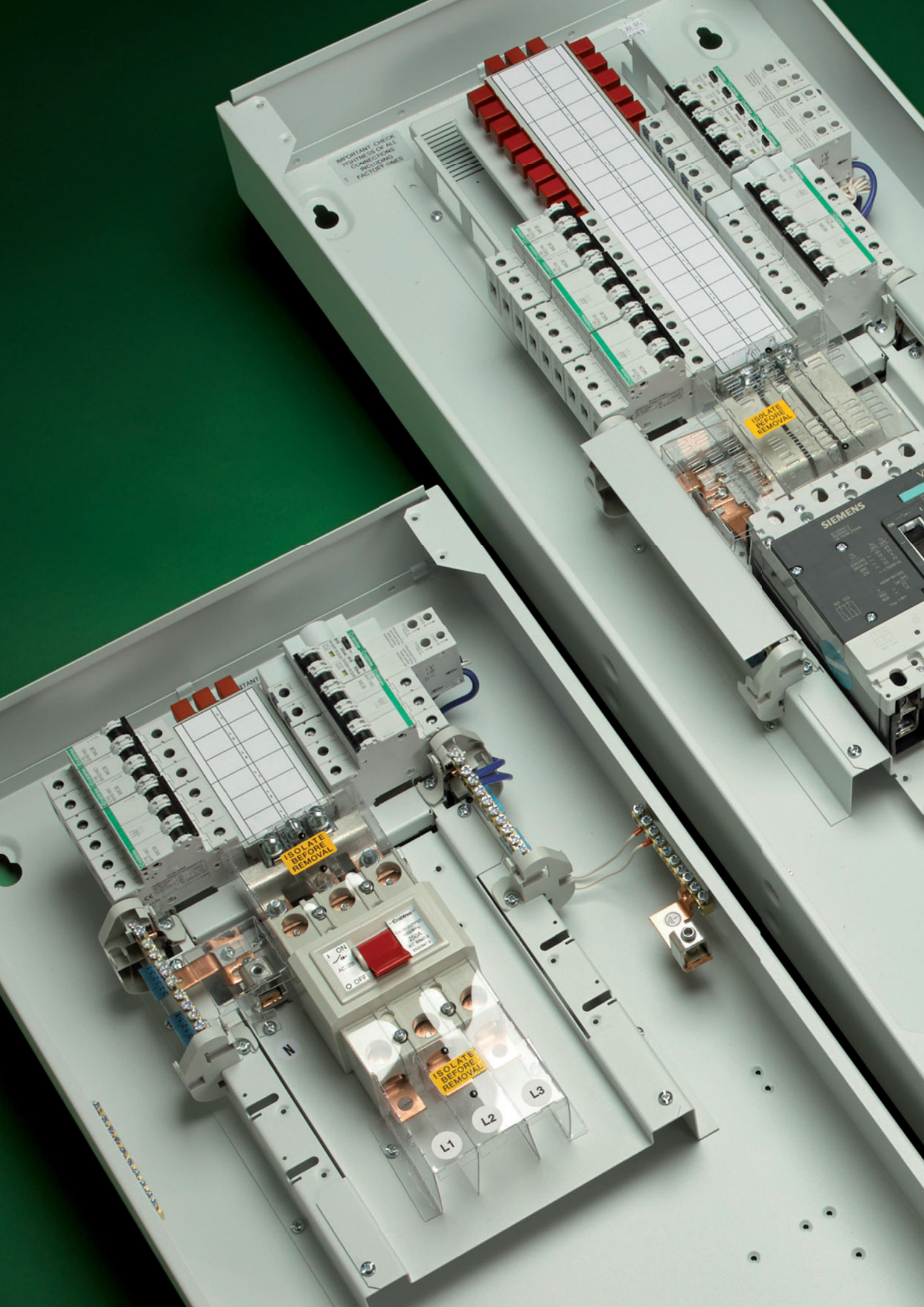
Crabtree



Polestar Compact 250A MCB Distribution Boards


IMPORTANT CHECK
TIGHTNESS OF ALL
CONNECTIONS
INCLUDING
FACTORY ONES
ISOLATE
BEFORE
REMOVAL
SIEMENS
ISOLATE
BEFORE
REMOVAL
ON
OFF
ISOLATE
BEFORE
REMOVAL
N
L1
L2
L3

