

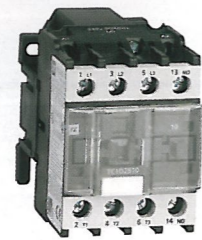
AC CONTACTORS & OVERLOADS

3 & 4 Pole Contactors AC Coil
0142 AUTHORISATION
RCC No. 0109446

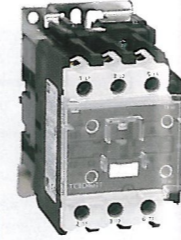
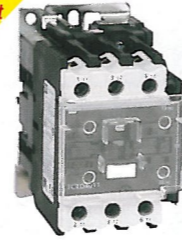


All ratings for ambient temperature
40°C and 2000m above sea level.

D09-D95 supplied with coil



New improved
design with
front dust
cover

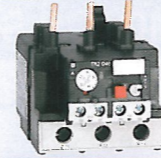
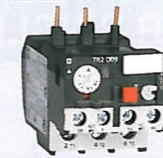
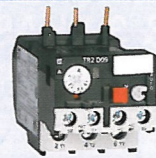


Code* 1N/O Aux	TC1-	D0910	D1210	D1810	D2210	D2510	D3210	D3810	D40	D50	D65	D80	D95
Code* 1N/C Aux	TC1-	D0901	D1201	D1801	D2201	D2501	D3201	D3801	1NO+1NC	1NO+1NC	1NO+1NC	1NO+1NC	1NO+1NC
Code* 4 Pole Contactors No Auxiliaries, Order Separately	TC1-	D09004	D12004	D18004	D22004	D25004	D32004	D38004	D40004	D50004	D65004	D80004	D95004
Rated operating voltage	AC	690V	690V	690V	690V	690V	690V	690V	690V	690V	690V	690V	690V
AC1 Duty Resistive Load		25A	25A	32A	32A	40A	50A	50A	60A	80A	80A	125A	125A
AC3 Duty Current rating	400V	9A	12A	18A	22A	25A	32A	38A	40A	50A	65A	80A	95A
AC3 Duty Power rating	400V	4kW	5.5kW	7.5kW	11kW	11kW	15kW	18.5kW	18.5kW	22kW	30kW	37kW	45kW
	550V	5.5kW	7.5kW	10kW	12.5kW	15kW	18.5kW	18.5kW	22kW	30kW	37kW	45kW	55kW
AC4 Duty 200K ops	400V	2.2kW	3.7kW	4kW	4.5kW	5.5kW	7.5kW	7.5kW	9kW	11kW	11kW	15kW	15kW
Star-Delta Power rating	400V	7.5kW	11kW	15kW	15kW	18.5kW	22kW	30kW	37kW	45kW	55kW	75kW	90kW
	550V	7.5kW	11kW	18.5kW	18.5kW	22kW	37kW	37kW	45kW	55kW	75kW	90kW	110kW
Generator set	400V	17kVA	17kVA	22kVA	22kVA	27kVA	34kVA	38kVA	42kVA	55kVA	55kVA	85kVA	85kVA
Mechanical life (million ops)		20	20	20	20	16	16	16	16	16	16	10	10
Electrical life (million ops)	AC3	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
Heat Dissipation	Max	4W	4W	5W	5W	7W	9W	9.5W	17W	21W	23W	25W	32W
Coil Consumption Inrush/sealed	50Hz	60/7VA				90/7.5VA				200/20VA			
Cable size required for AC 1 duty	50/60Hz	4mm ²	4mm ²	6mm ²	6mm ²	10mm ²	10mm ²	10mm ²	16mm ²	25mm ²	25mm ²	50mm ²	50mm ²
Size H x W x D	mm	74 x 45 x 80				84 x 56 x 93				127 x 75 x 114			
Mounting Rail	DIN	35mm				35mm				35/70mm			

Spare Coils

Code	TX1-D2*	TX1-D4*	TX1-D6*
Coil Voltages*			
J = 12V 50/60Hz (10.2-13.2V)			
B = 24V 50/60Hz (20.4-26.4V)			
E = 48V 50/60Hz (41-53V)			
F = 110V 50/60Hz (77-121V)			
	U = 240V 50Hz (170-280V)	N = 415V 50Hz (291-465V)	S = 500V 50Hz (425-550V) SF = 550V 50Hz (467-605V)

**Thermal
Overload
Relays**

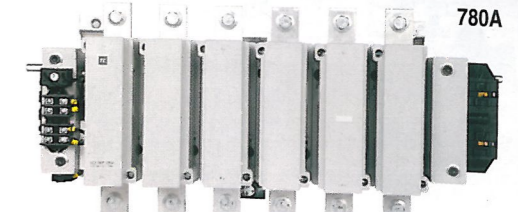
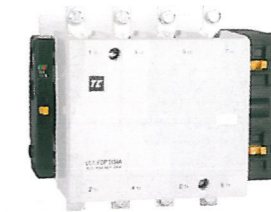


Code	Range	kW @ 400V	Code	Range	Code	Range	kW @ 400V
TR2-D09303	0.25-0.40A		TR2-D25322	17-25A	TR2-D40353	23-32A	15kW
TR2-D09304	0.40-0.63A		(11kW @ 400V)		TR2-D40355	30-40A	18.5kW
TR2-D09305	0.63-1.00A				TR2-D65357	37-50A	22kW
TR2-D09306	1.00-1.60A	0.37kW	TR2-D32353	23-32A	TR2-D65359	48-65A	25-30kW
TR2-D09307	1.60-2.50A	0.55-0.75kW	(15kW @ 400V)		TR2-D65361	55-70A	30-37kW
TR2-D09308	2.50-4.00A	1.1-1.5kW	TR2-D32355	28-36A	TR2-D80363	63-80A	37kW
TR2-D09310	4.00-6.00A	2.2kW	(18.5kW @ 400V)		TR2-D95365	80-93A	45kW
TR2-D09312	5.50-8.00A	3.0kW					
TR2-D09314	7.00-10.00A	4.0kW					
TR2-D12316	9.00-13.00A	5.5kW					
TR2-D18321	12.00-18.00A	7.5kW					

MOTOR CONTROL

1000V CONTACTORS & OVERLOADS

World class
accreditation
UL508-17 and
CSA14



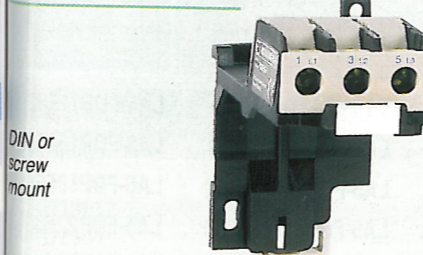
LC1-FDP... 115A	150A	185A	225A	265A	330A	400A	500A	630A	780A
Use same auxiliaries as TC1 contactors. Each contactor accepts up to 2 add-on units. Refer to page 92.									
115A/4	150A/4	185A/4	225A/4	265A/4	330A/4	400A/4	500A/4	630A/4	780A/4
1000V	1000V	1000V	1000V	1000V	1000V	1000V	1000V	1000V	1000V
200A	250A	275A	315A	350A	400A	500A	700A	1000A	1600A
115A	150A	185A	225A	265A	330A	400A	500A	630A	780A
55kW	75kW	90kW	110kW	132kW	160kW	200kW	250kW	355kW	400kW
75kW	90kW	110kW	129kW	160kW	200kW	257kW	355kW	400kW	550kW
18.5kW	22kW	33kW	40kW	51kW	59kW	75kW	80kW	110kW	110kW
110kW	132kW	160kW	200kW	250kW	315kW	375kW	-	-	-
132kW	160kW	220kW	250kW	315kW	375kW	425kW	-	-	-
135kVA	165kVA	185kVA	225kVA	240kVA	280kVA	350kVA	475kVA	680kVA	1100kVA
10	10	10	10	10	10	5	5	5	10
2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	1.2	-
34W	43W	60W	78W	106W	107W	149W	153W	174W	224W
550/45VA	550/45VA	805/55VA	805/55VA	1200/95VA	700/10VA	1075/15VA	1100/18VA	1650/22VA	2100/50VA
95mm ²	120mm ²	150mm ²	185mm ²	240mm ²	1 bar	2 bars	2 bars	2 bars	3 bars
162 x 164 x 165		174 x 169 x 176		203 x 202 x 207	206 x 206 x 213	238 x 233 x 226	304 x 309 x 250	434 x 702 x 250	

Coils to be ordered separately.

AC Coils

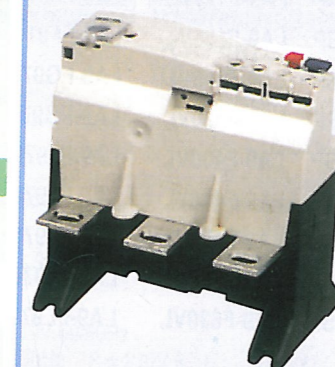
LX1-FF*	LX1-FG*	LX1-FH2*	LX1-FJ*	3P LX1-FK*	4P LX1-FL*	LX1-FL*	LX1-FX*
Coil Voltages*							
B = 24V 50Hz (20.4-26.4V)							
E = 48V 50Hz (41-53V)							
F = 110V 50Hz (77-121V)							
P = 230V 50Hz (195-253V)							
V = 400V 50Hz (340-440V)							
S = 500V 50Hz (425-550V)							
SF = 550V 50Hz (467-605V)							
Overload relays, separate mounting, CT operated							
Code							
Range							
Motor @ 400V							
LR1-F(M)105 65-105A 37-55kW							
LR1-F160 100-160A 75-90kW							
LR1-F200 125-200A 90-110kW							
LR1-F250 160-250A 110-132kW							
LR1-F315 200-315A 132-160kW							
LR1-F400 250-400A 160-220kW							
LR1-F500 315-500A 200-250kW							
LR1-F630 400-630A 250-375kW							

Overload Base Plate



DIN or
screw
mount

Code	To Fit Overload Sizes
A7-D0964	From TR2-D09301 To TR2-D25322
A7-D3264	From TR2-D32353 To TR2-D32355
A7-D3064	From TR2-D40353 To TR2-D95365



Code	Range	Motor @ 400V
LR9-F5367	60-100A	90-110kW
LR9-F5369	90-150A	110-132kW
LR9-F5371	132-220A	132-160kW
LR9-F7375	200-330A	160-220kW
LR9-F7379	300-500A	200-250kW
LR9-F7381	380-630A	250-375kW

For more electronic overloads, see page 106-107

MOTOR CONTROL

ACCESSORIES

Auxiliaries – Top Mount

Fits directly onto all T & F Range Contactors & TCA2 Relays

Code	Description
TA1-DN11	1N.O. + 1N.C.
TA1-DN02	2N.C.
TA1-DN20	2N.O.
TA1-DN22	2N.O. + 2N.C.
TA1-DN13	1N.O. + 3N.C.
TA1-DN31	3N.O. + 1N.C.
TA1-DN40	4N.O.
TA1-DN04	4N.C.

Auxiliaries – Side Mount

T Range Contactors and TCA2 Relays only

Code	Description
TA8-DN11	1N.O. + 1N.C.
TA8-DN20	2N.O.

Horizontal Mechanical Interlocks

T Range only

Code	For use with Contactors
TA9-D09978	TC1-D09 to D32 & TCA2
CA9-D10	TC1-D09 to D32 & TCA2 c/w 2 N/C Aux
TA9-D50978	TC1-D40 to D65
TA9-D80978	TC1-D80 to D95

Coil Suppressor

Code	For use with Contactors
LA9-D09980	D09 to D95 up to 250VAC/DC



Pneumatic Timers

Fits directly onto all T & F Range Contactors & TCA2 Relays

Code	Description
TA2-DT2	Delay On 0-30sec
TA2-DT4	0-180sec
TA3-DR2	Delay Off 0-30sec
TA3-DR4	0-180sec
TA2-DS2	S/Delta 1-30sec*

*With 40ms pause between Star opening and Delta closing.



Mechanical Latching Block

Fitted with 230VAC release coil

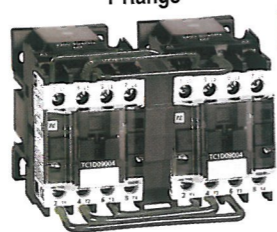
Code	For use with Contactors
LA6-DK01	D09 to D32 contactors and TCA2 relays



T-Range

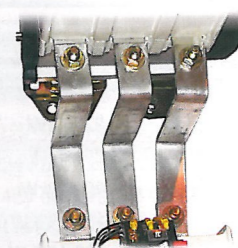
Rev / S-D Power Kits – Set of 6

Code	For use with Contactors
TA9-D1269	TC1-D09 to D12
TA9-D1869	TC1-D18
TA9-D2569	TC1-D25
TA9-D3269	TC1-D32
TA9-D6569	TC1-D40 to D65
TA9-D8069	TC1-D80 to D95

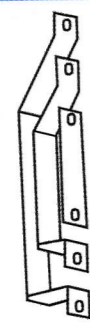


Shown fitted

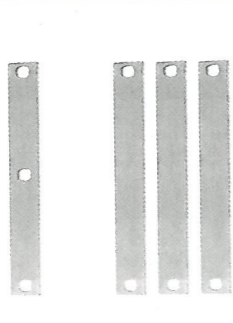
F Range Accessories



Shown fitted



Set of 6



Set of 3

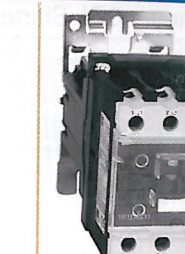
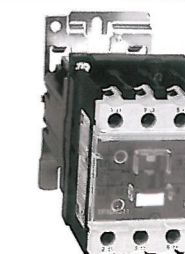
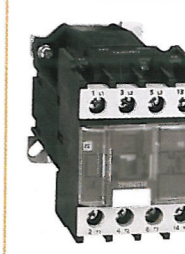
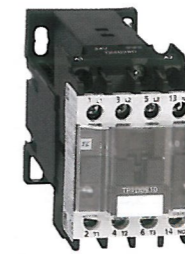


F Range Contactor Size	CT O/L Connections	Reversing/Star-Delta Busbar Kits	Star Point Bridge	Vertical Interlocked Power Connections	Horizontal Mechanical Interlocks	Vertical Mechanical Interlocks	Contact Kits (No. of Poles)	Arc Chamber (No. of Poles)
115A	LA9-F115OL	LA9-F115CL	LA9-F115SP	LA9-F115VL	LA9-FF970	LA9-FF971	LA5-FF431-F115 (3)	LA5-FDP11550(3)
150A	LA9-F185OL	LA9-F185CL	LA9-F185SP	LA9-F185VL	LA9-FF970	LA9-FF971	LA5-FF431-F150 (3)	LA5-FDP15050(3)
185A	LA9-F185OL	LA9-F185CL	LA9-F185SP	LA9-F185VL	LA9-FG970	LA9-FG971	LA5-FG431-F185 (3)	LA5-FDP18550(3)
225A	LA9-F400OL	LA9-F225CL	LA9-F400SP	LA9-F400VL	LA9-FG970	LA9-FG971	LA5-FG431-F225 (3)	LA5-FDP22550(3)
265A	LA9-F400OL	LA9-F265CL	LA9-F400SP	LA9-F400VL	LA9-FJ970	LA9-FJ971	LA5-FH431-F265 (3)	LA5-FDP26550(3)
330A	LA9-F400OL	LA9-F400CL	LA9-F400SP	LA9-F400VL	LA9-FJ970	LA9-FJ971	LA5-F400803-F330 (3)	LA5-FDP33050(3)
400A	LA9-F400OL	LA9-F400CL	LA9-F400SP	LA9-F400VL	LA9-FJ970	LA9-FJ971	LA5-F400803-F400 (3)	LA5-FDP40050(3)
500A	LA9-F500OL	LA9-F500CL	LA9-F500SP	LA9-F500VL	LA9-FJ970	LA9-FJ971	LA5-F500803-F500 (3)	LA5-FDP50050(3)
630A	LA9-F630OL	LA9-F630CL	LA9-F630SP	LA9-F630VL	LA9-FL970	LA9-FL971	LA5-F630803-F630 (3)	LA5-FDP63050(3)
780A	-	-	-	-	-	LA9-FX970	LA5-F780801-F780 (1)	LA5-FDP78050(1)

