

## SWITCHES



### ENCLOSED ISOLATORS

- Isolators with padlock handles
- Isolators with auxiliaries available on request
- Interlock in On position
- Protection rating: IP66

Product Code	Supplier Code	Dimensions HxWxD	Rating A	kW
<b>3 Pole</b>				
L0001018	H216-41300-700N4	125 x 100 x 85	20	5.5
L0001026	H220-41300-700N4		25	7.5
L0001035	H226-41300-700N4		32	11
L0001045	H233-41300-710N4	175 x 115 x 100	40	15
L0001052	B263-41300-710N4		63	22
<b>3 Poles and Neutral</b>				
L0001056	H406-41300-730N4	250 x 160 x 120	63	22
L0001065	H408-41300-730N4		80	30
L0001076	H410-41300-730N4		100	37
<b>3 Poles and Auxiliary</b>				
L0001084	H412-41300-477N4	320 x 220 x 180	125	45



### BASE MOUNT ISOLATORS

- Isolators with extension shaft + padlock handle + door interlock, metal shaft not included. Please order separately
- Protection rating: IP66

Product Code	Supplier Code	Dimensions HxWxD	Rating A	kW
<b>3 Pole</b>				
L0001017	H216-41300-281N4	70 x 36 x 300	20	5.5
L0001025	H220-41300-281N4		25	7.5
L0001034	H226-41300-281N4		32	11
L0001044	H233-41300-281N4		40	15
L0001051	B263-41300-281N4	72 x 50 x 300	63	22
L0001057	H406-41300-281N4	80 x 70 x 300	63	22
L0001066	H408-41300-281N4		80	30
L0001077	H410-41300-281N4		100	37
L0001083	H412-41300-281N4	80 x 70 x 300	125	45



### PANEL MOUNT ISOLATORS

- Isolator with padlock handles
- Isolators with auxiliaries available on request
- Protection rating: IP66

Product Code	Supplier Code	Dimensions HxWxD	Rating A	kW
3 Pole				
L0001015	H216-41300-033M4	70 x 36 x 60	20	5.5
L0001022	H220-41300-033M4		25	7.5
L0001033	H226-41300-033M4		32	11
L0001042	H233-41300-033M4		40	15
L0001050	B263-41300-281M4	70 x 50 x 60	63	22
-	H406-41300-033M4	80 x 70 x 75	63	22
L0001063	H408-41300-033M4		80	30
L0001074	H410-41300-033M4		100	37
L0001082	H412-41300-033M4		125	45



### PANEL MOUNT ROTARY CAM SWITCHES

- Front mounting/two hole mounting 20mm
- With black handle Off-On
- Auxillary contacts, neutrals and additional main poles are available on request
- Protection rating: IP66

Product Code	Supplier Code	Rating A
1 Pole		
L0001239	M220-61001-003M1	20
L0003122	M225-61001-003M1	25
-	T225-61001-003M1	32
2 Pole		
L0001240	M220-61002-003M1	20
L0003123	M225-61002-003M1	25
-	T225-61002-003M1	32
3 Pole		
L0001243	M220-61003-003M1	20
-	M225-61003-003M1	25
-	T225-61003-003M1	32
4 Pole		
-	M220-61004-003M1	20
-	M225-61004-003M1	25
-	T225-61004-003M1	32

**Note** Items above with (-) in the Product Code column are available on special request.



### CHANGE-OVER SWITCHES WITH CENTRE OFF

- 1-0-2 Panel mount

Product Code	Supplier Code	Dimensions HxWxD	Rating A
<b>1 Pole</b>			
L0001245	M220-61025-003M1	48 x 48 x L	20
-	M225-61025-003M1		25
L0003209	T225-61025-003M1		32
-	S432-61025-003M1	64 x 64 x L	50
-	S440-61025-003M1		63
L0003169	S606-61025-003M1	88 x 88 x L	80
-	S608-61025-003M1		100
-	S612-61025-003M1		160
L0003197	S825-61025-003M1	130 x 130 x L	315
<b>2 Pole</b>			
L0001247	M220-61026-003M1	48 x 48 x L	20
D0007405	M225-61026-003M1		25
L0003210	T225-61026-003M1		32
-	S432-61026-003M1	64 x 64 x L	50
-	S440-61026-003M1		63
L0003170	S606-61026-003M1	88 x 88 x L	80
L0003178	S608-61026-003M1		100
L0003186	S612-61026-003M1		160
-	S825-61026-003M1	130 x 130 x L	315
<b>3 Pole</b>			
L0001250	M220-61027-003M1	48 x 48 x L	20
L0004271	M225-61027-003M1		25
L0003211	T225-61027-003M1		32
L0001297	S432-61027-003M1	64 x 64 x L	50
D0007417	S440-61027-003M1		63
-	S606-61027-003M1	88 x 88 x L	80
L0003180	S608-61027-003M1		100
L0003187	S612-61027-003M1		160
L0003198	S825-61027-003M1	130 x 130 x L	315
<b>4 Pole</b>			
L0001252	M220-61028-003M1	48 x 48 x L	20
L0003125	M225-61028-003M1		25
L0003212	T225-61028-003M1		32
L0003154	S432-61028-003M1	64 x 64 x L	50
L0001305	S440-61028-003M1		63
L0003172	S606-61028-003M1	88 x 88 x L	80
L0003181	S608-61028-003M1		100
D0007403	S612-61028-003M1		160
L0003199	S825-61028-003M1	130 x 130 x L	315

**Note** Items above with (-) in the Product Code column are available on special request.

### PANEL MOUNT MOTOR SWITCHES



Product Code	Supplier Code	Dimensions HxWxD	Rating A
<b>Reversing 3 Phase</b>			
L0001281	M220-61211-003M1	48 x 48 x 70	20
-	M225-61211-003M1		25
L0004263	T225-61211-003M1	48 x 48 x 75	32
-	S432-61211-003M1		50
-	S440-61211-003M1	64 x 64 x 100	63
<b>2-Speed 3 Phase</b>			
L0001283	M220-61212-003M1	48 x 48 x 70	20
-	M225-61212-003M1		25
L0004244	T225-61212-003M1	48 x 48 x 75	32
-	S432-61212-003M1		50
-	S440-61212-003M1	64 x 64 x 100	63
<b>Star Delta 3 Phase</b>			
-	M220-61200-003M1	48 x 48 x 70	20
L0003123	M225-61200-003M1		25
L0003554	T225-61200-003M1	48 x 48 x 75	32
-	S432-61200-003M1		50
-	S440-61200-003M1	64 x 64 x 100	63

**Note** Items above with (-) in the Product Code column are available on special request.

## SWITCHES



### PANEL MOUNT MOTOR SWITCHES

Product Code	Supplier Code	Dimensions HxWxD	Rating A
Reversing 3 Phase			
L0001281	M220-61211-003M1	48 x 48 x 70	20
-	M225-61211-003M1		25
L0004263	T225-61211-003M1	48 x 48 x 75	32
-	S432-61211-003M1		50
-	S440-61211-003M1	64 x 64 x 100	63
2-Speed 3 Phase			
L0001283	M220-61212-003M1	48 x 48 x 70	20
-	M225-61212-003M1		25
L0004244	T225-61212-003M1	48 x 48 x 75	32
-	S432-61212-003M1		50
-	S440-61212-003M1	64 x 64 x 100	63
Star Delta 3 Phase			
-	M220-61200-003M1	48 x 48 x 70	20
L0003123	M225-61200-003M1		25
L0003554	T225-61200-003M1	48 x 48 x 75	32
-	S432-61200-003M1		50
-	S440-61200-003M1	64 x 64 x 100	63



### PANEL MOUNT MOTOR SWITCHES

- Voltmeter switches

Product Code	Supplier Code	Dimensions HxWxD	Rating A
4 Position			
-	OFF-RW-WB-BR	48 x 48 x 70	16
7 Position			
-	BN-WR-RN-OFF RW-WB-BR	48 x 48 x 70	16



### PANEL MOUNT MOTOR SWITCHES

- Ammeter switches

Product Code	Supplier Code	Dimensions HxWxD	Rating A
3 CTS			
L0003103	M220-61312-003M1	48 x 48 x 70	20
Direct			
-	M220-61328-003M1	48 x 48 x 70	20

**Note** Items above with (-) in the Product Code column are available on special request.



### ENCLOSED ISOLATORS

- "ME" series
- Size: 120 x 80mm
- Rated voltage: 240 to 415 VAC
- Threaded entries: top and bottom
- Padlockable in Off position
- Drain hole to eliminate condensation
- Protection rating: IP66

Product Code	Supplier Code	Rating A
2 Pole		
L0001934	MED220	20
-	MED225	25
L0001935	MED232	32
3 Pole + N		
L0002293	MET320	20
-	MET325	25
L0002294	MET332	32
4 Pole		
L0001936	MEF320	20
L0001937	MEF325	25
-	MEF332	32



### ENCLOSED ISOLATORS

- "E" series
- Size: 165 x 82mm
- Rated voltage: 240 to 415 VAC
- Threaded entries: top and bottom
- Padlockable in Off position
- Drain hole to eliminate condensation
- Protection rating: IP56

Product Code	Supplier Code	Rating A
2 Pole		
L0001398	WPD20ADP	20
-	WPD25ADP	25
L0001400	WPD32ADP	32
L0001943	WPD45ADP	45
L0001402	WPD63ADP	63
3 Pole + N		
L0001399	WPD20ATP	20
-	WPD25ATP	25
L0001401	WPD32ATP	32
-	WPD45ATP	45
L0001403	WPD63ATP	63
4 Pole		
-	EF420	20
-	EF425	25
-	EF432	32
-	EF345	45
-	EF363	63

**Note** Items above with (-) in the Product Code column are available on special request.

## ENCLOSED ISOLATORS



### WEATHERPROOF SWITCHED SOCKET OUTLET

- "ESS" series
- Size: 225 x 100 x 80mm
- Rated voltage: 250 VAC, 50/60Hz
- Rated current: 16A
- Threaded entries: top and bottom
- Cable entry: 1 x 25mm threaded entry
- UV resistant
- Padlockable in Off position
- Protection rating: IP66

Product Code	Supplier Code	Rating A
L0001941	ESS1666/S Mini	16
L0001940	ESS1666	16



### WEATHERPROOF UNSWITCHED SOCKET OUTLET

- "WUS" series
- Size: 100 x 100 x 90mm
- Rated voltage: 250 VAC, 50/60Hz
- Rated current: 16A
- Threaded entries: top and bottom
- Cable entry: 1 x 25mm threaded entry
- UV resistant
- Protection rating: IP66

Product Code	Supplier Code	Rating A
L0001945	WSU1666	16



### SURFACE MOUNT SWITCH SOCKET

- "M" series Switch Plug 3x3
- Metal clad surface mounted switch socket outlet
- Rated current: 16A
- Rated voltage: 250V AC
- Protection rating: IP66

Product Code	Supplier Code	Rating A
A0001975	GSSSO	16



### ALUMINIUM FIREMAN SWITCH "FS" - SERIES

Product Code	Supplier Code	Type	Current (A)
A0001577	FS220	2 Pole	20
L0003265	FS232	2 Pole	32



### BUSCH-DIN METAL CLAD

- Socket
- Wall mounted switch and interlocked (WACO System)
- Protection rating: IP44

Product Code	Supplier Code	Rating (A)	Pins P	Voltage (V)
A0000386	61425	25	3 + Earth	500
A0000387	61440	40		
A0000388	61463	63		



### BUSCH-DIN METAL CLAD

- Epoxy-coated, cast-aluminium housing
- Abrasion resistant
- High impact strength
- Protection rating: IP44

Product Code	Supplier Code	Rating (A)	Pins P	Voltage (V)
L0001405	61025	25	3 + Earth	500
L0001406	61040	40		
L0001407	61063	63		



### NOVA

- Socket
- Epoxy-coated, cast-aluminium housing
- Wall mounted switch
- Protection rating: IP44

Product Code	Supplier Code	Rating (A)	Pins P	Voltage (V)
A0000391	4084	16	3 + Earth	380
A0000392	4085	25		



### NOVA

- Plug
- Nylon housing
- Abrasion resistant
- High impact strength
- Protection rating: IP44

Product Code	Supplier Code	Rating (A)	Pins P	Voltage (V)
L0001408	2384	16	3 + Earth	380
L0001409	2385	25		





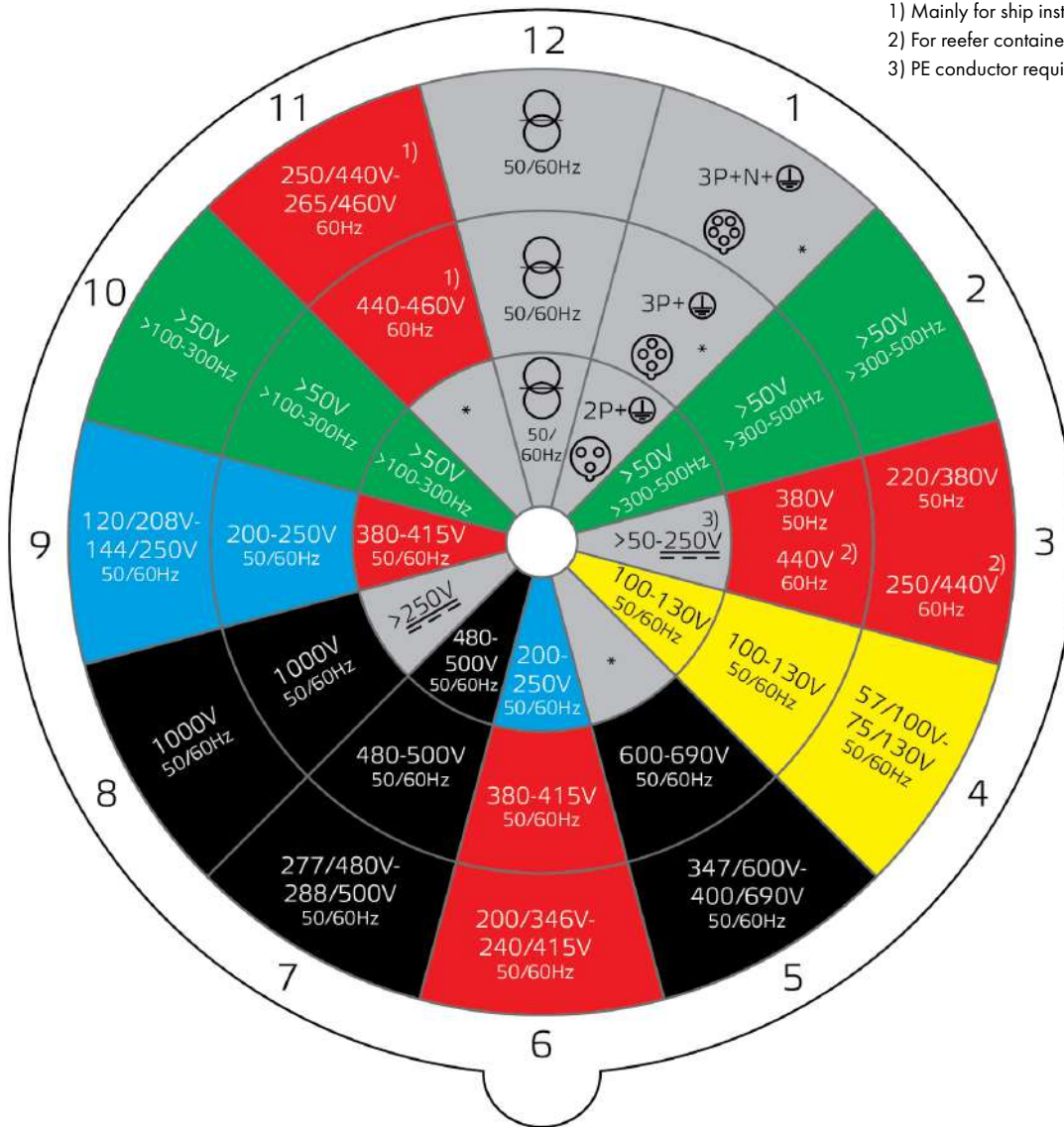
### METAL CLAD 63A SOCKET OUTLET

- Wall mounted, switch and interlocked
  - Switch socket outlet with earth leakage
  - Device and isolator
- Technical details:
- Colour: electric orange
  - RAL B26
  - Cable entries:
    - Top: 2x 25mm
    - Bottom: 1x 25mm
  - Standard socket:
    - 63A 4 pin & 5 pin 380V
    - 63A 4 pin & 5 pin 500V
  - Also with 525V earth leakage circuit breaker 30mA
  - Protection rating: IP55

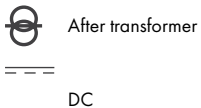
Product Code	Supplier Code	Rating (A)	Pins P	Voltage (V)
3 Pins + Earth				
L0002575	1253646-COMBI	63	4	380
L0002577	1253647-COMBI		4	500
3 Pins Neutral + Earth				
L0002578	1253656-COMBI	63	5	380
L0002579	1253657-COMBI		5	500



The illustration shows the position of the protective contact of a socket (front view) with rated operating voltages above 50 V, in accordance with DIN EN 60309-2. Plugs and inlets are mirror-inverted.



- 1) Mainly for ship installations
- 2) For reefer containers only (ISO standardised)
- 3) PE conductor required



\* All other configurations not covered by the rated operating voltage and/or frequencies. This clock face position can be additionally used in special applications when a distinction to standardised positions is required.

# POWER PRODUCTS

## INDUSTRIAL PLUGS AND SOCKETS



			SOCKET - OUTLETS										
			IP44	IP67	IP44	IP67	IP44	IP67	IP44	IP67	IP44	IP67	IP55
Volts	Amperes	No. of Pins											
			110V	16A	3		83134				103134	112134	
	32A	3											
	63A	3											
200V-250V	16A	3	82136	83136	92136	93136	101136	103136	112136	113136		123136	
	32A	3	82336	83336	92336	93336	101336	103336	112336	113336	122336	123336	
	63A	3		83636	92636	93636		103636					
	125A	3											
380V-415V	16A	4	82146	83146	92146	93146	101146		112146	113146		123146	
		5	82156	83156	92156	93156	101156	103156	112156	113156		123156	
		7	82176		92176	93176		103176					
	32A	4	Container Socket	83343				103343			Container Socket	123343	
		4	82346	83346	92346	93346	101346	103346	112346	113346	122346	123346	
		5	82356	83356	92356	93356	101356	103356	112356	113356	122356	123356	
	63A	7	82376		92376								
		4	82646	83646	92646	93646		103646					1253646
	125A	5	82656	83656	92656	93656		103656					1253656
		4				93846		103846					123846
500V (52.5)	16A	5				93856						123856	
		4	82147	83147	92147	93147			112147	113147		123147	
	32A	4	82347	83347	92347			103347	112347	113347		123347	
		4				93647							1253647
	63A	5											1253657
		4		83847									123847
	125A	5											123857

### Caravan Inlets

### Caravan and Marine Plugs and Sockets



Product Code: L0001890

Product Code: L0001808

Product Code: L0000470

Product Code: L0000420

Supplier Code: 262136-01

Supplier Code: 262136

Supplier Code: 301136

Supplier Code: 201136



Surface Mounting Switch with Interlock	PLUGTOPS		APPLIANCE INLETS				COUPLERS			Complies with: DIN 49462/63 VDE 0623 IEC 60309-1/2 SANS 1239 SANS 10142 SANS 60309			
	Straight Plugtops	Metal Clad Plugtops	Surface Mounting Appliance Inlets (without lids)	Panel Mounting Appliance Inlets (without lids)	In-line Connectors (Couplers)	Metal Clad Couplers	No. of Pins	Amperes	Volts				
IP67	IP44	IP67	IP55	IP44	IP67	IP44	IP67	IP44	IP67	IP55			
		203134									3	16A	110V
											3	32A	
											3	63A	
	201136	203136		272136		292136	293136	301136	303136		3	16A	200V - 250V
	201336	203336		272336		292336		301336	303336		3	32A	
	202636	203636					293636	302636	303636		3	63A	
		203836							303836		3	125A	
	201146	203146		272146		292146	293146	301146	303146		4	16A	380V - 415V
	201156	203156		272156	273156	292156		301156	303156		5		
	201176							301176	303176		7		
	Container Plug	203343				Container Inlet	293343	Container Coupler	303343		4	32A	
	201346	203346		272346		292346	293346	301346	303346	3053646	4		
	201356	203356		272356	273356	292356	293346	301356	303356	3053656	5		
	201376	203376		273376				301376	303376		7	63A	
123646	202646	203646	2053646		273646		293646	303646	3053646		4		
123656	202656	203656	2053656		273656		293656	303656			5		
		203846			273846		293846		303846		4	125A	
		203856			273856		293856		303856		5		
	201147	203147							303147		4	16A	
											5		
	201347	203347							303347		4	32A	
123647		203647	2053647					303647	3053647		4		
123657		203657	2053657					303657	3053657		5	63A	
		203847			273847			303847			4		
		203857									5		

### QUICK CONNECT by Bals



- Screwless terminals based on a patented spring loaded contact
- Maintenance free, vibration & thermal shock approved wiring technology
- Complete CEE product range available from 16A/3p up to 63A/5p in all configurations
- Easy to use for every installer, wiring without special tools, skills or training
- Accepts all conductor types (flexible, solid and other), easy rewiring
- Time (75% faster) & money saving cable lugs-terminals are not necessary for wiring

# POWER PRODUCTS

## ENCLOSURES



### TERMINAL BOXES



Product Code	Supplier Code	Dimensions HxWxD (mm)	Description
L0001097	001.CS	65 x 40	Press on lid
L0001098	002.CS	80 x 40	Press on lid
L0001099	003.CS	80 x 40 x 40	Press on lid
L0001100	005.CS	100 x 100 x 50	Screw on lid



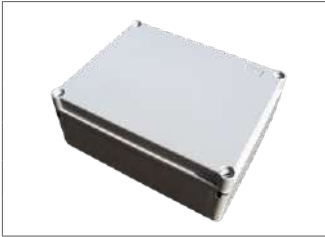
Product Code	Supplier Code	Dimensions HxWxD (mm)	Description
L0001101	006.PL	100 x 100 x 65	Enclosure with grey screw on lid
L0001102	007.PL	125 x 75 x 50	
L0001105	008.PL	150 x 110 x 70	
L0001108	009.PL	190 x 145 x 70	
L0001112	010.PL	240 x 190 x 90	
L0001115	011.PL	240 x 190 x 110	



Product Code	Supplier Code	Dimensions HxWxD (mm)	Description
L0001104	008.CA.G	150 x 110 x 135	Enclosure with grey screw on lid
L0001107	009.CA.G	190 x 145 x 135	
L0001111	010.CA.G	240 x 190 x 155	
L0001116	012.CA.G	310 x 230 x 160	
L0001121	014.CA.G	380 x 300 x 180	
L0001124	015.CA.G	460 x 380 x 180	



Product Code	Supplier Code	Dimensions HxWxD (mm)	Description
C0001243	008.PK	150 x 110 x 70	Enclosure with clear screw on lid
C0001244	009.PK	190 x 145 x 70	
C0001245	010.PK	240 x 190 x 90	
C0001246	011.PK	240 x 190 x 110	
C0001248	012.PK	310 x 230 x 115	



Product Code	Supplier Code	Dimensions HxWxD (mm)	Description
-	009.A.PL	150 x 140 x 70	Enclosure with grey hinged lid
-	010.A.PL	240 x 190 x 90	
C0001247	012.A.PL	300 x 220 x 115	
L0001120	014.A.PL	380 x 300 x 120	
L0001123	015.A.PL	460 x 380 x 120	

## DISTRIBUTION BOXES



Product Code	Supplier Code	Dimensions HxWxD (mm)	Description
L0001167	91.08	200 x 160 x 90	Surface DB 8 mod
L0001168	91.12	225 x 200 x 110	Surface DB 12 mod



Product Code	Supplier Code	Dimensions HxWxD (mm)	Description
L0001169	92.04	160 x 120 x 90	Surface mount Din 4 way
L0001170	92.08	200 x 160 x 90	Surface mount Din 8 way
L0001171	91.12	250 x 200 x 110	Surface mount Din 12 way



Product Code	Supplier Code	Dimensions HxWxD (mm)	Description
L0002856	920.12	250 x 250 x 140	Surface DB 12 mod
L0001172	920.24	375 x 250 x 140	Surface DB 24 mod

**Note** Items above with (-) in the Product Code column are available on special request.

# POWER PRODUCTS

## ENCLOSURES



### DISTRIBUTION BOXES



Product Code	Supplier Code	Dimensions HxWxD (mm)	Description
L0001175	940.12	325 x 200 x 90	Surface DB 12 mod
L0001177	940.24	420 x 293 x 133	Surface DB 24 mod
-	940.36	463 x 408 x 133	Surface DB 36 mod



Product Code	Supplier Code	Dimensions HxWxD (mm)	Description
L0001155	6.8200	250 x 125 x 80	Enclosure + lid 6 mod



Product Code	Supplier Code	Dimensions HxWxD (mm)	Description
L0001183	960.30031	440 x 135 x 110	Site DB 6 mod



Product Code	Supplier Code	Dimensions HxWxD (mm)	Description
L0001181	960.20001	240 x 190 x 110	Site DB 4 mod



Product Code	Supplier Code	Dimensions HxWxD (mm)	Description
L0001178	960.10011	360 x 260 x 110	Site DB 12 mod
L0001179	960.10021	440 x 340 x 110	Site DB 14 mod

**Note** Items above with (-) in the Product Code column are available on special request.



### CARAVAN PARK DISTRIBUTION BOARDS



- 2 or 4 socket outlets
- Overload protection: each socket is fitted with a 16A 1P 6kA MCB
- Safety: each board is fitted with a 63A 30mA earth leakage device
- Weather protection: UV stabilised insulated enclosures are IP44 rated

Product Code	Supplier Code	Dimensions HxWxD (mm)	Description
L0001090	CAR-DB-4W	310 x 230 x 150	4 way caravan site DB



Product Code	Supplier Code	Dimensions HxWxD (mm)	Description
L0001089	CAR-DB-2W	440 x 135 x 150	2 way caravan site DB



### DISTRIBUTION BOARDS

#### FLUSH MOUNT WACO DISTRIBUTION BOARDS



- Distribution board complete with earth and neutral bar and DIN rail
- Distribution board with metal tray and poly cover for din rail mount MCB only

Product Code	Cover Dimensions (mm)			Tray Dimensions (mm)			Description
	H	W	D	H	W	D	
C0001694	298	203	95	280	185	76	12 way
C0001696	378	238	95	367	216	76	16 way
C0001698	310	370	95	282	340	76	24 way

#### SURFACE MOUNT WACO DISTRIBUTION BOARDS



- Distribution board complete with earth and neutral bar and DIN rail
- Distribution board with poly base and cover

Product Code	Dimensions (mm)			Description
	H	W	D	
C0001688	323	230	93	12 way
C0001690	398	248	93	16 way
C0001692	323	382	93	24 way



## ENCLOSURES



### CR RANGE MILD STEEL ENCLOSURES

- Enclosures are supplied with base plates, gland plates and wall mounting brackets
- Available in electric orange and grey
- Material: sheet steel 1.4mm - 2.0mm (door CR64 onwards is 2.0mm)
- Protection rating: IP55