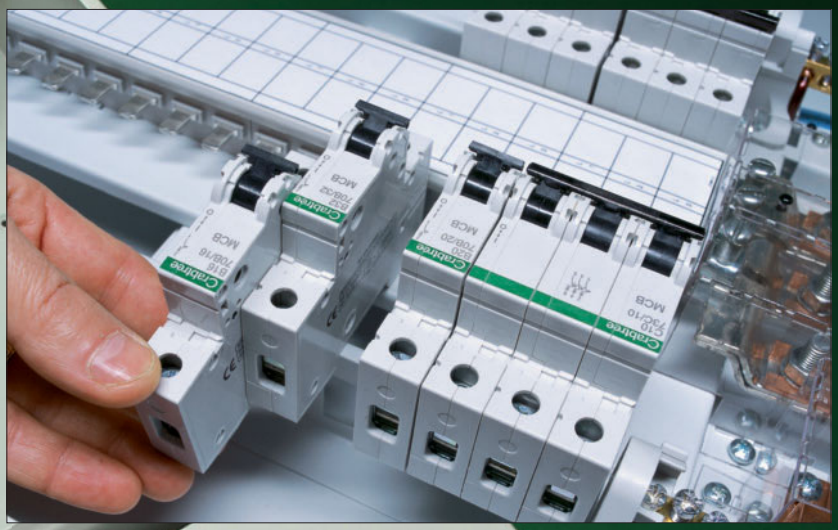
POLESTAR COMPACT

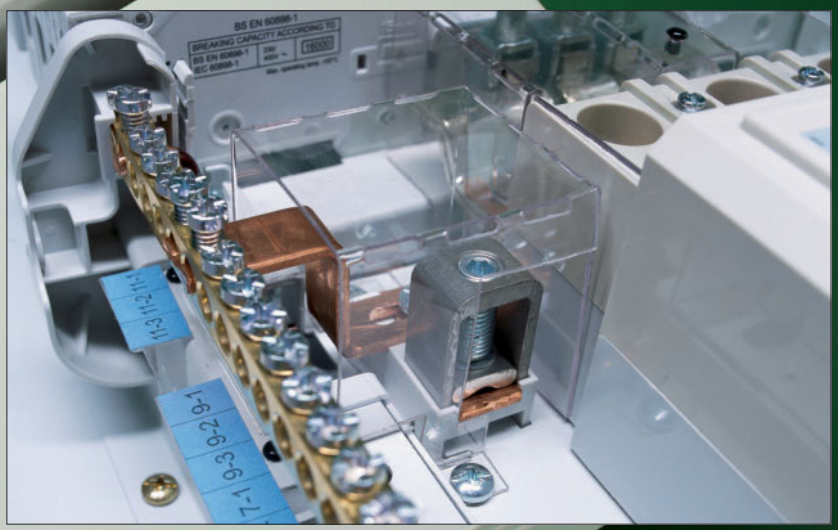
MCBS, RCBOs AND DISTRIBUTION BOARDS

- MCBs - 6A to 63A
- Type B, C and D
- Single, Double and Triple Pole
- 18mm modular width
- 16kA BS EN 60898
- RCBOs - 6A to 50A
- Type C
- Single Pole
- 18mm wide
- 16kA BS EN 61009

System

- TPN Boards rated 200A
- SPN Boards rated 125A
- Paint Finish, Epoxy Powder, Light Grey RAL 703 for standard boards and shade 697 to BS381C for IP66
- Custom Built 'Specials' Service





250A TYPE B DISTRIBUTION BOARDS AND THEIR INCOMING OPTIONS

- Incoming options - **order separately**:
- Integral metering available
- Busbars rated at 250A
- IP3X (Door Closed)
- Full compliment of Neutral & Earth terminals
  Incoming maximum 120mm²
  Outgoing maximum 25mm²
- Allows the fixture of dual Earth bars (IP3X)
- Clean Earth kit available (IP3X)
- All IP3X boards are supplied as standard with hinged outer door, catch (lock is optional extra) and removable top/bottom gland plates
- Neutral busbar supports incorporate an integral MCB end stop
- BS EN 61439-3

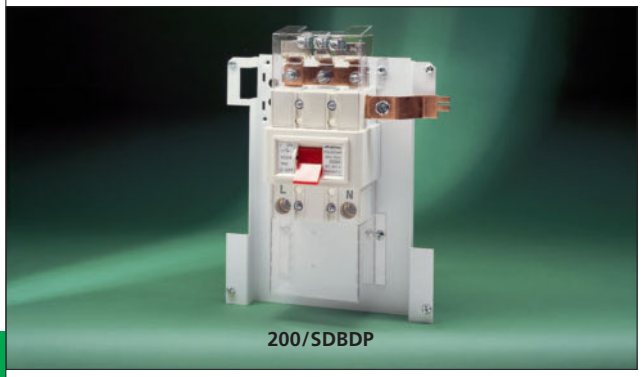

18PSC212MR


IP18PSC212MR

POLESTAR COMPACT INCOMER OPTIONS


250/SDB


2003MB


200/SDBDP

SWITCH DISCONNECTORS AND DIRECT CONNECTION

Switch Disconnector	List No
250A 3P*	**250/SDB**
200A 2P	**200/SDBDP**

150mm² terminal capacity
* Derated to 225A when used as an incomer to MCB distribution Boards
BS EN60947-3, IEC60947-3

Direct Connection	
250A 3P	**250/DCB**

- 120mm² terminal capacity
- All Incomers are supplied complete with mounting kit, links & fixing screws

MOULDED CASE CIRCUIT BREAKERS

200A 3P	**2003MB**
200A 4P	**2004MB**

- 185mm² terminal capacity
- All Incomers are supplied complete with mounting kit, links & fixing screws
- IEC 60947-2, EN 60947-2



DIN RAIL, ROWBOARD, SERVICE CENTRES

Service Centre/DIN Rail Board:	List No
18 Module	**18PSCDIN18**
36 Module (2 Rows of 18)	**18PSCDIN36**

- 'Add-On' for fixture to IP3X type B board.
- Equipped with easily removed DIN Rail to accommodate 18 or 36 18mm module wide DIN Rail mounted devices
- 245 & 410mm high

