I-LINE MCCBs & Panelboards

Intelligent Choice for Prestigious Buildings

a brand of Schneider Electric

SQUARE D

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Schneider Busway (Guangzhou) Limited receives product certification from ASTA and ISO system accreditation from DNV.

ISO 9001: 2000
CERT. NO.: 0086-1999-AQ-RGC-RvA

Square D I-LINE busbar trunking is designed and manufactured in a facility that is quality system registered by UL and BSI to ISO 9001.

CERT. NO.: FM23076

I-LINE Moulded Case Circuit Breakers

General Characteristics

- Used in I-LINE MCCB Panelboards.
- Comply with BS EN 60947-2, IEC 947-2, IEC 157-1, and have a factory set thermal trip and instantaneous magnetic trip release.
- Reference calibrated temperature 40°C.
- Indication of tripped circuit breaker on overload, short circuit and remote control is by location of the handle in the middle trip position between ON and OFF.
- Trip free handle ensures tripping even when the circuit breaker handle is held in the ON position. To reset the circuit breaker, move the handle from the TRIP to the OFF position. To restore service simply move the handle from the OFF to the ON position once the fault has been cleared, which completely eliminates the cost and inconvenience of replacing fuse links or fuse wire.
- Plug-on circuit breakers are tamperproof.
- Rated voltage up to 480V AC three phase 50/60 Hz.
- Black in color.

Full Range of I-LINE Moulded Case Circuit Breakers

General Characteristics

Performance Chart for Circuit Breakers

Frame	Current Rating A	IEC Rating (kA) at 415/240V AC 50/60Hz		
		Ultimate 157-1 P1	Ultimate 947-2 Icu	Service 947-2 Ics
SFA	16 to 160A	25	25	12.5
SFH	16 to 63A	65	65	50
SFH	80 to 100A	65	65	33
SFI	16 to 100A	150	150	75
SKA	125 to 250A	36	36	18
SKH	125 to 250A	50	50	50
SKC	125 to 250A	65	65	65
SKI	125 to 250A	150	130	65
SLA	250 to 400A	36	36	18
LC	250 to 400A	65	65	65
LC	450 to 600A	65	65	50
SMA	300 to 800A	50	50	25
SMH	300 to 800A	63	63	33
SNA	630 to 1250A	50	50	25
SPA	600 to 2000A	50	50	38

Combined Short Circuit Rating Table of Downstream Circuit Breaker

Used to determine the combined effective rating of the downstream circuit breaker. Cascading is recognised and permitted by BS 7671. The characteristics of each device for overload current protection and fault current protection shall be co-ordinated, so that the energy let through by the fault current protective device, does not exceed that which can be withstood without damage by the overload current protective device on one line.

Downstream Circuit Breaker		Main Upstream Circuit Breaker Frame and Current Rating															
Individual Circuit Breaker		SFA 16 to 160A	SFH 16 to 100A	SFI 20 to 100A	SKA 125 to 250A	SKH 125 to 250A	SKC 125 to 250A	SKI 125 to 250A	SLA 250 to 400A	SMA 300 to 1000A	SMH 300 to 1000A	SPA 600 to 2000A	BS88 fuse 100A	BS88 fuse 200A	BS88 fuse 355A	BS88 fuse 630A	BS88 fuse 710A
	SC* KA	25	65	150	36	50	60	150	36	50	65	50	80	80	80	80	80
QOHX 80, 100A	6	16	36	100	7.5	36	36	36					65	65			
QOE 6 to 63A	6 or 10	16	36	100	10	36	36	36					65	65			
SFA 16 to 160A	25			65	150	36	50	65	150	36	36	36	36	65	65	50	
SKA 125 to 250A	36						50	65	150		50	50	50			50	50
SLA 250 to 400A	36										50	50	50			50	50

* Short circuit capacity is represented in kA on a 415/240V AC 50Hz system.

I-LINE Moulded Case Circuit Breakers

16A to 160A

Circuit breakers have a factory set thermal trip and instantaneous magnetic trip release.
Please refer to accessories table for electrical auxiliaries, page 8-9.

