

Socket Outlets

Standards and approvals

All Decorative finish 13A socket outlets comply with BS 1363: Part 2: 1995.

Technical specification

Electrical

Voltage rating:
250V a.c.

Current rating:
13A per socket outlet

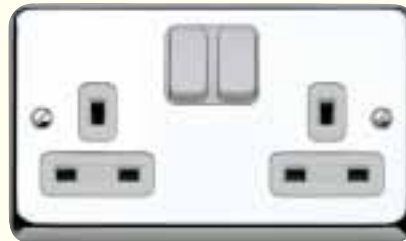
Terminal capacity:
Live, neutral & earth
3 x 2.5mm²
3 x 4mm²
2 x 6mm² (stranded)
(Dual earth terminals on list Nos. K733, K2958 and K245)

Physical

Ambient operating temperature:
-5°C to +40°C
(not to exceed an average of more than 25°C in any 24 hour period)

IP rating:
IP2XD

Max. installation altitude:
2000 metres



Description

A range of socket outlets designed for ease of installation and having all the advantageous design features of the Chroma Plus range.

Non-standard clean earth sockets are for use on installations where restricted access is required and will only accept MK LN647 13A non-standard plug with T-shaped earth pin. The sockets have two independent earth terminals so that they can also be used for 'clean earth' installations.

K733, K2958 and K2458 are fitted with two earth terminals on a common busbar to provide a double earth facility for use when installations are to comply with Section 607 of BS 7671, IEE Wiring Regulations.

The products can be quickly installed as replacement for existing 13 amp sockets or in a new installation.

Round pin sockets

A range of round pin switchsockets is also available.

Cable management

Decorative finish socket outlets can be mounted in a variety of MK trunking systems.

Features

- Moulded 'on' indicator flash on switches will not rub off – totally safe
- Optional neon indicators in the switch rockers with 175° visibility in the horizontal and vertical planes
- Unique 3 pin operated safety shutter
- Printed terminal markings on grey rear mouldings for clearer identification
- Top access, angled terminals make wiring easier and quicker
- 3mm switch contact gap
- Double pole switching
- Choice of inboard or outboard positioned rockers
- Additional electrical safety from neutral 'make first', 'break last' feature
- Switch contacts with silver contacts on both surfaces for good continuity
- Only one size of screwdriver required for installation
- Dual earth terminals for high integrity earthing on list Nos. K733, K2958 and K2458
- Backed out and captive terminal screws
- Non-standard 'clean earth' sockets available

Socket Outlets

Installation

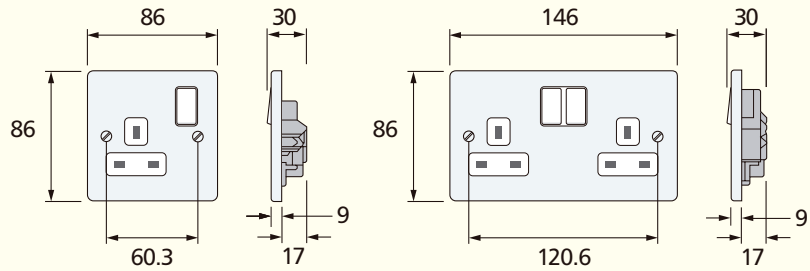
Socket outlets can be wall or bench mounted. Do not mount or use as a trailing socket or where they may be subject to excessive moisture or dampness.

2 gang switchsocket – view from rear

Top-facing, angled, backed-out terminals make wiring easier and quicker.



Dimensions (mm)



BOX TYPES				
	Flush	Flush (for extra wiring space)	Surface Insulated	Surface Metal
1 gang	861 ZIC	866 ZIC	K2140 WHI	K2211 ALM/K2213 ALM
2 gang	862 ZIC	886 ZIC	K2142 WHI	K2212 ALM/K2214 ALM

Sentrysocket RCD Protected Switchsocket Outlet

Compliance with EC Directives, Standards and approvals

All Sentrysockets comply with the following EC Directives and are CE marked:

Low Voltage Directive (73/23/EEC)
Electromagnetic Compatibility Directive (89/336/EEC)

Sentrysocket RCD Single Sockets also comply with the requirements of the following standards:

BS 7288: 1990 (1993)
BS 2011 Part 2.1 Db (Damp Heat - cyclic)
BS 2011 Part 2.1 Ka (Salt mist)
BS EN 50082-1



Description

Sentrysocket provides a high level of protection against electrocution and gives further protection when used with appliances vulnerable to insulation damage, particularly when they are in damp environments or outdoors. These Sentrysocket units are not suitable for mounting in damp environments or outdoors.

Sentrysocket, incorporating an RCD, is part of a complete range of fixed and portable wiring devices and circuit protection devices suitable for use in domestic, commercial and light industrial applications.

Active control circuits

Incorporate a 'Re-set' mechanism and are mains failure sensitive, ie they will function under all the normal conditions expected of an RCD, but will also trip in the event of a power cut or a sudden, dramatic reduction in mains voltage. This makes them ideal for use where it would be hazardous for equipment to suddenly energise after return of mains power, such as use with rotating machinery and heat developing apparatus.

Passive control circuits

Incorporate a 'Stay-set' mechanism and is mains failure proof, ie it will function under all the normal conditions expected of an RCD and will not trip in the event of a power cut. This makes it suitable for use with freezers or in inaccessible or unmanned locations.

Technical specification

Electrical

Rated Voltage:
240V a.c.

Current rating:
13A resistive

Rated tripping current
30mA and 10mA versions

Terminal capacity:
3 x 4mm²

Physical

Ambient operating temperature:
-5°C to +40°C

IP rating:
IP2XD

Max. installation altitude:
2000 metres

Single socket Sentrysockets are only suitable for use in TN-S system where the Supply Neutral Connection is connected to the Supply Earth.

They are not suitable for connection across two lines of a 127V line to Neutral Voltage System.

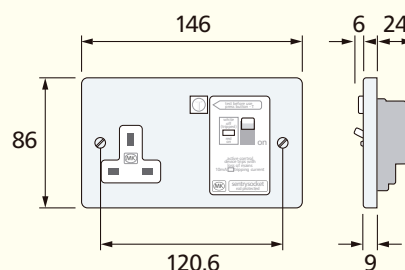
Features

- Suitable for most residential, commercial and light industrial applications
- Active and passive control circuit applications
- Comply fully with current Wiring Regulations
- Double pole switching
- Tripping time <30ms at rated tripping current and supply voltage, in normal use
- Flexible and versatile in use
- Ideal for use with equipment subject to wet weather or high humidity
- Part of a complete range of MK circuit protection devices
- They are a.c. and pulsating d.c. sensitive for residual current

Cable management

Decorative finish Sentrysockets can be mounted in a variety of MK trunking systems.

Dimensions (mm)



Installation

Flush mounting steel wall box

It should be noted that some of the conduit entries may be restricted, depending upon their positions and the depth of box used.

BOX TYPES

Flush

886 ZIC

Round Pin Socket Outlets

Standards and approvals

Round pin socket outlets comply with BS 546: 1950.

