

Reversing starter with disconnect

Enclosed contactor

Freedom series starters with Start (Forward/Reverse) & Stop/Reset pushbuttons

Description	Catalogue numbers	Price	Description	Catalogue numbers	Price
D.O.L.			D.O.L. reversing		
5.5kW	MA10C0*20X	£47.68	5.5kW	MA20C0*21X	£81.99
7.5kW	MA10D0*20X	£50.35	15kW	MA20F0*21X	£104.95
15kW	MA10F0*20X	£64.85			
22kW	MA11H0*20X	£114.82	D.O.L. reversing with disconnect		
30kW	MA11J0*20X	£116.52	5.5kW	MA20C1*21X	£127.36
			11kW	MA20E1*21X	£141.84
D.O.L. with disconnect			Star-Delta		
5.5kW	MA10C1*20X	£88.38	11kW	MA30E0*20X	£167.84
7.5kW	MA10D1*20X	£90.38	15kW	MA30F0*20X	£183.20
11kW	MA10E1*20X	£91.88	22kW	MA30H0*20X	£216.87
15kW	MA10F1*20X	£141.03			

Select overload relay from page 12

* Add suffix for coil voltage from table below

A.C. operating coils

Coil voltage	50Hz	24	48	110	220	380	415	440	550
60Hz		–	–	120	240	–	–	480	600
Suffix		T	Y	A	K	L	M	C	D

Contactors in IP65 Polycarbonate Enclosure

Ratings (kW)	Number of main poles	Catalogue numbers	Price
AC1 at 380/440V	AC3 at 380/415V	Coil voltage 240V 50Hz	
10.5	2.2	MA10AKX	£32.72
10.5	4.0	MA10BKX	£33.16
10.5	5.5	MA10CKX	£35.97
16.8	7.5	MA10DKX	£37.13
16.8	11	MA10EKX	£42.03
16.8	15	MA10FKX	£55.95
26.3	18.5	MA11GKX	£80.64
31.6	22	MA11HKX	£92.28
39.5	30	MA11JKX	£125.60

Starter

Enclosure

Manual motor starters

Description (FLC)	Catalogue numbers	Price
0.1 - 0.16A	A304AN	£24.98
0.16 - 0.25A	A304BN	£24.98
0.25 - 0.4A	A304CN	£24.98
0.4 - 0.63A	A304DN	£26.59
0.63 - 1.0A	A304EN	£30.94
1.0 - 1.6A	A304FN	£30.94
1.6 - 2.5A	A304GN	£30.94
2.5 - 4.0A	A304HN	£30.94
4.0 - 6.3A	A304JN	£30.94
6.3 - 10A	A304KN	£35.93
10 - 16A	A304LN	£35.93
16 - 20A	A304MN	£37.49
20 - 25A	A304NN	£45.04

Auxiliary contact blocks

Description	Catalogue numbers	Price
Side mounting		
1 N.O. – 1 N.C.	C320SC11	£4.82
2 N.O.	C320SC20	£4.82

Accessories

Description	Catalogue numbers	Price
3 phase connecting busbar for linking		
2 starters	C320MSB1	£5.38
4 starters	C320MSB2	£6.47
5 starters	C320MSB3	£7.28
Under voltage release – 50Hz		
110V	C320UV501	£13.72
220/240V	C320UV502	£13.72
380/415V	C320UV504	£13.72
550V	C320UV505	£13.72
Under voltage release – 60Hz		
110V	C320UV601	£13.72
220/240V	C320UV602	£13.72
Shunt trip		
110V	C320ST110	£13.72
220/240V	C320ST240	£13.72
480V	C320ST480	£13.72
Enclosure		
IP41	C799EN41	£4.13
IP55	C799EN55	£7.01
Flush mounting (IP55)	C799FM55	£6.20
DIN mounting plate for A304 & contactor	C321MSP	£3.19

DIN mtg. plate

Motor circuit breakers

Description (FLC)	Catalogue numbers	Price
0.1 – 0.16A	A305AN	£35.79
0.16 – 0.25A	A305BN	£35.79
0.25 – 0.4A	A305CN	£35.79
0.4 – 0.63A	A305DN	£35.79
0.63 – 1.0A	A305EN	£35.79
1.0 – 1.6A	A305FN	£35.79
1.6 – 2.5A	A305GN	£35.79
2.5 – 4.0A	A305HN	£35.79
4.0 – 6.3A	A305JN	£35.79
6.3 – 9.0A	A305KN	£49.28
9.0 – 12.5A	A305LN	£49.28
12.5 – 16A	A305MN	£49.28
16 – 20A	A305NN	£49.28
20 – 25A	A305PN	£57.72

Auxiliary contacts

Description	Catalogue numbers	Price
1 N.O. – 1 N.C.	A305WE11	£7.34
2 N.O.	A305WE20	£7.34
2 N.C.	A305WE02	£7.34
1 N.O. trip signal	A305WE10	£11.03
1 N.C. trip signal	A305WE01	£11.03

Accessories

Description	Catalogue numbers	Price
Busbar connector		
2 way, no auxiliaries	A305WCR1	£4.79
2 way, 1 auxiliary	A305WCR2	£5.94
2 way, 2 auxiliaries	A305WCR3	£5.94
4 way, no auxiliaries	A305WCR4	£6.81
4 way, 1 auxiliary	A305WCR5	£7.63
4 way, 2 auxiliaries	A305WCR6	£7.73
3 pole connection terminal block		
For busbar	A305WTB2	£5.39
For connection of 25mm ² wires	A305WTB1	£4.79
External handle, padlockable IP54		
Red handle, yellow front plate	A305WHR	£8.29
Black handle, black front plate	A305WHG	£8.29
DIN mtg. plate for A305 & contactor	C321MSP	£3.19

3 pole switch disconnectors with earth and neutral terminals

Size (kW) AC3 rating 3 ph 380/440V	Thermal rating AC1 (A)	Catalogue numbers	Price
Base mounted			
4	20	MC361BDBM3†	£11.88
7.5	25	MC361DDBM3	£12.01
13	32	MC361EDBM3	£13.79
30	63	MC361JDBM3	£22.46
37	100	MC361KDBM3	£36.10
Door mounted			
4	20	MC361BDDR3†	£13.20
7.5	25	MC361DDDR3	£13.34
13	32	MC361EDDR3	£17.93
30	63	MC361JDDR3	£29.33
37	100	MC361KDDR3	£40.30

Accessories

Description	Catalogue numbers	Price
1N.O. - 1N.C. auxiliary contact		
Base mounted	MC361KD11	£3.75
Door mounted	MC361DR11	£3.75
32A neutral pole, early make/late break		
Base mounted	MC361NP	£2.50
Door mounted	MC361DRNP	£2.50
100A neutral pole, early make/late break		
Base mounted	MC361NP2	£3.75
Door mounted	MC361DRNP2	£3.75
4 pole terminal shroud		
Sizes 7.5 & 13kW	MC361TSDE	£1.75
Sizes 30 & 37kW	MC361TSHK	£1.75
Shaft + interlock extension kit		
Sizes 4 & 13kW	MC361STB1	£0.75
Sizes 30 & 37kW	MC361STCK1	£0.83
Shaft extension (only)		
Sizes 4 & 13kW	MC361SB1	£0.38
Sizes 30 & 37kW	MC361SCK1	£0.45
Interlock extension (only)		
Sizes 4 & 13kW	MC361TB1	£0.38
Sizes 30 & 37kW	MC361TCK1	£0.38

Switch disconnects in IP65 polycarbonate enclosure

Size (kW) AC3 rating 3 ph 380/440V	Thermal rating AC1 (A)	Catalogue numbers	Price
3 pole with earth & neutral terminations			
4	20	MC361BDEN3†	£13.20
7.5	25	MC361DDEN3	£13.34
13	32	MC361EDEN3	£16.14
30	63	MC361JDEN3	£26.40
37	100	MC361KDEN3	£40.30
4 pole with earth & neutral terminations			
4	20	MC361BDEN4	£13.36

† Will not accept add-on neutral or auxiliary contact blocks.

3 pole

4 pole

Description	Catalogue numbers	Price
3 pole		
32A	C363F32F3	£38.70
63A	C363F63F3	£61.39
100A	C363F100F3	£98.04
160A	C363F160F3	£168.42
250A	C363F250F3	£270.91
315A	C363F315F3	£338.96
4 pole		
32A	C363F32F4	£48.59
63A	C363F63F4	£74.06
100A	C363F100F4	£120.11
160A	C363F160F4	£209.51
250A	C363F250F4	£301.60
315A	C363F315F4	£386.56
3 pole with 'test' operation		
32A	C363FT32F3	£45.37
63A	C363FT63F3	£68.05
100A	C363FT100F3	£98.04
160A	C363FT160F3	£168.42
250A	C363FT250F3	£270.91
315A	C363FT315F3	£338.96
400A	C363FT400F3	£391.66
4 pole with 'test' operation		
32A	C363FT32F4	£55.25
63A	C363FT63F4	£80.74
100A	C363FT100F4	£126.79
160A	C363FT160F4	£216.20
250A	C363FT250F4	£308.26
315A	C363FT315F4	£393.67
400A	C363FT400F4	£418.65

Fuseswitch operating shafts

Description (switch sizes)	Catalogue numbers	Price
120mm, (32 - 400A)	C363AS1	£2.67
320mm, (32 - 400A)	C363AS2	£9.35
500mm, (32 - 400A)	C363AS3	£14.70

Short handle

Long handle

Fuseswitch 'standard' interlocked operating handles & accessories

Description	Catalogue numbers	Price
Operating handles		
Black, short, (32 - 160A)	C363ADM1	£10.67
Black, long, (100 - 315A)	C363ADM2	£10.67
Red, short, (32 - 160A)	C363ADM3	£26.69
Red, long, (100 - 315A)	C363ADM4	£26.69
Auxiliary contact , 1 N.O. – 1 N.C.	C363AC1	£10.45
Auxiliary drive shaft kit	C363ACS1	£5.99
Terminal shrouds		
3 pole (100 - 160A)	C363A160TS3	£5.94
3 pole (250 - 315A)	C363A315TS3	£8.22
4 pole (100 - 160A)	C363A160TS4	£7.91
4 pole (250 - 315A)	C363A315TS4	£10.97
Neutral link (solid link for connection on to switched pole)		
32A	C363SL1	£6.67
63A	C363SL2	£9.35
100A	C363SL3	£9.35
160 to 315A	C363SL4	£13.34

Fuseswitch interlocked operating handles & accessories with TEST

Description (switch sizes)	Catalogue numbers	Price
Operating handle		
Black, short, (32 - 160A)	C363ADM5	£21.36
Black, long, (100 - 400A)	C363ADM6	£21.36
Auxiliary contact , 1 N.O. – 1 N.C.	C363AC11	£10.45
Auxiliary drive shaft kit	C363ACS2	£6.35
Terminal shrouds		
3 pole (100 - 160A)	C363A160TS3	£5.94
3 pole (250 - 400A)	C363A315TS3	£8.22
4 pole (100 - 160A)	C363A160TS4	£7.91
4 pole (250 - 400A)	C363A315TS4	£10.97
Neutral link (solid link for connection on to switched pole)		
32A	C363SL1	£6.67
63A	C363SL2	£9.35
100A	C363SL3	£9.35
160 to 315A	C363SL4	£13.34
400A	C363SL5	£16.01

Contactor

Reversing contactors

Contactors

Description AC3 400/440V	Catalogue numbers	Price
4kW		
3 N.O. + 1 N.O. auxiliary	CE12BNC310*	£9.77
3 N.O. + 1 N.C. auxiliary	CE12BNC301*	£9.77
4 N.O.	CE12BNC400*	£9.77
5.5kW		
3 N.O. + 1 N.O. auxiliary	CE12CNC310*	£16.05
3 N.O. + 1 N.C. auxiliary	CE12CNC301*	£16.05
4 N.O.	CE12CNC400*	£16.05

Control relays

Description	Catalogue numbers	Price
4 N.O.	D12CRC40*	£9.77
3 N.O. – 1 N.C.	D12CRC31*	£9.77
2 N.O. – 2 N.C.	D12CRC22*†	£9.77

* Add suffix for coil voltage from the tables below

† Can not be used with T2, T3, V2 & V3 coils

A.C. operating coils - 3.5VA

Coil voltage 40 to 450Hz	Suffix
24	T
48	W
110 - 127	A
220 - 240	B
277	H
380 - 415	L

Contactors - Reversing

Description AC3 400/440V	Catalogue numbers	Price
4kW		
3 N.O. + 1 N.O. auxiliary	CE52BNC310*	£24.81
3 N.O. + 1 N.C. auxiliary	CE52BNC301*	£24.81
5.5kW		
3 N.O. + 1 N.O. auxiliary	CE52CNC310*	£32.09
3 N.O. + 1 N.C. auxiliary	CE52CNC301*	£32.09

D.C. operating coils – 3.5 watts

Coil voltage	Suffix
12	R1
24	T1
48	W1
110 - 125	A1
220 - 240	B1

D.C. low power consumption operating coils for non-reversing contactors & relays ‡ †

Coil voltage	Suffix
24 (1.4 watts)	T2
24 (1.7 watts with surge suppressor)	T3
17 - 32 (2.4 watts)	V2
17 - 32 (2.8 watts with surge suppressor)	V3

‡ Can not be used when auxiliary contacts are fitted.

† Can not be used with control relay D12CRC22.

*Overload relay**Side mounting auxiliary**Top mounting auxiliary***Auxiliary contact blocks Δ**

Description	Catalogue numbers	Price
Side mounting		
1 N.O. – 1 N.C.	C320MCS11	£3.64
Top mounting		
1 N.O. – 1 N.C.	C320MCF11	£4.33
2 N.O.	C320MCF20	£4.33
2 N.C.	C320MCF02	£4.33

Δ Top and side mounted auxiliary contact blocks can not be used together.

Accessories

Description	Catalogue numbers	Price
Suppressor		
24 - 60V dc	C320MSS1	£1.85
50 - 250V dc	C320MSS2	£1.85
200 - 420V dc	C320MSS3	£1.85
Reversing connection links (2 pieces)	C320MCR1	£1.21
Identification markers	C320MCM1	£1.69

Thermal overload relays

Description (FLC)	Catalogue numbers	Price
0.3 – 0.45A	C312BN3A	£11.09
0.45 – 0.67A	C312BN3B	£11.09
0.67 – 1.0A	C312BN3C	£11.09
1.0 – 1.5A	C312BN3D	£11.09
1.4 – 2.1A	C312BN3E	£11.09
1.8 – 2.7A	C312BN3F	£11.09
2.4 – 3.6A	C312BN3G	£11.09
3.5 – 5.0A	C312BN3H	£11.09
4.0 – 6.0A	C312BN3J	£11.09
5.5 – 8.5A	C312BN3K	£11.09
8.5 – 12.5A	C312BN3L	£11.09

2.2kW

45kW

Contactors

Description	Catalogue numbers	Price
2.2kW		
3 pole, 1 N.O. auxiliary	CE15ANS3*	£17.29
3 pole, 1 N.C. auxiliary	CE15ANC3*	£17.29
4 pole	CE15AN4*	£17.91
4kW		
3 pole, 1 N.O. auxiliary	CE15BNS3*	£17.39
3 pole, 1 N.C. auxiliary	CE15BNC3*	£17.39
4 pole	CE15BN4*	£18.05
5.5kW		
3 pole, 1 N.O. auxiliary	CE15CNS3*	£20.29
3 pole, 1 N.C. auxiliary	CE15CNC3*	£20.29
4 pole	CE15CN4*	£20.99
7.5kW , 3 pole	CE15DN3*	£22.60
11kW , 3 pole	CE15EN3*	£30.18
15kW , 3 pole	CE15FN3*	£47.27
18.5kW , 3 pole	CE15GN3*	£62.22
22kW , 3 pole	CE15HN3*	£70.76
30kW , 3 pole	CE15JN3*	£100.67
37kW , 3 pole	CE15KN3*	£122.96
45kW , 3 pole, 1 N.O. auxiliary	CE15LN3*	£152.31
55kW , 3 pole, 1 N.O. auxiliary	CE15MN3*	£186.14
75kW , 3 pole, 1 N.O. auxiliary	CE15NN3*	£220.12
90kW , 3 pole, 1 N.O. – 1 N.C. auxiliary	CE15PN3*	£322.27
110kW , 3 pole, 1 N.O. – 1 N.C. auxiliary	CE15RN3*	£416.37
160kW , 3 pole, 1 N.O. – 1 N.C. auxiliary	CE15SN3*	£539.30

Relays

Description	Catalogue numbers	Price
2 N.O. – 2 N.C.	D15CR22*	£16.23
3 N.O. – 1 N.C.	D15CR31*	£16.23
4 N.O.	D15CR40*	£16.23

* Add suffix for coil voltage from tables below

A.C. operating coils

Coil voltage	Suffix								
	50Hz	24	48	110	220	380	415	440	550
60Hz		–	–	120	240	–	–	480	600
Suffix	CE15AN to FN	T	Y	A	K	L	M	C	D
	CE15GN to SN	U	Y	A	K	L	M	C	D

D.C. operating coils for contactors CE15PN to SN only

Coil voltage	24	48	120	240
Suffix	T1B	W1B	A1B	B1B

Contact block

Timer

Contactor and relay auxiliary contact blocks

Description (contactor sizes)	Catalogue numbers	Price
Side mounting (for contactors up to 37kW & relays)		
1 N.O.	C320KGS1	£5.61
1 N.C.	C320KGS2	£5.61
1 N.O. – 1 N.C.	C320KGS3	£7.01
2 N.O.	C320KGS4	£7.01
Top mounting (for contactors up to 37kW & relays)		
1 N.O.	C320KGT1	£5.04
1 N.C.	C320KGT2	£5.04
1 N.O. – 1 N.C.	C320KGT3	£6.42
2 N.O.	C320KGT4	£6.42
2 N.C.	C320KGT5	£6.42
2 N.O. – 2 N.C.	C320KGT15	£9.15
3 N.O. – 1 N.C.	C320KGT14	£9.15
4 N.O.	C320KGT13	£9.15
Base mounting		
1 N.O. (for contactors 45 to 75kW)	C320KGS31	£10.67
1 N.O. – 1 N.C. (for contactors 45 to 75kW)	C320KGS32	£13.05
1 N.O. (for contactors 90 to 160kW)	C320KGS41	£14.26
1 N.O. – 1 N.C. (for contactors 90 to 160kW)	C320KGS42	£18.13
Add-on (for contactors 45 to 160kW)		
1 N.O.	C320KGS20	£8.25
1 N.C.	C320KGS21	£12.92
1 N.O. – 1 N.C.	C320KGS22	£14.05

Add-on timers to fit contactors up to 37kW & relays

Description	Catalogue numbers	Price
On or off delay		
0.1 - 30s	C320TP1	£31.09
10 - 180s	C320TP2	£33.39

Contactor accessories

Description	Catalogue numbers	Price
Mechanical interlock		
For contactors up to 37kW	C321KM60B	£5.49
For contactors 45 to 75kW	C321KM30	£19.18
For contactors 90 to 160kW	C321KM40	£20.10
Suppressor, 24 - 48V		
For contactors up to 160kW	MC320LRC4	£7.06
Suppressor, 110 - 240V		
For contactors up to 37kW	MC320LRC2	£8.61
For contactors 45 to 160kW	MC320LRC3	£9.69

C.T. Operated
Thermal overload relays

Description (FLC)	Catalogue numbers	Price
For contactors up to 15kW		
0.25 - 0.4A	C316FNA3C	£19.86
0.4 - 0.63A	C316FNA3D	£19.86
0.63 - 1.0A	C316FNA3E	£19.86
1.0 - 1.4A	C316FNA3F	£19.86
1.3 - 1.8A	C316FNA3G	£19.86
1.7 - 2.4A	C316FNA3H	£19.86
2.2 - 3.1A	C316FNA3J	£19.86
2.8 - 4.0A	C316FNA3K	£19.86
3.5 - 5.0A	C316FNA3L	£19.86
4.5 - 6.5A	C316FNA3M	£19.86
6.0 - 8.5A	C316FNA3N	£19.86
7.5 - 11A	C316FNA3P	£19.86
10 - 14A	C316FNA3Q	£22.21
13 - 19A	C316FNA3R	£24.76
18 - 24A	C316FNA3S	£28.61
24 - 32A	C316FNA3T	£37.90
For contactors 18.5 to 37kW		
18 - 25A	C316KNA3A	£43.25
22 - 32A	C316KNA3B	£43.25
29 - 42A	C316KNA3C	£43.25
36 - 52A	C316KNA3D	£54.45
45 - 63A	C316KNA3E	£59.68
60 - 80A	C316KNA3F	£69.39
For contactors 45 to 90kW		
65 - 90A	C316PNA3A	£124.02
80 - 110A	C316PNA3B	£129.65
100 - 135A	C316PNA3C	£140.91
110 - 150A	C316PNA3D	£140.91
130 - 175A	C316PNA3E	£149.38
150 - 200A	C316PNA3F	£164.89
C.T. operated		
130 - 185A	C316SNA3A	£246.27
165 - 235A	C316SNA3B	£246.27
220 - 310A	C316SNA3C	£253.65
285 - 400A	C316SNA3D	£253.65

Overload relay accessories

Description	Catalogue numbers	Price
DIN/panel mtg. bracket (C316FNA)	C306TB1	£9.76
Panel mtg. bracket (C316KNA)	C316TB1	£16.47
Solenoid reset module (C316FNA/SNA)	C316RR1*	£18.89

Solenoid reset module operating coil

Coil voltage 50/60Hz	24	48	110/ 120	220/ 440	415/ 500
Suffix	U	Y	A	N	P

* Add suffix letter from table above.

Contactor

Overload relay

Contactors

Description	Catalogue numbers	Price
3 pole, 2 N.O. – 2 N.C. auxiliary		
240kW	GH55-3-22*	£902.10
315kW	GH57-3-22*	£1040.89
400kW	GH62-3-22*	£1568.78
500kW	GH64-3-22*	£2081.79
600kW	GH76-3-12*	£3643.41
700kW	GH78-3-12*	£4429.67

* Add suffix for coil voltage from tables below.

Contactor coil voltage suffix

AC/DC coils for contactors 240 to 500kW

Coil voltage	A.C. 50Hz	110	220	380	440
A.C. 60Hz		120	240	415	480
D.C.		110	200/ 220	345/ 380	400/ 440

Suffix	A	K	M	C
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AC coils for contactors 600 & 700kW

Coil voltage	50Hz	110	220	380	440
60Hz		120	240	415	480

Suffix	A	K	M	C
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DC coils for contactors 600 & 700kW

Coil voltage	48	120	220
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Suffix	W1	A1	B1
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C.T. operated thermal overloads

Description (FLC)	Catalogue numbers	Price
355 – 500A	C316UNA3A	£263.87
465 – 650A	C316UNA3B	£263.87
610 – 850A	C316UNA3C	£283.36

Auxiliary contact blocks

Description	Catalogue numbers	Price
2 N.O. – 2 N.C. For contactors 240 to 500kW	EF22	£38.93
1 N.O. – 1 N.C. For contactors 600 to 700kW	EB11	£45.19

Accessories

Description	Catalogue numbers	Price
Mechanical interlock - Horizontal		
For contactors 240 to 315kW	BM5H	£58.11
For contactors 400 to 500kW	BM6H	£87.16
For contactors 600 to 700kW	BM7H	£164.65
Mechanical interlock - Vertical		
For contactors 240 to 315kW	BM5V	£58.11
For contactors 400 to 500kW	BM6V	£87.16
For contactors 600 to 700kW	BM7V	£164.65
4th pole for contactors 240 to 315kW		
325A lth	NP325-5	£85.37
500A lth	NP500-5	£92.90
4th pole for contactors 400 to 500kW		
500A lth	NP500-6	£111.72
1000A lth	NP1000-6	£205.86
4th pole for contactors 600 to 700kW		
1000A lth	NP1000-7	£232.27

Timer

Supply monitoring
relay

Thermistor
protection unit

Electronic timers, 24 to 240V AC or DC operating voltage

Description	Catalogue numbers	Price
Delay on, 0.24s/0.24m - 600s/600m	MD87F	£40.70
Interval, 0.24s/0.24m - 600s/600m	MD87G	£45.32
Recycling, 0.24s/0.24m - 600s/600m	MD87H	£62.92

Electronic timers, fixed operating voltage

Description	Catalogue numbers	Price
Delay off, 0.5 - 10s		
24V AC/DC - 110V AC	MD87E24-110S10	£50.39
24V AC/DC - 240V AC	MD87E24-240S10	£50.39
Delay off, 1 - 30s		
24V AC/DC - 110V AC	MD87E24-110S30	£50.39
24V AC/DC - 240V AC	MD87E24-240S30	£50.39
Delay off, 1 - 60s		
24V AC/DC - 110V AC	MD87E24-110S60	£51.92
24V AC/DC - 240V AC	MD87E24-240S60	£51.92
Delay off, 1 - 10m		
24V AC/DC - 110V AC	MD87E24-110M10	£54.81
24V AC/DC - 240V AC	MD87E24-240M10	£54.81
Star delta, 1 - 30s		
24V AC/DC - 110V AC	MD87K24-110	£32.92
24V AC/DC - 240V AC	MD87K24-240	£32.92

Supply monitoring relays

Description	Catalogue numbers	Price
Undervoltage, phase loss, 380/440V	MD60ANM	£207.47
Phase loss, 380/440V	MD60DNM	£153.25

Thermistor protection units – Panel mounting

Description	Catalogue numbers	Price
Control supply		
50V	69400H314	£89.61
100/110V	69400H311	£89.61
230/250V	69400H312	£89.61
400/440V	69400H313	£89.61

Flush

Mushroom

Double headed

Non-illuminated operators

Description	Catalogue numbers		Price	
	Chrome bezel		Black bezel	
Flush	E22P*	£2.85	E22PB*	£2.64
Extended	E22E*	£2.85	E22EB*	£2.64
Mushroom, spring return				
28mm	E22M*	£5.00	E22MB*	£4.66
40mm	E22L*	£5.23	E22LB*	£4.87
50mm	E22JP*	£7.71	E22JPB*	£7.19
Mushroom, latch				
28mm, turn reset	E22ML*	£9.51	E22MLB*	£9.35
40mm, turn reset	E22LL*	£9.77	E22LLB*	£9.59
50mm, push-pull	E22JPL*	£10.42	E22JPLB*	£10.23
50mm, key reset	E22G*	£17.15	E22GB*	£16.87
Double headed green/red operators				
Unmarked – IP40	–		E22DB1A11	£4.42
– IP65	–		E22DB1B11	£4.98
Marked 'I - O' – IP40	–		E22DB1A21	£4.42
– IP65	–		E22DB1B21	£4.98

*** Push colour selection suffix**

Colour	Suffix
Black	1
Blue §	6
Green	3
Grey †§	7
Red	2
White †§	5
Yellow §	4

† Not available for mushroom operators.

