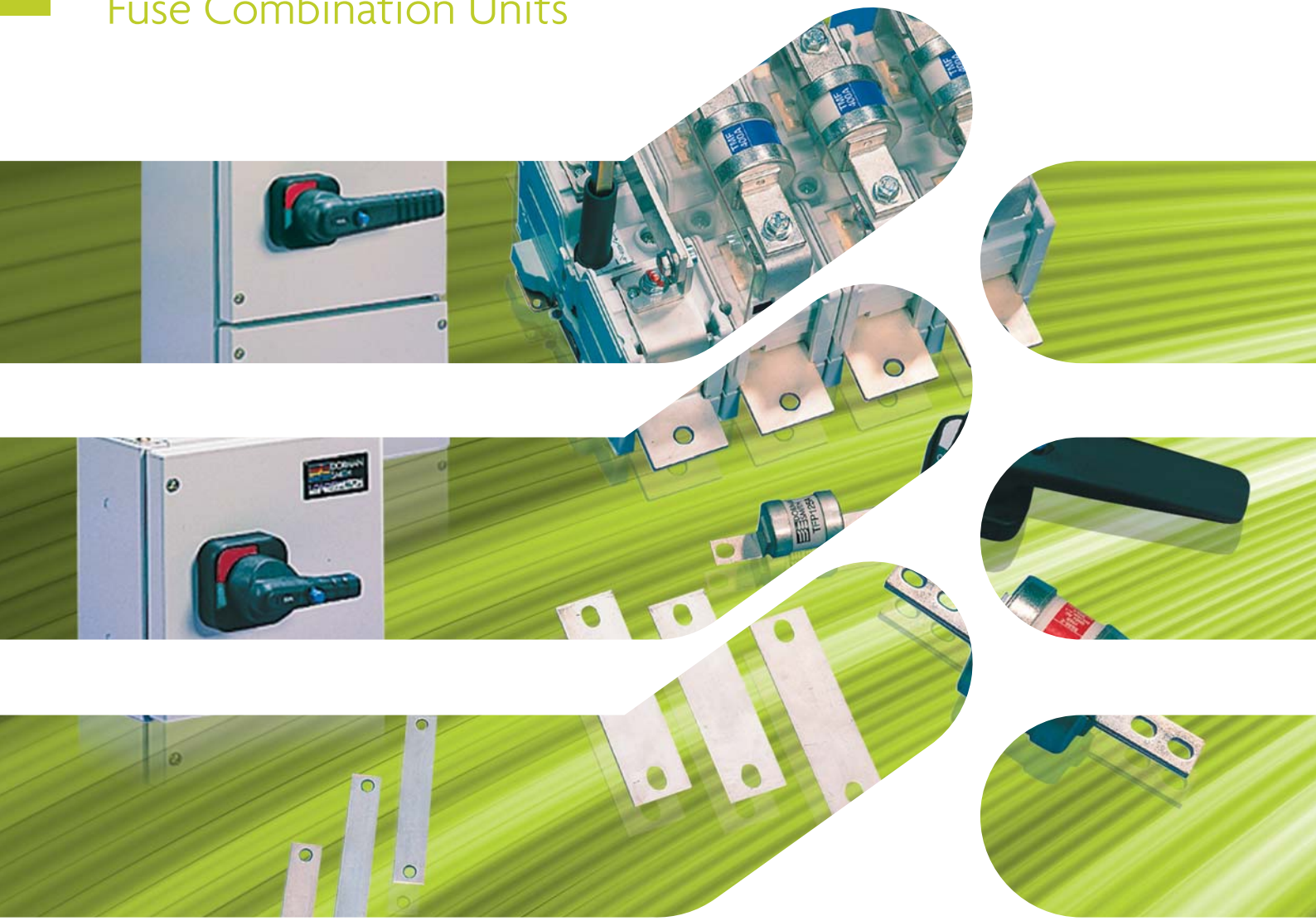
DORMAN SMITH

Loadswitch

Fuse Combination Units



OVER 130 YEARS OF ELECTRICAL EXCELLENCE

DORMAN SMITH

OVER 130 YEARS OF ELECTRICAL EXCELLENCE

Dorman Smith Switchgear Limited

With over 130 years of experience in switchgear design and production Dorman Smith Switchgear Limited continues to provide high quality equipment for low-voltage electrical distribution and circuit protection.

