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- Wiring Accessories
- Surge Protection Devices
- Circuit Breakers for Equipment
- Miniature Circuit Breakers
- Earth Leakage Devices
- Metering Devices
- Moulded Case Circuit Breakers
- Air Circuit Breakers
- Motor Control Devices

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1. All prices are in Rand. Prices are subject to variation.
2. Price List reflects VAT exclusive.
3. Discounts and ordering criteria are subject to conditions as per the official stockist policy.
4. For non-standard ampere ratings prices available on request (POR).
5. Prices invoiced will be ruling prices at date of dispatch of goods.

## SPECIFICATIONS

Avoid delays in delivery by always specifying the following:

1. Exact frame size of circuit breaker or switch disconnecter and number of poles.
2. Ampere rating applicable to either the circuit breaker or switch disconnecter should be clearly stated.  
The standard ampere ratings applicable to the various circuit breakers are detailed in our catalogue.
3. The time delay curve desired and the breaking capacity.

**Note: Unless specified to the contrary, circuit breakers will be supplied with the standard time delay curve as indicated in the catalogues.**

4. Voltage - in all cases state whether the voltage is DC or AC.
5. Types of terminals need only be specified where they differ per pole from terminal types listed in this price list.
6. For multipole circuit breakers, specify requirements per individual pole.
7. When ordering accessories, stipulate voltage if applicable.

HANDLE COLOUR CODING				
PRODUCT TYPE	MCB	MCCB (hydraulic-magnetic)	MCCB (thermal-magnetic) (Mitsubishi)	MCCB
Circuit Breakers	White	White	Black	Black
Curve One Circuit Breakers	Orange	-	-	-
Switch Disconnecter	Green	Red	Red	Red
DC Circuit Breaker	White/Grey	Orange	Orange	Orange

**Note: Due to constant research and development, CBI reserves the right to make modifications and change without prior notice.**

For further detailed information visit [www.cbi-electric.com](http://www.cbi-electric.com)  
Circuit Breaker Industries Ltd T/A CBI-electric: low voltage

**Should you experience any “stock-outs”  
in your area, contact us directly on our  
new **HOTLINE** number 0860 **BREAKR** (273 257)**

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## 2 x 4 LIGHT SWITCHES (250 V AC, 16 A, IP20)

CATALOGUE NO.	DESCRIPTION	PACK SIZES	WHITE OPTION PRICE EA.	SILVER SHIMMER PRICE EA.
L120-P	One lever switch (1-way) complete with surround	10	24.00	59.00
L121-P	One lever switch (2-way) complete with surround	10	27.00	62.00
L122-P	Two lever switch (1-way) complete with surround	10	32.00	67.00
L123-P	Two lever switch (2-way) complete with surround	10	42.00	77.00
L124-P	Three lever switch (1-way) complete with surround	10	43.00	78.00
L125-P	Four lever switch (1-way) complete with surround	10	49.00	85.00



L120 / L121-P    L122 / L123-P    L124-P    L125-P

## 4 x 4 LIGHT SWITCHES (250 V AC, 16 A, IP20)

CATALOGUE NO.	DESCRIPTION	PACK SIZES	WHITE OPTION PRICE EA.	SILVER SHIMMER PRICE EA.
L126-P	Four lever switch (1-way) complete with surround	10	63.00	110.00
L127-P	Six lever switch (1-way) complete with surround	10	80.00	127.00



L126-P    L127-P

## 2 x 4 GRID PLATES

CATALOGUE NO.	DESCRIPTION	PACK SIZES	WHITE OPTION PRICE EA.	SILVER SHIMMER PRICE EA.
G000-P	Grid plate (1 lever) with surround	25	16.00	51.00
G001-P	Grid plate (2 lever) with surround	25	16.00	47.00
G002-P	Grid plate (3 lever) with surround	25	16.00	47.00
G003-P	Grid plate (4 lever) with surround	25	16.00	51.00
G009-P	Grid plate (Blank) with surround	25	13.00	48.00
S013-P	Surround	25	7.00	NO COLOUR



G000-P    G001-P    G002-P    G003-P    G009-P    S013-P

## 4 x 4 GRID PLATES

CATALOGUE NO.	DESCRIPTION	PACK SIZES	WHITE OPTION PRICE EA.	SILVER SHIMMER PRICE EA.
G010-P	Grid plate (Blank) with surround	25	18.00	54.00
S014R-P	Surround	25	11.00	NO COLOUR



G010-P    S014R-P

Should you require a special combination please contact **CBI**.  
Refer to Page 5 for colour options.

## 2 x 4 SWITCHED SOCKET OUTLETS (250 V AC, 16 A, IP20)

CATALOGUE NO.	DESCRIPTION	PACK SIZES	WHITE OPTION PRICE EA.	SILVER SHIMMER PRICE EA.
PS672-P	Single switched socket outlet, Vertical	5	49.00	85.00
PS673-P	Single switched socket outlet, Horizontal	5	49.00	85.00
PS681-P	SA/Euro combined socket outlet, Vertical	5	106.00	POR



PS672-P



PS673-P



PS681-P

## 4 x 4 SWITCHED SOCKET OUTLETS 4 x 4 6 WAY EURO SOCKET OUTLET (250 V AC, 16 A, IP20)

CATALOGUE NO.	DESCRIPTION	PACK SIZES	WHITE OPTION PRICE EA.	SILVER SHIMMER PRICE EA.
PS674R-P	Single switched socket outlet	5	59.00	106.00
PS675R-P	Double switched socket outlet	5	80.00	127.00
PS680-P	SA/Euro combined socket outlet	5	80.00	127.00
PS682R-P	6 Way Euro Socket Outlet	5	80.00	127.00
PS683R-P	Single switched socket with 3 Euro sockets	5	118.00	---



PS683R-P



PS682R-P



PS674R-P



PS675R-P



PS680-P

## 2 x 4 UNSWITCHED SOCKET OUTLETS (250 V AC, 6 A, IP20)

CATALOGUE NO.	DESCRIPTION	PACK SIZES	WHITE OPTION PRICE EA.	SILVER SHIMMER PRICE EA.
PS678-P	Socket outlet	5	34.00	NO COLOUR



PS678-P

## ROUND UNSWITCHED SOCKET OUTLETS (250 V AC, 6 A, IP20)

CATALOGUE NO.	DESCRIPTION	PACK SIZES	PRICE EA.
PS679-P	Socket outlet	5	25.00



PS679-P

Should you require a special combination please contact CBI.  
Refer to Page 5 for colour options.

### 4 x 4 DEDICATED SWITCHED SOCKET OUTLETS (250 V AC, 16 A, IP20)

CATALOGUE NO.	DESCRIPTION	PACK SIZES	PRICE EA.
PS676R-P	Single dedicated switched socket outlet	5	90.00
PS677R-P	Double dedicated switched socket outlet	5	122.00



PS676R-P

PS677R-P

### 2 x 4 SURFACE MOUNT OUTLET BOX

CATALOGUE NO.	DESCRIPTION	PACK SIZES	PRICE EA.
OB690	Surface mount outlet box (Plastic)	10	16.00



OB690

### 4 x 4 SURFACE MOUNT OUTLET BOX

ORDER No.	DESCRIPTION	PACK SIZES	PRICE EA.
OB878	Surface mount outlet box (Plastic)	10	19.00



OB878

### 4 x 4 2/3 SWITCH DISCONNECTOR (250 V AC, 60 A, IP0X)

CATALOGUE NO.	DESCRIPTION	PACK SIZES	WHITE OPTION PRICE EA.	SILVER SHIMMER PRICE EA.
I129-P	Switch disconnecter, 2-pole	1	97.00	144.00
I131-P	Switch disconnecter, 3-pole	1	192.00	239.00



I129 / I131-P

### 2 x 4 2 SWITCH DISCONNECTOR (250 V AC, 30 A, IP20)

CATALOGUE NO.	DESCRIPTION	PACK SIZES	WHITE OPTION PRICE EA.	SILVER SHIMMER PRICE EA.
I130-P	Switch disconnecter, 2-pole	1	85.00	120.00



I130-P

Should you require a special combination please contact CBI.  
Refer to Page 5 for colour options.

## 2 x 4 TV & TELEPHONE SOCKET OUTLETS AND BELL PUSH

CATALOGUE NO.	DESCRIPTION	PACK SIZES	WHITE OPTION PRICE EA.	SILVER SHIMMER PRICE EA.
TV678-P	Single TV socket outlet complete with surround	5	91.00	126.00
B133-P	Bell push complete with surround	5	40.00	75.00
T686-P	Single telephone socket outlet (RJ11) complete with surround	5	78.00	113.00



TV678-P

B133-P

T686-P

## NEON, TV, DSTV & TELEPHONE INSERTS

CATALOGUE NO.	DESCRIPTION	PACK SIZES	WHITE OPTION PRICE EA.	SILVER SHIMMER PRICE EA.
TI657-P	Telephone socket outlet insert, RJ11	10	63.00	73.00
II662-P	Indication light insert, RED	10	31.00	NO COLOUR
TVI663-P	Standard TV connection insert	10	73.00	82.00
TVI664-P	DSTV connection insert	5	72.00	81.00
DI645-P	Data socket outlet insert, RJ45	10	77.00	NO COLOUR



TI657-P

II662-P

TVI663-P

TVI664-P

DI645-P

## SWITCH INSERTS (IP20)

CATALOGUE NO.	DESCRIPTION	PACK SIZES	WHITE OPTION PRICE EA.	SILVER SHIMMER PRICE EA.
BI661-P	Bell push insert (250V AC, 4 A)	10	24.00	33.00
LI659-P	Light switch insert (1-way), (250V AC, 16 A)	10	13.00	22.00
LI660-P	Light switch insert (2-way), (250V AC, 16 A)	10	18.00	27.00
LI661-P	Dimmer switch insert (250V AC, 16 A)	10	21.00	31.00
LI662-P	Blank switch insert	25	4.00	13.00
LI663-P	2-Pole switch insert (250V AC, 16 A)	10	37.00	47.00
II663-P	2-Pole switch insert (250V AC, 20 A)	10	51.00	61.00
LI664-P	Intermediate switch insert (250V AC, 16 A)	10	73.00	82.00



BI661-P

LI659-P

LI660-P

LI663-P/II663-P

LI661-P

## TACTILE DIMMER MODULE

CATALOGUE NO.	DESCRIPTION	PACK SIZES	PRICE EA.
D500-P	Dimmer module (250V AC, 500W resistive, 400W inductive)	4	268.00
D500C-P	Complete Dimmer Unit (G000-P, L1661-P, D500-P)	4	310.00

Refer to Page 5 for colour options.



LOAD TABLES	500 W Universal Dimmer (D500C-P)							
	🔌 12 V Low Voltage Electronic Transformers		🔌 12 V Low Voltage Inductive Transformers		🔌 230 V Down Lighter		💡 230 V Incandescent	
Minimum No. Of Lamps	20 W	1	20 W	1	—	—	20 W	1
	35 W	1	35 W	1	—	—	40 W	1
	50 W	1	50 W	1	50 W	1	60 W	1
	—	—	—	—	—	—	100 W	1
Maximum No. Of Lamps	20 W	25	20 W	20	—	—	20 W	25
	35 W	14	35 W	11	—	—	40 W	12
	50 W	10	50 W	8	50 W	10	60 W	8
	—	—	—	—	—	—	100 W	5

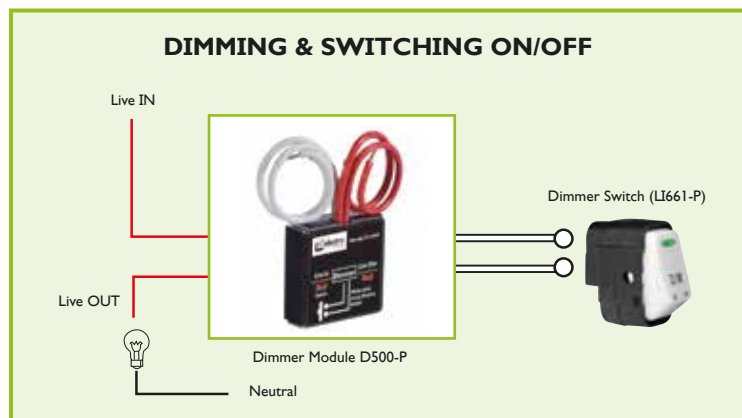
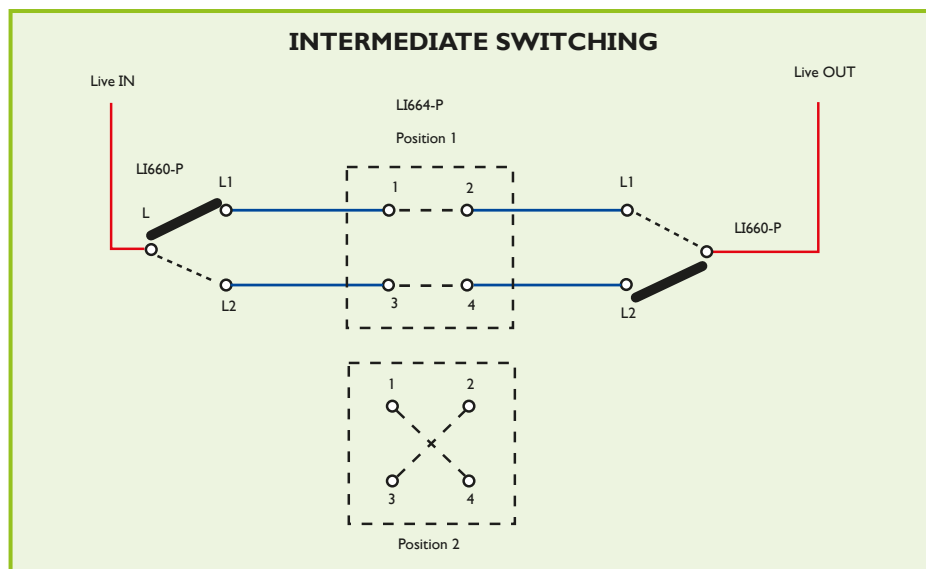
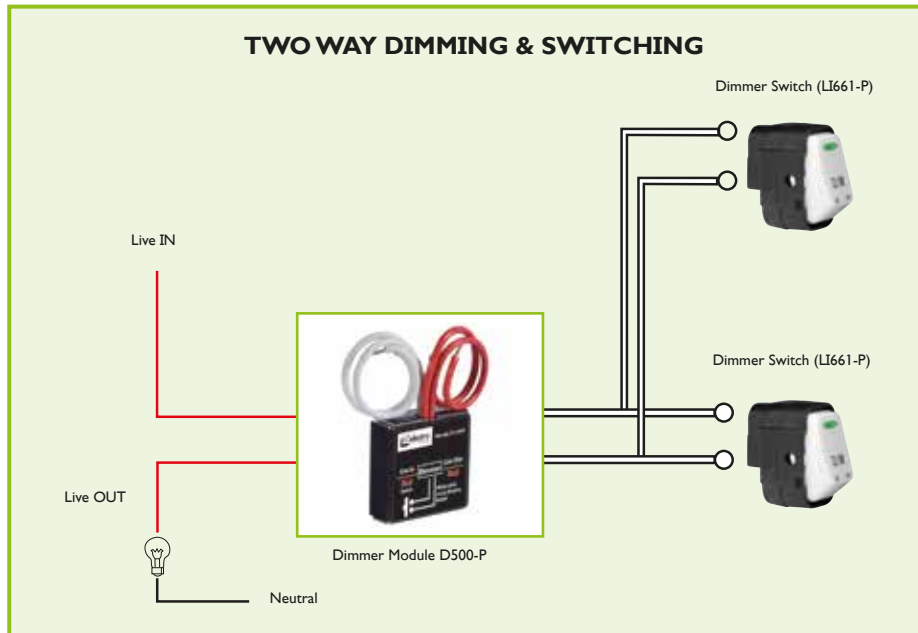
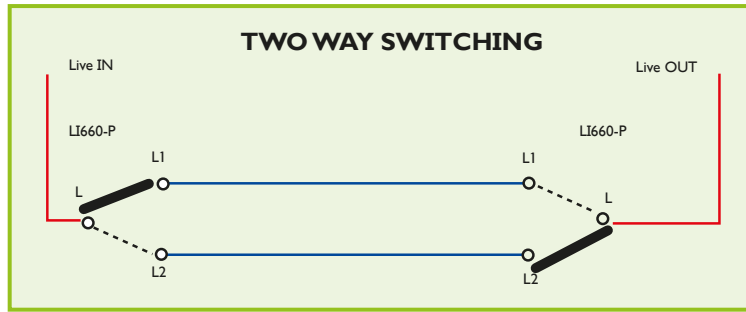
**SWITCH ADVANTAGE COLOUR OPTIONS**



Silver Shimmer  
C03-T

**Wiring Accessories available in the above colours.**

Please note: Due to the restraints of printing, colour reflected on this page may differ from actual product colour.  
 \*When ordering a colour option (EG); 1 lever one way in Silver Shimmer, construct ordering numbers as follows: L120C03-T  
 • In the case of ordering wiring accessories, -P refers to our standard white range.  
 • In the case of ordering wiring accessories, -T refers to our colour variant.





QKL-1(13)D QKL-1(13)

**CLIP-IN DUAL MOUNTED SURGE PROTECTION DEVICES**

**5 kA (8/20 μs) SURGE PROTECTION DEVICES<sup>1</sup>: 275 V Mini Rail (57 mm Escutcheon) - Class II**

PRODUCT	DESCRIPTION	WIDTH	STD PACK	PRICE EA.	ORDER NO.
QFL-1(13)	1 Pole 275 V, with indicaton	13 mm	12	192.00	QFLM0001
QFLN-2(13)	1 Pole and Neutral 275 V, with indication	26 mm	6	364.00	QFLM0002
QFL-3(13)	3 Pole 275 V, with indication	39 mm	4	545.00	QFLM0003
QFLN-4(13)	3 Pole and Neutral 275 V, with indication	52 mm	3	727.00	QFLM0004

**20 kA (8/20 μs) SURGE PROTECTION DEVICES<sup>2</sup>: 275 V Mini Rail (57 mm Escutcheon) - Class II**

PRODUCT	DESCRIPTION	WIDTH	STD PACK	PRICE EA.	ORDER NO.
QKL-1(13)	1 Pole 275 V, with indication	13 mm	12	478.00	QKLM0001
QKLN-2(13)	1 Pole and Neutral 275 V, with indication	26 mm	6	915.00	QKLM0002
QKL-3(13)	3 Pole 275 V, with indication	39 mm	4	1,374.00	QKLM0003
QKLN-4(13)	3 Pole and Neutral 275 V, with indication	52 mm	3	1,830.00	QKLM0004

**5 kA (8/20 μs) SURGE PROTECTION DEVICES<sup>1</sup>: 275 V DIN Rail (45 mm Escutcheon) - Class II**

PRODUCT	DESCRIPTION	WIDTH	STD PACK	PRICE EA.	ORDER NO.
QFL-1(13)D	1 Pole 275 V, with indication	13 mm	12	192.00	QFLD0001
QFLN-2(13)D	1 Pole and Neutral 275 V, with indication	26 mm	6	364.00	QFLD0002
QFL-3(13)D	3 Pole 275 V, with indication	39 mm	4	545.00	QFLD0003
QFLN-4(13)D	3 Pole and Neutral 275 V, with indication	52 mm	3	727.00	QFLD0004

**20 kA (8/20 μs) SURGE PROTECTION DEVICES<sup>2</sup>: 275 V DIN Rail (45 mm Escutcheon) - Class II**

PRODUCT	DESCRIPTION	WIDTH	STD PACK	PRICE EA.	ORDER NO.
QKL-1(13)D	1 Pole 275 V, with indication	13 mm	12	478.00	QKLD0001
QKLN-2(13)D	1 Pole and Neutral 275 V, with indication	26 mm	6	915.00	QKLD0002
QKL-3(13)D	3 Pole 275 V, with indication	39 mm	4	1,374.00	QKLD0003
QKLN-4(13)D	3 Pole and Neutral 275 V, with indication	52 mm	3	1,830.00	QKLD0004

**5 kA (8/20 μs) SURGE PROTECTION DEVICES<sup>1</sup>: 130 V Dual Mounted - Class II**

PRODUCT	DESCRIPTION	WIDTH	STD PACK	PRICE EA.	ORDER NO.
QFL-1(13)	1 Pole 130 V, 5 kA with indication Mini rail (57 mm Escutcheon)	13 mm	12	192.00	QFLM1001
QFL-1(13)D	1 Pole 130 V, 5 kA with indication DIN rail (45 mm Escutcheon)	13 mm	12	200.00	QFLD1001

<sup>1</sup>Required to be backed up by a **QA MCB**.  
<sup>2</sup>Required to be backed up by a **QF MCB**.

**CLASS II SPD'S ARE ONLY TO BE USED WHERE ITEMS ARE NOT SUBJECTED TO DIRECT LIGHTNING STRIKES AND THE VOLTAGE / CURRENT SURGES ARE ATTENUATED (REDUCED IN MAGNITUDE)**

PRODUCT TYPE	QFL	QKL
Maximum Continuous Operating Voltage	275V AC (RMS)	275V AC (RMS)
Voltage Protection Level (Peak)	1,5kV	1,5kV
Nominal Discharge Current (In)	5kA (8/20μs)	20kA (8/20μs)
Maximum Discharge Current (Max)	10kA (8/20μs)	40kA (8/20μs)
Short Circuit Withstand	2,5kA (50Hz)	5kA (50Hz)



B FRAME



C FRAME



DD FRAME



L SERIES

**CBE RANGE\***

CIRCUIT BREAKERS				
TYPE	POLES	VOLTAGE	RATING (A)	PRICE EA.
B-FRAME	1 - 2	240 V AC	1 - 30	POR
B-FRAME	1 - 2	65 V DC	1 - 30	POR
C-FRAME	1 - 4	240 V AC	1 - 50	POR
C-FRAME	1 - 2	80 V DC	1 - 50	POR
DD-FRAME	1 - 4	240 / 415 V AC	1 - 70 (100 A - 1 Pole)	POR
DD-FRAME	1 - 2	80 V DC	1 - 250	POR
J SERIES	1	80 V DC	100 - 750	POR
L SERIES	1	125 V DC	700 - 1500	POR

**Notes:**

The CBE range of products are fully approved by leading international authorities such as VDE, UL, IEC and CSA.

\* Contact CBI for availability.

\* Standard discounts are not applicable.

**Should you experience any “stock-outs”  
in your area, contact us directly on our  
new HOTLINE number 0860 BREAKR (273 257)**



QDC-1(13)-D

## QDC RANGE (80 V DC, 125 V DC)

### 80 V DC CIRCUIT BREAKERS 10 kA Curve U2 Mini-rail Mounting, 57 mm Escutcheon and DIN Rail Mounting, 45 mm Escutcheon

TYPE	POLES	VOLTAGE	kA	MCB WIDTH (mm)	STD PACK	RATING (A)	PRICE EA.
QDC-1(13) (Grey Handle)	1	80 V DC	10	13 (1 Module)	12	5	TBA
						10,15,20	TBA
						25,30,35,40	TBA
						45,50,60	TBA
QDC-2(13) (Grey Handle)	2	80 V DC	10	26 (2 Modules)	6	5	TBA
						10, 15, 20	TBA
						25,30,35,40	TBA
						45,50	TBA
QDC-2(13) (Grey Handle)	(Parallel)	80 V DC	10	26 (2 Modules)	6	80	TBA
						100	TBA
QDC-3(13) (Grey Handle)	3 (Parallel)	80 V DC	10	39 (3 Modules)	4	125,150	TBA

### 125 V DC CIRCUIT BREAKERS 10 kA Curve U2 Mini-rail Mounting, 57 mm Escutcheon and DIN Rail Mounting, 45 mm Escutcheon

TYPE	POLES	VOLTAGE	kA	MCB WIDTH (mm)	STD PACK	RATING (A)	PRICE EA.
QDC-1(13) (Grey Handle)	1	125 V DC	10	13 (1 Module)	12	5	TBA
						10,15,20	TBA
						25,30,35,40	TBA
						45,50,60	TBA
QDC-2(13) (Grey Handle)	2	125 V DC	10	26 (2 Modules)	6	5	TBA
						10,15,20	TBA
						25,30,35,40	TBA
						45,50	TBA
QDC-2(13) (Grey Handle)	(Parallel)	125 V DC	10	26 (2 Modules)	6	80	TBA
						100	TBA

### 125 V DC CIRCUIT BREAKERS 10 kA Curve U2, DIN Rail Mounting, 45 mm Escutcheon

TYPE	POLES	VOLTAGE	kA	MCB WIDTH (mm)	STD PACK	RATING (A)	PRICE EA.
QDC-1(26)-D (Grey Handle)	1	125 V DC	10	26 (1 Module)	6	80,100,125	TBA

Contact CBI for details.

Standard discounts are not applicable.

## QA RANGE MINI RAIL 13MM HYDRAULIC MAGNETIC



### CIRCUIT BREAKERS 3 kA Curve 3 (Standard) Mini Rail Mounting, 57 mm Escutcheon

TYPE	POLES	VOLTAGE	kA	MCB WIDTH (mm)	STD PACK	RATING (A)	PRICE EA.	ORDER NO.
<b>QA-1(13)</b> (White Handle)	1	240V AC	3	13 (1 Module)	12	5	108.00	QAL183...
						10,15,20	110.00	
						25,30,35,40	123.00	
						45,50,60	127.00	
<b>QA-2(13)</b> (White Handle)	2	415V AC	3	26 (2 Modules)	6	5	413.00	QAL283...
						10,15,20	424.00	
						25,30,35,40	436.00	
						45,50	469.00	
<b>QA-3(13)</b> (White Handle)	3	415V AC	3	39 (3 Modules)	4	5	610.00	QAL383...
						10,15,20	663.00	
						25,30,35	673.00	
						40,45,50	686.00	
<b>QA-N-2(13)</b> (White / Green Handle)	1 + N	240V AC	3	26 (2 Modules)	6	5,10,15,20	292.00	QAL213...
						25,30,35,40,45,50	309.00	
						60	315.00	
<b>QA-N-4(13)</b> (White / Green Handle)	3 + N	415V AC	3	52 (4 Modules)	3	5,10,15,20,25	793.00	QAL413...
						30,35,40,45,50	811.00	

### DUAL MOUNT SWITCH DISCONNECTORS<sup>1</sup> 3 kA, Mini Rail Mounting, 57 mm Escutcheon

TYPE	POLES	VOLTAGE	WITHSTAND kA <sup>1</sup>	MCB WIDTH (mm)	STD PACK	RATING (A)	PRICE EA.	ORDER NO.
<b>QA-S-1(13)</b> (Green Handle)	1	240V AC	3	13 (1 Module)	12	63	107.00	QAL10063
<b>QA-S-2(13)</b> (Green Handle)	2	415V AC	3	26 (2 Modules)	6	63	215.00	QAL20063
<b>QA-S-3(13)</b> (Green Handle)	3	415V AC	3	39 (3 Modules)	4	63	330.00	QAL30063
<b>QA-S-4(13)</b> (Green Handle)	4	415V AC	3	52 (4 Modules)	3	63	415.00	QAL40063

#### Notes:

The above Voltages and kA ratings are in accordance with SANS specifications, (see side of product).

The front printing on the product refers to Voltages and kA ratings in accordance with IEC specifications.

Max Cable Size 35 mm<sup>2</sup> - QA (13).

<sup>1</sup>Required to be backed up by suitable Short Circuit Protection Device (SCPD).



QF-1(13)

QF-2(13)

QF-3(13)

QF-N-2(13)

QF-N-4(13)

QF-S-4(13)

**QF RANGE DUAL MOUNT  
13MM HYDRAULIC MAGNETIC**

**CIRCUIT BREAKERS 6 kA Curve 2 (Standard) Mini and DIN Rail Mounting, 57 mm Escutcheon**

TYPE	POLES	VOLTAGE	kA	MCB WIDTH (mm)	STD PACK	RATING (A)	PRICE EA.	ORDER NO.
<b>QF-1(13)</b> (White Handle)	1	240V AC	6	13 (1 Module)	12	5 10,15,20 25	119.00 121.00 135.00	QFA182...
<b>QF-2(13)</b> (White Handle)	2	415V AC	6	26 (2 Modules)	6	5 10,15,20 25	449.00 462.00 503.00	QFA282...
<b>QF-3(13)</b> (White Handle)	3	415V AC	6	39 (3 Modules)	4	5 10,15,20 25	720.00 720.00 732.00	QFA382...
<b>QF-N-2(13)</b> (White / Green Handle)	1 + N	240V AC	6	26 (2 Modules)	6	5,10,15,20 25	317.00 337.00	QFA212...
<b>QF-N-4(13)</b> (White / Green Handle)	3 + N	415V AC	6	52 (4 Modules)	3	5,10,15, 20 25	863.00 863.00	QFA412...

**CIRCUIT BREAKERS 6 kA Curve 1 (Special) Mini and DIN Rail Mounting, 57 mm Escutcheon**

TYPE	POLES	VOLTAGE	kA	MCB WIDTH (mm)	STD PACK	RATING (A)	PRICE EA.	ORDER NO.
<b>QF-1(13)</b> (Orange Handle)	1	240V AC	6	13 (1 Module)	12	5,10,15,20,25	167.00	QFA181...
<b>QF-2(13)</b> (Orange Handle)	2	415V AC	6	26 (2 Modules)	6	5,10,15,20,25	615.00	QFA281...
<b>QF-3(13)</b> (Orange Handle)	3	415V AC	6	39 (3 Modules)	4	5,10,15,20 25	923.00 929.00	QFA381...
<b>QF-N-2(13)</b> (Orange Handle)	1+N	240V AC	6	26 (2 Module)	6	5,10,15,20 25	353.00 357.00	QFA211...

**SWITCH DISCONNECTORS<sup>1</sup> 6 kA, Mini and DIN Rail Mounting, 57 mm Escutcheon**

TYPE	POLES	VOLTAGE	WITHSTAND kA <sup>1</sup>	MCB WIDTH (mm)	STD PACK	RATING (A)	PRICE EA.	ORDER NO.
<b>QF-S-1(13)</b> (Green Handle)	1	240V AC	6	13 (1 Module)	12	63	124.00	QFA10063
<b>QF-S-2(13)</b> (Green Handle)	2	415V AC	6	26 (2 Modules)	6	63	233.00	QFA20063
<b>QF-S-3(13)</b> (Green Handle)	3	415V AC	6	39 (3 Modules)	4	63	364.00	QFA30063
<b>QF-S-4(13)</b> (Green Handle)	4	415V AC	6	52 (4 Modules)	3	63	467.00	QFA40063

**Notes:**

The above Voltages and kA ratings are in accordance with SANS specifications, (see side of product).  
The front printing on the product refers to Voltages and kA ratings in accordance with IEC specifications.  
Max Cable Size 35 mm<sup>2</sup> - QF (13).

<sup>1</sup>Required to be backed up by suitable Short Circuit Protection Device (SCPD).

Contact CBI for details.



