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Isolation Equipment

- Moulded, Deep Drawn & Stainless Enclosures
- IP41 & IP65 Enclosures
- 'ATEX C' Zone 22
- Fire Rated Enclosures
- Load Break Switches
- Accessories

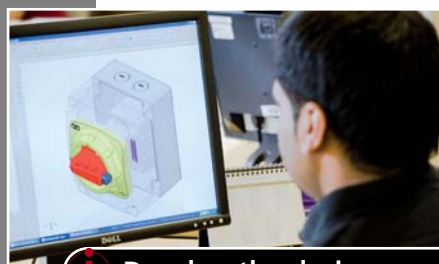


**CRAIG &
DERRICOTT**

...make the switch



Contact us



Develop the design



Manufacture product



Rapid delivery



Fit and forget

Craig & Derricott have been at the forefront of switch disconnecter design for more than 20 years. During that time our products have earned a well deserved reputation for quality and reliability.

Building on this, the i-switch range combines modern styling within a cost effective design to ensure easy installation and maximum safety in use.

Additionally the i-switch range broadens our enclosure offerings to include:

- IP41 sealed versions of our enclosed 32 to 1000A switch disconnecter and fuse combination switches
- Deep drawn sheet steel and stainless IP65 sealed enclosures for our switch disconnectors and changeover switches rated 20-63A

Switchgear manufacturers and OEMs looking for switch disconnectors, fuse combination switches and changeover switches can now select from our range of isolators and accessories designed to meet a wide range of application requirements.

This catalogue covers our range of standard i-switch products. However, this is only a small part of our capability. As a UK based Design & Manufacturing business we pride ourselves on being able to offer bespoke & special versions of our products in one off or larger quantities delivered in short lead times. Simply contact our sales team to discuss your requirements and take advantage of our bespoke mi-switch service for "make to order" products.

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* photographs courtesy of Trevor Aston Photography

General Description

Switchgear housed in moulded plastic enclosures provides the basis for most industrial applications and the added benefits offered by the 'i-switch' range provide the user with a wealth of opportunities when selecting the correct item for a specific application. Sealing to IP65 is a standard feature as is the ability to add a selection of auxiliary blocks providing additional contacts and a choice of Neutral assemblies.

With the i-switch range comes an important safety feature which prevents the enclosure cover being removed when the device has been padlocked in the 'Off' position. When combined with the excellent on-load breaking capacity of the i-switch family this feature ensures that the term 'Safety Switch' is fully satisfied.



Safety Features

Padlocking

All items allow for the insertion of up to three padlocks in the 'Off' position. Standard hasp diameter Ø6.4



An option to allow padlocking in the 'On' position is available to special order.

Switch Disconnectors (O-I)

Catalogue Numbers

Rating	Format	Interior Switch Product Range	Cat. No.	Enclosure Size *
20A / 25A	2P	CS25	SDP252	A
	3P	CS25	SDP253	
	3P+N**	CS25	SDP253N	
	3P+2 EB Aux	CS25	SDP253EB	
	6P	GX20	SDP256	
	6P+2 EB Aux	GX20	SDP256EB	
40A	2P	CS40R	SDP402	B
	3P	CS40R	SDP403	
	3P+N**	CS40R	SDP403N	
	3P+2 EB Aux	CS40R	SDP403EB	
	6P	GX40	SDP406	
	6P+2 EB Aux	GX40	SDP406EB	
63A	2P	CS63	SDP632	B
	3P	CS63	SDP633	
	3P+N**	CS63	SDP633N	
	3P+2 EB Aux	CS63	SDP633EB	

** switched neutral (Early make, late break)

Changeover Switch Disconnectors (I-O-II)

Rating	Format	Interior Switch Product Range	Cat. No.	Enclosure Size *
20A	2P	GX20	SCODP252	A
	3P	GX20	SCODP253	
	4P	GX20	SCODP254	
40A	2P	GX40	SCODP402	B
	3P	GX40	SCODP403	
	4P	GX40	SCODP404	

Safety Interlock

Screwed lid enclosures have always been open to abuse by having the lid removable when the isolator is off and padlocked. This would allow the switch shaft to be turned manually to the 'On' position, thus defeating the safety padlocking feature.

The 'i-switch' range now incorporates a mechanical interlock which when a padlock is inserted prevents the enclosure lid from being removed.

*



Neutral Link
(Unswitched)

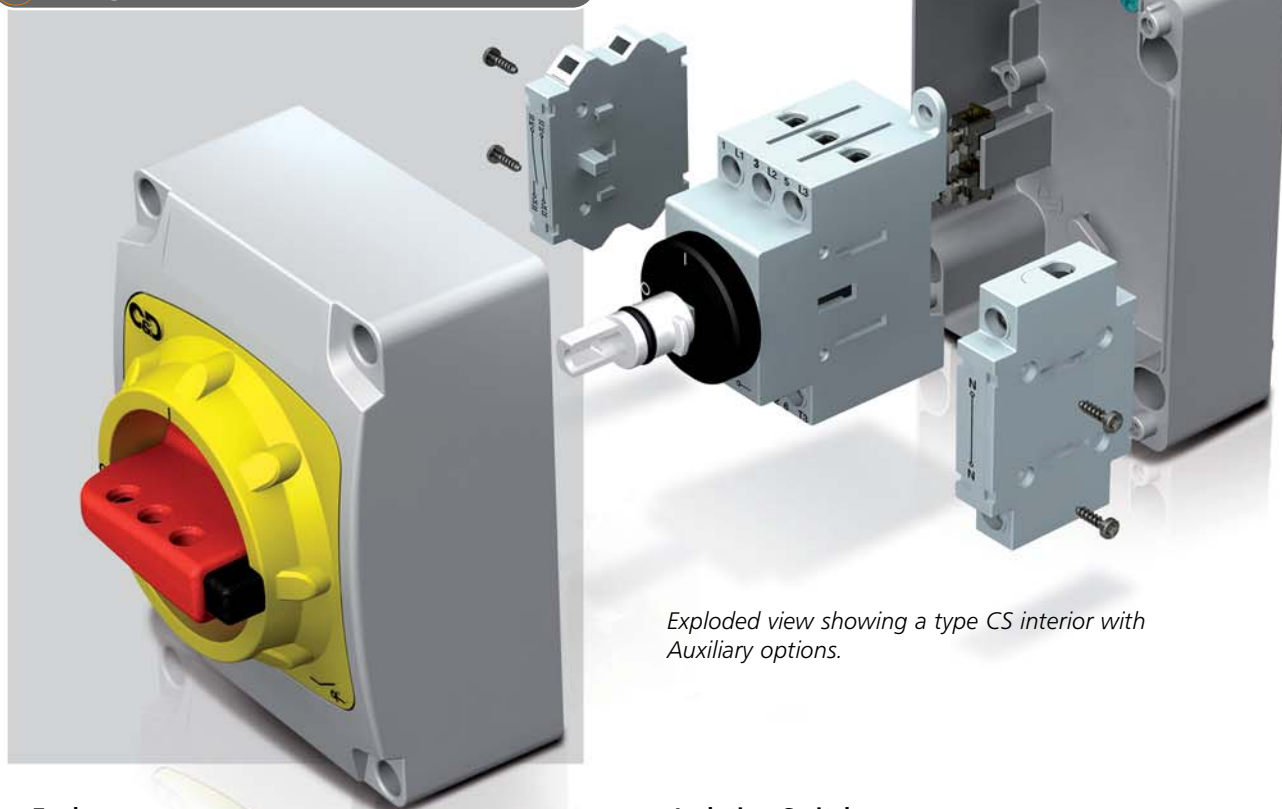
2 Early Break
Auxiliary

Neutral Link
(Switched)

Accessories (applicable to type CS interiors only)

Description	Cat. No.
Auxiliary Contact - 2 Early Break	SAUX2EB
Auxiliary Contact - 1 N/O + 1 N/C	SAUXCO
25A Neutral (Unswitched)	SNL25
40A Neutral (Unswitched)	SNL40
63A Neutral (Unswitched)	SNL63
25A Neutral (Switched)	SSP25
40A Neutral (Switched)	SSP40
63A Neutral (Switched)	SSP63

Design Features



Exploded view showing a type CS interior with Auxiliary options.

Enclosure

Material	PC/ABS
Colour	Enclosure - Grey Ral 7035
Entries	Size A Enclosure - 2 x M20 knock-outs on top & bottom faces. Size B Enclosure - 2 x M20/25 knock-outs on top & bottom faces. Both Sizes - 2 x M20 knock-outs on back face
Cover screws	Stainless Steel (Captive)
Fixings	Outside IP65 sealed cavity

Isolating Switches

2&3 Pole	Type CS base mounted (Accepts add-on Aux blocks & neutral pole)
6 Pole	Type GX base mounted (also available with 2 E/B Aux)

Earthing

Two earth continuity terminals are provided in the base of each enclosure.



Technical Specification

Isolator Interiors

Data supplied against tests to IEC/BS EN 60947-3

Application	Sym.	Unit	Category	Rating							
				16A	20/25A	32A	40A	63A	80A		
Switch Product Range	-	-	-	CS16	GX20	CS25	CS32	GX40	CS40R	CS63	CS80
Rated thermal current	I_{the}	A		16	20	25	32	40	40	63	80
Rated Insulation voltage	U_i	V		690	690	690	690	690	690	690	690
Rated impulse voltage	U_{imp}	kV		6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Rated operational power (3 phase AC)		kW	380/440V - AC23	7.5	7.5	11.0	15.0	18.5	15.0	25.0	30.0
			500V - AC23	9.0	7.5	15.0	15.0	15.0	15.0	30.0	37.0
			600V - AC23	9.0	7.5	15.0	15.0	15.0	15.0	30.0	30.0
Rated short time withstand current (1 sec)	I_{cw}	A		400	250	500	600	800	600	1300	1400
Max. fuse size for short circuit protection (gG characteristic)		A	10kA	35	20	35	32	40	40	80	80
			25kA	32	16	32	32	35	32	63	63
			50kA	32	-	32	32	-	32	63	63
Connecting capacity		-	Terminal type								
		mm ²	Flexible type	6.0	2.5 x 2	6.0	6.0	6.0 x 2	6.0	16.0	16.0
		mm ²	Rigid cable	10.0	2.5 x 2	10.0	10.0	10.0 x 2	10.0	25.0	25.0
		Nm	Tightening torque	1.2	1.0	1.2	1.2	1.0	1.2	1.2	1.2

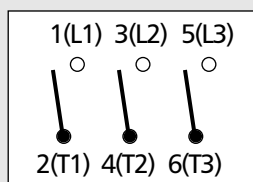
Auxiliary Contacts

Data supplied against tests to IEC/BS EN 60947-5-1

Application	Sym.	Unit	Rating
Rated Insulation Voltage	U_i	V	690
Rated Thermal Current	I_{th}	A	10
Rated operational current (AC15)	I_e	A	110V 8
			220 - 240V 8
			380 - 400V 3
			660 - 690V 1
Max. conductor size	-	mm ²	1.5
Tightening Torque	-	Nm	0.6

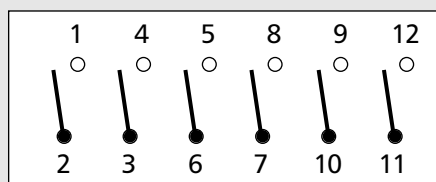
Terminal Markings

O - I (90° indexing)



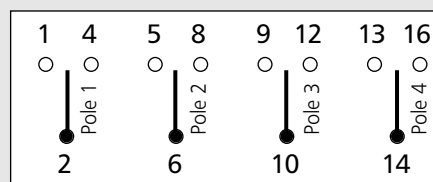
2 & 3 Pole

O - I (90° indexing)



6 Pole

I - O - II (90° indexing)



C/O (4 Pole shown)

General Description

Switchgear housed in steel enclosures provides the user with a robust and cost effective assembly and the added benefits offered by the 'i-switch' range provide the user with a wealth of opportunities when selecting the correct item for a specific application. Sealing to IP65 is a standard feature as is the ability to add a selection of auxiliary blocks providing additional contacts and a choice of Neutral assemblies.

With the i-switch range comes an important safety feature which prevents the enclosure cover being removed when the device has been padlocked in the 'Off' position. When combined with the excellent on-load breaking capacity of the i-switch family this feature ensures that the term 'Safety Switch' is fully satisfied.



Safety Features

Padlocking

All items allow for the insertion of up to three padlocks in the 'Off' position. Standard hasp diameter Ø6.4



An option to allow padlocking in the 'On' position is available to special order.

Switch Disconnectors (O-I)

Catalogue Numbers

Rating	Format	Interior Switch Product Range	Cat. No.	Enclosure Size *
20A / 25A	2P	CS25	SDMG252	A
	3P	CS25	SDMG253	
	3P+N**	CS25	SDMG253N	
	3P+2 EB Aux	CS25	SDMG253EB	
	6P	GX20	SDMG256	
	6P+2 EB Aux	GX20	SDMG256EB	
40A	2P	CS40R	SDMG402	B
	3P	CS40R	SDMG403	
	3P+N**	CS40R	SDMG403N	
	3P+2 EB Aux	CS40R	SDMG403EB	
	6P	GX40	SDMG406	
	6P+2 EB Aux	GX40	SDMG406EB	
63A	2P	CS63	SDMG632	B
	3P	CS63	SDMG633	
	3P+N**	CS63	SDMG633N	
	3P+2 EB Aux	CS63	SDMG633EB	

** switched neutral (Early make, late break)

Changeover Switch Disconnectors (I-O-II)

Rating	Format	Interior Switch Product Range	Cat. No.	Enclosure Size *
20A	2P	GX20	SCODMG252	A
	3P	GX20	SCODMG253	
	4P	GX20	SCODMG254	
40A	2P	GX40	SCODMG402	B
	3P	GX40	SCODMG403	
	4P	GX40	SCODMG404	

Safety Interlock

Screwed lid enclosures have always been open to abuse by having the lid removable when the isolator is off and padlocked. This would allow the switch shaft to be turned manually to the 'On' position, thus defeating the safety padlocking feature.

The 'i-switch' range now incorporates a mechanical interlock which when a padlock is inserted prevents the enclosure lid from being removed.





