

# PRODUCT CATALOGUE



LV Switchgear  
Distribution Boards  
Consumer Units  
Circuit Protection Devices

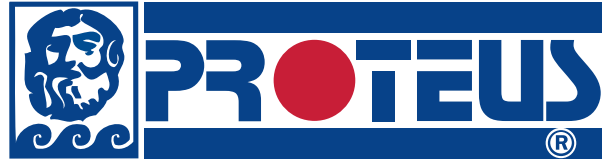
**Installation Materials Division**

...the name behind the brands

Welcome to.....

# Proteus Switchgear





Proteus**Industrial** Proteus**Consumer**

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## Introduction

With over 25 years manufacturing experience, Proteus Switchgear continues to expand and broaden its portfolio of electrical products and services. From Power Distribution to LV Switchgear, Metalclad Consumer Units to Circuit Protection, our focus is to offer a complete solution for the domestic, commercial, retail and industrial market sectors.

With two manufacturing facilities based in the heart of the UK, we are ideally placed to service over 800 distributors worldwide. Continual investment enables the company to remain in step with our customers' expectations, maintain quality, develop new products and respond to market and regulatory requirements. The ongoing development of our manufacturing processes ensures Proteus Switchgear continually supply quality products for today's customer.



# Consumer Unit Division



For over twenty-five years, Proteus Switchgear has been at the forefront of British manufacturing - specialising in the production of domestic consumer units and circuit protective devices, working proficiently to supply a full and varied product range.

In addition to our standard product range, we have the ability to offer fully bespoke units, tailored to customer needs to suit any individual installation.

At Proteus, we are entirely committed to the design and development of our products with the future in mind. Our values insist that we are continuously endeavouring to provide 100% tested products alongside features and benefits that allow us to excel within the Switchgear industry.





# Content

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## 230V Switchgear

Metalclad Consumer Units.....	58
Insulated Consumer Units.....	66
Enclosures/Multi-Purpose Units.....	72
Meter Isolator Products.....	76
Switch Fuses/Fire Alarm Switches.....	77
Three Phase Consumer Units.....	78
Circuit Protection.....	49
Timers.....	80
Contactors & Isolators.....	81
Accessories.....	82
Specials.....	84
Mantel Units.....	85
Technical Information.....	86



# Selection and configurations

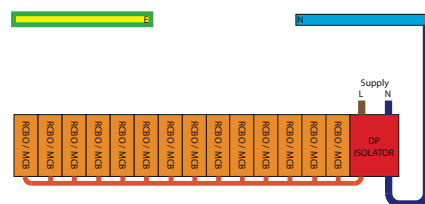
BS7671:2008 incorporating Amendment 3 is clear about the type of enclosure required for domestic (household) premises – non-combustible (or metal) – but the configuration can vary depending on the type of installation.

Proteus offers a full selection of consumer units to meet both the requirements of BS7671 and each individual application.

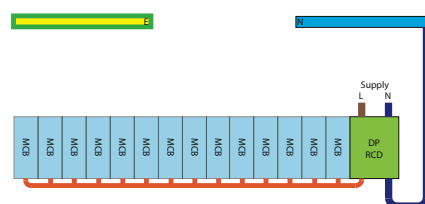
This guide to Consumer Units has been compiled in order to assist in understanding the new wiring regulations. However it is not intended to be a substitute for BS7671:2008 which should always be consulted in order to ensure that all installations are constructed in accordance with these regulations.

- Is the Consumer unit being installed in a domestic (household) premise. (Reg. 421.1.201) i.e metalclad consumer unit.
- To avoid hazards and minimise inconvenience in the event of a fault. Take into account the danger caused by failure of a single circuit such as a lighting circuit. Reduce the possibility of tripping of an RCD due to excessive protective conductor currents (Reg. 314.1).
- Socket outlets up to 20A must be protected by a residual-current device (Reg. 411.3.3).
- All circuits containing a bath or shower must be RCD-protected (Reg. 701.411.3.3).
- Unprotected cables buried less than 50mm deep in a wall must be RCD-protected. (Reg. 522.6.202 & 522.6.203).

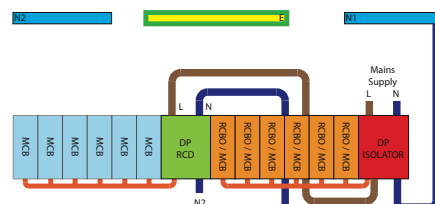
## ISOLATOR CONTROLLED BOARD



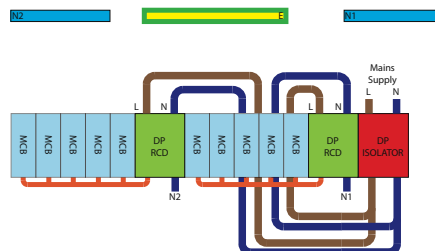
## RCD CONTROLLED BOARD



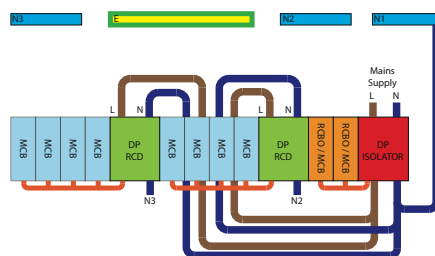
## SPLIT LOAD BOARD



## DUAL RCD BOARD



## HIGH INTEGRITY & DUAL RCD BOARD



# Selection and configurations

- Allows the use of single module RCBO devices for individual circuit protection at 30mA.
- Reduces risk of nuisance tripping.
- An earth fault on one circuit would not adversely affect other circuits in the installation.
- Can be used as main domestic Consumer Unit.

See page **60** for Metal clad boards (68 for insulated boards)

- Suitable for Grouped Circuit Protection of small numbers of circuits, usually downstream of main consumer unit.
- Typical applications include garages, showers and small extensions.
- If fed from main Consumer Unit also with RCD protection then earth leakage discrimination must be considered.
- Can be used as sub-distribution board but not main domestic Consumer Unit.

See page **63** for Metal clad boards (72 for insulated boards)

- Offers both High Integrity ways of Isolator and Grouped Circuit Protection off RCD device.
- Unwanted tripping is limited / restricted.
- Variable units allow for increased High Integrity ways for dedicated circuit protection - e.g. Smoke Alarms.
- Can be used as main domestic Consumer Unit.

See page **61** for Metal clad boards (69 for insulated boards)

- Offers Grouped Circuit Protection using two 30mA RCDs
- Circuits can be segregated to reduce unwanted tripping, for example upstairs lights + downstairs ring main off RCD1 and downstairs lights + upstairs ring main off RCD2.
- Can be used as main domestic Consumer Unit.

See page **61** for Metal clad boards (70 for insulated boards)

- High Integrity circuit ways off the isolator are available for dedicated circuit protection - i.e. Smoke Alarms.
- Dual 30mA RCD configuration offering Grouped Circuit Protection.
- Circuits can be segregated to reduce unwanted tripping.
- Can be used as main domestic Consumer Unit.

See page **62** for Metal clad boards (71 for insulated boards)



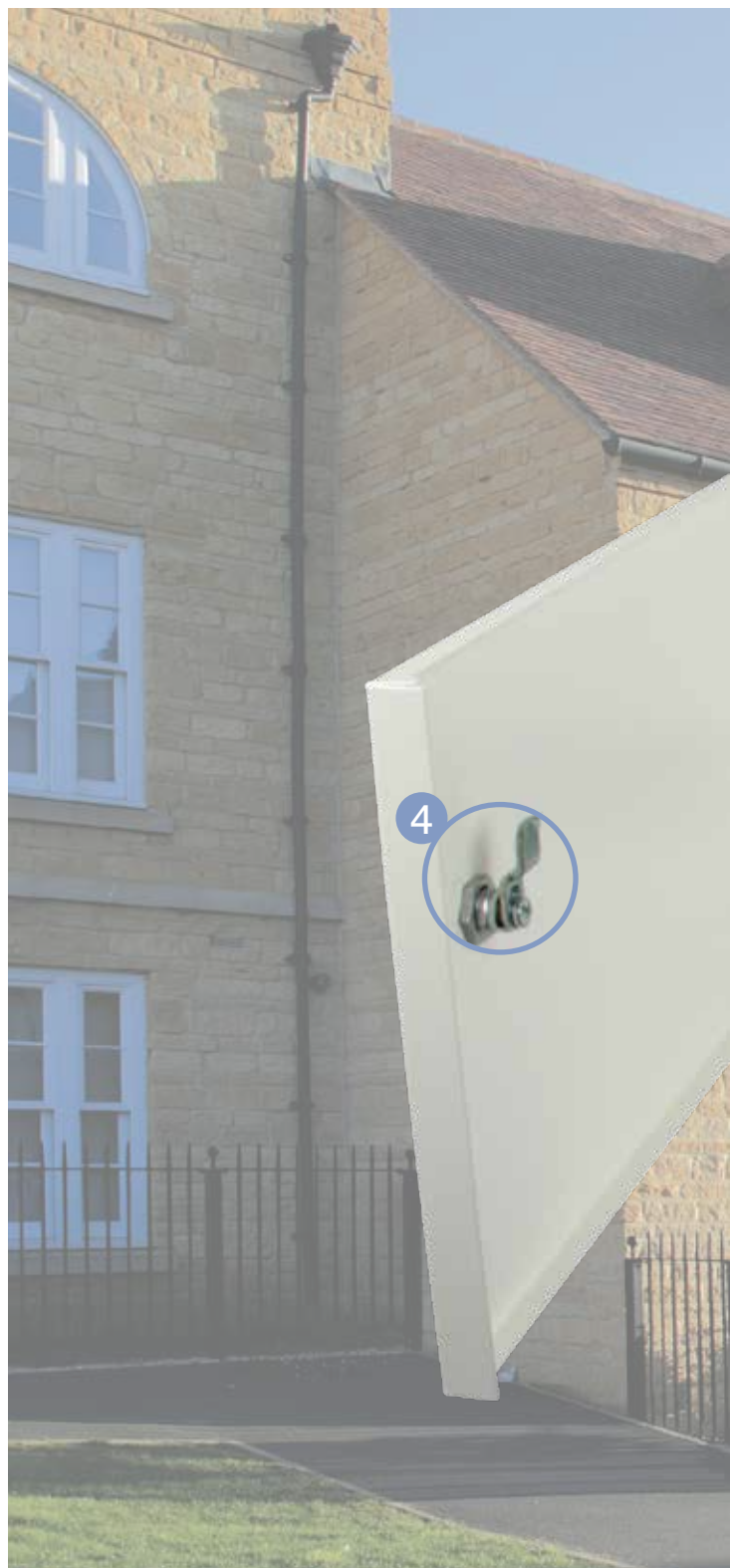
# Metalclad Features & Benefits

This new range of Metalclad Consumer Units from Proteus Switchgear has been designed in conjunction with contractors and housing authorities specifically to meet the requirements of Regulation 421.1.201 of BS7671:2008 incorporating Amendment 3:2015.

With its linear design and matt white (RAL9010) finish, the consumer unit offers the home owner a discreet and contemporary product, whilst providing suitable protection to meet today's need.

## AYXLM Range

- 1 Full metal enclosure compliant to BS7671 Amendment 3:2015, Reg. 421.1.201.
- 2 BS EN 61439-3 Compliant.
- 3 Comb bus bar / Half Din Rail for quick fitting of devices.
- 4 Steel cam lock with optional retrofit key lock.
- 5 Captive screws with cage nut fixings.
- 6 Increased height for added cabling space.
- 7 Large rear knockouts with radius corners.
- 8 Easy access for meter tail connections.
- 9 Contemporary linear design.
- 10 Bespoke consumer units made to order.

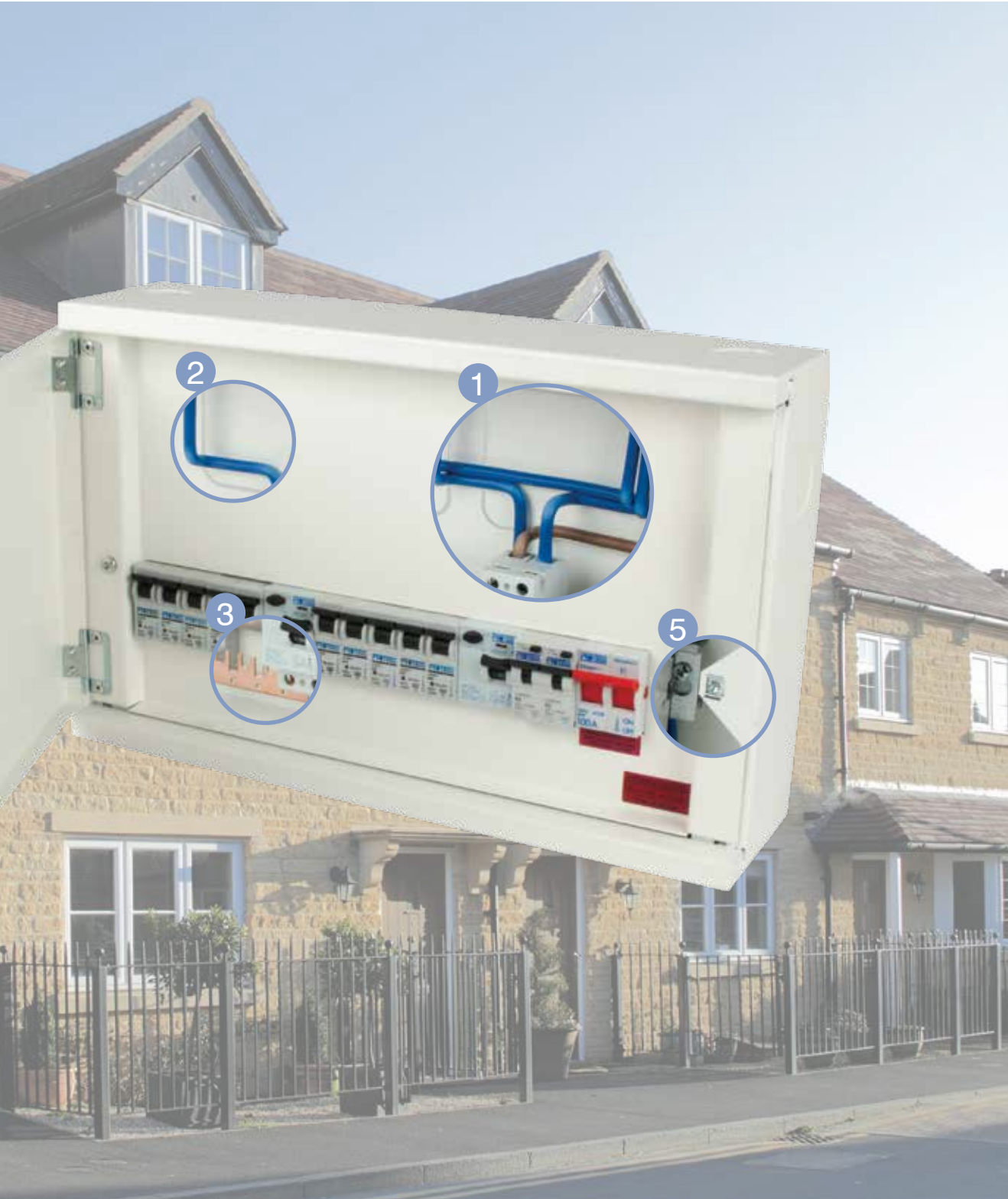




# Metalclad Features & Benefits

Regulation 421.1.201 calls for switchgear assemblies, including consumer units, to be housed in a non-combustible enclosure, incorporating the base, cover, door and any accessories.