MOTOR CONTROL

CONTACTORS, CONTROL RELAYS

3 Pole Contactors DC Coils



D09-D80 supplied with coil

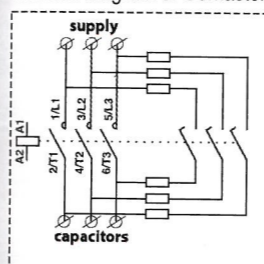
Code* 1N/O Aux	TP1-	D0910*	D1210*	D1810*	D2510*	D3210*	D4011*	D5011*	D6511*	D8011*
Code* 1N/C Aux	TP1-	D0901*	D1201*	D1801*	D2501*	D3201*	1NO+1NC	1NO+1NC	1NO+1NC	1NO+1NC
AC3 Rated Power @ 400V		4kW	5.5kW	7.5kW	11kW	15kW	18.5kW	22kW	30kW	37kW
Coil Consumption		9W	9W	9W	11W	11W	22W	22W	22W	22W
Mechanical Life (million ops)		30	30	30	25	25	20	20	20	20
Dimensions H x W x D mm		74 x 45 x 115			84 x 56 x 130		127 x 75 x 115		127 x 75 x 181	

Spare Coils

TX4-D2*	TX4-D4*	LX4-D40*	LX4-D80*
* Voltage DC JD = 12VDC BD = 24VDC ED = 48VDC FD = 110VDC MD = 220VDC			

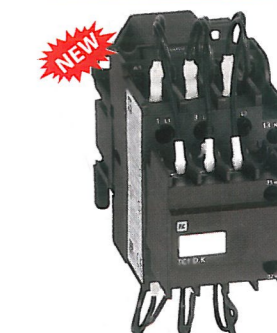
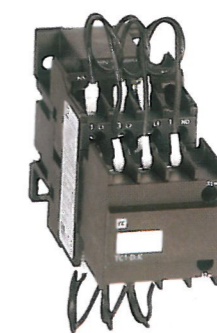
Contactors for 3 Phase PF Correction Capacitor Banks

Internal diagram of Contactor



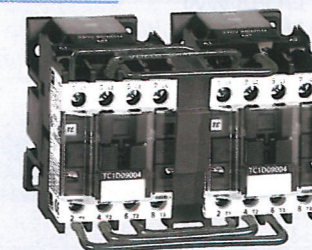
Conforms to AC6B IEC 60947-4-1

D12K-D60K supplied with coil



Code* 1N/O + 1N/C	TC1-	D12K11*	D16K11*	D20K11*	D25K11*	D33K12*	D40K12*	D60K12*
Code* 2N/C	TC1-	D12K02*	D16K02*	D20K02*	D25K02*	1NO+2NC	1NO+2NC	1NO+2NC
Rated operating voltage		690V	690V	690V	690V	690V	690V	690V
Capacitor switching	400V	12.5kVAr	16.7kVAr	20kVAr	25kVAr	33.3kVAr	40kVAr	60kVAr
* Add Coil Voltage F = 110V 50/60Hz U = 240V 50Hz N = 415V 50Hz								

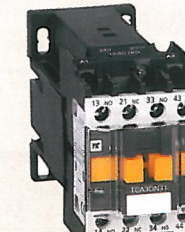
Reversing Contactors (AC Coils)



AC Control Relays



DC Control Relays



Code	AC3 400V	Aux Contacts	Code	Contacts	Code	Contacts
TC2-D0901*	4kW	1N.C.	TCA2-DN22*	2N.O. + 2N.C.	TCA3-DN22*	2N.O. + 2N.C.
TC2-D1201*	5.5kW	1N.C.	TCA2-DN31*	3N.O. + 1N.C.	TCA3-DN31*	3N.O. + 1N.C.
TC2-D1801*	7.5kW	1N.C.	TCA2-DN40*	4N.O.	TCA3-DN40*	4N.O.
TC2-D2501*	11kW	1N.C.				
TC2-D3201*	15kW	1N.C.				
TC2-D4011*	18.5kW	1N.O. + 1N.C.				
TC2-D5011*	22kW	1N.O. + 1N.C.				
TC2-D6511*	30kW	1N.O. + 1N.C.				
TC2-D8011*	37kW	1N.O. + 1N.C.				
TC2-D9511*	45kW	1N.O. + 1N.C.				

* Coil Voltage AC B = 24V 50/60Hz E = 48V 50/60Hz F = 110V 50/60Hz U = 240V 50Hz N = 415V 50Hz SF = 550V 50Hz V = 400V 50Hz P = 230V 50Hz S = 500V 50Hz
 * Coil Voltage DC JD = 12VDC BD = 24VDC ED = 48VDC FD = 110VDC MD = 220VDC

DOL STARTERS @ 415V AC3 RATING

Economy DOL Starters



kW AC3/ 400V	DOL Starter IP65	DOL Starters with isolator IP65	DOL Starters with ammeter IP54
0.37kW	0.63-1.0A	LE1-D123N305	ILE1-D123N305
0.55kW	1.0 -1.6A	LE1-D123N306	ILE1-D123N306
0.75kW	1.6-2.5A	LE1-D123N307	ILE1-D123N307
1.1kW	1.6-2.5A	LE1-D123N307	ILE1-D123N307
1.5kW	2.5-4.0A	LE1-D123N308	ILE1-D123N308
2.2kW	4-6A	LE1-D123N310	ILE1-D123N310
3kW	5.5-8A	LE1-D123N312	ILE1-D123N312
4kW	7-10A	LE1-D123N314	ILE1-D123N314
5.5kW	9-13A	LE1-D123N316	ILE1-D123N316
7.5kW	12-18A	LE1-D183N321	ILE1-D183N321
11kW	17-25A	LE1-D253N322	ILE1-D253N322
15kW	23-32A	LE1-D323N353	ILE1-D323N353
15kW Steel	23-32A	BE1-T3235N353	IBE1-T3235N353
18.5kW	30-40A	BE1-T4035N355	IBE1-T4035N355
22kW	37-50A	BE1-T5035N357	IBE1-T5035N357
30kW	48-65A	BE1-T6535N359	IBE1-T6535N359
37kW	63-80A	BE1-T8035N361	IBE1-T8035N361
45kW	80-93A	BE1-T9035N363	IBE1-T9035N363

For 230V Single Phase motors

Coil fitted

U 240V

(Customer to fit T1-L2 Link)

kW AC3	Overload Current Range Fitted	DOL Starter IP65
0.37kW	2-8-4.2A	LE1-D123U308
0.55kW	4-6A	LE1-D123U310
0.75kW	4-6A	LE1-D123U310
1.1kW	7-10A	LE1-D123U314
1.5kW	9-13A	LE1-D123U316
2.2kW	12-18A	LE1-D183U321

New wide range coil voltages

U 240V (170-280V)

N 415V (291-465V)

S 500V (425-550V)

SF 550V (467-605V)

Ideal for agricultural applications

DOL Starters without overload (*coil Voltage)

Code	Code	275L x 160W x 145D	195L x 100W x 145D
5.5kW LE1-D123*	Empty enclosure c/w Push buttons	up to 7.5kW LE1-D12	
7.5kW LE1-D183*		for 11kW LE1-D25	
11kW LE1-D253*		for 15kW LE1-D32	
15kW LE1-D323*		for 18-24kW BE1-T40	
*U 240V (170-280V)	Start switch	up to 7.5kW LA9-D09906	
*S 500V (425-550V)	Start button	Green LE1-DSBG	
*N 415V (291-465V)	Stop button	Red LE1-DSBR	



shown with isolator & ammeter

DOL Starters

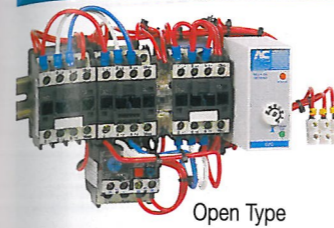
Motor Size 400V	Motor Size 525V	Overload Range	DOL Starters	With Isolator	With Ammeter	Enclosure*	Coil Voltage	Dimensions enclosed starter only H x W x D
4kW	5.5kW	7-10A	ELC009	/IS	/AM	/S	B=24V	350 x 250 x 170
5.5kW	7.5kW	9-13A	ELC012	/IS	/AM	/S	B=24V	350 x 250 x 170
7.5kW	11kW	12-18A	ELC018	/IS	/AM	/S	E=48V	350 x 250 x 170
11kW	15kW	17-25A	ELC025	/IS	/AM	/S	F=110V	350 x 250 x 170
15kW	18.5kW	23-32A	ELC032	/IS	/AM	/S	F=110V	350 x 250 x 170
18.5kW	22kW	30-40A	ELC040	/IS	/AM	/S	U=240V	450 x 300 x 220
22kW	30kW	33-50A	ELC050	/IS	/AM	/S	N=415V	450 x 300 x 220
30kW	37kW	43-65A	ELC065	/IS	/AM	/S	SF=550V	450 x 300 x 220
37kW	45kW	54-80A	ELC080	/IS	/AM	/S	SF=550V	450 x 300 x 220

* Standard enclosures listed. Change /P (IP56 plastic) or /S (IP55 steel) if required.
Order code example: 45kW 550V DOL in steel enclosure, 550V control, isolator and ammeter: ELC80/IS/AM/SF

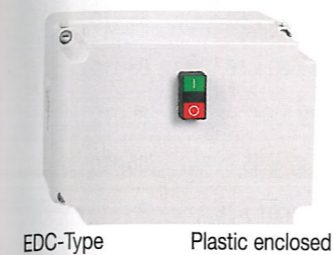
STAR-DELTA & DOL REVERSING STARTERS

Star-Delta starters

Complete with mechanical and electrical interlocks, thermal overload relay and electronic timer.



Open Type



EDC-Type Plastic enclosed



EDC-Type Steel enclosed



BE3 Type

Motor Size 400V	Motor Size 525V	Overload Range	Open Star-Delta Starters	Enclosed Star-Delta Starter	With Isolator	With Ammeter	Enclosure*	Coil Voltage	Dimensions enclosed starter only H x W x D
4kW	5.5kW	4-6A	†DC009A	EDC009A	/IS	/AM	/P		240 x 190 x 160
5.5kW	7.5kW	5.5-8A	DC009B	EDC009B	/IS	/AM	/P		240 x 190 x 160
7.5kW	11kW	7-10A	†DC009	EDC009	/IS	/AM	/P	B=24V	240 x 190 x 160
11kW	15kW	9-13A	†DC012	EDC012	/IS	/AM	/P		240 x 190 x 160
15kW	18.5kW	12-18A	†DC018	EDC018	/IS	/AM	/P	F=110V	240 x 190 x 160
18.5kW	22kW	17-25A	†DC025	EDC025	/IS	/AM	/P		300 x 220 x 180
22kW	30kW	28-36A	†DC032	EDC032	/IS	/AM	/P	U=240V	300 x 220 x 180
30kW	37kW	30-40A	DC038	EDC038	/IS	/AM	/S		450 x 300 x 220
37kW	45kW	37-50A	DC040A	EDC040A	/IS	/AM	/S	N=415V	450 x 300 x 220
45kW	55kW	48-65A	DC050	EDC050	/IS	/AM	/S		450 x 300 x 220
55kW	75kW	48-65A	DC065	EDC065	/IS	/AM	/S	SF=550V	450 x 300 x 220
75kW	90kW	63-80A	DC080	EDC080	/IS	/AM	/S		550 x 400 x 220
90kW	110kW	80-93A	DC095	EDC095	/IS	/AM	/S		650 x 450 x 270
110kW	132kW	100-160A	DC115	EDC115	/IS	/AM	/S		750 x 550 x 270
132kW	160kW	100-160A	DC150	EDC150	/IS	/AM	/S	B=24V	750 x 550 x 270
160kW	200kW	125-200A	DC185	EDC185	/IS	/AM	/S	F=110V	950 x 700 x 270
200kW	250kW	160-250A	DC225	EDC225	/IS	/AM	/S	P=230V	950 x 700 x 270
250kW	315kW	200-315A	DC265	EDC265	/IS	/AM	/S	V=400V	1150 x 850 x 270
315kW	400kW	250-400A	DC330	EDC330	/IS	/AM	/S	SF=550V	1150 x 850 x 270
375kW	450kW	315-500A	DC400	EDC400	/IS	/AM	/S		1575 x 800 x 400

* Standard enclosures listed. Change /P (IP56 plastic) or /S (IP55 steel) if required.

Order code example:

Open 15kW S-D starter 415V control: DC18 N

Enclosed 22kW c/w isolator and ammeter 240V: EDC35/IS/AM/P U

Optional extras include:

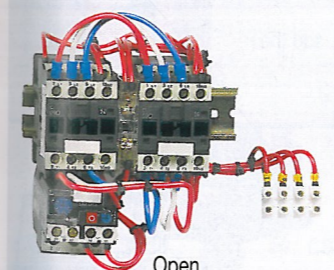
Running hour meter, voltmeter, run & trip pilot lights, SPR3 supply protection relay.

†For basic range add prefix BE3, example BE3-DC012 N. Only available in steel enclosure 400V.

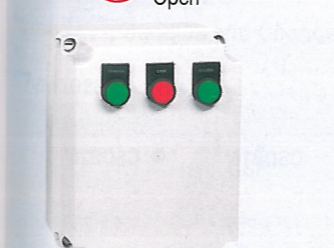
Not available with isolator & ammeter.

DOL Reversing starters

Complete with mechanical and electrical interlocks and thermal overload relay.



Open



Enclosed

Motor 400V	KW AC3 525V	Overload Range	Open Reversing Starters	Enclosed Reversing Starter	With Isolator	With Ammeter	Enclosure*	Coil Voltage	Dimensions enclosed starter only H x W x D
0.37kW	0.55kW	1-1.6A	RC009A	ERC009A	/IS	/AM	/P		190 x 140 x 140
0.55-0.75kW	1.5kW	1.6-2.5A	RC009B	ERC009B	/IS	/AM	/P	B=24V	190 x 140 x 140
1.1-1.5kW	2.2kW	2.5-4A	RC009C	ERC009C	/IS	/AM	/P	F=110V	190 x 140 x 140
2.2kW	3kW	4-6A	RC009D	ERC009D	/IS	/AM	/P	U=240V	190 x 140 x 140
3kW	4kW	5.5-8A	RC009E	ERC009E	/IS	/AM	/P		190 x 140 x 140
4kW	5.5kW	7-10A	RC009	ERC009	/IS	/AM	/P	N=415V	190 x 140 x 140
5.5kW	7.5kW	9-13A	RC012	ERC012	/IS	/AM	/P	SF=550V	190 x 140 x 140
7.5kW	11kW	12-18A	RC018	ERC018	/IS	/AM	/P		190 x 140 x 140

* Standard enclosures listed. Change /P (IP56 plastic) to /S (IP55 steel) if required

Order code example: Reversing starter 5.5kW with isolator 415V control ERC12/IS/P N

Optional extras include: Running hour meter, voltmeter, run & trip pilot lights, phase failure/reversal relay.

Compressor Starters

Star-Delta starters with on-off selector switch & provision for pressure switch connection 415V coils fitted. IP56

Description	kW @ 400V	Code	Dimensions H x W x D
Compressor starter	7.5kW	AS7.5	240 x 190 x 160
	11kW	AS11	300 x 220 x 180
	15kW	AS15	300 x 220 x 180
	22kW	AS22	450 x 300 x 220

ONLOAD ISOLATORS

Open Isolators 25...1800A Ue 690V
 25-125A (D-Type) supplied with red/yellow padlockable handle and 70mm shaft. For longer shaft order separately.
 125-1800A supplied with padlockable pistol-grip handle and shaft.
 DIN Rail mounting: 25 & 40A (3 & 4 pole) plus 63A 3 pole. All others are screw mounting.