Cable Spreader Box	
Add on Enclosure, 245mm high, Blank front cover plate	**18PSCSB**



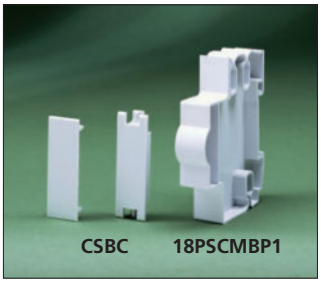
Rowboard:

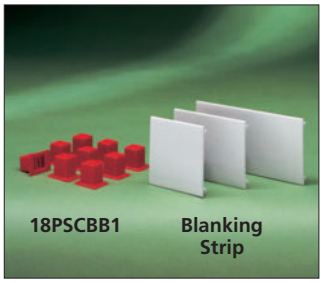
No of Rows	H	W	D	
1	245	430	155	**18PSCAS1**
2	410	430	155	**18PSCAS2**
3	570	430	155	**18PSCAS3**
4	735	430	155	**18PSCAS4**
5	815	430	155	**18PSCAS5**

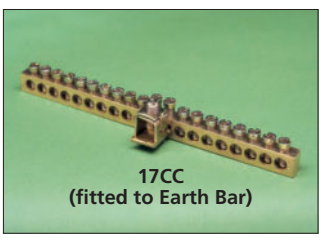
- Suitable for 'Stand-Alone' use or 'Add-On' to IP3X type B board.
- Each row will accommodate 18 off 18mm module wide DIN Rail mounted devices.
- Main Neutral and Earth Bars included, along with provision for additional 'Mini' Neutral and Earth bars.

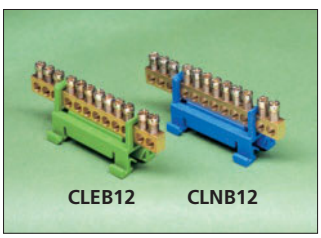












GENERAL POLESTAR ACCESSORIES TP & SP

	List No
Cylinder Lock & Key	**16CL**
MCB Locking device (excl. lock)	**MCBLD**
Padlock & Key for use with MCBLD	**748**
Clean Earth Bar Kit type B Boards only. (4 to 12 way=1 kit, 16 to 24 way=2 kits).	**18CEBK**
SP MCB size Blank (shields MCB & Busbar Terminal)	**18PSCMBP1**
Blanking Strip - 6 Individual 1 module wide pieces	**18PSCBP1/6**
Blanking Strip - 4 lengths each 3 modules wide	**18PSCBP3/4**
Blanking Strip - 2 lengths each 12 modules wide	**18PSCBP12/2**
Clip In Blank SP Moulding	**CSBC**
Busbar cross connector insulator - pack of 9	**18PSCBB1**
Cable clamp assembly (70mm^2) - pack of 3	**17CC**

ADDITIONAL EARTH BAR KITS

Additional Earth Bars to fit TP Distribution Boards

No of Ways	List No	No of Ways	List No
4	**18EB04**	16	**18EB16**
6	**18EB06**	20	**18EB20**
8	**18EB08**	24	**18EB24**
12	**18EB12**		

Earth and Neutral bar, 10mm^2 cable max, for use with DIN Rail

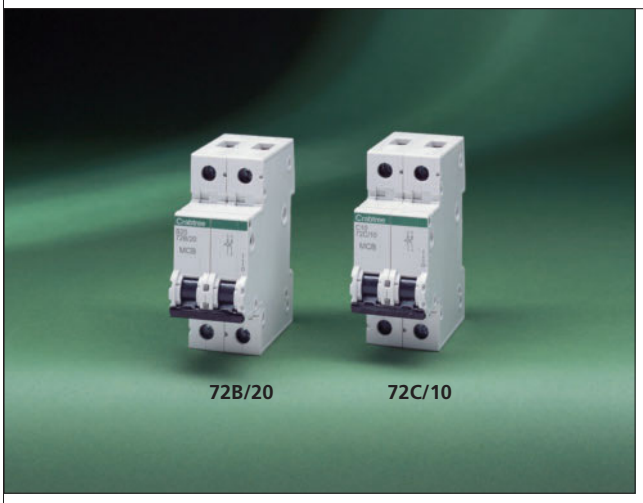
	NEUTRAL	EARTH
7 Terminals	**CLNB07**	**CLEB07**
12 Terminals	**CLNB12**	**CLEB12**
15 Terminals	**CLNB15**	**CLEB15**


MCBs

SINGLE POLE MCBs - 16kA

RATING AMPS	B TYPE	C TYPE	D TYPE
6A	**70B/06**	**70C/06**	**70D/06**
10A	**70B/10**	**70C/10**	**70D/10**
16A	**70B/16**	**70C/16**	**70D/16**
20A	**70B/20**	**70C/20**	**70D/20**
32A	**70B/32**	**70C/32**	**70D/32**
40A	**70B/40**	**70C/40**	**70D/40**
50A	**70B/50**	**70C/50**	**70D/50**
63A	**70B/63**	**70C/63**	**70D/63**