Our product range begins with single-pole and neutral distribution board systems and continues up to custom designed, factory built low-voltage electrical switchboards for a broad range of commercial, industrial and retrofit applications.

We continue to build on our extensive technical knowledge and awareness of customer and market demands, operating conditions and current regulations.

This breadth of experience supports the development and manufacturing techniques of our electrical products to exceed the industry standards.

Index

Content	Page No
Introduction to Dorman Smith Switchgear Limited	1
Key Features	2-3
Housed Fuse Switches	4-5
Skeleton Fuse Switches	6-7
Fuse Comparison Chart	8

Loadswitch
Fuse Combination Units

Overview

The Loadswitch fuse combination range includes skeleton switches, housed switches and switch disconnectors from 32A to 800A.

All Loadswitch fuse combination units exceed EN 60947-3 and meet the specifications for full uninterrupted duty to ensure that the switches will maintain the maximum rated load indefinitely.

Given their utilisation category of AC23A and their short-circuit capacity of 80kA, the Loadswitch fuse combination devices provide complete confidence when installed in any resistive or inductive load applications.

Housed switches are supplied in sheet steel enclosures with integral cable spreading room that can be positioned above or below the switch to suit the ease of installation.

The robust steel enclosures are finished in light grey RAL 7035 epoxy powder coating and have doors that open 180° for ease of access.

A variety of accessories are available for both the skeleton and housed switches, which include cable spreader boxes, solid links for isolation, longer shafts, terminal shrouds and auxiliary switches.

Housed Switches
32A to 800A and accessories.

