



Accessories



Accessories  
Catalogue

Welcome to the latest Cooper B-Line Accessories Catalogue. B-Line are committed to enhancing and modifying their existing rack and cabinet systems. The accessories featured in this catalogue will enable you to enhance your cabinets usage by installing extra components which in turn will expand your cabinets usage and lifespan. All the accessories featured in this catalogue will fit our existing Access and EC Cabinet range along with all other TIA/EIA-1-D 19" compliant rack/enclosures.

## Other products from Cooper B-Line

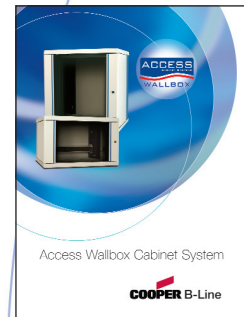
### Access Cabinet System

Access is the first cabinet designed to solve the problems of today's networking environment. Access provides unique working and cabling accessibility to totally transform cabinet installation layouts, onsite installation time and on-going system management. So what makes Access so different from conventional cabinets? The unique construction, open architecture without corner posts, enables the quick removal of all panels/doors to completely expose the open frame for installation of cables and/or equipment. Far neater, faster and user friendly cable installations are possible compared with conventional cabinets. The resultant installation is much easier to maintain with ready access to equipment and patch panels and the avoidance of messy, haphazard cabling arrangements. The Access cabinet open frame structure provides virtually 360° total accessibility, prior to fitting panels and doors, which gives installers maximum working access and the opportunity to greatly improve installation times. The elimination of corner posts also removes the need to excessively inset 19" mounting angles, achieving maximum equipment and working space.



### Access - Wallbox

This unique cabinet innovation has been specifically designed to bring unrivalled advantages to wallbox cabinets and will offer a number of benefits to ultimately reduce the total cost of ownership. So what makes the Access Wallbox so different from a conventional cabinet? The unique construction, open architecture without corner posts, enables the quick removal of all panels/doors to completely expose the open frame for installation of cables and/or equipment. Far neater, faster and user friendly cable installations are possible compared with conventional cabinets. The resultant installation is much easier to maintain with ready access to equipment and patch panels and the avoidance of messy, haphazard cabling arrangements.



### EC - Cabinet

Competitive markets require cost effective products that deliver the right solution. Cooper B-Line introduce EC, a 19" cabinet system designed to give users a practical, yet highly versatile cabinet that meets the needs of the most demanding applications. As well as including common features such as adjustable 19" mounting angles and lockable side panels, the EC range also includes interchangeable top panels (such as fan trays and brush strip cable entry panels), a ventilated glass front door for enhanced thermal management and an open base design fitted with jacking feet for trouble free installation. Furthermore, the EC design boasts excellent style and aesthetics, built to the high quality standard our customers have grown to expect over the years from Cooper B-Line.



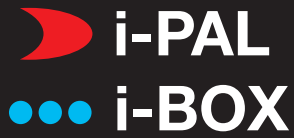
### EC - Wallbox

The new EC wall box from Cooper B-Line offers users a highly cost effective and versatile solution for wall mounted products such as cabling infrastructures, networking and telecom equipment. The wall box is supplied in the standard light grey with mid grey trims. Wall cabinet doors have a quick release two pin hinge mechanism and are supplied fully glazed with a standard lock. The door can also be easily changed from left to right-hand operation. The EC wall mounted box is also available with optional steel doors and rear panels made to order. The 19" mounting rails on the EC wall box are adjustable front to rear and in common with the freestanding cabinet the wall box has "U" ident markings for ease of equipment location. Cable entry in the EC wall box is gained through rear top and bottom slots with removable cover plates and cable management is further enhanced through suitable points for locating and securing cables. Assembly of the box is made easy with its simple bolt together construction, allowing a single operator to construct a box in just a few minutes.



Cooper B-Line also manufacture a wide range of Custom made products including IP54 cabinets and console systems to customer specific requirements.

CONTROL &  
MONITORING



POWER DISTRIBUTION

INTELLIGENT PDU'S



UPS



FIRE I-REM



KVM



LIGHTING

2 POST RACKS



RACK ACCESSORIES

CABLE MANAGEMENT

# Credit Card Payment



## Payment within the UK

All the following Credit/Debit Cards are acceptable, including:

Visa, Mastercard, Maestro, Switch, Delta and Eurocard

- Charges may apply on Credit/Debit Cards

# Next Day Delivery

Order by 4pm for next day delivery.\*

Free Delivery on orders over £250 (Cable Basket Only).

Delivery charges apply on other products, ask our Customer Services Team for details.

\*Subject to availability.



# Order Hotline



# 01278 788000

**Cooper B-Line** have a dedicated team who are available to answer any technical questions you may have.



# Cooper B-Line Online

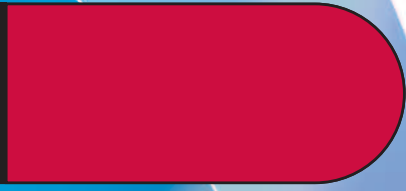
Further details and product information can be found on our websites:

- [www.cooperblines.co.uk](http://www.cooperblines.co.uk)
- [www.cooperblines.net](http://www.cooperblines.net) (Foreign Language Site)



CONTROL &  
MONITORING

 **i-PAL**  
 **i-BOX**



# Control & Monitoring



## Introduction

Today's businesses are becoming more and more reliant on their IT infrastructure to sustain a competitive edge. Businesses are therefore looking to maximise their capital investments in IT systems by striving to achieve 100% network availability.

"Human Error" remains the largest threat to network integrity. Something as simple as incorrect or unauthorised modification to cable patching can cause systems to fail resulting in lost time and lost revenues. The first line of defence is therefore the proactive control of who has access to the infrastructure and when!

Whilst building control systems have been developed to manage room access, historically cabinet level security has been managed with conventional barrel key locks. On larger sites this has required the adoption of complex and time-consuming systems to manage the authorisation of personnel and the issuing of keys. Even with these elaborate processes in place the risk from the loss of keys, not to mention the potential expense and trouble of changing locks, can make access control and expensive hidden cost.

In response to demand from our customers Cooper B-Line has developed i-PAL, an intelligent electronic proximity and control solution. Based on proven building control architecture i-PAL can deliver either simple configurable local access and control or, when integrated with i-BOX, a fully scalable local and remote access control and monitoring solution with access tracking and alarm function. In addition the adoption of i-BOX has the added benefit of fully configurable environmental monitoring solution with a range of SMART sensors complete with individually configurable threshold alarms.

## i-PAL Access Control

### Integrated Proximity Access Locking Handle

i-PAL offers a simple modular solution to cabinet access control utilising leading edge proximity card technology. Fully compatible with the Access Cabinet range i-PAL can be supplied as either a factory or retrofit option.

As a stand alone solution i-PAL can be configured in a matter of minutes to provide configurable access control;

**Step 1** Simply plug the i-PAL handle (IPALBL, IPALBK, IPALGY) into its multi regional universal power supply (IBIPPSU).

**Step 2** Then using the system administrator program card you can programme in up to 500 users cards per handle. (IPALCARD contains one system administrator programme card together with three user and user delete cards - additional user cards are available IPALACARD).

**Step 3** Add or delete user cards using the system administrator programme card as required.

i-PAL can also be designed into other bespoke applications and is compatible with a number of other cabinet products. i-PAL is designed for indoor applications although other handles offering the same functionality are available for outdoor application, please contact us for details.



### Key Features

- ✓ Proactive Control
- ✓ Local Management
- ✓ Easy Configuration
- ✓ Scalable
- ✓ Retrofit-able
- ✓ Upgradeable



IBIPPSU

+



IPALBK

+



IBOXCARD

=

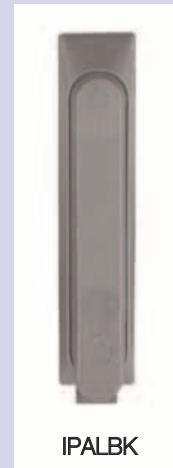
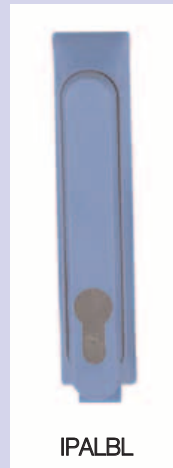
ACCESS  
CONTROL

## Technical Details

<b>Dimensions Handle assembly:</b>	30mm Wide x 20mm Deep x 154mm High
<b>Dimensions I-PAL module:</b>	34mm Wide x 36mm Deep x 85mm High
<b>Voltage:</b>	12VDC
<b>Power:</b>	0.72W
<b>Current:</b>	60ma @ 12VDC
<b>Communications Port:</b>	RS232
<b>Standalone operation:</b>	500 Card Capacity <i>When Connected to i-BOX, see i-BOX details</i>

## Component Part Codes

Order Code	Description
IPALBL	Single i-PAL Handle Blue
IPALBK	Single i-PAL Handle Black
IPALGY	Single i-PAL Handle Grey
IPALEXTL	i-PAL Handle 5 metre Extension Lead
IBIPPSU	i-BOX/i-PAL Universal Power Supply
IPALCARD	i-PAL Card set comprising of 1x program card, 3x user cards and 3x user delete cards
IPALACARD	i-PAL Additional card set comprising of 5x user cards and 5x user delete cards
	*Note lock ods/lock cam may require modification to operate correctly



# Solution

## Integration With i-BOX

By simply integrating i-PAL with i-BOX the i-PAL becomes a fully scaleable local and remote access control system with full system administrator override facility providing ultimate access control. Additional enhanced functions include;

- Integrated centralised user card management database allowing individual users cards to be added, deleted or modified in a matter of seconds. Any changes to the database trigger automatic updates to all the associated access points (handles) providing real time seamless security.
- An increased user capacity from 500 users per access points (stand alone i-PAL) to 4,000 users per access point.
- Real time transaction logging including event date/time stamp for each access point transaction or attempted transaction.
- The ability to generate detailed reports with the option to filter the data in a wide variety of ways including by an individual access points, group of access points, employee name, company / department, individual date or date range. The system also allows this data to be exported should the information need to be presented in an alternate format or need further analysis.
- The ability to define and associate up to 256 configurable user times zones. These time zones can then be associated to individual cards providing authorised access periods (i.e. 08:00 to 18:00 Monday to Friday access is granted).
- IP camera integration allowing individual access points to be associated with local cameras providing the opportunity to link video or photographic data to all logged transaction events.
- The option to link unauthorised/exceptional access transactions to SMS or e-mail alerts providing real time security alarms.

Importantly the loss of the network does not mean loss of security as the handle holds the card access data and simply uploads authorised transaction data to the i-BOX database when the network and i-BOX come back on line. Each i-BOX is configured to support the integration of up to two i-PAL handles.



### i-PAL Enhanced Features

- ✓ **Simple Key Replacement**
- ✓ **Support for 4,000 Users**
- ✓ **Transaction Logging**
- ✓ **Time Zone Configuration**
- ✓ **Plug and Play**
- ✓ **GUI Management Interface**
- ✓ **IP Camera Link**
- ✓ **Online for:-  
Real Time Alarm Reporting;  
SMS, Email, SNMP Traps**

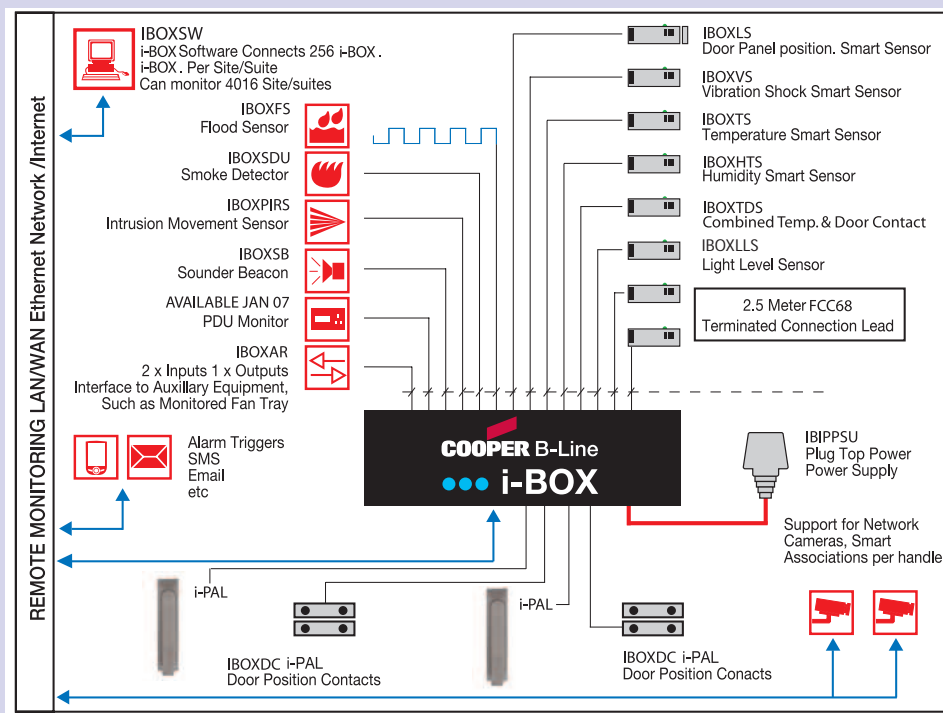
## Environmental Monitoring

As well as offering the integration of an enterprise level Access Control and Security system i-BOX has the added benefit of providing a comprehensive Environmental monitoring solution, allowing for the convergence of Facilities / IT monitoring within a single network addressable unit. Built into i-BOX as standard are four environmental sensors, these being;

- Temperature.
- Humidity.
- Light.
- Consumed voltage.

The further fourteen SMART ports on the front of the i-BOX allow a whole range of optional plug and play sensors to be connected, details of these sensors are shown on the preceding pages. In each case the individual sensor provides;

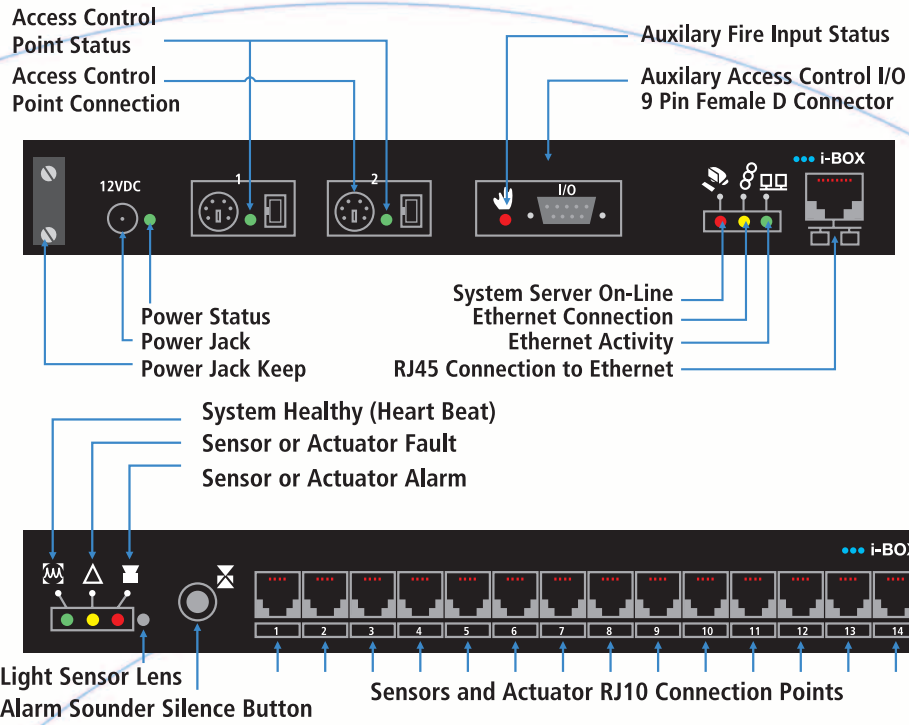
- Individual sensors can be linked up to 15m away from the i-BOX using the sensor extension cables (IBOXSEC).
- The ability to set individual sensor level threshold limits with pre alarm and full alarm functionality triggering alarm outputs via inbuilt SNMP (Small Network Management Protocol) agents including V2c.
- In most cases sensors have the function to provide Low , Pre, and High threshold alarms with the added function of being able to set Quick Change alarms identifying potential problems when they first occur.
- Threshold alarms can be set to be temporarily disabled in instances when the cabinet door or side panels are opened altering the microenvironment within the cabinet.
- The facility to link alarm functions with external "calls to action" including SMS and e-mail alerts, essential for lights out or unmanned facilities.
- Configurable sensor level identification enabling quick and easy identification of the item in alarm.
- Full plug and play functionality providing easy intuitive configuration.
- Built in network and sensor test wizards to ensure optimum system operation.



Other features of the system include;

- Support for up to 65,000 users per network system.
- The ability to manage up to 256 i-BOX units using one network PC providing the ability to control, monitor and manage up to;
- 512 x i-PAL access points.
- 1,024 x Integrated temperature, humidity, light and consumed voltage sensors.
- 3,584 x Additional fully configurable sensors.
- Native Ethernet TCP/IP, UDP 10Mb communications.
- Local and Wide Area Network (LAN / WAN) support.
- CCTV integration connecting up to two cameras to one i-BOX.
- Simple integration to either cabinet level or room level fire alarm systems.
- ActiveX Software Development Kit (SDK) for full integration to third party applications.
- Card management and configuration facility with the ability to generate user cards including photo ID.
- Multi language support.







## i-BOX Part Code And Technical Specification


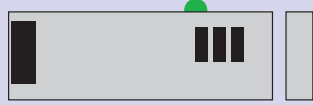

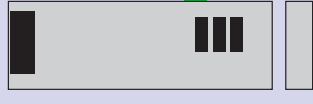


Order Code	Description
IBOX	<p>The i-BOX unit is an ethernet controller that plugs directly into the IP network.</p> <ul style="list-style-type: none"> <li>The unit is powered by a single IBIPPSU.</li> <li>The IBOX has a single temperature, humidity, light level and incoming voltage sensor built into the unit. <ul style="list-style-type: none"> <li>Voltage Sensor: Incoming voltage sensor, sampling 10Bit</li> <li>Humidity 0-100%, 0.5% Resolution, 3% Accuracy,</li> <li>Temperature Range -25°C to 123.8°C, Accuracy .04°C @ 25°C to 40°C</li> <li>Aspirating Fan: 5.2 cfm</li> <li>Light Level Sensor: 0 to 200 Lux</li> </ul> </li> </ul> <p><b>Controller and sensor connections</b></p> <ul style="list-style-type: none"> <li>2 x IPAL Cabinet Handle, or Standard Access Control Doors via 6 way Mini Din Plug</li> <li>2 x IBOXDC, Door Position Sensor, MiniDin through connector</li> <li>An additional 14 external devices and sensors can be plugged into the i-BOX via 4 way FCC68 connectors</li> <li>1 x 9 way D Type for addition set firmware I/O, default fire interface plus 9 x Status LED's</li> </ul> <p><b>Unit Size And Operating Environment</b></p> <ul style="list-style-type: none"> <li>Dimensions 212mm wide x 95mm deep x 29mm high</li> <li>Universal Fixing Bracket 25 x 25mm</li> <li>Voltage: 12VDC (48VDC option)</li> <li>Current: 210ma @ 12VDC</li> <li>Steel Enclosure: Finish Powder Coated Grey TEX36</li> <li>Operating Environment -25°C to 85°C</li> <li>Power: 2.52 Watts</li> </ul> <p><b>Communication Protocols</b></p> <ul style="list-style-type: none"> <li>Communications Port: RJ45 Ethernet</li> <li>Card Holder: 4,000 capacity local storage expandable to 32,000</li> <li>Standard Memory: 5,000 transaction local storage expandable to 32,000</li> <li>Protocol: TCP/IP, UDP and ARP</li> <li>Supporting: LAN/WAN &amp; VPN</li> </ul>

## i-BOX USER CARDS






Order Code	Description
IBOXCARD	<p><b>i-BOX User Cards</b></p> <ul style="list-style-type: none"> <li>Pack of 10 Programmable User Cards</li> </ul> 
IBOXFOB	<p><b>i-BOX User Fobs</b></p> <ul style="list-style-type: none"> <li>Pack of 10 Programmable User Fobs</li> </ul> 
IBOXAPL	<p><b>i-BOX User Self Adhesive Labels</b></p> <ul style="list-style-type: none"> <li>Pack of 10 Programmable Self Adhesive Labels</li> </ul>



## Optional i-BOX Sensors

Order Code	Description	
IBOXTS	<p><b>SMART Temperature Sensor</b></p> <ul style="list-style-type: none"> <li>With 2.5 metre terminated lead with 4 way FCC68 jack.</li> <li>Set high low temperature freshhold alarm and ambient temp on demand. Associate Door Contact for door left open alarm etc</li> <li>Door Contact Read range 15mm from side 10mm from Front</li> <li>1 x Status LED</li> <li>Temperature: -10 to 75c Accuracy 4%</li> <li>Dimensions: 20mm high x 60mm long x 20mm wide</li> <li>Powered by i-BOX</li> <li>Power: 15ma</li> </ul>	
IBOXDC	<p><b>Door Position Contacts</b></p> <ul style="list-style-type: none"> <li>With 2.5 metre terminated lead with mini din through jack. For associated IBOX only. Read range 15mm from side 10mm from Front</li> <li>1 x Status LED</li> <li>Dimensions: 20mm high x 60mm long x 20mm wide</li> <li>Powered by i-BOX</li> <li>Power: 8ma</li> </ul>	
IBOXLCS	<p><b>SMART Location Contacts</b></p> <ul style="list-style-type: none"> <li>With 2.5 metre terminated lead with 4 way FCC68 jack. For Side Panel open/closed, and equipment location monitoring.</li> <li>Read range 15mm from side 10mm from Front</li> <li>1 x Status LED</li> <li>Dimensions: 20mm high x 60mm long x 20mm wide</li> <li>Powered by i-BOX</li> <li>Power: 12ma</li> </ul>	
IBOXTDS	<p><b>Combined Temperature And Contact Sensor</b></p> <ul style="list-style-type: none"> <li>With 2.5 metre terminated lead with 4 way FCC68 jack.</li> <li>Set high low temperature freshhold alarm and ambient temp on demand</li> <li>1 x Status LED</li> <li>Temperature: -10°C to 75°C Accuracy 4%</li> <li>Dimensions: 20mm high x 60mm long x 20mm wide</li> <li>Powered by i-BOX</li> <li>Power: 12ma</li> </ul>	
IBOXHTS	<p><b>SMART Temperature And Humidity Sensor</b></p> <ul style="list-style-type: none"> <li>With 2.5 metre terminated lead with 4 way FCC68 jack.</li> <li>Set high low temperature freshhold alarm and ambient temp on demand</li> <li>1 x Status LED</li> <li>Humidity 0-100%, 0.5% Resolution, 3% Accuracy</li> <li>Temperature: -25°C to 123.8°C Resolution 0.04°C @ 25 to 40°C</li> <li>Powered from i-BOX</li> <li>Power: 16ma</li> </ul>	
IBOXLS	<p><b>Smart Light Level Sensor</b></p> <ul style="list-style-type: none"> <li>With 2.5 metre terminated lead with 4 way FCC68 jack. Designed for darkened environments, high level light and colour responsive sensors available on request.</li> <li>1 x Status LED</li> <li>Light Level Response: 0 To 200 Lux</li> <li>Dimensions: 20mm high x 60mm long x 20mm wide</li> <li>Powered from i-BOX</li> <li>Power: 15ma</li> </ul>	

## Optional i-BOX Sensors (continued...)

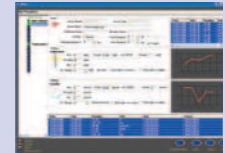
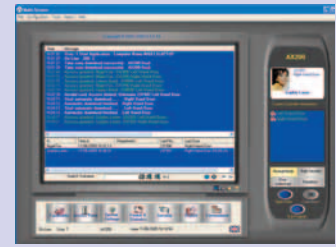
Order Code	Description	
IBOXVS	<p><b>Smart Intrusion Vibration Vandalism Sensor</b></p> <ul style="list-style-type: none"> <li>With 2.5 metre terminated lead with 4 way FCC68 jack.</li> <li>1 x Status LED</li> <li>Vibration freshold from 0-100 SPM</li> <li>Dimensions: 20mm high x 60mm long x 20mm wide</li> <li>Powered from i-BOX</li> <li>Power: 12ma</li> </ul>	
IBOXAR	<p><b>Auxiliary Relay and 2 x Digital Inputs</b></p> <ul style="list-style-type: none"> <li>With 2.5 metre terminated lead with 4 way FCC68 jack.</li> <li>1 x Status LED</li> <li>Face Plate single gang electrical box size: 85mm square 13mm deep</li> <li>Back Box: 110mm high x 86mm wide x 28mm deep</li> <li>Relay rated: 48VDC @ 5amp</li> <li>Digital Inputs: Normally open or closed voltage free contacts</li> <li>Powered by i-BOX</li> <li>Power: 28ma quiescent 52ma alarm</li> </ul>	
IBOXFS	<p><b>SMART Flood Sensor</b></p> <ul style="list-style-type: none"> <li>With 2.5 metre terminated lead with 4 way.</li> <li>FCC68 jack, 5 Meters Flood cable, supplied with 15 Fixing clips.</li> <li>2 x quick blow fuses for electrical safety</li> <li>Flood scale 40-170 using sensitive wicking cable</li> <li>1 x Status LED</li> <li>Face Plate single gang electrical box size: 85mm square 13mm deep</li> <li>Back Box: 110mm high x 86mm wide x 28mm deep</li> <li>Voltage: 12v</li> <li>Power: 50ma</li> </ul>	
IIBOXPIRS	<p><b>Intrusion 360 Passive Infra Red Movement Sensor</b></p> <ul style="list-style-type: none"> <li>With 2.5 metre terminated lead with 4 way FCC68 jack</li> <li>1 x Status LED, Multizone PIR</li> <li>Area covered 7M x 6M @ a mounting height of 2.5M</li> <li>Dimensions: 26mm high x 60mm long x 20mm Wide</li> <li>Powered by i-BOX</li> <li>Power: 15ma</li> </ul>	
IBOXSB	<p><b>Sounder Beacon Unit</b></p> <ul style="list-style-type: none"> <li>With 2.5 metre terminated lead with 4 way FCC68 jack.</li> <li>4 x Red Flashing High Intensity Minature bulbs flash at frequency of approximately 3Hz</li> <li>Sound Output: 100dB @ 1M</li> <li>Alarm Frequency 3.5-4.5KHz</li> <li>Dimensions: 45mm deep x 122mm long x 73mm wide</li> <li>Voltage: Powered By i-Box</li> <li>Power: 200ma</li> </ul>	
IBOXSDU	<p><b>i-Box Smoke Detector Unit</b></p> <ul style="list-style-type: none"> <li>With 2.5 metre terminated lead with 4 way FCC68 jack.</li> <li>Combined optical smoke detector with rate of rise and fixed temperature heat</li> <li>1 x Status LED</li> <li>Temperature: -10°C to 75°C Accuracy 4%</li> <li>Smoke response to EN54 Part 7 Heat Response 60°C</li> <li>Dimensions: 105mm diameter x 60mm deep</li> <li>Powered by i-BOX</li> <li>Power: 15ma quiescent 30ma in alarm</li> </ul>	
IBOXSEC	<p><b>2.5m Sensor Extension Cable Terminated Lead</b></p> <ul style="list-style-type: none"> <li>With 4 way FCC68 with jack and socket</li> </ul>	
IBOXSBK	<p><b>Sensor Mounting Bracket</b></p> <ul style="list-style-type: none"> <li>Single bracket supplied complete with fixings</li> </ul>	

