



#### **IP RATINGS**

The IP (International Protection) rating given to an enclosure states the degree of protection it offers by means of two digits. A summary of these is shown below; for a more detailed definition, see IEC 529: 1989, BS EN 60529: 1992.

#### FIRST DIGIT

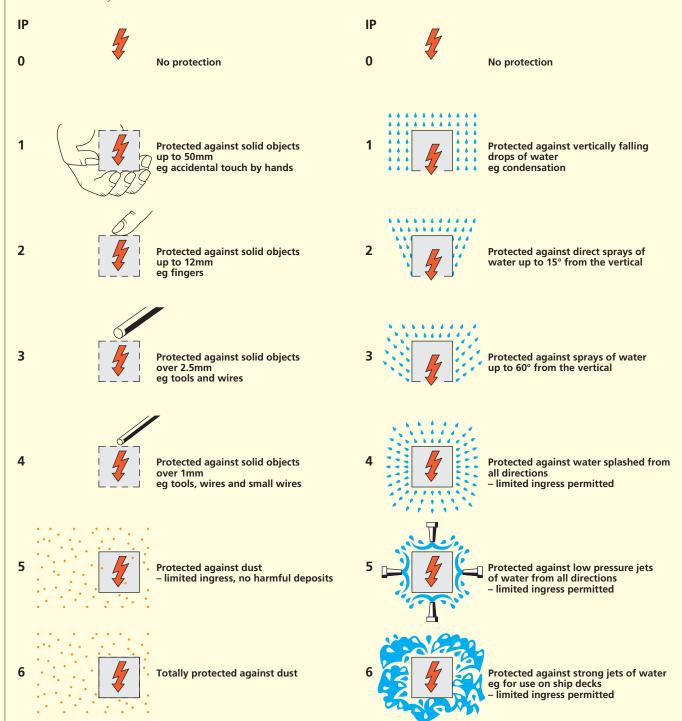
Protection against solid foreign objects and access to hazardous parts

The first digit covers protection against penetration by solid objects, which includes hands and tools such as screwdrivers. At the lowest of seven levels, 0, no protection is offered, either of the equipment itself from damage by intrusion or of a person contacting live or moving parts. At the highest, 6, there shall be no entry of dust.

#### SECOND DIGIT

Protection against ingress of water

The second digit covers the degree of protection against the entry of water, on a progressive scale. For example, number 1 indicates that dripping water shall have no harmful effect, and number 6, that water projected in powerful jets against the enclosure from any direction shall have no harmful effects.



The letter X can be used in place of the first or second digit to indicate that tests have either not been made or are not applicable.

#### NOTE

In the event of additional holes being drilled/pierced or knockouts removed, suitable measures should be taken to restore the products to the original ratings.

IEC 529, BS EN 60529 does not apply to protection against the risk of explosion or conditions such as humidity, corrosive gases, fungi or vermin. In certain cases equipment designed to be mounted in an enclosure will contribute towards the stated IP rating (eg pushbuttons mounted in an enclosure). Different parts of enclosures can have different degrees of protection and still conform to the standard (eg enclosures with pre-drilled conduit entry).

## WIRING ACCESSORIES - GENERAL

#### **BRITISH STANDARDS**

An unqualified reference to the British Standards in this product catalogue indicates that the products referred to are marked with the British Standard and therefore comply in all respects with the standard stated.

Where a qualification is given against the British Standard, eg BS 3676 where applicable, this means that there is no specific standard for the product in question and it has been tested as far as possible for compliance with the standard indicated.