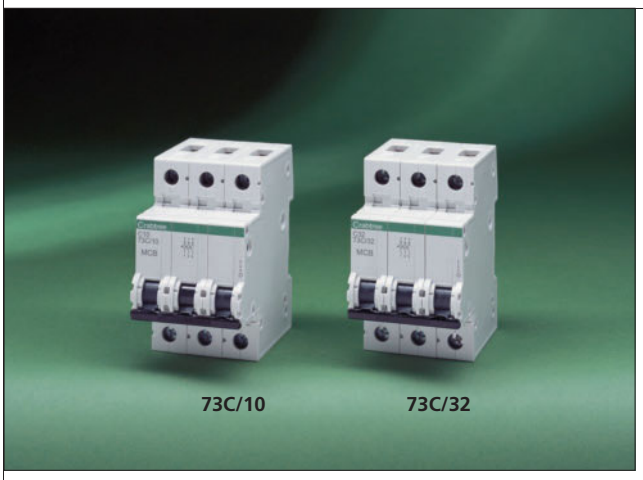
- BS EN 60898
- Type B (3–5In), C (5–10In), D (10–20In) classification
- Short circuit duty rating: Type B/C/D 16000A 240V/415V 50Hz
- Terminal capacity up to 35mm² cable
- 18mm modular width


72B/20 72C/10

DOUBLE POLE MCBs - 16kA

RATING AMPS	B TYPE	C TYPE	D TYPE
6A	**72B/06**	**72C/06**	**72D/06**
10A	**72B/10**	**72C/10**	**72D/10**
16A	**72B/16**	**72C/16**	**72D/16**
20A	**72B/20**	**72C/20**	**72D/20**
32A	**72B/32**	**72C/32**	**72D/32**
40A	**72B/40**	**72C/40**	**72D/40**
50A	**72B/50**	**72C/50**	**72D/50**
63A	**72B/63**	**72C/63**	**72D/63**

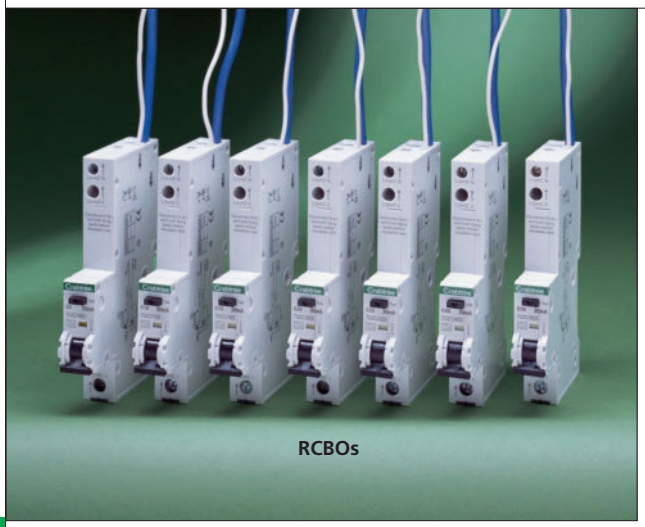
- BS EN 60898
- Type B (3–5In), C (5–10In), D (10–20In) classification
- Short circuit duty rating: Type B/C/D 16000A 240V/415V 50Hz
- Terminal capacity up to 35mm² cable
- 18mm modular width
- Not for use within standard type A or B distribution boards


73C/10 73C/32

TRIPLE POLE MCBs - 16kA

RATING AMPS	B TYPE	C TYPE	D TYPE
6A	**73B/06**	**73C/06**	**73D/06**
10A	**73B/10**	**73C/10**	**73D/10**
16A	**73B/16**	**73C/16**	**73D/16**
20A	**73B/20**	**73C/20**	**73D/20**
32A	**73B/32**	**73C/32**	**73D/32**
40A	**73B/40**	**73C/40**	**73D/40**
50A	**73B/50**	**73C/50**	**73D/50**
63A	**73B/63**	**73C/63**	**73D/63**

- BS EN 60898
- Type B (3–5In), C (5–10In), D (10–20In) classification
- Short circuit duty rating: Type B/C/D 16000A 240V/415V 50Hz
- Terminal capacity up to 35mm² cable
- 18mm modular width

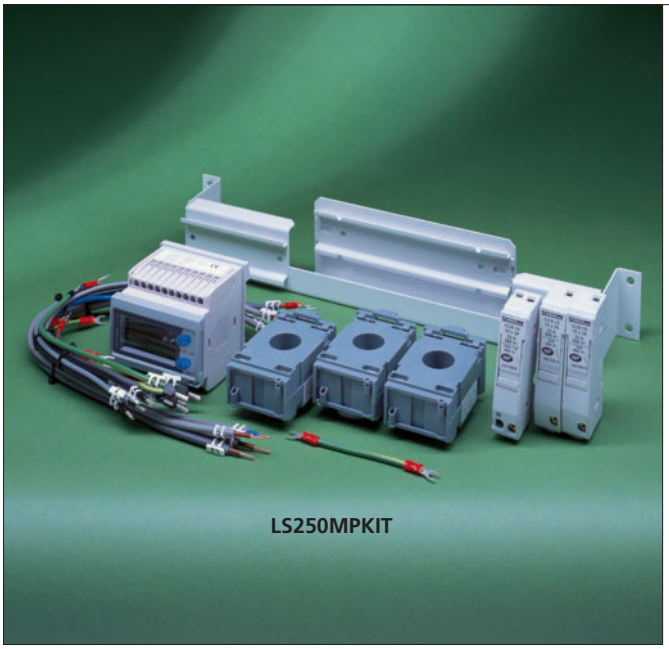

RCBOs

RCBOs SINGLE MODULE - 30mA SENSITIVITY - 16kA

Single Pole **Type A**

MCB Type C Current rating (A)	List No
6A	**701C/063**
10A	**701C/103**
16A	**701C/163**
20A	**701C/203**
32A	**701C/323**
40A	**701C/403**
50A	**701C/503**