Technical specification

Electrical

Voltage rating:
250V a.c.

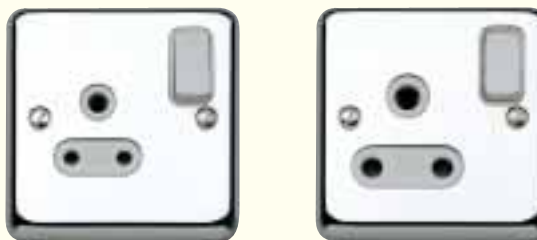
Terminal capacities:
5 amp sockets (K2881):
3 x 2.5mm²
2 x 4mm²
2 x 6mm² (stranded)
15 amp sockets (K2883):
3 x 2.5mm²
3 x 4mm²
2 x 6mm² (stranded)

Physical

Ambient operating temperature:
-5°C to +40°C
(not to exceed an average of more than 25°C in any 24 hour period)

IP rating:
IP2XD

Max. installation altitude:
2000 metres



Description

A range of socket outlets designed for ease of installation and having all the advantages and design features of the Chroma Plus range. These products can be quickly installed as replacements for existing socket outlets or in new installations.

Features

- Top access terminals make wiring easier and quicker
- Integral ON indicator on switches will not rub off – totally safe
- 3mm switch contact gap
- Double pole switching
- Terminal screws backed out
- Additional electrical safety from neutral “make first”, “break last” feature on switched sockets
- Switch contacts with silver contact points on both surfaces for good continuity
- 5A and 15A sockets contain a unique 3 pin operated safety shutter
- Printed terminal markings on grey rear mouldings for clearer identification

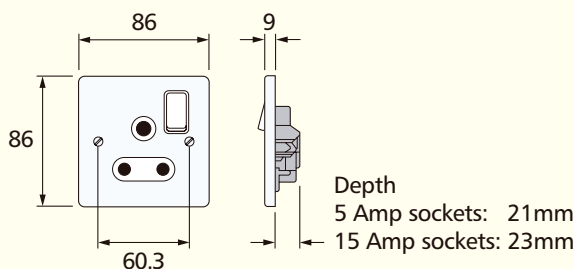
Installation

Chroma Plus socket outlets can be wall or bench mounted – do not mount or use as a trailing socket or where they may be subjected to excessive moisture or dampness.

Cable management

Chroma Plus socket outlets can be mounted in a variety of MK trunking systems.

Dimensions (mm)



BOX TYPES

	Flush	Flush for extra wiring space	Surface with knockouts	Surface without knockouts
5A and 15A	861 ZIC	866 ZIC	899 ALM	K829 ALM

15A American Socket Outlet

Standards and approvals

Complies with SSA: 444:1985

Technical specification

15A American

Electrical

Voltage rating:
127V a.c.

Current rating:
15A

Terminal capacity:
Live, neutral & earth
3 x 2.5mm²
2 x 4mm²
1 x 6mm² (stranded)

Physical

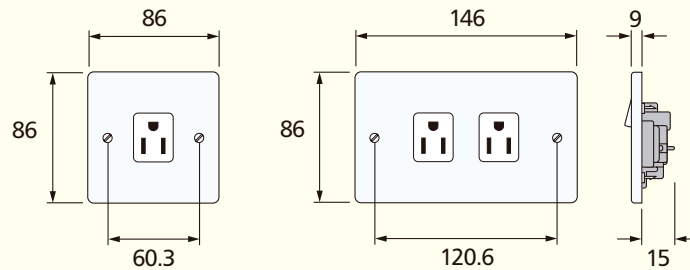
Ambient operating temperature:
-5°C to +40°C
(not to exceed an average of more than 25°C in any 24 hour period)

IP rating:
IP2XD

Max. installation altitude:
2000 metres



Dimensions (mm)



BOX TYPES

	Flush	Flush for extra wiring space
1 gang	861 ZIC	866 ZIC
2 gang	862 ZIC	886 ZIC

16 Amp Modular Format (German and Universal socket outlets)

16A GERMAN

Standards and approvals

IEC 60884-1: 2002

Technical specification

Electrical

Voltage rating:
250V a.c.

Current rating:
16A

Terminal capacity:
Live, neutral & earth
4 x 1.5mm²
2 x 2.5mm²
1 x 4mm²

Physical

Ambient operating temperature:
-5°C to +40°C
(not to exceed an average of more than 25°C in any 24 hour period)

IP rating:
IP2XD

Max. installation altitude:
2000 metres

16A UNIVERSAL

Standards and approvals

BS 5733:1995

Technical specification

Electrical

Voltage rating
125/250V

Current rating:
16A

Terminal capacity
2 x 6mm² (stranded)
3 x 4mm² 3 x 2.5mm²

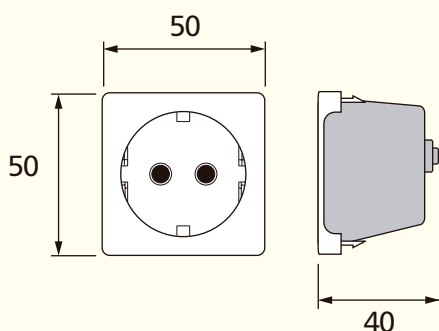
Physical

Ambient operating temperature:
-5°C to +40°C
(not to exceed an average of more than 25°C in any 24 hour period)

IP rating:
IP2XD

Max. installation altitude:
2000 metres

Dimensions (mm)

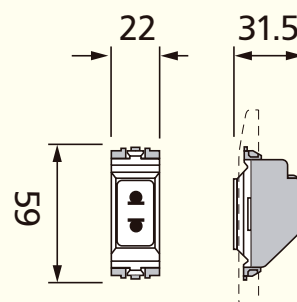


German Modular unit fits into any Euro Module frontplate

Description

The universal socket does not incorporate an earth contact. Therefore, appliances needing earth connection (class 1 equipment) must NOT be used with this socket. The socket is intended for use with BS, USA and CEE standard plugs.

Dimensions (mm)



Universal Modular unit fits into any Grid Plus frontplate

Shaver Supply Units

Standards and approvals

Shaver supply units comply with BS EN 61558-2-5: 1998

Accommodates plugs as follows:

- British 5mm diameter pins on 16.6mm pitch (230V socket) to BS 4573: 1970.
- European 4mm diameter pins on 17 to 19mm pitch (230V socket) to IEC 83: 1975 Standard C5.
- Australian 6.5 x 1.6 flat blades each set at 30° to the vertical on a nominal pitch of 13.7mm (230V socket) AS C112: 1964.
- American 6.6 x 1.6 flat horizontal blades on 12.7mm pitch (115V socket) to ANSI C73.10.



Technical specification

Electrical

Voltage rating:

K703: 230V a.c. Input (will operate at 220-250V a.c.)

K707: 127V a.c. Input (will operate at 110-130V a.c.)