Product Code (Grey)	Product Code (Orange)	Supplier Code	Dimensions HxWxD (mm)	Gland Plates	Locks
C0001196	L0000030	CR252010	250 x 200 x 100	0	1
C0001197	L0000031	CR252015	250 x 200 x 150	0	1
L0000033	L0000032	CR302515	300 x 250 x 150	1	1
-	C0000917	CR302520	300 x 250 x 200	1	1
-	L0000035	CR303020	300 x 300 x 200	1	1
L0000037	L0011641	CR403020	400 x 300 x 200	1	1
-	L0000038	CR403030	400 x 300 x 300	1	1
C0001200	L0011642	CR404020	400 x 400 x 200	1	1
-	L0011643	CR504020	500 x 400 x 200	1	1
L0000043	L0000042	CR504025	500 x 400 x 250	1	1
-	L0000044	CR505020	500 x 500 x 200	1	1
-	L0000045	CR505025	500 x 500 x 250	1	1
-	L0011644	CR604020	600 x 400 x 200	2	2
C0001202	L0000047	CR604025	600 x 400 x 250	2	2
-	L0000048	CR605025	600 x 500 x 250	2	2
-	L0000049	CR606025	600 x 600 x 250	2	2
C0001203	L0000050	CR606030	600 x 600 x 300	2	2
L0000052	L0011645	CR705025	700 x 500 x 250	2	2
C0001205	L0011646	CR806025	800 x 600 x 250	2	2
C0001206	L0000056	CR808030	800 x 800 x 300	4	2
C0001194	L0011647	CR1008030	1000 x 800 x 300	4	2
C0001195	L0011648	CR1208030	1200 x 800 x 300	4	2



### CT RANGE MILD STEEL ENCLOSURES

- Protection rating: IP66

Product Code	Supplier Code	Dimensions HxWxD (mm)
L0000058	CT151512	150 x 150 x 120
L0000059	CT202012	200 x 200 x 120

**Note** Items above with (-) in the Product Code column are available on special request.



### CRX RANGE STAINLESS STEEL ENCLOSURES

- Enclosures are supplied with base plates and gland plates
- SS304 with hairline finish
- Material: stainless steel 1.5mm - 2.0mm (door CRX86 onwards is 2.0mm)
- Protection rating: IP65

Product Code	Supplier Code	Dimensions HxWxD (mm)	Gland Plates	Locks
L0000018	CRX302515	300 x 250 x 150	1	1
L0000019	CRX303015	300 x 300 x 150	1	1
L0000020	CRX403020	400 x 300 x 200	1	1
L0000021	CRX404020	400 x 400 x 200	1	1
L0000022	CRX504020	500 x 400 x 200	1	2
L0000023	CRX604020	600 x 400 x 200	1	2
L0000024	CRX606025	600 x 600 x 250	1	2
L0000025	CRX705025	700 x 500 x 250	1	2
L0000026	CRX806025	800 x 600 x 250	1	2
L0000016	CRX1008030	1000 x 800 x 300	2	2
L0000017	CRX1208030	1200 x 800 x 300	2	2



### MILD STEEL ENCLOSURES

- Enclosures are supplied with base plates and gland plates
- Colour: electric orange
- Material: sheet steel 1.2mm
- Protection rating: IP66

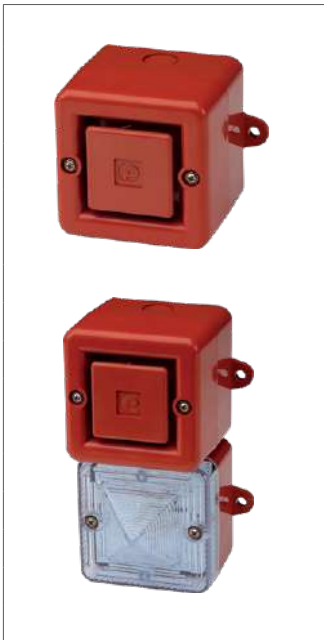
Product Code	Supplier Code	Dimensions HxWxD (mm)	Gland Plates	Locks
C0001221	ST2-2515	250 x 200 x 150	1	1
L0002226	ST2-315	300 x 200 x 150	1	1
L0002213	ST25-320	300 x 250 x 200	1	1
L0002214	ST3-320	300 x 300 x 200	1	1
C0001222	ST3-415	400 x 300 x 150	1	1
L0002215	ST3-420	400 x 300 x 200	1	1
C0001223	ST4-420	400 x 400 x 200	1	1
L0002216	ST4-520	500 x 400 x 200	1	1
L0002217	ST5-520	500 x 500 x 200	1	1
L0002218	ST5-520	600 x 400 x 200	1	1
C0001461	ST5-625	600 x 500 x 250	1	2
L0002221	ST5-720	700 x 500 x 200	1	2
L0002220	ST5-725	700 x 500 x 250	1	2
L0002219	ST4-730	700 x 500 x 300	1	2
C0001224	ST6-825	800 x 600 x 250	1	2
C0001225	ST8-103	1000 x 800 x 300	2	3
C0001226	ST8-123	1230 x 800 x 300	2	3



## ELECTRONIC SOUNDERS



### E2S ELECTRONIC SOUNDERS



#### A100 SOUNDER AND AL100 COMBO

- The E2S range of sounder and combination units have been designed to perform at maximum capacity for as long as required.
- The sound output can be decreased by means of a volume control.
- The standard colour is red, but these units are also available in grey.

Product Code	Supplier Code	Description
L0022523	ESY3024	A100 10-30VDC 300M
L0022524	ESY3025	A100 24VAC 300M
L0022525	ESY3110	A100 110VAC 300M
L0022526	ESY3220	A100 220VAC 300M
L0022483	ECY3R01	AL100 10-30VDC 300M RED
L0022484	ECY3A01	AL100 12VDC 300M AMBER
L0022485	ECY3R02	AL100 24VDC 300M RED
L0022486	ECY3A02	AL100 24VDC 300M AMBER
L0022487	ECY3R04	AL100 110VAC 300M RED
L0022488	ECY3A04	AL100 110VAC 300M AMBER
L0022489	ECY3R05	AL100 220VAC 300M RED
L0022490	ECY3A05	AL100 220VAC 300M AMBER

Specifications				
Voltage	10-30 Vdc	24 Vac	110 Vac	220 Vac
Duty cycle	Continuous			
Sound output	104 dB(A) at 1m			
Sound frequency	340/2400Hz (depends on tone selection)			
Sound select	32 user selectable tones with a 3 stage alarm option			
App. range	300m in still air on an open field			
Current consumption	25mA	40mA	13mA	13mA
Current consumption (combo)	12V - 525mA	405mA	120mA	65mA
Lens colour	Red, amber, green or blue			
IP rating	Sounder - IP66		Combo - IP66	
Weight (g)	Sounder - 370		Combo - 570	
Packing dimensions (mm)	Sounder - 110 x 110 x 90		Combo - 190 x 110 x 190	



### A105 SOUNDER AND AL105 COMBO

- The E2S range of sounder and combination units have been designed to perform at maximum capacity for as long as required.
- The sound output can be decreased by means of a volume control.
- The standard colour is red, but these units are also available in grey and white.

Product Code	Supplier Code	Description
L0022527	ESY5024	A105 10-30VDC 500M
L0022473	ESY5025	A105 24VAC 500M
L0022474	ESY5110	A105 110VAC 500M
L0022475	ESY5220	A105 220VAC 500M
L0022491	ECY5R01	AL105 12VDC 500M RED
L0022492	ECY5A01	AL105 12VDC 500M AMBER
L0022493	ECY5R02	AL105 24VDC 500M RED
L0022494	ECY5A02	AL105 24VDC 500M AMBER
L0022495	ECY5R04	AL105 110VAC 500M RED
L0022496	ECY5A04	AL105 110VAC 500M AMBER
L0022497	ECY5R05	AL105 220VAC 500M RED
L0022498	ECY5A05	AL105 220VAC 500M AMBER

Specifications				
Voltage	10-30 Vdc	24 Vac	110 Vac	220 Vac
Duty cycle	Continuous			
Sound output	112 dB(A) at 1m			
Sound frequency	340/2400Hz (depends on tone selection)			
Sound select	32 user selectable tones with a 3 stage alarm option			
App. range	500m in still air on an open field			
Current consumption	25mA	40mA	20mA	15mA
Current consumption (combo)	12V - 525mA	275mA	120mA	65mA
Lens colour	Red, amber, green or blue			
IP rating	Sounder - IP66		Combo - IP66	
Weight (kg)	Sounder - 1		Combo - 1.2	
Packing dimensions (mm)	Sounder - 150 x 150 x 140		Combo - 150 x 220 x 150	

## ELECTRONIC SOUNDERS



### A112 SOUNDER AND AL112 COMBO

- The E2S range of sounder and combination units have been designed to perform at maximum capacity for as long as required.
- The sound output can be decreased by means of a volume control.
- The standard colour is red, but these units are also available in grey and white.

Product Code	Supplier Code	Description
L0003336	ESY8024	A112 10-30VDC 800M
L0022476	ESY8025	A112 24VAC 800M
L0022477	ESY8110	A112 110VAC 800M
L0022478	ESY8220	A112 220VAC 800M
L0022499	ECY8R01	AL112 12VDC 800M RED
L0022500	ECY8A01	AL112 12VDC 800M AMBER
L0022501	ECY8R02	AL112 24VDC 800M RED
L0022502	ECY8A02	AL112 24VDC 800M AMBER
L0022503	ECY8R04	AL112 110VAC 800M RED
L0022504	ECY8A04	AL112 110VAC 800M AMBER
L0022505	ECY8R05	AL112 220VAC 800M RED
L0022506	ECY8A05	AL112 220VAC 800M AMBER

Specifications				
Voltage	10-30 Vdc	24 Vac	110 Vac	220 Vac
Duty cycle	Continuous			
Sound output	119 dB(A) at 1m			
Sound frequency	340/2400Hz (depends on tone selection)			
Sound select	45 user selectable tones with a 3 stage alarm option			
App. range	800m in still air on an open field			
Current consumption	200mA	500mA	100mA	60mA
Current consumption (combo)	700mA	450mA	170mA	95mA
Lens colour	Red, amber, green or blue			
IP rating	Sounder - IP66		Combo - IP66	
Weight (kg)	Sounder - 2.1		Combo - 2.3	
Packing dimensions (mm)	Sounder - 200 x 200 x 160		Combo - 200 x 160 x 260	



### A121 SOUNDER AND AL121 COMBO

- The E2S range of sounder and combination units have been designed to perform at maximum capacity for as long as required.
- The sound output can be decreased by means of a volume control.
- The standard colour is red, but these units are also available in grey.

Product Code	Supplier Code	Description
L0022479	ESY9024	A121 10-30VDC 1000M
L0022480	ESY9025	A121 24VAC 1000M
L0022481	ESY9110	A121 110VAC 1000M
L0022482	ESY9220	A121 220VAC 1000M
L0022507	ECY9R01	AL121 12VDC 1000M RED
L0022508	ECY9A01	AL121 12VDC 1000M AMBER
L0022509	ECY9R02	AL121 24VDC 1000M RED
L0022510	ECY9A02	AL121 24VDC 1000M AMBER
L0022511	ECY9R04	AL121 110VAC 1000M RED
L0022512	ECY9A04	AL121 110VAC 1000M AMBER
L0022513	ECY9R05	AL121 220VAC 1000M RED
L0022514	ECY9A05	AL121 220VAC 1000M AMBER

Specifications				
Voltage	10-30 Vdc	24 Vac	110 Vac	220 Vac
Duty cycle	Continuous			
Sound output	126 dB(A) at 1m			
Sound frequency	340/2400Hz (depends on tone selection)			
Sound select	45 user selectable tones with a 3 stage alarm option			
App. range	1000m in still air on an open field			
Current consumption	950mA	1000mA	240mA	120mA
Current consumption (combo)	1450mA	1200mA	310mA	155mA
Lens colour	Red, amber, green or blue			
IP rating	Sounder - IP66		Combo - IP66	
Weight (kg)	Sounder - 2.7		Combo - 2.9	
Packing dimensions (mm)	Sounder - 220 x 220 x 220		Combo - 220 x 280 x 200	

## ELECTRONIC SOUNDERS



### E2S BEACONS



#### E2S XENON BEACONS

- The E2S Xenon Beacon can be used for any application where a visual warning indicator is required.
- Seven lens colours are available.

Product Code	Supplier Code	Description
L0022515	EBXA012	L101 12VDC AMBER
L0022516	EBXR012	L101 12VDC RED
L0022517	EBXA024	L101 24VDC AMBER
L0022518	EBXR024	L101 24VDC RED
L0022521	EBXA110	L101 110VAC AMBER
L0022522	EBXR110	L101 110VAC RED
L0022519	EBXA220	L101 220VAC AMBER
L0022520	EBXR220	L101 220VAC RED

Specifications				
Voltage	12Vdc	24 Vac	110 Vac	220 Vac
Colour LED	Red, amber, yellow, clear, opal, blue and green			
Duty cycle	Continuous rated			
Light source	5 Joule Xenon @ 1Hz			
Current consumption	500mA	300mA	70mA	35mA
IP rating	IP66			
Weight (g)	200			
Packing dimensions (mm)	100 x 100 x 100			

#### BANSHEE ELECTRONIC SOUNDERS



#### MULTITONE

Product Code	Supplier Code	IP Rating	Description
L0001798	BEMT930	IP44	MULTITONE EXCEL 9 - 30V DC
L0002507	BEMT048	IP44	MULTITONE EXCEL 48V AC/DC
L0014425	BEMT931	IP65	MULTITONE EXCEL 9 - 30V DC DEEP BASE
L0003940	BEMT122	IP65	MULTITONE EXCEL 110 - 220V AC

Specifications			
Voltage	9 - 30Vdc	110Vac	220Vac
Duty cycle	Continuous		
Sound output	110dB(A) at 1m/32 selectable tones		
Sound frequency	420 - 2900Hz		
App. range	600m in still air on an open field		
Current consumption	The amps vary from 40 - 70mA depending on the sound selection		
Weight (g)	200		
Packing dimensions (mm)	100 x 100 x 100		



#### FLASHTONE

Product Code	Supplier Code	IP Rating	Description
L0002508	BFER930	IP44	FLASHTONE EXCEL R/R 9 - 30V DC
L0014463	BFER931	IP65	FLASHTONE EXCEL R/R 9 - 30V DC DEEP BASE
L0001799	BFER220	IP65	FLASHTONE EXCEL R/R 110 - 220V AC

Specifications			
Voltage	9 - 30Vdc	110Vac	220Vac
Duty cycle	Continuous		
Sound output	110dB(A) at 1m/32 selectable tones		
Sound frequency	420 - 2900Hz		
App. range	600m in still air on an open field		
Current consumption	14V - 90mA/24V - 40mA		
Lens colour	Amber, yellow, red, green, blue		
Weight (g)	220		
Packing dimensions (mm)	100 x 100 x 100		



# POWER PRODUCTS

## MAINTENANCE CHEMICALS



### PRECISION CLEANERS



#### QD CONTACT CLEANER

**Product Code: L0000837**

- Supplier Code: 2130
- Plastic safe, quick drying and leaves no residue. Ideal for applications where lower flash-point solvents can be used. Flammable, quick drying, complete evaporation.
- Applications: Telephones, PCs, relays, edge connectors, tape heads, bus bars, circuits, contacts, printed circuit boards, switches and breakers.



#### ISOPROPYL ALCOHOL PRECISION CLEANER

**Product Code: L0002284**

- Supplier Code: 3201
- A quick drying light-duty precision cleaner for use in industrial, electrical, electronic and aviation applications. Its 99% pure formula aggressively dissolves grease, dust, dirt, lint, oils and flux from most non-plastic surfaces. Recommended for light duty cleaning and degreasing.
- Applications: Removal of dirt, adhesives, silicones, anti-oxidation compounds and other contaminants from the semi-conductive cores of high voltage cables when splicing and terminating cables.



#### CONTACT CLEANER 2000

**Product Code: L0021882**

- Supplier Code: 2140
- Non-flammable precision cleaner which rapidly and completely evaporates and assists with thermal stability. It also removes light contaminants, atmospheric oils, dust and lint from precision electrical and electronic equipment. Non-flammable, safe on most plastics, complete evaporation.
- Applications: Contacts, circuit breakers, switches, relays, meters, light bulb sockets, control systems and coils where lubricating and corrosion protection is required.



#### FREEZE SPRAY

**Product Code: L0000819**

- Supplier Code: 14086
- Aerosol coolant system that instantly freezes surfaces to -51°C (-60°F), dissipating heat and cooling equipment, and also assists in locating thermal intermittent components, failures and safe to use on sensitive components and all surface niches. Dries instantly, leaves no residue and is non-abrasive.
- Applications: Thermal intermittent, computers office equipment, electronics, video, audio and communication equipment, data processing equipment, circuit boards, lab equipment, clean rooms, plant machinery and more.



#### CO CONTACT CLEANER

**Product Code: L0000828**

- Supplier Code: 2016
- Formula contains no known ozone depleting substances or VOCs. The non-chlorinated, nonflammable, plastic safe formula is an optimal alternative to CFC, HCFC and flammable contact cleaners.
- Applications: Electrical connectors, printed circuit boards, relays, switches, scales, timers and other electrical and electronic equipment.



**KEY:** Icons are an indication of use. However, please refer to PDS and SDS for accurate information.





### PRECISION CLEANERS



#### NF CONTACT CLEANER

**Product Code: L0000829**

- Supplier Code: 2017
- A revolutionary, technically proven, stable, no flash point, and non-flammable, inert high purity cleaning solvent. Non-conductive, non-corrosive, non-staining, rapid complete evaporation and contains no lubricants.
- Applications: Recommended for cleaning relays, switches, circuit breakers, alarm and signal systems, printed circuit boards, connectors, generators, contacts, laboratory and test equipment, motor and motor controls, sensors, flux removal, terminals, plugs and jacks



#### DUSTER

**Product Code: L0015669**

- Supplier Code: 5185
- Moisture-free dust and lint remover that effectively removes dirt, dust, lint and other contaminants with a dry blast of air. Safely eliminates debris from sensitive electronics, appliances and equipment.
- Applications: Circuit breakers, computer components, contacts, electronics, lab equipment, light sockets, locks, office equipment, PC boards, PCs, photographic equipment, radios, PCV Valve, sensors, smoke detectors, stereos, switches, telephones, televisions, VCRs.



#### CONTACT CLEANER AND PROTECTANT

**Product Code: L0000848**

- Supplier Code: 3140
- Cleans away grease, oil, dirt and other contaminants and helps equipment perform like new. Leaves a fine, microscopic corrosion proof and lubricating film.
- Applications: Contacts, circuit breakers, switches, relays, meters, light bulb sockets, control systems and coils where lubricating and corrosion protection is required.



#### SMART WASHER®

**Product Code: -**

- Supplier Code: 14740
- Model Number: SW23
- Environmentally friendly mobile parts washer kit.
- Non-toxic, non-polluting, non-corrosive, non-flammable, non-hazardous



#### SMART WASHER®

**Product Code: -**

- Supplier Code: 14741
- Model Number: SW37
- Environmentally friendly heavy weight parts washer kit.
- Non-toxic, non-polluting, non-corrosive, non-flammable, non-hazardous

**Note** Items above with (-) in the Product Code column are available on special request.

# POWER PRODUCTS

## MAINTENANCE CHEMICALS



### INDUSTRIAL DEGREASERS AND CLEANERS



#### LECTRA CLEAN

**Product Code: L0000830**

- Supplier Code: 2018
- Quickly and effectively removes grease, oil, tar, dirt, grime corrosion, sludge and other stubborn substances to increase operating efficiency of electric motors and equipment. It offers quick and effective degreasing action, fast evaporation and leaves no residue.
- Applications: Energised electrical cleaner.



#### LECTRA CLEAN

**Product Code: L0002741**

- Supplier Code: 2020
- Quickly and effectively removes grease, oil, tar, dirt, grime corrosion, sludge and other stubborn substances to increase operating efficiency of electric motors and equipment. It offers quick and effective degreasing action, fast evaporation and leaves no residue.
- Applications: Energised electrical cleaner.



#### HYDRO-FORCE INDUSTRIAL STRENGTH DEGREASER

**Product Code: L0000820**

- Supplier Code: 14414
- Upon contact instantly begins to hunt-down, break-up and lift-off heavy deposits of grease, oil and dirt. Non-flammable, safe on most plastics, biodegradable and non-abrasive. Perfect for machinery, motors, concrete and non-porous surfaces. Use caution on soft metals and painted surfaces.
- Applications: Tools, grills, tyres, engines, drives, motors, shop equipment, lawn equipment, fabric, floors, appliances, vents, tubs, sinks, showers, plastic, fibreglass, canvas, vinyl, pressure washers, vehicle washing, walls, chrome, stainless steel, polished metals, etc.



#### HYDRO-FORCE INDUSTRIAL STRENGTH DEGREASER

**Product Code: L0000821**

- Supplier Code: 14416
- Upon contact instantly begins to hunt-down, break-up and lift-off heavy deposits of grease, oil and dirt. Non-flammable, safe on most plastics, biodegradable and non-abrasive. Perfect for machinery, motors, concrete and non-porous surfaces. Use caution on soft metals and painted surfaces.
- Applications: Tools, grills, tyres, engines, drives, motors, shop equipment, lawn equipment, fabric, floors, appliances, vents, tubs, sinks, showers, plastic, fibreglass, canvas, vinyl, pressure washers, vehicle washing, walls, chrome, stainless steel, polished metals, etc.



**Note** Items above with (-) in the Product Code column are available on special request.

**KEY:** Icons are an indication of use. However, please refer to PDS and SDS for accurate information.





### INDUSTRIAL DEGREASERS AND CLEANERS



#### LECTRA CLEAN II LOW VOC

**Product Code:** —

- Supplier Code: 2120
- Upon contact it instantly begins to hunt-down, break-up and lift-off heavy deposits of grease, oil and dirt. Non-flammable, safe on most plastics, biodegradable and non-abrasive. Perfect for machinery, motors, concrete and non-porous surfaces. Use caution on soft metals and painted surfaces.
- Applications: Electric motors, fusible disconnects, switch-gears, transformers, circuits, insulators, relays, switches, air tools, mechanical brakes, clutches, chains, bearings, generators, compressors, pumps, tools, dies, molds and many other electrical/industrial equipment.



#### LECTRA CLEAN II LOW VOC

**Product Code:** —

- Supplier Code: 2121
- Upon contact it instantly begins to hunt-down, break-up and lift-off heavy deposits of grease, oil and dirt. Non-flammable, safe on most plastics, biodegradable and non-abrasive. Perfect for machinery, motors, concrete and non-porous surfaces. Use caution on soft metals and painted surfaces.
- Applications: Electric motors, fusible disconnects, switch-gears, transformers, circuits, insulators, relays, switches, air tools, mechanical brakes, clutches, chains, bearings, generators, compressors, pumps, tools, dies, molds and many other electrical/industrial equipment.



#### BRAKLEEN

**Product Code:** L0000858

- Supplier Code: 5089
- Quickly and safely removes brake fluid, grease, oil and other contaminants from brake linings, pads, drums and callipers. Non-staining, non-corrosive and leaves no residue. Safely settles and removes asbestos dust from brake assemblies, preventing inhalation of airborne particles.
- Applications: ABS, disc, drum, brake cylinders, brake drums, brake linings, brake shoes, callipers, clutch discs, disc brake pads, discs. Safe for use on all brake systems, including springs and wedge brakes.



#### NATURAL DEGREASER

**Product Code:** —

- Supplier Code: 14005
- A blend of natural citrus and organic solvents that effectively clean and degrease. Leaves no sticky residue.
- Applications: Air tools, mechanical brakes, clutches, chains, wire ropes, motors, dies, molds, parts, bearings, generators and compressors.



**Note** Items above with (-) in the Product Code column are available on special request.

# POWER PRODUCTS

## MAINTENANCE CHEMICALS



### LUBRICANTS



#### ELECTRICAL SILICONE LUBRICANT

**Product Code: L0000835**

- Supplier Code: 2094
- Specially formulated to lubricate, waterproof and protect electrical components. Meets FDA Regulation CFR 21-178.3570 for incidental food contact. NSF H1 Registered.
- Applications: Helps prevent corrosion to electrical equipment located in wet or harsh environments.



#### COPPER ANTI-SEIZE

**Product Code: L0002737**

- Supplier Code: 14095
- A general purpose anti-seize lubricant that prevents seizing caused by high temperature, heavy loads, vibrations and corrosion. Working temperature -53°C - +982°C.
- Applications: Recommended to lubricate fittings, bushings, flanges, headers, nuts, screws, studs, threaded surfaces, pipes, plugs and manifolds to prevent seizing and galling of surfaces.



#### 2-26 MULTI-PURPOSE LUBRICANT

**Product Code: L0000827**

- Supplier Code: 92005
- Plastic safe lubricant, penetrant and corrosion inhibitor that helps prevent electrical malfunctions caused by water penetration, humidity, condensation or corrosion. Restores resistance values and helps stop current leakage.
- Applications: Connectors, relays, circuit breakers, transformers, switchgear, motors, generators, controls, instruments, communication assemblies, electronics, alarm systems, starters, tubing, castings, gears, weld rod, wire, fixtures, dies, jigs, shim stock, chucks.



#### 3-36 MULTI-PURPOSE LUBRICANT AND CORROSION INHIBITOR

**Product Code: L0000838**

- Supplier Product Code: 3005
- Multi-purpose lubricant, penetrant and corrosion inhibitor. Forms a clear, thin film that lubricates, prevents corrosion, displaces moisture, penetrates and cleans.
- Applications: Tubing, castings, gears, weld rod, wire, fixtures, dies, jigs, shim stock, chucks, drill rod, heat treated parts, machined surfaces, finished welds, aluminium extrusions, air actuated tools, conveyors, frozen joints, locks, hoists, etc.



**KEY:** Icons are an indication of use. However, please refer to PDS and SDS for accurate information.





### LUBRICANTS



#### KNOCK'ER LOOSE

**Product Code:** L0021533

- Supplier Code: 3020
- An industrial strength, low viscosity super penetrant designed to quickly loosen and free seized, bound or frozen fasteners. Quickly permeates rust, scale, gum, grease and corrosion on nuts and bolts, pins, screws, bushings, clips, hinges, snaps, lugs, caps, locks, washers and sliding mechanisms.
- Applications: Nuts and bolts, pins, screws, bushings, clips, hinges, snaps, lugs, caps, locks, washers and sliding mechanisms.



#### KNOCK'ER LOOSE PLUS PENETRATING SOLVENT

**Product Code:** —

- Supplier Code: 3027
- A unique penetrant that immediately drops the temperature of the area in contact with the spray. The freeze shock action cracks rusted surfaces allowing it to reach deeper and work more effectively than other penetrants.
- Applications: Nuts and bolts, pins, screws, bushings, clips, hinges, snaps, lugs, caps, locks, washers and sliding mechanisms.



#### CHAIN AND WIRE ROPE LUBRICANT

**Product Code:** L0000842

- Supplier Code: 3050
- Extends the working life of chains and wire rope and reduces wear caused by friction and corrosion. Resists water wash-off and high temperature sling-off. Absorbs pin/bushing shock and cushions rollers, pins and bushings. Can be applied with guards in place to eliminate costly downtime.
- Applications: Low speed conveyor, drive chains, hoists, winches, pulleys, cushion pins, rollers, garage doors, bushings, seals, o-rings, and come-alongs.



#### DRY PTFE LUBE

**Product Code:** L0000840

- Supplier Code: 3044
- Multi-purpose, micro-thin film lubricant containing PTFE that penetrates and bonds to most surfaces including metal, wood, rubber, plastic and glass. Prevents sticking, reducing friction and wear, while sealing out moisture.
- Applications: Hinges, locks, catches, pulleys, conveyors, machine parts, chutes and slides, coin mechanisms, window guides, drawers, rollers, control buttons, switches, electrical wires and harnesses.



#### DRY MOLY LUBE

**Product Code:** —

- Supplier Code: 3084
- Lowers friction, prevents galling and helps to reduce torque and energy consumption. High antifriction and anti-seizure properties. Fast drying film resists dirt and dust build-up.
- Applications: Gaskets, transfer belts, conveyor belts, motors, plant machinery and handling equipment, rubber moldings, high temperature, low load, or high rpm slides, rollers, wheels, gears, chains and hoists.



