

Ex Zone 1, 2, 21 & 22 Ex 'e'

General Description

Craig & Derricott has been associated with the design and manufacture of Ex products for more than 30 years. The current product range has been developed to meet the technical requirements of today's market and a great deal of the design consideration has been given to bringing a quality product to the market at a competitive price.

The 'EXZ1' range of enclosed switch-disconnectors are supplied in Ex'e' enclosures manufactured from glass reinforced polyester sealing to IP65 ensuring the product will withstand being installed in the harshest of industrial environments.

The operating handles come standard in Red/Yellow and can be padlocked in the 'Off' position. All lids are mechanically interlocked with the isolating switch and are removable in the 'On' position only. If you would require a black handle instead please replace R in the catalogue number with a B e.g. EXZ1SDR02530.

Available in ratings from 25A - 180A the isolating switch interiors are supplied in either 3 or 4 pole formats complete with 1 N/O (Early break) & 1 N/C (Late make) auxiliary contacts.



Catalogue Numbers

| Rating | Format | Handle Colour | Cat. No. | Optional Brass Earthing Plate Cat. No. | Enclosure Size |
|--------|--------|---------------|--------------|--|----------------|
| 25A | 3P+Aux | Red/Yellow | EXZ1SDR02530 | EXEP0253 | A |
| | 4P+Aux | Red/Yellow | EXZ1SDR02540 | EXEP0254 | |
| 40A | 3P+Aux | Red/Yellow | EXZ1SDR04030 | EXEP0403 | B |
| | 4P+Aux | Red/Yellow | EXZ1SDR04040 | EXEP0404 | |
| 80A | 3P+Aux | Red/Yellow | EXZ1SDR08030 | EXEP0803 | C |
| | 4P+Aux | Red/Yellow | EXZ1SDR08040 | EXEP0804 | |
| 180A | 3P+Aux | Red/Yellow | EXZ1SDR18030 | EXEP1803 | D |
| | 4P+Aux | Red/Yellow | EXZ1SDR18040 | EXEP1804 | |

Aux - 1 N/O (Early break) & 1 N/C (Late make)

Brass Earthing Plates

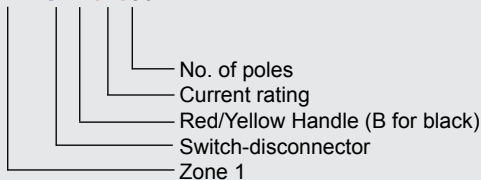
To enable armoured cables to be earth bonded within the insulated enclosure a selection of pre-drilled earthing plates are available for each enclosure size.

Optional Brass Earthing Plate shown right.

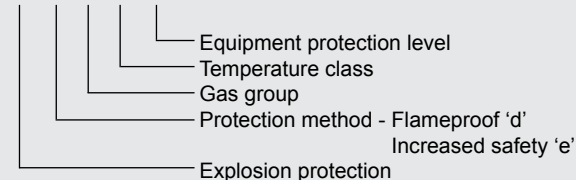


Catalogue No. Key

EXZ1SDR02530



Ex d e IIC T6 Gb



Equipment Marking

| | |
|------|--|
| 25A | II2GD Ex d e IIC T6 Gb Ex tb IIIC T80°C Db (Ta≤40°C) |
| | Ex d e IIC T5 Gb Ex tb IIIC T95°C Db (Ta≤55°C) |
| 40A | II2GD Ex d e IIC T6 Gb Ex tb IIIC T80°C Db (Ta≤40°C) |
| | Ex d e IIC T5 Gb Ex tb IIIC T95°C Db (Ta≤55°C) |
| 80A | II2GD Ex d e IIC T6 Gb Ex tb IIIC T80°C Db (Ta≤40°C) |
| | Ex d e IIC T5 Gb Ex tb IIIC T95°C Db (Ta≤55°C) |
| 180A | II2GD Ex d e IIC T5 Gb Ex tb IIIC T95°C Db (Ta≤40°C) |
| | Ex d e IIC T4 Gb Ex tb IIC T130°C Db (Ta≤55°C) |

Key to Marking

| | |
|---|-------------------------------|
| Specific marking for Explosion protection | II Equipment group |
| | 2 Equipment category |
| | G Environment e.g. Gas |



Certification

All items have been approved with 'ATEX' (CML 15ATEX1197X) and 'IECEX' (IECEX CML 15.0093X) certificates for use in Zones 1, 2, 21 & 22.