**QF RANGE DUAL MOUNT  
26MM HYDRAULIC MAGNETIC**

QF-1(26)-C1    QF-1(26)-C2    QF-2(26)-C2    QF-3(26)-C2    QF-S-2(26)

**CIRCUIT BREAKERS 6 kA Curve 1(Special) Mini and DIN Rail Mounting, 57 mm Escutcheon**

TYPE	POLES	VOLTAGE	kA	MCB WIDTH (mm)	STD PACK	RATING (A)	PRICE EA.	ORDER NO.
<b>QF-1(26)</b> (Orange Handle)	1	240V AC	6	26 (1 Module)	12	5,10,15,20	169.00	QFE181...
						25,30,35,40,45,50,63	174.00	
						80	280.00	
						100,125	401.00	
<b>QF-2(26)</b> (Orange Handle)	2	415V AC	6	52 (2 Modules)	6	5,10,15,20	620.00	QFE281...
						25,30,35,40,45,50,63	623.00	
						80	906.00	
						100	986.00	
<b>QF-3(26)</b> (Orange Handle)	3	415V AC	6	78 (3 Modules)	4	5	928.00	QFE381...
						10,15,20	930.00	
						25,30,35,40,45,50,63	932.00	
						80	1,361.00	
						100	1,472.00	

**CIRCUIT BREAKERS 6 kA Curve 2(Standard) Mini and DIN Rail Mounting, 57 mm Escutcheon**

TYPE	POLES	VOLTAGE	kA	MCB WIDTH (mm)	STD PACK	RATING (A)	PRICE EA.	ORDER NO.
<b>QF-1(26)</b> (White Handle)	1	240V AC	6	26 (1 Module)	12	5,10	115.00	QFE182...
						15,20,25,30	123.00	
						35,40,45,50,63	130.00	
						80	245.00	
						100,125	284.00	
<b>QF-2(26)</b> (White Handle)	2	415V AC	6	52 (2 Modules)	6	5	454.00	QFE282...
						10,15,20	462.00	
						25,30,35,40	509.00	
						45,50,63	516.00	
						80	853.00	
						100	1,274.00	
<b>QF-3(26)</b> (White Handle)	3	415V AC	6	78 (3 Modules)	4	5,10,15,20	663.00	QFE382...
						25,30,35,40,45,50,63	669.00	
						80	1,227.00	
						100	1,472.00	
<b>QF-N-2(26)</b> (White / Green Handle)	1 + N	240V AC	5	52 (2 Modules)	6	5,10,15,20	306.00	QFE212...
						25,30,35,40	319.00	
						45,50,63	356.00	
						80	533.00	
						100	539.00	
<b>QF-N-4(26)</b> (White / Green Handle)	3 + N	240V AC	6	104 (4 Modules)	3	70,80,90,100	1,731.00	QFE412...

**DUAL MOUNT SWITCH DISCONNECTORS 6 kA, Mini and DIN Rail Mounting, 57 mm Escutcheon**

TYPE	POLES	VOLTAGE	WITHSTAND kA	MCB WIDTH (mm)	STD PACK	RATING (A)	PRICE EA.	ORDER NO.
<b>QF-S-1(26)</b>	1	240V AC	6	26	12	63	138.00	QFE10063
				(1 Module)		100	233.00	QFE100100
<b>QF-S-2(26)</b>	2	415V AC	6	52	6	63	272.00	QFE20063
				(2 Modules)		100	447.00	QFE200100
<b>QF-S-3(26)</b>	3	415V AC	6	78	4	63	423.00	QFE30063
				(3 Modules)		100	739.00	QFE300100
<b>QF-S-4(26)</b>	4	415V AC	6	104	3	63	556.00	QFE40063
				(4 Modules)		100	985.00	QFE400100

**QF RANGE DIN RAIL  
18MM HYDRAULIC MAGNETIC**



QF-3(18)-D-C1    QF-1(18)-D-C2    QF-2(18)-D-C2    QF-3(18)-D-C2

**CIRCUIT BREAKERS 6 kA Curve 1 (Special) DIN Rail Mounting, 45 mm Escutcheon**

TYPE	POLES	VOLTAGE	kA	MCB WIDTH (mm)	STD PACK	RATING (A)	PRICE EA.	ORDER NO.
<b>QF-1(18)-D</b> (Orange Handle)	1	240 V AC	6	18 (1 Module)	12	6,10,16,20 25,32,40,50,63	168.00 173.00	QFD181...
<b>QF-2(18)D</b> (Orange Handle)	2	415 V AC	6	36 (2 Modules)	6	6,10,16,20 25,32,40,50,63	620.00 622.00	QFD281...
<b>QF-3(18)-D</b> (Orange Handle)	3	415 V AC	6	54 (3 Modules)	4	6,10,16,20 25,32,40,50,63	929.00 932.00	QFD381...

**CIRCUIT BREAKERS 6 kA Curve 2 (Standard) DIN Rail Mounting, 45 mm Escutcheon**

TYPE	POLES	VOLTAGE	kA	MCB WIDTH (mm)	STD PACK	RATING (A)	PRICE EA.	ORDER NO.
<b>QF-1(18)-D</b> (White Handle)	1	240 V AC	6	18 (1 Module)	12	6, 10, 16, 20 25, 32 35,40,50,63	116.00 131.00 134.00	QFD182...
<b>QF-2(18)-D</b> (White Handle)	2	415 V AC	6	36 (2 Modules)	6	6 10,16,20 25,32,40 45,50,63	454.00 462.00 510.00 516.00	QFD282...
<b>QF-3(18)-D</b> (White Handle)	3	415 V AC	6	54 (3 Modules)	4	6 10,16,20 25,32,40,45,50,63	768.00 663.00 669.00	QFD382...
<b>QF-N-2(18)-D<sup>2</sup></b> (White / Green Handle)	1 + N	240 V AC	6	36 (2 Modules)	6	6,10,16,20 25,32,40 45,50,63	309.00 321.00 359.00	QFD212...
<b>QF-N-4(18)-D<sup>3</sup></b> (White / Green Handle)	3 + N	415 V AC	6	72 (4 Modules)	3	6,10,16,20 25,32,40 50,63	863.00 914.00 926.00	QFD412...

**Notes:**

The above Voltage and kA ratings are in accordance with IEC specifications. (See front printing of product).

The SANS specifications for voltage and kA ratings are printed on the side of the product.

Max Cable Size 35 mm<sup>2</sup> - QF (18).

<sup>1</sup>Required to be backed up by suitable Short Circuit Protection Device (SCPD).

Contact CBI for details.



QF-1(18)-D-C1 QF-2(18)-D-C2 QF-3(18)-D-C2 QF-N-2(18)-D-C2 QF-N-4(18)-D-C2 QF-S-2(18)-D

## QF RANGE DIN RAIL 18MM THERMAL MAGNETIC

### CIRCUIT BREAKERS 6 kA Curve 1 (Special) DIN Rail Mounting, 45 mm Escutcheon

TYPE	POLES	VOLTAGE	kA	MCB WIDTH (mm)	STD PACK	RATING (A)	PRICE EA.	ORDER NO.
<b>QF-1(18)-D</b> (Orange Handle)	1	240V AC	6	18 (1 Module)	12	6	169.00	QFD181...1
						10,16,20	169.00	
						25,32,40,50,63	175.00	
<b>QF-2(18)-D</b> (Orange Handle)	2	415V AC	6	36 (2 Modules)	6	6,10,16,20	621.00	QFD281...1
						25,32,40,50,63	625.00	
<b>QF-3(18)-D</b> (Orange Handle)	3	415V AC	6	54 (3 Modules)	4	6,10,16,20	932.00	QFD381...1
						25,32,40,50,63	933.00	
<b>QF-N-4(18)-D</b> (Orange / Green Handle)	3 + N	415V AC	6	72 (4 Modules)	3	6,10,16,20	1,107.00	QFD411...1
						25,32,40	1,178.00	
						50,63	1,195.00	

### CIRCUIT BREAKERS 6 kA Curve 2 (Standard) DIN Rail Mounting, 45 mm Escutcheon

TYPE	POLES	VOLTAGE	kA	MCB WIDTH (mm)	STD PACK	RATING (A)	PRICE EA.	ORDER NO.
<b>QF-1(18)-D</b> (White Handle)	1	240V AC	6	18 (1 Module)	12	6,10,16,20	117.00	QFD182...1
						25,32	134.00	
						40,50,63	137.00	
<b>QF-2(18)-D</b> (White Handle)	2	415V AC	6	36 (2 Modules)	6	6	456.00	QFD282...1
						10,16,20	464.00	
						25,32,40	511.00	
<b>QF-3(18)-D</b> (White Handle)	3	415V AC	6	54 (3 Modules)	4	6	770.00	QFD382...1
						10,16,20	666.00	
						25,32,40,50,63	670.00	
<b>QF-N-2(18)-D</b> (White / Green Handle)	1 + N	240V AC	6	36 (2 Modules)	6	6,10,16,20	311.00	QFD212...1
						25,32,40	323.00	
						50,63	361.00	
<b>QF-N-4(18)-D</b> (White / Green Handle)	3 + N	415V AC	6	72 (4 Modules)	3	6,10,16,20	864.00	QFD412...1
						25,32,40	915.00	
						50,63	928.00	

### SWITCH DISCONNECTORS 6 kA, DIN Rail Mounting, 45 mm Escutcheon

TYPE	POLES	VOLTAGE	WITHSTAND kA <sup>1</sup>	MCB WIDTH (mm)	STD PACK	RATING (A)	PRICE EA.	ORDER NO.
<b>QF-S-1(18)-D</b>	1	240V AC	6	18	12	100	226.00	QFD100100
				(1 Module)		125	315.00	QFD100125
<b>QF-S-2(18)-D</b>	2	415V AC	6	36	6	100	359.00	QFD200100
				(2 Modules)		125	447.00	QFD200125
<b>QF-S-3(18)-D</b>	3	415V AC	6	54	4	100	581.00	QFD300100
				(3 Modules)		125	740.00	QFD300125
<b>QF-S-4(18)-D</b>	4	415V AC	6	72	3	100	770.00	QFD400100
				(4 Modules)		125	985.00	QFD400125

**Notes:**

For non-standard amp ratings, please contact CBI.

The above Voltages and kA ratings are in accordance with SANS specifications (see front printing of product).

MCB Max Cable Size 35 mm<sup>2</sup>

Switch Disconnector Max Cable Size 50mm<sup>2</sup>

These Products are to be used in conjunction with the 63A QRM Range Earth leakages when earth leakage with add on overload Protection is required (Ref Page 16)

Contact CBI for availability.



QF-1(27)-D



QF-2(27)-D



QF-3(27)-D

**QF RANGE DIN RAIL  
27MM THERMAL MAGNETIC**

**CIRCUIT BREAKERS 6 kA Curve 1 (Special) DIN Rail Mounting, 45 mm Escutcheon**

TYPE	POLES	VOLTAGE	kA	MCB WIDTH (mm)	STD PACK	RATING (A)	PRICE EA.	ORDER NO.
<b>QF-1(27)-D</b> (Orange Handle)	1	240V AC	6	27 (1 Module)	12	80 100	280.00 401.00	QFF181...1
<b>QF-2(27)-D</b> (Orange Handle)	2	415V AC	6	54 (2 Modules)	6	80 100	906.00 986.00	QFF281...1
<b>QF-3(27)-D</b> (Orange Handle)	3	415V AC	6	81 (3 Modules)	4	80 100	1,361.00 1,472.00	QFF381...1
<b>QF-N-4(27)-D</b> (Orange / Green Handle)	3 + N	415V AC	6	108 (4 Modules)	3	80 100	1,788.00 1,788.00	QFF411...1

**CIRCUIT BREAKERS 6 kA Curve 2 (Standard) DIN Rail Mounting, 45 mm Escutcheon**

TYPE	POLES	VOLTAGE	kA	MCB WIDTH (mm)	STD PACK	RATING (A)	PRICE EA.	ORDER NO.
<b>QF-1(27)-D</b> (White Handle)	1	240V AC	6	27 (1 Module)	12	80 100	245.00 280.00	QFF182...1
<b>QF-2(27)-D</b> (White Handle)	2	415V AC	6	54 (2 Modules)	6	80 100	853.00 1,274.00	QFF282...1
<b>QF-3(27)-D</b> (White Handle)	3	415V AC	6	81 (3 Modules)	4	80 100	1,227.00 1,472.00	QFF382...1
<b>QF-N-4(27)-D</b> (White / Green Handle)	3 + N	415V AC	6	108 (4 Modules)	3	80 100	1,627.00 1,627.00	QFF412...1

**Notes:**

For non-standard amp ratings, please contact CBI.

The above Voltages and kA ratings are in accordance with SANS specifications (see front printing of product).

Max Cable Size 50 mm<sup>2</sup>

These Products are to be used in conjunction with the 125A QRM Range Earth leakages when Earth leakage with Add on Overload Protection is required (Ref Page 16)

Contact CBI for availability.



## QF RANGE DIN RAIL THERMAL MAGNETIC EARTH LEAKAGES (30mA)

EARTH LEAKAGE MODULE WITH SWITCH,  $I_{cw} = 6 \text{ kA}$ , DIN Rail Mounting, 45 mm Escutcheon - No Overload

TYPE	POLES	VOLTAGE	kA	MCB WIDTH (mm)	STD PACK	RATING (A)	PRICE EA.	ORDER NO.
QF16CD	1 + N	240V AC	6	36 (1 Module)	6	63,100	959.00	QF16CD...
QF36CD	3 + N	415V AC	6	72 (1 Module)	3	63,100	2,099.00	QF36CD...

EARTH LEAKAGE MODULE WITH SWITCH,  $I_{cw} = 6 \text{ kA}$ , DIN Rail Mounting, 45 mm Escutcheon

TYPE	POLES	VOLTAGE	kA	MCB WIDTH (mm)	STD PACK	RATING (A)	PRICE EA.	ORDER NO.
QRM16AD	2	415V AC	6	36 (1 Module)	6	63 125	799.00 1,273.00	QRM16AD... QRM16AD...
QRM36AD	4	415V AC	6	72 (1 Module)	3	63 125	959.00 1,976.00	QRM36AD... QRM36AD...

### NOTE:

For 6 kA Applications:

QRM16A-D-63A must be used in conjunction with QF-N-2(18)-D on Page 14

QRM16A-D-125A must be used in conjunction with QF-2(27)-D on Page 15

QRM36A-D-63A must be used in conjunction with QF-N-4(18)-D on Page 14

QRM36A-D-125A must be used in conjunction with QF-N-4(27)-D on Page 15

Contact CBI for availability.

### CABLE LENGTHS MAY NOT BE CUT



INTERCONNECTING CABLES AS PER ABOVE ILLUSTRATION ARE STANDARD WITH ALL QRM 125A PRODUCT PURCHASES.



QH-1(18)-D-C1    QH-2(18)-D-C2    QH-3(18)-D-C2    QH-N-2(18)-D-C2    QH-N-4(18)-D-C2    QH-S-1(18)-D

**QH RANGE DIN RAIL  
18MM THERMAL MAGNETIC**

**STANDARD CIRCUIT BREAKERS 10 kA Curve 2 (Standard) DIN Rail Mounting, 45 mm Escutcheon**

TYPE	POLES	VOLTAGE	kA	MCB WIDTH (mm)	STD PACK	RATING (A)	PRICE EA.	ORDER NO.
<b>QH-1(18)-D</b> (White Handle)	1	240 V AC	10	18 (1 Module)	12	6,10,16,20 25,32,40,50,63	251.00 294.00	QHB182...
<b>QH-2(18)-D</b> (White Handle)	2	415 V AC	10	36 (2 Modules)	6	6,10,16,20 25,32,40,50,63	768.00 866.00	QHB282...
<b>QH-3(18)-D</b> (White Handle)	3	415 V AC	10	54 (3 Modules)	4	6,10,16,20 25,32,40,50,63	1,040.00 1,127.00	QHB382...
<b>QH-N-2(18)-D</b> (White / Green Handle)	1 + N	240 V AC	10	36 (2 Modules)	6	10,16,20 25,32,40,50,63	669.00 692.00	QHB212...
<b>QH-N-4(18)-D</b> (White / Green Handle)	3 + N	415 V AC	10	72 (4 Modules)	3	10,16,20 25,32,40,50,63	1,229.00 1,366.00	QHB412...

**SPECIAL CIRCUIT BREAKERS 10 kA Curve 1, DIN Rail Mounting 45 mm Escutcheon**

TYPE	POLES	VOLTAGE	kA	MCB WIDTH (mm)	STD PACK	RATING (A)	PRICE EA.	ORDER NO.
<b>QH-1(18)-D</b> (Orange Handle)	1	240 V AC	10	18 (1 Module)	12	6,10,16,20 25,32,40,50,63	417.00 497.00	QHB181...
<b>QH-2(18)-D</b> (Orange Handle)	2	415 V AC	10	36 (2 Modules)	6	6,10,16,20 25,32,40,50,63	949.00 1,004.00	QHB281...
<b>QH-3(18)-D</b> (Orange Handle)	3	415 V AC	10	54 (3 Modules)	4	6,10,16,20 25,32,40,50,63	1,424.00 1,510.00	QHB381...
<b>QH-N-4(18)-D</b> (Orange / Green Handle)	3 + N	415 V AC	10	72 (4 Modules)	3	10,16,20 25,32,40,50,63	1,648.00 1,695.00	QHB411...

**SWITCH DISCONNECTORS 10 kA DIN Rail Mounting, 45 mm Escutcheon**

TYPE	POLES	VOLTAGE	kA	MCB WIDTH (mm)	STD PACK	RATING (A)	PRICE EA.	ORDER NO.
<b>QH-S-1(18)-D</b> (Green Handle)	1	240 V AC	10	18 (1 Module)	12	100	267.00	QHB100100
<b>QH-S-2(18)-D</b> (Green Handle)	2	415 V AC	10	36 (2 Modules)	6	100	531.00	QHB200100
<b>QH-S-3(18)-D</b> (Green Handle)	3	415 V AC	10	54 (3 Modules)	4	100	755.00	QHB300100
<b>QH-S-4(18)-D</b> (Green Handle)	4	415 V AC	10	72 (4 Modules)	3	100	1,065.00	QHB400100

**Note:**

Use curve 1 for Motor Protection.

Contact CBI for delivery.

For Motor Starting Applications, refer to pages 69, 70, 71.

Max Cable Size 35 mm<sup>2</sup> - QH.

These Products are to be used in conjunction with the 63A QRM Range Earth leakages when Earth leakage with Add on Overload Protection is required (Ref Page 19)

Contact CBI for availability.



QH-1(27)-D-C1 QH-1(27)-D-C2 QH-2(27)-D-C2 QH-3(27)-D-C2 QH-S-2(18)-D

## QH RANGE DIN RAIL 27MM THERMAL MAGNETIC

### STANDARD CIRCUIT BREAKERS 10 kA Curve 2 (Standard) DIN Rail Mounting, 45 mm Escutcheon

TYPE	POLES	VOLTAGE	kA	MCB WIDTH (mm)	STD PACK	RATING (A)	PRICE EA.	ORDER NO.
<b>QH-1(27)-D</b> (White Handle)	1	240V AC	10	27	12	80	382.00	QHD182...
				(1 Module)		100	447.00	
<b>QH-2(27)-D</b> (White Handle)	2	415V AC	10	54	6	80	1,139.00	QHD282...
				(2 Modules)		100	1,384.00	
<b>QH-3(27)-D</b> (White Handle)	3	415V AC	10	81	4	80	1,491.00	QHD382...
				(3 Modules)		100	1,675.00	
<b>QH-N-2(27)-D</b> (White / Green Handle)	1 + N	240V AC	10	54	6	80	723.00	QHD212...
<b>QH-N-4(27)-D</b> (White / Green Handle)	3 + N	415V AC	10	108	3	80	1,756.00	QHD412...
				(4 Modules)		100	1,882.00	

### SPECIAL CIRCUIT BREAKERS 10 kA Curve 1, DIN Rail Mounting, 45 mm Escutcheon

TYPE	POLES	VOLTAGE	kA	MCB WIDTH (mm)	STD PACK	RATING (A)	PRICE EA.	ORDER NO.
<b>QH-1(27)-D</b> (Orange Handle)	1	240V AC	10	27	12	80	651.00	QHD181...
				(1 Module)		100	707.00	
<b>QH-2(27)-D</b> (Orange Handle)	2	415V AC	10	54	6	80	1,379.00	QHD281...
				(2 Modules)		100	1,395.00	
<b>QH-3(27)-D</b> (Orange Handle)	3	415V AC	10	81	4	80	2,068.00	QHD381...
				(3 Modules)		100	2,092.00	
<b>QH-N-4(27)-D</b> (Orange Handle)	3 + N	415V AC	10	108	4	80	1,756.00	QHD411...
				(4 Modules)		100	1,882.00	

**Note:**

Use curve 1 for Motor Protection.

Contact CBI for delivery.

For Motor Starting Applications, refer to pages 69, 70, 71.

Max Cable Size 50 mm<sup>2</sup> - QH.

Note: These Products are to be used in conjunction with the 125A QRM Range Earth leakages when Earth leakage with Add on Overload Protection is required (Ref Page 19)



**QH RANGE DIN RAIL  
THERMAL MAGNETIC EARTH LEAKAGES (30mA)**

**EARTH LEAKAGE MODULE WITH SWITCH, I<sub>cn</sub> = 6 kA, DIN Rail Mounting, 45 mm Escutcheon - No Overload**

TYPE	POLES	VOLTAGE	kA	MCB WIDTH (mm)	STD PACK	RATING (A)	PRICE EA.	ORDER NO.
QH16CD	1 + N	240V AC	10	36	6 (1 Module)	63,100	1,059.00	QHD16CD...
QH36CD	3 + N	415V AC	10	72 (1 Module)	3	63,100	2,199.00	QHD36CD...

**EARTH LEAKAGE MODULE WITH SWITCH, I<sub>cn</sub> = 6 kA, DIN Rail Mounting, 45 mm Escutcheon**

TYPE	POLES	VOLTAGE	kA	MCB WIDTH (mm)	STD PACK	RATING (A)	PRICE EA.	ORDER NO.
QRM16AD	2	415V AC	6	36 (1 Module)	6	63 125	799.00 1,273.00	QRM16AD... QRM16AD...
QRM36AD	4	415V AC	6	72 (1 Module)	3	63 125	959.00 1,976.00	QRM36AD... QRM36AD...

Note:

For 10 kA Applications:

QRM16A-D-63A must be used in conjunction with QH-N-2(18)-D on page 17

QRM16A-D-125A must be used in conjunction with QH-N-2(27)-D on page 18

QRM36A-D-63A must be used in conjunction with QH-N-4(18)-D on page 17

QRM36A-D-125A must be used in conjunction with QH-N-4(27)-D on page 18

Contact CBI for availability.

**CABLE LENGTHS MAY NOT BE CUT**

**INTERCONNECTING CABLES AS PER ABOVE ILLUSTRATION ARE STANDARD WITH ALL QRM 125A PRODUCT PURCHASES.**



## QA, QF, SF, AND SM RANGE EARTH LEAKAGES

### 1. Special Earth Leakage Protection Devices

All products manufactured by CBI to meet special non-standard requirements of customers will be quoted for (Price On Request).

### 2. Standard Current Ratings

Ampere ratings indicated are standard. Non-standard ratings can be provided (POR).

### 3. Earth Leakage Protection Device Sensitivities

Sensitivities indicated are standard. Non-standard sensitivities can be provided (POR).

### 4. Standard Pack Sizes

CBI reserves the right to apply a surcharge not exceeding 20 % for orders received where quantities are below the minimum pack sizes.

### Earth Leakage Protection Devices Abbreviation Codes

#### Suffix A

Earth Leakage protection device with overload, Single pole and Neutral / 3 pole and Neutral versions.

#### Suffix C

Earth Leakage protection device (switch disconnecter, non overload), Single pole and 3 pole versions.

TYPE	POLES	VOLTAGE	WITHSTAND kA	mA	WIDTH (mm)	STD PACK	RATING (A)	PRICE EA.	ORDER NO.
<b>Residential/Commercial Earth Leakage Protection Device Single Phase with Overload Protection (Dual Mount)</b>									
QA17A	1 + N	240 V AC	3	30	26	10	5,10,15,20,25,30,40,50,63	1,287.00	QA17A...
<b>Residential/Commercial Earth Leakage Protection Device Single Phase without Overload Protection (Dual Mount)<sup>1</sup></b>									
QA17C	1 + N	240 V AC	-	30	26	10	63	669.00	QA17C...
<b>Commercial/Industrial Earth Leakage Protection Device Single Phase with Overload Protection (Dual Mount)</b>									
QF17A	1 + N	240 V AC	6	30	26	10	5,10,15,20,25,30,40,50,63	1,389.00	QF17A...
<b>Commercial/Industrial Earth Leakage Protection Device Single Phase without Overload Protection (Dual Mount)<sup>1</sup></b>									
QF17C	1 + N	240 V AC	-	30	26	10	63	959.00	QF17C...
<b>Residential/Commercial Earth Leakage Protection Device Three Phase with Overload Protection (Dual Mount)</b>									
QA36AW	3 + N	415 V AC	3	30	78	5	6,10,15,20,25,30,40,50,63	2,199.00	QA36AW2...
<b>Residential/Commercial Earth Leakage Protection Device Three Phase without Overload Protection (Dual Mount)<sup>1</sup></b>									
QA36CW	3 + N	415 V AC	-	30	78	5	63	1,422.00	QA36CW...
<b>DIN Commercial/Industrial Earth Leakage Protection Device Single Phase with Overload Protection (DIN Mount)</b>									
QF14AD	1 + N	240 V AC	6	30	26	10	6,10,16,20,32,40,50,63	1,389.00	QF14AD2...
<b>DIN Commercial/Industrial Earth Leakage Protection Device Single Phase without Overload Protection (DIN Mount)<sup>1</sup></b>									
QF14CD	1 + N	240 V AC	-	30	26	10	63	959.00	QF14CD...
<b>Commercial/Industrial Earth Leakage Protection Device Single Phase with Overload Protection (Mini Rail &amp; Front Mount)</b>									
SF15A	1 + N	240 V AC	6	30	65	10	80,100	1,899.00	SF15K...
<b>Commercial/Industrial Earth Leakage Protection Device Single Phase without Overload Protection (Mini Rail &amp; Front Mount)<sup>1</sup></b>									
SF15C	1 + N	240 V AC	-	30	65	10	100	1,299.00	SF15A...
<b>Commercial/Industrial Earth Leakage Protection Device Three Phase with Overload Protection (Mini Rail &amp; Front Mount)</b>									
SF36A	3 + N	415 V AC	6	30	117	5	15,20,30,40,50,60,70,80	2,499.00	SF35K...
<b>Commercial/Industrial Earth Leakage Protection Device Three Phase without Overload Protection (Mini Rail &amp; Front Mount)<sup>1</sup></b>									
SF36C	3 + N	415 V AC	-	30	117	5	80	2,099.00	SF35A...

Max Cable Size 35 mm<sup>2</sup> - QA 5A-63A  
 35 mm<sup>2</sup> - QF 5A-63A  
 50 mm<sup>2</sup> - QF 70A-125A  
 50 mm<sup>2</sup> - SF 15A-100A

<sup>1</sup>Required to be backed up by suitable Short Circuit Protection Device (SCPD).



SF / SM36A



SM15A

**SM RANGE**

**110V AC Mining / Industrial Earth Leakage Protection Device, Single Phase with Overload Protection (Mini Rail & Front Mount)**

TYPE	POLES	VOLTAGE	kA	mA	WIDTH (mm)	STD PACK	RATING (A)	PRICE EA.	ORDER NO.
SM15A	1 + N	110V AC	6	30mA	65	10	10,15,20,30,40,50,60,80,100	1,899.00	SN15K...
SM15A	1 + N	110V AC	6	50mA	65	10	10,15,20,30,40,50,60,80,100	1,899.00	SN15L...
SM15A	1 + N	110V AC	6	100mA	65	10	10,15,20,30,40,50,60,80,100	1,899.00	SN15M...
SM15A	1 + N	110V AC	6	250mA	65	10	10,15,20,30,40,50,60,80,100	1,899.00	SN15N...
SM15A	1 + N	110V AC	6	375mA	65	10	10,15,20,30,40,50,60,80,100	1,899.00	SN15P...
SM15A	1 + N	110V AC	6	500mA	65	10	10,15,20,30,40,50,60,80,100	1,899.00	SN15Q...
SM15A	1 + N	110V AC	6	1000mA	65	10	10,15,20,30,40,50,60,80,100	1,899.00	SN15R...

**240V AC Mining / Industrial Earth Leakage Protection Device, Single Phase with Overload Protection (Mini Rail & Front Mount)**

TYPE	POLES	VOLTAGE	kA	mA	WIDTH (mm)	STD PACK	RATING (A)	PRICE EA.	ORDER NO.
SM15A	1 + N	240V AC	6	50mA	65	10	10,15,20,30,40,50,60,80,100	1,899.00	SM15L...
SM15A	1 + N	240V AC	6	100mA	65	10	10,15,20,30,40,50,60,80,100	1,899.00	SM15M...
SM15A	1 + N	240V AC	6	250mA	65	10	10,15,20,30,40,50,60,80,100	1,899.00	SM15N...
SM15A	1 + N	240V AC	6	375mA	65	10	10,15,20,30,40,50,60,80,100	1,899.00	SM15P...
SM15A	1 + N	240V AC	6	500mA	65	10	10,15,20,30,40,50,60,80,100	1,899.00	SM15Q...
SM15A	1 + N	240V AC	6	1000mA	65	10	10,15,20,30,40,50,60,80,100	1,899.00	SM15R...

**110V AC Mining / Industrial Earth Leakage Protection Device, Three Phase with Overload Protection (Mini Rail & Front Mount)**

TYPE	POLES	VOLTAGE	kA	mA	WIDTH (mm)	STD PACK	RATING (A)	PRICE EA.	ORDER NO.
SM36A	3 + N	110V AC	6	30mA	117	5	10,15,20,30,40,50,60,80	2,499.00	SN35K...
SM36A	3 + N	110V AC	6	50mA	117	5	10,15,20,30,40,50,60,80	2,499.00	SN35L...
SM36A	3 + N	110V AC	6	100mA	117	5	10,15,20,30,40,50,60,80	2,499.00	SN35M...
SM36A	3 + N	110V AC	6	250mA	117	5	10,15,20,30,40,50,60,80	2,499.00	SN35N...
SM36A	3 + N	110V AC	6	375mA	117	5	10,15,20,30,40,50,60,80	2,499.00	SN35P...
SM36A	3 + N	110V AC	6	500mA	117	5	10,15,20,30,40,50,60,80	2,499.00	SN35Q...
SM36A	3 + N	110V AC	6	1000mA	117	5	10,15,20,30,40,50,60,80	2,499.00	SN35R...

**415V AC Mining / Industrial Earth Leakage Protection Device, Three Phase with Overload Protection (Mini Rail & Front Mount)**

TYPE	POLES	VOLTAGE	kA	mA	WIDTH (mm)	STD PACK	RATING (A)	PRICE EA.	ORDER NO.
SM36A	3 + N	415V AC	6	50mA	117	5	15,20,30,40,50,60,80	2,499.00	SM35L...
SM36A	3 + N	415V AC	6	100mA	117	5	15,20,30,40,50,60,80	2,499.00	SM35M...
SM36A	3 + N	415V AC	6	250mA	117	5	15,20,30,40,50,60,80	2,499.00	SM35N...
SM36A	3 + N	415V AC	6	375mA	117	5	15,20,30,40,50,60,80	2,499.00	SM35P...
SM36A	3 + N	415V AC	6	500mA	117	5	15,20,30,40,50,60,80	2,499.00	SM35Q...
SM36A	3 + N	415V AC	6	1000mA	117	5	15,20,30,40,50,60,80	2,499.00	SM35R...

\* Please contact CBI to determine the earth leakage configuration and availability.

Max Cable Size 50 mm<sup>2</sup> - SM.