## Sensors (continued...)

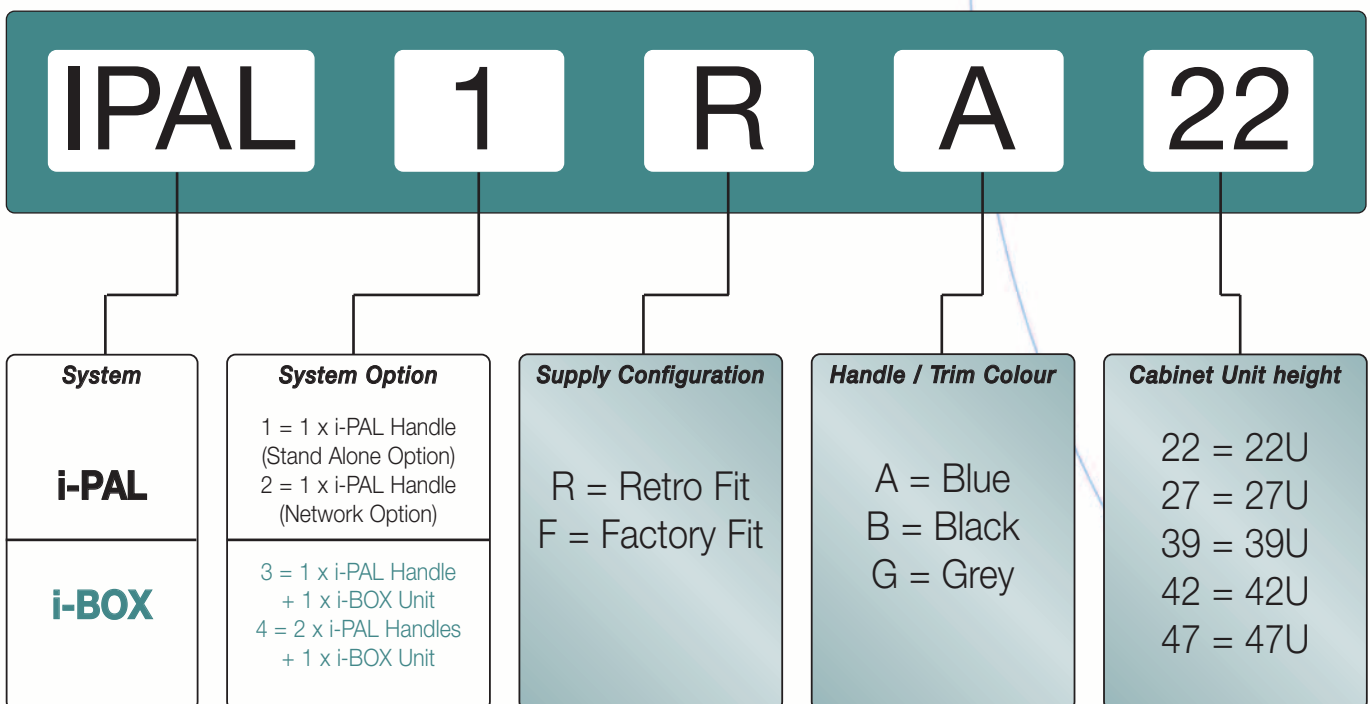
Order Code	Description
IBOXMFTL	<p><b>Monitored Fan Tray Lead</b></p> <ul style="list-style-type: none"> <li>2.5 metre terminated lead with 4 way FCC68 jack, connection with 2 x Molynx 3 pin connectors on flying lead for connection to fan tray.</li> <li>1 x Status LED</li> <li>Dimensions: 20mm high x 60mm long x 20mm wide</li> <li>Digital Inputs: Normally open or closed dry contacts</li> <li>Powered by i-BOX</li> <li>Power: 12ma</li> </ul>

## i-BOX User Interface

Order Code	Description
IBOXSW	<p><b>i-BOX Software</b></p> <ul style="list-style-type: none"> <li>Manages 65,000 card holder and access level group with 256 time zones per system</li> <li>Built in alarm reporting, Photo ID, Who's in/out, Configuration/User wizards for true Plug and Play operation</li> <li>CCTV Network Camera Support per Door</li> <li>Software using SQL Standard Query Language</li> <li>Protocol: TCP/IP, UDP and ARP</li> <li>Alarm Handling: SMS, Email &amp; SNMP Traps version 2.1c</li> <li>SDK option for Integration to 3rd Party Applications, with support for up to 4016 systems</li> <li>Minimum PC specification, Pentium Processor, 64Mb RAM, 64Mb Video Memory for 800 x 600 resolution, 200Mb of free harddisk space 100 BaseT ethernet connection, Mouse, Keyboard</li> <li>Designed for Microsoft® Windows XP™</li> </ul>



## Access Cabinet i-PAL & i-BOX Options



## Access Cabinet - i-PAL Programmable Electronic Locking System

Each kit comprises of the following supplied boxed and labelled;

- 1 x Colour Specific i-PAL Handle.
- 1 x Bottom Locking Rod (Unit Height Specific).
- 1 x Electronic Lock Rod Extension.
- 1 x Rod Coupling.
- 1 x Cable Duct (Universal Width - Trim To Size).
- 1 x Universal Power Supply.
- 10 x Self Adhesive cable clips.
- 1 x Programme Card
- 2 x User Cards
- 2 x User Delete Cards
- 1 x Set of fitting instructions.
- 1 x Glazed Door Top Trim Strip - Colour Specific (Trim To Size If Required).

Customer Retro Fit Kit.		Factory Fitted	
Order Code	Description	Order Code	Description
IPAL 1 R A 22	Blue	IPAL 1 F A 22	Blue
IPAL 1 R A 27	Blue	IPAL 1 F A 27	Blue
IPAL 1 R A 32	Blue	IPAL 1 F A 32	Blue
IPAL 1 R A 39	Blue	IPAL 1 F A 39	Blue
IPAL 1 R A 42	Blue	IPAL 1 F A 42	Blue
IPAL 1 R A 47	Blue	IPAL 1 F A 47	Blue
IPAL 1 R B 22	Black	IPAL 1 F B 22	Black
IPAL 1 R B 27	Black	IPAL 1 F B 27	Black
IPAL 1 R B 32	Black	IPAL 1 F B 32	Black
IPAL 1 R B 39	Black	IPAL 1 F B 39	Black
IPAL 1 R B 42	Black	IPAL 1 F B 42	Black
IPAL 1 R B 47	Black	IPAL 1 F B 47	Black
IPAL 1 R G 22	Grey	IPAL 1 F G 22	Grey
IPAL 1 R G 27	Grey	IPAL 1 F G 27	Grey
IPAL 1 R G 32	Grey	IPAL 1 F G 32	Grey
IPAL 1 R G 39	Grey	IPAL 1 F G 39	Grey
IPAL 1 R G 42	Grey	IPAL 1 F G 42	Grey
IPAL 1 R G 47	Grey	IPAL 1 F G 47	Grey

## Access Cabinet - i-PAL Programmable Electronic Locking System

Each kit comprises of the following supplied boxed and labelled;

- 1 x Colour Specific i-PAL Handle.
  - 1 x Bottom Locking Rod (Unit Height Specific).
  - 1 x Electronic Lock Rod Extension.
  - 1 x Rod Coupling.
  - 10 x Self Adhesive cable clips.
  - 1 x Glazed Door Top Trim Strip - Colour Specific (Trim To Size If Required).
  - No Power Supply Unit
  - 1 x Cable Duct (Universal Width - Trim To Size).
- This option would be used where the handle will be plugged into an existing i-BOX installation

Order Code	Description	Order Code	Description
IPAL 2 R A 22	Blue	IPAL 2 F A 22	Blue
IPAL 2 R A 27	Blue	IPAL 2 F A 27	Blue
IPAL 2 R A 32	Blue	IPAL 2 F A 32	Blue
IPAL 2 R A 39	Blue	IPAL 2 F A 39	Blue
IPAL 2 R A 42	Blue	IPAL 2 F A 42	Blue
IPAL 2 R A 47	Blue	IPAL 2 F A 47	Blue
IPAL 2 R B 22	Black	IPAL 2 F B 22	Black
IPAL 2 R B 27	Black	IPAL 2 F B 27	Black
IPAL 2 R B 32	Black	IPAL 2 F B 32	Black
IPAL 2 R B 39	Black	IPAL 2 F B 39	Black
IPAL 2 R B 42	Black	IPAL 2 F B 42	Black
IPAL 2 R B 47	Black	IPAL 2 F B 47	Black
IPAL 2 R G 22	Grey	IPAL 2 F G 22	Grey
IPAL 2 R G 27	Grey	IPAL 2 F G 27	Grey
IPAL 2 R G 32	Grey	IPAL 2 F G 32	Grey
IPAL 2 R G 39	Grey	IPAL 2 F G 39	Grey
IPAL 2 R G 42	Grey	IPAL 2 F G 42	Grey
IPAL 2 R G 47	Grey	IPAL 2 F G 47	Grey

## Access Cabinet - i-BOX Control & Monitoring System

Each kit comprises of the following supplied boxed and labelled;

- 2 x Colour Specific i-BOX Handles.
- 2 x Bottom Locking Rods (Unit Height Specific).
- 2 x Electronic Lock Rod Extensions.
- 2 x Rod Couplings.
- 2 x Cable Ducts (Universal Width - Trim To Size).
- 1 x Universal Power Supply.
- 20 x Self Adhesive cable clips.
- 10 x User Cards
- 1 x i-BOX Unit.
- 1 x AX Series User Interface Software
- 1 x Set of instructions.
- 2 x Glazed Door Top Trim Strip - Colour Specific (Trim To Size If Required).

Customer Retro Fit Kit.		Factory Fitted Upgrade	
Order Code	Description	Order Code	Description
IBOX 4 R A 22	Blue	IBOX 4 F A 22	Blue
IBOX 4 R A 27	Blue	IBOX 4 F A 27	Blue
IBOX 4 R A 32	Blue	IBOX 4 F A 32	Blue
IBOX 4 R A 39	Blue	IBOX 4 F A 39	Blue
IBOX 4 R A 42	Blue	IBOX 4 F A 42	Blue
IBOX 4 R A 47	Blue	IBOX 4 F A 47	Blue
IBOX 4 R B 22	Black	IBOX 4 F B 22	Black
IBOX 4 R B 27	Black	IBOX 4 F B 27	Black
IBOX 4 R B 32	Black	IBOX 4 F B 32	Black
IBOX 4 R B 39	Black	IBOX 4 F B 39	Black
IBOX 4 R B 42	Black	IBOX 4 F B 42	Black
IBOX 4 R B 47	Black	IBOX 4 F B 47	Black
IBOX 4 R G 22	Grey	IBOX 4 F G 22	Grey
IBOX 4 R G 27	Grey	IBOX 4 F G 27	Grey
IBOX 4 R G 32	Grey	IBOX 4 F G 32	Grey
IBOX 4 R G 39	Grey	IBOX 4 F G 39	Grey
IBOX 4 R G 42	Grey	IBOX 4 F G 42	Grey
IBOX 4 R G 47	Grey	IBOX 4 F G 47	Grey

## Access Cabinet - i-BOX Control & Monitoring System

Each kit comprises of the following supplied boxed and labelled;

- 1 x Colour Specific i-BOX Handle.
- 1 x Bottom Locking Rod (Unit Height Specific).
- 1 x Electronic Lock Rod Extension.
- 1 x Rod Coupling.
- 1 x Cable Duct (Universal Width - Trim To Size).
- 1 x Universal Power Supply.
- 10 x Self Adhesive cable clips.
- 5 x User Cards
- 1 x i-BOX Unit.
- 1 x AX Series User Interface Software
- 1 x Set of instructions.
- 1 x Glazed Door Top Trim Strip - Colour Specific (Trim To Size If Required).

Order Code	Description	Order Code	Description
IBOX 3 R A 22	Blue	IBOX 3 F A 22	Blue
IBOX 3 R A 27	Blue	IBOX 3 F A 27	Blue
IBOX 3 R A 32	Blue	IBOX 3 F A 32	Blue
IBOX 3 R A 39	Blue	IBOX 3 F A 39	Blue
IBOX 3 R A 42	Blue	IBOX 3 F A 42	Blue
IBOX 3 R A 47	Blue	IBOX 3 F A 47	Blue
IBOX 3 R B 22	Black	IBOX 3 F B 22	Black
IBOX 3 R B 27	Black	IBOX 3 F B 27	Black
IBOX 3 R B 32	Black	IBOX 3 F B 32	Black
IBOX 3 R B 39	Black	IBOX 3 F B 39	Black
IBOX 3 R B 42	Black	IBOX 3 F B 42	Black
IBOX 3 R B 47	Black	IBOX 3 F B 47	Black
IBOX 3 R G 22	Grey	IBOX 3 F G 22	Grey
IBOX 3 R G 27	Grey	IBOX 3 F G 27	Grey
IBOX 3 R G 32	Grey	IBOX 3 F G 32	Grey
IBOX 3 R G 39	Grey	IBOX 3 F G 39	Grey
IBOX 3 R G 42	Grey	IBOX 3 F G 42	Grey
IBOX 3 R G 47	Grey	IBOX 3 F G 47	Grey

### i-BOX Shelving

Order Code

Description

IBOXSHLF

i-BOX 19-Inch Front Mounted Sliding Shelf

- 1U high x 315mm deep sliding cantilever shelf finished in Black RAL 9005. Designed to house a single i-BOX the shelf has integrated cable management to ensure connections remain stress free during operation and maintenance.
- The shelf assembly is rated at 15kg load capacity.





Welcome to  
**ACCESS**  
the ultimate Networking,  
Data and Telecoms Cabinet.



This unique cabinet innovation has been specifically designed to bring unrivalled advantages to Free Standing Cabinets and will offer a number of benefits to ultimately reduce the total cost of ownership.

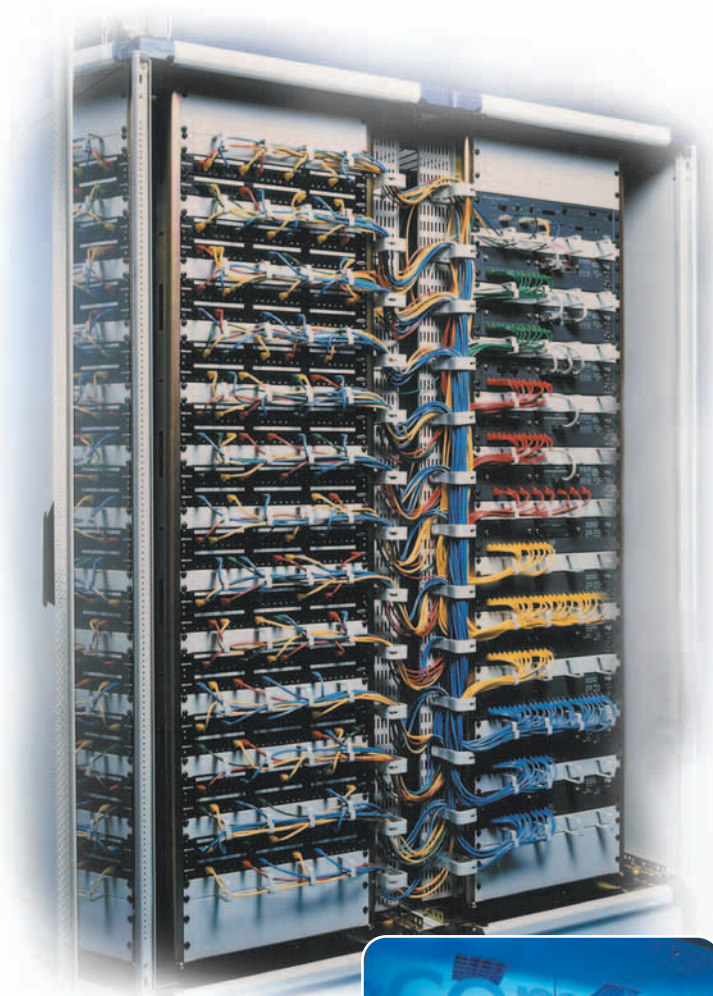


- Totally open construction
  - no corner posts
  - unrivalled working access
  - excellent cabling facilities
  - unrestricted top/base cable entry
- Network installations are made easy
- Stylish appearance blends elegance with functionality

**ACCESS** is the first cabinet designed to solve the problems of today's networking environment.

**ACCESS** provides unique working and cabling accessibility to totally transform cabinet installation layouts, on-site installation time and on-going system management.

- *Totally open construction for ease of cross-patching.*
- *Reduced installation time.*
- *Network installations made easy.*
- *Maximum useable space.*
- *Emphasis on security.*
- *Stylish appearance.*
- *Flexible panel configurations.*
- *Enhanced thermal management.*







POWER DISTRIBUTION



**5 way horizontal**



**7 way horizontal**



**PDU surge**



**PDU switch**

## Standard Horizontal Power Management

Horizontal Mounting PDU's are fitted either to the front, rear or both 19" mounting rails

### Benefits

- Suitable for horizontal applications
- Robust all aluminium housing
- Unit overall rating 13A, 250V
- 3 metre input lead terminated with a BS1363 plug fused at 13A
- 2U of rack space is required for horizontal units when fitted to the front 19" mountings
- Integral 19" mounting brackets
- Shrouded switch

Description	Order Code
4 Way BS1363 Horizontal Mounting PDU - Switched 13 AMP	PSH04DC21SN3DB
5 Way BS1363 Horizontal Mounting PDU - Switched 13 AMP	PSH05DC21SN3DB
6 Way BS1363 Horizontal Mounting PDU - Switched 13 AMP	PSH06DC21SN3DB
4 Way BS1363 Horizontal Mounting PDU with sockets at 45 degrees - Switched 13 AMP	PSH04DR21SN3DB
5 Way BS1363 Horizontal Mounting PDU with sockets at 45 degrees - Switched 13 AMP	PSH05DR21SN3DB
4 Way BS1363 Horizontal Mounting PDU - Switched 13 AMP with 10KA surge protector	PSH04DC21SF3DB
5 Way BS1363 Horizontal Mounting PDU - Switched 13 AMP with 10KA surge protector	PSH05DC21SF3DB
6 Way BS1363 Horizontal Mounting PDU - Switched 13 AMP with 10KA surge protector	PSH06DC21SF3DB
4 Way IEC320 Horizontal Mounting PDU - Non switched 13 AMP	PSH04IC21NN3DB
6 Way IEC320 Horizontal Mounting PDU - Non switched 13 AMP	PSH06IC21NN3DB
8 Way IEC320 Horizontal Mounting PDU - Non switched 13 AMP	PSH08IC21NN3DB

- Please note that the standard PDU's above have a switched input with a cable length of 3m.
- If you have any PDU requirements in addition to the ones shown above, please contact our Customer Services team who will be happy to arrange a quotation.

## Standard Vertical Power Management

Suitable for vertical mounting either direct to the 19" mounting angles or to vertical cable tray

### Benefits

- Robust all aluminium housing
- Unit overall rating 13A, 250V
- 3 metre input lead terminated with a BS1363 plug fused at 13A
- Shrouded switch

Description	Order Code
6 Way BS1363 Vertical Mounting PDU with socket at 45 degrees - Switched 13 AMP	PSV06DR21SN3DB
8 Way BS1363 Vertical Mounting PDU with socket at 45 degrees - Switched 13 AMP	PSV08DR21SN3DB
10 Way BS1363 Vertical Mounting PDU with socket at 45 degrees - Switched 13 AMP	PSV10DR21SN3DB
12 Way BS1363 Vertical Mounting PDU with socket at 45 degrees - Switched 13 AMP	PSV12DR21SN3DB
8 Way BS1363 Vertical Mounting PDU with sockets at 45 degrees - Switched 13 AMP with 10KA surge protector	PSV08DR21SF3DB
10 Way BS1363 Vertical Mounting PDU with sockets at 45 degrees - Switched 13 AMP with 10KA surge protector	PSV10DR21SF3DB



**13 amp switched 10 way**



**13 amp switched 10 way with surge protection**



**13 amp 10 way IEC sockets**

## Standard Vertical Power Management (continued...)

Description	Order Code
12 Way BS1363 Vertical Mounting PDU with sockets at 45 degrees - Switched 13 AMP with 10KA surge protector	PSV12DR21SF3DB
10 Way IEC320 Vertical Mounting PDU - Non switched 13 AMP	PSV10IC21SN3DB
12 Way IEC320 Vertical Mounting PDU - Non switched 13 AMP	PSV12IC21SN3DB
12 Way IEC320 Vertical Mounting PDU - Non switched 13 AMP	PSV20IC21SN3DB

- Please note that the standard PDU's above have a switched input with a cable length of 3m.
- If you have any PDU requirements in addition to the ones shown above, please contact our Customer Services team who will be happy to arrange a quotation.



**13 amp 10 way IEC sockets with surge protection**



**32 amp switched 10 way 45° sockets**

## Configured Power Management Options

A selection of commonly configured PDUs

- Vertical & Horizontal Options
- Switched versions provided with hinged switch cover to prevent accidental switching

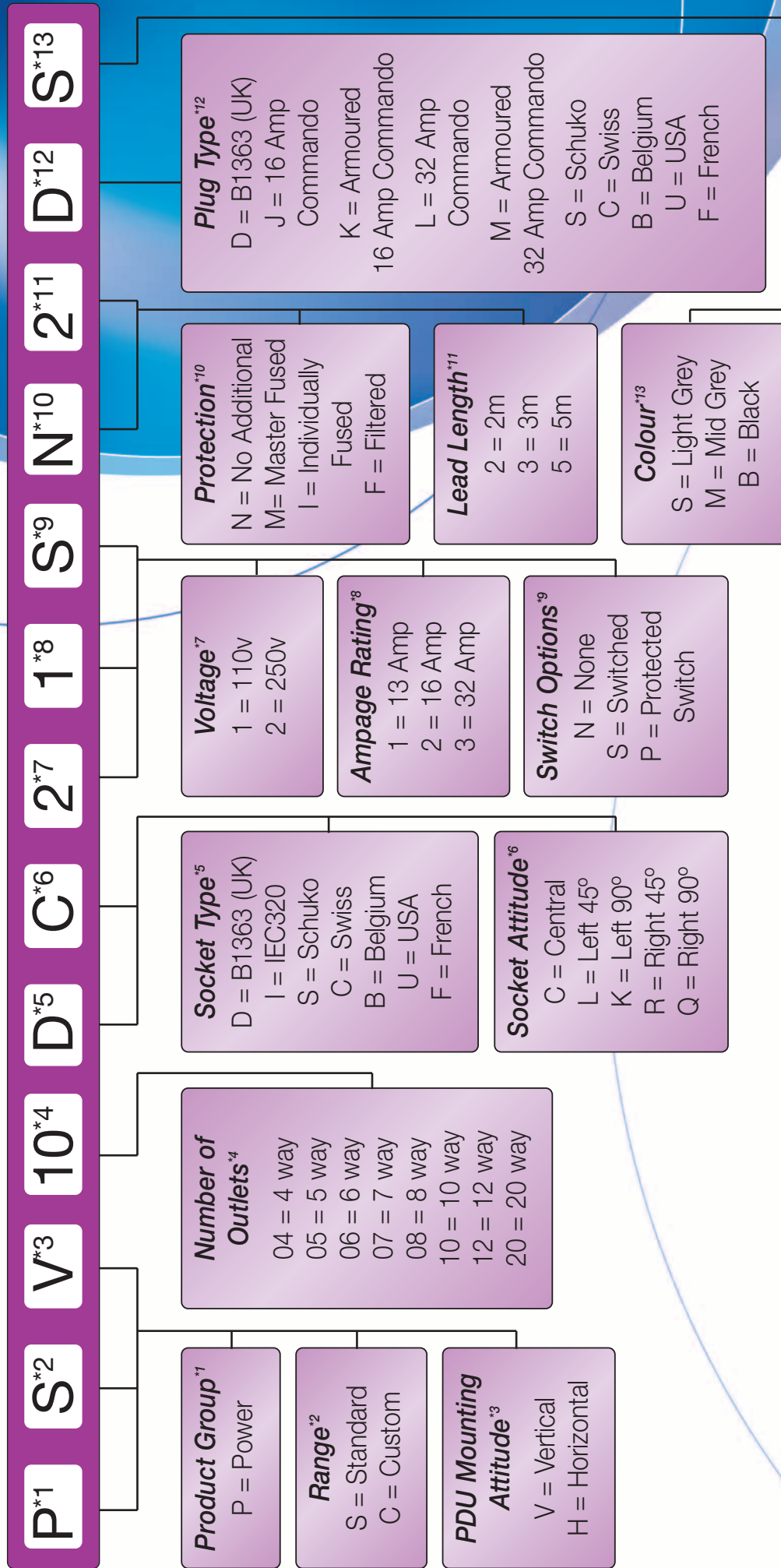


Description	Order Code
PDU Horizontal Mounting UK 4-Way 13 AMP 1U High - Switched	PCH04DC21SN3DM
PDU Horizontal Mounting UK 5-Way 13 AMP 1U High - Switched	PCH05DC21SN3DM
PDU Horizontal Mounting UK 6-Way 13 AMP 1U High - Switched	PCH06DC21SN3DM
PDU Vertical Mounting UK 4-Way 13 AMP - Switched	PCV04DC21SN3DM
PDU Vertical Mounting UK 5-Way 13 AMP - Switched	PCV05DC21SN3DM
PDU Vertical Mounting UK 6-Way 13 AMP - Switched	PCV06DC21SN3DM
PDU Vertical Mounting UK 8-Way 13 AMP - Switched	PCV08DC21SN3DM
PDU Vertical Mounting UK 10-Way 13 AMP - Switched	PCV10DC21SN3DM
PDU Vertical Mounting UK 12-Way 13 AMP - Switched	PCV12DC21SN3DM
PDU Horizontal Mounting EU 4-Way Schuko - Switched	PCH04SC21SN3SM
PDU Horizontal Mounting EU 5-Way Schuko - Switched	PCH05SC21SN3SM
PDU Horizontal Mounting EU 6-Way Schuko - Switched	PCH06SC21SN3SM
PDU Vertical Mounting EU 4-Way Schuko - Switched	PCV04SC21SN3SM
PDU Vertical Mounting EU 5-Way Schuko - Switched	PCV05SC21SN3SM
PDU Vertical Mounting EU 6-Way Schuko - Switched	PCV06SC21SN3SM
PDU Vertical Mounting EU 8-Way Schuko - Switched	PCV08SC21SN3SM
PDU Vertical Mounting EU 10-Way Schuko - Switched	PCV10SC21SN3SM
PDU Vertical Mounting EU 12-Way Schuko - Switched	PCV12SC21SN3SM
PDU Vertical Mounting 8-Way IEC - Switched	PCV08IC21SN3DM
PDU Vertical Mounting 10-Way IEC - Switched	PCV10IC21SN3DM
PDU Vertical Mounting 12-Way IEC - Switched	PCV12IC21SN3DM
PDU Horizontal Mounting 6-Way IEC - Switched	PCH06IC21SN3DM
PDU Horizontal Mounting 8-Way IEC - Switched	PCH08IC21SN3DM
PDU Horizontal Mounting 10-Way IEC - Switched	PCH10IC21SN3DM

- If you have any PDU requirements in addition to the ones shown above, please contact our Customer Services team who will be happy to arrange a quotation.

## Vertical Power Management Mounting

Description	Order Code
Standard PDU Mounting Bracket Kit	PDUMTGBRKT



INTELLIGENT PDU'S



**i-PAD**



# i-PAD

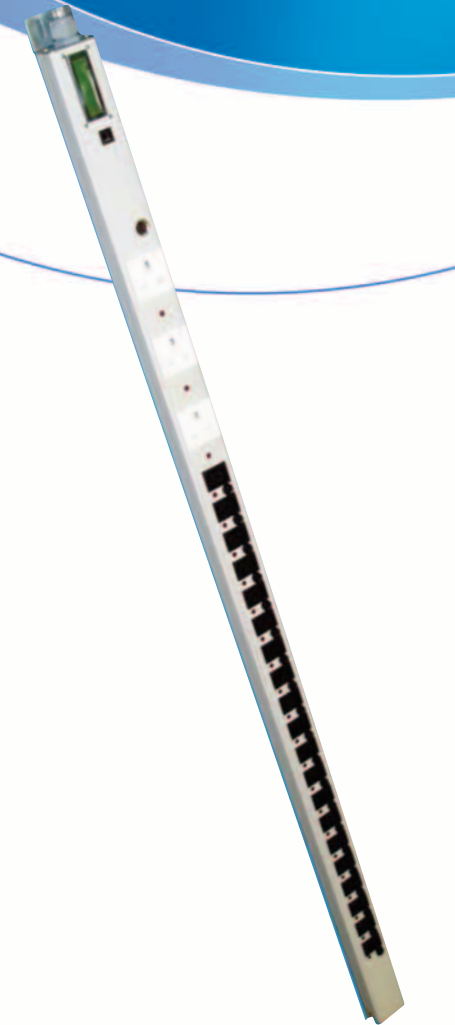
## Intelligent Power Distribution



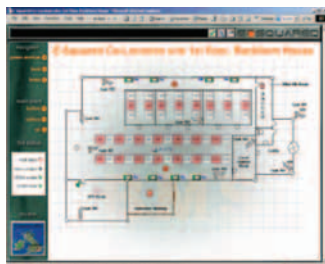
### Remote Power, Environmental Monitoring and Management

The demand for control and the environment to mission critical equipment, is increasingly becoming an issue for operations and facilities management. Identification of potential of problems, pro-active preventative action, reduced maintenance / inspection costs and report / audit tracking, is necessary to guarantee "zero" equipment downtime, customer service level maximisation and increased operational profits.