**Catalogue Number			Current Rating	Terminal Capacity	Instantaneous Trip Setting	Maximum Earth Fault Loop Impedance Zs OHMS at 240V AC	
Single Pole	Double Pole	Triple Pole	A	mm^2	A	5 Seconds	0.4 Seconds
Short Circuit Capacity 25kA - 1 / 2 / 3 Module Ways Occupied in I-LINE Panelboard							
SFA1016	SFA2016	SFA3016	16	2.5-25	400	2.46	0.60
SFA1020	SFA2020	SFA3020	20	2.5-25	400	1.97	0.60
SFA1032	SFA2032	SFA3032	32	2.5-25	480	1.17	0.50
SFA1040	SFA2040	SFA3040	40	2.5-50	600	0.94	0.40
SFA1050	SFA2050	SFA3050	50	2.5-50	600	0.75	0.40
SFA1063	SFA2063	SFA3063	63	2.5-50	1000	0.60	0.24
SFA1080	SFA2080	SFA3080	80	2.5-50	1200	0.47	0.20
SFA1100	SFA2100	SFA3100	100	2.5-50	1200	0.38	0.20
-	-	SFA3125	125	50-95	1440	0.30	0.17
-	-	SFA3160	160	50-95	1440	0.23	0.17
Short Circuit Capacity 65kA - 3 Modules Ways Occupied in I-LINE Panelboard							
-	-	SFH3016	16	2.5-6	400	2.46	0.60
-	-	SFH3020	20	2.5-6	400	1.97	0.60
-	-	SFH3032	32	2.5-6	480	1.17	0.50
-	-	SFH3040	40	2.5-50	600	0.94	0.40
-	-	SFH3050	50	2.5-50	600	0.75	0.40
-	-	SFH3063	63	2.5-50	1000	0.60	0.24
-	-	SFH3080	80	2.5-50	1200	0.47	0.20
-	-	SFH3100	100	2.5-50	1200	0.38	0.20
Short Circuit Capacity 150kA - 3 Modules Ways Occupied in I-LINE Panelboard							
-	-	SFI3020	20	2.5-25	400	1.20	0.60
-	-	SFI3032	32	2.5-25	480	0.75	0.50
-	-	SFI3040	40	2.5-50	600	0.65	0.40
-	-	SFI3050	50	2.5-50	600	0.55	0.40
-	-	SFI3063	63	2.5-50	1000	0.42	0.24
-	-	SFI3080	80	2.5-50	1200	0.34	0.20
-	-	SFI3100	100	2.5-50	1200	0.28	0.20

SFA1080

SFA3040

** Catalogue numbers for circuit breakers of single and double pole construction require the addition of a suffix corresponding to the phase connection details.

- Suffix A supply red phase.
- Suffix B supply yellow phase.
- Suffix C supply blue phase.
- Suffix AB supply red-yellow phase.
- Suffix BC supply yellow-blue phase.
- Suffix AC supply red-blue phase.

Example SFA1080B supply yellow phase connection.

Example SFA2080AB supply red-yellow phase connection.

I-LINE Moulded Case Circuit Breakers

125A to 250A

Circuit breakers have a factory set thermal trip and an adjustable instantaneous magnetic trip release over the nominal range 5 to 10 times the current rating.
Please refer to accessories table for electrical auxiliaries, page 8-9.

SKA3125

SKA3225

Catalogue Number	Current Rating	Terminal Capacity	Instantaneous Trip Normal Setting		Maximum Earth Fault Loop Impedance Zs	OHMS at 240V AC
			Low	High	Inst Trip	Inst Trip
Triple Pole	A	mm²	A	A	Low	High
Short Circuit Capacity 36kA - 3 Module Ways Occupied in I-LINE Panelboard						
SKA3125	125	25-185	625	1250	0.38	0.19
SKA3160	160	25-185	800	1600	0.30	0.15
SKA3175	175	25-185	875	1750	0.27	0.14
SKA3200	200	25-185	1000	2000	0.24	0.12
SKA3225	225	25-185	1125	2250	0.21	0.11
SKA3250	250	25-185	1250	2500	0.19	0.10
Short Circuit Capacity 50kA - 3 Module Ways Occupied in I-LINE Panelboard						
SKH3125	125	25-185	625	1250	0.38	0.19
SKH3160	160	25-185	800	1600	0.30	0.15
SKH3175	175	25-185	875	1750	0.27	0.14
SKH3200	200	25-185	1000	2000	0.24	0.12
SKH3225	225	25-185	1125	2250	0.21	0.11
SKH3250	250	25-185	1250	2500	0.19	0.10
Short Circuit Capacity 65kA - 3 Module Ways Occupied in I-LINE Panelboard						
SKC3125	125	25-185	625	1250	0.38	0.19
SKC3160	160	25-185	800	1600	0.30	0.15
SKC3175	175	25-185	875	1750	0.27	0.14
SKC3200	200	25-185	1000	2000	0.24	0.12
SKC3225	225	25-185	1125	2250	0.21	0.11
SKC3250	250	25-185	1250	2500	0.19	0.10
Short Circuit Capacity 150kA - 3 Module Ways Occupied in I-LINE Panelboard						
SKI3125	125	25-185	625	1250	0.38	0.19
SKI3160	160	25-185	800	1600	0.30	0.15
SKI3175	175	25-185	875	1750	0.27	0.14
SKI3200	200	25-185	1000	2000	0.24	0.12
SKI3225	225	25-185	1125	2250	0.21	0.11
SKI3250	250	25-185	1250	2500	0.19	0.10

I-LINE Moulded Case Circuit Breakers

250A to 600A

Circuit breakers have a factory set thermal trip and an adjustable instantaneous magnetic trip release over the nominal range 5 to 10 times the current rating.
Please refer to accessories table for electrical auxiliaries, page 9-10.