PAGES 4-5

Compliance

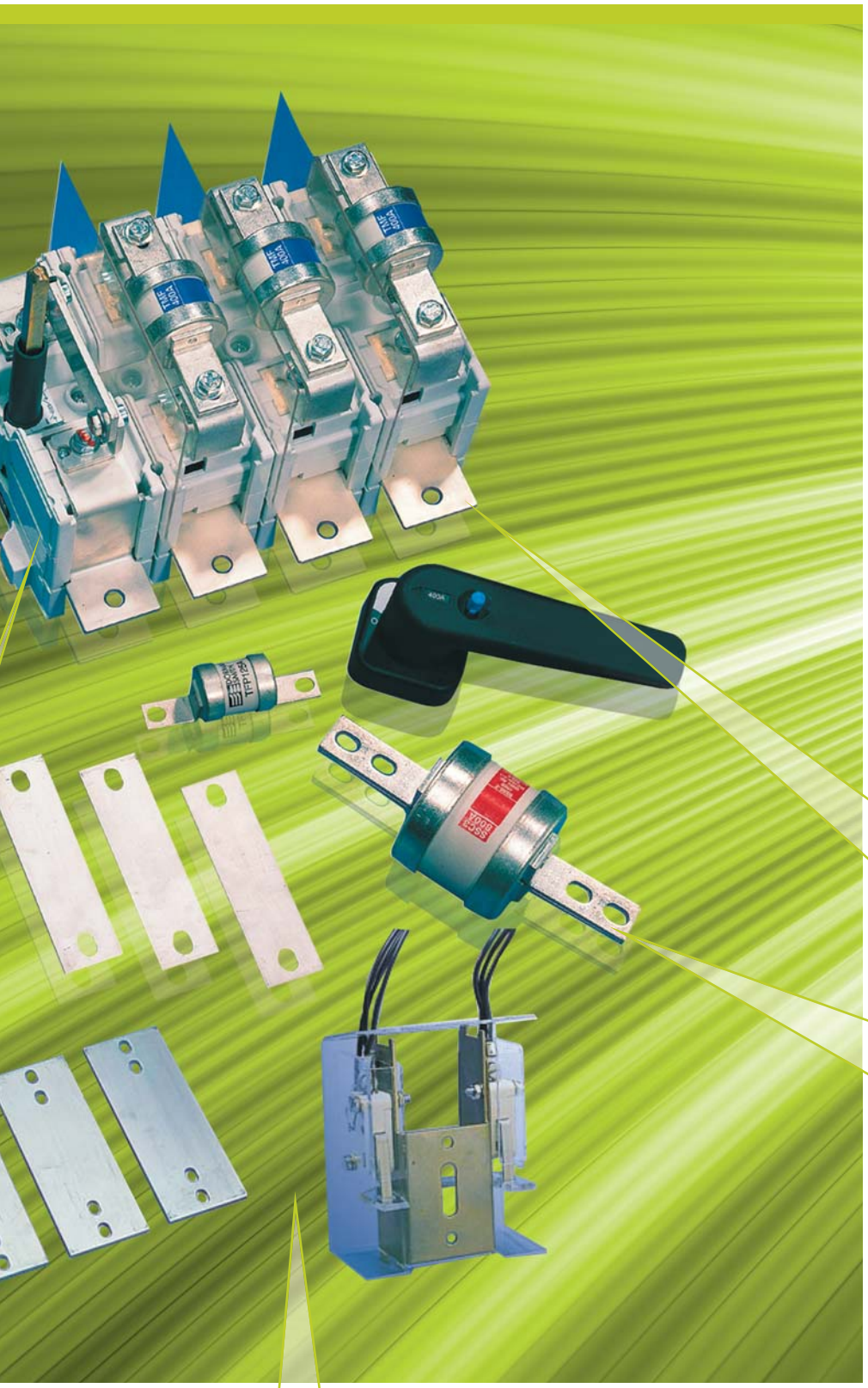
Switches	EN 60947-3

Add-on enclosures
We have a range of matching cable spreader boxes to allow for easier installation and cabling.

PAGE 4

Skeleton Switches
63A to 800A and accessories.

PAGES 6-7



Ingress Protection
Our Loadswitch housed units have an ingress protection rating of IP4X.

PAGE 4

Rated voltage
415V AC.

Doors
All of the doors on the housed fuse switches open to 180°C for ease of access during installation.

PAGE 4

Terminals
Our 32A housed units are provided with cable clamps for easy installation. Our 63A to 400A housed units are built with inserted terminals.

PAGES 4-6

Fuses
All of our housed switches up to 125A are provided with fuses. We also offer solid links as an accessory for this range to allow switches to be converted to isolators.

PAGE 8

Utilisation category
With a utilisation category of AC23A our switches provide confidence when installed in any resistive or inductive load application.

PAGE 4 & 6

Accessories
We offer a wide range of accessories designed for the Loadswitch range including; lock mounting kits, auxiliary switches, shaft extensions, terminal shrouds and terminal barriers.

PAGE 4 & 6

Fused short-circuit capacity
All of our switches in the Loadswitch range have a short-circuit capacity of 80kA rms.

PAGE 4 & 6

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Loadswitch
Fuse Combination Units

Housed Fuse Switches
32A - 800A

Features

- Exceeds the requirements of EN 60947-3
- Full withstand duty
- 80kA rms fused short circuit capacity
- 415V AC rated voltage
- AC23A Utilisation category
- IP4X Ingress Protection
- Single solid links available as optional extras as per table below (one required per phase)