#### DRY GRAPHITE LUBE

**Product Code:** —

- Supplier Code: 3094
- Ideal where a dry lubricant is required or where petroleum products must be avoided. Resists dirt, dust and oil build-up. Working temperature 454.4°C (constant) 537.8°C (intermittent).
- Applications: Gaskets, transfer belts, conveyor belts, motors, plant machinery and handling equipment, rubber moldings, high temperature, low load, or high rpm slides, rollers, wheels, gears, chains and hoists.



**Note** Items above with (-) in the Product Code column are available on special request.

# POWER PRODUCTS

## MAINTENANCE CHEMICALS



### LUBRICANTS



#### DI-ELECTRIC GREASE

**Product Code: L0017668**

- Supplier Code: 3082
- Non-curing silicone compound used for electrical sealing, lubricating, protecting and insulating. Waterproofs electrical connections and components. Improves electrical performance in adverse weather conditions.
- Applications: Electrical panels, outdoor lighting, scoreboards, traffic lights, high voltage poles, transformers, disconnects, switching mechanisms, electrical contacts, spark plugs, battery terminals, fasteners, o-rings, rubber and plastic parts.



#### DI-ELECTRIC GREASE

**Product Code: L0021526**

- Supplier Code: 2085
- Non-curing silicone compound used for electrical sealing, lubricating, protecting and insulating. Waterproofs electrical connections and components. Improves electrical performance in adverse weather conditions.
- Applications: Electrical panels, outdoor lighting, scoreboards, traffic lights, high voltage poles, transformers, disconnects, switching mechanisms, electrical contacts, spark plugs, battery terminals, fasteners, o-rings, rubber and plastic parts.



#### MARINE BOAT TRAILER AND 4X4 WHEEL BEARING GREASE

**Product Code: —**

- Supplier Code: SL3120
- Blue tacky, aluminium complex grease using a highly refined base oil. Formulated with a polymer to provide adhesive, non-blend and water wash-out characteristics. Will resist water under the most severe water conditions.
- Applications: Anti-friction bearings, blocks, boat trailer bearings, deck equipment, marine equipment, shaft log seals, sleeve bearings, slides, steering cables, steering dockside machinery, steering quadrants, turn-buckles, wheel bearings, winches.



#### 6-56 MARINE LUBRICANT AND WATER DISPLACER

**Product Code: L0000861**

- Supplier Code: 6007
- Displaces moisture in salt water. Multi-purpose, plastic-safe, moisture displacer, lubricant, penetrant and corrosion inhibitor that helps prevent electrical malfunctions caused by water penetration, humidity, condensation or corrosion. Helps to restore water damaged electrical equipment.
- Applications: Fishing reels, winches, pulleys, metal components, starts wet engines, frees rusted parts, as a corrosion inhibitor.



**Note** Items above with (-) in the Product Code column are available on special request.

**KEY:** Icons are an indication of use. However, please refer to PDS and SDS for accurate information.





### LUBRICANTS



#### GEL-TAC

**Product Code: L0004133**

- Supplier Code: 3135
- Ideal to use on highly loaded reciprocal moving parts. Operates in a temperature range of -35°C to +300°C. Compatible with O-ring chains. Water resistant, multi-purpose lubricant that is a specially formulated blend of high quality synthetic oils, with anti-wear additives, friction modifiers and tackiness agents.
- Applications: Conveyors, hinges, forklifts, farm equipment, window mechanisms, coupling mechanisms, car-wash equipment and chains.



#### TAC 2® ADHESIVE CHAIN LUBRICANT

**Product Code: L0000855**

- Supplier Code: 3076
- An exceptional lubricant, with a tough adhesive quality which will bond to chain/wear surfaces to keep them in peak operating condition by reducing friction and wear that causes metal fatigue.
- Applications: Drive chains, open gears, hoists, winches, pulleys, fork lifts, rollers, garage doors, bushings, seals, o-rings, and wire ropes.



#### 5-56 MULTIPURPOSE LUBRICANT AND PENETRANT

**Product Code: L0001990**

- Supplier Code: 5005A
- Multi-purpose product with superior penetrating power that breaks through rust and corrosion while it cleans away scale and dirt. Eliminates the need for many disassembly operations. Lubricates, penetrates, eliminates moisture and protects against corrosion.
- Applications: Metal components, engines.



#### POWERLUBE MULTIPURPOSE LUBRICANT AND PENETRANT

**Product Code: L0000853**

- Supplier Code: 5005
- Fast acting multi-purpose lubricant. This all in one product quickly penetrates, lubricates, stops squeaks, fights corrosion and loosens rusted parts.
- Applications: Hinges, speedometer cables, seat slides, door locks, distributors, power antennas, wheels, lug nuts, battery terminals, air tools, switches, computers, clocks, firearms, fishing reels, bicycles, etc.



### PROTECTION AND CORROSION INHIBITORS



#### ZINC-IT INSTANT COLD GALVANISE

**Product Code: L0022251**

- Supplier Code: 18412
- Excellent touch-up for damaged galvanised coatings and actively fights rust and corrosion. Protects base metal even when scratched, abraded or dented and has excellent weldability. Dries to touch in 20 minutes.
- Applications: Threads, exposed edges, fasteners, conduit, strapping, welds, fencing, railings, grates, electrical poles, breaker panel housings, rain spouts, signs, doors, trailers, waste containers, catwalks and guard rails.



#### RUST CONVERTER

**Product Code: L0002739**

- Supplier Code: 18418
- Neutralises rust and converts it to a tough, black primer in one easy step. No more scraping or sandblasting. Protects surfaces for years. Hundreds of applications for auto, marine, RV, heavy trucking, construction, utility service, hardware and home.
- Applications: Cars, truck frames/beds, boats and trailers, railings, bridges, storage tanks, transmission towers, fences, iron or steel furniture, equipment, tools, etc.





# POWER PRODUCTS

## MAINTENANCE CHEMICALS



### PROTECTION AND CORROSION INHIBITORS



#### STEEL RE-NU

**Product Code:** —

- Supplier Code: 18211
- A coating containing 316L stainless steel pigment to provide corrosion resistance and protection against sunlight, oil and water. Authorised for use in food processing plants.
- Applications: On threads, exposed edges, fasteners, conduit, strapping, welds, fencing, railings, grates, electrical poles, breaker panel housings, rain spouts, signs, doors, trailers, waste containers, catwalks and guard rails.



#### CORROSION INHIBITOR

**Product Code:** L0000851

- Supplier Code: 3282
- Medium-term corrosion inhibitor for machined surfaces and assemblies subjected to long periods of storage or adverse shipping conditions. It is an easily removable film that will provide protection of all equipment subject to heat humidity, chemicals and severely corrosive atmospheres. Medium-term protection for all metals during shipment or extended storage.
- Applications: Precision machine surfaces, shafts, motors, start-up lubricant for stored machinery, assemblies in storage or in shipment, equipment exposed to elements, outdoor storage of raw materials and finished stock.



#### URETHANE RED SEAL COAT

**Product Code:** L0000824

- Supplier Code: 18410
- Polyurethane coating that insulates electrical equipment and seals out water and moisture. The red formula allows for visualization of equipment.
- Applications: On motor windings, terminals, bus bars, commutator ends, stator coils and PC boards.



#### URETHANE CLEAR SEAL COAT

**Product Code:** L0000825

- Supplier Code: 18411
- Provides a coating that insulates electrical equipment and seals out water and moisture. This clear formulation is an excellent insulator of PC boards since it allows visualisation of circuit paths. Red provides for a striking contrast. Dries quickly to a hard, durable, flexible and nonconductive film.
- Applications: Motor windings, terminals, bus bars, commutator ends, stator coils and PC boards.



**Note** Items above with (-) in the Product Code column are available on special request.

**KEY:** Icons are an indication of use. However, please refer to PDS and SDS for accurate information.





### SPECIALITY



#### HYDROFORCE GLASS CLEANER

**Product Code: L0002738**

- Supplier Code: 14412
- Cuts through dirt, dust, fingerprints and haze deposits. Provides streak-free glass cleaning even on delicate glass surfaces. Biodegradable, ready to use.
- Applications: Glass, mirrors.



#### HYDROFORCE STAINLESS STEEL CLEANER

**Product Code: L0000822**

- Supplier Code: 14424
- Exclusive ultra-shine formula eliminates dirt, dust, fingerprints and watermarks. Leaves behind a protective, non-greasy barrier that resists the return of stains.
- Applications: Aluminium, chrome, other shiny metal surfaces located in heavily industrial environments, stainless steel



#### TRUE TAP AQUA CUTTING FLUID

**Product Code: —**

- Supplier Code: 3440
- Water-soluble cutting fluid with excellent cooling and lubrication properties. Suitable replacement for solvent or oil-based cutting fluids. Works well in machine tools containing water-soluble coolants.
- Applications: Tapping, threading, drilling, sawing, shearing, turning, reaming metal parts, pipes, conduit, screws, bolt holes, housings, aluminium sheets, strapping, gears and chains.



#### WELDER'S ANTI-SPATTER

**Product Code: L0002745**

- Supplier Code: 3083
- Prevents spatter from adhering to surrounding metal surfaces during welding. Eliminates the need to chisel, grind or wire brush after welding. Water based formula allows easy clean-up without the use of solvent cleaners. Does not contain silicone. Contains no ODCs. Rust inhibiting additive prevents flash rust on in-process and surrounding metal surfaces. Non-hazardous composition. Low odour.
- Applications: Resistance welding tips, mig and tig tips, weldments, electrode holders, contact tips, tools, metal molds and bench top splash guards.



**Note** Items above with (-) in the Product Code column are available on special request.

# POWER PRODUCTS

## MAINTENANCE CHEMICALS



### SPECIALITY



#### SMOKE TEST

**Product Code: L0000836**

- Supplier Code: 2105
- A convenient, easy and safe product to test the functional ability of a smoke detector. It also checks for obstructions or debris, which clog detector vents and prevents smoke from properly entering the sensing chamber. Simulates smoke to provide a true, functional test for smoke detectors.
- Applications: Commercial or residential smoke detectors.



#### LEAK DETECTOR

**Product Code: B0000083**

- Supplier Code: 14503
- Formulated for the quick detection of gas and air leaks. The water based formula contains no oils, silicones or harmful solvents. Quickly and reliably locates gas leaks and pressure losses in pipes and pressurised systems by forming highly visible bubbles when applied over any leak.
- Applications: Refrigeration units, air conditioning systems, exhausts, pipes, valves, screw connectors, welding seams and compressors.



#### TACKLE GUARD

**Product Code: L0000862**

- Supplier Code: 6028
- Cleans, lubricates, drives out moisture, prevents corrosion and protects tackle even through periods of storage.
- Applications: Ideal for protecting and lubricating all types of fresh and salt water reels without damaging mono-filament lines, fly fishing lines, EVA grips, seals and varnish.



**Note** Items above with (-) in the Product Code column are available on special request.

**KEY:** Icons are an indication of use. However, please refer to PDS and SDS for accurate information.





### SPECIALITY



### INDUSTRIAL ADHESIVE REMOVER

**Product Code: —**

- Supplier Code: 3250
- A low VOC, industrial strength adhesive remover specially formulated for quick removal of adhesives. Specially formulated to remove adhesive labels from many substrates.
- Applications: Removing labelling from machinery, removing tar from equipment, softening liquid adhesive and adhesive tape residue.



### HAND CLEANER TOWELS

**Product Code: —**

- Supplier Code: 4100
- Hand Cleaner Towels are powerful, yet safe cleaning agents work together with an absorbent, no scratching abrasive hand cleaning towel. The result is hands that are clean, with a pleasant fragrance.
- Applications: Lubricants, tar, sealants, heavy grease, oils, wax, paint, adhesives, ink, caulk, epoxy, and much more.



### BATTERY TERMINAL PROTECTOR

**Product Code: L0000857**

- Supplier Code: 5046
- Specially designed to protect battery terminals from corrosion, a leading cause of hard starting and battery failure. Provides a lead-free soft protective coating.
- Applications: Battery posts, terminals, hold-downs and casings used in vehicles, boats, handling equipment and uninterrupted power supplies (UPS), and used for computer, security and emergency back-up systems.



### WHITE LITHIUM GREASE

**Product Code: L0000856**

- Supplier Code: 5037
- A high purity, high quality grade white lithium-based grease lubricant. Provides long lasting lubrication with excellent water and heat resistance, corrosion protection and film strength. Reduces friction and wear in metal-to-metal and metal-to-plastic application and being white in colour allows easy visual film check.
- Applications: Recommended to lubricate hinges, latches, overhead door tacks, open gears and chains, cables, slide conveyors, guide rails, cams and pistons. Excellent as a break-in lubrication for bearings. Also used for general purpose lubrication and corrosion protection for machinery, tools and equipment.



### JUMP START

**Product Code: L0000860**

- Supplier Code: 5671
- Assures fast, economical starts in cold or humid conditions. Also contains an upper cylinder lubricant to minimise wear during cold starts.
- Applications: For use in both gasoline and diesel engines. Spray in air intake or air cleaner while engine is off.



**Note** Items above with (-) in the Product Code column are available on special request.

# POWER PRODUCTS

## MAINTENANCE CHEMICALS



### AUTOMOTIVE



#### MASS AIR FLOW SENSOR CLEANER

**Product Code: L0000859**

- Supplier Code: 5110
- Safely cleans and protects MAF sensors and is proven to increase horsepower and improve air/fuel ratio. Reduces rough idle, hesitation and pinging and improves fuel mileage. Plastic safe and leaves no residue.
- Applications: Mass air flow sensors and housing.



#### BATTERY CLEANER WITH ACID INDICATOR

**Product Code: L0000854**

- Supplier Code: 5023
- Penetrates and removes corrosion allowing for maximum current flow. Yellow foam turns pink to instantly detect acid leaks and neutralise acid. Effectively cleans terminals, connectors, cases and hold-downs.
- Applications: Battery terminals, battery casings, cable connectors and hold-downs.



### FOOD GRADE LUBRICANTS



#### FOOD GRADE SILICONE

**Product Code: L0000839**

- Supplier Code: 3040
- Features and Benefits:
  - Harmless to most rubbers and plastics.
  - Wide effective temperature range -40°C to +200°C.
  - Excellent release agent and lubricant for all surfaces.
- Applications: Food processing and handling equipment, chutes, guides, rails, conveyors, bottling machinery, slicers, ovens, freezers, knives, saws, coin mechanisms, linkages, locks, pulleys, timers, rubber seals, tools, vending machines and ceramic insulators.



#### FOOD GRADE CHAIN LUBE

**Product Code: L0000844**

- Supplier Code: 3055
- Features and Benefits:
  - Non-drying film effectively lubricates metal surfaces.
  - Formula contains anti-wear properties to extend chain life.
  - Foaming action penetrates chain bushings and pins, and provides maximum adhesion.
- Applications: Conveyor chains, packaging equipment, hoist chains, link and roller assemblies, forklift trucks and many other industrial applications.



#### FOOD GRADE DIELECTRIC GREASE

**Product Code: L0017669**

- Supplier Code: 3085
- Non-curing silicone compound used for electrical sealing, lubricating, protecting and insulating. Waterproofs electrical connections and components. Improves electrical performance in adverse weather conditions.
- Applications: Gaskets, transfer belts, conveyor belts, motors, plant machinery and handling equipment, rubber moldings, high temperature, low load, or high rpm slides, rollers, wheels, gears, chains and hoists.





### FOOD GRADE LUBRICANTS



#### FOOD GRADE PENETRATING OIL

**Product Code: L0002212**

- Supplier Code: 3086
- Features and Benefits:
  - General, non-silicone lubricant for use on all food processing equipment.
  - Eases disassembly of mechanical equipment, fittings and fixtures.
  - 360° valve.
  - Temperature range 0°C to +150°C.
- Applications: Food processing equipment directly exposed to food products including scales, fans, carts, galleys, bottlers, chutes, conveyors, racks, ovens, stoves, fillers, mixers, freezers, rails and cooking appliances.



#### FOOD GRADE WHITE GREASE

**Product Code: L0002746**

- Supplier Code: 3038
- Features and Benefits:
  - Excellent adhesion resists throw-off and shear breakdown.
  - Resistant to water, salt spray and detergent.
  - Wide operating temperature range -18°C to +232°C.
- Applications: Bakeries, bottlers, breweries, canneries, dairies.



#### FOOD GRADE BELT DRESSING

**Product Code: L0000845**

- Supplier Code: 3065
- Features and Benefits:
  - Tacky, non-drying, water resistant film minimises belt slippage.
  - Colourless – will not stain finished goods transported on conveyor systems.
- Applications: Industrial machinery, conveyor systems, portable motorized equipment and vehicle belts.



#### FOOD GRADE MULTIPURPOSE GREASE

**Product Code: -**

- Supplier Code: SL35605
- An aluminum complex premium grade USDA H1 greasing for use in food production and processing industries. This NLGI Grade 2 multi-purpose lubricant is white in colour and has a smooth buttery texture.
- Applications: Anywhere lubrication is needed where it may come in contact with food, bottling machinery, breweries, canneries, carton/packaging equipment, dairies, food processing and handling equipment, meat processing plants, seamers at high speeds and pressure.



#### FOOD GRADE MACHINE OIL

**Product Code: L0000847**

- Supplier Code: 3081
- Features and Benefits:
  - Contains no silicone.
  - Will not harm wood, metal, plastic or painted surfaces.
  - Working temperature range 0°C to 149°C
  - 360° valve.
- Applications: Food processing equipment directly exposed to food products including scales, fans, carts, galleys, bottlers, chutes, conveyors, racks, ovens, stoves, fillers, mixers, freezers, rails and cooking appliances.



#### FOOD GRADE MULTI-PURPOSE GREASE

**Product Code: L0002751**

- Supplier Code: SL35600
- Features and Benefits:
  - Wide temperature range -35°C to +150°C.
  - Timken OK load of 40lbs.
- Applications: Anywhere lubrication is needed where it may come in contact with food, bottling machinery, breweries, canneries, carton/packaging equipment, dairies, food processing and handling equipment, meat processing plants, seamers at high speeds and pressure.



**Note** Items above with (-) in the Product Code column are available on special request.

## INDUSTRIAL RELAYS



### RMS-T RELAYS 2 AND 3 CONTACTS WITH INDICATION FLAG

Features:

- Universal power relay for general applications

Product Code	Supplier Code	Nominal Voltage	Pin	Amp	Changeover
D0005514	RMS20L012DCOT	12VDC	8	10	2
D0005519	RMS30L012DCOT		11		3
D0005520	RMS30L024DCOT	24VDC	8		2
D0005513	RMS20L012ACOT	12VAC			
D0005515	RMS20L024ACOT	24VAC	11		3
D0005517	RMS20L120ACOT	120VAC			
D0005523	RMS30L230ACOT	230VAC	8		2
D0005518	RMS20L230ACOT		11		3
D0005521	RMS20L048ACOT	48VAC	11		3
D0005522	RMS20L120ACOT	120VAC			



### RQS-T RELAYS 1, 2 AND 4 CONTACTS WITH INDICATION FLAG

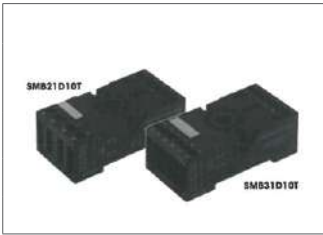
Features:

- Miniature power relay for general applications

Product Code	Supplier Code	Nominal Voltage	Pin	Amp	Changeover
-		6VDC	8	16	2
-		12VDC			
-		24VDC			
-		48VDC			
-		115VDC			
D0005524	RQS20LT	230VDC	14	16	4
-	6VAC				
-	12VAC				
-	24VAC				
-	48VAC				
-	120VAC				
D0005527	RQS40LT	230VAC			

**Note** Items above with (-) in the Product Code column are available on special request.

## INDUSTRIAL RELAYS



### SOCKETS/POWER RELAYS SM-T SOCKETS

Features:

- DIN rail (35mm) or panel mountable

Product Code	Supplier Code	Pin	Colour
D0005530	SMB21D10T0000	8	Black
D0005532	SMB30D11T0000	11	Black



### SOCKETS/POWER RELAYS SQ SOCKETS

Features:

- DIN rail (35mm) or panel mountable

Product Code	Supplier Code	Pin	Colour
D0005533	SQB20D10T0000	8	Grey
D0005535	SQB31D10T0000	14	Black
D0005536	SQB31D10T0000B		Black
D0005537	SQB41D01T0000		Grey

## LIFT AND CRANE CONTROL



### FOOT SWITCHES - IP SERIES - IP54 THERMOPLASTIC TYPE-SINGLE

Product Code	Supplier Code	Contacts	IP Rating
D0007655	IP7007	1 NO	54



## TEST TERMINAL BLOCKS



### TEST TERMINAL BLOCKS

**Features:**

- Offer easy access for on-site testing of Ammeters, KWH Meters, Demand Indicators, Trivector Meters, Relays and Instrument Transformers without disconnecting from load and avoid C.T open circuit problems
- Connections for testing can be easily made
- Test Terminal Blocks are an important element of the metering solution
- Designed for projection mounting with either front or back connection possibilities, designated with FC or BC
- For 3-phase, 3-wire or 3-phase 4-wire application for up to 50A continuous rating at 600V and generally conform to IEC60947-7-1
- The most popular Test Terminal Block has 13 terminals in total of which 9 are current terminals and 4 are voltage terminals
- The current terminals are separated into groups of 3 with inter-terminal shorting links for short-circuiting of the CT terminals and testing
- The base is made of excellent quality electrical grade black bakelite moulding powder
- The base moulding is provided with integrally moulded barriers between the terminals for complete protection against flash-overs
- In addition, a bakelite shield is provided in front to avoid flash-over or shorting at cable entries
- A moulded shroud is provided for safety against the voltage terminals
- For viewing the inside connections without removing the cover, thus saving time of the operator, a transparent, sturdy and flame retardant (UL94V0) poly-carbonate top cover is provided
- Optionally, the top cover is offered in bakelite
- The top cover is secured in place by knurled knobs and a sealing arrangement is provided to prevent unauthorised access
- The Test Terminal Block can be fitted to any panel by means of 4 holes provided on the base
- All terminals, shorting links, screws, nuts, etc. used in the electrical connections are of bright nickel-plated brass to prevent corrosion and to provide high connectivity
- The screws are provided with rounded edges to prevent any damage to cable strands. Each terminal has 6mm (dia) hole for cable entry and two M5 screws secure the cables
- For the back connected Test Terminal Blocks, colour coded sleeves of brown, black, grey and blue (neutral) are provided to indicate different phases

Product Code	Supplier Code	Approval Specifications
L000908	TTB 13WBCB	13 way test block back connected - bakelite
L000909	TTB 13WBPCP	13 way test block back connected - polycarbonate
L000910	TTB 13WFCB	13 way test block front connected - bakelite
L000911	TTB 13WFPCP	13 way test block front connected - polycarbonate



### TEST TERMINAL BLOCKS

**Application:**

- For mounting on switchboard panels for use in conjunction with test equipment to facilitate the testing of AC instruments, meters and relays

**Features:**

- Type TTB4-W test blocks are essentially 4 pole jacks, provided with moulded phenolic covers, that have internal plug contacts which make a through connection when the cover is in place
- The contacts in the blocks are of the line-pressure type and provide positive contact with minimum contact resistance
- For current circuits, auxiliary contacts are used which automatically short circuit the current transformer when the cover or plug is removed
- Routine testing can be accomplished simply by removing the cover and substituting the properly connected test plug. Normal connections are restored by replacing the cover
- Contact rating is 250 volts, 10 amperes continuously
- A hole in the cover allows for securing against unauthorised use

Product Code	Supplier Code	Approval Specifications
L0000912	TTB4WBPCP	4 way test block back connected - moulded bakelite



### MINIATURE DISCONNECTORS "ISOLATORS"/E200/SHD200 SERIES

Function:

- Suitable for under load operations and equipped with lockable control lever in both positions
- Each switch-disconnector must be protected on the supply side by a co-ordinated device which safeguards it against short-circuits

Application:

- Commercial and industrial



#### E201/SHD201 SINGLE POLE ISOLATOR DIN RAIL MOUNT (230 VAC) (1NO)

Product Code	Supplier Code	Number of Poles (17.5mm)	Rated Current (A)	Rated kA 230V VAC (ICW)
E0002661	SHD201/63	1	63	10
E0001934	E201/80r		80	25
E0002663	E201/100r		100	25
E0002664	E201/125r		125	6



#### E202/SHD202 DOUBLE POLE ISOLATORS DIN RAIL MOUNT (415 VAC) (2NO)

Product Code	Supplier Code	Number of Poles (35mm)	Rated Current (A)	Rated kA 415VAC (ICW)
E0002665	SHD202/63	2	63	10
E0002666	E202/100r		100	25
E0002667	E202/125r		125	6



#### E203/SHD203 TRIPLE POLE ISOLATORS DIN RAIL MOUNT (415 VAC) (3NO)

Product Code	Supplier Code	Number of Poles (52.5mm)	Rated Current (A)	Rated kA 415VAC (ICW)
E0001936	SHD203/63	3	63	10
E0001937	E203/80r		80	25
E0001935	E203/100r		100	25
E0002671	E203/125r		125	6

# POWER PRODUCTS

## MINIATURE CIRCUIT BREAKERS

**ABB**



### E204/SHD204 FOUR POLE ISOLATORS DIN RAIL MOUNT (415VAC) (4NO)

Product Code	Supplier Code	Number of Poles (70mm)	Rated Current (A)	Rated kA 415VAC (ICW)
E0002672	SHD204/63	4	63	10
E0002673	E204/100r		100	25
E0002674	E204/125r		125	6

### MINIATURE CIRCUIT BREAKERS CURVE C 10kA - S200 SERIES

Miniature Circuit Breaker S200 (C - Curve /Curve 2) up to 10kA

Function:

- Protection and control of circuits against overloads and short-circuits;
- Protection for resistive and inductive loads with low inrush current

Application:

- Domestic, commercial and industrial



### S201 SINGLE POLE MCB 10kA DIN RAIL MOUNT (230VAC - 60VDC)

Product Code	Supplier Code	Number of Poles (17.5mm)	Rated Current (A)	Rated kA 230VAC (Icu)
E0001944	S201-C2	1	2	10
E0001945	S201-C6		6	
E0001946	S201-C10		10	
E0001948	S201-C16		16	
E0001949	S201-C20		20	
E0001950	S201-C25		25	
E0001951	S201-C32		32	
E0001952	S201-C40		40	
E0002688	S201-C50		50	
E0002689	S201-C63		63	
E0001955	S201-C80		80	
E0001947	S201-C100		100	



### S202 DOUBLE POLE MCB 10kA DIN RAIL MOUNT (415VAC - 125VDC)

Product Code	Supplier Code	Number of Poles (35mm)	Rated Current (A)	Rated kA 230VAC (Icu)
E0001956	S202-C6	2	6	10
E0002700	S202-C10		10	
E0001957	S202-C16		16	
E0001958	S202-C20		20	
E0001959	S202-C25		25	
E0001960	S202-C32		32	
E0002705	S202-C40		40	
E0002706	S202-C50		50	
E0002707	S202-C63		63	
-	S202-C80		80	
-	S202-C100		100	



### S203 TRIPLE POLE MCB 10kA DIN RAIL MOUNT (400VAC)

Product Code	Supplier Code	Number of Poles (52.5mm)	Rated Current (A)	Rated kA 230VAC (Icu)
E0012451	S203-C6	3	6	10
E0002708	S203-C10		10	
E0001961	S203-C16		16	
E0001962	S203-C20		20	
E0001963	S203-C25		25	
E0001964	S203-C32		32	
E0002713	S203-C40		40	
E0002714	S203-C50		50	
E0002715	S203-C63		63	
-	S203-C80		80	
E0012224	S203-C100		100	

**Note** Items above with (-) in the Product Code column are available on special request.

# POWER PRODUCTS

## MINIATURE CIRCUIT BREAKERS



### MINIATURE CIRCUIT BREAKERS CURVE D 10kA - S200 SERIES

Miniature Circuit Breaker S200 (D - Curve/Curve 1) up to 10kA

Function:

- Protection and control of circuits against overloads and short circuits
- Protection for circuits with high inrush current with circuit closing

Application:

- Domestic, commercial and industrial



#### S201 SINGLE POLE MCB 10kA DIN RAIL MOUNT (230VAC - 60VDC)

Product Code	Supplier Code	Number of Poles (17.5mm)	Rated Current (A)	Rated kA 230VAC (Icu)
E0010764	S201-D6	1	6	10
E0010761	S201-D10		10	
E0010738	S201-D16		16	
E0010759	S201-D20		20	
E0010760	S201-D25		25	
E0010758	S201-D32		32	
E0010739	S201-D40		40	
E0010763	S201-D50		50	
E0010762	S201-D63		63	



#### S202 DOUBLE POLE MCB 10kA DIN RAIL MOUNT (400VAC - 125VDC)

Product Code	Supplier Code	Number of Poles (35mm)	Rated Current (A)	Rated kA 230VAC (Icu)
E0010741	S202-D6	2	6	10
E0010742	S202-D10		10	
E0010745	S202-D16		16	
E0010740	S202-D20		20	
E0010746	S202-D25		25	
E0010747	S202-D32		32	
E0010748	S202-D40		40	
E0010744	S202-D50		50	
E0010743	S202-D63		63	



### S203 TRIPLE POLE MCB 10kA DIN RAIL MOUNT (400VAC)

Product Code	Supplier Code	Number of Poles (52.5mm)	Rated Current (A)	Rated kA 400VAC (Icu)
E0010749	S203-D6	3	6	10
E0010756	S203-D10		10	
E0010755	S203-D16		16	
E0010751	S203-D20		20	
E0010754	S203-D25		25	
E0010970	S203-D32		32	
E0010752	S203-D40		40	
E0010750	S203-D50		50	
E0010757	S203-D63		63	

### MINIATURE CIRCUIT BREAKERS S200 SERIES ACCESSORIES

MCB S200 (C-Curve /Curve 2) 10kA with disconnecting neutral NA (VC8036)

Function:

- Protection and control circuits against overloads and short-circuits; protection for resistive and inductive loads with low inrush current

Application:

- Domestic, commercial and industrial



### S201 NA SINGLE POLE AND NEUTRAL MCB 10kA DIN MOUNT (230VAC - 60VDC)

Product Code	Supplier Code	Number of Poles (35mm)	Rated Current (A)	Rated kA 230VAC (Icu)
E0002690	S201-C6NA	1 + Neutral	6	10
E0002691	S201-C10NA		10	
E0002692	S201-C16NA		16	
E0002693	S201-C20NA		20	
E0002694	S201-C25NA		25	
E0002695	S201-C32NA		32	
E0002696	S201-C40NA		40	
E0002697	S201-C50NA		50	

# POWER PRODUCTS

## MINIATURE CIRCUIT BREAKERS



### AUXILIARY CONTACT - SIDE MOUNTING

Function:

- Indication of the position of the device's contacts
- Suitable for MCB's S200, S200 M, S200 P

Product Code	Supplier Code	Mounting Position	Description
D0019855	S2C-S/H6R	Side	Auxiliary contact (1NO)



### BUSBARS FOR MCCB'S WITHOUT SUPPLEMENTARY DEVICES

Product Code	Supplier Code	Connector Capacity (mm)	Number of Poles	Description
E0002675	PS 1/60	10	1	1 phase insulated busbar 60 way
E0002676	PS 1/60/16	16		
E0002677	PS 3/60	10	3	3 phase insulated busbar 60 way
E0002678	PS 3/60/16	16		

## RESIDUAL CURRENT DEVICES

Residual Current Devices (ELCB) - RCCB's

Residual Current Devices "Earth Leakage" F 200 AC type without Overload Protection

Function:

- Protection against the effects of sinusoidal alternating earth fault currents
- Protection against indirect contacts and additional protection against direct (with  $I_n = 30\text{mA}$ ) contacts
- Command and isolation of resistive and inductive circuits

Application:

- Residential, commercial and industrial



### F202 SINGLE POLE AND NEUTRAL RCCB DIN RAIL MOUNT 30mA 10kA

Product Code	Supplier Code	Number of Poles	Rated Current (A)	Sensitivity (mA)	Withstand kA at 230VAC (Inc)
E0001938	F202 AC - 63/0.03	2	63	30	10
E0001939	F202 AC - 100/0.03		100		

## MINIATURE CIRCUIT BREAKERS



### F204 TRIPLE POLE AND NEUTRAL RCCB DIN RAIL MOUNT 30mA 10kA

Product Code	Supplier Code	Number of Poles	Rated Current (A)	Sensitivity (mA)	Withstand kA at 230VAC (Inc)
E0001940	F204 AC - 63/0.03	4	63	30	10
E0002728	F204 AC - 100/0.03		100		



### DDA202 AC DOUBLE POLE

Product Code	Supplier Code	Number of Poles	Rated Current (A)	Sensitivity (mA)
E0010259	DDA202AC - 63/0.03	2	63	30



### DDA204 FOUR POLE

Product Code	Supplier Code	Number of Poles	Rated Current (A)	Sensitivity (mA)
E0011772	DDA204AC - 63/0.03	4	63	30

## ESB INSTALLATION CONTACTORS (ALSO AVAILABLE IN 12, 24, 48 AND 110VAC)

Application:

- Buildings, both residential and commercial



### MINIATURE DIN RAIL COMPONENTS (MDRCS)

Product Code	Supplier Code	Description
E0002754	ESB20-20/230	230 VAC contactor 20A (2NO)
E0002755	ESB40-40/230	230 VAC contactor 40A (4NO)
E0002756	ESB63-40/230	230 VAC contactor 63A (4NO)



### DIGITAL TIME SWITCH (230VAC, 16A RESISTIVE LOAD)

Product Code	Supplier Code	Description
D0005651	D1	Weekly digital time switch 1 x CO, 6 year power reserve



# POWER PRODUCTS

## MINIATURE CIRCUIT BREAKERS



### SURGE PROTECTION DEVICES

Function:

- Provide incoming protection for electrical and electronic equipment against over-voltage and impulse currents such as switching and lightning surges

Application:

- Residential, commercial and industrial



#### CLASS II - IMAX (8/20): 20kA SINGLE POLE

Product Code	Supplier Code	Number of Poles	Maximum Discharge Current (kA)	Maximum Operating Voltage (V)
E0001941	OVR T2 20 275	1	20	275



#### CLASS II - IMAX (8/20): 20kA THREE POLE AND NEUTRAL

Product Code	Supplier Code	Number of Poles	Maximum Discharge Current (kA)	Maximum Operating Voltage (V)
E0001942	OVR T2 3N 20 275SP	3 + Neutral	20	275



#### CLASS II - IMAX (8/20): 40kA SINGLE POLE

Product Code	Supplier Code	Number of Poles	Maximum Discharge Current (kA)	Maximum Operating Voltage (V)
E0002735	OVR T2 40 275P	1	40	275



#### CLASS II - IMAX (8/20): 40kA THREE POLE AND NEUTRAL

Product Code	Supplier Code	Number of Poles	Maximum Discharge Current (kA)	Maximum Operating Voltage (V)
E0002736	OVR T2 3N 40 275P	3 + Neutral	40	275



### MOULDED CASE CIRCUIT BREAKERS FOR POWER DISTRIBUTION

Function:

- Protection and control of the circuits against overloads and short-circuit for power distribution.
- All Tmax circuit breakers are suitable for current limiting in standard release.

Application:

- Power distribution for commercial and industrial installations.



#### XT1 160 TMD - FIXED (F) - 3 POLES - FRONT TERMINALS (F)

Thermomagnetic Trip Unit - TMD	In	B	C	N
		Icu @ 415Vac = 18kA	Icu @ 415Vac = 25kA	Icu @ 415Vac = 36kA
TMD	12 - 16A	1SDA066799R1	1SDA080825R1	1SDA080827R1
TMD	14 - 20A	1SDA066800R1	1SDA080826R1	1SDA080828R1
TMD	18 - 25A	1SDA066801R1	1SDA067391R1	1SDA080829R1
TMD	22 - 32A	1SDA066802R1	1SDA067392R1	1SDA067411R1
TMD	28 - 40A	1SDA066803R1	1SDA067393R1	1SDA067412R1
TMD	35 - 50A	1SDA066804R1	1SDA067394R1	1SDA067413R1
TMD	44 - 63A	1SDA066805R1	1SDA067395R1	1SDA067414R1
TMD	56 - 80A	1SDA066806R1	1SDA067396R1	1SDA067415R1
TMD	70 - 100A	1SDA066807R1	1SDA067397R1	1SDA067416R1
TMD	88 - 125A	1SDA066808R1	1SDA067398R1	1SDA067417R1
TMD	112 - 160A	1SDA066809R1	1SDA067399R1	1SDA067418R1



#### XT1 160 TMD - FIXED (F) - 4 POLES - FRONT TERMINALS (F)

Thermomagnetic Trip Unit - TMD	In	B	C	N
		Icu @ 415Vac = 18kA	Icu @ 415Vac = 25kA	Icu @ 415Vac = 36kA
TMD	12 - 16A	1SDA066810R1	1SDA080840R1	1SDA080842R1
TMD	14 - 20A	1SDA066811R1	1SDA080841R1	1SDA080843R1
TMD	18 - 25A	1SDA066812R1	1SDA067400R1	1SDA080844R1
TMD	22 - 32A	1SDA066813R1	1SDA067401R1	1SDA067419R1
TMD	28 - 40A	1SDA066814R1	1SDA067402R1	1SDA067420R1
TMD	35 - 50A	1SDA066815R1	1SDA067403R1	1SDA067421R1
TMD	44 - 63A	1SDA066816R1	1SDA067404R1	1SDA067422R1
TMD	56 - 80A	1SDA066817R1	1SDA067405R1	1SDA067423R1
TMD	70 - 100A	1SDA066818R1	1SDA067406R1	1SDA067424R1
In N=50%	88 - 125A	1SDA066819R1	1SDA067407R1	1SDA067425R1
In N=50%	112 - 160A	1SDA066820R1	1SDA067408R1	1SDA067426R1
In N=100%	88 - 125A	1SDA066888R1	1SDA067409R1	1SDA067427R1
In N=100%	112 - 160A	1SDA066821R1	1SDA067410R1	1SDA067428R1

# POWER PRODUCTS

## MOULDED CASE CIRCUIT BREAKERS

**ABB**



### XT1D - SWITCH-DISCONNECTOR

Type	Iu	3 Poles	4 Poles
XT1D 160*	160A	1SDA068208R1	1SDA068209R1



### XT3 250 TMD - FIXED (F) - 3 POLES - FRONT TERMINALS (F)

Thermomagnetic Trip Unit - TMD	In	N	S
		Icu @ 415Vac = 36kA	Icu @ 415Vac = 50kA
TMD	44 - 63A	1SDA068053R1	1SDA068215R1
TMD	56 - 80A	1SDA068054R1	1SDA068216R1
TMD	70 - 100A	1SDA068055R1	1SDA068217R1
TMD	88 - 125A	1SDA068056R1	1SDA068218R1
TMD	112 - 160A	1SDA068057R1	1SDA068219R1
TMD	140 - 200A	1SDA068058R1	1SDA068220R1
TMD	175 - 250A	1SDA068059R1	1SDA068221R1



### XT3 250 TMD - FIXED (F) - 4 POLES - FRONT TERMINALS (F)

Thermomagnetic Trip Unit - TMD	In	N	S
		Icu @ 415Vac = 36kA	Icu @ 415Vac = 50kA
TMD	44 - 63A	1SDA068060R1	1SDA068222R1
TMD	56 - 80A	1SDA068061R1	1SDA068223R1
TMD	70 - 100A	1SDA068062R1	1SDA068224R1
In N=50%	88 - 125A	1SDA068063R1	1SDA068225R1
In N=50%	112 - 160A	1SDA068064R1	1SDA068226R1
In N=50%	140 - 200A	1SDA068065R1	1SDA068227R1
In N=50%	175 - 250A	1SDA068066R1	1SDA068228R1
In N=100%	88 - 125A	1SDA068067R1	1SDA068229R1
In N=100%	112 - 160A	1SDA068068R1	1SDA068230R1
In N=100%	140 - 200A	1SDA068069R1	1SDA068231R1
In N=100%	175 - 250A	1SDA068070R1	1SDA068232R1



### XT3D - SWITCH-DISCONNECTOR

Type	Iu	3 Poles	4 Poles
XT3D 250*	250A	1SDA068210R1	1SDA068211R1

**Note** \*The above disconnector rating is based on AC22 conditions.



### ACCESSORIES FOR MOULDED CASE CIRCUIT BREAKERS TMAX XT1 AND XT3

#### FIXED PARTS, CONVERSION KIT AND ACCESSORIES FOR FIXED PARTS



Supplier Code	Type	Number of Poles	Item Description	For use with
1SDA068183R1	Kit P PF EF	3	Fixed plug-in base	XT1
1SDA066276R1	P MP KIT	3	Conversion kit for MCCB to plug-in	XT1
1SDA066260R1	EF - Front Extended terminals	3	Terminals for conversion kit	XT1
1SDA068192R1	Kit P PF EF	3	Fixed plug-in base	XT3
1SDA066280R1	P MP KIT	3	Conversion kit for MCCB to plug-in	XT3
1SDA066264R1	EF - Front Extended terminals	3	Terminals for conversion kit	XT3
1SDA068953R1	PS - Rear phase separators 90mm	3	Rear phase separators 90mm	XT3
1SDA066412R1	Socket-plug panel connector	3	15 pin for rear	XT1/XT3



#### SHUNT OPENING RELEASE - SOR

Supplier Code	Type	For use with
1SDA066321R1	SOR-C 12V DC	XT1/XT3
1SDA066322R1	SOR-C 24 - 30V AC/DC	XT1/XT3
1SDA066324R1	SOR-C 110 - 127V AC / 110 - 125V DC	XT1/XT3
1SDA066325R1	SOR-C 220 - 240V AC / 220 - 250V DC	XT1/XT3
1SDA066326R1	SOR-C 380 - 440V AC	XT1/XT3
1SDA066327R1	SOR-C 480 - 525V AC	XT1/XT3



#### UNDER VOLTAGE RELEASE - UVR

Supplier Code	Type	For Use With
1SDA066396R1	UVR-C 24 - 30V AC/DC	XT1/XT3
1SDA066398R1	UVR-C 110 - 127V AC / 110 - 125V DC	XT1/XT3
1SDA066399R1	UVR-C 220 - 240V AC / 220 - 250V DC	XT1/XT3
1SDA066400R1	UVR-C 380 - 440V AC	XT1/XT3
1SDA066401R1	UVR-C 480 - 525V AC	XT1/XT3



#### DELAY DEVICE FOR UNDER VOLTAGE RELEASE - UVD

Supplier Code	Type	For Use With
1SDA051357R1	UVD 24 - 30V AC/DC	XT1/XT3
1SDA051360R1	UVD 110 - 125V AC/DC	XT1/XT3
1SDA051361R1	UVD 220 - 250V AC/DC	XT1/XT3

# POWER PRODUCTS

## MOULDED CASE CIRCUIT BREAKERS

**ABB**



### AUXILIARY CONTACTS - AUX

Supplier Code	Type	For Use With
1SDA066426R1	AUX-C 3Q 250V AC/DC	XT1
1SDA066428R1	AUX-C 3Q 250V AC/DC	XT3
1SDA066431R1	AUX-C 1Q+1SY 250V AC/DC	XT1/XT3
1SDA066433R1	AUX-C 2Q+1SY 250V AC/DC	XT1/XT3



### MOTOR OPERATORS

Supplier Code	Type	For Use With
1SDA066457R1	MOD 24V DC	XT1/XT3
1SDA066459R1	MOD 110 - 125V AC/DC	XT1/XT3
1SDA066460R1	MOD 220 - 250V AC/DC	XT1/XT3
1SDA066461R1	MOD 380 - 440V AC	XT1/XT3



### ROTARY HANDLE OPERATING MECHANISM

Supplier Code	Type	For Use With
1SDA066475R1	RHD normal direct handle	XT1/XT3
1SDA066479R1	RHE normal transmitted handle	XT1/XT3



### T5 630 - FIXED (F) - 3 POLES - FRONT TERMINALS (F)

	In	N	S	H	V
Trip Unit – TMA		Icu @ 415Vac = 36kA	Icu @ 415Vac = 50 kA	Icu @ 415Vac = 70 kA	Icu @ 415Vac = 200 kA
TMA	350 - 500A	1SDA054456R1	1SDA054461R1	1SDA054465R1	1SDA054473R1



### T5 630 - FIXED (F) - 3 POLES - FRONT TERMINALS (F)

	In	N	S	H	V
Electronic Trip Unit		Icu @ 415Vac = 36kA	Icu @ 415Vac = 50 kA	Icu @ 415Vac = 70 kA	Icu @ 415Vac = 200 kA
PR221DS-LS/I	252 - 630A	1SDA054396R1	1SDA054404R1	1SDA054412R1	1SDA054428R1
PR222DS/P-LSI	252 - 630A	1SDA054398R1	1SDA054406R1	1SDA054414R1	1SDA054430R1

## MOULDED CASE CIRCUIT BREAKERS



### T5 630 - FIXED (F) - 4 POLES - FRONT TERMINALS (F)

Trip Unit – TMA	In	N	S	H	V
		Icu @ 415Vac = 36kA	Icu @ 415Vac = 50 kA	Icu @ 415Vac = 70 kA	Icu @ 415Vac = 200 kA
N=50%	350 - 500A	1SDA054459R1	1SDA054463R1	1SDA054467R1	1SDA054475R1
N=100%	350 - 500A	1SDA054487R1	1SDA054489R1	1SDA054491R1	1SDA054495R1



### T5 630 - FIXED (F) - 4 POLES - FRONT TERMINALS (F)

Electronic Trip Unit	In	N	S	H	V
		Icu @ 415Vac = 36kA	Icu @ 415Vac = 50 kA	Icu @ 415Vac = 70 kA	Icu @ 415Vac = 200 kA
PR221DS-LS/I	252 - 630A	1SDA054400R1	1SDA054408R1	1SDA054416R1	1SDA054432R1
PR222DS/P-LSI	252 - 630A	1SDA054402R1	1SDA054410R1	1SDA054418R1	1SDA054434R1



### T5D 400 & 630 - SWITCH-DISCONNECTOR - FIXED (F)

Type	Icw	3 Poles	4 Poles
T5D 400	400A	1SDA054599R1	1SDA054600R1
T5D 630	630A	1SDA054601R1	1SDA054602R1



### T6 630 - FIXED (F) - 3 POLES - FRONT TERMINALS (F)

Thermomagnetic Trip Unit – TMA	In	N	S	H	L
		Icu @ 415Vac = 36kA	Icu @ 415Vac = 50 kA	Icu @ 415Vac = 70 kA	Icu @ 415Vac = 100 kA
TMA	440 - 630A	1SDA060202R1	1SDA060204R1	1SDA060206R1	1SDA060208R1



### T6 630 - FIXED (F) - 3 POLES - FRONT TERMINALS (F)

Electronic Trip Unit	In	N	S	H	L
		36kA	50 kA	70 kA	100 kA
PR221DS-LS/I	252 - 630A	1SDA060226R1	1SDA060236R1	1SDA060246R1	1SDA060256R1
PR222DS/P-LSI	252 - 630A	1SDA060228R1	1SDA060238R1	1SDA060248R1	1SDA060258R1

# POWER PRODUCTS

## MOULDED CASE CIRCUIT BREAKERS

**ABB**



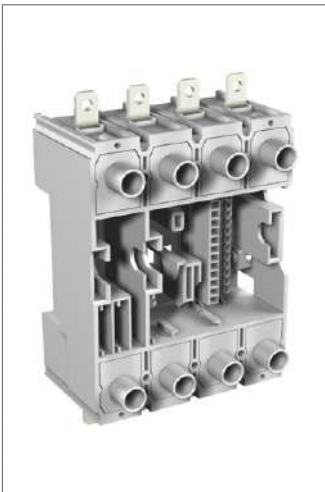
### T6 630 - FIXED (F) - 4 POLES - FRONT TERMINALS (F)

Thermomagnetic Trip Unit – TMA	In	N	S	H	L
		Icu @ 415Vac = 36kA	Icu @ 415Vac = 50 kA	Icu @ 415Vac = 70 kA	Icu @ 415Vac = 100 kA
N=50%	441 - 630A	1SDA060203R1	1SDA060205R1	1SDA060207R1	1SDA060209R1
N=100%	441 - 630A	1SDA060210R1	1SDA060211R1	1SDA060212R1	1SDA060213R1



### T6 630 - FIXED (F) - 4 POLES - FRONT TERMINALS (F)

Electronic Trip Unit	In	N	S	H	L
		Icu @ 415Vac = 36kA	Icu @ 415Vac = 50 kA	Icu @ 415Vac = 70 kA	Icu @ 415Vac = 100 kA
PR221DS-LS/I	252 - 630A	1SDA060231R1	1SDA060241R1	1SDA060251R1	1SDA060262R1
PR222DS/P-LSI	252 - 630A	1SDA060233R1	1SDA060243R1	1SDA060253R1	1SDA060264R1



### FIXED PARTS, CONVERSION KIT AND ACCESSORIES FOR FIXED PARTS

Function:

- Protection and control of the circuits against overloads and short-circuit for power distribution.
- All Tmax circuit breakers are suitable for current limiting in standard release.

Application:

- Power distribution for commercial and industrial installations.

Supplier Code	Description	Number of Poles	Item Description	For Use With
1SDA054737R1	T4 FPEF	3	Fixed plug -in base	T4
1SDA054839R1	Kit P MP T4	3	Conversion kit for the MCCB to plug-in	T4
1SDA054749R1	T5 400P FPEF	3	Fixed plug -in base	T5 400
1SDA054843R1	Kit P MP T5 400	3	Conversion kit for the MCCB to plug-in	T5 400
1SDA054762R1	T5 630 P FPEF	3	Fixed plug -in base	T5 630
1SDA054847R1	Kit P MP T5 630	3	Conversion kit for the MCCB to plug-in	T5 630
1SDA054944R1	FLD T4-T5 F/P		Front lever operating mechanism	T4,T5



### SHUNT OPENING RELEASE

Supplier Code	Description	For Use With
1SDA054870R1	SOR-C 24 - 30V AC/DC	T4/T5/T6
1SDA054872R1	SOR-C 110 - 127V AC /110 - 125V DC	T4/T5/T6
1SDA054873R1	SOR-C 220 - 240V AC /220 - 250V DC	T4/T5/T6
1SDA054874R1	SOR-C 380 - 440V AC	T4/T5/T6
1SDA054875R1	SOR-C 480 - 525V AC	T4/T5/T6
1SDA062065R1	SOR-C 24 - 30V AC/DC	T7/T7M
1SDA062069R1	SOR-C 110 - 120V AC/DC	T7/T7M
1SDA063548R1	SOR-C 220 - 240V AC/DC	T7/T7M
1SDA062071R1	SOR-C 380 - 440V AC	T7/T7M



### SHUNT CLOSING RELEASE

Supplier Code	Description	For Use With
1SDA062076R1	SCR-C 24 - 30V AD/DC	T7M
1SDA062080R1	SCR-C 110 - 120V AC/DC	T7M
1SDA062081R1	SCR-C 220 - 240V AC/DC	T7M
1SDA062082R1	SCR-C 380 - 440V AC*	T7M



### UNDER VOLTAGE RELEASE

Supplier Code	Description	For Use With
1SDA054887R1	UVR-C 24 - 30V AC/DC	T4/T5/T6
1SDA054890R1	UVR-C 110 - 127V AC /110 - 125V DC	T4/T5/T6
1SDA054891R1	UVR-C 220 - 240V AC/220 - 250V DC	T4/T5/T6
1SDA054892R1	UVR-C 380 - 440V AC	T4/T5/T6
1SDA054893R1	UVR-C 480 - 525V AC	T4/T5/T6
1SDA062087R1	UVR-C 24 - 30V AC/DC	T7/T7M
1SDA062091R1	UVR-C 110 - 120V AC/DC	T7/T7M
1SDA063552R1	UVR-C 220 - 240V AC/DC	T7/T7M
1SDA062093R1	UVR-C 380 - 440V AC	T7/T7M



### DELAY DEVICE UNDER VOLTAGE RELEASE

Supplier Code	Description	For Use With
1SDA051357R1	UVD 24 - 30V AC/DC	T4/T5/T6
1SDA051360R1	UVD 110 - 125V AC/DC	T4/T5/T6
1SDA051361R1	UVD 220 - 250V AC/DC	T4/T5/T6
1SDA038316R1	UVD 24 - 30V AC/DC	T7/T7M
1SDA038319R1	UVD 110 - 125V AC/DC	T7/T7M
1SDA038320R1	UVD 220 - 250V AC/DC	T7/T7M



### AUXILIARY CONTACTS - AUX

Supplier Code	Description	For Use With
1SDA054910R1	AUX-C 1Q+1SY 250V	T4/T5/T6
1SDA054911R1	AUX-C 3Q+1SY 250V	T4/T5/T6
1SDA054912R1	AUX-C 1Q+1SY 400V	T4/T5/T6
1SDA054913R1	AUX-C 2Q 400V	T4/T5/T6
1SDA062102R1	AUX 2Q 400V AC	T7/T7M
1SDA062101R1	AUX 2Q 24V AC	T7/T7M
1SDA063553R1	AUX-SA 1 S51 T7 - T7M 250V	T7M



## 3 POLE BLOCK CONTACTORS



### 3 POLE CONTACTORS, FOR MOTOR CONTROL AND POWER SWITCHING



AF09



AF12



AF38



AF40



AF52

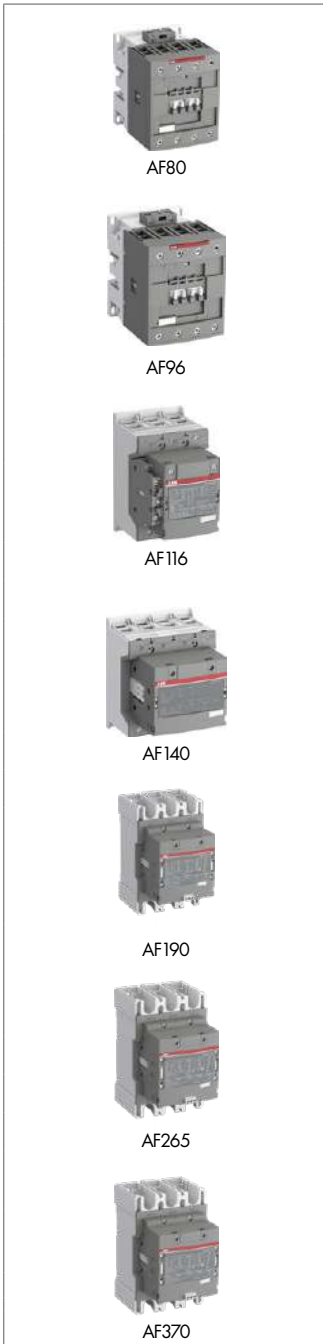


AF65

AC / DC Control Supply	Type	AF09	AF12	AF16	AF26	AF30	AF38	AF40	AF52	AF65	
IEC AC-3 Rated Operational Power 0 ≤ 60°C for AF09- AF370 0 ≤ 55°C for AF400- AF2650	220 - 230 - 240V	kW	2.2	3	4	6.5	9	11	11	15	18.5
	380 - 400V	kW	4	5.5	7.5	11	15	18.5	18.5	22	30
	415V	kW	4	5.5	9	11	15	18.5	22	30	37
	440V	kW	4	5.5	9	15	18.5	22	22	30	37
	500V	kW	5.5	7.5	9	15	18.5	22	22	30	37
	690V	kW	5.5	7.5	9	15	18.5	22	22	30	37
1000V	kW	-	-	-	-	-	-	-	-	-	
Rated Operational Current	380 - 400V	A	9	12	18	26	32	38	40	53	65
AC-1 Rated Operational current	u ≤ 40°C, 690V	A	25	28	30	45	50	50	70	100	105
UL / CSA 1-Phase Motor Rating	120V	hp	0.75	1	1.5	2	2	2	3	3	5
	240V	hp	1.5	2	3	3	5	5	7.5	10	15
3-Phase Motor Rating	200 - 208V	hp	2	3	5	7.5	10	10	10	15	20
	220 - 240V	hp	2	3	5	7.5	10	10	15	20	25
	440 - 480 V	hp	5	7.5	10	15	20	25	30	40	50
550 - 600V	hp	7.5	10	15	20	25	30	40	50	60	
General Use Rating	600V	A	25	28	30	45	50	50	60	80	90
NEMA Size			00	0	-	1	-	-	2	-	-
"1000 V IEC ratings available for AF80, AF96 and AF146-AF2650 contactors. ≤ 55°C AF400-AF2650 contactors."											
Main Accessories											
Auxiliary Contact Blocks	Front Mounting										
	Side Mounting	CAL4-11 (1 x N.O. + 1 x N.C.)									
Timers	Electronic	TEF4-ON									
		TEF4-OFF									
Interlocking Units (3)	Mechanical	VM4									
	Mechanical / Electrical	VEM4						VM96-4			
Connection Sets	For Reversing Contactors	BER16-4			BER 38-4			BER65-4			
Surge Suppressors	Varistor (AC/DC)										
	RC Type (AC)										
	Transil Diode (DC)										
(3) See available reversing contactors VB6, VB7 and VAS09-VAS16.											