- Standard compliance BS EN 61009; IEC 1009.
- Short circuit duty rating 16000A 240V 50Hz.
- Terminal capacity up to 16mm² cable.
- 18mm modular width



LS250MPKIT

SUB METERING

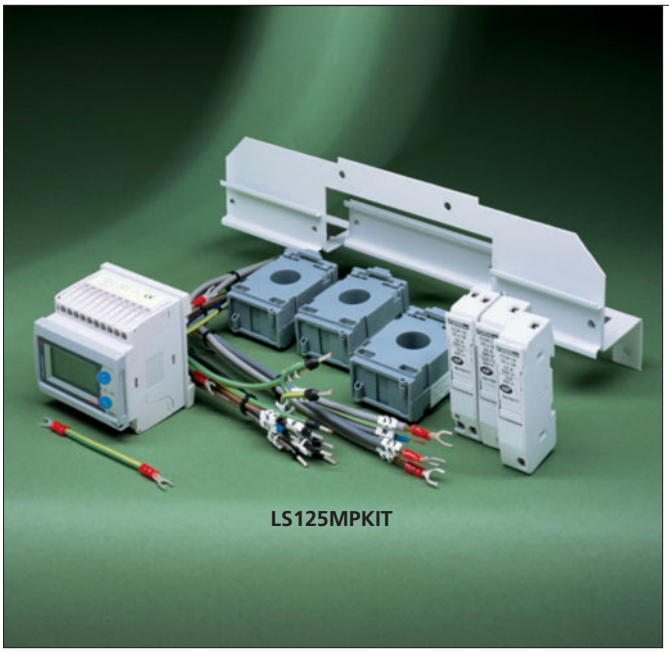
Sub metering provides an awareness of energy use. Trends of minimum and maximum demand become visible enabling any instances of energy waste to be identified.

Metering alone cannot reduce energy consumption or subsequent carbon emissions - **action taken based upon knowledge gained from an effective metering strategy can**.

Schedule 7 of the Electricity Act 1989 requires that all meters must be approved for use in a billing situation. MID (Measuring Instruments Directive) approved meters have, since 2006, been approved for billing purposes across the EU.

Non MID meters include MODBUS (RTU) connections and pulsed output as a standard feature.

MID meters are supplied with a pulsed output as a standard feature.



LS125MPKIT

INTEGRAL METER KIT

Integral meter kits suitable for mounting within 250A type B **Meter Ready** (MR) Distribution Boards. Includes a Digital energy meter, three current transformers, fuses, neutral link, wiring looms and mounting base plate.

Suitable for use with a 3ph 4 wire unbalanced system.

Description	250A
Integral Meter Kit	**LS250MPKIT**
Integral Meter Kit (MID)	**LS250MIDMPKIT**



18MPSC250LP

250A DUAL METER PACK

740mm high 'add on' assembly suitable for mounting directly beneath two surface 250A type B Distribution Boards. Includes two digital energy meters, six current transformers, all associated fuses & wiring and flexible interconnections to Distribution Boards. Provides single point isolation while dual meters allow for separate monitoring of **Light** and small **Power** energy consumption.

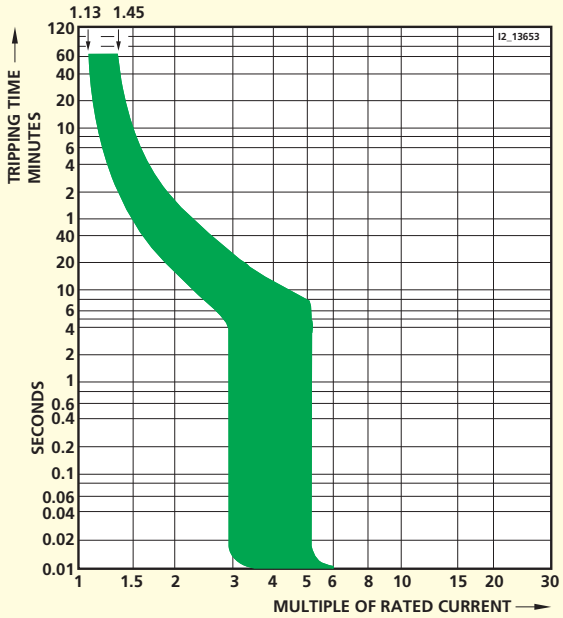
Suitable for use with a 3ph 4 wire unbalanced system.