3-Pole Code	4-Pole Code	Ie 690V	AC23A 415V	kVAR 415V	Dimensions 3/4 Pole (mm)	
					w/w x h x d	Panel Depth
CSSD25D3	CSSD25D4	25A	20A	10	51/62 x 60 x 68	85-110
CSSD40D3	CSSD40D4	40A	25A	12.5	51/62 x 60 x 68	85-110
CSSD63D3	-	63A	50A	30	53 x 84 x 68	85-110
-	CSSD63D4	63A	50A	30	110 x 97 x 95	85-110
CSSD125D3	CSSD125D4	125A	75A	35	77/110 x 97 x 75	85-110
CSSD125DM3	CSSD125DM4	125A	100A	50	190/230 x 142 x 90	135-235
CSSD160DM3	CSSD160DM4	160A	160A	60	190/230 x 142 x 90	135-235
CSSD200DM3	CSSD200DM4	200A	200A	90	195/240 x 163 x 105	190-300
CSSD250DM3	CSSD250DM4	250A	250A	115	195/240 x 163 x 105	190-300
CSSD315DM3	CSSD315DM4	315A	315A	145	195/240 x 163 x 105	190-300
CSSD400D3	CSSD400D4	400A	400A	250	211/257 x 205 x 130	220-325
CSSD630K3	CSSD630K4	630A	630A	300	244/306 x 223 x 130	220-325
CSSD800K3	CSSD800K4	800A	720A	350	260/330 x 223 x 130	220-325
CSSD1000K3	CSSD1000K4	1000A	800A	630	343/423 x 372 x 125	240-310
CSSD1250K3	CSSD1250K4	1250A	*	*	343/423 x 372 x 125	240-310
CSSD1600K3	CSSD1600K4	1600A	*	*	461/600 x 372 x 125	240-310
CSSD1800K3	CSSD1800K4	1800A	*	*	461/600 x 372 x 125	240-310

Order shaft separately

Complete with Shaft and Handle



*On application

Enclosed Isolators IP54

For any of the above to be supplied in an electric orange steel enclosure, add the prefix "E".
 Eg. E-CSSD400D3.



Accessories

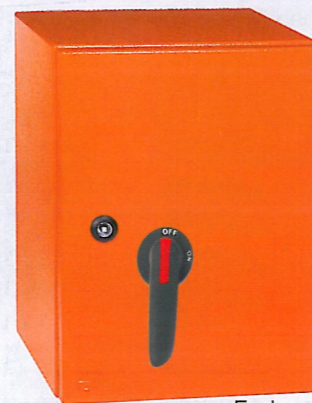


	CSSDZX107	CSSDZX104	DB16	DB22	CSSDS3	CSSDB1/2/3	CSSDZW6/1
Switch size	25-40D	63D	125D	125-160DM	200-315DM	400-800D/K	1000-1800K
Spare Handle - Black padlockable (IP54)	CSSDZX104	CSSDZX104	CSSDB16*	CSDB20*	CSDB22*	CSDB16*	CSDB28*
Spare Handle - Red/Yellow	CSSDZX107*	CSSDZX107*	-	-	-	-	-
Shaft - Size (mm)	5² x 150	5² x 150	5/6² x 165	6² x 150	8² x 240	12² x 255	12² x 255
Code	CSSDS1	CSSDS1	CSSDS3	*CSSDS2	*CSSDS4	*CSSDS5	*CSSDS5
Support bracket 70mm	CSSDB1	CSSDB1	CSSDB2	CSSDB3	-	-	-
Changeover mechanism	CSSDZW6/1¹	CSSDZW6/1¹	CSSDZW6/1¹	-	-	CSSFZW11	-
Aux. Contact - 1NO + 1NC	CSSDZX49	CSSDZX79	CSSDZX52	CSSDFZX1	CSSDZX37	CSSDZX33	CSSDZX35
Aux. Contact - 3P 2NO + 2NC	CSSDZX50	CSSDZX80	CSSDZX53	CSSDFZX16	CSSDZX38	CSSDZX34	CSSDZX36
Aux. Contact - 1NO + 1NC	CSSDZX87	CSSDZX55	CSSDZX55	CSSDFZX1	CSSDZX37	CSSDZX33	CSSDZX35
Aux. Contact - 4P 2NO + 2NC	CSSDZX88	CSSDZX56	CSSDZX56	CSSDFZX16	CSSDZX38	CSSDZX34	CSSDZX36
Terminal shrouds	-	-	SF701	SF702	SF703	-	-

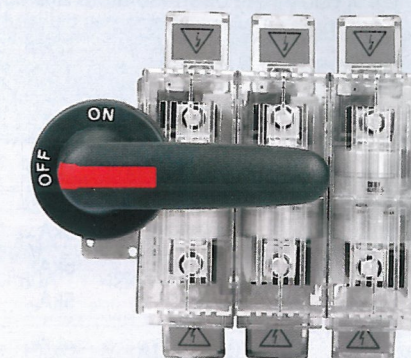
*These are supplied with the isolator and are offered for spares purposes only. ¹Order CSSDS2 Shaft. CSSDB16 Pistol Grip Handle supplied.

FUSED ISOLATORS

NEW



Enclosed Version



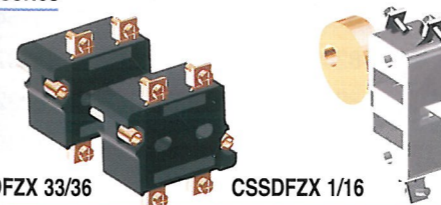
All open fused isolators supplied complete with black handle and shaft 170mm long.

3 POLE DIN CODE	DIN FUSE SIZE	3 POLE BS CODE	BS FUSE SIZE	AC23A 415 V	KVAR SWITCHING CAPACITY	DIN DIMENSIONS H x W x D	BS DIMENSIONS H x W x D	ENCLOSURE SIZE H x W x D
CSSDF032D	00	CSSDF032B	A2,A3	32A	15	190 x 142 x 135	190 x 142x135	275 x 225 x 180
CSSDF063D	00	CSSDF063B	A2,A4	63A	30	190 x 142 x 135	190 x 142x135	275 x 225 x 180
CSSDF100D	00	CSSDF100B	A4	100A	45	190 x 142 x 135	190 x 142 x 135	275 x 275 x 180
CSSDF125D	00	CSSDF125B	A4	125A	50	190 x 142 x 135	190 x 142 x 135	275 x 275 x 180
CSSDF160D	00	CSSDF160B	B1-B2	160A	60	190 x 142 x 135	212 x 142 x 135	275 x 275 x 180
CSSDF200D	1	CSSDF200B	B1-B2	200A	90	260 x 320 x 220	260 x 320 x 220	325 x 400 x 220
CSSDF250D	1	CSSDF250B	B1-B2	250A	115	260 x 320 x 221	260 x 320 x 221	400 x 400 x 220
CSSDF315D	2	CSSDF315B	B1-B4	315A	145	260 x 320 x 222	260 x 320 x 222	400 x 400 x 220
CSSDF400D	2	CSSDF400B	B1-B4	400A	180	260 x 320 x 223	260 x 320 x 223	400 x 400 x 220
CSSDF630D	3	CSSDF630B	C1-C3	630A	250	403 x 320 x 240	403 x 320 x 240	600 x 500 x 275
CSSDF800D	-	CSSDF800B	C1-C3	800A	310	-	403 x 320 x 241	600 x 500 x 275

For enclosed isolators IP55 add prefix "E-" to the above codes, eg. E-CSSDF200D

The fused isolators conform to IEC 60947 part 3. Max operational voltage without derating 690V. Utilisation category AC23A@415V and DC23A@220V 2 poles in series. Rated insulation voltage Ui 750V. Impulse withstand voltage Uimp 750V. Conventional enclosed thermal rating 45°C

Accessories



ISOLATOR SIZE	CODE 1NO+1NC	CODE 2NO+2NC
32-63A	CSSDFZX 46	CSSDFZX 32
100-160A	CSSDFZX 1	CSSDFZX 16
200-400A	CSSDFZX 33	CSSDFZX 34
630-800A	CSSDFZX 35	CSSDFZX 36

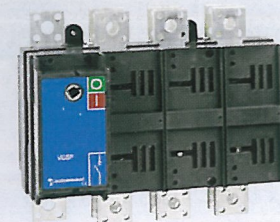
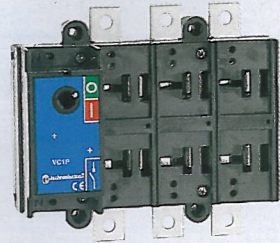
Operating Handles and Change Over Mechanisms



CHANGE OVER MECHANISM	SPARE HANDLE CODE	SPARE HANDLE SHAFT CODE	ISOLATOR SIZE
CSSFZW1	CSDB 20	CSP6X165	32A
CSSFZW1	CSDB 20	CSP6X165	63A
CSSFZW1	CSDB 20	CSP6X165	100A
CSSFZW1	CSDB 20	CSP6X165	125A
CSSFZW1	CSDB 20	CSP6X165	160A
CSSFZW12/1	CSDB16	CSP12X255	200A
CSSFZW12/1	CSDB16	CSP12X255	250A
CSSFZW12/1	CSDB16	CSP12X255	315A
CSSFZW12/1	CSDB16	CSP12X255	400A
CSSFZW12/1	CSDB28	CSP12X255	630A
CSSFZW12/1	CSDB28	CSP12X255	800A

ONLOAD ISOLATORS

Screw mounting Ue = 690V Ui = 1000V All open Isolators are supplied with a black padlockable handle and 200mm extension shaft.



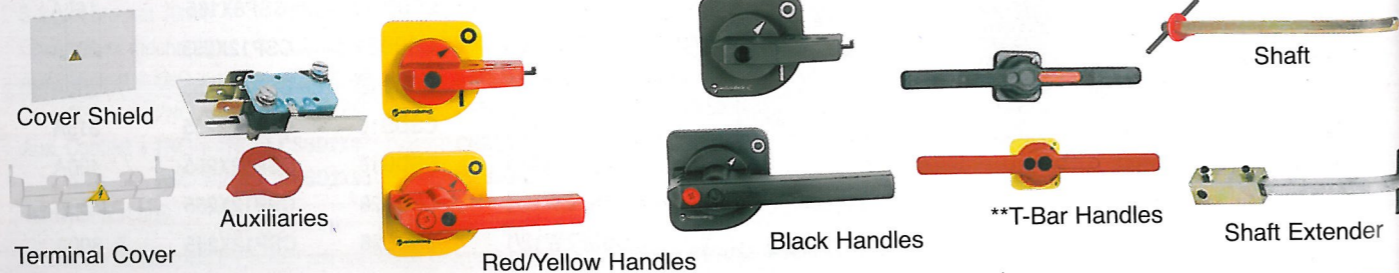
3 Pole Code	Icw 1sec	AC21A/AC23A		AC23A 400V kW	kVAR Power Rating	Dimensions H x W x D(mm)
		400V	500V			
VC1P 32A	5kA	32A	25A	17kW	15kVAR	113 x 142 x 73
VC1P 45A	5kA	45A	35A	23kW	20kVAR	113 x 142 x 73
VC1P 63A	5kA	63A	45A	33kW	30kVAR	113 x 142 x 73
VC1P 80A	5kA	80A	63A	42kW	40kVAR	113 x 142 x 73
VC1P 100A	5kA	100A	80A	52kW	45kVAR	113 x 142 x 73
VC1P 125A	5kA	125A	100A	65kW	50kVAR	113 x 142 x 73
VC2P 160A	8kA	160A	125A	85kW	70kVAR	152 x 168 x 81
VC2P 200A	8kA	200A	160A	105kW	90kVAR	152 x 168 x 81
VC2P 250A	8kA	250A	200A	130kW	110kVAR	152 x 168 x 81
VC3P 315A	13kA	315A	250A	165kW	140kVAR	196 x 235 x 93
VC3P 400A	13kA	400A	315A	210kW	180kVAR	196 x 235 x 93
VC4P 630A	26.5kA	630A	500A	330kW	300kVAR	230 x 280 x 120.5
VC5P 800A	35kA	800A	800A	420kW	380kVAR	306 x 356 x 147
VC5P 1000A	35kA	1000A	800A	525kW	475kVAR	306 x 356 x 147
VC5P 1250A	35kA	1250A	800A	630kW	600kVAR	306 x 356 x 147
VC5P 1600A	50kA	1600A	1250A	630kW	-	306 x 356 x 186
VC5P 2000A	50kA	2000A	1600A	630kW	-	306 x 356 x 186
VC5P 2500A	50kA	2500A	2000A	-	-	306 x 356 x 225
VC5P 3150A	50kA	3150A	2500A	-	-	306 x 356 x 225

4 Pole codes: Insert '4' after P. eg VC5P4 800A

ACCESSORIES

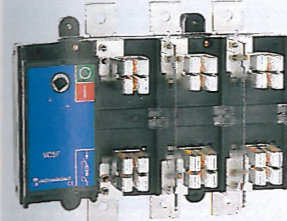
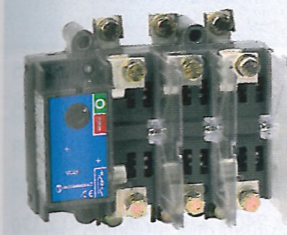
Description	Code						
	VC1P	VC2P	VC3P	VC4P	VC5P 1250A	VC5P 1600-2000A	VC5P 2500-3150A
Auxiliary contacts (early-break, late-make) { 1NO+1NC	18165	18165	18163	18160	18163	18163	18163
{ 2NO+2NC	18166	18166	18164	18161	18164	18164	18164
Shaft (Spare) 200mm	18201	18201	18207	18207	18207	18207	18207
Shaft Extender* 100mm	18030	18030	18032	18032	18032	18032	18032
200mm	18033	18033	18035	18035	18035	18035	18035
Terminal covers Upper	18050	18052	18350	18054	18056	18058	-
Lower	18051	18053	18351	18055	18057	18059	-
Main contact cover shield	18060	18061	18360	18062	18063	18063	-
Handles: Black padlockable IP65	18001	18001	18003	18003	18005	18830**	18830**
Red/Yellow padlockable IP65	18002	18002	18004	18004	18006	18831**	18831**
Black key lockable IP54	18100	18100	18100	18100	-	-	-
Risers (mm)	18290 (5)	18291 (5)	18292 (10)	18293 (15)	18293 (15)	18293 (15)	18293 (15)

*Extends 200mm shaft for deep enclosures



FUSE SWITCHES

Screw mounting Ue = 690V Ui = 1000V **Open Type** All open fuse switches are supplied with a black padlockable "pistol grip" handle plus 200mm extension shaft.