## TERMINAL CAPACITIES (mm<sup>2</sup>)

Product	Quantity and gauge of cable accepted by terminals
13A Capital/Platinum socket outlets 13A Capital safety sockets 13A Capital/Platinum fused conn. units	3 x 2.5mm², 2 x 4mm², 2 x 6mm²
13A Panel mounting socket	3 x 2.5mm², 2 x 4mm², 1 x 6mm²
10AX Capital/Platinum plate switches 10A Capital architrave switches	4 x 1mm², 3 x 1.5mm², 1 x 2.5mm²
20A Capital/Platinum DP switches 32A Capital/Platinum DP switches	3 x 2.5mm², 2 x 4mm², 1 x 6mm², 1 x 10mm²
32A Capital TP & N switches 45A Capital/Platinum DP switches	2 x 6mm², 1 x 10mm², 1 x 16mm²
50A Capital DP switches 45A Capital/Platinum cooker control units	2 x 6mm², 1 x 10mm², 1 x 16mm²
Capital/Platinum shaver supply unit Capital light/shaver unit 6A Capital ceiling switches	4 x 1mm², 3 x 1.5mm²
16A Capital ceiling switches	2 x 2.5mm² max
50A Capital ceiling switch	3 x 2.5mm², 2 x 4mm², 1 x 6mm², 1 x 10mm²,
Capital ceiling roses Capital safety batten lampholder	1.5mm² multiway
Capital safety pendant lampholder	1 x 1mm² flexible cable
16A Minder PIR sensor	6 x 1mm², 4 x 1.5mm², 2 x 2.5mm²

# 6A TP ISOLATING SWITCH

# LIST No. 4017, 4017/1, 6017/\_ \_ , 7017/\_ \_ , 1017/1\_ \_ , IN/3017/1\_ \_ & 4587/BG

Complies fully with requirements of BS EN 60947-3 for switch disconnectors.

Rated SC making capacity 300A
Rated conditional short circuit current 6kA

(when protected by Starbreaker 6A mcb)

Rated insulation voltage 300V
Rated impulse withstand voltage 2.5kV
Rated duty Uninterrupted

Maximum switching rate 120 switch cycles per hour Rated short time withstand current 100A for 1 second Utilisation category AC 23B, 6A 250V 50Hz

# A POINT ON TESTING

When installations incorporating electronic devices of the semi-conductor type are being tested, care must normally be taken to ensure that they are not subjected to the output voltage of an insulation tester. However, dimmer switches complying with BS 5518 will not be damaged by the application of a normal 500V insulation resistance test. In all other cases where electronic items are fitted, they should be disconnected whilst the insulation of the installation is tested. A notice, drawing attention to the fact that electronic devices are incorporated in the installation, should always be affixed at the intake position. This also applies to any neon indicators fitted.

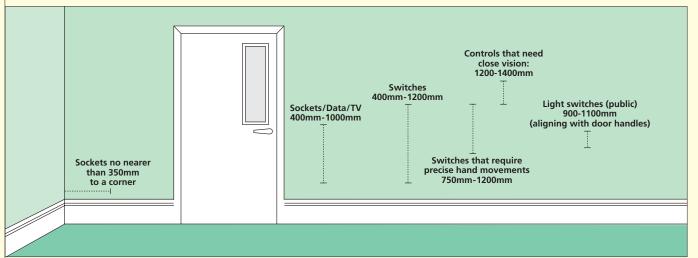
#### BUILDING REGULATIONS APPROVED DOCUMENT PART M - ACCESS TO AND THE USE OF BUILDINGS

There are a number of considerations that need to be met by the specifier or contractor of a buildings installation when covering reasonable provision for the access to and use of a buildings structure and facilities for a disabled person whether visiting, working or dwelling in them. Crabtree have continually been introducing and developing products throughout their range of wiring accessories to enable compliance with Part M.

# Part M can be split into four sections:

◆ Height
 ◆ Visibility
 ◆ Operation
 ◆ Freedom from obstruction

#### **MOUNTING HEIGHT AND POSITION**



- Socket outlets, Telephone points and TV sockets are mounted at 400 - 1000mm with a preference for the lower range.
- Switches should be mounted at 400 1200mm unless needed at a higher level for particular appliances.
- Switches and controls that require precise hand movement (eg: Central Heating Controls) at 750 -1200mm.
- Controls that need close vision at 1200 1400mm so that readings may be taken by a person sitting or standing.
- Light Switches for use by the general public align horizontally with door handles within the range 900 -1100mm.
- Sockets no nearer than 350mm from room corners.

#### **DESIGN CONSIDERATIONS**

- There should be a consistent relationship with the doorways and corners to reinforce the ease with which people manipulate switches and controls.
- All users should be able to locate a control, know which setting it is on and use it without inadvertently changing its setting.
- Controls that contrast with their surroundings are more convenient for the visually impaired as are light switches that are activated by a large touch pad.
- It is an advantage if individual switches on panels and multiple socket outlets are well separated, or in the form of large touch plates to avoid the incorrect selection of an adjacent control by visually impaired people and people with limited dexterity.
- The colours red and green should not be used in combination as indicators of "on" and "off" for switches and controls. It may be useful to use text or a pictogram to clarify.