The Proteus AYXLM range meets these requirements and offers additional features providing a more versatile product for the installing contractor.



# Isolator Incomer Consumer Units

The Proteus AYXLM range of metal consumer units are designed and manufactured to BSEN61439 pt 3 and meets the requirements of BS7671:2008, Amendment 3:2015, regulation 421.1.201 - effects against thermal influences specifically for domestic household dwellings.

Manufactured from steel and finished in a polyester powder coating to RAL9010, the AYXLM range provides a comprehensive selection of products to meet the customers requirements.



AYXLM4

## Isolator Controlled Consumer Units

Outgoing Ways	Isolator Rating	RCD 1 Rating*	RCD 2 Rating*	Cat. No.	H (mm)	W (mm)	D (mm)
2	63A	-	-	<b>AYXLM2</b>	232	149	110
4	100A	-	-	<b>AYXLM4</b>	256	201	110
6	100A	-	-	<b>AYXLM6</b>	256	273	110
8	100A	-	-	<b>AYXLM8</b>	256	273	110
10	100A	-	-	<b>AYXLM10</b>	256	309	110
12	100A	-	-	<b>AYXLM12</b>	256	381	110
14	100A	-	-	<b>AYXLM14</b>	256	381	110
16	100A	-	-	<b>AYXLM16</b>	256	417	110
18	100A	-	-	<b>AYXLM18</b>	256	489	110
20	100A	-	-	<b>AYXLM20</b>	256	489	110
26	100A	-	-	<b>AYXLM26</b>	256	597	110
30	100A	-	-	<b>AYXLM30*</b>	500	381	110

\* - Double banked.

Please refer to page 49 for circuit protection devices.

# Split Load & Dual RCD Consumer Units

This selection of Consumer Units offer the facility to spread the load circuits across one or two 30mA RCDs. Standard configurations listed below supplied with DP

Isolator and RCD/s factory fitted , link leads for both Live and Neutral connections also pre-installed.



## Dual RCD Consumer Units

AYXLMJB3JB3	Outgoing Ways	Isolator Rating	RCD 1 Rating*	RCD 2 Rating*	Cat. No.	H (mm)	W (mm)	D (mm)
	6	100A	63A	63A	AYXLMJB3JB3	256	309	110
	10	100A	63A	63A	AYXLMJB5JB5	256	381	110
	10	100A	80A	80A	AYXLMKB5KB5	256	381	110
	12	100A	63A	63A	AYXLMJB6JB6	256	417	110
	12	100A	80A	80A	AYXLMKB6KB6	256	417	110
	16	100A	63A	63A	AYXLMJB8JB8	256	489	110
	16	100A	80A	80A	AYXLMKB8KB8	256	489	110
	20	100A	63A	63A	AYXLMJB10JB10	256	597	110
	20	100A	80A	80A	AYXLMKB10KB10	256	597	110

\* - 30mA trip rating.

Please refer to page 49 for circuit protection devices.



## Split Load Consumer Units

AYXLMSLV12	Outgoing Ways	Isolator Rating	RCD 1 Rating*	RCD 2 Rating*	Cat. No.	H (mm)	W (mm)	D (mm)
	6	100A	63A	-	AYXLMSLV6	256	273	110
	12	100A	63A	-	AYXLMSLV12	256	381	110

\* - 30mA trip rating.

Please refer to page 49 for circuit protection devices.

# High Integrity Consumer Units

For applications where 'High Integrity' circuit protection is required, for example smoke detectors, these units allow dedicated RCBO installation.

Standard configurations listed below supplied with DP Isolator and RCD/s factory fitted , link leads for both Live and Neutral connections also pre-installed.



## High Integrity Dual RCD Consumer Units

AYXLM2JB4JB4	Outgoing Ways	Isolator Rating	RCD 1 Rating*	RCD 2 Rating*	Cat. No.	H (mm)	W (mm)	D (mm)
	6	100A	63A	63A	<b>AYXLM1JB2JB3</b>	256	309	110
	10	100A	63A	63A	<b>AYXLM2JB4JB4</b>	256	381	110
	12	100A	63A	63A	<b>AYXLM2JB5JB5</b>	256	417	110
	14	100A	63A	63A	<b>AYXLM2JB6JB6</b>	256	489	110
	20	100A	80A	80A	<b>AYXLM4KB8KB8</b>	256	597	110
	6	100A	63A	63A	<b>AYXLMDSL6</b>	256	309	110
	10	100A	63A	63A	<b>AYXLMDSL10</b>	256	381	110
	12	100A	63A	63A	<b>AYXLMDSL12</b>	256	489	110
	16	100A	80A	80A	<b>AYXLMDSL16</b>	256	489	110
	22	100A	80A	80A	<b>AYXLMDSL22</b>	256	597	110

\* - 30mA trip rating.

Please refer to page 49 for circuit protection devices.

# RCD Incomer Consumer Units

The AYXLM range of RCD incomer metalclad consumer units are available with 63A, 80A and 100A RCD incomer ratings and 30mA earth leakage protection.

For higher earth leakage protection, 100mA to 500mA, please contact our sales office for further details.



AKBXM4

## RCD Incomer Consumer Units

Outgoing Ways	Isolator Rating	RCD 1 Rating*	RCD 2 Rating*	Cat. No.	H (mm)	W (mm)	D (mm)
4	-	63A	-	<b>AJBXM4</b>	256	201	110
6	-	63A	-	<b>AJBXM6</b>	256	273	110
8	-	63A	-	<b>AJBXM8</b>	256	273	110
12	-	63A	-	<b>AJBXM12</b>	256	381	110
4	-	80A	-	<b>AKBXM4</b>	256	201	110
6	-	80A	-	<b>AKBXM6</b>	256	273	110
8	-	80A	-	<b>AKBXM8</b>	256	273	110
12	-	80A	-	<b>AKBXM12</b>	256	381	110
4	-	100A	-	<b>ALBXM4</b>	256	201	110
6	-	100A	-	<b>ALBXM6</b>	256	273	110
8	-	100A	-	<b>ALBXM8</b>	256	273	110
12	-	100A	-	<b>ALBXM12</b>	256	381	110

\* - 30mA trip rating.

Please refer to page 49 for circuit protection devices.

# Enclosures & Garage / Shower Units

The AYXLM range offers a selection of din rail mount enclosures for building your own switchgear assembly. A range of Garage and Shower Units are also available

ensuring compliance with Regulation 421.1.201 of BS7671:2008 incorporating Amendment 3:2015.



APXLM12

## Metalclad Enclosures

No. Of Modules	Banks	Cat. No.	H (mm)	W (mm)	D (mm)
6	1	<b>APXLM6</b>	256	201	110
10	1	<b>APXLM10</b>	256	273	110
12	1	<b>APXLM12</b>	256	309	110
16	1	<b>APXLM16</b>	256	381	110
18	1	<b>APXLM18</b>	256	417	110
22	1	<b>APXLM22</b>	256	489	110
28	1	<b>APXLM28</b>	256	597	110

Please refer to page 49 for circuit protection devices.



APGU4M

## Garage & Shower Units

Outgoing Ways	Isolator Rating	RCD 1 Rating*	MCB Rating*	Cat. No.	H (mm)	W (mm)	D (mm)
2	-	40A	6A + 16A	<b>APGU2M</b>	232	150	110
4	-	40A	6A + 16A	<b>APGU4M</b>	256	201	110
1	-	40A	40A	<b>APSU95M</b>	232	150	110
1	-	63A	50A	<b>APSU115M</b>	232	150	110

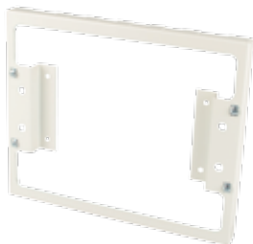
Please refer to page 49 for circuit protection devices.



# Metalclad Accessories

To compliment the AYXLM range of Metalclad consumer units, a selection of spacer mounts are available for use where retrofitting to surface mount cables are necessary.

In addition, Meter Tail glands are available for providing Class II insulation protection for incoming supply cables.



ASM12

## Consumer Unit Spacer Mounts

No. Of Modules	Banks	Cat. No.	H (mm)	W (mm)	D (mm)
6	1	<b>ASM6</b>	256	201	20
10	1	<b>ASM10</b>	256	273	20
12	1	<b>ASM12</b>	256	309	20
16	1	<b>ASM16</b>	256	381	20
18	1	<b>ASM18</b>	256	417	20
22	1	<b>ASM22</b>	256	489	20
28	1	<b>ASM28</b>	256	597	20



MTGP40B

## Meter Tail Gland Pack

Description	Cat. No.	Dia (mm)
Meter tail gland pack (2x25mm / 1x 16mm) M40 - brass	<b>MTGP40B</b>	40
Meter tail gland pack (2x25mm / 1x 16mm) M40 - plastic	<b>MTGP40P</b>	40
Meter tail gland pack (2x16mm / 1x 10mm) M40 - plastic	<b>MTGP32P</b>	32



AKL

## Safety Accessories

Description	Cat. No.
Key lock for A type metalclad consumer units	<b>AKL</b>
Intumescent putty (210mm x 148mm x 3mm)	<b>IP21X15</b>

# Insulated Features & Benefits

The YXL range of Consumer Units has quickly become one of the most innovative insulated boards in the market. Developed through a keen interest in customer feedback, Proteus Switchgear created a Consumer Unit that was flexible to any imaginable on-site scenario. The

various options available include Dual RCD units and also Dual RCD units with High Integrity option - suitable for single module RCBO devices, offering complete peace of mind for those essential circuits requiring

## YXL Range

- 1 Unique stacking system.
- 2 Removable endplates for maximum cable access.
- 3 Comb bus bar / Half Din Rail for quick fitting of devices.
- 4 Rear, side and top/bottom cable entries.
- 5 Captive four point 1/4 turn cover fixing screws.
- 6 Increased height for added cabling space.
- 7 BS EN 61439-3 Compliant.
- 8 Translucent front door.
- 9 Manufactured from thermoplastic materials to BS 60695.
- 10 Bespoke consumer units made to order.



# Insulated Features & Benefits

dedicated earth fault protection. In this range, Proteus Switchgear also offer the largest single bank insulated Consumer Unit on the market, the 25-module Consumer unit, with up to 23 outgoing circuit ways.



# Isolator Incomer Consumer Units

Readily available from 1 to 30 usable ways, our Isolator Incomer Consumer Units allow the use of single module RCBO devices for individual circuit protection at 30mA, reducing the risk of nuisance tripping.

Our insulated enclosures are manufactured from light grey impact resistant and flame retardant thermoplastic.



YXL6

## Isolator Controlled Consumer Units

Outgoing Ways	Isolator Rating (A)	No. Of Modules	Cat. No.	H (mm)	W (mm)	D1 (mm)	D2 (mm)
1	45	4	YXL1*	230	116	110	220
2	63	4	YXL2*	230	116	110	220
3	63	6	YXL3*	230	152	110	220
4	100	6	YXL4*	230	152	110	220
6	100	10	YXL6	230	252	106	205
8	100	10	YXL8	230	252	106	205
12	100	16	YXL12	230	359	106	205
14	100	16	YXL14	230	359	106	205
16	100	18	YXL16*	230	390	110	220
18	100	20**	YXL18	460	252	106	205
21	100	25	YXL21*	230	511	110	220
23	100	25	YXL23*	230	511	110	220
30	100	32***	YXL30	460	359	106	205

For Isolator controlled Consumer Units with over 30 outgoing ways contact factory for availability.

\* - Cannot be banked

\*\* - Double banked unit

\*\*\* - Triple banked unit

YXL# units are supplied with translucent cover.  
Please refer to page 49 for circuit protection devices.

# Split Load Consumer Units

A selection of standard surface mounting insulated Split Load Consumer Units are available. Standard configurations listed below are supplied with DP Isolator and RCD/s factory fitted; with link leads for both Live and

Neutral connections also pre-installed.

Split Load 'Variable' units can also be purchased offering the installer flexibility to adjust circuit distribution when on-site eg. YXLSLV6 and YXLSLV12.



YXL3JB3

## Split Load Boards Consumer Units

Outgoing Ways	Isolator Rating	Isolator Ways	RCD (1) Ways	RCD Rating	No. Of Modules	Cat. No.	H (mm)	W (mm)	D1 (mm)	D2 (mm)
6	100A	3	3	63A 30mA	10	<b>YXL3JB3</b>	230	252	106	205
6	100A	up-to 5	up-to 5	63A 30mA	10	<b>YXLSLV6</b>	230	252	106	205
12	100A	6	6	63A 30mA	16	<b>YXL6JB6</b>	230	359	106	205
12	100A	6	6	80A 30mA	16	<b>YXL6KB6</b>	230	359	106	205
12	100A	up-to 9	up-to 9	63A 30mA	16	<b>YXLSLV12</b>	230	359	106	205
14	100A	up-to 10	up-to 10	63A 30mA	18*	<b>YXLSLV14</b>	230	390	110	220
19	100A	up-to 14	up-to 14	63A 30mA	25*	<b>YXLSLV19***</b>	230	511	110	220
21	100A	up-to 16	up-to 16	63A 30mA	25*	<b>YXLSLV21***</b>	230	511	110	220

\* - Insulated boards which cannot be banked.

\*\*\* - Units are available on request.

Please refer to page 49 for circuit protection devices.

# Dual RCD Consumer Units

Consumer Units pre-installed with two RCDs allow all load circuits to be 30mA protected economically and enables the circuit distribution to be configured such that hazards or disruption is minimized in the event of a fault on a circuit.