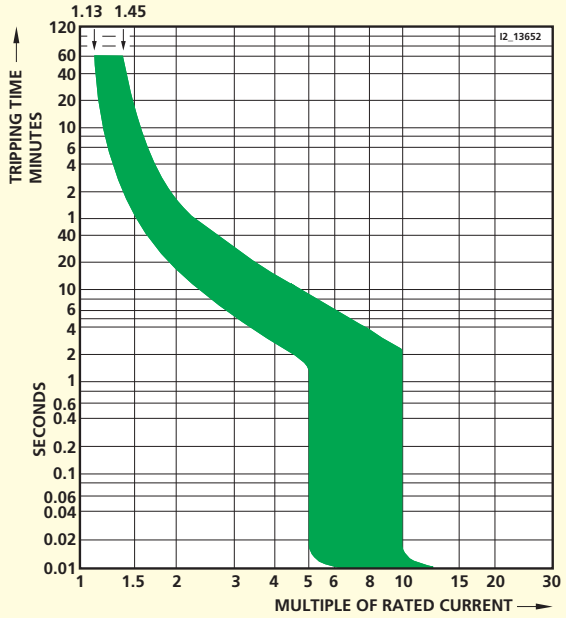
Description	250A
Add-on Dual Meter Pack	**18MPSC250LP**

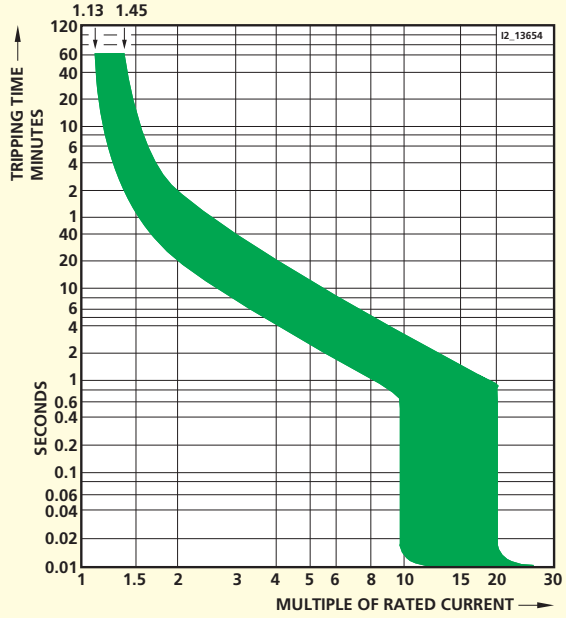
For use with IP3X Type B Distribution Boards.

POLESTAR COMPACT MINIATURE CIRCUIT BREAKER - Tripping Characteristics and Earth Loop Impendance Values

Tripping Characterteristics







Maximum earth fault loop impedance (Zs) for circuit breakers with Uo of 230V, incorporating the 0.95 C_{min} factor, 17th Edition IET Wiring Regulations (BS7671:2008), Amendment 3 effective from 1st January 2015

Characteristic B

I_n (A)	t_a 0.4s Ω	t_a 5s Ω
6	7.22	7.22
10	4.37	4.37
16	2.76	2.76
20	2.19	2.19
32	1.33	1.33
40	1.05	1.05
50	0.86	0.86
63	0.67	0.67

Tripping characteristic B
For universal use in socket outlet and lighting circuits.

Characteristic C

I_n (A)	t_a 0.4s Ω	t_a 5s Ω
6	3.61	7.22
10	2.19	4.37
16	1.33	2.66
20	1.05	2.09
32	0.67	1.33
40	0.57	1.14
50	0.48	0.95
63	0.38	0.76

Tripping characteristic C
Particularly advantageous in lamp and motor circuits with higher starting currents.

Characteristic D

I_n (A)	t_a 0.4s Ω	t_a 5s Ω
6	2.38	7.22
10	1.05	4.37
16	0.67	2.66
20	0.48	2.09
32	0.29	1.33
40	0.27	1.14
50	0.22	0.95
63	0.19	0.76

Tripping characteristic D
For electrical circuits with strong pulse-generating equipment, such as transformers or solenoid valves.

Maximum permissible lamp load of a miniature circuit breaker when operating fluorescent lamps L 18 W, L 36 W, L 38 W, L 58 W