Accessories (applicable to type CS interiors only)

Description	Cat. No.
Auxiliary Contact - 2 Early Break	SAUX2EB
Auxiliary Contact - 1 N/O + 1 N/C	SAUXCO
25A Neutral (Unswitched)	SNL25
40A Neutral (Unswitched)	SNL40
63A Neutral (Unswitched)	SNL63
25A Neutral (Switched)	SSP25
40A Neutral (Switched)	SSP40
63A Neutral (Switched)	SSP63

Technical Specification

Data supplied against tests to IEC/BS EN 60947-3

Isolator Interiors

Application	Sym.	Unit	Category	Rating (A)				
				20/25A		40A		63A
Switch Product Range	-	-	-	GX20	CS25	GX40	CS40R	CS63
Rated thermal current	I_{th}	A		20	25	40	40	63
Rated insulation voltage	U_i	V		690	690	690	690	690
Rated impulse voltage	U_{imp}	kV		6.0	6.0	6.0	6.0	6.0
Rated operational power (3 phase AC)		kW	380/440V - AC23	7.5	11.0	18.5	15.0	25.0
			500V - AC23	7.5	15.0	15.0	15.0	30.0
			600V - AC23	7.5	15.0	15.0	15.0	30.0
Rated short time withstand current (1 sec)	I_{cw}	A		250	500	800	600	1300
Max. fuse size for short circuit protection (gG characteristic)		A	10kA	20	35	40	40	80
			25kA	16	32	35	32	63
			50kA	-	32	-	32	63
Connecting capacity		-	Terminal type					
		mm ²	Flexible type	2.5 x 2	6.0	6.0 x 2	6.0	16.0
		mm ²	Rigid cable	2.5 x 2	10.0	10.0 x 2	10.0	25.0
		Nm	Tightening torque	1.0	1.2	1.0	1.2	1.2

Design Features

Enclosure

Material Sheet Steel, 1mm thick
 Paint Finish Epoxy Powder Coated
 Colour Enclosure - Grey Ral 7035
 Entries **Size A Enclosure** - 2 x M20 knock-outs on top & bottom faces. **Size B Enclosure** - 2 x M20/25 knock-outs on top & bottom faces.

Isolating Switches

2&3 Pole Type **CS** base mounted
 (Accepts add-on Aux blocks & neutral pole)
 6 Pole Type **GX** base mounted
 (also available with 2 E/B Aux)

Earthing

Two earth continuity terminals are provided in the base of each enclosure.

Auxiliary Contacts

Data supplied against tests to IEC/BS EN 60947-5-1

Application	Sym.	Unit	Rating
Rated Insulation Voltage	U_i	V	690
Rated Thermal Current	I_{th}	A	10
Rated operational current (AC15)	I_e	A	110V 8
			220 - 240V 8
			380 - 400V 3
			660 - 690V 1
Max. conductor size	-	mm ²	1.5
Tightening Torque	-	Nm	0.6

General Description

Switchgear housed in stainless steel enclosures provides the user with an assembly that can be installed in the very harshest of environments. Outdoor in unprotected positions or indoor and subject to severe hygiene cleansing routines, the stainless steel i-switch range offers the ideal solution. Sealing to IP65 is a standard feature as is the ability to add a selection of auxiliary blocks providing additional contacts and a choice of Neutral assemblies.

With the i-switch range comes an important safety feature which prevents the enclosure cover being removed when the device has been padlocked in the 'Off' position. When combined with the excellent on-load breaking capacity of the i-switch family this feature ensures that the term 'Safety Switch' is fully satisfied.



Safety Features

Padlocking

All items allow for the insertion of up to three padlocks in the 'Off' position. Standard hasp diameter Ø6.4



An option to allow padlocking in the 'On' position is available to special order.

Switch Disconnectors (O-I)

Catalogue Numbers

Rating	Format	Interior Switch Product Range	Cat. No.	Enclosure Size *
20A / 25A	2P	CS25	SDS252	A
	3P	CS25	SDS253	
	3P+N**	CS25	SDS253N	
	3P+2 EB Aux	CS25	SDS253EB	
	6P	GX20	SDS256	
	6P+2 EB Aux	GX20	SDS256EB	
40A	2P	CS40R	SDS402	B
	3P	CS40R	SDS403	
	3P+N**	CS40R	SDS403N	
	3P+2 EB Aux	CS40R	SDS403EB	
	6P	GX40	SDS406	
	6P+2 EB Aux	GX40	SDS406EB	
63A	2P	CS63	SDS632	B
	3P	CS63	SDS633	
	3P+N**	CS63	SDS633N	
	3P+2 EB Aux	CS63	SDS633EB	

** switched neutral (Early make, late break)

Changeover Switch Disconnectors (I-O-II)

Rating	Format	Interior Switch Product Range	Cat. No.	Enclosure Size *
20A	2P	GX20	SCODS252	A
	3P	GX20	SCODS253	
	4P	GX20	SCODS254	
40A	2P	GX40	SCODS402	B
	3P	GX40	SCODS403	
	4P	GX40	SCODS404	

Safety Interlock

Screwed lid enclosures have always been open to abuse by having the lid removable when the isolator is off and padlocked. This would allow the switch shaft to be turned manually to the 'On' position, thus defeating the safety padlocking feature.

The 'i-switch' range now incorporates a mechanical interlock which when a padlock is inserted prevents the enclosure lid from being removed





Accessories (applicable to type CS interiors only)

Description	Cat. No.
Auxiliary Contact - 2 Early Break	SAUX2EB
Auxiliary Contact - 1 N/O + 1 N/C	SAUXCO
25A Neutral (Unswitched)	SNL25
40A Neutral (Unswitched)	SNL40
63A Neutral (Unswitched)	SNL63
25A Neutral (Switched)	SSP25
40A Neutral (Switched)	SSP40
63A Neutral (Switched)	SSP63

Technical Specification

Data supplied against tests to IEC/BS EN 60947-3

Isolator Interiors

Application	Sym.	Unit	Category	Rating (A)				
				20/25A		40A		63A
Switch Product Range	-	-	-	GX20	CS25	GX40	CS40R	CS63
Rated thermal current	I_{th}	A		20	25	40	40	63
Rated Insulation voltage	U_i	V		690	690	690	690	690
Rated impulse voltage	U_{imp}	kV		6.0	6.0	6.0	6.0	6.0
Rated operational power (3 phase AC)		kW	380/440V - AC23	7.5	11.0	18.5	15.0	25.0
			500V - AC23	7.5	15.0	15.0	15.0	30.0
			600V - AC23	7.5	15.0	15.0	15.0	30.0
Rated short time withstand current (1 sec)	I_{cw}	A		250	500	800	600	1300
Max. fuse size for short circuit protection (gG characteristic)		A	10kA	20	35	40	40	80
			25kA	16	32	35	32	63
			50kA	-	32	-	32	63
Connecting capacity		-	Terminal type					
		mm ²	Flexible type	2.5 x 2	6.0	6.0 x 2	6.0	16.0
		mm ²	Rigid cable	2.5 x 2	10.0	10.0 x 2	10.0	25.0
		Nm	Tightening torque	1.0	1.2	1.0	1.2	1.2

Design Features

Enclosure

Material Stainless Steel, Grade 304, 1mm thick
Finish Fine Grained
Entries **Size A Enclosure** - 2 x M20 knock-outs on top & bottom faces.
Size B Enclosure - 2 x M20/25 knock-outs on top & bottom faces.

Isolating Switches

2&3 Pole Type **CS** base mounted
(Accepts add-on Aux blocks & neutral pole)
6 Pole Type **GX** base mounted
(also available with 2 E/B Aux)

Earthing

Two earth continuity terminals are provided in the base of each enclosure.

Auxiliary Contacts

Data supplied against tests to IEC/BS EN 60947-5-1

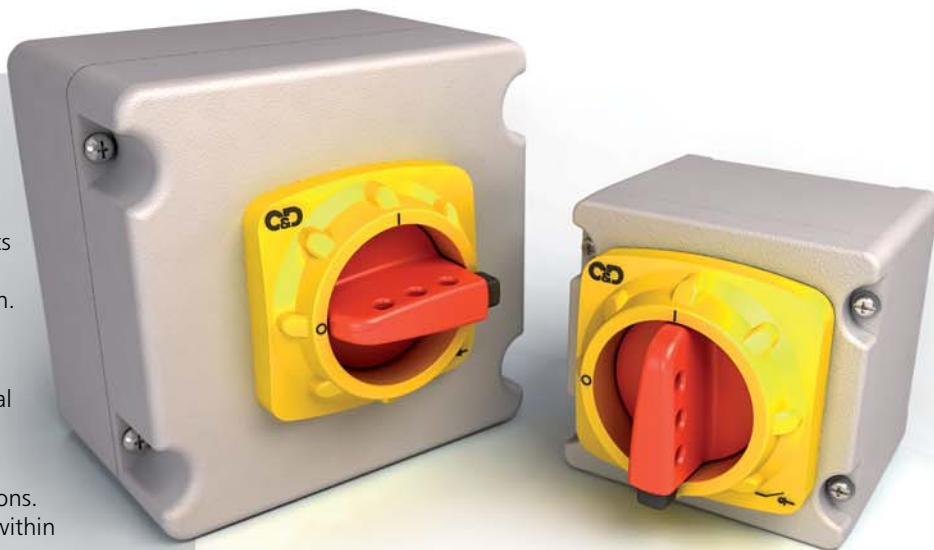
Application	Sym.	Unit	Rating
Rated Insulation Voltage	U_i	V	690
Rated Thermal Current	I_{th}	A	10
Rated operational current (AC15)	I_e	A	110V 8
			220 - 240V 8
			380 - 400V 3
			660 - 690V 1
Max. conductor size	-	mm ²	1.5
Tightening Torque	-	Nm	0.6

General Description

The die-cast enclosed family of switch disconnectors provides the user with a product that will withstand a good deal of abuse. With sealing to IP65 these products can safely be placed in environments where resistance to impacts, moisture and dust/dirt are a concern.

The internal switches are all base mounted and of the latest design with approvals to many international standards.

A wide cross section of formats are available including changeover options. Early break auxiliaries are available within the standard product range.



Safety Features

Padlocking

All items allow for the insertion of up to three padlocks in the 'Off' position. Standard hasp diameter Ø6.4



An option to allow padlocking in the 'On' position is available to special order.

Safety Interlock

Screwed lid enclosures have always been open to abuse by having the lid removable when the isolator is off and padlocked. This would allow the switch shaft to be turned manually to the 'On' position, thus defeating the safety padlocking feature.

The 'i-switch' range now incorporates a mechanical interlock. When a padlock is inserted the enclosure lid is prevented from being removed.

Auxiliary Contacts

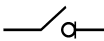
The 'EB' addition to the catalogue numbers denotes the inclusion of 2 early break contacts.

On the 20A rating these are factory fitted to the isolator interior. However on the 40A 2, 3 & 4 pole versions there are additional blocks available including switched and un-switched neutrals.

Switch Disconnectors (O-I) 

Catalogue Numbers

Rating	Format	Interior switch product range	Cat. No.	Enclosure Size *
20A	2P	GX	SDG252	A
	3P		SDG253	
	3P+2 EB Aux		SDG253EB	
	4P		SDG254	
	6P+2 EB Aux		SDG256EB	
40A	2P	CS	SDG402	B
	3P		SDG403	
	3P+2 EB Aux		SDG403EB	
	3P + SN		SDG403N	
	4P		SDG404	
	6P + 2 EB Aux	-	SDG406EB	
		GX	SDG404	

Changeover Switch Disconnectors (I-O-II) 

Rating	Format	Interior Switch product range	Cat. No.	Enclosure Size *
20A	2P	GX	SCODG252	A
	3P		SCODG253	
	4P		SCODG254	
40A	2P	GX	SCODG402	B
	3P		SCODG403	
	4P		SCODG404	

Accessories (applicable to type CS interiors only)

Description	Cat. No.
Auxiliary Contact - 2 Early Break	SAUX2EB
Auxiliary Contact - 1 N/O + 1 N/C	SAUXCO
40A Neutral (Unswitched)	SNL40
40A Neutral (Switched)	SSP40

*



Technical Specification

Isolator Interiors

Data supplied against tests to IEC/BS EN 60947-3

Application	Sym.	Unit	Category	20A	40A	
Format	-	-	-	All	2-4 pole	6 pole+2 E/B
Rated thermal current	I_{the}	A		20	40	40
Rated Insulation voltage	U_i	V		690	690	690
Rated impulse voltage	U_{imp}	kV		6.0	6.0	-
Rated operational power (3 phase AC)		kW	380/440V - AC23	7.5	15.0	15.0
			500V - AC23	7.5	15.0	-
			600V - AC23	7.5	15.0	-
Rated short time withstand current (1 sec)	I_{cw}	A		250	1000	800
Max. fuse size for short circuit protection (gG characteristic)		kW	10kA	20	40	40
			25kA	16	32	40
			50kA	-	32	40
Connecting capacity		-	Terminal type			
		mm ²	Flexible type	2.5	6.0	10.0*
		mm ²	Rigid cable	2.5	10.0	6.0 x 2
		Nm	Tightening torque	1.0	1.2	1.2

* Crimps Only

Auxiliary Contacts are all fully rated with the exception of the 40A (2,3 & 4 pole) items which accept add-on blocks rated as shown below.

Design Features

Material

Die-cast aluminium alloy LM24 (BS 1490)

Finish

Grey - RAL 7035 semi-gloss (textured)

Entries

2 x M20 on bottom face of enclosure as std.

Maximum no. of possible entries:-

Enclosure size A 6 (3 top + 3 bottom)

Enclosure size B 8 (3 top + 3 bottom + 1 on both sides)

Earthing

Terminals are provided on both lid and base to allow full earth continuity to be maintained.

Mounting

All fixings are internal and outside of the IP65 sealed area. Guide channels are provided to assist with the fixing screw location.