§ Not available for 50mm mushroom operators.

Contact block selection table (max. 2 per operator)

Description	Catalogue numbers	Price
1 N.C.	E22B1	£2.90
1 N.O.	E22B2	£2.90
1 N.O. – 1 N.C.	E22B11	£5.54
2 N.O.	E22B20	£5.54

See accessories page 21 for fitting up to 5 contact blocks per operator.

Flush

Double headed with clear lens

Illuminated operators

Description	Catalogue numbers		Price	
	Chrome bezel		Black bezel	
Flush	E22N*	£5.76	E22NB*	£5.38
Extended	E22T*	£5.76	E22TB*	£5.38
Mushroom, latch 50mm push-pull	E22JPT*	£11.00	E22JPTB*	£10.23
Double headed green/red operators & 1 pilot light with clear lens				
Unmarked – IP40	–		E22DB1A10	£6.79
– IP65	–		E22DB1B10	£7.54
Marked 'I - O' – IP40	–		E22DB1A20	£6.79
– IP65	–		E22DB1B20	£7.54

* Push colour selection suffix

Colour	Suffix
Amber †	9
Black §	1
Blue	6
Clear †	0
Green	3
Grey §	7
Red	2
White	5
Yellow	4

† Not available for flush or extended operators.

§ Not available for mushroom operators.

Contact block selection table (max. 2 per operator)

Description	Catalogue numbers	Price
1 N.C.	E22B1	£2.90
1 N.O.	E22B2	£2.90
1 N.O. – 1 N.C.	E22B11	£5.54
2 N.O.	E22B20	£5.54

See accessories page 21 for fitting up to 5 contact blocks per operator.

Transformer units, complete with 6V BA9s bulb

Description	Catalogue numbers	Price
110V input	E22TL1C	£22.22
240V input	E22TL2C	£22.22

Knob

Lever

Key

Selector switch operators

Description	Catalogue numbers		Black bezel	Price
	Chrome bezel	Price		
Knob operated				
2 pos. stayput	E22X51	£4.87	E22XB51	£4.74
2 pos. return from right	E22X61	£4.87	E22XB61	£4.74
3 pos. stayput (centre off)	E22XG1	£4.99	E22XBG1	£4.65
3 pos. return from left/right	E22XL1	£5.23	E22XBL1	£4.87
3 pos. return from left	E22XJ1	£5.23	E22XBJ1	£4.87
3 pos. return from right	E22XN1	£5.23	E22XBN1	£4.87
Lever operated				
2 pos. stayput	E22V51	£4.87	E22VB51	£4.74
2 pos. return from right	E22V61	£4.87	E22VB61	£4.74
3 pos. stayput (centre off)	E22VG1	£4.99	E22VBG1	£4.65
3 pos. return from left/right	E22VL1	£5.23	E22VBL1	£4.87
3 pos. return from left	E22VJ1	£5.23	E22VBJ1	£4.87
3 pos. return from right	E22VN1	£5.23	E22VBN1	£4.87
Key operated				
2 pos. stayput	E22K53	£20.35	E22KB53	£18.97
2 pos. return from right	E22K62	£20.35	E22KB62	£18.97
3 pos. stayput (centre off)	E22KG7	£21.70	E22KBG7	£20.05
3 pos. return from left/right	E22KL4	£23.91	E22KBL4	£22.12
3 pos. return from left	E22KJ5	£23.91	E22KBJ5	£22.12
3 pos. return from right	E22KN6	£23.91	E22KBN6	£22.12

Contact block selection table (max. 2 per operator)

Description	Catalogue numbers	Price
1 N.C.	E22B1	£2.90
1 N.O.	E22B2	£2.90
1 N.O. – 1 N.C.	E22B11	£5.54
2 N.O.	E22B20	£5.54

See accessories page 21 for fitting up to 5 contact blocks per operator.

Knob

Lever

Red illuminated selector switch operators

Description	Catalogue numbers		Black bezel	Price
	Chrome bezel	Price		
Knob operated				
2 pos. stayput	E22S52	£6.75	E22SB52	£6.27
2 pos. return from right	E22S62	£6.75	E22SB62	£6.27
3 pos. stayput (centre off)	E22SG2	£6.75	E22SBG2	£6.27
3 pos. return from left/right	E22SL2	£6.96	E22SBL2	£6.47
3 pos. return from left	E22SJ2	£6.96	E22SBJ2	£6.47
3 pos. return from right	E22SN2	£6.96	E22SBN2	£6.47
Lever operated				
2 pos. stayput	E22W52	£6.75	E22WB52	£6.27
2 pos. return from right	E22W62	£6.75	E22WB62	£6.27
3 pos. stayput (centre off)	E22WG2	£6.75	E22WBG2	£6.27
3 pos. retrn from left/right	E22WL2	£6.96	E22WBL2	£6.47
3 pos. return from left	E22WJ2	£6.96	E22WBJ2	£6.47
3 pos. return from right	E22WN2	£6.96	E22WBN2	£6.47

Contact block selection table (max. 2 per operator)

Description	Catalogue numbers	Price
1 N.C.	E22B1	£2.90
1 N.O.	E22B2	£2.90
1 N.O. – 1 N.C.	E22B11	£5.54
2 N.O.	E22B20	£5.54

See accessories page 21 for fitting up to 5 contact blocks per operator.

Transformer units, complete with 6V BA9s bulb

Description	Catalogue numbers	Price
110V input	E22TL1	£7.20
240V input	E22TL2	£7.20
415V input	E22TL3	£8.42
440V input	E22TL4	£8.42

Monoblock

Standard

Monoblock indicating lights, BA9s 2.6W max.

Description	Catalogue numbers	Price
Direct connect		
IP40	E22HVP†	£2.47
IP65	E22HV†	£3.60
Resistor connect, 240V (For use with 110V bulb only)		
IP40	E22HRP†	£3.92
IP65	E22HR†	£5.07

† Add suffix to denote lens colour.

BA9s bulbs

Description	Catalogue numbers	Price
6V (1W) flasher	28-2225-26	£3.77
6V (1W)	28-2225-72	£1.11
12V (1.2W)	28-2225-29	£1.21
24V (1.2W)	28-2225-30	£1.21
28V (1.12W)	28-2225-73	£1.21
110V (2.2W) (For use in indicating lamps only)	28-2225-24	£3.29

LED bulbs up to 60Vac/dc

Colour	Catalogue numbers	Price
Blue	E22LED*BN	£12.08
Green	E22LED*GN	£12.08
Orange	E22LED*ON	£6.59
Red	E22LED*RN	£6.59
White	E22LED*WN	£12.08
Yellow	E22LED*YN	£6.59

* Add voltage code to complete catalogue number.

LED bulbs 120Vac/dc

Colour	Catalogue numbers		Price	
	120Vac	120Vdc	120Vdc	Price
Blue	E22LED120BA	£12.08	E22LED120BD	£12.08
Green	E22LED120GA	£12.08	E22LED120GD	£12.08
Orange	E22LED120OA	£6.59	E22LED120OD	£8.78
Red	E22LED120RA	£6.59	E22LED120RD	£8.78
White	E22LED120WA	£12.08	–	–
Yellow	E22LED120YA	£6.59	E22LED120YD	£8.78

Standard indicating light

Description	Catalogue numbers	Price
Lens and mounting	E22HT†	£2.01

† Add suffix to denote lens colour

Transformer units, complete with 6V BA9s bulbs

Description	Catalogue numbers	Price
Input 110V	E22TL1	£7.20
240V	E22TL2	£7.20
415V	E22TL3	£8.42
440V	E22TL4	£8.42

Indicating light lens colour selection table

Colour	Lens suffix	
	For BA9s bulbs	For LED bulbs
Amber	9	9
Blue	6	66
Clear	0	0
Green	3	33
Red	2	22
White	5	5
Yellow	4	4

Voltage code

Voltage	Code
10Vac – 6Vdc	006
12Vac – 12Vdc	012
24Vac – 24Vdc	024
35Vac – 35Vdc	035
48Vac – 48Vdc	048
60Vac – 60Vdc	060

LED bulbs 135Vac/dc

Colour	Catalogue numbers		Price
	135Vac/dc	Price	
Blue	E22LED135BD	£12.08	
Green	E22LED135GD	£12.08	
Orange	E22LED135OD	£8.78	
Red	E22LED135RD	£8.78	
White	E22LED135WD	£12.08	
Yellow	E22LED135YD	£8.78	

Single way

Two way

Three way

Assembled Pushbutton Stations in IP65 Polycarbonate Enclosure

Description/ Operator	Button colour	Contact arrangement	Catalogue numbers		Black bezel	Price
			Chrome bezel	Price		
Single way						
40mm mushroom (spring return) Yellow background	Red	N. C.	E22AS105	£19.28	E22ASB105	£18.91
40mm mushroom (latch-in twist to release) Yellow background	Red	N. C.	E22AS106	£24.37	E22ASB106	£23.62
40mm mushroom (latch-in key release) Yellow background	Red	N. C.	E22AS107	£35.03	E22ASB107	£27.62
Start (flush)	Green	N. O.	E22AS108	£15.70	E22ASB108	£15.48
Stop (extended)	Red	N. C.	E22AS109	£15.70	E22ASB109	£15.48
Two way						
Start (flush)	Green	N. O.				
Stop (extended)	Red	N. C.	E22AS204	£24.63	E22ASB204	£24.20
↑ (flush)	Black	N. O.				
↓ (flush)	Black	N. O.	E22AS207	£24.63	E22ASB207	£24.20
Start (flush)	Green	N. O.				
Stop (40mm mushroom spring return)	Red	N. C.	E22AS205	£26.97	E22ASB205	£26.40
Start (flush)	Green	N. O.				
Stop (40mm mushroom latch-in twist to release)	Red	N. C.	E22AS206	£32.06	E22ASB206	£31.12
Three way						
Forward (flush)	Black	N. O.				
Stop (extended)	Red	N. C.				
Reverse (flush)	Black	N. O.	E22AS304	£33.43	E22ASB304	£32.77
Open (flush)	Black	N. O.				
Stop (extended)	Red	N. C.				
Close (flush)	Black	N. O.	E22AS305	£33.43	E22ASB305	£32.77
Up (flush)	Black	N. O.				
Stop (extended)	Red	N. C.				
Down (flush)	Black	N. O.	E22AS306	£33.43	E22ASB306	£32.77
↑ (flush)	Black	N. O.				
○ (extended)	Red	N. C.				
↓ (flush)	Black	N. O.	E22AS307	£33.43	E22ASB307	£32.77

Single way

Three way

Legend plates

Description	Catalogue numbers	Price
Aluminium 30 x 40mm		
Black, blank	E22NE36	£0.52
Red, blank	E22NE37	£0.52
Aluminium 40 x 45mm		
Black, blank	E22NF36	£0.76
Red, blank	E22NF37	£0.76
Visual aid surround, yellow		
70mm	E22VA1	£2.27
45mm	E22VA2	£1.94

Polycarbonate enclosures (IP65)

Description	Catalogue numbers	Price
Single way		
56mm deep	E22CSP1	£6.83
86mm deep	E22CDP1	£9.54
56mm deep, yellow cover	E22CSP1Y	£8.00
86mm deep, yellow cover	E22CDP1Y	£10.45
Two way		
56mm deep	E22CSP2	£8.63
86mm deep	E22CDP2	£11.82
Three way		
56mm deep	E22CSP3	£10.39
86mm deep	E22CDP3	£13.65
Four way		
56mm deep	E22CSP4	£14.20
86mm deep	E22CDP4	£19.10

Accessories

Description	Catalogue numbers	Price
Operator plug , for contact blocks in centre position of momentary operators	E22BA2	£0.40
5 way mounting adaptor *		
For use with:		
Non-illuminating pushbutton & mushroom operators, and 2 position selector switches	E22BA11	£1.71
Illuminated pushbutton & 50 mm mushroom latch operators, and 2 position selector switches	E22BA11L	£1.71
3 position selector switches cam 1 only	E22BA12	£1.71
Illuminated 3 position selector switches cam 1 only	E22BA12L	£1.71
Mechanical push rod 25 - 120mm	E22MRL	£3.39
Protective boot , for IP66, clear	E22BCM	£1.74
Hole plug	E22BHP	£1.96
Box spanner	E22BA6	£3.83

* Not suitable for 3 position push-pull operator, double headed pushbutton or 3 position selector switch with cam 2

Flush

Extended

Mushroom

Standard pushbutton operators with chrome bezels

Description	Catalogue numbers	Price
Flush		
Black	91000T101	£6.94
Blue	91000T108	£6.94
Green	91000T103	£6.94
Red	91000T102	£6.94
White	91000T106	£6.94
Yellow	91000T104	£6.94
Extended		
Black	91000T111	£6.94
Green	91000T113	£6.94
Red	91000T112	£6.94
Bare shaft operators		
Spring return	91000T100	£7.33
Latching	91000T140	£19.34
38mm dia. mushroom operating pushes for bare shaft operators		
Black	91000T281	£2.99
Blue	91000T288	£3.73
Green	91000T283	£2.99
Red	91000T282	£2.99
Yellow	91000T284	£3.24
63mm dia. palm operating pushes for bare shaft operators		
Black	91000T291	£6.44
Green	91000T293	£6.44
Red	91000T292	£6.44

Contact blocks, up to six per operator

Description	Catalogue numbers	Price
1 N.O. – 1 N.C.	91000T1	£8.39
2 N.O.	91000T2	£8.39
2 N.C.	91000T3	£8.39
1 N.C.	91000T51	£5.85
1 N.O.	91000T53	£5.85

Illuminated pushbutton operators with chrome bezels

Description	Catalogue numbers	Price
Transformer type (supplied with 6V bulb)		
110/120V input	91000T411	£41.40
220/240V input	91000T412	£41.40
380/415V input	91000T413	£41.40
440/480V input	91000T414	£41.40
Direct connected (supplied without bulb)		
6 – 240V	91000T441	£21.46

Lenses – plastic

Description	Catalogue numbers	Price
Amber	91000TC43	£1.54
Blue	91000TC24	£2.80
Clear	91000TC25	£2.80
Green	91000TC22	£1.54
Red	91000TC21	£1.54
White	91000TC26	£1.54

BA9s bulbs

Description	Catalogue numbers	Price
6V (1W) flasher	28-2225-26	£3.77
6V (1W)	28-2225-72	£1.11
12V (1.2W)	28-2225-29	£1.21
24V (1.2W)	28-2225-30	£1.21
28V (1.12W)	28-2225-73	£1.21

Contact blocks, up to six per operator

Description	Catalogue numbers	Price
1 N.O. – 1 N.C.	91000T1	£8.39
2 N.O.	91000T2	£8.39
2 N.C.	91000T3	£8.39
1 N.C.	91000T51	£5.85
1 N.O.	91000T53	£5.85

Plastic lens
Glass lens

Standard indicating lamps with chrome bezels

Description	Catalogue numbers	Price
Transformer type (supplied with 6V bulb)		
110/120V input	91000T181N	£32.33
220/240V input	91000T182N	£32.33
380/415V input	91000T183N	£32.33
550/600V input	91000T185N	£32.33
Direct connected (supplied without bulb)		
6 - 240V	91000T197N	£21.17
Resistor type (supplied with 120V bulb)		
110/120V input	91000T201N	£29.09
220/240V input	91000T202N	£29.09

Lenses – plastic

Description	Catalogue numbers	Price
Amber	91000TC19N	£1.54
Blue	91000TC4N	£1.54
Clear	91000TC5N	£1.54
Green	91000TC2N	£1.54
Red	91000TC1N	£1.54
White	91000TC6N	£1.54

Lenses – glass

Description	Catalogue numbers	Price
Amber	91000TC9N	£8.39
Blue	91000TC10N	£8.39
Clear	91000TC11N	£8.39
Green	91000TC8N	£8.39
Red	91000TC7N	£8.39
White	91000TC12N	£8.39

Voltage code

Voltage	Code
10Vac – 6Vdc	006
12Vac – 12Vdc	012
24Vac – 24Vdc	024
35Vac – 35Vdc	035
48Vac – 48Vdc	048
60Vac – 60Vdc	060

BA9s bulbs

Description	Catalogue numbers	Price
6V (1W) flasher	28-2225-26	£3.77
6V (1W)	28-2225-72	£1.11
12V (1.2W)	28-2225-29	£1.21
24V (1.2W)	28-2225-30	£1.21
28V (1.12W)	28-2225-73	£1.21
110V (2.2W) (For use in indicating lamps only)	28-2225-24	£3.29

LED bulbs

Colour	Catalogue numbers		Price		Price		Price	
	Up to 60Vac/dc	120Vac	120Vdc	135Vac/dc	120Vdc	135Vac/dc	120Vdc	135Vac/dc
Blue	E22LED*BN	£12.08	E22LED120BA	£12.08	E22LED120BD	£12.08	E22LED135BD	£12.08
Green	E22LED*GN	£12.08	E22LED120GA	£12.08	E22LED120GD	£12.08	E22LED135GD	£12.08
Orange	E22LED*ON	£6.59	E22LED120OA	£6.59	E22LED120OD	£8.78	E22LED135OD	£8.78
Red	E22LED*RN	£6.59	E22LED120RA	£6.59	E22LED120RD	£8.78	E22LED135RD	£8.78
White	E22LED*WN	£12.08	E22LED120WA	£12.08	–		E22LED135WD	£12.08
Yellow	E22LED*YN	£6.59	E22LED120YA	£6.59	E22LED120YD	£8.78	E22LED135YD	£8.78

*Add voltage code to complete catalogue number.

Plastic lens

Glass lens

Pretest indicating lamps with chrome bezels

Description	Catalogue numbers	Price
Transformer type (supplied with 6V bulb)		
110/120V input	91000T221N	£40.84
220/240V input	91000T222N	£40.84
380/415V input	91000T223N	£40.84
Direct connected (supplied without bulb)		
6 – 240V	91000T230N	£27.07
Resistor type (supplied with 120V bulb)		
110/120V input	91000T231N	£36.75
220/240V input	91000T240N	£36.75

Lenses – plastic

Description	Catalogue numbers	Price
Amber	91000TC43	£1.54
Blue	91000TC24	£2.80
Clear	91000TC25	£2.80
Green	91000TC22	£1.54
Red	91000TC21	£1.54
White	91000TC26	£1.54

BA9s bulbs

Description	Catalogue numbers	Price
6V (1W) flasher	28-2225-26	£3.77
6V (1W)	28-2225-72	£1.11
12V (1.2W)	28-2225-29	£1.21
24V (1.2W)	28-2225-30	£1.21
28V (1.12W)	28-2225-73	£1.21
110V (2.2W) (For use in indicating lamps only)	28-2225-24	£3.29

LED bulbs

Colour	Catalogue numbers		Price	120Vac	Price	120Vdc	Price	135Vac/dc	Price
	Upto 60Vac/dc	Price							
Blue	E22LED*BN	£12.08	E22LED120BA	£12.08	E22LED120BD	£12.08	E22LED135BD	£12.08	
Green	E22LED*GN	£12.08	E22LED120GA	£12.08	E22LED120GD	£12.08	E22LED135GD	£12.08	
Orange	E22LED*ON	£6.59	E22LED120OA	£6.59	E22LED120OD	£8.78	E22LED135OD	£8.78	
Red	E22LED*RN	£6.59	E22LED120RA	£6.59	E22LED120RD	£8.78	E22LED135RD	£8.78	
White	E22LED*WN	£12.08	E22LED120WA	£12.08	–		E22LED135WD	£12.08	
Yellow	E22LED*YN	£6.59	E22LED120YA	£6.59	E22LED120YD	£8.78	E22LED135YD	£8.78	

* Add voltage code to complete catalogue number.

Lens – glass

Description	Catalogue numbers	Price
Amber	91000TC15N	£8.39
Blue	91000TC16N	£8.39
Clear	91000TC17N	£8.39
Green	91000TC14N	£8.39
Red	91000TC13N	£8.39
White	91000TC18N	£8.39

Contact blocks, up to six per operator

See page 26

Voltage code

Voltage	Code
10Vac – 6Vdc	006
12Vac – 12Vdc	012
24Vac – 24Vdc	024
35Vac – 35Vdc	035
48Vac – 48Vdc	048
60Vac – 60Vdc	060

Knob
Lever
Key

Selector switch operators with chrome bezels

Description	Catalogue numbers	Price
2 position		
Stayput	91000T4011	£9.30
Spring return from right	91000T4081	£9.30
3 position		
Stayput, (centre off)	91000T4023	£10.20
Spring return from left & right	91000T4043	£11.24
Spring return from left	91000T4033	£11.24
Spring return from right	91000T4053	£11.24
Operator knob	91000TKB	£2.67
Operator lever	91000TLB	£3.76

Key switch operators with chrome bezels

Description	Catalogue numbers	Price
2 position		
Stayput	91000T15113	£32.64
Spring return from right	91000T15712	£32.64
3 position		
Stayput, (centre off)	91000T15237	£34.30
Spring return from left & right	91000T15434	£34.30
Spring return from left	91000T15335	£34.30
Spring return from right	91000T16536	£34.30

Contact blocks, up to six per operator

Description	Catalogue numbers	Price
1 N.O. – 1 N.C.	91000T1	£8.39
2 N.O.	91000T2	£8.39
2 N.C.	91000T3	£8.39
1 N.C.	91000T51	£5.85
1 N.O.	91000T53	£5.85

Single way

Three way

Legend plates

Description	Catalogue numbers	Price
Aluminium, medium		
Black, blank	91000TM36	£1.86
Red, blank	91000TM37	£1.86
Aluminium, large		
Black, blank	91000TJ36	£2.17
Red, blank	91000TJ37	£2.17

Accessories

Description	Catalogue numbers	Price
Hole plug	91000TA7	£1.69
Padlock attachment with clear flap	91000TA38	£12.50
Protective boot, (flush pushbuttons)		
Black	91000TA47	£3.13
Red	91000TA48	£3.13

Aluminium alloy enclosures

Description	Catalogue numbers	Price
Single way		
1 block deep	91000TN1	£15.34
2 blocks deep	91000TN11	£16.30
1 block deep, yellow lid	91000TN100	£15.34
Two way		
1 block deep	91000TN2	£20.02
2 blocks deep	91000TN12	£24.49
Three way		
1 block deep	91000TN3	£23.36
2 blocks deep	91000TN13	£31.88
Four way		
1 block deep	91000TN4	£40.11
2 blocks deep	91000TN14	£46.50

Die cast
Miniature DIN
Standard DIN
Limit switches, die cast, oil tight, plug-in with snap action contacts

Description	Catalogue numbers	Price
Plug-in body		
1 changeover contact	E50SA	£30.23
2 changeover contacts	E50SB	£39.61
Receptacle, surface mtg		
1 contact	E50RA20	£9.92
2 contact	E50RB20	£14.82
Receptacle, manifold mtg		
1 contact	E50RAM	£15.15
2 contact	E50RBM	£20.05
Receptacle, submersible (fitted with 2.4 metre sealed & terminated cable)		
1 contact	E50RA20S	£74.10
2 contact	E50RB20S	£99.91
Operating head		
Side rotary	E50DR1	£24.50
Side push plunger	E50DS1	£33.75
Side push roller	E50DS3	£41.56
Top push plunger	E50DT1	£30.94
Top push roller	E50DT3	£37.79
Operating levers , for use with side rotary operating heads		
Standard, nylon roller, (38mm)	E50KL200	£6.35
Standard, metal roller, (38mm)	E50KL355	£6.35
Adjustable, nylon roller, (13-95mm)	E50KL201	£9.42
Adjustable, metal roller, (13-95mm)	E50KL538	£9.42

Limit switches, DIN style, all insulated IP65 enclosures with positive opening N.C. contacts
Standard DIN size

Description	Catalogue numbers	Price
Switch body		
1 N.O. – 1 N.C. contacts	E49S1120	£11.64
Operating head		
Top push plunger	E49BP1	£4.30
Top push roller	E49CP1	£5.43
Standard roller lever	E49AP1	£7.47
Adjustable roller lever	E49UP1	£8.79
Rod lever	E49DP1	£7.58
Wobble head	E49VP1	£8.20

Miniature DIN size

Description	Catalogue numbers	Price
Switch body		
1 N.O. – 1 N.C. contacts	E49S7120	£9.14
Operating head		
Top push plunger	E49BP7	£1.30
Top push roller	E49CP7	£2.49
Standard roller lever	E49AP7	£2.49
Adjustable roller lever	E49UP7	£5.49
Rod lever	E49DP7	£6.32

Modular component parts

Description	Catalogue numbers	Price
Plunger heads		
Top push operator	ME500DT1	£8.59
Top roller push operator	ME500DT3	£11.88
Side push operator	ME500DS1	£40.44
Side roller push operator		
Roller in horizontal plane	ME500DS3	£42.43
Roller in vertical plane	ME500DS2	£42.43
Side rotary heads (including actuator)		
Standard roller lever - 30mm	ME500DR3	£20.41
Adj roller lever - 58 to 115mm	ME500DR4	£22.70
Steel rod lever - 200mm	ME500DR5	£24.63
Telescopic wobble head		
216 to 1208mm. This head must be installed with the actuator vertically downwards.	ME500DW2	£33.71

Complete position switches – Red enclosure IP65

Description	Catalogue numbers	Price
Plunger heads		
Top push		
Snap action	ME500PT1R1	£38.17
Slow make & break	ME500CT1R1	£35.24
Top roller push		
Snap action	ME500PT3R1	£41.13
Slow make & break	ME500CT3R1	£38.17
Side push - snap action		
Horizontal roller	ME500PS3R1	£72.03
Vertical roller	ME500PS2R1	£69.09

Description	Catalogue numbers	Price
Enclosure		
Red with 20mm conduit entry	ME500ER1	£17.10
Contact blocks		
IN.O. – 1N.C. Snap action contact block with positive opening operation	ME500SP	£12.53
IN.O. – 1N.C. Slow make and break contact block with positive opening operation	ME500SC	£9.60
Replacement actuators		
Standard roller lever - 30mm	ME500DR7	£4.91
Adj roller lever - 58 to 115mm	ME500DR6	£5.59
Steel rod lever - 200mm	ME500DR8	£1.98

