



## DEHNconnect DCO SD2 MD EX 24

IECEX DEK 12.0076X  
Ex ia [ia Ga] IIC T4/T5/T6 Gb  
DEKRA 12A TEX0261 X  
II 2(1) G Ex ia [ia Ga] IIC T4/T5/T6 Gb

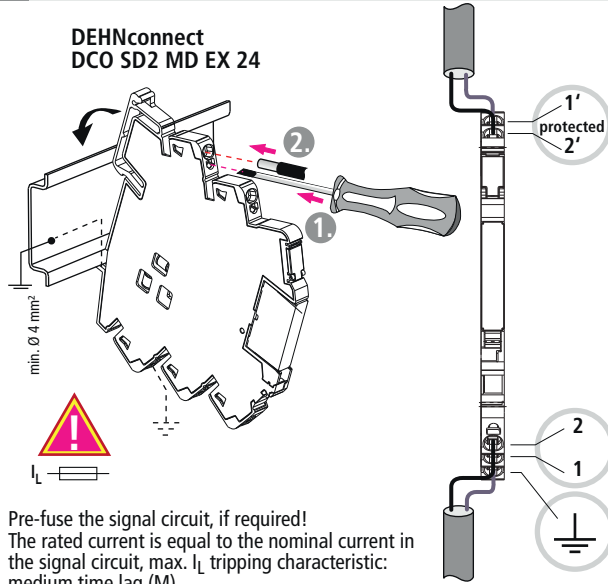
Standards for ATEX:  
EN 60079-0: 2012  
EN 60079-11: 2012  
EN 60079-26: 2007

for IECEx:  
IEC 60079-0: 2011  
IEC 60079-11: 2011  
IEC 60079-26: 2006

Connection to intrinsically safe circuits with:  
 $U_i = 30\text{ V}$   
 $I_i = 500\text{ mA}$   
 $C_i$  negligibly small  
 $L_i$  negligibly small

Ambient temperature range:  
-40°C ... +30°C for temperature class T6  
-40°C ... +80°C for temperature class T5  
-40°C ... +80°C for temperature class T4

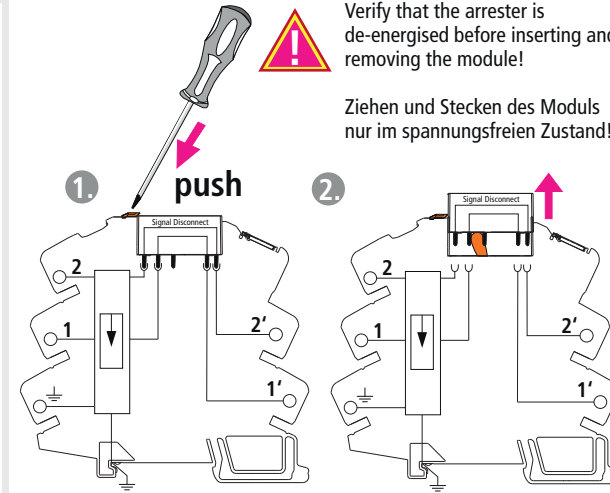
### 1 Mounting / Montage



### 2 Technical Data / Technische Daten

$\vartheta\text{ °C}$	-40°C ... +80°C
IP-Code	00
	9-10 mm / 0.35-0.39 in
2, 2', 1, 1' $\pm$	min. 0,34 mm <sup>2</sup> (AWG 22) max. 2,5 mm <sup>2</sup> (AWG 14)

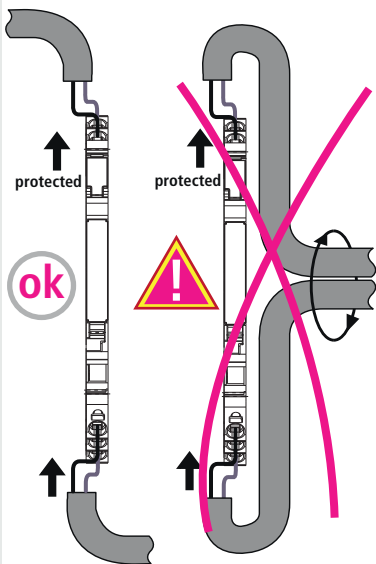
### 3 Signal Disconnection / Signaltrennung