YXLJB5JB5

Dual RCD Consumer Units

Outgoing Ways	Isolator Rating	RCD (1) Ways	RCD (2) Ways	RCD Rating	No. Of Modules	Cat. No.	H (mm)	W (mm)	D1 (mm)	D2 (mm)
6	100A	3	3	63A 30mA	12*	<b>YXLJB3JB3</b>	230	285	106	205
8	100A	4	4	63A 30mA	14	<b>YXJB4JB4</b>	200	320	106	205
10	100A	5	5	63A 30mA	16	<b>YXLJB5JB5</b>	230	359	106	205
12	100A	6	6	63A 30mA	20**	<b>YXLJB6JB6DB</b>	460	252	106	205
12	100A	6	6	63A 30mA	18*	<b>YXLJB6JB6</b>	230	390	110	220
12	100A	6	6	80A 30mA	18*	<b>YXLKB6KB6</b>	230	390	110	220
14	100A	6	8	63A 30mA	20**	<b>YXLJB6JB8</b>	460	252	106	205
17	100A	8	9	80A 30mA	25*	<b>YXLKB8KB9</b>	230	511	110	220
19	100A	9	10	80A 30mA	25*	<b>YXLKB9KB10</b>	230	511	110	220

\* - Insulated boards which cannot be banked.

\*\* - Double banked unit.

Please refer to page 49 for circuit protection devices.



# High Integrity Consumer Units

This selection of Consumer Units offer the facility to spread the load circuits across two 30mA RCDs. Additionally, for applications where 'High Integrity' circuit protection is required, for example smoke detectors,

units allow dedicated RCBO installation. Standard configurations listed below supplied with DP Isolator and RCD/s factory fitted, link leads for both Live and Neutral connections also pre-installed.



YXL3JB4JB4

## High Integrity Consumer Units

Outgoing Ways	Isolator Ways	RCD (1) Ways	RCD (2) Ways	RCD (3) Ways	RCD Rating	No. Of Modules	Cat. No.	H (mm)	W (mm)	D1 (mm)	D2 (mm)
6	1	2	3	-	63A 30mA	12*	YXL1JB2JB3	230	285	106	205
10	2	4	4	-	63A 30mA	16	YXL2JB4JB4	230	359	106	205
10	up-to 4	up-to 6	4	-	63A 30mA	16	YXLSLV6R4	230	359	106	205
10	up-to 4	up-to 6	4	-	80A 30mA	16	YXLSLV6R4/80	230	359	106	205
11	3	4	4	-	63A 30mA	18*	YXL3JB4JB4	230	390	110	220
11	3	4	4	-	80A 30mA	18*	YXL3KB4KB4	230	390	110	220
12	2	5	5	-	63A 30mA	18*	YXL2JB5JB5	230	390	110	220
12	2	5	5	-	80A 30mA	18*	YXL2KB5KB5	230	390	110	220
12	up-to 3	up-to 5	5	-	63A 30mA	18*	YXLSLV7R5	230	390	110	220
12	up-to 3	up-to 5	5	-	80A 30mA	18*	YXLSLV7R5/80	230	390	110	220
17	2	5	5	5	80A 30mA	25*	YXL2KB5KB5KB5	230	511	110	220
17	3	5	5	4	63A 30mA	25*	YXL3JB5JB5JB4	230	511	110	220
17	3	5	5	4	80A 30mA	25*	YXL3KB5KB5KB4	230	511	110	220
19	2	8	9	-	80A 30mA	25*	YXL2KB8KB9	230	511	110	220
19	up-to 6	up-to 10	6	-	63A 30mA	25*	YXLSLV13R6	230	511	110	220
19	up-to 6	up-to 10	6	-	80A 30mA	25*	YXLSLV13R6/80	230	511	110	220

\* - Insulated boards which cannot be banked. Please refer to page 49 for circuit protection devices.

# RCD Incomer Consumer Units

Readily available from 1 to 12 usable ways, our RCD Incomer Consumer Units are suitable for grouped circuit protection for a small number of circuits, typically installed in addition to a property's main Consumer

Unit – applications such as garages, showers and small extensions. Our ranges of RCD Incomer Consumer Units are pre-fitted with a 30mA RCD Incomer, with ratings ranging from 25A – 100A.



GBX4

## RCD Controlled Consumer Units

Outgoing Ways	Isolator Rating (A)	No. Of Modules	Cat. No. Standard Range	H (mm)	W (mm)	D1 (mm)	D2 (mm)
1	25A	4	<b>GBX1*</b>	230	116	110	220
2	25A	4	<b>GBX2*</b>	230	116	110	220
3	25A	6	<b>GBX3*</b>	230	152	110	220
4	25A	6	<b>GBX4*</b>	230	152	110	220
1	40A	4	<b>HBX1*</b>	230	116	110	220
2	40A	4	<b>HBX2*</b>	230	116	110	220
3	40A	6	<b>HBX3*</b>	230	152	110	220
4	40A	6	<b>HBX4*</b>	230	152	110	220
6	40A	10	<b>HBX6</b>	230	252	106	205
1	63A	4	<b>JBX1*</b>	230	116	110	220
2	63A	4	<b>JBX2*</b>	230	116	110	220
3	63A	6	<b>JBX3*</b>	230	152	110	220
4	63A	6	<b>JBX4*</b>	230	152	110	220
6	63A	10	<b>JBX6</b>	230	252	106	205
8	63A	10	<b>JBX8</b>	230	252	106	205
10	63A	14	<b>JBX10</b>	200	320	106	205
12	63A	14	<b>JBX12</b>	200	320	106	205
4	80A	6	<b>KBX4*</b>	230	152	110	220
6	80A	10	<b>KBX6</b>	230	252	106	205
8	80A	10	<b>KBX8</b>	230	252	106	205
10	80A	14	<b>KBX10</b>	200	320	106	205
12	80A	14	<b>KBX12</b>	200	320	106	205
6	100A	10	<b>LBX6</b>	230	252	106	205
8	100A	10	<b>LBX8</b>	230	252	106	205
10	100A	14	<b>LBX10</b>	200	320	106	205
12	100A	14	<b>LBX12</b>	200	320	106	205

RCD incomer units are available in higher earth leakage sensitivity options on request.

\* - Insulated boards which cannot be banked.

Please refer to page 49 for circuit protection devices.

# Multi-Purpose Units

Build your own consumer unit or multi-purpose board.  
Just clip on your required equipment to the DIN Rail and  
if necessary fit the Comb Busbar.  
Fitted with full DIN rail, Earth and Neutral terminal bars.



PXL4

## Multi-Purpose Units

No. Of Modules	Cat. No.	H (mm)	W (mm)	D1 (mm)	D2 (mm)
4	PXL4*	230	116	110	220
6	PXL6*	230	152	110	220
10	PXL10	230	252	106	205
16	PXL16	230	359	106	205
18	PXL18*	230	390	110	220
20	PXL20**	460	252	106	205
25	PXL25*	230	511	110	220
32	PXL32**	460	359	106	205

\* - Insulated enclosures which cannot be banked.

\*\* - Double banked unit.

Please refer to page 49 for circuit protection devices.



YXLDT10

## Direct Termination Units

No. Of Modules	Cat. No.	H (mm)	W (mm)	D1 (mm)	D2 (mm)
10	YXLDT10	230	252	106	205
16	YXLDT16	230	359	106	205

Modular enclosures fitted with direct termination busbar for banking with  
isolator or RCD controlled units to increase outgoing ways.  
Please refer to page 49 for circuit protection devices.

# Insulated IP Enclosures

Surface mounting units suitable for use with Proteus modular isolation and protection devices to provide local or individual circuit control eg. Workshop.  
For extra wiring room order extended enclosures eg. ENC202ML or ENC204ML.



ENC654

## Insulated Enclosures

No. of Modules	IP Rating	Cat. No.	H (mm)	W (mm)	D (mm)
1 or 2	20	ENC202*	135	40	65
4	20	ENC204*	135	75	65
4	40	ENC404	230	116	110
2	55	ENC542	135	75	95
4	55	ENC544	160	120	95
6	55	ENC546	160	200	95
10	55	ENC5410	196	250	110
16	55	ENC5416	270	340	140
4	65	ENC654	200	127	120
8	65	ENC658	200	200	120
12	65	ENC6512	258	318	142
24	65	ENC6524	383	318	142
36	65	ENC6536	507	318	142

\* - Enclosure supplied without transparent front cover.  
Please refer to page 49 for circuit protection devices.



## **Sheffield City Council** New Build Homes

As part of a new build project, Sheffield City Council chose Proteus Switchgear to develop a range of Flush-Mounted Consumer Units to incorporate a dual RCD / high integrity configuration including a PV monitoring and data-logging/transmission module. The units were designed to meet the requirements of Amendment 3:2015 of BS7671:2008 - Requirements for Electrical Installations.



# Metering Isolators & Terminals

Single and three phase isolator switches specifically for metering applications.

Facility to seal the enclosure cover and incoming 'bottom' connections, allowing the outgoing 'top' connections to be made at a later stage.

Removable terminal cover can also be sealed if required. Entry holes will accommodate 25mm<sup>2</sup> double insulated or 35mm<sup>2</sup> single insulated cable.



EMIS ECO

## 2 Module Enclosure

Description	Cat. No.	H (mm)	W (mm)	D (mm)
100A DP Isolator	EMIS ECO	145	59	82



EMIS4 ECO

## 4 Module Enclosures

Description	Cat. No.	H (mm)	W (mm)	D (mm)
24Hr/Off Peak Insulated	EMIS2 ECO	145	95	82
100A 4 Pole Isolator	EMIS4 ECO	145	95	82



ETB5

## Terminal Block

Description	Cat. No.	H (mm)	W (mm)	D (mm)
100A 5 Way terminal block	ETB5	64	50	40



KWH100A

## Kilowatt Hour Meters

Description	Cat. No.	No. Of Modules
45A Direct connect MID approved kWh meter	KWH45AMID	1
100A Direct connect kWh meter	KWH100A	2
100A Direct connect MID approved kWh meter	KWH100AMID	2



# Switch Fuse & Fire Alarm Switches

Surface mounting switch disconnecter fuse unit in robust steel enclosure with an epoxy powder coated paint finish.

Unit is designed to accommodate fuselinks to

BS88: Part 1,2 & 6.

All switches are lockable in ON and OFF position.



SF20

## Double Pole HRC Switch Fuses

Current Rating	Capacity In (mm <sup>2</sup> )	Capacity Out (mm <sup>2</sup> )	Cat No.	H (mm)	W (mm)	D (mm)
20	50	25	<b>SF20</b>	225	114	90
32	50	25	<b>SF32</b>	225	114	90
40	50	25	<b>SF40</b>	225	114	90
50	50	25	<b>SF50</b>	225	114	90
63	50	25	<b>SF63</b>	225	114	90
80	50	50	<b>SF100/80</b>	307	192	93
100	50	50	<b>SF100</b>	307	192	93

DP Isolator can be locked in the ON or OFF position using DLXP1.



FS1

## Fire Alarm Panel Switch

Description	Capacity In (mm <sup>2</sup> )	Capacity Out (mm <sup>2</sup> )	Cat No.	H (mm)	W (mm)	D (mm)
Metalclad unit	50	25	<b>FS1</b>	175	110	85

For use when connecting a fire alarm to a public or private power distribution supply.

### Key features:

Compliant with B5839 pt 1-2002 & BSEN54 pt4-1997

Three module steel enclosure.

Powder coated red in colour.

45A DP Isolator and 6A Type B SP MCB fitted

Both devices can be locked in the 'ON' position using locking accessories supplied.

Metalclad surface mounting enclosure with both top and bottom knockouts.

Ingress protection: IP20.

(NB: MCB will trip under fault conditions even when lock is fitted).



TPS30

## 4 pole Isolator Switch AC21B

Description	Capacity In (mm <sup>2</sup> )	Capacity Out (mm <sup>2</sup> )	Cat No.	H (mm)	W (mm)	D (mm)
32A	10	10	<b>TPS30</b>	140	81	60

Surface mounting 4pole switch disconnectors compliant with IEC 60947-3 with AC21B utilisation category. This unit offers a high impact resistant metalclad enclosure with facility to lock the switch in ON and OFF positions.

# Three Phase Consumer Units

When space is limited and the installation requires a three phase distribution board, the range of Proteus TPX consumer units is the solution. A choice of 1 to 4 outgoing TP ways fed via a 3-phase

comb busbar arrangement are available in either insulated, metalclad or IP55 enclosures. All units are pre-fitted with 100A TP Isolator incomer and busbar to suit.



TPXIC4

## Insulated Enclosures

No. Of Modules	Cat. No.	H (mm)	W (mm)	D1 (mm)	D2 (mm)
1	TPXIC1	230	250	105	220
2	TPXIC2 *	230	250	105	220
3	TPXIC3 **	200	320	105	220
4	TPXIC4 **	230	360	105	220

\* - Will accept metal gland plate MGP2.

\*\* - Will accept metal gland plate MGP3.

Please refer to page 49 for circuit protection devices.



TPXIPC1

## IP55 Enclosures

No. Of Modules	Cat. No.	H (mm)	W (mm)	D (mm)
1	TPXIPC1	150	190	90
2	TPXIPC2	190	250	115
3	TPXIPC3	270	340	130
4	TPXIPC4	270	340	130

Please refer to page 49 for circuit protection devices.



TPXMC2

## IP55 Enclosures

No. Of Modules	Cat. No.	H (mm)	W (mm)	D (mm)
1	TPXMC1	254	167	108
2	TPXMC2	254	237	108
3	TPXMC3	254	307	108

Please refer to page 49 for circuit protection devices.

# Miniature Circuit Breakers

- Use the colour code to help identify the supplying Proteus Division for further technical data on circuit protection devices or visit: [www.proteusswitchgear.co.uk](http://www.proteusswitchgear.co.uk)

Blue Box - Consumer

No Box - Industrial



601B

## B-Type

Current Rating (A)	6kA SP Cat No.	10kA SP Cat. No.	10kA DP Cat. No.	6kA TP Cat. No.	10kA TP Cat. No.	10kA 4P Cat. No.
1	601B	-	-	-	-	-
2	602B	1002/2	-	-	-	-
4	604B	1004/2	-	-	-	-
6	606B	1006/2	-	-	31006/2	-
10	610B	1010/2	-	-	31010/2	-
16	616B	1016/2	-	-	31016/2	-
20	620B	1020/2	-	-	31020/2	-
25	625B	-	-	-	-	-
32	632B	1032/2	-	-	31032/2	-
40	640B	1040/2	-	-	31040/2	-
45	645B	-	-	-	-	-
50	650B	1050/2*	-	-	31050/2*	-
63	663B	1063/2*	-	-	31063/2*	-

\* - 6kA rated.