Description	Catalogue numbers	Price
Side rotary heads (including actuator)		
Standard roller lever - 30mm		
Snap action	ME500PR2R1	£50.01
Slow make & break	ME500CR2R1	£47.04
Adj roller lever - 58 to 115mm		
Snap action	ME500PR3R1	£52.31
Slow make & break	ME500CR3R1	£49.37
Steel rod lever - 200mm		
Snap action	ME500PR4R1	£54.32
Slow make & break	ME500CR4R1	£51.34
Telescopic wobble head - 216 to 1208mm		
Snap action	ME500PW2R1	£63.32
Slow make & break	ME500CW2R1	£60.37

*Foot switch
Unguarded*

*Foot switch
Guarded*

*Precision
limit switch*

IP65 foot switches

Description	Contact arrangement	Catalogue numbers	Price
Unguarded foot switches			
Single pedal type			
Spring return	1N.O. - 1N.C. 2N.O. - 2N.C.	ME40BW03A	£49.24
2 stage operation	2N.O. - 2N.C.	ME40BW13A ME40BW13D	£74.40 £96.27
Double pedal type			
Spring return	2N.O. - 2N.C.	ME40BW13B	£149.14
2 stage operation	2N.O. - 2N.C.	ME40BW13E	£149.14
Guarded foot switches			
Single pedal type			
Spring return	1N.O. - 1N.C. 2N.O. - 2N.C.	ME40BW03A2	£62.69
2 stage operation	2N.O. - 2N.C.	ME40BW13A2 ME40BW13D2	£91.50 £114.90
Double pedal type			
Spring return	2N.O. - 2N.C.	ME40BW13B2	£180.94
2 stage operation	2N.O. - 2N.C.	ME40BW13E2	£227.37
Auxiliary switch			
For 1N.O. - 1N.C. foot switches only	1N.O. - 1N.C.	6-285	£38.45

Precision limit switches

Description	Catalogue numbers	Price
Single pole 1N.O. - 1N.C.	93400H100	£14.29
Double pole 2N.O. - 2N.C.	10316H2000	£43.52

Mounting base

Description	Catalogue numbers	Price
Standard mounting base	E26X	£1.10

Extension tubes

Description	Catalogue numbers	Price
Standard – 20mm	E26BHA	£5.53
– 160mm	E26BJA	£10.90
– 360mm	E26BKA	£18.57
– 760mm	E26BMA	£32.04
20mm thread – 20mm	E26BHM	£5.70
– 160mm	E26BJM	£11.01
– 360mm	E26BKM	£18.69
– 760mm	E26BMM	£32.16

Cable connecting bases

Description	Catalogue numbers	Price
Non-flashing	E26BL	£23.33
Flashing – 12V	E26BFV1	£51.36
– 24V	E26BFV2	£56.85
– 48V	E26BFV3	£56.85
– 110/125V	E26BFV4	£56.85
– 220/240V	E26BFV5	£56.85

Xenon tube set (without lens)

Description	Catalogue numbers	Price
12V	E26S33	£98.03
24V	E26S34	£98.03
48V	E26S35	£98.03
110/125V	E26S36	£72.08
220/240V	E26S37	£72.08

Lens units – IP40 (excluding diffuser)

Description	Catalogue numbers	Price
Lens colour – Amber	E26S7	£1.76
– Blue	E26S6	£1.76
– Clear	E26S2	£1.76
– Green	E26S4	£1.76
– Red	E26S3	£1.76
– Yellow	E26S5	£1.76

Audible alarms

Description	Catalogue numbers	Price
Bitonal – 12V	E26BNV1	£66.03
– 24V	E26BNV2	£66.03
– 48V	E26BNV3	£66.03
– 110/125V	E26BNV4	£67.68
– 220/240V	E26BNV5	£67.68
Intermittent – 12V	E26BPV1	£66.03
– 24V	E26BPV2	£66.03
– 48V	E26BPV3	£66.03
– 110/125V	E26BPV4	£67.68
– 220/240V	E26BPV5	£67.68
Monotonal – 12V	E26BQV1	£65.15
– 24V	E26BQV2	£65.15
– 48V	E26BQV3	£65.15
– 110/125V	E26BQV4	£66.67
– 220/240V	E26BQV5	£66.67

Incandescent lens set - IP65 (lens, diffuser & bulbholder)

Description	Catalogue numbers	Price
Lens colour – Amber	E26B9	£16.48
– Blue	E26B6	£16.48
– Clear	E26B0	£16.48
– Green	E26B3	£16.48
– Red	E26B2	£16.48
– Yellow	E26B4	£16.48

Bulbs - BA15d (for use with above sets)

Description	Catalogue numbers	Price
12V	E26S8	£1.82
24V	E26S9	£1.82
48V	E26S10	£2.15
110/125V	E26S11	£2.53
220/240V	E26S12	£2.69

Diffusers (excluding lens)

Description	Catalogue numbers	Price
Diffuser	E26S31	£13.72
Clear diffuser for LED	E26S32	£13.72



Oxidation inhibitors. Protection radius 600mm

DescriptionW	CatalogueW numbers	Price
Life span 1 year		
Box of 25 inhibitors	C799L1-25W	£217.27
Box of 100 inhibitors	C799L1-100W	£772.52
Life span 2 years		
Box of 10 inhibitors	C799L2-10W	£108.89
Box of 40 inhibitors	C799L2-40W	£413.64

Single pole

Two pole

0.5 to 100A – IEC898, IEC947-2; 10kA

Rating (A)	Catalogue numbers		Type C	Price	Type D	Price	Suitable as an outgoer (•) for MCB distribution boards	
	Type B	Price					A Series	B Series
Single pole								
0.5	–		WMN1C00	£7.39	WMN1D00	£7.45	•	•
1	–		WMN1C01	£7.35	WMN1D01	£7.45	•	•
2	–		WMN1C02	£7.35	WMN1D02	£7.45	•	•
4	–		WMN1C04	£7.35	WMN1D04	£7.45	•	•
6	WMN1B06	£7.35	WMN1C06	£7.35	WMN1D06	£7.45	•	•
10	WMN1B10	£6.73	WMN1C10	£6.73	WMN1D10	£7.32	•	•
16	WMN1B16	£6.73	WMN1C16	£6.73	WMN1D16	£7.32	•	•
20	WMN1B20	£6.73	WMN1C20	£6.73	WMN1D20	£7.32	•	•
25	WMN1B25	£6.73	WMN1C25	£6.73	WMN1D25	£7.32	•	•
32	WMN1B32	£6.73	WMN1C32	£6.73	WMN1D32	£7.32	•	•
40	WMN1B40	£7.35	WMN1C40	£7.35	WMN1D40	£7.45	•	•
50	WMN1B50	£7.35	WMN1C50	£7.35	–		•	•
63	WMN1B63	£7.35	WMN1C63	£7.35	–		•	•
80	–		WMH1C80	£26.64	–		–	–
100	–		WMH1C100	£29.29	–		–	–
Two pole								
0.5	–		WMN2C00	£21.08	WMN2D00	£21.08	•	•
1	–		WMN2C01	£21.08	WMN2D01	£21.08	•	•
2	–		WMN2C02	£21.08	WMN2D02	£21.08	•	•
4	–		WMN2C04	£21.08	WMN2D04	£21.08	•	•
6	WMN2B06	£20.99	WMN2C06	£20.99	WMN2D06	£21.08	•	•
10	WMN2B10	£19.27	WMN2C10	£19.27	WMN2D10	£20.54	•	•
16	WMN2B16	£19.27	WMN2C16	£19.27	WMN2D16	£20.54	•	•
20	WMN2B20	£19.27	WMN2C20	£19.27	WMN2D20	£20.54	•	•
25	WMN2B25	£19.27	WMN2C25	£19.27	WMN2D25	£20.54	•	•
32	WMN2B32	£19.27	WMN2C32	£19.27	WMN2D32	£20.54	•	•
40	WMN2B40	£21.08	WMN2C40	£21.08	WMN2D40	£21.16	•	•
50	WMN2B50	£21.08	WMN2C50	£21.08	–		•	•
63	WMN2B63	£21.08	WMN2C63	£21.08	–		•	•
80	–		WMH2C80	£53.46	–		–	–
100	–		WMH2C100	£58.81	–		–	–

Accessories

See page 35

Three pole
Four pole
0.5 to 100A – IEC898, IEC947-2; 10kA

Rating (A)	Catalogue numbers		Type C	Price	Type D	Price	Suitable as an outgoer (•) for MCB distribution boards	
	Type B	Price					A Series	B Series
Three pole								
0.5	–		WMN3C00	£29.04	WMN3D00	£31.62	•	•
1	–		WMN3C01	£29.04	WMN3D01	£31.62	•	•
2	–		WMN3C02	£29.04	WMN3D02	£31.62	•	•
4	–		WMN3C04	£29.04	WMN3D04	£31.62	•	•
6	WMN3B06	£29.09	WMN3C06	£29.09	WMN3D06	£31.62	•	•
10	WMN3B10	£29.09	WMN3C10	£29.09	WMN3D10	£29.51	•	•
16	WMN3B16	£29.09	WMN3C16	£29.09	WMN3D16	£29.51	•	•
20	WMN3B20	£29.09	WMN3C20	£29.09	WMN3D20	£29.51	•	•
25	WMN3B25	£29.09	WMN3C25	£29.09	WMN3D25	£29.51	•	•
32	WMN3B32	£29.09	WMN3C32	£29.09	WMN3D32	£29.51	•	•
40	WMN3B40	£30.66	WMN3C40	£30.66	WMN3D40	£31.62	•	•
50	WMN3B50	£30.66	WMN3C50	£30.66	–		•	•
63	WMN3B63	£30.66	WMN3C63	£30.66	–		•	•
80	–		WMH3C80	£71.28	–		–	–
100	–		WMH3C100	£78.41	–		–	–
Four pole								
0.5	–		WMN4C00	£50.13	–		–	–
1	–		WMN4C01	£50.13	–		–	–
2	–		WMN4C02	£50.13	–		–	–
4	–		WMN4C04	£48.21	–		–	–
6	WMN4B06	£48.21	WMN4C06	£48.21	–		–	–
10	WMN4B10	£45.46	WMN4C10	£45.46	–		–	–
16	WMN4B16	£45.46	WMN4C16	£45.46	–		–	–
20	WMN4B20	£45.46	WMN4C20	£45.46	–		–	–
25	WMN4B25	£45.46	WMN4C25	£45.46	–		–	–
32	WMN4B32	£45.46	WMN4C32	£45.46	–		–	–
40	WMN4B40	£48.21	WMN4C40	£48.21	–		–	–
50	WMN4B50	£48.21	WMN4C50	£48.21	–		–	–
63	WMN4B63	£48.21	WMN4C63	£48.21	–		–	–
80	–		WMH4C80	£103.45	–		–	–
100	–		WMH4C100	£103.45	–		–	–

Accessories

See page 35

Busbar comb

Shunt trip

Auxiliary switch

Busbar combs – 80A, 1000mm long

Connection type	Cross section (mm ²)	Catalogue numbers	Price
Single pole			
Fork	20	WBF1A01K	£7.83
Pin	20	WBP1A01K	£7.78
Double pole			
Fork	16	WBF2A01K	£13.24
Pin	16	WBP2A01K	£14.79
Triple pole			
Fork	16	WBF3A01K	£16.29
Pin	16	WBP3A01K	£16.82
Four pole			
Fork	16	WBF4A01K	£27.11
Pin	16	WBP4A01K	£32.09
Single pole, 1 aux pos			
Fork	20	WBF1A11K	£8.75
Pin	20	WBP1A11K	£8.75
Double pole, 1 aux pos			
Fork	16	WBF2A11K	£15.75
Pin	16	WBP2A11K	£15.75
Triple pole, 1 aux pos			
Fork	16	WBF3A11K	£17.79
Pin	16	WBP3A11K	£17.79
Four pole, 1 aux pos			
Fork	16	WBF4A11K	£33.06
Pin	16	WBP4A11K	£33.06

Cable connectors

Connection type	Rating (A) 500V @ 40°C	Catalogue numbers	Price
Top cable			
Fork	100	WBFTC100	£1.59
Pin	100	WBPTC100	£1.59
Side cable			
Fork	100	WBFSC100	£1.59
Pin	100	WBPSC100	£1.59
Insulation caps			
For unused ways			
Pin & fork	–	WBCAP	£0.63

Accessories

Description	Catalogue numbers	Price
Shunt trip §		
110/220Vac	WST220A	£16.18
240/415Vac	WST415A	£16.18
12/48Vdc	WST48D	£16.18
Auxiliary switch † §		
Number of contacts 1A/1B	WAX1A1B	£10.93
Under voltage release §		
240Vac	WUVR240A	£16.18
48Vdc	WUVR48D	£16.18
Alarm switch † §		
Number of contacts 1A/1B	WAL1A1B	£10.93
Padlocking attachment	WPLK	£2.15
Busbar cap – single pole (supplied in packs of 6)	UNICAP6	£2.52
Labels §	WIDL	£1.20
Blanking plate - single pole*	WM1000	£0.92

* Supplied in packs of 4 + 2 halves

† Not suitable for 80 & 100A MCBs

§ Only suitable for fitting to MCBs

RCCB

Switch disconnector

RCBO

Residual current circuit breakers 25 to 100A – IEC10008-1

Rating (A)	Earth leakage sensitivity (mA)	Two pole Catalogue numbers	Price	Four pole Catalogue numbers	Price
25	30	WR22530	£41.02	WR42530	£54.67
25	100	WR225100	£38.99	WR425100	£44.66
25	300	WR225300	£43.56	WR425300	£43.56
40	30	WR24030	£42.31	WR44030	£57.16
40	100	WR240100	£41.12	WR440100	£52.35
40	300	WR240300	£40.33	WR440300	£51.06
63	30	WR26330	£50.41	WR46330	£76.99
63	100	WR263100	£47.11	WR463100	£62.57
63	300	WR263300	£45.30	WR463300	£55.47
80	30	WR28030	£58.28	WR48030	£84.30
80	100	WR280100	£50.65	WR480100	£78.10
80	300	WR280300	£49.20	WR480300	£74.20
100	30	WR210030	£71.54	WR410030	£96.97
100	100	WR2100100	£62.00	WR4100100	£94.54
100	300	WR2100300	£78.99	WR4100300	£92.17

Switch disconnectors 25 to 100A – IEC947-3

Rating (A)	Catalogue numbers		Two pole	Price	Three pole	Price	Four pole	Price
	Single pole	Price						
25	WSW125	£5.34	WSW225	£6.76	WSW325	£9.60	WSW425	£13.13
32	WSW132	£5.69	WSW232	£6.41	WSW332	£10.74	WSW432	£13.96
40	WSW140	£7.27	WSW240	£11.57	WSW340	£17.09	WSW440	£24.58
63	WSW163	£7.61	WSW263	£13.05	WSW363	£19.28	WSW463	£36.08
80	WSW180	£8.11	WSW280	£14.19	WSW380	£22.15	WSW480	£38.22
100	WSW1100	£9.72	WSW2100	£14.19	WSW3100	£30.10	WSW4100	£42.35

Residual current breaker operator (RCBO)

Single pole & neutral (1 module) – IEC61009-1-6kA

Rating (A)	Earth leakage sensitivity (mA)	Catalogue numbers	Price	Suitable as an outgoer (*) for MCB distribution boards	
				A Series	B Series
6	30	WMR1C0630	£46.71	•	•
10	30	WMR1C1030	£46.71	•	•
16	30	WMR1C1630	£46.71	•	•
20	30	WMR1C2030	£46.71	•	•
25	30	WMR1C2530	£46.71	•	•
32	30	WMR1C3230	£46.71	•	•
40	30	WMR1C4030	£46.71	•	•

Single pole

Three pole

16 to 125A – IEC947-2; 18kA

Rating (A)	Range (A)		Catalogue numbers	Price	Suitable as an Outgoer (•) for panelboards		
	Thermal	Magnetic			G series	F series	K series
Moulded Case Circuit Breaker (MCCB) – G Frame – Single pole; Fixed thermal/magnetic; 18kA (Icu)							
16	-	-	Gi1016	£43.10	•	-	-
20	-	-	Gi1020	£43.10	•	-	-
32	-	-	Gi1032	£43.10	•	-	-
40	-	-	Gi1040	£43.10	•	-	-
50	-	-	Gi1050	£43.10	•	-	-
63	-	-	Gi1063	£43.10	•	-	-
70	-	-	Gi1070	£43.10	•	-	-
80	-	-	Gi1080	£46.83	•	-	-
100	-	-	Gi1100	£46.83	•	-	-
Moulded Case Circuit Breaker (MCCB) – G Frame – Three pole; Fixed thermal/magnetic; 18kA (Icu)							
16	-	-	Gi3016	£68.84	•	-	-
20	-	-	Gi3020	£68.84	•	-	-
32	-	-	Gi3032	£68.84	•	-	-
40	-	-	Gi3040	£68.84	•	-	-
50	-	-	Gi3050	£68.84	•	-	-
63	-	-	Gi3063	£68.84	•	-	-
70	-	-	Gi3070	£65.56	•	-	-
80	-	-	Gi3080	£72.76	•	-	-
100	-	-	Gi3100	£72.76	•	-	-
125	-	-	Gi3125	£94.77	•	-	-
Blanking Plate – Single pole for unused pole spaces in the panelboard							
-	-	-	Gi1000	£0.83	•	-	-
Busbar Cap – Single pole for fitting on unused busbar connections in the panelboard (supplied in packs of 6)							
-	-	-	UNICAP6	£2.52	•	-	-

Note: Fitted with line and load terminals as standard

Accessories

See pages 56 & 58

Three pole

Four pole

16 to 125A – IEC947-2; 18, 25, 40 & 70kA

Rating (a)	Range (A)		Catalogue numbers			
	Thermal	Magnetic	3 Pole	Price	4 Pole	Price
Moulded Case Circuit Breaker (MCCB) – E Frame – Fixed thermal/magnetic; 18kA (Icu)						
16	–	–	EGB3016FFG	£68.65	EGB4016FFG	£88.98
20	–	–	EGB3020FFG	£68.65	EGB4020FFG	£88.98
32	–	–	EGB3032FFG	£68.65	EGB4032FFG	£88.98
40	–	–	EGB3040FFG	£68.65	EGB4040FFG	£88.98
50	–	–	EGB3050FFG	£68.65	EGB4050FFG	£88.98
63	–	–	EGB3063FFG	£68.65	EGB4063FFG	£88.98
80	–	–	EGB3080FFG	£68.65	EGB4080FFG	£88.98
100	–	–	EGB3100FFG	£68.65	EGB4100FFG	£88.98
125	–	–	EGB3125FFG	£68.65	EGB4125FFG	£88.98
Moulded Case Circuit Breaker (MCCB) – E Frame – Fixed thermal/magnetic; 25kA (Icu)						
16	–	–	EGE3016FFG	£96.38	EGE4016FFG	£138.10
20	–	–	EGE3020FFG	£96.38	EGE4020FFG	£138.10
32	–	–	EGE3032FFG	£96.38	EGE4032FFG	£138.10
40	–	–	EGE3040FFG	£96.38	EGE4040FFG	£138.10
50	–	–	EGE3050FFG	£96.38	EGE4050FFG	£138.10
63	–	–	EGE3063FFG	£96.38	EGE4063FFG	£138.10
80	–	–	EGE3080FFG	£96.38	EGE4080FFG	£138.10
100	–	–	EGE3100FFG	£96.38	EGE4100FFG	£138.10
125	–	–	EGE3125FFG	£96.38	EGE4125FFG	£138.10
Moulded Case Circuit Breaker (MCCB) – E Frame – Fixed thermal/magnetic; 40kA (Icu)						
16	–	–	EGS3016FFG	£132.65	EGS4016FFG	£198.80
20	–	–	EGS3020FFG	£132.65	EGS4020FFG	£198.80
32	–	–	EGS3032FFG	£132.65	EGS4032FFG	£198.80
40	–	–	EGS3040FFG	£132.65	EGS4040FFG	£198.80
50	–	–	EGS3050FFG	£132.65	EGS4050FFG	£198.80
63	–	–	EGS3063FFG	£132.65	EGS4063FFG	£198.80
80	–	–	EGS3080FFG	£132.65	EGS4080FFG	£198.80
100	–	–	EGS3100FFG	£132.65	EGS4100FFG	£198.80
125	–	–	EGS3125FFG	£132.65	EGS4125FFG	£198.80
Moulded Case Circuit Breaker (MCCB) – E Frame – Fixed thermal/magnetic; 70kA (Icu)						
16	–	–	EGH3016FFG	£165.25	EGH4016FFG	£231.21
20	–	–	EGH3020FFG	£165.25	EGH4020FFG	£231.21
32	–	–	EGH3032FFG	£165.25	EGH4032FFG	£231.21
40	–	–	EGH3040FFG	£165.25	EGH4040FFG	£231.21
50	–	–	EGH3050FFG	£165.25	EGH4050FFG	£231.21
63	–	–	EGH3063FFG	£165.25	EGH4063FFG	£231.21
80	–	–	EGH3080FFG	£165.25	EGH4080FFG	£231.21
100	–	–	EGH3100FFG	£165.25	EGH4100FFG	£231.21
125	–	–	EGH3125FFG	£165.25	EGH4125FFG	£231.21

Note: Fitted with line and load terminals as standard

Accessories See pages 56 & 58

Three pole

Four pole

20 to 125A – IEC947-2; 18, 25, 40 & 70kA

Rating (a)	Range (A)		Catalogue numbers		Price	4 Pole	Price
	Thermal	Magnetic	3 Pole				
Moulded Case Circuit Breaker (MCCB) – E Frame – Adjustable thermal/Fixed magnetic; 18kA (Icu)							
20	16 - 20	–	EGB3020AFG	£91.58		EGB4020AFG	£119.35
32	25 - 32	–	EGB3032AFG	£91.58		EGB4032AFG	£119.35
40	32 - 40	–	EGB3040AFG	£91.58		EGB4040AFG	£119.35
50	40 - 50	–	EGB3050AFG	£91.58		EGB4050AFG	£119.35
63	50 - 63	–	EGB3063AFG	£91.58		EGB4063AFG	£119.35
80	63 - 80	–	EGB3080AFG	£91.58		EGB4080AFG	£119.35
100	80 - 100	–	EGB3100AFG	£91.58		EGB4100AFG	£119.35
125	100 - 125	–	EGB3125AFG	£91.58		EGB4125AFG	£119.35
Moulded Case Circuit Breaker (MCCB) – E Frame – Adjustable thermal/Fixed magnetic; 25kA (Icu)							
20	16 - 20	–	EGE3020AFG	£101.20		EGE4020AFG	£142.05
32	25 - 32	–	EGE3032AFG	£101.20		EGE4032AFG	£142.05
40	32 - 40	–	EGE3040AFG	£101.20		EGE4040AFG	£142.05
50	40 - 50	–	EGE3050AFG	£101.20		EGE4050AFG	£142.05
63	50 - 63	–	EGE3063AFG	£101.20		EGE4063AFG	£142.05
80	63 - 80	–	EGE3080AFG	£101.20		EGE4080AFG	£142.05
100	80 - 100	–	EGE3100AFG	£101.20		EGE4100AFG	£142.05
125	100 - 125	–	EGE3125AFG	£101.20		EGE4125AFG	£142.05
Moulded Case Circuit Breaker (MCCB) – E Frame – Adjustable thermal/Fixed magnetic; 40kA (Icu)							
20	16 - 20	–	EGS3020AFG	£137.75		EGS4020AFG	£203.80
32	25 - 32	–	EGS3032AFG	£137.75		EGS4032AFG	£203.80
40	32 - 40	–	EGS3040AFG	£137.75		EGS4040AFG	£203.80
50	40 - 50	–	EGS3050AFG	£137.75		EGS4050AFG	£203.80
63	50 - 63	–	EGS3063AFG	£137.75		EGS4063AFG	£203.80
80	63 - 80	–	EGS3080AFG	£137.75		EGS4080AFG	£203.80
100	80 - 100	–	EGS3100AFG	£137.75		EGS4100AFG	£203.80
125	100 - 125	–	EGS3125AFG	£137.75		EGS4125AFG	£203.80
Moulded Case Circuit Breaker (MCCB) – E Frame – Adjustable thermal/Fixed magnetic; 70kA (Icu)							
20	16 - 20	–	EGH3020AFG	£170.10		EGH4020AFG	£236.05
32	25 - 32	–	EGH3032AFG	£170.10		EGH4032AFG	£236.05
40	32 - 40	–	EGH3040AFG	£170.10		EGH4040AFG	£236.05
50	40 - 50	–	EGH3050AFG	£170.10		EGH4050AFG	£236.05
63	50 - 63	–	EGH3063AFG	£170.10		EGH4063AFG	£236.05
80	63 - 80	–	EGH3080AFG	£170.10		EGH4080AFG	£236.05
100	80 - 100	–	EGH3100AFG	£170.10		EGH4100AFG	£236.05
125	100 - 125	–	EGH3125AFG	£170.10		EGH4125AFG	£236.05

Note: Fitted with line and load terminals as standard

Accessories

See pages 56 & 58

Single pole

Three pole

16 to 225A – IEC947-2; 18 & 40kA

Rating (A)	Range (A)		Catalogue numbers	Price	Suitable as an Outgoer (•) for panelboards			
	Thermal	Magnetic			G series	F series	K series	FE enclosure
Moulded Case Circuit Breaker (MCCB) – F Frame – Three pole; Fixed thermal/magnetic; 18kA (Icu)								
16	-	-	Fi3016L	£92.62	-	•	•	•
20	-	-	Fi3020L	£92.62	-	•	•	•
32	-	-	Fi3032L	£92.62	-	•	•	•
40	-	-	Fi3040L	£92.62	-	•	•	•
50	-	-	Fi3050L	£92.62	-	•	•	•
63	-	-	Fi3063L	£92.62	-	•	•	•
70	-	-	Fi3070L	£88.05	-	•	•	•
80	-	-	Fi3080L	£92.45	-	•	•	•
100	-	-	Fi3100L	£92.45	-	•	•	•
125	-	-	Fi3125L	£111.04	-	•	•	•
160	-	-	Fi3160L	£132.07	-	•	•	•
175	-	-	Fi3175L	£193.83	-	•	•	•
200	-	-	Fi3200L	£193.83	-	•	•	•
225	-	-	Fi3225L	£193.83	-	•	•	•
Moulded Case Circuit Breaker (MCCB) – F Frame – Single pole; Fixed thermal/magnetic; 40kA @ 240V (Icu)								
16	-	-	FWF1016L	£60.04	-	•	•	•
20	-	-	FWF1020L	£60.04	-	•	•	•
25	-	-	FWF1025L	£60.04	-	•	•	•
32	-	-	FWF1032L	£60.04	-	•	•	•
40	-	-	FWF1040L	£60.04	-	•	•	•
50	-	-	FWF1050L	£60.04	-	•	•	•
63	-	-	FWF1063L	£60.04	-	•	•	•
80	-	-	FWF1080L	£62.61	-	•	•	•
100	-	-	FWF1100L	£62.61	-	•	•	•
125	-	-	FWF1125L	£104.91	-	•	•	•
160	-	-	FWF1160L	£104.91	-	•	•	•
Blanking Plate – Single pole for unused pole spaces in the panelboard								
-	-	-	Fi1000	£2.00	-	•	•	-
Busbar Cap – Single pole for fitting on unused busbar connections in the panelboard (supplied in packs of 6)								
-	-	-	UNICAP6	£2.52	-	•	•	-