### 3 POLE CONTACTORS, FOR MOTOR CONTROL AND POWER SWITCHING



AC/DC Control Supply		Type	AF80	AF96	AF116	AF140	AF146	AF190	AF205	AF265	AF305	AF370
IEC AC-3 Rated Operational Power 0 ≤ 60°C for AF09- AF370 0 ≤ 55°C for AF400- AF2650	220 - 230 - 240V	kW	22	25	30	37	45	55	55	75	90	110
	380 - 400V	kW	37	45	55	75	75	90	110	132	160	200
	415V	kW	45	55	55	75	75	90	110	132	160	200
	440V	kW	45	55	75	90	90	110	132	160	160	200
	500V	kW	45	55	75	90	90	110	132	160	200	250
	690V	kW	45	55	55	75	90	132	160	200	250	315
1000V	kW	35	40	-	-	75	110	132	132	132	132	132
Rated Operational Current	380 - 400V	A	80	96	116	140	146	190	205	265	305	370
AC-1 Rated Operational Current	u ≤ 40°C, 690V	A	125	130	160	200	225	275	350	400	500	600
UL/CSA 1-Phase Motor Rating	120V	hp	7.5	7.5	-	-	-	-	-	-	-	-
	240V	hp	15	20	-	-	-	-	-	-	-	-
3-Phase Motor Rating	200 - 208V	hp	25	30	30	40	40	50	60	75	100	125
	220 - 240V	hp	30	30	40	50	50	60	75	100	125	150
	440 - 480V	hp	69	60	75	100	100	125	150	200	250	300
	550 - 600V	hp	75	75	100	125	125	150	200	250	300	350
General Use Rating	600V	A	105	115	160	200	200	250	300	350	400	520
NEMA Size			3	-	-	4	-	-	-	5	-	-
"1000 V IEC ratings available for AF80, AF96 and AF146-AF2650 contactors. ≤ 55°C AF400-AF2650 contactors."												
Main Accessories												
Auxiliary Contact Blocks	Front Mounting	CA4-10(1 x N.O.) CA4-01(1 x N.C.)										
	Side Mounting	CAL19-11 (1 x N.O. + 1 x N.C.)										
Timers	Electronic											TEF4-ON
												TEF4-OFF
Interlocking Units (3)	Mechanical	VM96-4					VM19 (for same size contactors)					
	Mechanical/ Electrical											
Connection Sets	For Reversing Contactors	BER96-4			BER140-4			BER205-4			BER370-4	
Surge Suppressors	Built-in surge protection											
(3) See available reversing contactors VB6, VB7 and VAS09-VAS16.												

# POWER PRODUCTS

## 3 POLE BLOCK CONTACTORS



### 3 POLE CONTACTORS, FOR MOTOR CONTROL AND POWER SWITCHING



AC / DC Control Supply		Type	AF400	AF460	AF580	AF750	AF1250	AF1350	AF1650	AF2050	AF2650
IEC AC-3 Rated Operational Power 0 ≤ 60°C for AF09-AF370 0 ≤ 55°C for AF400-AF2650	220 - 230 - 240V	kW	110	132	160	220	-	257	315	-	-
	380 - 400V	kW	200	250	315	400	-	475	560	-	-
	415V	kW	220	250	355	425	-	500	630	-	-
	440V	kW	220	250	355	450	-	560	710	-	-
	500V	kW	250	315	400	520	-	560	710	-	-
	690V	kW	315	355	500	600	-	800	1000	-	-
Rated Operational Current	380 - 400V	A	400	460	580	750	-	860	1060	-	-
AC-1 Rated Operational Current	u ≤ 40°C, 690V	A	600	700	800	1050	1260	1350	1650	2050	2650
UL / CSA 1-Phase Motor Rating	120V	hp	-	-	-	-	-	-	-	-	-
	240V	hp	-	-	-	-	-	-	-	-	-
3-Phase Motor Rating	200 - 208V	hp	125	150	200	250	-	-	-	-	-
	220 - 240V	hp	150	200	250	300	-	400	450	-	-
	440 - 480V	hp	350	400	500	600	-	800	900	-	-
	550 - 600V	hp	400	500	600	700	-	1000	1150	-	-
General Use Rating	600V	A	550	650	750	900	1210	1350	1650	2100	2700
NEMA Size			-	6	-	7	-	-	8	-	-
"1000 V IEC ratings available for AF80, AF96 and AF146-AF2650 contactors. ≤ 55 °C AF400-AF2650 contactors."											
Main Accessories											
Auxiliary Contact Blocks	Front Mounting										
	Side Mounting	CAL18-11 (1 x N.O. + 1 x N.C.)									
Timers	Electronic										
Interlocking Units (3)	Mechanical	VM750H VM750V									VM1650H
	Mechanical / Electrical										
Connection Sets	For Reversing Contactors	BEM460-30	BEM750-30								
Surge Suppressors	Built-in surge protection										
(3) See available reversing contactors VB6, VB7 and VAS09-VAS16.											



### 3 POLE CONTACTORS, FOR MOTOR CONTROL AND POWER SWITCHING



Overload Relays											
Thermal Relays	Class 10 (Class 10A for TF140, TA200DU)	TF42 (0.10-38A)		TF65 (22-67A)	TF96 (40-96A)	TF140DU (66-142A) 0≤55°C	TA200DU (66-200A) 0≤55°C				
	Electronic Relays Class 10E, 20E, 30E	EF19 (0.10-18.9 A)	EF19 (0.10-18.9 A) EF45 (9-45 A)	EF65 (20-70A)	EF96 (36-100A)	EF146 (54-150A)	EF205 (63-210A)	EF370 (115-380A)	EF460 (150-500A)	EF750 (250-800A)	E1250DU (375-1250)



Manual Motor Starters			
Thermal/Magnetic Protection Class 10	MS116 (0.10-32A) lcs up to 50 kA for Class 10A	MS165 (10-65A) lcs up to 100kA	MS5100 (40-100 A) lcs up to 50 kA
	MS132 (0.10-32A) lcs up to 100kA	MS495 (45-100A) lcs up to 50kA	MS497 (22-100A) lcs up to 100kA
Magnetic Only Types	MO132 (0.16-32 A) lcs up to 100kA	MO165 (16-65A) lcs up to 100kA	MS497 (22-100A) lcs up to 100kA
			MO495 (63-100A) lcs up to 50kA



Accessories			
For Contactor Mounting	BEA16-4	BEA38-4	BEA65-4 (5)
(4) MS165/MO165 are suitable for use with AF09-AF30 for North american applications.			
(5) BEA65-4 suitable for MS165 and MO165 only.			

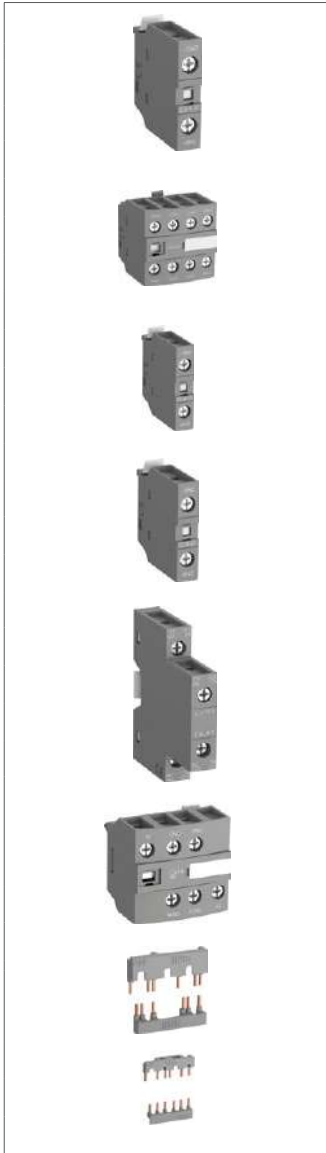


Short-circuit Protection Devices
MCCB and Switch-fuses

## 3 POLE BLOCK CONTACTORS



### MAIN ACCESSORIES FOR AF CONTACTOR RANGE



### ADDITIONAL AUXILIARY CONTACT BLOCKS

Product Code	Supplier Code	For Contactors	Type	Auxiliary Contacts
<b>Front-mounted Instantaneous Auxiliary Contact Blocks</b>				
D0003572	1SBN010110R1010	AF09 - AF96	CA4-10	1 0
D0003571	1SBN010110R1001	AF09 - AF96	CA4-01	0 1
-	1SBN010110T1001	AF09 - AF96	CA4-10-T	1 0
-	1SBN010140R112	AF09 - AF96	CA422M	2 2
D0015543	1SBN010140R1022	AF26 - AF38	CA4-22E	2 2
-	1SBN010140R1322	AF09 - AF16	CA4-22U	2 2
<b>Front-mounted Instantaneous Auxiliary Contact Blocks with N.O Leading Contact and N.C. Lagging Contact</b>				
-	1SBN010111R1010	AF09 - AF96	CC4-10	1 0
-	1SBN010111R1001		CC4-01	0 1
<b>Side-mounted Instantaneous Auxiliary Contact Blocks</b>				
D0018826	1SBN010120R1011	AF09 - AF96	CAL4-11	1 1
-	1SBN010120T1011		CAL4-11-T	
<b>Front-mounted Instantaneous Auxiliary Contact and A1 /A2 Coli Terminal Blocks</b>				
-	1SBN010151R1111	AF09 - AF96	CAT4-11M	1 1
-	1SBN010151R1011	AF26 - AF96	CAT4-11-E	
-	1SBN010151R1311	AF09 - AF96	CAT4-11U	
<b>Interlocks - Mechanical Interlock Unit</b>				
-	1SBN03015T1000	AF09 - AF38	VM4	Note Vm4 includes 2 fixing clips (BB4) to maintain together both contactors
<b>Mechanical and Electrical Interlock Set</b>				
D0003610	1SBN030111R1000	AF09 - AF38	VEM4	0 2
Note: VEM4 includes a Vm4 mechanical unit with 2 fixing clips (Bb4), z Ve4 electrical interlock block. Ve4 block must be used with A2-A2 connection to respect the electrical connection diagram.				
<b>Connection Sets For Reversing Contactors</b>				
D0003567	1SBN081311R1000	AF09 - AF16	BER16-4	-
D0003568	1SBN082311R1000	AF26 - AF38	BER38-4	-

**Note** Items above with (-) in the Product Code column are available on special request.



### CONTACTORS AND CONTACTORS RELAYS AF RANGE AC/DC OPERATED - WITH SCREW TERMINALS

Contactors AF09 to AF38

Application:

- AF09-AF38 contactors are used for controlling power circuits up to 690V AC and 220V DC
- They are mainly used for controlling 3-phase motors, non-inductive or slightly inductive loads

Description:

- AF09-AF38 contactors use an electronic coil interface accepting a wide control voltage  $U_c$  min- $U_c$  max
- Only four coils cover control voltage between 24-500V 50/60 Hz or 20-500V DC
- AF Contactors can manage large control voltage variations. One coil (e.g. 100-250V 50/60 Hz-DC) can be used for different control voltage used worldwide without any coil change
- AF-Z contactors equipped with a Z coil type type allow direct control by 24V DC 500mA PLC-Output and obtain a reduced holding coil consumption
- AF-Z contactors withstand short dips and voltage interruptions (SEMI F47-0706 compliance)
- AF contactors have built in surge protection and do not require any additional surge suppressors
- The built in N.C contact is a mirror contact in compliance with annex F of IEC 60947-4-1



AF09



AF12



AF38

Product Code	Supplier Code	EC Rated Power 400V AC-3 kW	Type	Control Voltage		Auxiliary Contacts Fitted	
				$U_c$ Min V 50/60 Hz	$U_c$ Max V DC	NO	NC
D0003566	1SBL137001R1110	4	AF09-30-10-11	24 - 60	20 - 60	1	0
D0002758	1SBL137001R1210		AF09-30-10-12	48 - 130	48 - 130		
D0002759	1SBL137001R1310		AF09-30-10-13	100 - 250	100 - 250		
D0003550	1SBL157001R1110	5.5	AF12-30-10-11	24 - 60	20 - 60	1	0
D0003547	1SBL157001R1210		AF12-30-10-12	48 - 130	48 - 130		
D0003548	1SBL157001R1310		AF12-30-10-13	100 - 250	100 - 250		
D0003554	1SBL177001R1110	7.5	AF16-30-10-11	24 - 60	20 - 60	1	0
D0003551	1SBL177001R1210		AF16-30-10-12	48 - 130	48 - 130		
D0003552	1SBL177001R1310		AF16-30-10-13	100 - 250	100 - 250		
D0003558	1SBL237001R1100	11	AF26-30-00-11	24 - 60	20 - 60	1	0
D0003555	1SBL237001R1200		AF26-30-00-12	48 - 130	48 - 130		
D0005556	1SBL237001R1300		AF26-30-00-13	100 - 250	100 - 250		
D0003562	1SBL277001R1100	15	AF30-30-00-11	24 - 60	20 - 60	0	0
D0003559	1SBL277001R1200		AF30-30-00-12	48 - 130	48 - 130		
D0003560	1SBL277001R1300		AF30-30-00-13	100 - 250	100 - 250		
D0005542	1SBL297001R1100	18.5	AF38-30-00-11	24 - 60	20 - 60	0	0
D0004979	1SBL297001R1200		AF38-30-00-12	48 - 130	48 - 130		
D0004978	1SBL297001R1300		AF38-30-00-13	100 - 250	100 - 250		



### AF40 - AF96 3 POLE CONTACTORS



AF40



AF52



AF65



AF80



AF96

Product Code	Supplier Code	IEC		UL/CSA		Rated Control Circuit Voltage		Auxiliary Contacts Fitted		Type
		Rated Operational Power Current 400V u ≤ 40°C		3-phase Motor Rating	General Use Rating 600 V AC	Uc Min	Uc Max			
		AC-3	AC-1							
		(kW)	(A)	(hp)	(A)					
-	1SBL347001R1100	18.5	70	30	60	24 - 60	20 - 60	0	0	AF40-30-00-11
-	1SBL347001R1200					48 - 130	48 - 130	0	0	AF40-30-00-12
D0003537	1SBL347001R1300					100 - 250	100 - 250	0	0	AF40-30-00-13
-	1SBL347001R1400					250 - 500	250 - 500	0	0	AF40-30-00-14
D0020120	1SBL367001R1100	22	100	40	80	24 - 60	20 - 60	0	0	AF52-30-00-11
D0015761	1SBL367001R1200					48 - 130	48 - 130	0	0	AF52-30-00-12
D0004980	1SBL367001R1300					100 - 250	100 - 250	0	0	AF52-30-00-13
D0019390	1SBL367001R1400					250 - 500	250 - 500	0	0	AF52-30-00-14
D0018847	1SBL387001R1100	30	105	50	90	24 - 60	20 - 60	0	0	AF65-30-00-11
-	1SBL387001R1200					48 - 130	48 - 130	0	0	AF65-30-00-12
D0018845	1SBL387001R1300					100 - 250	100 - 250	0	0	AF65-30-00-13
D0018846	1SBL387001R1400					250 - 500	250 - 500	0	0	AF65-30-00-14
-	1SBL397001R1100	37	125	60	105	24 - 60	20 - 60	0	0	AF80-30-00-11
-	1SBL397001R1200					48 - 130	48 - 130	0	0	AF80-30-00-12
D0004981	1SBL397001R1300					100 - 250	100 - 250	0	0	AF80-30-00-13
-	1SBL397001R1400					250 - 500	250 - 500	0	0	AF80-30-00-14
-	1SBL407001R1100	45	130	60	115	24 - 60	20 - 60	0	0	AF96-30-00-11
-	1SBL407001R1200					48 - 130	48 - 130	0	0	AF96-30-00-12
D0004982	1SBL407001R1300					100 - 250	100 - 250	0	0	AF96-30-00-13
-	1SBL407001R1400					250 - 500	250 - 500	0	0	AF96-30-00-14

**Note** Items above with (-) in the Product Code column are available on special request.



### AF116 - AF146 3 POLE CONTACTORS - FOR CONNECTION WITH BUILT-IN CABLE CLAMPS



AF116



AF140

Supplier Code	IEC		UL/CSA		Rated Control Circuit Voltage		Auxiliary Contacts Fitted		Type
	Rated Operational Power Current 400 V $u \leq 40^\circ\text{C}$		3-phase Motor Rating	General Use Rating 600 V AC	Uc Min	Uc Max			
	AC-3	AC-1							
	(kW)	(A)	(hp)	(A)					
1SFL427001R1100	55	160	75	160	24 - 60	20 - 60	0	0	AF116-70-00
1SFL427001R1200					48 - 130	48 - 130	0	0	AF116-70-00
1SFL427001R1300					100 - 250	100 - 250	0	0	AF116-70-00
1SFL427001R1400					250 - 500	250 - 500	0	0	AF116-70-00
1SFL447001R1100	75	200	100	200	24 - 60	20 - 60	0	0	AF140-30-00
1SFL447001R1200					48 - 130	48 - 130	0	0	AF140-30-00
1SFL447001R1300					100 - 250	100 - 250	0	0	AF140-30-00
1SFL447001R1400					250 - 500	250 - 500	0	0	AF140-30-00
1SFL467001R1100	75	225	100	200	24 - 60	20 - 60	0	0	AF146-30-00
1SFL467001R1200					48 - 130	48 - 130	0	0	AF146-30-00
1SFL467001R1300					100 - 250	100 - 250	0	0	AF146-30-00
1SFL467001R1400					250 - 500	250 - 500	0	0	AF146-30-00





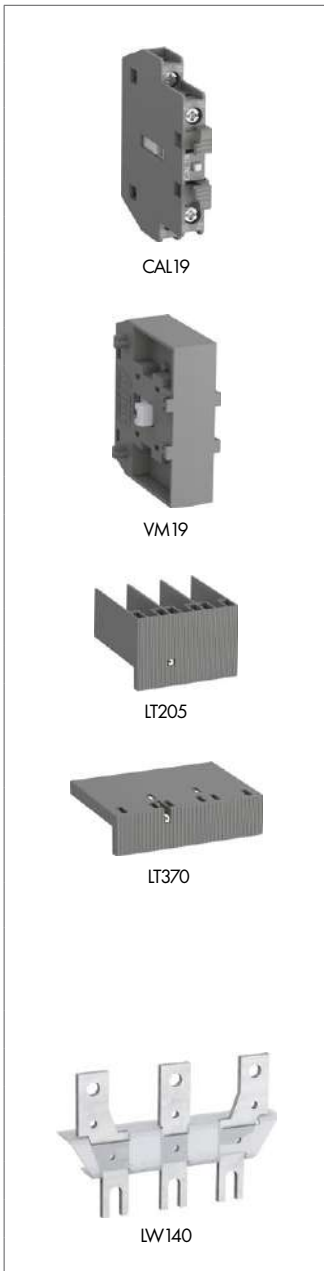
### AF190 - AF370 3 POLE CONTACTORS



Product Code	Supplier Code	IEC		UL/CSA		Rated Control Circuit Voltage		Auxiliary Contacts Fitted	Type	
		Rated Operational		3-phase	General Use Rating 600 V AC	Uc Min	Uc Max			
		Power 400 V AC-3 (kW)	Current $u \leq 40^\circ\text{C}$ AC-1 (A)	Motor Rating (hp)						
-	1SFL487002R1100	90	275	125	250	24 - 60	20 - 60	0	0	AF190-30-00-11
-	1SFL487002R1200					48 - 130	48 - 130	0	0	AF190-30-00-12
D0006358	1SFL487002R1300					100 - 250	100 - 250	0	0	AF190-30-00-13
-	1SFL487002R1400					250 - 500	250 - 500	0	0	AF190-30-00-14
-	1SFL527002R1100	110	350	150	300	24 - 60	20 - 60	0	0	AF205-30-00-11
-	1SFL527002R1200					48 - 130	48 - 130	0	0	AF205-30-00-12
D0005540	1SFL527002R1300					100 - 250	100 - 250	0	0	AF205-30-00-13
-	1SFL527002R1400					250 - 500	250 - 500	0	0	AF205-30-00-14
-	1SFL547002R1100	132	400	200	350	24 - 60	20 - 60	0	0	AF265-30-00-11
-	1SFL547002R1200					48 - 130	48 - 130	0	0	AF265-30-00-12
D0019939	1SFL547002R1300					100 - 250	100 - 250	0	0	AF265-30-00-13
-	1SFL547002R1400					250 - 500	250 - 500	0	0	AF265-30-00-14
-	1SFL587002R1100	160	500	250	400	24 - 60	20 - 60	0	0	AF305-30-00-11
-	1SFL587002R1200					48 - 130	48 - 130	0	0	AF305-30-00-12
D0005541	1SFL587002R1300					100 - 250	100 - 250	0	0	AF305-30-00-13
-	1SFL587002R1400					250 - 500	250 - 500	0	0	AF305-30-00-14
-	1SFL607002R1100	200	600	300	520	24 - 60	20 - 60	0	0	AF370-30-00-11
-	1SFL607002R1200					48 - 130	48 - 130	0	0	AF370-30-00-12
-	1SFL607002R1300					100 - 250	100 - 250	0	0	AF370-30-00-13
-	1SFL607002R1400					250 - 500	250 - 500	0	0	AF370-30-00-14

**Note** Items above with (-) in the Product Code column are available on special request

### AF116 - AF370 - 3 POLE CONTACTORS MAIN ACCESSORIES



Product Code	Supplier Code	For Contactors	Auxiliary Contacts		Type
<b>Side-mounted Instantaneous Auxiliary Contact Blocks</b>					
D0005545	1SFN010820R1011	AF116 - AF370	1	1	CAL19-11
-	1SFN010820R3311		1	1	CAL19-11B
<b>Mechanical Interlock Unit</b>					
D0019941	1SFN030300R1000	AF116 - AF370			VM19
-	1SFN034403R1000	AF116 - AF146 and AF190, AF205			VM140/190
-	1SFN035203R1000	AF190, AF205 and AF265 - AF370			VM205/265
<b>Terminal Shrouds</b>					
-	1SFN124203R1000	AF116 - AF146, with compression lugs			LT140-30L
-	1SFN124801R1000	AF190, AF205, with cable clamps			LT205-30C
-	1SFN124803R1000	AF190, AF205, with compression lugs			LT205-30L
-	1SFN124804R1000	AF190, AF205, with shorting bar or between contactor and TOL/EOL in DOL-starters			LT205-30Y
-	1SFN125401R1000	AF265 - AF370, with cable clamps			LT370-30C
-	1SFN125403R1000	AF265 - AF370, with compression lugs			LT370-30L
-	1SFN125404R1000	AF265 - AF370, with shorting bar or between contactor and TOL/EOL in DOL-starters			LT370-30Y
-	1SFN125406R1000	AF265 - AF370, for use with extending cable clamps, ATK300/2 and OZXB4			LT370-30D
Product Code	Supplier Code	For Contactors	Dimensions		Type
			Hole Ø (mm)	Bar (mm)	
<b>Terminal Enlargements</b>					
-	1SFN074207R1000	AF116 - AF146	6.5	13 x 3	LW140
-	1SFN074807R1000	AF190 - AF205	10.5	17.5 x 5	LW205
-	1SFN075407R1000	AF265 - AF370	10.5	20 x 5	LW370
<b>Terminal Extension</b>					
-	1SFN074210R1000	AF116 - AF146	6.5	13 x 3	LX140
-	1SFN074810R1000	AF190 - AF250	8.5	17.5 x 5	LX205
-	1SFN075410R1000	AF265 - AF370	10.5	20 x 5	LX370

**Note** Items above with (-) in the Product Code column are available on special request.

# POWER PRODUCTS

## CONTACTORS AND CONTACTOR RELAYS



### AF09 - AF38 - 4 POLE CONTACTORS



AF09



AF38

Product Code	Supplier Code	IEC	UL/CSA	Rated Control Circuit Voltage		Auxiliary Contacts Fitted	Type	
		Rated Operational Current $u \leq 40^\circ\text{C AC-1}$ (A)	General Use Rating 600 V AC (A)	Uc Min V 50/60 Hz	Uc Max V DC			
<b>4 N.O. Main Poles</b>								
-	1SBL137201R1100	25	25	24 - 60	20 - 60	0	0	AF09-40-00-11
-	1SBL137201R1200			48 - 130	48 - 130	0	0	AF09-40-00-12
-	1SBL137201R1300			100 - 250	100 - 250	0	0	AF09-40-00-13
-	1SBL137201R1400			250 - 500	250 - 500	0	0	AF09-40-00-14
-	1SBL177201R1100	30	30	24 - 60	20 - 60 <sup>1</sup>	0	0	AF16-40-00-11
-	1SBL177201R1200			48 - 130	48 - 130	0	0	AF16-40-00-12
-	1SBL177201R1300			100 - 250	100 - 250	0	0	AF16-40-00-13
-	1SBL177201R1400			250 - 500	250 - 500	0	0	AF16-40-00-14
-	1SBL237201R1100	45	45	24 - 60	20 - 60 <sup>1</sup>	0	0	AF26-40-00-41
-	1SBL237201R1200			48 - 130	48 - 130	0	0	AF26-40-00-12
D0019927	1SBL237201R1300			100 - 250	100 - 250	0	0	AF26-40-00-13
-	1SBL237201R1400			250 - 500	250 - 500	0	0	AF26-40-00-14
-	1SBL297201R1100	55	55	24 - 60	20 - 60 <sup>1</sup>	0	0	AF38-40-00-11
-	1SBL297201R1200			48 - 130	48 - 130	0	0	AF38-40-00-12
D0019928	1SBL297201R1300			100 - 250	100 - 250	0	0	AF38-40-00-13
-	1SBL297201R1400			250 - 500	250 - 500	0	0	AF38-40-00-14
<b>2 N.O. + 2 N.C. Main Poles</b>								
-	1SBL137501R1100	25	25	24 - 60	20 - 60	0	0	AF09-22-00-11
-	1SBL137501R1200			48 - 130	48 - 130	0	0	AF09-22-00-12
-	1SBL137501R1300			100 - 250	100 - 250	0	0	AF09-22-00-13
-	1SBL137501R1400			250 - 500	250 - 500	0	0	AF09-22-00-14
-	1SBL177501R1100	30	30	24 - 60	20 - 60 <sup>1</sup>	0	0	AF16-22-00-11
-	1SBL177501R1200			48 - 130	48 - 130	0	0	AF16-22-00-12
-	1SBL177501R1300			100 - 250	100 - 250	0	0	AF16-22-00-13
-	1SBL177501R1400			250 - 500	250 - 500	0	0	AF16-22-00-14
-	1SBL237501R1100	45	45	24 - 60	20 - 60 <sup>1</sup>	0	0	AF26-22-00-11
-	1SBL237501R1200			48 - 130	48 - 130	0	0	AF26-22-00-12
-	1SBL237501R1300			100 - 250	100 - 250	0	0	AF26-22-00-13
-	1SBL237501R1400			250 - 500	250 - 500	0	0	AF26-22-00-14
-	1SBL297501R1100	55	55	24 - 60	20 - 60 <sup>1</sup>	0	0	AF38-22-00-11
-	1SBL297501R1200			48 - 130	48 - 130	0	0	AF38-22-00-12
-	1SBL297501R1300			100 - 250	100 - 250	0	0	AF38-22-00-13
-	1SBL297501R1400			250 - 500	250 - 500	0	0	AF38-22-00-14

**Note** <sup>1</sup>For 24-60 V 50/60 Hz - 20-60 V DC, use AF-11.

AF-11 not suitable for direct control by PLC-output.