230V or 115V nominal outputs

Current rating:

K703: 200mA max. (internal thermister trip current)

K707: 400mA max. (internal thermister trip current)

Maximum load:

20VA

No load voltage < 275V

Terminal capacities:

Each terminal will accommodate 1 x 4mm² or 2 x 2.5mm² solid conductors*

Physical

Ambient operating temperature:

-5°C to +40°C

IP rating:

IP41 (In Zone 2 if fixed where direct spray from showers is unlikely)

Max. installation altitude:

2000 metres

*The design of this unit means that on no load the transformer output is allowed to be as high as 275V. This means that rechargeable shavers intended for use on the continent may be damaged by the inrush current created by this higher voltage. Rechargeable shavers with a wide range of input voltage should be recharged at 115V. Shavers manufactured for the UK are designed to be used with a transformer unit. Loads in excess of 20VA may cause the solid state overload to operate before shaving is completed. This is to protect the transformer.

Description

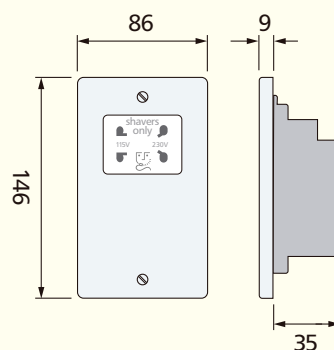
Designed for ease of installation and having many of the advantageous design features of the Chroma Plus range.

May be used in bathrooms and washrooms but must only be installed in accordance with the current IEE Wiring Regulations BS 7671: 1992: Amendment 3.

Features

- Top access terminals make wiring quicker and easier
- Automatic primary supply switching on insertion of plug
- Choice of 230V or 115V output socket positions
- Safety interlocked shutters to prevent insertion of two plugs simultaneously
- Only one size of screwdriver required for installation
- Terminal screws supplied 'backed out' and held captive within the terminal moulding
- Printed terminal markings on grey rear mouldings for clearer identification
- Front plate fixing screws retained on rear case moulding
- Integral over current device to protect transformer

Dimensions (mm)



Installation

Shaver supply unit should be wall mounted.

Wiring

An installation instruction leaflet is available. List no. 44944 PL.

Cable management

Decorative finish shaver supply units can be mounted in a variety of MK trunking systems.

BOX TYPES

Flush mounting only

Metal box 878 ZIC (minimum metal mounting box depth is 47mm)

Connection Units and 20A Switches

Standards and approvals

All Decorative Finish connection units comply with BS 1363: Part 4: 1995.

The 20A DP switch complies with BS 3676: Part 1: 1989.

Fuses are to BS 1362



Technical specification

Electrical

Voltage rating:
250V a.c.

Current rating:
Connection units – 13 amp
DP switches – 20 amp

Terminal capacity:

Supply terminal: 2 x 6mm² stranded
2 x 4mm²
3 x 2.5mm²

Load terminals: 2 x 6mm² stranded
(1 x 6mm² on earth terminal)
2 x 4mm²
3 x 2.5mm²

Flex outlet/cord grip capacities: min: 2 core, 0.5mm
max: 3 core, 1.5mm

20 Amp DP Switches min: 3 core, 1.5 mm
max: 3 core, 2.5 mm

Physical

Ambient operating temperature:
-5°C to +40°C
(not to exceed an average of more than 25°C in any 24 hour period)

IP rating:
With flex outlet: IP2XD
Without flex outlet: IP4X

Max. installation altitude:
2000 metres

Description

A range of 13A fused connection units 20A DP Switches designed for the connection of refrigerators, water heaters, central heating boilers and other fixed appliances.

The range is designed for ease of installation and have the advantageous design features of the Chroma Plus range.

Neon indicators

Neon indicators can be included in the rockers of the switched connection units. In the case of unswitched units, they are located centrally and uppermost on the face plate. Neon indicators are integrally wired into the product and do not require separate connection when installing.

The design gives 175° visibility in the horizontal and vertical planes.

Fuse carriers

These are captive and are opened by a fast acting, screwdriver operated worm drive for ease of replacement.

Fuse carriers can be locked open using a padlock, List No. K2000.

Flex outlets

The products are equipped with very strong, push-fit nylon cord grips making installation safe, quick and easy.

Features

- Optional indicators in the switch rockers with 175° visibility in the horizontal and vertical planes
- Worm-drive operated fuse carriers for additional security (tamper-proof version available)
- Fuse carrier lockable in open position
- All supply and load cables can be cut and stripped to the same length
- Integrally wired indicators save installation time
- Push-fit cord grips, for safer, quicker installation
- Angled, top mounted terminal screws simplify wiring
- Moulded 'on' indicator flash on switches cannot rub off – totally safe
- Captive fuse carrier
- Additional electrical safety from neutral 'make first', 'break last' feature
- Secure cable and flexible cord connection
- All terminal and fixing screws operated by one-size (4mm) screwdriver
- Backed out and captive terminal screws

Cable management

Decorative finish connection units and DP switches can be mounted in a variety of MK trunking systems.

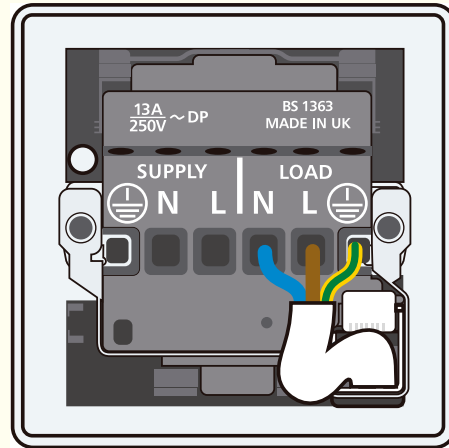
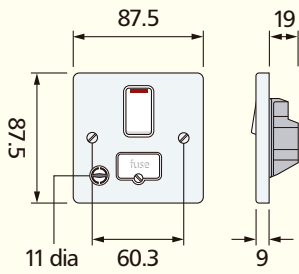
BOX TYPES

Flush

886 ZIC

Connection Units and 20A Switches

Dimensions (mm)



Installation

Decorative Finish connection units and 20A switches can be wall or bench mounted. Do not use on a trailing lead.

Wiring

Products must be installed in accordance with current IEE Regulations.

Front outlet cord grip

Supply and load cable cords cut and stripped to same length.

Lockable fuse carrier

High Current Switches and Cooker Control Units

Standards and approvals

All DP switches in the range conform to BS 3676: Part 1: 1989 (1994)

32A TP+N Switch conforms to BS EN 60947-3: 1992

All Cooker Control Units in the range conform to BS 4177: 1992 (1993). 'Specification for cooker control units'.

Cooker Connection Unit conforms to BS 5733: 1995



Technical specification

Electrical

Voltage rating:
250V a.c. (32A, 45A) 440V (32A TP+N)

Current:
32A/45A resistive

Switch:
3mm contact gap
Double pole operation –
except socket switch on CCUs

Terminal capacity, 32A TP+N Switch, 45A Switches and CCUs:

4 x 4mm²
3 x 6mm²
1 x 16mm²

Terminal capacity, 32A Switch:

3 x 2.5mm²
2 x 4mm²
1 x 6mm²

Physical

Ambient operating temperature:
–5°C to +40°C
(not to exceed an average of more than 25°C in any 24 hour period)

IP rating:
IP2XD (K5261)
IP4X (K5106, K5236, K5114)

Max. installation altitude:
2000 metres

Features

- Positive switch action
- Positive double pole switching
- Toggle action switches
- Wide product choice
- Hard wearing lacquer finish

Description

A range of switches and cooker control units harmonising with the Chroma Plus style, suitable for the switching of all domestic, commercial and industrial appliances where higher current ratings are required, ie cookers, heaters, commercial refrigeration units etc. These units are particularly suitable for refurbishment projects.