606C

## C-Type

Current Rating (A)	6kA SP Cat No.	10kA SP Cat. No.	10kA DP Cat. No.	6kA TP Cat. No.	10kA TP Cat. No.	10kA 4P Cat. No.
2	602C	1002/3	-	3602C	31002/3	-
4	604C	1004/3	-	3604C	31004/3	-
6	606C	1006/3	21006/3	3606C	31006/3	41006/3
10	610C	1010/3	21010/3	3610C	31010/3	41010/3
16	616C	1016/3	21016/3	3616C	31016/3	41016/3
20	620C	1020/3	21020/3	3620C	31020/3	41020/3
25	625C	1025/3	21025/3	3625C	31025/3	-
32	632C	1032/3	21032/3	3632C	31032/3	41032/3
40	640C	1040/3	21040/3	3640C	31040/3	41040/3
50	650C	1050/3*	21050/3*	3650C	31050/3*	41050/3*
63	663C	1063/3*	21063/3*	3663C	31063/3*	41063/3*

\* - 6kA rated.

## D-Type

Current Rating (A)	6kA SP Cat No.	10kA SP Cat. No.	10kA DP Cat. No.	6kA TP Cat. No.	10kA TP Cat. No.
6	-	1006/4	-	-	31006/4
10	-	1010/4	-	-	31010/4
16	-	1016/4	-	-	31016/4
20	-	1020/4	-	-	31020/4
32	-	1032/4	-	-	31032/4
40	-	1040/4	-	-	31040/4
50	-	1050/4	-	-	31050/4*
63	-	1063/4	-	-	31063/4*


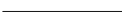
\* - 6kA rated. 4 Pole MCBs cannot be fitted in MCB boards.



1006/4

# Residual Current Breaker With Overload

- Use the colour code to help identify the supplying Proteus Division for further technical data on circuit protection devices or visit: [www.proteusswitchgear.co.uk](http://www.proteusswitchgear.co.uk)

	Blue Box - Consumer
	No Box - Industrial



XL6BR

## Single Module RCBOs - 1Pole & Solid Neutral B - Type

Current Rating (A)	4.5kA Cat No.	6kA Com. Cat. No.	6kA Cat No.	10kA Cat No.
6	6MBRSP	6MBRSPK	66MBRSP	XL6BR
10	10MBRSP	10MBRSPK	106MBRSP	XL10BR
16	16MBRSP	16MBRSPK	166MBRSP	XL16BR
20	20MBRSP	20MBRSPK	206MBRSP	XL20BR
25	25MBRSP	25MBRSPK	-	-
32	32MBRSP	32MBRSPK	326MBRSP	XL32BR
40	40MBRSP	40MBRSPK	406MBRSP	XL40BR
45	45MBRSP	-	-	XL45BR



20MCRSPK

## C - Type

Current Rating (A)	4.5kA Cat No.	6kA Com. Cat. No.	6kA Cat No.	10kA Cat No.
6	6MCRSP	6MCRSPK	66MCRSP	XL6CR
10	10MCRSP	10MCRSPK	106MCRSP	XL10CR
16	16MCRSP	16MCRSPK	166MCRSP	XL16CR
20	20MCRSP	20MCRSPK	206MCRSP	XL20CR
25	-	25MCRSPK	-	XL25CR
32	32MCRSP	32MCRSPK	326MCRSP	XL32CR
40	40MCRSP	40MCRSPK	406MCRSP	XL40CR
45	45MCRSP	-	-	XL45CR



10MRBE

## Double Module RCBOs - 1Pole & Switched Neutral B - Type



Current Rating (A)	4.5kA Cat No.	6kA Com. Cat. No.	6kA Cat No.	10kA Cat No.
6	-	-	6MRBE**	-
10	-	-	10MRBE**	-
16	-	-	16MRBE**	-
20	-	-	20MRBE**	-
32	-	-	32MRBE**	-
40	-	-	40MRBE**	-

\*\* MRBE range are suitable for 'cable in-cable out' applications and with DP comb busbar.

All RCBOs and RCDs are fitted with a 'Test-Button' facility which will check the detection and mechanical tripping function of the device, this must be operated regularly.

# Residual Current Device

- Use the colour code to help identify the supplying Proteus Division for further technical data on circuit protection devices or visit: [www.proteusswitchgear.co.uk](http://www.proteusswitchgear.co.uk)


	Blue Box - Consumer
	No Box - Industrial



25/2/30T

## 2 Pole RCDs

Current Rating (A)	Max. cable Size (mm <sup>2</sup> )	30mA Sensitivity Cat. No.	100mA Sensitivity Cat. No.	300mA Sensitivity Cat. No.	500mA Sensitivity Cat. No.
25	35	25/2/30T*	25/2/100T	25/2/300T	25/2/500T
40	35	40/2/30T*	40/2/100T	40/2/300T	40/2/500T
63	35	63/2/30T*	63/2/100T	63/2/300T	63/2/500T
80	35	80/2/30T*	80/2/100T	80/2/300T	80/2/500T
100	50	100/2/30T*	100/2/100T	100/2/300T	100/2/500T

As standard RCDs are Type AC ()


\* - DP 30mA RCD units are available in Type A () e.g. 100/2/30TA.

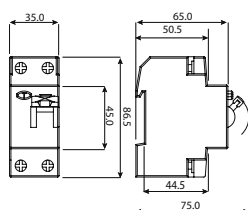


100/4/30

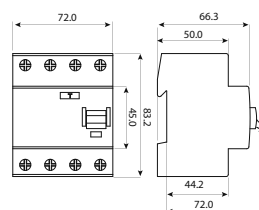
## 4 Pole RCDs

Current Rating (A)	Max. cable Size (mm)	30mA Sensitivity Cat. No.	100mA Sensitivity Cat. No.	300mA Sensitivity Cat. No.	500mA Sensitivity Cat. No.
25	35	25/4/30*	25/4/100	25/4/300	25/4/500
40	35	40/4/30*	40/4/100	40/4/300	40/4/500
63	35	63/4/30*	63/4/100	63/4/300	63/4/500
80	35	80/4/30*	80/4/100	80/4/300	80/4/500
100	35	100/4/30*	100/4/100	100/4/300	100/4/500

As standard RCDs are Type AC ()



DP - RCD - Type AC & A



4P - RCD - Type AC

## Residual Current Device - Principles of Operation.

When the load is connected to the supply through an RCD, the live and neutral conductors are connected through a primary winding on a toroidal transformer. In this arrangement the secondary winding is used as a sensing coil and is electrically connected to a relay or solid-state switching device, the activation of which triggers the mechanical tripping mechanism. When the live and neutral currents are balanced, as in healthy circuit they produce equal and opposite magnetic fluxes in

the transformer core with the result that there is no current generated in the sensing coil. When the live and neutral currents are not balanced they create an out-of-balance flux. This will induce a current in the secondary sensing winding which is used to operate the tripping mechanism of the RCD.

# Surge Protection

Proteus Switchgear offers a comprehensive range of Lightning and Surge Protection Devices for single and three phase applications. Whether it's a stand-alone

device or a pre-assembled SPD in a distribution board, Proteus can provide a coordinated system to meet your specific requirements.



SPD/T2/TNS4P



SPD/T3/PC



SPD/T2/TNS4PE

## Surge Protection

SPD Type	Earthing	Internal Fuse	Three Phase Cat. No.
1 + 2	TN - S, TN - C - S	N	SPD/T12/TNS4P
1 + 2	TN - S, TN - C - S	Y	SPD/T12/TNS4PIF
1 + 2	TT	N	SPD/T12/TT4P
1 + 2	TT	Y	SPD/T12/TT4PIF
2	TN - S, TN - C - S	N	SPD/T2/TNS4P
2	TN - S, TN - C - S	Y	SPD/T2/TNS4PIF
2	TT	N	SPD/T2/TT4P
2	TT	Y	SPD/T2/TT4PIF

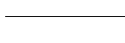
SPD Type	Earthing	Internal Fuse	Single Phase Cat. No.
1+2	TN-S, TN-C-S	N	SPD/T1/TN
1+2	TT	N	SPD/T1/TT
2 (1P+N)	TN-S, TN-C-S	N	SPD/T2/TN
2 (1P+N)	TT	N	SPD/T2/TT
2 (1P only)	-	N	SPD/T2/SP
3	-	N	SPD/T3/SC
3	-	N	SPD/T3/PC
3	-	N	SPD/T3/LPC

## Insulated IP Enclosures

SPD Type	IP Rating	Earthing	Cat. No.	H (mm)	W (mm)	D (mm)
1 + 2	IP55	TN-S, TN-C-S	SPD/T1/TNE	135	75	95
1 + 2	IP55	TT	SPD/T1/TTE	135	75	95
2 (1P+N)	IP55	TN-S, TN-C-S	SPD/T2/TNE	135	75	95
2 (1P+N)	IP55	TT	SPD/T2/TTE	135	75	95
2 (1P only)	IP55	-	SPD/T2/SPE	135	75	95
3	IP55	-	SPD/T3/SCE	135	75	95
3	IP55	-	SPD/T3/PCE	135	75	95
1 + 2 (3P+N)	IP65	TN-S, TN-C-S	SPD/T12/TNS4PE	201	202	120
1 + 2 (3P+N)	IP65	TT	SPD/T12/TT4PE	201	202	120
2 (3P+N)	IP65	TN-S, TN-C-S	SPD/T2/TNS4PE	160	120	95
2 (3P+N)	IP65	TT	SPD/T2/TT4PE	160	120	95



# Surge Protection

	Blue Box - Consumer
	No Box - Industrial



SPD/T12/TNS4PEF



SPD/T2/TT4PES



BX12S1TNS



XL4S1TT



BXS2TTK

## Steel Enclosures - With Integral Fuse

SPD Type	IP Rating	Earthing	Cat. No.	H (mm)	W (mm)	D (mm)
1 + 2	-	TN-S, TN-C-S	SPD/T12/TNS4PEF	385	205	112
1 + 2	-	TT	SPD/T12/TT4PEF	385	205	112
2	-	TN-S, TN-C-S	SPD/T2/TNS4PEF	385	205	112
2	-	TT	SPD/T2/TT4PEF	385	205	112

## Steel Enclosures - Without Integral Fuses

SPD Type	IP Rating	Earthing	Cat. No.	H (mm)	W (mm)	D (mm)
1 + 2	-	TN-S, TN-C-S	SPD/T12/TNS4PES	385	205	112
1 + 2	-	TT	SPD/T12/TT4PES	385	205	112
2	-	TN-S, TN-C-S	SPD/T2/TNS4PES	385	205	112
2	-	TT	SPD/T2/TT4PES	385	205	112

## Suitable For Use in TN-C-S/TN-S Systems

Outgoing Ways	BX Board 100A Incomer	BX Board 125A Incomer	XL Board 100A Incomer	XL Board 125A Incomer
3	BX4S1TNS	BX4S125TNS	XL4S1TNS	XL4S125TNS
5	BX6S1TNS	BX6S125TNS	XL6S1TNS	XL6S125TNS
7	BX8S1TNS	BX8S125TNS	XL8S1TNS	XL8S125TNS
11	BX12S1TNS	BX12S125TNS	XL12S1TNS	XL12S125TNS
15	BX16S1TNS	BX16S125TNS	XL16S1TNS	XL16S125TNS
19	BX20S1TNS	BX20S125TNS	XL20S1TNS	XL20S125TNS
23	BX24S1TNS	BX24S125TNS	XL24S1TNS	XL24S125TNS

## Suitable For Use in TT Systems

Outgoing Ways	BX Board 100A Incomer	BX Board 125A Incomer	XL Board 100A Incomer	XL Board 125A Incomer
3	BX4S1TT	BX4S125TT	XL4S1TT	XL4S125TT
5	BX6S1TT	BX6S125TT	XL6S1TT	XL6S125TT
7	BX8S1TT	BX8S125TT	XL8S1TT	XL8S125TT
11	BX12S1TT	BX12S125TT	XL12S1TT	XL12S125TT
15	BX16S1TT	BX16S125TT	XL16S1TT	XL16S125TT
19	BX20S1TT	BX20S125TT	XL20S1TT	XL20S125TT
23	BX24S1TT	BX24S125TT	XL24S1TT	XL24S125TT

Three phase distribution boards with incomer of 200A rating require a conversion kit to introduce type 2 SPD protection.

Type of 3ph Board	TN-C-S TN-s	TT
BX	BXS2TNSK	BXS2TTK
XL	XLS2TNSK	XLS2TTK

A Type 2 SPD can be connected in parallel with the installation using one of our conversion kit / enclosures which incorporate the necessary Type 2, 3P+N SPD with backup fuse units rated at 125A.



## **Gainsborough Hotel Finning UK** Flush Mount Consumer Units

As part of a major refurbishment program by Finning UK, Proteus Flush Mount Consumer Units were selected for the prestigious 100 bedroom Gainsborough Hotel in Bath.

The units were supplied pre-assembled with SCPDs and contactors already fitted, ready for immediate installation. In addition, provision was made in the Consumer Units to mount a secondary heating controller supplied by the contractor.

# Digital, Mechanical & Staircase Timers

A range of digital, mechanical & staircase timers available in 24-hour or 7-day options, predetermining the scheduling of automated switching options.



## Digital Timers

### No. of Channels

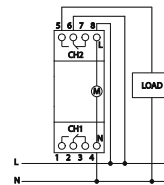
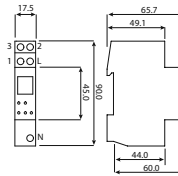
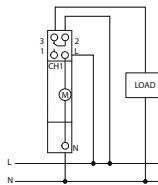
### Current Rating (A) Resistive Load

### Cat. No.

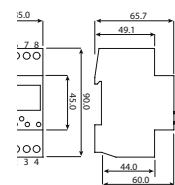
1	16	<b>71ST</b>
2	16	<b>72ST</b>

### 71ST

Wiring schematic and Dimensions/Terminal arrangement  
1 channel digital timer



2 channel digital timer



## Mechanical Timers

### No. of Channels

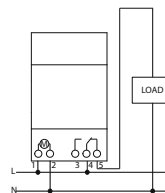
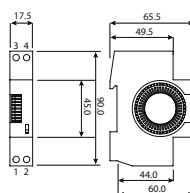
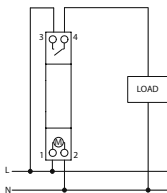
### Cat. No.

### Module Size

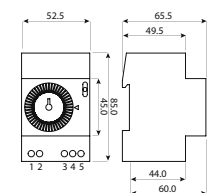
1 Channel 24hr synchronous timer 16A rated	<b>241S</b>	1
2 Channel 24hr synchronous timer 16A rated	<b>242S</b>	3
1 Channel 24hr quartz timer 16A rated	<b>241SQ</b>	1
2 Channel 24hr quartz timer 16A rated	<b>242SQ</b>	3

### 242S

Wiring schematic and Dimensions/Terminal arrangement  
1 NO contact 24hr



1 Changeover contact 24hr



## Staircase Timers

### No. of Channels

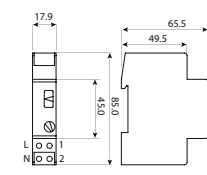
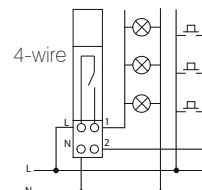
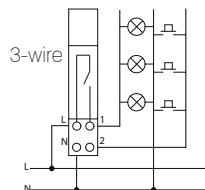
### Cat. No.