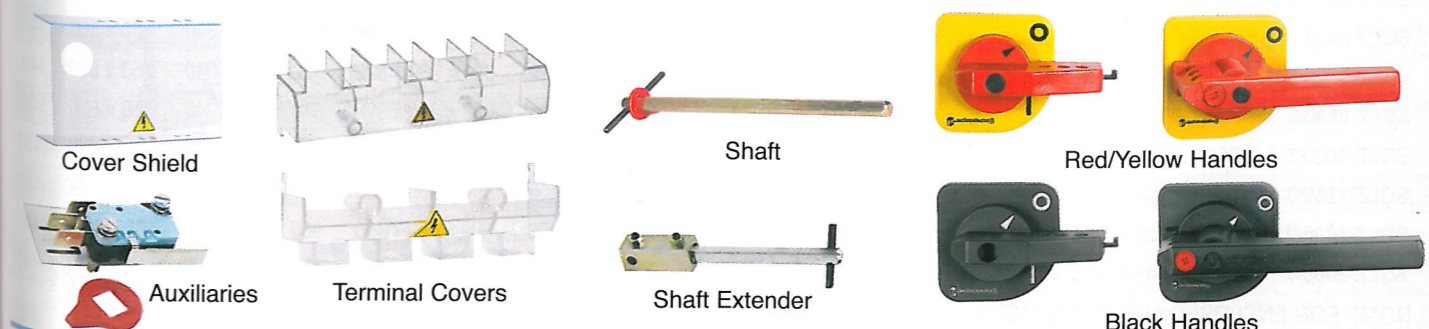
3 Pole DIN Code	DIN Fuse	3 Pole BS Code	BS Fuse	AC23A		Dimensions (mm) H x W x D
				400V	500V	
VC1F 32A	C00	VC1FB 32A	A2-A3	32A	17kW	113 x 142 x 86.5
VC1F 45A	C00	VC1FB 45A	A2-A3	45A	23kW	113 x 142 x 86.5
VC1F 63A	C00	VC1FB 63A	A2-A3	63A	33kW	113 x 142 x 86.5
VC1F 80A	C00	VC1FB 80A	A2-A3	80A	42kW	113 x 142 x 86.5
VC2F 100A	00	VC2FB 100A	A4	100A	52kW	147 x 168 x 94.5
VC2F 125A	00	VC2FB 125A	A4	125A	65kW	147 x 168 x 94.5
VC2F 160A	00	VC2FB160A	A4	160A	85kW	147 x 168 x 94.5
VC3F 200A	1	VC3FB 200A	B2	200A	105kW	196 x 235 x 113
VC3F 250A	1	VC3FB 250A	B2-B3	250A	130kW	196 x 235 x 113
VC4F 315A	2	VC4FB 315A	B2-B3	315A	165kW	230 x 280 x 140.5
VC4F 400A	2	VC4FB 400A	B2-B3	400A	210kW	230 x 280 x 140.5
VC5F 630A	3	VC5FB 630A	C1-C3	630A	330kW	306 x 356 x 164
-	-	VC5FB 800A	C1-C3	800A	420kW	306 x 356 x 164

For additional ratings and drawings, contact our technical department or visit our website. Fuse selection, see page 136/138/139

Accessories

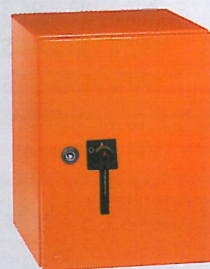
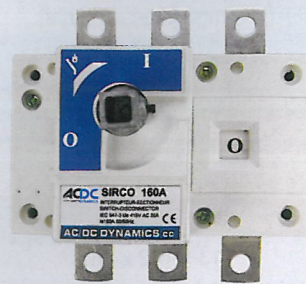
Description	Code				
	VC1F/FB	VC2F/FB	VC3F/FB	VC4F/FB	VC5F/FB
Auxiliary contacts 1NO+1NC	18165	18165	18163	18160	18163
(early break, late Make) 2NO+2NC	18166	18166	18164	18161	18164
Shaft (Spare) 200mm	18201	18201	18207	18207	18207
*Shaft Extender 100mm	18030	18030	18032	18032	18032
200mm	18033	18033	18035	18035	18035
Terminal Covers Upper	18050	18052	18350	18054	18056
Lower	18051	18053	18351	18055	18057
Fuse Covers	18180	18181	18380	18183	18184
Handles Black padlockable IP65	18001	18001	18003	18003	18005
Red/Yellow padlockable	18002	18002	18004	18004	18006
Key handle Black	18100	18100	18100	18100	-
Risers (mm)	18290 (5)	18291 (5)	18292 (10)	18293 (15)	18293 (15)

*Extends 200mm shaft for deep enclosures



ISOLATORS

Available in 3 and 4 pole



All open isolators are supplied with door interlocked, padlockable handle and 335mm shaft

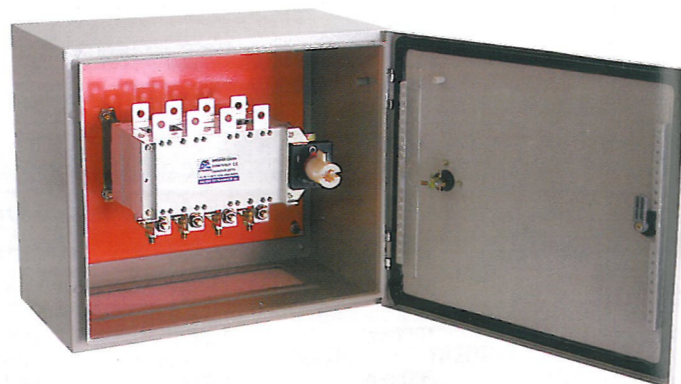
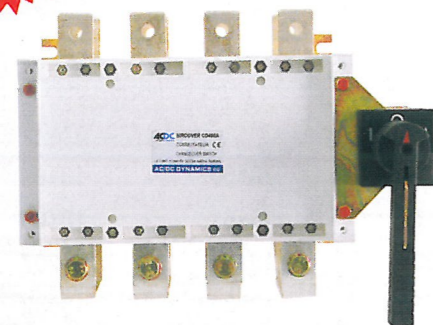
OPEN TYPE CODE 3 POLE	OPEN TYPE CODE 4 POLE	KA RMS FOR 1 SEC	AMPS @ AC21 400V	AMPS @ AC23 400V	AMPS @ AC23 660V	OPEN 3 POLE DIMENSION H x W x D	OPEN 4 POLE DIMENSION H x W x D
SGL-0125/3	SGL-0125/4	7	125	125	63	140 x 135 x 125	170 x 135 x 125
SGL-0160/3	SGL-0160/4	7	160	160	63	140 x 135 x 125	170 x 135 x 125
SGL-0200/3	SGL-0200/4	7	200	250	80	180 x 170 x 138	230 x 170 x 138
SGL-0250/3	SGL-0250/4	9	250	250	100	180 x 170 x 138	230 x 170 x 138
SGL-0315/3	SGL-0315/4	9	315	250	100	230 x 240 x 170	290 x 240 x 170
SGL-0400/3	SGL-0400/4	9	400	250	100	230 x 240 x 170	290 x 240 x 170
SGL-0500/3	SGL-0500/4	9	500	425	160	230 x 260 x 170	290 x 260 x 170
SGL-0630/3	SGL-0630/4	13	630	536	160	230 x 260 x 170	290 x 260 x 170
SGL-1000/3	SGL-1000/4	35	1000	800	200	378 x 312 x 353	498 x 312 x 473
SGL-1250/3	SGL-1250/4	35	1250	1000	200	378 x 356 x 353	498 x 356 x 473
SGL-1600/3	SGL-1600/4	50	1600	1250	500	378 x 356 x 353	498 x 356 x 473
SGL-2000/3	SGL-2000/4	50	2000	2000	NR	378 x 344 x 350	498 x 344 x 350
SGL-2500/3	SGL-2500/4	50	2500	NR	NR	378 x 344 x 350	498 x 344 x 350
SGL-3200/3	SGL-3200/4	55	3200	NR	NR	378 x 344 x 350	498 x 344 x 350

NOTE: FOR ENCLOSED ADD PREFIX "E", eg. E-SGL... Enclosure mild steel epoxy powder coated. IP54

CHANGE OVER SWITCHES

All open change over switches are supplied with door interlocked, padlockable handle and 335mm shaft.

NEW



OPEN TYPE CODE 3 POLE	OPEN TYPE CODE 4 POLE	KA RMS FOR 1 SEC	AMPS @ AC21 400V	AMPS @ AC23 400V	AMPS @ AC23 690V	OPEN 3 POLE DIMENSION H x W x D	OPEN 4 POLE DIMENSION H x W x D	ENCLOSED 3 POLE DIMENSION H x W x D	ENCLOSED 4 POLE DIMENSION H x W x D
SGLZ-0125/3	SGLZ-0125/4	7	125	125	63	196 x 135 x 217	227 x 135 x 217	400 x 350 x 260	400 x 350 x 260
SGLZ-0160/3	SGLZ-0160/4	7	160	160	63	196 x 135 x 217	227 x 135 x 217	400 x 350 x 260	400 x 350 x 260
SGLZ-0200/3	SGLZ-0200/4	7	200	250	80	236 x 170 x 227	288 x 170 x 227	470 x 400 x 280	470 x 400 x 280
SGLZ-0250/3	SGLZ-0250/4	9	250	250	100	236 x 170 x 227	288 x 170 x 227	470 x 400 x 280	470 x 400 x 280
SGLZ-0315/3	SGLZ-0315/4	9	315	250	100	298 x 240 x 322	360 x 240 x 322	650 x 550 x 340	650 x 550 x 340
SGLZ-0400/3	SGLZ-0400/4	9	400	250	100	298 x 240 x 322	360 x 240 x 322	650 x 550 x 340	650 x 550 x 340
SGLZ-0500/3	SGLZ-0500/4	9	500	500	160	298 x 260 x 322	360 x 260 x 322	650 x 550 x 340	650 x 550 x 340
SGLZ-0630/3	SGLZ-0630/4	13	630	500	160	298 x 260 x 322	360 x 260 x 322	650 x 550 x 340	650 x 550 x 340
SGLZ-1000/3	SGLZ-1000/4	35	1000	1000	200	478 x 309 x 400	600 x 309 x 400	950 x 850 x 550	1060 x 850 x 430
SGLZ-1250/3	SGLZ-1250/4	35	1250	1250	200	478 x 309 x 400	600 x 309 x 400	950 x 850 x 550	1060 x 850 x 430
SGLZ-1600/3	SGLZ-1600/4	50	1600	1250	500	478 x 350 x 400	600 x 350 x 400	950 x 850 x 550	1060 x 850 x 430
SGLZ-2000/3	SGLZ-2000/4	50	2000	2000	800	378 x 344 x 350	498 x 356 x 350	950 x 850 x 550	1060 x 850 x 430

NOTE: FOR ENCLOSED ADD PREFIX "E", eg. E-SGLZ... Enclosure mild steel epoxy powder coated. IP54

MOTORISED CHANGE OVER SWITCHES

Available in 4 pole only

NEW



Internally fitted with auxiliary contacts for circuit integration

Comes complete with manual operating handle

Open Type Code 4 Pole	KA RMS for 1 Second	Internal Motor Watts	Switch Over Time in Secs	Amperage @ AC21 440V	Amperage @ AC23 440V	Amperage @ AC23 660V	Open 4 Pole Dimension H x W x D
SGLD4P040A	7	300	0.45	40	40	32	406 x 135 x 261
SGLD4P063A	7	300	0.45	63	63	32	406 x 135 x 261
SGLD4P080A	7	300	0.45	80	80	40	406 x 135 x 261
SGLD4P100A	7	300	0.45	100	100	40	406 x 135 x 261
SGLD4P125A	9	325	0.45	125	125	63	406 x 135 x 261
SGLD4P160A	9	325	0.45	160	160	63	406 x 135 x 261
SGLD4P200A	9	325	0.45	200	200	80	466 x 170 x 261
SGLD4P250A	9	325	0.45	250	250	100	466 x 240 x 333
SGLD4P300A	13	355	0.6	315	300	125	515 x 240 x 333
SGLD4P400A	13	355	0.6	400	350	160	515 x 240 x 333
SGLD4P500A	13	355	0.6	500	400	200	515 x 260 x 333
SGLD4P630A	13	355	0.6	630	500	250	515 x 260 x 333
SGLD4P800A	26	400	1.2	800	550	315	1007 x 330 x 370
SGLD4P1000A	26	440	1.2	1000	550	315	1007 x 330 x 370
SGLD4P1250A	26	440	1.2	1250	630	400	1007 x 330 x 370
SGLD4P1600A	26	440	1.2	1600	800	500	1007 x 330 x 370
SGLD4P2000A	50	500	1.2	2000	1250	800	1007 x 455 x 562
SGLD4P2500A	50	500	1.2	2500	1250	800	1007 x 455 x 562
SGLD4P3200A	50	500	1.2	3200	1250	800	1007 x 455 x 562

ACCESSORIES FOR SGL RANGE

Code	Description
SGL-AUC	Auxiliary Contact Block 1 c/o
SGL-JSP	Joint Sleeve Plastic 125A to 630A
SGL-JSL	Joint Sleeve Metal 800A to 3200A
SGL-OPH1	Operative Handle 125A to 630A
SGL-OPH2	Operative Handle 800A to 3200A
SGL-CB	Extension Shaft joint
SGL-PC	Door Mounting Plate for Handle
SGL-PCP	Face Plate : On/Off
SGL-PCZ	Face Plate : Change Over On/Off/On
SGL-ES8-32	Shaft for 800A to 3200A
SGL-ES1-6	Shaft for 63A to 125A

CHANGEOVER SWITCHES



Change Over Switches

Compact 4 Pole. Supplied with shaft 165mm long. Padlockable "pistol grip" handle. Ue = 690V

Code	AC23A 415V	kVA 400V	Dimensions (mm)	
			h x w x d	Panel Depth
CSCS0160DM4CO	160A	64kVA	142 x 256 x 183	195-295
CSCS0200DM4CO	200A	80kVA	163 x 310 x 242	255-355
CSCS0250DM4CO	250A	100kVA	163 x 310 x 242	255-355
CSCS0315DM4CO	315A	126kVA	163 x 310 x 242	255-355
CSCS0400K4CO	400A	160kVA	205 x 352 x 262	300-400
CSCS0630K4CO	630A	250kVA	223 x 352 x 262	300-400
CSCS0800K4CO	800A	320kVA	223 x 352 x 262	300-400
CSCS1000K4CO	1000A	400kVA	372 x 436 x 260	330-450
CSCS1250K4CO	1250A	500kVA	372 x 436 x 260	330-450
CSCS1600K4CO	1600A	640kVA	372 x 502 x 260	330-450

IP54 Steel enclosed changeover switches. Prefix the above codes with "E-". e.g. E-CSCS0630K4CO. For rating below 160A/64kVA, use 2 isolators plus changeover mechanism, see page 98.



Enclosed Version



Auxiliary Kits

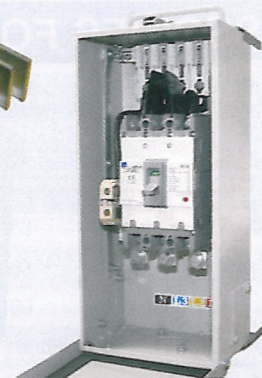
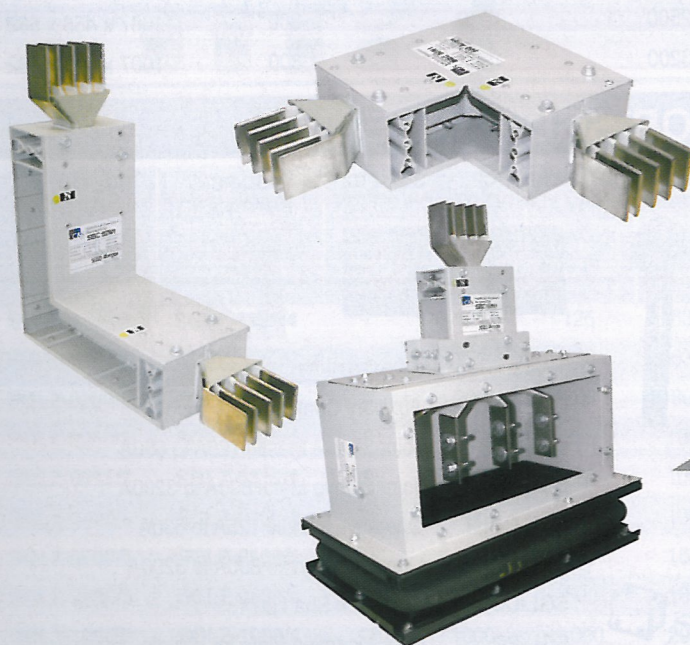
Code 1NO + 1NC	Code 2NO + 2NC	Isolator Size
CSSDFZX1	CSSDFZX16	Fits all sizes

BUSBAR SYSTEMS

Busbar systems for high rise buildings and factory production lines. The systems are flexible and can be relocated and repositioned as required. The system has a variety of accessories such as plug in distribution points, junctions and terminal boxes for generator sets and transformers. Note: These systems are made to customer requirements. Please consult with our sales team on this product.

RCC No: 1001001A · RCC No: 1001002A · RCC No: 1001003A · RCC No: 1001004A

Sandwich Busbar system available in Copper 630A to 6600A, Aluminum 400A to 5000A. Available in **IP54** for plug in type and **IP55/IP65/IP67** for feeder bustrunking. Air Insulated Busbar system available Copper 125A to 2000A. Aluminum 200A to 1250A. Only available in **IP54**.



RCC Certificate No. 0306083

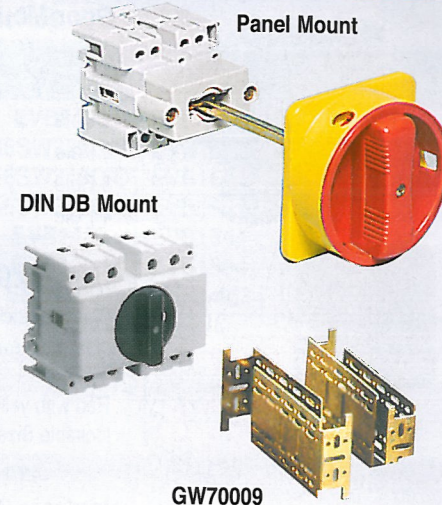
GEWISS ISOLATORS

Panel Mounting (Open Type) With **IP65** padlockable red/yellow handle, door interlocking with shaft.