BOX DEPTHS

List No.	Max. Cable Size	Flush	Surface
Switches			
K5106 PCR 32A DP Switch	6mm ² 10mm ²	35mm 46mm	40mm 40mm
K5236 PCR 45A DP Switch	6mm ² 10mm ²	35mm 46mm	40mm 40mm
K5114 PCR 32A TP+N Switch	6mm ² 10mm ²	35mm 47mm	40mm 40mm
Cooker control units			
K5261 PCR	6mm ² 10mm ²	35mm 47mm	40mm N/A

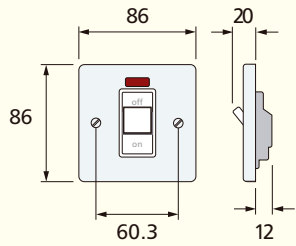
BOX REFERENCES

Box depth	Flush		Surface metal	
	1 gang	2 gang	1 gang	2 gang
35	886 ZIC	886 ZIC	–	–
40	–	–	K829 ALM/K899 ALM	K830 ALM/K897 ALM
46	877 ZIC	–	–	–
47	–	878 ZIC	–	–

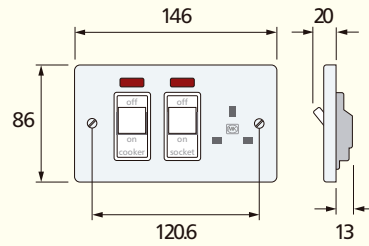
Note: These switches are not recommended for switching large banks of PCs

High Current Switches and Cooker Control Units

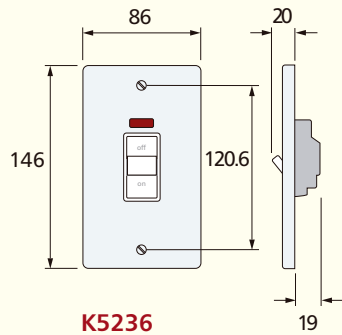
Dimensions (mm)



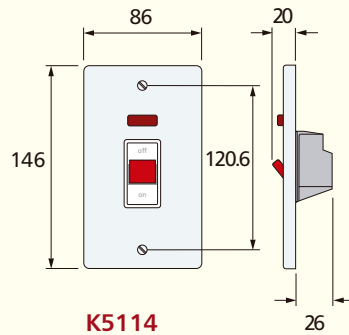
K5106



K5261



K5236



K5114

Plateswitches

Standards and approvals

All Decorative Finish plateswitches comply with BS EN 60669-1: 2000

Technical specification

Electrical

Voltage rating:
250V a.c. 50Hz

Current rating:
10 amps – no derating when used on fluorescent or inductive loads

Switches can be wired as either one-way or two-way.

Terminal capacity:

All products –
4 x 1mm²
4 x 1.5mm²
3 x 2.5mm²
2 x 4mm²
1 x 6mm²

Contact gap:

3mm switch contact gap

Physical

Operating temperature:
-5°C to +40°C

IP rating:
IP4X

Max. installation altitude:
2000 metres

Operational testing (all plateswitches):
tested to 100,000 operations for mechanical life
tested to 30,000 operations at 10 amp rating

All plateswitches in this ranges are rated 10AX.

Cable management

Decorative finish plateswitches can be mounted in a variety of MK trunking systems.

BOX TYPES

Flush

3995 ZIC



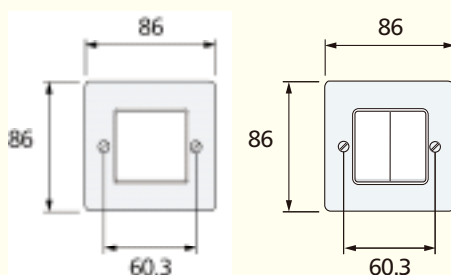
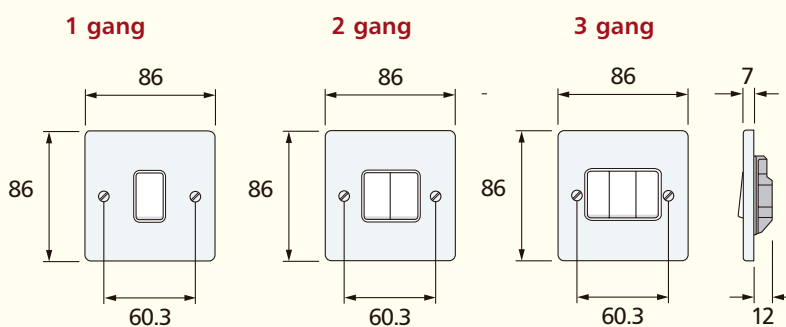
Description

Supplied as standard with white inserts

Features

- Two way switches can be wired as one or two way
- All products clearly printed with BS Nos., ratings, etc
- Matching Grid switches available in 10 or 20A ratings
- 3mm switch contact gap
- Positive switch action
- Top access, backed out and captive terminal screws
- Neon locator available making switch easy to find in darkened rooms
- An earth terminal is provided attached to rear of product

Dimensions (mm)

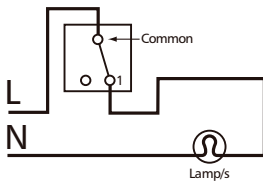


Sectional drawings show the furthest projections from the back of the frontplate (wall surface).

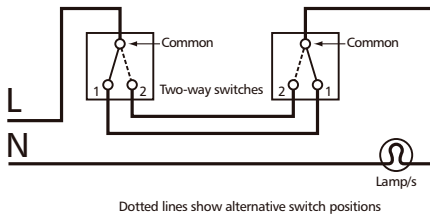
Plateswitches

Wiring Diagrams

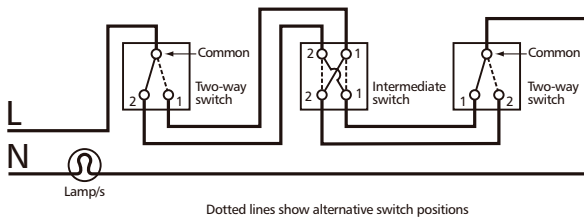
One-way switching



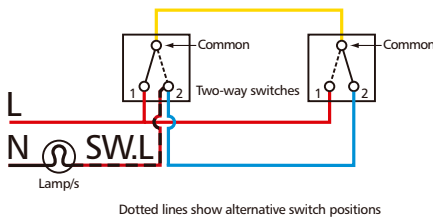
Two-way switching – 2 wire control



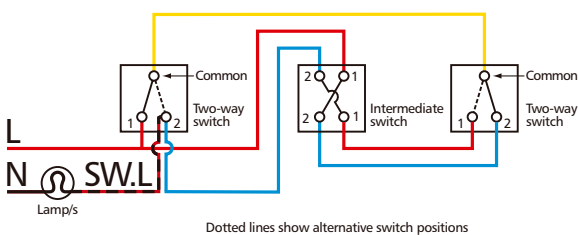
Two-way switching plus intermediate switching – 2 wire control



Two-way switching – 3 wire control



Two-way switching plus intermediate switching – 3 wire control



N.B. Terminal positions may alter. The above diagrams are to show wiring layout.