# Visibility

- Front plates should contrast visually with their backgrounds.
- Mains and circuit isolator switches should indicate clearly if they are on or off.
- Switched socket outlets should indicate whether they are on

Some may consider these requirements refer to the complete product contrasting with a wall, whilst others

may consider it is the switch that should contrast with its frontplate. The regulation states that switches, outlets and controls will satisfy requirement M1 if: front plates contrast visually with their background.

The Crabtree Seek light assists in locating light switches in the dark.

Crabtree have considered both options in their product range of Platinum, the products can either have contrasting rocker to frontplate which then could contrast with the back wall, or just contrast of frontplate and wall.

# **BUILDING REGULATIONS APPROVED DOCUMENT PART M - ACCESS TO AND THE USE OF BUILDINGS**

#### Operation

 Light switches, which are to be used by the general public are encouraged to have large rockers at a height corresponding to the door handle, within the 900 - 1100mm range.

This would enable people with a physical disability or visual impairment to both locate and activate them easily.

The Crabtree range of electrical wiring accessories all come with a large concave rocker, with the 'Corinthian' range having an extra wide rocker.

## Freedom from obstruction

- Light switches and controls should be 'well separated' or activated by a large push pad to prevent inadvertent operation.
- The operation of switches, outlets and controls does not require the simultaneous use of both hands, except where this mode of operation is necessary for safety reasons.

Where several switches on panels are required. In addition the Crabtree Rockergrid range provides a wide choice of switch options.

#### **CRABTREE PRODUCT SELECTOR**



#### Corinthian

A range of wide rocker 10AX lighting switches with clip on surrounds that can be provided in alternative colours to meet a variety of LRV values.

## **Seek Light**

The Crabtree Seek Light as shown above assists in the location of the light switches in the dark. Seek light comes on when the switch is turned off. Seek light fits all Crabtree 1 gang switches.

The circuit has been designed to reduce the pulse effect of the LED light and give a constant light source.



## Rockergrid

This modular system of boxes, grids, plates and switches can be quickly and easily assembled to customers' individual specifications enabling several circuits to be controlled from a single position.

The switches are a modular design that has a large concave rocker with a barrier between to avoid inadvertent selection of adjacent controls.



## **Platinum White Moulded**

A range of power, control and lighting accessories offering a low profile clip on moulded front plate.

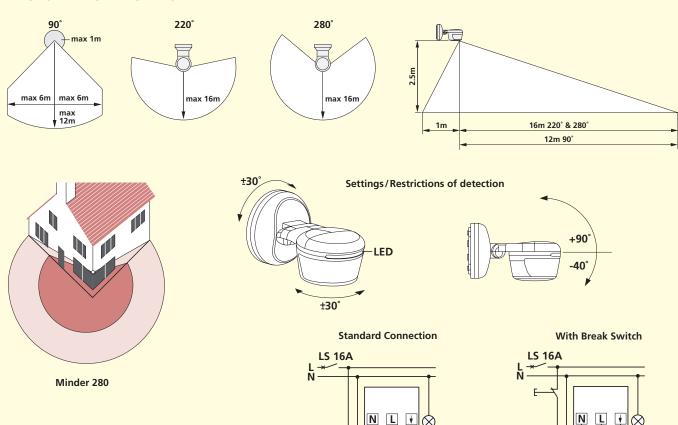
This range can be supplied with alternative colour front plates to contrast with the moulded rocker or can be combined with the Platinum decorative plates and interiors to provide a visual contrast.

Although the product ranges mentioned aim to meet the design considerations for Part M compliance, Crabtree would be prepared to discuss any future development on a project by project basis and assist, where possible, with any other requirements.