Staircase timer switch 1 module	<b>1SCT</b>
Staircase timer switch 1 module c/w pre-warn function	<b>1SCT/P*</b>

\* Pre-warn function ensures that the timed light circuit 'flashes' on and off several times before fully switching off.

### 1SCT

Dimensions/Terminal arrangement



# Contactor & Isolators

Proteus contactors are available from 20A up-to 63A in 2pole and 4pole options, suitable for din-rail mounting in consumer units fitted with full standard din-rail. Contactors offer method of remote switching of loads

and are suitable for AC1 switching - general heating and lighting loads. All contactors supplied with normally open (NO) contacts. Standard: EN61095.



CT202

## Contactors

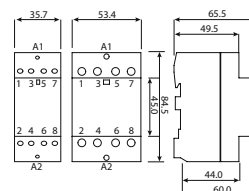
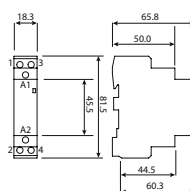
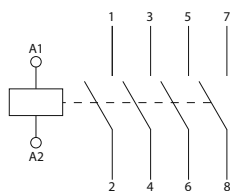
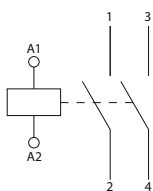
Current Rating (A)	Voltage Rating (V)	Power at Rated Voltage AC 1 (kW)	Power at Rated Voltage AC 3 (kW)	No. of Poles	No. of Modules	Cat. No.
20	400	4	-	2	1	CT202
20	400	16	4	4	2	CT204
40	400	25	8	4	3	CT404
63	400	37	15	4	3	CT634

2 pole contactor

Wiring schematic  
4 pole contactor

Dimensions/Terminal arrangement  
2 pole contactor

Dimensions/Terminal arrangement  
4 pole contactor



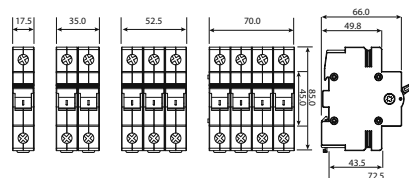
100S2

## Isolators

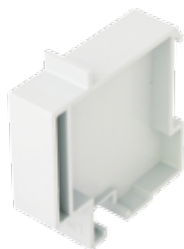
Current Rating (A)	DP Cat. No.	TP Cat. No.	4P Cat. No.
45	45S2	45S3	-
63	63S2	63S3	63S4
100	100S2	100S3	100S4

### Key features:

- Choice of current ratings from 45A up to 100A.
- Operating dolly can be locked in ON or OFF state.
- Neutral pole designed to 'make first / break last'.
- Positive contact status indication therefore can be used as an isolating switch.
- Switch disconnecter is designed to accept cable-in/cable-out and direct to busbar connection.



# Accessories



BM1

## Barriers & Locking

### Description

### Cat. No.

Blanking plate	<b>B1</b>
Busbar terminal shroud	<b>BBS1</b>
Blanking module	<b>BM1</b>
MCB Dolly locking device	<b>DLPX1</b>
MCB Dolly locking device c/w padlock	<b>DLPX1P</b>



CB19SP

## Insulated Comb Busbars \*

### Description

### Cat. No.

Insulated comb busbar 19 SP ways	<b>CB19SP</b>
Insulated comb busbar 28 SP ways	<b>CB28SP</b>
Insulated comb busbar 8 DP ways	<b>CB8DP</b>
Insulated comb busbar 12 DP ways	<b>CB12DP</b>
Insulated comb busbar 7 TP ways	<b>CB7TP</b>
Insulated comb busbar 12 TP ways	<b>CB12TP</b>
End Cap For DP/TP Insulated comb busbar	<b>CBC3</b>
Cable terminal for insulated comb busbar	<b>CBCT1</b>

\* - 80A max. 100A intermittent rating.



JPX1

## Banking Kits

### Description

### Cat. No.

Isol/RCD Direct termination cable kit for YX units	<b>PBK1</b>
Isol/RCD To Isol/RCD cable link kit for YX units	<b>PBK2</b>
Isol/RCD Direct termination cable kit for YXL units	<b>PBKL1</b>
Isol/RCD To Isol/RCD cable link kit for YXL units	<b>PBKL2</b>
Joining piece	<b>JPX1</b>

Suitable for insulated boards only.



TB8

## Brass Terminal Bars

Description	Cat. No.
5 Hole terminal bar	TB5
8 Hole terminal bar	TB8
10 Hole terminal bar	TB10
12 Hole terminal bar	TB12
14 Hole terminal bar	TB14
16 Hole terminal bar	TB16



PXS100

## BS88 Fuses (Offset Tag)

Description	Cat. No.
20A BS88 HRC Fuse	PES20
32A BS88 HRC Fuse	PES32
40A BS88 HRC Fuse	PES40
50A BS88 HRC Fuse	PES50
63A BS88 HRC Fuse	PES63
63A BS88 HRC Fuse (Fits SF100 & SF100/80)	PXS63
80A BS88 HRC Fuse	PXS80
100A BS88 HRC Fuse	PXS100



PMS100

## BS88 Fuses

Description	Cat. No.
20A BS88 HRC Fuse	PMS20
32A BS88 HRC Fuse	PMS32
40A BS88 HRC Fuse	PMS40
50A BS88 HRC Fuse	PMS50
63A BS88 HRC Fuse	PMS63
63A BS88 HRC Fuse (Fits SF100 & SF100/80)	PMS63
80A BS88 HRC Fuse	PMS80
100A BS88 HRC Fuse	PMS100



# Custom Built Consumer Units

At Proteus, our custom build service ensure we design and manufacture a diverse range of insulated and metalclad consumer units to meet your specific requirements.

## Bespoke Units



- Insulated, IP rated or metalclad units.
- Multiple distribution options.
- Optional circuit control devices.
- Pre-wired short circuit protective devices.
- Fully tested assembly.

## Multiple Banked Units

Larger than average homes require larger than the average Consumer Units, building bulk quantities to specification is made simple when specifying Proteus Switchgear.



## Street Lighting Applications

Special locations often require special solutions. A street lighting application demanded a compact unit incorporating Double Pole RCBO, a 2 pole contactor and a 7 day digital timer. Proteus Switchgear were able to offer a pre-cabled and configured unit with electrical noise suppression component included to meet this customers specification.

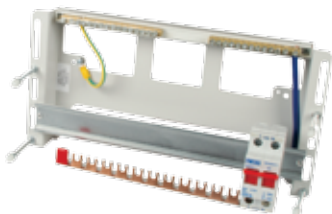




# Mantel Consumer Units

Proteus offer a variety of Mantel Consumer Units (also known as skeleton or spine units) to meet and comply with the recent changes in the wiring regulations. Designed and developed with the needs of both the installer and installation conditions in mind these units offer

Key features:  
16 module units.  
Pre-wired switchgear where applicable.  
Clean cover plate / barrier of non-combustible material.

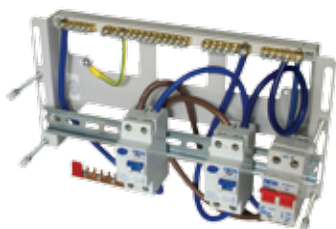


SK3JB12

## Split Load Spine Units

Outgoing Ways	Isolator Rating	RCD 1 Rating*	RCD 2 Rating*	RCD Type	Cat. No.	H (mm)	W (mm)	D (mm)
10	3	7	-	63A DP 30mA	<b>SK3JB7</b>	250	333	92
10	4	6	-	63A DP 30mA	<b>SK4JB6</b>	250	333	92
10	5	5	-	63A DP 30mA	<b>SK5JB5</b>	250	333	92
10	6	4	-	63A DP 30mA	<b>SK6JB4</b>	250	333	92
10	7	3	-	63A DP 30mA	<b>SK7JB3</b>	250	333	92
10	up-to 7	up-to 7	-	63A DP 30mA	<b>SKSLV12</b>	250	333	92

Please refer to page 49 for circuit protection devices.



SKJB5JB5

## Dual RCD Spine Units

Outgoing Ways	Isolator Rating	RCD 1 Rating*	RCD 2 Rating*	RCD Type	Cat. No.	H (mm)	W (mm)	D (mm)
8	-	4	4	63A DP 30mA	<b>SKJB4JB4</b>	250	333	92
10	-	5	5	63A DP 30mA	<b>SKJB5JB5</b>	250	333	92

Please refer to page 49 for circuit protection devices.



SKSLV6R4

## High Integrity & Dual RCD Spine Units

Outgoing Ways	Isolator Rating	RCD 1 Rating*	RCD 2 Rating*	RCD Type	Cat. No.	H (mm)	W (mm)	D (mm)
10	up-to 4	6	4	63A DP 30mA	<b>SKSLV6R4</b>	250	333	92
10	2	4	4	63A DP 30mA	<b>SK2JB4JB4</b>	250	333	92

Please refer to page 49 for circuit protection devices.

# Technical Information

Proteus MCBs are of thermo-magnetic, current limiting type and are available in a range of kA ratings (4.5kA up to 10kA) and operating characteristics (Type B, C and D). A selection of SP (single pole), DP (double pole) and TP (triple pole) options are offered.

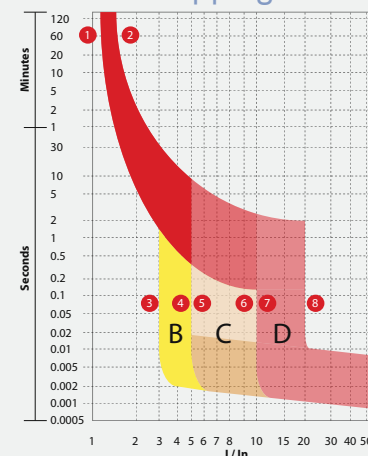
- All MCBs have a 'trip free mechanism'.

- Positive contact status indication in accordance with IEE wiring regulations.
- Tunnel design, touch proof and captive terminals.
- Can be used as isolating switches.
- Lockable in both ON and OFF state without affecting the ability of the trip mechanism to operate.

## General specification

Standards:	BSEN 60898
Operating voltage:	230 / 400V a.c.
Operating frequency:	50Hz
Ambient operating temp.:	-5C to +40C
Maximum terminal torque:	3Nm (2.5Nm advised)
Enclosure material:	Urea or V0 rated Polyamide (self extinguishing at 960C)
Supply:	Can be supplied from top or bottom.
IP rating:	IP4X (front face) IP20 (terminals)
Dielectric voltage:	2500V a.c.
Insulation voltage:	500V a.c.

## Miniature Circuit Breakers MCB Tripping Curves



### Type Instantaneous Tripping Range Circuit Applications

B	3 - 5	Used in domestic situations where maximum sensitivity is required and very little equipment with high start-up current is connected.
C	5 - 10	Suitable for commercial / industrial situations where close protection is not required and start up currents of devices can run up to 5 times rated current for a short period. Where many low voltage lights are used in a domestic situation then, due to the inrush currents of the transformers, type C MCBs may be required to avoid nuisance tripping.
D	10 - 20	Suitable for industrial application where start-up currents may be up to 10 times rated current, for example protection for machines with electric motors fitted, welding units etc.

- 1 Steady current value  $1.13I_n$ :  $t > 1\text{hr}$   
All MCBs are capable of carrying full load current continuously (derating factors apply for ambient conditions and no. of circuits within an enclosure).

- 2 Steady current value  $1.45I_n$ :  $t < 1\text{hr}$   
As load current increases above current rating the thermal release mechanism will disconnect MCB.

- 3  $3I_n$ :  $0.1\text{sec} < t < 45\text{sec}$  ( $I_n \leq 32\text{A}$ )  
 $3I_n$ :  $0.1\text{sec} < t < 90\text{sec}$  ( $I_n > 32\text{A}$ )  
MCB will trip within times specified.

- 4  $5I_n$ :  $t < 0.1\text{sec}$   
B-type MCB ensured to trip in less than 0.1sec via magnetic release.

- 5  $5I_n$ :  $0.1\text{sec} < t < 15\text{sec}$  ( $I_n \leq 32\text{A}$ )  
 $5I_n$ :  $0.1\text{sec} < t < 30\text{sec}$  ( $I_n > 32\text{A}$ )  
MCB will trip within times specified.

- 6  $10I_n$ :  $t < 0.1\text{sec}$   
C-type MCB ensured to trip in less than 0.1sec via magnetic release.

- 7  $10I_n$ :  $0.1\text{sec} < t < 4\text{sec}$  ( $I_n \leq 32\text{A}$ )  
 $10I_n$ :  $0.1\text{sec} < t < 8\text{sec}$  ( $I_n > 32\text{A}$ )  
MCB will trip within times specified.

- 8  $20I_n$ :  $t < 0.1\text{sec}$   
D-type MCB ensured to trip in less than 0.1sec via magnetic release.  
 $t$  = Tripping time

B-Type

C-Type

D-Type

## MCB Installation voltages

Type B & C 1 pole 230V-400V AC  
Type B & C Multi-pole 400V AC

## Terminal capacities

Range of MCBs	Capacity (mm <sup>2</sup> )
MCBs	25mm <sup>2</sup> (In and Out)
RCBOs	25mm <sup>2</sup> (In) ; 10mm <sup>2</sup> (Out)
RCDs (<100A)	35mm <sup>2</sup> (In and Out)
RCDs (100A)	50mm <sup>2</sup> (In and Out)
Isolators	35/50mm <sup>2</sup> (In and Out)
Earth and Neutral bars	25mm <sup>2</sup> and 16mm <sup>2</sup>

# Technical Information

Adjacent MCBs, RCBOs or MCB/RCD combinations should not be continuously loaded at, or approaching, their normal rated currents when mounted in enclosures. It is also good engineering practice to make provisions for adequate free air between devices.

Under these circumstances and, in common with other

## Switchgear Derating

manufacturers, we recommend a diversity factor of 66% is applied to the MCB nominal rated current, especially if the MCB is expected to be loaded near to or at full rating for more than one hour.

Thermal issues should also be taken into consideration when choosing conductor size for the protected circuits.

## MCB Installation currents

Generally the MCBs detailed are not intended to provide close overload protection for motors. However they can be employed in conjunction with the customary motor overload current device as an alternative to the isolator/fuse combination. In this condition the MCB will protect the cable to the motor and the motor will be protected by its own protective device.

The tables A and B detailed below give recommendations on MCB selection for motor circuits, for C type only.

Note: The values of full load current and starting current will approximately be 10% higher at 380/220V ac than the figures

stated for 400/230V motors. The figures given in table A for the starting current and its duration are intended to be used as a guide only. In practice the motor run up time will depend upon the type of drive and the loading of the motor when it is started. Consultation with the motor manufacturer should give an indication of the magnitude of the starting current and the duration.