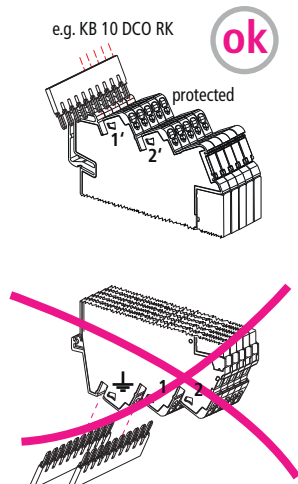
### Accessories / Zubehör



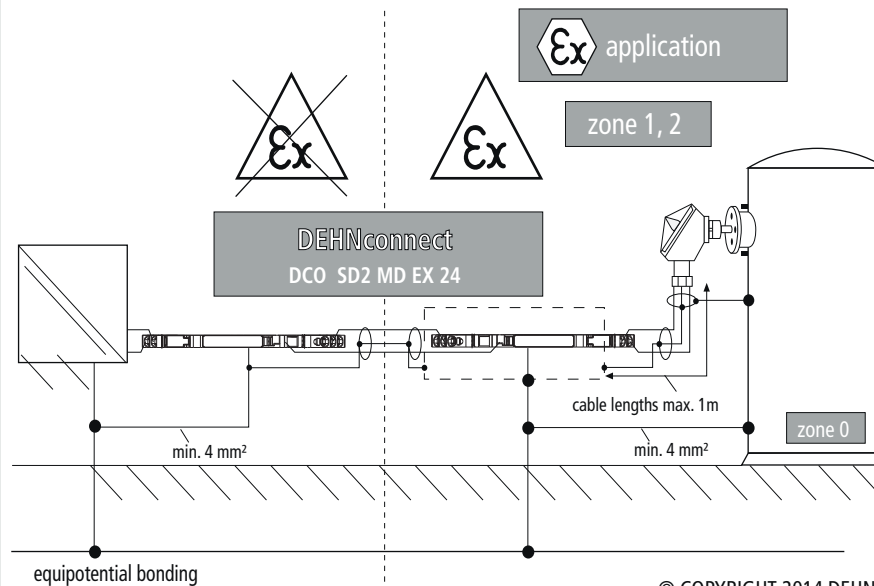
### 4 Cable Routing / Leitungsführung



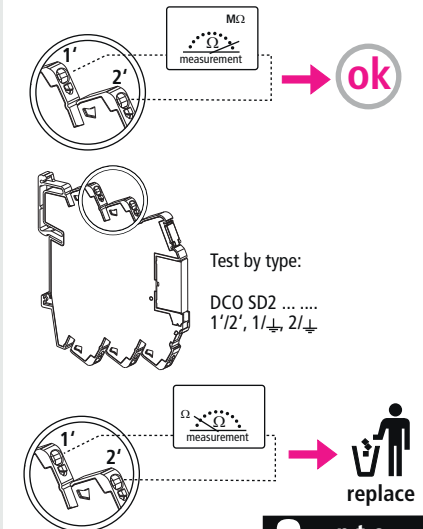
### 5 Wire link by means of jumper bar/ Drahtverbindung mit Kammbrücker