Terminal Markings

See Page 4

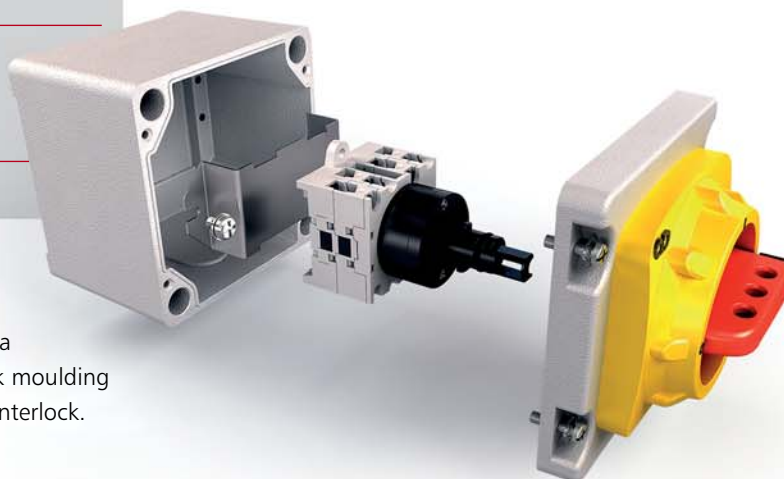
Auxiliary Contacts

Data supplied against tests to IEC/BS EN 60947-5-1

Application	Sym.	Unit	Rating
Rated Insulation Voltage	U_i	V	690
Rated Thermal Current	I_{th}	A	10
Rated operational current (AC15)	I_e	A	110V 8
			220 - 240V 8
			380 - 400V 3
			660 - 690V 1
Max. conductor size	-	mm ²	1.5
Tightening Torque	-	Nm	0.6

Exploded View

Exploded view showing an assembly with a 20A rated interior. Note the shaft interlock moulding which is used for the safety enclosure lid interlock.



General Description

Craig and Derricott have been manufacturing flush mounting isolators for more than 20 years and in that time the design has been carefully modified to give features that installers and end users really need.

The assembly consists of a galvanised back box (complete with knockouts) and stainless steel fascia plate which carries the isolating switch and lockable handle. The fascia plate now comes in an attractive brushed finish which resists the fingerprint effect associated with highly polished surfaces.

Equally at home in kitchens, laboratories, food processing areas, hospitals and many other areas where an elegant, low projection isolation device is required.



i Safety Features

Padlocking

All items allow the insertion of up to three padlocks in the 'Off' position.

It is recommended that padlocking devices with a standard hasp diameter of 6.4mm are used. This will lock the handle in the 'Off' position. (Handles lockable in the 'On' position are available to special order.)



Security

The fixing screws that secure the lid to the back box are supplied with allen key heads to give a degree of security. Fixings with a higher degree of security can be supplied to order.

Switch Disconnectors (O-I)

Catalogue Numbers

Rating	Format	Interior Switch Product Range	Cat. No.	Enclosure Size *
20A	2P	GX	SDFL252	A
	3P		SDFL253	
	4P		SDFL254	
40A	2P	GX	SDFL402	B
	3P		SDFL403	
	4P		SDFL404	
63A	2P	GN	SDFL632	C
	3P		SDFL633	
	4P		SDFL634	

*



Technical Specification

Isolator Interiors

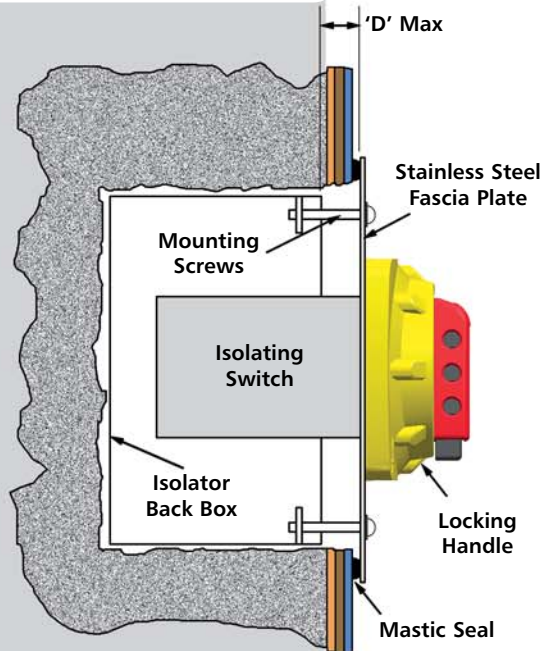
Data supplied against tests to IEC/BS EN 60947-3

Application	Sym.	Unit	Category	Rating (A)		
				20A	40A	63A
Rated thermal current	I_{the}	A		20	40	63
Rated Insulation voltage	U_i	V		690	690	690
Rated impulse voltage	U_{imp}	kV		6.0	6.0	6.0
Rated operational current (AC)		A	400/415V - AC21A	20.0	40.0	63.0
Rated operational power (AC)		kW	380/440V - AC23	7.5	18.5	30
Rated Short Time Withstand (1 sec)	U_{cw}	A		250	800	1600
Minimum mechanical endurance			Cycles	5×10^6	5×10^6	5×10^6
Connecting capacity		-	Terminal type			
		mm ²	Flexible cable x 2	0.5 - 2.5	1.5 - 6	2.5 - 10
		mm ²	Stranded Cable x 2	0.5 - 2.5	1.5 - 10	2.5 - 16
		Nm	Tightening torque	1.0	1.2	1.5

Installation

Typical Installation

('D' max = 20mm with standard length mounting screws.



Whilst the joint between the isolating switch and the stainless steel fascia plate is factory sealed to IP65 min, when installed, the fascia to mounting surface seal is the responsibility of the installer.

To maintain the sealing overall, an efficient bond must be made using some form of gasketing medium. This is particularly vital on tiled surfaces where grout lines can channel moisture down the wall.

A continuous bead of moisture resistant mastic is a simple way of providing a seal, and can improve the appearance of the final assembly on an uneven surface..

Design Features

Material

Fascia Plate - Stainless steel 304. 1.2mm thick. Brushed finish
Back Box - Sheet steel. 1.4 thick. Galvanised finish

Entries

Knockouts in back box.

Sealing

Isolating switch to stainless steel fascia plate - IP65

Mounting Screws

Stainless steel. (M5 x 25 with 'Allen Key' head).

Earthing

Separate earthing points on Fascia plate and back box.

General Description

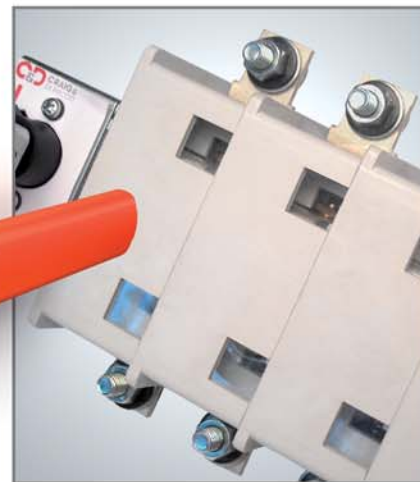
Supplied in grey powder coated sheet steel enclosures, our range of IP41 enclosed products are suitable for normal indoor industrial applications.



The internal arrangement of a SDF41G01603N Fuse Combination Switch.

Design Features

- Safety handle - when padlocked in the 'Off' position, the enclosure door cannot be opened. Capable of accepting up to three padlocks in the 'Off' position. ('On' position on request).
- Door interlock handle can be defeated to enable emergency opening or for testing purposes. (Must be carried out by a competent person)
- Positive contact indication through windows in Switch body.
- Removable gland plates on top & bottom of all enclosures.
- Enclosure size 2 and above isolating switches are mounted on a removable galvanised chassis plate.
- All Fuse Combination Switches supplied complete with a set of fully rated fuse links.



Switch Disconnectors (O-I)

Catalogue Numbers

Rating	Format**	Cat. No.	Enclosure Size *
32A	TPSN	SD41G00323N	1
63A	TPSN	SD41G00633N	1
100A	TPSN	SD41G01003N	3
125A	TPSN	SD41G01253N	4
160A	TPSN	SD41G01603N	4
200A	TPSN	SD41G02003N	5
250A	TPSN	SD41G02503N	5
400A	TPSN	SD41G04003N	6
630A	TPSN	SD41G06303N	8

** switched neutral

Fuse Combination Units (O-I)

Catalogue Numbers

Rating	Format†	Cat. No.	Enclosure Size *
32A	TP&N	SDF41G00323N	2
63A	TP&N	SDF41G00633N	2
100A	TP&N	SDF41G01003N	3
125A	TP&N	SDF41G01253N	4
160A	TP&N	SDF41G01603N	4
200A	TP&N	SDF41G02003N	5
250A	TP&N	SDF41G02503N	5
315A	TP&N	SDF41G03153N	6
400A	TP&N	SDF41G04003N	6
630A	TP&N	SDF41G06303N	8

† unswitched neutral

*



Technical Specification

Refer to the tables on page 17.

Spares / Accessories

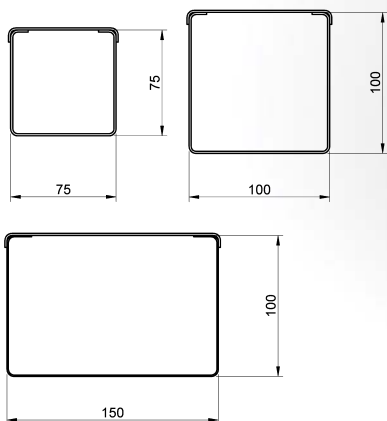
Steel Trunking Glandplates

The use of cable trunking is universally adopted in Electrical installations. To accommodate the use of cable trunking, Cable Glandplates have been designed to suit with the following sizes,

75mm x 75mm (3" x 3")

100mm x 100mm (4" x 4")

150mm x 100mm (6" x 4")



Typical Cable Capacities

(Maximum number of cables 600/1000V PVC)

Trunking Size	Nominal Conductor Size (mm ²)											
Surface (mm)	1.0	1.5	2.5	4.0	6.0	10.0	16.0	25.0	35.0	50.0	70.0	95.0
75 x 75	312	273	191	152	118	76	55	37	28	20	16	11
100 x 100	555	494	350	271	211	135	98	66	50	37	28	21
150 x 100	1250	1112	766	609	475	305	222	148	112	83	64	47

Refer to BS 7671, IEE wiring regulations for specific applications.

Catalogue Numbers

Trunking Size	Case Size (see page 33)					
	1	2	3 & 4	5 & 6	7-9	10
75 x 75	SGP1	-	-	-	-	-
150 x 100	-	SGP2	SGP3	SGP4	SGP5	SGP6
150 x 100	-	-	-	SGP7	SGP8	SGP9

Spares / Accessories *continued*



Electrical Rating (BS EN 60947-1)
 Rated thermal current I_n - 10A AC ratings (inductive A600)
 Rated Insulation voltage U_i - 500V 240V - Make 30A, Break 3A
 Utilisation Category AC15 (DC13) 480V - Make 15A, Break 1.5A

Auxiliary Contacts

Add-on auxiliary blocks are available for all enclosed items. Select the blocks required and the associated mounting kit from the tables below.

Catalogue Numbers

Contact Blocks

For 63A Switch disconnectors	1 N/O + N/C	SAUXCO*
For all other enclosed items	1 N/O (Green)	SAUXNO**
	1 N/C (Red)	SAUXNC

* See page 4 for electrical ratings

** N/O contacts are early break when switching Off when used in conjunction with the following mounting kits.

Mounting Kits

Switch Disconnectors

	63A	100A-160A	200A-250A	400A-800A	1000A-1250A
Cat No.	N/A	SAUXKITA	SAUXKITB	SAUXKITC	SAUXKITD

Fuse Combination Switches

	32A-160A	200A-400A	630A
Cat No.	SAUXKITA	SAUXKITC	SAUXKITD

Fuse Links

The Fuse Combination Units are supplied fitted with a set of fully rated IEC/BS EN 60269 (BS88) fuse links.

Replacements can be supplied as individual fuse links to the table below.

Fuse links can be fitted of a lower rating to suit a particular load; please refer to the rating table on **page 14** to maintain the correct size/tag format (A2, A4, B1 etc).

Ratings	32A	63A	100A	125A	160A	200A	250A	315A	400A	630A
IEC/BS EN 60269 (BS88) Fuse link Cat Nos	SFL32	SFL63	SFL100	SFL125	SFL160	SFL200	SFL250	SFL315	SFL400	SFL630



Terminal Covers

Terminal protection is provided on all items for live incoming terminals; spare terminal covers are available for replacement or extending the protection to the outgoing connections.

Switch Disconnectors & Fuse Combination Switches

Catalogue Numbers - individual covers

Isol. Rating (A)	32 - 63	100 - 160	200 - 400	630
Terminal Cover Cat No.	Not Req'd.	STS1	STS2	STS3

Fuse Covers

Fuse Link covers are not fitted to the standard Fuse Combination Switch catalogued items. Covers are offered to protect the user where access has to be gained whilst the power is on.

Fuse Combination Switches

Catalogue Numbers - individual covers

Isol. Rating (A)	32 - 160	200 - 250	315 - 400	630
Fuse Cover Cat No.	-	SFS1	SFS2	SFS3



General Description

In addition to the basic features of our IP41 enclosed range, the IP65 family introduces:-

- IP65 handle assemblies
- Changeover Switch Disconnectors
- Sealed gland plates
- Up to 1000A Switch Disconnectors
- Stainless steel enclosures



Design Features

- Safety handle - when padlocked in the 'Off' position, the enclosure door cannot be opened. Capable of accepting up to three padlocks in the 'Off' position. ('On' position on request).
- Door interlock handle can be defeated to enable emergency opening or for testing purposes. (Must be carried out by a competent person)
- Positive contact indication through windows in Switch body.
- Removable gland plates on top & bottom of all enclosures.
- Enclosure size 2 and above isolating switches are mounted on a removable galvanised chassis plate.
- All Fuse Combination Switches supplied complete with a set of fully rated fuse links.