## MINDER PASSIVE INFRA RED SENSORS

The Minder is a multi-adjustable, passive infrared movement detector. People and animals radiate heat, which is invisible to the human eye (infrared range). Consequently, the recorded infrared energy pattern changes when they enter the detection zone

## **DETECTION RANGE DIAGRAMS**



#### **TECHNICAL DATA**

Horizontal range of detection	90°	220°	280°
Max. frontal range	12m	16m	16m
Max. bilateral range	6m	16m	10m
Water protection	IP55	IP55	IP55
Switch off delay	1-3-5min	10 sec-30min	10 sec-30min
Dusk sensor, in Lux	3/15/Lux	0,5-300/Lux	0,5-300/Lux
Switching Capacity	3680 W/VA	3680 W/VA	3680 W/VA
Max switching Current	16AX	16AX	16AX
Operating Temperature	-25°C - +55°C	-25°C - +55°C	-25°C - +55°C

#### **INSTALLATION**

The Minder functions optimally when installed lateral to walking direction. When selecting the installation site, ensure that:

- The minder is not covered by rigid or moveable objects (e.g. roofing elements, branches of tree, etc.).
- When unit is installed above, or lateral to luminaires, a minimum distance is always allowed between the unit and the luminaire, in order to prevent maloperation.
- when the unit is installed below luminaires, it is not heated up as a result of radiant heat from the luminaire.

When mounted at a height of 2.5m, the detection range is as above mentioned, though deviations in the mounting height cause changes in the detection range. In the case of special conditions at the site (e.g. rows of trees, small plot of land, proximity to road, etc.) the enclosed masking strip can be used to restrict the detection range by sticking it on the Minder lens.

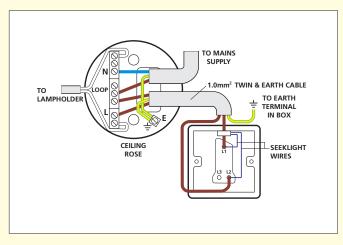
## MINDER FAULT FINDING ANALYSIS

NATURE OF FAULT	REASON FOR FAULT	REMEDY
Minder does not operate	Lens covered or dirty	Check power supply, uncover and/or clean lens
Inadvertent operation of Minder	Hot air or smoke e.g. out of kitchens activate Minder	Install Minder at a different location
Lamp is permanently on	Permanent movement in the monitored area	Make sure that no heat source is in the detection zone and wait until adjusted time lapse has run down For control purposes, please cover the lens completely.
	Minder is bridged to manual operation by additional switch	Switch to automatic operation

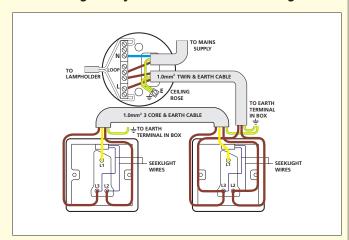
- 1 Before commencing work switch off the power supply by removing the fuse in the fuse box, or should isolate at main switch as neutral is a live conductor.
- 2 Connect seeklight wires as shown in diagrams below. Ensure terminal screws are properly tightened and no bare wire is visible. Push back unit into mounting box making sure conductors are not trapped.
- 3 Screw the unit to the mounting box.
- 4 Note: With the standard wiring configurations as described in the diagrams the Seeklight will only illuminate when the light it controls is off.
- 5 These products must be installed in accordance with the latest Building and IEE wiring regulations. If in any doubt, please contact a qualified electrician

PLEASE NOTE The LED 'Seeklight' must be disconnected when carrying out insulation testing to avoid a false reading

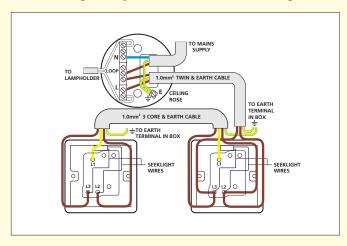
# 1 Gang 1 Way 10AX Switch with Seeklight



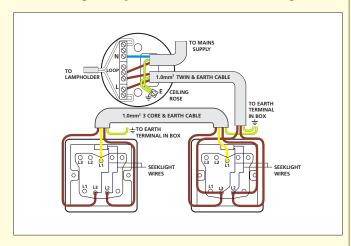
## 1 Gang 2 Way 10AX Switch with Seeklight



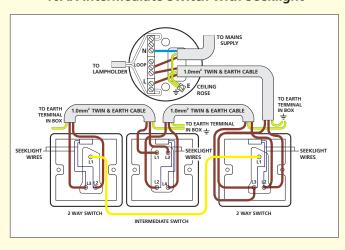
# 2 Gang 2 Way 10AX Switch with Seeklight