Note: Fitted with line and load terminals as standard

Accessories

See pages 56 & 58

Three pole

Four pole

16 to 225A – IEC947-2; 40kA

Rating (A)	Range (A)		Catalogue numbers	Price	Suitable as an Outgoer (•) for panelboards			
	Thermal	Magnetic			G series	F series	K series	FE enclosure
Moulded Case Circuit Breaker (MCCB) – F Frame – Three pole; Fixed thermal/magnetic; 40kA (Icu)								
16	-	-	FWF3016L	£110.74	-	•	•	•
20	-	-	FWF3020L	£110.74	-	•	•	•
25	-	-	FWF3025L	£110.74	-	•	•	•
32	-	-	FWF3032L	£110.74	-	•	•	•
40	-	-	FWF3040L	£110.74	-	•	•	•
50	-	-	FWF3050L	£110.74	-	•	•	•
63	-	-	FWF3063L	£110.74	-	•	•	•
80	-	-	FWF3080L	£110.74	-	•	•	•
100	-	-	FWF3100L	£110.74	-	•	•	•
125	-	-	FWF3125L	£131.02	-	•	•	•
160	-	-	FWF3160L	£168.97	-	•	•	•
200	-	-	FWF3200L	£206.59	-	•	•	•
225	-	-	FWF3225L	£206.59	-	•	•	•
Moulded Case Circuit Breaker (MCCB) – F Frame – Four pole; Fixed thermal/magnetic; 40kA Icu								
16	-	-	FWF40160L	£134.11	-	-	-	-
20	-	-	FWF40200L	£134.11	-	-	-	-
25	-	-	FWF40250L	£134.11	-	-	-	-
32	-	-	FWF40320L	£134.11	-	-	-	-
40	-	-	FWF40400L	£134.11	-	-	-	-
50	-	-	FWF40500L	£134.11	-	-	-	-
63	-	-	FWF40630L	£134.11	-	-	-	-
80	-	-	FWF40800L	£134.11	-	-	-	-
100	-	-	FWF41000L	£134.11	-	-	-	-
125	-	-	FWF41250L	£194.90	-	-	-	-
160	-	-	FWF41600L	£198.53	-	-	-	-
200	-	-	FWF42000L	£258.86	-	-	-	-
225	-	-	FWF42250L	£258.86	-	-	-	-
Blanking plate – Single pole for unused pole spaces in the panelboard								
-	-	-	Fi1000	£2.00	-	-	•	-
Busbar cap – Single pole for fitting on unused busbar connections in the panelboard (supplied in packs of 6)								
-	-	-	UNICAP6	£2.52	-	•	•	-

Note: Fitted with line and load terminals as standard

Accessories See pages 56 & 58

Single pole

Three pole

16 to 225A – IEC947-2; 70kA

Rating (A)	Range (A)		Catalogue numbers	Price	Suitable as an Outgoer (•) for panelboards			
	Thermal	Magnetic			G series	F series	K series	FE enclosure
Moulded Case Circuit Breaker (MCCB) – F Frame – Single pole; Fixed thermal/magnetic; 70kA @ 240V (Icu)								
16	-	-	HFWF1016L	£66.05	-	•	•	•
20	-	-	HFWF1020L	£66.05	-	•	•	•
25	-	-	HFWF1025L	£66.05	-	•	•	•
32	-	-	HFWF1032L	£66.05	-	•	•	•
40	-	-	HFWF1040L	£66.05	-	•	•	•
50	-	-	HFWF1050L	£66.05	-	•	•	•
63	-	-	HFWF1063L	£66.05	-	•	•	•
80	-	-	HFWF1080L	£66.05	-	•	•	•
100	-	-	HFWF1100L	£66.05	-	•	•	•
125	-	-	HFWF1125L	£127.14	-	•	•	•
160	-	-	HFWF1160L	£145.69	-	•	•	•

Moulded Case Circuit Breaker (MCCB) – F Frame – Three pole; Fixed thermal/magnetic; 70kA (Icu)

16	-	-	HFWF3016L	£123.09	-	•	•	•
20	-	-	HFWF3020L	£123.09	-	•	•	•
25	-	-	HFWF3025L	£123.09	-	•	•	•
32	-	-	HFWF3032L	£123.09	-	•	•	•
40	-	-	HFWF3040L	£123.09	-	•	•	•
50	-	-	HFWF3050L	£123.09	-	•	•	•
63	-	-	HFWF3063L	£123.09	-	•	•	•
80	-	-	HFWF3080L	£123.09	-	•	•	•
100	-	-	HFWF3100L	£123.09	-	•	•	•
125	-	-	HFWF3125L	£176.95	-	•	•	•
160	-	-	HFWF3160L	£224.68	-	•	•	•
200	-	-	HFWF3200L	£250.71	-	•	•	•
225	-	-	HFWF3225L	£250.71	-	•	•	•

Blanking Plate – Single pole for unused pole spaces in the panelboard

-	-	-	Fi1000	£2.00	-	•	•	-
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Busbar Cap – Single pole for fitting on unused busbar connections in the panelboard (supplied in packs of 6)

-	-	-	UNICAP6	£2.52	-	•	•	-
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Note: Fitted with line and load terminals as standard

Accessories

See pages 56 & 58

Four pole

Three pole

16 to 225A – IEC947-2; 70kA Icu

Rating (A)	Catalogue numbers	Price
Moulded Case Circuit Breaker (MCCB) – F Frame – Four pole; Fixed thermal/magnetic; 70kA (Icu)		
16	HFWF40160L	£147.71
20	HFWF40200L	£147.71
25	HFWF40250L	£147.71
32	HFWF40320L	£147.71
40	HFWF40400L	£147.71
50	HFWF40500L	£147.71
63	HFWF40630L	£147.71
80	HFWF40800L	£147.71
100	HFWF41000L	£147.71
125	HFWF41250L	£212.34
160	HFWF41600L	£269.62
200	HFWF42000L	£269.62
225	HFWF42250L	£300.86

16 to 225A – IEC947-2; 70kA

Rating (A)	Range (A) Thermal	Magnetic	Catalogue numbers	Price	Suitable as an Outgoer (•) for panelboards			
					G series	F series	K series	FE enclosure
Moulded Case Circuit Breaker (MCCB) – F Frame – Three pole; Adjustable thermal/Fixed magnetic; 70kA (Icu)								
16	12 - 16	-	HFW3016L	£132.52	-	•	•	•
20	16 - 20	-	HFW3020L	£132.52	-	•	•	•
25	20 - 25	-	HFW3025L	£132.52	-	•	•	•
32	25 - 32	-	HFW3032L	£132.52	-	•	•	•
40	32 - 40	-	HFW3040L	£132.52	-	•	•	•
50	40 - 50	-	HFW3050L	£132.52	-	•	•	•
63	50 - 63	-	HFW3063L	£132.52	-	•	•	•
80	63 - 80	-	HFW3080L	£140.38	-	•	•	•
100	80 - 100	-	HFW3100L	£140.38	-	•	•	•
125	100 - 125	-	HFW3125L	£196.62	-	•	•	•
160	125 - 160	-	HFW3160L	£236.66	-	•	•	•
200	160 - 200	-	HFW3200L	£257.03	-	•	•	•
225	200 - 225	-	HFW3225L	£257.03	-	-	-	-

Moulded Case Switch (MCS) – F Frame – Three pole; 70kA (Icu)

HFWF3160KL	£131.25	-	•	•	•
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Blanking Plate – Single pole for unused pole spaces in the panelboard

-	-	-	Fi1000	£2.00	-	•	•	-
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Busbar Cap – Single pole for fitting on unused busbar connections in the panelboard (supplied in packs of 6)

-	-	-	UNICAP6	£2.52	-	•	•	-
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Note: Fitted with line and load terminals as standard

Accessories See pages 56 & 58

Three pole 40kA

Three pole 70kA

20 to 225A – IEC947-2; 40kA Icu

Rating (A)	Thermal range (A)	Catalogue numbers		4 pole	Price
		3 pole	Price		
Moulded Case Circuit Breakers (MCCB) – F Frame Adjustable thermal, fixed magnetic; 40kA (Icu)					
20	16 – 20	FW3020L	£134.05	FW4020L	£154.23
25	20 – 25	FW3025L	£134.05	FW4025L	£154.23
32	25 – 32	FW3032L	£134.05	FW4032L	£154.23
40	32 – 40	FW3040L	£134.05	FW4040L	£154.23
50	40 – 50	FW3050L	£134.05	FW4050L	£154.23
63	50 – 63	FW3063L	£134.05	FW4063L	£154.23
80	63 – 80	FW3080L	£141.04	FW4080L	£154.23
100	80 – 100	FW3100L	£141.04	FW4100L	£154.23
125	100 – 125	FW3125L	£139.59	FW4125L	£202.87
160	125 – 160	FW3160L	£184.81	FW4160L	£202.87
200	160 – 200	FW3200L	£216.54	FW4200L	£269.62
225	200 – 225	FW3225L	£205.11	FW4225L	£269.62

Note: Fitted with line and load terminals as standard.

16 to 225A – IEC947-2; 70kA Icu

Rating (A)	Thermal range (A)	Catalogue numbers	
		4 pole	Price
Moulded Case Circuit Breakers (MCCB) – F Frame Adjustable thermal, fixed magnetic; 70kA (Icu)			
50	40 – 50	HFW40500L	£174.09
63	50 – 63	HFW40630L	£174.09
80	63 – 80	HFW40800L	£184.58
100	80 – 100	HFW41000L	£184.58
125	100 – 125	HFW41250L	£257.37
160	125 – 160	HFW41600L	£299.75
200	160 – 200	HFW42000L	£320.97
225	200 – 225	HFW42250L	£320.97
Moulded case switch – 70kA (Icu)			
160A		HFWF4160KL	£178.23

Note: Fitted with line and load terminals as standard.

Accessories

See pages 56 & 58

Three pole

Four pole

250A – IEC947-2; 40kA Icu

Rating (A)	Range (A) Thermal	Magnetic	Catalogue numbers	Price	Suitable as an incomer (I) or outgoer (O) for panelboards			
					G series	F series	K series	JE enclosure
Moulded Case Circuit Breaker (MCCB) – J Frame – Three pole; Adjustable thermal/magnetic; 40kA (Icu)								
250	200 - 250	1250 – 2500	JW3250	£270.98	I	–	–	0
Moulded Case Switch (MCS) – J Frame – Three pole; 40kA (Icu)								
250			JW3250K	£222.36	I	–	–	0
Moulded Case Circuit Breaker (MCCB) – J Frame – Four pole; Adjustable thermal/magnetic; 40kA (Icu)								
250	200 - 250	1250 – 2500	JW4250	£333.07	I	–	–	0
Moulded Case Switch (MCS) – J Frame – Four pole; 40kA (Icu)								
250			JW4250K	£290.57	I	–	–	0

Note: Fitted with line and load terminals as standard.

Accessories

See pages 56 & 58

Three pole

Four pole

63 to 250A – IEC947-2; 25, 40 & 70kA

Rating (A)	Range (A) Thermal	Magnetic	Catalogue numbers		Price	4 Pole	Price
			3 Pole				
Moulded Case Circuit Breaker (MCCB) – J Frame – Fixed thermal/Adjustable magnetic; 25kA (Icu)							
63	–	315 - 630	JGE3063FAG		£186.39	JGE4063FAG	£270.84
100	–	500 - 1000	JGE3100FAG		£186.39	JGE4100FAG	£270.84
125	–	625 - 1250	JGE3125FAG		£186.39	JGE4125FAG	£270.84
160	–	800 - 1600	JGE3160FAG		£186.39	JGE4160FAG	£270.84
200	–	1000 - 2000	JGE3200FAG		£186.39	JGE4200FAG	£270.84
250	–	1250 - 2500	JGE3250FAG		£186.39	JGE4250FAG	£270.84

Moulded Case Circuit Breaker (MCCB) – J Frame – Fixed thermal/Adjustable magnetic; 40kA (Icu)							
63	–	315 - 630	JGS3063FAG		£267.27	JGS4063FAG	£327.98
100	–	500 - 1000	JGS3100FAG		£267.27	JGS4100FAG	£327.98
125	–	625 - 1250	JGS3125FAG		£267.27	JGS4125FAG	£327.98
160	–	800 - 1600	JGS3160FAG		£267.27	JGS4160FAG	£327.98
200	–	1000 - 2000	JGS3200FAG		£267.27	JGS4200FAG	£327.98
250	–	1250 - 2500	JGS3250FAG		£267.27	JGS4250FAG	£327.98

Moulded Case Circuit Breaker (MCCB) – J Frame – Fixed thermal/Adjustable magnetic; 70kA (Icu)							
63	–	315 - 630	JGH3063FAG		£311.10	JGH4063FAG	£378.45
100	–	500 - 1000	JGH3100FAG		£311.10	JGH4100FAG	£378.45
125	–	625 - 1250	JGH3125FAG		£311.10	JGH4125FAG	£378.45
160	–	800 - 1600	JGH3160FAG		£311.10	JGH4160FAG	£378.45
200	–	1000 - 2000	JGH3200FAG		£311.10	JGH4200FAG	£378.45
250	–	1250 - 2500	JGH3250FAG		£311.10	JGH4250FAG	£378.45

Note: Fitted with line and load terminals as standard

Accessories

See pages 56 & 58

Three pole

Four pole

63 to 250A – IEC947-2; 25, 40 & 70kA

Rating (a)	Range (A) Thermal	Magnetic	Catalogue numbers		Price	4 Pole	Price
			3 Pole				
Moulded Case Circuit Breaker (MCCB) – J Frame – Adjustable thermal/Fixed magnetic; 25kA (Icu)							
100	63 - 100	–	JGE3100AAG	£196.20		JGE4100AAG	£285.10
125	100 - 125	–	JGE3125AAG	£196.20		JGE4125AAG	£285.10
160	125 - 160	–	JGE3160AAG	£196.20		JGE4160AAG	£285.10
200	160 - 200	–	JGE3200AAG	£196.20		JGE4200AAG	£285.10
250	200 - 250	–	JGE3250AAG	£196.20		JGE4250AAG	£285.10
Moulded Case Circuit Breaker (MCCB) – J Frame – Adjustable thermal/Fixed magnetic; 40kA (Icu)							
63	40 - 63	–	JGS3063AAG	£281.33		JGS4063AAG	£345.24
100	63 - 100	–	JGS3100AAG	£281.33		JGS4100AAG	£345.24
125	100 - 125	–	JGS3125AAG	£281.33		JGS4125AAG	£345.24
160	125 - 160	–	JGS3160AAG	£281.33		JGS4160AAG	£345.24
200	160 - 200	–	JGS3200AAG	£281.33		JGS4200AAG	£345.24
250	200 - 250	–	JGS3250AAG	£281.33		JGS4250AAG	£345.24
Moulded Case Circuit Breaker (MCCB) – J Frame – Adjustable thermal/Fixed magnetic; 70kA (Icu)							
63	40 - 63	–	JGH3063AAG	£333.76		JGH4063AAG	£398.37
100	63 - 100	–	JGH3100AAG	£333.76		JGH4100AAG	£398.37
125	100 - 125	–	JGH3125AAG	£333.76		JGH4125AAG	£398.37
160	125 - 160	–	JGH3160AAG	£333.76		JGH4160AAG	£398.37
200	160 - 200	–	JGH3200AAG	£333.76		JGH4200AAG	£398.37
250	200 - 250	–	JGH3250AAG	£333.76		JGH4250AAG	£398.37

Note: Fitted with line and load terminals as standard

Accessories

See pages 56 & 58

25kA

45kA

300 to 400A – IEC947-2; 25kA † ‡

Rating (A)	Range (A) Thermal	Magnetic	Catalogue numbers	Price	Suitable as an incomer (I) or outgoing (O) for panelboards			
					G series	F series	K series	Ke enclosure
Moulded Case Circuit Breaker (MCCB) – K Frame – Three pole; Fixed thermal/Adjustable magnetic; 25kA (Icu)								
300	–	1500 - 3000	Ki3300L	£334.33	I	I	0	0
350	–	1750 - 3500	Ki3350L	£334.33	I	I	0	0
400	–	2000 - 4000	Ki3400L	£334.33	I	I	0	0

200 to 400A – IEC947-2; 45 & 70kA † ‡

Rating (A)	Range (A) Thermal	Magnetic	Catalogue numbers	Price	Suitable as an incomer (I) or outgoing (O) for panelboards			
					G series	F series	K series	Ke enclosure
Moulded Case Circuit Breaker (MCCB) – K Frame – Three pole; Adjustable thermal/magnetic; 45kA (Icu)								
200	160 - 200	1000 - 2000	KW3200	£396.10	I	I	0	0
250	200 - 250	1250 - 2500	KW3250	£396.10	I	I	0	0
315	250 - 315	1575 - 3157	KW3315	£396.10	I	I	0	0
400	315 - 400	2000 - 4000	KW3400	£396.10	I	I	0	0
Moulded Case Switch (MCS) – K Frame – Three pole; 45kA (Icu)								
400			KW3400K	£399.14	I	I	0	0
Moulded Case Circuit Breaker (MCCB) – K Frame – Three pole; Adjustable thermal/magnetic; 70kA (Icu)								
200	160 - 200	1000 - 2000	HKW3200	£443.66	I	I	0	0
250	200 - 250	1250 - 2500	HKW3250	£443.66	I	I	0	0
315	250 - 315	1575 - 3157	HKW3315	£443.66	I	I	0	0
400	315 - 400	2000 - 4000	HKW3400	£443.66	I	I	0	0
Moulded Case Switch (MCS) – K Frame – Three pole; 70kA (Icu)								
400			HKW3400K	£424.88	I	I	0	0

Notes:

Fitted with line and load terminals as standard

† Connection kit supplied within panelboard as standard.

‡ For incoming cables larger than 240mm² a cable extension links kit is required. Catalogue number **400LCKK3** Price £26.90

Accessories

See pages 57 & 58

K Frame

L Frame

200 to 400A – IEC947-2; 45 & 70kA Icu

Rating (A)	Range (A) Thermal	Magnetic	Catalogue numbers	Price
Moulded Case Circuit Breaker (MCCB) – K Frame – Four pole; Adjustable thermal/magnetic; 45kA (Icu)				
200	160 – 200	1000 – 2000	KW4200	£533.20
250	200 – 250	1250 – 2500	KW4250	£533.20
315	250 – 315	1575 – 3157	KW4315	£533.20
400	315 – 400	2000 – 4000	KW4400	£533.20
Moulded case switch – 45kA (Icu)				
400			KW4400K	£502.43
Moulded Case Circuit Breaker (MCCB) – K Frame – Four pole; Adjustable thermal/magnetic; 70kA (Icu)				
200	160 – 200	1000 – 2000	HKW4200	£579.28
250	200 – 250	1250 – 2500	HKW4250	£579.28
315	250 – 315	1575 – 3157	HKW4315	£579.28
400	315 – 400	2000 – 4000	HKW4400	£579.28

Note: Fitted with line and load terminals as standard.

315 to 630A – IEC947-2; 45 & 70kA Icu

Rating (A)	Range (A) Thermal	Magnetic	Catalogue numbers	Price
Moulded Case Circuit Breaker (MCCB) – L Frame – Four pole; Adjustable thermal/magnetic; 45kA (Icu)				
315	250 – 315	1575 – 3150	LW4315	£882.33
400	315 – 400	2000 – 4000	LW4400	£882.33
500	400 – 500	2500 – 5000	LW4500	£882.33
630	500 – 630	3150 – 6300	LW4630	£882.33
Moulded case switch – 45kA (Icu)				
630			LW4630K	£773.44
Moulded Case Circuit Breaker (MCCB) – L Frame – Four pole; Adjustable thermal/magnetic; 70kA (Icu)				
315	250 – 315	1575 – 3150	HLW4315	£895.75
400	315 – 400	2000 – 4000	HLW4400	£945.69
500	400 – 500	2500 – 5000	HLW4500	£945.69
630	500 – 630	3150 – 6300	HLW4630	£945.69

Note: Fitted with line and load terminals as standard.

Accessories

See pages 57 & 58

45kA

70kA

500 to 800A – IEC947-2; 25kA † ‡

Rating (A)	Range (A) Thermal	Magnetic	Catalogue numbers	Price	Suitable as an incomer (I) or outgoer (O) for panelboards F series LE enclosure	
Moulded Case Circuit Breaker (MCCB) – L Frame – Three pole; Fixed thermal/Adjustable magnetic; 25kA (Icu)						
500	–	2500 - 5000	Li3500	£574.14	I	O
630	–	3000 - 6000	Li3630	£574.14	I	O
800	–	3200 - 6400	Li3800W	£849.79	–	–

315 to 630A – IEC947-2; 45 & 70kA † ‡

Rating (A)	Range (A) Thermal	Magnetic	Catalogue numbers	Price	Suitable as an incomer (I) or outgoer (O) for panelboards F series LE enclosure	
Moulded Case Circuit Breaker (MCCB) – L Frame – Three pole; Adjustable thermal/magnetic; 45kA (Icu)						
315	250 - 315	1575 - 3150	LW3315	£674.67	I	O
400	315 - 400	2000 - 4000	LW3400	£674.67	I	O
500	400 - 500	2500 - 5000	LW3500	£674.67	I	O
630	500 - 630	3150 - 6300	LW3630	£674.67	I	O

Moulded Case Switch (MCS) – L Frame – Three pole; 45kA (Icu)

630			LW3630K	£613.06	I	O
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Moulded Case Circuit Breaker (MCCB) – L Frame – Three pole; Adjustable thermal/magnetic; 70kA (Icu)

315	250 - 315	1575 - 3150	HLW3315	£748.48	I	O
400	315 - 400	2000 - 4000	HLW3400	£748.48	I	O
500	400 - 500	2500 - 5000	HLW3500	£748.48	I	O
630	500 - 630	3150 - 6300	HLW3630	£748.48	I	O

Moulded Case Switch (MCS) – L Frame – Three pole; 70kA (Icu)

630			HLW3630K	£568.94	I	O
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Notes:

Fitted with line and load terminals as standard, except Li3800W which has tags.

† Connection kit supplied within panelboard as standard.

‡ For incoming cables larger than 240mm² a cable extension links kit is required. Catalogue number **630LCKL3** Price £32.39

Accessories

See pages 57 & 58

Three pole

Four pole

800 to 1250A – EN60947-2; 50 & 70kA Icu

Description	Frame rating (A)	Catalogue numbers		Price	
		3 Pole	4 Pole	3 Pole	4 Pole
50kA (Icu)					
LS	800A	NW3800T33W		NW4800T33W	£1108.74
	1250A	NW3125T33W	£855.32	NW4125T33W	£1584.14
LSI	800A	NW3800T32W	£1034.92	NW4800T32W	£1288.46
	1250A	NW3125T32W	£1404.87	NW4125T32W	£1731.54
LSG	800A	NW3800T35W	£1401.00	NW4800T35W	£1674.19
	1250A	NW3125T35W	£1643.82	NW4125T35W	£1916.14
LSiG	800A	NW3800T36W	£1220.62	NW4800T36W	£1568.21
	1250A	NW3125T36W	£1563.53	NW4125T36W	£2222.42
Moulded case switch	800A	NW3800WK	£900.47	NW4800WK	£1053.55
	1250A	NW3125WK	£1100.49	NW4125WK	£1287.57
70kA (Icu)					
LS	800A	HNW3800T33W	£1040.60	HNW4800T33W	£1246.72
	1250A	HNW3125T33W	£1520.49	HNW4125T33W	£1919.84
LSi	800A	HNW3800T32W	£1080.25	HNW4800T32W	£1419.87
	1250A	HNW3125T32W	£1700.31	HNW4125T32W	£2127.18
LSG	800A	HNW3800T35W	£1568.41	HNW4800T35W	£1706.19
	1250A	HNW3125T35W	£1877.26	HNW4125T35W	£2041.05
LSiG	800A	HNW3800T36W	£1216.86	HNW4800T36W	£1890.21
	1250A	HNW3125T36W	£1670.19	HNW4125T36W	£2261.48
Moulded case switch	800A	HNW3800WK	£1125.59	HNW4800WK	£1205.82
	1250A	HNW3125WK	£1294.33	HNW4125WK	£1466.94

Note: Line and load terminals are not fitted as standard.

Definition of description

- L Adjustable long delay pick-up.
- S Adjustable short delay pick-up with fixed short delay time.
- I Adjustable instantaneous pick-up by setting short delay time to instantaneous.
- G Adjustable earth fault pick-up with adjustable earth fault delay (flat response).

Accessories

See pages 57 & 58

Three pole

Four pole

1600 to 2500A – EN60947-2; 70 & 100kA Icu

Description	Frame rating (A)	Catalogue numbers		4 Pole	Price
		3 Pole	Price		
70kA (Icu)					
LS	1600A	RW316T33W	£2131.32	RW416T33W	£2788.09
	2000A	RW320T33W	£2858.51	RW420T33W	£3698.37
	2500A	RW325T33W	£3518.95	RW425T33W	£4170.79
LSI	1600A	RW316T32W	£2393.03	RW416T32W	£3051.47
	2000A	RW320T32W	£3084.76	RW420T32W	£3958.44
	2500A	RW325T32W	£3777.38	RW425T32W	£4435.82
LSG	1600A	RW316T35W	£2509.32	–	
	2000A	RW320T35W	£3200.72	–	
	2500A	RW325T35W	£3893.49	–	
LSIG	1600A	RW316T36W	£2625.61	–	
	2000A	RW320T36W	£3316.71	–	
	2500A	RW325T36W	£4009.59	–	
Moulded case switch	1600A	RW316WK	£1603.44	RW416WK	£2260.21
	2000A	RW320WK	£2225.06	RW420WK	£2959.34
100kA (Icu)					
LSI	1600A	RWC316T33W	£2735.71	RWC416T33W	£3486.33
	2000A	RWC320T33W	£3524.29	RWC420T33W	£4520.28
LSI	1600A	RWC316T32W	£2735.71	RWC416T32W	£3486.33
	2000A	RWC320T32W	£3524.29	RWC420T32W	£4520.28
LSG	1600A	RWC316T35W	£2720.47	–	
	2000A	RWC320T35W	£3295.91	–	
LSIG	1600A	RWC316T36W	£2836.76	–	
	2000A	RWC320T36W	£3316.71	–	

Note: Line and load terminals are not fitted as standard.