Maximum number of fluorescent lamps

			Electronic ballast											
			Full switching at 230 V						Group switching at 230 V					
	I_n (A)	Lamp	1-lamp[1]			2-lamps[1]			1-lamp[2]			2-lamps[2]		
Characteristic			**B**	**C**	**D**	**B**	**C**	**D**	**B**	**C**	**D**	**B**	**C**	**D**
	6	L 18 W	17	37	66	17	35	35	66	66	66	35	35	35
		L 36 W	17	37	37	17	19	19	37	37	37	19	19	19
		L 58 W	17	19	19	12	12	12	19	19	19	12	12	12
	10	L 18 W	36	67	111	36	58	58	111	111	111	58	58	58
		L 36 W	36	62	62	32	32	32	62	62	62	32	32	32
		L 58 W	32	32	32	20	20	20	32	32	32	20	20	20
	16	L 18 W	56	100	177	56	94	94	177	177	177	94	94	94
		L 36 W	56	100	100	51	51	51	100	100	100	51	51	51
		L 58 W	51	51	51	32	32	32	51	51	51	32	32	32
	20	L 18 W	70	117	222	70	117	117	222	222	222	117	117	117
		L 36 W	70	117	125	64	64	64	125	125	125	64	64	64
		L 58 W	64	64	64	40	40	40	64	64	64	40	40	40
	32	L 18 W	100	144	355	100	144	188	355	355	355	188	188	188
		L 36 W	100	144	200	100	103	103	200	200	200	103	103	103
		L 58 W	100	103	103	65	65	65	103	103	103	65	65	65
	40	L 18 W	126	216	444	126	216	235	444	444	444	235	235	235
		L 36 W	126	216	250	126	129	129	250	250	250	129	129	129
		L 58 W	126	129	129	81	81	81	129	129	129	81	81	81
	50	L 18 W	180	247	555	180	247	294	555	555	555	294	294	294
		L 36 W	180	247	312	161	161	161	312	312	312	161	161	161
		L 58 W	161	161	161	102	102	102	161	161	161	102	102	102
	63	L 18 W	170	340	567	170	340	370	700	700	700	370	370	370
		L 36 W	170	340	393	170	203	203	393	393	393	203	203	203
		L 58 W	170	203	203	128	128	128	203	203	203	128	128	128

[1] All ECGs are turned on simultaneously.
[2] The ECGs are turned on in groups one after the other.

Circuit impedance:
The specified lamp loads apply, taking into account a line impedance of 800 m .
At 400 m the permissible values are reduced by 10%.

Reduction factors for miniature circuit breakers for the simultaneously switcing on of incandescent lamp loads, taking into account the rated current of the miniature circuit breaker and the summated current of the lamps

	Reduction factor	
	Switching with miniature circuit breaker	Switching with separate switch
Characteristic B	0.5	0.6
Characteristic C	1	1
Characteristic D	1	1

Current carrying capacity of miniature circuit breakers with corrected and uncorrected HQ, HQI and NAV lamps (number)

		Lamp power (W)							
		35	70	150	250	400	1000	2000	3500
Lamp current	(A)	0.5	1	1.8	3	3.5	9.5	10.3	18
Corrected lamp current	(A)	0.3	0.5	1	1.5	2	6	5.5	9.8
Inrush peak	(A)	10	18	36	60	70	120	125	220

	/n(A)	Lamp power (W)							
		35	70	150	250	400	1000	2000	3500
Characteristic B	6	2	1	0	0	0	0	0	0
	10	5	3	1	1	0	0	0	0
	16	8	5	2	1	1	0	0	0
	20	11	6	3	1	1	1	1	0
	32	16	8	4	2	2	1	1	0
	40	20	11	5	3	3	1	1	1
	50	28	15	7	4	4	2	2	1
	63	26	14	7	4	3	2	2	1
Characteristic C	6	6	3	1	1	0	0	0	0
	10	10	6	3	1	1	0	0	0
	16	16	9	4	2	2	1	1	0
	20	18	10	5	3	2	1	1	0
	32	22	12	6	3	3	2	1	1
	40	33	18	9	5	4	2	2	1
	50	38	21	10	6	5	3	3	1
	63	53	29	14	9	7	4	4	2
Characteristic D	6	8	4	2	1	1	0	0	0
	10	14	7	4	2	2	0	0	0
	16	22	11	6	3	3	1	1	0
	20	28	14	7	4	4	1	1	0
	32	44	22	12	7	6	2	2	1
	40	56	28	15	9	8	3	2	1
	50	70	35	19	11	10	4	3	2
	63	88	44	24	14	12	4	4	2

Different data for corrected/uncorrected lamps.

POLESTAR COMPACT RANGE

DISTRIBUTION BOARDS

Standards Compliance:	BSEN61439-3 and IEC 61439-3
Rated Voltage:	230/400V, 50/60Hz
Busbar Rating:	250A
Rated Insulation Voltage:	500V a.c.
Short Circuit Withstand:	25kA Conditional 17.2kA for 0.25 sec. 12.0kA for 1 sec.
Protection Degree:	IP3X (Door Closed)

ISOLATORS & SWITCH DISCONNECTORS

When used as an incomer to MCB Distribution Boards

Standards Compliance:	BSEN60947-3 and IEC/EN60947-3
Rated Voltage:	230/400V, 50/60HZ
Rated Insulation Voltage:	500V a.c.
Rated Impulse Withstand Voltage:	6kV a.c. peak
Rated Duty:	
200A	AC 22B (Double Pole)
225A	AC 22B (Triple Pole)
Pole Configuration:	Double Pole, Triple Pole
Isolators 225A	M10 Lug (20mm wide)

ISOLATORS & SWITCH DISCONNECTORS

When supplied loose

Standards Compliance:	BSEN60947-3 and IEC/EN60947-3
Rated Voltage:	230/400V, 50/60HZ
Rated Insulation Voltage:	500V a.c.
Rated Impulse Withstand Voltage:	6kV a.c. peak
Rated Duty:	
200A	AC 22B (Double Pole)
250A	AC 22B (Triple Pole)
Pole Configuration:	Double Pole, Triple Pole
Isolators 63 to 125A:	50mm²
250A	Incoming - M10 Lug (20mm wide) Outgoing - M8 Lug (16mm wide)