### 6 Ex-zone / Ex Zone



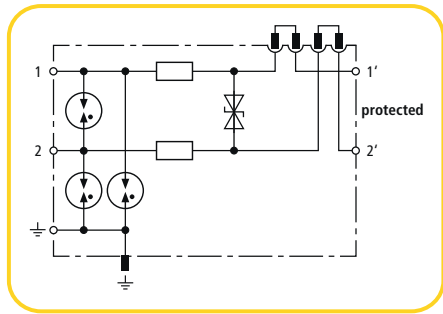
### 7 Testing / Test







DCO SD2 MD EX 24 Part No. 917 960



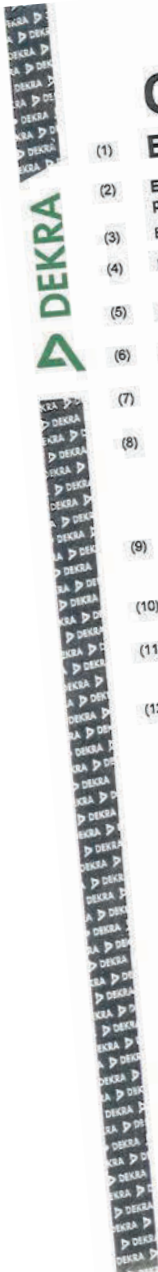
UL requirements

1. These protectors are intended for ordinary indoor use on communication loop circuits that are isolated from the Public Switched Telephone Network.
2. The DEHNconnect protectors shall be secured to a compatible Din Rail ground bar using the methods described in this instruction.
3. Proper grounding continuity shall be determined.
4. Please install the protectors in accordance with modules with the applicable requirements of the National Electrical Code, Article 800 or other applicable local codes if installed in the U.S.

Tabulation Strike voltage in accordance with UL 497 B (Protectors for Data Communication and Fire Alarm Circuits)						
		Voltage breakdown 100 Volts / sec				Impulse voltage 100 Volts / $\mu$ sec
Type	Part No.	Line to Line		Line to Ground		
		min.	max.	min.	max.	
DCO SD2 MD EX 24	917 960	37 V	52 V	--	--	< 1000



ATEX certificate



# CERTIFICATE

## EC-Type Examination

- (1) Equipment and protective systems intended for use in potentially explosive atmospheres - Directive 94/9/EC
- (2) EC-Type Examination Certificate Number: DEKRA 12ATEX0261 X Issue Number: 1
- (3) Equipment: Surge suppression device DEHNconnect Type DCO SD2 MD EX 24
- (4) Manufacturer: DEHN + SÖHNE GmbH + Co. KG.
- (5) Address: Hans-Dehn-Straße 1, D-92318 Neumarkt / Opf., Germany
- (6) This equipment and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.
- (7) DEKRA Certification B.V., notified body number 0344 in accordance with Article 9 of the Council Directive 94/9/EC of 23 March 1994, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres given in Annex II to the directive.
- (8) The examination and test results are recorded in confidential test report number NL/DEK/ExTR12.0076/xx.
- (9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:
 

EN 60079-0 : 2012	EN 60079-11 : 2012	EN 60079-26 : 2007
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- (10) If the sign "X" is placed after the certificate number, it indicates that the equipment is subject to special conditions for safe use specified in the schedule to this certificate.
- (11) This EC-Type Examination Certificate relates only to the design, examination and tests of the specified equipment according to the Directive 94/9/EC. Further requirements of the directive apply to the manufacturing process and supply of this equipment. These are not covered by this certificate.
- (12) The marking of the equipment shall include the following:

II 2(1) G Ex ia [Ia Ga] IIC T4,T5,T6 Gb

This certificate is issued on 7 January 2013 and, as far as applicable, shall be revised before the date of cessation of presumption of conformity of (one of) the standards mentioned above as communicated in the Official Journal of the European Union.

DEKRA Certification B.V.  
  
 C.G. van Es  
 Certification Manager

Page 1/2

\* Integral publication of this certificate and adjoining reports is allowed. This Certificate may only be reproduced in its entirety and without any change.

DEKRA Certification B.V. Utrechtseweg 310, 6812 AR Arnhem P.O. Box 5185, 6802 ED Arnhem The Netherlands  
 T +31 26 3 56 20 00 F +31 26 3 52 58 00 www.dekra-certification.com Registered Arnhem 09085396



- (13) SCHEDULE
- (14) to EC-Type Examination Certificate DEKRA 12ATEX0261 X Issue No. 1
- (15) Description

The surge suppression device DEHNconnect Type DCO SD2 MD EX 24 serves as transient suppressor in the lines of intrinsically safe circuits.

Ambient temperature range: -40 °C to +80 °C for temperature class T4,  
 -40 °C to +80 °C for temperature class T5,  
 -40 °C to +30 °C for temperature class T6.