Three Pole Fan Isolators

Standards and approvals

Comply with BS EN 60947: 1992

Technical specification

Electrical

Voltage rating:
250V a.c. 50Hz

Current rating:
10 amps

Terminal capacity:
4 x 1mm²
4 x 1.5mm²
3 x 2.5mm²
2 x 4mm²
1 x 6mm²

Contact gap:
3mm switch contact gap

Classifications

Method of operation: Stored energy operation
Suitability for isolation: Suitable for isolation

Ratings

Utilisation category	AC23B
Rated operational voltage (Ue)	250V
Conventional free air thermal current (Ith)	10A
Rated frequency	50Hz
Rated making capacity	100A rms
Rated breaking capacity	80A rms
Rated conditional short-circuit current	6000A rms
(with supply side protective device GEC NIT 16 BS88: part 2: 1988 16A 550VAC utilisation category gG 80KA breaking capacity fuse links.)	

Physical

Operating temperature:
-5°C to +40°C

IP rating:
IP4X

Max. installation altitude:
2000 metres



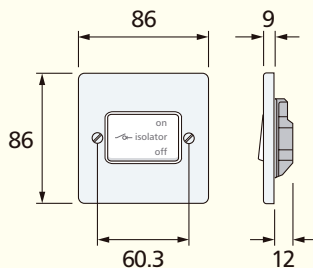
Description

The MK Three Pole Fan Isolator provides a safe and simple method of isolating mechanical fan units and is particularly useful in bathrooms, toilets, storerooms and basements where there is little or no natural light.

For example, timer controlled fans are often linked into the lighting circuit for energy saving and convenience. In such an installation there is often a need for the lighting circuit to remain live to provide light whilst the fan unit is externally isolated so that routine maintenance and repairs can be carried out in complete safety.

The 4857 fan isolator can be used as a double pole or triple pole isolator. In addition it includes a clear on/off indicator and the frontplate features a fan isolator symbol for easy circuit identification.

Dimensions (mm)



BOX TYPES

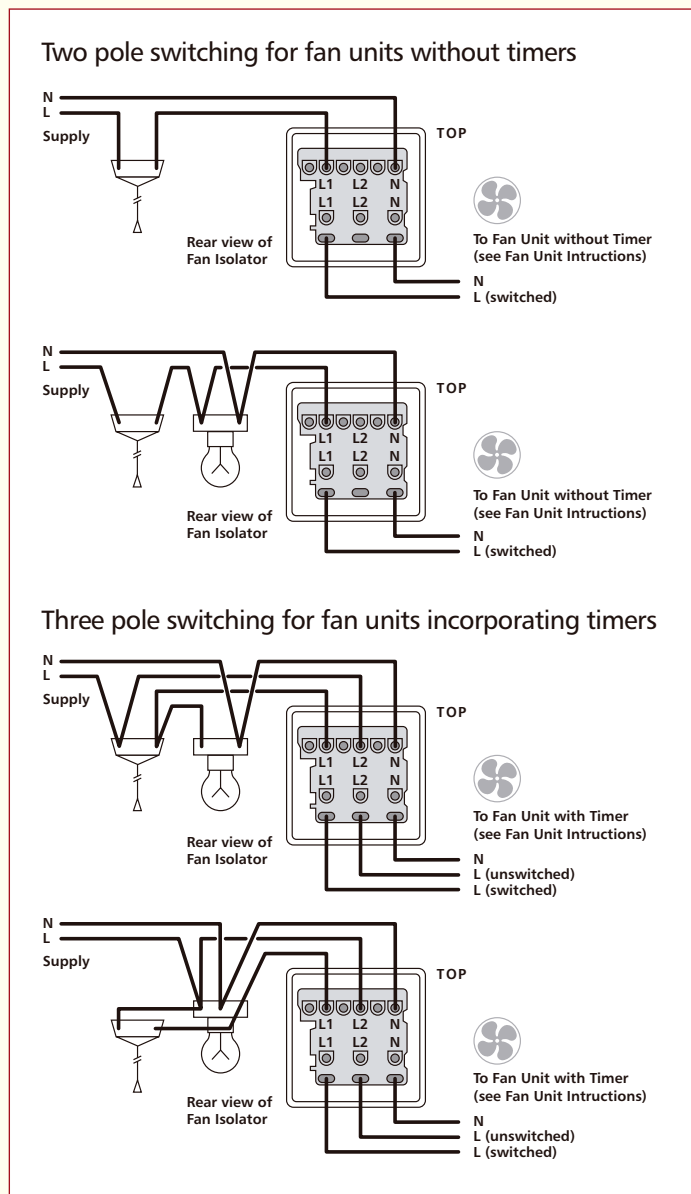
Flush	Surface
3995 ZIC	K2142 WHI

Features

- Switchlock list no. K4858 is available to allow the isolator to be locked in the disconnected position to facilitate fan maintenance

Three Pole Fan Isolators

Wiring Diagrams



Dimmer Switches

Standards and approvals

All CE marked Decorative finishes dimmer switches comply with the EC Low Voltage Directive: 73/23/EEC, Electromagnetic Compatibility Directive 89/336/EEC

They also comply with BS EN 60669-2-1 and BS EN 55015

Non-UK dimmer switches conform to the relevant parts of BS 5518.



Technical specification

Electrical

Mains Supply Voltage:

230V a.c. (Nominal)

220V a.c. (Nominal, Non-UK)

127V a.c. (Nominal, Non-UK)

Mains Supply Voltage Range:

216V a.c. to 253V a.c.

200V a.c. to 250V a.c.

120V a.c. to 134V a.c.

Mains Supply Frequency:

50Hz \pm 3Hz

60Hz \pm 3Hz

Type of Loads:

Standard Dimmers:

Fused GLS Tungsten Filament lamps only to BS EN 60064:

1996 and BS EN 60432-1: 2000,

rated at 230/240V

Low Voltage Dimmers:

Fused GLS Tungsten Filament lamps to BS EN 60064: 1996

and BS EN 60432-1,2 rated at 230/240V. Dimmable wire

wound or electronic Low Voltage Transformers of good

quality. Can also be used with good quality mains voltage

halogen lamps incorporating GU10 bases. Please check

with lamp manufacturer to determine suitability.

Note: Transformer must be suitable for dimming using phase delay (leading edge) and NOT only phase cut (trailing edge) type of dimmers.

Warning: These dimmer switches are not suitable for use with Fluorescent Lamps or Energy Saving Lamps.