Switch Disconnectors (O-I) —/α—

Catalogue Numbers

Rating	Format**	Sheet Steel	Stainless Steel	Encl. Size *
63A	TPSN	SDG00633N	SDS00633N	1
100A	TPSN	SDG01003N	SDS01003N	3
125A	TPSN	SDG01253N	SDS01253N	4
160A	TPSN	SDG01603N	SDS01603N	4
200A	TPSN	SDG02003N	SDS02003N	5
250A	TPSN	SDG02503N	SDS02503N	5
400A	TPSN	SDG04003N	SDS04003N	6
630A	TPSN	SDG06303N	SDS06303N	8
800A	TPSN	SDG08003N	SDS08003N	8
1000A	TPSN	SDG10003N	SDS10003N	10

** switched neutral

63A & 125A 6 Pole + 2 E/B options available on request

Fuse Combination Switches (O-I) —/α—

Catalogue Numbers

Rating	Format†	Sheet Steel	Stainless Steel	Encl. Size *
32A	TP&N	SDFG00323N	SDFS00323N	2
63A	TP&N	SDFG00633N	SDFS00633N	2
100A	TP&N	SDFG01003N	SDFS01003N	3
125A	TP&N	SDFG01253N	SDFS01253N	4
160A	TP&N	SDFG01603N	SDFS01603N	4
200A	TP&N	SDFG02003N	SDFS02003N	5
250A	TP&N	SDFG02503N	SDFS02503N	5
315A	TP&N	SDFG03153N	SDFS03153N	6
400A	TP&N	SDFG04003N	SDFS04003N	6
630A	TP&N	SDFG06303N	SDFS06303N	8

† unswitched neutral

Changeover Switch Disconnecter (I-O-II) —/α—

Catalogue Numbers

Rating	Format	Sheet Steel	Stainless Steel	Encl. Size *
63A	4P C/O	SCODG00634	SCODS00634	5
100A	4P C/O	SCODG01004	SCODS01004	5
125A	4P C/O	SCODG01254	SCODS01254	5
160A	4P C/O	SCODG01604	SCODS01604	5
200A	4P C/O	SCODG02004	SCODS02004	7
250A	4P C/O	SCODG02504	SCODS02504	7
400A	4P C/O	SCODG04004	SCODS04004	9
630A	4P C/O	SCODG06304	SCODS06304	9

*

see page
33 for
dimensions



Technical Specification

Switch Disconnectors

Data supplied against tests to BS EN 60947-3

Application	Sym.	Unit	Category	Rating (A)											
				32	63	100	125	160	200	250	400	630	800	1000	1250
Rated thermal current	I_{the}	A		32	63	100	125	160	200	270	500	630	720	1000	1250
Rated Insulation voltage	U_i	V		690	690	750	750	750	1000	1000	1000	1000	1000	1000	1000
Rated impulse voltage	U_{imp}	kV		6	6	8	8	12	12	12	12	12	12	8	8
Rated operational current (AC)	I_e	A	up to 415V - AC21A	32	63	100	125	160	200	250	400	630	800	1000	1250
			440-690V - AC21A	-	-	100	125	160	200	250	400	630	800	1000	1250
			up to 415V - AC22A	-	-	100	125	160	200	250	400	630	800	1000	1250
			690V - AC22A	-	-	100	125	160	200	250	400	630	800	-	-
			up to 415V - AC23A	-	-	100	125	160	200	250	400	630	720	-	-
			690V - AC23A	-	-	40	50	63	200	250	350	350	350	-	-
Rated operational current (DC) /poles in series	I_e	A	up to 48V - DC21A	-	-	100/2	125/2	160/2	200/2	250/2	400/2	630/1	800/1	1000/1	1250/1
			220V - DC21A	-	-	100/3	125/3	160/3	200/2	250/2	400/2	630/2	800/2	1000/3	1250/3
			up to 48V - DC22A	-	-	100/2	125/2	160/2	200/2	250/2	400/1	630/1	800/1	-	-
			220V - DC22A	-	-	100/3	125/3	160/3	200/2	250/2	400/2	630/2	800/2	-	-
			up to 48V - DC23A	-	-	100/2	125/2	160/2	200/2	250/2	400/1	630/1	800/1	-	-
			220V - DC23A	-	-	100/3	125/3	160/3	200/2	250/2	400/2	630/2	630/2	-	-
Rated operational power	P_e	kW	400/415V - AC23A	15	25	37	45	45	110	132	200	315	355	400	400
			690V - AC23A	15	30	37	45	45	170	200	315	355	355	-	-
Short circuit making capacity	I_{cm}	kA	Peak value	-	-	3.6	3.6	7	35	35	65	80	80	105	105
Short circuit withstand (1 sec)	I_{cw}	kA	RMS value	0.6	1.3	2.5	2.5	5	8	8	17	17	17	50	50
Min. mechanical endurance	-	-	Operations /2	-	-	20,000	20,000	20,000	16,000	16,000	10,000	10,000	10,000	6,000	6,000
Min. electrical endurance	-	-	415V - at 0.65 pf	-	-	5,000	5,000	1,000	1,000	1,000	1,000	500	500	500	500
Connecting capacity		-	Terminal type												
		mm ²	Min/Max	2.5/10	2.5/25	10/70	10/70	10/95	-	-	-	-	-	-	-
		mm	Stud/Cu palm width	-	-	8x20	8x20	8x20	8x25	10x30	10x40	12x40	12x40	12x60	12x60
		Nm	Tightening torque	1.2	1.3	6	8	8	30-44	30-44	30-44	50-75	50-75	50-75	50-75

Technical Specification

Fuse Combination Disconnectors

Data supplied against tests to BS EN 60947-3

Application	Sym.	Unit	Category	Rating (A)									
				32	63	100	125	160	200	250	315	400	630
Rated thermal current	I_{the}	A		32	63	100	125	160	200	250	315	400	630
Rated Insulation voltage	U_i	V		750	750	750	750	750	750	750	750	750	750
Rated impulse voltage	U_{imp}	kV		12	12	12	12	12	12	12	12	12	12
Rated operational current (AC)	I_e	A	415V - AC22A	32	63	100	125	160	200	250	315	400	630
Rated operational current (DC)*			220V - AC23A	32	63	100	125	160	200	250	315	400	630
Rated making capacity (AC23A)		A	415V, 0.35 pf	320	630	1,000	1,250	1,600	2,000	2,500	3,150	4,000	6,300
Rated breaking capacity (AC23A)		A	415V, 0.35 pf	256	504	800	1,000	1,280	1,600	2,000	2,520	3,200	5,040
Rated Conditional (Fused) short circuit		kA	S/C current rms	80	80	80	80	80	80	80	80	80	80
		A	back up fuse	32	63	100	125	160	200	250	315	400	630
Minimum mechanical endurance			Operations	20,000	20,000	15,000	15,000	15,000	10,000	10,000	10,000	10,000	6,000
Minimum electrical endurance			415V - at 0.65 pf	1,500	1,500	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
BS fuse format				A2, A3	A2, A3	A4	A4	B1-B2	B1-B2	B1-B2	B1-B4	B1-B4	C1-C3
Connecting capacity		-	Terminal type										
		mm ²	Min/Max	16	25	95	95	120	240	240	300	300	400
		mm	Stud/Cu palm width	-	-	8/20	8/20	8/20	10/25	10/25	10/25	10/25	12/50
		Nm	Tightening torque	3.5	5.5	9	12	16	25	30	35	45	50

* Two poles in series



Technical Specification

Changeover Switch Disconnectors



Data supplied against tests to BS EN 60947-3

Application	Sym.	Unit	Category	Rating (A)							
				63	100	125	160	200	250	400	630
Rated thermal current	I_{the}	A		63	100	125	160	200	250	400	630
Rated Insulation voltage	U_i	V		1000	1000	1000	1000	1000	1000	1000	1000
Rated impulse voltage	U_{imp}	kV		12	12	12	12	12	12	12	12
Rated operational current	I_e	A	415V - AC22A	63	100	125	160	200	250	400	630
			415V - AC23A	63	100	125	160	200	250	400	630
Rated making capacity (AC23A)		A	415V, 0.35 pf	630	1,000	1,250	1,600	2,000	2,500	4,000	6,300
Rated breaking capacity (AC23A)		A	415V, 0.35 pf	504	800	1,000	1,280	1,600	2,000	3,200	5,040
Short Circuit Current		kA	RMS (with fuses)	50	50	50	50	100	100	100	80
Rated S/C Making Capacity		A	Peak	10	10	10	10	30	30	40	50
Minimum mechanical endurance			Operations	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000
Minimum electrical endurance			415V - at 0.65 pf	5,000	5,000	5,000	1,000	1,000	1,000	1,000	500
Connecting capacity		-	Terminal type								
		mm ²	Min/Max	16	95	95	120	240	240	300	400
		mm	Stud/Cu palm width	-	8/20	8/20	8/20	10/25	10/25	10/25	12/50
		Nm	Tightening torque	3.5	9	12	16	25	30	45	50

Isolator interiors



Illustration shows the internal arrangement of a SCODG01604 Changeover Switch Disconnecter.



Illustration shows the internal arrangement of a SDG01603N Switch Disconnecter.



Spares / Accessories



Electrical Rating (BS EN 60947-1)
 Rated thermal current I_n - 10A
 Rated insulation voltage U_i - 500V
 Utilisation Category AC15 (DC13)
 AC ratings (inductive A600)
 240V - Make 30A, Break 3A
 480V - Make 15A, Break 1.5A

Auxiliary Contacts

Add-on auxiliary blocks are available for all enclosed items. Select the blocks required and the associated mounting kit from the tables below.

Catalogue Numbers

Contact Blocks

For 63A Switch disconnectors	1 N/O + N/C	SAUXCO*
For all other enclosed items	1 N/O (Green)	SAUXNO**
	1 N/C (Red)	SAUXNC

* See page 4 for electrical ratings

** N/O contacts are early break when switching Off when used in conjunction with the following mounting kits.

Mounting Kits

Switch Disconnectors

	63A	100A-160A	200A-250A	400A-800A	1000A-1250A
Cat No.	N/A	SAUXKITA	SAUXKITB	SAUXKITC	SAUXKITD

Fuse Combination Switches

	32A-160A	200A-400A	630A
Cat No.	SAUXKITA	SAUXKITC	SAUXKITD

Changeover Switch Disconnecter

		63A-160A	200A-630A
Cat No.	Upper Sw.	SAUXKITE	SAUXKITE
	Lower Sw.		

Fuse Links

The Fuse Combination Units are supplied fitted with a set of fully rated IEC/BS EN 60269 (BS88) fuse links. Replacements can be supplied as individual fuse links to the table below.

Fuse links can be fitted of a lower rating to suit a particular load; please refer to the rating table on **page 14** to maintain the correct size/tag format (A2, A4, B1 etc).

Ratings	32A	63A	100A	125A	160A	200A	250A	315A	400A	630A
IEC/BS EN 60269 (BS88)	SFL32	SFL63	SFL100	SFL125	SFL160	SFL200	SFL250	SFL315	SFL400	SFL630
Fuse link Cat Nos										



Terminal Covers

Terminal protection is provided on all items for live incoming terminals; spare terminal covers are available for replacement or extending the protection to the outgoing connections.

Switch Disconnectors & Fuse Combination Switches

Catalogue Numbers - individual covers

Isol. Rating (A)	32 - 63	100 - 160	200 - 400	630
Terminal Cover Cat No.	Not Req'd.	STS1	STS2	STS3

Fuse Covers

Fuse Link covers are not fitted to the standard Fuse Combination Switch catalogued items. Covers are offered to protect the user where access has to be gained whilst the power is on.

Fuse Combination Switches (Catalogue No. is for individual covers)

Isol. Rating (A)	32 - 160	200 - 250	315 - 400	630
Fuse Cover Cat No.	-	SFS1	SFS2	SFS3



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 & Derrickott 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 differing 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 work place.

- **DSEAR** Dangerous Substances and Explosive Atmospheres Regulations 2002
- **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 60204-1** Safety of machinery - electrical equipment of machines - Part 1 General requirements.
- **BS EN 60529** Specification for degrees of protection provided by enclosures (IP code).
- **BS EN 60947-3** Specification for low-voltage switchgear and controlgear.
- **BS EN 60204-1** Safety of machinery. Electrical equipment of machines - General requirements.

ATEX Switch Disconnectors

25A - 63A

Craig & Derrickott has been manufacturing enclosed switchgear for more than 50 years. We have incorporated all of that experience in producing an outstanding product that has now been approved for use in explosive dust atmospheres.

Two purpose designed die-cast enclosures are used to cover the 25A & 32A items, whilst the 63A items are supplied in a sheet steel enclosure. All items have a minimum ingress protection of IP65. The following table lists two popular formats that will fulfil most applications. However, if you specifically require an alternative arrangement, then contact our technical sales staff who will advise on options available.

Catalogue Numbers

Rating	Format	Assembly Form (see left)	Cat. No.	Enclosure Size *
25A	3P+2 EB Aux	2L	DGM253EBZ22	A
	6P+2 EB Aux		DGM256EBZ22	
32A	3P+2 EB Aux	2B	DGM403EBZ22	B
	6P+2 EB Aux		DGM406EBZ22	
63A	3P+2 EB Aux	3B	DGM633EBZ22	C
	6P+2 EB Aux		DGM636EBZ22	

Die-Cast Padlocking Handle

- 2L Lid mounted interior (25A)
- 2B Base mounted interior (32A)

Sheet Steel Enclosure

- 3B Base mounted interior (63A)

i Safety Features

Padlocking

All versions allow the fitting of a padlock in the 'Off' position. **Form 2** construction allows the use of a single padlock, whilst **Form 3** will accept 2 or more.

For Form 2 items it is recommended that padlocking devices with a minimum hasp diameter of 6.4mm are used. This will limit the movement of the handle away from the 'Off' position.

Form 2 can accommodate padlocking in both the 'Off' & 'On' positions. Please add /10 to the cat. No. if required:- e.g. DGM323EBZ22.

i Design Features

Auxiliary Contacts

The 'EB' addition to the catalogue numbers denotes the inclusion of 2 off **early break** contacts.

In all cases these are factory fitted to the isolator interior.

Form 2 auxiliary contacts are fully rated and are designed to open before the main contacts when switching 'Off'. By definition the contacts would be **late make** when switching 'On'.

i Technical Specification

Isolator Interiors

Data supplied against tests to IEC/BS EN 60947-3

Application	Sym.	Unit	Category	Rating		
				25A	32A	63A
Rated thermal current	I _{the}	A		25	40	63
Rated insulation voltage	U _i	V		690	690	690
Rated impulse voltage	U _{imp}	kV		4.0	-	6.0
Rated operational current (AC)		A	400/415V - AC21A	25.0	32.0	63.0
			400/415V - AC22A	25.0	32.0	-
			400/415V - AC23A	25.0	28.0	-
Rated operational power (AC)		kW	3 x 400V - AC23	10.0	15.0	25.0
Conditional short circuit current	I _{imp}	kA		6.0	50.0*	50.0**
Minimum mechanical endurance			Cycles	0.3 x 10 ⁶	0.5 x 10 ⁶	-
Connecting capacity		-	Terminal type			
		mm ²	Flexible cable	2.5 - 6.0	10 max	16.0
		mm ²	Stranded cable	2.5 - 6.0	10 max	25.0
		Nm	Tightening torque	1.6	2.0	2.0

*Fuse in circuit - GEC 'TIS 40'

** Fuse in circuit 63A

i Certification Details

25A -63A

Coding:

Ex II 3D
EX tD A22 IP65 T85°C

Complies in part or full with Standards:

BS EN 50014, BS EN 50281-1-1, BS EN 60529
BS EN 60947-3, BS EN 60204-1

(Must **not** be used in areas which exhibit **conductive dust**.)



