



### Exel 2 Switch-disconnector

- Designed as per standard: BS EN 60947-3
- IP rating: IP 41

Nominal rating, I <sub>e</sub> (A)	Utilisation category at U <sub>e</sub> 415V to BS EN 60947-3		250V DC rating to BS5419 DC23 (A)	Blank endplate fitted	Poles	Eaton list number
	AC22A (A)	AC23A (A)				
20	20	-	20 <sup>1)</sup>	EP842	SPSN	-
		11	-		DP	MSW0202
			-		TPN	MSW0203
32	32	-	32		SPSN	-
		22	-		DP	MSW0322
			-		TPN	MSW0323
63	63	-	63	EP539	SPSN	-
		39	-		DP	MSW0632
			-		TPN	MSW0633
100	100	-	100		SPSN	-
		52	-		DP	MSW1002
			-		TPN	MSW1003
125	125	52	-		TPN	MSW1253

SPSN indicates switched neutral. <sup>1)</sup>20A units are DC22. <sup>2)</sup>These units have dual fixings to accept SB3, SB4 and SO fuses. 2x M5 screws required.



### Exel 2 Fuse switch disconnector

- Designed as per standard: BS EN 60947-3
- IP rating: IP 41

Nominal rating, I <sub>e</sub> (A)	Utilisation category at U <sub>e</sub> 415V to BS EN 60947-3		250V DC rating to BS5419 DC23 (A)	Blank endplate fitted	Eaton HRC fuses fitted	Poles	Eaton list number
	AC22A (A)	AC23A (A)					
20	20	-	20 <sup>1)</sup>	EP842	20SA2	SPSN	MSF0201CF
		11	-			DP	MSF0202CF
			-			TPN	MSF0203CF
32	32	-	32		32SB3	SPSN	MSF0321CF
		22	-			DP	MSF0322CF
			-			TPN	MSF0323CF
63	63	-	63	EP539	63SB3	SPSN	MSF0631CF
		39	-			DP	MSF0632CF
			-			TPN	MSF0633CF
100	100	-	100		100SD5 <sup>2)</sup>	SPSN	MSF1001CF
		52	-			DP	MSF1002CF
			-			TPN	MSF1003CF
125	125	52	-		125SD6 <sup>2)</sup>	TPN	MSF1253CF

SPSN indicates switched neutral. <sup>1)</sup>20A units are DC22. <sup>2)</sup>These units have dual fixings to accept SB3, SB4 and SO fuses. 2x M5 screws required.



### Lid locking facilities

- All units are supplied with operating handles that provide lock-on, lock-off facilities, using padlock PD4. Door locking facilities, using padlock PD1, are available for fitment on site.

Nominal rating, I <sub>e</sub> (A)	Type	Eaton list number
63/100/125	Door locking bracket	5 LD
-	Padlock for use with above	PD1

Aerosol spray paint, Light grey to RAL7004. Eaton list number: 2AP

# 6.1

## Technical data/Dimensional drawing

Enclosed switch and fusegear

### Exel 2 Switch-disconnector

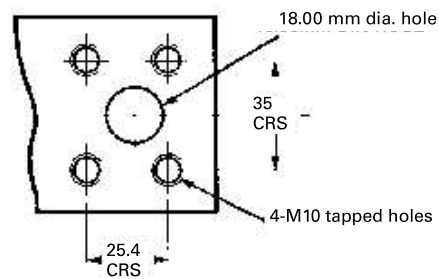
In accordance with BS EN 60947-3: "A" categories all ratings have been tested to values specified below:

Rated operational current, I <sub>e</sub> (A)	Utilisation category at U <sub>e</sub> 415V to BS EN 60947-3		
	Operating cycles Without current	With current	Total
63–100	8,500	1,500	10,000
160–315	7,000	1,000	8,000
400–630	4,000	1,000	5,000
800	2,500	500	3,000