Catalogue Number	Current Rating	Terminal Capacity	Instantaneous Trip Normal Setting		Maximum Earth Fault Loop Impedance Zs	OHMS at 240V AC
			Low	High	Inst Trip	Inst Trip
Triple Pole	A	mm²	A	A	Low	High
Short Circuit Capacity 36kA - 4 Module Ways Occupied in I-LINE Panelboard						
SLA3250	250	50-300	1250	2500	0.19	0.096
SLA3300	300	50-300	1500	3000	0.16	0.080
SLA3350	350	50-300	1750	3500	0.14	0.069
SLA3400	400	50-300	2000	4000	0.12	0.060
Short Circuit Capacity 65kA - 5 Module Ways Occupied in I-LINE Panelboard						
LC36300	300	2 x 95-240	1500	3000	0.16	0.080
LC36350	350	2 x 95-240	1750	3500	0.14	0.069
LC36400	400	2 x 95-240	2000	4000	0.12	0.060
LC36450	450	2 x 95-240	2250	4500	0.11	0.053
LC36500	500	2 x 95-240	2500	5000	0.10	0.048
LC36600	600	2 x 95-240	3000	5400	0.08	0.044
Short Circuit Capacity 150kA - 5 Module Ways Occupied in I-LINE Panelboard						
LI36300	300	2 x 95-240	1500	3000	0.064	0.080
LI36350	350	2 x 95-240	1750	3500	0.055	0.069
LI36400	400	2 x 95-240	2000	4000	0.048	0.060
LI36450	450	2 x 95-240	2250	4500	0.043	0.053
LI36500	500	2 x 95-240	2500	5000	0.039	0.048
LI36600	600	2 x 95-240	3000	5400	0.032	0.044

SLA3350

300A to 800A

Circuit breakers have a factory set thermal trip and an adjustable instantaneous magnetic trip release over the nominal range 5 to 10 times the current rating.
Please refer to accessories table for electrical auxiliaries, page 9-10.

Catalogue Number	Current Rating	Terminal Capacity	Instantaneous Trip Normal Setting		Maximum Earth Fault Loop Impedance Zs	OHMS at 240V AC
			Low	High	Inst Trip	Inst Trip
Triple Pole	A	mm²	A	A	Low	High
Short Circuit Capacity 50kA - 6 Module Ways Occupied in I-LINE Panelboard						
SMA3300	300	3 x 95-240	1500	3000	0.16	0.080
SMA3350	350	3 x 95-240	1750	3500	0.14	0.069
SMA3400	400	3 x 95-240	2000	4000	0.12	0.060
SMA3450	450	3 x 95-240	2250	4500	0.11	0.053
SMA3500	500	3 x 95-240	2500	5000	0.10	0.048
SMA3630	630	3 x 95-240	3150	6300	0.08	0.038
SMA3700	700	3 x 95-240	3500	7000	0.07	0.034
SMA3800	800	3 x 95-240	4000	8000	0.06	0.030
Short Circuit Capacity 65kA - 6 Module Ways Occupied in I-LINE Panelboard						
SMH3300	300	3 x 95-240	1500	3000	0.16	0.080
SMH3350	350	3 x 95-240	1750	3500	0.14	0.069
SMH3400	400	3 x 95-240	2000	4000	0.12	0.060
SMH3450	450	3 x 95-240	2250	4500	0.11	0.053
SMH3500	500	3 x 95-240	2500	5000	0.10	0.048
SMH3630	630	3 x 95-240	3150	6300	0.08	0.038
SMH3700	700	3 x 95-240	3500	7000	0.07	0.034
SMH3800	800	3 x 95-240	4000	8000	0.06	0.030

SMA3500

I-LINE Moulded Case Circuit Breakers

630A to 1250A

Circuit breakers have a factory set thermal trip and an adjustable instantaneous magnetic trip release.