Physical

Operating temperature:

0°C to +40°C

IP rating:

IP4X

Max. installation altitude:

2000 metres

Description

Chroma Dimmer Switches fall into three categories:

1) Standard Dimmer Switches

2) Intelligent Dimmer Switches

3) Non-UK Dimmer Switches

Standard Dimmer Switches

Dimmer Switches belonging to this category employ simpler electronic circuitry and the CE marked products make use of thermal switches to conform to the very stringent requirements of the Standard BS EN60669-2-1, for overload protection. They are only suitable for use with normal tungsten filament lamps with internal fuses, conforming to BS EN 60064: 1996 and BS EN 60432-1 standards and do not have any added features, e.g. soft start, ability to control dimmable transformers for low voltage, etc.

Standard Dimmer Switches are not suitable for use with transformers for Low Voltage Lighting or Fluorescent Loads, including Energy Saving Lamps.

Intelligent Dimmer Switches

Dimmer Switches belonging to this category, employ the latest, state of the art, micro-controller based electronic circuitry and use current sensing to compute the load conditions. These products show progressive reaction to overload conditions, depending on the extent of overload as shown in the table below. List numbers belonging to this category are identified by the suffix letters LV, e.g. K1551 PCR LV. All MK Intelligent Dimmer Switches employ one pole change over switches to facilitate two way switching.

MK Intelligent Dimmer Switches are not suitable for use with Fluorescent Loads, including Energy Saving Lamps.

Only one Dimmer Switch can be used in a two-way switching circuit.

OVERLOAD REACTION		
Case	Approximate load on the dimmer as a percentage of its maximum load	Power output to load when dimmer control is set to maximum
1	Up to 125%	Load will receive maximum power continuously.
2	>125% to 150%	Output to load will be reduced to 50% of the maximum after a delay of approximately 20 seconds after switch on.
3	>150% to 200%	Output to load will be reduced to the minimum setting of the dimmer after a delay of approximately 20 seconds after switch on.
4	>200%	Output will be disabled (load will be switched off) almost instantaneously after switch on.

Non-UK Dimmer Switches

Dimmer switches belonging to this category only conform to the relevant parts of BS 5518, without conforming to BS 800. Loads suitable for use with standard dimmer switches above are also suitable for use with this category of dimmer switch.

Dimmer Switches

Features

Intelligent Dimmer Switches incorporate the following advanced features

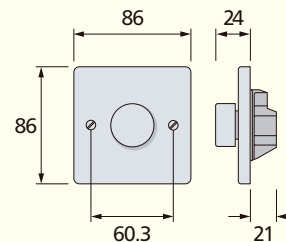
- Suitable for dimming Low Voltage Halogen lamps via good quality, fully dimmable electronic or wire-wound transformers
- Can be used with good quality mains voltage halogen lamps incorporating GU10 bases. Please check with lamp manufacturer to determine suitability
- Unidirectional current sensing
While being used with wire-wound transformers for low voltage lighting, these dimmer switches continuously monitor the drive conditions to the transformers, which require essentially, bi-directional a.c. supply at their input terminals. If, due to some fault condition, the supply to the wire-wound transformer is detected to be unidirectional, which could result in over-heating and/or damaging the transformer, the dimmer switches' circuitry automatically stops supplying the transformer after a few cycles of detected unidirectional supply
- Soft Start, which gradually increases the light output from the load over 1 to 3 seconds after switch on. The Soft Start feature is also particularly beneficial when used to dim Mains Voltage Tungsten Halogen lamps which have inherent very high inrush current at switch on

Standard Dimmer Switches

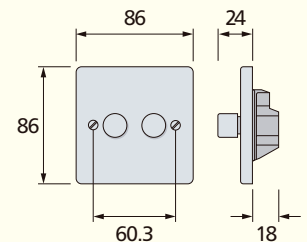
- Suitable only for use with fused GLS Tungsten Filament lamps to BS EN 60064 and BS EN 60432-1
- One way dimmer switches incorporate manual soft start
- Incorporate thermal switches for protection against overload

Dimensions (mm)

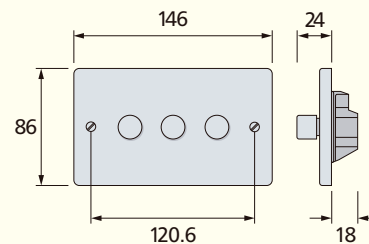
1 gang single



1 gang double



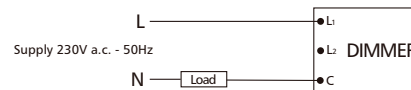
2 gang triple



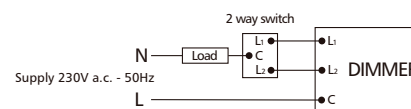
INTELLIGENT DIMMER SWITCHES

	Rating	Max No. of Transformers (total rating of all transformers must not exceed maximum VA rating of dimmer)
1 gang single dimmer	40-300W (LV and mains voltage halogen rating 40-240W/VA)	4
1 gang double dimmer	2 x 40-300W (LV and mains voltage halogen rating 2 x 40-240W/VA)	4 per dimmer
1 gang single dimmer	60-500W (LV and mains voltage halogen 60-400W/VA)	5

One-way switching



Two-way switching (only one dimmer can be used)



Wires must be connected to the correct dimmer terminals.
DO NOT connect earth to dimmer.

Please note the dimmer may be substituted for any of the Two-Way switches shown on page 112.

BOX TYPES

	Flush	Surface
1 gang (excluding double dimmers)	861 ZIC (25mm)	–
1 gang (for double dimmers)	866 ZIC (35mm)	–
2 gang	862 ZIC (25mm)	–
1 gang switches (Albany MCO only)	–	K829 ALM/K899 ALM
2 gang switches (Albany MCO only)	–	K830 ALM/897 ALM

TV/FM and Satellite Socket Outlets

Standards and approvals

Chroma Plus TV sockets comply with the following:

TV sockets K3520, K3521 and K3523

BS 3041: Part 2: 1977/IEC 169-2: 1977, BS5733: 1995 (where applicable) and IEC65, Cls 10.1, 10.3.

TV sockets K3525

BS 5733: 1995 (where applicable).



Technical specification

TV sockets
 cable specification: CT100 or equivalent
 Any standard low-loss TV co-axial cable:
 Outside 4-8mm diameter,
 inner conductor 0.5-2mm diameter

Insertion loss:
 Graphs showing insertion loss available on request

'F' Type satellite socket (K3525), cable specification:
 Co-axial cable: inner core diameter – 0.5-1.2mm

Physical

Ambient air:
 -20°C to +60°C

IP rating:
 IP2XD

Max. installation altitude:
 2000 metres

Description

A part of the very wide range of products in the distinctive Chroma Plus style to meet the latest technical requirements and the standards applicable to modern technology in the installation of telephone and television equipment.

Chroma Plus TV sockets will fit in plaster depth boxes.