### Glasgow copper plate terminal

#### Copper terminal plate

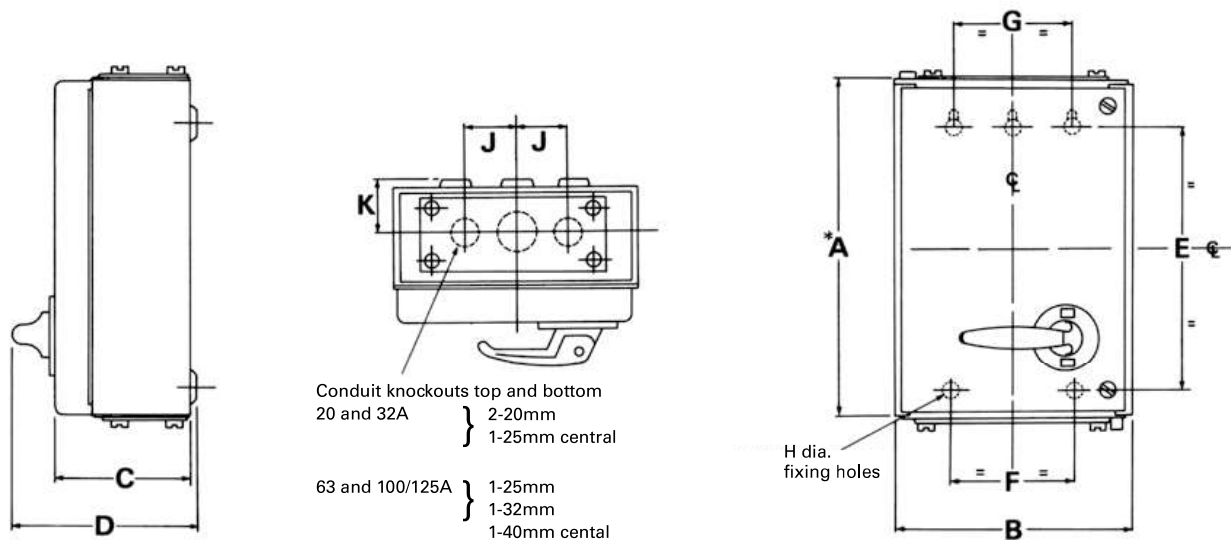
Each copper terminal plate has 1-M16 x 50mm bolt, nut and washers for single hole sockets. 4-M10 tapped holes are also provided for 4 hole sockets or solid copper.



### Exel 2 fuse-switch-disconnectors and switch-disconnectors

#### Dimensions

Current rating, A	Dimensions, mm									
	A	B	C	D	E	F	G	H	J	K
<b>Switch-disconnectors</b>										
20	159	193	92	127	112	114	–	5.6	38.5	34
32	173	245	101	137	116	114	114	6.4	38.5	34
63	230	310	129	173	152	168	168	6.7	58	54
100/125	329	367	167	210	241	221	221	6.7	58	54
<b>Fuse-switch-disconnector</b>										
20	219	193	92	127	171	114	-	5.6	38.5	34
32	267	245	101	137	209	114	114	6.4	38.5	34
63	351	310	129	173	273	168	168	6.7	58	54
100/125	503	367	167	210	416	221	221	6.7	58	54



\*Not including removable endplates and fixing screws.

**Performance values**

Unit	Short time withstand current (r.m.s. amps for 1 second)	Short circuit making capacity (peak amps at 415v ac)	Rated fused short-circuit (prospective r.m.s. amps at 415v ac)
20A	640A	2.96 kA	80 kA
32A	960A	5.12 kA	80 kA
63A	2000A	6.62 kA	80 kA
100/125A	3750A	8.42 kA	80 kA

**Rating to BS EN 60947-3 general performance characteristics**

Nominal unit rating, I <sub>e</sub> (A)	Utilisation category at U <sub>e</sub> 415V to BS EN 60947-3	
	AC 22B I <sub>e</sub> (A)	AC 23B I <sub>e</sub> (A)
20	20	11
32	32	22
63	63	39
100	100	52
125	125	52

**Derating of fused switches at higher ambient temperature**

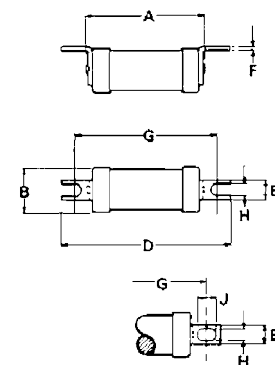
The derating is necessary due to the performance of the fuse rather than the switch.  
Applicable to both Glasgow and Exel 2 Fuse-switch-disconnectors:

Fuse/Switch rating (A)	Ambient Temp (°C)					
	35	40	45	50	55	60
20	20	19.5	19.0	18.5	18.1	17.6
32	32	31.2	30.4	29.7	28.9	28.2
63	63	61.4	59.9	58.4	56.9	55.5
100	100	97.5	95.1	92.7	90.4	88.1
125	125	121.9	118.8	115.9	113.0	110.1
160	160	156.0	152.1	148.3	144.6	141.0
200	200	195.0	190.1	185.4	180.7	176.2
315	315	307.1	299.4	292.0	284.7	277.5
400	400	390.0	380.3	370.7	361.5	352.4
500	500	487.5	475.3	463.4	451.8	440.5
630	630	614.3	598.9	583.9	569.3	555.1
800	800	780.0	760.5	741.5	723.0	704.9

**415V Industrial Fuselinks**

**415V industrial fuselinks – offset bolted contacts, dimensions**

Eaton list number	Dimensions, mm							
	A max.	B max.	D max.	E	F	G nom.	H	J
SA2	34	14	54	11	0.8	44.5	4.8	-
SA2M (25–40A)	34	14	54	11	0.8	44.5	4.8	-
SA2M (50–63A)	36	17.5	55	11	1.2	44.5	4.8	-
SB3	35	14	85	9	1.2	73	5.5	8
SB3M	56	22	86	9	1.2	73	5.5	8
SB4	35	17.5	86	9	1.2	73	5.5	8
SB4M	56	22	88	13	1.2	73	5.5	10
SO (80–100A)	55	21	86	13	1.2	73	5.5	10
SOM	55	26	91	13	1.2	73	5.5	10
SO (125–200A)	47	31	90	19	3.2	73	6.1	-
SD5	59	22	110	15	3.2	94	9	-
SD5M (125–160A)	58	26	109	15	3.2	94	9	11
SD5M (200A)	47	31	110	19	3.2	94	9	10
SD6	47	31	110	19	3.2	94	9	10
SD6M	47	31	110	19	3.2	94	9	10



SB3, SB3M, SB4, SB4M, SD5M, SD6, SD6M, SO (80–100A) and SOM types

# 6.1

## Technical data

### Enclosed switch and fusegear

#### 415V industrial fuselinks – centre bolted contacts, dimensions

Eaton list number	Dimensions, mm								
	A max.	B max.	D max.	E	F	G nom.	H	J	-
SE3	57	22	114	13	1.6	97	7.1	10	–
SF3	57	22	129	14	1.6	111	8.7	12	–
SE4	57	22	114	13	1.6	97	7.1	10	–
SF4	57	22	129	14	1.6	111	8.7	12	–
SE4M	57	22	114	13	1.6	97	7.1	10	–
SF4M	58	21	126	14	3.2	111	8.7	11	–
SF5	59	22	127	14	3.2	111	8.7	11	–
SF5M (125–160A)	58	26	126	14	3.2	111	8.7	11	–
SF5M200	47	31	136	19	3.2	111	9	12.5	–
SF6	47	31	136	19	3.2	111	9	12.5	–
SF6M	47	31	136	19	3.2	111	9	12.5	–
SF7	47	31	136	19	3.2	111	9	12.5	–
SF7 (315)	50	38	136	25	4.8	111	9	12.5	–
SF7M	50	38	136	25	4.8	111	9	12.5	–
SG7	47	59	158	19	3.2	133	10.5	12.5	–
SG7 (315)	50	38	209	25	4.8	133	10.5	12.5	25
SF8	50	39	136	25	4.8	111	9	12.5	–
SF8M	75	53	135	25	4.8	111	9	12.5	–
SH8	50	40	209	25	4.8	133	10.5	12.5	25.4
SF9	54	74	134	25	9.5	111	10.5	18	–
SH9	80	74	209	25	6.3	133	10.5	16	25.4
SY9	80	74	261	38	6.3	165	10.5	16	32
SH10	84	83	209	25	9.5	133	10.5	16	25.4
SY10	80	83	261	38	6.3	165	10.5	16	32
SJ11	83	100	198	63.5	9.5	149	14.3	19	32