General Description

Craig & Derricott has been producing switch disconnectors for more than 20 years. Combining our switching expertise with the specific requirements of the ventilation industry has led to the development of our 'High Temperature Isolator' range. Excellent switching characteristics with high temperature environment contact stability makes this the ideal product range.

The critical role these switches perform is to maintain the power to vital equipment such as ventilation fans, allowing safe evacuation of a business or public area. Often these devices are mounted local to the extraction fans and, as an assembly, it is essential they comply with the stringent thermal requirements of BS EN 12101 - 2003.

The complete range are housed in metal enclosures. The user can therefore be assured that there will be no distortion affecting the connecting cables and its supports.

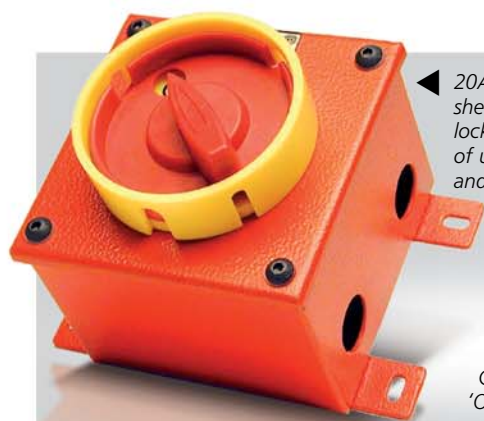
Smoke kills more people than fire.

A well known fact, and it's the job of the ventilation designer to ensure this doesn't happen - and to do this effectively they will need continuous power.

Electrical Characteristics

Application	Sym.	Unit	Category	Rating			
				20A	32A	63A	125A
Enclosure material / size *				Sheet Steel A	Die-Cast B	Sheet Steel C	Sheet Steel D
Rated thermal current	I_{the}	A		20.0	32.0	63.0	125.0
Rated insulation voltage	U_i	V		690	690	690	690
Rated operational current (AC)		A	400/415V - AC21A	20.0	32.0	63.0	125.0
			400/415V - AC22A	20.0	32.0	-	100.0
			400/415V - AC23A	25.0	28.0	-	-
Rated operational power (AC)		kW	3 x 400/415V - AC23A	10.0	15.0	-	55.0 (AC23B)
Conditional short circuit current	I_{cc}	kA		50.0**	50.0**	50.0**	50.0**
Minimum mechanical endurance		Cycles		$>0.5 \times 10^6$	$>0.5 \times 10^6$	$>0.5 \times 10^6$	$>0.5 \times 10^6$
Connecting capacity		-	Terminal type				
		mm ²	Flexible cable	2.5	6.0	25.0	50.0
		mm ²	Stranded cable	2.5	6.0	25.0	50.0

** Max size BS 88 fuse in circuit 20A-32A, 32A-32A, 63A-63A, 125A-125A



20A item housed in red finished sheet steel enclosure. The circular locking handle allows for the insertion of up to 3 padlocks in the 'Off' and 'On' positions.

32A item enclosed within a heavy duty die-cast aluminium enclosure. Can be supplied padlockable in both 'On' & 'Off' positions to special order.



Specification

Within BS EN 12101-3 :2003 (Smoke and heat control systems) which is the specification for powered smoke and heat exhaust ventilators, there are several classes of duty. These define specifically the temperature gradient and upper limit for the test as well as the time period over which the test will last. Within the range of this equipment are the following classes:-

F200 200°C for 120 minutes

F300 300°C for 60 minutes

F400 400°C for 120 minutes

The specification calls for dynamic tests designed to check the performance of complete ventilation systems. The associated isolator is required to maintain the essential supply throughout the duration of the test. To ensure the capability of this equipment, tests have been independently undertaken by a certified fire testing authority.

Catalogue Numbers

Rating	Format	Assembly Form	Catalogue Ref. (Finished Red)	Temp. Class (see above)	Enclosure Size *
20A	2P	Lid mounted in sheet steel enclosure	RD2011/CP/SEHT	F400	A
	3P		RT2021/CP/SEHT		
	3P + 2EB Aux		RT2031/2EB/CP/SEHT		
	3P + NL		RT2021/CP/SEHT/NL		
	4P		RQ2021/CP/SEHT		
	6P		RY2031/CP/SEHT		
32A	2P	Lid mounted in die-cast aluminium enclosure	RD3011/HPHT	F400	B
	3P		RT3021/HPHT		
	3P + 2EB Aux		RT3031/2EB/HPHT		
	3P + NL		RT3021/HPHT/NL		
	4P		RQ3021/HPHT		
	6P		RY3031/HPHT		
	6P + 2EB Aux		RY3041/2EB/HPHT		
63A	2P	Base mounted in sheet steel enclosure	RDB6321/HPHT	F400	C
	3P		RTB6341/HPHT		
	3P + 2EB Aux		RTB6351/2EB/HPHT		
	3P + NL		RTB6341/HPHT/NL		
	4P		RQB6341/HPHT		
	6P		RYB6361/HPHT		
	6P + 2EB Aux		RYB6371/2EB/HPHT		
125A	2P	Base mounted in sheet steel enclosure	RS1BD11/HPHT	F400	D
	3P		RS1BT21/HPHT		
	3P + 2EB Aux		RS1BT31/2EB/HPHT		
	3P + NL		RS1BT21/HPHT/NL		
	4P		RS1BQ21/HPHT		
	6P		RS1BY31/HPHT		
	6P + 2EB Aux		RS1BY41/2EB/HPHT		

Universal Features

- Positive mode contacts.
- Sealing to IP65
- Padlockable in the 'Off' & 'On' positions as standard
- Finished in RAL 3020 (Traffic Red) textured powder coat finish
- Cable Entries
 - 20A 2 x Ø20 plain holes
 - 32A 2 x M20
 - 63A Undrilled bottom gland plate
 - 125A Undrilled bottom gland plate

32A die-cast & 125A sheet steel examples



*



General Description

Craig & Derrick produces several ranges of enclosed switchgear within the i-switch family; each of which uses 'load break' switches in various formats. An increased range of these products are also available for installation in the users own enclosure/panel. All items include all of the necessary options to complete the installation such as shafts, handles, terminal shields etc. Below are listed the various switch formats and options available to the user in the following product types:-

- Switch Disconnectors
- Changeover Switch Disconnectors
- Fuse Combination Units

Switch Disconnectors

ISD Range (16A - 80A)



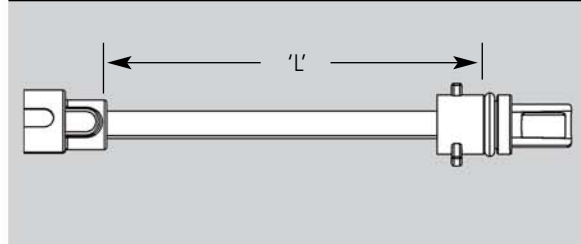
A compact range of switch disconnectors with the capacity to add a range of auxiliary and neutral block options to the basic load break switch block. Features:-

- On-load AC23A ratings.
- Four frame sizes.
- IP20 terminal protection.
- IP65 door interlocking handle.
- DIN rail or screw mounting.
- Add-on auxiliary/neutral blocks for 3 pole version.

Switch Disconnectors

Catalogue Numbers

Current rating	16A	20A	25A	32A	40A	40A	63A	80A
Frame Size *	A0	A2	A0	A0	A0	A3	A1	A1
3 Pole	SD00163	-	SD00253	SD00323	SD00403	-	SD00633	SD00803
6 Pole + 2 E/B Aux	-	SD00256EB	-	-	-	SD00406EB	-	-



Operating Shaft

Catalogue Numbers

Shaft Length 'L'	Catalogue Number
100mm	SSH1
200mm	SSH2

Safety Features

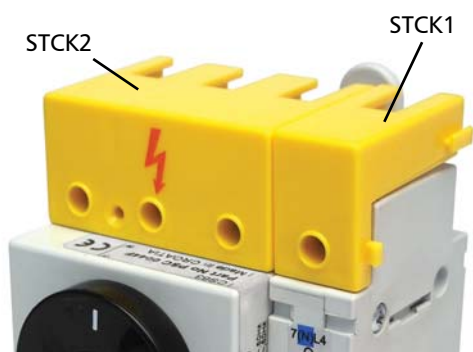


Door Interlocked Handle Assembly

The door interlocked handle is of a stylish design and compact in size. As the illustration shows, it can take up to 3 padlocks in the 'Off' position (Ø6.4 max. hasp diameter).

Catalogue Numbers

Sealing	Catalogue Number
IP65	SDH1



Accessories

Add-on Auxiliary Blocks

Auxiliary/neutral blocks can be fitted on the left, right or both sides of the 3Pole load break switch only. Before installing ensure the load break switch is in the 'Off' position.

Description	Cat. No.
Auxiliary Contact - 2 Early Break	SAUX2EB
Auxiliary Contact - 1 N/O + 1 N/C	SAUXCO
16A Neutral (Unswitched)	SNL16
25A Neutral (Unswitched)	SNL25
32A Neutral (Unswitched)	SNL32
40A Neutral (Unswitched)	SNL40
63A Neutral (Unswitched)	SNL63
80A Neutral (Unswitched)	SNL80
16A Neutral (Switched)	SSP16
25A Neutral (Switched)	SSP25
32A Neutral (Switched)	SSP32
40A Neutral (Switched)	SSP40
63A Neutral (Switched)	SSP63
80A Neutral (Switched)	SSP80

Terminal Covers

Additional protection can be added to the terminals of the 'A1' frame size items by fitting one of the following covers. Both items are supplied moulded in Yellow.

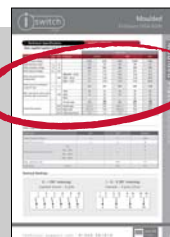
Description	Cat. No.
Neutral Link Cover	STCK1
Switch Disconnecter Cover	STCK2

Assembly Options

Rating (A)	Frame *	Main Switch		Operating Shaft		Door Interlock Handle	Terminal Cover (Screwed)	Auxiliary Contacts		Neutral Links	
		3 Pole	6 Pole	200mm	400mm			1N/O* + 1 N/C	2 E/B	Switched	Unswitched
16	A0	✓		SSH1	SSH2	SDH1		SAUXCO	SAUX2EB	SSP16	SNL16
20	A2		✓					N/A	N/A	N/A	N/A
25	A0	✓						SAUXCO	SAUX2EB	SSP25	SNL25
32	A0	✓						SAUXCO	SAUX2EB	SSP32	SNL32
40	A0	✓						SAUXCO	SAUX2EB	SSP40	SNL40
40	A3		✓					N/A	N/A	N/A	N/A
63	A1	✓					✓	SAUXCO	SAUX2EB	SSP63	SNL63
80	A1	✓					✓	SAUXCO	SAUX2EB	SSP80	SNL80

Technical Specification

For technical specifications please refer to: **Page 4 Moulded Plastic Enclosure**



*



i Switch Disconnectors (continued)

ISD Range (100A - 1250A)



A robust range of load break switches designed to ensure simple installation in applications such as power distribution boards. The compact design also suits OEM's and stand alone enclosure installations. A range of accessories extends the versatility.

Features:-

- On-load AC23A ratings.
- Four frame sizes covering 100A - 1250A.
- Direct lug connection onto Cu palms.
- Supplied as 3 or 4 pole load break switches.
- IP65 sealing door interlocking handles.

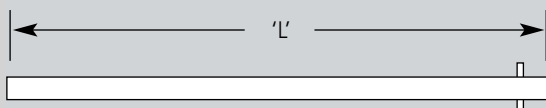
Switch Disconnectors

Catalogue Numbers

Current rating	100A	125A	160A	200A	250A	400A	630A	800A	1000A	1250A
Frame size *	B1	B1	B1	B2	B2	B3	B3	B3	B4	B4
3 Pole	SD01003	SD01253	SD01603	SD02003	SD02503	SD04003	SD06303	SD08003	SD10003	SD12503
4 Pole	SD01004	SD01254	SD01604	SD02004	SD02504	SD04004	SD06304	SD08004	SD10004	SD12504

Operating Shaft

All operating shafts are manufactured from square section steel and zinc plated. The height setting is adjusted by passing the shaft through a bush in the load break switch mechanism and locking it in position using two 'cup point' grub screws.



Catalogue Numbers

		Load Break Switch Current Rating		
Shaft Length 'L'		100 - 160A	200 - 315A	400 - 1250A
200mm		SSH3	SSH4	SSH5
400mm		SSH13	SSH14	SSH15
Shaft Section		6mm ²	8mm ²	12mm ²
Max. Possible	200mm	250	270	285
Enclosure depth	400mm	450	470	485

i Safety Features

Door Interlocked Handle Assembly

The door interlocked handle is of a stylish design in three sizes. As the illustration shows it can take up to 3 padlocks in the 'Off' position (Ø6.4 max. hasp diameter). For emergency or testing situations there is an override facility available for use by a competent person. All handles are sealed to IP65 which will enable installations in a wide variety on environmental conditions.

Catalogue Numbers

		Load Break Switch Current Rating		
		100 - 160A	200 - 315A	400 - 1250A
Handle		SDH2	SDH3	SDH4
Handle length		80mm	80mm	145mm
Shaft section (□)		6mm	8mm	12mm





Accessories

Add-on auxiliary blocks are available for all load-break items. Select the blocks required and the associated mounting kit from the tables located on page 19.

Electrical Rating (BS EN 60947-1)

Rated thermal current	I_{th} - 10A	AC ratings (inductive A600)
Rated Insulation voltage	U_i - 500V	240V - Make 30A, Break 3A
Utilisation Category	AC15 (DC13)	480V - Make 15A, Break 1.5A

Catalogue Numbers

See page 19 for Catalogue Numbers...