Current Rating (A)	Terminal Type	Terminal fixing Screws	Supplied with fuses	3 Pole & Neutral Product Code	4 Pole Product Code	Solid Link Product Code
32A	Cable clamps	N/A	Yes	HBE3P32N	N/A	HEL32
63A	M8 Inserted	Supplied with lug fixing screws	Yes	HBF3P63N	N/A	HFL63
100A	M8 Inserted	Supplied with lug fixing screws	Yes	HBF3P100N	HBF4P100	HFL200A
125A	M8 Inserted	Supplied with lug fixing screws	Yes	HBF3P125N	N/A	HFL200A
160A	M8 Inserted	Supplied with lug fixing screws	No	HBF3P160N	N/A	HFL200A
200A	M8 Inserted	Supplied with lug fixing screws	No	HBF3P200N	HBF4P200	HFL200A
315A	M10 Inserted	Supplied with lug fixing screws	No	HBK3P315N	N/A	HLL400
400A	M10 Inserted	Supplied with lug fixing screws	No	HBL3P400N	HBL4P400	HLL400
630A	M16 x 1 and M8 x 4	Not supplied	No	HBN3P630N	N/A	HNL800
800A	M16 x 1 and M8 x 4	Not supplied	No	HBN3P800N	HBN4P800	HNL800

Housed Fuse Switches Accessories

Description	Current Rating (A)	Product Code
Cable Spreader Box	63 to 125A 160 to 200A 315 and 400A 630 and 800A	HB125CSB HB200CSB HB400CSB HB800CSB
Castell * lock mounting kit	All	SCLK
2 Bank Auxiliary Switch	63 to 200A 315 to 800A	SAUX2F SAUX2N
4 Bank Auxiliary Switch	63 to 200A 315 to 800A	SAUX4F SAUX4N
6 Bank Auxiliary Switch	315 to 800A	SAUX6N

* Castell is a trademark of Castell Safety International Limited

NOTE: Standard symbol DS1, special symbols are available direct from Castell*. Quote reference: Castell FS2 – Spigot 9.5mm square x 22.5mm, 65° anti-clockwise to trap key.

Housed Fuse Switches Dimensions

Housed Switches Dimensions

Current Rating (A)	Height (mm)	Width (mm)	Depth over handle (mm)	Weight (kg)
32	210	210	230	3
63	420	263	273	6
100	420	263	273	6
125	420	263	273	6
160	525	315	325	12
200	525	315	325	12
315	735	420	325	21
400	735	420	325	21
630	840	630	378	37
800	840	630	378	37

Cable Spreader Box Dimensions

Current Rating (A)	Height (mm)	Width (mm)	Depth over handle (mm)	Weight (kg)
63 to 125A	105	262	183	3
200A	105	315	235	3
315 to 400A	210	420	235	5
630 to 800A	210	630	288	5

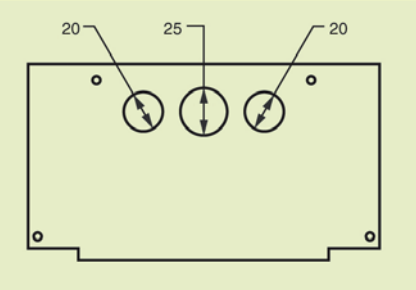
Housed Switch Technical Information

Rated Current (A)	32	63	100	125	160	200	315	400	630	800
Mechanical Endurance	10,000	10,000	10,000	8,000	8,000	8,000	8,000	5,000	5,000	3,000
kW at 415V AC	15	30	55	75	90	110	160	230	330	450
Maximum cable (mm^2) *	10	70	70	70	150	150	185**	300	630	630
Maximum cable lug palm width	N/A	22	22	22	22	22	35	50	80	80

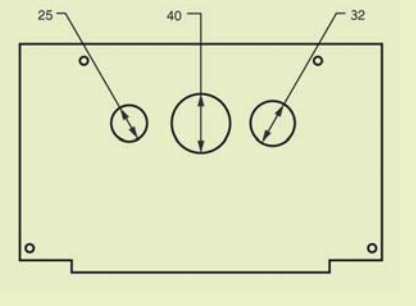
* These figures are for guidance only and are dependent upon lug palm width.