Catalogue Number	Current Rating	Terminal Capacity	Instantaneous Trip Normal Setting		Maximum Earth Fault Loop Impedance Zs	OHMS at 240V AC
			Low	High	Inst Trip	Inst Trip
Triple Pole	A	mm^2	A	A	Low	High
Short Circuit Capacity 50kA - 10 Module Ways Occupied in I-LINE Panelboard						
SNA3630	630	4 x 95-240	4000	8000	0.06	0.030
SNA3700	700	4 x 95-240	4000	8000	0.06	0.030
SNA3800	800	4 x 95-240	4000	8000	0.06	0.030
SNA3900	900	4 x 95-240	5000	10000	0.05	0.024
SNA31000	1000	4 x 95-240	5000	10000	0.05	0.024
SNA31250	1250	4 x 95-240	5000	10000	0.05	0.024

Automatic Switches

100A to 600A

An instantaneous magnetic trip release is provided to protect the switch itself when subject to high fault currents.
Switches have no thermal trip release.

Catalogue Number Triple Pole	Current Rating A	Trip Setting A	Terminal Capacity mm^2
FH36000M	100	1500	2.5 - 50
KH36000M	250	4500	25 - 185
LH36000M	400	8000	50 - 300
MH360006M	600	9000	3 x 95-240

I-LINE MCCB Accessories

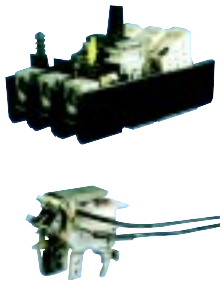
Factory Installed

Factory installed accessories must be ordered by the addition of the accessory suffix number to the circuit breaker catalogue reference. Example SFA3100 1021. These accessories must be ordered at the same time as the circuit breaker.

Field installed accessories may be installed at any time after manufacture and may be ordered by using the accessory catalogue reference. Example MA11021.

Shunt Trip Coil

- The coil will operate down to 75% of the lowest rated AC or DC voltage.
- The coil embodies an internal clearing contact which opens the control circuit when the circuit breaker has tripped.
- Two off black leads are 1mm^2.
- Preferred mounting position in bold.



Shunt Trip
- factory installed

Device Suffix	Voltage Rating	Circuit Breaker Frame	Position on Breaker	Coil Burden VA max
Shunt Trip Coil AC				
1021	120 – 240V AC	SFA, SK	**LEFT HAND**	29 – 154
1001	120 – 240V AC	SFA, SK	RIGHT HAND	29 – 154
Shunt Trip Coil DC				
1028	48V DC	SFA, SK	**LEFT HAND**	36
1008	48V DC	SFA, SK	RIGHT HAND	36

Under Voltage Trip Coil

- The trip coil is used for tripping the circuit breaker when the control voltage falls below 35 to 70% of the rated value.
- The circuit breaker can be reset when the voltage reaches 85% of the rated value.
- For application above 240V AC, use 120V AC coil and a step down transformer.
- Two off brown leads are 1mm^2.
- Preferred mounting position in bold.

Device Suffix	Voltage Rating	Circuit Breaker Frame	Position on Breaker	Coil Burden VA max
Under Voltage Trip Coil AC				
1124	240V AC	SFA, SK	**LEFT HAND**	8.0
1104	240V AC	SFA, SK	RIGHT HAND	8.0
Under Voltage Trip Coil DC				
1128	48V DC	SFA, SK	**LEFT HAND**	3.0
1108	48V DC	SFA, SK	RIGHT HAND	3.0

I-LINE MCCB Accessories

Factory Installed

Auxiliary Changeover Switches

- Used for the control of circuits associated with the operation of circuit breakers.
- Each auxiliary switch contains a combination of A and B contacts.
- When circuit breaker closed, Yellow lead A contact closed, Blue lead B contact open, Striped lead is for common contact.
- All leads are 1mm^2.
- Contact rating 11A@250V AC, 5A@30V DC.
- Preferred mounting position in bold.

Device Suffix	Contact Arrangement	Circuit Breaker Frame	Position on Breaker
1202	1A/1B	SFA, SK	LEFT HAND
1212	1A/1B	SFA, SK	**RIGHT HAND**
1360	2A/2B	SFA, SK	LEFT HAND
1352	2A/2B	SFA, SK	**RIGHT HAND**

Field Installed

Field installable accessories may be installed at any time after manufacture and may be ordered using the catalogue numbers shown in the table below.

LA11021

Shunt Trip Coil

- The coil will operate down to 75% of the lowest rated AC, or DC voltage.
- The coil embodies an internal clearing contact which opens the control circuit when the circuit breaker has tripped.
- Two off black leads are 1mm^2.