## MCB ACCESSORIES

SAFETY BLANK FUCHS RAIL TO RAIL FUCHS + HEINEMANN ADAPTOR PLATE HANDLE LOCK

### Mini Rail

PRODUCT	DESCRIPTION	STD PACK	PRICE EA.	ORDER No.
QA, QF	Shroud - 2 x 13 mm / 1 x 26 mm*	10	50.00	3670093
QA, QF	Shroud - 4 x 13 mm / 2 x 26 mm*	10	84.00	3670095
QA, QF	Shroud - 6 x 13 mm / 3 x 26 mm*	10	104.00	3670097
QA, QF	Shroud - 8 x 13 mm / 4 x 26 mm*	10	115.00	3670099
QF High Rating	Shroud - 1 x 26 mm, Complete with MKII Surface Mounting Clip	10	52.00	3670002
QF High Rating	Shroud - 2 x 26 mm (Open / Knockout) Complete with MKII Surface Mounting Clip	10	87.00	3670004
QF High Rating	Shroud - 3 x 26 mm (Open / Knockout) Complete with MKII Surface Mounting Clip	10	108.00	3670008
QF High Rating	Shroud - 4 x 26 mm (Open / Knockout) Complete wrth MKII Surface Mounting Clip	10	115.00	3670006
QA, QF	Shroud - Sealing Screws	100	4.00	3670012
QA, QF	Shroud - Insert Nuts	100	2.00	2096000
QA, QF	Mini Rail - 13 mm Module, 96 Modules	10	4.00	SAMR096
Adaptor Plate	Heinemann Clip Tray to Samite	400	15.00	SAMR100
QA, QF	Insulating Clip-On / Terminal Cover	1	POR	2156995
QA	Safety Blank - 13 mm Module, Clips into Mini-Rail	100	11.00	SAEB000
SF, QF	Escutcheon blank - 26 mm Module, Clips into D/B Aperture	500	6.00	SFEB000
SF	Dummy - 26 mm Single Pole	50	23.00	SF1002601
QF High Rating	Surface Mounting Clips MKI - Price per 4-way strip (excl sealing screws and insert nuts)	40	7.00	SAAX000
SF, E-Frame	Surface Mounting Clips MKII - Price per pair (excl. sealing screws and insert nuts)	40	5.00	SFAX001
SAK	Contacting Paralleling Bars	10	12.00	3670011
Rail to Rail	Fuchs Clip Tray to Mini Rail Adaptor Plate	50	6.00	SAMR101
QAN	Clip-in Neutral Bar (Mini rail only)	50	63.00	SANB000
QF	Escutcheon Blank (6,5 mm Module) 12 x 6,5 mm Way Strip	10	21.00	2356208
QA, QF	Shroud Mounting Kit (Black)	10	25.00	3670145
QA, QF, QH	Handle Lock	1	30.00	QFAP001

### DIN Rail

PRODUCT	DESCRIPTION	STD PACK	PRICE EA.	ORDER No.
QFDIN	Shroud - 2 x 13 mm / 1 x 18 mm / 1 x 27 mm*	10	50.00	3670094
QFDIN	Shroud - 4 x 13 mm / 2x 18 mm / 2 x 27 mm*	10	84.00	3670096
QFDIN	Shroud - 6 x 13 mm / 4 x 18 mm / 3 x 27 mm*	10	104.00	3670098
QF DIN	Shroud - 8 x 13 mm / 5 x 18 mm / 4 x 27 mm*	10	115.00	3670100
QF DIN	Busbar - 18 mm Module, Single Phase 36 Modules	50	92.00	2121363
QF DIN	Top Busbar - 18 mm Module, Single Phase 19 Modules	50	POR	2121381
QF DIN	Busbar - 18 mm Module, Three Phase Insulated Metre Lengths (16 x 3-Phase)	1	875.00	3670121
QF DIN	Shroud - Mounting Kit (Grey)	10	18.00	3670146

### DIN and Mini Rail

PRODUCT	DESCRIPTION	STD PACK	PRICE EA.	ORDER No.
QA, QF	Busbar - 13 mm Module, Single Phase 54 Modules	50	84.00	SABBM54
QA, QF	Top Busbar - 13 mm Module, Single Phase 26 Modules	50	84.00	2121380
QF	Busbar 26 mm - Module, Single Phase 36 Modules	50	102.00	SABBM36
QA, QF	Insulating Busbar Cover - Single Phase	1	18.00	2176081
QA, QF	Busbar - 13 mm Module, Three Phase Insulated Metre Lengths (25 x 3-Phase)	1	875.00	3670010
QF	Busbar - 26 mm Module, Three Phase Insulated Metre Lengths (13 x 3-Phase)	1	870.00	3670009
QA, QF	Busbar Link	50	11.00	SABL000
SF	Extended Lug Terminal	50	13.00	3190166
SA, SF, SH	Handle Locking Mechanism (Heilock)	10	28.00	SAAP001

\*Complete with QA MK1 Surface Mounting Clip.



SAK



QAT-R-DM



ECU

## AUXILIARY PRODUCTS

### Electronic Time Switches

PRODUCT	DESCRIPTION	STD PACK	PRICE EA.	ORDER NO.
QAT-R-DM	Standard Electronic Time Switch with 24 Hour Reserve Dual Mount 39 mm	10	439.00	QATRDM

### Energy Control Unit (Electronic)

PRODUCT	DESCRIPTION	STD PACK	PRICE EA.	ORDER NO.
SA-ECU	5,10,15 20 A Units, switches 21 A resistive load @ 230V AC (5 kW)	10	439.00	SACU0..
	25,30,40,60 A Units switches 21 A resistive load @ 230V AC (5 kW)	5	439.00	SACU0..

### Domestic Contactor (4 Pole Bridged Unit)

PRODUCT	DESCRIPTION	STD PACK	PRICE EA.	ORDER NO.
SAK	Contactor 220 / 240 V AC - 4 Poles AC3 (Inductive Load) - Max 13A AC1 (Resistive Load) - Max 40A	5	874.00	SAKR001

### Plastic Pole Mounting Box

PRODUCT	DESCRIPTION	STD PACK	PRICE EA.	ORDER NO.
SPB1	Plastic Pole Mounting Box Complete with One Operating Slide (Excludes Mounting Bracket MCBs, will accept 1, 2, 3-Pole MCBs Type QF, SF and QH)	10	277.00	SPB1001
SPB1 Kit-B	Horizontal Mounting Bracket - Ferrous	10	33.00	3674000
SPB1 Kit-D	Vertical Mounting Bracket - Ferrous	10	41.00	3674001
SPB1 Kit-E	Vertical Mounting Bracket - Non-Ferrous	10	97.00	3670022
SPB1 Kit-F	Horizontal / Vertical Mounting Bracket - Ferrous	10	69.00	3674002
SPB1 Kit-G	Horizontal / Vertical Mounting Bracket - Non-Ferrous	10	187.00	3670024
SPB1 Kit-H	Strapping Bracket - Non-Ferrous	10	33.00	3670025
SPB1 Slide	Operating Slide with Hole Plug	10	23.00	2166100



NRBCON002



NRBCON003

## READY BOARDS

Ready Boards		
ORDER NO.	DESCRIPTION	PRICE EA.
Ready board NRBCON002	1 x QA 17C 63 A 2 x QA -1 (13) 20 A 3 x 16 A switched sockets 1 x 6 A Euro socket	620.00
Ready board NRBCON003	1 x QA 17C 63 A 2 x QA-1 (13) 20 A 1 x switched bulkhead 3 x 16 A switched sockets 1 x 6 A Euro socket	653.00

**NOTE:**

Other variations on request, including a CFL version Bulkhead



ARCHITRAVE BOARD



20- WAY DB BOARD

## DISTRIBUTION BOARDS

### Flush Mounted Distribution Boards

DESCRIPTION	STD PACK	PRICE EA.	ORDER NO.
12-Way Steel Distribution Board, complete with 1 Plastic Cover and 1 Steel Tray (Mini Rail)	1	181.00	DBBOX12SP
12-Way Steel Distribution Board, complete with 1 Steel Cover and 1 Steel Tray (Mini Rail)	1	181.00	3190796
20-Way White Plastic hinged dust cover	1	21.00	2856033
20-Way Steel Distribution Board, complete with 1 Plastic cover and 1 Steel tray (Mini Rail)	1	249.00	DBBOX20SP
20-Way Front Cover (including hinged dust cover)	1	52.00	3670107
20-Way Steel Distribution Board, complete with 1 Steel cover and 1 Steel tray (Mini Rail)	1	282.00	3190795

### Surface Mount Distribution Board

DESCRIPTION	STD PACK	PRICE EA.	ORDER NO.
13-Way Surface Mount Plastic Distribution Board (Mini Rail)	1	220.00	NDBCON001

### Architrave Boards

DESCRIPTION	STD PACK	PRICE EA.	ORDER NO.
40-Way (2 x 20-Way and Tray) <sup>1</sup>	1	1,104.00	DBBOX40
60-Way (3 x 20-Way and Tray) <sup>1</sup>	1	1,350.00	DBBOX60

<sup>1</sup>Complete with reversible door, lockable metal latch, metal hinges, earth and neutral bars, mounting kit and manufactured in 1.2 & 1.0 mm mild steel & powder coated white.

## Circuit Breaker Selection Guide

**QA-N-2(13)**  
(1 pole + neutral combination)

- Protects against overloads and short circuit faults up to 2,5 kilo Amps (kA)
- Typical usage
  - Main switch disconnecter
  - Isolate live and neutral

**QFL SPD**  
(Surge Protective Device)

- Protects appliances from overvoltage surges e.g. lightning

**QAT-R**  
(Electronic Time Switch)

- Control lights, pool pumps, geysers etc
- Compact size
- Clips on mini and DIN rails inside DBs
- Simple settings of time and programmes
- Setting intervals: 30 minutes
- Power Failure reserve of up to 24 hours (QAT-R)
- LCD display
- Programme can be bypassed
- Terminals can accommodate up to 10 mm<sup>2</sup> cable

**Ecolec EC320**  
(Electronic Kilo-Watt Hour Meter)  
Measures energy consumption

**QA17 – 2,5 kA EL**  
(Earth Leakage Unit)

- Protects life and property from electrical shock and fire hazards

**ECU**  
(Energy Control Unit)

- Used for load shedding by controlling non-essential loads (e.g. geyser, underfloor heating)  
Example: stove = controlling appliance  
geyser = controlled appliance
- Maximum controlled load (AC1=21A, MAX 4kW Geyser)  
*Automatically controls household energy loads during peak periods*

**2,5 kA MCB**  
(Miniature Circuit Breaker)  
(Also available 5 A – 63 A)

- Protects against overloads and short circuit faults up to 2,5 kiloAmps (kA)
- Typical usage
  - Lights
  - Plugs



## RAIL MOUNT METERS (CLASS 1)

Ecolec Rail Mount Meters									
TYPE	PHASE	VOLTAGE	FREQUENCY	RATING	ESCUTCHEON	NO. OF MODULES	STD PACK	PRICE EA.	ORDER NO.
EC320CM	1 + N	230	50	5(80) Amps	57 mm	2	6	609.00	EC320CM
EC320CD	1 + N	230	50	5(80) Amps	45 mm	2	6	609.00	EC320CD
EC330CM	3 + N	230	50	5(80) Amps	57 mm	4	3	1,720.00	EC330CM
EC330CD	3 + N	230	50	5(80) Amps	45 mm	4	3	1,720.00	EC330CD

<sup>1</sup> Standard discounts are not applicable. Contact CBI for discount structure

## ORDERING INFORMATION

Ordering Information				
PRODUCT DESCRIPTION	SINGLE PHASE DIRECT CONNECT	THREE PHASE FOUR WIRE	SHELL COLOUR	ESCUTCHEON HEIGHT
Mini-rail 230 V / 50 Hz	EC320CM	EC330CM	Black	57 mm
Din-rail 230 V / 50 Hz	EC320CD	EC330CD	Grey	45 mm
Qty per std pack	6	3	Shrink Wrap Carton	
Meter width	26 mm	52 mm	Carton 178 mm wide	
Meter height	107 mm	107 mm	Carton 68 mm high	
Meter depth	66 mm	66 mm	Carton 110 mm high	
Mass / std pack	1060 g	1150 g		

### Rail Mount Meter

The Rail Mount Meters are based on a meter module width of 13 mm with the single phase being 2-Modules and the three phase 4-Modules. The meter uses an integral current transformer as a measuring element and will count positive no matter from which direction the current is drawn. The display is a conventional cyclometer. The range includes Mini and DIN rail mountings, 230 V, 50 Hz.

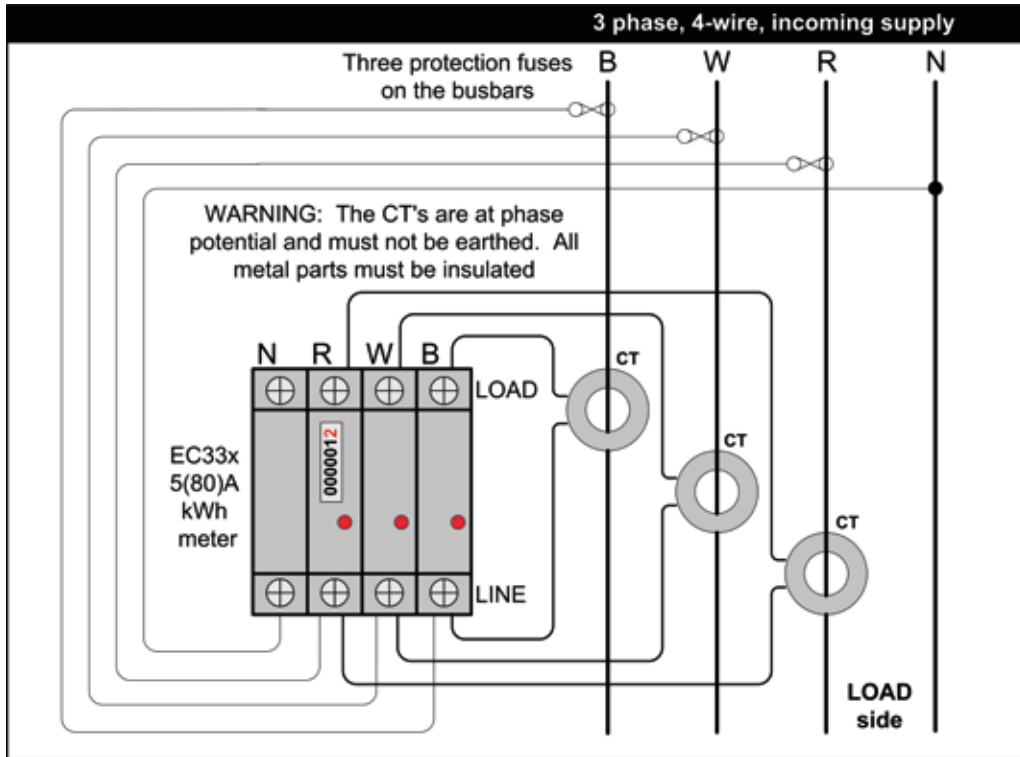
### Features

- IEC 61036 Class 1 electricity meters
- Single and three phase alternatives
- Fits all Mini and DIN rail Distribution Boards
- 7 digit indication of energy consumed to 1 / 10 kWh
- Dual colour lamp shows rate of consumption and/or confirms presence of incoming supply
- Supplied with anti-tamper terminal protection plugs
- Also available in 120 V / 60 Hz

### LED Indications

LED INDICATION	REASON DESCRIPTION
Pulses RED	Normal Consumption Pulses (1000 pulses per Kilo Watt Hour)
Pulses GREEN	Low Load Condition (Consumption is less than 30 Watts)
Solid GREEN	No Load (Meter is powered up)
Pulses ORANGE	Abnormal Load (Supply Voltage is between 265 - 460V or 60 - 90V AC)
Solid ORANGE	Unsafe Load Condition (The Current being drawn is greater than 125A or the Supply Voltage is greater than 460V AC)
Solid RED	Error Condition (The Meters Internal Built In Test has failed)
No LED	No LED Indication (The Supply Voltage is less than 160V AC)

## RAIL MOUNT METERS<sup>1</sup>



### EC 300 series kWh consumption when using external CTs

There is a requirement to measure loads in excess of the meters maximum current rating of 85 Amps. This can be done by using external CTs. The question of how to calculate the consumption when using external CTs, is one that repeatedly keeps being asked.

The actual kWh consumption per phase can be calculated by multiplying the CT ratio being used by the difference between the current and previous meter reading

Eg: For a 200/5 CT ratio the factor is 40.

Therefore the consumption per phase = 40 x kWh consumption.

For CT Selection, please refer to the NRS057 specification parts 1, 2 and 4.

**NOTE: Do not Earth CT's fitted above!**

### PRODUCT APPROVALS

- SANS IEC 61036 test report MTR/BB0630-SR
- 5(80) A
- SANS 1799

<sup>1</sup>Standard discounts are not applicable. Contact CBI for discount structure.



**ROTATING DISC METERS  
(SABS Approved)**

1 Phase 2 wire (20-80 A)

3 Phase 4 wire (5 A)

3 Phase 4 wire (40-100 A)

3 Phase 4 wire (80-160 A)

**Watt-Hour Meters<sup>3</sup>**

DESCRIPTION	STD PACK	PRICE EA.	ORDER NO.
1 Phase 2 Wire 20 - 80 A with encapsulated coils	1	375.00	BF36-20/80
1 Phase 2 Wire 20 - 80 A with encapsulated coils (calibrated <sup>2</sup> )	1	437.00	BF36-20/80-C
3 Phase 4 Wire 40 - 100 A (calibrated <sup>2</sup> )	1	1,946.00	MH36G-40-C
3 Phase 4 Wire 80 - 160 A (calibrated <sup>2</sup> )	1	2,049.00	MH36G-80-CER
3 Phase 4 Wire 5 A (calibrated <sup>2</sup> )	1	1,765.00	MH36-5A-C

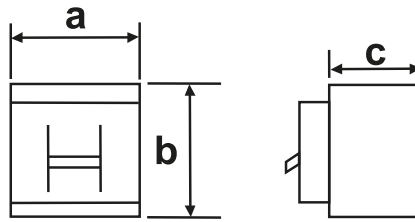
**PRODUCT APPROVAL**

**SABS 1607 / IEC 521**

<sup>1</sup>Standard discounts are not applicable. Contact CBI for discount structure.

<sup>2</sup>Certificates available on request.

	1P	3P
a	50 mm	105 mm
b	210 mm	210 mm
c	100 mm	100 mm



**JS / JSN RANGE (HYDRAULIC - MAGNETIC)**

**Distribution Circuit Breakers (Mixed Load)**

TYPE	POLES	TERMINALS	240 V	kA@ 415 V	525 V	STD PACK	RATING (A)	PRICE EA.	ORDER No.
<b>JS25<sup>2</sup></b> Complete with Mounting Hardware	1	G1	25	-	-	1	80,100	1,478.00	JSS0100
							125	1,536.00	JSS0125
							150	1,668.00	JSS0150
							200	1,723.00	JSS0200
							250	1,911.00	JSS0250
<b>J25S</b> Complete with 4 Phase Barriers, Mounting Hardware	3	G1	-	25	15	1	15,20,25,30,35,40,50,60	2,942.00	JSO00_ _ _
							70,80,90,100	2,979.00	JSO00_ _ _
							125	3,126.00	JSO0125
							150	3,314.00	JSO0150
							225	3,985.00	JSO0225
							250	4,682.00	JSO0250

**Switch Disconnectors<sup>1</sup>**

<b>J25SN</b> Complete with 4 Phase Barriers, Mounting Hardware	3	G1	-	25++	15++	1	100	1,920.00	JSN0100
							150	2,501.00	JSN0150
							200	3,253.00	JSN0200
							250	3,805.00	JSN0250

For DC Application (AS BELOW) Contact CBI

Poles	V DC per Pole	kA (Icu)	kA (Ics)	RATINGS (A)	UTILIZATION	MOUNTING	TERMINALS
1	80V DC	20	10	80-250	Cat A	Surface Mount	Lug Terminals
3	80V DC	20	10	300-750	Cat A	Surface Mount	Lug Terminals

**JS Accessories**

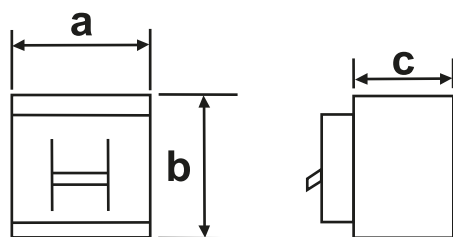
DESCRIPTION	FACTORY FITTED	STD PACK	VOLTAGE-AC	VOLTAGE-DC	PRICE EA.	ORDER No.	
<b>LH = Left Hand Side, RH = Right Hand Side</b>							
Shunt Trip	RH	Yes	1	110-250	759.00	FSA002	
	RH		1	380-600	759.00	FSA003	
	LH		1	110-250	759.00	FSA005	
	LH		1	380-600	759.00	FSA006	
	RH		1		24	759.00	FSA001
	LH		1		24	759.00	FSA004
Resettable Shunt Trip	LH	Yes	1	-	24	821.00	FSA007
	LH		1	110-250	821.00	FSA008	
	LH		1	380-600	821.00	FSA009	
Undervoltage Release	RH	Yes	1	220-250	961.00	FSAC220	
	RH		1	380-440	961.00	FSAC380	
Auxiliary Switch	RH	Yes	1		369.00	FSAG001	
	LH		1		369.00	FSAH002	
Trip Alarm Switch	RH	Yes	1		442.00	FSAE001	
	LH		1		442.00	FSAF001	
2 x Auxiliary Switch	RH	Yes	1		729.00	FSAQ001	
	LH		1		729.00	FSAR001	
1 x Auxiliary +1 x Trip Alarm Switch	RH	Yes	1		1,152.00	FSAU001	
	LH		1		1,152.00	FSAV001	
Cylindrical Lock	LH	Yes	1		668.00	FSAX006-013	
Handle Lock Plastic			1		72.00	FSAP001	
Daros Rotary Handle (Std.Shaft - 300 mm)			1		2,725.00	4470076	
(G4B) Stub Bar	} 3 Per Set line or load side		Set		171.00	FSAX001	
(G6) Rear Connecting Studs (250 A Max)		Set		909.00	FSAX003		
(G5) Tandem Box Terminal (250 A Max)		Set		564.00	FSAX002		
Phase Barriers (Set of 2)			Set		66.00	FSAX004	
Terminal Covers (Each) (Line or Load)			1		237.00	FSAX005	

<sup>1</sup>Withstand current must be backed up by Suitable Short Circuit Protection Device (SCPD). ++To IEC60947-3.

<sup>2</sup>Accessories cannot be fitted to a single pole JS breaker.  
Note: Contact CBI for Terminations

**NOTE:** Please fill in required AMP rating on dotted line of order number column.

a	150 mm
b	300 mm
c	105 mm



## LB / LBN RANGE (HYDRAULIC - MAGNETIC)

### Distribution Circuit Breakers (Mixed Load)

TYPE	POLES	TERMINALS	kA@415 V		STD PACK	RATING (A)	PRICE EA.	ORDER No.
			I <sub>cu</sub>	I <sub>cs</sub>				
<b>L20B</b>						100,125,150	4,913.00	L20B_ _ _
Complete with 4 Phase Barriers and Mounting Hardware	3	G1	20	20	1	175,200,225	6,027.00	L20B_ _ _
						250	6,372.00	L20B250
						300	7,573.00	L20B300
						350,400	8,970.00	L20B_ _ _
						450,500	12,930.00	L20B_ _ _
<b>L40B</b>						100,125,150	5,434.00	L40B_ _ _
Complete with 4 Phase Barriers and Mounting Hardware	3	G1	40	20	1	175,200,225	6,631.00	L40B_ _ _
						250	7,040.00	L40B250
						300	8,331.00	L40B300
						350,400	9,864.00	L40B_ _ _
						450,500	14,223.00	L40B_ _ _
						600	14,897.00	L40B600

### Switch Disconnectors<sup>1</sup>

TYPE	POLES	TERMINALS	Withstand kA@ 415 V	STD PACK	RATING (A)	PRICE EA.	ORDER No.
<b>L20BN</b>					300	6,554.00	L20BN0300
Complete with 4 Phase Barriers and Mounting Hardware	3	G1	20++	1	400	6,945.00	L20BN0400
					500	9,381.00	L20BN0500
					600	9,477.00	L20BN0600
<b>L40BN</b>					300	7,209.00	L40BN0300
Complete with 4 Phase Barriers and Mounting Hardware	3	G1	40++	1	400	7,640.00	L40BN0400
					500	10,318.00	L40BN0500
					600	10,421.00	L20BN0600

### LB Accessories

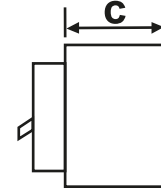
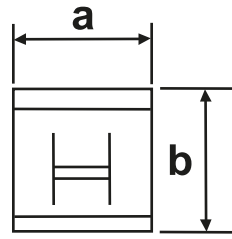
DESCRIPTION	FACTORY FITTED	STD PACK	VOLTAGE-AC	PRICE EA.	ORDER No.
Shunt Trip	Yes	1	110	1,638.00	LBSHT110
Shunt Trip			220 - 240	1,638.00	LBSHT220
Shunt Trip*			380 - 415	1,638.00	LBSHT380
Auxiliary Switch	Yes	1		729.00	LBAUX
Trip Alarm Switch	Yes	1		671.00	LBALARM
(G4B) Stub Busbar (500 - 600 A)	} 3 Per Set	Set		900.00	4120166
(G6) Rear Connecting Studs (up to 250 A Max)		Set		1,294.00	4670038
Daros Rotary Handle (Std.shaft - 300 mm)		1		3,148.00	12CBL3745
Phase Barriers (Set of 4)		Set		83.00	LBKIT

<sup>1</sup>Withstand current must be backed up by Suitable Short Circuit Protection Device (SCPD). ++SABS 152.

\*Contact CBI for availability.  
All Accessories are Factory Fitted only.

**NOTE:** Please fill in required AMP rating on dotted line of order number column.

a	210 mm
b	280 mm
c	105 mm



M35B

**MB / MBN RANGE (HYDRAULIC - MAGNETIC)**

**Distribution Circuit Breakers (Mixed Load)**

TYPE	POLES	TERMINALS	kA @415 V	STD PACK	RATING (A)	PRICE EA.	ORDER No.
M25B	3	G4B	25++	1	700,830	21,147.00	MB25_ _ _
M35B	3	G4B	35	1	700,830	21,704.00	MB35_ _ _
M50B	3	G4B	50++	1	700,830	22,149.00	MB50_ _ _

**Triple Pole Switch Disconnectors<sup>1</sup>**

M35BN	3	G4B	35++	1	830	18,365.00	MBN0830
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**MB Accessories**

DESCRIPTION	STD PACK	VOLTAGE-AC	PRICE EA.	ORDER No.
Shunt Trip with cut-out, both leads out	1	220	2,429.00	MBAA220
	1	380 / 415	2,429.00	MBAA_ _ _
	1	525	2,429.00	MBAA525
Auxiliary Switch	1		1,734.00	MBAG000
Trip Alarm Switch	1		1,783.00	MBAE000
Interphase Barriers (Set of 2)	Set		108.00	2176069

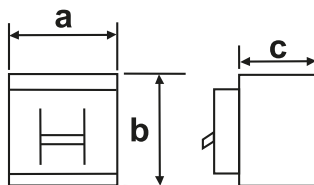
<sup>1</sup>Withstand current must be backed up by Suitable Short Circuit Protection Device (SCPD).  
++To IEC60947-2 / 3.

Note: All MB type circuit breakers and switch disconnectors come complete with 4 phase barriers and mounting hardware. All Accessories are Factory Fitted only.

NOTE: Please fill in required AMP rating on dotted line of order number column.

**Should you experience any “stock-outs”  
in your area, contact us directly on our  
new HOTLINE number 0860 BREAKR (273 257)**

	G15D/G25D/F15D/F25D		G35D/F35D		F65DV	F1000D
	16-125 A	150-250 A	16-100 A	125-250 A	16-250 A	15-250 A
a	90 mm	105 mm	90 mm	105 mm	105 mm	105 mm
b	130 mm	165 mm	130 mm	165 mm	165 mm	184 mm
c	68 mm	68 mm	68 mm	68 mm	86 mm	103 mm



G15D

F35D

### FD / FDN / GD / GDN RANGE - TRIPLE POLE (THERMAL - MAGNETIC)

#### Triple Pole Circuit Breakers (Mixed Load)

TYPE	POLES	TERMINALS	kA@		NO. OF INTERPHASE BARRIERS	RATING (A)	PRICE EA.	ORDER No.
			415 V	525 V				
G15D	3	G1	15	15	2	16,20,32,40,50,63	1,911.00	G15D_
		G1	15	15		80,100	2,183.00	G15D_
		G1	15	15		125	2,347.00	G15D_
F15D	3	G1	15	15	4	150,160	2,567.00	F15D_
		G1	15	15		175,200,225	4,281.00	F15D_
		G4B <sup>4</sup>	15	15		250	4,680.00	F15D_
G25D	3	G1	25	18	2	16,20,32,40,50,63	2,314.00	G25D_
		G1	25	18		80,100	2,385.00	G25D_
		G1	25	18		125	2,436.00	G25D_
F25D	3	G1	25	22	4	150,160	2,822.00	F25D_
		G1	25	22		175,200,225	4,622.00	F25D_
		G4B <sup>4</sup>	25	22		250	4,986.00	F25D_
G35D	3	G1	35	22	2	16,20,32,40,50,63	2,658.00	G35D_
		G1	35	22		80,100	3,144.00	G35D_
F35D	3	G1	35	30	4	150,160	3,328.00	F35D_
		G1	35	30		175,200,225	6,032.00	F35D_
		G4B <sup>4</sup>	35	30		250	6,490.00	F35D_
F65DV <sup>2</sup> Complete with Phase Barriers	3	G1	65	35	4	16-25,25-40,40-63	3,971.00	F65DV_
		G1	65	35		63-100	4,224.00	F65DV63-100
		G1	65	35		80-125	4,370.00	F65DV80-125
		G1	65	35		125-160	4,840.00	F65DV125-160
		G4B <sup>4</sup>	65	35		160-250	6,517.00	F65DV160-250

#### Switch Disconnectors<sup>1</sup>

TYPE	POLES	TERMINALS	Withstand kA@		NO. OF INTERPHASE BARRIERS	RATING (A)	PRICE EA.	ORDER No.
			415 V	525 V				
G35DN	3	G1	30++	18++		125	1,645.00	G35DN125
F35DN	3	G1	30++	22++		160	2,445.00	F35DN160
		G4B <sup>4</sup>	30++	22++		250	3,270.00	F35DN250

#### Triple Pole Circuit Breakers for DC Traction

TYPE	POLES	TERMINALS	kA@ 440 V DC	NO. OF INTERPHASE BARRIERS	RATING (A)	PRICE EA.	ORDER No.
G2	10	200	4,452.00	F10DDC250			

#### Triple Pole Circuit Breakers for 1000 V Applications<sup>3</sup>

TYPE	POLES	TERMINALS	kA@ 1000 V AC	NO. OF INTERPHASE BARRIERS	RATING (A)	PRICE EA.	ORDER No.
G1	10	40-50,50-63	4,927.00	F1000DV_			
G1	10	63-80	5,377.00	F1000DV080			
G1	10	80-100	6,519.00	F1000DV100			
G1	10	100-125	10,395.00	F1000DV125			
G1	10	125-160	12,728.00	F1000DV160			
G1	10	160-200	14,007.00	F1000DV200			
G1	10	200-250	15,440.00	F1000DV250			

<sup>1</sup>Withstand current must be backed up by Suitable Short Circuit Protection Device (SCPD).