The selection of the most suitable circuit breaker can then be found from the time/current characteristics of the circuit breaker.

**Table A: Recommended MCB current ratings for the protection of cables to single phase 230V a.c. motors.**

Horse Power (HP)	Power (kW)	FLC (A)	Starting Current (A)	Duration of Starting Current (sec)	MCB Current Rating (A)
0.25	0.18	1.5	10.5	3.0	10
0.50	0.37	3.0	21.0	3.0	10
0.75	0.55	5.0	35.0	3.0	16
1.00	0.75	5.5	38.5	3.1	20
1.50	1.12	8.5	59.5	3.15	32
2.00	1.50	10.5	73.5	3.2	50
3.00	2.25	15.5	108.0	3.3	50
4.00	3.00	20.0	140.0	3.4	63
5.00	3.80	24.0	168.0	3.5	-
6.00	4.50	28.0	196.0	3.6	-
7.00	5.20	32.0	224.0	3.7	-

## Maximum Earth fault loop impedance (ie Zs ohms) for circuits supplying socket outlets in accordance with BS7671 regulation 411.3.2 at @ 218.5V (230V x 0.95 Cmin)

BS7671: 2008 requirements: Electrical installations (17th Edition of the IEE Wiring regulations) specifically identifies Type B and C. Lower earth fault loop impedance's (Zs) are generally necessary for Type D to achieve the operating times required by regulation 413-02-08. (Maximum Zs is calculated using the formula in the regulations and the characteristics of the circuit breaker). Where the requirement can not be achieved, use of the circuit breakers

as overcurrent protective devices is not precluded, but the use of residual current circuit breakers (RCDs) to provide protection against indirect earth fault condition is implied. Establishment of the value of the earth fault loop impedance (Zs) at the design stage of installation will determine which type of circuit breaker should be used.

Device	Standard	6A	10A	16A	20A	32A	40A	50A	63A	80A	100A	125A
Type B	BSEN 60898	7.43	4.46	2.79	2.23	1.39	1.11	0.89	0.71	-	-	-
Type C	BSEN 60898	3.83	2.30	1.44	1.15	0.72	0.58	0.46	0.37	0.30	0.24	0.19
Type D	BSEN 60898	1.87	1.12	0.70	0.56	0.35	0.28	0.22	0.18	-	-	-

At these levels of earth loop impedance, MCBs will provide disconnection times in accordance with BS7671 for circuits supplying socket outlets.

# Technical Information

Table B: Recommended MCB current ratings for the protection of cables to three phase 400V a.c. motors.

Horse Power (HP)	Power (kW)	FLC (A)	Starting Current (A)	Duration of Starting Current (sec)	MCB Current Rating (A)	Starting Current (A)	Duration Of Starting Current (sec)	MCB Current Rating (A)
0.25	0.18	0.5	3.5	3.0	6	1.75	9.0	6
0.50	0.37	0.9	6.3	3.0	6	3.15	9.1	6
0.75	0.55	1.3	9.1	3.0	6	4.59	9.2	6
1.00	0.75	1.9	13.3	3.1	6	6.6	9.3	6
1.50	1.12	2.5	17.5	3.15	10	8.7	9.5	10
2.00	1.50	3.4	23.8	3.2	10	11.9	9.6	10
3.00	2.25	4.8	33.6	3.3	16	16.8	10.0	16
4.00	3.00	6.4	44.8	3.4	20	22.4	10.3	20
5.00	3.80	7.8	54.6	3.5	20	27.3	10.7	20
6.00	4.50	9.0	63.0	3.6	20	31.5	11.0	20
7.00	5.20	10.3	72.1	3.7	32	36.0	11.3	20
7.50	5.60	11.6	81.2	3.75	32	40.6	11.5	32
10.00	7.50	14.4	100.8	4.0	40	50.4	12.3	40
12.50	9.30	17.3	121.1	4.25	40	60.5	13.2	40
15.00	11.00	21.1	148.0	4.5	63	73.8	14.0	50
20.00	15.00	28.0	196.0	5.0	63	93.0	15.7	63
25.00	18.50	35.0	245.0	5.5	-	122.0	17.3	-
7.00	5.20	32.0	224.0	3.7	-			

## RCBOs

Providing both overcurrent protection and earth leakage protection in a combined unit, Proteus offers a range of RCBOs which will fit all Proteus modular consumer units and B-type 3-phase distribution boards.

RCBOs are available in a range of current ratings from 6A to 50A and with short circuit capacities (Ics) from 4.5kA up to 10kA. RCBOs are offered in both type B and C tripping characteristics. All single module RCBOs contain a switched live and solid neutral where as the double module unit offers both Live and Neutral switching.

Similar to our MCB technology all devices have a 'trip free

mechanism' and positive contact status indication. Connection of load circuit cables is via tunnel design cable clamps with touch proof and captive terminal screws. Lockable in both ON and OFF position without affecting the ability of the trip mechanism to operate.

RCBOs allow earth fault protection to be restricted to individual circuits, thus ensuring that only the circuit with the fault is interrupted. (When groups of circuits are protected by an RCD, all circuits would be interrupted under a fault condition, which may cause unnecessary inconvenience).

## General specification

Standards:	BSEN 61009
Operating voltage:	230V a.c.
Earth leakage sensitivity:	30mA
Switching:	Single pole - L (switched) + N (solid) Double pole - L + N (switched)
Operating frequency:	50Hz
Ambient operating temp.:	-5°C - +40°C
Maxi. terminal torque:	2Nm
Enclosure material:	Urea or VO rated PBT (both self extinguishing at 960°C)
Supply connections:	Consult specific product data sheet
IP rating:	IP4X (front face); IP20 (terminals)
Dielectric voltage:	2500V a.c.
Insulation voltage:	500V a.c.

# Technical Information

## RCDs

Proteus RCDs are available in a wide range of earth leakage sensitivities and current ratings to meet the majority of applications. Residual Current Devices (RCDs) come in both 2 pole and 4 pole options.

Proteus RCDs incorporate the latest in electronic earth leakage detection technology ensuring consistent reliable performance. With sufficient contact gap, switching of all Live and Neutral conductors and positive contact indication in accordance with the IEE wiring regulation these devices can be used for isolation purposes.

RCDs also incorporate 'trip free mechanism' technology and can be locked ON or OFF with suitable locking device (eg. DLPX1) without affecting the devices ability to offer protection under fault conditions.

General use RCDs for domestic single phase or light commercial three phase systems are required to be either Type AC or Type A. This type reference defines the nature of the earth leakage which the RCD is expected to detect and protect against.

**Type AC:** Tripping is ensured for residual sinusoidal alternating currents, whether suddenly applied or slowly rising. Identified by the symbol:



**Type A:** Tripping is ensured for residual sinusoidal alternating currents and residual pulsating direct currents, whether suddenly applied or slowly rising.

Identified by the symbol:



## General specification

Standards:	BSEN 61008
Operating voltage:	2P-230V a.c. 4P-230/400V a.c.
Operating frequency:	50Hz
Ambient operating temp.:	-5°C - +40°C
Maxi. terminal torque:	2.5Nm
Enclosure material:	VO rated polyamide or PBT (both self extinguishing at 960°C)
Supply connections:	Consult specific product data sheet
IP rating:	IP4X (front face); IP20 (terminals)
Dielectric voltage:	2500V a.c.
Insulation voltage:	500V a.c.

Type 1 SPDs are key to providing necessary protection of the installation against the effects of lightning strikes entering the building. Type 1 SPDs are designed to carry partial lightning currents and are defined as being tested with a high energy 10/350μs (Iimp) wave shape.

These Type 1 SPDs must be installed on incoming services (e.g. mains power and data) when an external Lightning Protection System (LPS) is installed on a building. Where partial lightning currents can also flow due to a direct lightning strike on overhead supplies or externally mounted equipment, Type 1 SPDs should also be used. Combined Type 1 + Type 2 SPDs are installed at the origin of the supply to the building, normally within the main switchboard. If the installation being protected is already fitted with an SCPD of 315A or less then the SPD can be connected direct to the busbar otherwise ensure the device is adequately protected.

In installations where it is not possible to fit a fuse or circuit breaker the 'IF' (Internal Fuse) version is available.

Type 2 SPDs in this modular form offer more general surge protection for equipment within the installation from sources of problematic electrical surges internal to the building (typically switching transients). If the installation being protected is already fitted with an SCPD of 125A or less then the SPD can be connected direct to the busbar otherwise ensure the device is adequately protected. In installations where it is not possible

to fit a fuse or circuit breaker the 'IF' (Internal Fuse) version is available. Their protection is limited by distance with a general protection zone of <10m. Equipment further away necessitate the installation of an additional Type 2 units in sub-distribution boards.

Type 2 and Type 3 SPDs are designed to discharge the induced surges created by lightning electromagnetic fields and also other transient surge events such as switching surges, supply faults etc. These devices are defined as being tested with a specific energy wave shape of 8/20μs (In) for Type 2 SPDs or a combination wave shapes for Type 3 SPDs. For many applications where the requirement is to provide surge protection only, Type 2 and Type 3 SPDs play a critical role in protecting electronic equipment.

Type 3 SPDs provide the primary 'fine protection' from surges, giving high sensitive equipment that added level of security. As a rule they should be installed as close as possible to the equipment being protected. This class of product is available in both din-rail mounting version or remote/local installation. For example the SPD/T3/LPC can be wired into the back of a plug socket feeding a certain piece of equipment. The SPD/T3/LPC has also the benefit of an audible alarm, for when the unit requires replacing.

## Surge Protection Devices

# Technical Information

The below table lists only categories applicable to BSEN60974-3 - Switches, Disconnectors, Switch-disconnectors and Fuse-combination units.

The letter A or B can be suffixed dependent on whether the intended application requires frequent (A) or infrequent (B) operation.  
[For full details consult the full chart in BSEN60947-1]

IEC Utilization Categories for Low Voltage Switchgear		
Current	Category	Typical Application
AC	AC - 20	Connecting and disconnecting under no-load conditions
	AC - 21	Switching of resistive loads including moderate overloads
	AC - 22	Switching of mixed resistive and inductive loads, including moderate overloads
	AC - 23	Switching of motor loads or other highly inductive loads
DC	DC - 20	Connecting and disconnecting under no-load conditions
	DC - 21	Switching of resistive loads including moderate overloads
	DC - 22	Switching of mixed resistive and inductive loads, including moderate overloads
	DC - 23	Switching of motor loads or other highly inductive loads

Moulded case circuit breakers are not in themselves intended to afford close thermal protection on motor circuits. However, when used in tandem with any intrinsic motor overload device they provide an excellent alternative to the combined isolator and fuse arrangements. In this case the motor is protected by its own circuit breaker.

In order to select the correct MCCB, consideration should be given to individual MCCB time/current characteristics (for full details please refer to works). This should only be undertaken in

conjunction with information provided by the motor manufacturer as to starting current and duration.

The motor protection table shown provides a guide to MCCB selection based on the start current and duration indicated and it must always be noted that the drive and motor loading will affect the motor run up time.

(i) The figures shown are based on the assumption that the motor starting conditions are:  
Direct On-Line = 7 x full load current for 5 seconds max.

## Moulded Case Circuit Breakers MCCB Protection of Motor Circuits

Moulded case circuit breakers are commonly applied to capacitor currents. However, due to high in-rush currents and harmonic content found in capacitor circuits, MCCBs should be rated > 1.5 times the current rating of the capacitor.

It is recommended that the MCCB should be utilized as a main isolation/protection device to the capacitor bank. (i.e. occasional switching). Capacitors should be individually protected and switched by appropriately rated contactors.

## MCCB Protection of Capacitor Circuits

Motor Rating (kW)	Motor Rating (HP)	Approx. FLC (A) at 400V	Direct On Line MCCB Type/ Current Rating	
< 5.5	< 7.5	< 11.5	16A	MC016T
< 11	< 15	< 22.5	25A	MC025T
< 15	< 20	< 30	32A	MC032T
< 18	< 25	< 36	40A	MC040T
< 22	< 30	< 43	50A	MC050T
< 30	< 40	< 58	63A	MC063T
< 37	< 50	< 72	80A	MC080T
< 51	< 70	< 98	100A	MC100T
< 63	< 85	< 117	125A	MC125T
< 80	< 110	< 147	160A	MC160T
< 90	< 125	< 169	200A	MC200T
< 110	< 150	< 205	250A	MC250T
< 160	< 220	< 292	315A	MC315T
< 200	< 270	< 368	400A	MC400T
< 250	< 340	< 465	500A	MC500T
< 315	< 430	< 580	630A	MC630T

# Technical Information

## Ingress Protection (IP Rating)

IEC/EN 60529 is an international set of test specification standards for classifying the degrees of protection provided by the enclosures of electrical equipment against the intrusion into the equipment of foreign bodies (i.e. tools, dust, fingers, etc) and moisture. This classification system utilizes the letters "IP" ("Ingress Protection") followed by two or three digits. (A third digit is sometimes used. An "x" is used for one of the digits if there is only one class of protection; i.e. IPX4 which addresses moisture resistance only.)

The first digit of the IP code indicates the degree that persons are protected against contact with moving parts (other than smooth rotating shafts, etc.) and the degree that equipment is protected against solid foreign bodies intruding into an enclosure. The second digit indicates the degree of protection of the equipment inside the enclosure against the harmful entry of various forms of moisture (e.g. dripping, spraying, submersion, etc.)

[For full details consult IEC/EN60529]

1st Digit	Protection from solid objects	2nd Digit	Protection from moisture
1	Protected against solid object greater than 50mm	1	Protection against vertically dripping water
2	Protected against solid object greater than 12.5mm	2	Protection against dripping water when tilted upto 15degrees
3	Protected against solid object greater than 2.5mm	3	Protection against spraying water
4	Protected against solid object greater than 1mm	4	Protection against splashing water
5	Dust protected	5	Protection against jetting water
6	Dust tight	6	Protection against powerfully jetting water
		7	Protection against the temporary affects of immersion
		8	Protection against continuous submersion

## Applicable Standards

Though not exhaustive the below table lists the British / European harmonised standards to which products in this catalogue comply (where applicable).

