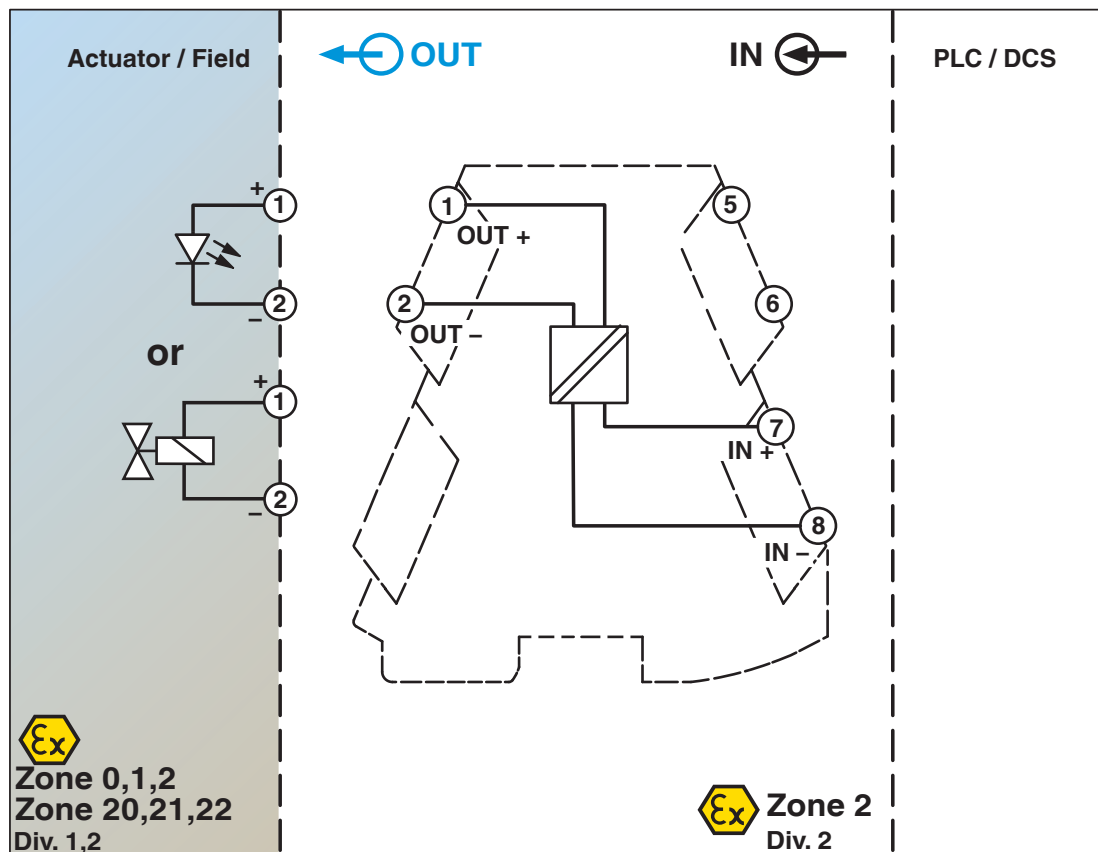
MINI MCR-EX-SD-23-38-LP - Solenoid driver

1277111

<https://www.phoenixcontact.com/in/products/1277111>

Drawings

Block diagram



MINI MCR-EX-SD-23-38-LP - Solenoid driver



1277111

<https://www.phoenixcontact.com/in/products/1277111>

Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/in/products/1277111>



IECEx

Approval ID: IECEx TUR 21.0043X



ATEX

Approval ID: TUV 21 ATEX 8651 X



CCC

Approval ID: 2023122316116237



UKCA-EX

Approval ID: TUV21UKEX7021X

MINI MCR-EX-SD-23-38-LP - Solenoid driver



1277111

<https://www.phoenixcontact.com/in/products/1277111>

Classifications

ECLASS

ECLASS-11.0	27210120
ECLASS-12.0	27210120
ECLASS-13.0	27210120

ETIM

ETIM 9.0	EC002653
----------	----------

MINI MCR-EX-SD-23-38-LP - Solenoid driver



1277111

<https://www.phoenixcontact.com/in/products/1277111>

Environmental product compliance

EU RoHS

Fulfills EU RoHS substance requirements	Yes
Exemption	7(a), 7(c)-I

China RoHS

Environment friendly use period (EFUP)	EFUP-50
	An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required.

EU REACH SVHC

REACH candidate substance (CAS No.)	Lead(CAS: 7439-92-1)
SCIP	e17253ff-0ae9-4559-8461-244c42373d23

MINI MCR-EX-SD-23-38-LP - Solenoid driver



1277111

<https://www.phoenixcontact.com/in/products/1277111>

Accessories

MCR-DP - Separating plate

1430594

<https://www.phoenixcontact.com/in/products/1430594>

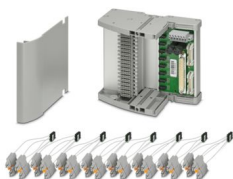


The partition plate is used to maintain Ex i isolating distances when Ex i and non-Ex i devices are mounted side by side on a DIN rail.