Code	Pole	AC21 400V	AC23 400V	Terminal Capacity	Panel Depth	Qty/ Box
GW70002	3	16A	5.5kW	6mm ²	87 - 145mm	10
GW70003	4	16A	5.5kW	6mm ²	87 - 145mm	10
GW70005	3	32A	11kW	16mm ²	87 - 145mm	10
GW70006	4	32A	11kW	16mm ²	87 - 145mm	10
GW70007	3	63A	22kW	25mm ²	114 - 177mm	5
GW70008	4	63A	22kW	25mm ²	114 - 177mm	5
GW70202	3	16A	3kW	4mm ²	DIN DB	30
GW70205	3	32A	11kW	10mm ²	DIN DB	24
GW70206	4	32A	11kW	10mm ²	DIN DB	24

Accessories

Code	Amps	Description	Qty/Box
GW70009	16 / 32 / 63A	Galvanised Steel adj. extension Brackets 117- 305mm	10
GW70409	16/32A	Spare Red/Yellow Handle	20
GW70410	63A	Spare Red/Yellow Handle	18



Enclosed (Surface Mounting) **IP65** With padlockable red/yellow handle.

Code	Pole	AC21 400V	AC23 400V	Terminal Capacity	Dimensions	Qty/ Box
GW70431	2	16A	2.2kW	6mm ²	114 x 114 x 72	16
GW70432	3	16A	5.5kW	6mm ²	114 x 114 x 72	16
GW70433	4	16A	5.5kW	6mm ²	114 x 114 x 72	16
GW70434	2	32A	7.5kW	16mm ²	114 x 114 x 72	16
GW70435	3	32A	11kW	16mm ²	114 x 114 x 72	16
GW70436	4	32A	11kW	16mm ²	114 x 114 x 72	16
GW70437	3	63A	27kW	25mm ²	170 x 170 x 96	6
GW70438	4	63A	27kW	25mm ²	170 x 170 x 96	6
GW70509	3	80A	35kW	50mm ²	165 x 175 x 135	1
GW70510	4	80A	35kW	50mm ²	165 x 175 x 135	1
GW70511	3	100A	35kW	50mm ²	165 x 175 x 135	1
GW70512	4	100A	35kW	50mm ²	165 x 175 x 135	1
GW70513	3	125A	45kW	50mm ²	240 x 190 x 160	1
GW70514	4	125A	45kW	50mm ²	240 x 190 x 160	1
ESD2-3125ME	3	125A	45kW	35mm ²	185 x 142 x 104	1
ESD2-4125ME	4	125A	45kW	35mm ²	190 x 147 x 104	1

For larger size Isolators see page 100.



ISOLATORS & CHANGE OVER SWITCHES

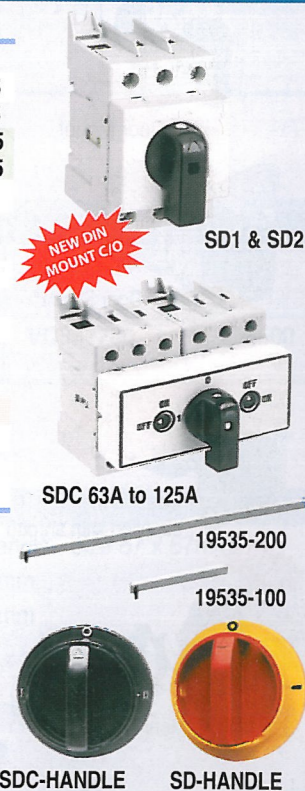
Panel & DIN Mounting (open type) (Handle and shaft to be ordered separately)

Rated thermal current in air	(A)	25A	40A	63A	80A	100A	125A
Code 3 Pole direct handle standard		SD1-325	SD1-340	SD1-363	SD2-380	SD2-3100	SD2-3125
Code 4 Pole direct handle standard		SD1-425	SD1-440	SD1-463	SD2-480	SD2-4100	SD2-4125
Code 3 Pole changeover switch		-	-	SDC-363	SDC-380	SDC-3100	SDC-3125
Code 4 Pole changeover switch		-	-	SDC-463	SDC-480	SDC-4100	SDC-4125
Rated insulation voltage IEC947-3	(V)	800VAC	800VAC	800VAC	800VAC	800VAC	800VAC

Rated operational current (A)		25A	40A	63A	80A	100A	125A
AC21	240 - 690 VAC	25A	40A	63A	80A	100A	125A
AC23	240 - 400 VAC	25A	40A	40A	80A	80A	80A
	500V	25A	40A	40A	63A	63A	63A
	690V	25A	25A	25A	32A	32A	32A
Rated operational power							
AC23	380/415V	(kW)	11kW	15kW	22kW	37kW	37kW
	500V		11kW	15kW	25kW	35kW	35kW
	690V		15kW	15kW	25kW	24kW	24kW
Maximum cable csa	(mm ²)	16	16	16-50	25-50	35-50	35-50

Accessories

Code	Description
19535-100	Extension Shaft 100mm
19535-200	Extension Shaft 200mm
SD1-AUX	Aux Contact 1NO + 1NC for SD1- 25 to 63A
SD2-AUX	Aux Contact 1NO + 1NC for SD2- 80 to 125A
SD1-4P	25-40A 4th Pole for SD1- 25 to 40A
SD2-4P	63-125A 4th Pole for SD2- 63 to 125A
SD-HANDLE	Red / Yellow Handle door interlocked for SD1 & SD2 (IP65)
SDC-HANDLE	Black Handle door interlocked for change-over (1-0-2) SDC 63A to 125A (IP65)





ROTARY ISOLATORS & CAM SWITCHES

Door Mounting Isolators (Switch supplied complete with PL handle)

	16A	20A	32A	40A	75A	115A
AC21	12A	16A	25A	32A	63A	100A
1 Pole	VB0728	VB0751	VB0769	VB0777	VB0793	-
2 Pole	VB0801	VB0835	VB0843	VB0850	VB0876	-
3 Pole	VB0884	VB0918	VB0926	VB0934	VB0959	VB0967
4 Pole	VB1056	VB1080	VB1018	VB1106	VB1122	VB1130

Handles (Spare handles)

	PL-1	PL-2	PL-2	PL-2	PL-3	PL-4
Black escutcheon plate Size (mm)	52 x 52	75 x 75	75 x 75	75 x 75	105 x 105	130 x 130
Red with yellow padlockable Size (mm)	3L-2	3L-2	3L-2	3L-2	3L-3	3L-4
	75 x 75	75 x 75	75 x 75	75 x 75	105 x 105	130 x 130

Isolator 22mm Ø Door Mount (48 x 48)

	16A	20A	32A	40A
AC21	12A	16A	25A	32A
2 Pole	CR0160002	CR0200002	CR0320002	CR0400002
3 Pole	CR0160003	CR0200003	CR0320003	CR0400003
4 Pole	CR0160004	CR0200004	CR0320004	CR0400004

Isolator Padlockable Front Door Mount (67 x 67)

3 Pole	CR01600G3	CR02000G3	CR03200G3	CR04000G3
4 Pole	CR01600G4	CR02000G4	CR03200G4	CR04000G4

Isolator Padlockable Base Mount (67 x 67)

3 Pole	CR01600G3BL6	CR02000G3BL6	CR03200G3BL6	CR04000G3BL6
4 Pole	CR01600G4BL6	CR02000G4BL6	CR03200G4BL6	CR04000G4BL6

CHANGE OVER SWITCHES

Change Over Switch Door Mount - 2 Pole

	16A	32A	40A	75A	115A	200A
AC21	12A	25A	32A	63A	100A	160A
2 Pole	-	-	VB1232	VB1263	-	-

Change Over Switch Door Mounting - 3 & 4 Pole

3 Pole	VB1353	VB1395	VB1403	VB1429	VB1437	VB1445
4 Pole	VB1478	VB1510	VB1528	VB1544	VB1551	VB1569
Size (mm)	52 x 52	75 x 75	105 x 105	105 x 105	130 x 130	130 x 130

Change Over Switches Chassis Mount - 3 & 4 Pole

3 Pole	VG9906	ZL0496	ZL0505	VF2993	VF3058
4 Pole	ZL0538	ZL0546	VD9446	VF3033	VF3066
Escutcheon Plate (mm)	75 x 75	105 x 105	105 x 105	130 x 130	130 x 130

Change Over Switches 22mm Ø Door Mount

	20A	32A	40A
AC21	16A	25A	32A
2 Pole	CR0200006	CR0320006	CR0400006
3 Pole	CR0200007	CR0320007	CR0400007
4 Pole	CR0200039	CR0320039	CR0400039
Size (mm)	48 x 48	48 x 48	48 x 48

Approvals:



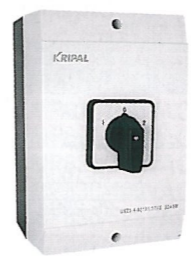
ROTARY ISOLATORS & CAM SWITCHES

Enclosed Change Over Switches IP65

Amps AC1	Amps AC23	2-Pole 1-0-2	3-Pole 1-0-2	4-Pole 1-0-2	Size H x W x D
20A	15A	-	EVB1403	EVB1478	100 x 80 x 120
32A	25A	-	56SW332C/O	EVB1510	125 x 100 x 120
40A	32A	-	56SW340C/O	EVB1528	125 x 100 x 120
63A	44A	-	56SW363C/O	EVB1529	175 x 114 x 135
80A	63A	EVB1263	EVB1429	EVB1544	240 x 160 x 140
100A	80A	-	EVB1003	EVB1004	240 x 160 x 140
63A	44A	-	ESDC-363	ESDC-463	260 x 298 x 140



ESDC type



EVB type

Motor Control Switches - Door Mount

AC1	AC23	1 Phase* Reversing	3 Phase Reversing	Star-delta	Plate Size
16A	12A	VB1940	VB1593	VB1841	52 x 52
20A	16A	-	VB1619	VB1866	75 x 75
32A	25A	-	VB1635	VB1882	75 x 75
40A	32A	-	VB1643	VB1890	75 x 75
50A	40A	-	VB1650	VB1908	105 x 105

Motor Control Switches - 22mm Door Mount

16A	12A	-	CR0160008	CR0160010	48 x 48
20A	16A	-	CR0200008	CR0200010	48 x 48
32A	25A	-	CR0320008	CR0320010	48 x 48
40A	32A	-	CR0400008	CR0400010	48 x 48

Stepping Switches Rear Door Mount

Description	AC21A	Code	Plate Marking	Size
1 Pole 3 step+off	16A	VB3045	0-1-2-3	52 x 52
1 Pole 5 step+off	16A	VG5325	0-1-2-3-4-5	52 x 52
1 Pole 7 step+off	16A	VF3783	0-1-2-3-4-5-6-7	52 x 52

On - Off Switches 20Amps AC23

2 Poles	4 Poles	6 Poles
R201-23	R202-23	R203-23

Fused Isolator, Pad Lockable, Base Mount IP65

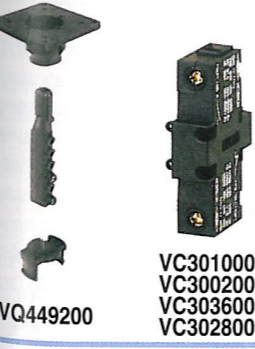
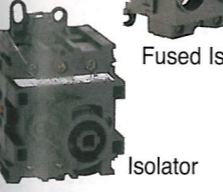
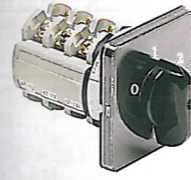
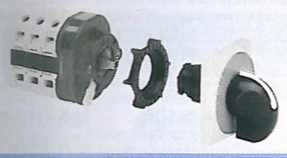
Supplied complete with ON/OFF handle and 175mm long shaft.

Amps AC22	16A	32A	50A	63A	80A	100A
Fused Isolator	VQ413800	VQ422900	-	-	-	-
	VQ416100	VQ425200	-	-	-	-
Isolator only	VQ362700	VQ380900	VQ355100	VQ356900	VQ357700	VQ358500
	VQ365000	VQ383300	-	-	-	-

16A Fused isolator use 10 x 38 fuses } For Fuses see page 135
32A Fused isolators use 14 x 51 fuses }

Accessories for XNF Type Fused Isolator

Code	Description
VQ436900	ON/ OFF red & yellow padlockable handle - size 67 x 67mm
VQ438500	Black ON/ OFF handle - size 48 x 48mm
VQ439300	Black ON/ OFF handle - size 67 x 67mm
VC301000	1 NO aux contact block 16a for XNF
VC300200	1 NC aux contact block 16a for XNF
VC303600	1 NO aux contact block 32a for XNF
VC302800	1 NC aux contact block 32a for XNF
VQ449200	300mm telescopic shaft for XNF



ELECTRONIC MOTOR PROTECTION RELAYS

NEW
ELEC



LA-

LA

- Features:**
See chart below for protection
- Overload protection cyclic and sustained based on a 15 second cold curve
 - Integrated current transformers
 - 1NO + 1NC 6A@250VAC
 - 110/220VAC control supply

Ordering Information

Current Range	Code Standard	Code with Battery ⁽¹⁾
1-10A	LA-010	LA-010N
5-50A	LA-050	LA-050N
10-100A	LA-100	LA-100N
25-250A	LA-250	LA-250N

⁽¹⁾Required to maintain LED status if within cubicle with electrical interlock



KA-

NEW
ELEC

KB-

KC-

K Series

- Features:**
See chart below for protection
- Overload protection cyclic and sustained based on a 15 second cold thermal curve
 - KA is powered from the 3ph 400V or 525V mains supply
 - KB & KC is suitable for 110V/220VAC control only
 - 1NO + 1NC 6A@250VAC

Ordering Information

Current Range	Code KA	Code KB	Code KC
0.1-1A	KA-001	KB-001	KC-001
0.5-5A	KA-005	KB-005	KC-005
1-10A	KA-010	KB-010	KC-010
2.5-25A	KA-025	KB-025	KC-025
5-50A	Use '-05' with 3 x 50:5 CL1 2.5VA CTs		
10-100A	Use '-05' with 3 x 100:5 CL1 2.5VA CTs		
20-200A	Use '-05' with 3 x 200:5 CL1 2.5VA CTs		

For CTs see page 166-167.



MA-250-PM

NEW
ELEC

MA-RDU-1



MA-RDU216

MA - The Professional

- Features:**
See chart for "full house" protection info.
- Overload protection cyclic and sustained with user adjustable thermal curves 5 to 35 seconds
 - Field bus interfaces
 - Software programmable LV protection for process control
 - 5 x programmable digital inputs
 - 4 x 1C/O relay outputs 5A@220VAC
 - 110V/220VAC control supply

To set up or alter parameters, either use laptop with software (free) and cable, or MA-RDU216 (supplied with 1.5m cable and security dongle)

Ordering Information

Description	Current Range	Code
Relay Without fieldbus interface	0.5-5A	MA-005-*
	1-10A	MA-010-*
	5-50A	MA-050-*
	10-100A	MA-100-*
	25-250A	MA-250-*

For larger currents, use MA-005 with 3 x 5A CL1 CTs

- Profibus comms included add suffix *...-PM
- Modbus comms included add suffix *...-MM
- Canbus comms included add suffix *...-CM
- Laptop Cable 1m MA-CAB1
- CD front end software MA-CD
- Door mount fault indicator c/w 1.5m cable MA-RDU-1
- Door mountable MMI programming & interface unit c/w 1m cable MA-RDU216
- Security Dongle for MA-RDU216 MA-SD

KD-Series: Supply volts 110/230VAC

Current Range	Code KD	Code KE	CT's required
0.5-5A	KD-005	KE-005	Internal
1-10A	KD-010	KE-010	internal
2.5-25A	KD-025	KE-025	Internal
5-50A	KD-050	KE-050	Internal
10-100A	KD-100	KE-100	100:5 Class 1 2.5VA
25-200A	KD-200	KE-200	200:5 Class 1 2.5VA
40-400A	KD-400	KE-400	400:5 Class 1 2.5VA

KE-relay cannot be programmed via front panel

- KE-relay does power measurement, real and apparent, in real time or consumption over time

- Protection Features:**
- Overload (both cyclic and sustained overload)
 - Locked rotor by vectorial stall
 - Running stall/jam
 - Single phasing/ unbalance
 - Over/Under frequency protection
 - Insulation failure prestart lock-out
 - Undercurrent/load loss/ cavitation
 - Under power (Cosφ measurement)
 - Phase rotation/over or under voltage
 - Short circuit protection trip threshold power factor dependant
 - Starts per hour with selectable 1-3 consecutive start attempts

KD Type

KE-* with profibus BBRTU module

Accessories

Code	Description	Code	Description
KD-FLED	Door mount indicator with Reset/ Test/ and last fault indication. Provides IR link to MMI or Laptop	CAB0100	RJ11-RJ11: Cable for connecting KD-FLED/KD-RDU420 to relay
KD-RDU420	Door mount Parametization unit to set KD-KE parameters and display values and faults. Provides IR link to MMI or Laptop.	CAB0101	RJ11-RS232: Cable for connection between relay and computer
KD-MMI420-EP	To set KD-KE parameters, upload events, upload fault records, display actual values and faults, connects via IRDA to relay	CAB0016	USB to serial converter
FPR0768	KD-KE profibus BBRTU module for profibus communication	FPR0202	RJ11-IRDA: Infrared eye for relay
		FPR0205	RS232-IRDA: Infrared eye for computer

KD-FLED

KD-RDU420

KD-MMI420-EP

ELECTRONIC MOTOR & OVERLOAD PROTECTION RELAYS

RHOMBERG

Phase Angle Motor Protection Relays

Mainly used for borehole protection with liquid level control tank filling. DIN mount.