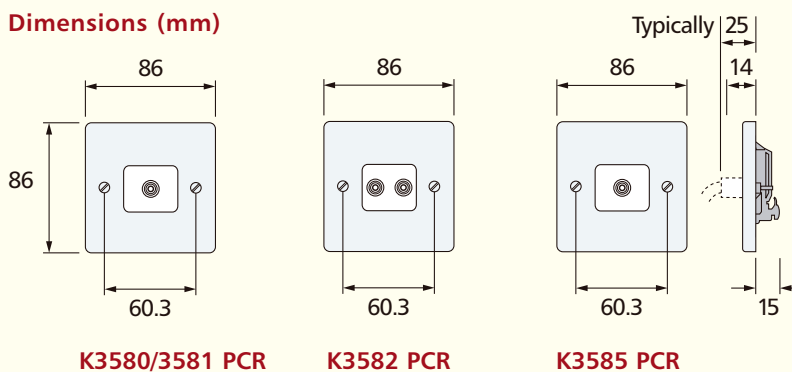
The F-type Satellite Socket may be used for connection of CATV, MATV and satellite TV installations.

Digital TV modules are available, see page 31 for details.

Features

- Single screw termination on TV outlets
- Meet all relevant BS requirements
- Quick, simple and reliable terminal connection
- Part of a complete range of products for telephone, television and data processing requirements

Dimensions (mm)



BOX TYPES	
	Flush
1 gang	861 ZIC

Sectional drawings show the furthest projections from the back of the frontplate (wall surface), including a typical coaxial connector in the case of TV sockets. All units will fit in 16mm plaster depth boxes.

TV/FM and Satellite Socket Outlets

Installation (TV sockets)

Product performance, systems compatibility

Isolated Outlets are intended for use where safety isolation (rated at 2000V ac) is required to provide protection against faults occurring within any mains powered product used on different parts of the distribution system. They are not suitable for use in systems where DC signals are passed through the socket, (e.g. where masthead/headend equipment is controlled by receiver/decoder equipment).

Diplexer Outlets are used in distribution systems where both TV and FM band signals are combined on a single aerial download. The filtering in the diplexer separates the appropriate signals and feeds them through to the relevant output connection port.

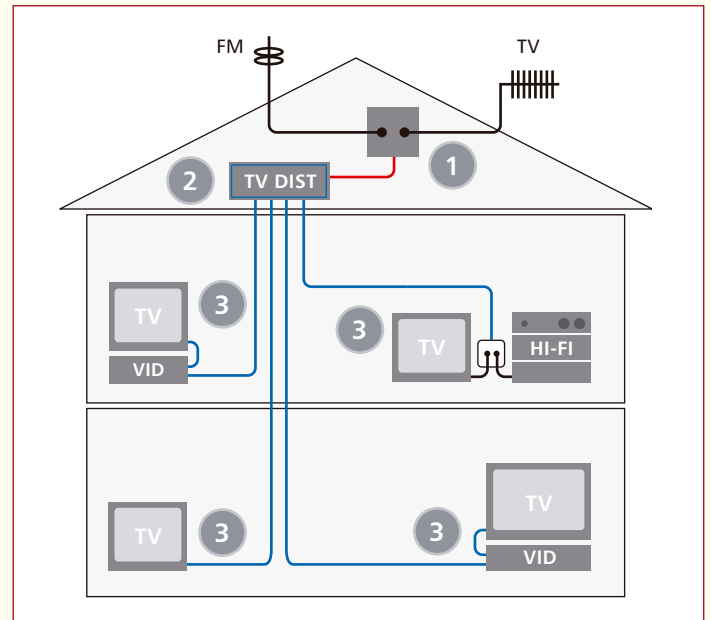
Cable Routing and Use of Cable Clamp

Sharp bends in the cable must be avoided during installation. The single TV/FM socket is fitted with a cable clamp that can be fixed on either side of the termination position to facilitate this.

When tightening the screening braid clamps ensure that the cable is firmly gripped and that the inner insulation is not squashed flat beyond a slight oval shape.

Safety Information

TV outlets or modules must not be installed in the same enclosure as equipment rated in excess of 50V, (e.g. mains rated 13A sockets or switches).



Method of installation of TV and FM aerial connection by using MK co-axial socket outlet and only one down lead.

Conventional distribution system for TV and FM signals using a single aerial download.

- 1 A standard TV/FM diplexer product is required to combine the TV and FM signals from the separate aerials in the loft space. (Black lines in wiring diagram).
- 2 The single cable feed from the diplexer then feeds to the input of a multi way distribution amplifier, typically located in the loft or garage. (Red line in wiring diagram).
- 3 Each individual output from the distribution amplifier is then fed to the individual rooms in the house to a standard TV (single or diplexer) outlet to which the TV/VCR and/or Hi-Fi can be connected. (Blue lines in wiring diagram).

MK Modular Data Frontplates

Standards and approvals

BS.5733: 1995

Technical specification

Physical

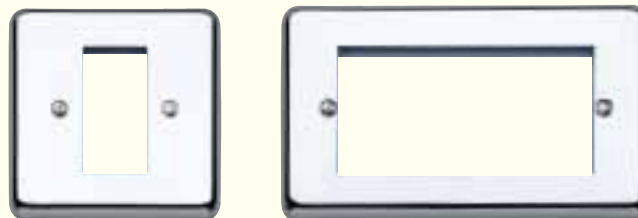
Temperature range:
Ambient air -20°C to $+60^{\circ}\text{C}$

IP rating:
IP2XD

Max. installation altitude:
2000 metres

Features

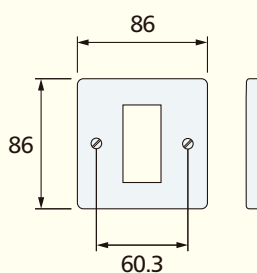
- Meet all relevant BS, OFTEL and cabling standards
- Interchangeable modules clip into grid frame which attaches to frontplate
- Front fixing facilitates easy exchange of modules
- Part of a range of products for telephone and data processing requirements



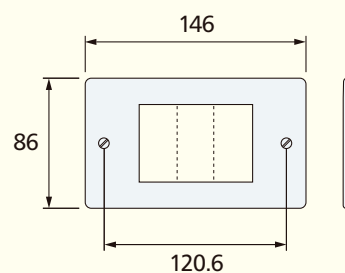
Description

A unique modular system in the distinctive Chroma Plus style comprising a range of socket modules for Data and Telephone use, with 4 matching frontplates capable of accepting combinations of interchangeable modules. Modules clip into mounting frames which, when attached to frontplates, provide a high degree of versatility, making the system ideal for use in all commercial, industrial and domestic applications.