Accessories

See pages 57 & 58

Three pole

Four pole

50 to 200A – IEC947-2; 35, 65 & 100kA Icu

Description	Range (A)		Magnetic	Catalogue numbers		4 Pole	Price
	Thermal			3 Pole	Price		
Earth Leakage Circuit Breaker (ELCB) – K Frame Three/four pole; Adjustable thermal, Fixed magnetic; 35kA (Icu)							
50A	40	– 50	–	ELFW3050L	£481.24	ELFW4050L	£579.83
63A	50	– 63	–	ELFW3063L	£481.24	ELFW4063L	£579.83
80A	63	– 80	–	ELFW3080L	£481.24	ELFW4080L	£579.83
100A	80	– 100	–	ELFW3100L	£481.24	ELFW4100L	£579.83
125A	100	– 125	–	ELFW3125L	£481.24	ELFW4125L	£579.83
160A	125	– 160	–	ELFW3160L	£530.36	ELFW4160L	£619.57
200A	160	– 200	–	ELFW3200L	£554.73	ELFW4200L	£638.73
Earth Leakage Circuit Breaker (ELCB) – K Frame Three/four pole; Adjustable thermal, Fixed magnetic; 65kA (Icu)							
50A	40	– 50	–	ELHFW3050L	£529.37	ELHFW4050L	£637.81
63A	50	– 63	–	ELHFW3063L	£529.37	ELHFW4063L	£637.81
80A	63	– 80	–	ELHFW3080L	£529.37	ELHFW4080L	£637.81
100A	80	– 100	–	ELHFW3100L	£529.37	ELHFW4100L	£637.81
125A	100	– 125	–	ELHFW3125L	£529.37	ELHFW4125L	£637.81
160A	125	– 160	–	ELHFW3160L	£583.39	ELHFW4160L	£681.52
200A	160	– 200	–	ELHFW3200L	£610.21	ELHFW4200L	£665.50
Earth Leakage Circuit Breaker (ELCB) – K Frame Three/four pole; Adjustable thermal, Fixed magnetic; 100kA (Icu)							
50A	40	– 50	–	ELFWC3050L	£582.30	ELFWC4050L	£701.59
63A	50	– 63	–	ELFWC3063L	£582.30	ELFWC4063L	£701.59
80A	63	– 80	–	ELFWC3080L	£582.30	ELFWC4080L	£701.59
100A	80	– 100	–	ELFWC3100L	£582.30	ELFWC4100L	£701.59
125A	100	– 125	–	ELFWC3125L	£582.30	ELFWC4125L	£701.59
160A	125	– 160	–	ELFWC3160L	£641.73	ELFWC4160L	£749.68

Note: Fitted with line and load terminals as standard.

J Frame

K Frame

250A – IEC947-2; 35, 65 & 100kA Icu

Description	Range (A)		Catalogue numbers		4 Pole	Price
	Thermal	Magnetic	3 Pole	Price		
Earth Leakage Circuit Breaker (ELCB) – J Frame Three/four pole; Adjustable thermal/magnetic; 35kA (Icu) 250A	200 – 250	1250 – 2500	ELJW3250	£647.28	ELJW4250	£823.49
Earth Leakage Circuit Breaker (ELCB) – J Frame Three/four pole; Adjustable thermal/magnetic; 65kA (Icu) 250A	200 – 250	1250 – 2500	ELHJW3250	£674.41	ELHJW4250	£858.00
Earth Leakage Circuit Breaker (ELCB) – J Frame Three/four pole; Adjustable thermal/magnetic; 100kA (Icu) 250A	200 – 250	1250 – 2500	ELJWC3250	£741.85	ELJWC4250	£943.80

Note: Fitted with line and load terminals as standard.

200 to 400A – IEC947-2; 40, 65 & 100kA Icu

Description	Range (A)		Catalogue numbers		4 Pole	Price
	Thermal	Magnetic	3 Pole	Price		
Earth Leakage Circuit Breaker (ELCB) – K Frame Three/four pole; Adjustable thermal/magnetic; 40kA (Icu) 200A	160 – 200	1000 – 2000	ELKW3200	£839.67	ELKW4200	£934.49
250A	200 – 250	1250 – 2500	ELKW3250	£839.67	ELKW4250	£934.49
315A	250 – 315	1575 – 3150	ELKW3315	£839.67	ELKW4315	£934.49
4000A	315 – 400	2000 – 4000	ELKW3400	£839.67	ELKW4400	£934.49
Earth Leakage Circuit Breaker (ELCB) – K Frame Three/four pole; Adjustable thermal/magnetic; 65kA (Icu) 200A	160 – 200	1000 – 2000	ELHKW3200	£874.86	ELHKW4200	£973.65
250A	200 – 250	1250 – 2500	ELHKW3250	£874.86	ELHKW4250	£973.65
315A	250 – 315	1575 – 3150	ELHKW3315	£874.86	ELHKW4315	£973.65
4000A	315 – 400	2000 – 4000	ELHKW3400	£874.86	ELHKW4400	£973.65
Earth Leakage Circuit Breaker (ELCB) – K Frame Three/four pole; Adjustable thermal/magnetic; 100kA (Icu) 200A	160 – 200	1000 – 2000	ELKWC3200	£962.35	ELKWC4200	£1071.02
250A	200 – 250	1250 – 2500	ELKWC3250	£962.35	ELKWC4250	£1071.02
315A	250 – 315	1575 – 3150	ELKWC3315	£962.35	ELKWC4315	£1071.02
4000A	315 – 400	2000 – 4000	ELKWC3400	£962.35	ELKWC4400	£1071.02

Note: Fitted with line and load terminals as standard.

F Frame

K Frame

Motor circuit protectors (HMCP) – EN60947-2

Continuous rating (A)	Magnetic trip range (A)	Catalogue numbers	Price
F Frame			
3	9 – 30	HMCP003A0	£140.39
15	45 – 150	HMCP015E0	£140.39
30	90 – 300	HMCP030H1	£140.39
50	150 – 500	HMCP050K2	£140.39
70	210 – 700	HMCP070M2	£145.79
150	450 – 1500	HMCP150T4	£270.01
150	750 – 2500	HMCP150U4	£270.01
J Frame			
250	350 – 700	HMCP250A5	£323.99
250	625 – 1250	HMCP250F5	£323.99
250	750 – 1500	HMCP250G5	£323.99
K Frame			
400	800 – 1000	HMCP400D5	£480.51
400	2000 – 4000	HMCP400X5	£480.51
L Frame			
600	1800 – 6000	HMCP600L6W	£769.49

Note: Fitted with line and load terminals as standard, except HMCP600L6W.

Alarm lockout

Auxiliary switch

Shunt trip

Accessories for E, F, J (old) & J (new) frame MCCBs (For 'G' frame MCCB accessories, please contact Cutler-Hammer)

Description	Pole location	Catalogue numbers		F frame	Price	J frame (See page 45)	Price	J frame (New) (See pages 46/47)	Price
		E frame	Price						
Alarm lockout									
1N.O. - 1N.C.	Left	-		A1L1LPK	£22.43	A1L2LPK	£28.05	-	
1N.O. - 1N.C.	Right	ALM1M1BEPK	£9.50	A1L1RPK	£22.43	A1L2RPK	£28.05	ALM1M1BEPK	£9.50
2N.O. - 2N.C.	Left	-		A2L1LPK	£30.87	-		-	
2N.O. - 2N.C.	Right	ALM2M2BEPK	£18.15	A2L1RPK	£30.87	-		ALM1M1BEPK	£18.15
Auxiliary switch									
1N.O. - 1N.C.	Left	-		A1X1PK	£9.82	A1X2PK	£15.68	-	
1N.O. - 1N.C.	Right	AUX1A1BPK	£9.82	A1X1PK	£9.82	A1X2PK	£15.68	AUX1A1BPK	£9.82
2N.O. - 2N.C.	Left	-		A2X1LPK	£19.64	A2X2PK	£22.43	-	
2N.O. - 2N.C.	Right	AUX2A2BPK	£18.15	A2X1RPK	£19.64	A2X2PK	£22.43	AUX2A2BPK	£18.15
3N.O. - 3N.C.	Left	-		-		-		-	
3N.O. - 3N.C.	Right	-		-		-		-	
Auxiliary switch/Alarm lockout									
	Left	-		AAL1LPK	£30.87	AAL2LPK	£49.58	-	
	Right	AUXALRMEPK	£18.15	AAL1RPK	£30.87	AAL2RPK	£49.58	AUXALRMEPK	£18.15
Shunt trip - Standard									
120Vac	Left	SNT120CPK	£31.15	SNT1LP08K	£40.53	SNT2P11K	£46.76	SNT120CPK	£31.15
	Right	-		SNT1RP08K	£40.53	SNT2P11K	£46.76	-	
240Vac	Left	SNT480APK	£31.15	SNT1LP12K	£40.53	SNT2P11K	£46.76	SNT480APK	£31.15
	Right	-		SNT1RP12K	£40.53	SNT2P11K	£46.76	-	
24Vdc	Left	SNT060CPK	£31.15	SNT1LP03K	£40.53	SNT2P04K	£46.76	SNT060CPK	£31.15
	Right	-		SNT1RP03K	£40.53	SNT2P04K	£46.76	-	
48Vdc	Left	SNT060CPK	£31.15	SNT1LP08K	£40.53	SNT2P06K	£46.76	SNT060CPK	£31.15
	Right	-		SNT1RP08K	£40.53	SNT2P06K	£46.76	-	
Shunt trip - Low energy									
	Left	-		LST1LPK	£53.16	LST2LPK	£61.71	-	
	Right	-		LST1RPK	£53.16	LST2RPK	£61.71	-	
Undervoltage release mechanism									
120Vac	Left	UVR120APK	£44.80	UVH1LP08K	£45.21	UVH2LP08K	£52.99	UVR120APK	£44.80
	Right	-		UVH1RP08K	£45.21	UVH2RP08K	£52.99	-	
240Vac	Left	UVR480APK	£44.80	UVH1LP11K	£45.21	UVH2LP11K	£52.99	UVR480APK	£44.80
	Right	-		UVH1RP11K	£45.21	UVH2RP11K	£52.99	-	
24Vdc	Left	UVR024CPK	£44.80	UVH1LP21K	£45.21	UVH2LP21K	£52.99	UVR024CPK	£44.80
	Right	-		UVH1RP21K	£45.21	UVH2RP21K	£52.99	-	
48Vdc	Left	UVR048DPK	£44.80	UVH1LP23K	£45.21	UVH2LP23K	£52.99	UVR048DPK	£44.80
	Right	-		UVH1RP23K	£45.21	UVH2RP23K	£52.99	-	
Motor operators									
120Vac	-	-		EOP1T07	£233.68	EOP2T07	£397.60	-	
240Vac	-	-		EOP1T11	£233.68	EOP2T11	£397.60	-	
120Vdc	-	-		MOP1P07DC	£233.68	EOP2T07DC	£397.60	-	
240Vdc	-	-		-		EOP2T11DC	£397.60	-	
24Vdc	-	-		MOP1P03DC	£233.68	-		-	
48Vdc	-	-		MOP1P05DC	£233.68	-		-	
Walking beam interlocks									
-	-	-		WBL1	£68.56	-		-	

Alarm lockout

Auxiliary switch

Shunt trip

Accessories for L, N & R frame MCCBs

Description	Pole location	Catalogue numbers		L frame	Price	N frame	Price	R frame	Price
		K frame	Price						
Alarm lockout									
1N.O. - 1N.C.	Left	A1L3LPK	£35.07	A1L4LPK	£35.07	A1L5LPK	£35.07	-	
1N.O. - 1N.C.	Right	A1L3RPK	£35.07	A1L4RPK	£35.07	A1L5RPK	£35.07	A1L6RPK	£35.07
2N.O. - 2N.C.	Left	A2L3LPK	£49.10	A2L4LPK	£49.10	A2L5LPK	£49.10	-	
2N.O. - 2N.C.	Right	A2L3RPK	£49.10	A2L4RPK	£49.10	A2L5RPK	£49.10	A2L6RPK	£49.10
Auxiliary switch									
1N.O. - 1N.C.	Left	A1X3PK	£16.83	A1X4PK	£16.83	A1X5PK	£16.83	-	
1N.O. - 1N.C.	Right	A1X3PK	£16.83	A1X4PK	£16.83	A1X5PK	£16.83	-	
2N.O. - 2N.C.	Left	A2X3PK	£25.25	A2X4PK	£25.25	A2X5LPK	£25.25	-	
2N.O. - 2N.C.	Right	A2X3PK	£25.25	A2X4PK	£25.25	A2X5RPK	£25.25	A2X6RPK	£49.10
3N.O. - 3N.C.	Left	A3X3LPK	£49.58	A3X4PK	£49.58	A3X5LPK	£72.14	-	
3N.O. - 3N.C.	Right	A3X3RPK	£49.58	A3X4PK	£49.58	A3X5RPK	£72.14	-	
Auxiliary switch/Alarm lockout									
	Left	AA13LPK	£49.58	AA114LPK	£49.10	AA115LPK	£49.10	-	
	Right	AA13RPK	£49.58	AA114RPK	£49.10	AA115RPK	£49.10	-	
Shunt trip - Standard									
120Vac	Left	SNT3P11K	£81.03	SNT4LP11K	£84.16	SNT5LP11K	£87.29	-	
	Right	SNT3P11K	£81.03	SNT4RP11K	£84.16	-	-	SNT6P11K	£93.82
240Vac	Left	SNT3P11K	£81.03	SNT4LP11K	£84.16	SNT5LP11K	£87.29	-	
	Right	SNT3P11K	£81.03	SNT4RP11K	£84.16	-	-	SNT6P11K	£93.82
24Vdc	Left	SNT3P04K	£81.03	SNT4LP03K	£84.16	SNT5LP03K	£87.29	-	
	Right	SNT3P04K	£81.03	SNT4RP03K	£84.16	-	-	SNT6P03K	£93.82
48Vdc	Left	SNT3P04K	£81.03	SNT4LP23K	£84.16	SNT5LP23K	£87.29	-	
	Right	SNT3P04K	£81.03	SNT4RP23K	£84.16	-	-	SNT6P23K	£93.82
Shunt trip - Low energy									
	Left	LST3LPK	£90.53	LST4LPK	£92.55	LST5LPK	£96.02	-	
	Right	LST3RPK	£90.53	LST4RPK	£92.55	-	-	LST6RPK	£103.20
Undervoltage release mechanism									
120Vac	Left	UVH3LP08K	£93.52	UVH4LP08K	£93.52	UVH5LP08K	£93.52	-	
	Right	UVH3RP08K	£93.52	UVH4RP08K	£93.52	-	-	UVH6RP08K	£97.39
240Vac	Left	UVH3LP11K	£93.52	UVH4LP11K	£93.52	UVH5LP11K	£93.52	-	
	Right	UVH3RP11K	£93.52	UVH4RP11K	£93.52	-	-	UVH6RP11K	£97.39
24Vdc	Left	UVH3LP21K	£89.05	UVH4LP21K	£93.52	UVH5LP21K	£93.52	-	
	Right	UVH3RP21K	£93.52	UVH4RP21K	£93.52	-	-	-	
48Vdc	Left	UVH3LP23K	£93.52	UVH4LP23K	£93.52	UVH5LP23K	£93.52	-	
	Right	UVH3RP23K	£93.52	UVH4RP23K	£93.52	-	-	-	
Motor operators									
120Vac	-	EOP3T07	£444.72	EOP4T07	£479.40	EOP5T07	£490.13	EOP6T08	£791.45
240Vac	-	EOP3T11	£444.72	EOP4T11	£479.40	EOP5T11	£490.13	EOP6T11	£791.45
120Vdc	-	EOP3T07DC	£444.72	EOP4T26	£479.40	-	-	-	
240Vdc	-	EOP3T11DC	£444.72	-	-	-	-	-	
24Vdc	-	MOP3P03DC	£444.72	EOP4MT21	£479.40	EOP5T21K	£490.13	EOP6T19K	£791.45
48Vdc	-	-	-	-	-	EOP5T22	£490.13	EOP6T21	£791.45
Walking beam interlocks									
-	-	WBL3	£84.44	WBL4A	£86.24	WBL5	£107.54	WBL6	£132.48



Door mounted

Flange mounted

Door mounted handle mechanisms

Description	Shaft length (mm)	Catalogue numbers	Price
G Frame			
Black handle	152	GHMVD06BW	£38.32
	305	GHMVD12BW	£40.80
Red/yellow handle	152	GHMVD06RW	£43.12
	305	GHMVD12RW	£45.60
E Frame			
Black handle	152	EHMVD06BW	£41.41
	305	EHMVD12BW	£43.76
Red/yellow handle	152	EHMVD06RW	£46.59
	305	EHMVD12RW	£48.94
F Frame			
Black handle	152	FHMVD06BW	£46.06
	305	FHMVD12BW	£51.41
Red/yellow handle	152	FHMVD06RW	£55.20
	305	FHMVD12RW	£57.55
J Frame (new) (See pages 46 & 47)			
Black handle	152	FJHMVD06BW	£46.06
	305	FJHMVD12BW	£51.41
Red/yellow handle	152	FJHMVD06RW	£55.20
	305	FJHMVD12RW	£57.55

Description	Shaft length (mm)	Catalogue numbers	Price
J Frame (See page 45)			
Black handle	152	JHMVD06BW	£48.63
	305	JHMVD12BW	£54.28
Red/yellow handle	152	JHMVD06RW	£58.28
	305	JHMVD12RW	£60.76
K Frame			
Black handle	152	KHMVD06BW	£55.26
	305	KHMVD12BW	£57.74
Red/yellow handle	152	KHMVD06RW	£62.17
	305	KHMVD12RW	£64.65
L Frame			
Black handle	152	LHMVD06BW	£59.76
	305	LHMVD12BW	£64.24
Red/yellow handle	152	LHMVD06RW	£69.49
	305	LHMVD12RW	£71.97

Flange mounted handle mechanisms

Description	Shaft length (mm)	Catalogue numbers	Price
Complete mechanisms Inclusive of handle & flexible shaft			
E Frame			
	1220	EHMFS04W	£189.39
	1525	EHMFS05W	£190.83
	1830	EHMFS06W	£192.25
J Frame (new)			
(See pages 46 & 47)	1220	JHMFS04W	£227.26
	1525	JHMFS05W	£229.00
	1830	JHMFS06W	£230.70
N Frame			
	1220	F5S04W	£298.70
	1525	F5S05W	£305.14
	1830	F5S06W	£311.58
R Frame			
	1220	F6S04W	£319.30
	1525	F6S05W	£325.74
	1830	F6S06W	£332.18

A Series

B Series

125A busbar – Single phase (A Series) supplied c/w neutral bar

Number of ways (SP)	Catalogue numbers	Price
Single busbar – Incoming device supplied separately		
6	125A6PA	£15.92
9	125A9PA	£18.39
12	125A12PA	£22.23
18	125A18PA	£26.08

250A busbar – Three phase (B Series) supplied c/w neutral bars

Number of ways (TP)	Catalogue numbers	Price
Single busbar – Incoming device supplied separately		
4	250B4PA	£49.96
6	250B6PA	£57.64
8	250B8PA	£64.56
12	250B12PA	£82.07
18	250B18PA	£99.37
24	250B24PA	£165.80

To convert to single phase, use a single phasing and connection kit.

Up to 63A devices – Catalogue number **63SPK2** Price £19.86

64A to 125A devices – Catalogue number **125SPK2** Price £19.86

Accessories – Connection kits

Rating (A)	Type of kit	Catalogue numbers	Price	Suitable for use with pan assemblies (•)	
				A series	B series
100	Direct connect	Supplied as standard	–	–	•
250	Direct connection	SPDL250B3	£33.44	–	•
225	F frame MCCB/MCS	225CKB3	£38.43	–	•

125A Busbar – Single phase: BSEN 60439 Part 3

Number of ways (SP)	Circuits		Catalogue numbers	Price
	A	B		
Single busbar – Incoming device supplied separately				
6	6	–	125A6	£25.73
9	9	–	125A9	£32.98
12	12	–	125A12	£42.06
18	18	–	125A18	£51.44
24 †	24	–	125A24	£94.72
Split busbar – Incoming device A factory fitted, incoming device B supplied separately				
6	4	2	125ASP42	£51.29
10	4	6	125ASP46	£55.99
12	6	6	125ASP66	£60.83
22 †	11	11	125ASP1111	£132.56
Dual incomer – Incoming devices A & B supplied separately				
7	2	5	125ADU25	£43.29
10	4	6	125ADU46	£49.94
10	5	5	125ADU55	£49.94
10	6	4	125ADU64	£49.94
13	5	8	125ADU58	£54.17
13	7	6	125ADU76	£54.17
13	9	4	125ADU94	£54.17

† Double tier board

Incoming devices Refer to pages 62 to 64

Outgoing devices Refer to pages 33 & 34

250A Busbar – Three phase: BSEN 60439 Part 3

Number of ways (TP)	(SP)	Circuits A (TP)	B (TP)	Catalogue numbers	Price
Single busbar † – Incoming device supplied separately					
4	12	4	–	250B4	£95.03
6	18	6	–	250B6	£103.51
8	24	8	–	250B8	£119.85
12	36	12	–	250B12	£137.70
18	54	18	–	250B18	£187.03
24	72	24	–	250B24	£255.11

† To convert to single phase, use a single phasing and connection kit.

Up to 63A devices – Catalogue number **63SPK2** Price £19.86

64A to 125A devices – Catalogue number **125SPK2** Price £19.86

Incoming devices Refer to pages 62 to 64

Outgoing devices Refer to pages 33 & 34

RCD two pole

RCD four pole

Switch disconnecter
two pole

63A – BSEN 61008; 80 to 100A – BS4293

Rating (A)	Sensitivity (mA)	Catalogue numbers	Price	Suitable for use with pan assembly and distribution boards (•)	
				A Series	B Series
Residual current devices (RCDs) – Two pole					
63	30	SPRL63R230	£60.39	•	•
63	100	SPRL63R2100	£54.08	•	•
63	300	SPRL63R2300	£50.78	•	•
80	30	SPRL80R230	£78.51	•	•
80	100	SPRL80R2100	£72.19	•	•
80	300	SPRL80R2300	£68.62	•	•
100	30	SPRL100R230	£87.56	•	•
100	100	SPRL100R2100	£80.43	•	•
100	300	SPRL100R2300	£76.58	•	•
Residual current devices (RCDs) – Four pole					
63	30	SPRL63R430	£107.80	–	•
63	100	SPRL63R4100	£91.62	–	•
63	300	SPRL63R4300	£88.20	–	•
80	30	SPRL80R430	£114.42	–	•
80	100	SPRL80R4100	£106.65	–	•
80	300	SPRL80R4300	£102.32	–	•
100	30	SPRL100R430	£120.77	–	•
100	100	SPRL100R4100	£111.25	–	•
100	300	SPRL100R4300	£105.78	–	•

Switch disconnecter 100 to 200A – IEC947-3

	Rating (A)	Catalogue numbers	Price	Suitable for use with pan assembly and distribution boards (•)	
				A series	B series
Two pole	100	SPIL100S2	£17.29	•	•
Three pole	100	SPIL100S3/PA	£32.38	–	•
	200	SPIL200S3	£164.34	–	•
Four pole	100	SPIL100S4	£44.19	–	•

Notes:

- Two pole devices require a single phasing & connection kit when fitted to a B Series pan assembly.
Up to 63A devices – Catalogue number **63SPK2** Price £19.86
64A to 125A devices – Catalogue number **125SPK2** Price £19.86
- Four pole devices are supplied complete with a connection kit when fitted to a B Series pan assembly.

Moulded case
circuit breaker

Moulded case switch

Direct Connection Terminal Block

	Rating (A)	Catalogue numbers	Price	Suitable as an incomer (•) for A series B series	
Three pole	100 250 †	Supplied as standard SPDL250B3	£33.44	– –	• •

Earth Leakage Moulded Case Circuit Breaker 200A – EN60942-2

	Rating (A)	Catalogue numbers	Price	Suitable as an incomer (•) for A series B series	
Four pole	200	SPML200ELM4	£587.42	–	•

Moulded Case Circuit Breaker 250A – IEC947-2

	Rating (A)	Catalogue numbers	Price	Suitable as an incomer (•) for A series B series	
Three pole	250 †	SPML250M3	£333.17	–	•

Moulded Case Switch 250A – IEC947-2

	Rating (A)	Catalogue numbers	Price	Suitable as an incomer (•) for A series B series	
Three pole	250 †	SPML250MS3	£311.27	–	•

Note:

† All 250A devices are supplied within an extension box complete with connection kit.