Items above with (-) in the Product Code column are available on special request.



### AF40 - AF80 4 POLE CONTACTORS



AF40



AF52



AF80

Product Code	Supplier Code	IEC	UL/CSA	Rated Control Circuit Voltage		Auxiliary Contacts Fitted		Type <sup>1</sup>
		Rated Operational Current $u \leq 40^\circ\text{C}$ AC-1 (A)	General Use Rating 600 V AC (A)	Uc Min V 50/60 Hz	Uc Max V DC			
<b>4 N.O. Main Poles</b>								
-	1SBL347201R1100	70	60	24 - 60	20 - 60 <sup>1</sup>	0	0	AF40-40-00-11
-	1SBL347201R1200			48 - 130	48 - 130	0	0	AF40-40-00-12
-	1SBL347201R1300			100 - 250	100 - 250	0	0	AF40-40-00-13
-	1SBL347201R1400			250 - 500	250 - 500	0	0	AF40-40-00-14
-	1SBL367201R1100	100	80	24 - 60	20 - 60 <sup>1</sup>	0	0	AF52-40-00-11
-	1SBL367201R1200			48 - 130	48 - 130	0	0	AF52-40-00-12
-	1SBL367201R1300			100 - 250	100 - 250	0	0	AF52-40-00-13
-	1SBL367201R1400			250 - 500	250 - 500	0	0	AF52-40-00-14
-	1SBL397201R1100	125	105	24 - 60	20 - 60 <sup>1</sup>	0	0	AF80-40-00-11
-	1SBL397201R1200			48 - 130	48 - 130	0	0	AF80-40-00-12
D0019931	1SBL397201R1300			100 - 250	100 - 250	0	0	AF80-40-00-13
-	1SBL397201R1400			250 - 500	250 - 500	0	0	AF80-40-00-14
<b>2 N.O. + 2 N.C. Main Poles</b>								
-	1SBL347501R1100	70	60	24 - 60	20 - 60 <sup>1</sup>	0	0	AF40-22-00-11
-	1SBL347501R1200			48 - 130	48 - 130	0	0	AF40-22-00-12
-	1SBL347501R1300			100 - 250	100 - 250	0	0	AF40-22-00-13
-	1SBL347501R1400			250 - 500	250 - 500	0	0	AF40-22-00-14
-	1SBL397501R1100	125	105	24 - 60	20 - 60 <sup>1</sup>	0	0	AF80-22-00-11
-	1SBL397501R1200			48 - 130	48 - 130	0	0	AF80-22-00-12
-	1SBL397501R1300			100 - 250	100 - 250	0	0	AF80-22-00-13
-	1SBL397501R1400			250 - 500	250 - 500	0	0	AF80-22-00-14

**Note** <sup>1</sup>AF-11 not suitable for direct control by PLC-output.

Items above with (-) in the Product Code column are available on special request.



### MINI CONTACTORS



B6



B7

Supplier Code	IEC		UL/CSA		Rated Control Circuit Voltage U <sub>c</sub>		Auxiliary Contacts Fitted	Type	
	Rated Operational Power 400 V AC-3  (kW)	Current 8 ≤ 40°C AC-1  (A)	3- phase Motor Rating	General Use Rating	50 Hz V AC	60 Hz V AC			
<b>3 Pole AC Operated B6</b>									
GJL1211001R0101	4	20	3	300V/12A	24	24	1	0	B6-30-10-01
GJL1211001R0011	4	20	3	300V/12A			0	1	B6-30-01-01
GJL1211001R0102	4	20	3	300V/12A	42	42	1	0	B6-30-10-02
GJL1211001R0012	4	20	3	300V/12A			0	1	B6-30-01-02
GJL1211001R0103	4	20	3	300V/12A	48	48	1	0	B6-30-10-03
GJL1211001R0013	4	20	3	300V/12A			0	1	B6-30-01-03
GJL1211001R8104	4	20	3	300V/12A	110 - 127	110 - 127	1	0	B6-30-10-84
GJL1211001R8014	4	20	3	300V/12A			0	1	B6-30-01-84
GJL1211001R8100	4	20	3	300V/12A	220 - 240	220 - 240	1	0	B6-30-10-80
GJL1211001R8010	4	20	3	300V/12A			0	1	B6-30-01-80
GJL1211001R8105	4	20	3	300V/12A	380 - 415	380 - 415	1	0	B6-30-10-85
GJL1211001R8015	4	20	3	300V/12A			0	1	B6-30-01-85
<b>3 Pole AC Operated B7</b>									
GJL1311001R0101	5.5	20	5	600V/16A	24	24	1	0	B7-30-10-01
GJL1311001R0011	5.5	20	5	600V/16A			0	1	B7-30-01-01
GJL1311001R0102	5.5	20	5	600V/16A	42	42	1	0	B7-30-10-02
GJL1311001R0012	5.5	20	5	600V/16A			0	1	B7-30-01-02
GJL1311001R0103	5.5	20	5	600V/16A	48	48	1	0	B7-30-10-03
GJL1311001R0013	5.5	20	5	600V/16A			0	1	B7-30-01-03
GJL1311001R8104	5.5	20	5	600V/16A	110 - 127	110 - 127	1	0	B7-30-10-84
GJL1311001R8014	5.5	20	5	600V/16A			0	1	B7-30-01-84
GJL1311001R8100	5.5	20	5	600V/16A	220 - 240	220 - 240	1	0	B7-30-10-80
GJL1311001R8010	5.5	20	5	600V/16A			0	1	B7-30-01-80
GJL1311001R8105	5.5	20	5	600V/16A	380 - 415	380 - 415	1	0	B7-30-10-85
GJL1311001R8015	5.5	20	5	600V/16A			0	1	B7-30-01-85



### MINI CONTACTORS



Supplier Code	IEC		UL/CSA		Rated Control Circuit Voltage U <sub>c</sub> 50 Hz V AC	Auxiliary Contacts Fitted		Type
	Rated Operational Power 400 V AC-3 (kW)	Current 8 ≤ 40°C AC-1 (A)	3-phase Motor Rating	General Use Rating				
<b>3 Pole DC Operated B6</b>								
GJL1213001R0107	4	20	3	300V/12A	12	1	0	BC6-30-10-07
GJL1213001R0017	4	20	3	300V/12A		0	1	BC6-30-01-07
GJL1213001R0101	4	20	3	300V/12A	24	1	0	BC6-30-10-01
GJL1213001R0011	4	20	3	300V/12A		0	1	BC6-30-01-01
GJL1213001R1106	4	20	3	300V/12A	48	1	0	BC6-30-10-16
GJL1213001R1016	4	20	3	300V/12A		0	1	BC6-30-01-16
GJL1213001R0103	4	20	3	300V/12A	60	1	0	BC6-30-10-03
GJL1213001R0013	4	20	3	300V/12A		0	1	BC6-30-01-03
GJL1213001R0104	4	20	3	300V/12A	110 - 125	1	0	BC6-30-10-04
GJL1213001R0014	4	20	3	300V/12A		0	1	BC6-30-01-04
GJL1213001R0105	4	20	3	300V/12A	220 - 240	1	0	BC6-30-10-05
GJL1213001R0015	4	20	3	300V/12A		0	1	BC6-30-01-05
<b>3 Pole DC Operated B7</b>								
GJL1313001R0107	5.5	20	5	600V/16A	12	1	0	BC7-30-10-07
GJL1313001R0017	5.5	20	5	600V/16A		0	1	BC7-30-01-07
GJL1313001R0101	5.5	20	5	600V/16A	24	1	0	BC7-30-10-01
GJL1313001R0011	5.5	20	5	600V/16A		0	1	BC7-30-01-01
GJL1313001R1106	5.5	20	5	600V/16A	48	1	0	BC7-30-10-16
GJL1313001R1016	5.5	20	5	600V/16A		0	1	BC7-30-01-16
GJL1313001R1103	5.5	20	5	600V/16A	60	1	0	BC7-30-10-03
GJL1313001R0013	5.5	20	5	600V/16A		0	1	BC7-30-01-03
GJL1313001R0104	5.5	20	5	600V/16A	110 - 125	1	0	BC7-30-10-04
GJL1313001R0014	5.5	20	5	600V/16A		0	1	BC7-30-01-04
GJL1313001R0105	5.5	20	5	600V/16A	220 - 240	1	0	BC7-30-10-05
GJL1313001R0015	5.5	20	5	600V/16A		0	1	BC7-30-01-05

## CONTACTORS AND CONTACTOR RELAYS



### THERMAL OVERLOAD RELAYS FOR B AND AS RANGE

T16				
Supplier Code	Setting Range A	Short-circuit Protective Device	Trip Class	Type
1SAZ711201R1005	0.10 - 0.13	0.5A, fuse type T	10	T16-0.13
1SAZ711201R1008	0.13 - 0.17	1.0A, fuse type T	10	T16-0.17
1SAZ711201R1009	0.17 - 0.23	1.0A, fuse type T	10	T16-0.23
1SAZ711201R1013	0.23 - 0.31	1.0A, fuse type T	10	T16-0.31
1SAZ711201R1014	0.31 - 0.41	2.0A, fuse type gG	10	T16-0.41
1SAZ711201R1017	0.41 - 0.55	2.0A, fuse type gG	10	T16-0.55
1SAZ711201R1021	0.55 - 0.74	4.0A, fuse type gG	10	T16-0.74
1SAZ711201R1023	0.74 - 1.00	6.0A, fuse type gG	10	T16-1.0
1SAZ711201R1025	1.00 - 1.30	6.0A, fuse type gG	10	T16-1.3
1SAZ711201R1028	1.30 - 1.70	10.0A, fuse type gG	10	T16-1.7
1SAZ711201R1031	1.70 - 2.30	10.0A, fuse type gG	10	T16-2.3
1SAZ711201R1033	2.30 - 3.10	10.0A, fuse type gG	10	T16-3.1
1SAZ711201R1035	3.10 - 4.20	20.0A, fuse type gG	10	T16-4.2
1SAZ711201R1038	4.20 - 5.70	20.0A, fuse type gG	10	T16-5.7
1SAZ711201R1040	5.70 - 7.60	35.0A, fuse type gG	10	T16-7.6
1SAZ711201R1043	7.60 - 10.0	35.0A, fuse type gG	10	T16-10
1SAZ711201R1045	10.0 - 13.0	40.0A, fuse type gG	10	T16-13
1SAZ711201R1047	13.0 - 16.0	40.0A, fuse type gG	10	T16-16



### SINGLE MOUNTING KIT T16

Supplier Code	Suitable For	Description	Type
1SAZ701901R0001	T16	Single mounting kit	DB16

### MAIN ACCESSORIES FOR AF CONTACTORS RANGE

#### AF09 - AF38 3 POLE CONTACTORS TF42 THERMAL OVERLOAD RELAYS

Application:

- Overload protection
- Trip class 10
- Phase loss sensitivity
- Manual/automatic reset selectable

Description:

- 45mm width
- Suitable for contactor AF09-AF38
- Sealable operating elements



Product Code	Supplier Code	Type	Setting Ranges A-A	Suitable for Contactors
-	1SAZ721201R1005	TF42-0.13	0.10 - 0.13	AF09 - AF38
-	1SAZ721201R1008	TF42-0.17	0.13 - 0.17	
-	1SAZ721201R1009	TF42-0.23	0.17 - 0.23	
-	1SAZ721201R1013	TF42-0.31	0.23 - 0.31	
-	1SAZ721201R1014	TF42-0.41	0.31 - 0.41	
-	1SAZ721201R1017	TF42-0.55	0.41 - 0.55	
-	1SAZ721201R1021	TF42-0.74	0.55 - 0.74	
-	1SAZ721201R1023	TF42-1.0	0.74 - 1.00	
D0005065	1SAZ721201R1025	TF42-1.3	1.00 - 1.30	
D0005553	1SAZ721201R1028	TF42-1.7	1.30 - 1.70	
D0005067	1SAZ721201R1031	TF42-2.3	1.70 - 2.30	
D0005554	1SAZ721201R1033	TF42-3.1	2.30 - 3.10	
D0005069	1SAZ721201R1035	TF42-4.2	3.10 - 4.20	
D0005555	1SAZ721201R1038	TF42-5.7	4.20 - 5.70	
D0006025	1SAZ721201R1040	TF42-7.6	5.70 - 7.60	
D0003602	1SAZ721201R1043	TF42-10	7.60 - 10.0	
D0003603	1SAZ721201R1045	TF42-13	10.0 - 13.0	
D0006022	1SAZ721201R1047	TF42-16	13.0 - 16.0	
D0003604	1SAZ721201R1049	TF42-20	16.0 - 20.0	
D0003605	1SAZ721201R1051	TF42-24	20.0 - 24.0	
D0003606	1SAZ721201R1052	TF42-29	24.0 - 29.0	
D0005078	1SAZ721201R1053	TF42-35	29.0 - 35.0	
-	1SAZ721201R1055	TF42-38	35.0 - 38.0/40.0	



#### SINGLE MOUNTING KIT TF42

Supplier Code	SuitableFor	Description	Type
1SAZ701902R0001	TF42	Single mounting kit	DB42

**Note** Items above with (-) in the Product Code column are available on special request.



## CONTACTORS AND CONTACTOR RELAYS

**ABB**



### THERMAL OVERLOAD RELAYS FOR AF40 - AF65 RANGE

- TF65

Product Code	Supplier Code	Setting Range A	Short-circuit Protective Device	Trip Class	Type
-	1SAZ811201R1001	22.0 - 28.0	80A, gG type fuses	10	TF65-28
-	1SAZ811201R1002	25.0 - 33.0	80A, gG type fuses	10	TF65-33
D0020479	1SAZ811201R1003	30.0 - 40.0	100A, gG type fuses	10	TF65-40
-	1SAZ811201R1004	36.0 - 47.0	125A, gG type fuses	10	TF65-47
-	1SAZ811201R1005	44.0 - 53.0	125A, gG type fuses	10	TF65-53
-	1SAZ811201R1006	50.0 - 60.0	125A, gG type fuses	10	TF65-60
-	1SAZ811201R1007	57.0 - 67.0	160A, gG type fuses	10	TF65-67



### SINGLE MOUNTING KIT FOR TF65

Product Code	Supplier Code	Suitable for	Description	Type
-	1SAZ801901R1001	TF65	DB65 single mounting kit	DB65



### THERMAL OVERLOAD RELAYS FOR AF80 - AF96 RANGE

- TF96

Product Code	Supplier Code	Setting Range A	Short-circuit Protective Device	Trip Class	Type
-	1SAZ911201R1001	40.0 - 51.0	125 A, gG type fuses	10	TF96-51
-	1SAZ911201R1002	48.0 - 60.0	160 A, gG type fuses	10	TF96-60
-	1SAZ911201R1003	57.0 - 68.0	160 A, gG type fuses	10	TF96-68
-	1SAZ911201R1004	65.0 - 78.0	200 A, gG type fuses	10	TF96-78
-	1SAZ911201R1005	75.0 - 87.0	200 A, gG type fuses	10	TF96-87
-	1SAZ911201R1006	84.0 - 96.0	250 A, gG type fuses	10	TF96-96



### SINGLE MOUNTING KIT FOR TF96

Product Code	Supplier Code	Suitable For	Description	Type
-	1SAZ901901R1001	TF96	DB96 single mounting kit	DB96

**Note** Items above with (-) in the Product Code column are available on special request.



### THERMAL OVERLOAD RELAYS FOR AF116 - AF140 RANGE

- TF140

Product Code	Supplier Code	Setting Range A	Short-circuit Protective Device	Trip Class	Type
-	1SAZ431201R1001	66 - 90	200A, fuse type gG	10A	TF140DU-90
-	1SAZ431201R1002	80 - 110	224A, fuse type gG	10A	TF140DU-110
-	1SAZ431201R1003	100 - 135	224A, fuse type gG	10A	TF140DU-135
-	1SAZ431201R1004	110 - 142	250A, fuse type gG	10A	TF140DU-142



### THERMAL OVERLOAD RELAYS FOR AF190 - AF205 RANGE

- TA200

Product Code	Supplier Code	Setting Range A	Short-circuit Protective Device	Trip Class	Type
-	1SAZ421201R1001	66 - 90	200A, fuse type gG/125 A aM	10A	TA200DU-90
-	1SAZ421201R1002	80 - 110	224A, fuse type gG/160 A aM	10A	TA200DU-110
-	1SAZ421201R1003	100 - 135	224A, fuse type gG/200 A aM	10A	TA200DU-135
-	1SAZ421201R1004	110 - 150	250A, fuse type gG/200 A aM	10A	TA200DU-150
-	1SAZ421201R1005	130 - 175	315A, fuse type gG/250 A aM	10A	TA200DU-175
D0020119	1SAZ421201R1006	150 - 200	315A, fuse type gG/250 A aM	10A	TA200DU-200



### SINGLE MOUNTING KIT FOR TA200DU

Product Code	Supplier Code	Suitable For	Description	Type
-	1SAZ401110R0001	TA200DU	DB200 single mounting kit	DB200



### BLOCK CONTACTORS - OVERLOAD RELAYS FOR A CONTACTOR RANGE

- TA200

Product Code	Supplier Code	Type	Rating and Adjustment Range	Contactor Fitment	Description
-	1SAZ421201R1004	TA200 DU-150	110 - 150	A145 - A185	Thermal overload for up to 690V
-	1SAZ421201R1005	TA200 DU-175	130 - 175		
-	1SAZ421201R1006	TA200 DU-200	150 - 200		
-	1SAZ511201R1002	TA450 DU 235	165 - 235	A210 - A300	
-	1SAZ511201R1003	TA450 DU 310	220 - 310		

**Note** Items above with (-) in the Product Code column are available on special request.

## CONTACTORS AND CONTACTOR RELAYS

**ABB**



### BLOCK CONTACTORS OVERLOAD RELAYS A RANGE - ELECTRONIC OVERLOAD RELAYS FOR B6/B7 TO AF1250

- For contactors A9-A1650
- E16 - E1250 DU

Product Code	Supplier Code	Type	Rating and Adjustment Range	Contactor Fitment	Description
-	1SAX111001R1101	E16 DU 0.32	0.1 - 0.32	-	Electronic overload
-	1SAX111001R1102	E16 DU 1.0	0.3 - 1.00	-	
-	1SAX111001R1103	E16 DU 2.7	0.9 - 2.70	-	
-	1SAX111001R1104	E16 DU 6.3	2.0 - 6.30	-	
-	1SAX111001R1105	E16 DU 18.9	5.7 - 18.9	-	

**Note** Items above with (-) in the Product Code column are available on special request.



### ELECTRONIC TIMERS CT-D RANGE

**Description:**

- The CT-D range with a width of only 17.5mm fits into all domestic installation and distribution panels.
- The devices offer 4 or 7 time ranges from 0.05 seconds up to 100 hours.
- Offers LEDs for status indication.



Supplier Code	Timing Function	Rated Control Supply Voltage	Time Ranges	Control Input	Output	Type	
1SVR500020R0000	Multifunctional <sup>1</sup>	24-240 VAC 24-48 VDC	7 (0.05s - 100h)	■	1 c/o	CT-MFD.12	
1SVR500020R1100	Multifunctional <sup>1</sup>	12-240 VAC/DC	7 (0.05s - 100h)	■	2 c/o	CT-MFD.21	
1SVR500100R0000	ON-delay	24-240 VAC 24-48 VDC	7 (0.05s - 100h)	-	1 c/o	CT-ERD.12	
1SVR500100R0100				-	2 c/o	CT-ERD.22	
1SVR500110R0000	OFF-delay			■	1 c/o	CT-AHD.12	
1SVR500110R0100				■	2 c/o	CT-AHD.22	
1SVR500130R0000	Impulse-ON			-	1 c/o	CT-VWD.12	
1SVR500150R0000	Flasher starting with ON			-		CT-EBD.12	
1SVR500160R0000	Pulse generator			2x7 (0.05s - 100h)	■	2 c/o	CT-TGD.12 <sup>2</sup>
1SVR500160R0100					■		CT-TGD.22 <sup>2</sup>
1SVR500211R0100	Star-delta change-over			4 (0.05s - 10min)	-	2 c/o	CT-SDD.22 <sup>3</sup>
1SVR500210R0100					-		CT-SAD.22 <sup>4</sup>

**Note** Functions: <sup>1</sup> ON-delay, OFF-delay with auxiliary voltage, Impulse-ON, Impulse-OFF with auxiliary voltage, Flasher starting with ON, Flasher starting with OFF, Pulse former

<sup>2</sup> ON and OFF times adjustable independently: 2 x 7 time ranges 0.05 s - 100 h

<sup>3</sup> Transition time 50 ms fixed

<sup>4</sup> Transition time adjustable

Note: ■ Control input with voltage-related triggering

- No triggering

**Synonyms:**

Used expression

1 c/o contact

2 c/o contact

alternative expression(s)

SPDT

DPDT

Used expression

voltage-related

volt-free

alternative expression(s)

wet/non-floating

dry/floating



### ELECTRONIC TIMERS CT-E RANGE

- This range offers highest possible flexibility with:
  - 56 single-function timers with 5 different time ranges
  - 2 multifunction timers with 6 functions and 8 time ranges



Supplier Code	Timing Function	Rated Control Supply Voltage	Time Ranges	Control Input	Output	Type
1SVR550029R8100	Multifunctional <sup>1</sup>	24-240VAC/DC	8 (0.05 s- 100 h)	■	1 c/o	CT-MFE
1SVR550107R1100	ON-delay	24 V AC/DC, 220-240 V AC	0.1-10 s	-	1 c/o	CT-ERE
1SVR550107R4100			0.3-30 s			
1SVR550107R2100			3-300 s			
1SVR550107R5100			0.3-30 min			
1SVR550100R1100		110-130 V AC	0.1-10 s			
1SVR550100R4100			0.3-30 s			
1SVR550100R2100			3-300 s			
1SVR550100R5100			0.3-30 min			
1SVR550118R1100	OFF-delay	24 V AC/DC	0.1-10 s	■	1 c/o	CT-AHE
1SVR550118R4100			0.3-30 s			
1SVR550118R2100			3-300 s			
1SVR550110R1100		110-130 V AC	0.1-10 s			
1SVR550110R4100			0.3-30 s			
1SVR550110R2100			3-300 s			
1SVR550111R1100		220-240 V AC	0.1-10 s			
1SVR550111R4100			0.3-30 s			
1SVR550111R2100	3-300 s					
1SVR550127R1100	OFF-delay <sup>2</sup>	24 V AC/DC, 220-240 V AC	0.1-10 s	-	1 c/o	CT-ARE
1SVR550127R4100			0.3-30 s			
1SVR550120R1100		110-130 V AC	0.1-10 s			
1SVR550120R4100			0.3-30 s			
1SVR550137R1100	Impulse-ON	24 V AC/DC, 220-240 V AC	0.1-10 s	-	1 c/o	CT-VWE
1SVR550137R4100			0.3-30 s			
1SVR550137R2100			3-300 s			
1SVR550130R1100		110-130 V AC	0.1-10 s			
1SVR550130R4100			0.3-30 s			
1SVR550130R2100			3-300 s			
1SVR550158R3100	Impulse-OFF <sup>2</sup>	24 V AC/DC	0.05-1 s	-	1 c/o	CT-AWE
1SVR550150R3100		110-130 V AC				
1SVR550151R3100		220-240 V AC				

**Note** Functions: <sup>1</sup> ON-delay, OFF-delay with auxiliary voltage, Impulse-ON, Flasher starting with ON, Flasher starting with OFF, Pulse former

<sup>2</sup> Without auxiliary voltage, True Off-delay timer.

Note: ■ Control input with voltage-related triggering

- No triggering



### ELECTRONIC TIMERS CT-E RANGE

Supplier Code	Timing Function	Rated Control Supply Voltage	Time Ranges	Control Input	Output	Type
1SVR550148R1100	Impulse-OFF	24VAC/DC	0.1-10 s	■	1 c/o	CT-AWE
1SVR550148R4100			0.3-30 s			
1SVR550148R2100			3-300 s			
1SVR550140R1100		110-130 V AC	0.1-10 s			
1SVR550140R4100			0.3-30 s			
1SVR550140R2100			3-300 s			
1SVR550141R1100		220-240 V AC	0.1-10 s			
1SVR550141R4100			0.3-30 s			
1SVR550141R2100			3-300 s			
1SVR550167R1100	Flasher starting with OFF	24 V AC/DC, 220-240 V AC	0.1-10 s	-	1 c/o	CT-EBE <sup>4</sup>
1SVR550160R1100		110-130 V AC				
1SVR550207R1100	Star-delta change-over twice ON-delayed	24 VAC/DC, 220-240 V AC	0.1-10 s	-	1 c/o	CT-YDE <sup>1 2</sup>
1SVR550207R4100			0.3-30 s			
1SVR550207R2100			3-300 s			
1SVR550200R1100		110-130 V AC	0.1-10 s			
1SVR550200R4100			0.3-30 s			
1SVR550200R2100			3-300 s			
1SVR550217R4100	Star-delta change-over with impulse	24 VAC/DC, 220-240 V AC	0.3-30 s	-	1 n/o + 1 n/c	CT-SDE <sup>2 5</sup>
1SVR550210R4100		110-130 V AC				
1SVR550212R4100		380-415 V AC				
1SVR550019R0000	Multifunctional	24-240 V AC/DC	0.1-10 s 3-300 s	-	Solid-state	CT-MKE <sup>3 6</sup>
1SVR550509R1000	ON-delay	24-240 V AC/DC	0.1-10 s	-		CT-EKE
1SVR550509R4000			0.3-30 s			
1SVR550509R2000			3-300 s			
1SVR550519R1000	OFF-delay	24-240 V AC	0.1-10 s	-		CT-AKE
1SVR550519R4000			0.3-30 s			
1SVR550519R2000			3-300 s			



**Note** Functions: <sup>1</sup> Without auxiliary voltage

<sup>2</sup> With fixed transition time

<sup>3</sup> Solid-state output, functions and time range selection via external jumpers

<sup>4</sup> Symetric ON & OFF times

<sup>5</sup> Common contact

<sup>6</sup> Functions: ON-delay (AC/DC), Impuls-ON (AC only), Flasher starting with OFF (AC only)

**Note:** CT-KE are solid-state timers with thyristor output for 2-wire applications. They are connected directly in series with the control coil of contactors or relays. Voltage should not be applied without a load connected, because there is no current limiting in the unit.

**Note:** ■ Control input with voltage-related triggering

- No triggering



### ELECTRONIC TIMERS CT-S RANGE

**Description:**

- This range is diverse and offers:
  - 8 multifunction timers - 13 single function timers
- Innovative connection technology with double chamber cage connection terminals. The easy connect technology uses push-in terminals which means tool free wiring.