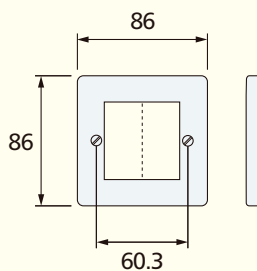
Dimensions



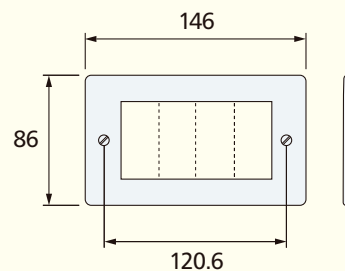
1 module
K391 PCR



3 module
K393 PCR



2 module
K392 PCR



4 module
K394 PCR

Euro and LU6C Data Frontplates

Standards and approvals

BS 5733

Technical specification

Dimensions

Height:	86mm
Width:	86mm (1G)
	146mm (2G)
Depth:	9mm

Aperture Dimensions

Euro Frontplates

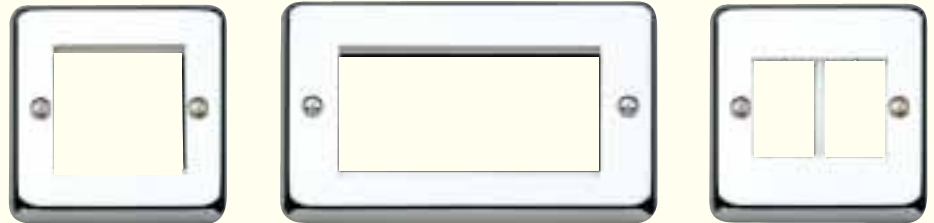
Height:	50mm
Width:	50mm (1G)
	100mm (2G)

LU6C Frontplates

Height:	37mm
Width:	22mm

Features

- 1G and 2G frontplates
- Chroma Plus style
- Accept industry standard (Euro) and LU6C snapfit modules
- 1G Euro frontplate accepts 2 Euro modules, (50 x 50mm aperture)
- 2G Euro frontplate accepts 4 Euro modules, (100 x 50mm aperture)
- 2G LU6C frontplate accepts two LU6C modules (27 x 37mm aperture)
- 1/2 module (12.5 x 50mm) blank available for Euro frontplates
- Interchangeable modules clip into frontplate



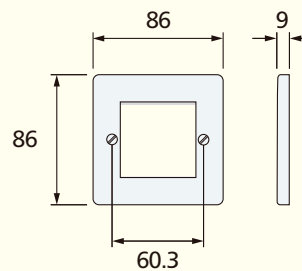
Description

Frontplates used for mounting snapfit data modules.

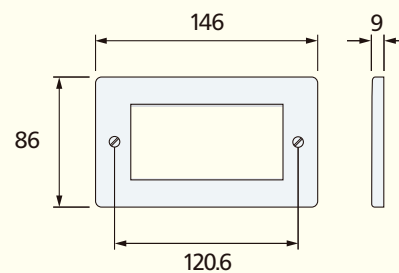
Dimensions (mm)

Euro Frontplates

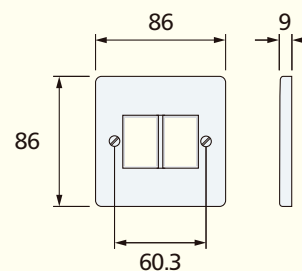
1 gang K182 PCR



2 gang K184 PCR



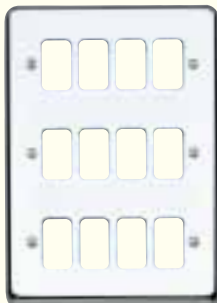
LU6C Frontplates K172 PCR



Grid Plus Front Plates

Standards and approvals

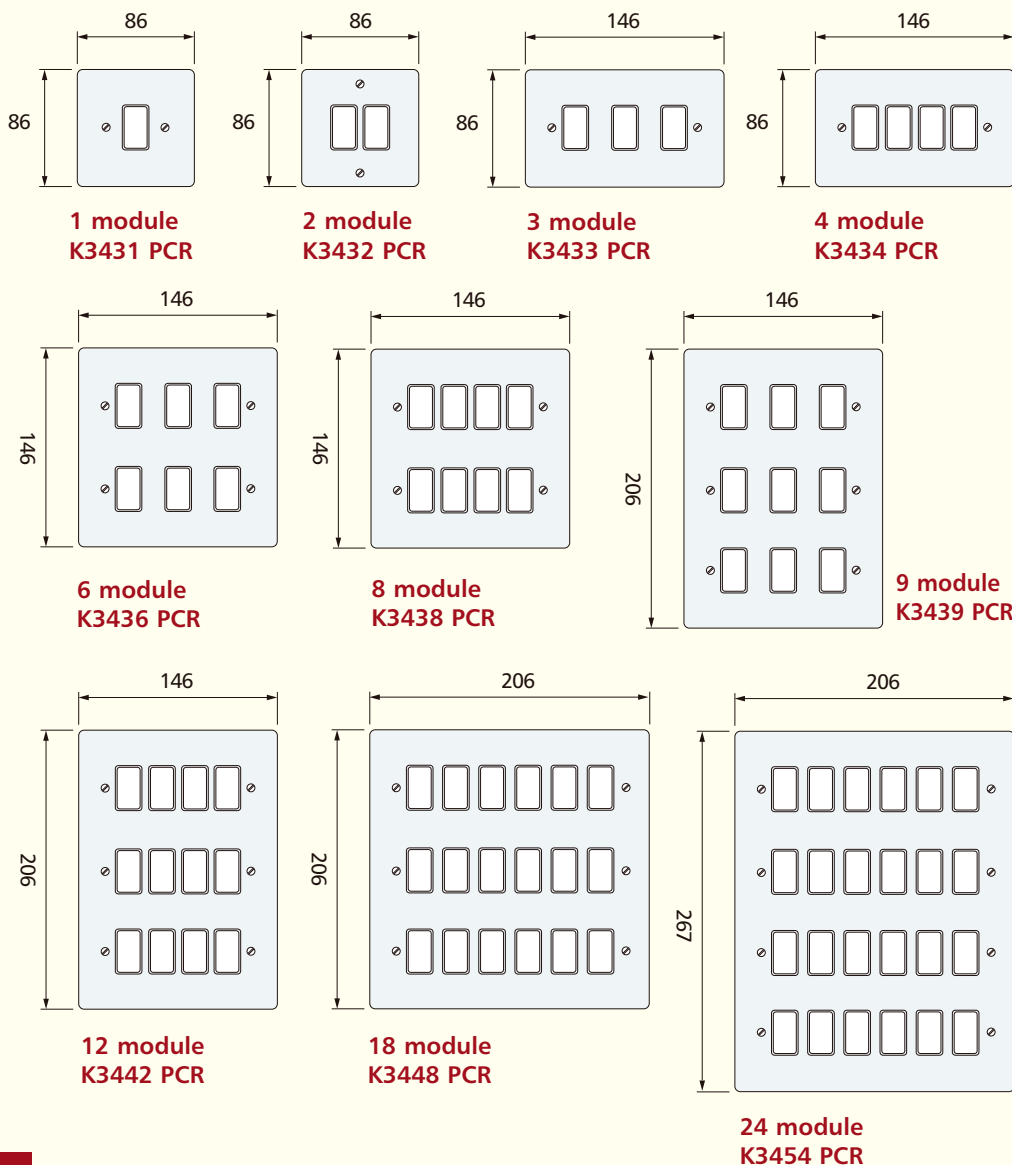
BS 5733: 1995



Description

Grid Plus is a comprehensive modular switching and monitoring system ideal for a variety of applications within the commercial, public and domestic sectors.

Dimensions (mm)



For a full range of corresponding products, see page 114 in the product selector.