3 Gang 2 Way 10AX Switch with Seeklight



# **10AX Intermediate Switch with Seeklight**



ш

 $\propto$ 

 $\triangleleft$ 

#### GRID LED BACKLIGHT ILLUMINATION



LED Illumination without Dimmer knob



LED Illumination with Dimmer knob fitted



**Dimmer shown fitted to Grid** 

# SPECIFICATION AND PERFORMANCE

Model No. (2-way Push Sw) See Page 89 for Selection Rated Voltage /V ac 230-240V ac - 10% +6%

Supply Frequency /Hz 50Hz / 60 Hz Rated Current /A 1.5A max.

Rated Power /W & VA 60W to 250W & 60W to 400W

Neutral RequiredNoFluorescent compatibleNoGU10 Mains Halogen compatibleYes

LV Transformer compatible

Yes, Limited Electronic & Electromagnetic

Way Switch

Standard Two-Way switch for On/Off function

Turn On/Off operation style Push On/Push Off

Dimming operation Full rotary travel by smooth turning

Outline Dimensions See Drawing

Standards & Approval EN60669-2-1, EN55015, EN61547, EN61000

Special Feature Blue LED backlight option

RoHS Compliant Yes

# **ENERGY SAVING CARD SWITCH**

BS 60669-12



Card switch shown illuminated. Insertion of the card turns the neon off. Ideal for helping locate card switch in hotel corridors.

Available in Crabtree Capital moulded, Capital Metal Plate & Platinum Low Profile.

Controls energy consumption in installations such as hotels by ensuring that appliances are not left on when rooms are unoccupied.

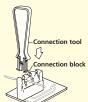
Mains Voltage Card Switch is operated by a door entry card and controls the supply to a room via a suitably rated contactor. Will accept door entry cards up to 86mm x 54mm x 1mm.

# CAPITAL TELEPHONE SOCKET OUTLETS

The Crabtree Capital range of Telephone Socket Outlets has been developed primarily for use in telephone systems using British Telecom standards. The products are similar in specification to units available from British Telecom.

#### **TERMINATIONS**

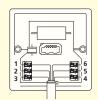
All telephone outlets should be wired in accordance with the wiring diagrams shown below. Connection of these telephone outlets is by the IDC (Insulation Displacement Connection) method allowing one or two equal size cables (0.40-0.68mm) to be terminated per connection block, using Crabtree connection tool List No.6915 as shown below.



Allow 50mm cable 'tails' at each connection block Push home in direction of arrow with connection tool Excess cable may be trimmed using wire cutters

#### WIRING COLOUR CODE

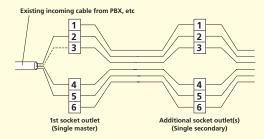
Pin number	Base colour/stripe
1	Green/White
2	Blue/White
3	Orange/White
4	White/Orange
5	White/Blue
6	White/Green



#### WIRING DIAGRAMS

Example of typical connections:

- As seen from rear 1 Connections to 2 & 5
- 2 Earth recall (when used) connect to terminal 4
- 3 Connection to terminal 3 is not usually required
- **NB** (a) Standard 4 wire cable is shown below as incoming cable. If terminals 1 and 6 (normally unused) are required, 6 wire cable may be used.
  - (b) All socket outlet connections are in parallel any number of socket outlets can be connected, but it is recommended that only a maximum of 5 telephones be used at any one time on one line.



#### WARNING NOTES

In order to comply with current Wiring Regulations, metal faceplate telephone socket outlets must be within the 'equipotential zone' of the building they are located in. Therefore an earth terminal is fitted to metal plate units which should be connected to the electrical installation's earthing system.

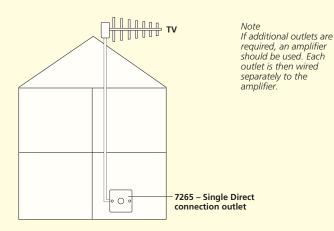
# Testing

- (a) Connect cables as shown in wiring diagram
- (b) Plua in telephones
- (c) Lift receivers and check for dial tone
- (d) Make an incoming call to check bells work
- (e) If circuit does not work, disconnect and check thoroughly before reconnecting

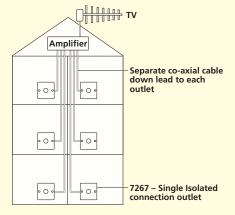
Unauthorised connection of telephone socket outlets to wiring owned by British Telecom is an offence. Further information concerning the requirements of a telephone system installation can be obtained from the Department of Industry or the telephone equipment supplier.