Supplier Code	Timing Function	Rated Control Supply Voltage	Time Ranges	Control Input	Output	Type	
1SVR730020R0200	Multifunctional <sup>5</sup>	24 - 240 V AC/DC	10 (0.05 - 300h)	■	2 c/o	CT-MVS.21S <sup>1 2 3</sup>	
1SVR740020R0200						CT-MVS.21P <sup>1 2 3</sup>	
1SVR730020R3300		24-48 V DC, 24-240 V AC				CT-MVS.22S	
1SVR740020R3300						CT-MVS.22P	
1SVR730021R2300		380-440 V AC				CT-MVS.23S	
1SVR740021R2300						CT-MVS.23P	
1SVR730020R3100	Multifunctional <sup>6</sup>	24-48 V DC, 24-240 V AC	10 (0.05s - 300h)	■	1 c/o	CT-MVS.12S	
1SVR740020R3100						CT-MVS.12P	
1SVR730030R3300	Multifunctional <sup>7</sup>	24-48 V DC, 24-240 V AC	2x10 (0.05s - 300h)	■	2 c/o	CT-MXS.22S <sup>4</sup>	
1SVR740030R3300						CT-MXS.22P <sup>4</sup>	
1SVR730010R0200	Multifunctional <sup>8</sup>	24-240 V AC/DC	10 (0.05s - 300h)	□/□	2 c/o	CT-MFS.21S <sup>1 2 3</sup>	
1SVR740010R0200						CT-MFS.21P <sup>1 2 3</sup>	
1SVR730010R3200		24-48 V DC, 24-240 V AC		10 (0.05s - 300h)		□	CT-MBS.22S <sup>2 3</sup>
1SVR740010R3200							CT-MBS.22P <sup>2 3</sup>
1SVR730040R3300	Multifunctional <sup>9</sup>	24-48 V DC, 24-240 V AC	10 (0.05s - 300h)	-	2 c/o	CT-WBS.22S	
1SVR740040R3300						CT-WBS.22P	

**Note** S: screw connection

P: push-in / easy connect

<sup>1</sup> Extended temperature range -40°C

<sup>2</sup> Remote potentiometer connection

<sup>3</sup> 2nd c/o contact selectable as instantaneous contact

<sup>4</sup> 2 remote potentiometer connections

<sup>5</sup> Functions: ON-delay, OFF-delay with auxiliary voltage, Impulse-ON, Impulse-OFF with auxiliary voltage, Symmetrical ON- and OFF-delay, Flasher starting with ON or OFF, Star-delta change-over with impulse, Pulse former, Accumulative ON-delay, ON/OFF-function

<sup>6</sup> Functions: ON-delay, OFF-delay with auxiliary voltage, Impulse-ON, Impulse-OFF with auxiliary voltage, Symmetrical ON- and OFF-delay, Flasher starting with ON or OFF, Pulse former, Accumulative ON-delay, ON/OFF-function

<sup>7</sup> Functions: Select function via DIP switches behind the marker label on the front of the unit, asymmetrical ON- and OFF-delay, Impulse-ON/OFF, Pulse generator starting with ON or OFF, Single pulse generator, ON/OFF-function

<sup>8</sup> Functions: ON-delay, OFF-delay with auxiliary voltage, Impulse-ON, Impulse-OFF with auxiliary voltage, Symmetrical ON- and OFF-delay, Flasher starting with ON, Flasher starting with OFF, Star-delta change-over with impulse, Pulse former, ON/OFF-function

<sup>9</sup> Functions: Flasher starting with ON, Flasher starting with OFF, Impulse-ON, ON-delay, fixed impulse with adjustable time delay, Adjustable impulse with fixed time delay, ON/OFF-function

Note: ■ Control input with voltage-related triggering

□ Control input with volt-free triggering

□/□ Two control input with volt-free triggering

- No triggering



### ELECTRONIC TIMERS CT-S RANGE

Supplier Code	Timing Function	Rated Control Supply Voltage	Time Ranges	Control Input	Output	Type		
1SVR730100R0300	ON-delay	24-240 V AC/DC	10 (0.05s - 300h)	-	2 c/o	CT-ERS.21S <sup>1</sup>		
1SVR740100R0300						CT-ERS.21P <sup>1</sup>		
1SVR730100R3300		24-48 V DC, 24-240 V AC				CT-ERS.22S		
1SVR740100R3300						CT-ERS.22P		
1SVR730100R3100		24-48 V DC, 24-240 V AC			-	1 c/o	CT-ERS.12S	
1SVR740100R3100							CT-ERS.12P	
1SVR730180R0300	OFF-delay	24-240 V AC/DC	10 (0.05s - 300h)	■	2 c/o	CT-APS.21S <sup>1</sup>		
1SVR740180R0300						CT-APS.21P <sup>1</sup>		
1SVR730180R3300		24-48 V DC, 24-240 V AC				CT-APS.22S		
1SVR740180R3300						CT-APS.22P		
1SVR730180R3100		24-48 V DC, 24-240 V AC			■	1 c/o	CT-APS.12S	
1SVR740180R3100							CT-APS.12P	
1SVR730110R3300		24-48 V DC, 24-240 V AC		10 (0.05 s - 300h)	□	2 c/o	CT-AHS.22S	
1SVR740110R3300							CT-AHS.22P	
1SVR730120R3100		OFF-delay <sup>2</sup>		24-240 V AC/DC	7 (0.05s - 10 min)	-	1 c/o	CT-ARS.11S
1SVR740120R3100								CT-ARS.11P
1SVR730120R3300	-		2 c/o			CT-ARS.21S		
1SVR740120R3300						CT-ARS.21P		
1SVR730210R3300	Star-delta change-over <sup>3</sup>	24-48 V DC, 24-240 V AC	7 (0.05s - 10min)	-	2 n/o	CT-SDS.22S		
1SVR740210R3300						CT-SDS.22P		
1SVR730211R2300		380-440 V AC				CT-SDS.23S		
1SVR740211R2300						CT-SDS.23P		

**Note** S: screw connection  
P: push-in / easy connect  
<sup>1</sup> Extended temperature range -40°C  
<sup>2</sup> Without auxiliary voltage  
<sup>3</sup> 50 ms transition time

Note: ■ Control input with voltage-related triggering  
□ Control input with volt-free triggering  
- No triggering





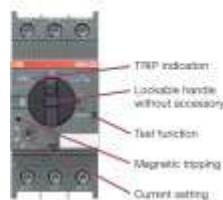
### AUTOMATION DEVICES MANUAL MOTOR STARTERS

#### MS116 AND MS132 MANUAL MOTOR STARTERS HARMONISED DESIGN IN 45mm WIDTH

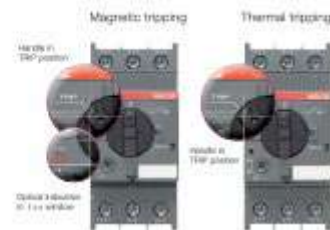


Product code	Type	MS116	MS132
-	Setting range	0.1 - 16A	0.1 - 32A
-	Switch position	ON/OFF	ON/OFF/Trip
-	Magnetic trip indication	-	Yes
-	Lockable handle without accessories	-	Yes
-	Max. breaking capacity Ics	Up to 50kA	Up to 100kA
-	Trip class	10A	10A

#### ON/OFF Switch Functionality

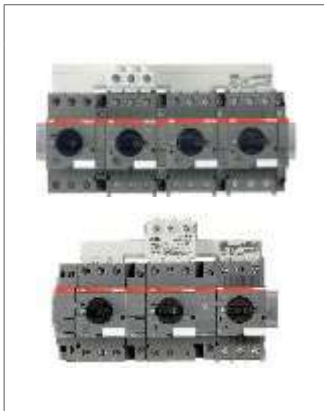


#### Clear Tripping Identification



#### ONE RANGE OF ACCESSORIES FOR MS116 AND MS132

- Common auxiliary contacts, signaling contacts and auxiliary trip units
- Common busbar systems



**Note** Items above with (-) in the Product Code column are available on special request.



### MANUAL MOTOR STARTERS

#### MS116, MS132



Product Code	Supplier Code	Rated Operational Power 400 V AC-3 (Kw)	Setting Range (A)	Short-circuit Breaking Capacity Ics at 400 VAC (kA)	Rated Instantaneous Short-circuit Current Setting Ii (A)	Type
<b>MS116</b>						
-	1SAM25000R1001	0.03	0.10 - 0.16	50	2.00 <sup>1</sup>	MS116 - 0.16
D0013527	1SAM25000R1002	0.06	0.16 - 0.25	50	3.10 <sup>1</sup>	MS116 - 0.25
D0019858	1SAM25000R1003	0.09	0.25 - 0.40	50	5.00 <sup>1</sup>	MS116 - 0.4
D0019859	1SAM25000R1004	0.12	0.40 - 0.63	50	7.90 <sup>1</sup>	MS116 - 0.63
D0005997	1SAM25000R1005	0.25	0.63 - 1.00	50	12.5 <sup>1</sup>	MS116 - 1.0
D0005996	1SAM25000R1006	0.55	1.00 - 1.60	50	20.0 <sup>1</sup>	MS116 - 1.6
D0005549	1SAM25000R1007	0.75	1.60 - 2.50	50	31.3 <sup>1</sup>	MS116 - 2.5
D0006348	1SAM25000R1008	1.5	2.50 - 4.00	50	50	MS116 - 4.0
D0006004	1SAM25000R1009	2.2	4.00 - 6.30	50	78.8	MS116 - 6.3
D0005548	1SAM25000R1010	4	6.30 - 10.0	50	150	MS116 - 10
D0003579	1SAM25000R1012	5.5	8.00 - 12.0	25	180	MS116 - 12
D0003580	1SAM25000R1011	7.5	10.0 - 16.0	16	240	MS116 - 16
-	1SAM25000R1013	7.5	16.0 - 20.0	10	300	MS116 - 20
-	1SAM25000R1014	11	20.0 - 25.0	10	375	MS116 - 25
-	1SAM25000R1015	15	25.0 - 32.0	10	480	MS116 - 32
<b>MS132</b>						
-	1SAM35000R1001	0.03	0.10 - 0.16	100	2.00 <sup>1</sup>	MS132 - 0.16
-	1SAM35000R1002	0.06	0.16 - 0.25	100	3.10 <sup>1</sup>	MS132 - 0.25
D0019858	1SAM35000R1003	0.09	0.25 - 0.40	100	5.00 <sup>1</sup>	MS132 - 0.4
D0019859	1SAM35000R1004	0.12	0.40 - 0.63	100	7.90 <sup>1</sup>	MS132 - 0.63
-	1SAM35000R1005	0.25	0.63 - 1.00	100	12.5 <sup>1</sup>	MS132 - 1.0
D0006001	1SAM35000R1006	0.55	1.00 - 1.60	100	20.0 <sup>1</sup>	MS132 - 1.6
-	1SAM35000R1007	0.75	1.60 - 2.50	100	31.3 <sup>1</sup>	MS132 - 2.5
D0006003	1SAM35000R1008	1.5	2.50 - 4.00	100	50	MS132 - 4.0
D0006004	1SAM35000R1009	2.2	4.00 - 6.30	100	78.8	MS132 - 6.3
D0003581	1SAM35000R1010	4	6.30 - 10.0	100	150	MS132 - 10
D0003582	1SAM35000R1012	5.5	8.00 - 12.0	100	180	MS132 - 12
D0003583	1SAM35000R1011	7.5	10.0 - 16.0	100	240	MS132 - 16
D0019514	1SAM35000R1013	7.5	16.0 - 20.0	100	300	MS132 - 20
D0003584	1SAM35000R1014	11	20.0 - 25.0	50	375	MS132 - 25
D0003585	1SAM35000R1015	15	25.0 - 32.0	25	480	MS13 - 32

**Note** Manual motor starters should always be selected so that the actual motor current is within the setting range.

<sup>1</sup>The data is valid for products, produced after week 34, 2014.

Items above with (-) in the Product Code column are available on special request.

# POWER PRODUCTS

## AUTOMATION DEVICES

**ABB**



### MS165

Supplier Code	Rated Operational Power 400 V AC-3 (Kw)	Setting Range (A)	Short-circuit Breaking Capacity Ics at 400 VAC (kA)	Rated Instantaneous Short-circuit Current Setting Ii (A)	Type
1SAM451000R1011	7.5	10 - 16	100	240	MS165 - 16
1SAM451000R1012	7.5	14 - 20	100	300	MS165 - 20
1SAM451000R1013	11	18 - 25	100	375	MS165 - 25
1SAM451000R1014	15	23 - 32	100	480	MS165 - 32
1SAM451000R1015	22	30 - 42	50	630	MS165 - 42
1SAM451000R1016	22	40 - 54	30	810	MS165 - 54
1SAM451000R1017	30	52 - 65	30	975	MS165 - 65
1SAM451000R1018	37	62 - 73	30	1022	MS165 - 73
1SAM451000R1019	45	70 - 80	30	1120	MS165 - 80



### MS450: SETTING RANGES FROM 40 TO 50A

Product Code	Supplier Code	Description	Current Range (A)	Rated kA (400V)
-	1SAM450000R1005	MS450-40	28 - 40	50
-	1SAM450000R1006	MS450-45	36 - 45	
-	1SAM450000R1007	MS450-50	40 - 50	

## AUTOMATION DEVICES MANUAL MOTOR STARTERS

Function:

- For isolating and providing thermal overload protection and short circuit protection for motors

Application:

- Motor protection



### MS495: 4 SETTING RANGES FROM 63 TO 100A

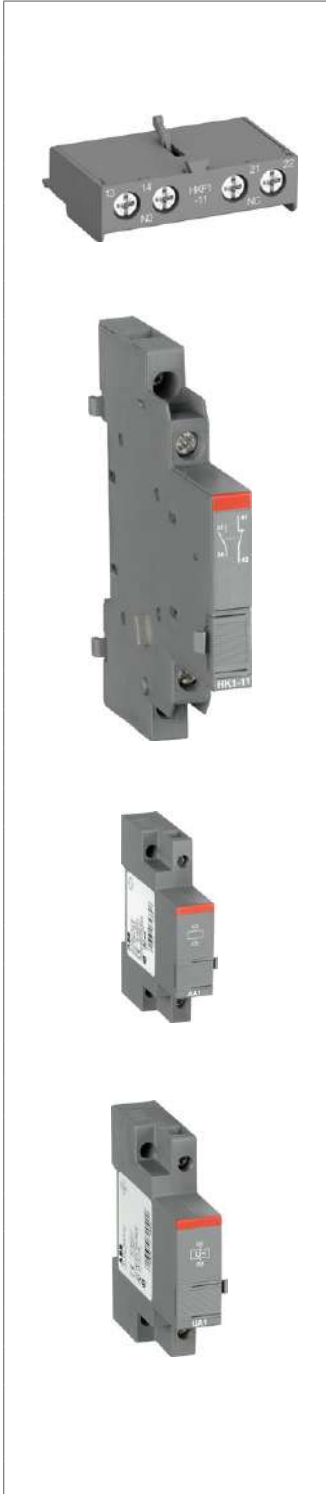
Product Code	Supplier Code	Description	Current Range (A)	Rated kA (400V)
-	1SAM550000R1005	MS495-40	28 - 40	50
-	1SAM550000R1006	MS495-63	36 - 50	
-	1SAM550000R1007	MS495-63	45 - 63	
-	1SAM550000R1008	MS495-75	57 - 75	
-	1SAM550000R1009	MS495-90	70 - 90	
-	1SAM550000R1010	MS495-100	80 - 100	

**Note** Manual motor starters should always be selected so that the actual motor current is within the setting range.

Items above with (-) in the Product Code column are available on special request.

### MANUAL MOTOR STARTERS - MAIN ACCESSORIES

#### MS116, MS132, MS165, MO132, MO165, MS132-T



Product Code	Supplier Code	Auxiliary Contacts N.O.	Auxiliary Contacts N.C.	Description	Type
<b>Auxiliary Contacts – Mountable on the Front</b>					
D0003578	1SAM201901R1001	1	1		HKF1-11
-	1SAM201901R1003	1	0		HKF1-10
-	1SAM201901R1004	0	1		HKF1-01
-	1SAM201901R1002	2	0		HKF1-20
<b>Auxiliary Contacts – Mountable on the Right</b>					
D0003577	1SAM201902R1001	1	1	Max. 2 pieces	HK1-11
D0003547	1SAM201902R1002	2	0	Max. 2 pieces	HK1-20
-	1SAM201902R1003	0	2	Max. 2 pieces	HK1-02
-	1SAM201902R1004	2	0	With lead contacts	HK1-20L
<b>Signaling Contacts – Mountable on the Right</b>					
-	1SAM201903R1001	1	1	For tripped alarm, max. 2 pieces	SK1-11
-	1SAM201903R1002	2	0	For tripped alarm, max. 2 pieces	SK1-20
-	1SAM201903R1003	0	2	For tripped alarm, max. 2 pieces	SK1-02
-	1SAM301901R1001	1	1	For short-circuit alarm, max. 2 pieces	CK1-11
-	1SAM301901R1002	2	0	For short-circuit alarm, max. 2 pieces	CK1-20
-	1SAM301901R1003	0	2	For short-circuit alarm, max. 2 pieces	CK1-02
Product Code	Supplier Code	50 Hz V AC		60 Hz V AC	Type
<b>Shunt Trips – Mountable on the Left</b>					
-	1SAM201910R1001	20 - 24		20 - 24	AA1-24
-	1SAM201910R1002	110		110	AA1-110
-	1SAM201910R1003	200 - 240		200 - 240	AA1-230
-	1SAM201910R1004	350 - 415		350 - 415	AA1-400
<b>Shunt Trips – Mountable on the Left</b>					
-	1SAM201904R1010	20		24	UA1-20
-	1SAM201904R1001	24		-	UA1-24
-	1SAM201904R1002	48		-	UA1-48
-	1SAM201904R1003	60		-	UA1-60
-	1SAM201904R1004	110		120	UA1-110
-	1SAM201904R1008	-		208	UA1-208
-	1SAM201904R1005	230		240	UA1-230
-	1SAM201904R1006	400		-	UA1-400
-	1SAM201904R1007	415		480	UA1-415
-	1SAM201904R1009	-		575	UA1-575

**Note** Items above with (-) in the Product Code column are available on special request.



### MANUAL MOTOR STARTERS - MAIN ACCESSORIES

#### MS116, MS132, MO132, MS132-T - MAIN ACCESSORIES



Product Code	Supplier Code	Suitable For	Rated Operational Current (A)	Number of MMS	Number of Lateral Aux.	Type
Three-phase Busbars						
-	1SAM201906R1102	MS116 MS132 MO132	65	2	0	PS1 - 2 - 0 - 65
D0003587	1SAM201906R1103		65	3	0	PS1 - 3 - 0 - 65
-	1SAM201906R1104		65	4	0	PS1 - 4 - 0 - 65
D0003589	1SAM201906R1105		65	5	0	PS1 - 5 - 0 - 65
-	1SAM201906R1112		65	2	1	PS1 - 2 - 1 - 65
-	1SAM201906R1113		65	3	1	PS1 - 3 - 1 - 65
-	1SAM201906R1114		65	4	1	PS1 - 4 - 1 - 65
-	1SAM201906R1115		65	5	1	PS1 - 5 - 1 - 65
-	1SAM201906R1122		65	2	2	PS1 - 2 - 2 - 65
-	1SAM201906R1123		65	3	2	PS1 - 3 - 2 - 65
-	1SAM201906R1124		65	4	2	PS1 - 4 - 2 - 65
-	1SAM201906R1125		65	5	2	PS1 - 5 - 2 - 65
D0003586	1SAM201916R1103		100	3	0	PS1 - 3 - 0 - 100
-	1SAM201916R1104		100	4	0	PS1 - 4 - 0 - 100
D0003588	1SAM201916R1105		100	5	0	PS1 - 5 - 0 - 100
-	1SAM201916R1113		100	3	1	PS1 - 3 - 1 - 100
-	1SAM201916R1114		100	4	1	PS1 - 4 - 1 - 100
-	1SAM201916R1115		100	5	1	PS1 - 5 - 1 - 100
-	1SAM201916R1123		100	3	2	PS1 - 3 - 2 - 100

**Note** Items above with (-) in the Product Code column are available on special request.



### MANUAL MOTOR STARTERS - MAIN ACCESSORIES

#### THREE-PHASE FEEDER TERMINALS



Product Code	Supplier Code	Suitable For	Rated Operational Current (A)	Rated Cross Section (mm <sup>2</sup> )	Mounting Form	Type
D0003599	1SAM201907R1101	MS116 MS132 MO132	65	25	Flat	S1-M1-25
-	1SAM201907R1102		65	25	High	S1-M2-25
-	1SAM201907R1103		65	25	UL type E and IEC	S1-M3-25
D0003600	1SAM201913R1103		100	35	UL type E and IEC	S1-M3-35
Supplier Code		Suitable For	Description			Type
1SAM201908R1001		MS116, MS132, MO132	Protection cover for busbars			BS1-3
GJF1101903R0001		MS116	Lock handle			SA1
GJF1101903R0003			Lock handle box SA1/SA2			SA3
Accessories for Single-phase Connection (IEC only)						
1SAM201914R1001		MS116, MS132, MO132,	Phase connecting link			PB1-1-32
1SAM201914R1002		MS132-T	Phase power infeed block			S1-PB1-25

#### MS165, MO165 - MAIN ACCESSORIES



Supplier Code	Suitable For	Rated Operational Current (A)	Number of MMS	Number of Lateral Aux.	Type
Three-phase Busbars					
1SAM401920R1002	MS165 MO165	125	2	0	PS2-2-0-125
1SAM401920R1003		125	3	0	PS2-3-0-125
1SAM401920R1004		125	4	0	PS2-4-0-125
1SAM401920R1022		125	2	2	PS2-2-2-125
1SAM401920R1023		125	3	2	PS2-3-2-125
1SAM401920R1024		125	4	2	PS2-4-2-125
Supplier Code	Suitable For	Description			Type
1SAM401922R1001	MS165, MO165	Terminal shroud			KA165
1SAM401921R1001		Protection cover for busbars			BS2-3
GJF1101903R0002		Padlock + two keys			SA2

**Note** Items above with (-) in the Product Code column are available on special request.



### GENERAL ACCESSORIES

#### MS1xx, MOxx, MS49x, MO49x



Product Code	Supplier Code	Suitable For	Description	Shaft Length (mm)	Colour	Type
<b>Shafts</b>						
-	1SCA101647R1001	MS116 MS132 MO132 MS165 MO165 MS4xx MO4xx	For MSHD handles. Shaft diameter 6mm. Shaft extension for door coupling driver.			OXS6X85
-	1SCA108043R1001			85		OXS6X105
D0005630	1SCA101655R1001			105		OXS6X130
D0005631	1SCA101659R1001			130		OXS6X180
				180		
<b>IP64 Handles (UL/CSA Type 1, 3R, 12)</b>						
-	1SAM201920R1001	MS116 MS132 MO132 MS165 MO165 MS4xx MO4xx	Padlockable max. 3 padlocks with bail diameter 5-8mm, door interlock in ON position defeatable, for use with 6mm OXS6... types up to 180mm or driver shafts MSOX.		Black	MSHD-LB
-	1SAM201920R1002				Yellow	MSHD-LY
-	1SAM201920R1011				Black	MSHD-LTB
-	1SAM201920R1012				Yellow	MSHD-LTY
<b>Driver</b>						
-	1SAM101923R0002	MS116 MS132 MO132 MS165 MO165 MS4xx MO4xx	Coupling driver for use with 6mm OXS6 types up to 180mm.			MSMN
-	1SAM101923R0012					MSMNO
<b>Shaft Alignment Ring</b>						
-	1SAM201920R1000	MS116 MS132 MO132 MS165 MO165 MS4xx MO4xx	The MSH-AR supports the long shafts for alignment to the handle inlet. It makes closing panel doors more easy. Use for OXS6X > 105mm.			MSH-AR
<b>Shaft Supporter</b>						
-	1SAM201909R1021	MS116 MS132 MO132	With the MSAH it is possible to support the shaft in the extension of handle (MSHD). It is mandatory for the usage of shafts > 130mm.			MSAH1

**Note** Items above with (-) in the Product Code column are available on special request.



### SWITCHES - OT MINI SWITCH DISCONNECTORS - BASE AND DIN RAIL MOUNTING

Function:

- ABB's switch-disconnector range meets disconnect and isolation requirements more effectively than ever, maximising the benefits and optimising your use of assets

Application:

- On or off load isolation



#### FRONT OPERATED SWITCH-DISCONNECTORS - INCLUDES DIRECT MOUNT HANDLE UP TO OT125

Product Code	Supplier Code	Type	Current Rating Ith (Open) A
D0020922	1SCA104811R1001	OT16F3	16
D0020923	1SCA104857R1001	OT25F3	25
D0020924	1SCA104902R1001	OT40F3	40
D0020925	1SCA105332R1001	OT63F3	63
D0020926	1SCA105798R1001	OT80F3	80
D0020927	1SCA105004R1001	OT100F3	100
D0020928	1SCA105033R1001	OT125F3	125



#### ACCESSORIES FOR OT MINI SWITCH-DISCONNECTORS, BASE AND DIN RAIL MOUNTING

- Fourth poles - for converting OT switches to 4 pole
- Mountable on the side of the switch

Product Code	Supplier Code	Type	Function	Suitable for Switches
D0005624	1SCA105001R1001	OTPS40FPN1	Simultaneous with the main contacts	OT16 - OT40F
D0005625	1SCA105000R1001	OTPS40FPN2		OT63 - OT80F
D0005626	1SCA105461R1001	OTPS80FP		OT100 - OT125F
D0005623	1SCA105099R1001	OTPS125FP		



#### CONVERSION KITS FOR FRONT OPERATED SWITCH COMBINATIONS

- 6 pole switches
- Parallel attachment for connecting two 3 pole switches to switch simultaneously

Product Code	Supplier Code	Type	Function	Suitable for Switches
-	1SCA022865R4800	OWP6D40	Simultaneous with the main contacts	OT16 - OT40F
D0019985	1SCA022865R5010	OWP6D80		OT63 - OT80F
-	1SCA022865R5100	OWP6D125		OT100 - OT125F

**Note** Items above with (-) in the Product Code column are available on special request.



## SWITCHES

### ABB



#### HANDLES

- Mounted directly to the switch, no shaft needed

Product Code	Supplier Code	Type	Suitable for Switches	Colour	Handle Length (mm)	Padlockable
-	1SCA109089R1001	OHBS2	OT63 - OT1 25F3/F4	Black	40	Yes
-	ISCA108665R1001	OHBS9	OT40 - 125		72	



#### SHAFTS FOR SELECTOR TYPE HANDLES

Product Code	Supplier Code	Type	Suitable for Switches	Shaft Size (mm)	Shaft Length (mm)
D0005630	1SCA101655R1001	OXS6X130	OT16 - OT125F	6	130
D0003641	1SCA101660R1001	OXS6X250			250
D0003642	1SCA101661R1001	OXS6X330			330



#### SELECTOR TYPE HANDLES, DOOR MOUNTED, INDICATION I-O AND ON-OFF

- No shaft 22.5mm hole
- Padlockable with 3 padlocks in OFF position
- Interlock in On position
- Protection rating: IP65

Product Code	Supplier Code	Type	Suitable for Switches	Colour	Padlockable
-	1SCA105231R1001	OHBS2PJ	OT16 - OT40	Black/red	Yes
-	1SCA105322R1001	OHY2SPJ		Yellow/red	
-	1SCA105323R1001	OHBS2RJ	OT16 - OT125	Black/red	
-	1SCA105323R1001	OHY2SRJ		Yellow/red	
D0003639	1SCA105213RL001	OHBS2AJ		Black/red	