<sup>2</sup>Thermal Adjustable.

<sup>3</sup>F1000D uses special accessories. (See page 36 for list of accessories).

<sup>4</sup> FD 250 A breakers come complete with G4B stub busbars (set of 6).

++To IEC60947-3.

NOTE: Please fill in required AMP rating on dotted line of order number column



F35DN



F65DV



F1000DV

**GD / FD ACCESSORIES**

**GD Accessories**

DESCRIPTION LH = Left Hand Side, RH = Right Hand Side	STD PACK	VOLTAGE (AC)	PRICE EA.	ORDER No. GD
Shunt Trip	RH	1 24-48	351.00	SHTA048-1SWRS
	RH	1 100-240	351.00	SHTA240-1SWRS
	RH	1 380-550	351.00	SHTA550-1SWRS
Undervoltage Release	RH	1 24 / 48	738.00	UVTNA048-1SWRS
	RH	1 100-110 / 120-130	738.00	UVTNA130-1SWRS
	RH	1 200-220 / 230-250	738.00	UVTNA250-1SWRS
	RH	1 380-415 / 440-480	738.00	UVTNA480-1SWRS
	RH	1 500-550 / 600	738.00	UVTNA600-1SWRS
Auxiliary Switch	LH	1	244.00	AX-1SWLS
Double Auxiliary Switch	LH	1	490.00	AX2-1SWL
Alarm Auxiliary Switch	LH	1	501.00	ALAX-1SWLS
Line and Load shrouds		1	205.00	TCL-1SW3W
Motor Operator 220V 50 Hz		1 100-240 (AC / DC)	9,830.00	MDS240-1SW
(G4B) Stub busbar (Qty 3)	Set		171.00	FB-1SW
Daros Rotary Handle (Std. shaft - 300 mm)		1	1,236.00	12MEC.1145
Handle Lockout		1	258.00	HLS-1SW
Interphase Barriers (Qty 1)		1	84.00	BAF-1SW

**FD Accessories**

DESCRIPTION LH = Left Hand Side, RH = Right Hand Side	STD PACK	VOLTAGE (AC)	PRICE EA.	ORDER No. FD
Shunt Trip	RH	1 24-48	578.00	SHTA048-2SWRS
	RH	1 100-240	578.00	SHTA240-2SWRS
	RH	1 380-550	578.00	SHTA550-2SWRS
Undervoltage Release	RH	1 24 / 48	948.00	UVTNA048-2SWRS
	RH	1 100-110 / 120-130	948.00	UVTNA130-2SWRS
	RH	1 200-220 / 230-250	948.00	UVTNA250-2SWRS
	RH	1 380-415 / 440-480	948.00	UVTNA480-2SWRS
	RH	1 500-550 / 600	948.00	UVTNA600-2SWRS
Auxiliary Switch	LH	1	263.00	AX-2SWLS
Double Auxiliary Switch	LH	1	530.00	AX2-2SWL
Alarm Auxiliary Switch	LH	1	613.00	ALAX-2SWLS
Line and Load shrouds		1	550.00	TCL-2SW3W
Motor Operator 220V 50 Hz		1 100-240 (AC / DC)	9,830.00	MDS240-2SW
(G4B) Stub busbar (Qty 3)	Set		171.00	FSAX001
Daros Rotary Handle (Std. shaft - 300 mm)		1	1,236.00	12MEC.1045
Handle Lockout		1	258.00	HLS-2SW
Interphase Barriers (Qty 1)		1	84.00	BAF-2SW

## F65DV ACCESSORIES

F65SDV Accessories					
DESCRIPTION LH = Left Hand Side, RH = Right Hand Side		STD PACK	VOLTAGE (AC)	PRICE EA.	ORDER No. F6SDV
Shunt Trip	RH	1	24-48	578.00	SHTA048-2GSWR
	RH	1	100-240	578.00	SHTA240-2GSWR
	RH	1	380-550	578.00	SHTA550-2GSWR
Undervoltage Release	RH	1	24 / 48	948.00	UVTSA048-2GSWRS
	RH	1	100-110 / 120-130	948.00	UVTSA130-2GSWR
	RH	1	200-220 / 230-250	948.00	UVTSA250-2GSWR
	RH	1	380-415 / 440-480	948.00	UVTSA480-2GSWR
	RH	1	500-550 / 600	948.00	UVTA600-2GSWR
Auxiliary Switch	LH	1		263.00	AX-2GSWLS
Double Auxiliary Switch	LH	1		530.00	AX2-2GSWLS
Line and Load shrouds		1		550.00	TCL-2GSW3
Motor Operator 220V 50 Hz		1	100-240 (AC / DC)	9,830.00	MD250GSW240
Daros Rotary Handle (Std. shaft - 300 mm)		1		1,236.00	12MEC.1245
Handle Lockout		1		258.00	HLS-2GSW
Interphase Barriers (Qty 1)		1		84.00	BAF-2GSW

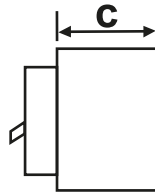
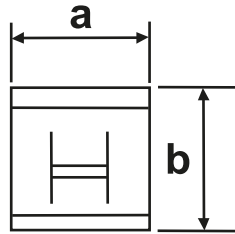
### THERMAL and MAGNETIC Adjustable Chart - FDV

TYPE	MAGNETIC <sup>4</sup>	THERMAL <sup>5</sup>
F65DV 16-25 A	-	16,20,25
F65DV 25-40 A	-	25,32,40
F65DV 40-63 A	-	40,50,63
F65DV 63-100 A	-	63,80,100
F65DV 125-160 A	4,6,8,10	125,160
F65DV 160-250 A	4,6,8,10	160,200,250

<sup>4</sup> Magnetics are adjustable in fixed steps as per adjustability chart

<sup>5</sup> Thermals are adjustable in fixed steps as per adjustability chart

	KD	K1000D
a	140 mm	140 mm
b	257 mm	275 mm
c	103 mm	120.5 mm



K25D



K35D



K50D

**KD, KDN RANGE (THERMAL - MAGNETIC), KDE RANGE (ELECTRONIC)**

**KD Circuit Breakers (Mixed Load)**

TYPE	POLES	TERMINALS	kA@			NO. OF INTERPHASE BARRIERS	RATING (A)	PRICE EA.	ORDER No.
			415 V	500 V	525 V				
K25D	3	G4B	25	22	-	4	250	6,113.00	K25D250
			25	22	-		300,350,400	7,324.00	K25D_ _ _
K35D	3	G4B	35	30	30	4	250	7,161.00	K35D250
			35	30	30		300,350,400	9,672.00	K35D_ _ _
			36	22	-		500,630	12,585.00	K35D_ _ _
K50D	3	G4B	50	40	35	4	500,630	13,973.00	K50D_ _ _

**KDE Electronic Circuit Breakers (Adjustable in Fixed Steps)**

TYPE	POLES	TERMINALS	kA@			NO. OF INTERPHASE BARRIERS	RATING (A)	PRICE EA.	ORDER No.
			415 V	500 V	525 V				
K35DE	3	G4B	35	30	30	4	200-400	11,725.00	K35DE400X
K50DE	3	G4B	50	40	35	4	300-630	18,348.00	K50DE630X
K65DE	3	G4B	65	50	50	4	200-400	12,447.00	K65DE400X
K70DE	3	G4B	70	50	-	4	300-630	20,557.00	K70DE630X

**Switch Disconnectors<sup>1</sup>**

TYPE	POLES	TERMINALS	WITHSTAND kA@			NO. OF INTERPHASE BARRIERS	RATING (A)	PRICE EA.	ORDER No.
			400 V	500 V	525 V				
K35DN	3	G4B	35++	22++	-	4	300	6,667.00	K35DN300X
			35++	22++	-		400	6,980.00	K35DN400X
			36++	22++	-		630	8,901.00	K35DN630X
K50DN	3	G4B	50++	40++	35++	4	630	12,062.00	K50DN630X

**Triple Pole Circuit Breakers for DC Traction**

TYPE	POLES	TERMINALS	kA@			NO. OF INTERPHASE BARRIERS	RATING (A)	PRICE EA.	ORDER No.
			440 V DC						
K15DDC	3	G4B	15			4	300	8,192.00	K15DDC300
			15				400	8,417.00	K15DDC400

**Triple Pole Circuit Breakers for 1000 V Applications<sup>2</sup>**

TYPE	POLES	TERMINALS	kA@			NO. OF INTERPHASE BARRIERS	RATING (A)	PRICE EA.	ORDER No.
			1000 V AC						
K1000D	3	G1	15			4	125-250	18,807.00	K1000DV250
			15				200-400	18,862.00	K1000DV400
			15				315-630	24,663.00	K1000DV630

<sup>1</sup>Backed up by Suitable Short Circuit Protection Device (SCPD).

<sup>2</sup>K1000D uses special accessories. Contact CBI for price and availability. (See page 36).

++To IEC60947-2 / 3.

Note: The new KD range is available from 250 A up to 630 A. Ampere ratings from 100 A to 225 A are available in the new FD range.

**NOTE:** Please fill in required AMP rating on dotted line of order number column.



K25DN



K35DN

## KD ACCESSORIES

KD Accessories					
DESCRIPTION LH = Left Hand Side, RH = Right Hand Side		STD PACK	VOLTAGE-AC	PRICE EA.	ORDER No.
Shunt Trip	RH	1	24-48 AC / DC	1,197.00	SHT48-4SWRS
	RH	1	100-450	712.00	SHT-4SWRS
	LH	1	100-450	712.00	SHT-4SWLS
	RH	1	380-550	712.00	SHT-A550-4SWRS
Undervoltage Release	LH/RH	1	110-120	1,281.00	UVTA120-4SWS
	LH/RH	1	220-240	1,281.00	UVTA240-4SWS
	LH/RH	1	380-415	1,281.00	UVTA415-4SWS
	LH/RH	1	500-550	1,281.00	UVTA550-4SWS
Auxiliary Switch	LH	1		463.00	AX-4SWLS
Trip Alarm Switch	LH	1		498.00	AL-4SWLS
Alarm Auxiliary Switch	LH	1		605.00	ALAX-4SWLS
(G6) Rear Connected Studs - 400 A (Line & Load - set of 6)		Set		1,151.00	ST-4SW3
(G6) Rear Connected Studs - 630 A (Line & Load - set of 6)		Set		1,863.00	ST-6SW3
Motor Operator		1	100-110	6,227.00	MDS-4SWA110
		1	200-220	6,227.00	MDS-4SWA220
Daros Rotary Handle (Std. shaft - 300 mm)		1		1,323.00	12MEC.0645
Mechanical Interlock		1		4,913.00	MI630
Interphase Barriers (Qty 1)		1		92.00	BAF-4SV
Handle Lockout		1		314.00	HLS-4SV
Cylindrical lock* (Same key)		1		581.00	4470113
Cylindrical lock* (Different key)		1		581.00	4470112
Line and Load Shroud ( Terminal Cover)		2		625.00	TCL-4SW3

### Example

DESCRIPTION	QTY	PRICE EA.	PRICE
K25D 300 A Circuit Breaker	2	7,324.00	14,648.00
KD Auxiliary Switch	2	463.00	926.00
KD Spring Charge Motor Operator	2	6,227.00	12,453.00
KD Mechanical Interlock and Baseplate	1	4,913.00	4,913.00
<b>TOTAL</b>			<b>32,940.00</b>

**Note:**

- For mechanically interlocked automatic change over circuit breaker assembly (Factory assembled), take the price of 2 x selected KD MCCBs complete with auxiliary switches + 2 x KD spring charge motor operators and 1 x mechanical interlock. See above example. The breakers are electrically interlocked via their auxiliary switches.

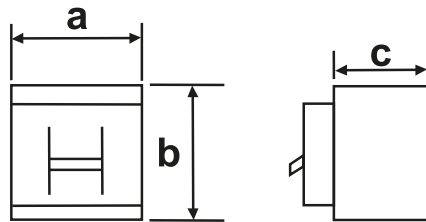
\* Contact CBI for availability and type.

These accessories do not fit the new K1000D breakers. Please contact CBI for price and availability.

## MOULDED CASE CIRCUIT BREAKER ACCESSORIES - 1000 V

F1000D & K1000D Accessories						
DESCRIPTION		FACTORY FITTED	STD PACK	VOLTAGE	PRICE EA.	ORDER No.
Shunt Trip (Fits both F1000D & K1000D)	LH	Yes	1	24V AC / DC	1,126.00	FD1000-SHTA24
	LH	Yes	1	110-130 V AC / DC	1,126.00	FD1000-SHTA110
	LH	Yes	1	208-250 V AC / DC	1,126.00	FD1000-SHTA220
	LH	Yes	1	525 V AC / DC	1,126.00	FD1000-SHTA525
Under Voltage Release (Fits both F1000D & K1000D)	LH	Yes	1	110-130V AC	1,304.00	FD1000-UVTA110
	LH	Yes	1	208-240V AC	1,304.00	FD1000-UVTA220
	LH	Yes	1	525 V AC / DC	1,304.00	FD1000-UVTA525
Auxiliary Switch 1N/O (fits both F1000D & K1000D)	RH	Yes	1		263.00	FD1000-AX
Rear Connecting Studs - F1000D 250 A (Set of 3)		Yes	Set		1,370.00	FD1000-RCS
Rear Connecting Studs - K1000D 630 A (Set of 3)		Yes	Set		1,934.00	KD1000-RCS
Daros Handle - F1000D (Std. shaft - 300 mm)			1		830.00	FD1000-DH
Daros Handle - K1000D (Std. shaft - 300 mm)			1		1,592.00	KD1000-DH

	LDE
a	210 mm
b	275 mm
c	103 mm



L50DE

L50DN

**LDE, LDN RANGE**

**Triple Pole Circuit Breakers (Mixed Load) Adjustable in Fixed Steps**

Standard Ratings 400-800 A

TYPE	POLES	TERMINALS	kA@			NO. OF	RATING (A)	PRICE EA.	ORDER No.
			415 V	500 V	525 V	INTERPHASE BARRIERS			
L35DE	3	G4B	36++	22++	-	2	400-800	19,756.00	L35DE800X
L50DE	3	G4B	50++	40++	25++	2	400-800	22,437.00	L50DE800X
L70DE	3	G4B	70++	50++	-	2	400-800	24,680.00	L70DE800X

**Triple Pole Switch Disconnectors<sup>1</sup>**

Standard Ratings 800 A

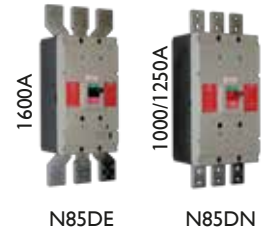
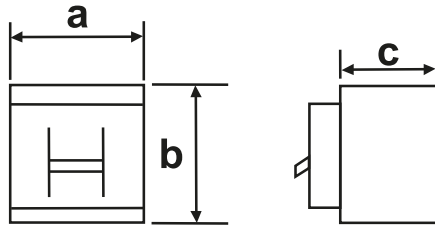
TYPE	POLES	TERMINALS	WITHSTAND kA@			NO. OF	RATING (A)	PRICE EA.	ORDER No.
			400 V	500 V	525 V	INTERPHASE BARRIERS			
L50DN	3	G4B	50++	40++	25++	2	800	14,598.00	L50DN800X

<sup>1</sup>Backed up by Suitable Short Circuit Protection Device (SCPD).  
 ++To IEC60947-2 / 3.

**LDE AND LDN ACCESSORIES**

DESCRIPTION		STD PACK	VOLTAGE-AC	PRICE EA.	ORDER No.
LH = Left Hand Side, RH = Right Hand Side					
Shunt Trip		1	24-48 AC / DC	1,197.00	SHT48-4SWRS
		1	100-450	712.00	SHT-4SWRS
		1	380-550	712.00	SHTA550-4SWRS
Undervoltage Release		1	110-120	1,281.00	UVTA120-4SWS
	RH	1	220-240	1,281.00	UVTA240-4SWS
	RH	1	380-415	1,281.00	UVTA415-4SWS
	LH	1	500-550	1,281.00	UVTA550-4SWS
Auxiliary Switch (1N/0 + 1N/C)	RH	1		463.00	AX-4SWLS
Trip Alarm Switch	LH/RH	1		498.00	AL-4SWLS
Alarm Auxiliary Switch	LH/RH	1		605.00	ALAX-4SWLS
(G6) Rear Connected Studs - 800 A (Line & Load - set of 6)	LH/RH	Set		2,345.00	ST-8SW3
Spring Charge Unit MDS Type 110 V AC	LH/RH	1	100-110	6,227.00	MDS-8SWA110
Spring Charge Unit MDS Type 220 V AC	LH	1	200-220	6,227.00	MDS-8SWA220
Daros Rotary Handle (Std. shaft - 300 mm)	LH	1		1,719.00	12MEC.0845
Mechanical Interlock	LH	1		4,913.00	MI630
Key Interlock - Cylindrical type		1		581.00	4470113
Phase barriers (Qty 1)		1		103.00	BAF-8SW

a	210 mm
b	406 mm
c	140 mm



## NDE AND NDN RANGE

### Triple Pole Circuit Breakers (Mixed Load) Adjustable

Standard Ratings 500 - 1000 A, 600 - 1250 A, 800 - 1600 A

TYPE	POLES	TERMINALS	kA@		NO. OF INTERPHASE BARRIERS	RATING (A)	PRICE EA.	ORDER No.
			415 V	500 V				
N85DE	3	G4B	85++	65++	2	500-1000	25,272.00	N85DE1000X
					2	600-1250	30,186.00	N85DE1250X
					2	800-1600	43,627.00	N85DE1600X

### Triple Pole Switch Disconnecter<sup>1</sup>

Standard Ratings: 1000,1250 A

TYPE	POLES	TERMINALS	WITHSTAND kA@		NO. OF INTERPHASE BARRIERS	RATING (A)	PRICE EA.	ORDER No.
			415 V	500 V				
N85DN	3	G4B	85++	65++	2	1000	21,450.00	N85DN1000X
					2	1250	27,342.00	N85DN1250X

## NDE AND NDN ACCESSORIES

### NDE and NDN Accessories

DESCRIPTION LH = Left Hand Side, RH = Right Hand Side	FACTORY FITTED	STD PACK	VOLTAGE-AC	PRICE EA.	ORDER No.
Shunt Trip	RH	1	100-120	1,801.00	SHTA120-10SWRS
	RH	1	200-240	1,801.00	SHTA240-10SWRS
	RH	1	380-450	1,801.00	SHTA450-10SWRS
	RH	1	500-550	1,801.00	SHTA550-10SWRS
Under Voltage Release	RH	1	100-120	1,888.00	UVTNA130-10SWRS
	RH	1	200-240	1,888.00	UVTNA240-10SWRS
	RH	1	380-450	1,888.00	UVTNA450-10SWRS
	RH	1	500-550	1,888.00	UVTNA550-10SWRS
Auxiliary Switch (1N/0 + 1N/C)	LH	1	-	643.00	AX-10SWLS
Alarm + Auxiliary Switch Combined	LH	1	-	1,064.00	ALAX-10SWLS
Alarm Switch (1N/0 + 1N/C)	LH	1	-	643.00	AL-10SWLS
Mechanical Interlock	Yes	1	-	4,913.00	MI1000
Spring Charge Unit MDS Type	Yes	1	100-110	32,295.00	MD-10SWA110
	Yes	1	200-220	32,295.00	MD-10SWA220
Key interlock - Cylindrical type	Yes	1	-	581.00	4470113
Daros Handle Mechanism 12 MEC 0945 (Std shaft - 300 mm)		1	-	2,209.00	12MEC.0945
Phase barriers (Qty 1)		1		103.00	BAF-10SWV

Note: For mechanically interlocked automatic change over circuit breaker assembly (Factory assembled), take the price of 2 x selected NDE MCCBs c/w Aux Switches

+2 x NDE Spring Charge Operators and 1 x mechanical interlock. The breakers are electrically interlocked via their auxiliary switches. For additional auxiliary switches please specify.

<sup>1</sup>Backed up by Suitable Short Circuit Protection Device (SCPD).

++ To IEC60947-2 / 3

## JSDC - SPECIAL TRACTION DC BREAKER<sup>3</sup>

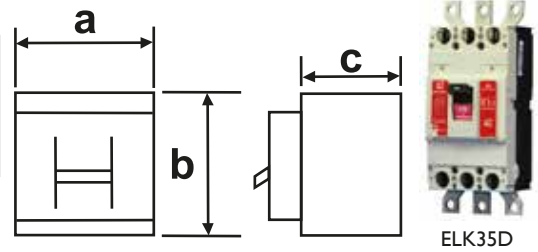
### Triple Pole Circuit Breakers For DC

TYPE	POLES	TERMINALS	kA@ 220 V DC	NO. OF INTERPHASE BARRIERS	RATING (A)	PRICE EA.	ORDER No.
J10SDC	2	G4B	10++	4	250	4,534.00	FTO250

Note: ++To IEC60947-2/3.

<sup>3</sup> For other ratings, please contact CBI for prices and availability.

	EL3G 3P	EL3F 3P	EL4G 4P	EL4F 4P	ELK	
	16-100 A	125-250 A	16-100 A	125-225 A	3P	4P
a	90 mm	105 mm	120 mm	140 mm	a	140 mm
b	130 mm	165 mm	130 mm	165 mm	b	257 mm
c	68 mm	68 mm	68 mm	68 mm	c	103 mm



**ELFD / ELKD RANGE (THERMAL - MAGNETIC, ELECTRONIC)**

**Integral Earth Leakage Circuit Breakers (Mixed Load) not for 4-Wire Systems**

TYPE	POLES		TERMINALS	kA@			SENSITIVITY mA	NO. OF INTERPHASE BARRIERS	RATING (A)	PRICE EA.	ORDER No.
	CB	E/L		380 V	400 V	525 V					
EL3G25D	3	3	G1	25	25	15	30,175,250 <sup>1</sup>	2	16,20,32,40,50,63	5,154.00	ELG25D3_ _ _
									80,100	5,449.00	
EL3F25D	3	3	G1	25	25	15	30,250,375 <sup>1</sup>	4	125,150,175	6,783.00	ELF25D3_ _ _
									200,225,250	7,958.00	
EL3K35D	3	3	G4B	35	35	25	100,300,500 <sup>2</sup>	4	250	10,602.00	ELK35D3_ _ _
									300	14,558.00	
									400	15,647.00	
									630	19,238.00	

CB = Circuit Breaker Poles.  
E/L = Earth Leakage Poles.

<sup>1</sup>Sensitivity: Adjustable (instantaneous tripping time). Other units available on request. (contact CBI for availability).

<sup>2</sup>Sensitivity: Adjustable mA and time delay setting (0.45, 1.0 2.0 s).

<sup>3</sup>Sensitivity: 30 mA fixed rating (instantaneous tripping time).

**NOTES:**

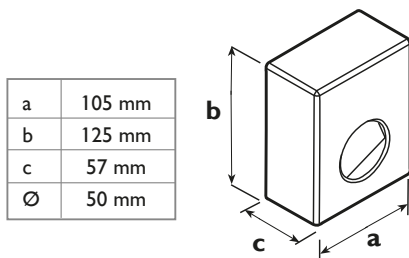
\* For "EL3G/EL3F/EL3K" Accessories, refer to FD and KD accessories (only the left hand cavity is available for fitting of accessories).

\* Contact CBI for availability (Non Stock items).

**NOTE:** Please fill in required AMP rating on dotted line of order number column.

**TECHNICAL:**

3 Phase EL's without Neutral are not suitable for all 4 wire systems.



## EARTH LEAKAGE RELAYS EL305 / 306

Earth Leakage Relays EL305 <sup>2</sup>							
TYPE	SUFFIX	STANDARD VOLTAGE	SENSITIVITY mA	STD PACK	REMOTE CORE IF REQUIRED (mm)	PRICE EA.	ORDER No.
<b>EL305</b>	A	110,220,380,525	250	1	70,105	1,930.00	QC5A00_
Complete with ClipTray	AA	110,220,380,525	125	1	Not Available	2,304.00	QC5AA0_
	B	110,220,380,525	500	1	70,105,152,190	1,930.00	QC5B00_
	J	525 <sup>1</sup>	1000	1	70,105,152,190	2,340.00	QC5J00_
	K	525 <sup>1</sup>	5000	1	70,105,152,190	2,340.00	QC5K00_
	L	525 <sup>1</sup>	2000	1	70,105,152,190	2,340.00	QC5L00_
	Y	110,220,380,525	30	1	Not Available	2,636.00	QC5Y00_
	Z	220,380,525	50	1	Not Available	2,636.00	QC5Z00_

Inverse Definite Minimum Time (IDMT) Earth Leakage Relay EL306 <sup>2</sup>							
TYPE	SUFFIX	STANDARD VOLTAGE	SENSITIVITY mA	STD PACK	REMOTE CORE IF REQUIRED (mm)	PRICE EA.	ORDER No.
<b>EL306</b>	C	110-525	500	1	70,105	2,317.00	QC06C00_
Complete with Clip-tray	D	110-525	1000	1	70,105,152	2,450.00	QC06D00_
	E	110-525	2000	1	70,105,152,190	2,707.00	QC06E00_
	F	110-525	375	1	70,105	2,317.00	QC06F00_

Remote Cores for EL305 / EL306 Earth Leakage Relays *1													
TYPE	INTERNAL DIAMETER	A	B	J	L	K	F	C	D	E	H	PRICE EA.	ORDER No.
<b>RC3</b>	70 mm	•	•	•	•	•	•	•	•	•	•	2,636.00	TBA
<b>RC4</b>	105 mm	•	•	•	•	•	•	•	•	•	•	2,707.00	TBA
<b>RC6</b>	152 mm	•	•	•	•	•	•	•	•	•	•	3,071.00	TBA
<b>RC8</b>	190 mm	•	•	•	•	•	•	•	•	•	•	4,425.00	TBA
<b>Remote Test Button</b>												239.00	TBA

\*1 Note: Remote Core and Earth Leakage Relay must be a matched pair (Factory Calibrated).

## HOSPITAL MONITOR

Hospital Earth Leakage Monitor							
TYPE	POLES	VOLTAGE	kA	mA	STD PACK	PRICE EA.	ORDER No.
<b>EB225H</b> (Early Bird)	1 + N	230 V	-	1	1	7,922.00	EB99900

## PORTABLE EARTH LEAKAGE UNITS

Portable Earth Leakage Units AC 20 A 50 Hz, 2.5 kA @ 230 V, 30 mA SABS 767-2				
TYPE		STD PACK	PRICE EA.	ORDER No.
<b>ELP15</b>	Fitted with 3-Standard 15 A round pin socket outlets & 20A Overload Protection	1	2,690.00	LP36K15

<sup>1</sup> Other non-standard voltages available on request.

<sup>2</sup> If the sum of the conductor's outside diameter is greater than 50 mm, a remote core must be purchased with the EL305 / 6.

**NOTE:** Please fill in required VOLT rating on dotted line of order number column.



NF125-SWA

NF250-SWA

**WSS - CIRCUIT BREAKERS / SWITCH DISCONNECTERS**

**Circuit Breakers World Super Series SWA / SGW**

Standard Ratings 16, 20, 25, 32, 40, 50, 63, 80, 100, 125, 150, 160, 175, 200, 225, 250 A

TYPE	POLES	TERMINALS	kA@			NO. OF INTERPHASE BARRIERS	RATING (A)	PRICE EA.	ORDER No.
			400 V	500 V	525 V				
NF125-SWA <sup>2</sup>	3	G1	30	18	18	2	16,20,32,40,50,63	2,392.00	NF125SW_ _ _
		G1	30	18	18		80,100,125	2,764.00	NF125SW_ _ _
NF125-SGW RT*	3	G1	36	30	22	4	16-25,25-40,40-63	2,388.00	NF125SW_ _ _
		G1	36	30	22		63-100	2,765.00	NF125SW63-100
		G1	36	30	22		80-125	3,255.00	NF125SW80-125
NF160-SWA <sup>2</sup>	3	G1	30	22	22	4	125	3,534.00	NF160SW125
		G1	30	22	22		150,160	4,049.00	NF160SW_ _ _
NF160-SGW RT*	3	G1	36	30	22	4	125-160	4,049.00	NF160SGW125-160
NF250-SWA <sup>2</sup>	3	G1	30	22	22	4	125,150,175,200,225	4,855.00	NF250SW_ _ _
		G1	30	22	22		250	5,376.00	NF250SW250
NF250-SGW RT*	3	G1	36	30	22	4	125-160	4,855.00	NF250SGW125-160
		G1	36	30	22		160-250	5,376.00	NF250SGW160-250

**Circuit Breakers World Super Series HWA / HGW**

Standard Ratings 10, 16, 20, 25, 32, 40, 50, 63, 80, 100, 125, 150, 160, 175, 200, 225, 250 A

TYPE	POLES	TERMINALS	kA@			NO. OF INTERPHASE BARRIERS	RATING (A)	PRICE EA.	ORDER No.
			400 V	500 V	525 V				
NF63-HWA	3	G1	10	7.5	-	2	10,16,20,,32,50,63	1,566.00	NF63HW_ _ _
NF125-HWA	3	G2	50	35	22	2	16,20,32,40,50,63,80,100	3,849.00	NF125HW_ _ _
NF125-HGW RT*	3	G1	75	50	35	4	16-25,25-40,40-63,63-100,80-125	3,849.00	NF125HW_ _ _
NF160-HWA	3	G1	50	35	35	4	125	4,602.00	NF160HW125
		G1	50	35	35		150,160	5,172.00	NF160HW_ _ _
NF160-HGW RT*	3	G1	75	50	35	4	125-160	5,172.00	NF160HW125-160
NF250-HWA	3	G1	50	35	35	4	125,150,175,200,225	5,896.00	NF250HW_ _ _
		G1	50	35	35		250	6,649.00	NF250HW250
NF250-HGW RT*	3	G1	75	50	35	4	125-160	5,896.00	NF250HW125-160
		G1	75	50	35		160-250	6,649.00	NF250HW160-250

**Circuit Breakers CWA Compact Economy Class**

Standard Ratings 63, 80, 100, 125, 150, 175, 200, 225, 250 A

TYPE	POLES	TERMINALS	kA@			NO. OF INTERPHASE BARRIERS	RATING (A)	PRICE EA.	ORDER No.
			400 V	500 V	525 V				
NF125-CWA	3	G1	10	10	-	2	63,80,100	1,731.00	NF125CW_ _ _
NF250-CWA	3	G1	18	14	-	4	125,150	2,727.00	NF250CW_ _ _
		G1	18	14	-		175,200,225	4,223.00	NF250CW_ _ _
		G1	18	14	-		250	4,661.00	NF250CW250

**Circuit Breakers DC Locomotive Protection (Orange Handle)**

TYPE	POLES	TERMINALS	kA@ 440 V DC	NO. OF INTERPHASE BARRIERS	RATING (A)	PRICE EA.	ORDER No.
	3	G1	10	4	175,200,225,250	4,753.00	NF250CW_ _ _

**On Load Switch Disconnectors<sup>1</sup> (Red Handle)**

Standard Ratings 125, 150, 250 A

TYPE	POLES	TERMINALS	ICW kA	SEC.	RATING (A)	PRICE EA.	ORDER No.
DSN125-SWA	3	G1	2	1	125	1,563.00	DSN125SW125
DSN125-SGW	3	G1	2	1	125	2,372.00	DSN125SGW125
DSN250-CWA	3	G1	4	1	150	2,155.00	DSN250CW150
		G1	4	1	250	3,581.00	DSN250CW250
DSN250-SWA	3	G1	4	1	250	3,754.00	DSN250SW250
DSN250-SGW	3	G1	4	1	250	3,754.00	DSN250SGW250

\*Thermal Adjustable.