Notes:

1. Three & four pole disconnectors are supplied complete with a connection kit when fitting to B Series Distribution Boards.
2. An extension box is recommended for fitting a 3 pole 200A disconnector to a B Series Distribution Board if cable size exceeds 70mm². Catalogue number **BEX** Price £60.45
3. 4 pole 200A disconnectors are supplied within an extension box complete with connection kit.
4. Two pole 100A devices require a single phasing & connection kit when fitted to a B Series Distribution Board. Catalogue number **125SPK2** Price £19.86

18kA

40kA

16 to 225A – IEC947-2; 18 & 35kA

Rating (A)	Range (A) Thermal	Magnetic	Catalogue numbers	Price	Suitable as an incomer (•) for A series B series	
Moulded Case Circuit Breaker (MCCB) – F Frame – Three pole; Fixed thermal/magnetic; 18kA (Icu)						
16	-	-	Fi3016L	£92.62	-	•
20	-	-	Fi3020L	£92.62	-	•
32	-	-	Fi3032L	£92.62	-	•
40	-	-	Fi3040L	£92.62	-	•
50	-	-	Fi3050L	£92.62	-	•
63	-	-	Fi3063L	£92.62	-	•
70	-	-	Fi3070L	£88.05	-	•
80	-	-	Fi3080L	£92.45	-	•
100	-	-	Fi3100L	£92.45	-	•
125	-	-	Fi3125L	£111.04	-	•
160	-	-	Fi3160L	£132.07	-	•
175	-	-	Fi3175L	£193.83	-	•
200	-	-	Fi3200L	£193.83	-	•
225	-	-	Fi3225L	£193.83	-	•
Moulded Case Circuit Breaker (MCCB) – F Frame – Three pole; Fixed thermal/magnetic; 40kA (Icu)						
16	-	-	FWF3016L	£110.74	-	•
20	-	-	FWF3020L	£110.74	-	•
32	-	-	FWF3032L	£110.74	-	•
40	-	-	FWF3040L	£110.74	-	•
50	-	-	FWF3050L	£110.74	-	•
63	-	-	FWF3063L	£110.74	-	•
80	-	-	FWF3080L	£110.74	-	•
100	-	-	FWF3100L	£110.74	-	•
125	-	-	FWF3125L	£131.02	-	•
160	-	-	FWF3160L	£168.97	-	•
200	-	-	FWF3200L	£206.59	-	•
225	-	-	FWF3225L	£206.59	-	•
Moulded Case Switch (MCS) – F Frame – Three pole						
160			HFWF3160KL	£131.25	-	•

Notes:

1. An extension box is recommended for fitting Fi & FW MCCBs to a B Series Distribution Board if cable exceeds 70mm². Catalogue number **BEX** Price £60.45
2. Fitted with line and load terminals as standard.
3. For F frames with higher fault ratings see pages 42 & 43
4. An MCCB mounting kit is required for MCCB incomers to type B board. Catalogue number **225CKB3** Price £38.43

400A Single Busbar G Series (Incoming device supplied separately) – supplied c/w neutral bars

Number of ways (TP)	Catalogue numbers	Price
4	400G4PA	£306.06
6	400G6PA	£324.45
12	400G12PA	£495.19

630A Single Busbar F Series (Incoming device supplied separately) – supplied c/w neutral bars

Number of ways	Catalogue numbers	Price
6	630F6PA	£433.70
12	630F12PA	£548.44
18	630F18PA	£626.95

800A Single Busbar K Series (Incoming device supplied separately) – supplied c/w neutral bars

Number of ways	Catalogue numbers	Price
6	800KD6PA	£867.40
12	800KD12PA	£1054.06
18	800KD18PA	£1152.88

Connection kits

Rating (A)	Type of kit	Catalogue numbers	Price	Suitable for use with pan assemblies (•)		
				G series	F series	K series
200	Direct connection	Supplied as standard		•	–	–
250	J Frame MCCB/MCS	250CKG3	£49.41	•	–	–
400	Direct connection	SPDL400G3	£47.27	•	–	–
400	K Frame MCCB/MCS	400CKG3	£53.80	•	–	–
300	Direct connection	Supplied as standard		–	–	•
400	K Frame MCCB/MCS	400CKF3	£60.39	–	•	–
630	Direct connection	SPDL630F3	£58.79	–	•	–
630	L Frame MCCB/MCS	630CKF3	£64.78	–	•	–
800	N Frame MCCB/MCS	800CKK3	£107.60	–	–	•

400A Single Busbar – G series (BSEN 60439 Part 1) (Incoming device supplied separately)

Number of ways (TP)	Catalogue numbers	Price
4	400G4	£400.26
6	400G6	£425.81
12	400G12	£583.18

630A Single Busbar – F Series (BSEN 60439 Part 1) (Incoming device supplied separately)

Number of ways	Catalogue numbers	Price
6	630F6	£478.16
12	630F12	£656.40
18	630F18	£841.92

Three Phase Direct Connection Incoming Facility – G series

Rating (A)	Catalogue numbers	Price
200A	Supplied as standard †	
400A	SPDL400G3	£47.27

† Suitable for crimped lug that will accept up to 95mm² cable

Three Phase Direct Connection Incoming Facility – F series

Rating (A)	Catalogue numbers	Price
300A	Supplied as standard ‡	
630A	SPDL630F3	£58.79

‡ Suitable for crimped lug that will accept up to 185mm² cable

800A Single Busbar – K Series (Incoming device factory fitted) – BSEN 60439 Part 1

Number of ways (TP)	Type of incomer	Catalogue numbers	Price
6	Direct connection	800KD6	£1059.21
12	Direct connection	800KD12	£1343.68
18	Direct connection	800KD18	£1561.58
6	Moulded case circuit breaker	800KM6	£1816.40
12	Moulded case circuit breaker	800KM12	£2178.94
18	Moulded case circuit breaker	800KM18	£2360.53
6	Moulded case switch	800KS6	£1779.48
12	Moulded case switch	800KS12	£2051.84
18	Moulded case switch	800KS18	£2263.69

Incoming devices Refer to pages 48, 50 & 67

Outgoing devices Refer to pages 37, 40 to 43 & 48

Enclosure

Incomer

MCCB Wall Mounting Enclosures

Description	Nominal ampere range	Catalogue numbers	Price	Select MCCBs from pages
F frame	16 – 225	FE3000	£59.33	40 to 43
J frame	125 – 250	JE3000	£59.33	Below
K frame	200 – 400	KE3000	£116.11	48
L frame	500 – 630	LE3000	£116.11	50

Incomers & outgoers for G series panelboards & JE enclosures

250A – IEC947-2; 40kA †‡

Rating (A)	Range (A)		Catalogue numbers	Price	Suitable as an incomer (I) or outgoer (O) for panelboards & enclosures	
	Thermal	Magnetic			G series	JE enclosures
Moulded Case Circuit Breaker (MCCB) – J Frame – Three pole; Adjustable thermal/magnetic; 40kA (Icu)						
250	200 - 250	1250 - 2500	JW3250	£270.98	I	O
Moulded Case Switch (MCS) – J Frame – Three pole; 40kA (Icu)						
250			JW3250K	£222.36	I	O

Notes:

† Connection kit supplied within panelboard as standard.

‡ For incoming cables larger than 150mm² a cable extension links kit is required. Catalogue number **250LCKJ3** Price £24.70

Fixed mounting

Fixed mounting with standard interruption and withstand ratings. Manually operated frame only with horizontal rear terminals. Ics breaking capacity 40 - 85kA.

Prices on fixed breakers include only frame, sensors, IP41 panel escutcheon and secondary mounting kit. Secondary terminals, wiring, trip units and accessories must be priced separately. All terminations are horizontal. Vertical terminations must be priced separately.

Continuous current rating (A) at 40°C	Ics breaking capacity (kA) @ 690V & 440V IEC947-2	3-pole Catalogue numbers	Price	4-pole Catalogue numbers	Price
Withstand rating 40 kA for 1 sec (Icw)					
800	40	MWI4083HEA	£1249.06	MWI4084HEA	£1628.11
1250	40	MWI4123HEA	£1308.63	MWI4124HEA	£1749.95
Withstand rating 65 kA for 1 sec (Icw)					
800	65	MWI6083HEA	£1314.80	MWI6084HEA	£1713.80
1000	65	MWI6103HEA	£1377.50	MWI6104HEA	£1842.05
1250	65	MWI6123HEA	£1377.50	MWI6124HEA	£1842.05
1600	65	MWI6163HEA	£1485.80	MWI6164HEA	£1995.00
2000	65 (50kA‡)	MWI6203HEA	£2147.00	MWI6204HEA	£2696.10
2500	65	MWI6253HEA	£2564.05	MWI6254HEA	£3469.40
3200	65 (50kA‡)	MWI6323HEA	£3570.10	MWI6324HEA	£4662.60
4000*	65	MWI6403HEA†	£6031.55	MWI6404HEA†	£7570.55
4000*	65	MWI64N3HEA†	£6031.55	MWI64N4HEA†	£7570.55
Withstand rating 85 kA for 1 sec (Icw)					
800	85	MWI8083HEA	£1448.94	MWI8084HEA	£1917.20
1250	85	MWI8123HEA	£1539.06	MWI8124HEA	£2018.80
1600	85	MWI8163HEA	£1672.47	MWI8164HEA	£2246.74
2000	85 (50kA‡)	MWI8203HEA	£2380.15	MWI8204HEA	£3021.57
2500	85	MWI8253HEA	£3082.53	MWI8254HEA	£3884.75
3200	85 (50kA‡)	MWI8323HEA	£4001.37	MWI8324HEA	£5285.10
4000*	85	MWI8403HEA†	£6795.00	MWI8404HEA†	£8920.70
5000*	85	MWI8503HEA†	£9303.26	MWI8504HEA†	£10431.48
6300*	85	MWI8633HEA†	£12667.78	MWI8634HEA†	£12903.62
4000*	85	MWI84N3HEA†	£6795.00	MWI84N4HEA†	£8920.70
5000*	85	MWI85N3HEA†	£9303.26	MWI85N4HEA†	£10431.48
6300*	85	MWI86N3HEA†	£12667.78	MWI86N4HEA†	£14257.92

* Dimension change in width only.

† 4000 to 6300A breakers with an "N" in the catalogue number i.e. MWI84N3HEA are AABCC phasing for 3-pole and NNAABCC phasing for 4-pole.
4000 to 6300A breakers without an "N" in the catalogue number i.e. MWI8403HEA are ABCABC phasing for 3-pole and NNABCABC phasing for 4-pole.

‡ Indicates 3 second (Icw) withstand rating.

Drawout mounting

Drawout mounting with standard interrupting and withstand ratings. Manually operated frame only with horizontal rear finger clusters. Ics breaking capacity 40 - 85kA.

Prices on drawout breakers include only frame, sensors, IP41 panel escutcheon secondary mounting kit and a cassette with safety shutters. Secondary terminals, wiring, trip units and accessories must be priced separately. All terminations are horizontal. Vertical terminations must be priced separately.

Continuous current rating (A) at 40°C	Ics breaking capacity (kA) @ 690V & 440V IEC947-2	3-pole Catalogue numbers	Price	4-pole Catalogue numbers	Price
Withstand rating 40 kA for 1 sec (Icw)					
800	40	MWI4083LEA	£1713.85	MWI4084LEA	£2205.71
1250	40	MWI4123LEA	£1813.12	MWI4124LEA	£2301.38
Withstand rating 65 kA for 1 sec (Icw)					
800	65	MWI6083LEA	£1804.05	MWI6084LEA	£2321.80
1000	65	MWI6103LEA	£1908.55	MWI6104LEA	£2422.50
1250	65	MWI6123LEA	£1908.55	MWI6124LEA	£2422.50
1600	65	MWI6163LEA	£2170.75	MWI6164LEA	£2920.30
2000	65 (50kA‡)	MWI6203LEA	£2848.10	MWI6204LEA	£3701.20
2500	65	MWI6253LEA	£3529.25	MWI6254LEA	£4619.85
3200	65 (50kA‡)	MWI6323LEA	£5194.60	MWI6324LEA	£6535.05
4000*	65	MWI6403LEA†	£8215.60	MWI6404LEA†	£10448.10
4000*	65	MWI64N3LEA†	£8215.60	MWI64N4LEA†	£10448.10
Withstand rating 85 kA for 1 sec (Icw)					
800	85	MWI8083LEA	£1935.75	MWI8084LEA	£2482.64
1250	85	MWI8123LEA	£2032.93	MWI8124LEA	£2558.62
1600	85	MWI8163LEA	£2309.47	MWI8164LEA	£3107.27
2000	85 (50kA‡)	MWI8203LEA	£3032.17	MWI8204LEA	£3956.31
2500	85	MWI8253LEA	£3980.17	MWI8254LEA	£4954.67
3200	85 (50kA‡)	MWI8323LEA	£5512.16	MWI8324LEA	£7026.48
4000*	85	MWI8403LEA†	£8826.17	MWI8404LEA†	£11596.82
5000*	85	MWI8503LEA†	£10431.48	MWI8504LEA†	£13070.50
6300*	85	MWI8633LEA†	£14204.03	MWI8634LEA†	£16168.05
4000*	85	MWI84N3LEA†	£8826.17	MWI84N4LEA†	£11596.82
5000*	85	MWI85N3LEA†	£11427.25	MWI85N4LEA†	£13481.80
6300*	85	MWI86N3LEA†	£15391.50	MWI86N4LEA†	£17596.68

* Dimension change in width only.

† 4000 to 6300A breakers with an "N" in the catalogue number i.e. MWI86N3LEA are AABCC phasing for 3-pole and NNAABCC phasing for 4-pole.
4000 to 6300A breakers without an "N" in the catalogue number i.e. MWI8633LEA are ABCABC phasing for 3-pole and NNABCABC phasing for 4-pole.

‡ Indicates 3 second (Icw) withstand rating.

Fixed mounting

Fixed mounting with standard interruption and withstand ratings. Manually operated frame only with horizontal rear terminals. Ics Breaking capacity 85 - 150kA.

Prices on fixed breakers include only frame, sensors, IP41 panel escutcheon and secondary mounting kit. Secondary terminals, wiring, trip units and accessories must be priced separately. All terminations are horizontal. Vertical terminations must be priced separately.

Continuous current rating (A) at 40°C	Ics breaking capacity (kA) @ 690V & 440V IEC947-2	3-pole Catalogue numbers	Price	4-pole Catalogue numbers	Price
Withstand rating 85 kA for 1 sec (Icw)					
800	100	MWIC083HEA	£1558.00	MWIC084HEA	£2061.50
1250	100	MWIC123HEA	£1654.90	MWIC124HEA	£2170.75
1600	100	MWIC163HEA	£1798.35	MWIC164HEA	£2415.85
2000	100	MWIC203HEA	£2559.30	MWIC204HEA	£3249.00
2500	100	MWIC253HEA	£2314.55	MWIC254HEA	£4177.15
3200	100	MWIC323HEA	£4302.55	MWIC324HEA	£5682.90
Withstand rating 100 kA for 1 sec (Icw)					
4000	100	MWIC403HEA†	£7306.45	MWIC404HEA†	£9592.15
5000	100	MWIC503HEA†	£10003.50	MWIC504HEA†	£11216.65
6300	100	MWIC633HEA†	£13621.26	MWIC634HEA†	£13874.86
4000	100	MWIC4N3HEA†	£7306.45	MWIC4N4HEA†	£9592.15
5000	100	MWIC5N3HEA†	£10003.50	MWIC5N4HEA†	£11216.65
6300	100	MWIC6N3HEA†	£13621.26	MWIC6N4HEA†	£13874.86
4000	150	MWIE403HEA†	£9489.39	MWIE404HEA†	£12469.80
5000	150	MWIE503HEA†	£12069.75	MWIE504HEA†	£14581.85
6300	150	MWIE633HEA†	£17707.64	MWIE634HEA†	£18037.32
4000	150	MWIE4N3HEA†	£9489.39	MWIE4N4HEA†	£12469.80
5000	150	MWIE5N3HEA†	£12069.75	MWIE5N4HEA†	£14581.85
6300	150	MWIE6N3HEA†	£17707.64	MWIE6N4HEA†	£18037.32

* Dimension change in width only.

† 4000 to 6300A breakers with an "N" in the catalogue number i.e. MWIE6N3HEA are AABBC phasing for 3-pole and NNAABBC phasing for 4-pole.
4000 to 6300A breakers without an "N" in the catalogue number i.e. MWIE633HEA are ABCABC phasing for 3-pole and NNABCABC phasing for 4-pole.

‡ Indicates 3 second (Icw) withstand rating.

Drawout mounting

Drawout mounting with standard interrupting and withstand ratings. Manually operated frame only with horizontal rear finger clusters. Ics Breaking capacity 85 - 150kA.

Prices on drawout breakers include only frame, sensors, IP41 panel escutcheon secondary mounting kit and a cassette with safety shutters. Secondary terminals, wiring, trip units and accessories must be priced separately. All terminations are horizontal. Vertical terminations must be priced separately.

Continuous current rating (A) at 40°C	Ics breaking capacity (kA) @ 690V & 440V IEC947-2	3-pole Catalogue numbers	Price	4-pole Catalogue numbers	Price
Withstand rating 85 kA for 1 sec (Icw)					
800	100	MWIC083LEA	£2081.45	MWIC084LEA	£2669.50
1250	100	MWIC123LEA	£2185.95	MWIC124LEA	£2751.20
1600	100	MWIC163LEA	£2483.30	MWIC164LEA	£3341.15
2000	100	MWIC203LEA	£3260.40	MWIC204LEA	£4254.10
2500	100	MWIC253LEA	£4279.75	MWIC254LEA	£5327.60
3200	100	MWIC323LEA	£5927.05	MWIC324LEA	£7555.35
Withstand rating 100 kA for 1 sec (Icw)					
4000	100	MWIC403LEA†	£9490.50	MWIC404LEA†	£12469.70
5000	100	MWIC503LEA†	£11216.65	MWIC504LEA†	£14054.30
6300	100	MWIC633LEA†	£15273.15	MWIC634LEA†	£17385.00
4000	100	MWIC4N3LEA†	£9490.50	MWIC4N4LEA†	£12469.70
5000	100	MWIC5N3LEA†	£11216.65	MWIC5N4LEA†	£14054.30
6300	100	MWIC6N3LEA†	£15273.15	MWIC6N4LEA†	£17385.00
4000	150	MWIE403LEA†	£12337.65	MWIE404LEA†	£16210.61
5000	150	MWIE503LEA†	£13282.90	MWIE504LEA†	£17073.40
6300	150	MWIE633LEA†	£18425.25	MWIE634LEA†	£20698.60
4000	150	MWIE4N3LEA†	£12337.65	MWIE4N4LEA†	£16210.61
5000	150	MWIE5N3LEA†	£13282.90	MWIE5N4LEA†	£17073.40
6300	150	MWIE6N3LEA†	£18425.25	MWIE6N4LEA†	£20698.60

* Dimension change in width only.

† 4000 to 6300A breakers with an "N" in the catalogue number i.e. MWIE6N3LEA are AABBCB phasing for 3-pole and NNAABBCB phasing for 4-pole.
4000 to 6300A breakers without an "N" in the catalogue number i.e. MWIE633LEA are ABCABC phasing for 3-pole and NNABCABC phasing for 4-pole.

‡ Indicates 3 second (Icw) withstand rating.

Magnum catalogue number completion

To complete the Magnum catalogue number add suffixes from all the tables below in the order depicted below

MWI4083HEA 08 NN A P A A 2 Y M N CX

Magnum switch Table 1 Table 2 Table 3 Table 4 Table 5 Table 6 Table 7 Table 8 Table 9 Table 10
 (page 73) (page 73) (page 73) (page 73)

Table 1 – Sensors/plugs

Description	Suffix code
None	NN
200A	02
250A	05
300A	03
400A	04
600A	06
630A	07
800A	08
1000A	10
1200A	12
1250A	13
1600A	16
2000A	20
2500A	25
3000A	30
3200A	32
4000A	40
5000A	50
6300A	63

Table 2 – Trip units

Trip unit	Control voltage	Functionality	Suffix code	Extra price
None	None	Non-automatic	NN	–£75.00
MTR220	None	LI	22	£324.90
MTR520	None	LSI	52	£639.35
MTR520i	None	LSIG†	5W	£859.75
MTR520M	None	LSI	M2	£809.40
MTR520M	24/48 Vdc	LSI	MT	£1001.30
MTR520M	120Vac	LSI	MU	£1001.30
MTR520M	240Vac	LSI	MV	£1001.30
MTR520Mi	None	LSIG†	MW	£1221.70
MTR520Mi	24/48 Vdc	LSIG†	MJ	£1221.70
MTR520Mi	120Vac	LSIG†	MK	£1221.70
MTR520Mi	240Vac	LSIG†	ML	£1221.70
MTR1150i	24/48 Vdc	LSI	1A	£3291.75
MTR1150i	120Vac	LSI	1C	£3291.75
MTR1150i	240Vac	LSI	1E	£3291.75
MTR1150i	24/48 Vdc	LSIG & LSIA†	1R	£3599.55
MTR1150i	120Vac	LSIG & LSIA†	1S	£3599.55
MTR1150i	240Vac	LSIG & LSIA†	1T	£3599.55

† 4th current sensor required for earth fault in a 3 phase, 4-wire system. Not included in above price, see page 76

Table 3 – Shunt trip

Voltage (AC:50/60 Hz)	Suffix code	Extra price
110/127Vac/dc	A	£57.00
208/240Vac/dc	R	£57.00
24Vac/dc	C	£57.00
48Vac/dc	H	£57.00
120Vac	7	£57.00
240Vac	8	£57.00

Table 4 – Motor operator

Voltage (AC:50/60 Hz)	Operating speed (sec)	Suffix code	Extra price
110/120Vac	5	N	£418.95
220/240Vac	5	P	£418.95
24Vdc	5	L	£418.95
48Vdc	5	K	£418.95
110/125Vdc	5	W	£418.95
220/250Vdc	5	T	£418.95

Table 5 – Spring release

Voltage (AC:50/60 Hz)	Suffix code	Extra price
110/127Vac/dc	A	£57.00
208/240Vac/dc	R	£57.00
24Vac/dc	C	£57.00
48Vac/dc	H	£57.00

Table 6 – Undervoltage release (instantaneous)

Voltage (AC:50/60 Hz)	Suffix code	Extra price
110/127Vac/dc	A	£112.10
208/240Vac/dc	R	£112.10
24Vdc	C	£112.10
48Vdc	H	£112.10
110/125Vdc	E	£112.10
220/250Vdc	F	£112.10
32Vdc	G	£112.10
380/415Vac	X	£112.10
480Vac	J	£112.10
600Vac	K	£112.10

Table 7 – Auxiliary switches

Type	Suffix code	Extra price
2A/2B	2	£77.90
4A/4B	4	£116.85
6A/6B	6	£163.40

Table 8 – Bell alarm/OTS

Type	Suffix code	Extra price
2 Form C contacts	Y	£89.30

Table 9 – Padlockable pushbutton covers

Type	Suffix code	Extra price
Metal (close & trip)	M	£34.50
Plastic (close & trip)	P	£23.75
Close PB metal	C	£34.50
Close PB plastic	H	£23.75

Table 10 – Operations counter/keylock interlocking

Operations counter	Keylock provision	Suffix code	Extra price
No counter	No lock	N	–
No counter	Castell lock	C	£53.00
Operations counter	Castell lock	L	£103.00
No counter	Ronis lock	R	£53.00
Operations counter	Ronis lock	H	£103.00
No counter	Kirk lock	K	£53.00
Operations counter	Kirk lock	Y	£103.00
Operations counter	No lock	A	£66.50

Drawout cassettes without shutters. Includes as standard horizontal terminals and provisions only for secondary mounting. Select the appropriate amount of secondary terminal blocks from the accessories below.

Continuous current rating (A) at 40°C	3-pole Catalogue numbers	Price	4-pole Catalogue numbers	Price
800	EN083HATN	£423.50	EN084HATN	£538.00
1250	EN123HATN	£423.50	EN124HATN	£538.00
1600	EN163HATN	£423.50	EN164HATN	£538.00
2000	EN203HATN	£423.50	EN204HATN	£538.00
2500	EN253HATN	£1030.50	EN254HATN	£1347.00
3000	EN303HATN	£1030.50	EN304HATN	£1347.00
3200	EN323HATN	£1030.50	EN324HATN	£1347.00
4000	EN403HATN	£1406.50	EN404HATN	£1660.00
5000	EN503HATN	£1758.00	EN504HATN	£2489.00
6300	EN633HATN	£1758.00	EN634HATN	£2489.00

Cassette accessories

Type	Catalogue numbers	Price
Cassette shutters		
800 - 3200A 3 pole	MISHTR3SM	£75.00
800 - 3200A 4 pole	MISHTR4SM	£97.50
4000 - 6300A 3 pole	MISHTR3LG	£147.50
4000 - 6300A 4 pole	MISHTR4LG	£170.00
Secondary terminal kit (qty 15 terminal blocks)		
	MSECBK	£77.50
Secondary terminal wire kit (includes 90 wires for wiring from breaker to secondary terminal blocks)		
	MSECWR	£43.00
Rejection clips (1 shipped with each cassette)		
	MRC	£38.19

Type	Catalogue numbers	Price
Cell switch		
4 Form C Contacts	M4CS	£21.85
8 Form C Contacts	M8CS	£27.55
12 Form C Contacts	M12CS	£78.00
Provisions only for lock on cassette (Castell or Kirk)		
Left side	MCASSPRL	£43.70
Right side	MCASSPRR	£43.70
Door escutcheon with gasket (IP41) (1 shipped with each breaker)		
	MDES	£42.75
Door escutcheon with gasket and cover (IP54)		
	MDESC	£155.80

Field installable kits

Sensor/rating plug kits Includes (3) 3-pole or (4) 4-pole sensors and (1) rating plug per kit. Sensor ampere rating cannot exceed the frame ampere rating.

Sensor rating (A)	3-pole Catalogue numbers	Price	4-pole Catalogue numbers	Price
200	M3SRG0200	£600.53	M4SRG0200	£800.70
250	M3SRG0250	£600.53	M4SRG0250	£800.70
300	M3SRG0300	£600.53	M4SRG0300	£800.70
400	M3SRG0400	£600.53	M4SRG0400	£800.70
600	M3SRG0600	£600.53	M4SRG0600	£800.70
630	M3SRG0630	£600.53	M4SRG0630	£800.70
800	M3SRG0800	£600.53	M4SRG0800	£800.70
1000	M3SRG1000	£600.53	M4SRG1000	£800.70
1200	M3SRG1200	£600.53	M4SRG1200	£800.70
1250	M3SRG1250	£600.53	M4SRG1250	£800.70
1600	M3SRG1600	£600.53	M4SRG1600	£800.70
2000	M3SRG2000	£600.53	M4SRG2000	£800.70
2000	M3RRG2000	£900.50	M4RRG2000	£1200.50
2500	M3SRG2500	£600.53	M4SRG2500	£800.70
2500	M3RRG2500	£900.50	M4RRG2500	£1200.50
3200	M3SRG3200	£600.53	M4SRG3200	£800.70
3200	M3RRG3200	£900.50	M4RRG3200	£1200.50
4000	M3RRG4000	£1481.30	M4RRG4000	£1975.06
5000	M3RRG5000	£1481.30	M4RRG5000	£1975.06
6300	M3RRG6300	£1481.30	M4RRG6300	£1975.06

* For use with 4000 to 6300 frames only.