Device Suffix	Voltage Rating	Circuit Breaker Frame	Position on Breaker	Coil Burden VA max
		Shunt Trip Coil AC		
LA11021	120-240V AC	SLA	RIGHT/LEFT	29 - 154
MA11021	120-240V AC	SMA, SMH	RIGHT/LEFT	29 - 154
		Shunt Trip Coil DC		
LA11028	48V DC	SLA	RIGHT/LEFT	36
MA11028	48V DC	SMA, SMH	RIGHT/LEFT	36

Field Installed

Under Voltage Trip Coil

- The trip coil is used for tripping the circuit breaker when the control voltage falls below 35 to 70% of the rated value.
- The circuit breaker can be reset when the voltage reaches 85% of the rated value.
- For application above 240V AC, use 120V AC coil and a step down transformer.
- Two off brown leads are 1mm^2.

Device Suffix	Voltage Rating	Circuit Breaker Frame	Position on Breaker	Coil Burden VA max
Under Voltage Trip Coil AC				
LA11124	240V AC	SLA	RIGHT/LEFT	8
MA11124	240V AC	SMA, SMH	RIGHT/LEFT	8
Under Voltage Trip Coil DC				
LA11127	24V DC	SLA	RIGHT/LEFT	2
MA11127	24V DC	SMA, SMH	RIGHT/LFET	2

Auxiliary Changeover Switches

- Used for the control of circuits associated with the operation of circuit breakers.
- Each auxiliary switch contains a combination of A and B contacts.
- When circuit breaker closed, Yellow lead A contact closed, Blue lead B contact open, Striped lead is for common contact.
- All leads are 1mm^2.
- Contact rating 11A@250V AC, 5A@30V DC.

Device Suffix	Contact Arrangement	Circuit Breaker Frame	Position on Breaker
LA11212	1A/1B	SLA	RIGHT/LEFT
MA11212	1A/1B	SMA, SMH	RIGHT/LEFT
LA11352	2A/2B	SLA	RIGHT/LEFT
MA11352	2A/2B	SMA, SMH	RIGHT/LEFT

Auxiliary switch
- field installable

I-LINE MCCB Panelboards

General Characteristics

- Labour saving with Square D Plug-on MCCBs used throughout.
- Tin-plated copper busbars are fully braced and supported.
- Fully fault tested and certified to withstand 50kA for 1 second.
- Dead front construction and separation to BS EN 60439-1, Form 3b.
- Degree of protection is to IP4X/42, BS EN 60529.
- Pre-drilled neutral and earthing bars are fitted as standard to save installation time.
- Hinged lift-off cable gutter covers make inspection easy.
- Plenty of cable space, with removable gland plate fitted top and bottom.
- Long life enclosures fabricated from corrosion resistant sheet steel with durable, electrostatically deposited bluish grey epoxy powder paint finish.
- Wide range of incoming circuit breakers available from 100A to 630A, and branch circuit breakers rated from 16A to 400A.

Full Range of I-LINE MCCB Panelboards

I-LINE MCCB Panelboards

250A / 400A

- Plug-on incoming circuit breakers may be connected at either the top or bottom of the busbars stack, this may improve access when using large cables.
- Outgoing ways are in addition to ways occupied by listed incoming device.

Catalogue Number	Outgoing Ways		*Main Incoming Device	Outgoing Device	Packed Dimensions			Weight
	Module (1.5in)	TP Ways (3 mod MCCB)			Height mm	Width mm	Depth mm	kg
Distribution Boards Rated Current 250A								
KA-250-2-1	6	2	FH36000M	SFA	599	510	184	23.0
KA-250-4-1	12	4	KH36000M		827	510	184	34.0
KA-250-6-1	18	6	SFA3100		1056	510	184	43.2
KA-250-8-1	24	8	SFA3160		1284	510	184	56.1
KA-250-10-1	30	10	SKA3250		1513	510	184	66.0
KA-250-12-1	36	12	SL225		1742	510	184	75.0
Distribution Boards Rated Current 400A								
LA-400-2-2	6	2	LH36000M	SFA/SKA	599	712	203	37.0
LA-400-4-2	12	4			827	712	203	48.0
LA-400-6-2	18	6			1056	712	203	59.0
LA-400-8-2	24	8	SLA3400		1284	712	203	70.0

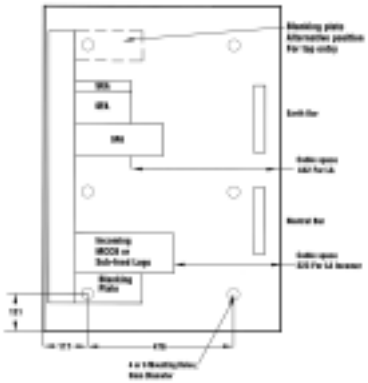
* Main incoming and outgoing Plug-on device are not included with panelboard and must be ordered separately.