** 240mm^2 with terminal barriers fitted.

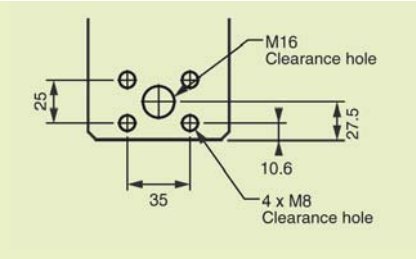
32A Top and Bottom Knock Out Dimensions



63 - 125A Top and Bottom Knock Out Dimensions



630-800A Loadswitch Terminal



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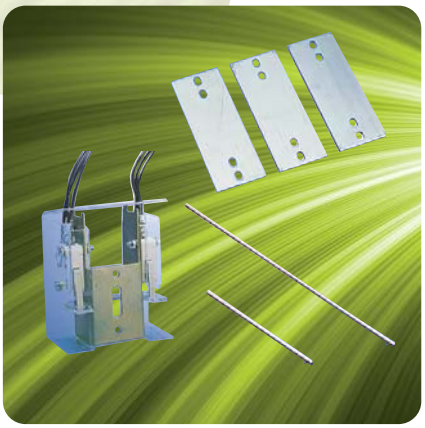
Loadswitch
Fuse Combination Units



Skeleton Fuse Switches
63A - 800A

Features

- Exceeds the requirements of EN 60947-3
- Full uninterrupted duty
- 80kA rms fused short circuit capacity
- 415V AC rated voltage
- AC23A Utilisation category
- Lug fixings and fuses not supplied
- Single solid links available as optional extras as per table below (one required per phase)

Current Rating (A)	Terminal Type	Supplied with fuses	3 Pole & Neutral Product Code	4 Pole Product Code	Solid Link Product Code
63A	M8 clearance hole	No	SF3P63N	SF4P63	HFL63
100A	M8 clearance hole	No	SF3P100N	SF4P100	HFL200A
125A	M8 clearance hole	No	SF3P125N	SF4P125	HFL200A
160A	M8 clearance hole	No	SF3P160N	SF4P160	HFL200A
200A	M8 clearance hole	No	SF3P200N	SF4P200	HFL200A
315A	M12 clearance hole	No	SK3P315N	SK4P315	HLL400
400A	M12 clearance hole	No	SL3P400N	SL4P400	HLL400
630A	4 x M8 and 1 x M16 *	No	SN3P630N	SN4P630	HNL800
800A	M16 x 1 and M8 x 4	No	SN3P800N	SN4P800	HNL800