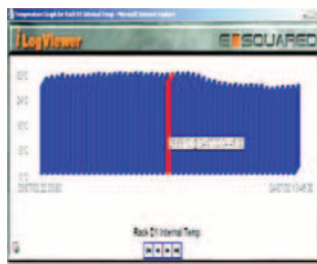
- i-PAD has been specifically designed to monitor, measure, manage, collect, analyse and act on information, necessary to meet today's demanding power and environmental requirements.
- i-PAD Remote power management and site monitoring products, utilise the latest software and hardware technologies, to provide tailored solutions for customer specific requirements. We work in partnership with our customers to provide fully integrated solutions designed for small single installations, to large multi-international installations. By working with our customers and listening to their needs, the i-PAD product range offers the most cost effective, flexible, reliable and easy to use power and environmental monitoring and management solution in today's market place.
- i-PAD can be fully integrated into existing building / facilities management systems or installed as a standalone system to remotely manage and monitor mission critical equipment.
- i-PAD Hardware monitors and manages.
  - DC voltage current and switching
  - True RMS voltage, current load, kWhr and switching
  - Individual socket outlets power on/off and sequential power up / shut down
  - Plug and socket outlets to suit any application
  - New build and retrofit design, with legacy options
  - Overvoltage and current protection options
  - Temperature monitoring
  - Door entry and other facility options
- i-PAD Data communications can.
  - Down load to a PC via a RS485 port
  - Network multiple units via MODBUS devices to PC's or via the Ethernet
  - Use existing LAN's and Building Management Systems can be utilised
  - Connect remotely, via a modem to the Internet
- i-PAD Software Platform offers.
  - Flexible, multi-user access
  - Windows NT and Windows 2000 Platforms
  - Drag and drop display pages, tables, graphs and charts
  - Alarm flags and event information, live and historical
  - Connection and Integration to other 3rd party devices
  - Fully "open structure" allowing full integration



**i-PAD E-PDU**



**Layouts**



**Graphical Views**

**Clear Data**



# Intelligent Power Distribution

## i-PAD Remote Power A/C Distribution Link Box

The modular i-PAD Link Box series provides the ability to bring intelligence to dumb power distribution units (PDUs). By simply connecting the Link Box in series between the cabinet power supply and the dumb PDU the Link Box provides the platform for local as well as remote monitoring and power management. The on board electronics and local LCD display provide real time readings for voltage, ampage and kWh. Connecting the Link Box to the network then allows the added features of remote monitoring and collection of data as well as a remote PDU reset function. Available in horizontal 19-inch mounting format each unit takes up 2U of rack space and can be supplied to offer either single feed or dual feed monitoring. The i-PAD Link Box also has the option to provide door contact or temperature monitoring as an added benefit.

- Full featured management via web browser/Ethernet/BMS/interface
- Set alarm thresholds, provide management, billing and audit reports
- Scalable
- New build and retrofit applications
- RS485/RS232 connectivity
- Multiple user support
- Simple to install
- Modular
- Single or multi-site applications
- Economical, cost effective
- Easy to use
- CE approved

### Options

- Remote current
- Voltage and kWhr monitoring
- Range of UK and International plug outlets
- Up to 32A load rating
- Remote reboot and switching of AC power
- Remote temperature monitoring
- Remote cabinet door monitoring
- 19", ETSI vertical and horizontal mount

### Specifications

Connectivity: EIA RS232 or RS485 Modbus, via RJ45 connection port

### Power Management

Rated Voltage	230,+10%,-15%
Rated Current	Up to 32A
Rated Frequency	48 Hz to 62 Hz
Operating Temperature	-10°C to +85°C
Measuring Accuracy	+/-2%, (kWh to ENG1036.IEC1036)
Measurement Method	True RMS measurement of distorted Current/Voltage waveform
Local Display	LCD of current, Voltage and kWhr
Display Resolution	1 Volt, 0.01 Amp, 0.1 kWhr

### Power Supply Switching

Rated Supply Current	16 Amps
Breaking Voltage	250vAC / 440vAC
Maximum Breaking Capacity	4000VA
Make Current	30 Amps (At 4 sec at duty cycle 10%)
Peak inrush current (20 ms)	80 Amps

### Temperature Measurement

1 to 4 temperature sensors, wired in parallel with individual ID

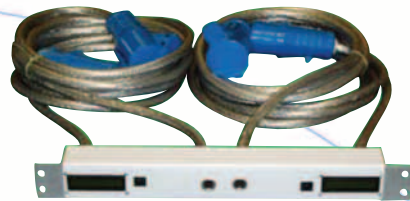
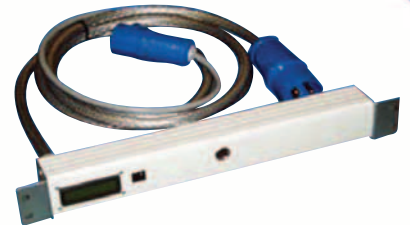
Operating Temperature	-10°C to +85°C
Measurement Accuracy	+/- 0.5°C
Connection	2 Pole connector

### Other information

Mechanical Dimensions:	19" / ETSI, 1.5 U
Material:	High impact, fire retardant, double skin plastic, colour grey

### Configure

Choose your configuration - see quick check spec.



Single and Dual Feed Link Box

### Quick Check Spec.

#### 1. Strip Type

- Horizontal 19-Inch Single Feed
- Horizontal 19-Inch Twin Feed

#### 2. Operating Voltage

- 220 – 240v A/C
- 110 – 120V A/C

#### 3. Max Draw

- 10A
- 13A
- 16A
- 32A

#### 4. Incoming Feed Plug Type

- UK 13A 3 Pin - BS1363
- IEC 320 10A - C14 Plug
- IEC 320 16A - C20 Plug
- IEC 32A Commando – BS 4343
- European 10A - CEE 7/7
- Schuko 10A - CEE 7/4
- Swiss 10A - SEV 1011
- USA 15A -
- Other – Please State

#### 5. Outgoing Feed Socket Type

- UK 13A 3 Pin - BS1363
- IEC 320 10A - C13 Socket
- IEC 320 16A - C19 Socket
- IEC 32A Commando – BS 4343
- European 10A - CEE 7/7
- Schuko 10A - CEE 7/4
- Swiss 10A - SEV 1011
- USA 15A -
- Other – Please State

#### 6. Lead Length

- 3m
- 5m



# i-PAD

# Intelligent Power Distribution

## i-PAD Intelligent PDU - E-PDU Series

The i-PAD, E-PDU provides a modular and flexible solution for today's Power and Environment needs.

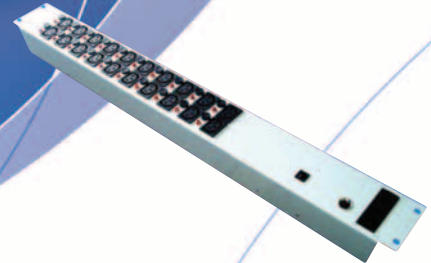
The power strip is designed to fit horizontally in a standard 19 inch cabinet, with the option to also mount vertically in an 800mm wide cabinet. i-PAD E-PDU offers customers a range of simple to use "pick and mix" product options providing a tailored solution to match specific requirements. The i-PAD E-PDU integrates with other i-PAD products to form an i-PAD Power Management Solution.

### Options

- 1-24 Socket Outlets of UK IEC and International Applications
- Range of UK and International Plug Outlets
- Up to 32A Load Rating
- Remote Humidity Monitoring
- Remote Cabinet Door Monitoring

### Standard Features

- Scalable
- CE Approved
- Modular
- Sequential Power On / Shutdown
- Economical, Cost Effective
- Remote Boot of Individual Sockets
- Thermal Monitoring
- 10/100 Ethernet Modbus TCP/IP, HTTP Protocol
- New Build and Retrofit Applications
- Remote Monitoring of Individual Sockets
- Single or Multi Site Application
- Choice of 10, 15 or 20 IEC Outlets
- 32 Amp Load Rating
- Remote Current, Voltage and kWh Monitoring
- Multiple User Support
- 19" ETSI Vertical and Horizontal Rack Mounting
- Fully Featured via Internal web Server
- Easy to Use
- Simple to Install
- Set Alarm Thresholds provide management, billing and audit reports



Power i-PAD E-PDU

### Quick Check Spec.

#### 1. Strip Type

- Horizontal 19-Inch
- Vertical

#### 2. Operating Voltage

- 220 – 240v A/C
- 110 – 120V A/C

#### 3. Max Draw

- 10A
- 13A
- 16A
- 32A

#### 4. Number of Outlets

- 10 IEC
- 15 IEC
- 20 IEC
- Other – Please State

#### 5. Lead Length

- 3m
- 5m
- Other – Please State

#### 6. Socket Types

- UK 13A 3 Pin - BS1363
- IEC 320 10A - C13 Socket
- IEC 320 16A - C19 Socket
- IEC 32A Commando – BS 4343
- European 10A - CEE 7/7
- Schuko 10A - CEE 7/4
- Swiss 10A - SEV 1011
- USA 15A -
- Other – Please State

#### 7. Plug Type

- UK 13A 3 Pin - BS1363
- IEC 320 10A - C14 Plug
- IEC 320 16A - C20 Plug
- IEC 32A Commando – BS 4343
- European 10A - CEE 7/7
- Schuko 10A - CEE 7/4
- Swiss 10A - SEV 1011
- USA 15A -
- Other – Please State





# Intelligent Power Distribution

## i-PAD E-PDU Specification

### Connectivity / Supported Protocols

- Modbus RS485 port for connection of up to 5 slave units (One IP address for up to 6 units)
- Ethernet 10/100 Modbus TCP IP
- Ethernet 10/100 HTTP IP
- SNMP

### Power Management

Rated Voltage	230V,+10%,-15%
Rated Current	Up to 32A
Rated Frequency	48Hz to 62Hz
Operating Temperature	-10°C to +85°C
Measuring Accuracy	+/-2%, (kWh to ENG1036,IEC1036)
Measurement Method	True RMS measurement of distorted Current / Voltage Waveform
Local Display	LCD of Current, Voltage and kWh
Display Resolution	1 Volt, 0.01 Amp, 0.1 kWh

### Power Socket Switching

Sockets Outlets Rated at Current	16 Amps
Breaking Voltage	250 Vac / 440 Vac
Max. Breaking Capacity	4000VA
Make Current	30 Amps
	(At 4 sec. At duty cycle 10%)
Peak Inrush Current	80 Amps

### Temperature Measurement

1 to 4 Temperature Sensors, wired in parallel with individual ID	
Operating Temperature	-10°C to +85°C
Measurement Accuracy	+/- 0.5°C
Connection	2 Pole Connector

### Mechanical Dimensions

Height	50mm
Width	65mm
Length	Dependant on Application
Material	High impact, fire retardant, double skin, colour grey

### Configure

Choose your configuration - see quick check spec.



# i-PAD

## Intelligent Power Distribution

### i-PAD Server Strip

The i-PAD Server Strip has been designed to meet the demands of today's data centre environment utilising technology to offer full local and remote power monitoring and management capability. As standard the Server Strip has;

- 6 x IEC 320 10 Amp C13 sockets
- 8 x BS1363 13 Amp UK pattern sockets.

Designed to fit vertically in a 19-inch cabinet the i-PAD Server Strip offers customers the option to "pick and mix" product options providing a tailored solution to match specific requirements. The i-PAD Server Strip also integrates with other i-PAD products as part of the i-PAD Power Management Solution.

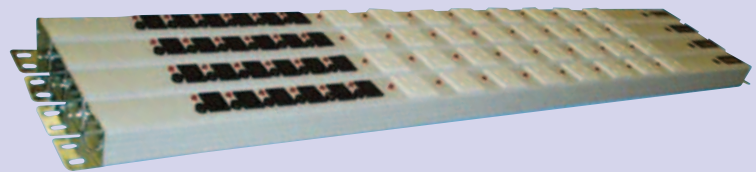
#### Features

- Bank of 6 10A IEC and 8 UK 13A sockets
- Remote Monitoring PDU
- RS485, RJ45 Port for remote connectivity
- Local LCD display of voltage, current & kWhr
- Sequential power up
- Remote Monitoring of voltage, current, kWhr, Temperature
- Connection port for remote temperature monitoring
- Remote switching of individual socket outlet
- Vertical mounted
- Supplied with 3m lead, terminated with a 32A commando plug

#### Configure

The i-PAD Server Strip range can also be configured to individual requirements, please contact our customer services department to discuss.

### Measure • Manage • Control • Reduce Costs



**32A 3 Phase Link Box for Direct Feed**

### i-PAD 3-Phase Link Box

Simply connect the i-PAD 3-Phase Link Box in series between your 3-Phase power supply and your 3-Phase equipment feed and the Link Box provides the platform for local as well as remote monitoring and power management. The on board electronics and local LCD display provide real time readings for voltage, current and kWhr. Connecting the Link Box to the network then allows the added features of remote monitoring and collection of data.

#### Features

- 32A load rated.
- RJ45 Connectivity, via RJ45 Port.
- Installed under the floor or Rack Mounted with 2m 3 Phase Lead Terminated with 5 pin Commando plug and socket.
- Local and remote monitoring of 3 phase voltage, current and kWhr.
- 3 Phase in / 3 phase out via 5 pole 32A commando plug.
- Length of lead optional.

UPS



## Introduction

The Riello UPS range comprises of more than 20 product lines and options for powering any type of load (from information technology to industrial), in any type of installation (office or dedicated power room), with any type of distribution (single-phase or three-phase, TN/TT or IT), from any type of power source (mains, generator, transformer). RIELLO UPS also offer a wide range of communications options to allow users to automatically manage their "no-break system" over any type of communication medium (serial connection, BUS connection, telephone connection or LAN). The range today comprises:

- 400VA to 4800kVA Uninterruptible Power Supplies (UPS)
- Stabilisers (AVRs)
- Automatic transfer switches
- Modular rack-mount cabinet
- Using these components users can configure the most suitable back-up solution for their application.
- Central supply systems for Emergency applications (CSS)
- UPS monitoring and communications software
- Inverters 9DC input/AC output
- Communications software

## IT Range | Dialog Active

### Dialog Active 500-2000VA single-phase

- Small/medium computer networks
- Local Area Networks (LAN)
- Workstations
- Servers
- EPOS (Electric Point Of Sale) systems

The Dialog Active series includes the 500 - 750 - 1000 - 1500 - 2000VA models and uses digital Line Interactive (VI) technology. The load is powered from the mains through an AVR to stabilise brownout, sag and surge voltages and EMI filters to suppress spikes and transients.

When the mains fails, the load is powered by the inverter with a true sinewave to provide sufficient runtime for computer system shutdown using the PowerShield<sup>2</sup> software supplied as standard. The UPS also incorporates a filtered socket for PC network and telephone line cable protection.

For advanced communication and outstanding performance (including Power Share and a true sinewave output at all times), Dialog Active is the ideal solution for larger network users requiring total control of their power system.

#### Characteristics

- Mains power supply stabilisation and filtering (Line Interactive VI technology with AVR and filters for atmospheric disturbances suppression)
- High quality output voltage pure sinewave output (distortion <2%)
- High level immunity to surges (6kV according to IEC801-5)
- Cold start capability: the UPS can power up without a mains supply present
- Integrated protection for PC networks and telephone line/modem connections RJ45-RJ11
- High reliability with built-in automatic battery test feature
- Auto restart at power-up
- Microsoft certification product

#### Advanced Communication

- Advanced, multi-platform communication for all operating systems and network environments: PowerShield<sup>2</sup> monitoring and shut-down software included with SNMP agent for Windows 95, 98, NT 4.0, 2000, 2003, Me, XP, Mac OS X, 9.x, Linux, Novell operating systems
- USB or RS232 serial port (selectable)
- Slot-in SNMP network adaptor card (DA 200 model)
- 2-year warranty



# IT Range | Dialog Active

Order Code	CDA 50	CDA 75
Power	500VA/335W	750VA/500W
<b>Input</b>		
Rated voltage	230 Vac	
Range with mains supply present	230Vac (-25%, +21%)	
Frequency	50/60Hz auto sensing	
Frequency range	+/- 5Hz	
<b>Output</b>		
Rated voltage	230 Vac	
Voltage on mains operation	230 Vac (-15%, +11%)	
Frequency	50-60Hz auto sensing	
Voltage on battery operation	230 Vac (+/-5%)	
Waveform	Sinewave	
Distortion	<2%	
<b>Batteries</b>		
Type	Maintenance-free sealed lead-acid	
Recharge time	8h	
<b>Environmental</b>		
Operating temperature	0 ÷ 40°C	
Humidity	< 95%	
Protection	Overload – short circuit – over voltage – under voltage – temperature – low battery	
Safety compliance	EN 62040-1-1 and Directive 73/23 EEC, EN 62040-3	
EMC conformance	EN 62040-2 and Directive 89/336	
Surge capability	IEC 801-5 6KV 1.2/50 µs; 3KA 8/20 µs differential	
Colour	Light grey RAL 7035	
Noise	<40dBA at 1m	
Other options available on request. Please contact Customer Services for details.		

## Dialog Plus 700-3000VA single-phase

- Small/medium computer networks
- Local Area Networks (LAN)
- Workstations
- Servers
- EPOS (Electric Point Of Sale) systems

The Dialog Plus series includes the 700 - 1000 - 1500 - 2000 - 3000VA models and uses double conversion technology (VFI). The load is powered continuously by the inverter with an EMI filtered, stabilised and regulated sinewave supply. The input and output EMI filters considerably increase the immunity of the load to mains disturbances and surges, even on bypass.

The UPS can power the load for long periods (using battery extension packs) or provide sufficient runtime to allow shut-down of the protected systems using the PowerShield<sup>2</sup> software, supplied as standard, for Windows 95, 98, NT 4.0, 2000, 2003, Me, XP, Mac OS X, 9.x, Linux operating systems.

For outstanding power protection and communication Dialog Plus is the best solution for sensitive and "mission-critical" applications.

Dialog Plus-ER models have no internal batteries. They are supplied with a larger internal charger and with their matching external battery extension packs can achieve long back up times.

### Characteristics

- Reliable, filtered, stabilised and regulated sinewave output (double conversion technology VFI in conformity with IEC 62040-3 specifications) with filters for atmospheric disturbance suppression
- High level immunity to surges (up to 150%)
- Auto restart on mains return (programmable)
- Start-up without mains (cold start)
- GS-TÜV certification
- Power factor correction with sinusoidal input to ensure a low impact on the mains supply (UPS input power, factor, close to 1)
- Wide input voltage window (110-300Vac) to reduce battery usage
- Integrated protection for PC networks and telephone line/modem connections RJ45-RJ11
- Option to extend the back up time to several hours
- Software-programmable operating parameters
- Timer for scheduled shut-down and power up (software programmable)
- Highly reliable batteries with automatic and manual test feature
- Highly reliable system with full microprocessor control
- Breaker based input protection
- 2-year warranty

### Advanced Communication

- Advanced, multi-platform communication for all operating systems and network environments: PowerShield<sup>2</sup> monitoring and shut-down software included with SNMP agent for Windows 95, 98, NT 4.0, 2000, 2003, Me, XP, Mac OS X, 9.x, Linux, Novell operating systems
- Free UPS tools configuration software
- RS232 serial port
- Slot-in SNMP network adaptor card



# IT Range | Dialog Plus

Order Code	CDLP 100	CDLP 200
<b>Power</b>	1000VA/700W	2000VA/1400W
<b>Input</b>		
Rated voltage	220-230-240 Vac	
Minimum voltage range	110V up to 60% of load/120V from 60% to 70% of load 140V from 70 to 80% of load/160V from 80% to 100% of load	
Maximum voltage	300 Vac	
Rated frequency	50/60 Hz ±5Hz	
Power factor	> 0.97	
Input current	Sinewave	
<b>By Pass</b>		
Voltage range	180-264 Vac	
Frequency range	Selected frequency ±5Hz	
<b>Batteries</b>		
Recharge time	5-7h	4h
Recharge current	1A	
<b>Output</b>		
Rated voltage	selectable 220,230 or 240 Vac ± 1.5%	
Waveform	Sinewave	
Voltage distortion	< 2%	
Frequency	50 or 60Hz auto sensing	
Crest factor	3:1	
Overloads	110%, 30';130% 30";150% 10"	
<b>Environmental</b>		
AC/AC Efficiency	90%	
Operating temperature	0 ÷ 40°C	
Humidity	< 95% non condensing	
Protection	Overload – short circuit – over voltage – under voltage – temperature – low battery	
Compliance	EN 62040-1-1 and Directive 73/23 EEC, EN 62040-2 cl. B and Directive 89/336/EEC, EN 62040-3	
Surge capability	3KA 8/20 µs	
Colour	metallic grey (silver)	
Noise	<40dBA at 1m	
Other options available on request. Please contact Customer Services for details.		

# Network Range | Dialog Dual

## Dialog Dual 3,3-6KVA single/single-phase

- Local Area Networks (LAN)
- Servers
- Data centres
- Industrial PLC's
- Electronic Point Of Sale (EPOS)
- Emergency devices (lights/alarms)
- Electro-medical devices

The Dialog Dual range is available in 3300 - 4000 - 5000 - 6000VA models with on-line double conversion (VFI) technology. The Dialog Dual range may be placed directly on the floor or mounted in 19" rackmount cabinets.

In terms of technology, features (selectable on-line, economy and smart active operating modes) and diagnostics such as the digital display, RS232 and USB interfaces, network adaptor card option and PowerShield<sup>2</sup> software included, Dialog Dual is easily the best solution for protecting "mission critical" applications requiring the highest levels of reliability.

Dialog Dual is ideally suited for a whole range of applications from IT to security.



### Characteristics

- The UPS can be installed as a floor standing tower or 19" rack mount UPS. The front panel digital display can be pulled out (using the keys provided) and rotated to suite the installation format
- Reliable, filtered, stabilised and regulated sinewave output (double conversation technology VFI in conformity with IEC 62040-3 specifications) with filters for atmosphere disturbance suppression
- Low noise level (<40dBA) thanks to the digitally PWM controlled ventilation system which is load and temperature dependent and the use of an inverter with a high switching frequency (>20kHz, above the audible range)
- Optional bolt-on maintenance bypass (DLD 500/600 models) to allow service without disruption to the loads
- User selectable operating modes in addition to true on-line mode:
  - Economy Mode: selects Line Interactive VI technology to power non-critical loads from mains and achieve up to 98% operating efficiency
  - Smart Active Mode: the UPS selects automatically whether to operate in on-line VFI or line interactive VI mode depending on the stability of the mains supply
  - Emergency: the UPS can be programmed to work only when the mains fails – suitable for emergency lighting
  - Frequency conversion 50 or 60Hz
- Output voltage selection: 220-230-240Vac
- Auto restart when mains power returns programmed using the front panel or using PowerShield<sup>2</sup> software
- Bypass on: when the UPS is switched off, it automatically goes into bypass mode to charge the batteries
- Automatic power down due to minimum load
- End of battery discharge pre-alarm
- Delayed start up
- PowerShare output socket (2x10A IEC) functionality on DLD 500/600 models
- Guaranteed output quality even with typical distorting IT loads with crest factors of 3:1
- Rephrasing of load as the UPS has an input power factor close to 1 with a sinusoidal input current
- Completely digitally controlled
- Automatic bypass with no break in power supply
- Use of IMS (Insulated Metallic Substrates) modules
- Status, measurements and alarms available on the standard backlit display
- UPS can be updated digitally (flash upgradeable)
- Highly reliable battery performance (automatic and manual battery tests)
- Unique Low Ripple Current Discharge (LRCD) to help prolong battery life
- Hot-swap user replaceable batteries
- No limit extendible back-up time using modular design Battery Extension Packs
- Increased ride through (without batteries) on mains breaks up to 40ms and for fluctuations ranging from 84 to 276Vac
- Input protected by resettable thermally activated switch





- Back-feed protection: to avoid current being fed back into the mains should a fault occur
- Increased short circuit current on the bypass
- Increased overload capacity: 150% on inverter even when mains supply has failed
- Performance guaranteed in temperatures up to 40 °C
- Manual switch over to bypass
- Two IEC output plugs with thermal protection (DLD500-600)
- Microsoft Certified Product

### Advanced Communication

- Advanced multi-platform communication for all operating systems and network environments: PowerShield® supervision and shut-down software included with SNMP agent for Windows 95, 98, NT 4.0, 2000, 2003, Me, XP, Mac OS X, 9.X, Linux, Novell operating systems. The UPS is supplied with a communications cable for 'Plug and Play' PC connection
- Plug & play feature
- USB port
- RS232 serial port
- Slot for one of the following interface cards:
  - Network adaptor (Netman 102)
  - Multiplexer (Multicom 352)
  - JBUS/MODBUS interface (Multicom 302)
  - RS232/USB card (Multicom 362)
  - RS232/EPO\* (Multicom 372)
  - Dry contacts card/EPO\* (Multicom 382)
- Microsoft certification
  - \*EPO is standard on DLD500-600 models
- 2-year warranty

Order Code	CDLD 330	CDLD 400
<b>Power</b>	3300VA/2300W	
<b>Input</b>	220-230-240 Vac	
Rated voltage	164 Vac @ load 100% 84 Vac @ load 50%	
Minimum voltage	50/60 Hz ±5Hz	
Rated frequency	> 0.98	
Power factor	≤ 7%	
Current distortion		
<b>By Pass</b>	180-264 Vac (selectable in Economy Mode and Smart Active Mode)	
Voltage range	Selected frequency ±5% (user configurable)	
Frequency range		
<b>Batteries</b>	4-6h	
Recharge time		
<b>Output</b>	selectable 220,230 or 240 Vac	
Rated voltage	1,5%	
Static variation	≤ 5% in 20ms	
Dynamic variation	Sinewave	
Waveform	< 3%	
Voltage distortion with linear load	< 6%	
Voltage distortion with non-linear load	50 or 60Hz selectable	
Frequency	3:1	
Crest factor		
<b>Overload Capacity</b>	1'	
100% <Load <110%	4 s	
100% ≤Load <150%	0.5 s	
Load > 150%		
<b>Environmental</b>	92%	
Efficiency	98%	
Line-interactive/Smart Active Efficiency	0 ÷ 40°C	
Operating temperature	< 95% non condensing	
Humidity	Overload – short circuit – over voltage – under voltage – temperature – low battery	
Protection	EN 62040-1-1; Directives 73/23/EEC 93/68/EEC; EN 62040-2; Directive 89/336/EEC; 92/31	
Compliance	EEC; 93/68 EEC; EN62040-3	
Colour	metallic grey (silver)	
Noise	<40dBA at 1m	
Accessories provided	2 x 10A cables; 1 x IEC – 16A plug; software; serial cable; plastic keys to release display; handles kit	

Other options available on request. Please contact Customer Services for details.