#### **CO-AXIAL SOCKET OUTLETS**

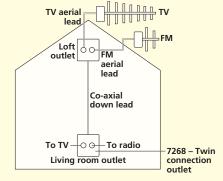
In order to comply with the latest EMC directives, all installations containing amplification systems or comprising multiple co-axial socket outlets must be fitted with appropriate earth bonding. Isolated Co-Axial Sockets are isolated 2kV.



#### Single connection outlet **Domestic installation**



Co-axial outlet installation Communal aerial system eg flats, hotels etc



TV/FM outlet installation

TV and FM aerial connections use a twin connection outlet (7268) and one co-axial down lead. 1 Fit a co-axial connector to the TV and FM aerial cables. 2 Plug connectors into 7268 in loft. 3 Connect a co-axial cable run between back of 7268 in loft and back of 7268 in the living room, then plug TV and FM radio into front of plate.



5012 rear view

#### **Technical details:**

Terminal capacity: 4x2.5mm<sup>2</sup>, 2x4mm<sup>2</sup>, 1x6mm<sup>2</sup> per outlet terminal

Standards: BS7001

BS5733 general electrical requirements

Note: BS 6972 only covers LSC's rated upto 6A 250V

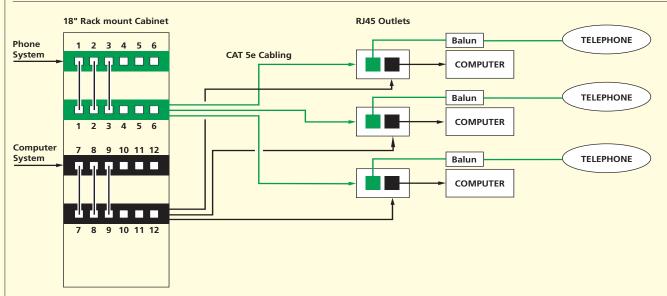
Rating: max 10A 250V per socket, 16A max per

distribution box

Static load: 5kg

The LSC is forming an integral part of design installations for many major projects. In new installations the specifier may choose LSCs to offer a versatile lighting system. However, in projects where refurbishment is being undertaken the LSC system is seen as an ideal cost effective solution where hard wiring may already be in place.

# DATAPAK TYPICAL USE OF PATCH PANELS, PATCH LEADS & DATA OUTLETS



#### **TELECOM MODULES**

Master voice module - BT 601 master

IDC connectors (Krone style)

Capacitor, lightning protection, resistor

PABX voice module - IDC connectors

Capacitor, no lightning protection, (resistor optional)

Secondary voice module - IDC connectors

Master voice module (left handed) - BT 601 master

IDC connectors

Capacitor, lightning protection, resistor

Accepts left handed plug

#### DATA MODULES

RJ45 Cat 5e - IDC connector blocks

Colour coding - socket/cable/patch panel

Tie wrap facility

Use as socket on ISDN system, multiple sockets "daisy-chained"

ISDN Terminated (blue shutter) - RJ45 socket with 100 ohm resitor between pins 4 & 5 and one between pins 3 & 6

Ratio 8:1 use

RJ11/12 - clasified as data outlet, but used as telecom socket in Eire & USA No capacitor accepts 6p6c plug (RJ12) and 6p4c plug (RJ11)

# MEDIA MODULES AND ACCESSORIES

Triplex unit - TV/SAT/FM splitter. One cable in, carrying combined signals, splits signal back into 3 parts. Each socket is screened, reducing susceptability to noise distortion thus improving picture reception. 50mm x 50mm (double mod size)

TV return - screened TV module, used in conjunction with a distribution amplifier to distribute signals to other rooms

BNC (female) - accepts BNC male plug, 50 ohm or 70 ohm, as found on co-axial data systems (RG58, Ethernet) and CCTV installations.