TC-D37SUB-AIO16-MP-PS-UNI - Module carrier

2906640

<https://www.phoenixcontact.com/in/products/2906640>



Universal Termination Carrier for connecting 16 MINI Analog Pro signal conditioners to digital or analog I/O cards, via D-SUB connector, 37-pos. (1:1 connection), with HART multiplexer connection

MINI MCR-EX-SD-23-38-LP - Solenoid driver

1277111

<https://www.phoenixcontact.com/in/products/1277111>



TC-D37SUB-ADIO16-MP-P-UNI - Module carrier

2906639

<https://www.phoenixcontact.com/in/products/2906639>

Universal Termination Carrier for connecting 16 MINI Analog Pro signal conditioners to digital or analog I/O cards, via D-SUB connector, 37-pos. (1:1 connection)



MINI MCR-2-V8-FLK 16 - System adapter

2901993

<https://www.phoenixcontact.com/in/products/2901993>



Eight MINI Analog Pro signal conditioners and measuring transducers can be connected to a controller with minimal cabling effort and without any errors using system adapters and system cabling.

MINI MCR-EX-SD-23-38-LP - Solenoid driver



1277111

<https://www.phoenixcontact.com/in/products/1277111>

UCT-EM (30X5) - Marker for end clamp

0801505

<https://www.phoenixcontact.com/in/products/0801505>



Marker for end clamp, Sheet, white, unlabeled, can be labeled with: TOPMARK NEO, TOPMARK LASER, BLUEMARK ID COLOR, BLUEMARK ID, BLUEMARK CLED, THERMOMARK PRIME, THERMOMARK CARD 2.0, THERMOMARK CARD, mounting type: latching, Number of individual labels: 24, text field height: 5 mm, text field width: 30 mm

UCT-EM (30X5) CUS - Marker for end clamp

0801589

<https://www.phoenixcontact.com/in/products/0801589>



Marker for end clamp, can be ordered: by sheet, white, labeled according to customer specifications, mounting type: snapped into marker carrier, Number of individual labels: 24, text field height: 5 mm, text field width: 30 mm

MINI MCR-EX-SD-23-38-LP - Solenoid driver



1277111

<https://www.phoenixcontact.com/in/products/1277111>

SK 5,0 WH:REEL - Marker strip

0805221

<https://www.phoenixcontact.com/in/products/0805221>



Marker strip, Roll, white, unlabeled, can be labeled with: THERMOMARK E.300 (D)/600 (D), THERMOMARK ROLL 2.0, THERMOMARK ROLL, THERMOMARK ROLL X1, THERMOMARK ROLLMaster 300/600, THERMOMARK X1.2, mounting type: adhesive, Number of individual labels: 10, text field height: 5 mm, text field width: 90000 mm

UC-EMLP (15X5) - Plastic label

0819301

<https://www.phoenixcontact.com/in/products/0819301>



Plastic label, Sheet, white, unlabeled, can be labeled with: BLUEMARK ID COLOR, BLUEMARK ID, BLUEMARK CLED, PLOTMARK, CMS-P1-PLOTTER, mounting type: adhesive, Number of individual labels: 10, text field height: 5 mm, text field width: 15 mm

MINI MCR-EX-SD-23-38-LP - Solenoid driver



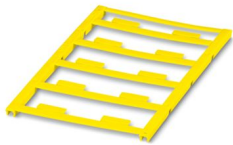
1277111

<https://www.phoenixcontact.com/in/products/1277111>

UC-EMLP (15X5) YE - Plastic label

0822615

<https://www.phoenixcontact.com/in/products/0822615>



Plastic label, Sheet, yellow, unlabeled, can be labeled with: BLUEMARK ID COLOR, BLUEMARK ID, BLUEMARK CLED, PLOTMARK, CMS-P1-PLOTTER, mounting type: adhesive, Number of individual labels: 10, text field height: 5 mm, text field width: 15 mm

UC-EMLP (15X5) CUS - Plastic label

0824550

<https://www.phoenixcontact.com/in/products/0824550>



Plastic label, can be ordered: by sheet, white, labeled according to customer specifications, mounting type: adhesive, text field height: 5 mm, text field width: 15 mm

MINI MCR-EX-SD-23-38-LP - Solenoid driver



1277111

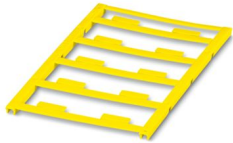
<https://www.phoenixcontact.com/in/products/1277111>

UC-EMLP (15X5) YE CUS - Plastic label

0824551

<https://www.phoenixcontact.com/in/products/0824551>

Plastic label, can be ordered: by sheet, yellow, labeled according to customer specifications, mounting type: adhesive, text field height: 5 mm, text field width: 15 mm