**Electrical data**

Module input circuits (terminals X1 and X2);  
 in type of protection intrinsic safety Ex ia IIC, for connection to a certified intrinsically safe circuit, with the following maximum values:  
 $U_i = 30 \text{ V}; I_i = 500 \text{ mA}; P_i = \text{any}; C_i = 0 \text{ nF}; L_i = 0 \text{ mH};$

or for connection to a certified intrinsically safe circuit or a circuit in accordance with FISCO, with the following maximum values:  
 $U_i = 17,5 \text{ V}; I_i = 380 \text{ mA}; P_i = 5,32 \text{ W}; C_i = 0 \text{ nF}; L_i = 0 \mu\text{H}.$

Module output circuits (terminals X1' and X2');  
 The values of  $U_o$ ,  $I_o$  and  $P_o$  are determined by the parameters of the circuit(s) to which the DEHNconnect Type DCO SD2 MD EX 24 is connected.

**Installation instructions**

- (16) Test Report  
 The instructions provided with the equipment shall be followed in detail to assure safe operation.  
 No. NL/DEK/ExTR12.0076/xx.
- (17) Special conditions for safe use  
 The dielectric strength of at least 500 V of the intrinsically safe circuits of the surge suppression device DEHNconnect Type DCO SD2 MD EX 24 is limited only by the overvoltage protection.  
 Because the enclosure is made of plastic, electrostatic charges on the enclosure shall be avoided.  
 For ambient temperature range, see (15).
- (18) Essential Health and Safety Requirements  
 Covered by the standards listed at (9).
- (19) Test documentation  
 As listed in Test Report No. NL/DEK/ExTR12.0076/xx.

Page 2/2

Form 100  
 Version 2 (2011-05)



IECEX Certificate of Conformity		
INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres <small>for rules and details of the IECEX Scheme visit www.iecex.com</small>		
Certificate No.:	IECEX DEK 12.0076X	Issue No.: 0
Status:	Current	Certificate history:
Date of Issue:	2013-01-07	Page 1 of 3
Applicant:	DEHN + SÖHNE GmbH + Co. KG. Hans-Dehn-Straße 1 92318 Neumarkt/Opf Germany	
Electrical Apparatus: Optional accessory:	Surge suppression device DEHNconnect Type DCO SD2 MD EX 24	
Type of Protection:	Ex i	
Marking:	Ex is [ja Ga] IIC T4...T8 Gb	
Approved for issue on behalf of the IECEX Certification Body:	C.G. van Es Certification Manager	
Signature: (for printed version)		
Date:	2013-01-07	
<p>1. This certificate and schedule may only be reproduced in full.                  2. This certificate is not transferable and remains the property of the issuing body.                  3. The Status and authenticity of this certificate may be verified by visiting the Official IECEX Website.</p>		
Certificate issued by:	 DEKRA Certification B.V. Utrechtseweg 310 6812 AR Arnhem The Netherlands	

IECEX Certificate of Conformity		
Certificate No.:	IECEX DEK 12.0076X	
Date of Issue:	2013-01-07	Issue No.: 0
Manufacturer:	DEHN + SÖHNE GmbH + Co. KG Hans-Dehn-Straße 1 92318 Neumarkt/Opf Germany	
Additional Manufacturing location (s):		
<p>This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEX Quality system requirements. This certificate is granted subject to the conditions as set out in IECEX Scheme Rules, IECEX 02 and Operational Documents as amended.</p>		
<p><b>STANDARDS:</b> The electrical apparatus and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:</p>		
IEC 60079-0 : 2011	Explosive atmospheres - Part 0: General requirements	
Edition: 6.0		
IEC 60079-11 : 2011-06	Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"	
Edition: 6.0		
IEC 60079-26 : 2006	Explosive atmospheres - Part 26: Equipment with equipment protection level (EPL) Ga	
Edition: 2		
<p>This Certificate does not indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed above.</p>		
<p><b>TEST &amp; ASSESSMENT REPORTS:</b> A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in</p>		
Test Report:	NU/DEKEXTR12.0076/00	
Quality Assessment Report:	NU/DEKQAR12.0084/00	