Shunt trip

Voltage (AC:50/60 Hz)	Catalogue numbers	Price
110/127Vac/dc	MST1	£57.00
208/240Vac/dc	MST2	£57.00
24Vac/dc	MST3	£57.00
48Vac/dc	MST4	£57.00
120Vac	MST7	£57.00
240Vac	MST8	£57.00

Spring release

Voltage (AC:50/60 Hz)	Catalogue numbers	Price
110/127Vac/dc	MSRA	£57.00
208/240Vac/dc	MSRR	£57.00
24Vac/dc	MSRC	£57.00
48Vac/dc	MSRH	£57.00

Terminal adapter (6 per kit)

Voltage (AC:50/60 Hz)	Catalogue numbers	Price
Vertical for: 800 – 1600A	MVADP316	£142.50
2000A	MVADP320	£187.50
2500 – 3200A	MVADP332	£285.00
4000A	MVADP340	£375.00
5000 – 6300A	MVADP350	£570.00

Motor operator

Voltage (AC:50/60 Hz)	Operating speed (sec)	Catalogue numbers	Price
110/120Vac	5	MMOTN	£418.95
220/240Vac	5	MMOTP	£418.95
24Vdc	5	MMOTL	£418.95
48Vdc	5	MMOTK	£418.95
110/125Vdc	5	MMOTW	£418.95
220/250Vdc	5	MMOTT	£418.95

Undervoltage release (instantaneous)

Voltage (AC:50/60 Hz)	Catalogue numbers	Price
110/127Vac/dc	MUVRA	£112.10
208/240Vac/dc	MUVRR	£112.10
24Vdc	MUVRC	£112.10
48Vdc	MUVRH	£112.10
110/125Vdc	MUVRE	£112.10
220/250Vdc	MUVRF	£112.10
32Vdc	MUVRG	£112.10
380/415Vac	MUVRX	£112.10
480Vac	MUVRJ	£112.10
600Vac	MUVRK	£112.10

Padlockable pushbutton covers

Type	Catalogue numbers	Price
Metal (close & trip)	MCOVM	£34.50
Plastic (close & trip)	MCOVP	£23.75
Close PB metal	MCOVC	£34.50
Close PB plastic	MCOVH	£23.75

Mechanical interlocks

Description	Catalogue numbers	Price
Mechanical interlock assemblies †		
Drawout		
3 way type 31 cable	MI31DC	£707.28
3 way type 32 cable	MI32DC	£768.51
3 way type 33 cable	MI33DC	£707.28
2 way rod	MI2DR	£431.71
2 way cable	MI2DC	£431.71
Fixed		
3 way type 31 cable	MI31FC	£737.89
3 way type 32 cable	MI32FC	£799.13
3 way type 33 cable	MI33FC	£737.89
2 way rod	MI2FR	£462.33
2 way cable	MI2FC	£462.33
Mechanical interlock cable kits		
1524 mm	MIC5	£296.99
1828 mm	MIC6	£315.37
2438 mm	MIC8	£339.86
3048 mm	MIC10	£364.35
Mechanical interlock rod kit		
914 mm	MIR	£137.78

Accessory	Catalogue numbers	Price
Bell alarm/OTS 2 Form C contacts	MOTS	£89.30
Auxiliary switches		
2A/2B	MAUX2	£77.90
4A/4B	MAUX4	£116.85
6A/6B	MAUX6	£163.40

† To make a complete mechanical interlock

Select appropriate Mechanical Interlock Assembly and either the appropriate Mechanical Interlock Cable Kit for the Cable version or the Mechanical Interlock Rod Kit for the Rod version.

External accessories

Type numbers	Catalogue	Price
Digitrip test set		
Mini-tester	MTST1	£95.00
Portable test kit	MTST2	£2162.20
Tester adaptor cable (Works with existing digitrip test kit)		
	MTADPTC	£406.50

External 4th current sensor for earth fault

Sensor rating (A)	Catalogue numbers	Price
200	9253C03H01	£242.25
250	9253C03H02	£242.25
300	9253C03H03	£242.25
400	9253C03H04	£242.25
600	9253C03H05	£242.25
630	9253C03H14	£242.25
800	9253C03H06	£242.25
1000	9253C03H07	£242.25
1200	9253C03H08	£242.25
1250	9253C03H15	£242.25
1600	9253C03H09	£242.25
2000	9253C03H10	£242.25
2500	9253C03H11	£242.25
3000	9253C03H12	£242.25
3100	9253C03H16	£242.25
3200	9253C03H13	£242.25

Figure lock kit

Description number	Catalogue	Price
Castell or Kirk lock (Lock not supplied)	MBRLCKC	£53.00

Description	Catalogue numbers	Price	Description	Catalogue numbers	Price
IQ Metering			IQ300		
IQ Energy sentinel			Complete meter. Includes base, display, 55mm cable, with communications and KYZ output		
F Frame				IQ320	£1337.66
208Vac	IQESF208	£772.28	Complete meter. Includes base, display and 355mm cable	IQ310	£1237.66
400Vac	IQESF400	£772.28	Display module only	IQ300D	£505.00
480Vac	IQESF480	£772.28	For IQ310 & IQ320		
600Vac	IQESF600	£772.28			
J Frame			IQ DP4000		
208Vac	IQESJ208	£900.98	With 3 phase power	IQDP4030	£1628.80
400Vac	IQESJ400	£900.98	With 24 to 48Vdc power	IQDP4020	£1628.80
480Vac	IQESJ480	£900.98	With separate source power	IQDP4010	£1628.80
600Vac	IQESJ600	£900.98	With 3 phase power & I/O	IQDP4130	£1742.10
K Frame			With 24 to 48Vdc power & I/O	IQDP4120	£1742.10
208Vac	IQESK208	£964.05	With separate source power & I/O	IQDP4110	£1742.10
400Vac	IQESK400	£964.05			
480Vac	IQESK480	£964.05	IQ Analyser		
600Vac	IQESK600	£964.05	With 3 phase power	IOA6430	£3940.28
Universal with internal CTS			With 24 to 48Vdc power	IOA6420	£3940.28
208Vac	IQESUI208	£964.05	With separate source power	IOA6410	£3940.28
400Vac	IQESUI400	£964.05	With 3 phase power, waveform display and dvdt capture	IOA6630	£4519.73
480Vac	IQESUI480	£964.05	With 24 to 48Vdc power, waveform display and dvdt capture	IOA6620	£4519.73
600Vac	IQESUI600	£964.05	With separate source power, waveform display and dvdt capture	IOA6610	£4519.73
Universal requires external CTS			IQ Protective relays		
208Vac	IQESUE208	£991.07	Protective relay 24 to 48Vdc	DT3030	£1697.23
400Vac	IQESUE400	£991.07	Drawout case protective relay		
480Vac	IQESUE480	£991.07	24 to 48Vdc	DT3031	£2560.58
600Vac	IQESUE600	£991.07	Motor protective relay	MP3000	£1098.00
IQ200			Universal RTD module	URTD	£774.46
Complete meter. Includes base, display, 355mm cable, with communications and KYZ output	IQ220	£1165.01	Feeder protection relay 1A C/Ts	FP1000	£5729.33
Complete meter. Includes base, display and 355mm cable	IQ210	£1051.71	Feeder protection relay 5A C/Ts	FP5000	£5729.33
Transducer base only. With communications and KYZ output	IQ220TRAN	£972.11	IQ Accessories		
Display module only			Addressable relay II	ARII	£420.14
For IQ210 & IQ220	IQ200D	£423.74	IQ DC power supply	IQDCPS	£1370.93
Cable to connect meter to base			Extension cable - IQ data, IQ generator, IIQ data II, IQDP4000 - 914mm	IQCABLE	£74.71
914mm – category 5	IQ23CABLE	£44.49	Extension cable - IQ analyser		
1828mm – category 5	IQ26CABLE	£50.85	914mm	IQACABLE	£40.40
3048mm – category 5	IQ210CABLE	£59.32	1143mm	IOA45CABLE	£40.79
			IQ flange	IQFLANGE	£183.78

Description	Catalogue numbers	Price
PowerNet operator interfaces		
Assemblies electronic monitor II	AEMII	£1631.74
IQ energy central display	IQCEDII	£1440.19
Breaker Interface module	BIMII	£1440.19
PowerNet communications hardware		
Incom PONI	IPONI	£560.84
Buffered PONI	BPONI	£662.81
RS232 PONI (order IMPCOM separately if required)	RS232PONI	£1030.04
MINTII (includes 1 copy of IMPCOM & DRIMPACC)	MINTII	£1784.48
Ethernet master incom translator	EMINT	£1800.04
CONI (includes 1 copy of DRIMPACC)	CONI3FIRM4	£995.00
Ethernet 10base T translator, 1 INCOM port	NLE1T	£5458.22
Ethernet 10base T translator, 2 INCOM ports	NLE2T	£5908.26
MODBUS translator, 1 INCOM port	NLM1	£5367.67
MODBUS translator, 2 INCOM ports	NLM2	£5909.92
Ethernet 10base T/MODBUS translator, 1 INCOM port	NLD1T	£5909.92
Ethernet 10base T/MODBUS translator, 2 INCOM ports	NLD2T	£6100.00
Ethernet PONI	EPONI	£1233.72
Ethernet PONI	EPONIF	£1683.26

Description	Catalogue numbers	Price
PowerNet		
Client/server packages		
100 device core, monitor, trend, waveform, DDE & DevGraphic	PNEG100	£18877.71
100 device core, monitor, trend, waveform & DDE	PNED100	£8135.85
20 device core & monitor	PNED20	£3667.49
Client packages		
Monitor, trend, waveform, DDE & DevGraphics viewer	PNEGC	£7360.40
Monitor, trend & waveform,	PNEDC	£5078.55
Powernet components		
Core 2 device capability	NP CORE2	£1308.31
Core 20 device capability	NP CORE20	£1626.12
Core 100 device capability	NP CORE100	£2664.28
Core 200 device capability	NP CORE200	£3691.86
Core 1000 device capability	NP CORE1000	£5296.78
Modbus tools	NP COREMOD	£1906.84
Monitor	NP MONITOR	£2542.45
DDE server	NP DDE	£1265.93
Trend	NP TREND	£2542.45
Waveform	NP WAVEFORM	£1700.27
DDE pager	DDE PAGER	£1054.06
Graphic packages		
Development	NP ID60K	£14174.17
Runtime	NP IR60K	£6985.39
Viewer	NP IV60K	£2408.97
Development 256 tag	NP ID256	£6737.50
Update	NP ID60KUP	£2860.26
Runtime update	NP IR60KUP	£1271.23
CD	NP 60CD	£14174.17
E- Bill packages		
E-Bill - 20 tenant	NP BILL20	£1986.30
E-Bill - 200 tenant	NP BILL200	£4094.41
E-Bill - 1000 tenant	NP BILL1000	£5872.01
Track - product cost allocation	NP BILLTRACK	£1387.76
DDE energy logging	NP BILLDDE	£4761.81

Description	Catalogue numbers	Price
Upgrades from existing IMPACC series III systems		
Upgrade from:		
Series III 20, includes core & monitor	NP20UP	£2102.83
Series III 200, includes core & monitor	NP200UP	£2854.97
Series III 1000, includes core & monitor	NP1000UP	£3543.55
Waveform	NP WAVEUP	£1054.06
E-trend	NP TRENDUP	£1054.06
Upgrades from existing E-bill systems		
20 tenant e-bill	NP BILL20UPG	£1054.06
200 tenant e-bill	NP BILL200UPG	£1054.06
1000 tenant e-bill	NP BILL1000UPG	£1054.06
Product costing add-on to e-bill	NP TRACKUPG	£1054.06
Device count upgrades		
Add to a device server		
20 devices	NP ADD20	£1626.12
100 devices	NP ADD100	£2664.28
200 devices	NP ADD200	£3691.86
1000 devices	NP ADD1000	£5296.78
Control	NP C	£105.94
Remove control from device server	NP NC	£105.94
Miscellaneous - PowerNet		
CD Rom (on line help)	PN CD	£105.94
Printed users manual	PN UM	£105.94
Updates for current PowerNet users		
Core update for:		
2 devices	NP CORE2UP	£105.94
20 devices	NP CORE20UP	£842.19
100 devices	NP CORE100UP	£1054.06
200 devices	NP CORE200UP	£1054.06
1000 devices	NP CORE1000UP	£1054.06
Updates for latest versions		
Monitor	NP MONITORUP	£1054.06
DDE server	NP DDEUP	£312.52
Bill trend	NP BILLTRENDUP	£524.39
Waveform	NP WAVEUP	£1054.06
Product costing update	NP BILLTRACKUP	£524.39
DDE interface to energy logging database update	NP BILLDDEUP	£524.39

Starter

Contactors

Control module

Advantage starters (DOL)

Size	Catalogue numbers	Price
With earth fault and phase loss protection		
1.5kW	K200MBCNC	£160.53
7.5kW	K200MECNC	£163.45
18.5kW	K200MKCNC	£169.95
37.5kW	K200MPCNC	£226.60
75kW	K200MTCNC	£254.93
156kW	K200MWCNC	£849.75
300kW	K200MYCNC	£913.48

Reversing starters

1.5kW	K210MBCNC	£391.67
7.5kW	K210MECNC	£470.20
18.5kW	K210MKCNC	£487.19
37.5kW	K210MPCNC	£566.50
75kW	K210MTCNC	£730.79
156kW	K210MWCNC	£2024.07
300kW	K210MYCNC	£2179.08

Advantage contactors (DOL)

7.5kW	K201KECN	£118.01
18.5kW	K201KCCN	£142.50
37.5kW	K201KPCN	£153.30
75kW	K201KTCN	£661.32
156kW	K201KWCN	£891.07
300kW	K201KYCN	£936.99

Advantage auxiliaries

Description	Catalogue numbers	Price
Auxiliary contacts		
4 N.O.	W40	£11.33
3 N.O. – 1 N.C.	W31	£11.33
2 N.O. – 2 N.C.	W22	£11.33
1 N.O. – 3 N.C.	W13	£11.33
4 N.C.	W04	£11.33
Horiz mech interlocks including 2 N.C. auxiliaries – All sizes		
	WM16H	£20.39
Bell alarm contact assembly		
Assembly	WBELL	£90.64
Internal trip indicator		
	WLED	£17.00
Electrical reset trip indicator		
1800 mm cable	WRSKL72	£19.74
Din rail adaptor for sizes 7.5 to 18.5kW	WDIN	£11.33

Network comms modules

Type	Catalogue numbers	Price
INCOM/PowerNet interface		
Digital/analogue	WPONI	£124.63
Digital	WCTLPONI	£103.14
Central monitoring unit for PowerNet only	WCMU	£653.96
“Devicenet” communications module	WPONIDNA	£169.95
Mounting plate assembly for comms’ modules	WPONIBASE	£2.27

Advantage control modules (door mounted)

DOL Status

With reset only	WPBFV1	£147.29
With start/stop/reset	WPBFV2	£147.29
With start/stop/reset/ hand-off-auto	WPBFV3	£147.29
With reset/hand-off-auto	WPBFV4	£147.29

Star Delta status

With reset only	WPBRV1	£147.29
With start/stop/reset	WPBRV2	£147.29
With start/stop/reset/ hand-off-auto	WPBRV3	£147.29
With reset/hand-off-auto	WPBRV4	£147.29

Reverse status

With reset only	WPBR1	£147.29
With start/stop/reset	WPBR2	£147.29
With start/stop/reset/ hand-off-auto	WPBR3	£147.29
With reset/hand-off-auto	WPBR4	£147.29

Two speed status

With reset only	WPB2S1	£147.29
With fast/slow/stop	WPB2S2	£147.29
With fast/slow/stop/ hand-off-auto	WPB2S3	£147.29

Programming module†	WAPM	£184.00
ACM meter and status device	WMETER	£181.28
1800 mm interconnecting cable	WACM6	£25.41
900 mm interconnecting cable	WACM3	£19.26
300 mm jumper cable	WACM1	£17.00
Pack of 10 DIP switch covers	WDIPSW10	£6.34

† This module is required to permanently disable the earth fault and phase loss protection

Contactors

Reversing contactors

3 pole DOL non-reversing contactors – 24V dc operated

AC3 rating 3 phase 400/415V (kW)	Catalogue numbers	Price
2.2	E111A06X3N	£18.20
4.0	E111A09X3N	£20.17
5.5	E111A12X3N	£23.12
9.0	E111B18X3N	£29.10
12.5	E111B25X3N	£41.07
15	E111B32X3N	£67.80
18.5	E111C40X3N	£90.50
25	E111C50X3N	£114.70
33	E111D65X3N	£140.30
45	E111D85X3N	£172.20
55	E111D10X3N	£185.50
63	E111E12X3N	£205.20
80	E111E16X3N	£235.00
110	E111E20X3N	£405.00

24V dc power supplies (For use with all /T contactors, reversing contactors & starters)

Description	Catalogue numbers	Price
10W		
240V max supply	PSS10E	£61.99
480V max supply	PSS10F	£67.80
25W		
240V max supply	PSS25E	£72.21
480V max supply	PSS25F	£81.36

3 pole DOL reversing contactors – 24V dc operated

AC3 rating 3 phase 400/415V (kW)	Catalogue numbers	Price
2.2	E511A06X3N	£38.50
4.0	E511A09X3N	£45.00
5.5	E511A12X3N	£54.00
9.0	E511B18X3N	£73.44
12.5	E511B25X3N	£100.92
15	E511B32X3N	£162.07
18.5	E511C40X3N	£232.89
25	E511C50X3N	£288.93
33	E511D65X3N	£333.01
45	E511D85X3N	£498.00
55	E511D10X3N	£536.58
63	E511E12X3N	£599.30
80	E511E16X3N	£695.86
110	E511E20X3N	£808.28

Auxiliary contacts

Description	Catalogue numbers	Price
2.2 to 110kW		
1N.O.	EMA13	£6.27
1N.C.	EMA14	£6.27
1N.O. - 1N.C.	EMA15	£8.40
2N.O.	EMA16	£8.40
2N.C.	EMA17	£8.40
2.2 to 220kW		
Logic level auxiliary contact 1N.O. - 1N.C.	EMA13	£11.55

3 pole DOL open type non-reversing starters – (24V dc operated contactor and solid state overload relay)

AC3 rating 3 phase 400/415V	Overload relay Adjustment range (A)	Catalogue numbers	Price	AC3 rating 3 phase 400/415V	Overload relay Adjustment range (A)	Catalogue numbers	Price
9.0 kW	0.25 – 0.8	E101B18A3A	£62.72	33 kW	5.0 – 16	E101D65F3A	£214.40
	0.59 – 1.8	E101B18B3A	£62.72		8.4 – 27	E101D65H3A	£214.40
	1.4 – 4.4	E101B18C3A	£62.72		14 – 45	E101D65K3A	£214.40
	2.8 – 9.0	E101B18D3A	£62.72		31 – 100	E101D65N3A	£214.40
	6.3 – 20	E101B18G3A	£62.72				
	10 – 32	E101B18J3A	£62.72				
12.5 kW	0.25 – 0.8	E101B25A3A	£69.16	45 kW	5.0 – 16	E101D85F3A	£270.60
	0.59 – 1.9	E101B25B3A	£69.16		8.4 – 27	E101D85H3A	£270.60
	1.4 – 4.4	E101B25C3A	£69.16		14 – 45	E101D85K3A	£270.60
	2.8 – 9.0	E101B25D3A	£69.16		31 – 100	E101D85N3A	£270.60
	6.3 – 20	E101B25G3A	£69.16	55 kW	5.0 – 16	E101D10F3A	£301.62
	10 – 32	E101B25J3A	£69.16		8.4 – 27	E101D10H3A	£301.62
15 kW	0.25 – 0.8	E101B32A3A	£99.36	63 kW	14 – 45	E101E12K3A	£334.36
	0.59 – 1.9	E101B32B3A	£99.36		28 – 90	E101E12M3A	£334.36
	1.4 – 4.4	E101B32C3A	£99.36		42 – 135	E101E12P3A	£334.36
	2.8 – 9.0	E101B32D3A	£99.36		63 – 200	E101E12R3A	£334.36
	6.3 – 20	E101B32G3A	£99.36	89 kW	14 – 45	E101E16K3A	£364.98
	10 – 32	E101B32J3A	£99.36		28 – 90	E101E16M3A	£364.98
18.5 kW	0.25 – 0.8	E101C40A3A	£154.56	42 – 135	E101E16P3A	£364.98	
	0.59 – 1.9	E101C40B3A	£154.56	63 – 200	E101E16R3A	£364.98	
	1.4 – 4.4	E101C40C3A	£154.56	110 kW	14 – 45	E101E20K3A	£385.88
	2.8 – 9.0	E101C40D3A	£154.56		28 – 90	E101E20M3A	£385.88
	5.0 – 16	E101C40F3A	£154.56		42 – 135	E101E20P3A	£385.88
	8.4 – 27	E101C40H3A	£154.56		63 – 200	E101E20R3A	£385.88
16 – 50	E101C40L3A	£154.56					
22 kW	0.25 – 0.8	E101C50A3A	£186.24				
	0.59 – 1.9	E101C50B3A	£186.24				
	1.4 – 4.4	E101C50C3A	£186.24				
	2.8 – 9.0	E101C50D3A	£186.24				
	5.0 – 16	E101C50F3A	£186.24				
	8.4 – 27	E101C50H3A	£186.24				
16 – 50	E101C50L3A	£186.24					

DC power supplies

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3 pole DOL open type reversing starters – (24V dc operated contactors and solid state overload relay)

AC3 rating 3 phase 400/415V	Overload relay Adjustment range (A)	Catalogue numbers	Price	AC3 rating 3 phase 400/415V	Overload relay Adjustment range (A)	Catalogue numbers	Price
9.0 kW	0.25 – 0.8	E501B18A3A	£118.50	33 kW	5.0 – 16	E501D65F3A	£464.40
	0.59 – 1.8	E501B18B3A	£118.50		8.4 – 27	E501D65H3A	£464.40
	1.4 – 4.4	E501B18C3A	£118.50		14 – 45	E501D65K3A	£464.40
	2.8 – 9.0	E501B18D3A	£118.50		31 – 100	E501D65N3A	£464.40
	6.3 – 20	E501B18G3A	£118.50				
	10 – 32	E501B18J3A	£118.50	45 kW	5.0 – 16	E501D85F3A	£642.40
12.5 kW	0.25 – 0.8	E501B25A3A	£135.25		8.4 – 27	E501D85H3A	£642.40
	0.59 – 1.9	E501B25B3A	£135.25		14 – 45	E501D85K3A	£642.40
	1.4 – 4.4	E501B25C3A	£135.25		31 – 100	E501D85N3A	£642.40
	2.8 – 9.0	E501B25D3A	£135.25	55 kW	5.0 – 16	E501D10F3A	£672.54
	6.3 – 20	E501B25G3A	£135.25		8.4 – 27	E501D10H3A	£672.54
10 – 32	E501B25J3A	£135.25	14 – 45		E501D10K3A	£672.54	
15 kW	0.25 – 0.8	E501B32A3A	£219.24		31 – 100	E501D10N3A	£672.54
	0.59 – 1.9	E501B32B3A	£219.24		63 kW	14 – 45	E501E12K3A
	1.4 – 4.4	E501B32C3A	£219.24	28 – 90		E501E12M3A	£710.06
	2.8 – 9.0	E501B32D3A	£219.24	42 – 135		E501E12P3A	£710.06
	6.3 – 20	E501B32G3A	£219.24	63 – 200		E501E12R3A	£710.06
	10 – 32	E501B32J3A	£219.24	80 kW	14 – 45	E501E16K3A	£810.92
18.5 kW	0.25 – 0.8	E501C40A3A	£320.04		28 – 90	E501E16M3A	£810.92
	0.59 – 1.9	E501C40B3A	£320.04		42 – 135	E501E16P3A	£810.92
	1.4 – 4.4	E501C40C3A	£320.04		63 – 200	E501E16R3A	£810.92
	2.8 – 9.0	E501C40D3A	£320.04	110 kW	14 – 45	E501E20K3A	£857.34
	5.0 – 16	E501C40F3A	£320.04		28 – 90	E501E20M3A	£857.34
8.4 – 27	E501C40H3A	£320.04	42 – 135		E501E20P3A	£857.34	
16 – 50	E501C40L3A	£320.04	63 – 200		E501E20R3A	£857.34	
25 kW	0.25 – 0.8	E501C50A3A	£410.88				
	0.59 – 1.9	E501C50B3A	£410.88				
	1.4 – 4.4	E501C50C3A	£410.88				
	2.8 – 9.0	E501C50D3A	£410.88				
	5.0 – 16	E501C50F3A	£410.88				
	8.4 – 27	E501C50H3A	£410.88				
	16 – 50	E501C50L3A	£410.88				

DC power supplies

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IT. I/O modules
Starter network adaptor
DeviceNet adaptor

D77A I/O module

Description	Maximum Output current/point	Points/ common	Catalogue numbers	Price
24V dc input – 8 point	N/A	2	D77A-DI8	£82.80
– 16 point	N/A	2	D77A-DI16	£110.40
24V dc solid-state output – 8 point	1A	4	D77A-DQ8	£99.36
– 16 point	1A	4	D77A-DQ16	£124.20
120V ac input – 8 point	N/A	2	D77A-AI8	£93.15
– 16 point	N/A	2	D77A-AI16	£124.20
120V ac solid-state output – 8 point	0.8A	2	D77A-AQ8	£118.68
– 16 point	0.8A	2	D77A-AQ16	£189.75
24V dc /120V ac relay output – 8 point	5A	2	D77A-RQ8	£96.60
– 16 point	5A	2	D77A-RQ16	£154.56
24V dc/120V ac high current relay output – 6 point	10A	1	D77A-HQ6	£124.20

D77A I/O module – Accessories

Description	Catalogue numbers	Price
Powered QCPort interconnect		
0.025 metres	D77E-QPIP25	£11.04
1 metre	D77E-QPIP100	£13.80
2 metres	D77E-QPIP200	£20.70
3 metres	D77E-QPIP300	£27.60
Unpowered QCPort interconnect		
0.025 metres	D77E-QPIU25	£11.04
1 metre	D77E-QPIU100	£13.80
2 metres	D77E-QPIU200	£20.70
3 metres	D77E-QPIU300	£27.60

Starter Network Adaptors

Description	Catalogue numbers	Price
DeviceNet starter network adaptor product and prewired starter interconnect cable	D77B-DSNAP	£158.70
QCPort starter network adaptor product and prewired starter interconnect cable	D77B-QSNAP	£110.40

Description	Catalogue numbers	Price
Long run to QCPort backplane connector	D77E-QPLR	£34.50
QCPort backplane filler module	D77E-FM1	£17.25
QCPort Backplane – 7 position	D77E-BP7	£26.22
– 12 position	D77E-BP12	£36.57
– 20 position	D77E-BP20	£55.20
RJ QCPort terminator	D77E-TERRJ	£17.25
12 position I/O replacement spring clamp terminal	D77E-RTSP12	£13.80
12 position I/O replacement screw clamp terminal	D77E-RTSC12	£9.66