NEW



Code	Description	Max. Current Continuous
MP820/230VAC-SP	Single phase motor protection relay up to 1.1kW	*10A
MP825/230VAC-SP	Single phase motor protection relay above 1.1kW	*10A
MP830/230VAC-SP	Three phase motor protection relay up to 3.7kW	*8A
MP830/400VAC-SP	Three phase motor protection relay up to 3.7kW	*8A
MP830/525VAC-SP	Three phase motor protection relay up to 3.7kW	*8A
MP835/230VAC-SP	Three phase motor protection relay up to 3.7kW	*8A
MP835/400VAC-SP	Three phase motor protection relay up to 3.7kW	*8A

* For higher load current use 5 Amp CT to achieve accurate calibration

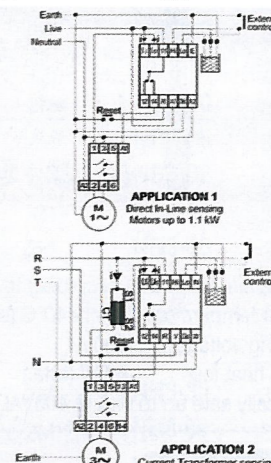
Exclusive Features

- MP820: Direct in-line current sensing of motor, up to 1.1kW. Latching on overload conditions. Adjustable restart time: 15mins - 24hrs. For single phase motor 230VAC. Restart timer 15mins-24hrs (ADS)
- MP825: Auto calibration of overload voltage and underload voltage limits with latching on these conditions. For single phase motors 230VAC. Direct in-line current sensing of motor, up to 3.7kW.
- MP830: Phase sequence and phase failure detection. Latching on overload conditions. Adjustable restart time: 15mins - 24hrs. Direct in-line current sensing of motor, up to 3.7kW.
- MP835: Auto calibration of overload voltage and underload voltage. Phase sequence and phase failure detection. Latching on under and overload conditions. Underload sensitivity adjustment

Common Features

- Relay/ Over load sensing
- Under/ Over load sensing
- Liquid level control. 50kΩ
- Reset lockout: Max 3 resets per 15mins
- Auto calibration of over/ under current and over/ under voltage
- Latching on overload conditions
- Microprocessor-based technology
- Start-up delay: 3 seconds fixed, extended time available on request
- Response delay on overload 3 seconds
- Response delay on voltage 1 second

RHE



Electronic Overload Protection Relays

NEW



Code	Current Range	Features												
		OL	PL	LR	PU	PR	STL	UL	ALT	GF	TRIP TYPE	DISP TYPE	CONTROL VOLTAGE	
CSMPA-60-T 6A	0.5 - 6	●	●	-	-	-	-	-	-	-	-	D	LED	110/220
CSMPA-60-T 60A	5 - 60	●	●	-	-	-	-	-	-	-	-	D	LED	110/220
CSMPA-22-3S-5A0	0.3 - 1.5*	●	●	-	●	-	●	-	-	-	-	I	LED	110 to 260
CSMPA-22-3S5A	1 - 5	●	●	-	●	-	●	-	-	-	-	I	LED	110 to 260
CSMPA-40R 1-SA	0.3 - 1.5	●	●	-	●	●	●	-	-	-	-	I	LED	110 to 260
CSMPA-40R 5A	1 - 5	●	●	-	●	●	●	-	-	-	-	I	LED	110 to 260
CSMPM-06-SZ	0.5 - 6	●	●	●	●	●	●	●	●	●	●	I + D	SSD	110/220
CSMPM-60-SZ	5 - 60	●	●	●	●	●	●	●	●	●	●	I + D	SSD	110/220

Key: OL: over current PL: Phase Loss LR: Locked Rotor PU: Phase Unbalance PR: Phase Reverse STL: Stalling
UL: Under Current ALT: Alert (60 - 110%) GF: Ground Fault I: Inverse Time D: Definite Time ●: Available
LED: Red & Green SSD: Seven Segment Display

Accessories

Code	Description
CSMPM - 1.5M	1.5m ext cable for CSMPM - 06/60-S/ S1/SZ
CSMPM - 4M	4m ext cable for CSMPM - 06/60-S/S1/SZ

*NOTES: CSMPA22 - models with current range 1 - 5A can be used up to 600A with suitable ratios CTs having 5A secondary, class 1 accuracy.

Ground Fault Core Balance Transformers

Code	Hole DIA
Z-CT D30	30mm
Z-CT D50	50mm
Z-CT D65	65mm
Z-CT D80	80mm

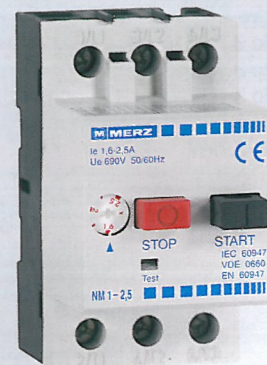
Protection Features for Newelec Relays

	DS1							DS1						
	LA	KB	KA	KC	MA	KD/KE	LA	KB	KA	KC	MA	KD/KE		
Max. current (w/o ext. CTs)	60A	250A	25A	25A	25A	250A	60A	250A	25A	25A	25A	250A		
Thermal memory	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Locked rotor (at start)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Jam (from running)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Unbalanced load	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Phase loss	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
User select O/L auto reset	✓	✓	✓	✓(1)	✓(1)	✓(1)	✓	✓	✓	✓	✓	✓		
Under current	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Restart timer	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Restart contact	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Phase rotation	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Over voltage	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		

*For MA, CB CT is internal up to 250A. For over 250A use external core balance CT, see page 167. (1) 3 starts per hour limit in auto mode

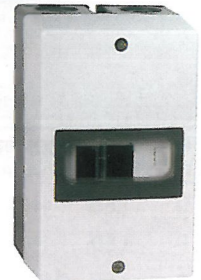
MANUAL MOTOR STARTERS

With thermal overload and magnetic short-circuit release

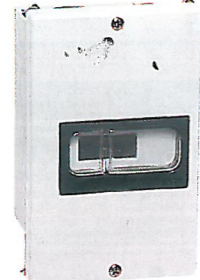


Phase failure sensitivity according to IEC 947-4-1
Ambient temperature -25...+40°C (enclosed)
Operating voltage U_e 690V
Current heat loss 6.0W (total)
Intrinsically safe up to 6kA @ 400VAC

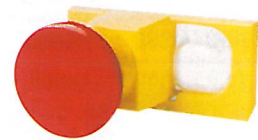
Back-up fuses (gL, aM) [A] 230V 400V 500V	kA			With Current Limiter NM1-SB kA		Adj. range	Code
	230V	400V	500V	230V	400V		
No additional protective installations necessary.	No additional protective installations necessary.			No additional protective installations necessary.		0.1 - 0.16A	NM1-0.16
						0.16 - 0.25A	NM1-0.25
						0.25 - 0.40A	NM1-0.4
						0.40 - 0.63A	NM1-0.63
						0.63 - 1.0A	NM1-1
						1.0 - 1.6A	NM1-1.6
						1.6 - 2.5A	NM1-2.5
						2.5 - 4.0A	NM1-4
						4.0 - 6.3A	NM1-6.3
						6.3 - 10A	NM1-10
						10 - 16A	NM1-16
						16 - 20A	NM1-20
						20 - 25A	NM1-25



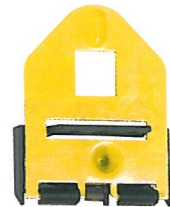
NM1-G1



NM1-FP1



NM1-PV



NM1-VS

Enclosures and fittings

Description	Code
Surface mounting enclosure - IP55 Insulated with entries 4 x M20 threaded	NM1-G1
Flush mounting enclosure - IP55 For flush-mounting in enclosures, switchboard or machines	NM1-FP1
Emergency Stop button Latch-in, twist to release	NM1-PV
Padlock device To lock an enclosed starter in the OFF position using up to 3 padlocks (6-8mm shackle)	NM1-VS

Accessories

Description	Code
Auxiliary Contacts	
UI = 500V I _{th} = 6A	NM1-HS11
Side mount Aux 1NO +1NC	NM1-HS02
AC11: 3.5A at 250V, 2A at 400V	NM1-EHS11
Internal mount Aux 1NO +1NC	NM1-ESS01
*Side mount alarm contact 1NC	

*Alarm contacts operate on thermal or magnetic trip. NC on tripped condition

Undervoltage Release (internal mounting)

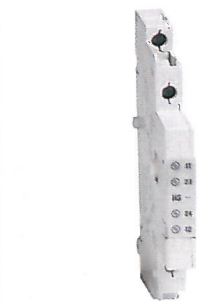
Actuating voltage ≤85% V _n	230V	NM1-U230V
Tripping voltage 35-75% V _n	400V	NM1-U400V
Rated duty 100% (uninterrupted)		
Heat Loss 1.8W		

Current Limiter

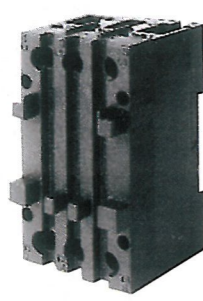
For increasing the breaking capacity of not intrinsically safe MMS to 50kA at 400V. Rated continuous current 32A.	NM1-SB
Also for use as group back-up protection: 4 x 10 or 2 x 16A	

Busbars

For starters without external aux contact	2 way 90mm	NM1-B02
	3 way 136mm	NM1-B03
	4 way 180mm	NM1-B04
For starters with RH external aux fitted	2 way 99mm	NM1-B12
	3 way 153mm	NM1-B13
	4 way 207mm	NM1-B14
	5 way 261mm	NM1-B15



NM1-HS



NM1-SB



NM1-U

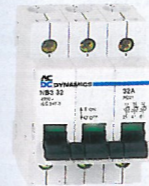
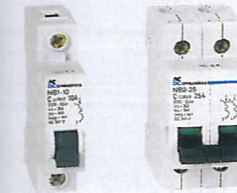


NM1-B13

Fitting of accessories:
Internal mount, one per starter
Side mount, max two per starter

DIN MINIATURE CIRCUIT BREAKERS (MCBs) 3kA

DIN Modules: 1M = 17.5mm
RCC Certificate No. 0311159
IEC 60947-2



Amps	1 Pole Code	Width	1 P+N Code	Width	2 Pole Code	Width	3 Pole Code	Width
3kA Circuit Breakers C Curve								
1A	NB1-1	1M	-	-	-	-	-	-
2A	NB1-2	1M	-	-	NB2-2	2M	NB3-2	3M
3A	NB1-3	1M	-	-	-	-	-	-
4A	NB1-4	1M	-	-	-	-	-	-
6A	NB1-6	1M	NB1N-6	2M	NB2-6	2M	NB3-6	3M
10A	NB1-10	1M	NB1N-10	2M	NB2-10	2M	NB3-10	3M
16A	NB1-16	1M	NB1N-16	2M	NB2-16	2M	NB3-16	3M
20A	NB1-20	1M	NB1N-20	2M	NB2-20	2M	NB3-20	3M
25A	NB1-25	1M	NB1N-25	2M	NB2-25	2M	NB3-25	3M
32A	NB1-32	1M	NB1N-32	2M	NB2-32	2M	NB3-32	3M
40A	NB1-40	1M	-	2M	NB2-40	2M	NB3-40	3M
50A	NB1-50	1M	-	2M	NB2-50	2M	NB3-50	3M
63A	NB1-63	1M	-	2M	NB2-63	2M	NB3-63	3M

Isolators (0142 RCC Certificate No. 0303037)

32A	NH1-32	1M		NH2-32	2M	NH3-32	3M
63A	NH1-63	1M		NH2-63	2M	NH3-63	3M
100A	-	-		NH2-100	2M	NH3-100	3M

Earth Leakage Relays - RCDs 30mA (0142 RCC Certificate No. 0201004)

Amps	No Overload Protection			With Overload			
	2 Pole Code	Width	4 Pole Code	Width	Amps	2 Pole Code	Width
25A	NL2-25	2M	NL4-25	4M	25A	NL2L-25	2M
40A	NL2-40	2M	NL4-40	4M	32A	NL2L-32	2M
63A	NL2-63	2M	NL4-63	4M			



NL4

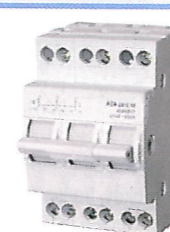
Modular Changeover Switches

Code	Amps AC1	No. of Poles	Width
SF2P-*	25, 40, 63, 100A	2P	2M
SF3P-*	25, 40, 63, 100A	3P	3M
SF4P-*	25, 40, 63, 100A	4P	4M

*Add amps to code: 25, 40, 63, 100



SF2P-*



SF3P-*

DIN MCB accessories

Description	Carton	Code	Caps
Busbars - spade terminals			
Busbar terminal for wire sizes up to 25mm ²		AS-25-SN	-
Insulated busbar 1 phase 63Amps, 1000mm, 56 poles.	50	S1L-1000/16	-
Insulated busbar 2 phase 63Amps, 1000mm, 56 poles.	20	S2L-1000/16	EK-B-2+3
Insulated busbar 3 phase 63Amps, 1000mm, 56 poles.	20	S3L-1000/16	EK-B-2+3
Conversion Kit from DIN Breakers to Samite Rail		CK-SAM	

Busbar for DIN MCB - Not for NB1 or Gewiss

Description	Code
Busbars - Fork Terminals	
Insulated end cap for 2 & 3 pole busbars	EK-B-2+3
Fork busbar 1 phase 63Amps, 1000mm, 56 poles.	G1L-1000/16
Fork busbar 2 phase 63Amps, 1000mm, 56 poles.	G2L-1000/16
Fork busbar 3 phase 63Amps, 1000mm, 56 poles.	G3L-1000/16



S1L-1000/16



CK-SAM



G1L-1000/16



End Cap

DIN CONTACTORS

DIN Contactors - Coil Voltage 230VAC



Code	Amps AC1	No. of Poles	Width
NCH8-20	12A	2P N/O	1m
TM2P-*A	25A, 40A, 63A	2P N/O	2m
TM3P-*A	25A, 40A, 63A	3P N/O	3m
TM4P-*A	25A, 40A, 63A	4P N/O	3m
TM4P-25A/22	25A	2 N/O + 2 N/C	3m
TM4P-40A/22	40A	2 N/O + 2 N/C	3m
TM4P-63A/22	63A	2 N/O + 2 N/C	3m

*Add amps to code: 25, 40, 63

READY BOARDS



Ready Boards RB-1

- 3 x 15A switched socket outlets
- 1 x 40A DP earth leakage
- 2 x 20A SP CB for socket outlets

Ready Boards RB-2

- 3 x 15A switched socket outlets
- 1 x 40A DP earth leakage
- 1 x 10A SP CB for lights
- 2 x 20A SP CB for socket outlets