Incoming Connection Details

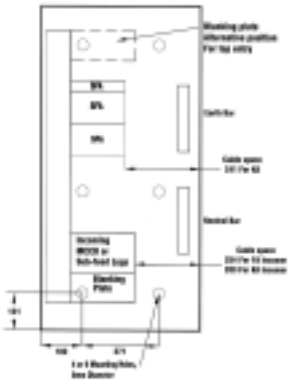
Catalogue Number	Description	Incoming Cable Space mm	Phase Lug mm^2	Packed Dimensions Height mm	Width mm	Depth mm	Weight kg
Distribution Boards Rated Current 250A							
KH36000M	250A TP Plug-on Auto Switch	203	25 - 185	275	114	145	3.75
SKA3250	250A TP Plug-on Circuit Breaker 36kA	203	25 - 185	275	114	145	3.75
SL225	225A TP Plug-on Lug Unit	203	26 - 185	203	114	121	2.50
Distribution Boards Rated Current 400A							
LH36000M	400A TP Plug-on Auto Switch	290	50 – 300	350	152	160	8.00
SLA3400	400A TP Plug-on Circuit Breaker 36kA	290	50 – 300	350	152	160	8.00

Note: For alternative main incoming device ratings, select from listings on page 4-6.

KA-250-6-1



LA-400



KA-250

630A

- Choice of Plug-on incoming circuit breakers.
- Main lugs option which is factory fitted.
- Fully shrouded incoming device terminations.
- Two neutral bars for easier cable wiring.
- Removable neutral link.
- Field installable instrumentation kit comprising three ammeters, voltmeter and line selector switch, with fuses.
- Outgoing ways are in addition to ways occupied by listed incoming device.

Catalogue Number	Outgoing Ways		*Main Incoming Device	Outgoing Device	Packed Dimensions			Weight
	Module (1.5in)	TP Ways (3 mod MCCB)			Height mm	Width mm	Depth mm	kg
Distribution Boards Rated Current 630A								
MA-630-6-2	18	6	MH360006M	SFA/SKA	1132	1018	218	76.8
MA-630-8-2	24	8			1246	1018	218	89.0
MA-630-10-2	30	10			1361	1018	218	101.0
MA-630-12-2	36	12			1475	1018	218	113.0
MA-630-14-2	42	14	SMA3630		1589	1018	218	124.0
MA-630-18-2	54	18			1818	1018	218	135.0

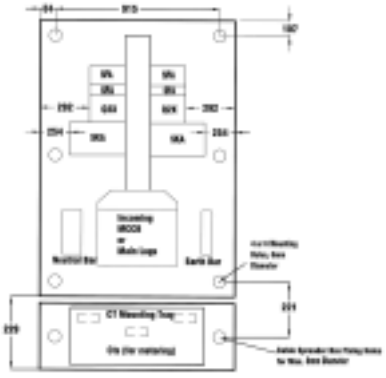
* Main incoming and outgoing Plug-on device are not included with panelboard and must be ordered separately.

Incoming Connection Details

Catalogue Number	Description	Incoming Cable Space mm	Phase Lug mm^2	Packed Dimensions Height mm	Width mm	Depth mm	Weight kg
Distribution Boards Rated Current 630A							
MH360006M	600A TP Plug-on Auto Switch	295	3x95 – 240	420	229	170	15.5
SMA3630	630A TP Plug-on Circuit Breaker 50kA	295	3x95 – 240	420	229	170	15.5

Note: For alternative main incoming device ratings, select from listings on page 6.