# The ultimate Networking, Data and Telecoms Cabinet

**This unique cabinet innovation has been specifically designed to bring unrivalled advantages to wallbox cabinets and will offer a number of benefits to ultimately reduce the total cost of ownership.**

## Access Wallbox development

Developed for today's front office environment the Access Wallbox range was designed to incorporate impact resistant moulded (SMC) top and bottom panels for improved aesthetics. Compared with a conventional wall box this feature has the added benefit that the top and bottom panels can be easily cut and modified to fit over existing cabling ducting/equipment without the need to touch up exposed metal surfaces.

Designed with ease of use in mind the range also has user friendly quick release hinged side panels and doors for quick and easy removal during installation and maintenance. Security to the cabinet is maintained via a single point key lock on the door.

All cabinets can be supplied with a choice of standard or vented side panels as well as plain steel or glazed doors. The vented side panels offer the option of fitting fan kits providing enhanced thermal management through forced cooling.

Just like the Access Cabinet the Access Wallbox is based on an open frame design removing the need for conventional corner posts. This feature provides the option to configure the cabinet with either fixed adjustable 19-inch mounting angles or a 19-inch swing frame (not available on the 6U version) which offers the benefit of full access to the rear of the equipment thanks to it's ability to rotate a full 180 degrees.

## Design features

- *Stylish design.*
- *Open frame architecture.*
- *Configurable options.*
- *User friendly features.*
- *Retrofit-able over existing installations.*
- *Floor/underdesk mounting.*
- *Single person installation.*
- *Supplied flat packed or assembled.*
- *Available in 5 height and 2 depth options.*



FIRE I-REM



**i-REM**



# Intelligent Rack Extinguisher Module

## i-REM Data and Fire Protection

Loss of data is perhaps one of the most feared aspects of business. Losing internal records, employee records and sales records alone could cripple even the largest company to the point of collapse. If the company also then relies on these technologies to provide a sales outlet, be it through POS terminals or Internet trading, losing these for any length of time will affect the ability to continue trading in times of crisis.

Enterprises with computer networks, IT communications and those who rely on large banks of data, house their computers, network devices and ancillary equipment in 19" floor standing racks/cabinets, i.e. a "Computer room in a Cabinet". The data is protected against viruses, the computers against power fluctuations with UPS, the excess heat by air conditioning, the security by the latest devices, but the fire protection is often left to the room Fire Protection System. Each individual cabinet is not separately protected.

So why not let your computer room fire system handle the fire? The answer is simply the down time and disruption to business involved in doing so. Your building fire system is perfect for protecting the occupants of the building and the building itself, but generally has little regard for the consequences of dealing with a small fire. Even if you have expensive computer room fire extinguishing capability, this system will still flood the room with agent and close down all the equipment inside the room, requiring your staff to leave the room, until the agent is vented, before returning to deal with the problem.

If you have 20 racks containing data servers, this shuts 95% more of your business than need be affected by a localised fire in one rack. Cooper B-Line can now supply the i-REM, this unit is designed to protect data and equipment sited in closed separate 19" racks from the effects of a smoke threat originating within the periphery of the rack. Installed in the top 2U of the cabinet the i-REM's microprocessor will monitor the rack for smoke, using two optical smoke detectors. Power from the rack will be removed at 3% / meter smoke obscuration. The cause of the smoke will be extinguished by filling the rack with FM200 extinguishant with a zero oxygen depletion potential.

Because this affects only the rack with the smoke, the room is safe for your staff to continue working and the rack is immediately available for engineers to repair or replace the faulty equipment, and business is resumed in the shortest possible time.

## Features

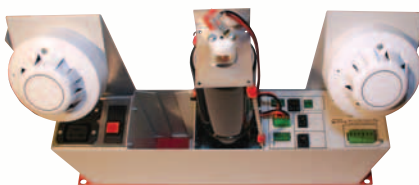
- Automatic smoke detection, alarm and extinguish with immediate power off to cabinet
- Extendible with additional units up to 8 bayed cabinets
- Supplied fully assembled. 2U 19" mounted
- Visual, audible and electronic alarms
- Worldwide universal AC voltage input (96-264VAC)
- Option of gauge or pressure switch monitoring of canister
- Inbuilt microprocessor with battery backup for i-REM



2U Fire protection module



Rear view



Rear view

## Detection • Alarm • Extinguish





## Unit Overview

### Input

- Worldwide operation 90-264Vac (50/60Hz)
- 10 Amp, 16 Amp or 20 Amp IEC inlet

### Output

- 10 Amp, 16 Amp or 20 Amp IEC socket outlet corresponding to input
- UPS power shut down contacts
- Remote system alarm contacts
- Remote fire alarm contacts
- Visual and Audible warning indicators

### Function

- The on board i-REM unit microprocessor monitors all functions and indicates faults on 4 LED's. Twin smoke detectors continuously monitor the cabinet for smoke at > 3%/m obscuration
- On smoke detection and alarm, i-REM fire extinguisher is operated automatically i-REM cuts power to the outlet socket. UPS-off contact operates, Alarm indicator and remote alarm contacts operate.

### Dimensions

- 2U high (87mm) x 345mm deep x 19" mounted
- Weight of 6kg or less

### Environment

- Ozone Depleting Potential (ODP) is zero
- Minimal atmospheric warming effect
- Extinguishant is non toxic FM200TM or FE36TM

## Options and part codes

Order Code	Description
IEMX101x800	Master 10amp: 1 x 800grm Extinguishing Canister Fills 1.4M
IEMX101x1000	Master 10amp: 1 x 1000grm Extinguishing Canister Fills 1.8M
IEMX102x1000	Master 10amp: 2 x 1000grm Extinguishing Canister Fills 3.6M
IEMX161x1000	Master 16amp: 1 x 1000grm Extinguishing Canister Fills 1.8M
IEMX162x1000	Master 16amp: 2 x 1000grm Extinguishing Canister Fills 3.6M
IEMX201x1000	Master 20amp: 1 x 1000grm Extinguishing Canister Fills 1.8M
IEMX202x1000	Master 20amp: 2 x 1000grm Extinguishing Canister Fills 3.6M
IEMXS1x800	Slave 1 X 800grm Extinguishing Can. + connect cables. Fills 1.4M
IEMXS1x1000	Slave 1 X 1000grm Extinguishing Can. + connect cables. Fills 1.8M
IEMXS2x1000	Slave 2 X 1000grm Extinguishing Can. + connect cables. Fills 3.6M
IEMXEPS800	Extinguisher canister only 800grms FM200 w/- Pressure-Switch.
IEMXEPS1000	Extinguisher canister only 1000grms FM200 w/- Pressure-Switch.
IEMCBLD3	Multi-Bay connecting cable for 3 / 4 Bayed Racks.
IEMCBLD4	Multi-Bay 5 - 8 Bayed Racks. Connect Box+ Cables. Specify No. of racks.
IEMADPD1	Adapter: Power Off APC-UPS on Smoke alert REPO
IEMCBLP1	Cable Power 10amp C13F>C14M =3Mtr. UPS to DFP power in.
IEMCBLP2	Cable Power 16amp C19F>C20M =2.5Mtr. UPS to DFP power in.
IEMCBLP3	Cable Power 16amp C19F>Free end =2.5Mtr. UPS to DFP power IN.
IEMCBLP4	Cable Power 16amp C20M>Free end =2.5Mtr. UPS to DFP power OUT.
IEMCBLP5	Power 16amp Connector C19F Rewireable To DFP power IN.
IEMCBLP6	Power 16amp Connector C20M Rewireable From DFP power OUT.
IEMPDPP1	Power Distribution 16A C20 Input +2m 5 x13amp sockets OUT, Horizontal Mount
IEMPDPP1	Power Distribution 16A C20 Input +2m 9 x13amp sockets OUT, Vertical Mount
IEMADPD6	APC UPS Power Off w/- EPO ( Emergency Power Off )
IEMX10M	Master Unit 10amp: (drives 1 slave)
IEMX16M	Master Unit 16amp: (drives 1 slave)
IEMX20M	Master Unit 20amp: (drives 1 slave)
IEMXS	Slave Unit With 3 connecting cables

## i-REM Data and Fire Protection

### Concentration of Extinguishant - FM200 in Enclosures

50630 Calculations of Volume filled with specified quantity of FM200 (Fire Extinguishant) at various concentrations and temperatures.

The most critical aspect of the specification for protection of your Cabinet from the damage of Smoke & Fire is to determine the "free volume" of your cabinet and its "leakage".

#### Rack-free volume.

This is the reduced cabinet volume after solid metal and airtight enclosures are subtracted.

#### Leakage is caused by:

- Unnecessary leakage from leaving gaps, e.g. around cable inlets at the base of the rack.
- Necessary ventilation to provide enough air flow to cool the electronic equipment, usually computers.

FM200 is heavier than air and drops down the cabinet and will leak out of any unsealed gaps around the lower cable entries.

*Specify the weight of Extinguishant to achieve concentration of 7% minimum in the protected enclosure.*

### FM200 Base Data<sup>A</sup> NFPA2001

Temp °C	S.V.V. <sup>1</sup> m³/kg	Kgs per m³ at % concentrations of HFC-227ea				
		6%	7%	8%	9%	10%
-5	0.1241	0.5142	0.6064	0.7005	0.7987	0.8951
0	0.1268	0.5034	0.5936	0.6858	0.78	0.8763
+5	0.1294	0.4932	0.5816	0.6719	0.7642	0.8586
+10	0.1321	0.4834	0.57	0.6585	0.749	0.8414
+15	0.1347	0.474	0.5589	0.6457	0.7344	0.8251
+20	0.1373	0.465	0.5483	0.6335	0.7205	0.8094
+25	0.1399	0.4564	0.5382	0.6217	0.7071	0.7944

<sup>1</sup> Specific Vapor Volume

### Cabinet Volumes<sup>B</sup>

### Cabinet Concentration<sup>C</sup>

with 800grms @ 20°C

with 1000grms @ 20°C

Height U Height Mtr.	39U 42U 47U			39U 42U 47U			39U 42U 47U		
	Volume m³ of Cabinets			% Concentration @ 20°C			% Concentration @ 20°C		
6x6 Rack	0.68	0.72	0.79	16.01%	15.21%	13.83%	20.06%	19.06%	17.32%
6x8 Rack	0.91	0.96	1.06	12.01%	11.41%	10.37%	15.04%	14.29%	12.99%
6x10 Rack	1.14	1.20	1.32	9.61%	9.13%	8.30%	12.04%	11.43%	10.39%
8x6 Rack	0.91	0.96	1.06	12.01%	11.41%	10.37%	15.04%	14.29%	12.99%
8x8 Rack	1.22	1.28	1.41	9.00%	8.55%	7.78%	11.28%	10.72%	9.74%
8x10 Rack	1.52	1.60	1.76	7.20%	6.84%	6.22%	9.03%	8.58%	7.80%
8x12 Rack	1.82	1.92	2.11	6.00%	5.70%	5.18%	7.52%	7.15%	6.50%

### Canister

with 800grms of FM200

with 1000grms of FM200

Temp °C	M³ filled at % concentration				M³ filled at % concentration			
	7%	8%	9%	10%	7%	8%	9%	10%
-5	1.32	1.14	1.00	0.89	1.65	1.43	1.25	1.12
0	1.35	1.17	1.03	0.91	1.68	1.48	1.28	1.14
+5	1.38	1.19	1.05	0.93	1.72	1.49	1.31	1.16
+10	1.40	1.21	1.07	0.95	1.75	1.52	1.34	1.19
+15	1.43	1.24	1.09	0.97	1.79	1.55	1.36	1.21
+20	1.46	1.26	1.11	0.99	1.82	1.58	1.39	1.24
+25	1.49	1.29	1.13	1.01	1.86	1.61	1.41	1.26

### Extinguishants

FM200, FE227, (HFC-227ea). Worlds most widely used safe-in-kind replacement for Halon 1301. Boils at -16°C. Has zero ozone depleting potential. It is safe clean and electrically non-conducting so virtually eliminating collateral damage to computing and other delicate electronic equipment.

\*A Data from NFPA 2001 Standard on Clean Agent Fire Extinguishing Systems

\*B No consideration for installed Equipment

\*C Concentration of Extinguishment in enclosure will increase with rise in temperature

KVM

**MINICOM**  
ADVANCED SYSTEMS

## The KVM.net System

**Addresses the need for managed access in high density enterprise environments such as data centers, businesses with branch offices, testing labs, and “lights-out” facilities. It unifies administration, monitoring, and control of all servers and users in the organization across geographic locations.**

### Secure Access to your Servers

KVM.net is a highly available system with powerful authentication and authorization mechanisms for secure user sessions. KVM.net complies with the highest security standards. The LDAP-based system is designed for synchronized compliance with organizational security policies and profiles for more effective, secure user administration.

### Simplify System Administration

KVM.net provides the tools that system administrators need to manage and control high density, distributed server environments. The system presents administrators with a unified, logical view of their KVM infrastructure that shields them from the complexities of a distributed topology. Users log on to a single IP address that securely routes them to their assigned targets, and that's all they see. The KVM topology is transparent.

### Improve User Experience

The Linux based GUI was designed by system administrators to provide a common and familiar interface that helps system administrators manage users, groups, and targets. Minicom KVM/IP technology provides superior video and mouse performance that looks and feels as if it's connected directly to the server.

### Preserve your KVM Investment

The open, vendor independent system leverages existing installations and legacy systems with smarter management of different server/data center configurations. It is the only available solution for access and control over mixed server environments of 3rd party switches. KVM.net aligns with your existing architecture, fully preserving your investment in your current KVM infrastructure.

### Grow your Business

KVM.net is a fully scalable system that grows with your out-of-band infrastructure. Automatic discovery of all IP devices attached to the system eases installation and maintenance, allowing you to easily add or remove targets and users from the system.

### Your Solution for KVM Management Over IP

The KVM.net system includes a KVM.net Manager appliance, any number of PX or Smart IP Access devices, and an optional replication unit.

### PX Single Server IP Device

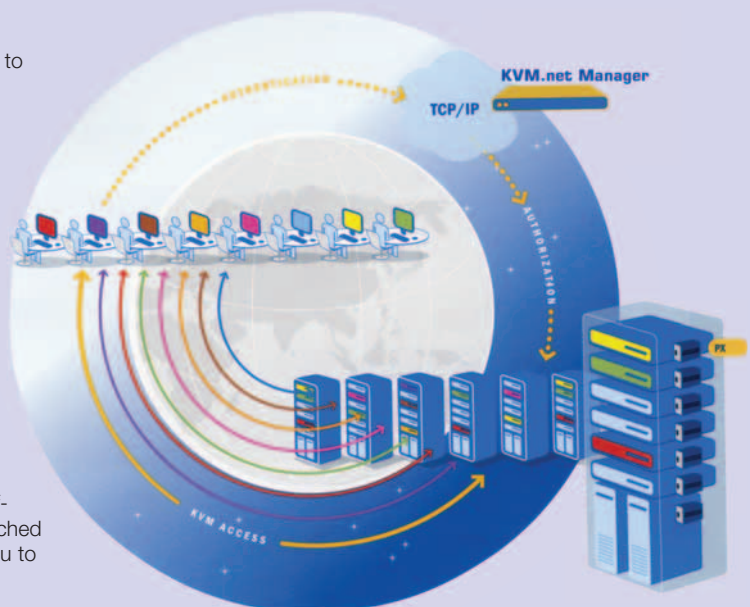
The PX is a compact, cost effective, single server IP device for non-blocking access to servers. The high performance device provides superior video, real-time mouse synchronization, SSL encryption, and full screen mode. Connecting a PX to each of your mission critical servers turns the KVM.net system into a fully secure, digital, non-blocking matrix solution allowing any number of remote users to control any number of servers, regardless of their physical location and topology. The rack-mountable PX uses Power Over Ethernet technology (POE switch or MidSpan power hub) for efficient, clutter free power management.

### Smart IP Access

Remote access to your legacy switches and servers Smart IP Access provides KVM/IP access to servers and analog KVM switches. It is designed to work with all Minicom and most 3rd party switches. The feature rich device provides superior video, realtime mouse synchronization, SSL encryption, and full screen mode. The Smart IP Access can also be used in stand-alone applications for direct remote KVM access.

### Replication Unit for Mission Critical Redundancy

KVM.net's replication unit is an additional unit for redundant management, including backup and data replication. Both units stay connected to the network, with data being consistently replicated to the second unit which is always ready to take over with the most up-to-date database.





# KVM.net Technical Specifications

## KVM.net Manager

Protocols	HTTP, HTTPS, XML, SSH
Platform	Red Hat Linux 8.0
Form Factor	1U Rack Mountable
Network Connection	2 x RJ45
Power Supply	115-230 VAC, 50-60Hz Auto Sensing
Operating Temperature	10°C to 35°C / 50°F to 95°F
Regulatory/Conformity	Regulatory/Conformity FCC, CE, UL
Client Computer	Internet Explorer 6.0 or higher



## Smart IP Access

Operating systems	Host Computer Windows 2000, XP, NT4, 2003 Server, DOS, Novell 3.12 -6, Linux Client Computer Windows 2000 or higher with IE 6.0 or higher
Resolution	Host Computer Up to 1600x1200 @85Hz Client Computer Recommended resolution should be higher than resolution on host computer
Connections	Both auto and manual modes
Video and Mouse Synchronization	Both auto and manual modes
Ethernet	2 x RJ45 – 10/100 Mbit/sec auto sensing
Serial	2 x RJ45
Local KVM Connection	Screen HDD15, Keyboard/Mouse – MiniDIN6
Computer / Switch Connection	Screen HDD15, Keyboard/Mouse – MiniDIN6 3 in 1 cable 1.8m (supplied with system)
Dimensions	44H x 230D x 215W mm / 1.7 x 9 x 8.5 in
Power Supply	Internal switching 85 – 265 VAC 50 / 60 Hz
Operating Temp.	0°C to 40°C / 32°F to 104°F



## PX

Operating systems	Host Computer Windows 2000, XP, NT4, 2003 Server, DOS, Novell 3.12 -6, Linux Client Computer Windows 2000 or higher with IE 6.0 or higher
Resolution	Host Computer Up to 1600x1200 @85Hz Client Computer Recommended resolution should be higher than resolution on host computer
Connections	Video and Mouse Synchronization Both auto and manual modes
Ethernet	RJ45 – 10/100 Mbit/sec auto sensing
Serial	N/A
Local KVM Connection	N/A
Computer / Switch Connection	Screen HDD15, Keyboard/Mouse – MiniDIN6 3 in 1 cable 60cm
Dimensions	31H x 80D x 105W mm / 1.2 x 3.15 x 4.13 in
Power Supply	Power Supply POE switch class 2 or midspan
Operating Temp.	Operating Temp. 0°C to 40°C / 32°F to 104°F



## KVM.net

Order Code	Description
CBLKVMNETU64UK	KVM.NET APPLIANCE SUPPORT UP TO 64 IP DEVICES
CBLKVMNETM64UK	KVM.NET APPLIANCE SUPPORT 64 PLUS IP DEVICES
CBL0SU70018	PX - DIGITAL SERVER INTERFACE UNIT
CBL0SU70022UK	POE SWITCH 24 PORT
CBL0SU70023UK	POE MID SPAN 24 PORT

## DX Matrix System

In today's server environments IT managers are faced with increasingly elaborate hardware mixes, high-density rack installations, as well as complex server and user profiles, and the need for 24/7 uptime and maximum scalability. These complexities call for a comprehensive and unified management system – a system that is more than just another KVM switch. Minicom answers this call, and presents the innovative DX matrix system, designed for advanced multi-functional, unified out-of-band management based on state-of-the-art CAT5 technology.

The DX matrix system combines four major functions in one unified solution:

- KVM switching and control
- Serial control
- Power management
- User management

The DX system unifies these four functions using AIM

AIM (Advanced Integrated Manager), is a LINUX based, innovative embedded program that supplies advanced management functionality in a hardware-only solution. AIM combines the management of all four major functions within a single intuitive, Windows-like interface, for truly unified administration of your server environment.

The DX matrix system gives you a highly secure, integrated, flexible and supremely scalable solution for 24/7 BIOS-level control and management of high-density mission critical server environments through:

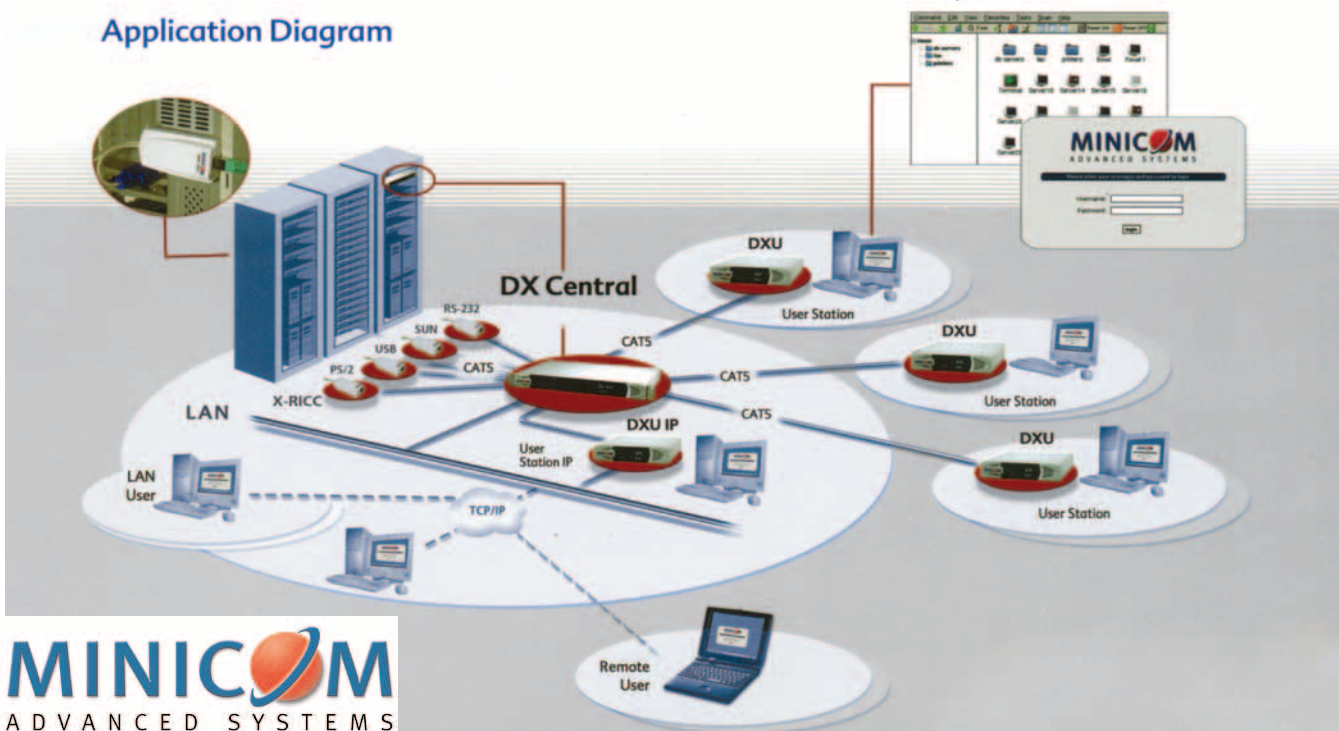
- Unified, One-stop, local and remote control.
- Revolutionary embedded management functionality in a pure hardware solution.
- High-level security.
- Multi-functional, multi-user, multi-platform matrix solution.
- Seamless cascading.
- State-of-the-art CAT5 all-the-way technology.
- Maximum business value & ROI.

### One-stop Local and Remote Control

The DX system manages all KVM and Serial equipment centrally, eliminating redundant management effort, and saving you time and money in your corporate high-density server environment. And through flexible remote IP access, the DX system enables you to control your server installation from anywhere in the world, at any time, further reducing overhead and administration costs.



### Application Diagram



## DX Matrix System Features

### Powerful Management

Minicom revolutionizes out-of-band management with the power of AIM. Using AIM, your server environment benefits from out-of-band BIOS level access combined with advanced management functionality in a pure hardware solution. AIM enhances and simplifies your administration capabilities through:

- Intuitive, Windows-like GUI replacing the traditional OSD.
- Comprehensive management of all KVM and Serial hardware in the data center.
- Multi-layer user administration.
- Multi-level security access control.

### Multi-Functional, Multi-User and Multi-Platform

The growing server environment and its ever-increasing data requirements call for a clutter-free, powerful and centralized multi-functional matrix solution. The DX matrix system is the optimal solution for the server environment challenge, meeting today's needs and preparing for future scalability. Features include:

- Non-blocking control of multiple users for thousands of servers.
- Mixed multi-platform support: PS/2, SUN, USB and RS232.
- Flexible remote IP access: fit the IP mix to your needs and add IP users as your business grows.
- Built-in local computer access at every user station.
- CAT5 all-the-way technology, from server to user.

### Seamless Cascading

The DX system's seamless cascade of additional switch layers allows you to add multiple servers that are monitored and controlled from the same interface, regardless of their physical connection. Minicom's embedded AIM solution automatically recognizes the additional layers of DX systems, streamlining setup of additional switches. There is no single point of failure - system settings and parameters are saved on all DX central units. With seamless cascading, your DX system grows with your needs while keeping the same straightforward management approach.

### High-Level Security

Security is key to your server environment's performance. The DX system's multiple layer security protection with user-name and password authentication includes up to 32 user profiles for hundreds of users, and 4 levels of user access rights for increased protection. In addition, DX's innovative technology includes double authentication of access rights through port and server recognition, for an exceptionally secure system.

## Technical Specification

### DX System






Operating Systems	DOS, Windows (3x, 9x, ME, NT4, 2000, XP, 2003 Server and later), Linux, UNIX, HP UX, QNX, SGI, FreeBSD, BeOS, Open VMS, Novell 3.12-6, Solaris, Java Desktop System
Resolution	1600 x 1200 @ 75Hz
User to server distance	200m / 660ft
System Cable	CAT5, CAT6, CAT7
Operating temp.	0°C to 40°C / 32°F to 104°F
Storage temp.	-40°C to 40°C / -40°F to 104°F
Security	Password, multiple-user profiles
Management	AIM (Advanced Integrated Manager), RS-232 Control software
Mouse Support	PS/2, Wheel mouse, 5-button mouse, Microsoft intellimouse
Warranty	3 Years

	DX Central Unit	DX User Unit	DXU IP
Cables/Connectors	Computer Ports-32 RJ 45	System - RJ45	System - RJ45
	Users Port - 4/8 RJ45	Local Console and CPU	Local Console and CPU KVM + Serial
	Serial Ports - 2 x DB9	Video - HDD15	Video - HDD15
	LAN - RJ45	Keyboard /Mouse - MiniDin6	Keyboard /Mouse - MiniDin6
	Power	Serial - 2 x DB9 DB9	
		Power	Power
		2XUSB (Future Application)	2XUSB (Future Application)
			LAN - RJ45
Rack Mountable	Yes	Yes	Yes
Dimensions	43.2x27x4cm / 17x11x1.6"	21.6x27x4 / 8.5x11x1.6"	43.2x27x4 / 17x11x1.6"
Power Consumption	100-250 VAC 50/60 Hz	100-250 VAC 50/60 Hz	100-250 VAC 50/60 Hz

### Technical Specification (continued...)

	RICC PS/2	X RICC PS/2	X RICC SUN	X RICC USB	X RICC RS232
Server to DX Central Distance	10m/33ft	100m/330ft	100m/330ft	100m/330ft	100m/330ft
Cables/ Connectors	System - RJ45	System - RJ45	System - RJ45	System - RJ45	System - RJ45
	Video - HDD15	Video - HDD15	Video - HDD15	Video - HDD15	Power - Jack
	Keyboard/Mouse	Keyboard/Mouse	Keyboard/Mouse	Keyboard/Mouse	Power - Jack
	MiniDin6	MiniDin6	MiniDin8	USB	Power - Jack
					Power - Jack
Rack Mountable	Yes	Yes	Yes	Yes	Yes
Power Supply	From Keyboard	From Keyboard	From USB	From USB	Power Adapter
Dimensions	24x91x41mm / 0.94x3.58x1.61"	24x91x41mm / 1.05x3.58x1.77"	24x91x41mm / 1.05x3.58x1.77"	24x91x41mm / 1.05x3.58x1.77"	24x91x41mm / 1.05x3.58x1.77"

### DX System Part Codes

Order Code	Description	
CBLOSU60002	DX 432 CENTRAL UNIT 4 USERS 32 CPU'S	    
CBLOSU60003	DX 832 CENTRAL UNIT 8 USERS 32 CPU'S	
CBLOSU60001	DXU USER UNIT WITH LOCAL PC PS/2 CONNECTION	
CBLOSU60004	DXU IP USER UNIT WITH LOCAL PC PS/2 + IP CONNECION	
CBLODT23018	DX SERVER DIRECT - EMERGENCY CON DIRECT TO XRICC	
CBLOSU51059	XRICC PS/2 CABLE	
CBLOSU51050	XRICC USB CABLE	
CBLOSU51051	XRICC SUN CABLE	
CBLOSU51052	XRICC RS232 CABLE	
CBL0SU51066	RICC PS/2 FOR DX SYSTEM	

### Rack Director

The Rack Director is a true 1U display console that allows you to control any number of servers from one location. The space requirement is dramatically reduced as there's no need to house separate monitors and keyboards. With a number of features listed below the Rack Director is the perfect complement to any comms room.