The equipment is designed and tested to comply with the following:-

- EN 60079-0 Electrical Atmospheres, Part 0 : Equipment - General requirements.
- EN 60079-1 Electrical Atmospheres, Part 1 : Equipment protection by flameproof enclosures 'd'.
- EN 60079-7 Electrical Atmospheres, Part 7 : Equipment protection by increased safety 'e'.
- EN 60947-1 Low-Voltage switch gear and controlgear - Part 1:general rules.
- EN 60947-3 Low-Voltage switch gear and controlgear - Part 3:switches, disconnectors, switch-disconnectors and fuse combination units.
- EN 60529 Degrees of protection provided by enclosures. (IP Code)

Ex Zone 1, 2, 21 & 22 Ex 'd'

General Description

A range of Switch-Disconnectors housed in heavy duty cast enclosures - ATEX certified for use in Cat II, Zones 1, 2, 21 & 22 environments.

Certifications and Approvals

- Certification Code **Ex II 2 GD Ex d IIB**
- **Ex tD A21 IP6X**
- Certification No. **ITS 09 ATEX 16433X, ITS 09 ATEX 16436U**
- Certification standard **EN 60079-0, EN 60079-1, EN 61241-0 & EN 61241-1**
- Operating temperature **-20°C to +40°C / +60°C (See temperature class below)**
- Ingress Protection **IP65**

Construction

High quality heavy duty cast enclosures are used throughout the range. (Cast Iron 16A - 63A, Cast Aluminium 80A - 250A). The enclosures are supplied with large cable entries which can be fitted with approved reducers to suit individual cable requirements. Specific entry requirements can be accommodated - please specify when ordering.

All load switching interiors are supplied as either 3P+N (switched neutral) or 6P and have AC23A ratings to BS EN 60947-3. Auxiliary contacts are available for applications such as SCADA packages. Finish - RAL 7035 Two pack grey epoxy coating over etching primer.



Typical small assembly



Example of a 100A assembly

Catalogue Numbers

| Current Rating (A) | Format | Catalogue No. | Enclosure Ref. | Supplied Entries* | External Earth | Temperature Class | |
|--------------------|-----------|-----------------------------|----------------|-------------------|----------------|-------------------|------|
| | | | | | | 40°C | 60°C |
| 16 | 3P+N+2E/B | DGC0164EBZ1 | G21 | 3 x M20 | M6 | T6 | T5 |
| 25 | 3P+N+2E/B | DGC0254EBZ1 | G21 | 4 x M20 | M6 | T6 | T5 |
| 20 | 6P + 2E/B | DGC0206EBZ1 | G21 | 2 x M25 + 1 x M20 | M6 | T6 | T5 |
| 40 | 3P+N+2E/B | DGC0404EBZ1 | G22 | 2 x M25 + 1 x M20 | M8 | T6 | T5 |
| 40 | 6P + 2E/B | DGC0406EBZ1 | G22 | 2 x M25 + 1 x M20 | M8 | T6 | T5 |
| 63 | 3P+N+2E/B | DGC0634EBZ1 | G22 | 2 x M25 + 1 x M20 | M8 | T6 | T5 |
| 80 | 3P+N+2E/B | DGC0804EBZ1 | G24 | 3 x M32 + 1 x M20 | M8 | T6 | T6 |
| 100 | 3P+N+2E/B | DGC1004EBZ1 | G25 | 3 x M32 + 1 x M20 | M8 | T6 | T6 |
| 125 | 3P+N+2E/B | DGC1254EBZ1 | G25 | 3 x M40 + 1 x M20 | M8 | T6 | T6 |
| 160 | 3P+N+2E/B | DGC1604EBZ1 | G25 | 2 x M32 + 1 x M20 | M8 | T6 | T6 |
| 200 | 3P+N+2E/B | DGC2004EBZ1 | G28 | 3 x M50 + 1 x M20 | M10 | T6 | T6 |
| 250 | 3P+N+2E/B | DGC2504EBZ1 | G28 | 3 x M50 + 1 x M20 | M10 | T6 | T6 |

* Other entry configurations available on request.