MA-630-6-2



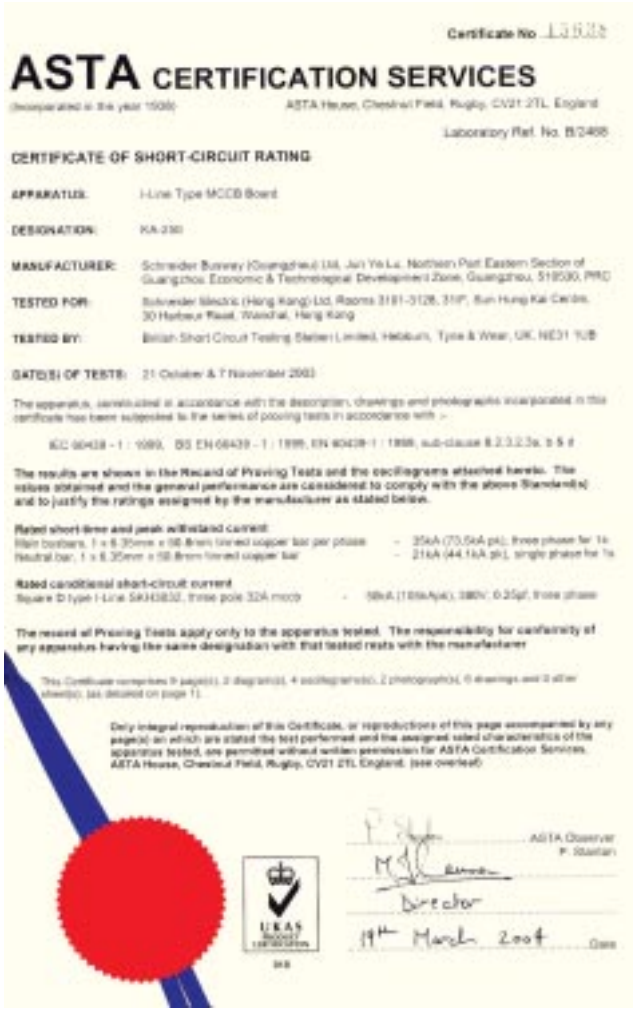
Accessories

Blanking Plates

- To shroud all spare ways not fitted with a circuit breaker.
- This is to ensure no accidental contact with live parts.

Catalogue Number	Description	Dimensions Height mm	Width mm	Depth mm
HNM1BL	1 module way blanking plate	290	110	40
HNM4BL	3 module way blanking plate	325	110	40

Certificates



Certificate No 13923

ASTA CERTIFICATION SERVICES

(Incorporated in the year 1936) ASTA House, Chestnut Field, Rugby, CV21 2TL, England

Laboratory Ref. No. B/2466

CERTIFICATE OF SHORT-CIRCUIT RATING

APPARATUS: I-Line Type MCCB Board

DESIGNATION: KA-250

MANUFACTURER: Schneider Busway (Guangzhou) Ltd, Jun Ye Lu, Northern Part Eastern Section of Guangzhou Economic & Technological Development Zone, Guangzhou, 510530, PRC

TESTED FOR: Schneider Electric (Hong Kong) Ltd, Rooms 3101-3128, 31/F, Sun Hung Kai Centre, 30 Harbour Road, Wanchai, Hong Kong

TESTED BY: British Short Circuit Testing Station Limited, Hebburn, Tyne & Wear, UK, NE31 1UB

DATE(S) OF TESTS: 21 October & 7 November 2003

The apparatus, constructed in accordance with the description, drawings and photographs incorporated in this certificate has been subjected to the series of proving tests in accordance with :-

IEC 60439 - 1 : 1999, BS EN 60439 - 1 : 1999, EN 60439-1 : 1999, sub-clause 8.2.3.2.3a, b & d

The results are shown in the Record of Proving Tests and the oscillograms attached hereto. The values obtained and the general performance are considered to comply with the above Standard(s) and to justify the ratings assigned by the manufacturer as stated below.

Rated short-time and peak withstand current:
Main busbars, 1 x 6.35mm x 98.8mm tinned copper bar per phase - 25kA (70.5kA pk), three phase for 1s
Neutral bar, 1 x 6.35mm x 98.8mm tinned copper bar - 21kA (44.1kA pk), single phase for 1s

Rated conditional short-circuit current
Square D type I-Line SKH0832, three pole 32A mccb - 50kA (105kApk), 380V, 0.25pf, three phase

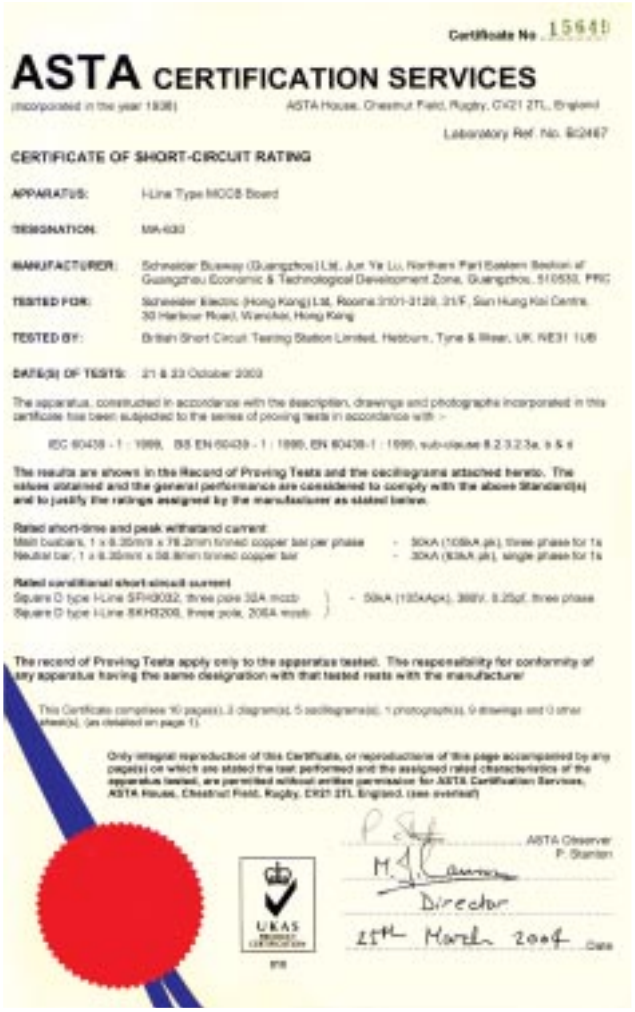
The record of Proving Tests apply only to the apparatus tested. The responsibility for conformity of any apparatus having the same designation with that tested rests with the manufacturer