Standard	Title
BS88	Cartridge fuses for voltages up to and including 1000A a.c. and 1500V d.c.
BSEN60269	Low-voltage Fuses
BSEN61439	Low-voltage switchgear and controlgear assemblies
BSEN61439-2	Power switchgear and controlgear assemblies
BSEN61439-3	Distribution boards intended to be operated by ordinary persons (DBO)
BSEN60529	Specification for degree of protection provided by enclosures (IP code)
BSEN60898	Specification for circuit-breakers for overcurrent protection for household and similar installations
BSEN60947	Low-voltage switchgear and control gear
BSEN60947-2	Circuit-breakers
BSEN60947-3	Switches, disconnectors, switch-disconnectors and fuse-combination units
BSEN60947-4	Electromechanical contactors and motor starters
BSEN61008	Residual current operated circuit breakers without integral overcurrent protection for household and similar use (RCCBs / RCDs)
BSEN61009	Residual current operated circuit breakers with integral overcurrent protection for household and similar use (RCBOs)
BSEN61095	Specification for electromechanical contactors for household and similar purposes



## Index

1SCT.....	80	63/4/100.....	51	600BC2.....	42
1SCT/P.....	80	63/4/300.....	51	600BC3.....	42
2CB12.....	34, 35	63/4/500.....	51	600BC4.....	42
2CB15.....	34, 35	63S2.....	81	600BC6.....	42
6MBRSP.....	50	63S3.....	81	601B.....	49
6MBRSPK.....	50	63S4.....	81	602B.....	49
6MCRSP.....	50	66MBRSP.....	50	604B.....	49
6MCRSPK.....	50	66MCRSP.....	50	606B.....	49
6MRBE.....	50	71ST.....	80	606C.....	49
10MBRSP.....	50	72ST.....	80	610B.....	49
10MBRSPK.....	50	80/2/30T.....	51	610C.....	49
10MCRSP.....	50	80/2/100T.....	51	616B.....	49
10MCRSPK.....	50	80/2/300T.....	51	616C.....	49
10MRBE.....	50	80/2/500T.....	51	620B.....	49
16MBRSP.....	50	80/4/30.....	51	620C.....	49
16MBRSPK.....	50	80/4/100.....	51	625B.....	49
16MCRSP.....	50	80/4/300.....	51	625C.....	49
16MCRSPK.....	50	80/4/500.....	51	630FS.....	34
16MRBE.....	50	100/2/30T.....	51	632B.....	49
20MBRSP.....	50	100/2/100T.....	51	632C.....	49
20MBRSPK.....	50	100/2/300T.....	51	640B.....	49
20MCRSP.....	50	100/2/500T.....	51	640C.....	49
20MCRSPK.....	50	100/4/30.....	51	645B.....	49
20MRBE.....	50	100/4/100.....	51	650B.....	49
25/2/30T.....	51	100/4/300.....	51	650C.....	49
25/2/100T.....	51	100/4/500.....	51	663B.....	49
25/2/300T.....	51	100BC2.....	42	663C.....	49
25/2/500T.....	51	100BC3.....	42	800BC2.....	42
25/4/30.....	51	100BC4.....	42	800BC3.....	42
25/4/100.....	51	100BC6.....	42	800BC4.....	42
25/4/300.....	51	100S2.....	81	800BC6.....	42
25/4/500.....	51	100S3.....	81	800FS.....	34
25MBRSPK.....	50	100S4.....	81	1002/2.....	24, 49
25MCRSPK.....	50	106MBRSP.....	50	1002/3.....	24, 49
32MBRSP.....	50	106MCRSP.....	50	1004/2.....	24
32MBRSPK.....	50	166MBRSP.....	50	1004/3.....	24, 49
32MCRSP.....	50	166MCRSP.....	50	1006/2.....	24, 49
32MCRSPK.....	50	200BC2.....	42	1006/3.....	24
32MRBE.....	50	200BC3.....	42	1006/4.....	49
40/2/30T.....	51	200BC4.....	42	1010/2.....	24, 49
40/2/100T.....	51	200BC6.....	42	1010/3.....	24
40/2/300T.....	51	206MBRSP.....	50	1010/4.....	49
40/2/500T.....	51	206MCRSP.....	50	1016/2.....	24, 49
40/4/30.....	51	241S.....	80	1016/3.....	24
40/4/100.....	51	241SQ.....	80	1016/4.....	49
40/4/300.....	51	242S.....	80	1020/2.....	24, 49
40/4/500.....	51	242SQ.....	80	1020/3.....	24
40MBRSP.....	50	300BC2.....	42	1020/4.....	49
40MCRSP.....	50	300BC3.....	42	1025/3.....	24
40MRBE.....	50	300BC4.....	42	1032/2.....	24, 49
45MBRSP.....	50	300BC6.....	42	1032/3.....	24
45MCRSP.....	50	326MBRSP.....	50	1032/4.....	49
45S2.....	81	326MCRSP.....	50	1040/2.....	24, 49
45S3.....	81	400BC2.....	42	1040/3.....	24
63/2/30T.....	51	400BC3.....	42	1040/4.....	49
63/2/100T.....	51	400BC4.....	42	1050/2.....	24, 49
63/2/300T.....	51	400BC6.....	42	1050/3.....	24
63/2/500T.....	51	406MBRSP.....	50	1050/4.....	49
63/4/30.....	51	406MCRSP.....	50	1063/2.....	24, 49

# Index

1063/3	24	310125/3	24	AYXLM10	60
1063/4	49			AYXLM12	60
1080/3	24			AYXLM14	60
3606C	49	<b>A</b>		AYXLM16	60
3610C	49	ABX2S1	31	AYXLM18	60
3616C	49	ABX2S1V	31	AYXLM20	60
3620C	49	ABX4S1	31	AYXLM26	60
3625C	49	ABX4S1V	31	AYXLM30	60
3632C	49	ABX6S1	31	AYXLMDSLV6	62
3640C	49	ABX6S1V	31	AYXLMDSLV10	62
3650C	49	ABX8S1	31	AYXLMDSLV12	62
3663C	49	ABX8S1V	31	AYXLMDSLV16	62
10100/3	24	ABX12S1	31	AYXLMDSLV22	62
10125/3	24	ABX12S1V	31	AYXLME6	64
21006/3	49	AJBXM4	63	AYXLME10	64
21010/3	49	AJBXM6	63	AYXLME12	64
21016/3	49	AJBXM8	63	AYXLME16	64
21020/3	49	AJBXM12	63	AYXLME18	64
21032/3	49	AKBXM4	63	AYXLME22	64
21040/3	49	AKBXM6	63	AYXLME28	64
21050/3	49	AKBXM8	63	AYXLMJB3JB3	61
21063/3	49	AKBXM12	63	AYXLMJB5JB5	61
31002/3	24, 49	AKL	65	AYXLMJB6JB6	61
31004/3	24, 49	ALBXM4	63	AYXLMJB8JB8	61
31006/2	24, 49	ALBXM6	63	AYXLMJB10JB10	61
31006/3	24, 49	ALBXM8	63	AYXLMKB5KB5	61
31006/4	49	ALBXM12	63	AYXLMKB6KB6	61
31010/2	24, 49	APGU2M	64	AYXLMKB8KB8	61
31010/3	24, 49	APGU4M	64	AYXLMKB10KB10	61
31010/4	49	APSU95M	64	AYXLMSLV6	61
31016/2	24, 49	APSU115M	64	AYXLMSLV12	61
31016/3	24, 49	ASM10	65		
31016/4	49	ASM12	65	<b>B</b>	
31020/2	24, 49	ASM16	65	B1	82
31020/3	24, 49	ASM18	65	BBS1	82
31020/4	49	ASM22	65	BCC185/23	43
31025/3	24, 49	ASM28	65	BCC185/48	43
31032/2	24, 49	AX4	31	BCC240/48	43
31032/3	24, 49	AX4MA	31	BLC6/23	43
31032/4	49	AX4MD	31	BLC6/48	43
31040/2	24, 49	AX6	31	BLC8/23	43
31040/3	24, 49	AX8	31	BLC8/48	43
31040/4	49	AX8MA	31	BLC10/23	43
31050/2	24, 49	AX8MD	31	BLC10/48	43
31050/3	24, 49	AX12	31	BM1	82
31050/4	49	AX12MA	31	BX4P30	29
31063/2	24, 49	AX12MD	31	BX4Q30	29
31063/3	24, 49	AX16	31	BX4R30	30
31063/4	49	AX20	31	BX4R100	30
31080/3	24	AX26	31	BX4R300	29, 30
41006/3	49	AYXLM1JB2JB3	62	BX4S1	28
41010/3	49	AYXLM2	60	BX4S1TNS	53
41016/3	49	AYXLM2JB4JB4	62	BX4S1TT	53
41020/3	49	AYXLM2JB5JB5	62	BX4S2	28
41032/3	49	AYXLM2JB6JB6	62	BX4S125	28
41040/3	49	AYXLM4	60	BX4S125TNS	53
41050/3	49	AYXLM4KB8KB8	62	BX4S125TT	53
41063/3	49	AYXLM6	60	BX6P30	29
310100/3	24	AYXLM8	60		

# Index

BX6Q30 .....	29	BX20S125 .....	28	<b>E</b>	
BX6R30 .....	30	BX20S125TNS .....	53	E20TN .....	37
BX6R100 .....	30	BX20S125TT .....	53	E32TN .....	37
BX6R300 .....	29, 30	BX20S250 .....	29	E63TN .....	37
BX6S1 .....	28	BX24P30 .....	29	E100TN .....	37
BX6S1TNS .....	53	BX24Q30 .....	29	E160TN .....	37
BX6S1TT .....	53	BX24R30 .....	30	E200TN .....	37
BX6S2 .....	28	BX24R100 .....	30	EF20D .....	37
BX6S125 .....	28	BX24R300 .....	30	EF20S .....	37
BX6S125TNS .....	53	BX24S1 .....	28	EF20TN .....	37
BX6S125TT .....	53	BX24S1TNS .....	53	EF32D .....	37
BX8P30 .....	29	BX24S1TT .....	53	EF32S .....	37
BX8Q30 .....	29	BX24S2 .....	28	EF32TN .....	37
BX8R30 .....	30	BX24S125 .....	28	EF63D .....	37
BX8R100 .....	30	BX24S125TNS .....	53	EF63S .....	37
BX8R300 .....	30	BX24S125TT .....	53	EF63TN .....	37
BX8S1 .....	28	BX24S250 .....	29	EF100D .....	37
BX8S1TNS .....	53	BXM14 .....	29	EF100S .....	37
BX8S1TT .....	53	BXM28 .....	29	EF100TN .....	37
BX8S2 .....	28	BXS2TNSK .....	53	EMCB1NC .....	47
BX8S125 .....	28	BXS2TTK .....	53	EMCB1NO .....	47
BX8S125TNS .....	53	BXSB1 .....	30	EMIS2 ECO .....	76
BX8S125TT .....	53	BXSB2 .....	30	EMIS4 ECO .....	76
BX8S250 .....	29	BXSCK1 .....	30	EMIS ECO .....	76
BX12P30 .....	29	BXSCK2 .....	30	EM/STOP .....	47
BX12Q30 .....	29			ENC202 .....	74
BX12R30 .....	30	<b>C</b>		ENC204 .....	74
BX12R100 .....	30	CB7TP .....	82	ENC404 .....	74
BX12R300 .....	30	CB8DP .....	82	ENC542 .....	74
BX12S1 .....	28	CB12DP .....	82	ENC544 .....	74
BX12S1TNS .....	53	CB12TP .....	82	ENC546 .....	74
BX12S1TT .....	53	CB19SP .....	82	ENC654 .....	74
BX12S2 .....	28	CB28SP .....	82	ENC658 .....	74
BX12S125 .....	28	CBC3 .....	82	ENC5410 .....	74
BX12S125TNS .....	53	CBCT1 .....	82	ENC5416 .....	74
BX12S125TT .....	53	CO/202 .....	40	ENC6512 .....	74
BX12S250 .....	29	CO/203 .....	40	ENC6524 .....	74
BX16P30 .....	29	CO/204 .....	40	ENC6536 .....	74
BX16Q30 .....	29	CO/322 .....	40	ETB5 .....	76
BX16R30 .....	30	CO/323 .....	40		
BX16R100 .....	30	CO/324 .....	40	<b>F</b>	
BX16R300 .....	30	CO/632 .....	40	FDL1 .....	30
BX16S1 .....	28	CO/633 .....	40	FS1 .....	77
BX16S1TNS .....	53	CO/634 .....	40		
BX16S1TT .....	53	CO/1002 .....	40	<b>G</b>	
BX16S2 .....	28	CO/1003 .....	40	GBX1 .....	72
BX16S125 .....	28	CO/1004 .....	40	GBX2 .....	72
BX16S125TNS .....	53	CT202 .....	81	GBX3 .....	72
BX16S125TT .....	53	CT204 .....	81	GBX4 .....	72
BX16S250 .....	29	CT404 .....	81		
BX20P30 .....	29	CT634 .....	81	<b>H</b>	
BX20Q30 .....	29			HBX1 .....	72
BX20R30 .....	30	<b>D</b>		HBX2 .....	72
BX20R100 .....	30	DLPX1 .....	82	HBX3 .....	72
BX20R300 .....	30	DLPX1P .....	82	HBX4 .....	72
BX20S1 .....	28			HBX6 .....	72
BX20S1TNS .....	53				
BX20S1TT .....	53				
BX20S2 .....	28				