- Unique Dual slides for flatpanel & for keyboard
- On Screen Display (OSD) on LCD Display
- 105 keys ps/2 keyboard with easy glide touchpad
- Power LED indicator
- Keylock mechanism
- 3 power on/off feature
- 3 in 1 flex cable-- Bright Active Martrix TFT Display
- Compact, Low Profile
- DB-25 Keyboard/Mouse/Video input
- Hidden Handle for keyboard Tray
- Subject to lead time and minimum order quantity. Can be supplied with 8 port and 16 port KVM switch



Order Code	Description
1U17TFT0KVM	1U 19" Rack Director display console with 17" viewing area - no KVM Switch
1U15TFT0KVM	1U 19" Rack Director display console with 15" viewing area - no KVM Switch

# Remote Power Switch

Order Code	Description
CBLOSU60005	DX POWER SWITCH MASTER IP 8 PORT
CBLOSU60006	DX POWER SWITCH SLAVE 8 PORT S SERIAL ONLY
CBLOSU60007	DX 4 PORT DESK TOP POWER SWITCH
CBLOSU60009	DX 1 PORT DESK TOP POWER SWITCH
CBL5AC00263	USB STICK FOR FIRMWARE UPGRADE - DXU/DXU IP



## Product Overview

### Complements your remote access capabilities

The Remote Power Switch (RPS) allows remote power management of your data center over the internet. The switch is ideal for powering and rebooting servers and other devices in data centers and server farms. The two-in-one Remote Power Switch also performs environmental monitoring of the server room.

The Remote Power Switch is part of a comprehensive remote management solution for the modern data center. It adds to your existing remote access capabilities, saving you the time and cost of visiting geographically remote sites. It gives you the necessary functionality to complete remote operations that require you to reboot the server, complementing out-of-band remote access to servers and devices from your KVM switching systems.

### Manage up to 128 servers and devices remotely

There are three configurable modes of shutdown operations: instant shutdown, safe shutdown, and safe reboot. You can power up, power down, and reboot up to 128 connected servers and devices from anywhere over the Internet. You can easily configure power settings of the sockets via the Remote Power Switch web interface.

### Environmental monitoring

The environmentally aware power switch monitors temperature and humidity to protect your rack or server room from extreme, and possibly damaging, conditions. Temperature and humidity triggers can be configured to send administrative alerts or to perform a power operation under specified conditions. For example, you can configure the remote power switch to regulate the temperature in the room if it exceeds a specified trigger.

## Features and Benefits

- Two-in-one power management and environmental monitoring
- Power UP and Power DOWN devices via any browser
- Monitor temperature and humidity
- Control up to 128 devices
- Safe shutdown mode
- Customizable alerts & timers

## Technical Specifications

	Remote Power Switch Manager	Remote Power Switch Slave
LAN Interface	RJ45; 10/100M Auto Detect	N/A
Modem	RS232	N/A
Environmental	RJ11	N/A
Reset Button	Yes	N/A
Link Interface	2 x RJ11, connection to cascaded unit	
Safe Shutdown	8 x RJ11	
Power Control	2 AC inputs each feeding 4 outputs	
Input	2 input connectors IEC320P	
Output	8 x IEC320R	
Power Protection	7 Amp circuit breaker	
LEDs - Red	On/Off status 1 LED for each outlet	
LEDs - yellow	Indicates the ID no. of iLink cascade - 16 LEDs	
Nominal input voltage	220V model and 110V model	
Frequency	50/60HZ full range	
Maximum output capacity	2 x 7 Amp	
Operating Temperature	0°C to 40°C / 32°F to 104°F	
Storage Temperature	-40°C to 40°C / -140°F to 104°F	
Relative humidity	0 - 95% non - Amp circuit breaker	
Dimensions (H x L x D)	4.4 x 43.1 x 16.2 cm / 1.73 x 16.96 x 6.37	
Weight	2.5 kg / 5.51 lb	
Regulatory compliance	FCC	

# IP Control

Order Code	Description
CBL5AC00297	IP CONTROL DEST BRACKET
CBL0SU70017UK	IP CONTROL



## Product Overview

### Secure Web-based KVM access

IP Control is an affordable hardware device designed to give you web-based access and management of computers, from any location in the world, at all times. Desk-mountable and small enough to fit in the palm of your hand, IP Control features 128-bit SSL security, and is adaptable for use in single PC's/servers, small to medium size data centers, and digital signage installations.

### BIOS level remote support for mission-critical PC's

IP Control is an indispensable tool for disaster recovery and remote KVM support in single PC, mission-critical scenarios - where every second of computer downtime can cause harm to business, human safety or health. IP Control gives you instant web-access to your PC's BIOS level - saving you critical downtime minutes, and reducing the cost and inconvenience of employing field technicians.

### Safeguards your KVM investment

IP Control is equally at home in small to medium size data centers that use a mix of legacy KVM switches to operate their IT infrastructure. Designed for compatibility with any brand of installed KVM switch or server, IP Control seamlessly adds-on remote, out-of-band KVM and Serial access while safeguarding your existing KVM investment.

### Superior video & mouse performance

Featuring proprietary technology, IP Control provides superior video quality and mouse control over LAN, WAN and Internet. The remote user's KVM experience looks and feels local even while it's over an Internet TCP/IP connection.

### Remote Serial control

In addition to KVM, IP Control has a built-in Serial port for remote access to power management switches, routers, headless servers and other useful Serial devices.

### Digital signage remote player control

IP Control also plays a vital role within the digital signage world, providing remote management and monitoring of PC media players. It commands in real time, and with virtually no extra cost, the distribution of media content on any number of players and enables troubleshooting even when the operating system is down.

## Features and Benefits

- Affordable, desk-mountable remote KVM access solution
- Web-based BIOS level access to mission-critical PC's & servers
- Ideal for remote KVM support & disaster recovery
- Superior remote video quality & mouse control
- Redundant out-of-band access for added back-up
- Compatible with any KVM switch - safeguards existing KVM investment
- Secure, 128-bit SSL encryption for total system defense
- Remote Serial access to power switches/routers/headless servers
- Adaptable for single PC's, small-medium data centers, and digital signage

## Technical Specifications

<b>Operating systems</b>	Host Computer: Dos, Windows, Novell, Linux, SUN Solaris for PC	Client Computer: Windows 2000 computer with IE 6.0 or higher and ActiveX
<b>Resolution</b>	Host Computer: Up to 1600x1200 @85Hz	Client Computer: Recommended resolution should be higher than resolution on local computer
<b>Video and Mouse Synchronization</b>	Both auto and manual modes	
<b>Connections</b>	Ethernet - RJ45 - 10/100 Mbit/sec autosensing Serial - RJ45 Local KVM connection - Screen HDD15, Keyboard/Mouse - MiniDIN6 Computer / switch connection - Screen HDD15, Keyboard/Mouse - MiniDin6 3 in 1 Cable 1.8m (supplied with system)	
<b>Weight</b>	0.2kg / 0.45lb	
<b>Dimensions</b>	3H x 10D x 8Wcm / 1.1 x 3.9 x 3.1in	
<b>Power supply</b>	External power adapter 3.3VDC 2A	
<b>Operating Temperature</b>	0°C to 40°C / 32°F to 104°F	

# Supervisor Smart

Order Code	Description
CBLOSU21018	SUPERVISOR SMART 2 PORT DESKTOP
CBLOCL61031	MULTIMEDIA VIDEO SCALER
CBLOSU21020	SUPERVISOR SMART 4 PORT DESKTOP
CBL5AC10170	DESK BRACKET FOR VIDEO DISPLAY-B/CAST-LINE SPLIT
CBL5AC00215	HD D15F TO 3 RCA ADAPTOR
CBL5AC00216	HD D15M TO 3 RCA ADAPTOR



## Product Overview

Now you can benefit from KVM technology in your office or home thanks to Minicom's miniature desktop switches, the Supervisor Smart 2 and the Supervisor Smart 4. Powerful, compact and easy to install and operate use the Smart to access, monitor and control up to four computers all from a single workstation. Not only will you save money by eliminating excess equipment, you'll also free up valuable desk space.

### Ideal for Small to Medium Office Environments

The desktop Supervisor Smart comes in two models: a 2 port (Smart 2) and 4 port (Smart 4). Both models are made of sturdy metal casing and are specially designed to save desktop space. The Smart 2 is almost as small as a deck of cards and the Smart 4 is desk mountable or rack mountable.

## Features and Benefits

- Save money, space and energy by eliminating excess equipment
- Ideal solution for small to medium office environments
- High video resolution - 1920 x 1440 @ 75Hz
- Pure hardware solution - No software required
- Instant plug-and-play installation
- Supports Windows, UNIX, LINUX, NOVELL operating systems
- No external power supply needed
- Switch between computers via push-button or keyboard hotkey
- All cables included
- 3 year warranty

## Technical Specifications

Model	Smart 2	Smart 4
Workstations	1	1
Number of Computers	2	4
Mouse Support	PS/2, Wheelmouse, Microsoft Intellimouse	PS/2, Wheelmouse, Microsoft Intellimouse
Platforms	IBM Compatible, PS/2 (SUN with external adapter)	IBM Compatible, PS/2 (SUN with external adapter)
Operating Systems	Windows (3.1, 9x, 2000, NT4, ME, XP), Unix (HP UX, Alpha, SGI, Open VMS), Novell, Linu9x, QNX, FreeBSD, BeOS	
Resolution	1920X1440 @ 75Hz	
Cables	VGA - HDD15M/F KB/Mouse - MiniDin6M MiniDin6M MiniDin6M	3 in 1 CPU cable (KB/Video/Mouse)
Rack & Desk Mountable	No	Yes
Product Dimensions	24Hx72Dx127Wmm / 0.94Hx2.83Dx5W"	44Hx95Dx170Wmm / 1.73Hx3.74Dx6.69W"
Package Dimensions	90Hx175Dx301Wmm / 3.5Hx6.9Dx11.9W"	105Hx250Dx330Wmm / 4Hx10Dx13W"
Weight	0.3kg/0.7lb	0.6kg/1.3lb
Shipping Weight	1.3kg/2.9lb	2.5kg/5.5lb
Power Consumption	60mA	120mA
Power Supply (optional)	6V 2A	
Operating Temperature	0° to 40°C / 104°F	
Storage Temperature	-40°C to 40°C / -40°F to 104°F	
Warranty	3 Years	

## CAT5 IP Switches And Remote Access

Order Code	Description
CBLOSU51070	SMART 16IP PROM BY THE SWITCH 6 RICC'S FOC-5U+ P/O
CBLOSU22007	SMART CAT5 SWITCH 16PT STARTER KIT 8 RICC'S PS/2
CBLOSU22006	SMART CAT5 SWITCH 8PT STARTER KIT 4 RICC PS/2
CBLOSU51023	RICC PS/2 CONNECTION CABLE
CBLOSU51024	RICC USB CONNECTION CABLE
CBLOSU51025	RICC SUN CONNECTION CABLE
CBLOSU21032	SMART IP LINK
CBLOSU22002	SMART CAT5 SWITCH 8 PORTS
CBLOSU21025	SMART IP 16 PORT KVM SWITCH
CBLOSU22003	SMART CAT5 SWITCH 16 PORTS
CBL5CB10413	3 IN 1 CPU CABLE FOR SMART 4 PORT
CBL5AC20201	RACK MOUNT BRACKET FOR SMART 4 PORT
CBL5PS20025	SWITCHING POWER SUPPLY FOR SMART 2/4 PORT
CBL5AC20200	DESK MOUNT BRACKET FOR SMART 4 PORT TWIST STUDENT



### Product Overview

#### Smart CAT5 Switches

The line of 8 port and 16 port single user Smart CAT5 Switches is Minicom's next-generation line of powerful, compact, cutting-edge, cost-effective rack mountable KVM switches. The sleek, 1U sized Smart CAT5 line features CAT5 cable to eliminate cable clutter, and powerful on-screen display control and management. The Smart CAT5 Switches support 8 or 16 computers, hundreds when cascaded, letting you control and operate your server room racks with just one keyboard, monitor and mouse!

Rack mounting kit included with all models.

#### Innovative RIC Cables

Buy platform-specific Minicom RIC (Remote Interface Connection) cables to support PS/2, SUN, and USB, as and when you need them.

### Features and Benefits

- Powerful — control 8 or 16 computers from one KVM console
- New RIC (Remote Interface Connection) cable technology
- Extend distance — between computer and switch up to 10 m/33ft.
- Rack mountable — sleek, 1U space saving KVM switches
- Innovative CAT5 technology — eliminate cable clutter at the rack
- Multi-layer security — protects your corporate data
- Better server management — choice of On Screen Display, serial port or push button control
- Multi-platform - PS/2, SUN, and USB support
- 3 year warranty

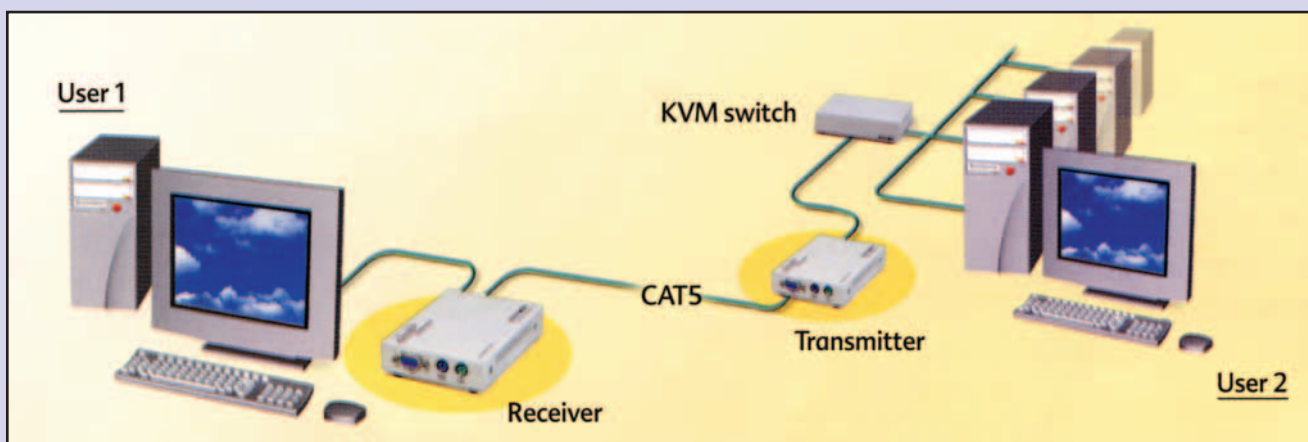
### Technical Specifications

<b>Switch Unit</b>	
<b>Operating System</b>	Dos, Windows (3.1, 9x, 2000, NT4, ME, XP, 2003 Server) Linux, Unix, QNX, SGI, FreeBSD, BeOS, Open VMS, Novell 3.12-6, Alpha UNIX, HP UX, SUN
<b>Mouse</b>	PS/2, Wheel mouse, Intellimouse, 5-button mouse
<b>Number of Ports</b>	8, 16
<b>Resolution</b>	Up to 1600x1200@75Hz
<b>Maximum Distance</b>	10m/33ft
<b>System Cable</b>	CAT5 FTP or UTP 2x4x24 AWG solid wire
<b>Connection:</b>	
<b>System</b>	RJ45
<b>Serial</b>	RJ11
<b>Local KVM</b>	HDD15/MiniDin6/MiniDin6
<b>Management</b>	OSD, Hot Key, Push Button, Serial
<b>Weight</b>	Product - 1000g/2.2lbs Shipping - 1950g/4.22lbs
<b>Dimensions</b>	Product - 215x122x41.5mm / 8.44x4.34x1.62in Shipping - 240x150x115mm / 9.46x6.36x5.57in
<b>Power Supply</b>	85 - 265 VAC 50/60 Hz
<b>Operating Temperature</b>	0°C to 40°C / 32°F to 104°F
<b>Storage Temperature</b>	-40°C to 70°C/-40°F to 158°F
<b>Warranty</b>	3 years



# Cat5 Smart KVM Extender

Control your computer or KVM switch up to 110 metres away



- Dual-user function - double the power of your computer by allowing 2-user access
- 2 port KVM switch function
- Advanced CAT5 technology - low density cabling that is easy to install
- Supports high resolution video 1600x1200 @ 75Hz
- Pure hardware solution - software/network independent
- Sturdy metal casing
- **3 Year Warranty**

Minicom's new generation Smart KVM Extender enables controlling a computer or KVM switch up to 110m/360ft away by extending the KVM console. This makes it a good solution for accessing computers centralized in one secure, environmentally controlled location such as those in financial institutions. A major feature of the new system is its advanced CAT5 technology. The thin CAT5 cable is easy to install and eliminates troublesome cable clutter.

## From SOHO Environments To Industrial Applications

More than an extender, the Smart KVM Extender is actually a multifunctional system that performs three tasks all in one: extension, dual-user access and 2 port KVM switching. The dual user feature enables two users to access the same computer making work more efficient.

As a 2-port KVM switch one user can switch between and control two computers and a second user can control one computer. This makes it an ideal solution for storage, industrial applications and Small Office Home Office (SOHO) environments (i.e. boss and secretary).

## Quick Plug-and-Play Installation

The Smart KVM extender is comprised of two units which are easy to install: a transmitter and a receiver. Both are made with sturdy metal casing. The transmitter (which comes with built-in KVM cabling) connects to the computer and the receiver connects to a KVM console. All it takes is a few seconds. A button on the receiver unit makes it simple to switch between remote and local computers.

## Specifications:

System Cable	CAT5 FTP Cable	
Maximum Distance	110m/360ft	
Mouse Support	PS/2, Wheelmouse, 5 - button mouse	
Operating Systems	DOS, Windows (3x, 9x, 2000, NT, ME, XP), Linux, UNIX, HP UNIX, QNX, SGI, FreeBSD, BeOS, Open VMS	
Management	Push button or hot-key	
Resolution	Up To 1600x1200 @ 75Hz depending on cable length	
Operating Temperature	5° to 50°C / 41°F to 148°F	
Storage Temperature	-40°C to 70°C / -40°F to 158°F	
Shipping Weight	1750g/3.9lb	
Order Number	0DT23001 (Transmitter & Receiver)	
Warranty	3 Years limited	
Cables & Connectors	<b>Transmitter</b>	<b>Receiver</b>
	VGA - HDD15F	VGA - HDD15F
	KB - MiniDin6F	KB - MiniDin6F
	Mouse - MiniDin6F	Mouse - MiniDin6F
Power Consumption	System - RJ45	System - RJ45
	KVM cable - Built In	Standard KVM cable (Included)
	240mA from computer (or external power supply)	External Power Adapter 6VDC 2A
Dimensions	85x113x25mm/ 3.3x4.4x1in	85x149x25mm/ 3.3x5.9x1in
	Weight	400g/0.9lb

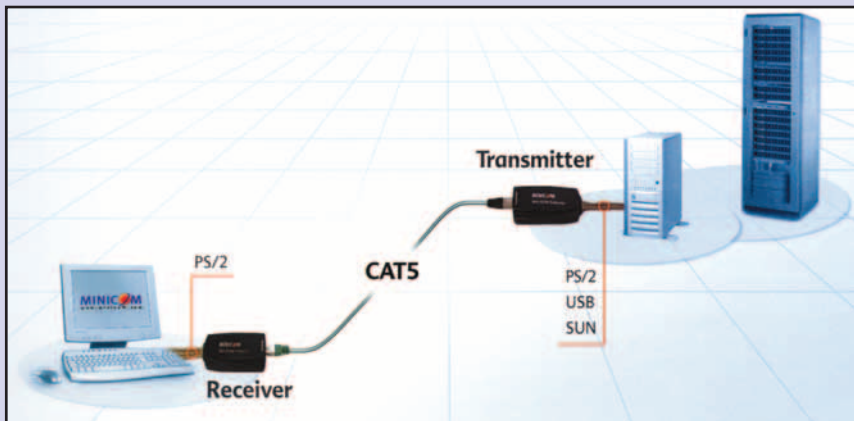


## Extender

Order Code	Description
CBL0DT23001	CAT5 SMART KVM EXTENDER

# Mini KVM Extender

Control your computer or KVM switch up to 70 metres away



- Maximize your investment - Perfect add-on for existing KVM switch installations
  - Extend KVM console 70m/230ft from server room, rack or KVM switch
- Tighter security - Look after your investment, store computers in locked, environmentally controlled rooms
- Easy to install - Simply plug and play
- Multi-platform support - PS/2, USB, SUN
- Micro sized - Smallest form factor for sleek Transmitter and Receiver units. Once installed you won't even know they exist!
- KVM-over-CAT5 technology - Low cost, low density, standard CAT5/6/7 cable
- Pure hardware - No software conflicts, network independent
- No compatibility issues - Connect and control through any of Minicom's wide range of KVM solutions
- **Peace of mind with Minicom's 3-year warranty**

The Mini KVM Extender is an affordable solution for extending your KVM console from your computer or KVM switch to remotely control and run applications at a distance of up to 70m/230ft away over clutter free CAT5/6/7 cable.

## Tailored for every need

If you're working from a small home office (SOHO), the Mini KVM Extender is the preferred extended control solution - just place the KVM console where you want and the computer where you need and you're all set to go!  
For industrial applications such as manufacturing lines or clean rooms, the Mini KVM Extender provides maximum safety and security allowing you to place computers and servers in a single centralized location, away from any production hazards.

## Secure, Flexible, Affordable

IT managers seeking extended access to server rooms in a tightly secured environment will find the Mini KVM Extender particularly efficient and easy to use. Ideal also for presentation and training applications, the Mini KVM Extender provides flexibility and security coupled with highly attractive pricing.

## Compact Solution

The Mini KVM Extender is made up of 2 micro sized, compact units: the Transmitter unit that connects to the computer and the Receiver unit that connects to the KVM hardware. The Mini KVM Extender is a pure hardware solution making it both software and network independent. The Mini KVM Extender connects a PS/2 console to any platform - PS/2, USB and SUN.

## Specifications:

System Cable	CAT5/6/7 cable 2x4x24 AWG Solid Wire
Maximum Distance	70m/230ft
Mouse Support	2 or 3 or 5 button PS/2, Wheelmouse, Intellimouse Explorer
Operating Systems	All major operating systems
Resolution	Screen resolution Up to 1600 x 1200 @ 75Hz (depends on cable length)
Operating Temperature	0°C to 40°C / 32°F to 104°F
Storage Temperature	-40°C to 70°C / -40°F to 158°F

	Transmitter	Receiver
Cables & Connectors	Built-in KVM System - RJ45	VGA - HDD15F Keyboard - MiniDin6F Mouse - MiniDin6F System - RJ45
Power Consumption	From connected computer	External power adapter 5VDC
Dimensions	89 x 46 x 25.3mm / 3.5 x 1.8 x 0.9"	89 x 46 x 25.3mm / 3.5 x 1.8 x 0.9"
Shipping Weight	550g	550g

## Ordering Information:

	Order No.	
	110V	220V
Mini KVM Extender PS/2	ODT23008A	ODT23008
Mini KVM Extender SUN	ODT23009A	ODT23009
Mini KVM Extender USB	ODT23010A	ODT23010

## Extenders

Order Code	Description
CBL0DT23008	MINI KVM EXTENDER PS/2
CBL0DT23011	USB EXTENDER
CBLOVS22013	CAT5 RS232 EXTENDER
CBL0DT23009	MINI KVM EXTENDER SUN
CBL0DT23010	MINI KVM EXTENDER HUB
CBL5AC00265	MINI KVM EXTENDER MOUNTING HUB
CBL0DT22015	DUET TWP CENTRAL/REMOTE LONG RANGE SET PS/2
CBLOVS24001	12V POWER SUPPLY FOR RS232 EXTENDER OVER 300M
CBL0DT50002UK	KEYBOARD VIDEO MOUSE AND SERIAL EXTENDER



CAT5 SMART KVM EXTENDER



CAT5 RS232 EXTENDER



MINI KVM EXTENDER

## LevelOne CamCon Video Server

The LevelOne CamCon Video Server (CVS) is a digital network-based monitoring system. It cooperates with existing CCTV devices. The LevelOne CamCon Video Server can operate as part of an existing IP-monitoring system as well as single IP-monitoring system. Authorized users can watch camera pictures via webbrowser, store real-time videos or play stored videos. The flexible architecture of the device allows easy integration of available cameras, alarm- and access-control-systems of other manufacturers. The CVS are qualified as professional and easy to install monitoring solution for companies, production plants or in public buildings.



- BNC composite video input PAL/NTSC auto-sensing
- Resolutions: 160x120, 320x240, 640x240, 640x480 pixel
- 5 selectable compression rates
- Display: via IE-browser (Windows 98,ME, 2000,XP) 5.0 or higher
- Single channel, four channels, Picture-In-Picture mode,
- 4/8 channels at the same time
- Storing as AVI while playback
- Supports remote storing under Windows 98/ME/2000/XP, Linux/Unix, FTP, NAS
- Motion-detection with selectable sensitivity that causes a 30 second recording
- Event-actions: recording, snapshot, e-mail, mobile phone SMS, audio warning alarm

- Sequential mode, video dimension (1xmode, 2xmode, full screen mode)
- Multiple playback speed (1x, 2x, 4x, 8x, 16x, 1/2x, 1/4x, 1/8x, 1/16x speed)
- Video-compression: motion JPEG (supports multicast)
- Supports two different storage places
- One RS232 and one RS485 Port (for P/T/Z control)
- Event-handling: multiple interval, motion detection, video input loss, network fail, systemfail, storage full

Order Code	Description
CBLFCS-9004	CamCon Software for 4 CVS
CBLFCS-9002	CamCon Software for 2 CVS
CBLFCS-9000	CamCon Software for unlimited number of CVS
CBLFCS-5008	8 channel camera server
CBLFCS-5004	4 channel camera server

## LevelOne CamCon IP Network Camera

The LevelOne CamCon IP Network Cameras provide live pictures via internet. The cameras are directly connected to the network, either wireless or with RJ45 patchcord. You can get access from any PC of the network or you can monitor worldwide via Web browser.