#### BAND WIDTH/CAT

Cat 4 - 20Mhz

Cat 5 - 100Mhz

Cat 5e - 160Mhz

Cat 6 - 250Mhz

#### **CAPITAL**



Capital Bronze (BZ)

Base metal Mild Steel

Process 1 Linished and brushed

- 2 Electrophoretically lacquered
- 3 Stoved



#### **Capital Satin Chrome** (SC)

Base metal Mild Steel

Process 1 Linished and brushed

- 2 Nickel-chrome plated
- and lanolin wiped



#### Highly Polished Chrome (HPC)

Base metal Mild Steel

Process 1 Polished plate

- 2 Electrophoretically laquered
- 3 Stoved



## Capital Polished Brass (PB)

Base metal Mild Steel

Process 1 Polished plate

- 2 Electrophoretically laquered
- 3 Stoved



#### Polished Stainless Steel (PSS)

Base metal Stainless Steel

Process 1 Polished plate



#### Industrial Grey (BG)

Base metal Mild Steel

Process 1 Iron phosphated

2 Epoxy polyester powder coated



Stainless Steel (SS)

Base metal Stainless Steel

## **PLATINUM LOW PROFILE**



Satin Chrome (SC)

Base metal Mild Steel

White interior as standard



Polished Brass (PB)

Base metal Mild Steel

Black interior as standard



Highly Polished Chrome (HPC)

Base metal Mild Steel

Black interior as standard



Black Nickel (BKN)

Base metal Mild Steel

Black interior as standard

# **PLATINUM FLAT PLATE**



Stainless Steel (SS)

Base metal Stainless Steel

White interior as standard



Polished Brass (PB)

Base metal Mild Steel

Black interior as standard



Polished Stainless Steel (PSS)

Base metal Stainless Steel

Black interior as standard

# CFL COMPACT FLUORESCENT LAMPHOLDER

The design of the Lampholder accepts an industry standard 4 pin 10,13 and 18W  $G24q^1$  and  $q^2$  lamp. This reduces the power consumption, when compared to an equivalent incandescent lamp, by up to 80%.

The Lampholder is designed to European standards and has a diameter of 42mm, which is larger than the typical Lampholder which is 29mm.

A Safety feature which protects the installation will disconnect the supply to the Lampholder:-

During a lamp change, when no lamp is present, or in the case of lamp failure at the end of lamp life.

This Safety feature is reset by switching the supply to the fitting off for 10 to 15 seconds.

#### **CRABTREE ANTI MICROBIAL**

Crabtree wiring accessories prefixed with AM have all been independently tested to BS ISO 22196:2007, which is for the measurement of antibacterial activity on plastic surfaces.

Crabtree use Biocote technology which has undergone 25 years life cycle testing.

The Heartlands study showed a 94.5% reduction in bacteria on Crabtree products as opposed to other untreated switches/sockets.

#### BIOCOTE REDUCES BACTERIA LEVELS BY OVER 95% IN WARD AT HEARTLANDS HOSPITAL

The first ever study to investigate the effectiveness of silver at reducing levels of bacteria in an environment has published its initial findings. The environmental trial compares two out-patient wards in the Heart of England NHS Foundation Trust, one at Heartlands Hospital, containing furniture and equipment with BioCote<sup>®</sup> antimicrobial protection and one containing standard, untreated items.

BioCote<sup>®</sup> protected products contain silver, a natural antimicrobial, with a high Efficacy against bacteria, mould and fungi. When micro-organisms come into contact with the silver, their ability to reproduce is inhibited and they die.

Results from the trials show that **the facility at Heartlands, which contained BioCote<sup>®</sup> protected products had 95.8% less bacteria present in the environment, than the standard ward with no BioCote<sup>®</sup> present. The products tested in the trials included waste bins, blinds, tiles, door handles and light switches.** 

Initial indications show that using silver-based products in a hospital environment can lead to a reduction in bacterial colonisation, resulting in a more hygienic environment for patients. With fewer bacteria in the environment, it is logical that the risks of cross contamination are reduced and consequently the risks of patients being infected with "superbugs" such as MRSA are reduced.