# Index

HLC25 .....	47	M204.....	38	MC1250T.....	22
HLC32 .....	47	M206.....	38	MC1600T.....	22
HLC63 .....	47	M254.....	38	MCCBM1.....	18
HLC100.....	47	M324.....	38	MCEL100F.....	17
HLC200 .....	47	M326.....	38	MCEL100T.....	17
		M634.....	38	MCEL125F.....	17
<b>I</b>		M636.....	38	MCEL125T.....	17
IP65E302013 .....	44	M1004.....	38	MCEL160F.....	17
IP65E403022 .....	44	M1604.....	38	MCEL160T.....	17
IP65E504024 .....	44	M2004.....	38	MCEL200F.....	17
IP65E604020 .....	44	M3262.....	38	MCEL200T.....	17
IP65E705025 .....	44	M6362.....	38	MCEL250F.....	17
		MC016S.....	22	MCEL250T.....	17
<b>J</b>		MC016T.....	22	MCEL315F.....	17
JBX1 .....	72	MC020S.....	22	MCEL315T.....	17
JBX2 .....	72	MC020T.....	22	MCEL400F.....	17
JBX3 .....	72	MC025S.....	22	MCEL400T.....	17
JBX4 .....	72	MC025T.....	22	MCEL500F.....	17
JBX6 .....	72	MC032S.....	22	MCEL500T.....	17
JBX8 .....	72	MC032T.....	22	MCEL630F.....	17
JBX10.....	72	MC040S.....	22	MCEL630T.....	17
JBX12.....	72	MC040T.....	22	MCENC1.....	18
JPX1 .....	82	MC050S.....	22	MCENC1F.....	18
		MC050T.....	22	MCENC2.....	18
<b>K</b>		MC063S.....	22	MCENC2F.....	18
KBX4 .....	72	MC063T.....	22	MCENC6.....	18
KBX6.....	72	MC080S.....	22	MCENC6F.....	18
KBX8.....	72	MC080T.....	22	MCENC8.....	18
KBX10.....	72	MC100F.....	23	MCENC8F.....	18
KBX12.....	72	MC100S.....	22	MCP32/I200.....	10
KWH2A .....	27	MC100T.....	22	MCP32/I250.....	10
KWH2D.....	27	MC125F.....	23	MCP42/I200F.....	10
KWH2E.....	27	MC125S.....	22	MCP42/I250F.....	10
KWH4A.....	27	MC125T.....	22	MCP44/I315.....	12
KWH4D.....	27	MC160F.....	23	MCP44/I315F.....	12
KWH4E.....	27	MC160S.....	22	MCP44/I400.....	12
KWH45AMID.....	76	MC160T.....	22	MCP44/I400F.....	12
KWH100A.....	76	MC200F.....	23	MCP48/I500.....	14
KWH100AMID.....	76	MC200S.....	22	MCP48/I500F.....	14
		MC200T.....	22	MCP48/I630.....	14
<b>L</b>		MC250F.....	23	MCP48/I630F.....	14
LBX6 .....	72	MC250FLF.....	23	MCP48/I800.....	14
LBX8.....	72	MC250T.....	22	MCP48/I800F.....	15
LBX10.....	72	MC250TLF.....	22	MCP52/I200.....	10
LBX12.....	72	MC250TNA.....	23	MCP52/I250.....	10
		MC315F.....	23	MCP62/I200F.....	10
<b>M</b>		MC315T.....	22	MCP62/I250F.....	10
M20T.....	38	MC400F.....	23	MCP64/I315.....	12
M25T.....	38	MC400T.....	22	MCP64/I315F.....	12
M32T.....	38	MC400TNA.....	23	MCP64/I400.....	12
M63T.....	38	MC500F.....	23	MCP64/I400F.....	12
M100T.....	38	MC500T.....	22	MCP68/I500.....	14
M160T.....	38	MC630F.....	23	MCP68/I500F.....	14
M200T.....	38	MC630T.....	22	MCP68/I630.....	14
		MC630TNA.....	23	MCP68/I630F.....	14
		MC800F.....	23	MCP68/I800.....	14
		MC800T.....	22	MCP68/I800F.....	15
		MC800TNA.....	23	MCP72/I200.....	10
		MC1000T.....	22	MCP72/I250.....	10

## Index

MCP82/I200F.....	10	MCPCB24R.....	11, 13, 15	MCPEB182FL.....	11
MCP82/I250F.....	10	MCPCB32L.....	11, 13, 15	MCPEB182FR.....	11
MCP84/I315.....	12	MCPCB32R.....	11, 13, 15	MCPEB184L.....	13
MCP84/I315F.....	12	MCPCB34L.....	11, 13, 15	MCPEB184R.....	13
MCP84/I400.....	12	MCPCB34R.....	11, 13, 15	MCPEB188L.....	15
MCP84/I400F.....	12	MCPD.....	18	MCPEB188R.....	15
MCP88/I500.....	14	MCPDMM063S.....	16	MCPEL100.....	17
MCP88/I500F.....	14	MCPDMM063T.....	16	MCPEL125.....	17
MCP88/I630.....	14	MCPDMM100S.....	16	MCPEL160.....	17
MCP88/I630F.....	14	MCPDMM100T.....	16	MCPEL200.....	17
MCP88/I800.....	14	MCPDMM125S.....	16	MCPEL250.....	17
MCP88/I800F.....	15	MCPDMM125T.....	16	MCPEL400.....	17
MCP112/I200.....	10	MCPDMM160S.....	16	MCPEL630.....	17
MCP112/I250.....	10	MCPDMM160T.....	16	MCPID.....	18
MCP122/I200F.....	10	MCPDMM200S.....	16	MCPKWH063S.....	16
MCP122/I250F.....	10	MCPDMM200T.....	16	MCPKWH063T.....	16
MCP124/I315.....	12	MCPDMM250T.....	16	MCPKWH100S.....	16
MCP124/I315F.....	12	MCPDMM315T.....	16	MCPKWH100T.....	16
MCP124/I400.....	12	MCPDMM400T.....	16	MCPKWH125S.....	16
MCP124/I400F.....	12	MCPDMM500T.....	16	MCPKWH125T.....	16
MCP128/I500.....	14	MCPDMM630T.....	16	MCPKWH160S.....	16
MCP128/I500F.....	14	MCPDMM800T.....	16	MCPKWH160T.....	16
MCP128/I630.....	14	MCPEB32L.....	11	MCPKWH200S.....	16
MCP128/I630F.....	14	MCPEB32R.....	11	MCPKWH200T.....	16
MCP128/I800.....	14	MCPEB42FL.....	11	MCPKWH250T.....	16
MCP128/I800F.....	15	MCPEB42FR.....	11	MCPMB32L.....	11
MCP152/I200.....	10	MCPEB44L.....	13	MCPMB32R.....	11
MCP152/I250.....	10	MCPEB44R.....	13	MCPMB42FL.....	11
MCP162/I200F.....	10	MCPEB48R.....	15	MCPMB42FR.....	11
MCP162/I250F.....	10	MCPEB52L.....	11	MCPMB44L.....	13
MCP164/I315.....	12	MCPEB52R.....	11	MCPMB44R.....	13
MCP164/I315F.....	12	MCPEB62FL.....	11	MCPMB48L.....	15
MCP164/I400.....	12	MCPEB62FR.....	11	MCPMB48R.....	15
MCP164/I400F.....	12	MCPEB64L.....	13	MCPMB52L.....	11
MCP168/I500.....	14	MCPEB64R.....	13	MCPMB52R.....	11
MCP168/I500F.....	14	MCPEB68R.....	15	MCPMB62FL.....	11
MCP168/I630.....	14	MCPEB72L.....	11	MCPMB62FR.....	11
MCP168/I630F.....	14	MCPEB72R.....	11	MCPMB64L.....	13
MCP168/I800.....	14	MCPEB82FL.....	11	MCPMB64R.....	13
MCP168/I800F.....	15	MCPEB82FR.....	11	MCPMB68L.....	15
MCP172/I200.....	10	MCPEB84L.....	13	MCPMB68R.....	15
MCP172/I250.....	10	MCPEB84R.....	13	MCPMB72L.....	11
MCP182/I200F.....	10	MCPEB88R.....	15	MCPMB72R.....	11
MCP182/I250F.....	10	MCPEB112L.....	11	MCPMB82FL.....	11
MCP184/I315.....	12	MCPEB112R.....	11	MCPMB82FR.....	11
MCP184/I315F.....	12	MCPEB122FL.....	11	MCPMB84L.....	13
MCP184/I400.....	12	MCPEB122FR.....	11	MCPMB84R.....	13
MCP184/I400F.....	12	MCPEB124L.....	13	MCPMB88L.....	15
MCP188/I500.....	14	MCPEB124R.....	13	MCPMB88R.....	15
MCP188/I500F.....	14	MCPEB128R.....	15	MCPMB112L.....	11
MCP188/I630.....	14	MCPEB152L.....	11	MCPMB112R.....	11
MCP188/I630F.....	14	MCPEB152R.....	11	MCPMB122FL.....	11
MCP188/I800.....	14	MCPEB162FL.....	11	MCPMB122FR.....	11
MCP188/I800F.....	15	MCPEB162FR.....	11	MCPMB124L.....	13
MCPEB200.....	11, 13, 15	MCPEB164L.....	13	MCPMB124R.....	13
MCPEB22L.....	11, 13, 15	MCPEB164R.....	13	MCPMB128L.....	15
MCPCB22R.....	11, 13, 15	MCPEB168R.....	15	MCPMB128R.....	15
MCPCB24L.....	11, 13, 15	MCPEB172L.....	11	MCPMB152L.....	11
		MCPEB172R.....	11	MCPMB152R.....	11

# Index

MCPMB162FL .....	11
MCPMB162FR .....	11
MCPMB164L .....	13
MCPMB164R .....	13
MCPMB168L .....	15
MCPMB168R .....	15
MCPMB172L .....	11
MCPMB172R .....	11
MCPMB182FL .....	11
MCPMB182FR .....	11
MCPMB184L .....	13
MCPMB184R .....	13
MCPMB188L .....	15
MCPMB188R .....	15
MCPT2/TNSIF .....	18
MCPT2/TTIF .....	18
MCPT12/TNS .....	18
MCPT12/TNSIF .....	18
MCPT12/TT .....	18
MCPT12/TTIF .....	18
MCST3P250 .....	18
MCST3P630 .....	18
MCST3P800 .....	18
MCST4P100 .....	18
MCST4P250 .....	18
MCST4P400 .....	18
MCST4P630 .....	18
MCST4P800 .....	18
MEMI .....	47
MEMK .....	47
MEMSS .....	47
MEMT .....	47
MTGP40B .....	65
MTGP40P .....	65
MTGP32P .....	65

## P

P125MCBSPENC .....	24
P125MCBTPENC .....	24
PBK1 .....	82
PBK2 .....	82
PBKL1 .....	82
PBKL2 .....	82
PC020230V .....	47
PC025230V .....	47
PC032230V .....	47
PC063230V .....	47
PC100230V .....	47
PC200230V .....	47
PCB1NC .....	47
PCB1NO .....	47
PCS-11 .....	47
PDU4S .....	32
PDU4S2 .....	32
PDU4S2S .....	32
PDU4SS .....	32
PDU6S .....	32
PDU6S2 .....	32

PDU6S2S .....	32
PDU6SS .....	32
PDU8S .....	32
PDU8S2 .....	32
PDU8S2S .....	32
PDU8SS .....	32
PDU12S .....	32
PDU12S2S .....	32
PDU12SS .....	32
PDU16S .....	32
PDU16S2S .....	32
PDU16SS .....	32
PEB4 .....	48
PEB4/800 .....	48
PEB6 .....	48
PEB6/800 .....	48
PEB8 .....	48
PEB8/800 .....	48
PEB12 .....	48
PEB12/800 .....	48
PEBTL6 .....	48
PEBTL6/800 .....	48
PEBTL8 .....	48
PEBTL8/800 .....	48
PEBTL12 .....	48
PEBTL12/800 .....	48
PES20 .....	83
PES32 .....	83
PES40 .....	83
PES50 .....	83
PES63 .....	83
PMS20 .....	83
PMS32 .....	83
PMS40 .....	83
PMS50 .....	83
PMS63 .....	83
PMS80 .....	83
PMS100 .....	83
PX22I200 .....	24
PX22I250 .....	24
PX42I200 .....	24
PX42I250 .....	24
PX62I200 .....	24
PX62I250 .....	24
PX102I200 .....	24
PX102I250 .....	24
PXL4 .....	73
PXL6 .....	73
PXL10 .....	73
PXL16 .....	73
PXL18 .....	73
PXL20 .....	73
PXL25 .....	73
PXL32 .....	73
PXS63 .....	83
PXS80 .....	83
PXS100 .....	83

## S

SF20 .....	77
SF32 .....	77
SF40 .....	77
SF50 .....	77
SF63 .....	77
SF100 .....	77
SF100/80 .....	77
SK2JB4JB4 .....	85
SK3JB7 .....	85
SK4JB6 .....	85
SK5JB5 .....	85
SK6JB4 .....	85
SK7JB3 .....	85
SKJB4JB4 .....	85
SKJB5JB5 .....	85
SKSLV6R4 .....	85
SKSLV12 .....	85
SPD/T1/TN .....	52
SPD/T1/TNE .....	52
SPD/T1/TT .....	52
SPD/T1/TTE .....	52
SPD/T2/SP .....	52
SPD/T2/SPE .....	52
SPD/T2/TN .....	52
SPD/T2/TNE .....	52
SPD/T2/TNS4P .....	52
SPD/T2/TNS4PE .....	52
SPD/T2/TNS4PEF .....	53
SPD/T2/TNS4PES .....	53
SPD/T2/TNS4PIF .....	52
SPD/T2/TT .....	52
SPD/T2/TT4P .....	52
SPD/T2/TT4PE .....	52
SPD/T2/TT4PEF .....	53
SPD/T2/TT4PES .....	53
SPD/T2/TT4PIF .....	52
SPD/T2/TTE .....	52
SPD/T3/LPC .....	52
SPD/T3/PC .....	52
SPD/T3/PCE .....	52
SPD/T3/SC .....	52
SPD/T3/SCE .....	52
SPD/T12/TNS4P .....	52
SPD/T12/TNS4PE .....	52
SPD/T12/TNS4PEF .....	53
SPD/T12/TNS4PES .....	53
SPD/T12/TNS4PIF .....	52
SPD/T12/TT4P .....	52
SPD/T12/TT4PE .....	52
SPD/T12/TT4PEF .....	53
SPD/T12/TT4PES .....	53
SPD/T12/TT4PIF .....	52

## T

TB5 .....	83
-----------	----

98



# Index

XL68MA .....	27	YXLSLV13R6 .....	71
XL68MD .....	27	YXLSLV13R6/80 .....	71
XL84SL .....	26	YXLSLV14 .....	69
XL812MA .....	27	YXLSLV19 .....	69
XL812MD .....	27	YXLSLV21 .....	69
XLGP22 .....	26		
XLGP33 .....	26		
XLGP44 .....	26		
XLI100 .....	27		
XLI200 .....	27		
XLKL .....	26, 30		
XLS2TNSK .....	53		
XLS2TTK .....	53		

## Y

YXJB4JB4 .....	70
YXL1 .....	68
YXL1JB2JB3 .....	71
YXL2 .....	68
YXL2JB4JB4 .....	71
YXL2JB5JB5 .....	71
YXL2KB5KB5 .....	71
YXL2KB5KB5KB5 .....	71
YXL2KB8KB9 .....	71
YXL3 .....	68
YXL3JB3 .....	69
YXL3JB4JB4 .....	71
YXL3JB5JB5JB4 .....	71
YXL3KB4KB4 .....	71
YXL3KB5KB5KB4 .....	71
YXL4 .....	68
YXL6 .....	68
YXL6JB6 .....	69
YXL6KB6 .....	69
YXL8 .....	68
YXL12 .....	68
YXL14 .....	68
YXL16 .....	68
YXL18 .....	68
YXL21 .....	68
YXL23 .....	68
YXL30 .....	68
YXLDT10 .....	73
YXLDT16 .....	73
YXLJB3JB3 .....	70
YXLJB5JB5 .....	70
YXLJB6JB6 .....	70
YXLJB6JB6DB .....	70
YXLJB6JB8 .....	70
YXLKB6KB6 .....	70
YXLKB8KB9 .....	70
YXLKB9KB10 .....	70
YXLSLV6 .....	69
YXLSLV6R4 .....	71
YXLSLV6R4/80 .....	71
YXLSLV7R5 .....	71
YXLSLV7R5/80 .....	71
YXLSLV12 .....	69

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