Code	Size H x W x D	Description
RB-1	330 x 245 x 90	No Bulkhead with 40A DP earth leakage
RB-2	455 x 245 x 90	With Bulkhead no lamp with 40A DP earth leakage
RB-2A	455 x 245 x 90	With Bulkhead no lamp with 63A DP earth leakage

PRE-ASSEMBLED DISTRIBUTION BOARDS



Flush Type

- Adjustable steel tray
- 20mm and 25mm knock outs
- Smokey, transparent lid
- 2 x Neutral bars, fitted,
- 1 x Earth bar

White Pre-assembled Distribution Boards

Populated with 3KA AC/DC Breakers
See page 109 for breakers

Surface	8 Way Pre Assembled Code	12 Way Pre Assembled Code
Flush	FRB-3	FRB-4
Surface	SRB-3	SRB-4

1 x 63A DP MCB (Mains)	1 x 63A DP MCB (Mains)
1 x 63A ELU 30mA	1 x 63A ELU 30mA
1 x 32A SP MCB (Stove)	1 x 32A SP MCB (Stove)
1 x 16A SP MCB (Geyser)	1 x 16A SP MCB (Geyser)
1 x 10A SP MCB (Lights)	2 x 10A SP MCB (Lights)
1 x 20A SP MCB (Plugs)	3 x 20A SP MCB (Plugs)

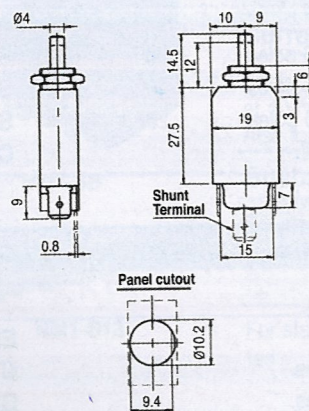
Surface Type



- 20mm and 25mm knock outs
- Smokey, transparent lid
- 2 x Neutral bars, fitted,
- 1 x Earth bar

MINIATURE CIRCUIT BREAKERS

16mm mounting. 240VAC/32VDC rated. 0.2KA@240V
Calibration of rated current @ 25°C:100%, Continuous
140%, Trip within 60 mins
200%, Trip within 60 secs

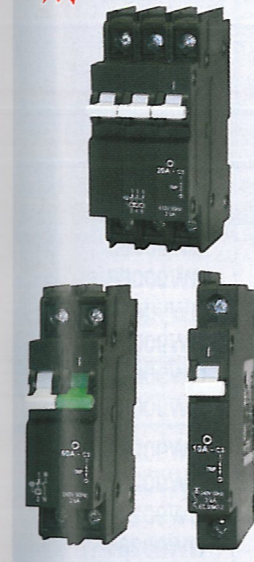


Code	Amps	Max. Internal Resistance	Derating Factor
Manual push reset			
A-0709U 4A	4	0-120Ω	0°C x1.46
A-0709U 5A	5	0-100Ω	10°C x1.35
A-0709U 6A	6	0-075Ω	15°C x1.14
A-0709U 7A	7	0-035Ω	18°C x1.11
A-0709U 8A	8	0-020Ω	25°C x1
A-0709U 10A	10	0-015Ω	32°C x0.92
A-0709U 12A	12	0-010Ω	40°C x0.81
A-0709U 15A	15	0-008Ω	60°C x0.58

MINI RAIL MINIATURE CIRCUIT BREAKERS (MCBs) 2.5kA



SA Range Modules 1M = 13mm



Amps	1 Pole Code	Width	1 P+N Code	Width	2 Pole Code	Width	3 Pole Code	Width	3 P+N Code	Width
2.5kA Circuit Breakers Curve 3										
1A	SA1-1	1M	-	2M	-	2M	-	3M	-	4M
2A	SA1-2	1M	-	2M	-	2M	-	3M	-	4M
5A	SA1-5	1M	SA1N-5	2M	SA2-5	2M	SA3-5	3M	SA3N-5	4M
10A	SA1-10	1M	SA1N-10	2M	SA2-10	2M	SA3-10	3M	SA3N-10	4M
15A	SA1-15	1M	SA1N-15	2M	SA2-15	2M	SA3-15	3M	SA3N-15	4M
20A	SA1-20	1M	SA1N-20	2M	SA2-20	2M	SA3-20	3M	SA3N-20	4M
25A	SA1-25	1M	SA1N-25	2M	SA2-25	2M	SA3-25	3M	SA3N-25	4M
30A	SA1-30	1M	SA1N-30	2M	SA2-30	2M	SA3-30	3M	SA3N-30	4M
35A	SA1-35	1M	SA1N-35	2M	SA2-35	2M	SA3-35	3M	SA3N-35	4M
40A	SA1-40	1M	SA1N-40	2M	SA2-40	2M	SA3-40	3M	SA3N-40	4M
45A	SA1-45	1M	SA1N-45	2M	SA2-45	2M	SA3-45	3M	SA3N-45	4M
50A	SA1-50	1M	SA1N-50	2M	SA2-50	2M	SA3-50	3M	SA3N-50	4M
63A	SA1-63	1M	SA1N-63	2M	-	2M	-	3M	-	4M

Isolators

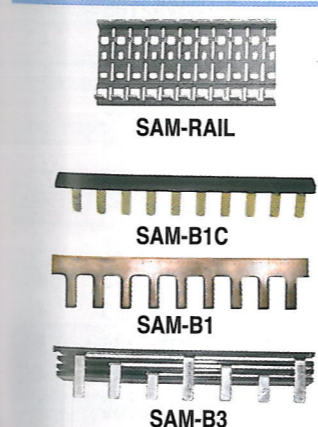
25A	SAS1-25	1M	-	-	SAS2-25	2M	SAS3-25	3M	SAS4-25	4M
40A	SAS1-40	1M	-	-	SAS2-40	2M	SAS3-40	3M	SAS4-40	4M
63A	SAS1-63	1M	-	-	SAS2-63	2M	SAS3-63	3M	SAS4-63	4M

Earth Leakage Relays RCDs 30mA

Amps	No Overload Protection				With Overload		
	2 Pole Code	Width	4 Pole Code	Width	Amps	2 Pole Code	Width
25A	SAE2-25	2M	SAE4-25	4M	25A	SAE2L-25	2M
40A	SAE2-40	2M	SAE4-40	4M	32A	SAE2L-32	2M
63A	SAE2-63	2M	SAE4-63	4M			

13mm Mini C/B Accessories

Code	Description
SAM-RAIL	Mini Rail for circuit breakers 77 Way/1m
SAM-B1C	Copper busbar for 13mm mini rail breakers 750mm long 1 Pole black insulated
SAM-B1	Copper busbar for 13mm mini rail breakers 750mm long 1 Pole non-insulated
SAM-B3	Copper busbar for 13mm mini rail breakers 750mm long 3 Pole black insulated
SAM-BLANK-WH	4½ way 13mm mini rail blanks, white
SAM-BLANK-BK	4½ Way 13mm mini rail blanks, black
SAM-NB	Neutral bar clip-in to rail Accommodates 16mm ² x 1, 7mm ² x 7



ENERGY CONTROL UNIT

Energy Control Units - Thermal Type with indication

Unit monitors primary load current (eg. stove/ oven) and disconnects a secondary load (eg. geyser) when full load current exceeds 125% of rated current of the unit. The secondary load will be reconnected when the primary load current falls below 85% of the rated current.

Mini Rail Mounting

Code 13mm Mini Rail	Rated at 230V 50Hz	Width	Resistive load @ 230V AC	Maximum Current	Code 17.5mm DIN Rail
SAM1-ECU05	5A	1m	3kW	5A	DIN-ECU05
SAM1-ECU10	10A	1m	3kW	10A	DIN-ECU10
SAM1-ECU16	16A	1m	3kW	25A	DIN-ECU16
SAM1-ECU25	25A	1m	3kW	40A	DIN-ECU25
SAM1-ECU32	32A	1m	3kW	50A	DIN-ECU32

Do not exceed maximum current ratings



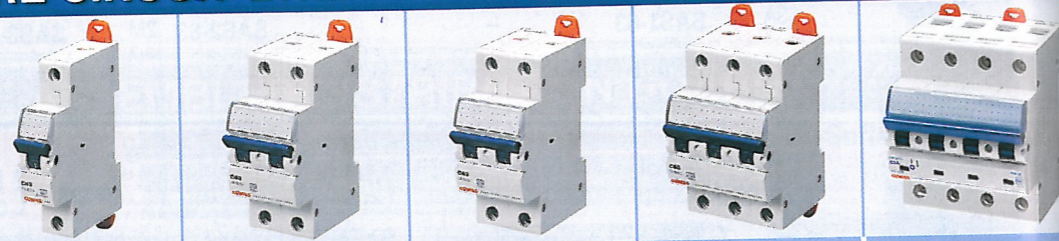
DIN MINIATURE CIRCUIT BREAKERS – COMPACT RANGE MTC



M = 1x Module Size: 18mm

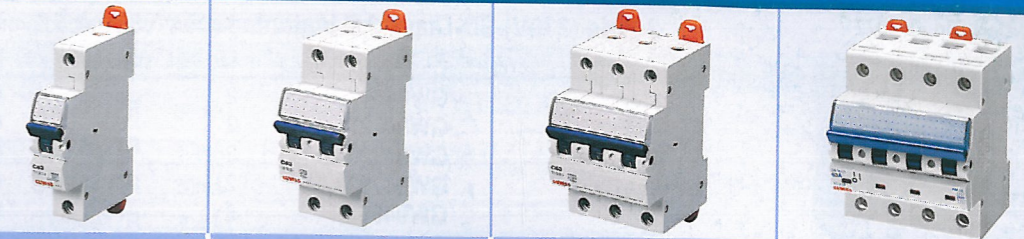
Icon	Type	In (A)	1P	M	1P+N	M	2P	M	3P	M	4P	M
Range MTC45 4.5kA (IEC60947-2) (IEC60898)	C	6	GW90005	1	GW90025	1	GW90045	1	GW90065	2	GW90085	2
		10	GW90006	1	GW90026	1	GW90046	1	GW90066	2	GW90086	2
		16	GW90007	1	GW90027	1	GW90047	1	GW90067	2	GW90087	2
		20	GW90008	1	GW90028	1	GW90048	1	GW90068	2	GW90088	2
		25	GW90009	1	GW90029	1	GW90049	1	GW90069	2	GW90089	2
		32	GW90010	1	GW90030	1	GW90050	1	GW90070	2	GW90090	2
Range MTC60 6kA (IEC60947-2)	C	6	-		GW90225	1	GW90245	1	GW90265	2	GW90285	2
		10	-		GW90226	1	GW90246	1	GW90266	2	GW90286	2
		16	-		GW90227	1	GW90247	1	GW90267	2	GW90287	2
		20	-		GW90228	1	GW90248	1	GW90268	2	GW90288	2
		25	-		GW90229	1	GW90249	1	GW90269	2	GW90289	2
		32	-		GW90230	1	GW90250	1	GW90270	2	GW90290	2

DIN MINIATURE CIRCUIT BREAKERS – STANDARD RANGE MT



Icon	Type	In (A)	1P	M	1P+N	M	2P	M	3P	M	4P	M
Range MT45 6kA (IEC60947-2)	C	6	GW92105	1	GW92125	2	GW92145	2	GW92165	3	GW92185	4
		10	GW92106	1	GW92126	2	GW92146	2	GW92166	3	GW92186	4
		16	GW92108	1	GW92128	2	GW92148	2	GW92168	3	GW92188	4
		20	GW92109	1	GW92129	2	GW92149	2	GW92169	3	GW92189	4
		25	GW92110	1	GW92130	2	GW92150	2	GW92170	3	GW92190	4
		32	GW92111	1	GW92131	2	GW92151	2	GW92171	3	GW92191	4
Range MT60 10kA (IEC60947-2)	C	40	GW92112	1	GW92132	2	GW92152	2	GW92172	3	GW92192	4
		1	GW92001	1	GW92021	2	GW92041	2	GW92061	3	GW92081	4
		2	GW92002	1	GW92022	2	GW92042	2	GW92062	3	GW92082	4
		3	GW92003	1	GW92023	2	GW92043	2	GW92063	3	GW92083	4
		4	GW92004	1	GW92024	2	GW92044	2	GW92064	3	GW92084	4
		6	GW92005	1	GW92025	2	GW92045	2	GW92065	3	GW92085	4
		10	GW92006	1	GW92026	2	GW92046	2	GW92066	3	GW92086	4
		16	GW92007	1	GW92027	2	GW92047	2	GW92067	3	GW92087	4
		20	GW92008	1	GW92028	2	GW92048	2	GW92068	3	GW92088	4
		25	GW92009	1	GW92029	2	GW92049	2	GW92069	3	GW92089	4
Range MT60 6kA (IEC60898)	D	32	GW92010	1	GW92030	2	GW92050	2	GW92070	3	GW92090	4
		40	GW92011	1	GW92031	2	GW92051	2	GW92071	3	GW92091	4
		50	GW92012	1	GW92032	2	GW92052	2	GW92072	3	GW92092	4
		63	GW92013	1	GW92033	2	GW92053	2	GW92073	3	GW92093	4
		6	GW92405	1	-	GW92445	2	GW92465	3	GW92485	4	
		10	GW92406	1	-	GW92446	2	GW92466	3	GW92486	4	
		16	GW92407	1	-	GW92447	2	GW92467	3	GW92487	4	
		20	GW92408	1	-	GW92448	2	GW92468	3	GW92488	4	
		25	GW92409	1	-	GW92449	2	GW92469	3	GW92489	4	
		32	GW92410	1	-	GW92450	2	GW92470	3	GW92490	4	
40	GW92411	1	-	GW92451	2	GW92471	3	GW92491	4			

DIN MINIATURE CIRCUIT BREAKERS – HIGH kA



M = 1x Module Size: 18mm

Icon	Type	In (A)	1P	M	2P	M	3P	M	4P	M		
Range MT100 15kA (IEC60947-2)	C	6	GW92605	1	GW92645	2	GW92665	3	GW92685	4		
		10	GW92606	1	GW92646	2	GW92666	3	GW92686	4		
		16	GW92607	1	GW92647	2	GW92667	3	GW92687	4		
		20	GW92608	1	GW92648	2	GW92668	3	GW92688	4		
		25	GW92609	1	GW92649	2	GW92669	3	GW92689	4		
		32	GW92610	1	GW92650	2	GW92670	3	GW92690	4		
		40	GW92611	1	GW92651	2	GW92671	3	GW92691	4		
		50	GW92612	1	GW92652	2	GW92672	3	GW92692	4		
		63	GW92613	1	GW92653	2	GW92673	3	GW92693	4		
		10kA (IEC60898)	D	1	GW92701	1	GW92741	2	GW92761	3	GW92781	4
				2	GW92702	1	GW92742	2	GW92762	3	GW92782	4
				3	GW92703	1	GW92743	2	GW92763	3	GW92783	4
4	GW92704			1	GW92744	2	GW92764	3	GW92784	4		
6	GW92705			1	GW92745	2	GW92765	3	GW92785	4		
10	GW92706			1	GW92746	2	GW92766	3	GW92786	4		
16	GW92707			1	GW92747	2	GW92767	3	GW92787	4		
20	GW92708			1	GW92748	2	GW92768	3	GW92788	4		
25	GW92709			1	GW92749	2	GW92769	3	GW92789	4		
32	GW92710			1	GW92750	2	GW92770	3	GW92790	4		
40	GW92711			1	GW92751	2	GW92771	3	GW92791	4		
Range MTHP160 16kA	C			80	GW93307	1.5	GW93327	3	GW93337	4.5	GW93347	6
		100	GW93308	1.5	GW93328	3	GW93338	4.5	GW93348	6		
		125	GW93309	1.5	GW93329	3	GW93339	4.5	GW93349	6		
		63	GW93356	1.5	GW93376	3	GW93386	4.5	GW93396	6		
		80	GW93357	1.5	GW93377	3	GW93387	4.5	GW93397	6		
		100	GW93358	1.5	GW93378	3	GW93388	4.5	GW93398	6		
Range MT250 25kA	C	16	GW92807	1	GW92847	2	GW92867	3	GW92887	4		
		20	GW92808	1	GW92848	2	GW92868	3	GW92888	4		
		25	GW92809	1	GW92849	2	GW92869	3	GW92889	4		
		32	GW92810	1	GW92850	2	GW92870	3	GW92890	4		
		40	GW92811	1	GW92851	2	GW92871	3	GW92891	4		
		50	GW92812	1	GW92852	2	GW92872	3	GW92892	4		
		63	GW92813	1	GW92853	2	GW92873	3	GW92893	4		