Terminal Covers

The catalogue numbers shown are for individual covers. The covers are attached by screwing on to the thread of the terminal bolt.

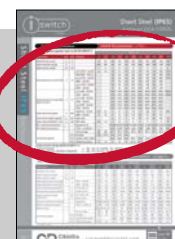
Isol. Rating (A)	100 - 160	200 - 400	630 - 800	1000 - 1250
Terminal Cover Catalogue No.	STS1	STS2	STS3	-

Assembly Options

Rating (A)	Main Switch	Operating Shaft		Door Interlock Handle	Terminal Cover (Screwed)	Auxiliary Contacts	
	3/4 Pole	200mm	400mm			Blocks	Mtg. Kit
100	✓	SSH3	SSH13	SDH2	STS1	SAUXNO & SAUXNC	SAUXKITA
125	✓						
160	✓						
200	✓	SSH4	SSH14	SDH3	STS2		SAUXKITB
250	✓						
400	✓						
630	✓	SSH5	SSH15	SDH4	STS3		SAUXKITC
800	✓						
1000	✓						
1250	✓				-		SAUXKITD

Technical Specification

For technical specifications please refer to: **Page 17 Sheet Steel IP65 Enclosure**



Changeover Disconnectors *ISC Range (63A - 630A)*



A modular design has created a compact range of on-load changeover switches suitable for a wide range of applications

Features:-

- On-load AC23A ratings.
- Windows for visual contact inspection.
- Three frame sizes covering 63A - 630A.
- Direct lug connection onto Cu palms.
- Supplied as 4 pole load break switches..
- IP65 sealing door interlocking handles.

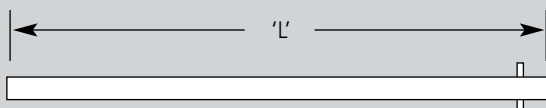
Load Break Changeover Switches

Catalogue Numbers

Current rating	63A	100A	125A	160A	200A	250A	400A	630A
Frame size *	C1	C1	C1	C1	C2	C2	C3	C3
4 Pole	SCOD00634	SCOD01004	SCOD01254	SCOD01604	SCOD02004	SCOD02504	SCOD04004	SCOD06304

Operating Shaft

All operating shafts are manufactured from square section steel and zinc plated. The height setting is adjusted by passing the shaft through a bush in the load break switch mechanism and locking it in position using two 'cup point' grub screws.



Catalogue Numbers

		Load Break Switch Current Rating		
Shaft Length 'L'		63 - 160A	200 - 250A	400 - 630A
200mm		SSH6	SSH6	SSH5
400mm		SSH16	SSH16	SSH15
Shaft Section		12mm ²	12mm ²	12mm ²
Max. Possible	200mm	250	270	285
Enclosure depth	400mm	450	470	485

Safety Features



Door Interlocked Handle Assembly

The door interlocked handle is of a stylish design in two sizes. Each handle is designed to take up to 3 padlocks in the 'Off' position (Ø6.4 max. hasp diameter). For emergency or testing situations there is an override facility available for use by a competent person.

All handles are sealed to IP65 which will enable installations in a wide variety of environmental conditions.

Catalogue Numbers

		Load Break Switch Current Rating	
		63 - 250A	400 - 630A
Handle		SDH5	SDH6
Handle length		145mm	220mm
Shaft section (□)		12mm	12mm



Accessories

Add-on auxiliary blocks are available for all load-break items. Select the blocks required and the associated mounting kit from the tables located on page 19.

Electrical Rating (BS EN 60947-1)

Rated thermal current	I_{th} - 10A	AC ratings (inductive A600)
Rated Insulation voltage	U_i - 500V	240V - Make 30A, Break 3A
Utilisation Category	AC15 (DC13)	480V - Make 15A, Break 1.5A

Catalogue Numbers

See page 19 for Catalogue Numbers...

Assembly Options

Rating (A)	Main Switch	Operating Shaft		Door Interlock Handle	Terminal Cover (screwed)	Auxiliary Contacts	
		200mm	400mm			Blocks	Mtg. Kit
63	✓	SSH6	SSH16	SDH5	N/A	SAUXNO & SAUXNC	SAUXKITE (Upper & Lower Switches)
100	✓						
125	✓						
160	✓						
200	✓						
250	✓	SSH5	SSH15	SSDH6	N/A	SAUXNO & SAUXNC	SAUXKITE
400	✓						
630	✓						

Technical Specification

For technical specifications please refer to: **Page 18 Sheet Steel IP65 Enclosure Changeover Disconnectors**



Fuse Combination Units

ISF Range (32A - 630A)



A robust modular range of fused load break switches. The compact design also suits OEM's and stand alone enclosure installations. A range of accessories extends the versatility.

Features:-

- On-load AC23A ratings
- Wide current range
- Standard IEC/BS EN 60269 (BS 88) fuse links
- Supplied as TP&N (Neutral unswitched)
- IP65 sealing door interlocking handles

Catalogue Numbers

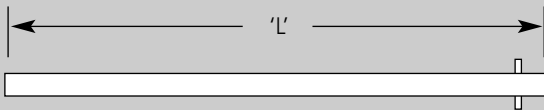
Current rating	32A	63A	100A	125A	160A	200A	250A	315A	400A	630A
Frame size *	D1	D1	D2	D2	D3	D4	D4	D5	D5	D6
TP&N	SDF00323N	SDF00633N	SDF01003N	SDF01253N	SDF01603N	SDF02003N	SDF02503N	SDF03153N	SDF04003N	SDF06303N



i Fuse Combination Units (continued) **ISF Range (32A - 630A)**

Operating Shaft

All operating shafts are manufactured from square section steel and zinc plated. The height setting is adjusted by passing the shaft through a bush in the load break switch mechanism and locking it in position using two 'cup point' grub screws.



Catalogue Numbers

		Load Break Switch Current Rating		
		32 - 160A	200 - 315A	400 - 630A
Shaft Length 'L'	200mm	SSH3	SSH5	SSH5
	400mm	SSH13	SSH15	SSH15
Shaft Section		6mm ²	12mm ²	12mm ²
Max. Possible	200mm	250	300	330
Enclosure depth	400mm	450	500	530

i Safety Features

Designed to complement the handles used on our enclosed equipment, the door interlocked versions are capable of being locked with a maximum of three padlocks. (Ø6.4 max. hasp diameter).

All handles are sealed to IP65 which will enable installations in a wide variety of environmental conditions.

If the contacts should weld due to a fault or an excessive current situation, an override facility is provided for the use of a competent person which will allow the lid to be opened.

Door Interlocked Handle Assembly

Catalogue Numbers

		Load Break Switch Current Rating	
		32 - 160A	200 - 630A
Handle		SDH2	SDH4
Handle length		80mm	145mm
Shaft section (□)		6mm	12mm

i Accessories

FOR DETAILS OF AUXILIARY BLOCKS, TERMINAL COVERS AND FUSE COVERS - SEE PAGE 19

i Assembly Options

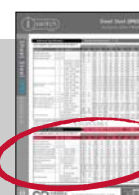
Rating (A)	Main Switch (TP&N)	Operating Shaft		Door Interlock Handle	Terminal Cover (screwed)	FUSE COVERS	Auxiliary Contacts	
		200mm	400mm				Blocks	Mtg. Kit
32	✓	SSH3	SSH13	SDH2	N/A	N/A	SAUXNO & SAUXNC	SAUXKITA
63	✓							
100	✓							
125	✓							
160	✓							
200	✓	SSH5	SSH15	SDH4		SFS1		SAUXKITC
250	✓							
315	✓					SFS2		
400	✓							
630	✓					STS3		

* N/O contacts are Early Break when switching Off

i Technical Specification

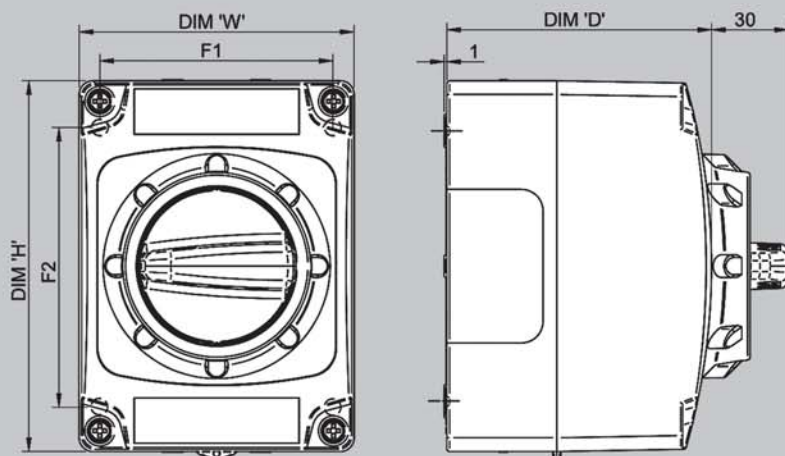
For technical specifications please refer to: **Page 17**

Sheet Steel IP65 Enclosure Fuse Combination Disconnectors



i Moulded Plastic Enclosure

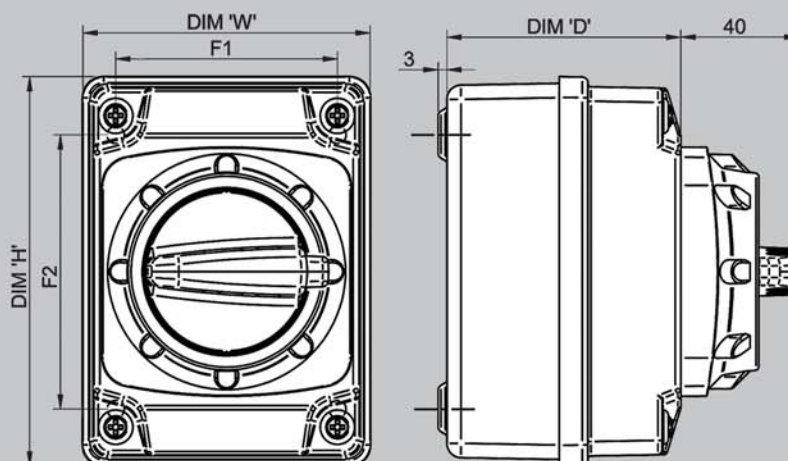
refers to pages 2-4



	Overall Dimensions			Fixing Details		
	H	W	D	F1	F2	Ø
Size A	135	100	95	85	98.5	5.5
Size B	175	130	115	115	135	5.5

i Deep Drawn Steel Enclosure

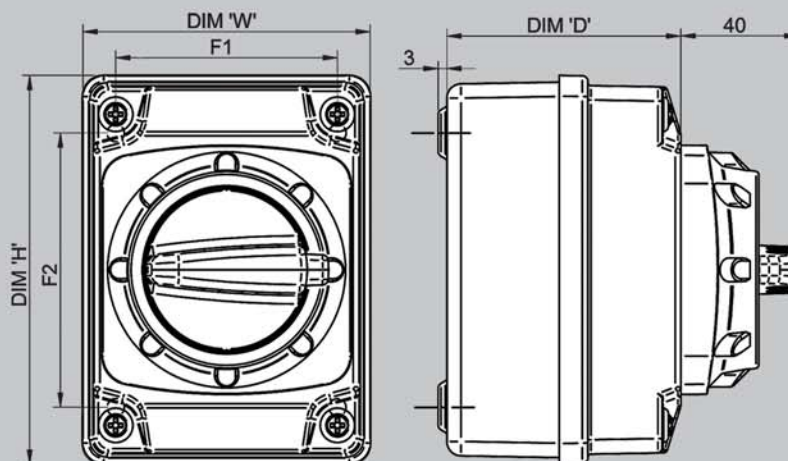
refers to pages 5-6



	Overall Dimensions			Fixing Details		
	H	W	D	F1	F2	Ø
Size A	135	100	80	60	95	5.5
Size B	175	130	100	85	130	5.5

i Deep Drawn Stainless Steel Enclosure

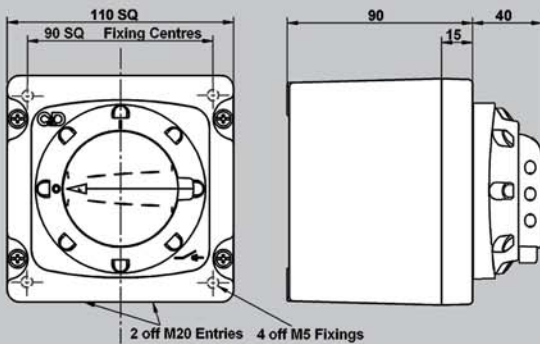
refers to pages 7-8



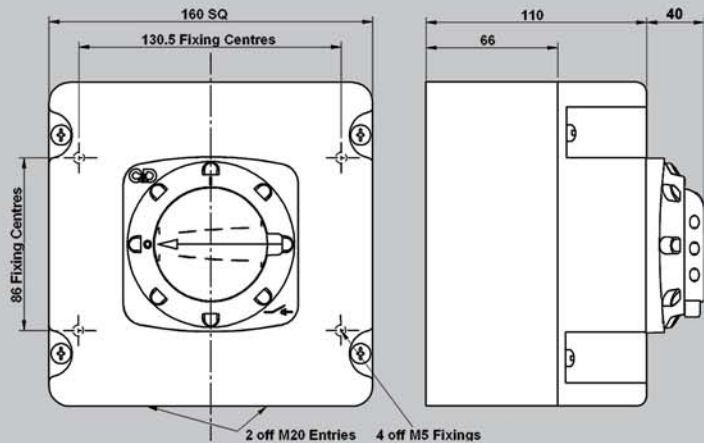
	Overall Dimensions			Fixing Details		
	H	W	D	F1	F2	Ø
Size A	135	100	80	60	95	5.5
Size B	175	130	100	85	130	5.5

Die Cast Enclosure

refers to pages 9-10



size A



size B

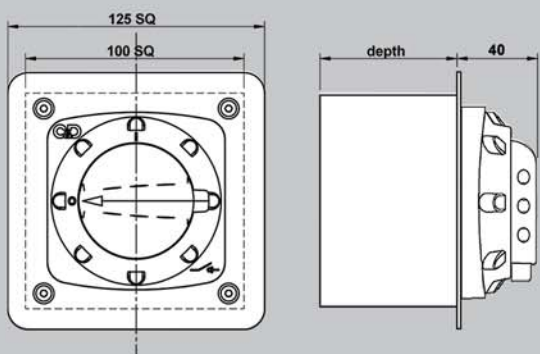
refers to pages:

9

10

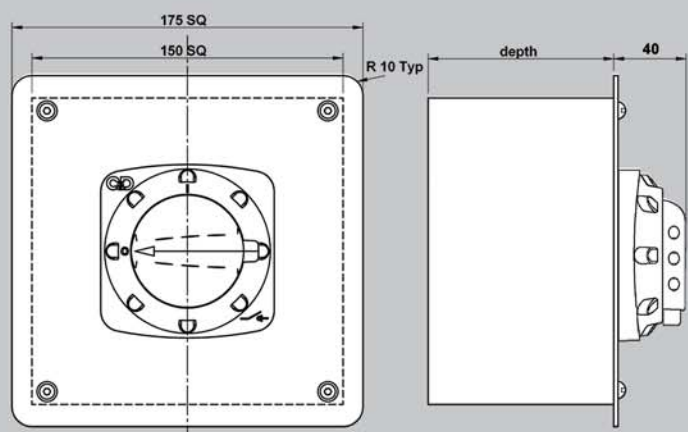
Flush Enclosure

refers to pages 11-12



size A

depth
Enclosure Size A - 75mm



size B & C

depth
Enclosure Size: B - 75mm Size C - 100mm

refers to pages:

11

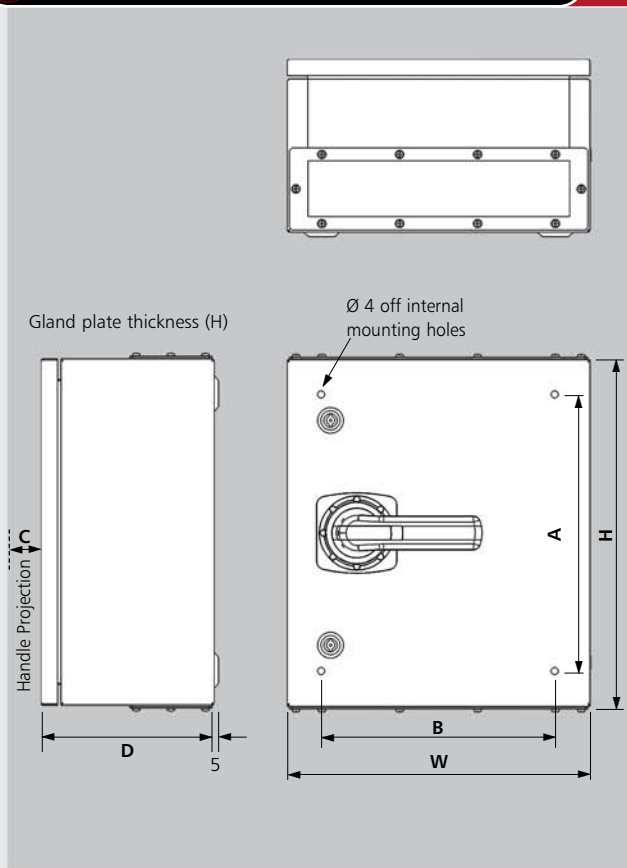
12

refers to pages:

13
14
15
16
17
18
19

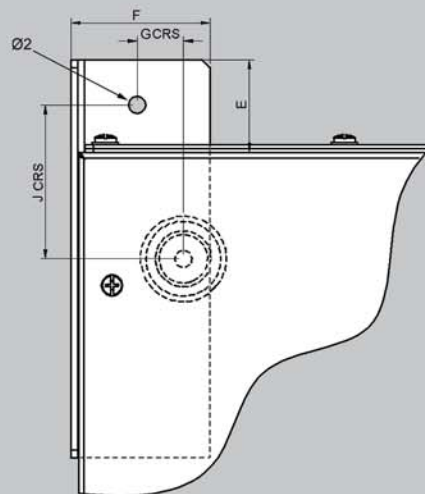
i Sheet Steel IP41 & IP65

refers to pages 13-19



Case Sizes										
Dim	1	2	3	4	5	6	7	8	9	10
H	250	250	400	500	550	750	750	900	900	1000
W	250	300	350	350	450	450	600	600	600	750
D	100	200	200	200	250	275	300	300	400	300
A	170	170	320	420	470	670	670	820	820	920
B	170	220	270	270	370	370	520	520	520	670
C	40	67	67	67	67	67	67	67	67	67
Ø	6.5	6.5	8.5	8.5	8.5	8.5	8.5	10.5	10.5	10.5

External Feet										
E	35	35	35	35	35	35	35	35	35	35
F	53	53	58	58	58	58	58	58	58	58
G	18	18	13	13	13	13	13	13	13	13
J	58	58	58	58	58	58	58	58	58	58
Ø2	6.5	6.5	8.5	8.5	8.5	8.5	8.5	10.5	10.5	10.5



External Mounted Feet (Set of four feet)

Cat Ref (Case Sizes 1&2)	SEFL1/KIT
Cat Ref (Case Sizes 3-7)	SEFL2/KIT
Cat Ref (Case Sizes 8-10)	SEFL3/KIT

i Enclosure Data

Materials

IP41 & IP65 available in sheet steel. IP65 also available in Stainless Steel.

Finish

IP41 & IP65	IP65 only
Sheet steel (Grey) Iron Phosphate pre treatment + Powder coat RAL 7035 (Light grey) textured finish.	Stainless Steel Grade 304 Finely grained surface

Hinges

Metal with quick release pins.

Cabinet Door Locks

All metal locks supplied with one key per enclosure.

IP41	IP65
Enclosure Sizes 1 & 2 (Two screw fixings) 2 Locks	1 Lock
Enclosure Sizes 3 - 9 2 Locks	2 Locks
Enclosure Size 10 3 Locks	3 Locks

Gland Plates

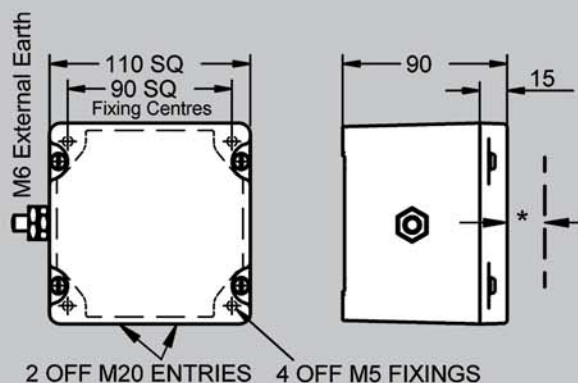
All enclosures supplied with a removable gland plate on the top & bottom faces finished to match the enclosure.

Chassis Plate

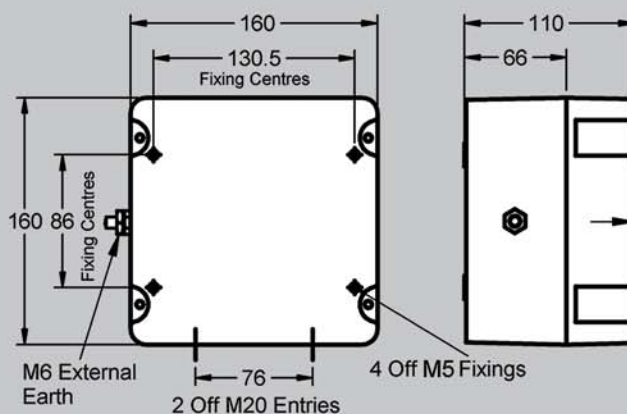
Above case size 1, all assemblies are supplied with the switching element mounted on a removable internal chassis plate.
Material - 2mm galvanised steel.

i ATEX 'C' Zone 22

refers to pages **20-21**



size A

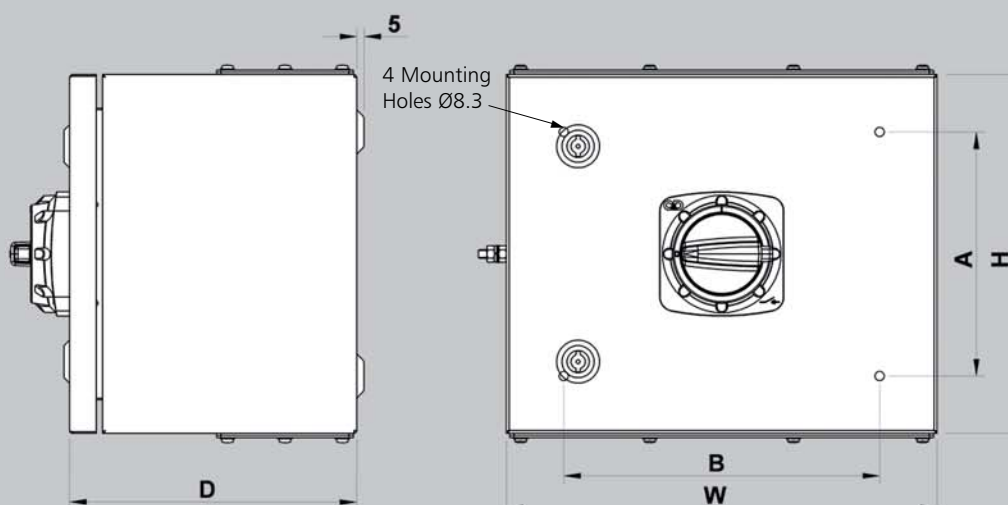
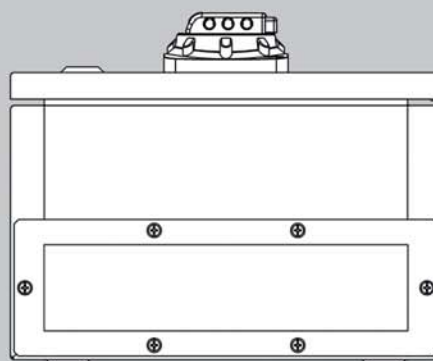


size B

size C

Dim	H	W	D	A	B
mm	250	300	200	170	220

External mounted feet kit available for this item.
Please contact our sales department for details.



refers to pages:

20
21

refers to pages:

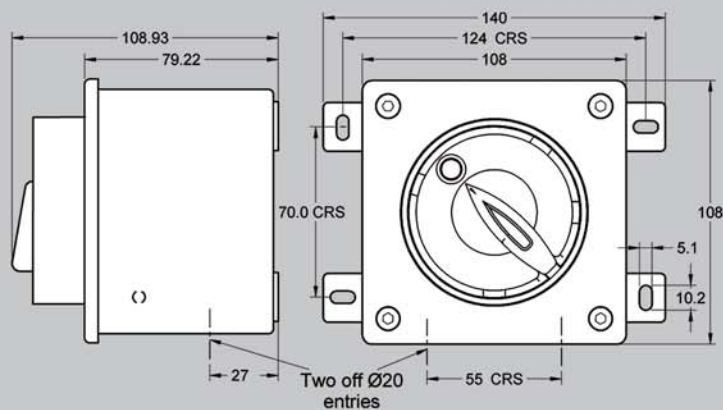
22

23

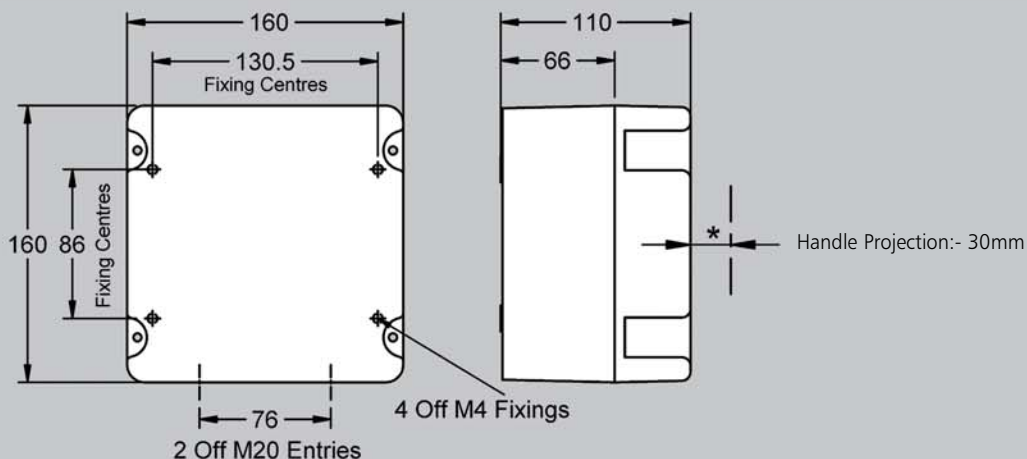
Fire Rated - High Temperature

refers to pages 22-23

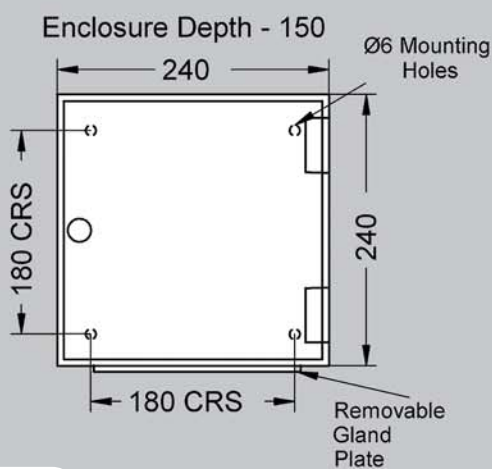
size A



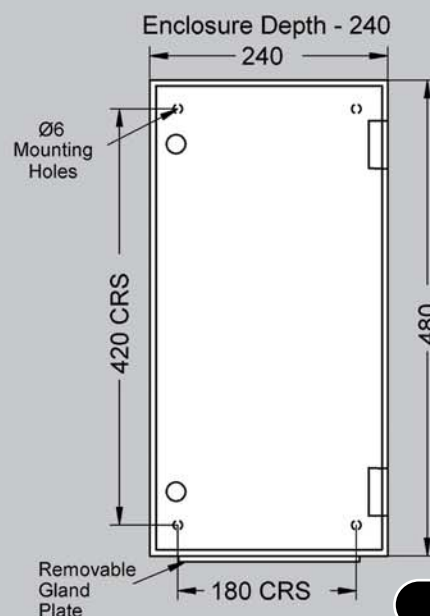
size B



size C



size D



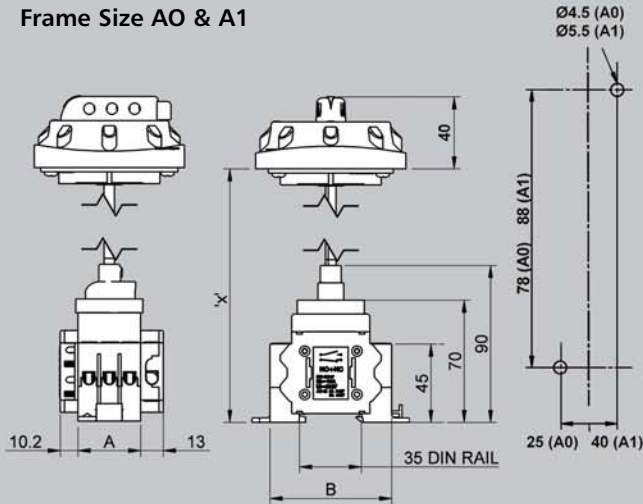
i Load Break Switch Disconnectors

refers to pages 24-25

refers to pages:

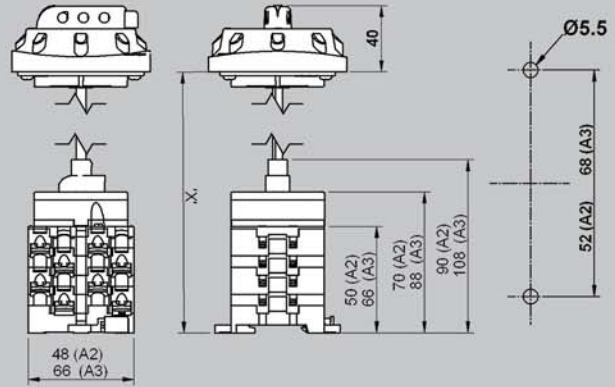
24
25

Frame Size A0 & A1



Frame Size	A	B	C
A0 (16A-40A)	36	70	13.5
A1 (63A-80A)	54	76	18

Frame Size A2 & A3



Dimensions for the 20A & 40A 6 Pole + 2 E/B Aux versions

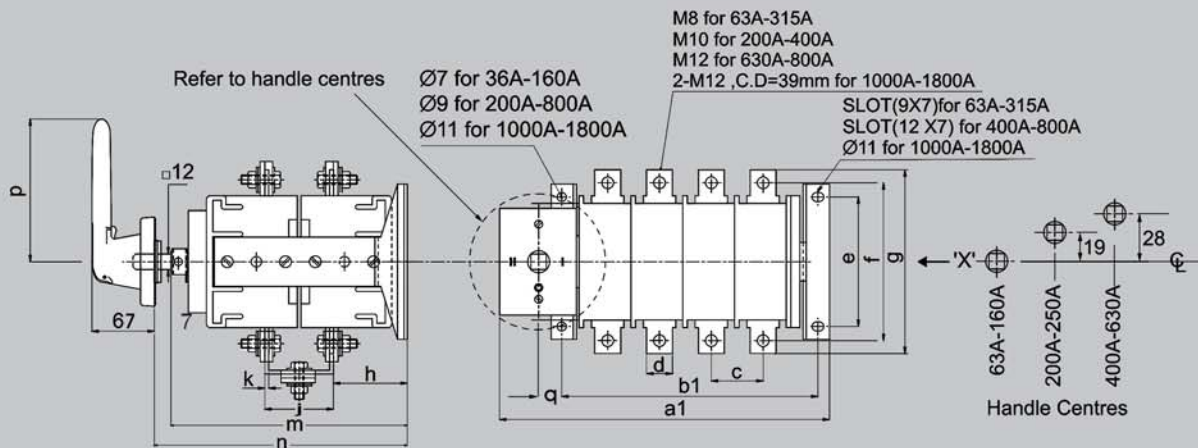
Minimum fitting space - 105mm
Maximum fitting space - 280mm

i Load Break Changeover Switch Disconnectors

refers to pages 28-29

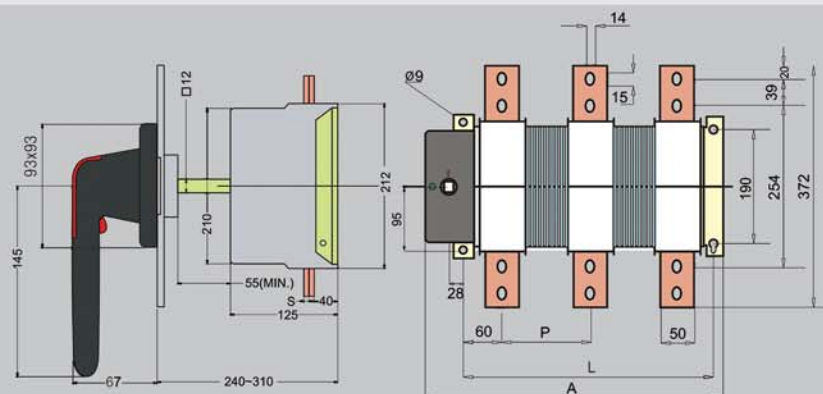
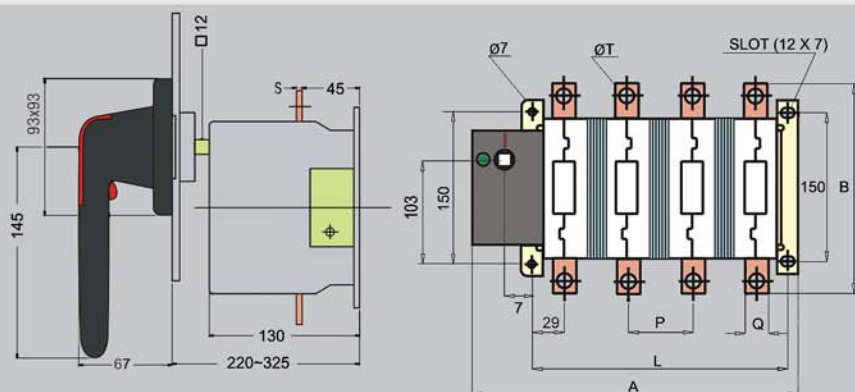
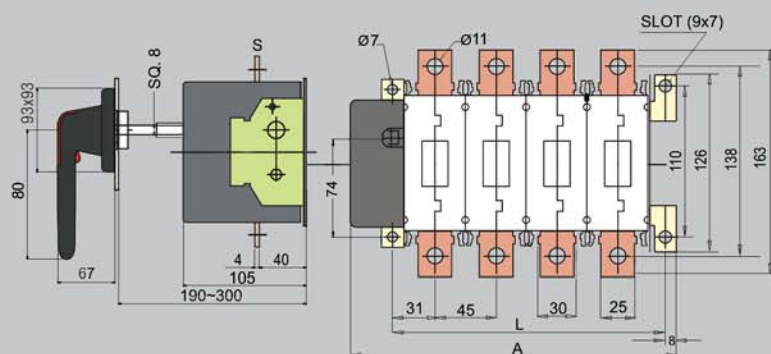
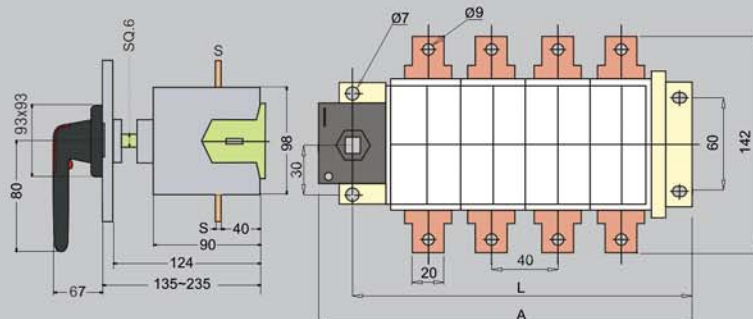
refers to pages:

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29

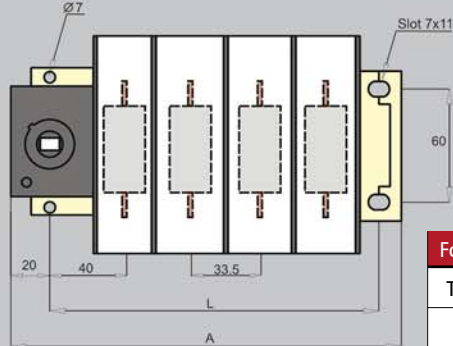
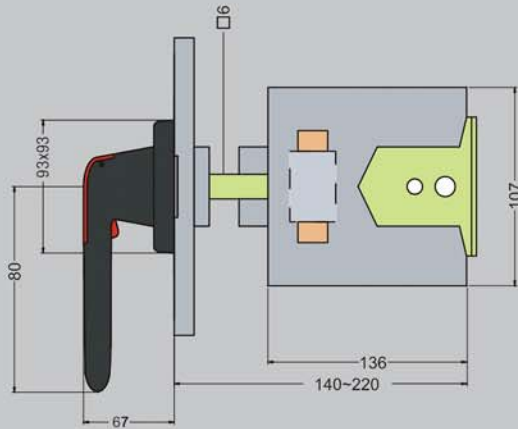


Rating	a1	b1	c	d	e	f	g	h	j	k	m	n	p	q	frame size
63A	255.5	198.5	40	20	100	122	142	58	51	2.0	182.5	195-295	145	18	C1
80A	255.5	198.5	40	20	100	122	142	58	51	2.0	182.5	195-295	145		
100A	255.5	198.5	40	20	100	122	142	58	51	2.0	182.5	195-295	145		
125A	255.5	198.5	40	20	100	122	142	57	53	3.0	182.5	195-295	145		
160A	255.5	198.5	40	20	100	122	142	57	53	3.0	182.5	195-295	145		
200A	309.5	252	61	25	124	138	163	65.5	81	4.0	242	255-355	145	26	C2
250A	309.5	252	61	25	124	138	163	65.5	81	4.0	242	255-355	145		
400A	352	276	70	25	150	180	205	85	96	4.0	262	300-400	220		
630A	352	276	70	40	150	185	223	84	98	5.0	262	300-400	220		C3

Frame Size B4



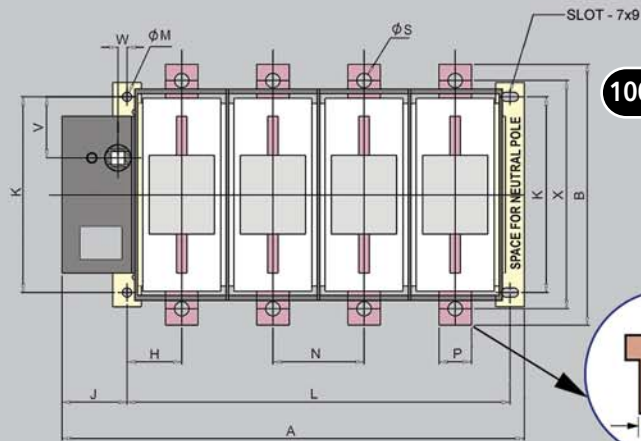
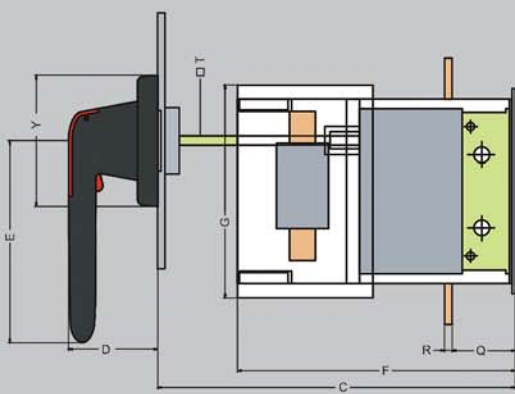
i Load Break Switch Disconnecter Fuse refers to pages 29-30



32A - 63A

Format	A	L
TP&N	168	138
4P	201	171

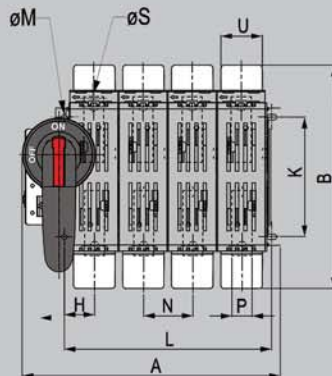
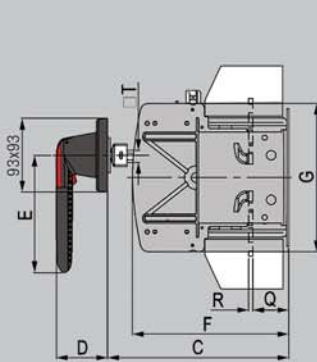
Frame Size D1



100A - 160A

	A		B	C	D	E	F	G	H	J	K	L		M	N	P	Q	R	S	T	V	W	X	Y	Frame Size	
Rating (A)	TPN	4P										TPN	4P													
100-125	190	230	142	135-225	67	80	134	98	44.5	20	60	160	200	7	40	20	40	2	9	6	30	0	122	93	D2	
160	212	260	142	135-225	67	80	134	98	44.5	20	60	182	230	7	48	20	40	3	9	6	30	0	122	93	D3	

200A - 630A



	A		B	C	D	E	F	G	H	K	Frame Size
Rating (A)	3P	4P									
200A-250A	261	323	280	230-310	67	145	196	186	37	150	D4
315A-400A	285	355	280	230-310	67	145	196	186	37	150	D5
630A	360	440	444	245-305	67	145	231	250	60	190	D6

	L		M	N	P	Q	R	S	T	U	Frame Size
Rating (A)	3P	4P									
200A-250A	198	260	7	62	25	45	5	11	12	52	D4
315A-400A	222	292	7	70	25	45	5	11	12	52	D5
630A	278	358	9	80	40	40	6	13	12	61	D6



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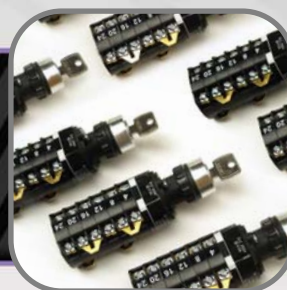
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