- Complies with IEEE802.3, IEEE802.3u and IEEE802.11b/g (WCS-2030) / supported protocols: SMTP, HTTP, TCP/IP, DHCP, NTP
- MPEG-4 video compression
- User authentication ensures from unauthorized access
- E-mail alerts by motion detection

- Resolution: 160X120, 320X240, 640x480
- Shows live pictures from any PC via LAN or internet
- Built-in web server/ ethernet interface, no extra PC necessary
- Scheduled recording utility for Windows
- Supports DDNS for dynamic IP addresses
- User friendly web-based management

Order Code	Description
CBLFCS-1030	1 x 10/100Mbps, CMOS, MPEG 4 FCS-1020 1 x 10/100Mbps, MJPEG FCS-1010 10/100Mbps + Audio, 4xDigital Zoom, CCD, MPEG
CBLFCS-1040	10/100Mbps + 2-Way Audio, 10xDigital Zoom, 10xOptical Zoom, CCD MPEG 4, MJPEG
CBLWCS-2010	10/100Mbps + Wireless 54Mbps + Audio, 4xDigital Zoom, CCD, MPEG 4
CBLWCS-2030	1 x 10/100Mbps + Wireless 54Mbps + Audio, CMOS, MPEG 4
CBLFCS-3000	10/100Mbps + 2way Audio, CCD with IR Len, MPEG 4, MJPEG, 10x digital zoom, 10x optical zoom, Indoor/Outdoor, Day/Night, Vandalproof



CBLFCS-1030



CBLFCS-1040



CBLWCS-2010



CBLWCS-2030



# Quality & Price it's in the box

**Today's competitive markets require cost effective products that deliver the right solution. Cooper B-Line introduce EC, a 19" cabinet system designed to give users a practical, yet highly versatile cabinet that meets the needs of the most demanding applications.**

Incorporating common features such as adjustable 19" mounting angles and fitted with jacking feet as standard, the EC range offers a configurable top panel system and also provides an open base design to promote trouble free installation. Externally the cabinet can be fitted with a range of options including side panels, plain steel doors, vented glazed doors and vented steel doors all designed to offer the flexibility to meet everyday requirements.

Furthermore, the EC design boasts excellent style and aesthetics, built to the high quality standard our customers have grown to expect over the years from Cooper B-Line.

The best news of all – you'll find the range very competitively priced.

## EC 19" Cabinet

- Networking / Cabling
- Server Housing
- 19" Electronic Equipment Housing
- Communication Systems
- IT Systems

## Benefits

- 5 height variations
- 2 width options, 600mm and 800mm
- 3 depths available, 600mm, 800mm and 1000mm
- Fully adjustable 19" mounting angles
- Configurable top panels
- Open base design with optional plinth
- Plain steel, vented steel and glazed door options
- Lockable lift off side panels
- Compatible with Cooper B-Line Access and Fusion Accessories
- Available either fully built or flat packed
- Available in standard Light Grey NCS 1502-Y or Black RAL 9005



Colour Variations



LIGHTING

# Lighting | KL025 Compact

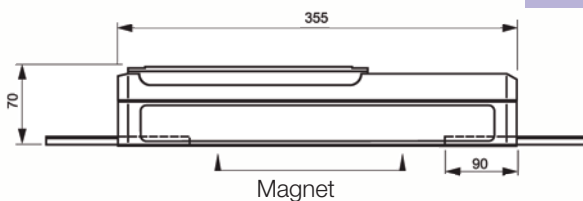
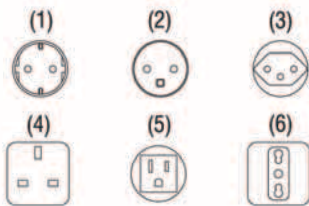
## Compact Lamp KL 025 Series

- Magnetic or optional DIN rail mounting
- Energy-saving lamp
- Lamp without/with electrical socket (choice of sockets)
- On/Off switch

The compact lamp KL 025 was especially designed for use in enclosures. A powerful magnet enables the lamp to be mounted freely in any desired position in metal enclosures saving time and installation problems. The integrated electrical socket allows the use of additional appliances.



Lamp shown with protective plastic cover (see Accessories)



In plastic, aluminium or stainless steel cabinets the lamp can be fixed using screws together with inserted 35mm DIN rail sections.

### Technical Data



Luminosity	900 Lm
Lamp type	compact fluorescent lamp with integral starter
Service life	5,000 h
Switch	on/off switch for lamp
Connection	3-pole terminal 2.5mm <sup>2</sup> with cable clamp, torque 0.8Nm
Mounting	magnet fixing
Casing	plastic, light grey
Dimensions	355 x 65 x 70mm
Weight	approx. 1.0kg
Fitting position	variable
Operating/Storage temperature	-20 to +50°C (-4 to +122°F) / -45 to +70°C (-49 to +158°F)
Protection type	IP20
Accessories	lamp cover, Art. No. 09520.0-00 (see photo)

### Product Information

Order Code	Operating Voltage	Socket	Power consumption	Nominal Current	Protection class	Approvals
KL02500	230VAC, 50Hz	Germany (1)	11W (equals 75W light bulb)	16.0A	I (earthed)	VDE
KL02507	230VAC, 50Hz	none	11W (equals 75W light bulb)	-	II (double insulated)	-
KL02501	230VAC, 50Hz	France/Poland (2)	11W (equals 75W light bulb)	16.0A	I (earthed)	-
KL02502	230VAC, 50Hz	Switzerland (3)	11W (equals 75W light bulb)	10.0A	I (earthed)	-
KL02510	230VAC, 50Hz	UK/Ireland (4)	11W (equals 75W light bulb)	13.0A	I (earthed)	-
KL02512	230VAC, 50Hz	Italy (6)	11W (equals 75W light bulb)	16.0A	I (earthed)	-
KL02505	120VAC, 60Hz	USA/Canada (5)	9W (equals 60W light bulb)	15.0A	I (earthed)	-
KL02506	120VAC, 60Hz	none	9W (equals 60W light bulb)	-	II (double insulated)	-

## Slimline Lamp SL 025 Series with On/Off switch

- Slim casing
- Electronic ballast
- Lamp without/with electrical socket (choice of sockets)
- Magnet fixing (option)
- Energy saving lamp
- On/Off switch

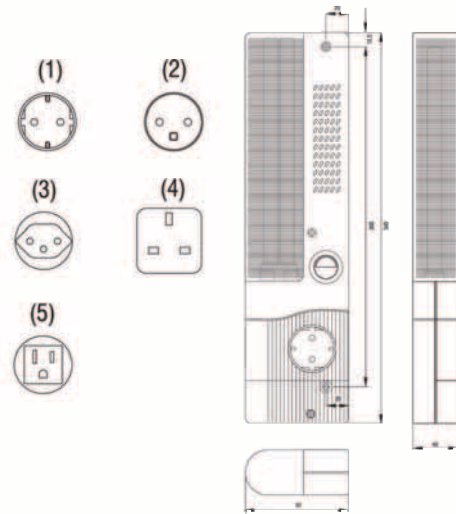
The flat slimline lamp SL 025 is suitable for all types of panels and enclosures, especially where space is at a premium. The lamp can be mounted on its narrow or broad surface using screws. It is also available with a magnet which allows it to be fitted quickly in any position in a steel enclosure. Both versions are available with an integrated electrical socket enabling the use of additional appliances.

### Technical Data



Power consumption	11W (equals 75W light bulb)
Luminosity	900Lm
Lamp type	energy saving lamp, 2G7 socket
Service life	10,000h
Switch	on/off switch for lamp
Connection	terminal 2.5mm <sup>2</sup> with cable clamp, clamping torque 0.8Nm
Mounting	screw fixing, M5, 300mm centres magnet fixing (optional)
Casing	plastic according to UL94 V-0, light grey
Dimensions	345 x 91 x 40mm
Fitting position	narrow surface/broad surface
Operating/Storage temperature	-20 to +50°C (-4 to +122°F) / -45 to +70 °C (-49 to +158 °F)
Protection type	IP20
Note	24VDC to 48VDC on request

**Slimline lamp with on/off switch, with integrated electric socket (Germany), Art. No. 02520.0-00**



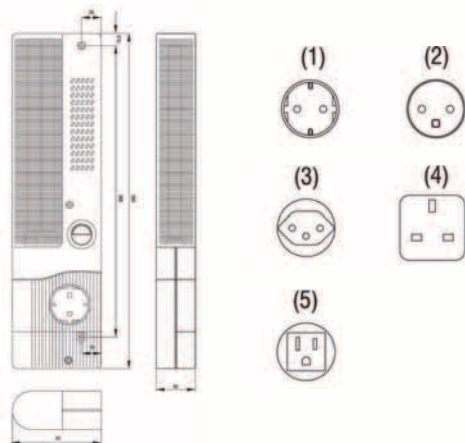
The slimline lamp SL 025 is also available with a 19" front panel.

### Product Information

Order Code	Model	Operating Voltage	Socket	Nominal Current	Weight (approx.)	Protection class	Approvals
SL025200N	without magnet	230VAC, 50/60Hz	Germany (1)	16.0A	0.40kg	I (earthed)	VDE
SL025200	with magnet	230VAC, 50/60Hz	Germany (1)	16.0A	0.60kg	I (earthed)	VDE
SL025201N	without magnet	230VAC, 50/60Hz	France/Poland (2)	16.0A	0.40kg	I (earthed)	VDE
SL025201	with magnet	230VAC, 50/60Hz	France/Poland (2)	16.0A	0.60kg	I (earthed)	VDE
SL025202N	without magnet	230VAC, 50/60Hz	Switzerland (3)	10.0A	0.40kg	I (earthed)	VDE
SL025202	with magnet	230VAC, 50/60Hz	Switzerland (3)	10.0A	0.60kg	I (earthed)	VDE
SL025203N	without magnet	230VAC, 50/60Hz	UK/Ireland (4)	13.0A	0.40kg	I (earthed)	VDE
SL025203	with magnet	230VAC, 50/60Hz	UK/Ireland (4)	13.0A	0.60kg	I (earthed)	VDE
SL025204N	without magnet	120VAC, 50/60Hz	USA/Canada (5)	15.0A	0.40kg	I (earthed)	UL submitted
SL025204	with magnet	120VAC, 50/60Hz	USA/Canada (5)	15.0A	0.60kg	I (earthed)	UL submitted
SL025207N	without magnet	230VAC, 50/60Hz	none	-	0.40kg	II (double insulated)	VDE; UL submitted
SL025207	with magnet	230VAC, 50/60Hz	none	-	0.60kg	II (double insulated)	VDE; UL submitted
SL025208N	without magnet	120VAC, 50/60Hz	none	-	0.40kg	II (double insulated)	UL submitted
SL025208	with magnet	120VAC, 50/60Hz	none	-	0.60kg	II (double insulated)	UL submitted



Slimline lamp with movement sensor and with integrated electric socket (Germany), Art. No. 02520.0-03



The slimline lamp SL 025 is also available with a 19" front panel.

## Slimline Lamp SL 025 Series with movement sensor

- Slim casing
- Electronic ballast
- Lamp without/with electrical socket (choice of sockets)
- Magnet fixing (option)
- Energy saving lamp
- On/Off switch

The flat slimline lamp SL 025 with movement sensor is suitable for all types of panels and enclosures, especially where space is at a premium. The lamp can be mounted on its narrow or broad surface using screws. It is also available with a magnet which allows it to be fitted quickly in any position in a steel enclosure. Both versions are available with an integrated electrical socket enabling the use of additional appliances. The movement sensor substitutes a door contact switch.

### Technical Data



Power consumption	11W (equals 75W light bulb)
Luminosity	900Lm
Lamp type	energy saving lamp, 2G7 socket
Service life	10,000h
Switch	PIR movement sensor, approx. 6 min. fixed switch-on duration
Connection	terminal 2.5mm <sup>2</sup> with cable clamp, clamping torque 0.8Nm
Mounting	screw fixing, M5, 300mm centres magnet fixing (optional)
Casing	plastic according to UL94 V-0, light grey
Dimensions	345 x 91 x 40mm
Fitting position	narrow surface/broad surface
Operating/Storage temperature	-20 to +50°C (-4 to +122°F) / -45 to +70 °C (-49 to +158 °F)
Protection type	IP20
Note	24VDC to 48VDC on request

### Product Information

Order Code	Model	Operating Voltage	Socket	Nominal Current	Weight (approx.)	Protection class	Approvals
SL025200N-MS	without magnet	230VAC, 50/60Hz	Germany (1)	16.0A	0.40kg	I (earthed)	VDE
SL025200-MS	with magnet	230VAC, 50/60Hz	Germany (1)	16.0A	0.60kg	I (earthed)	VDE
SL025201N-MS	without magnet	230VAC, 50/60Hz	France/Poland (2)	16.0A	0.40kg	I (earthed)	VDE
SL025201-MS	with magnet	230VAC, 50/60Hz	France/Poland (2)	16.0A	0.60kg	I (earthed)	VDE
SL025202N-MS	without magnet	230VAC, 50/60Hz	Switzerland (3)	10.0A	0.40kg	I (earthed)	VDE
SL025202-MS	with magnet	230VAC, 50/60Hz	Switzerland (3)	10.0A	0.60kg	I (earthed)	VDE
SL025203N-MS	without magnet	230VAC, 50/60Hz	UK/Ireland (4)	13.0A	0.40kg	I (earthed)	VDE
SL025203-MS	with magnet	230VAC, 50/60Hz	UK/Ireland (4)	13.0A	0.60kg	I (earthed)	VDE
SL025204N-MS	without magnet	120VAC, 50/60Hz	USA/Canada (5)	15.0A	0.40kg	I (earthed)	UL submitted
SL025204-MS	with magnet	120VAC, 50/60Hz	USA/Canada (5)	15.0A	0.60kg	I (earthed)	UL submitted
SL025207N-MS	without magnet	230VAC, 50/60Hz	none	-	0.40kg	II (double insulated)	VDE; UL submitted
SL025207-MS	with magnet	230VAC, 50/60Hz	none	-	0.60kg	II (double insulated)	VDE; UL submitted
SL025208N-MS	without magnet	120VAC, 50/60Hz	none	-	0.40kg	II (double insulated)	UL submitted
SL025208-MS	with magnet	120VAC, 50/60Hz	none	-	0.60kg	II (double insulated)	UL submitted



## Dual Lamp DL 026 Series with On/Off switch

- Versatile – base lamp or hand lamp
- Long-life energy saving lamp
- Connections for further lamps

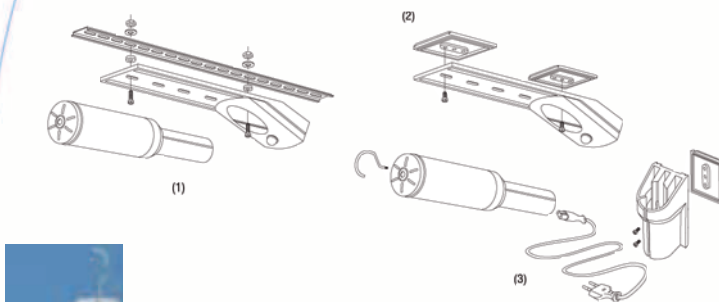
### Technical Data



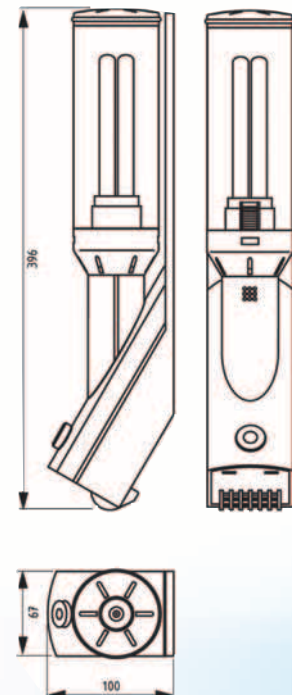
Luminosity	1000Lm
Lamp type	energy saving lamp, E27 socket
Service life	10,000h
Switch	on/off push switch
Connection	6-pole screw connector 2.5mm <sup>2</sup> (torque 0.8 Nm) for power connection, further lamps and external door contact switch
Mounting	screw fixing (e.g. 35mm DIN rail)
Casing	plastic according to UL94 V-0, light grey
Weight	approx. 0.60kg
Fitting position	variable
Operating/Storage temperature	-20 to +50°C (-4 to +122°F) / -45 to +70°C (-49 to +158°F)
Protection type / Protection class	IP20 / II (double insulated)
Approvals	-
Accessories	wall holder with connection cable (2m) incl. Fixing Plate, Art. No. 03410.0-00 2 fixing plates (self-adhesive), Art. No. 09515.0-00
Note	120VAC and DC voltages on request



**Dual lamp with on/off switch (incl. base station)**



- (1) Standard screw fixing to DIN rail
  - (2) 2 self-adhesive fixing plates, Art. No. 09515.0-00
  - (3) Wall holder with connection cable (2m) and self-adhesive fixing plate, Art. No. 03410.0-00.
- By using an additional wall holder the lamp can be used as a hand lamp



### Product Information

Order Code	Operating voltage	Power consumption
DL02500	230VAC, 50Hz	20W (equals 100W light bulb)

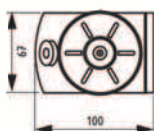
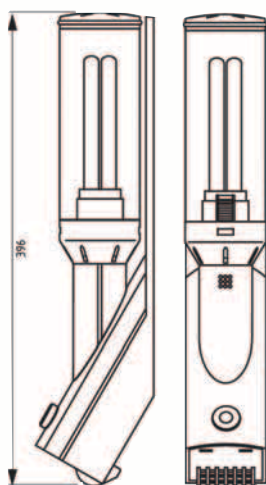
# Lighting | DL026 Sensor

## Dual Lamp DL 026 Series with movement sensor

- Versatile – base lamp or hand lamp
- Long-life energy saving lamp
- Automatic switching
- Alternative solution for door switch
- Connections for further lamps



Dual lamp with movement sensor (incl. base station)

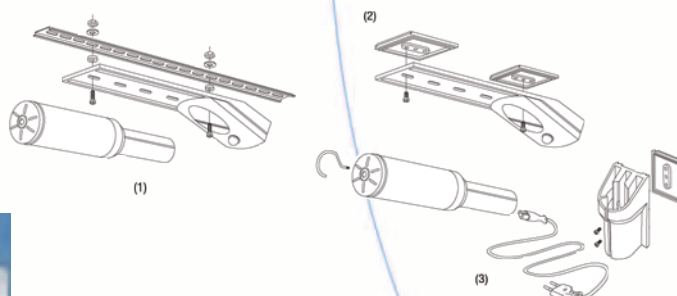


The PIR movement sensor switches the lamp on when the enclosure door is opened. The switch-on time is reset with every further registered movement. The movement sensor does not react to movement on the other side of glass and so can be used in enclosures with glass doors.

### Technical Data



Luminosity	1000Lm
Lamp type	energy saving lamp, E27 socket
Service life	10,000h
Switch	PIR movement sensor, approx. 3 min. fixed switch-on duration
Connection	4-pole screw connector 2.5mm <sup>2</sup> (torque 0.8 Nm) for power connection and further lamps
Mounting	screw fixing (e.g. 35mm DIN rail)
Casing	plastic according to UL94 V-0, light grey
Weight	approx. 0.60kg
Fitting position	variable
Operating/Storage temperature	-20 to +50°C (-4 to +122°F) / -45 to +70°C (-49 to +158°F)
Protection type / Protection class	IP20 / II (double insulated)
Approvals	-
Accessories	wall holder with connection cable (2m) incl. fixing plate. Art. No. 03410.0-00 2 fixing plates (self-adhesive), Art. No. 09515.0-00
Note	120VAC and DC voltages on request



- (1) Standard screw fixing to DIN rail
- (2) 2 self-adhesive fixing plates, Art. No. 09515.0-00
- (3) Wall holder with connection cable (2m) and self-adhesive fixing plate, Art. No. 03410.0-00.

By using an additional wall holder the lamp can be used as a hand lamp

### Product Information

Order Code	Operating voltage	Power consumption
DL02500-MS	230VAC, 50Hz	20W (equals 100W light bulb)

## Hand Lamp DL 026 Series with lamp holder

- Long-life energy saving lamp
- Versatile

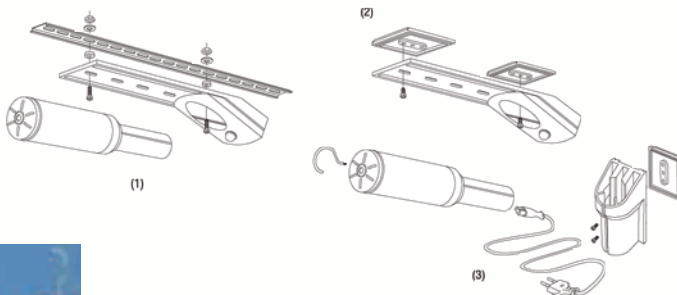
### Technical Data



Luminosity	1000Lm
Lamp type	energy saving lamp, E27 socket
Service life	10,000h
Connection	power cable (2m) with Euro plug
Mounting	screws or fixing plate (self-adhesive)
Casing	plastic according to UL94 V-0, light grey
Weight	approx. 0.60kg
Fitting position	variable
Operating/Storage temperature	-20 to +50°C (-4 to +122°F) / -45 to +70 °C (-49 to +158 °F)
Protection type / Protection class	IP20 / II (double insulated)
Approvals	-
Included in delivery	lamp holder, hook and fixing plate
Note	120VAC and DC voltages on request

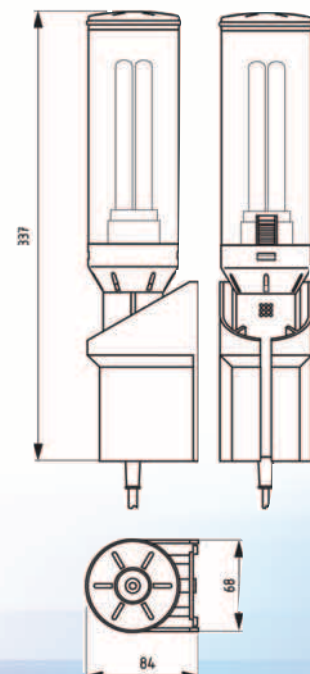


**Dual lamp with on/off switch (incl. base station)**



- (1) Standard screw fixing to DIN rail
- (2) 2 self-adhesive fixing plates, Art. No. 09515.0-00
- (3) Wall holder with connection cable (2m) and self-adhesive fixing plate, Art. No. 03410.0-00.

By using an additional wall holder the lamp can be used as a hand lamp



### Product Information

Order Code	Operating voltage	Power consumption
DL02501	230VAC, 50Hz	20W (equals 100W light bulb)



# Cost effective but versatile

The new EC wall box from Cooper B-Line offers users a highly cost effective and versatile solution for wall mounted products such as cabling infrastructures, networking and telecom equipment.

The wall box is supplied in the standard light grey with mid grey trims. Wall cabinet doors have a quick release two pin hinge mechanism and are supplied fully glazed with a standard lock. The door can also be easily changed from left to right-hand operation. The EC wall mounted box is also available with optional steel doors and rear panels made to order.

The 19" mounting rails on the EC wall box are adjustable front to rear and in common with the freestanding cabinet the wall box has "U" ident markings for ease of equipment location.

Cable entry in the EC wall box is gained through rear top and bottom slots with removable cover plates and cable management is further enhanced through suitable points for locating and securing cables.

Assembly of the box is made easy with its simple bolt together construction, allowing a single operator to construct a box in just a few minutes.

## EC Wall Box

- *Networking / Cabling*
- *19" Electronic Equipment Housing*
- *Communication Systems*
- *IT Systems*

## Benefits

- *Lockable, aesthetic glass door with quick release hinges for easy removal*
- *Fully adjustable 19" mounting angles*
- *Door can be hinged left or right handed*
- *Large apertures for cable entry*
- *6 standard heights available*
- *Fast, easy construction from flat pack*



## Standard EC Wallbox

H (U)	H (mm)	W (mm)	D (mm)	Max Usable Depth (mm)	Weight (kgs)	Part Number (Flat Packed)
6U	340	600	500	435	13	ECWB65FP
9U	474	600	500	435	14.5	ECWB95FP
15U	740	600	500	435	17.5	ECWB155FP
18U	874	600	500	435	19	ECWB185FP

2 POST RACKS



# Rack Cable Manager | Product Highlights

## Manage Your Cable While Managing Your Budget

Now, installers have access to the most feature rich cable management system in the industry... introducing Cooper B-Line's RCM+. Offering simplified cable management, a more flexible solution for all installations and a reduced total installed cost. RCM+ has all the configurations you need for your rack supported cable management requirements.

### ■ FLEXIBILITY

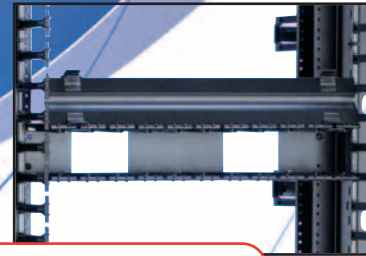
Need gates on the left, but fingers on the right? No problem. How about adding doors on the back? Again, no problem! The RCM+ open system design offers countless options and solutions to deal with issues of cable access and cable routing...like those that are created by increasing demands for faster data transmission and higher cable density. The RCM+ incorporates an innovative modular unit concept with total interchangeability of parts over all units. All rearrangement and modification of the cable management system is done easily in the field. Flexibility... based on your application needs now and in the future.

### ■ AFFORDABILITY

Our RCM+ cable managers offer all the features of higher priced systems, PLUS features that aren't offered on products priced at two, three and four times as much. Also, because of the way the RCM+ is designed, you will find significant labour savings, dramatically improved cable routing and access options... All part of a system that can be tailored to almost any need.

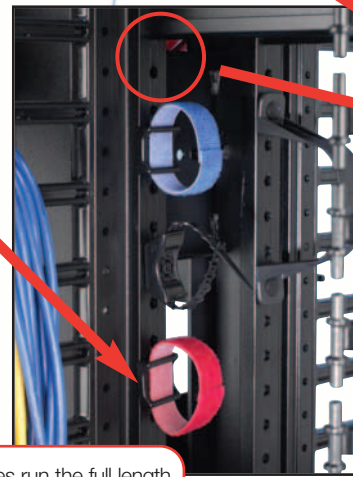
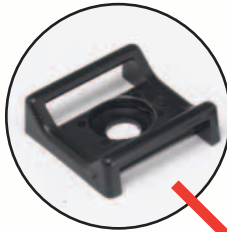
### ■ INSTALL-ABILITY

No matter what your requirement is, RCM+ can be installed in whatever configuration you need, on whatever standard 2-post rack you have or want. The clean, simply designed appearance blends with the widest range of architecture and environments. If you require retrofitting a cable manager to an existing rack, or if you are looking to add additional racks and accessories, RCM+ will cure all of your cable management headaches.



Horizontal managers with removable door that hinges top or bottom, allows for easy cable access.

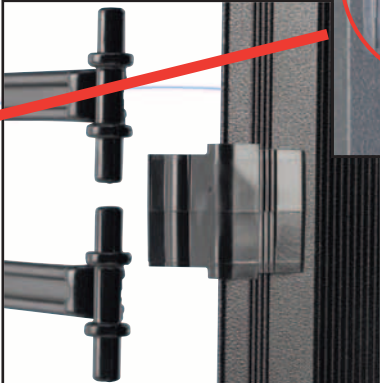
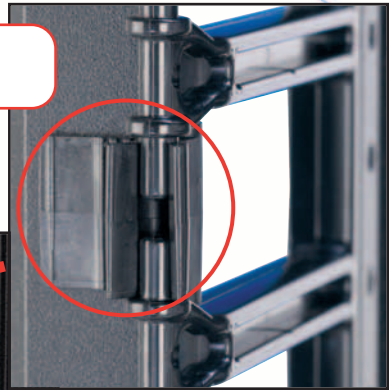
Vertical cable manager with closely spaced fingers for high-density cabling.



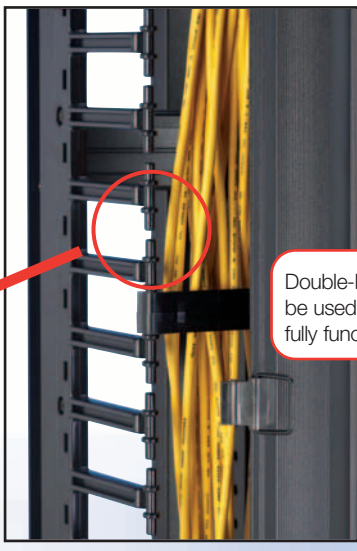
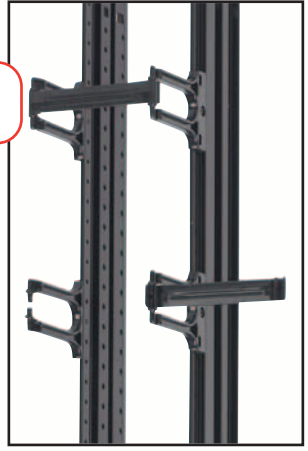
Accessory mounting holes run the full length of all vertical sections to accommodate attachment of dozens of cable management accessories.