*B Curve available on request

16kA at 10kA Prices

ISOLATORS 400V

Amps	1P	M	2P	M	3P	M	4P	M
32A	GW96104	1	GW96114	2	GW96124	3	GW96134	4
63A	GW96146	1	GW96156	2	GW96166	3	GW96176	4
80A	GW96147	1	GW96157	2	GW96167	3	GW96177	4
100A	GW96148	1	GW96158	2	GW96168	3	GW96178	4
125A	GW96149	1	GW96159	2	GW96169	3	GW96179	4

STANDARD EARTH LEAKAGE RELAYS (RCCBs)

RCC Cert. No. 057077

2 Pole (230V) SD-Class AC Instantaneous no overload protection

Rated Current	Code 30mA	No. of Mod	Code 300mA	No. of Mod
25A	GW94617	2	GW94619	2
40A	GW94627	2	GW94629	2
63A	GW94790	2	GW94792	2
80A	GW94793	2	GW94795	2
100A	GW94652	3	GW94653	3

4 Pole (400V + N)

25A	GW94662	3	GW94664	3
40A	GW94667	3	GW94669	3
63A	GW94757	4	GW94759	4
80A	GW94761	4	GW94766	4
100A	GW94777	4	GW94779	4
125A	GW95601	4	GW95603	4

2 Pole (230V) 4.5kA MDC45 Class A (E.L.R.) with overload protection

Rated Current	Code 30mA	No. of Mod	Code 300mA	No. of Mod
16A	GW94227	2	GW94237	2
20A	GW94228	2	GW94238	2
25A	GW94229	2	GW94239	2
32A	GW94230	2	GW94240	2

4 Pole (400V + N)

25A	GW94269	4	GW94279	4
32A	GW94270	4	GW94280	4

Add-on Residual Current devices (RCBOs) Class AC Instantaneous

Current	Code	ImA	No. of Mod	Current	Code	ImA	No. of Mod
3-Pole (400V)							
63A	GW94449	300mA	3.5	25A	GW94402	30mA	2
125A	GW95418	300mA	6	63A	GW94412	30mA	2
2-Pole							
				125A	GW95406	30mA	4
4-Pole (400V + N)							
63A	GW94433	300mA	3.5				
125A	GW95428	300mA	6				

DIN MCB's, RCBs & ACCESSORIES

0142 Authorisation Cert. No. 0509122

Accessories for DIN MCBs and RCBs

Code	Contact Rating	Type	Description
GW96001	6A @ 230V 3A @ 400V	Auxiliary	Signals the position of switch contacts, when switched on or tripped
GW96006	6A @ 230V 3A @ 400V	Alarm Contact	Indicates the automatic opening of the circuit breaker caused by overloading, shortcircuiting or earth fault
GW96012	110-415AC	Shunt Trip	Used for tripping the circuit breaker to which they are mounted on
GW96016	230VAC	Under Voltage Release	300mS delay. Release Voltage -Un -55%
GW96041			To lock lever in 'on' or 'off' position. For lock size 8mm Ø

Busbars

Code	Description	Caps
AS-25-SN	Busbar terminal for wire sizes up to 25mm ²	-
S1L-1000/16	Insulated busbar 1 phase 63Amps, 1000mm, 56 poles.	-
S2L-1000/16	Insulated busbar 2 phase 63Amps, 1000mm, 56 poles.	EK-B-2+3
S3L-1000/16	Insulated busbar 3 phase 63Amps, 1000mm, 56 poles.	EK-B-2+3
GW40423	DIN Blanks, 17.5mm wide, 4 1/2 Modules per strip	



Application



GW96041

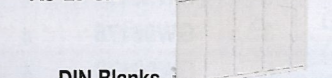


S1L-1000/16



AS-25-SN

End Cap



DIN Blanks

RESTART EARTH LEAKAGE

NO Auxiliary contact output

RESTART

• With Auxiliary contact output

RESTART

NEW

RESTART

NEW 4 POLE RESTART

RESTART

NEW

RESTART

2 Pole (230V) Restart Earth Leakage no overload protection

Code	Idn	Rated Current	Type	Nominal Voltage	No. Modules	No. Poles
GW94817R	30mA	25A	A	230V	4	2
GW94827R	30mA	40A	A	230V	4	2
GW94837R	30mA	63A	A	230V	4	2
GW94847R	30mA	80A	A	230V	4	2

2 Pole (230V) Restart Earth Leakage Autotest no overload protection

Code	Idn	Rated Current	Type	Nominal Voltage	No. Modules	No. Poles
GW90901	30mA	25A	A	230V	5	2
GW90902	30mA	40A	A	230V	5	2

- System with auto reset and weekly self-diagnosis of the earth leakage functions.
- Self-diagnosis on the residual current device test is run without turning off the system's power supply.
- Function LEDs and programmable auxiliary contact.
- Rated supply - 230V 50Hz, -15+10%.
- Auxiliary can be programmed for 1Hz pulse for bell/buzzer or steady state for telephone dialler or other home management system. This is achieved by using internal bypass contacts during the test.

2 Pole (230V) Restart Earth Leakage Pro no overload protection

Code	Idn	Rated Current	Type	Nominal Voltage	No. Modules	No. Poles
GW94817P	30mA	25A	A	230V	4	2
GW94827P	30mA	40A	A	230V	4	2
GW94837P	30mA	63A	A	230V	4	2
GW94847P	30mA	80A	A	230V	4	2

Tests every 15 minutes in case of a fault.

4 Pole (400V) Restart Earth Leakage Pro no overload protection

Code	Idn	Rated Current	Type	Nominal Voltage	No. Modules	No. Poles
GW94867P	30mA	25A	A	400V	6	4
GW94897P	30mA	40A	A	400V	6	4
GW94937P	30mA	63A	A	400V	7	4

Same as Restart Pro Plus.

Tests every 15 minutes in case of a fault.

4 Pole (400V) Restart Earth Leakage Autotest Pro no overload protection

Code	Idn	Rated Current	Type	Nominal Voltage	No. Modules	No. Poles
GW90921	30mA	25A	A	400V	7	4
GW90922	30mA	40A	A	400V	7	4
GW90923	30mA	63A	A	400V	7	4

Same as 2P Autotest Plus.

Tests every 15 minutes in case of a fault.

Add-on Restart Rd for SD earth leakage relays without overload protection

Code	Idn	Description	No. Modules	No. Poles
GW90966	30mA	Suitable for SD E.L.R. 2 Pole or 4 Pole	3	2

Build your own Restart Earth Leakage Relay.

Take GW90966 and any 2 or 4 pole RCCB to complete restart E.L.R.

Restart Rd will only check for earth fault.

Add-on Restart Rm for RCBO (residual current breakers with over current protection)

Code	Description	No. Modules	No. Poles
GW90986	Suitable for RCBO, 1P + N, 2P, 3P & 4P	3	2

No expensive call outs to reset an earth leakage! Restart Rm checks for both earth fault and short circuit before reclosing circuit breaker ≤10s after tripping.

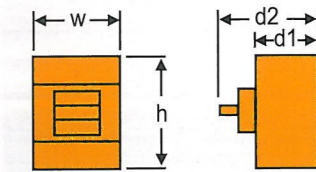
* Also available in 300mA

TEMBREAK MCCBs



E125-NJ

Plug-in conversion kits available



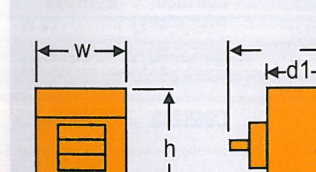
Dimensions

		25kA Adjustable Settings		
	3-Pole	E125-NJ	E250-NJ	E400-NJ
	4-Pole	E125-NJ4	E250-NJ4	E400-NJ4
Nominal Current Ratings -5 to 50°C 2000m		20A (12.5-20)	250A	400A
		32A (20-32)	(160-250)	(250-400)
		50A (32-50)		
		63A (40-63)		
		100A (63-100)		
	125A (80-125)			
Ratings:	Ui / Ue	800/525V	800/525V	800/525V
	Icu 400/415V	25kA	25kA	25kA
	Icu 525V	8kA	10kA	15kA
Protection:	Thermal	0.63-1 x In	0.63-1 x In	0.63-1 x In
	Magnetic	6-12 x In	6-13 x In	6-12 x In
Dimensions	h	155mm	165mm	260mm
	d1	68mm	68mm	103mm
	d2	92mm	92mm	145mm
	w-3P	90mm	105mm	140mm
	w-4P	120mm	140mm	185mm
	Max Panel depth with VDH	543mm	543mm	610mm



S125-NJ

Plug-in conversion kits available



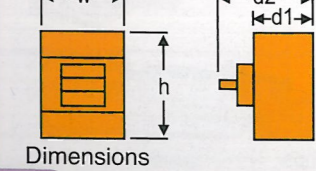
Dimensions

		36kA Adjustable Settings				
	3-Pole	S125-NJ	S160-NJ	S250-NJ	S400-CJ	E630-NE
	4-Pole	S125-NJ4	S160-NJ4	S250-NJ4	S400-CJ4	E630-NE4
Nominal Current Ratings -5 to 50°C 2000m		20A (12.5-20)	160A	200A (126-200)	400A	630A
		32A (20-32)	(100-160)	250A (160-250)	(250-400)	(250-630)
		50A (32-50)				
		63A (40-63)				
		100A (63-100)				
		125A (80-125)				
Ratings:	Ui / Ue	800/690V	800/690V	800/690V	800/690V	800/690V
	Icu 400/415V	36kA	36kA	36kA	36kA	36kA
	Icu 525V	22kA	25kA	25kA	22kA	15kA
Protection:	Thermal	0.63-1 x In	0.63-1 x In	0.63-1 x In	0.63-1 x In	Electronic
	Magnetic	6-12 x In	6-13 x In	6-13 x In	6-12 x In	
Dimensions	h	155mm	165mm	165mm	260mm	260mm
	d1	68mm	68mm	68mm	103mm	103mm
	d2	92mm	92mm	92mm	145mm	145mm
	w-3P	90mm	105mm	105mm	140mm	140mm
	w-4P	120mm	140mm	140mm	185mm	185mm
	Max Panel depth with VDH	543mm	543mm	543mm	610mm	610mm



S400-NJ

Plug-in conversion kits available



Dimensions

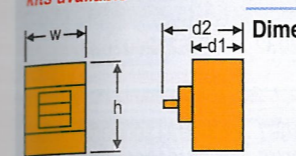
		50kA Adjustable Settings			
	3-Pole	S400-NJ	S630-CE	XS800-NJ	XS1250-CE
	4-Pole	S400-NJ4	S630-CE4	XS800-NJ4	-
Nominal Current Ratings S & E: -5 to 50°C 2000m XS: -5 to 40°C 2000m		400A (250-400)	630A (250-630)	800A (500-800)	1000A (500-1000)
					1250A (630-1250)
Ratings:	Ui / Ue	800/690V	800/690V	690/690V	690/690V
	Icu 400/415V	50kA	50kA	50kA	50kA
	Icu 525V	30kA	30kA	35kA	35kA
Protection:	Thermal	0.63-1 x In		0.63-1 x In	
	Magnetic	6-12 x In	Electronic	3-12 x In	Electronic
Dimensions	h	260mm	260mm	273mm	370mm
	d1	103mm	103mm	103mm	120mm
	d2	145mm	145mm	145mm	171mm
	w-3P	140mm	140mm	210mm	210mm
	w-4P	185mm	185mm	280mm	280mm
	Max Panel depth with VDH	610mm	610mm	484mm	515mm

TEMBREAK MCCBs



S250-GJ

Plug-in conversion kits available



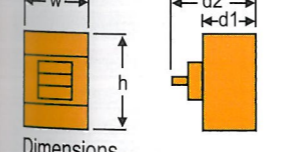
Dimensions

		65kA Adjustable Settings			70kA Adjustable Settings	
	3-Pole	S125-GJ	S160-GJ	S250-GJ	S400-GJ	S630-GE
	4-Pole	S125-GJ4	S160-GJ4	S250-GJ4	S400-GJ4	S630-GE4
Nominal Current Ratings -5 to 50°C 2000m		20A (12.5-20)	160A (100-160)	200A (126-200)	400A	630A (250-630)
		32A (20-32)		250A (160-250)	(250-400)	
		50A (32-50)				
		63A (40-63)				
		100A (63-100)				
		125A (80-125)				
Ratings:	Ui / Ue	800/690V	800/690V	800/690V	800/690V	800/690V
	Icu 400/415V	65kA	65kA	65kA	70kA	70kA
	Icu 525V	25kA	25kA	25kA	30kA	30kA
Protection:	Thermal	0.63-1 x In	0.63-1 x In	0.63-1 x In	0.63-1 x In	Electronic
	Magnetic	6-12 x In	6-13 x In	6-13 x In	6-12 x In	
Dimensions	h	155mm	165mm	165mm	260mm	260mm
	d1	68mm	68mm	68mm	103mm	103mm
	d2	92mm	92mm	92mm	145mm	145mm
	w-3P	90mm	105mm	105mm	140mm	140mm
	w-4P	120mm	140mm	140mm	185mm	185mm
	Max Panel depth with VDH	543mm	543mm	543mm	610mm	610mm



XS1250-SE

Plug-in conversion kits available in 1250A only



Dimensions

		85kA Adj Settings		100kA Adjustable Settings	
	3-Pole	XS1250-SE	XS1600-SE	XS2000-NE	
	4-Pole	XS1250-SE4	XS1600-SE4	-	
Nominal Current Ratings 5 to 50°C 2000m		1000A (500-1000A)	1600A (800-1600)	2000A (1000-2000)	
		1250A (630-1250)			
Ratings:	Ui / Ue	800/690V	800/690V	800/690V	
	Icu 400/415V	85kA	100kA	100kA	
	Icu 525V	45kA	65kA	65kA (500V)	
Protection:	Thermal	Electronic	Electronic	Electronic	
	Magnetic				
Dimensions	h	370mm	370mm	450mm	
	d1	120mm	140mm	225mm	
	d2	171mm	191mm	285mm	
	w-3P	210mm	210mm	-	
	w-4P	-	-	-	
	Max panel depth with VDH	515mm	535mm	320 mm	

MCCBs WITH INTEGRATED EARTH LEAKAGE PROTECTION



240-525VAC Suitable for Single Phase installation

		MCCBs WITH INTEGRATED EARTH LEAKAGE PROTECTION					
	3-Pole	ZE125-NJ	ZS125-NJ	ZS125-GJ	ZE250-NJ	ZS250-NJ	ZS250-GJ
	4-Pole	ZE125-NJ4	ZS125-NJ4	ZS125-GJ4	ZE250-NJ4	ZS250-NJ4	ZS250-GJ4
Current		20A (12.5-20)	20A (12.5-20)	20A (12.5-20)	250A	250A	250A
Rating		32A (20-32)	32A (20-32)	32A (20-32)	(160-250)	(160-250)	(160-250)
In		50A (32-50)	50A (32-50)	50A (32-50)			
		63A (40-63)	63A (40-63)	63A (40-63)			
		100A (63-100)	100A (63-100)	100A (63-100)			
		125A (80-125)	125A (80-125)	125A (80-125)			
AC Breaking Capacity:	Icu 400V/415V	25kA	36kA	65kA	25kA	36kA	65kA
	525V	8kA	22kA	25kA	10kA	25kA	25kA
Protection:	Earth Leakage	30mA - 3A	30mA - 3A	30mA - 3A	30mA - 3A	30mA - 3A	30mA - 3A
	Thermal	0.63-1 x In	0.63-1 x In	0.63-1 x In	0.63-1 x In	0.63-1 x In	0.63-1 x In
	Magnetic Fixed	10-12 x In	10-12 x In	10-12 x In	10-13 x In	10-13 x In	10-13 x In
Dimensions	see CB	E125	S125	S125	E250	S250	S250

For accessories see page 120