<sup>1</sup>Backed up by Suitable Short Circuit Protection Device (SCPD).

<sup>2</sup>These breakers can be used in DC applications.

Contact CBI for more information.



NV125-SWA

NV250-SWA

**WSS - EARTH LEAKAGE CIRCUIT BREAKERS**
**Earth Leakage Circuit Breakers**

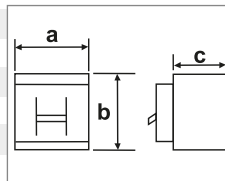
TYPE	POLES	TERMINALS	kA@				SENSITIVITY mA SELECTABLE	TIME DELAY	NO. OF INTERPHASE BARRIERS	RATING (A)	PRICE EA.	ORDER No.	
			380 V	415 V	480 V	525 V 550 V							
NV63-HWA	3	G1	10	10	10	7.5	7.5	30,100,500	Inst	2	16,20,32,40,50,63	3,449.00	NV63HW_
NV125-SWA	3	G1	25	15	15	18	10	30,175,250	Inst	2	16,20,32,40,50,63	4,642.00	NV125SW_
		G1	25	15	15	18	10	30,175,250	Inst	2	80,100	4,925.00	NV125SW_
NV125-HWA*	3	G1	50	30	30	22	18	30,175,250	Inst	2	16,20,32,40,50,63,80,100	9,132.00	NV125HW_
NV250-SWA	3	G1	25	15	15	18	10	30,250,375	Inst	4	125,150,175	7,073.00	NV250SW_
		G1	25	15	15	18	10	30,250,375	Inst	4	200,225,250	7,947.00	NV250SW_
NV250-SWA	3	G1	25	15	15	18	10	250,375,500	0.45,1,2	4	125,150,175	7,174.00	NV250SW_
		G1	25	15	15	18	10	250,375,500	0.45,1,2	4	200,225,250	7,946.00	NV250SW_
NV250-HWA*	3	G1	50	30	30	22	18	250,375,500	0.45,1,2	4	125,150,175,200,225	17,134.00	NV250HW_

Note: Remote tripping not available on NV63 Series.

\*Contact CBI for availability

**WSS - Dimensions**

DESCRIPTION	DIMENSIONS (mm)		
	a	b	c
NF63 & NV63 (SWA / HWA)	75	130	68
NF125 & NV125 (CWA / SWA / HWA)	90	130	68
DSN125 (CWA / SWA)	90	130	68
NF160 / 250 & NV250 (CWA / SWA / HWA)	105	165	68
DSN250 (CWA / SWA)	105	165	68
NF125 / 160 / 250 (SGW/HGW)	105	165	86


**THERMAL and MAGNETIC Adjustable Chart - HGW/SGW**

TYPE	MAGNETIC <sup>1</sup>	THERMAL <sup>2</sup>
NF 125 HGW / SGW 16-25 A	-	16,20,25
NF 125 HGW / SGW 25-40 A	-	25,32,40
NF 125 HGW / SGW 40-63 A	-	40,50,63
NF 125 HGW / SGW 63-100 A	-	63,80,100
NF 125 HGW / SGW 80-125 A	4,6,8,10	80,100,125
NF 160 HGW / SGW 125-160 A	4,6,8,10	125,160
NF 250 HGW / SGW 160-250 A	4,6,8,10	160,200,250

<sup>1</sup> Magnetics are adjustable in fixed steps as per adjustability chart.

<sup>2</sup> Thermals are adjustable in fixed steps as per adjustability chart.

**NOTE:** Please fill in required AMP rating on dotted line of order number column.



**WSS - ACCESSORIES**

WSS - Accessories						
TYPE		VOLTAGE RANGE	STD PACK	PRICE EA.	ORDER No.	
<b>Undervoltage Release</b>						
<b>NF63 &amp; NV63 (SWA / HWA)</b>	LH	24 / 48V AC	1	582.00	UVTNA048-05SWLS	
	LH	100-110 / 120-130V AC	1	582.00	UVTNA130-05SWLS	
	LH	380-415 / 440-480V AC	1	582.00	UVTNA480-05SWLS	
	LH	500-550 / 600V AC	1	582.00	UVTNA600-05SWLS	
<b>NF125 &amp; NV125 (CWA / SWA / HWA)</b>	LH	24 / 48V AC	1	738.00	UVTNA048-1SWLS	
	NF125(CWA / SWA / HWA)	LH	100-110 / 120-130V AC	1	738.00	UVTNA130-1SWLS
	(RHS FITTED)	LH	200-220 / 230-250V AC	1	738.00	UVTNA250-1SWLS
	NV125 (CWA / SWA / HWA)	LH	380-415 / 440-480V AC	1	738.00	UVTNA480-1SWLS
	(LHS FITTED)	LH	500-550 / 600V AC	1	738.00	UVTNA600-1SWLS
<b>NF160 / 250 (CWA / SWA / HWA)</b>	RH	24 / 48V AC	1	948.00	UVTNA048-2SWRS	
	RH	100-110 / 120-130V AC	1	948.00	UVTNA130-2SWRS	
	RH	200-220 / 230-250V AC	1	948.00	UVTNA250-2SWRS	
	RH	380-415 / 440-480V AC	1	948.00	UVTNA480-2SWRS	
	RH	500-550 / 600V AC	1	948.00	UVTNA600-2SWRS	
<b>NV250 (SWA / HWA)</b>	LH	24 / 48V AC	1	948.00	UVTNA048-2SWLS	
	LH	100-110 / 120-130V AC	1	948.00	UVTNA130-2SWLS	
	LH	200-220 / 230-250V AC	1	948.00	UVTNA250-2SWLS	
	LH	380-415 / 440-480V AC	1	948.00	UVTNA480-2SWLS	
	LH	500-550 / 600V AC	1	948.00	UVTNA600-2SWLS	
<b>NF125 / 160 / 250 (SGW / HGW)</b>	RH	24 / 48V AC	1	948.00	UVTSA048-2GSWRS	
	RH	100-110 / 120-130V AC	1	948.00	UVTSA130-2GSWRS	
	RH	200-220 / 230-250V AC	1	948.00	UVTSA250-2GSWRS	
	RH	380-415 / 440-480V AC	1	948.00	UVTSA480-2GSWRS	
	RH	500-550 / 600V AC	1	948.00	UVTSA600-2GSWRS	
<b>Shunt Trip<sup>1</sup></b>						
<b>NF63 (SWA / HWA)</b>	RH	24-48V AC	1	346.00	SHTA048-05SWRS	
	NV125 = LHS	RH	100-240V AC	1	346.00	SHTA240-05SWRS
	RH	380-550V AC	1	346.00	SHTA550-05SWRS	
<b>NF125 (CWA / SWA / HWA)</b>	RH	24-48V AC	1	351.00	SHTA048-1SWRS	
	NV125 = LHS	RH	100-240V AC	1	351.00	SHTA240-1SWRS
	RH	380-550V AC	1	351.00	SHTA550-1SWRS	
<b>NF160 / 250 (CWA / SWA / HWA)</b>	RH	24-48V AC	1	578.00	SHTA048-2SWRS	
	RH	100-240V AC	1	578.00	SHTA240-2SWRS	
	RH	380-550V AC	1	578.00	SHTA550-2SWRS	
<b>NF125 / 160 / 250 (SGW/HGW)</b>	RH	24-48V AC	1	578.00	SHTA048-2GSWRS	
	RH	100-240V AC	1	578.00	SHTA240-2GSWRS	
	RH	380-550V AC	1	578.00	SHTA550-2GSWRS	
<b>Trip Alarm</b>						
<b>NF63 (SWA / HWA)</b>	LH		1	239.00	AL-05SWLS	
	RH		1	239.00	AL-05SWRS	
<b>Auxiliary Switch</b>						
<b>NF63 (SWA / HWA)</b>	LH		1	237.00	AX-05SWLS	
	RH		1	237.00	AX-05SWRS	
<b>NF125 (CWA / SWA / HWA)</b>	LH		1	244.00	AX-1SWLS	
	RH		1	244.00	AX-1SWRS	
<b>NF160 / 250 (CWA / SWA / HWA)</b>	LH		1	263.00	AX-2SWLS	
	RH		1	263.00	AX-2SWRS	
<b>NF125 / 160 / 250 (SGW / HGW)</b>	LH		1	263.00	AX-2GSWLS	

<sup>1</sup>For shunt trip possibility on NV breakers, contact CBI.

**WSS - ACCESSORIES**

WSS - Accessories				
TYPE	VOLTAGE RANGE	STD PACK	PRICE EA.	ORDER No.
<b>Alarm/Auxiliary Switch</b>				
<b>NF63 (SWA / HWA)</b>	LH	1	510.00	ALAX-05SWLS
	RH	1	510.00	ALAX-05SWRS
<b>NF125 &amp; NV125 (CWA / SWA / HWA)</b>	LH	1	501.00	ALAX-1SWLS
<b>NF160 / 250 &amp; NV250 (CWA / SWA / HWA)</b>	LH	1	613.00	ALAX-2SWLS
<b>NF125 / 160 / 250 (SGW / HGW)</b>	LH	1	709.00	ALAX-2GSWLS
	RH	1	709.00	ALAX-2GSWRS
<b>Terminal Covers</b>				
<b>NF63 &amp; NV63 (SWA / HWA)</b>		2	84.00	TCL-05SW3W
<b>NF125 &amp; NV125 (CWA / SWA / HWA)</b>		2	205.00	TCL-1SW3W
<b>NF160 / 250 &amp; NV250 (CWA / SWA / HWA)</b>		2	550.00	TCL-2SW3W
<b>NF125 / 160 / 250 (SGW / HGW)</b>		2	550.00	TCL-2GSW3
<b>Adaptor Plate<sup>1</sup></b>				
<b>NF125 (CWA / SWA / HWA)</b>		1	83.00	ADAPT125
<b>Daros Handles</b>				
<b>NF63 &amp; NV63 (SWA / HWA) NF125 / NV125</b>	(Std shaft - 300 mm)	1	1,236.00	12MEC.1145
<b>NF160 / 250 &amp; NV250 (CWA / SWA / HWA)</b>	(Std shaft - 300 mm)	1	1,236.00	12MEC.1045
<b>NF160 / 250 (SGW / HGW)</b>	(Std shaft - 300 mm)	1	1,236.00	12MEC.1245
<b>Motor Operator</b>				
<b>NF125 / 160 / 250 (SGW / HGW) / 125SW</b>	100-240V AC / 100-250V DC	1	9,830.00	MD250GSW240
<b>NF125 (CWA / SWA / HWA)</b>	100-240V AC / 100-250V DC	1	9,830.00	MDS240-1SW <sup>2</sup>
<b>NF250 (CWA / SWA / HWA)</b>	100-240V AC / 100-250V DC	1	9,830.00	MDS240-2SW <sup>3</sup>

<sup>1</sup> Adaptor plate must be used when retro-fitting NF125 in place of NF100 breaker.

<sup>2</sup> These units have mechanical trip indication on the operators.

<sup>3</sup> These units have electrical trip indication through an alarm switch.



**WSS - Circuit Breakers / Switch Disconnectors**

**Thermal-Magnetic Circuit Breakers (CWA) Compact Economy Class (CIF Approved)**

Standard Ratings: 250, 300, 350, 400, 500, 630 A

TYPE	POLES	TERMINALS	kA@		NO. OF INTERPHASE BARRIERS	RATING (A)	PRICE EA.	ORDER No.
			400 V	500 V				
NF400-CWA	3	G4B	36	22	4	250	6,792.00	NF400CW250
			36	22	4	300	7,813.00	NF400CW300
			36	22	4	350,400	8,191.00	NF400CW_ _ _
NF630-CWA	3	G4B	36	22	4	500,600,630	12,705.00	NF630CW_ _ _

**Thermal-Magnetic Circuit Breakers (SWA) Standard Fixed Type (CIF Approved)**

Standard Ratings: 250, 300, 350, 400, 500, 600, 630 A

TYPE	POLES	TERMINALS	kA@			NO. OF INTERPHASE BARRIERS	RATING (A)	PRICE EA.	ORDER No.
			400 V	500 V	525 V				
NF400-SWA <sup>2</sup>	3	G4B	50	40	35	4	250	9,124.00	NF400SW250
			50	40	35	4	300	9,201.00	NF400SW300
			50	40	35	4	350,400	9,599.00	NF400SW_ _ _
NF630-SWA <sup>2</sup>	3	G4B	50	40	35	4	500,600,630	14,107.00	NF630SW_ _ _

**Electronic Adjustable Circuit Breakers (CIF Approved)**

Standard Ratings: 200-400 A, 300-630 A, 400-800 A, 500-1000 A, 600-1250 A, 800-1600 A

TYPE	POLES	TERMINALS	kA@				NO. OF INTERPHASE BARRIERS	RATING (A)	PRICE EA.	ORDER No.
			380 V	400 V	500 V	525 V				
NF400-SEW	3	G4B	50	50	40	35	4	200-400	11,316.00	NF400SEW400
NF400-HEW	3	G4B	70	70	50	50	4	200-400	16,581.00	NF400HEW400
NF630-SEW	3	G4B	50	50	40	35	4	300-630	18,348.00	NF630SEW630
NF630-HEW	3	G4B	70	70	50	-	4	300-630	20,557.00	NF630HEW630
NF800-CEW	3	G4B	40	36	18	-	2	400-800	19,756.00	NF800CEW800
NF800-SEW	3	G4B	50	50	40	25	2	400-800	22,437.00	NF800SEW800
NF800-HEW	3	G4B	70	70	50	-	2	400-800	24,680.00	NF800HEW800

**Electronic Adjustable Circuit Breakers (CIF Approved)**

Standard Ratings: 500-1000 A, 600-1250 A, 800-1600 A

TYPE	POLES	TERMINALS	kA@			NO. OF INTERPHASE BARRIERS	RATING (A)	PRICE EA.	ORDER No.
			380 V	400 V	500 V				
NF1000-SEW	3	G4B	85	85	65	2	500-1000	25,272.00	NF1000SEW
NF1250-SEW	3	G4B	85	85	65	2	600-1250	30,186.00	NF1250SEW
NF1600-SEW	3	G4B	85	85	65	2	800-1600	43,627.00	NF1600SEW

**Circuit Breaker DC Locomotive Protection (Orange Handle)**

Standard Ratings: 300, 400 A

TYPE	POLES	TERMINALS	kA@		NO. OF INTERPHASE BARRIERS	RATING (A)	PRICE EA.	ORDER No.
			440 V DC	440 V DC				
NF400-CWA (DC)	3	G4B	15		4	300	8,342.00	NF400CWDC300
			15		4	400	8,609.00	NF400CWDC400

**ON LOAD SWITCH DISCONNECTORS<sup>1</sup> (Red Handle)**

Standard Ratings: 300, 400, 630, 800, 1000, 1250 A

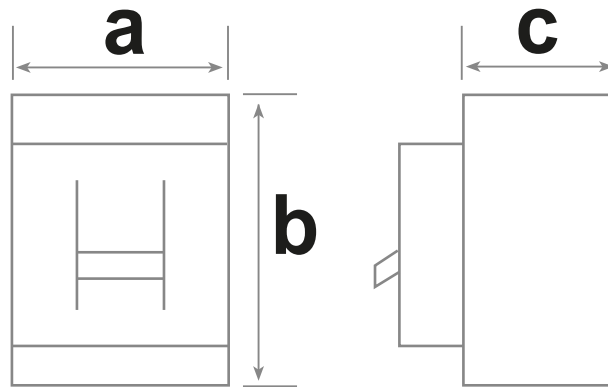
TYPE	POLES	TERMINALS	ICW kA	SEC.	RATING (A)	PRICE EA.	ORDER No.
DSN400-SWA	3	G4B	6	1	400	7,324.00	DSN400SW400
DSN630-CWA	3	G4B	8	1	630	8,986.00	DSN630CW630
DSN630-SWA	3	G4B	8	1	630	12,063.00	DSN630SW630
DSN800-CWA	3	G4B	10	1	800	12,477.00	DSN800CW800
DSN800-SWA	3	G4B	10	1	800	14,598.00	DSN800SW800
DSN1000-SW	3	G4B	15	1	1000	21,450.00	DSN1000SW_ _ _
DSN1250-SW	3	G4B	15	1	1250	27,342.00	DSN1250SW_ _ _

<sup>1</sup>Backed up by Suitable Short Circuit Protection Device (SCPD).  
<sup>2</sup>These breakers can be used in DC Applications. Contact CBI for more information.

**NOTE:** Please fill in required AMP rating on dotted line of order number column.


**WSS - Earth Leakage Circuit Breakers**
**Earth Leakage Circuit Breakers Progressive Super Series**

TYPE	POLES	TERMINALS	kA@				SENSITIVITY mA SELECTABLE	TIME DELAY	No. OF INTERPHASE BARRIERS	RATING (A)	PRICE EA.	ORDER NO.
			380 V	400 V	525 V	550 V						
NV400-SWA	3	G4B	50	50	15	15	100,300,500	0.45, 1,2	4	250,300,350,400	15,994.00	NV400SV_
NV400-SEW	3	G4B	50	50	15	15	100,300,500		4	200-400	17,188.00	NV400SEW400
NV630-SWA	3	G4B	50	50	25	15	100,300,500	0.45, 1,2	4	500,600,630	19,550.00	NV630SV_
NV800-SEW	3	G4B	50	50	25	15	100,300,500	0.45, 1,2	2	400-800	22,122.00	NV800SEW800


**PSS/WSS - Dimensions**

TYPE	DIMENSIONS (mm)		
	a	b	c
NF400 & NV400 (CWA / SWA / SEW / HEW)	140	257	103
DSN400 (CWA / SWA)	140	257	103
NF630 & NV630 (SEP / HEP)	210	275	103
NF630 & NV630 (CWA / SWA / SEW / HEW)	140	257	103
DSN630 (CWA / SWA)	140	257	103
NF800 & NV800 (CWA / SWA / SEW / HEW)	210	275	103
DSN800 (CWA / SWA)	210	275	103
NF1000 & NV1250 & NF1600 (SEW)	210	406	140
DSN1000 & DSN1250 (SW)	210	406	140

**WSS - Current Setting Range (Adjustable Breakers)**

TYPE	RATING (A)	SETTING RANGE (fixed steps)
NF400-SEW (CEW / SEW / HEW)	200-400	200 / 225 / 250 / 300 / 350 / 400 A
NF630-SEW (CEW / SEW / HEW)	300-630	300 / 350 / 400 / 500 / 600 / 630 A
NF800-SEW (CEW / SEW / HEW)	400-800	400 / 450 / 500 / 600 / 700 / 800 A
NF1000-SEW	500-1000	500 / 600 / 700 / 800 / 900 / 1000 A
NF1250-SEW	600-1250	600 / 700 / 800 / 1000 / 1200 / 1250 A
NF1600-SEW	800-1600	800 / 1000 / 1200 / 1400 / 1500 / 1600 A

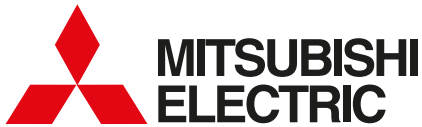
Notes: For availability and price of NV4P breakers, contact CBI.



**WSS - ACCESSORIES**

WSS - Accessories					
TYPE		VOLTAGE RANGE	STD PACK	PRICE EA.	ORDER No.
<b>Undervoltage Release</b>					
<b>NF400 / 630 / 800 &amp; NV400 / 630 / 800 (CW / SW / CEW / SEW / HEW)</b>	RH	24-48V DC	1	2,092.00	UVTSD048-8SWRFS
	LH/RH	110V DC	1	2,092.00	UVTD110-4SWWS
	LH/RH	110-120V AC	1	1,281.00	UVTA120-4SWWS
	LH/RH	220-240V AC	1	1,281.00	UVTA240-4SWWS
	LH/RH	380-415V AC	1	1,281.00	UVTA415-4SWWS
<b>NF1000SEW &amp; NF1250SEW &amp; NF1600SEW</b>	LH/RH	500-550V AC	1	1,281.00	UVTA550-4SWWS
	RH	100-120V AC	1	1,888.00	UVTNA130-10SWRS
	RH	200-240V AC	1	1,888.00	UVTNA240-10SWRS
	RH	380-450V AC	1	1,888.00	UVTNA450-10SWRS
	RH	500-550V AC	1	1,888.00	UVTNA550-10SWRS
<b>Shunt Trip<sup>1</sup></b>					
<b>NF400 / 630 / 800 (CW / SW / CEW / SEW / HEW)</b>	RH	24-48V AC / DC	1	1,197.00	SHT48-4SWRS
	LH	100-450V AC / 100-200V DC	1	712.00	SHT-4SWLS
	RH	100-450V AC / 100-200V DC	1	712.00	SHT-4SWRS
	RH	380-550V AC	1	712.00	SHTA550-4SWRS
<b>NF1000SEW &amp; NF1250SEW &amp; NF1600SEW</b>	RH	24V AC	1	1,801.00	SHTA024-10SWRS
	RH	48V AC	1	1,801.00	SHTA048-10SWRS
	RH	100-120V AC	1	1,801.00	SHTA120-10SWRS
	RH	200-240V AC	1	1,801.00	SHTA240-10SWRS
	RH	380-450V AC	1	1,801.00	SHTA450-10SWRS
	RH	500-550V AC	1	1,801.00	SHTA550-10SWRS
<b>Alarm Switch</b>					
<b>NF400 / 630 / 800 &amp; NV400 / 630 / 800 (CW / SW / CEW / SEW / HEW)</b>	LH		1	498.00	AL-4SWLS
<b>Auxiliary Switch</b>					
<b>NF400 / 630 / 800 (CW / SW / CEW / SEW / HEW)</b>	LH		1	463.00	AX-4SWLS
	RH		1	463.00	AX-4SWRS
<b>NV400 / 630 / 800 (SW / SEW)</b>	LH		1	463.00	AX-4SWLS
<b>NV400 / 630 / 800 (SW / SEW)</b>	LH		1	463.00	AX-4SWLS
<b>NF1000SEW &amp; NF1250SEW &amp; NF1600SEW</b>	LH		1	643.00	AX-10SWLS
	RH		1	643.00	AX-10SWRS
<b>Alarm/Auxiliary Switch</b>					
<b>NF400 / 630 / 800 &amp; NV400 / 630 / 800 (CW / SW / CEW / SEW / HEW)</b>	LH		1	605.00	ALAX-4SWLS
<b>NF1000SEW &amp; NF1250SEW &amp; NF1600SEW</b>	LH		1	1,064.00	ALAX-10SWLS
<b>Motor Operator<sup>*</sup></b>					
<b>NF400 / 630 &amp; NV400 / 630 (CW / SW / CEW / SEW / HEW)</b>		100-110V AC	1	6,227.00	MDS-4SWA110
		200-220V AC	1	6,227.00	MDS-4SWA220
<b>NF800 &amp; NV800 (CEW / SEW / HEW)</b>		100-110V AC	1	6,227.00	MDS-8SWA110
		200-220V AC	1	6,227.00	MDS-8SWA220
<b>NF1000SEW &amp; NF1250SEW &amp; NF1600SEW</b>		100-110V AC	1	32,295.00	MD-10SWA110
		200-220V AC	1	32,295.00	MD-10SWA220
<b>Mechanical Interlock<sup>*</sup></b>					
<b>NF400 / 630 / 800 &amp; NV400 / 630 / 800 (CW / SW / CEW / SEW / HEW)</b>			1	4,913.00	MI630
<b>NF1000SEW &amp; NF1250SEW &amp; NF1600SEW</b>			1	4,913.00	MI1000
<b>Rear Connecting Studs<sup>*</sup></b>					
<b>NF400 &amp; NV400 (CW / SW / CEW / SEW / HEW)</b>		Set of 6	Set	1,151.00	ST-4SW3
<b>NF630 &amp; NV630 (CW / SW / CEW / SEW / HEW)</b>		Set of 6	Set	1,863.00	ST-6SW3
<b>NF800 &amp; NV800 (CEW / SEW / HEW)</b>		Set of 6	Set	2,345.00	ST-8SW3

<sup>1</sup>For shunt trip possibility on NV breakers, contact CBI.  
\*Contact CBI for availability.



**WSS - ACCESSORIES**

TYPE	VOLTAGE RANGE	STD PACK	PRICE EA.	ORDER No.
<b>Terminal Covers*</b>				
NF400 / 630 & NV400 / 630 (CW / SW / CEW / SEW / HEW)		1	625.00	TCL-4SW3
NF800 & NV800 (CEW / SEW / HEW)		1	781.00	TCL-8SW3
NF1000SEW & NF1250SEW & NF1600SEW		1	1,214.00	TCL-10SW3
<b>Handle Locking Device (Metal)*</b>				
NF400 / 630 & NV400 / 630 (CW / SW / CEW / SEW / HEW)		1	314.00	HLS-4SW
NF1000 / 1250 / 1600 SEW		1	2,209.00	HLS-10SW
<b>Daros Handles</b>				
NF400 / 630 & NV400 / 630 (CW / SW / CEW / SEW / HEW)	(Std. shaft - 300 mm)	1	1,323.00	12MEC.0645
NF800 & NV800 (CEW / SEW / HEW)	(Std. shaft - 300 mm)	1	1,719.00	12MEC.0845
NF1000SEW & NF1250SEW & NF1600SEW	(Std. shaft - 300 mm)	1	2,209.00	12MEC.0945

\*Contact CBI for availability

Note: Walking Beam Interlock Mechanisms: Two Daros "MEC" handle mechanisms (one on Breaker A and one on Breaker B) required operations:

- i. Breaker A is "OFF" and Breaker B is "OFF"
- ii. Breaker A is "ON" and Breaker B is "OFF"
- iii. Breaker A is "OFF" and Breaker B is "ON"



AE1600-SW

**AE WORLD SUPER SERIES  
LOW VOLTAGE AIR CIRCUIT BREAKERS (CIF APPROVED)**

**Air Circuit Breakers<sup>1</sup>**

Standard Ratings: 315-630, 500-1000, 625-1250, 800-1600, 1000-2000, 1250-2500, 1600-3200, 2000-4000 A

TYPE	POLES	TERMINALS	kA@		STD PACK	RATING (A)	PRICE EA. FIXED (F) <sup>3</sup>	PRICE EA. DRAW OUT (D) <sup>3</sup>	ORDER No.
			525 V	690 V					
AE630-SW	3	Horizontal Stubs	65	65	1	315-630	30,136.00	40,809.00	AE630SW(F/D)
AE1000-SW	3	Horizontal Stubs	65	65	1	500-1000	31,674.00	42,938.00	AE1000SW(F/D)
AE1250-SW	3	Horizontal Stubs	65	65	1	625-1250	33,344.00	43,756.00	AE1250SW(F/D)
AE1600-SW	3	Horizontal Stubs	65	65	1	800-1600	35,211.00	44,575.00	AE1600SW(F/D)
AE2000-SW	3	Horizontal Stubs	75	75	1	1000-2000	41,921.00	54,886.00	AE2000SW(F/D)
AE2500-SW	3	Horizontal Stubs	75	75	1	1250-2500	48,372.00	58,062.00	AE2500SW(F/D)
AE3200-SW	3	Horizontal Stubs	75	75	1	1600-3200	61,007.00	72,530.00	AE3200SW(F/D)
AE2000-SWA*	3	Vertical Stubs	65	65	1	1000-2000	38,566.00	49,728.00	AE2000SWA(F/D)
AE4000-SWA	3	Vertical Stubs	75	75	1	2000-4000	97,909.00	119,262.00	AE4000SWA(F/D)

**AE WORLD SUPER SERIES LOW VOLTAGE SWITCH DISCONNECTORS**

**Switch Disconnectors<sup>2</sup>**

Standard Ratings: 1600, 2000, 2500, 3200, 4000 A

TYPE	POLES	TERMINALS	STD PACK	RATING (A)	PRICE EA. FIXED (F) <sup>3</sup>	PRICE EA. DRAW OUT (D) <sup>3</sup>	ORDER No.
DSN AE2500-SW	3	Horizontal Stubs	1	2500	42,642.00	52,364.00	DSN2500SW(F/D)
DSN AE3200-SW	3	Horizontal Stubs	1	3200	53,969.00	65,527.00	DSN3200SWA(F/D)
DSN AE2000-SWA*	3	Vertical Stubs	1	2000	33,214.00	44,311.00	DSN2000SWA(F/D)
DSN AE4000-SWA*	3	Vertical Stubs	1	4000	88,431.00	107,703.00	DSN4000SWA(F/D)

Note: Standard discounts are not applicable. Contact CBI for discount structure.  
For ACBs bigger than 4000 A (5000 A & 6300 A), contact CBI for price and availability.

<sup>1</sup> All ACBs come complete with terminal connectors, aux(2a, 2b), door frame (Draw-out ACB also has safety shutters) and Electronic Trip Relay (ETR).

<sup>2</sup> All Switch Disconnectors come complete with terminal connectors, aux(2a, 2b) and door frame (Draw-out DSN also has safety shutters).

<sup>3</sup> Ordering numbers Fixed = (F)  
Draw out = (D)

\*Contact CBI for availability.