This Certificate comprises 9 page(s), 2 diagram(s), 4 oscillogram(s), 2 photograph(s), 0 drawings and 0 other sheet(s), (as detailed on page 1).

ASTA Observer
P. Stanton

Director

19th March 2004 Date



Certificate No 15645

ASTA CERTIFICATION SERVICES

(Incorporated in the year 1936) ASTA House, Chestnut Field, Rugby, CV21 2TL, England

Laboratory Ref. No. B/2467

CERTIFICATE OF SHORT-CIRCUIT RATING

APPARATUS: I-Line Type MCCB Board

DESIGNATION: MA-630

MANUFACTURER: Schneider Busway (Guangzhou) Ltd, Jun Ye Lu, Northern Part Eastern Section of Guangzhou Economic & Technological Development Zone, Guangzhou, 510530, PRC

TESTED FOR: Schneider Electric (Hong Kong) Ltd, Rooms 3101-3128, 31/F, Sun Hung Kai Centre, 30 Harbour Road, Wanchai, Hong Kong

TESTED BY: British Short Circuit Testing Station Limited, Hebburn, Tyne & Wear, UK, NE31 1UB

DATE(S) OF TESTS: 21 & 23 October 2003

The apparatus, constructed in accordance with the description, drawings and photographs incorporated in this certificate has been subjected to the series of proving tests in accordance with :-

IEC 60439 - 1 : 1999, BS EN 60439 - 1 : 1999, EN 60439-1 : 1999, sub-clause 8.2.3.2.3a, b & d

The results are shown in the Record of Proving Tests and the oscillograms attached hereto. The values obtained and the general performance are considered to comply with the above Standard(s) and to justify the ratings assigned by the manufacturer as stated below.

Rated short-time and peak withstand current:
Main busbars, 1 x 6.35mm x 76.2mm tinned copper bar per phase - 50kA (105kA pk), three phase for 1s
Neutral bar, 1 x 6.35mm x 98.8mm tinned copper bar - 30kA (63kA pk), single phase for 1s

Rated conditional short-circuit current
Square D type I-Line SFH0632, three pole 32A mccb
Square D type I-Line SKH0208, three pole, 20kA mccb
- 50kA (105kApk), 380V, 0.25pf, three phase

The record of Proving Tests apply only to the apparatus tested. The responsibility for conformity of any apparatus having the same designation with that tested rests with the manufacturer

This Certificate comprises 10 page(s), 2 diagram(s), 5 oscillogram(s), 1 photograph(s), 0 drawings and 0 other sheet(s), (as detailed on page 1).

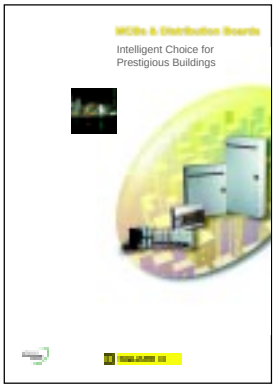
ASTA Observer
P. Stanton

Director

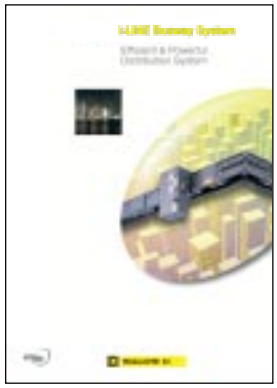
25th March 2004 Date

I-LINE MCCBs & Panelboards
Document No.: SEHK/SQD/001

Unit Mounting MCCBs & Enclosure
Document No.: SEHK/SQD/002



MCBs & Distribution Boards
Document No.: SEHK/SQD/003



Busway System
Document No.: SEHK/SQD/004

Schneider Electric (Hong Kong) Ltd.

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Development District, Guangzhou, PR China
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