In addition, the results showed that within the facility at Heartlands, furniture and equipment with BioCote<sup>®</sup> protection harboured 92.6% less bacteria than those without protection. These results prove that silver can complement cleaning and hygiene practices, working in-between cleans to reduce levels of bacteria on BioCote<sup>®</sup> protected equipment.

The study also showed that BioCote<sup>®</sup> protected products can help reduce bacteria counts on unprotected product s within their vicinity, thus reducing the overall levels of bacteria in the complete environment. **Standard equipment and furniture which were in the ward alongside BioCote<sup>®</sup> protected products saw a 43.5% reduction in bacteria on their surfaces, than standard products in the ward without Biocote<sup>®</sup>.** 

The collaboration between the Heart of England NHS Foundation Trust and BioCote Ltd began in May 2006, when Heartlands Hospital was the first in the UK to equip an out-patient facility with furniture and equipment that had BioCote antimicrobial protection. As soon as the facility had been in use for 12 months, tests began to compare the products with and without BioCote<sup>®</sup> protection and also to compare the facility to a similar ward which only contains standard hospital equipment.

To make the study as consistent as possible, both environments were out-patient wards with a similar through-flow of patients. All testing was carried out at an independent laboratory. The study has concentrated on bacteria counts on the surface of objects, in the form of Total viable count and does not identify actual organisms at this stage.

The Managing Director at BioCote Ltd comments, "We believe that this initial study in conjunction with the NHS helps to justify the use of BioCote<sup>®</sup> protected products. These initial findings indicate that the NHS should be increasing their use of BioCote<sup>®</sup> protected products to help support hygiene practices within healthcare environments, leading to reduced HCAI rates".

With NHS Trusts facing increased pressure from The Healthcare Commission to improve hygiene standards, BioCote<sup>®</sup> protected products can complement cleaning and hand hygiene practices by lowering bacteria counts in ward environments.

Ħ CHNICAL DATA WARWICK

Manufactured to comply with the requirements of BS4678: Part 4 (1982) and BSEN 50085-1 (1999). The Electrium group of companies is registered for assessed capability to ISO 9001: 2000 & ISO 14001: 2004. The WARWICK range complies with all requirements of the 17th Edition of the IEE Regulations.

#### **MANUFACTURE**

All trunking components are manufactured from PVCu material. Base sections, covers and bus-bar base sections are extruded.

Bends, corners, stop ends, joint covers and accessory boxes are formed by injection moulding.

Flat angles and tees are factory pre-fabricated from standard profiles.

#### **STRENGTH**

High impact resistant. The material is formulated to comply with BS4678 Part 4 (1982). Temperature classification -5 to +60°C for permanent application range.

#### FINISH

Manufactured in White Semi-gloss finish.

#### **FIRE RESISTANCE**

The PVCu used in WARWICK trunking is non-propagating and complies with the requirements of BS476 parts 5 & 7 and BS4678 Part 4.

#### **DEGREE OF PROTECTION**

IP4X

#### THERMAL PROPERTIES

Water Absorbtion - Negligible Mineral Acids - Excellent Detergents - Excellent

Note:

Some solvents such as Ketones, Aromatics and Hydrocarbons should not be used on PVC trunking

#### **CABLE CAPACITIES**

Please refer to the IEE Wiring Regulations 17th Edition

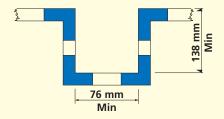
#### **INSTALLATION RECOMMENDATIONS**

- 1) The base section and extension base (if used) should be plug and screw fixed to the wall ensuring washers are used behind the screw head for a more secure fix.
- 2) All joints should have a 5mm gap to allow for expansion and base section corners should be mitred. The cutting of the base sections is not critical as the manufactured fittings cover the joints and overlap the trunking lids.
- 3) For cutting it is recommended that a fine tooth tenon or hacksaw is used. Use a sharp knife or file for trimming.
- 4) Socket and data boxes can be positioned and wiring can begin.
- 5) On completion of all wiring, the covers, joint covers etc can be inserted.
- 6) Finally, all power/data/telephone accessories can be wired and fixed.

The Earth Loop Impedance Test can now be carried out.

#### **INSTALLATION TIPS**

Installation around columns.



**Accessory Boxes** 



All boxes are on the same plain. Therefore, holes should be drilled from top or bottom to accommodate data and telephone cabling.