**WORLD SUPER SERIES ACCESSORIES**

Air Circuit Breakers Type AE630-SW to AE4000-SWA					
TYPE	VOLTAGE AC	VOLTAGE DC	STD PACK	PRICE EA.	ORDER No.
Door Interlock* for all Draw Out Types	-	-	1	4,849.00	WS-DI-SAED
Door Interlock* for all Fixed Types	-	-	1	5,217.00	WS-DI-SAEF
Cell Switch* (4 Contacts)	-	-	1	2,898.00	WS-CLCCELLS
Auxiliary Switch (5N/O + 5N/C)	-	-	1	1,854.00	WS-AXAESW5A5B
Shunt Trip	100-250	100-250	1	1,316.00	WS-SHTAE110AC
Shunt Trip*	-	24-48	1	1,316.00	WS-SHTAE24DC
Shunt Trip	380-525	-	1	1,316.00	WS-SHTAE400AC
Motor Charging Device	100-125	100-125	1	3,937.00	WS-MDAESW110
Motor Charging Device	200-250	200-250	1	3,937.00	WS-MDAESW220
Closing Coil Unit	100-250	100-250	1	1,650.00	WS-CCAE025A
Closing Coil Unit	-	24-48	1	2,084.00	WS-CCAED048A
Cylinder Lock Mechanism with Viro Key	-	-	1	2,207.00	WS-CYLAESW
Counter*	-	-	1	1,855.00	WS-CNTAESW
Undervoltage Tripping Device - instantaneous (tripping coil included)	100-120	-	1	4,636.00	WS-UVT-A120-INS
Undervoltage Tripping Device - instantaneous (tripping coil included)	200-240	-	1	4,636.00	WS-UVT-A240-INS
Undervoltage Tripping Device Time Delay - (tripping coil included)	200-240	-	1	4,636.00	WS-UVT-A240-TD3
Undervoltage Tripping Device - instantaneous (tripping coil included)	380-460	-	1	7,476.00	WS-UVT-A460-INS
Push Button Cover (For Padlocking)	-	-	1	293.00	WS-BCL-SAE
Misinsertion Preventer*	-	-	1	581.00	WS-MIPAESW
Terminal Connectors on Breaker	-	-	1	1,260.00	WS-ATC-SAEBKR
Terminal Connectors on Cradle	-	-	1	1,260.00	WS-ATC-SAECRL
Ground Fault Protection Relay* (module must be fitted to ETR)	-	-	1	1,451.00	WS-G1
Mechanical Interlock Device (Draw out Type Only) (630SW - 1600SW, 2000SWA)	-	-	1	3,937.00	WS-MIAESW16D
Mechanical Interlock Device (Fixed Type Only) (630SW - 1600SW, 2000SWA)	-	-	1	3,937.00	WS-MIAESW16F
Mechanical Interlock Device (Draw out Type Only) (2000SW - 3200SW, 4000SWA)	-	-	1	3,937.00	WS-MIAESW32D
Mechanical Interlock Device (Fixed Type Only) (2000SW - 3200SW, 4000SWA)	-	-	1	3,937.00	WS-MIAESW32F
Mechanical Interlock Wire Set* (used when 3 ACBs are interlocked)	-	-	1	1,943.00	WS-MI-IW
Shutter Locking Parts* (Padlock Excluded)	-	-	1	147.00	WS-SSTAESW
Safety Shutter (AE630SW - AE1600SW, AE2000SWA)	-	-	1	1,226.00	WS-SSTAESW160
Safety Shutter (AE2000SW - AE3200SW, AE4000SWA)	-	-	1	1,226.00	WS-SSTAESW400
Cradle* (AE630SW - AE1600SW) - (Excluding Safety Shutters)	-	-	1	7,517.00	WS-AE1600SSCR
Cradle* (AE2000SW - AE2500SW) - (Excluding Safety Shutters)	-	-	1	12,124.00	WS-AE2000SSCR
Cradle* (AE3200SW) (Excluding Safety Shutters)	-	-	1	12,124.00	WS-AE3200SSCR
Vertical Terminal Adaptor* (Draw out) Set of 3 (AE630SW - AE1600SW)	-	-	1	3,260.00	WS-VTA-02SAC
Vertical Terminal Adaptor* (Draw out) Set of 3 (AE2000SW - AE2500SW)	-	-	1	5,754.00	WS-VTA-03SAC
Vertical Terminal Adaptor* (Draw out) Set of 3 (AE3200SW)	-	-	1	6,901.00	WS-VTA-32SAE
Extension Module (EX1)* - (compulsory module for display and interface function)	-	-	1	3,675.00	WS-EX1
Display Module (DP1)* - (WS - EX1 is required)	-	-	1	4,059.00	WS-DISPLAY
VT Unit (VT)* - (WS - EX1 is required)	-	-	1	2,609.00	WS-VT
CC-Link Interface Unit* - (WS - EX1 is required)	-	-	1	7,244.00	WS-BIF-CC
Drawout Position Switch for Network* - (WS-BIF-IO is required)	-	-	1	2,320.00	WS-BIF-DO-POS
I/O Unit* - (interface unit is required ex WS - BIF - PR)	-	-	1	3,478.00	WS-BIF-IO
PROFIBUS-DP Interface Unit* - (WS - EX1 is required)	-	-	1	7,244.00	WS-BIF-PR
Modbus Interface Unit* - (WS - EX1 is required)	-	-	1	7,244.00	WS-BIF-MD
Neutral Pole Current Transformer* (AE1600SW)	-	-	1	2,758.00	WS-NCTAESW16
Neutral Pole Current Transformer* (AE2000SW, AE2000SWA)	-	-	1	2,758.00	WS-NCTAESW20
Neutral Pole Current Transformer* (AE2500SW)	-	-	1	3,678.00	WS-NCTAESW25
Neutral Pole Current Transformer* (AE3200SW)	-	-	1	3,678.00	WS-NCTAESW32
Neutral Pole Current Transformer* (AE4000SWA)	-	-	1	3,678.00	WS-NCTAESW40

Note: Standard discounts are not applicable, contact CBI for discount structure.  
\*Contact CBI for availability.



S-N95

**SERIES S-N (CIF APPROVED) - AC CONTACTOR, AC COIL**

**Magnetic Contactors Series S-N (CIF Approved)**

TYPE <sup>2</sup>	RATED CONTINUOUS CURRENT	AC-1		AC-3		AC-4		STANDARD AUX CONTACTS <sup>1</sup>		PRICE EA.	ORDER NO.
		380 V/440 V (A)	525 V (A)	380 V/440 V kW (A)	525 V kW (A)	380 V/440 V kW (A)	525V kW (A)	NORMALLY OPEN	NORMALLY CLOSED		
S-N10 <sup>3</sup>	20	11	8	4(9)	4 (7)	1.1 (6)	1.1 (6)	1	-	365.00	SN10-___
S-N11 <sup>3</sup>	20	13	11	5.5 (12)	5.5 (9)	1.5 (9)	1.5 (9)	1	-	436.00	SN11-___
S-N12 <sup>3</sup>	20	13	11	5.5 (12)	5.5 (9)	1.5 (9)	1.5 (9)	1	1	501.00	SN12-___
S-N18 <sup>3</sup>	25	20	16	7.5 (16)	7.5 (13)	2.2 (9)	2.2 (9)	-	-	602.00	SN18-___
S-N20 <sup>3</sup>	32	32	32	11 (22)	11 (17)	3.7 (13)	3.7 (10)	1	1	754.00	SN20-___
S-N21 <sup>3</sup>	32	32	32	11 (22)	11 (17)	3.7 (13)	3.7 (10)	2	2	816.00	SN21-___
S-N25 <sup>3</sup>	50	50	50	15 (30)	15 (24)	5.5 (17)	5.5 (12)	2	2	1,015.00	SN25-___
S-N35 <sup>3</sup>	60	60	60	18.5 (40)	18.5 (32)	5.5 (24)	5.5 (17)	2	2	1,306.00	SN35-___
S-N50 <sup>3</sup>	80	80	80	22 (50)	22 (38)	7.5 (32)	7.5 (24)	2	2	1,673.00	SN50-___
S-N65 <sup>3</sup>	100	100	100	30 (65)	37 (60)	11 (47)	11 (38)	2	2	2,058.00	SN65-___
S-N80	135	135	135	45 (85)	45 (75)	15 (62)	15 (45)	2	2	3,056.00	SN80-___
S-N95	150	150	150	55 (105)	55 (85)	18.5 (75)	18.5 (55)	2	2	3,919.00	SN95-___
S-N125	150	150	150	60 (120)	60 (90)	22 (90)	22 (65)	2	2	4,419.00	SN125-___
S-N150	200	200	200	75 (150)	90 (140)	30 (110)	37 (80)	2	2	6,442.00	SN150-___
S-N180	260	260	260	90 (180)	110 (180)	37 (150)	45 (140)	2	2	7,295.00	SN180-___
S-N220	260	260	260	132 (250)	132 (200)	45 (180)	55 (140)	2	2	8,283.00	SN220-___
S-N300	350	350	350	160 (300)	160 (250)	60 (220)	60 (200)	2	2	15,159.00	SN300-___
S-N400	450	450	450	220 (400)	225 (350)	75 (300)	90 (250)	2	2	19,405.00	SN400-___
S-N600	800	660	660	330 (630)	330 (500)	110 (400)	130 (350)	2	2	26,919.00	SN600-___
S-N800	1000	800	800	440 (800)	500 (720)	130 (630)	150 (500)	2	2	34,610.00	SN800-___

Note: DIN rail mounting for all contactors up to SN-65

<sup>1</sup>Extra auxiliary contact blocks can be added (refer to contactor spares and accessories)

<sup>2</sup>When ordering please specify coil voltage e.g. SN10-400.

<sup>3</sup>These units have finger protection on terminals as standard (CX).

Standard coil voltages are 110 V, 220 V, 400 V, 525 V.

Other voltages available on request.

**Contactor Utilisation Categories (IEC 60947.4)**

**ALTERNATING CURRENT**

<b>AC-1</b>	All AC Loads with a power factor $\geq 0.80$ - heating distribution
<b>AC-3</b>	Starting and stopping squirrel cage motors - starting $\pm 7$ times rated motor current - stopping the voltage is at $\pm 20\%$ of mains supply voltage - light breaking
<b>AC-4</b>	Plugging and inching of squirrel cage - closing and opening at $\pm 7$ times rated motor current - severe breaking
<b>AC-15</b>	Control of electromagnetic loads ( $>72\text{VA}$ )

**DIRECT CURRENT**

<b>DC-13</b>	Control of electromagnets
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Note: For new rating of auxiliary contacts for SN/SDN contactors see table 1 on page 61.

## ACCESSORIES

### Magnetic Contactors Series S-N Contact Coils

CONTACTOR TYPE	COIL PRICE EA.	ORDER NO.
SN10	151.00	SN10-...C
SN11	151.00	
SN12	151.00	
SN18	151.00	
SN20	195.00	SN21-...C
SN21	195.00	
SN25	247.00	SN25-...C
SN35	247.00	
SN50	364.00	SN50-...C
SN65	364.00	
SN80	614.00	SN80-...C
SN95	614.00	
SN125	1,563.00	SN125-...C
SN150	1,563.00	
SN180	1,839.00	SN180-...C
SN220	1,839.00	
SN300	2,417.00	SN300-...C
SN400	2,417.00	
SN600	2,417.00	SN600-...C
SN800	2,417.00	
SDN12	385.00	
SDN21	909.00	SDN21-...C
SDN35	1,058.00	SDN35-...C
SDN50	1,299.00	SDN50-...C
SDN65	1,299.00	
SDN80	1,447.00	SDN80-...C
SDN95	1,447.00	
SDN125	1,108.00	SDN125-...C
SDN150	1,108.00	
SDN220	2,936.00	SDN220-...C
SDN300	8,717.00	SDN300-...C
SDN400	8,717.00	
SDN600	9,611.00	SDN600-...C
SDN800	9,611.00	
SRN4	151.00	SN10-...C
SRDN	385.00	SN10-...C
DU-A60	POR	DU_COIL DC- ...V
DU-A120	POR	DU_COIL DC- ...V
DU-K180	POR	SN180-...C
DU-K260	POR	SN300-...C
DUD-A60	POR	DU_COIL DC- ...V
DUD-A120	POR	DU_COIL DC- ...V
DUD-K180	POR	DU_COIL DC- ...V
DUD-K260	POR	DU_COIL DC- ...V
SD-Q11	POR	24 V DC
SD-Q12	POR	24 V DC
SD-Q19	POR	24 V DC

**NOTE:**

**ORDER NUMBER EXAMPLE: Contactor Type + Coil Voltage + "C"**

i.e.: **SN10 -110C**  
**SDN80-110C**



## ACCESSORIES

TYPE	MECHANICAL INTERLOCK					FRONT CLIP-ON AUX. CONTACT BLOCK <sup>(1,2)</sup>		SIDE CLIP-ON AUX. CONTACT BLOCK <sup>(1,3)</sup>
	UNML11	UNML21	UNML80	UNML150	UNML220	UNAX2 (1A, 1B) UNAX2CX2A (2A) UNAX2CX2B (2B)	UNAX4 (2A, 2B) UNAX4CX3A (3A, 1B) UNAX4CX4A (4A)	UNAX11 (1A, 1B)
	PRICE EACH							
SN10	428.00	-	-	-	-	204.00	268.00	277.00
SN11	428.00	-	-	-	-	204.00	268.00	277.00
SN12	-	-	-	-	-	204.00	268.00	-
SN18	-	512.00	-	-	-	204.00	268.00	-
SN20	-	512.00	-	-	-	204.00	268.00	277.00
SN21	-	512.00	-	-	-	204.00	268.00	277.00
SN25	-	512.00	-	-	-	204.00	268.00	277.00
SN35	-	512.00	-	-	-	204.00	268.00	277.00
SN50	-	512.00	-	-	-	204.00	268.00	277.00
SN65	-	512.00	-	-	-	204.00	268.00	277.00
SN80	-	-	530.00	-	-	-	-	-
SN95	-	-	530.00	-	-	-	-	-
SN125	-	-	530.00	-	-	-	-	-
SN150	-	-	-	701.00	-	-	-	-
SN180	-	-	-	-	701.00	-	-	-
SN220	-	-	-	-	701.00	-	-	-
SN300	-	-	-	-	701.00	-	-	-
SN400	-	-	-	-	701.00	-	-	-
SN600	-	-	-	-	-	-	-	-
SN800	-	-	-	-	-	-	-	-
SDN11	428.00	-	-	-	-	204.00	268.00	277.00
SDN12	-	-	-	-	-	204.00	268.00	-
SDN21	-	512.00	-	-	-	204.00	268.00	277.00
SDN35	-	512.00	-	-	-	204.00	268.00	277.00
SDN50	-	512.00	-	-	-	204.00	268.00	277.00
SDN65	-	512.00	-	-	-	204.00	268.00	277.00
SDN80	-	-	530.00	-	-	-	-	-
SDN95	-	-	530.00	-	-	-	-	-
SDN125	-	-	530.00	-	-	-	-	-
SDN150	-	-	-	701.00	-	-	-	-
SDN220	-	-	-	-	701.00	-	-	-
SDN300	-	-	-	-	701.00	-	-	-
SDN400	-	-	-	-	701.00	-	-	-

Note:

\*Contact CBI for availability

A = Normal Open Contact

B = Normal Closed Contact

<sup>1</sup>Front clip-on & side clip-on should not be both mounted.

<sup>2</sup>Max 1 aux contact block can be mounted on a contactor.

<sup>3</sup>Max 2 aux contact block can be mounted on a contactor.

<sup>4</sup>Price includes fitting and adjusting.

**ACCESSORIES**

ORDER No.	SIDE CLIP-ON AUX. CONTACT BLOCK <sup>1</sup>			DC INTERFACE MODULE SOLID STATE			DC INTERFACE MODULE RELAY		
	UNAX80 (1A1B)	UNAX150 (1A, 1B)	UNAX600 (2A, 2B)	UNSY11 (SEPARATE MOUNTING)	UNSY21 (DIRECT MOUNTING ON CONTACTOR)	UNSY31 (DIRECT MOUNTING ON CONTACTOR)	UNSY12 (SEPARATE MOUNTING)	UNSY22 (DIRECT MOUNTING ON CONTACTOR)	UNSY32 (DIRECT MOUNTING ON CONTACTOR)
TYPE	PRICE EACH								
SN10	-	-	-	-	505.00	-	-	505.00	-
SN11	-	-	-	-	505.00	-	-	505.00	-
SN12	-	-	-	-	505.00	-	-	505.00	-
SN18	-	-	-	-	505.00	-	-	505.00	-
SN20	-	-	-	-	505.00	-	-	505.00	-
SN21	-	-	-	-	505.00	-	-	505.00	-
SN25	-	-	-	-	505.00	-	-	505.00	-
SN35	-	-	-	-	505.00	-	-	505.00	-
SN50	-	-	-	-	-	550.00	-	-	550.00
SN65	-	-	-	-	-	550.00	-	-	550.00
SN80	268.00	-	-	550.00	-	-	550.00	-	-
SN95	268.00	-	-	550.00	-	-	550.00	-	-
SN125	268.00	-	-	550.00	-	-	550.00	-	-
SN150	-	287.00	-	550.00	-	-	550.00	-	-
SN180	-	287.00	-	550.00	-	-	550.00	-	-
SN220	-	287.00	-	550.00	-	-	550.00	-	-
SN300	-	287.00	-	550.00	-	-	550.00	-	-
SN400	-	287.00	-	550.00	-	-	550.00	-	-
SN600	-	-	2,036.00	-	-	-	-	-	-
SN800	-	-	2,036.00	-	-	-	-	-	-
SDN11	-	-	-	-	-	-	-	-	-
SDN12	-	-	-	-	-	-	-	-	-
SDN21	-	-	-	-	-	-	-	-	-
SDN35	-	-	-	-	-	-	-	-	-
SDN50	-	-	-	-	-	-	-	-	-
SDN65	-	-	-	-	-	-	-	-	-
SDN80	268.00	-	-	-	-	-	-	-	-
SDN95	268.00	-	-	-	-	-	-	-	-
SDN125	268.00	-	-	-	-	-	-	-	-
SDN150	-	287.00	-	-	-	-	-	-	-
SDN220	-	287.00	-	-	-	-	-	-	-
SDN300	-	287.00	-	-	-	-	-	-	-
SDN400	-	287.00	-	-	-	-	-	-	-
SDN600	-	-	2,036.00	-	-	-	-	-	-
SDN800	-	-	2,036.00	-	-	-	-	-	-
DU(D)A	POR	-	-	-	-	-	-	-	-
DU(D)K	-	POR	-	-	-	-	-	-	-
SRN4	-	-	-	-	505.00	-	-	505.00	-
SRDN4	-	-	-	-	-	-	-	-	-

Note:

<sup>1</sup>Max 2 aux contact block can be mounted on a contactor.

\*Contact CBI for availability

A = Normal Open Contact

B = Normal Closed Contact



TH-N12KP

## SERIES TH-N

Thermal Overload Relays Series TH-N Heater Type				
TYPE	CONTACTOR SIZE	OVERLOAD SIZE AMPS	HEATER RANGE AMPS	PRICE EA.
<b>TH-N12KP(CX)<sup>1</sup></b>				
THN12-0.17		0.17	0.14 - 0.22	314.00
THN12-0.24		0.24	0.2 - 0.32	314.00
THN12-0.35		0.35	0.28 - 0.42	314.00
THN12-0.5		0.5	0.4 - 0.6	314.00
THN12-0.7		0.7	0.55 - 0.85	314.00
THN12-0.9		0.9	0.7 - 1.1	314.00
THN12-1.3	S-N10- (CX),	1.3	1.0 - 1.6	314.00
THN12-1.7	S-N11- (CX),	1.7	1.4 - 2.0	314.00
THN12-2.1	S-N12- (CX).	2.1	1.7 - 2.5	314.00
THN12-2.5		2.5	2.0 - 3.0	314.00
THN12-3.6		3.6	2.8 - 4.4	314.00
THN12-5		5	4.0 - 6.0	314.00
THN12-6.6		6.6	5.2 - 8.0	314.00
THN12-9		9	7.0 - 11.0	314.00
THN12-11		11	9.0 - 13.0	314.00
<b>TH-N18KP(CX)<sup>2</sup></b>				
THN18-15	S-N18(CX)	15	12.0 - 18.0	314.00
<b>TH-N20KP(CX)<sup>3</sup></b>				
THN20-0.24		0.24	0.2 - 0.32	407.00
THN20-0.35		0.35	0.28 - 0.42	407.00
THN20-0.5		0.5	0.4 - 0.6	407.00
THN20-0.7		0.7	0.55 - 0.85	407.00
THN20-0.9		0.9	0.7 - 1.1	407.00
THN20-1.3		1.3	1.0 - 1.6	407.00
THN20-1.7	S-N20 (CX),	1.7	1.4 - 2.0	407.00
THN20-2.1	S-N21 (CX),	2.1	1.7 - 2.5	407.00
THN20-2.5	S-N25 (CX),	2.5	2.0 - 3.0	407.00
THN20-3.6	S-N35 (CX).	3.6	2.8 - 4.4	407.00
THN20-5		5	4.0 - 6.0	407.00
THN20-6.6		6.6	5.2 - 8.0	407.00
THN20-9		9	7.0 - 11.0	407.00
THN20-11		11	9.0 - 13.0	407.00
THN20-15		15	12.0 - 18.0	407.00
THN20-19		19	16.0 - 22.0	407.00
<b>THN20TAKP(CX)</b>				
THN20-22	S-N25 (CX),	22	18.0 - 26.0	407.00
THN20-29	S-N35 (CX).	29	24.0 - 34.0	407.00
THN20-35		35	30.0 - 40.0	407.00

## Note

<sup>1</sup> For direct connection to contactors.

<sup>2</sup> For direct connection to S-N18 only.

<sup>3</sup> For the correct connecting links to contactors see thermal overload accessories on p.66.

<sup>4</sup> For use with contactors S-N20 & S-N21 only.

<sup>5</sup> For use with contactors S-N35 only.

**ORDER NUMBER = TYPE NUMBER**



TH-N60KP

**SERIES TH-N**

Thermal Overload Relays Series TH-N Heater Type				
TYPE <sup>2</sup>	CONTACTOR SIZE	OVERLOAD SIZE AMPS	HEATER RANGE AMPS.	PRICE EA.
<b>TH-N60KP (CX)</b>				
THN60-15		15	12 - 18	679.00
THN60-22	S-N50,	22	18 - 26	679.00
THN60-29	S-N65,	29	24 - 34	679.00
THN60-35	S-N80,	35	30 - 40	679.00
THN60-42	S-N95.	42	34 - 50	679.00
THN60-54 <sup>1</sup>		54	43 - 65	679.00
<b>TH-N60TAKP</b>				
THN60-67		67	54 - 80	679.00
THN60-82	S-N80,	82	65 - 93	679.00
THN60-95 <sup>3</sup>	S-N95.	95	85 - 105	679.00
<b>TH-N120TP</b>				
THN120-42		42	34 - 50	1,002.00
THN120-54	S-N125,	54	43 - 65	1,002.00
THN120-67	S-N150.	67	54 - 80	1,002.00
THN120-82		82	65 - 100	1,002.00
<b>TH-N120TAKP</b>				
THN120-105	S-N125,	105	85 - 125	1,002.00
THN120-125	S-N150.	125	100 - 150	1,002.00
<b>TH-N220RHKP<sup>4</sup></b>				
THN220 - 82		82	65 - 100	2,729.00
THN220 - 105		105	85 - 125	2,729.00
THN220 - 125	S-N180,	125	100 - 150	2,729.00
THN220 - 150	S-N220.	150	120 - 180	2,729.00
THN220 - 180		180	140 - 200	2,729.00
THN220 - 210 <sup>5</sup>		210	170 - 250	2,729.00
<b>TH-N400RHKP<sup>4</sup></b>				
THN400 - 125		125	100 - 150	3,490.00
THN400 - 150		150	120 - 180	3,490.00
THN400 - 180	S-N300,	180	140 - 220	3,490.00
THN400 - 250	S-N400.	250	200 - 300	3,490.00
THN400 - 330		330	260 - 400	3,490.00
<b>TH-N600KP<sup>6</sup></b>				
THN600 - 330		330	260 - 400	1,021.00
THN600 - 500	S-N600,	500	400 - 600	1,021.00
THN600 - 660	S-N800.	660	520 - 800	1,021.00

**Current Transformer Specs for TH-N600kP<sup>7</sup>**

HEATER DESIGNATION (A)	SETTING RANGE (A)	CURRENT TRANSFORMER RATIO	TRANSFORMER CAPACITY
330	260-400	500/5	15 VA or more
500	400-600	750/5	15 VA or more
660	520-800	1000/5	140 VA or more

**Note:**
<sup>1</sup> Cannot be mounted onto SN50.

<sup>2</sup> For the correct connecting links to contactors see thermal overload accessories on p.66.

<sup>3</sup> For contactor size SN95 only.

<sup>4</sup> Connecting links included.

<sup>5</sup> For contactor size SN220 only.

<sup>6</sup> Current transformers not included.

<sup>7</sup> CT Class to be Class 1 or better.

<sup>7</sup>Current transformer to be supplied by customer.

**ORDER NUMBER = TYPE NUMBER**



## ACCESSORIES

### Connecting Links for TH-N OverloadS & S-N Contactors

TYPE	DESCRIPTION	PRICE EA.
UN-TH21	Connecting links TH-N20KP (CX) & S-N20 / 21 (CX)	142.00
UN-TH25	Connecting links TH-N20TAKP (CX) & S-N25 / 35 (CX)	165.00
4370006	Connecting links TH-N60KP (CX) & S-N50 / 65 (CX) BH559N350	159.00
4370000	Connecting links TH-N60TAKP (CX) & S-N80 / 95 BH569N350 + bracket	204.00
BH579N355	Connecting links TH-N120KP & S-N125	225.00
BH589N355	Connecting links TH-N120TAKP & S-N150	225.00
UN-HZ12(CX)	Adaptor block for separate mounting of TH-N 12KP (CX)	296.00

**Note:**

TH-N220RHKP have connecting bars & base plate included.

TH-N400RHKP have connecting bars & base plate included.

### Remote Reset Release

TYPE	DESCRIPTION	PRICE EA.
UN-RR205*	Remote reset for TH-N 12 18 200 mm	319.00
UN-RR405*	Remote reset for TH-N 12 18 400 mm	319.00
UN-RR550*	Remote reset for TH-N20 550 mm	641.00
UN-RR555*	Remote reset for TH-N 12 18 550 mm	641.00
UN-RR705*	Remote reset for TH-N 12 18 700 mm	650.00

**Note:**

\*Contact CBI for availability.



ET-N60

**TYPE ET-N**

Electronic Motor Protection Relays Type ET-N				
TYPE	CONTROL VOLTAGE	SETTING RANGE	STD PACK	PRICE EA.
<b>ET-N60</b>				
ETN60-1 -110 OR 220	110 / 220V	0.25 - 1.0 A	1	2,313.00
ETN60-4-110 OR 220		1.0 - 4.0 A	1	2,313.00
ETN60-8-110 OR 220		2.0 - 8.0 A	1	2,313.00
ETN60-20-110 OR 220		5.0 - 20 A	1	2,313.00
ETN60-60-110 OR 220		15 - 60 A	1	2,313.00
<b>ET-N150</b>				
ETN60-1-400 OR 525	400 / 525V*	0.25 - 1.0 A	1	3,202.00
ETN60-4-400 OR 525		1.0 - 4.0 A	1	3,202.00
ETN60-8-400 OR 525		2.0 - 8.0 A	1	3,202.00
ETN60-20-400 OR 525		5.0 - 2.0 A	1	3,202.00
<b>ET-N360</b>				
ETN150-110 OR 220	110 / 220V	40 - 150	1	4,769.00
ETN150-400 OR 525	400 / 525V*	40 - 150	1	5,361.00
<b>ET-N360</b>				
ETN360-110 OR 220	110 / 220V	110 - 360	1	4,955.00
ETN360-400 OR 525	400 / 525V*	110 - 360	1	5,518.00

Note: Motor protection relays type ET-N feature selectable protection mode, i.e. overload, phase failure and phase reversal protection with selectable tripping time at 600 % of setting.

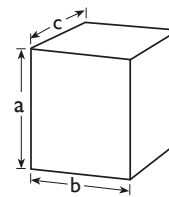
Remote reset facility can be added at an additional cost.

\*Contact CBI for availability.

**ORDER NUMBER = TYPE NUMBER**



	SH-V160	SH-V320	SH-V400	SHV-600
a		210 mm		290 mm
b		210 mm		285 mm
c		210 mm		225 mm



SH-V320

**SERIES SH-V**

**Medium Voltage Vacuum Contactors Series SH-V up to 1500 V**

TYPE <sup>1</sup> PRICE EA.	AC-1 & Ith (A)	AC-3				COIL VOLTAGES	STANDARDS AUX CONTACTS		
		440 V kW (A)	660 V kW (A)	1000 V kW (A)	1500 V kW (A)		NORMALLY OPEN	NORMALLY CLOSED	
SH-V160	200	110 (180)	160 (180)	225 (160)	315 (160)	STD: 110 / 220 / 400 / 525	2	2	27,881.00
SH-V320	350	200 (320)	315 (320)	450 (320)	700 (320)	STD: 110 / 220 / 400 / 525	2	2	27,881.00
SH-V400	450	250 (400)	400 (400)	550 (400)	800 (400)	STD: 110 / 220 / 400 / 525	2	2	30,514.00
SH-V600	750	300 (630)	600 (600)	750 (600)	1000 (600)	STD: 110 / 220 / 400 / 525	2	2	55,281.00

Note:

<sup>1</sup>Specify coil voltages.

**SPARES AND ACCESSORIES**

**Medium Voltage Vacuum Contactors Series SH-V up to 1500 V**

ORDER No.	REPLACEMENT AUX CONTACT	ADD ON AUX CONTACT		PRICE EACH
	UAAXVY1 (A1B) (FITS MNTG PLATE)	UAAXVY2 (2A2B)	UAAXVY4 (2A2B) (FITS MNTG PLATE)	
SH-V160	622.00	1,017.00	-	
SH-V320	622.00	1,017.00	-	
SH-V400	622.00	1,017.00	-	
SH-V600	-	-	1,656.00	

**VACUUM TUBE ASSEMBLY (SET OF 3)**

**REPLACEMENT COILS**

ORDER No.	SHV160TUBE	SHV320TUBE	SHV400TUBE	SHV600TUBE	REPLACEMENT COILS	
					1 C SHV160- SHV320- SHV400-	2 C SHV600-
SH-V160	16,809.00	-	-	-	1,919.00	-
SH-V320	-	17,129.00	-	-	1,919.00	-
SH-V400	-	-	17,129.00	-	1,919.00	-
SH-V600	-	-	-	18,029.00	-	2,522.00

\*Contact CBI for availability.  
A = Normal Open Contact.  
B = Normal Closed Contact.

<sup>1</sup>SHV coils interchangeable with SN180 coils.  
<sup>2</sup>SHV coils interchangeable with SN300 coils



VZ

**SERIES VZ-D**

Medium Voltage Vacuum Contactors Series VZ-D (Std 2 NO / 2 NC Contactor)										
TYPE <sup>1 &amp; 2</sup>	Ith (A)	3 Ph. INDUCTION MOTOR RATING				TRANSFORMER RATING				PRICE EA.
		3.3 kV kW	3.3 kV (A)	6.6 kV kW	6.6 kV (A)	3.3 kV kVA	3.3 kV (A)	6.6 kV kVA	6.6 kV (A)	
<b>(110 V AC/DC)</b> <b>VZ2-PE-E10</b>	200	35-75	20	75-160	20	5 / 10	0.87 / 1.75	5 / 10	0.44 / 0.87	36,331.00
	200	90-200	50	185-400	50	20 / 30	3.5 / 5.25	20 / 30	1.75 / 2.62	
	200	220-400	100	450-800	100	50 / 75	8.75 / 13.1	50 / 75	4.37 / 6.56	
	200	450-630	150	900-1250	150	100 / 150	17.5 / 26.2	100 / 150	8.75 / 13.1	
	200	710-750	200	1500	200	200 / 300	35.0 / 52.5	200 / 300	17.5 / 26.2	
	200	-	-	-	-	500 / 750	87.5 / 13.1	500 / 750	43.7 / 65.6	
	200	-	-	-	-	1000	175	1000 / 1500	87.5 / 131	
	200	-	-	-	-	-	-	2000	175	
<b>VZ4-PE-E10</b> <b>(110 V AC/DC)</b>	400	900-1250	300	2500	300	1500	262	3000	262	49,581.00
<b>(220 V AC/DC)</b> <b>VZ2-PE-E20</b>	200	35-75	20	75-160	20	5 / 10	0.87 / 1.75	5 / 10	0.44 / 0.87	38,124.00
200	90-200	50	185-400	50	20 / 30	3.5 / 5.25	20 / 30	1.75 / 2.62		
200	220-400	100	450-800	100	50 / 75	8.75 / 13.1	50 / 75	4.37 / 6.56		
200	450-630	150	900-1250	150	100 / 150	17.5 / 26.2	100 / 150	8.75 / 13.1		
200	710-750	200	1500	200	200 / 300	35.0 / 52.5	200 / 300	17.5 / 26.2		
200	-	-	-	-	500 / 750	87.5 / 131	500 / 750	43.7 / 65.6		
200	-	-	-	-	1000	175	1000 / 1500	87.5 / 131		
200	-	-	-	-	-	-	2000	175		
<b>VZ4-PE-E20</b> <b>(220 V AC / DC)</b>	400	900-1250	300	2500	300	1500	262	3000	262	51,915.00
	400	1500	400	3000	400	2000	350	4000	350	

**ADDITION OF AUXILIARY CONTACTS**

Description of Additional Contractors that may be fitted to the Standard Products		
TYPE	DESCRIPTION	PRICE EA.
<b>VZMOD1</b>	Additional 2NO and 2NC Contacts with External Pre-Wired Terminal Strip	3,650.00
<b>VZMOD2 (110 VAC)</b>	Additional 4NO and 4NC Contacts with External Pre-Wired Terminal Strip	5,750.00
<b>VZMOD3 (220 VAC)</b>	Additional 2NO and 2NC Contacts with External Pre-Wired Terminal Strip	5,750.00

**Note:**

\*Withdrawable type available contact CBI.