Housed Fuse Switches Accessories

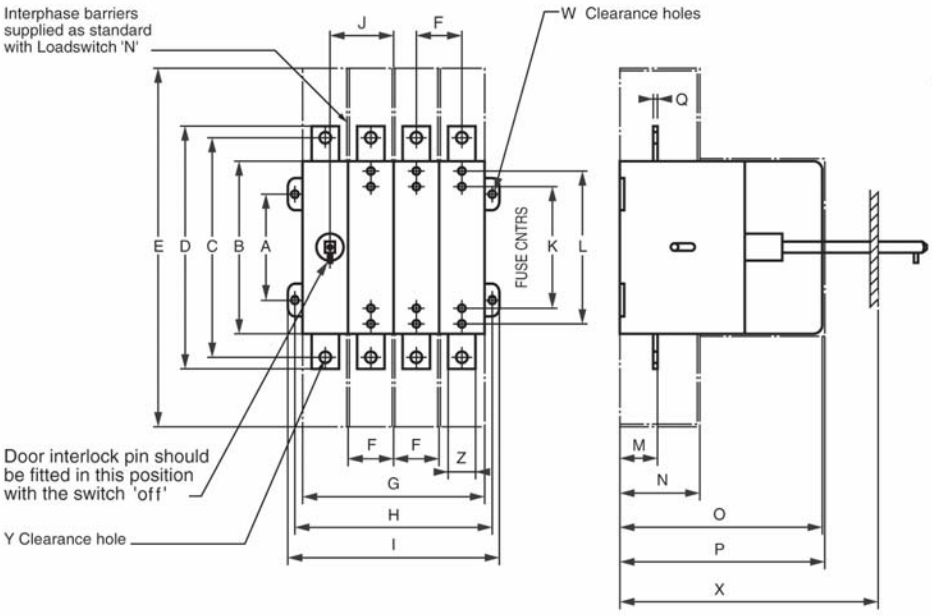
Description	Current Rating (A)	Product Code
Cable extension terminals (set of 8)	630 and 800A	SNCET
Castell ** lock mounting kit	All	SCLK
2 Bank Auxiliary Switch	63 to 200A 315 to 800A	SAUX2F SAUX2N
4 Bank Auxiliary Switch	63 to 200A 315 to 800A	SAUX4F SAUX4N
6 Bank Auxiliary Switch	315 to 800A	SAUX6N
Terminal Shrouds	160 and 200A 315A 400 630 and 800A	SFTSL SKTS SLTS SNTS
Terminal Barriers (set of 3)	63 to 200A 315A 400A 630 and 800A	SFTB SKTB SLTB Supplied
Fuse Shrouds (set of 3)	63 to 125A 160 and 200A 315A 400A 630 and 800A	SFFS125 SFFS200 SKFS SLFS SNFS
Handle Assembly (Standard size)	For 32A E Frame (small handle) For 63 to 200A F Frame (medium handle) For 315 to 800A K,L and N Frame (large handle)	SHA1 SHA2 SHA4
Handle Assembly (Special size)	For 315 to 400A (medium handle)	SHA3
Shaft Extension For 270mm deep panel	63 to 200A 315 to 800A	SXT127 SXT227
Shaft Extension For 600mm deep panel	63 to 200A 315 to 800A	SXT160 SXT260

* Only with SNCET cable extension terminals fitted.
** Castell is a trademark of Castell Safety International Limited.

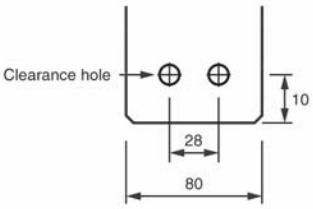
NOTE: Standard symbol DS1, special symbols are available direct from Castell*. Quote reference: Castell FS2 – Spigot 9.5mm square x 22.5mm, 65° anti-clockwise to trap key.

Skeleton Fuse Switches Dimensions

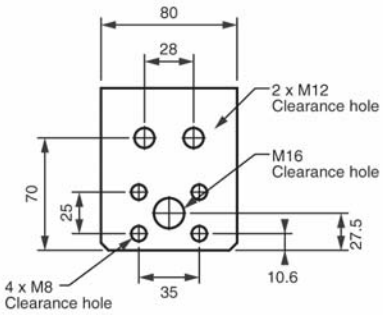
Skeleton Switches Dimensions



630/800A Standard Terminal



630/800A extension terminal (accessory)



Rating (A)	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	W	X	Y	Z
63	80	135	170	186	270	35	140	150	165	50	73	N/A	30	80	160	161	3	M5	170*	M8	20
100-125	80	135	170	186	270	35	140	150	165	50	94	N/A	30	80	160	161	3	M5	170*	M8	20
160-200	80	135	170	186	300	35	140	150	165	50	94	N/A	30	80	196	197	3	M5	220	M8	20
315	60	180	220	250	384	52.5	210	220	235	90	111	N/A	45	87	210	212	5	M5	220	M12	35
400	60	180	220	250	414	70	280	295	305	125	111	N/A	45	87	210	212	5	M5	220	M12	50
630-800	100	180	235	255	534	105	420	460	475	195	133	184	60	129	240	242	5	M6	270	M12	80