Universal doors work on all configurations of fingers and gates.

Snap on hinges allow quick opening from either side or complete removal of the doors and gates.



Vertical Cable Manager with widely spaced fingers for low-density cabling.



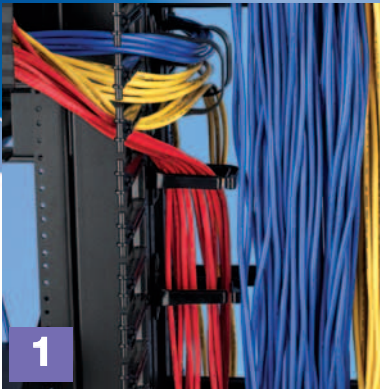
Double-hinged gates and doors can be used in combination. Both remain fully functional.

Open back design allows unrestricted routing of cables between front and rear cable managers.

Back cover (optional accessory) available for all managers.

# Rack Cable Manager | Features & Benefits

**360° cable routing...**  
*from anywhere, to anywhere, through anywhere*



## Efficient, lower cost cable installation

The open back design permits cable to enter or exit the cable manager at any RMU level, resulting in more direct routing to any point on the rack or an adjacent cable manager (image 1). This means less cable density, looser bundling and faster moves, adds and changes. The advantages of the open back design are amplified by the open side feature of double-sided managers.



## Assists with data integrity by reducing cable density

The 1/4" accessory mounting holes spaced every 1/2 RMU extend along the entire height of the RCM+ (image 2). They are an integral component of the open system design. Permitting quick attachment of a wide variety of cable management devices, they are used to support, segregate and route cables going in all directions, whether entering, leaving or passing through the manager.



## Compatible with advancements in rack designs and

The RCM+ takes full advantage of the cable pass-through openings on the side of the new, deeper racks (image 3). The open sides created by spaced-apart mounting, allow cable to pass through the cable manager to an adjacent rack or into either cable manager through the open back.



## Fast and convenient access with dynamic cable

The RCM+ introduces a new system that consists of cable retention gates that uniquely nest under the two-piece double-hinged doors (image 4). When doors are opened, the gates provide containment, but can also be opened from either side or removed as convenience dictates. The gates can be snapped on at any location and additional gates can be added to the system.

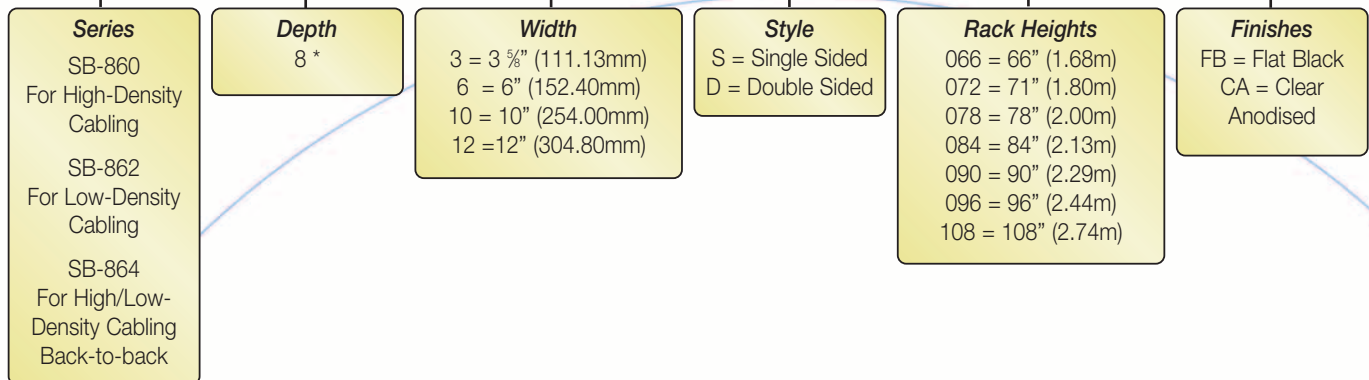
## Field modifiable features reduce future costs

The system used to mount plastic cable support fingers is common to all cable managers in every series. Any combination and arrangement of fingers can be installed on the mounting rails. The same universality is applied to the snap on hinges of all doors and gates. This interchangeability allows any RCM+ cable manager to be modified in the field to accommodate a broad range of applications. This also provides for adaptability to meet any future changes required.

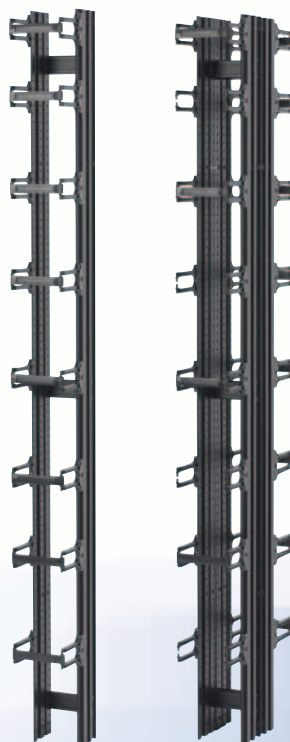
**RCM+, A Better Way To Manage Your Cable.**



**SB-860 - 8 3 S - 066 FB**



**SB-860 Series**  
Single Sided      Double Sided



**SB-862 Series**  
Single Sided      Double Sided



**SB-864 Series**  
Double Sided

# Rack Cable Manager | High Density Cable Manager



SB-860-86S-084



SB-860-86S-084

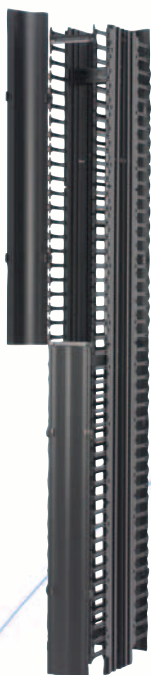
## Single-Sided SB-860 Series

Single-sided SB-860 Series cable managers with closely spaced fingers are designed for routing high density cabling on and between racks.

- Eliminates the need for horizontal cable managers and provides cable support for each rack mounting space
- Two-piece doors with snap on hinges allow for quick opening from either side or complete removal
- Three snap-on gates retain cables when doors are opened or removed. Gates can be placed at any location
- Open back design allows unrestricted front and rear routing of cables
- Easily mounts to all Cooper B-Line relay racks and any relay rack with industry standard mounting holes
- 1/4" accessory mounting holes run the full height on both sides of cable manager to accommodate the attachment of cable management accessories
- Optional back covers with pass through openings and vertical slots for attaching cable straps.
- Material: Aluminum with UL 94V-0 black plastic components
- Finish: Flat Black Powder Coat Clear Anodised Aluminum
- Vertical cable manager includes: (1) vertical cabling section, (2) doors, (3) gates, (25) push-in fasteners, (6) cable strap mounts, (2) cable retainer bars and mounting hardware

Order Code	Fits Rack Height of		Weight	
	In.	(mm)	Lbs	(kg)
<b>3 3/8" (92mm) Wide x 9 3/8" (238mm) Deep</b>				
SB-860-83S-066 *	66	(1676)	19.0	(8.6)
SB-860-83S-072 *	72	(1829)	20.9	(9.5)
SB-860-83S-078 *	78	(1981)	22.5	(10.2)
SB-860-83S-084 *	84	(2133)	24.2	(11.0)
SB-860-83S-090 *	90	(2286)	25.8	(11.7)
SB-860-83S-096 *	96	(2438)	27.5	(12.5)
SB-860-83S-108 *	108	(2743)	30.7	(13.9)
<b>6" (152mm) Wide x 9 3/8" (238mm) Deep</b>				
SB-860-86S-066 *	66	(1676)	22.0	(10.0)
SB-860-86S-072 *	72	(1829)	24.1	(10.9)
SB-860-86S-078 *	78	(1981)	25.9	(11.7)
SB-860-86S-084 *	84	(2133)	27.8	(12.6)
SB-860-86S-090 *	90	(2286)	29.6	(13.4)
SB-860-86S-096 *	96	(2438)	31.6	(14.4)
SB-860-86S-108 *	108	(2743)	35.1	(15.9)

# Rack Cable Manager | High Density Cable Manager



SB-860-86D-084

## Double-Sided SB-860 Series

Double-sided SB-860 Series cable managers with closely spaced fingers are designed for routing high density cabling on and between racks. Provides greater cable capacity with access doors and gates on front and rear.

- Front and rear vertical sections can be spaced apart when mounting on racks deeper than 3" (76mm). This allows cables to be routed out through side openings created between vertical sections
- Eliminates the need for horizontal cable manager and provides cable support for each rack mounting space
- Two-piece doors with snap on hinges allow for quick opening from either side or complete removal
- Six snap-on gates retain cables when doors are opened or removed. Gates can be placed at any location
- Open back design allows unrestricted routing of cables between front and rear cable managers
- Easily installed on rack by one person
- Easily mounts to all Cooper B-Line relay racks and any relay rack with industry standard mounting holes
- ¼" accessory mounting holes run the full height on both sides of cable manager to accommodate the attachment of cable management accessories
- Optional back covers with pass through openings and vertical slots for attaching straps
- Material: Aluminum with UL 94V-0 black plastic components
- Finish: Flat Black Powder Coat Clear Anodised Aluminum
- Vertical cable manager includes: (2) vertical cabling section, (4) doors, (6) gates, (50) push-in fasteners, (12) cable strap mounts, (4) cable retainer bars and mounting hardware. On 10" and 12" wide cable managers only, (2) spool kits are included

Order Code	Fits Rack Height of		Weight	
	In.	(mm)	Lbs	(kg)
<b>3" (92mm) Wide x 18" (473mm) Deep</b>				
SB-860-83D-066 *	66	(1676)	35.5	(16.1)
SB-860-83D-072 *	72	(1829)	39.1	(17.7)
SB-860-83D-078 *	78	(1981)	42.0	(19.1)
SB-860-83D-084 *	84	(2133)	45.3	(20.6)
SB-860-83D-090 *	90	(2286)	48.3	(21.9)
SB-860-83D-096 *	96	(2438)	51.5	(23.4)
SB-860-83D-108 *	108	(2743)	57.6	(26.1)
<b>6" (152mm) Wide x 18" (473mm) Deep</b>				
SB-860-86D-066 *	66	(1676)	40.9	(18.6)
SB-860-86D-072 *	72	(1829)	45.0	(20.4)
SB-860-86D-078 *	78	(1981)	48.4	(21.9)
SB-860-86D-084 *	84	(2133)	51.9	(23.6)
SB-860-86D-090 *	90	(2286)	55.4	(25.1)
SB-860-86D-096 *	96	(2438)	59.3	(26.9)
SB-860-86D-108 *	108	(2743)	65.9	(29.9)

# Rack Cable Manager | High/Low Density Cable Manager



SB-864-86D-084

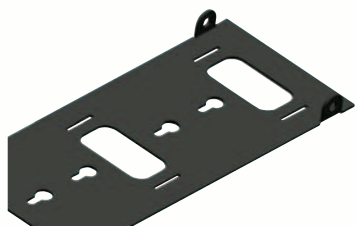
## Double-Sided Combination SB-864 Series

SB-864 Series cable managers utilise our SB-860 and SB-862 Series cable managers in back-to-back combination for use in applications with widely differing cable management requirements.

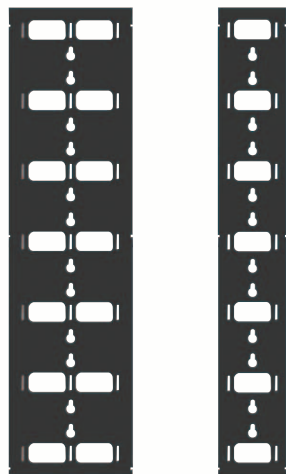
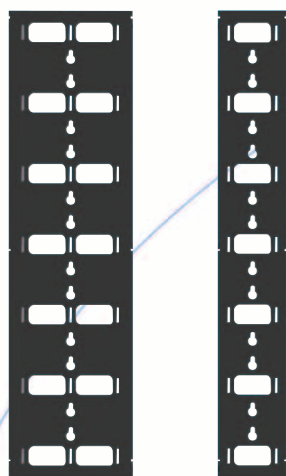
- Front and rear vertical sections can be spaced apart when mounting on racks deeper than 3" (76mm). This allows cables to be routed out through side openings created between the vertical sections
- Two-piece doors on one side with snap on hinges allow for quick opening from either side or complete removal
- Snap-on gates on both sides allows for quick opening from either side or complete removal
- Open back design allows unrestricted routing of cables between front and rear sections
- Easily mounts to all Cooper B-Line relay racks and any relay rack with industry standard mounting holes
- 1/4" accessory mounting holes run the full height on both sides of cable manager to accommodate the attachment of cable management accessories
- Easily installed on rack by one person
- Optional back cover with pass through openings and vertical slots for attaching cable
- Material: Aluminum with UL 94V-0 black plastic components
- Finish: Flat Black Powder Coat  
Clear Anodised Aluminum
- Vertical cable manager includes: (2) vertical cabling section, (2) doors, (50) push-in fasteners, (12) cable strap mounts, (4) cable retainer bars, required number of gates and mounting hardware

Order Code	Fits Rack Height of		Weight	
	In.	(mm)	Lbs	(kg)
<b>3<sup>5</sup>/<sub>8</sub>" (92mm) Wide x 17<sup>7</sup>/<sub>8</sub>" (454mm) Deep</b>				
SB-864-83D-066 *	66	(1676)	34.9	(15.8)
SB-864-83D-072 *	72	(1829)	38.6	(17.5)
SB-864-83D-078 *	78	(1981)	41.5	(18.8)
SB-864-83D-084 *	84	(2133)	44.7	(20.3)
SB-864-83D-090 *	90	(2286)	47.5	(21.5)
SB-864-83D-096 *	96	(2438)	50.5	(22.9)
SB-864-83D-108 *	108	(2743)	56.6	(25.7)
<b>6" (152mm) Wide x 17<sup>7</sup>/<sub>8</sub>" (454mm) Deep</b>				
SB-864-86D-066 *	66	(1676)	38.4	(17.4)
SB-864-86D-072 *	72	(1829)	42.3	(19.2)
SB-864-86D-078 *	78	(1981)	45.5	(20.6)
SB-864-86D-084 *	84	(2133)	48.9	(22.2)
SB-864-86D-090 *	90	(2286)	51.9	(23.5)
SB-864-86D-096 *	96	(2438)	55.4	(25.1)
SB-864-86D-108 *	108	(2743)	61.8	(28.0)

# Rack Cable Manager | Accessories



mounting legs



SB-862-BRC-10-084 (left)  
SB-862-BRC-6-084 (right)

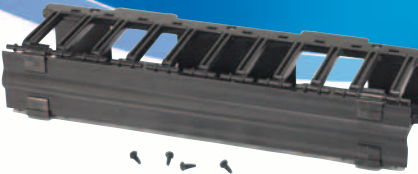
## Back Covers SB-862-BRC Series

- The back cover provides closure on the rear side of SB-860, SB-862, and SB-864 vertical cable managers
- Back covers are designed with pass through openings for cable routing, slots for cable straps, and keyhole slots for attaching cable spools
- Includes mounting hardware
- Material: Aluminum
- Finish: Flat Black Powder Coat  
Clear Anodised Aluminum

Order Code	Fits Rack Height of		Weight	
	In.	(mm)	Lbs	(kg)
<b>3 3/8" (92mm) Wide</b>				
SB-862-BRC-3-066 *	66	(1676)	3.1	(1.4)
SB-862-BRC-3-072 *	72	(1829)	3.4	(1.5)
SB-862-BRC-3-078 *	78	(1981)	3.6	(1.6)
SB-862-BRC-3-084 *	84	(2133)	3.9	(1.8)
SB-862-BRC-3-090 *	90	(2286)	3.9	(1.8)
SB-862-BRC-3-096 *	96	(2438)	4.3	(2.0)
SB-862-BRC-3-108 *	108	(2743)	4.8	(2.2)
<b>6" (152mm) Wide</b>				
SB-862-BRC-6-066 *	66	(1676)	4.6	(2.1)
SB-862-BRC-6-072 *	72	(1829)	4.9	(2.2)
SB-862-BRC-6-078 *	78	(1981)	5.3	(2.4)
SB-862-BRC-6-084 *	84	(2133)	5.7	(2.6)
SB-862-BRC-6-090 *	90	(2286)	5.7	(2.6)
SB-862-BRC-6-096 *	96	(2438)	6.4	(2.9)
SB-862-BRC-6-108 *	108	(2743)	7.2	(3.3)
<b>10" (254mm) Wide</b>				
SB-862-BRC-10-066 *	66	(1676)	6.9	(3.1)
SB-862-BRC-10-072 *	72	(1829)	7.5	(3.4)
SB-862-BRC-10-078 *	78	(1981)	8.2	(3.7)
SB-862-BRC-10-084 *	84	(2133)	8.8	(4.0)
SB-862-BRC-10-090 *	90	(2286)	8.8	(4.0)
SB-862-BRC-10-096 *	96	(2438)	10.0	(4.5)
SB-862-BRC-10-108 *	108	(2743)	11.2	(5.1)

## Horizontal Cable Managers: SB-870 Series

- SB-870 Series horizontal manager with snap-on removable hinged door opens past 180°, and remains open in up position for convenient cable access
- #12-24 mounting hardware is included
- Material: Aluminum with UL 94V-0 black plastic components
- Finishes: Flat Black Powder Coat / Clear Anodised Aluminum



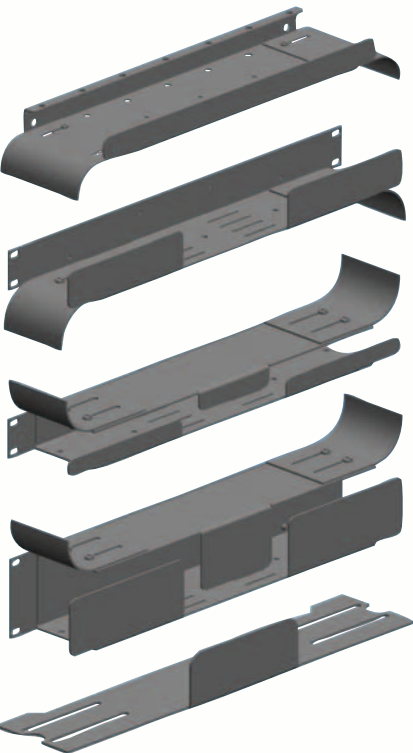
SB-870 Series

Order Code	Height		Width	Weight	
	In.	(mm)		Lbs	(kg)
SB-870-19S-1 *	19	(482)	1U	2.1	(0.9)
SB-870-23S-1 *	23	(584)	1U	2.3	(1.0)
SB-870-19S-2 *	19	(482)	2U	2.5	(1.1)
SB-870-23S-2 *	23	(584)	2U	2.7	(1.2)
SB-870-19S-3 *	19	(482)	3U	2.8	(1.3)
SB-870-23S-3 *	23	(584)	3U	3.1	(1.4)

\* Add Finish Designation: Flat Black Powder Coat = FB Clear Anodised Aluminum = CA

## Horizontal Transition Trays SB-813 Series

- Transition trays offer top and bottom field adjustable horizontal cable management support
- Bend radius is 11/2" (38mm)
- Available for 19" (482mm) and 23" (584mm) racks
- Material: Aluminum
- Finish: Flat Black Powder Coat / Clear Anodised Aluminum



SB-813 Series

Order Code	Width		Height		Weight	
	In.	(mm)	In.	(mm)	Lbs	(kg)
<b>Top Transition Tray - 1½" (38mm) High</b>						
SB-813-19TT-3 *	3½	(89)	19	(482)	3.0	(1.36)
SB-813-19TT-6 *	6	(152)	19	(482)	4.0	(1.81)
SB-813-23TT-3 *	3½	(89)	23	(584)	4.0	(1.81)
SB-813-23TT-6 *	6	(152)	23	(584)	5.0	(2.27)
<b>Upper Transition Tray - 1¼" (44mm) High</b>						
SB-813-19UT-3 *	3½	(92)	19	(482)	3.0	(1.36)
SB-813-19UT-6 *	6	(152)	19	(482)	4.0	(1.81)
SB-813-23UT-3 *	3½	(92)	23	(584)	4.0	(1.81)
SB-813-23UT-6 *	6	(152)	23	(584)	5.0	(2.27)
<b>Lower transition Tray - 1¼" (44mm) High</b>						
SB-813-19LT-3*	3½	(92)	19	(482)	4.0	(1.81)
SB-813-19LT-6*	6	(152)	19	(482)	5.0	(2.27)
SB-813-23LT-3*	3½	(92)	23	(584)	5.0	(2.27)
SB-813-23LT-3*	6	(152)	23	(584)	6.0	(2.72)
<b>Lower Transition Tray - Double - 31/2" (89mm) High</b>						
SB-813-19LTD-3*	3½	(92)	19	(482)	4.0	(1.81)
SB-813-19LTD-6*	6	(152)	19	(482)	5.0	(2.27)
SB-813-23LTD-3*	3½	(92)	23	(584)	5.0	(2.27)
SB-813-23LTD-6*	6	(152)	23	(584)	6.0	(2.72)
<b>Transition Tray - 17/8" (47mm) High</b>						
SB-813-TP-3*	3¼	(82)	15.8	(401)	2.0	(0.91)
SB-813-TP-6*	5¼	(146)	15.8	(401)	4.0	(1.81)

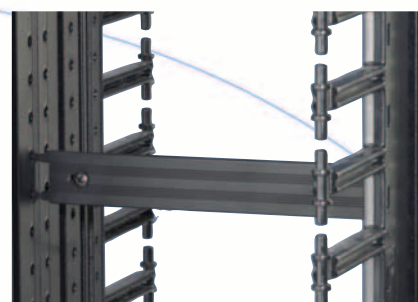
\*Add finish designation: Flat black powder coat +FB  
Clear anodised aluminium + CA

# Rack Cable Manager | Accessories

## Cable Retainer Bar

- Designed to provide vertical cable segregation and containment
- Installs in any location by engaging the accessory mounting holes
- Can be quickly installed or moved to another location
- Material: Aluminum
- Finish: Flat Black Powder Coat

Order Code	For Manager Width of		Weight	
	In.	(mm)	Lbs	(kg)
SB-862-3-CRB FB	3 <sup>5</sup> / <sub>8</sub>	(92)	0.11	(0.05)
SB-862-6-CRB FB	6	(152)	0.17	(0.08)
SB-862-10-CRB FB	10	(254)	0.29	(0.13)
SB-862-12-CRB FB	12	(305)	0.33	(0.15)



## Relay Racks SB-556 (558)-XU Series

- Universal 5/8", 5/8", 1/2" mounting hole pattern for maximum mounting flexibility
- #12-24 panel mounting holes
- Conformance to EIA-310-D
- Load Rating: 1000 lbs. (453kg) when load is evenly distributed
- Self squaring with tapped assembly holes
- Material: 6061-T6 aluminum alloy
- Finishes: Brushed Aluminum / Flat Black Powder Coat

Order Code	Height		Effective Unit Height	Weight	
	In.	(mm)		Lbs	(kg)
<b>19" (482mm) Rack Width</b>					
SB-556-084-XU *	84	(2133)	45	33.0	(14.9)
SB-556-096-XU *	96	(2438)	51	35.0	(15.9)
SB-556-108-XU *	108	(2743)	58	37.0	(16.8)
<b>23" (584mm) Rack Width</b>					
SB-558-084-XU*	84	(2133)	45	35.0	(15.9)
SB-558-096-XU*	96	(2438)	51	37.0	(16.8)
SB-558-108-XU*	108	(2743)	58	39.0	(17.7)

\*Add finish designation: Flat black powder coat +FB  
Clear anodised aluminium + CA



Cable Retainer Bar



Relay Racks

Willsher & Quick was established in 1956, quickly grew and became one of the premier specialist enclosure manufacturers in Europe. Based in Highbridge, Somerset, the company created an excellent reputation for design development and quality.

In November 2000 Willsher & Quick became part of Cooper B-Line Inc., a division of Cooper Industries. The Group's annual turnover exceeds US\$4.0 billion and has an ongoing objective to develop products and services in support of global markets, especially serving Europe, The Middle East and Asia.

Cooper B-Line continues to invest in technology and boasts some of the most up to date design and manufacturing systems available. Linked with a strong technical and logistics resource the company is well placed to meet the stringent demands of customers on a global basis.

## Concept Design

With short life cycles, and the requirement to differentiate a product, from its competitor, the design of an enclosure can be crucial to its success. We can offer a full product development service. The first part of this process is to create an image for the product. Using the company's Pro-Engineer CAD system it is possible to create a number of "concept" models to allow customers to visualise how their product will look.

The concept models can also be rendered in corporate or the intended colour scheme to show the potential of each design. This can then be used to examine cable routings and the layout of equipment mounted in the enclosure.

Our company offer a design service, turning outline into realities. Finally it is possible for us to provide software to view the various concept designs to enable the customer to make internal presentations.

## Cost Development

We understand that it is important to meet critical cost targets for customer projects. By detailing the specific costs for each of the components in the product assembly and using the purchasing power of the Cooper Group, we can also obtain materials and components at competitive rates, offering customers complete control of costs.

By combining the Product and Cost Development the company can evaluate a variety of solutions offering the one that gives the optimum balance between technical compliance and the cost target.

## Manufacturing

The most important element of product realisation is the manufacturing facility. The company has the latest in turret punching capability, which is also supplemented by a laser. The laser offers a very high level of flexibility and allows fast, complex production without the need for special tooling.

Following the turret punching process sheet metal products have to be formed and this is completed using a variety of CNC Press Brakes. Again these machines offer "high speed" production with a high degree of flexibility.

The final element of the manufacturing cycle is finishing. We can offer high volume powder paint but still have the flexibility to "wet spray" products. This means that a variety of finishes can be supplied to best suit the application.

## Assembly and Test

Simply offering sheet metal components and enclosures is no longer "enough" in today's market. As part of the product service the company can supply products with thermal management system such as fan units, heat exchangers and air-conditioners. Cabinets can also be supplied with environmental sealing, humidity control and heaters. If required, products can also be supplied with power supply and distribution systems.

All of these can be supplied assembled and tested as a complete "sub-system" ready for final assembly and software configuration. If needed pre-production compliance testing can be undertaken.

## Installation and Logistics

Making the product is not all the service offered by Willsher & Quick. If needed the company offers an installation service. This means that part of our Logistics Team will deliver a product to a site, install it to its correct position and finally remove and dispose of the packaging. This means that, once sited, customer installation engineers can visit sites knowing that a cabinet will be pre-installed and that they can concentrate on "fitting out" and installing their own products.







RACK ACCESSORIES



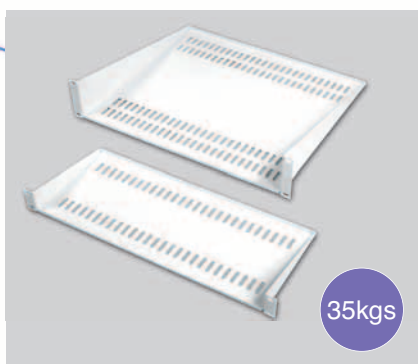


19" front panel

### 19" Front Panels

Material and finish: 1.5mm steel, painted light grey or satin anodised aluminium

Description	Order Code		
	Aluminium	Grey	Black
Front Panel 1U	PPA1	PPS1	PPS1B
Front Panel 2U	PPA2	PPS2	PPS2B
Front Panel 3U	PPA3	PPS3	PPS3B
Front Panel 6U	PPA6	PPS6	PPS6B



cantilever shelves

### Cantilever Shelves

Fit to front face of 19" mounting angles, with angles set at standard 19" width. Ideal for modems, hubs or other networking equipment.