IECEX Certificate of Conformity		
Certificate No.:	IECEX DEK 12.0076X	
Date of Issue:	2013-01-07	Issue No.: 0
		Page 3 of 3
<b>Schedule</b>		
<p><b>EQUIPMENT:</b> Equipment and systems covered by this certificate are as follows:</p>		
<p>The surge suppression device DEHNconnect Type DCO SD2 MD EX 24 serves as transient suppressor in the lines of intrinsically safe circuits.</p>		
<p><b>Electrical data</b></p>		
<p>Module input circuits (terminals X1 and X2):                  in type of protection intrinsic safety Ex ia IIC, for connection to a certified intrinsically safe circuit, with the following maximum values: <math>U_i = 30\text{ V}</math>; <math>I_i = 500\text{ mA}</math>; <math>P_i = \text{any}</math>; <math>C_i = 0\text{ nF}</math>; <math>L_i = 0\text{ mH}</math>;</p>		
<p>or for connection to a certified intrinsically safe circuit or a circuit in accordance with FISCO, with the following maximum values:  <math>U_i = 17.5\text{ V}</math>; <math>I_i = 380\text{ mA}</math>; <math>P_i = 5.32\text{ W}</math>; <math>C_i = 0\text{ nF}</math>; <math>L_i = 0\text{ }\mu\text{H}</math>.</p>		
<p>Module output circuits                  The values of <math>U_o</math>, <math>I_o</math> and <math>P_o</math> are determined by the parameters of the circuit(s) to which the DEHNconnect Type DCO SD2 MD EX 24 is connected.</p>		
<p><b>CONDITIONS OF CERTIFICATION: YES as shown below:</b></p>		
<p>Ambient temperature range:                  -40 °C to +30 °C for T8;                  -40 °C to +80 °C for T5;                  -40 °C to +80 °C for T4.</p>		
<p>The dielectric strength of at least 500 V of the intrinsically safe circuits of the surge suppression device DEHNconnect Type DCO SD2 MD EX 24 is limited only by the overvoltage protection.</p>		
<p>Because the enclosure is made of plastic, electrostatic charges on the enclosure shall be avoided.</p>		



**CE** EC Declaration of Conformity



Document: CE – DEHNconnect SD2 EX  
 Manufacturer: DEHN + SÖHNE GmbH + Co. KG.  
 ELEKTROTECHNISCHE FABRIK  
 Address: Hans-Dehn-Straße 1  
 D-92318 Neumarkt/OPf.

**CE** EC Declaration of Conformity  
 DEHNconnect SD2 EX



SPD Type	Part No.	Standard	EC-Type Examination Certificate	Technical Report	Date
DCO SD2 MD EX 24	917 960	EN 61643-21:2001 + A1:2009		DS-Y-12-12	14.01.2013

We declare that the designated product:

SPD Type	Part No.	Standard	EC-Type Examination Certificate	Technical Report	Date
DCO SD2 MD EX 24	917 960	EN 60079-0:2012 EN 60079-11:2012 EN 60079-26:2007	DEKRA 12ATEX0261 X		07.01.2013

DEKRA Quality B.V., Utrechtseweg 310, 6812 Arnhem, Netherlands  
 Notified body number: 0344

is in conformity with the European Directives:

DIRECTIVE 94/9/EC OF THE EUROPEAN PARLIAMENT  
 AND OF THE COUNCIL

of 23 March 1994

on the approximation of the laws of the Member States concerning equipment  
 and protective systems intended for use in potentially explosive atmospheres

DIRECTIVE 2006/95/EC OF THE EUROPEAN PARLIAMENT  
 AND OF THE COUNCIL

of 12 December 2006

on the harmonisation of the laws of Member States relating to electrical  
 equipment designed for use within certain voltage limits.

Issuer:

DEHN + SÖHNE GmbH + Co. KG.  
 Hans-Dehn-Straße 1  
 D-92318 Neumarkt

Place, date:

Neumarkt, March 1, 2013

Legally binding  
 signature:

Dr. Peter Zahlmann (General Manager)

This declaration certifies compliance with the indicated directives but implies no  
 warranty of properties.

The safety instructions of the accompanying documentation shall be observed.