Skeleton Switch Technical Information

Rated Current (A)	63	100	125	160	200	315	400	630	800
Mechanical Endurance	10,000	10,000	8,000	8,000	8,000	8,000	5,000	5,000	3,000
kW at 415V AC	30	55	75	90	110	160	230	330	450
Maximum cable (mm^2) **	70	70	70	150	150	185***	300	630	630
Maximum cable lug palm width	22	22	22	22	22	35	50	80	80
Weight (kg)	6	6	6	12	12	21	21	37	37

* Supplied suitable for an X dimension of 220mm, the drive shaft can be cut down to give a minimum X dimension of 170mm
** These figures are for guidance only and are dependent upon lug palm width.
*** 240mm^2 with terminal barriers fitted.

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Loadswitch
Fuse Combination Units

Fuse Comparison Chart
415V

Frame Size	Current Rating (A)	Bussman	GEC / Lawson	MEM	Tag Type	BS88 Ref	Fuse fixing centres (mm)
HBE	32	NITD2 NITD4 NITD6 NITD10 NITD16 NITD20 NITD25 NITD32	NIT2 NIT4 NIT6 NIT10 NIT16 NIT20 NIT25 NIT32	2SA2 4SA2 6SA2 10SA2 16SA2 20SA2 25SA2 32SA2	OFFSET	A1	44.50
HBF SF SFT	63	AAO2 AAO4 AAO6 AAO10 AAO16 AAO20 AAO25 AAO32 BAO40 BAO50 BAO63	TIA2 TIA4 TIA6 TIA10 TIA16 TIA20 TIA25 TIA32 TIS40 TIS50 TIS63	2SB3 4SB3 6SB3 10SB3 16SB3 20SB3 25SB3 32SB3 40SB4 50SB4 63SB4	OFFSET OFFSET	A2 A3	73.00 73.00
HBF SF SFT	100	- - - - - CEO32 CEO40 CEO50 CEO63 CEO80 CEO100	TCP6 TCP10 TCP16 TCP20 TCP25 TCP32 TCP40 TCP50 TCP63 TCP80 TCP100	- - - - - - - - - 80SD5 100SD5	OFFSET	A4 (dia. 33 max)	94.00
HBF SF SFT	125	DEO125	TFP125	125SD6	OFFSET	A4	94.00
HBF SF SFT	160	DEO125 DEO160	TFP125 TFP160	125SD6 160SD6	OFFSET	A4 (dia. 38 max)	94.00
HBF SF SFT	200	DEO125 DEO160 DEO200	TFP125 TFP160 TFP200	125SD6 160SD6 200SD6	OFFSET	A4 (dia. 38 max)	94.00
HBK SK SKT	315	CD80 CD100 DD125 DD160 DD200 ED250 ED315	TC80 TC100 TF125 TF160 TF200 TKF250 TKF315	80SF5 100SF5 125SF6 160SF6 200SF6 250SF7 315SF7	CENTRE CENTRE CENTRE 	B1 B2 B3 	 111.00 111.00 111.00
HBL SL SLT	400	EF355 EF400 ED400	TM355 TM400 TMF400	355SH8 400SH8 400SF8	CENTRE CENTRE	C1 B4	133.00 111.00 S
HBN SN SNT	630	FF450 FF500 FF560 FF630	TTM450 TTM500 TTM560 TTM630	450SH9 500SH9 560SH9 630SH9	CENTRE	C2	133.00
HBN SN SNT	800	- GF710 - GF800	TLM670 TLM710 TLM750 TLM800	- 710SH10 - 800SH10	CENTRE	C3	133.00

NOTE:

1) The comparative types are a guide to interchange ability with regards to dimensions and current rating only. It is essential that rated voltage and other electrical characteristics are checked to ensure the compatibility of the fuse.

2) Please check maximum barrel size prior to fitting

3) * Lawson fuse reference only

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