

**UK Type Examination Certificate CML 21UKEX1353X Issue 0****United Kingdom Conformity Assessment**

- 1 Product or Protective System Intended for use in Potentially Explosive Atmospheres UKSI 2016:1107 (as amended) – Schedule 3A, Part 1
- 2 Equipment **EXZ1 Explosion-Proof Load Isolation Switch**
- 3 Manufacturer **Craig & Derricott Limited**
- 4 Address **Hall Lane, Walsall,  
WS9 9DP, United  
Kingdom**

5 The equipment is specified in the description of this certificate and the documents to which it refers.

6 Eurofins E&E CML Limited, Newport Business Park, New Port Road, Ellesmere Port, CH65 4LZ, United Kingdom, Approved Body Number 2503, in accordance with Regulation 43 of the Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres Regulations 2016, UKSI 2016:1107 (as amended), certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment intended for use in potentially explosive atmospheres given in Schedule 1 of the Regulations.

The examination and test results are recorded in the confidential reports listed in Section 12.

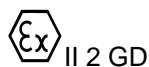
7 If an 'X' suffix appears after the certificate number, it indicates that the equipment is subject to specific conditions of use (affecting correct installation or safe use). These are specified in Section 14.

8 This UK Type Examination certificate relates only to the design and construction of the specified equipment. Further requirements of the Regulations apply to the manufacturing process and supply of the product. These are not covered by this certificate.

9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the confidential report, has been demonstrated through compliance with the following documents:

EN IEC 60079-0:2018      EN 60079-1:2014      EN IEC 60079-7:2015+A1:2018  
EN 60079-31:2014

10 The equipment shall be marked with the following:



Ex db eb IIC T\* Gb

Ex tb IIIC T\* Db

Ta= -40°C to +40°C/+55°C\*\*

\*Temperature class and assigned maximum surface temperature depend on the model. Refer to Section 11

\*\*The maximum ambient temperature depends on the model and the temperature class assigned. Refer to Section 11.



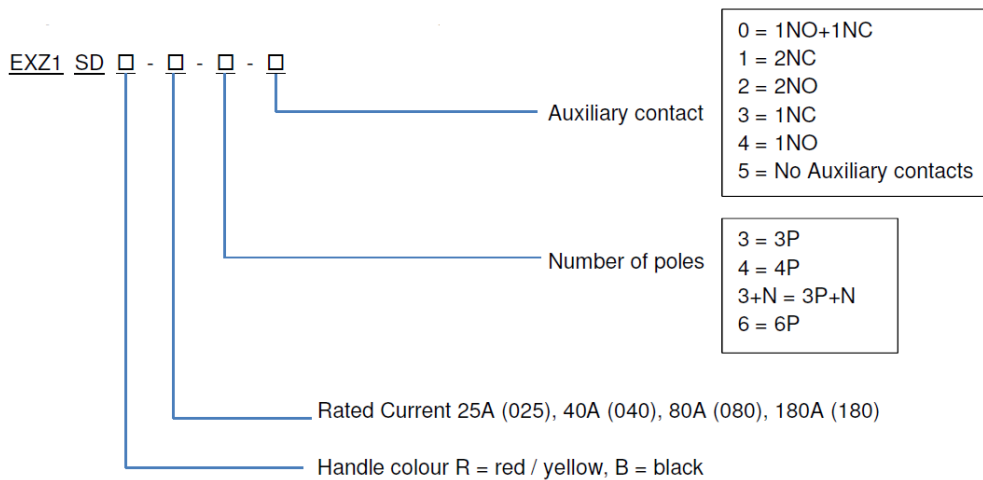
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## 11 Description

EXZ1 SD Series Explosion-Proof Switch Units (Power Distribution box) consist of an increased safety and dust ignition protective enclosure and an arrangement of separately certified and appropriately rated and dimensioned components and accessories.

The CZ12□□ enclosure is constructed of glass fibre reinforced polyester and the CZ13□□ enclosure is constructed of carbon steel or stainless steel. The outer surfaces of the carbon steel enclosures are painted by a plastic spray process. Multiple CZ12□□ / CZ13□□ series explosion-proof boxes can be combined with the use of connection plates.

### Equipment Name/ Model Number



The models and their ratings are shown below:

**Model: EXZ1 SD□-025/□-□**

Rated current: 25A

Rated voltage: Up to 690 V 50/60Hz

Temperature class/assigned max. surface temperature: T6 / T80°C (Ta: -40°C to +40°C)  
T5 / T95°C (Ta: -40°C to +55°C)

IP65

Rated capacity of switch

Switch Module Code	AC3				AC15		DC13	
U	230V	400V	500V	690V	250V	400V	24V	250V
I	25A	25A	20A	16A	10A	8A	8A	1A
Wire Cross Section Area	4.0mm <sup>2</sup>		2.5mm <sup>2</sup>		1.5mm <sup>2</sup>		1.5mm <sup>2</sup>	
Ground Cross Section Area	4.0mm <sup>2</sup>		2.5mm <sup>2</sup>		1.5mm <sup>2</sup>		1.5mm <sup>2</sup>	



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**Model EXZ1 SD□-040/□-□**

Rated current: 40A

Rated voltage: Up to 690 V 50/60Hz

Temperature class/assigned max. surface temperature: T6 / T80°C (Ta: -40°C to +40°C)  
T5 / T95°C (Ta: -40°C to +55°C)