Device Net Adaptors

Description	Catalogue numbers	Price
DeviceNet adaptor	D77A-DNA	£220.80

S701

S751

S801

Soft Start Controller - S701

Description	Catalogue numbers	Price
Soft Start Controller		
45mm wide		
4kW, 15A max, 208 - 240Vac	S701C15N3S	£134.05
5.5kW, 15A max, 380 - 440Vac	S701E15N3S	£159.25
90mm wide		
7.5kW, 25A max, 208 - 240Vac	S701C25N3S	£202.16
11kW, 25A max, 380 - 440Vac	S701E25N3S	£210.66
Soft Start Controller with Bypass		
90mm wide		
7.5kW, 25A max, 208 - 240Vac	S701C25N3BP	£235.53
11kW, 25A max, 380 - 440Vac	S701E25N3BP	£292.92
Soft Start Controller with Brake		
90mm wide		
5.5kW, 25A max, 208 - 240Vac	S701C25B3S	£417.01
12.5kW, 25A max, 380 - 440Vac	S701E25B3S	£425.59
Torque Limiter		
45mm wide		
4kW, 15A max, 208 - 480Vac	TL480N15	£70.22
7.5kW, 25A max, 208 - 480Vac	TL480N25	£80.86
Reversing Contactor - S701		
45mm wide		
4kW, 10A max, 208 - 480Vac	S511E10N3S	£134.05

Soft Start Controller - S751

Description	Catalogue numbers	Price
0.8A max	S751L01N3S	£510.00
1.9A max	S751L02N3S	£502.00
4.4A max	S751L04N3S	£495.00
9.0A max	S751L09N3S	£450.00
16A max	S751L16N3S	£440.00
27A max	S751L27N3S	£435.00

Soft Start Controller - S801

Rating at 400V	Catalogue numbers	Price
Standard ramp time units, 0.5 to 180s		
21kW, 37A max	S801N37N3S	£1,000.00
37kW, 66A max	S801N66N3S	£1,090.91
59kW, 105A max	S801R10N3S	£1,342.66
76kW, 135A max	S801R13N3S	£1,533.38
102kW, 180A max	S801T18N3S	£2,239.51
136kW, 240A max	S801T24N3S	£2,378.50
172kW, 304A max	S801T30N3S	£2,693.71
204kW, 360A max	S801V36N3S	£3,347.65
238kW, 420A max	S801V42N3S	£3,516.08
283kW, 500A max	S801V50N3S	£3,960.84
368kW, 650A max	S801V65N3S	£4,777.22
407kW, 720A max	S801V72N3S	£5,909.63
481kW, 850A max	S801V85N3S	£7,758.04
Extended ramp time units, 0.5 to 360s		
21kW, 37A max	S801N37N3L	£1,175.00
37kW, 66A max	S801N66N3L	£1,265.91
59kW, 105A max	S801R10N3L	£1,517.66
76kW, 135A max	S801R13N3L	£1,708.38
102kW, 180A max	S801T18N3L	£2,414.51
136kW, 240A max	S801T24N3L	£2,553.50
172kW, 304A max	S801T30N3L	£2,868.71
204kW, 360A max	S801V36N3L	£3,522.65
238kW, 420A max	S801V42N3L	£3,691.08
283kW, 500A max	S801V50N3L	£4,135.84
368kW, 650A max	S801V65N3L	£4,952.22
407kW, 720A max	S801V72N3L	£6,084.63
481kW, 850A max	S801V85N3L	£7,933.04
Pump control option, pump stop, 0 to 60s		
21kW, 37A max	S801N37P3S	£1,250.00
37kW, 66A max	S801N66P3S	£1,340.91
59kW, 105A max	S801R10P3S	£1,592.66
76kW, 135A max	S801R13P3S	£1,783.38
102kW, 180A max	S801T18P3S	£2,489.51
136kW, 240A max	S801T24P3S	£2,628.50
172kW, 304A max	S801T30P3S	£2,943.71
204kW, 360A max	S801V36P3S	£3,597.65
238kW, 420A max	S801V42P3S	£3,766.08
283kW, 500A max	S801V50P3S	£4,210.84
368kW, 650A max	S801V65P3S	£5,027.22
407kW, 720A max	S801V72P3S	£6,159.63
481kW, 850A max	S801V85P3S	£8,008.04

Surge suppressor
Lug kits
24Vdc power supply

Description	Catalogue numbers	Price
S751 Supplies		
Input voltage		
240Vac max	PSS25E	£72.21
480Vac max	PSS25F	£81.36
S801 Supplies		
Input voltage		
110 - 120Vac	PSS55A	£103.94
220 - 240Vac	PSS55B	£103.94
380 - 480Vac	PSS55C	£113.49
DIN rail mounting kit (35mm)	PSSDIN	£9.64

Surge suppressor for S801 starters

Description	Catalogue numbers	Price
600V MOV		
For N & R frames	EMS38	£114.24
For T & V frames	EMS39	£159.50

Control interface module filler plate for S801 starters

Description	Catalogue numbers	Price
Control interface module filler plate	EMA68	£45.00

Control terminal block for S801 starters

Description	Catalogue numbers	Price
Control terminal block	EMA75	£10.00

Lug kits for S801 starters

Description	Catalogue numbers	Price
T frame		
1 cable, 107 - 250mm ²	EML23	£97.47
2 cables, 107 - 250mm ²	EML24	£107.37
1 cable, 67 - 150mm ²	EML25	£97.47
2 cables, 67 - 150mm ²	EML26	£107.37
Lug cover kit	EML27	£45.00
V frame		
2 cables, 107 - 250mm ²	EML28	£123.29
4 cables, 107 - 250mm ²	EML30	£139.90
6 cables, 107 - 250mm ²	EML32	£203.68
4 cables, 67 - 150mm ²	EML33	£139.90
Lug cover kit	EML34	£45.00

Mounting plates for S801 starters

Description	Catalogue numbers	Price
Mounting plate		
N frame	EMM13N	£56.00
R frame	EMM13R	£60.00
T frame	EMM13T	£70.00
V frame	EMM13V	£80.00
Vibration mounting plate		
N frame	EMM14N	£64.00
R frame	EMM14R	£70.00
T frame	EMM14T	£80.00
V frame	EMM14V	£90.00

Auxiliary contacts

Description	Catalogue numbers	Price
2.2 to 110kW		
1N.O.	EMA13	£6.27
1N.C.	EMA14	£6.27
1N.O. - 1N.C.	EMA15	£8.40
2N.O.	EMA16	£8.40
2N.C.	EMA17	£8.40
2.2 to 220kW		
Logic level auxiliary contact 1N.O. - 1N.C.	EMA70	£11.55

June 2002



Compact range 380 - 440V, 50Hz. IP20

Torque ratingsW				FrameW size	Catalogue numbersW	Price
ConstantW kW	IctW	VariableW kW	Ict			
0.75	2.5	1.1	3.5	M3	SV9F07AC-4M1B00R1W	£425.00
1.1	3.5	1.5	4.5	M3	SV9F11AC-4M1B00R1W	£516.67
1.5	4.5	2.2	6.5	M3	SV9F15AC-4M1B00R1W	£541.67
2.2	6.5	3.0	8.0	M3	SV9F22AC-4M1B00R1W	£635.00
3.0	8.0	4.0	10	M3	SV9F30AC-4M1B00R1W	£768.33
4.0	10	5.5	13	M4B	SV9F40AC-4M1B00R1W	£816.67
5.5	13	7.5	18	M4B	SV9F55AC-4M1B00R1W	£911.67
7.5	18	11	24	M4B	SV9F75AC-4M1B00R1W	£1150.00
11	24	15	32	M4B	SV9011AC-4M1B00R1W	£1433.33
15	32	18.5	42	M5B	SV9015AC-4M1B00R1W	£1841.67
18.5	42	22	48	M5B	SV9018AC-4M1B00R1W	£2200.00
22	48	30	60	M5B	SV9022AC-4M1B00R1W	£2650.00

Accessories

DescriptionW	Catalogue numbersW	Price
Remote mounted control panel IP56	SV9PNLRMTW	£98.00
DeviceNet interface	SV9NCDNW	£156.00

For a complete list of standard drive products and 18 pulse "clean power" drives please contact Cutler-Hammer on 0870 600 0446.

Controller
Pocket editor

Programmable controllers

Description	Power supply		Catalogue numbers	Price
Controllers	110Vac			
	24Vdc input	Relay output	D50CR14	£179.26
	110Vac input	Relay output	D50CRA14	£190.56
	110Vac input	Triac output	D50CAA14	£236.93
	24Vdc			
	24Vdc input	Relay output	D50DCR14	£179.26
	110Vac input	Transistor output	D50DCD14	£179.26
Expanders	24Vdc input	Relay output	D50ER14	£143.06
	120Vac input	Relay output	D50ERA14	£161.16

Programming accessories

Description	Catalogue numbers	Price
Pocket editor	D50PGM10	£179.26
4 channel analogue input module, 12 bit	D50AIM410V	£366.24
2 channel analogue output module, 12 bit	D50AOM210V	£366.24
1 channel analogue to digital convertor	48160-450	£79.73
1 channel digital to analogue convertor	48160-480	£79.73
Programming software with RS485 adaptor, cable and software manual	D50CCS35	£170.21
RS232/RS485 adaptor	D50CPM485	£46.94
Cable only	D50CBL10	£46.94
Hardware manual	D50SA122	£20.93
Programming software manual	D50SA123	£20.93

D320 Programmable Logic Controllers

The D320 PLCs combine modular I/O cards, fast scan speed and advanced communications capabilities to provide the power of a larger PLC in a compact design. The expandability of the D320 allows you to create a logic platform in the 64 to 2048 I/O range.

Contact Cutler-Hammer for full information and prices.

Electronic operator interface

Description	Catalogue numbers	Price
Base unit with D50 PLC driver and interface cable	D820MPM	£336.78
Base unit with D50 PLC driver	D830MPM	£499.37
Base unit with D50 PLC driver	D840MPM	£726.36
Base unit with D50 PLC driver	D850MPM	£998.74

Configuration software packages

Description	Catalogue numbers	Price
3 1/2" diskettes with Cutler-Hammer D50 PLC interface only	D800CCSCH	£333.62
3 1/2" diskettes with all nine PLC interfaces	D800CCSSET	£375.85
Communications enable utility (1)	D800ENABLE	£42.23
Communications enable utility with DH485	D800ENABLEDH	£135.14

Accessories

Description	Catalogue numbers	Price
Serial transfer cable	D800CBLXFR	£67.57
Cutler-Hammer D50 PLC cable	D800CBLCH1	£67.57
115V AC to 24V DC power conversion module	1216	£124.00
115V AC to 5V DC power supply for use with D820 model only	D820PWR	£105.50

Communications Interfaces

The communications interfaces included in D800CCSSET are:

- AB SLC 500 DH 485
- Mitsubishi FX Series
- Cutler-Hammer D50
- AB PLC 5 DF1
- Modicon Modbus
- Siemens S5
- AB SLC 500 DF1
- Omron Host Link
- GE SNP

Considerations when placing orders

To operate the D830, D840, or D850 units with other than a Cutler-Hammer D50 PLC, you will need to order one (1) only D800CCSSET, then **for each** Operator Interface unit, you will need a D800ENABLEDH.

Note:

- (1) Required for each individual D830, D840 or D850 that will use any non Cutler-Hammer PLC communications interface other than DH485



Touchpanel



Touchscreen

DescriptionW	Catalogue numbersW	Price
PanelMate 1000 Series		
127mm monochrome LCD, painted steel	1218W	£1230.06
Configuration software	1220W	£408.74
PanelMate Power Pro LT 1100		
188mm Greyscale display, touchpanel	1155KW	£767.35
188mm Greyscale display, touchscreen	1155TW	£767.35
195mm Colour dual scan display, touchpanel	1175KW	£1230.06
195mm Colour dual scan display, touchscreen	1175TW	£1230.06
1 x 64 I/O point expansion	1100TAG1W	£227.51
5 x 64 I/O point expansion	1100TAG5W	£998.71
PanelMate Power Pro 1700		
188mm Greyscale display, touchpanel	1755KW	£1384.31
188mm Greyscale display, touchscreen	1755TW	£1384.31
203mm Colour dual scan display, touchpanel	1775KW	£1898.71
203mm Colour dual scan display, touchscreen	1775TW	£1898.71
213mm Colour TFT display, touchpanel	1785KW	£3080.96
213mm Colour TFT display, touchscreen	1785TW	£3080.96
PanelMate Power Pro 3000		
264mm Colour TFT display, touchpanel (glass), painted	3985KW	£3697.91
264mm Colour TFT display, touchpanel (glass), stainless	3985SKW	£4392.00
264mm Colour TFT display, touchscreen (glass), painted	3985TW	£3697.91
264mm Colour TFT display, touchscreen (glass), stainless	3985SKW	£4392.00
264mm Colour TFT display, touchscreen (acrylic), painted	3985ATW	£3697.91
264mm Colour TFT display, touchscreen (acrylic), stainless	3985SAKW	£4700.48
PanelMate Power Pro 5000		
Keypad, 355mm Colour TFT display	5585KW	£5394.55
Touchscreen, 355mm Colour TFT display	5585TW	£5394.55
Split architecture, 355mm Colour TFT display	5285KW	£5394.55
PowerMate Pro configuration software (Seat licence)†	PMPROSW	£381.74
PanelMate PC runtime software, stand alone	PMPC-RTW	£1349.61

For communication interfaces please contact Customer Services.

† Includes all drivers, programming cable and manuals in electronic format.

These tables are based on motors of approximately 1450 r.p.m. of average efficiency and power factor. Motors of higher speed than 1450 r.p.m. usually take a lower current than that shown in the table, while motors of lower speed usually take higher current.

Wide variations from these figures can arise, especially on single phase motors and engineers should, whenever possible, determine the actual FLC from the motor rating plate in each case.

Single phase 50Hz motors approximate FLC at line voltage

Motor rating		110VW	220VW	240V
kW	hpW			
0.07	1/12	2.4	1.2	1.1
0.1	1/8	3.3	1.6	1.5
0.12	1/6	3.8	1.9	1.7
0.18	1/4	4.5	2.3	2.1
0.25	1/3	5.8	2.9	2.6
0.37	1/2	7.9	3.9	3.6
0.56	3/4	11	5.5	5
0.75	1	15	7.3	6.7

Motor rating		110VW	220VW	240V
kW	hpW			
1.1	1.5	21	10	9
1.5	2	26	13	12
2.2	3	37	19	17
3	4	49	24	22
3.7	5	54	27	25
4	5.5	60	30	27
5.5	7.5	85	41	38
7.5	10	110	55	50

Three phase 50Hz motors approximate FLC at line voltage

Motor rating		220VW	380VW	415VW	500VW	550VW	660V
kW	hpW						
0.37	0.5	2.1	1.2	1.1	0.9	0.8	0.7
0.55	0.75	2.8	1.6	1.5	1.2	1.1	0.9
0.75	1.0	3.5	2.0	1.9	1.5	1.4	1.2
1.1	1.5	4.9	2.9	2.6	2.2	2.0	1.6
1.5	2.0	6.3	3.6	3.3	2.8	2.5	2.1
2.2	3.0	9.0	5.2	4.8	4.0	3.6	3.0
3.0	4.0	12	6.8	6.2	5.1	4.7	3.9
4.0	5.5	16	9.1	8.3	6.9	6.3	5.2
5.5	7.5	21	12	11	9.4	8.5	7.1
7.5	10	27	16	14	12	11	9.1
10	13.5	36	21	19	16	14	12
11	15	40	23	21	17	16	13
15	20	52	30	28	23	21	17
18.5	25	64	37	34	28	26	21
22	30	77	44	41	34	31	26

Motor rating		220VW	380VW	415VW	500VW	550VW	660V
kW	hpW						
30	40	100	59	54	45	41	34
37	50	125	73	67	55	50	42
45	60	150	86	79	66	60	50
55	75	180	106	98	81	74	61
75	100	240	140	130	105	96	80
90	125	300	170	160	130	120	99
110	150	350	200	190	160	140	120
132	175	410	240	220	180	160	140
160	220	510	300	270	230	210	170
200	270	630	360	330	280	250	210
220	300	730	420	380	320	290	240
250	350	810	470	430	360	320	270

It is important to note that these figures are average values and that actual values can vary by +20% –10% for motors up to 7.5kW and by ±10% for motors above 7.5kW.

1. General

No conditions of the buyer shall apply and in the event of any doubt or conflict, these conditions shall apply.

2. Validity

Unless previously withdrawn, our tender is open for acceptance within thirty days only from date thereof, and is subject to confirmation at the time of acceptance.

3. Acceptance

The acceptance of our tender must be accompanied by sufficient information to enable us to proceed with the order forthwith, otherwise we are at liberty to amend the tender prices to cover any increase in cost which has taken place after acceptance. Any samples submitted may be charged for unless returned to our Works in new condition, carriage paid, within thirty days from the date of tender.

4. Packing

Packing materials and cases will not be charged for unless otherwise stated in the tender. Returnable packing cases will be charged for separately at the time the goods are despatched, but full credit will be given if they are received by our Works, carriage paid and in good condition within thirty days from the date of despatch. Beyond that period credit allowances will be at our discretion.

5. Limits of contract

Our tender includes only such goods, accessories and works as are specified therein.

6. Specification and drawings

All descriptive and forwarding specification, drawings and particulars of weights and dimensions submitted with our quotations are approximate only, and the descriptions and illustrations contained in our catalogues, price lists and other advertising matter are intended merely to give a general idea of the goods and shall not form part of the contract. After acceptance of tender, a set of certified outline drawings will be supplied free of charge if desired.

7. Tests

Our manufactures are carefully inspected and, where practicable, submitted to our standard tests before despatch. If special tests or tests in the presence of you or your representatives are required, unless otherwise agreed, they will be charged for extra. In the event of any delay on your part in attending such tests after seven days notice that we are ready, the tests will proceed in your absence and shall be deemed to have been made as if in your presence. All tests must be made at our Works.

8. Performance

Any performance figures given by us are based upon our experience and are such as we expect to obtain on test. We will not, however, accept liability if those figures are not obtained unless we specifically guarantee them under an agreed sum as liquidated damages and a bonus, subject to the recognised tolerances and rejection limits applicable to such figures. We are to be given reasonable time and opportunity to comply with the terms of the guarantee before we are called on to pay any sum in respect of such liquidated damages. If we fail so to comply, you may reject the goods and we will repay to you any sum paid by you to us on account of the contract price thereof, and any sum that may have accrued due to you in respect of delay in despatch under Clause 9 up to the date of such rejection. You assume responsibility for the capacity and performance of the goods being sufficient and suitable for your purpose.

9. Despatch

Any times quoted for despatch are to date from receipt by us of a written order to proceed and of all necessary information and drawings to enable us to put the work in hand. All such times are to be treated as estimates only not involving us in any liability for failure to despatch within such time unless you have suffered loss and the amount payable in respect thereof shall have been agreed in writing as liquidated damages in which case our liability shall be limited to the amount so agreed to be paid. In all cases, whether a time for despatch be quoted or not, the time for despatch shall be extended by a reasonable period if delay in despatch is caused by instructions, or lack of

instructions, from you or by industrial dispute or by any cause whatsoever beyond our reasonable control.

10. Extra cost

In the event of the suspension of the work by your instructions or lack of instructions, the contract price shall be increased to cover any extra expense thereby incurred by us.

11. Delivery

Standard Carriage & Packing charges in the UK are included within our UK list prices. Standard carriage is via a two working day carrier service to a UK mainland destination.

Express delivery is available and will incur additional cost, charges for which will be advised on placement of order.

The minimum order value accepted by us is £250 UK nett value.

12. Terms of payment

Unless otherwise agreed in writing, goods are normally due for payment on the last day of the month following the month in which the goods were invoiced. We reserve the right to charge interest at 1.25% of the invoice price per month from due date of payment.

13. Storage

If we do not receive forwarding instructions within the seven days after date of notification that the goods have been tested or are ready for despatch, a storage charge of 1.5% of the invoice price per month, for the first three months, increasing to 2.5% for the fourth month onwards will be made until the goods are despatched and the goods shall be paid for notwithstanding non-despatch.

14. Loss or damage in transit

When delivery is included, we will repair or at our option replace free of charge, goods lost or damaged in transit, provided the carriers and ourselves receive written notification of such loss or damage within three days of delivery, but in no other case.

15. General maintenance and guarantee

For a period of twelve calendar months after delivery we guarantee all our goods as to design (other than a design made, furnished, or specified by you for which we have in writing disclaimed responsibility), materials and workmanship. Should any defect arise under proper use within this period and provided you give us prompt notice thereof we undertake, free of charge to you, to make good the defect by repairs, or at our option, by the supply of a replacement. All defective parts must be returned by you to our Works carriage paid. If it is not practicable to remedy a defect by repair at our Works or by the supply of a part in replacement, we will remedy the defect on site on terms to be agreed. In the case of goods not of our manufacture you are entitled to the benefit of any guarantee given to us in respect thereof. Except as hereinbefore expressed we shall not be under any liability in Contract, Tort or otherwise for any personal injury, loss or damage of any kind or cause or for anything done or omitted in connection with the goods or any work in connection with the goods or any work in connection therewith and our liability under this clause shall be accepted by you in lieu of any warranty condition or liability expressed or implied by law or otherwise as to the quality or the design or fitness for any particular purpose of the goods and as to any claim of want of conformity to contract, we are either to make the goods come up to contract or (at our option) take them back and no claim for damages is to arise.

16. Patents

We will indemnify you against any claim for infringement of letters patent or registered design (published at the date of the Contract/Order) by the use or sale of any article or material supplied by us to you and against all costs and damages which you may incur in any action for such infringement or for which you may become liable in any such action. Provided always that this indemnity shall not apply to any infringement which is due to our having followed a design or instruction furnished or given to you or to the use of such article or material in

a manner or for a purpose or in a country not specified by or disclosed to us. And provided also that this indemnity is conditional on your giving to us the earliest possible notice in writing of any claim being made or action threatened or brought against you and on your permitting us at our own expense to conduct any litigation that may ensue and all negotiations for a settlement of the claim. You on your part warrant that any design or instruction furnished or given by you shall not be such as will cause us to infringe any letters patent, registered design or trade mark in the execution of your order.

17. Fair wages

We undertake to be bound by the Fair Wages Clauses approved and adopted by the British Electrical and Allied Manufacturers' Association for the use of its members.

18. Price variation

(a) Standard products

All published prices and discounts are subject to change without notice. Prices covering all material listed in our U.K. Price List - or subsequent revisions thereof - shall be those in effect at date of order acceptance provided we are permitted to despatch within 30 days or at our convenience.

(b) Special and engineered products

The prices stated in our tender for specially designed equipment are based on the cost of material, labour, transport and statutory obligations ruling at the date of tender, and if between that date and the date of despatch, variations either by rise or fall shall occur in these costs then the order will, unless otherwise stated in writing, be subject to contract price adjustment based on the current BEAMA formulae.

19. Application Engineers visits

Our price does not include for visits by Application Engineers. If visits are requested they will be charged extra.

20. Legal construction

The contract shall in all respects be construed and operate as an English contract and in conformity with English law.

21. Arbitration

If at any time any question, dispute or difference whatsoever shall arise between you and ourselves upon, in relation to, or in connection with the contract, either of us may give the other notice in writing of the existence of such question, dispute or difference, and the same shall be referred to the arbitration of a person to be mutually agreed upon, or, failing agreement, of some person appointed by the President for the time being of the Institution of Electrical Engineers. The submission shall be deemed to be submission to arbitration within the meaning of the Arbitration Act, 1950, or any statutory modification thereof.

22. Statutory and other regulations

We reserve the right to withdraw any item from sale without notice. If the cost to us of performing our obligations under the contract shall be increased or reduced by reason of the making or amendment after the date of tender of any law or of any order, regulation, or bye-law having the force of law that shall affect the performance of our obligations under the contract, the amount of such increase or reduction shall be added to or deducted from the contract price as the case may be.

23. Title and risk

- (a) Notwithstanding that the goods sold by us hereunder have been delivered to you, the goods shall remain our absolute property until payment of all amounts invoiced by us to you and outstanding from time to time.
- (b) All risk in the goods shall be borne by you from the point specified for delivery of the goods to you, and you will take out and maintain insurance cover to the full value thereof against all risks.
- (c) You agree to store the goods in such a way that they are readily identifiable as of our manufacture.

(d) In the event that you fail to make payment for the goods when due, commit any act of bankruptcy, make any arrangements with your creditors, enter into liquidation, have a winding-up order made against you or if any receiver or manager of your assets, income or any parts thereof shall be appointed, we shall, after giving notice of our intention and without prejudice to any other rights, have the right immediately to enter upon your premises with such transport as may be necessary and repossess the goods.

(e) Until such time as any of the events specified in sub-clause (d) have occurred, you have the right to sell the goods to any bona fide purchaser but shall not give any warranties or incur any liability on behalf of us and in the event of any such sale or of any other disposal by you or if you shall make any insurance claim in respect of the goods while they remain our property, you have a fiduciary duty to account to us for the proceeds of such sale, other disposition or insurance claim (and shall hold any claim to such proceeds as trustee for us) to the extent of all sums invoiced by us and outstanding from time to time.

(f) If the goods are used as a component in the production of other goods or are mixed with other goods, we shall be entitled to exercise our right of repossession under sub-clause (d) above over the composite products or mixture, as the case may be, and you shall have the same duty to account to us for the proceeds of any sale, disposition or insurance claim relating to such composite products or mixture and to hold any claim thereto as trustee for us to the extent of all sums invoiced by us and outstanding from time to time, as it has under sub-clause (e) in respect of the proceeds of sale, disposition or insurance claims or claim thereto relating to the goods.

24. Tools, dies, patterns, etc.

All tooling dies, patterns, samples and equipment supplied by us shall remain our absolute property whether or not a charge is made by us in respect thereof.

25. Force majeure

If in consequence of any circumstances of force majeure, including but without limitation, war, civil commotion or disturbance, strikes, labour trouble of any sort, shortage of manpower, fire, flood, shortage of fuel, power or raw materials, demands, restriction or requests of Government or similar authorities, non-delivery or delay of our supplies and all other circumstances of whatever kind which are beyond our reasonable control and which affect our ability to fulfil our delivery obligations or if delivery of the goods or completion of the contract is prevented, impeded, or delayed, we shall be absolved from all responsibility and liability whatsoever and reserve the right at our option wholly or partly to cancel the agreement or to postpone the delivery by such period beyond the time of delivery stated as is appropriate in the circumstances. Any cancellation by us shall be without prejudice to our rights to recover all sums due in respect of deliveries made prior to cancellation.

26. Breach and liquidation

If you shall make default in or commit any breach of any of your obligations to us or if any distress or execution shall be levied upon your property or assets or if you shall make or offer to make any arrangements or composition with creditors or commit any act of bankruptcy or if any petition or receiving order in bankruptcy shall be presented or made against you, or if, being a limited company, any resolution or petition to wind up your undertaking, property or assets, or any part thereof, is made, we shall have the right forthwith to determine any contract then subsisting and to cancel any outstanding delivery or deliveries and to stop any goods in transit, without prejudice to any other remedy which we may have in respect thereof.

27. Samples

Samples submitted will be charged for unless returned in good condition to our Works at your expense within two months from despatch (or such other period as may be agreed).