<sup>1</sup>Available coil voltages are:

110 V AC / DC (1100) replaced (5100).

220 V AC / DC (2100) replaced (6100).

<sup>2</sup>Standard aux contacts fitted are 2 N/O + 2 N/C.

Aux contact ratings are 1A @ 220V AC and 110V DC.

Extra aux contacts can be fitted.

\*Contact CBI for availability.

All Accessories are Factory Fitted only.

**ORDER NUMBER = TYPE NUMBER**



**SERIES TEK**

Terminal Blocks					
TYPE	CURRENT RATING (A)	NO. OF WAYS	RATED VOLTAGE	WIRE SIZE mm <sup>2</sup> MAX	PRICE EA.
TEK 1.25-12*	10	12	250	1.25	83.00
TEK 1.25-3	10	3	250	1.25	39.00
TEK 2-3	15	3	660	2.5	50.00
TEK 2-6	15	6	660	2.5	52.00
TEK 2-9*	15	9	660	2.5	101.00
TEK 2-12	15	12	660	2.5	102.00
TEK 2-20*	15	20	660	2.5	154.00
TEK 5.5-3	30	3	660	6.0	52.00
TEK 5.5-12*	30	12	660	6.0	127.00
TEK 14-3	60	3	660	16.0	64.00
TEK 14-4	60	4	660	16.0	97.00
TEK 22-3	80	3	660	25.0	121.00
TEK 22-4	80	4	660	25.0	154.00
TEK 60-3	150	3	660	70.0	174.00
TEK 60-4	150	4	660	70.0	242.00
TEK 100-3	225	3	660	120.0	293.00
TEK 100-4	225	4	660	120.0	394.00
TEK 200-3	400	3	660	180.0	788.00
TEK 400-3*	800	3	660	120x2	3,865.00

\*Contact CBI for availability

**ORDER NUMBER = TYPE NUMBER**

**Available and reliable.**

## MCBs AND ACCESSORIES DATA

### 1. Calibration

With CBI Hydraulic-Magnetic Miniature Circuit Breakers, there is no effect on the fixed trip point at ambient temperature ranges from -5 °C to +60 °C.

### 2. Products

Products comply to local and international standards (SANS, VC, IEC, etc).

### 3. DC Voltage Rating

Please refer to CBI catalogues / leaflets for DC ratings.

### 4. For reverse connection

Contact CBI for details.

### 5. Module Width

CBI's MCB module widths are:

13 mm and 26 mm in mini-rail mounting (Escutcheon height 57 mm).

13 mm, 18 mm and 27 mm in din-rail mounting (Escutcheon height 45 mm), Suffix "D".

### 6. Special Breakers

For all breakers manufactured to non-standard requirements, prices will be by quotation only.

### 7. Standard Current Ratings

Ampere ratings as indicated are standard. Non-standard ratings can be provided - Prices on request (POR).

### 8. Switch Disconnectors

All switch disconnectors must be backed up by a suitable short circuit protection device (SCPD), having the same or lower current rating and the same interrupting capacity as the switch disconnector, unless otherwise stated. Contact CBI for availability of 4-Pole switch disconnector units.

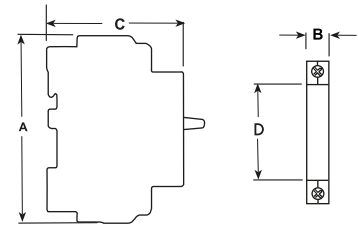
### 9. Motor Starting

Please refer to pages 82, 83, 84 or CBI catalogues / leaflets.

### 10. Time Delay curves

Curve No.	Time Delay	Instantaneous (Short circuit)	Non Tripping Current	Tripping Current
1	Long	High 10 - 20 x In	1.05 x In	1.30 x In
2	Medium	Medium 5 - 10 x In	1.05 x In	1.30 x In
3	Short	Low 3 - 5 x In	1.05 x In	1.30 x In
2,3 (LL)	Medium	115 % Trip Point (Load Limiting)	1.05 x In	1.15 x In
9	Long	Medium 7 - 12 x In	1.05 x In	1.30 x In
B	Short	Low 3 - 5 x In	1.13 x In	1.45 x In
C	Medium	Medium 5 - 10 x In	1.13 x In	1.45 x In
D	Long	High 10 - 20 x In	1.13 x In	1.45 x In
OP (AC+DC)	Very Short	Low 3 - 5 x In	1.05 x In	1.30 x In
U2 (DC)	Medium	Medium 6 - 11 x In	1.05 x In	1.30 x In
KM	Medium	Medium 6 - 12 x In	1.00 x In	1.25 x In

\*Other curves available on request.



**MCB DIMENSIONS**

PRODUCT	HEIGHT (A)	WIDTH (B)	DEPTH (C)	ESCUTCHEON (D)
QA-1(13)	93	13	66	57
QA-2(13)	93	26	66	57
QA-3(13)	93	39	66	57
QF-1(13)	93	13	66	57
QF-2(13)	93	26	66	57
QF-3(13)	93	39	66	57
QF-4(13)	93	52	66	57
QF-1(18)-D	93	18	65	45
QF-2(18)-D	93	36	65	45
QF-3(18)-D	93	54	65	45
QF-4(18)-D	93	72	65	45
QF-1(26)	93	26	66	57
QF-2(26)	93	52	66	57
QF-3(26)	93	78	66	57
QF-4(26)	93	104	66	57
QF-1(27)-D	97.5	27	65	45
QF-2(27)-D	97.5	54	65	45
QF-3(27)-D	97.5	81	65	45
QF-4(27)-D	97.5	108	65	45
QH-1(27)-D	97.5	27	65	45
QH-2(27)-D	97.5	54	65	45
QH-3(27)-D	97.5	81	65	45
QH-4(27)-D	97.5	108	65	45
QF14 A/C-D	93	36	65	45
QA17 A/C	93	26	64.8	57
QF17 A/C	93	26	64.8	57
SM15A	122	65	66	57
SM36A	122	117	66	57

NOTE: All measurements are done in mm.

## MCCBs AND ACCESSORIES DATA

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### 1. 1000 V Rating

For 1000 V rating, please consult CBI.  
(Switch disconnectors not available)

### 2. Adjustable Current Ratings

From the FD range upwards, some breakers are fitted with adjustable magnetic trips.  
The suffix “V/E” types also have adjustable overload trips. Suffix “E” (electronic) types down to 50 % of nominal rating and suffix “V” (mechanical) types down to 75 % of nominal rating.

### 3. Calibration

CBI thermal breakers are calibrated at 40 °C, unless otherwise stated. Derating for higher temperature environment to be done in accordance with derating curves.

### 4. Reverse Connection

Contact CBI for details. Units indicated line / load should not be reverse connected.

### 5. Special Breakers

Prices for all breakers made by CBI to meet non-standard rating requirements of customer will be by quotation only.

### 6. Standard Current Ratings

Ampere ratings indicated are standard. Non-standard can be provided, on application at a surcharge of up to 20 % of the next standard rating price, depending on quantity, product type and acceptance by CBI.

### 7. Switch Disconnector Fault Ratings

The fault current ratings of CBI switch disconnectors which are fitted with shunt trips and external tripping devices are the same as those of the corresponding circuit breakers. Addition of interface barriers is mandatory.

### 8. Terminations

Consult CBI Catalogues for details.

### 9. Transient Inrush and Close Co-ordination Protection

Higher transient motor starting current associated with some high efficiency motors have created nuisance tripping problems. Consult CBI when in doubt.

### 10. DC Interrupting Capacity

All CBI MCCBs have a DC Voltage Rating of 125 V per pole at 10 kA.

### 11. Motor Starting

In addition to cable protection functions, the CBI circuit breakers are designed for induction motor starting and protection duties. These breakers are particularly suited to direct-on-line starting applications for standard type motors in conjunction with a contactor overload combination or as a stand-alone unit. (Refer to pages 69, 70, 71.)  
For direct-on-line starting applications using Mitsubishi Circuit Breakers, please refer to page 70.





**For complete details, refer to the “Motor Starting and Protection Application Guide” and “Circuit Breaker Selection Guide for DOL Motor Starting”, copies available upon request.**

## WARRANTY CLAIMS

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**Products may only be returned to CBI for warranty claims if all conditions under Section 7, Limitation of Liability, of CBI's General Terms and Conditions of Sale have been met (Copy available upon request)**

**TERMINATIONS**

LUG TERMINAL		KD	
<p>G1</p> 		<p>G4B</p>  <p>X3</p>	
<p>G4B</p>  <p>X3</p>		<p>G4B</p>  <p>X1</p> <p>X2</p>	
LB		J25S/FD	

Note: For relevant current carrying capacities, please refer to relevant products.

**MCCB TERMINAL BOLT SIZES:**

- J25S - M8
- L20 / L40B - M12
- G15 / 25D - M8
- G35D - M8
- F15 / 25D - M8
- F35D - M8
- K25 / 35D - M12
- L35 / 50D - M12
- MB - M12
- N85D - M12

**THIS IS A SERIES CONNECTED (CASCADING) SYSTEM  
REPLACEMENT OF THE CIRCUIT BREAKERS OTHER THAN THOSE OF IDENTICAL TYPES  
SHOULD BE REFERRED TO THE CIRCUIT BREAKER MANUFACTURER**

## CASCADING TABLES

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**Note:**

**Any current limiting by the cables should be taken into account.**

**Application of the Cascading Table No 1 and 2 on Page 67 and 68. The Cascading Table is applied in practice as follows:**

1. Determine the maximum prospective short circuit fault current level at the point of installation of the upstream breaker in the cascade.
2. Moving from the left side towards the right side of the cascading table, in the **top** row, select an upstream breaker whose breaking capacity rating is equal to or greater than that determined by (1.) above.
3. Determine the prospective short circuit current at the installation point of the **downstream** breaker, taking into account only the current limiting effect of any cable that is connected between the upstream and downstream breakers. Any current limiting by the upstream breaker should be ignored for this purpose.
4. From the first column on the left of the cascading table, select the **row** that represents a short circuit current that is equal to or higher than this latter short circuit current.
5. The **downstream** breaker suitable for the cascading application will then be found at the intersection of the row from (2) above, and the column from (4) above.

**Due to constant research and development, CBI reserves the right to make changes, modifications and extensions to these cascading tables without prior notice.**

**Also available:**

**CBI's software "CBI<sup>2</sup>" which is specially prepared to assist designers in the selection of circuit breakers and cables for a low voltage distribution system. This program is available through CBI.**

CASCADING TABLE (CBI MCCBs and MCBs)

UPSTREAM CIRCUIT BREAKERS										BUSBAR RATING kA RMS
No. OF POLES	G15D / F15D	G25D / F25D	G35D / F35D	F65DV	K25D	K35D	K65D	L65D		
FAULT LEVEL kA	3	3	3	3	3	3	3	3		
AMP RATING	15	25	35	65	25	35	65	65		
	125	125	125	100	400	400	400	630		
65				QH	QH			G15D / F15D	20	
50				QH	QH			G15D / F15D		
35			QH QF1*	QH QF1*	QH QF1*			G15D / F15D		
30			QF1 QF*	QF1 QF*	QF1 QF*		G15D / F15D	G15D / F15D	15	
25		QF1 QF*	QF1 QF*	QF1 QF*	G15D / F15D	G15D / F15D	G15D / F15D	G15D / F15D		
20		QF QF*	QF QF*	QF QF*	G15D / F15D	G15D / F15D	G15D / F15D	G15D / F15D		
15	QF QF*	QF QF*	QF QF*	QF QF*	QH QF1	QH QF1	QH QF1	QH QF1	10	
10	QF	QF	QF	QF	QF1	QF1	QF1	QF1		
<b>PROSPECTIVE DOWNSTREAM FAULT LEVEL kA (RMS)</b>										

TYPE	MOUNTING TYPE	ESCUITCHEON, mm
QF/QH	Mini / DIN	57
	DIN	45

**NOTES:**  
**QF = QF-(13), QF-(18), QF-(26)**  
**QF\* = QF-(18), QF-(26) ONLY**  
**QF1, QF1\* = Single pole circuit breakers**  
**QF, QF\*, QH = Single, double or triple pole circuit breakers**

F15D CAN CASCADE WITH ANY FD UPSTREAM BREAKER UP TO THE MAXIMUM FAULT LEVEL kA OF THE UPSTREAM BREAKER

**mitsubishi cascading table (Mitsubishi MCCBs and CBI MCBs)**

**UPSTREAM CIRCUIT BREAKERS**

TYPE	NF125SGW NF160SGW NF250SGW			NF125SGW NF160SGW NF250SGW			NF125SGW NF160SGW NF250SGW			NF125SGW NF160SGW NF250SGW					
	No. OF POLES	3			3			3			3				
FAULT LEVEL kA	20			25			30			35					
AMP RATING	125	160	250	125	160	250	125	160	250	125	160	250	125	160	250
35													QF	QF	QF
30							QF	QF	QF				QF	QF	QF
25				QF	QF	QF				QF	QF	QF			
20				QF	QF	QF				QF	QF	QF			
15				QF	QF	QF				QF	QF	QF			
10				QF	QF	QF				QF	QF	QF			

**PROSPECTIVE DOWNSTREAM FAULT LEVEL kA (RMS)**

**NOTES:**

**MCBs**

**QF = QF3-(18), QF1-(18), QF-(26)**

**MCCBs**

**NF125 = 63-100, 80-125 A (thermal adjustable)**

**NF160 = 125-160 A (thermal adjustable)**

**NF250 = 125-160, 160-250 A (thermal adjustable)**

TYPE	MOUNTING TYPE	ESCUICHEON, mm
QF	Mini / DIN	57
	DIN	45

		SINGLE PHASE VOLTAGE 230V AC					THREE PHASE VOLTAGE 400V AC				
MOTOR SIZE (kW)	5 kA	10 kA	5 kA	10 kA	15 kA	25 kA	35 kA	65 kA	Note: * = External Overload Protection Required. Curve 1 Circuit Breakers Only. ** = Locked Rotor Protection Only.		
0.12	QF1 5A*	QHI 5A*	QF3 1A*	QH3 1A*	G15D 16A**	G25D 16A**	G35D 16A**	F65DV 16-25 (16A) <sup>spd</sup>			
0.18	QF1 5A*	QHI 5A*	QF3 2A*	QH3 2A*	G15D 16A**	G25D 16A**	G35D 16A**	F65DV 16-25 (16A) <sup>spd</sup>			
0.25	QF1 5A*	QHI 5A*	QF3 2A*	QH3 2A*	G15D 16A**	G25D 16A**	G35D 16A**	F65DV 16-25 (16A) <sup>spd</sup>			
0.37	QF1 5A*	QHI 5A*	QF3 2A*	QH3 2A*	G15D 16A**	G25D 16A**	G35D 16A**	F65DV 16-25 (16A) <sup>spd</sup>			
0.55	QF1 10A*	QHI 10A*	QF3 5A*	QH3 5A*	G15D 16A**	G25D 16A**	G35D 16A**	F65DV 16-25 (16A) <sup>spd</sup>			
0.75	QF1 10A*	QHI 10A*	QF3 5A*	QH3 5A*	G15D 16A**	G25D 16A**	G35D 16A**	F65DV 16-25 (16A) <sup>spd</sup>			
1.1	QF1 15A*	QHI 15A*	QF3 5A*	QH3 5A*	G15D 16A**	G25D 16A**	G35D 16A**	F65DV 16-25 (16A) <sup>spd</sup>			
1.5	QF1 15A*	QHI 15A*	QF3 5A*	QH3 5A*	G15D 16A**	G25D 16A**	G35D 16A**	F65DV 16-25 (16A) <sup>spd</sup>			
1.8	QF1 20A*	QHI 20A*	QF3 10A*	QH3 10A*	G15D 16A**	G25D 16A**	G35D 16A**	F65DV 16-25 (16A) <sup>spd</sup>			
2.2	QF1 20A*	QHI 20A*	QF3 10A*	QH3 10A*	G15D 16A**	G25D 16A**	G35D 16A**	F65DV 16-25 (16A) <sup>spd</sup>			
3	QF1 25A*	QHI 25A*	QF3 10A*	QH3 10A*	G15D 16A**	G25D 16A**	G35D 16A**	F65DV 16-25 (16A) <sup>spd</sup>			
3.7	QF1 30A*	QHI 30A*	QF3 15A*	QH3 15A*	G15D 16A**	G25D 16A**	G35D 16A**	F65DV 16-25 (16A) <sup>spd</sup>			
4	QF1 30A*	QHI 30A*	QF3 15A*	QH3 15A*	G15D 16A**	G25D 16A**	G35D 16A**	F65DV 16-25 (16A) <sup>spd</sup>			
4.5	QF1 35A*	QHI 35A*	QF3 20A*	QH3 20A*	G15D 20A	G25D 20A	G35D 20A	F65DV 16-25 (20A) <sup>1</sup>			
5.2	QF1 40A*	QHI 40A*	QF3 20A*	QH3 20A*	G15D 20A	G25D 20A	G35D 20A	F65DV 16-25 (20A) <sup>1</sup>			
5.5	QF1 45A*	QHI 45A*	QF3 20A*	QH3 20A*	G15D 20A	G25D 20A	G35D 20A	F65DV 16-25 (20A) <sup>1</sup>			
6	QF1 50A*	QHI 50A*	QF3 20A*	QH3 20A*	G15D 20A	G25D 20A	G35D 20A	F65DV 16-25 (20A) <sup>1</sup>			
7	QF1 60A*	QHI 60A*	QF3 20A*	QH3 20A*	G15D 32A	G25D 32A	G35D 20A	F65DV 25-40 (32A) <sup>1</sup>			
7.5	QF1 70A*	QHI 70A*	QF3 25A*	QH3 25A*	G15D 32A	G25D 32A	G35D 20A	F65DV 25-40 (32A) <sup>1</sup>			
9.3	QF1 80A*	QHI 80A*	QF3 30A*	QH3 30A*	G15D(40A)	G25D 40A	G35D 40A	F65DV 25-40 (40A) <sup>1</sup>			
11	QF1 100A*	QHI 100A*	QF3 35A*	QH3 35A*	G15D 40A	G25D 40A	G35D 40A	F65DV 25-40 (40A) <sup>1</sup>			
15			QF3 45A*	QH3 45A*	G15D 50A	G25D 50A	G35D 50A	F65DV 40-63 (50A) <sup>1</sup>			
18.5			QF3 60A*	QH3 60A*	G15D 63A	G25D 63A	G35D 63A	F65DV 40-63 (63A) <sup>1</sup>			
22			QF3 70A*	QH3 70A*	G15D 80A	G25D 80A	G35D 80A	F65DV 80-125/63-100 (80A) <sup>1</sup>			
26			QF3 80A*	QH3 80A*	G15D 100A	G25D 100A	G35D 100A	F65DV 80-125/63-100 (100A) <sup>1</sup>			
30			QF3 80A*	QH3 80A*	G15D 100A	G25D 100A	G35D 100A	F65DV 80-125/63-100 (100A) <sup>1</sup>			
37			QF3 100A*	QH3 100A*	G15D 125A	G25D 125A	G35D 125A	F65DV 80-125 (125A) <sup>1</sup>			
45					G15D 125A	G25D 125A	G35D 125A	F65DV 80-125 (125A) <sup>1</sup>			
55					F15D 175A	F25D 175A	F35D 175A	F65DV 160-250 (175A) <sup>1</sup>			
75					F15D 225A	F25D 225A	F25D 225A	F65DV 160-250 (225A) <sup>1</sup>			
90					F15D 250A / F25D 250A	F25D 250A / F25D 250A	F35D 250A / F35D 250A	F65DV 250A / K65DE 250A) <sup>1</sup>			
110					K25D 350A	K25D 350A	K35D 350A	K65D 200-400 (350A) <sup>1</sup>			
132					K25D 400A	K25D 400A	K35D 400A	K65D 200-400 (400A) <sup>1</sup>			
160					K35D 500A	K35D 500A	K35D 500A	K70D 300-630 (500A) <sup>1</sup>			
200					K35D 600A	K35D 600A	K35D 600A	K70D300-630 (600A) <sup>1</sup>			
250					L35DE 800 (700A) <sup>1</sup>	L35DE 800 (700A) <sup>1</sup>	L35DE 800 (700A) <sup>1</sup>	L70DE 800 (700A) <sup>1</sup>			
315					N85DE 1000 (900A) <sup>1</sup>	N85DE 1000 (900A) <sup>1</sup>	N85DE 1000 (900A) <sup>1</sup>	N85DE 1000 (900A) <sup>1</sup>			
355					N85DE 1000 (1000A) <sup>1</sup>	N85DE 1000 (1000A) <sup>1</sup>	N85DE 1000 (1000A) <sup>1</sup>	N85DE 1000 (1000A) <sup>1</sup>			
400					N85DE 1250 (1200A) <sup>1</sup>	N85DE 1250 (1200A) <sup>1</sup>	N85DE 1250 (1200A) <sup>1</sup>	N85DE 1250 (1200A) <sup>1</sup>			
450					N85DE 1250 (1250A) <sup>1</sup>	N85DE 1250 (1250A) <sup>1</sup>	N85DE 1250 (1250A) <sup>1</sup>	N85DE 1250 (1250A) <sup>1</sup>			
500					N85DE 1600 (1400A) <sup>1</sup>	N85DE 1600 (1400A) <sup>1</sup>	N85DE 1600 (1400A) <sup>1</sup>	N85DE 1600 (1400A) <sup>1</sup>			
560					N85DE 1600 (1600A) <sup>1</sup>	N85DE 1600 (1600A) <sup>1</sup>	N85DE 1600 (1600A) <sup>1</sup>	N85DE 1600 (1600A) <sup>1</sup>			
630					AE2000SW/SWA (1750A) <sup>1</sup>	AE2000SW/SWA (1750A) <sup>1</sup>	AE2000SW/SWA (1750A) <sup>1</sup>	AE2000SW/SWA (1750A) <sup>1</sup>			
710					AE2000SW/SWA (1900A) <sup>1</sup>	AE2000SW/SWA (1900A) <sup>1</sup>	AE2000SW/SWA (1900A) <sup>1</sup>	AE2000SW/SWA (1900A) <sup>1</sup>			

**Notes:**

- All information in this table is for reference and selection purposes only, and only for direct line (DOL) starting.
- Breaker selection is based on 4-pole three phase squirrel cage motors and certain deviations may be encountered for different motor manufacturers.
- Circuit breaker settings are based on rated motor current multiplied by 1.6 to prevent starting current from exceeding the instantaneous pick-up current of the circuit breaker.
- For complete details refer to the "Circuit Breaker Selection Guide for DOL Motor Starting".  
These are adjustable breakers and the current in ( ) is the ampere value that these breakers must be set at.

## MITSUBISHI DOL

MOTOR SIZE (kW)	THREE PHASE VOLTAGE - 400 V AC	THREE PHASE VOLTAGE - 525 V AC
0.37	NF63-HWA 10A, NV63-HWA 16A, NV125-SWA/HWA 16A	NF63-HWA 10A, NV63-HWA 16A, NV125-SWA/HWA 16A
0.55	NF63-HWA 10A, NV63-HWA 16A, NV125-SWA/HWA 16A	NF63-HWA 10A, NV63-HWA 16A, NV125-SWA/HWA 16A
0.75	NF63-HWA 10A, NV63-HWA 16A, NV125-SWA/HWA 16A	NF63-HWA 10A, NV63-HWA 16A, NV125-SWA/HWA 16A
1.1	NF63-HWA 10A, NV63-HWA 16A, NV125-SWA/HWA 16A	NF63-HWA 10A, NV63-HWA 16A, NV125-SWA/HWA 16A
1.5	NF63-HWA 10A, NV63-HWA 16A, NV125-SWA/HWA 16A	NF63-HWA 10A, NV63-HWA 16A, NV125-SWA/HWA 16A
2.2	NF63-HWA 10A, NV63-HWA 16A, NV125-SWA/HWA 16A	NF63-HWA 10A, NV63-HWA 16A, NV125-SWA/HWA 16A
3	NF63-HWA 10A, NV63-HWA 16A, NV125-SWA/HWA 16A	NF63-HWA 10A, NV63-HWA 16A, NV125-SWA/HWA 16A
4	NF63-HWA 16A, NF125-SWA/HWA 16A, NV125-SWA/HWA 16A	NF63-HWA 16A, NF125-SWA/HWA 16A, NV125-SWA/HWA 16A
5.5	NF63-HWA 20A, NF125-SWA/HWA 20A, NV125-SWA/HWA 20A	NF63-HWA 20A, NF125-SWA/HWA 20A, NV125-SWA/HWA 20A
7.5	NF63-HWA 32A, NF125-SWA/HWA 32A, NV125-SWA/HWA 32A	NF63-HWA 32A, NF125-SWA/HWA 32A, NV125-SWA/HWA 32A
11	NF63-HWA 40A, NF125-SWA/HWA 40A, NV125-SWA/HWA 40A	NF63-HWA 40A, NF125-SWA/HWA 40A, NV125-SWA/HWA 40A
15	NF63-HWA 50A, NF125-SWA/HWA 50A, NV125-SWA/HWA 50A	NF63-HWA 50A, NF125-SWA/HWA 50A, NV125-SWA/HWA 50A
18.5	NF63-HWA 63A, NF125-CWA/SWA/HWA 63A, NV125-SWA/HWA 63A	NF63-HWA 50A, NF125-SWA/HWA 50A, NV125-SWA/HWA 50A
22	NF125-CWA/SWA/HWA 80A, NV125-SWA/HWA 80A	NF63-HWA 50A, NF125-SWA/HWA 50A, NV125-SWA/HWA 50A
30	NF125-CWA/SWA/HWA 100A, NV125-SWA/HWA 100A	NF125-CWA/SWA/HWA 80A, NV125-SWA/HWA 80A
37	NF160/250-CWA/SWA/HWA 125A, NV250-SWA/HWA 125A	NF125-CWA/SWA/HWA 80A, NV125-SWA/HWA 80A
45	NF160/250-CWA/SWA/HWA 125A, NV250-SWA/HWA 125A	NF125-CWA/SWA/HWA 100A, NV125-SWA/HWA 100A
55	NF160-SWA/HWA 160A, NF250-CWA/SWA/HWA 175A, NV250-SWA/HWA 175A	NF160/250-CWA/SWA/HWA 125A, NV250-SWA/HWA 125A
75	NF250-CWA/SWA/HWA 225A, NV250-SWA/HWA 225A	NF250-CWA/SWA/HWA 175A, NV250-SWA/HWA 175A
90	NF250-CWA/SWA/HWA 250A, NF400CW/SW 250A, NV400 SW 250A	NF250-CWA/SWA/HWA 200A, NV250-SWA/HWA 200A
110	NF400 CW/SW 350A, NV400 SW 350A	NF250-CWA/SWA/HWA 250A, NF400-CW/SW 250A, NV400-SW 250A
132	NF400 CW/SW 400A, NV400 SW 400A	NF400-CW/SW 300A, NV400-SW 300A
160	NF630 CW/SW 500A, NV630 SW 500A	NF400-CW/SW 350A, NV400-SW 350A
200	NF630 CW/SW 600A, NV630 SW 600A	NF630-CW/SW 500A, NV630-SW 500A
250	NF800 CEW/SEW (700A)*, NV800-SEW (700A)*	NF630-CW/SW 600A, NV630-SW 600A
315	NF1000-SEW (900A)*, AE1000-SW (900A)*	NF800-CEW/SEW (700A)*, NV800-SEW (700A)*
355	NF1000-SEW (1000A)*, AE1000-SW (1000A)*	NF800-CEW/SEW (800A)*, NV800-SEW (800A)*
400	NF1250-SEW (1200A)*, AE1250-SW (1200A)*	NF1000-SEW (900A)*, AE1000-SW (900A)*
450	NF1250-SEW (1250A)*, AE1250-SW (1250A)*	NF1000-SEW (1000A)*, AE1000-SW (1000A)*
500	NF1600-SEW (1400A)*, AE1600-SW (1400A)*	NF1250-SEW (1200A)*, AE1250-SW (1100A)*
560	NF1600-SEW (1600A)*, AE1600-SW (1600A)*	NF1250-SEW (1200A)*, AE1250-SW (1200A)*
630	AE2000-SW/SWA (1750A)*	NF1600-SEW (1400A)*, AE1600-SW (1300A)*
710	AE2000-SW/SWA (1900A)*	NF1600-SEW (1500A)*, AE1600-SW (1500A)*

### NOTES:

- 1) All information contained in this table is for reference and selection purposes only and only for direct on line motor starting (DOL).
- 2) Breaker selection is based on 4-pole three phase squirrel cage motors and certain deviations may be encountered for different motor manufacturers.
- 3) kA ratings of breakers must be selected in accordance with fault levels of applicable systems.
- 4) Circuit breaker settings are based on rated motor current multiplied by 1,6 to prevent starting current from exceeding the instantaneous pick-up current of the circuit breaker.
- 5) For complete details, refer to the "Circuit Breaker Selection Guide For DOL Motor Starting".