**Note** Items above with (-) in the Product Code column are available on special request.



### FRONT OPERATED SWITCH-DISCONNECTORS

- Shaft and handles included as standard



Product Code	Supplier Code	Current Rating Ith (open) A	Type	Rated Operational Current
				AC21A/ AC22A/ AC23A1000V [A/A/A]
D0005610	1CSA135139R1001	200	OT160G03P	160
D0005611	1SCA022712R0800	200	OT200E03P	200
D0005612	1SCA022710R0100	250	OT250E03P	250
D0019869	1SCA022718R8510	315	OT315E03P	315
D0019854	1SCA022718R8780	400	OT400E03P	400
-	1SCA022718R8940	630	OT630E03P	630
-	1SCA022718R9410	800	OT800E03P	800
-	1SCA022860R5930	1000	OT1000E03P	1000
-	1SCA022860R6230	1250	OT1250E03P	1250
-	1SCA022860R6580	1600	OT1600E03P	1600
-	1SCA108036R1001	2000	OT2000E03P	2000
-	1SCA104972R1001	2500	OT2500E03P	2500

### OT SWITCH-DISCONNECTORS, 3 POLE, BASE MOUNTING, WITH DIRECT MOUNTED HANDLE



Product Code	Supplier Code	Current Rating Ith (open) A	Type	Rated Operational Current
				AC21A/ AC22A/ AC23A1000V [A/A/A]
-	1SCA022763R4820	200	OT200E03K	200
-	1SCA022763R5040	250	OT250E03K	250
-	1SCA022763R5630	315	OT315E03K	315
-	1SCA022763R5390	400	OT400E03K	400
-	1SCA022779R4940	630	OT630E03K	630

**Note** Items above with (-) in the Product Code column are available on special request.

## SWITCHES

**ABB**



### FOURTH POLES SIMULTANEOUS FUNCTION WITH THE MAIN CONTACTS

- No shaft 22.5mm hole
- Padlockable with 3 padlocks in OFF position
- Interlock in On position
- Protection rating: IP65

Product code	Supplier code	Type	Function	Suitable for Switches
-	1SCA022735R9420	OTZ250E	Simultaneous with the main contacts	OT200 - OT250
D0019934	1SCA022749R1960	OTZ400E		OT315 - OT400
-	1SCA022807R5100	OTZ800E		OT630 - OT800
-	1SCA103765R1001	OTZ1250E		OT1000 - OT1250
-	1SCA100431R1001	OTZ1600E		OT1600
-	1SCA107931R1001	OTZ2500E		OT2000 - OT2500



### SHAFTS FOR PISTOL TYPE HANDLES

Product Code	Supplier Code	Type	Suitable for Switches	Shaft Size (mm)	Shaft Length (mm)
D0005628	1SCA022295R5600	EXP6X150	OT16 - OT250	6	150
D0003640	1SCA022042R6370	EXP6X290			290
D0005629	1SCA022042R6530	EXP6X360			360
-	1SCA022056R6030	EXP6X430			430
-	1SCA022325SR6710	EXP12X185	OT315 - 2500	12	185
-	1SCA022042R5990	EXP12X395			395
-	1SCA022042R6020	EXP12X465			465

**Note** Items above with (-) in the Product Code column are available on special request.



### FRONT OPERATED SWITCH-DISCONNECTORS

- Shafts and handles included as standard

Product Code	Supplier Code	Type	Suitable for Switches	Shaft Size (mm)	Shaft Length (mm)
Door Mount Handles - Pistol Type					
D0003638	1SCA02230R8770	OHB45J6	OT16F3 - OT125F3/ OWP6080 - OWP5D125	6	45
Door Mount Handles - Pistol Type. For Appropriate Shaft Size (OX_P_X_), IP65, Padlockable with 3 Padlocks in OFF Position, Interlock in ON Position					
D0005601	1SCA022360R9560	OHB65J6	OT160E - OT250E	6	65
D0006323	1SCA022361R0830	OHB95J12	OT315E - OT400E	12	95
D0006322	1SCA022381R1560	OHB125J12	OT630E - OT800E		125
-	1SCA115920R1001	OHB274J12	OT1000E - OT2500E		274



### OT MINI SWITCH-DISCONNECTORS, 3 POLE, DOOR MOUNTING

Product Code	Supplier Code	Type	Current Rating Ith (open) A
D0006039	1SCA104838R1001	OT17FT3	16
D0006040	1SCA104884R1001	OT25FT3	25
D0006041	1SCA104940R1001	OT40FT3	40
D0006337	1SCA105382R1001	OT63FT3	63
D0006043	1SCA105431R1001	OT80FT3	80
D0006037	1SCA105023R1001	OT100FT3	100
D0006340	1SCA105090R1001	OT125FT3	125



### ACCESSORIES FOR OT MINI SWITCH-DISCONNECTORS, DOOR MOUNTING

- Fourth poles - for converting OT switches to 4 pole
- Mountable on the side of the switch

Product Code	Supplier Code	Type	Function	Suitable for Switches
D0005624	1SCA104999R1001	OTPS40FDN1	Simultaneous with the main contacts	OT16 - OT40FT
D0005625	1SCA104998R1001	OTPS40FDN2		OT63 - OT80F
D0005626	1SCA105458R1001	OTPS80FD		OT100 - OT125FT
D0005623	1SCA105096R1001	OTPS125FD		



### BY-PASS SWITCH MECHANISM

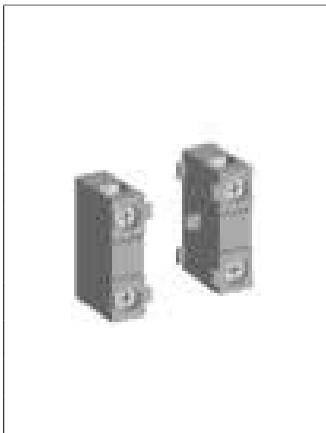
Product Code	Supplier Code	Description	Suitable for Switches
-	1SCA 022 387 R1620	OTZW17	OT16 - 125
-	1SCA 022 778 R7060	OTZW26	OT200 - 250

**Note** Items above with (-) in the Product Code column are available on special request.

# POWER PRODUCTS

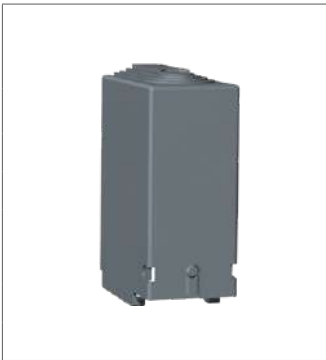
## SWITCHES

**ABB**



### AUXILIARY CONTACT BLOCKS, IP20

Product Code	Supplier Code	Type	Description	Suitable for Switches
D0003634	1SCA022353R4890	OA3G01	1NC mountable on left side. Max. 2 pcs	OT160EV03 - OT2500E03
D0003634	1SCA022353R4890	OA1G01	1NC on left side.	OT16 - OT125
D0003635	1SCA022353R4970	OA1G10	1NO on left side.	OT16 - OT125
D0003636	1SCA022379R8100	OA2G11	1NO + 1NC mountable on sides. Max. 2 pcs	OT125F3C
-	1SCA022190R3000	OBEA10	Mounting with OEZNP1	OT160E
-	1SCA022190R3260	OBEA01		
-	1SCA022131R8690	OZ XK1	1 NO + 1NC mounting on mechanism	OETL3150
-	1SCA022131R8850	OZ XK2		



### TERMINAL SHROUDS

- Snap on mounting grey plastic

Product Code	Supplier Code	Type	Number of Pieces	Suitable for Switches
Terminal Shrouds (3 Per Pack)				
-	1SCA022731R8150	OTS250G1L/3	3	OT160EV03 - OT250E03
-	1SCA022736R8840	OTS400G1L/3		OT315E03 - OT400E03
-	1SCA022776R7890	OTS800G1L/3		OT630E03 - OT800E03
-	1SCA022871R9510	OTS1600G1L/3		OT1000E03 - OT1600E03
-	1SCA107261R1001	OTS2500G1L/3		OT2000E03 - OT2500E03



### ENCLOSED SWITCH DISCONNECTOR - ONE20

Product Code	Supplier Code	Type	Number of Poles	Current Rating	
				AC22A 230V	AC23A 400V
Cover Colour: White. Handle Colour: White					
-	1SCA138456R1001	ONE20M2W	2	20	9.8
-	1SCA138457R1001	ONE20M3W	3		
-	1SCA138459R1001	ONE20M4W	4		
Cover Colour: Yellow. Handle Colour: Red					
-	1SCA135533R1001	ONE20M2Y	2	20	9.8
-	1SCA135536R1001	ONE20M3Y	3		
-	1SCA135540R1001	ONE20M4Y	4		

**Note** Items above with (-) in the Product Code column are available on special request.



### PSR - THE COMPACT RANGE

- PSR3-PSR105
- Rated operational voltage  $U_e$ , 208-600V AC
- Rated control supply voltage  $U_s$ , 100-240V AC



### MOTOR POWER

Product Code	Supplier Code	230V Pe kW	400V Pe kW	500V Pe kW	Type	Type IEC Max Rated Operational Current $I_e$ (A)
-	1SFA896103R7000	0.75	1.5	2.2	PSR3-600-70	3.9
-	1SFA896104R7000	1.5	3	4	PSR6-600-70	6.8
-	1SFA896105R7000	2.2	4	4	PSR9-600-70	9
D0003590	1SFA896106R7000	3	5.5	12	PSR12-600-70	12
D0003593	1SFA896107R7000	4	7.5	7.5	PSR16-600-70	16
D0003595	1SFA896108R7000	5.5	11	15	PSR25-600-70	25
D0003597	1SFA896109R7000	7.5	15	18.5	PSR30-600-70	30
-	1SFA896110R7000	7.5	18.5	22	PSR37-600-70	37
-	1SFA896111R7000	11	22	30	PSR45-600-70	45
-	1SFA896112R7000	15	30	37	PSR60-600-70	60
-	1SFA896113R7000	22	37	45	PSR72-600-70	72
-	1SFA896114R7000	22	45	55	PSR85-600-70	85
-	1SFA896115R7000	30	55	55	PSR105-600-70	105
-	1SFA897114R7000	90	160	200	PSR300-600-70	300
-	1SFA897115R7000	110	200	250	PSR370-600-70	370

**Note** Items above with (-) in the Product Code column are available on special request.

# POWER PRODUCTS

## COMPACT PILOT DEVICES



### COMPACT PILOT DEVICES SELECTOR SWITCHES



#### SELECTOR SWITCHES 2 POSITION (C-B) MOMENTARY SPRING RETURN FROM C TO B NON ILLUMINATED 22mm

Product Code	Supplier Code	Type	Description	Contact NO	Contact NC
D0003657	1SFA619200R1016	C2SS1-10B-10	Black selector switch 2 position (C-B)	1	-
-	1SFA619202R1046	C2SS1-10B-01		-	1
D0003658	1SFA619200R1076	C2SS1-10B-11		1	1
D0003659	1SFA619200R1026	C2SS1-10B-20		2	-



#### SELECTOR SWITCHES 3 POSITION (A-B-C) MAINTAINED NON ILLUMINATED 2mm

Product Code	Supplier Code	Type	Description	Contact NO	Contact NC
D0003660	1SFA619210R1026	C3SS1-10B-20	Black selector switch 3 position (A-B-C)	2	-
-	1SFA619210R1056	C3SS1-10B-02		-	2
-	1SFA619210R1076	C3SS1-10B-11		1	1



#### COMPACT PILOT DEVICES NON ILLUMINATED PUSH BUTTONS MOMENTARY COMPACT PUSH BUTTONS EXTENDED NON ILLUMINATED 22mm

Product Code	Supplier Code	Type	Description	Contact NO	Contact NC
D0003668	1SFA619100R1011	CP1-10R-10	Red compact push button non illuminated	1	-
D0003667	1SFA619100R1041	CP1-10R-01		-	1
-	1SFA619100R1071	CP1-10R-11		1	1
D0003665	1SFA619100R1012	CP1-10G-10	Green compact push button non illuminated	1	-
-	1SFA619100R1072	CP1-10G-11		1	1
-	1SFA619100R1022	CP1-10G-20		2	-
D0003669	1SFA619100R1013	CP1-10Y-10	Yellow compact push button non illuminated	1	-
D0003670	1SFA619100R1073	CP1-10Y-11		1	1
-	1SFA619100R1014	CP1-10L-10	Blue compact push button non illuminated	1	-
D0003666	1SFA619100R1074	CP1-10L-1		1	1
D0005633	1SFA619100R1076	CP1-10B-01	Black compact push button non illuminated	-	1
D0003664	1SFA619100R1046	CP1-10B-11		1	1

**Note** Items above with (-) in the Product Code column are available on special request.



### PILOT LIGHTS



Product Code	Supplier Code	Colour	Rated Current (mA)	Type
Rated Voltage 24 V AC/DC				
-	1SFA619403R5021	Red	16	CL2-502R
-	1SFA619403R5022	Green	16	CL2-502G
-	1SFA619403R5023	Yellow	16	CL2-502Y
-	1SFA619403R5024	Blue	16	CL2-502L
D0005634	1SFA619403R5028	Clear	16	CL2-502C
Rated Voltage 110-130 V AC				
D0003676	1SFA619403R5131	Red	15 - 17	CL2-513R
D0003675	1SFA619403R5132	Green	15 - 17	CL2-513G
D0003635	1SFA619403R5133	Yellow	15 - 17	CL2-513Y
Rated Voltage 110-130 V DC				
D0003678	1SFA619403R5151	Red	8 - 9	CL2-515R
D0003677	1SFA619403R5152	Green	8 - 9	CL2-515G
D0003679	1SFA619403R5153	Yellow	8 - 9	CL2-515Y
Rated Voltage 230 V AC				
D0003682	1SFA619403R5231	Red	17	CL2-523R
D0003680	1SFA619403R5232	Green	17	CL2-523G
D0003684	1SFA619403R5233	Yellow	17	CL2-523Y
D0003681	1SFA619403R5234	Blue	17	CL2-523L
D0003683	1SFA619403R5238	Clear	17	CL2-523C
Rated Voltage 380-415 V AC				
-	1SFA619403R5421	Red	15 - 17	CL2-524R
-	1SFA619403R5422	Green	15 - 17	CL2-524G
Rated Voltage 230 V AC with 60V Anti-inductive Voltage				
-	1SFA619403R6231	Red	17	CL2-623R
-	1SFA619403R6232	Green	17	CL2-623G
-	1SFA619403R6233	Yellow	17	CL2-623Y

### MODULAR PILOT DEVICES EMERGENCY STOP PUSH BUTTONS COMPACT EMERGENCY STOPS (CONTACTS ALL INCLUDED)

- IEC 60947-5-5 compliant emergency stops



Product Code	Supplier Code	Type	Description	Contact NO	Contact NC
D0003661	1SFA619500R1041	CE3T-10R-01	Compact 30mm emergency stop (twist release)	-	1
-	1SFA619500R1051	CE3T-10R-02		-	2
-	1SFA619552R1051	CE3K-10R-02	Compact 30mm emergency stop (key operated)	-	2
D0003662	1SFA619550R1041	CE4T-10R-01	Compact 40mm emergency stop push button twist	-	1
-	1SFA619550R1051	CE4T-10R-02		-	2
-	1SFA619551R1051	CE4P-10R-02	Compact 40mm emergency stop push button pull	-	2
-	1SFA619552R1051	CE4K1-10R-02	Compact 30mm emergency stop push button key op	-	2

**Note** Items above with (-) in the Product Code column are available on special request.



Please note: Subject to any applicable laws from time to time: (1) All the product images shown in this catalogue are for marketing purposes and may differ from the actual product. (2) All factual information in this catalogue was correct at the time of going to print and is subject to change without prior notice. Errors and Omissions Excepted. Voltex (Pty) Ltd and its Marketing Agency do not accept responsibility or liability for any incorrect listing of any merchandise or information. Voltex Terms & Conditions of Sale which can be found at [www.voltex.co.za](http://www.voltex.co.za) and the Disclaimer which is set out at the end of this catalogue apply.



# POWER PRODUCTS

## ELECTRONIC PRODUCTS AND RELAYS



### PRIMARY SWITCH MODE POWER SUPPLIES



#### CP-D RANGE

- The CP-D range of modular power supply units in MDRC design (modular DIN rail components) is ideally suited for installation in distribution panels. This range offers devices with output voltages of 12 V DC and 24 V DC at output currents of 0.42 A to 4.2 A.

Product Code	Supplier Code	Input Voltage (V)		Rated Output		Type
		AC	DC	Voltage	Current	
-	1SVR427041R1000	90 - 264	120 - 375	12VDC	0.83A	CP-D 12/0.83
-	1SVR427043R1200	90 - 264	120 - 375	12VDC	2.1A	CP-D 12/2.1
-	1SVR427041R0000	90 - 264	120 - 375	24VDC	0.42A	CP-D 24/0.42
-	1SVR427043R0100	90 - 264	120 - 375	24VDC	1.3A	CP-D 24/1.3
-	1SVR427044R0200	90 - 264	120 - 375	24VDC	2.5A	CP-D 24/2.5
-	1SVR427045R0400	90 - 264	120 - 375	24VDC	4.2A	CP-D 24/4.2



#### CP-E < 100W

- This range offers types with output voltages from 5 V DC to 48 V DC at output currents of 0.625 A to 20 A. The high thermal efficiency of up to 90%, corresponding to very low power and heat dissipation, allows operation without forced cooling.

Product Code	Supplier Code	Input Voltage (V)		Rated Output		Type
		AC	DC	Voltage	Current	
-	1SVR427033R3000	90 - 264	120 - 375	5VDC	3A	CP-E 5/3.0
-	1SVR427032R1000	85 - 264	90 - 375	12VDC	2.5A	CP-E 12/2.5
-	1SVR427035R1000	90 - 132; 180 - 264	210 - 375	12VDC	10A	CP-E 12/10.0
-	1SVR427030R0000	90 - 264	120 - 375	24VDC	0.75A	CP-E 24/0.75
-	1SVR427031R0000	85 - 264	90 - 375	24VDC	1.25A	CP-E 24/1.25
-	1SVR427032R0000	85 - 264	90 - 375	24VDC	2.5A	CP-E 24/2.5



#### CP-E > 100W

Product Code	Supplier Code	Input Voltage (V)		Rated Output		Type
		AC	DC	Voltage	Current	
-	1SVR427034R0000	90 - 132; 180 - 264	210 - 375	24VDC	5A	CP-E 24/5.0
-	1SVR427035R0000	90 - 132; 180 - 264	210 - 375	24VDC	10A	CP-E 24/10.0
-	1SVR427036R0000	90 - 264	120 - 375	24VDC	20A	CP-E 24/20.0
-	1SVR427030R2000	85 - 264	90 - 375	48VDC	0.625A	CP-E 48/0.62
-	1SVR427031R2000	85 - 264	90 - 375	48VDC	1.25A	CP-E 48/1.25
-	1SVR427034R2000	90 - 132; 180 - 264	210 - 375	48VDC	5A	CP-E 48/5.0
-	1SVR427035R2000	90 - 264	120 - 375	48VDC	10A	CP-E 48/10.0

**Note** Items above with (-) in the Product Code column are available on special request.



### CP-T RANGE

- The CP-T range of three-phase power supply units are designed for an ambient temperature of up to 70°C and efficiency of up to 92%.

Product Code	Supplier Code	Input Voltage (V)		Rated Output		Type
		AC	DC	Voltage	Current	
-	1SVR427054R0000	340 - 575	480 - 820	24VDC	5A	CP-T 24/5.0
-	1SVR427055R0000	340 - 575	480 - 820	24VDC	10A	CP-T 24/10.0
-	1SVR427056R0000	340 - 575	480 - 820	24VDC	20A	CP-T 24/20.0
-	1SVR427057R0000	340 - 575	480 - 820	24VDC	40A	CP-T 24/40.0
-	1SVR427054R2000	340 - 575	480 - 820	48VDC	5A	CP-T 48/5.0
-	1SVR427055R2000	340 - 575	480 - 820	48VDC	10A	CP-T 48/10.0
-	1SVR427056R2000	340 - 575	480 - 820	48VDC	20A	CP-T 48/20.0



### CP-C.1 RANGE

- The CP-C.1 power supplies are ABB's high-performance and most advanced range. With excellent efficiency, high reliability and innovative functionality it is prepared for the most demanding industrial applications. These power supplies have up to 50% integrated power reserve and operate at an efficiency of up to 94%. They are equipped with overheat protection and active power factor correction.

Product Code	Supplier Code	Input Voltage (V)		Rated Output		Type
		AC	DC	Voltage	Current	
-	1SVR360563R1001	100 - 240	90 - 300	24V DC	5A	CP-C.1 24/5.0
-	1SVR360663R1001	100 - 240	90 - 300	24V DC	10A	CP-C.1 24/10.0
-	1SVR360763R1001	100 - 240	90 - 300	24V DC	20A	CP-C.1 24/20.0

**Note** Items above with (-) in the Product Code column are available on special request.

## SITELITES/AVIATION WARNING BEACONS



### S2SL/S1ES/G-R SINGLE SITELITE BEACON

**Product Code: L0000110**

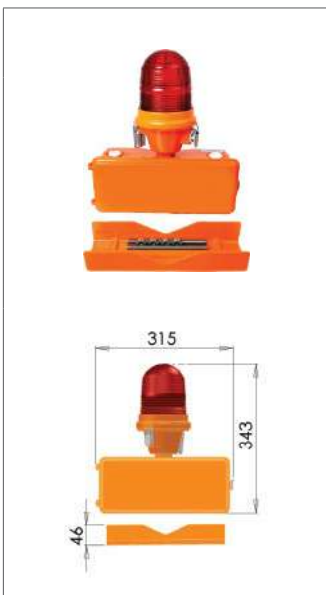
- Beacon is supplied with an ES lampholder and 20mm cable gland entry as standard
- Max 100W lamp



### S2SL/S1ES/G-R32 SINGLE SITELITE BEACON

**Product Code: L0002316**

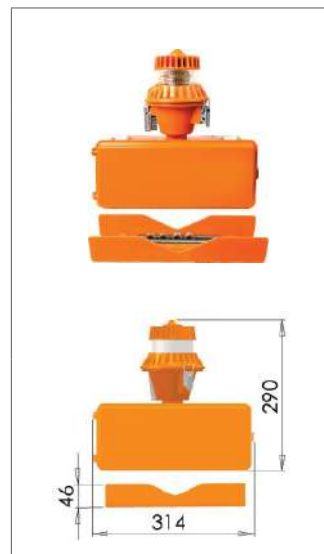
- Beacon is a complete 32CD Navled lamp unit
- This is a complete 32 candela standard unit
- Available in various voltages



### S2SL/S1ES/BS-COM SINGLE SITELITE BEACON

**Product Code: L0000108**

- Beacon is supplied complete with a die-cast aluminium enclosure and universal pole clamp
- Max 100W lamp
- For use with Annunciator Box



### S2SL/S1ES/BS-COM32 CD SINGLE SITELITE BEACON

**Product Code: L0002317**

- Beacon is supplied complete with a die-cast aluminium enclosure and universal pole clamp
- This is a complete 32 candela standard unit
- Available in various voltages

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## SITELITES/AVIATION WARNING BEACONS



### S2SL/S1ES/U-R SINGLE SITELITE BEACON

**Product Code: L0000111**

- Beacon is supplied complete with a 20mm CCG cable box and universal pole clamp
- Max 100W lamp
- For use with Annunciator Box



### S2SL/S1ES/U-R32 CD SINGLE SITELITE BEACON

**Product Code: L0002318**

- Beacon is supplied complete with a 20mm CCG cable box and universal pole clamp
- This is a complete 32 candela standard unit
- Available in various voltages



### S2SL/S2ES/BS-COM DOUBLE SITELITE BEACON

**Product Code: L0000113**

- Beacon is supplied with a die-cast aluminium enclosure and universal pole clamp
- Max 100W lamp
- For use with Annunciator Box

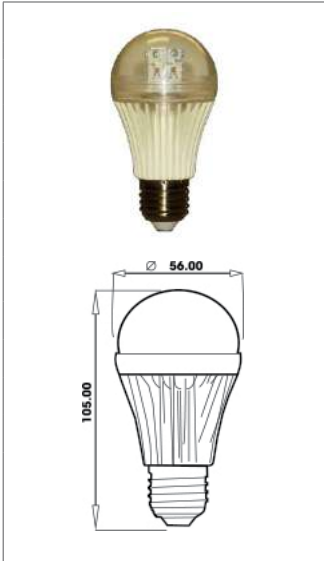


### S2SL/S2ES/BS-COM32 CD DOUBLE SITELITE BEACON

**Product Code: L0002519**

- Beacon is supplied with a die-cast aluminium enclosure and universal pole clamp
- This is a complete 32 candela standard unit
- Available in various voltages

## SITELITES/AVIATION WARNING BEACONS



### S2SL/NAV/-R NAVLED

- The S2SL/NAV/-R NAVLED - Navigational LED E27

Product Code	Voltage (V)
L0000104	12
L0000105	24
L0017640	48
L0017641	230
Characteristics	Specifications
Supply Input	220 VAC or 48VDC < 10W
LED Wavelength	625nm
Expected Lamp Life	>15 000 hour with <25% degradation
Construction Material	Acrylic lens and coolplast base



### S2SL/NAV32/-R NAVLED

- This unit is a retrofit and is interchangeable with our existing models in order to upgrade it from low to medium intensity
- Available in various voltages
- Light emitted is rated at 32 candela
- This unit cannot be upgraded with the old annunciator based units.

Product Code	Voltage (V)
L0002328	12
L0002329	24
L0002311	48
L0002312	230



### CONTROL BOX

**Product Code: L0002518**

- Control box manufactured from LM6 die-cast aluminium
- Comes complete with isolator, daylite sensor and universal pole clamp



### ANNUNCIATOR BOX

**Product Code: L0000099**

- The Annunciator Box uses a photo diode to monitor operation of the main lamp
- In the event of the lamp falling the Annunciator will switch over to the second sitelite
- The fault light will come on and a set of alarm contacts in the box will close
- The faulty lamp must be replaced and the reset button pushed to cancel the alarm condition
- The day/night switch circuit is also built into the box with a convenient remote mounting sensor
- All voltages are available



### S2SL/DAYLITE SENSOR

**Product Code: L0000101**

- The S2SL/DAY is an UV stabilised daylite sensor with IP54 protection
- Switching level ON  $\pm$  -60 lux
- Switching level OFF  $\pm$  -90 lux
- Switching delay 20-30 sec
- SABS 1777
- Voltage: 48V
- Model: S2SL/DAY

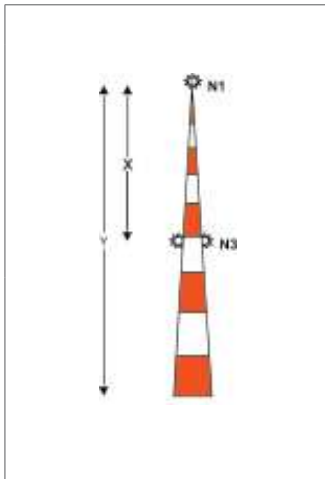
Also available in:

- 12V
- 24V
- 110V
- Built to order
- Minimum order quantity: 10

## INSTALLATION OF LIGHTS ON OBSTACLES

### CABLING

- The single light fitting with control box have cable entry and exit glands, permitting the use of a single cable from the bottom of the tower to the lights.
- This eliminates the need for the use of a junction box and separate cables from it to each of the lights on the obstacle.
- For optimal performance, it is recommended that cable wiring be done in parallel



### GUIDELINE FOR SPACING LIGHTS ON OBSTACLES:

- Light Spacing between stages (X) not to exceed 45m  
Number of stages (N) =  $\frac{Y \text{ (Meters)}}{45}$
- Example Y (Total height) = 60m  
Number of stages  $\frac{N}{45} = \frac{60}{45} = 1.33$  (thus round up to 2)
- The number of stages required is 2, i.e double at the top (N1) and 2,3 or 4 singles at the intermediate level (N2)