The items listed are standard products. If you require a bespoke arrangement, then please contact our technical sales staff who will be pleased to discuss your individual requirements.



How safe is your workspace?

From July 2006 the onus was placed upon companies to ensure that all equipment within their organisations is suitable for the environment in which it is being used. This was aimed particularly at areas where there may be a possibility of a combustible atmosphere being present, even for short periods i.e. less than 10 hours/year.

People normally think of such atmospheres as being gases, mists or vapours, however there are various industries where a conductive or non-conductive dust mixed with air in the right proportion can become explosive. It is these areas where the Craig & Derricott ATEX Group II (Zone 22) equipment can be used to help you comply with Health & Safety regulations.

Typical industries where such atmospheres may be generated:-

- Grain Mills
- Textiles
- Cargo Handling
- Pharmaceuticals
- Powder Coating Plant
- Chemicals
- Woodworking
- Waste Processing

There are different degrees of protection against explosive dusts, and Zone 22 is defined as:-

"A place in which an explosive atmosphere, in the form of a cloud of combustible dust in air, is not likely to occur in normal operation but, if it does occur, will persist for a short period only."

Applicable Regulations/Specifications

- **Directive 94/9/EC** ("Manufacturers Directive") Sets out the route equipment manufacturers must take to get their products certified for use in hazardous environments.
- **Directive 1999/92/EC** ("Users Directive") Defines the classifications for protection zones, and the approach users must take to ensure that the correct equipment is matched to specific hazardous environments.

Both of the above are classed as 'ATEX' directives and are concerned solely with ensuring safety in the workplace.

- **DSEAR** Dangerous Substances and Explosive Atmospheres Regulations 2002.
- **BS EN 60079-0** Explosive atmospheres - Part 0: Equipment - General requirements.
- **BS EN 60079-31** Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t".
- **BS EN 61241-0** Electrical apparatus for use in the presence of combustible dust - General requirements.
- **BS EN 61241-1** Electrical apparatus for use in the presence of combustible dust - Protection by enclosures 'tD'.
- **BS EN 60529** Specification for degrees of protection provided by enclosures. (IP code)
- **BS EN 60947-3** Specification for low-voltage switchgear and control gear.
- **BS EN 60204-1** Safety of machinery. Electrical equipment of machines - General requirements.

ATEX Switch-Disconnectors 20A - 63A

Craig & Derricott has been manufacturing enclosed switchgear for more than 70 years. We have incorporated all of that experience in producing an outstanding product that has now been approved for use in explosive dust atmospheres.

Using high quality die cast aluminium and hinged door sheet steel enclosures the range covers 20A - 63A ratings.

Catalogue Numbers

| Rating | Format | Cat. No. | Enclosure Size |
|--------|-------------|--------------|----------------|
| 20A | 6P+2 EB Aux | SDDG206EBZ22 | A |
| 25A | 3P+2 EB Aux | SDDG253EBZ22 | A |
| 32A | 3P+2 EB Aux | SDDG323EBZ22 | A |
| | 6P+2 EB Aux | SDDG326EBZ22 | B |
| 40A | 3P+2 EB Aux | SDDG403EBZ22 | B |
| | 6P+2 EB Aux | SDDG406EBZ22 | B |
| 63A | 3P+2 EB Aux | SDDG633EBZ22 | B |
| | 3P+2 EB Aux | SDMG633EBZ22 | C |
| | 6P+2 EB Aux | SDMG636EBZ22 | D |

Other ratings are available upon request.

Design & Safety Features

- All items allow for the fitting of up to three padlocks in the 'Off' position.
- Units are inclusive of fixings outside of the enclosure seal area and an external earth point.



Certification Details 20A - 63A

Die cast Aluminium / Sheet Steel Coding

II 3D
tc IIIB T85°C Dc

Complies in part or in full with standards:-

BS EN 60079-0, BS EN 60079-31
BS EN 60529, BS EN 60947-3, BS EN 60204-1