		THREE PHASE VOLTAGE 525 V AC			
MOTOR SIZE (mm)	2.5 kA	15 kA	18/22 kA <sup>2</sup>	22/30 kA <sup>2</sup>	35 kA <sup>2</sup>
0.12	SF3-G3* 1A				
0.18	SF3-G3* 1A				
0.25	SF3-G3* 1A				
0.37	SF3-G3* 2A	G15D 16A**	G25D 16A**	G35D 16A**	F65DV 16-25 (16A) <sup>†††</sup>
0.55	SF3-G3* 2A	G15D 16A**	G25D 16A**	G35D 16A**	F65DV 16-25 (16A) <sup>†††</sup>
0.75	SF3-G3* 2A	G15D 16A**	G25D 16A**	G35D 16A**	F65DV 16-25 (16A) <sup>†††</sup>
1.1	SF3-G3* 2A	G15D 16A**	G25D 16A**	G35D 16A**	F65DV 16-25 (16A) <sup>†††</sup>
1.5	SF3-G3* 5A	G15D 16A**	G25D 16A**	G35D 16A**	F65DV 16-25 (16A) <sup>†††</sup>
1.8	SF3-G3* 5A	G15D 16A**	G25D 16A**	G35D 16A**	F65DV 16-25 (16A) <sup>†††</sup>
2.2	SF3-G3* 5A	G15D 16A**	G25D 16A**	G35D 16A**	F65DV 16-25 (16A) <sup>†††</sup>
3	SF3-G3* 10A	G15D 16A**	G25D 16A**	G35D 16A**	F65DV 16-25 (16A) <sup>†††</sup>
3.7	SF3-G3* 10A	G15D 16A**	G25D 16A**	G35D 16A**	F65DV 16-25 (16A) <sup>†††</sup>
4	SF3-G3* 10A	G15D 16A**	G25D 16A**	G35D 16A**	F65DV 16-25 (16A) <sup>†††</sup>
4.5	SF3-G3* 10A	G15D 16A**	G25D 16A**	G35D 16A**	F65DV 16-25 (16A) <sup>†††</sup>
5.2	SF3-G3* 15A	G15D 16A**	G25D 16A**	G35D 16A**	F65DV 16-25 (16A) <sup>†††</sup>
5.5	SF3-G3* 15A	G15D 16A**	G25D 16A**	G35D 16A**	F65DV 16-25 (16A) <sup>†††</sup>
6	SF3-G3* 15A	G15D 20A	G25D 20A	G35D 20A	F65DV 16-25 (20A) <sup>†</sup>
7	SF3-G3* 15A	G15D 20A	G25D 20A	G35D 20A	F65DV 16-25 (20A) <sup>†</sup>
7.5	SF3-G3* 20A	G15D 20A	G25D 20A	G35D 20A	F65DV 16-25 (20A) <sup>†</sup>
9.3	SF3-G3* 20A	G15D 32A	G25D 32A	G35D 32A	F65DV 25-40 (32A) <sup>†</sup>
11	SF3-G3* 25A	G15D 32A	G25D 32A	G35D 32A	F65DV 25-40 (32A) <sup>†</sup>
15	SF3-G3* 35A	G15D 40A	G25D 40A	G35D 40A	F65DV 25-40 (40A) <sup>†</sup>
18.5	SF3-G3* 40A	G15D 50A	G25D 50A	G35D 50A	F65DV 40-63 (50A) <sup>†</sup>
22	SF3-G3* 50A	G15D 50A	G25D 50A	G35D 50A	F65DV 40-63 (50A) <sup>†</sup>
26	SF3-G3* 60A	G15D 80A	G25D 80A	G35D 80A	F65DV 80-125 / 63-100 (80A) <sup>†</sup>
30	SF3-G3* 70A	G15D 80A	G25D 80A	G35D 80A	F65DV 80-125 / 63-100 (80A) <sup>†</sup>
37	SF3-G3* 80A	G15D 80A	G25D 80A	G35D 80A	F65DV 80-125 / 63-100 (80A) <sup>†</sup>
45	SF3-G3* 100A	G15D 100A	G25D 100A	G35D 100A	F65DV 80-125 / 63-100 (100A) <sup>†</sup>
55		G15D 125A	G25D 125A	G35D 125A	F65DV 80-125 (125A) <sup>†</sup>
75		K15D 175A	K25D 175A	K35D 175A	F65D(Z) 160-250 (175A) <sup>†</sup>
90		K15D 200A	K25D 200A	K35D 200A	F65DV 160-250 (200A) <sup>†</sup>
110		K15D 250A / K35D 250A	K25D 250A / K35D 250A	K35D 250A / K35D 250A	F65DV 160-250 (250A) <sup>†</sup>
132		K35D 300A	K35D 300A	K35D 300A	K50DE 630 (300A) <sup>†</sup>
160		K35D 350A	K35D 350A	K35D 350A	K50DE 630 (350A) <sup>†</sup>
200		K50D 500A	K50D 500A	K50D 500A	K50D(X) 500A / K50DE(X) 630 (500A) <sup>†</sup>
250		K50D 600A	K50D 600A	K50D 600A	K50D(X) 600A / K50DE(X) 630 (600A) <sup>†</sup>
315		L50DE 800 (700A) <sup>†</sup>	L50DE 800 (700A) <sup>†</sup>	L50DE 800 (700A) <sup>†</sup>	L50DE (700A)
355		L50DE 800 (800A) <sup>†</sup>	L50DE 800 (800A) <sup>†</sup>	L50DE 800 (800A) <sup>†</sup>	L50DE (800A) <sup>†</sup>
400		N85DE 1000 (900A) / AE1000-SW (900A)	N85DE 1000 (900A) / AE1000-SW (900A)	N85DE 1000 (900A) / AE1000-SW (900A)	N85DE 1000 (900A) / AE1000-SW (900A) <sup>†</sup>
450		N85DE 1000 (1000A) / AE1000-SW (1000A)	N85DE 1000 (1000A) / AE1000-SW (1000A)	N85DE 1000 (1000A) / AE1000-SW (1000A)	N85DE 1000 (1000A) / AE1000-SW (1000A) <sup>†</sup>
500		N85DE 1250 (1200A) / AE1250-SW (1100A)	N85DE 1250 (1200A) / AE1250-SW (1100A)	N85DE 1250 (1200A) / AE1250-SW (1100A)	N85DE 1250 (1200A) / AE1250-SW (1100A) <sup>†</sup>
550		N85DE 1250 (1200A) / AE1250-SW (1100A)	N85DE 1250 (1200A) / AE1250-SW (1100A)	N85DE 1250 (1200A) / AE1250-SW (1100A)	N85DE 1250 (1200A) / AE1250-SW (1100A) <sup>†</sup>
560		N85DE 1250 (1200A) / AE1250-SW (1200A)	N85DE 1250 (1200A) / AE1250-SW (1200A)	N85DE 1250 (1200A) / AE1250-SW (1200A)	N85DE 1250 (1200A) / AE1250-SW (1200A) <sup>†</sup>
630		N85DE 1600 (1400A) / AE1600-SW (1300A)	N85DE 1600 (1400A) / AE1600-SW (1300A)	N85DE 1600 (1400A) / AE1600-SW (1300A)	N85DE 1600 (1400A) / AE1600-SW (1300A) <sup>†</sup>
710		N85DE 1600 (1500A) / AE1600-SW (1500A)	N85DE 1600 (1500A) / AE1600-SW (1500A)	N85DE 1600 (1500A) / AE1600-SW (1500A)	N85DE 1600 (1500A) / AE1600-SW (1500A) <sup>†</sup>

**Note:** \* External Overload Protection Required. Curve 1 Circuit Breakers Only.  
 \*\* Locked Rotor Protection Only.

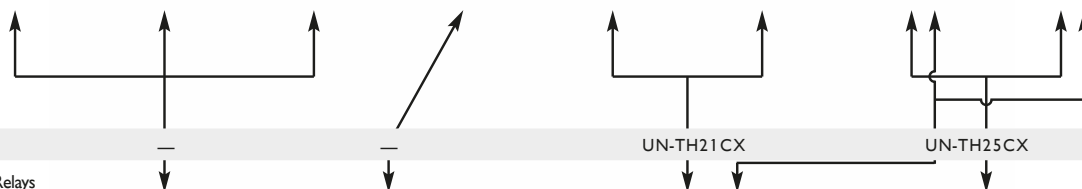
- Notes:**
- 1) All information in this table is for reference and selection purposes only, and only for direct line (DOL) starting.
  - 2) Breaker selection is based on 4-pole three phase squirrel cage motors and certain deviations may be encountered for different motor manufacturers.
  - 3) Circuit breaker settings are based on rated motor current multiplied by 1.6 to prevent starting current from exceeding the instantaneous pick-up current of the circuit breaker.
  - 4) For complete details refer to the "Circuit Breaker Selection Guide for DOL Motor Starting".
- <sup>†</sup> These are adjustable breakers and the current in ( ) is the ampere value that these breakers must be set at.  
<sup>††</sup> Insure the breaking capacity (kA) of the product is equal to or greater than the Prospective Short Circuit (PSC) current of the installation.

### Three-phase motor ratings for Contactors

Coil		SN10 - COIL				SN21 - COIL		SN25 - COIL	
Contactor	AC-operated	S-N10CX	S-N11CX	S-N12CX	S-N18CX	S-N20CX	S-N21CX	S-N25CX	S-N35CX
	DC-operated	-	SD-N11CX	SD-N12CX	-	-	SD-N21CX	-	SD-N35CX
Auxiliary contacts standard		1 NO	1 NO	1 NO + 1 NC	-	1 NO + 1 NC	2 NO + 2 NC	2 NO + 2 NC	2 NO + 2 NC
Rated insulation voltage V		690	690	690	690	690	690	690	690
Conventional free air thermal current Ith A		20	20	20	25	32	32	50	60
Rated capacity for resistive loads 3-ph, Category AC-1									
	220-240V kW (A)	7.5 (20)	7.5 (20)	7.5 (20)	9.5 (25)	12 (32)	12 (32)	18 (50)	20 (60)
	380-440V kW (A)	7 (11)	8.5 (13)	8.5 (13)	13 (20)	20 (32)	20 (32)	30 (50)	35 (60)
	500V kW (A)	7 (8)	9.5 (11)	9.5 (11)	13 (16)	25 (32)	25 (32)	40 (50)	50 (60)
	690V kW (A)	7 (6)	8 (8)	8 (8)	11 (10)	30 (32)	30 (32)	50 (50)	60 (60)
Rated operational current for squirrel cage motors 3-ph, Category AC-3									
	220-240V kW (A)	2.5 (11)	3.5 (13)	3.5 (13)	4.5 (18)	5.5 (22)	5.5 (22)	7.5 (30)	11 (40)
	380-440V kW (A)	4 (9)	5.5 (12)	5.5 (12)	7.5 (16)	11 (22)	11 (22)	15 (30)	18.5 (40)
	500V kW (A)	4 (7)	5.5 (9)	5.5 (9)	7.5 (13)	11 (17)	11 (17)	15 (24)	18.5 (32)
	690V kW (A)	4 (5)	5.5 (7)	5.5 (7)	7.5 (9)	7.5 (9)	7.5 (9)	11 (12)	15 (17)
Rated capacity for jogging of AC motors 3-ph, Category AC-4									
	220-240V kW	0.75	1.1	1.1	1.5	2.2	2.2	3	3.7
Electrical life is ca. 200,000 operations									
	380-440V kW	1.1	1.5	1.5	2.2	3.7	3.7	5.5	5.5
	500V kW	1.1	1.5	1.5	2.2	3.7	3.7	5.5	5.5
	690V kW	1.1	1.5	1.5	2.2	3.7	3.7	5.5	5.5
Making & breaking 3-ph, cos T= 0.35									
	Making current A	110/110	130/120	130/120	180/180	220/220	220/220	300/300	400/400
	Breaking current A	100/72	120/100	120/100	180/130	220/220	220/220	300/240	400/320
Switching Frequency									
	Category AC-1 Operations / hr	1,800	1,800	1,800	1,800	1,800	1,800	1,800	1,800
	Category AC-3 Operations / hr	1,800	1,800	1,800	1,800	1,800	1,800	1,800	1,800
	Category AC-4 Operations / hr	600	600	600	600	600	600	600	600
Dimensions (W x H x D) SN		mm	43 x 78 x 78	43 x 78 x 78	53 x 78 x 78	43 x 79 x 81	63 x 81 x 81	63 x 81 x 81	75 x 89 x 91
Dimensions (W x H x D) SD-N		mm	43 x 78 x 78	43 x 78 x 110	43 x 78 x 110	43 x 79 x 81	63 x 81 x 81	63 x 81 x 113	75 x 89 x 91



S-N10CX	S-N11CX	S-N12CX	S-N18CX	S-N20CX	S-N21CX	S-N25CX	S-N35CX
	SD-N11CX	SD-N12CX	-	-	SD-N21CX	-	SD-N35CX



Type	TH-N12KPCX	TH-N18KPCX	TH-N20KPCX	TH-N20TAKPCX	
Setting Range	0.1 - 13 A	1 - 18 A	0.2 - 22 A	18 - 40 A	
Heater Setting A Range	0.1 ~ 0.16 (0.12 A) 0.14 ~ 0.22 (0.17 A) 0.2 ~ 0.32 (0.24 A) 0.28 ~ 0.42 (0.35 A) 0.4 ~ 0.6 (0.5 A) 0.55 ~ 0.85 (0.7 A) 0.7 ~ 1.1 (0.9 A) 1 ~ 1.6 (1.3 A)	1.4 ~ 2 (1.7 A) 1.7 ~ 2.5 (2.1 A) 2 ~ 3 (2.5 A) 2.8 ~ 4.4 (3.6 A) 4 ~ 6 (5 A) 5.2 ~ 8 (6.6 A) 7 ~ 11 (9 A) 9 ~ 13 (11 A) <sup>1</sup>	1 ~ 1.6 (1.3 A) 1.4 ~ 2 (1.7 A) 1.7 ~ 2.5 (2.1 A) 2 ~ 3 (2.5 A) 2.8 ~ 4.4 (3.6 A) 4 ~ 6 (5 A) 5.2 ~ 8 (6.6 A) 7 ~ 11 (9 A) 9 ~ 13 (11 A) 12 ~ 18 (15 A)	2 ~ 3 (2.5 A) 2.8 ~ 4.4 (3.6 A) 4 ~ 6 (5 A) 5.2 ~ 8 (6.6 A) 7 ~ 11 (9 A) 7 ~ 11 (9 A) 9 ~ 13 (11 A) 12 ~ 18 (15 A) 16 ~ 22 (19 A) <sup>3</sup>	18 ~ 26 (2.2 A) 24 ~ 34 (2.9 A) 30 ~ 40 (3.5 A) <sup>4</sup>
Dimensions (W x H x D) mm	46 x 55 x 76,5	54 x 59 x 80	63 x 51 x 79	74 x 72 x 83,5	

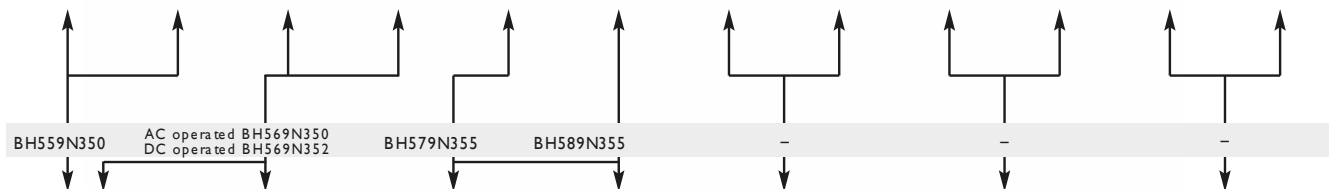


**Note:**  
<sup>1</sup>660 A at ambient temperature 40 ° - 55 ° C  
<sup>2</sup>800 A at ambient temperature 40 ° - 55 ° C  
<sup>3</sup>For size N20 & N21 only  
<sup>4</sup>For size N35 only

SN50-COIL		SN80-COIL		SN125-COIL		SN180-COIL		SN300-COIL		SN600-COIL	
S-N50CX	S-N65CX	S-N80	S-N95	S-N125	S-N150	S-N180	S-N220	S-N300	S-N400	S-N600	S-N800
SD-N50	SD-N65	SD-N80	SD-N95	SD-N125	SD-N150	--	SD-N220	SD-N300	SD-N400	SD-N600	SD-N800
2 NO + 2 NC	2 NO + 2 NC	2 NO + 2 NC	2 NO + 2 NC	2 NO + 2 NC	2 NO + 2 NC	2 NO + 2 NC	2 NO + 2 NC	2 NO + 2 NC	2 NO + 2 NC	2 NO + 2 NC	2 NO + 2 NC
690	690	690	690	690	690	690	690	690	690	690	690
80	100	135	150	150	200	260	260	350	450	800 <sup>1</sup>	1000 <sup>2</sup>
30 (80)	35 (100)	50 (135)	55 (150)	55 (150)	75 (200)	95 (260)	95 (260)	130 (350)	170 (450)	250 (660)	300 (800)
50 (80)	65 (100)	85 (135)	90 (150)	90 (150)	130 (200)	170 (260)	170 (260)	230 (350)	290 (450)	430 (660)	530 (800)
65 (80)	85 (100)	110 (135)	120 (150)	120 (150)	170 (200)	220 (260)	220 (260)	300 (350)	380 (450)	570 (660)	700 (800)
80 (80)	100 (100)	135 (135)	150 (150)	150 (150)	200 (200)	260 (260)	260 (260)	350 (350)	450 (450)	660 (660)	900 (800)
15 (55)	18.5 (65)	22(85)	30 (105)	37 (125)	45 (150)	55 (180)	75 (250)	90 (300)	125 (400)	190 (630)	220 (800)
22 (50)	30 (65)	45 (85)	55 (105)	60 (120)	75 (150)	90 (180)	132 (250)	160 (300)	220 (400)	330 (630)	440 (800)
25 (38)	37 (60)	45 (75)	55 (85)	60 (90)	90 (140)	110 (180)	132 (200)	160 (250)	225 (350)	330 (500)	500 (720)
22 (26)	30 (38)	45 (52)	55 (65)	60 (70)	90 (100)	110 (120)	132 (150)	200 (220)	250 (300)	330 (420)	500 (630)
5.5	7.5	7.5	11	15	18.5	22	22	37	45	65	75
7.5	1.1	15	18.5	22	30	37	45	60	75	110	130
7.5	1.1	15	18.5	22	37	45	55	60	90	130	150
7.5	1.1	15	18.5	22	30	50	55	75	90	130	150
550/460	650/620	850/850	1050/1050	1250/1250	1500/1500	1800/1800	2500/2500	3000/3000	4000/4000	6500/6500	8000/8000
550/460	650/620	800/750	930/930	1000/1000	1200/1200	1450/1450	2000/2000	2400/2400	3200/3200	5040/5040	6400/6400
1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200
1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200
600	600	600	300	300	300	300	300	300	300	300	300
88 x 108 x 106	88 x 108 x 106	100 x 124 x 127	100 x 124 x 127	100 x 150 x 137	120 x 160 x 145	138 x 204 x 175	138 x 204 x 175	163 x 243 x 195	163 x 243 x 195	290 x 310 x 235	290 x 310 x 235
88 x 107.5 x 133	88 x 107.5 x 133	100 x 134 x 157	100 x 134 x 157	100 x 150 x 162	138 x 204 x 175	138 x 204 x 200.5	163 x 243 x 221	163 x 243 x 221	163 x 243 x 221	275 x 310 x 235	375 x 310 x 235



S-N50CX	S-N65CX	S-N80	S-N95	S-N125	S-N150	S-N180	S-N220	S-N300	S-N400	S-N600	S-N800
SD-N50	SD-N65	SD-N80	SD-N95	SD-N125	SD-N150	--	SD-N220	SD-N300	SD-N400	SD-N600	SD-N800



TH-N60KPCX	TH-N60TAKP	TH-N120KP	TH-N120TAKP	TH-N220RHKP	TH-N400RHKP	TH-N600KP <sup>9</sup>
12 – 65 A	54 – 105 A	34 – 100 A	85 – 150 A	65 – 250 A	85 – 400 A	200 – 800 A
12 ~ 18 (15 A)	54 ~ 80 (67 A)	34 ~ 50 (42 A)	85 ~ 125 (105 A)	65 ~ 100 (82 A)	85 ~ 125 (105 A)	200 ~ 300 (250 A)
18 ~ 26 (22 A)	65 ~ 100 (82 A)	43 ~ 65 (54 A)	100 ~ 150 (125 A) <sup>4</sup>	85 ~ 125 (105 A)	100 ~ 150 (125 A)	260 ~ 400 (330 A)
24 ~ 34 (29 A)	85 ~ 105 (95 A) <sup>5</sup>	54 ~ 80 (67 A)		100 ~ 150 (125 A)	120 ~ 180 (150 A)	400 ~ 600 (500 A)
30 ~ 40 (35 A)		65 ~ 100 (82 A)		120 ~ 180 (150 A)	140 ~ 220 (180 A)	520 ~ 800 (660 A) <sup>10</sup>
34 ~ 50 (42 A)				140 ~ 220 (180 A) <sup>7</sup>	200 ~ 300 (250 A)	
43 ~ 65 (54 A)				170 ~ 250 (210 A) <sup>7</sup>	260 ~ 400 (330 A) <sup>8</sup>	
91.5 x 57 x 87	89 x 73.5 x 83.5	103 x 67 x 105	112 x 87 x 105	144 x 114 x 179.5	144 x 160 x 193.5	63 x 42 x 83.5



<sup>5</sup>For size N95 only

<sup>6</sup>For size N150 only

<sup>7</sup>For size N220 only

<sup>8</sup>For size N400 only

<sup>9</sup>TH-N600(KP) must be used with the current transformers (to be supplied by the customer)

<sup>10</sup>For size N800 only

<sup>11</sup>Except for size N10

Note: Current Transformers (CTs) must be of the Class 1 Type or Class 0.5 Type.

### 1 PHASE 230 V (50 Hz CIRCUITS)

CAPACITOR RATING (kVA)	CAPACITOR RATED CURRENT (A)	CB RATED CURRENT (A)
5	21.7	40
10	43.5	80
15	65.2	100
20	87	125
25	108.7	175
30	130.4	200
40	173.9	250
50	217.4	350
75	326.1	500
100	434.8	700
150	652.2	1000
200	869.6	1400
300	1304.3	2000
400	1739.1	2500

### 3 PHASE 400 V (50Hz CIRCUITS)

CAPACITOR RATING (kVA)	CAPACITOR RATED CURRENT (A)	CB RATED CURRENT (A)
5	7.2	15/16
10	14.4	30/32
15	21.7	40
20	28.9	50
25	36.1	60/63
30	43.3	80
40	57.7	100
50	72.2	125
75	108.3	175
100	144.3	225
150	216.5	350
200	288.7	500
300	433	700
400	577.4	900

**NOTE:**

Circuit breaker interrupting capacity (kA rating) must be suitable for the specific application.

**THIS DOCUMENT IS AN ABRIDGED VERSION OF THE GENERAL TERMS AND CONDITIONS OF SALE OF CIRCUIT BREAKER INDUSTRIES ("CBI") AND SERVES ONLY AS A SUMMARY OF THE MAIN PROVISION OF CBI'S GENERAL TERMS AND CONDITIONS OF SALE. THE LATTER SHALL PREVAIL IN ALL CIRCUMSTANCES SHOULD THERE BE ANY CONFLICT BETWEEN THEM AND THIS ABRIDGED VERSION OF THE GENERAL TERMS AND CONDITIONS OF SALE. A COPY OF THE GENERAL TERMS AND CONDITIONS OF SALE IS AVAILABLE UPON REQUEST.**

**1. SCOPE:**

CBI's general terms and conditions of sale shall apply to the sale of all goods ("the Goods"), including export sales, by CBI to any person ("the Buyer") and shall prevail over any terms and conditions furnished by the Buyer and shall not be varied in any way except only in writing.

**2. ORDER ACKNOWLEDGEMENT:**

The sale of any goods which are not part of CBI's standard product range, which are modified to comply with the Buyer's specific requirements, which are sold on tender or are sold in terms at a quoted price, shall not come into existence between CBI and the Buyer until CBI furnishes the Buyer with a written Order Acknowledgement. The sale of all other goods shall come into existence upon delivery of those goods in terms of Clause 5 below.

**3. PRICE:**

3.1 Save where CBI furnishes the Buyer with a quote for the price for goods in writing, the price of any goods sold shall be the price stated in CBI's standard price list or export price list, as the case may be, in force at the date of delivery of the goods.

3.2 CBI may increase the purchase price of any goods by the amount of any increase in CBI's supply cost should such cost increase between the date of sale or the date of quotation, as the case may be, and the date of delivery of the goods in question.

3.3 The price of goods sold to Buyers in the Export market includes the costs of packing the goods for delivery.

**4. PAYMENT:**

4.1 Should CBI agree that payment in respect of the goods sold by CBI to the Buyer shall be made by way of Letter of Credit, such Letter of Credit shall be drawn on a bank acceptable to CBI and on terms and conditions acceptable to CBI.

4.2 The purchase price for all other goods other than those referred to in Clause 4.1 shall be paid in cash, without any deduction or set-off and free of exchange, against delivery of the goods in question, provided that CBI may in its discretion accept any currency other than South African currency in the event that the goods are sold for export.

4.3 All overdue amounts shall bear interest at the maximum rate allowed in terms of the National Credit Act 2005, calculated from the date on which the payment in question falls due to the date on which it is made, both dates inclusive.

4.4 CBI may appropriate any payments made by the Buyer to any of the Buyer's debts as CBI may choose, including interest due on any overdue amounts.

**5. DELIVERY:**

5.1 Goods sold for export shall be delivered F.O.B. (Incoterms 1990) unless otherwise agreed between CBI and the Buyer in writing.

5.2 Goods delivered in terms of CBI's local ordering policy within the Republic of South Africa, shall be delivered by CBI at CBI's cost either by post to the Buyer at the Buyers place of business, or delivered by road, or rail to such place. Any other form of delivery shall be for the Buyers account.

5.3 All goods delivered by post shall in all circumstances be deemed to have been delivered on posting of the goods.

5.4 The Buyer shall not be entitled to cancel any agreement of sale should CBI fail to deliver the goods on the agreed date of delivery or should it only tender partial delivery due to causes beyond its reasonable control or arising in the ordinary course of business, and CBI shall make full delivery as soon as reasonably possible.

5.5 Any claim for wrong delivery or short delivery shall be forfeited by the Buyer if it is not made in writing within 7 (seven) days of delivery of the goods in question.

5.6 The Buyer shall not have any claim against CBI, irrespective of any negligence on CBI's part, should the goods be lost or damaged for any reason whatsoever after they have been sold but before delivery.

**6. OWNERSHIP:**

Notwithstanding delivery of the goods, ownership of the goods shall not pass until the Buyer has paid for them in full.

**7. LIMITATION OF LIABILITY:**

7.1 Goods sold in terms of the General Terms and Conditions of Sale shall not be subject to any warranty or guarantee except as provided for in the General Terms and Conditions of Sale and for the periods prescribed therein. CBI's obligation to remedy any defects in workmanship or materials shall be strictly as provided for in the General Terms and Conditions of Sale.

7.2 CBI's liability in respect of the suitability of any goods for any purpose and any goods not conforming to any specifications, measurements or instructions shall be strictly as provided for in the General Terms and Conditions of Sale.

7.3 CBI's liability in respect of ant defective installation of goods shall be strictly as provided for in the General Terms and Conditions of Sale.

7.4 CBI shall not be liable in respect of any defective advice or information relating to the goods given by it to any buyer.

7.5 CBI's liability in respect of any replacement goods or repairs carried out to goods shall be strictly as provided for in the General Terms and Conditions of Sale.

7.6 CBI shall not be liable for any consequential loss as defined in the General Terms and Conditions of Sale in respect of any breach by CBI of its obligations to the Buyer.

7.7 The limitation of CBI's liability in terms of this Clause 7 shall be deemed to apply to all CBI's employees, servants, agents, sub-contractors and distributors.

**8. PERMITS:**

The Buyer shall obtain at its own cost all permits, licenses or authorisations required for the import of goods from the Republic of South Africa and for the transport of any such goods into the Buyer's country.

**9. PATENTS/TRADEMARKS:**

The Buyer shall have no claim against CBI, irrespective of any negligence on CBI's part, in the event that the use of any goods sold by CBI to the Buyer or the sale of such goods by the Buyer to third parties infringes the rights of any person in respect of any patent, trademark, copyright or design.

**10. RETURN OF GOODS:**

Should CBI agree to exchange the goods or to examine any goods to see whether they are prepared to exchange the, the General Terms and Conditions of Sale shall apply.

**11. VIZ MAJOR:**

11.1 The Buyer shall not have any claim against CBI for any failure by CBI to carry out any obligation owed to the Buyer, should such failure occur as the result of viz major as defined in the General Terms and Conditions of Sale.

11.2 Should CBI be prevented by viz major for 90 days or more from carrying out any obligation which is owed to the Buyer, CBI may cancel the agreement in question.

**12. BREACH:**

12.1 Should the Buyer breach any contract of sale or any other agreement between CBI and itself, CBI may, without prejudice to any other rights it may have, cancel any or all agreements between it and the Buyer; and/or claim all amounts owing (whether or not due and payable) by the Buyer from any cause whatsoever; and/or keep possession of any assets belonging to the Buyer as security for fulfillment of the Buyer's obligations.

12.2 In the event that the Buyer is an individual and such buyer dies, or is provisionally or finally sequestrated or surrenders his estate, or the Buyer is a partnership and the partnership is terminated, or is a company or close corporation and is placed under provisional or final order of liquidation or judicial management or passes a resolution for its voluntary winding up, or commits an act of insolvency, Clause 12.1 Shall apply mutatis mutandis.

12.3 When an event falling within the meaning of viz major as defined in Clause 11 occurs, CBI shall be entitled to cancel any agreement existing between it and the Buyer if CBI believes that such event will prejudice CBI's rights in terms of the agreement in question.

**13. NEGOTIABLE INSTRUMENTS:**

The Buyer waives the requirements of presentment, notice of dishonour and protest in respect of all negotiable instruments of any nature whatsoever.

**14. GENERAL PROVISIONS:**

14.1 No relaxation by CBI of any of its rights shall be deemed to be a waiver unless it is given in writing.

14.2 The Buyer shall not cede any of its rights or delegate any of its obligations in terms of any agreement governed by the General Terms and Conditions of Sale without CBI's prior written consent.

14.3 The Buyer shall not reply on any representation allegedly inducing into any agreement with CBI unless such representation is in writing and signed by CBI.

14.4 CBI may cede or delegate any of its obligations in terms of any agreement governed by the General Terms and Conditions of Sale without notice to the Buyer.

**15. ARBITRATION:**

Any dispute arising between the parties in regard to any matter arising out of the General Terms and Conditions of Sale or its interpretation or the respective rights and obligations under that agreement or its cancellation shall be submitted to and decided by arbitration in terms of the General Terms and Conditions of Sale.

**16. APPLICABLE LAW:**

The law of the Republic of South Africa shall apply to all agreements between CBI and the Buyer and the Buyer submits itself to the exclusive jurisdiction of the Witwatersrand Local Division of the Supreme Court of South Africa in respect of any matter arising out of or in connection with a contract of sale governed by the General Terms and Conditions of Sale.

**17. CONSENT OF JURISDICTION:**

CBI consents to the jurisdiction of any magistrate's court having jurisdiction over the Buyer even if the amount of the claim exceeds the jurisdiction of the magistrate court in question.

**18. COSTS:**

The Buyer shall be liable for all costs incurred by CBI in taking any action to enforce its rights against the Buyer, including legal costs on an attorney and own client basis and collection commission of 10%.

**19. NOTICES:**

CBI may send notices to the Buyer by telefax, registered post or hand delivery and such notices shall be deemed to have been received by the Buyer as provided for in the General Terms and Conditions of Sale.

**CIRCUIT BREAKER INDUSTRIES PRODUCT WARRANTY**

All products sold are subject to the Circuit Breaker Industries General Terms and Conditions of Sale. The applicable product warranties are depicted in Table 1 below.

Product Range	Type	Technology	Warranty	Note
QA/QF/QDC	MCB - Clip In	Hydraulic Magnetic	60 Months	Warranty is from Date of Manufacture
QF/QH	MCB - Clip In	Thermal Magnetic	24 Months	
GD/FD/KD/LD/ND/ MB/NF/NV/DSN/AE	MCCB	Thermal Magnetic / Electronic	24 Months	
LB/JSO	MCCB	Hydraulic Magnetic	60 Months	
QA17/QF17/QA36/ SF15/SF36/SM15/SM36	Earth Leakages	Hydraulic Magnetic with Electronic	12 Months	
QF16CD/QF36CD/QH16CD/ QH36AD/QRM16AD/QRM36AD	Earth Leakages	Thermal Magnetic with Electronic	12 Months	
QAT TIMER/ECU/SAK	Auxiliary Products	Various	12 Months	
All other Products not Specifically Mentioned	Accessories	Various	12 Months	

**TABLE 1: Product Warranties**

**Exclusions**

All products returned to Circuit Breaker Industries under warranty claim will be subject to a failure investigation to determine the validity of the communicated failure. The following conditions are not considered as a product failure, as such will not qualify as a warranty claim:

- Any unofficial Product Modification.
- Any incorrect Product Application.
- Any tampering with the Product Seal or Date Stamp / Codng
- Any damage resulting from Lightnng, Water or Dust (Envromental Disturbances and Quality of Supply.)
- Any Failure caused as a result of VIZ MAJOR.





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