IP65

Rated capacity of switch

Switch Module Code	AC3			
U	230V	400V	500V	690V
I	40A	40A	40A	32A
Wire Cross Section Area	10.0mm <sup>2</sup>			
Ground Cross Section Area	10.0mm <sup>2</sup>			

**Model EXZ1 SD□-080/□-□**

Rated current: 80A

Rated voltage: Up to 690 V 50/60Hz

Temperature class/assigned max. surface temperature: T6 / T80°C (Ta: -40°C to +40°C)  
T5 / T95°C (Ta: -40°C to +55°C)

IP65

Rated capacity of switch

Switch Module Code	AC3			
U	230V	400V	500V	690V
I	80A	80A	80A	63A
Wire Cross Section Area	25.0mm <sup>2</sup>			16mm <sup>2</sup>
Ground Cross Section Area	16.0mm <sup>2</sup>			

**Model EXZ1 SD□-180/□-□**

Rated current: 180A

Rated voltage: Up to 690 V 50/60Hz

Temperature Class/assigned max. surface temperature: T5 / T95°C (Ta: -40°C to +40°C)  
T4 / 130°C (Ta: -40°C to +55°C)

IP65

Rated capacity of switch

Switch Module Code	AC3			
U	230V	400V	500V	690V
I	180A	180A	150A	125A
Wire Cross Section Area	95.0mm <sup>2</sup>		70mm <sup>2</sup>	50mm <sup>2</sup>
Ground Cross Section Area	50.0mm <sup>2</sup>			



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## Earth Plate Accessories

Brass Earth Plates listed below are for use with metal cable glands.

Reference	Description
EXEP0253	Brass Earth Plate For Use With EXZ1SD#02530
EXEP0254	Brass Earth Plate For Use With EXZ1SD#02540
EXEP0403	Brass Earth Plate For Use With EXZ1SD#04030
EXEP0404	Brass Earth Plate For Use With EXZ1SD#04040
EXEP0803	Brass Earth Plate For Use With EXZ1SD#08030
EXEP0804	Brass Earth Plate For Use With EXZ1SD#08040
EXEP1803	Brass Earth Plate For Use With EXZ1SD#18030
EXEP1804	Brass Earth Plate For Use With EXZ1SD#18040

## 12 Certificate history and evaluation reports

Issue	Date	Associated report	Notes
0	07 Oct 2021	R13481B/00	Issue of the prime certificate.

Note: Drawings that describe the equipment are listed or referred to in the Annex.

## 13 Conditions of Manufacture

The following conditions are required of the manufacturing process for compliance with the certification.

- i. The minimum ambient temperature of the product depends on the minimum ambient temperature of all the installed component modules. The maximum ambient temperature of the product depends on the allowed service temperature of all the installed component modules.
- ii. The enclosures incorporate the use of separately certified and suitably dimensioned entry devices with Ex certificates. The IP protection level and the EPL should be not less than the original level of the enclosure.
- iii. Rated values are maximum value, the actual electrical values are determined by mounted electrical apparatus. The manufacturer specifies the final limiting values dependent on power supply specifications, operation pattern, using type etc., and within these limiting values complying with the appropriate standards.
- iv. The maximum power dissipation or contact resistance shall be in accordance with the certificates of the Ex components. Each component's power dissipation shall be determined by the actual input current ( $I$ ) when in operation and the contact resistance ( $R$ ) when operated at 20°C.
- vii. The equipment shall be subjected to electric strength tests as follows:
  - Primary – secondary at a test voltage of  $(1000 + 2U)$  Vac or 1500 Vac (whichever is the greater) where  $U$  is the highest of primary and secondary voltages



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The test voltage to be applied for 60 s. Alternatively, a voltage of 20% higher may be applied for 1 s. There shall be no evidence of flashover or breakdown and the maximum current flowing shall not exceed 5 mA.

- v. For tested and verified components, checks must be carried out to ensure the temperature class and the internal ambient temperature of the equipment does not exceed the ambient temperature and the service temperature of each component.  
For unverified components, a routine temperature rise test must be carried out in accordance with EN/IEC 60079-0 clause 26.5 on each unit to ensure the service temperature of each component is not exceeded.
- vi. The manufacturer shall mark the equipment with the types of protection of the components used.

#### **14 Specific Conditions of Use**

The following conditions relate to safe installation and/or use of the equipment.

- i. Equipment incorporating the CZ1300 enclosure with a coating of epoxy powder must not be used in areas affected by charge producing processes, mechanical friction and separation processes, electron emission (e.g. in the vicinity of electrostatic coating equipment), and pneumatically conveyed dust to avoid electrostatic discharge.
- ii. The equipment shall be used with cable that has a suitable temperature rating.
- iii. Any replacement fasteners shall meet or exceed the yield stress of the original fasteners as defined by the components used.
- iv. The equipment incorporates components that have flamepath dimensions that differ from the requirements of EN/IEC 60079-1 Table 2. Therefore, the flamepaths shall not be repaired or modified by anyone other than the manufacturer.

## Certificate Annex

**Certificate Number** CML 21UKEX1353X  
**Equipment** EXZ1 Explosion-Proof Load Isolation Switch  
**Manufacturer** Craig & Derricott Limited



The following documents describe the equipment defined in this certificate:

### Issue 0

Drawing No	Sheets	Iss.	Approved date	Title
EPC0265	1 of 1	6	07 Oct 2021	C&D-CZ Trade Agent Rating Label Detail