UC-EMLP (15X5) SR - Plastic label

0828095

<https://www.phoenixcontact.com/in/products/0828095>

Plastic label, Sheet, silver, unlabeled, can be labeled with: BLUEMARK ID COLOR, BLUEMARK ID, BLUEMARK CLED, PLOTMARK, CMS-P1-PLOTTER, mounting type: adhesive, Number of individual labels: 10, text field height: 5 mm, text field width: 15 mm



MINI MCR-EX-SD-23-38-LP - Solenoid driver



1277111

<https://www.phoenixcontact.com/in/products/1277111>

UC-EMLP (15X5) SR CUS - Plastic label

0828099

<https://www.phoenixcontact.com/in/products/0828099>



Plastic label, can be ordered: by sheet, silver, labeled according to customer specifications, mounting type: adhesive, Number of individual labels: 10, text field height: 5 mm, text field width: 15 mm

US-EMLP (15X5) - Plastic label

0828790

<https://www.phoenixcontact.com/in/products/0828790>



Plastic label, Card, white, unlabeled, can be labeled with: BLUEMARK ID COLOR, BLUEMARK ID, THERMOMARK PRIME, THERMOMARK CARD 2.0, THERMOMARK CARD, mounting type: adhesive, Number of individual labels: 189, text field height: 5 mm, text field width: 15 mm

MINI MCR-EX-SD-23-38-LP - Solenoid driver



1277111

<https://www.phoenixcontact.com/in/products/1277111>

US-EMLP (15X5) YE - Plastic label

0828873

<https://www.phoenixcontact.com/in/products/0828873>



Plastic label, Card, yellow, unlabeled, can be labeled with: BLUEMARK ID COLOR, BLUEMARK ID, THERMOMARK PRIME, THERMOMARK CARD 2.0, THERMOMARK CARD, mounting type: adhesive, Number of individual labels: 189, text field height: 5 mm, text field width: 15 mm

US-EMLP (15X5) SR - Plastic label

0828874

<https://www.phoenixcontact.com/in/products/0828874>



Plastic label, Card, silver, unlabeled, can be labeled with: BLUEMARK ID COLOR, BLUEMARK ID, THERMOMARK PRIME, THERMOMARK CARD 2.0, THERMOMARK CARD, mounting type: adhesive, Number of individual labels: 189, text field height: 5 mm, text field width: 15 mm

MINI MCR-EX-SD-23-38-LP - Solenoid driver



1277111

<https://www.phoenixcontact.com/in/products/1277111>

US-EMLP (15X5) CUS - Plastic label

0830076

<https://www.phoenixcontact.com/in/products/0830076>

Plastic label, Card, can be ordered: by card, white, labeled according to customer specifications, mounting type: adhesive, Number of individual labels: 189, text field height: 5 mm, text field width: 15 mm



US-EMLP (15X5) YE CUS - Plastic label

0830077

<https://www.phoenixcontact.com/in/products/0830077>

Plastic label, Card, can be ordered: by card, yellow, labeled according to customer specifications, mounting type: adhesive, Number of individual labels: 189, text field height: 5 mm, text field width: 15 mm



MINI MCR-EX-SD-23-38-LP - Solenoid driver



1277111

<https://www.phoenixcontact.com/in/products/1277111>

US-EMLP (15X5) SR CUS - Plastic label

0830078

<https://www.phoenixcontact.com/in/products/0830078>

Plastic label, Card, can be ordered: by card, silver, labeled according to customer specifications, mounting type: adhesive, Number of individual labels: 189, text field height: 5 mm, text field width: 15 mm



UCT-EM (30X5) YE - Marker for end clamp

0830340

<https://www.phoenixcontact.com/in/products/0830340>

Marker for end clamp, Sheet, yellow, unlabeled, can be labeled with: TOPMARK NEO, TOPMARK LASER, BLUEMARK ID COLOR, BLUEMARK ID, BLUEMARK CLED, THERMOMARK PRIME, THERMOMARK CARD 2.0, THERMOMARK CARD, mounting type: latching, Number of individual labels: 24, text field height: 5 mm, text field width: 30 mm



MINI MCR-EX-SD-23-38-LP - Solenoid driver



1277111

<https://www.phoenixcontact.com/in/products/1277111>

UCT-EM (30X5) YE CUS - Marker for end clamp

0830348

<https://www.phoenixcontact.com/in/products/0830348>



Marker for end clamp, can be ordered: by sheet, yellow, labeled according to customer specifications, mounting type: snapped into marker carrier, Number of individual labels: 24, text field height: 5 mm, text field width: 30 mm

SZS 0,6X3,5 - Screwdriver

1205053

<https://www.phoenixcontact.com/in/products/1205053>



Actuation tool, for ST terminal blocks, insulated, also suitable for use as a bladed screwdriver, size: 0.6 x 3.5 x 100 mm, 2-component grip, with non-slip grip

Phoenix Contact 2025 © - all rights reserved
<https://www.phoenixcontact.com>

PHOENIX CONTACT (I) Pvt. Ltd.
A-58/2, Okhla Industrial Area, Phase - II, New Delhi-110 020

+91.1275.71420
info@phoenixcontact.co.in