RESIDUAL CURRENT CIRCUIT BREAKERS (RCCBs)

Standards Compliance:	EN61008 and IEC 61008
Rated Voltage:	230/400V, 50/60Hz
RCD Class:	Type AC
Maximum Terminal Capacity:	35mm²

MINIATURE CIRCUIT BREAKERS (MCBs)

Standards Compliance:	BSEN60898 and IEC 60898
Rated Voltage:	230/400V, 50/60Hz
Short Circuit Capacity:	16kA BSEN60898-1 and IEC60898-1
Tripping Characteristics:	Types B, C and D
Temperature Range:	Maximum Operating Temperature: 55°C
Pole Configuration:	Single Pole, Double Pole, Triple Pole
Maximum Terminal Capacity:	35mm²

MOULDED CASE CIRCUIT BREAKERS (MCCBs)

Standards Compliance:	IEC/EN60947-2
Rated Current In:	200A
Rated Configuration:	3 Pole or 4 Pole
Rated Operational voltage:	690V
Rated Breaking Capacity:	65kA

RCBOs

Standards Compliance:	EN61009, IEC 61009
Rated Voltage:	230V 50Hz
Rated Short Circuit Capacity:	16kA
MCB Tripping Characteristics:	Type C
RCD Class:	Type A
Neutral:	Unswitched
Maximum Terminal Capacity:	16mm²

Neutral flying lead and functional earth lead provided

During interruption of the neutral conductor the protective function is guaranteed when FE & PE conductors are connected

TYPE B AND ROW DISTRIBUTION BOARDS

250A

List No.	H
18PSC204MR	768
18PSC206MR	822
18PSC208MR	876
18PSC212MR	984
18PSC216MR	1092
18PSC220MR	1200
18PSC224MR	1308

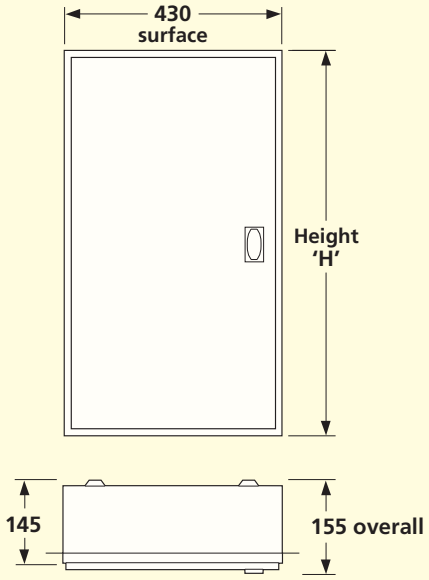
Add on enclosures

List No.	H	List No.	H
18PSCDIN18	245	**18PSCAS1**	245
18PSCDIN36	410	**18PSCAS2**	410
18PSCSB	245	**18PSCAS3**	570
		18PSCAS4	735
		18PSCAS5	815

Meter Packs

18MPSC250LP	740

Dual meter packs (LP) have a width equal to that of two distribution boards



Acknowledged as one the leading brands in the UK and in British Standard markets around the world, Crabtree offers designers & specifiers a wide range of quality products that caters for a vast array of applications including Commerce, Offices, Education, Hospitals & Health, Hotels & Leisure facilities, in fact wherever quality products are required.



Crabtree factories operate a series of internationally recognized standards including ISO9001 for quality, OHSAS 18001 for Health & Safety and ISO14001 for Environmental Management. The UK production locations are home to the product management, engineering, design, quality & logistics teams.

In the UK Crabtree operates two UKAS accredited Laboratories that carry out R&D and compliance testing on all Crabtree products, these highly accredited facilities ensure that safety, quality & reliability remain consistent with UK & EU legislation regulations & Siemens internal standards, policies and practices.

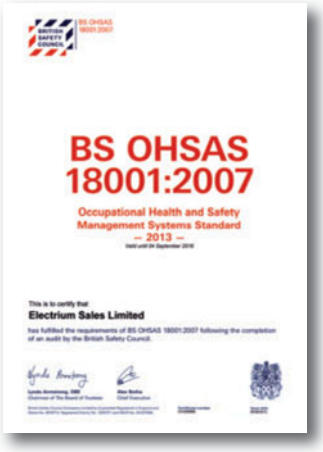
Crabtree products are all designed manufactured and tested in accordance with the recognised product standards, and backed by standard & extended guarantees.

Crabtree also operates to recognised standards for product safety & sustainability, Crabtree wiring accessories are **ROHS** and **REACH** compliant often in excess of the UK market standards.

Crabtrees **WEEE** compliance process and recycling scheme ensures that the end of product life circumstances are catered for in line with UK & EU Legislation.

Recycled materials are used in product packaging, and declared into a recycling scheme locally to control environmental impacts and assure that the maximum level of recycling of materials and use of recycled materials is achieved.

As a Siemens company Crabtree also operates a zero harm scheme within all of its manufacturing, logistics & sales facilities, and is proud to have achieved a 5 star Health & Safety rating.



ZERO HARM

WELL BEING

SUSTAINABLE FUTURE

Electrium



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Although every effort has been made to ensure accuracy in the compilation of the technical detail within this publication, specifications and performance data are constantly changing. Latest details can be obtained from Crabtree.

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