- Made from 1.5mm mild steel. Light grey or black finish
- Load rating 35kg (Uniformly Distributed)

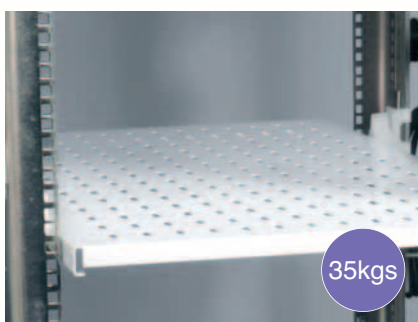
Description	Height 'U'	Depth	Order Code
19" Front Mounted - Grey	1	190mm	MS19
19" Front Mounted - Grey	2	400mm	MS40
19" Front Mounted - Grey	3	400mm	MS403
19" Front Mounted - Black	1	190mm	MS19B
19" Front Mounted - Black	2	400mm	MS40B
19" Front Mounted - Black	3	400mm	MS403B

### Fixed Shelves

Quick Fit Range

"Designed to mount into the Access Cabinet range."

- Ventilated shelf to assist convection
- Unique bracket requires no fixings
- Simple thumb screw locks shelf in position
- Add and remove shelves in seconds
- Designed for loads up to 35kg
- Full width versions to suit 800 wide cabinets with no vertical cable channels fitted
- Made from 1.2mm mild steel. Light grey or black finish



quick fit fixed shelf

Description	Depth	Order Code
19" width - Grey	450mm	QRSV45
19" width - Grey	550mm	QRSV55
19" width - Grey	650mm	QRSV65
Full width - Grey	450mm	QRSVFW45
Full width - Grey	650mm	QRSVFW65
19" width - Black	450mm	QRSV45B
19" width - Black	550mm	QRSV55B
19" width - Black	650mm	QRSV65B

## Fixed Shelves

### Heavy Duty Range

- Adjustable rear bracket to suit various depth cabinets
- 3 depths: 450, 550 and 650mm
- Up to 90kg load when supported equally on the vertical panel mounting angles
- Full width versions to suit 800 wide cabinets with no vertical cable channels fitted
- Made from 2mm mild steel. Light grey powder paint finish

### Description

Description		Order Code
19" width	450mm	HDASV45AS
19" width	550mm	HDASV55AS
19" width	650mm	HDASV65AS
Full width	550mm	HDASVFW55AS
Full width	650mm	HDASVFW65AS

## Sliding Keyboard Shelf

Enables a standard keyboard to be used in any 19" rack. Turntable permits a keyboard which is wider than 450mm to be turned through 90° for storage. Universal mounting brackets fit uprights set between 450 & 750mm apart.

- Depth adjustable between 450 & 750mm
- Universal mounting fits any standard 19" rack
- Load rating 35kg (Uniformly Distributed) ■ Includes fixing kit

### Description

Description	Order Code
Sliding Keyboard Shelf	KT750

## Sliding Shelves

### Universal Fit Range

To suit EC & Other 19" Enclosures with Front & Rear IEC Fixings.

- Vented Shelf to Assist Convection ■ Adjustable Rear Bracket
- Fits any 19" rack by utilising front and rear mountings
- Designed for loads up to 45kg when supported equally on the vertical panel mounting angles
- Made from 1.5mm mild steel. Light grey or Black finish

Min-Max Front to Rear 19" rail spacing	Shelf Depth & Colour	Order Code
444 - 749	Grey - 455mm	LDATSV45
444 - 812	Grey - 555mm	LDATSV55
444 - 749	Black - 455mm	LDATSV45B
444 - 812	Black - 555mm	LDATSV55B

## Sliding Shelves

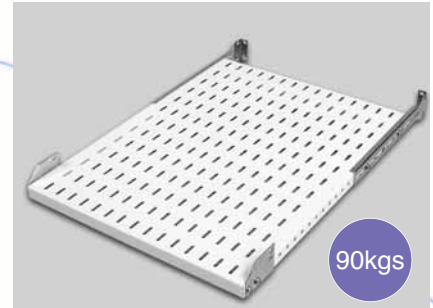
Universal Quick Fit Sliding Shelf (To suit EC & Other 19" Enclosures with Front & Rear IEC Fixings.)

- Vented Shelf to Assist Convection ■ Adjustable Rear Bracket
- Unique Fitting Requires No Tools\*
- 125kg load rating when supported equally on the vertical panel mounting angles
- Made from 1.5mm mild steel. Light grey powder paint finish

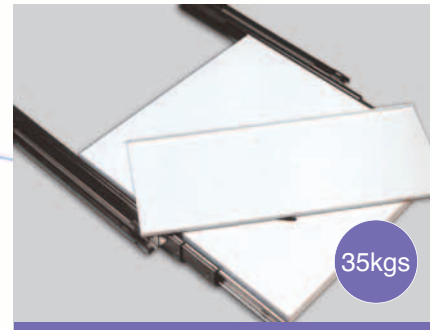
Min-Max Front to Rear 19" Rail Spacing	Type	Depth	Order Code
363 - 513mm	19" width	450mm	QRTSV45
513 - 663mm	19" width	600mm	QRTSV60
663 - 813mm	19" width	750mm	QRTSV75
363 - 513mm	Full width	450mm	QRTSVFW45
513 - 663mm	Full width	600mm	QRTSVFW60

Full width versions to suit 800 wide racks with rails fitted to extreme outside edges.

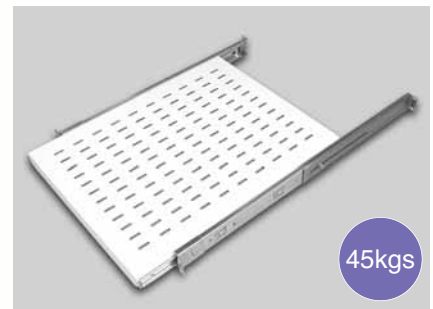
\* For permanent fixing, Posidrive screwdriver required.



quick fit fixed heavy duty shelf



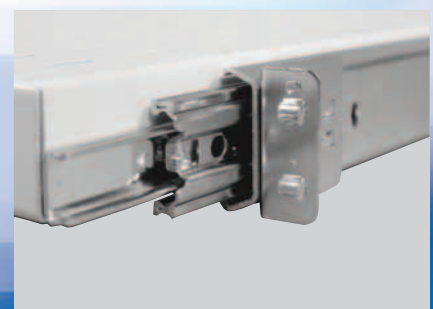
sliding keyboard shelf



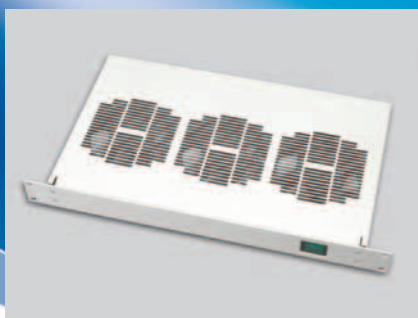
19" sliding shelf



19" heavy duty sliding shelf



heavy duty universal mount



1U rack mounted fan tray

### 1U Rack Mounted Fan Tray

- Fits directly to panel mounts
- 230V AC fans
- Neon power indicator
- Occupies only 1U of rack space
- Please order mains lead separately - see options below

Description	No. of Fans	Order Code Grey
1U Rack Mounted Fan Tray - 230V	3	IVU3L
1U Rack Mounted Fan Tray - 230V	6	IVU6L
1U Rack Mounted Fan Tray - 110V	3	IVU3L1
1U Rack Mounted Fan Tray - 110V	6	IVU6L1

Description	No. of Fans	Order Code Black
1U Rack Mounted Fan Tray - 230V	3	IVU3LB
1U Rack Mounted Fan Tray - 230V	6	IVU6LB
1U Rack Mounted Fan Tray - 110V	3	IVU3L1B
1U Rack Mounted Fan Tray - 110V	6	IVU6L1B

### Controlled and Monitored Fans

The TCM1000 module is the same size as a standard 119mm fan and is designed for applications that require speed control and alarm monitoring.

- Can be configured into either a roof mounted or rack mounted fan tray.
- User programmable functions to control up to 6 fans.
- Dual thermistor control with failure alarm via volt- free relay contact.
- Tri- colour LED providing visual status.
- Fan shutdown feature for power saving and noise reduction.
- Universal auto-select mains input (100 - 230V AC).



TCM1000 environmental Control Module

Description	Order Code Grey
Rack mounted fan tray + TCM1000 Controller + 2 Fans.	TCMFT2
Rack mounted fan tray + TCM1000 Controller + 5 Fans.	TCMFT5

Description	Order Code Black
Rack mounted fan tray + TCM1000 Controller + 2 Fans.	TCMFT2B
Rack mounted fan tray + TCM1000 Controller + 5 Fans.	TCMFT5B

Description	Order Code
TCM1000 Fan Control Module	TCM1000PL
12V DC Axial Fan, Finger Guard & Lead	ECMF12K
Fan Tray Lead BS1363 13 AMP	AFTL
Fan Tray Lead IEC 10 AMP	AFTLIEC
Fan Tray Lead Schuko	AFTLSCH

### Cable Management Hoops:

Our customers requirements for cable management within the cabinet are varied and can differ from installation to installation. To aid the routing and manageability of cables within the cabinet we offer a range of cable hoops that can be mounted both horizontally and vertically within the cabinet. This leaves the installer free to decide where and how the cables are positioned for optimum performance during installation and maintenance.

#### Standard Cable Tidies

- Manufactured from Halogen Free Nylon and finished in Mid Grey
- Fits directly to 19" panel mounts or 800mm wide cable channels
- Single hole fixing
- Multiple mounting positions
- Hinged gate clip action
- Approximate overall dimensions

Description	Size	Order Code
Cable tidy - small	80mm x 40 x 26mm	CTS
Cable tidy - large	120mm x 60mm x 28mm	CTL

#### Flexible Cable Tidies

- Manufactured from Halogen Free Nylon and finished in Mid Grey
- Similar to CTS and CTL but allows the hoop to be opened fully.
- Fits directly to 19" panel mounts or 800mm wide cable channels
- Single hole fixing
- Approximate overall dimensions
- Multiple mounting positions

Description	Size	Order Code
Flexible cable tidy - Size 1	62mm x 42mm x 22mm	CGCT1
Flexible cable tidy - Size 2	82mm x 42mm x 22mm	CGCT2
Flexible cable tidy - Size 3	75mm x 75mm x 22mm	CGCT3
Flexible cable tidy - Size 4	122mm x 62mm x 22mm	CGCT4

#### Cable Tidy Fixing Kit

Universal fixing kit to mount both the CT and CGCT range of cable tidy hoops. Fixing kit comprises of the following;

- 10 off M6 socket cap screws
- 10 off M6 plain washers
- 10 off M6 cage nuts
- 10 off M6 flange nuts

Description	Order Code
Universal cable tidy fixing kit	UCTFK



CTS cable tidy



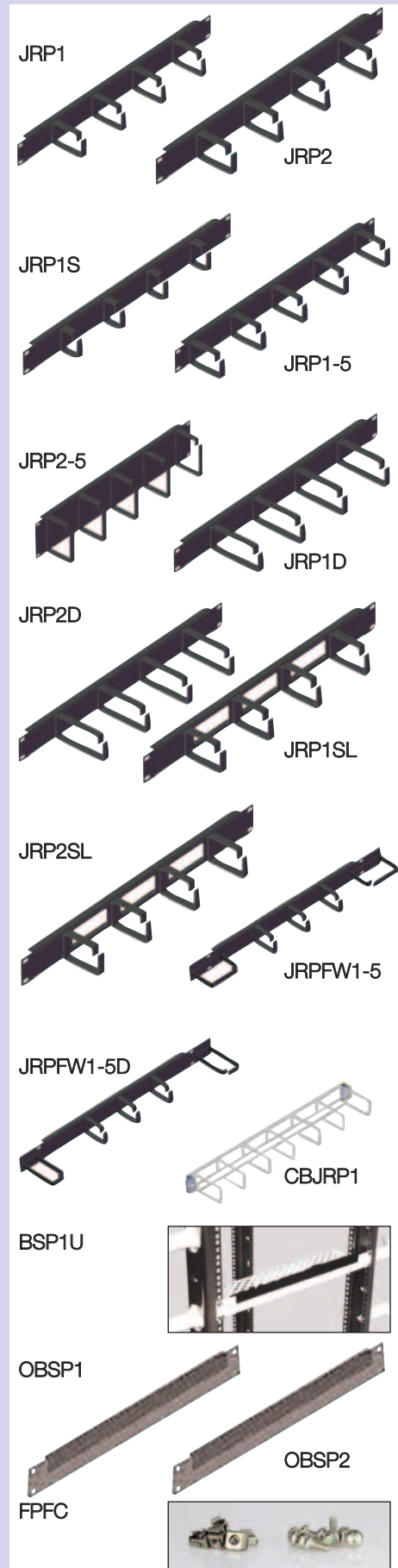
CTL cable tidy



CGCT series cable tidy

## Horizontal Cable Management Panels

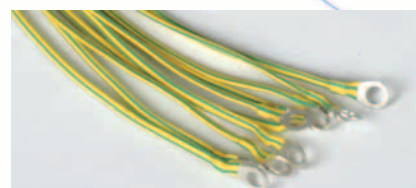
Order Code	Description
JRP1	1U 19-inch mounted jumper ring panel finished in black. Rings: 4 x 65mm deep
JRP2	2U 19-inch mounted jumper ring panel finished in black. Rings: 4 x 65mm deep.
JRP1S	1U 19-inch mounted shallow ring jumper ring panel finished in black. Rings: 4 x 35mm deep.
JRP1-5	1U 19-inch mounted jumper ring panel finished in black. Rings: 5 x 65mm deep.
JRP2-5	2U 19-inch mounted jumper ring panel finished in black. Rings: 5 x 65mm deep.
JRP1D	1U 19-inch mounted deep ring jumper ring panel finished in black. Rings: 4 x 100mm deep.
JRP2D	2U 19-inch mounted deep ring jumper ring panel finished in black. Rings: 4 x 100mm deep.
JRP1SL	1U 19-inch mounted jumper ring panel with cable through apertures - finished in black. Rings: 4 x 65mm deep.
JRP2SL	2U 19-inch mounted jumper ring panel with cable through apertures - finished in black. Rings: 4 x 65mm deep.
JRPFW1-5	1U 19-inch mounted full width jumper ring panel finished in black. Rings: 3 x 65mm deep horizontal rings and 2 x 65mm deep vertical rings.
JRPFW1-5D	1U 19-inch mounted full width jumper ring panel finished in black. Rings: 3 x 65mm deep horizontal rings and 2 x 100mm deep vertical rings.
CBJRP1	1U seven ring cable basket cable tidy Rings: 7 x 65mm deep
BSP1U	1U Cable entry brush strip panel. Finished light grey
BSP1UB	1U Cable entry brush strip panel. Finished black (not shown)
OBSP1	1U Cable entry brush strip panel. Finished black (not grey as shown)
OBSP2	2U Cable entry brush strip panel. Finished black (not grey as shown)
FPFC	Front panel fixing kit. Comprising of: 50 x M6 cheese head screws, 50 x nylon washers and 50 M6 cage nuts.



### Cabinet Earthing Kits

An extensive range of earth kits and earth bars are available to cover our range of standard products. In addition we also offer a range of standard, non-cabinet specific, products that can be easily modified to fit most applications.

Earth kits are available for each of our standard products lines. Each kit comprises of sufficient earth leads, nuts and screws to provide earth continuity through the product in compliance to EN60950 Clause 2.5.11.



Earthing Kit

Description	Order Code
Access Cabinet Earth Kit.	AEK
EC Cabinet Earth Kit.	EEK
Access Wall Box Earth Kit	AWBEK
EC Wall Box Earth Kit	ECWBEK

### Earth Bars

Our earth bars are designed to mount either onto the vertical mounting angle or into the side of the cabinet. They offer an easy way of ensuring that all active equipment can be easily grounded and are ideal for augmented Cat6 applications.



Earth Bar

Description	Order Code
Pre-tapped Copper Earth Bar – 1m Length.	EB1
Pre-tapped Copper Earth Bar – 2m Length.	EB2
Pack of 20 x Copper Earth Bar Clamps.	EBL20
Earth Bar Isolation Mounting Kit.	ECEBIM

### Unit Height Labels

Self adhesive 'U' height numbering strip which simply fixes to the front face of the 19" panel mounts.



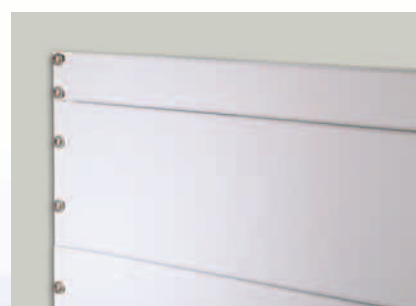
Unit Height Labels

Description	Order Code
Pairs of height labels, 1-47 - Top to Bottom	AUHL
Pairs of height labels, 1-47 - Bottom to Top	AUHLR
Pairs of height labels, 1-47 48-94 - Top to Bottom	AUHLFR
Pairs of height labels, 1-47 48-94 - Bottom to Top	AUHLFRR

### 19" Front Panels

Material and finish: Satin anodised aluminium or Painted Steel in either Light Grey NCS 1502-Y or Black RAL 9005

Description	Order Code		
	Aluminium	Grey	Black
Front Panel 1U	PPA1	PPS1	PPS1B
Front Panel 2U	PPA2	PPS2	PPS2B
Front Panel 3U	PPA3	PPS3	PPS3B
Front Panel 6U	PPA6	PPS6	PPS6B



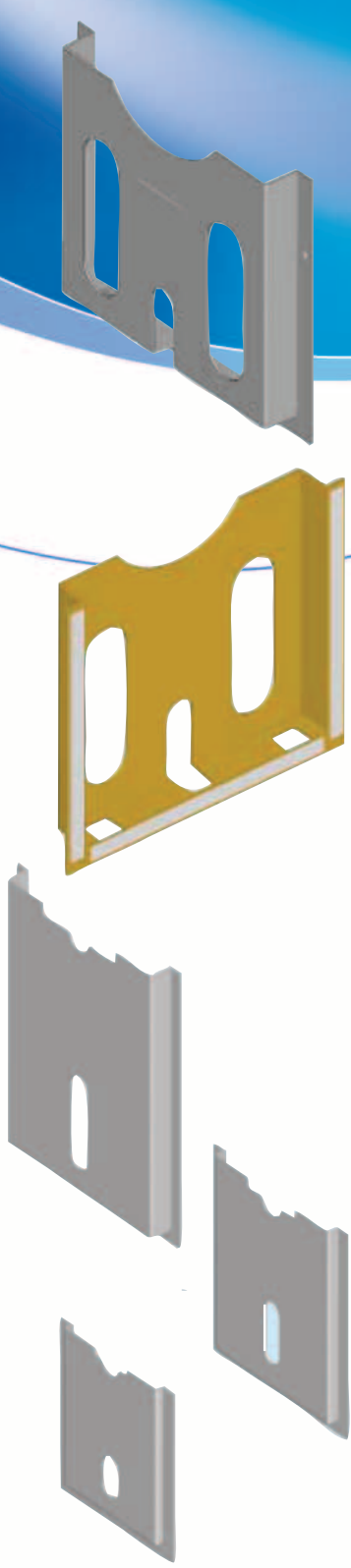
19" Front Panel

### Front Panel Fixings

Description	Order Code
Pan head, posidrive, M6 screws/washers 50 sets	FPPF
Cheese head, slotted M6 screw/grey nylon washers 50 sets	FPPC

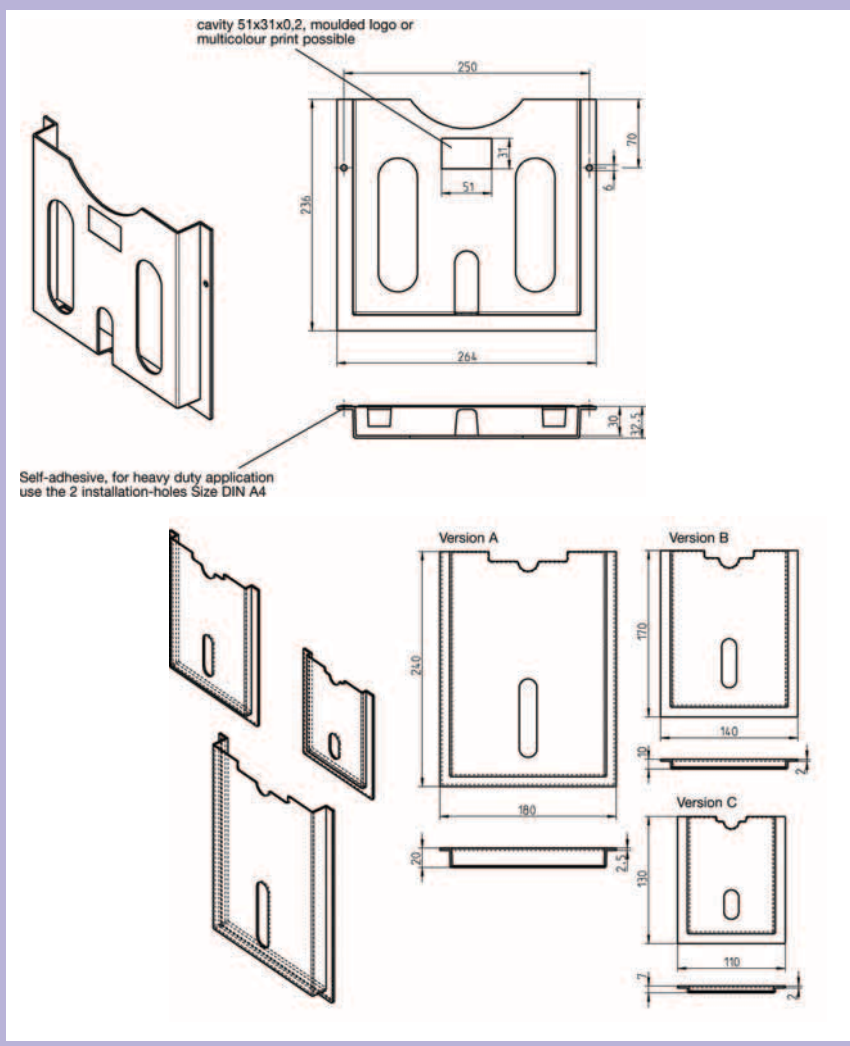


Front Panel Fixings



## Document Wallets

Description	Order Code
Self Adhesive Document Wallet 250mm Wide x 236mm High x 32.5mm Deep Finished Grey	DW
Self Adhesive Document Wallet 250mm Wide x 236mm High x 32.5mm Deep Finished Orange	DWO
Self Adhesive Document Wallet 180mm Wide x 220mm High x 20mm Deep Finished Transparent	DWA
Self Adhesive Document Wallet 140mm Wide x 170mm High x 10mm Deep Finished Transparent	DWB
Self Adhesive Document Wallet 110mm Wide x 130mm High x 7mm Deep Finished Transparent	DWC





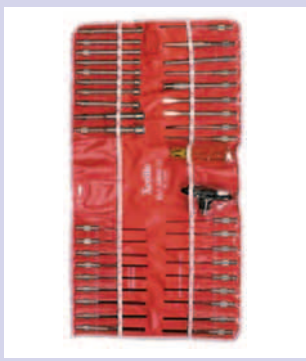
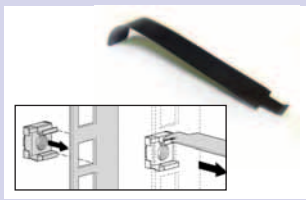
Document Wallets



### Hand Tools

Order Code	Product	Description	
0060403504	Ultralock Tape Measure	<b>5M Tape Measure – 19mm wide blade</b> <ul style="list-style-type: none"> <li>Chrome-plated lightweight high strength case</li> <li>Blade lock holds blade at any length</li> <li>Powered blade return</li> <li>Built-in shock absorber cushions blade return</li> <li>Removable belt clip</li> </ul>	 Ultralock  Series 2000  UTAPE
0069220504	Series 2000 Tape Measure	<b>5M Tape Measure – 19mm wide blade</b> Ergonomic design, rounded case to feel as if it was part of the hand <ul style="list-style-type: none"> <li>High strength case with removable belt clip</li> <li>Blade lock placed on top where the thumb expects it to be</li> <li>Lock holds blade securely at any length</li> <li>Unbreakable end hook and bright, clean graphics</li> <li>Built-in shock absorber cushions blade return</li> </ul>	
UTAPE	UTAPE Measure	<b>An essential new product</b> allowing the installer to quickly survey cabinet locations and easily identify the correct size unit for the job. The tape measure has 13mm wide blade and is dual scaled, measuring 0-67U an 0-3 metres. The tape measure can also be locked at any length and has an integral belt clip.	
220845N	5mm Ball End Allen Key	<b>Ball End Allen Key</b> <ul style="list-style-type: none"> <li>Black Finish</li> </ul>	
220844N	4mm Ball End Allen Key	<b>Ball End Allen Key</b> <ul style="list-style-type: none"> <li>Black Finish</li> </ul>	
220843N	3mm Ball End Allen Key	<b>Ball End Allen Key</b> <ul style="list-style-type: none"> <li>Black Finish</li> </ul>	
SDMB7GDP	Combination Screwdriver	<b>The new 7-in-1-Screwdriver</b> <ul style="list-style-type: none"> <li>Ergonomic non-slip handle for improved control.</li> <li>S2 Steel bits for improved lifetime.</li> <li>Consists of:                             <ul style="list-style-type: none"> <li>Slotted screwdriver 1 x 7 mm and Phillips PH2 (5/16" shank)</li> <li>Slotted screwdriver 1 x 5 mm und Phillips PH1 (1/4" shank)</li> <li>Nutdriver: 6 mm / 1/4", 8 mm / 5/16", 11 mm / 7/16"</li> </ul> </li> </ul>	 
SDMBR2	Dura-Driver Ratchet Screwdriver Set	<b>3 Torque Position 34 piece Dura-Driver power driving ratcheting screwdriver kit</b> Features: <ul style="list-style-type: none"> <li>Dura-Driver ratchet screwdriver with 3 torque positions.</li> <li>Stainless magnetic bit holder with 1/4" hex drive.</li> <li>7 power nutdrivers, SAE.</li> <li>7 power nutdrivers, metric.</li> <li>18 screwdriver bits.</li> <li>Blow moulded storage case.</li> </ul>	
302016N	19mm Combination Spanner	<b>Combination Spanners</b> <ul style="list-style-type: none"> <li>This spanner gathers the quality of the open end and box end spanners.</li> <li>Manufacture in Chrome-Vanadium steel.</li> <li>Nickel and chrome-plated finished.</li> <li>12 point profile with round corners on the spanner up to 23mm which provides more contact area with the screw.</li> </ul>	
302009N	13mm Combination Spanner		
302007N	12mm Combination Spanner		
302005N	10mm Combination Spanner		
WK500V	Utility Knife	<b>Quick Change Comfort Grip Utility Knife with Blade Storage</b> <ul style="list-style-type: none"> <li>Retractable utility knife with 11 positions</li> <li>Quick change blade release and reload</li> <li>Magazine blade storage holds 3 blades, not included</li> <li>Comfort grip for ease of use and slip protection</li> <li>Safety string cutter with recessed blade</li> <li>Warning: Sharp blade included, use care when handling.</li> </ul>	
SD8SET	Electrical Screwdriver Set	<b>Screwdriver Set - 8 Pieces</b> Consists of: <ul style="list-style-type: none"> <li>Slotted 2,5 x 80 / 4,0 x 100 / 6,5 x 150</li> <li>Phillips® PH 1 x 100 / PH 2 x 100</li> <li>Pozidriv PZ 1 x 100 / PZ 2 x 100</li> <li>Main Tester 140</li> </ul>	

## Hand Tools (continued...)

Order Code	Product	Description	
DCN160	Insulated Side Cutters	<b>Diagonal Cutting Nippers</b> <ul style="list-style-type: none"> <li>Insulated according Norm 1000 V 05 IEC 60900.</li> <li>VDE / GS certificated.</li> <li>Co-molded handles for maximum comfort.</li> </ul>	
HLDCN160	Insulated Side Cutters	<b>High Leverage Diagonal Cutting Nipper</b> <ul style="list-style-type: none"> <li>Insulated according Norm 1000 V 05 IEC 60900.</li> <li>VDE / GS certificated.</li> <li>Co-molded handles for maximum comfort.</li> </ul>	
CP180	Insulated Combination Pliers	<b>Combination Pliers</b> <ul style="list-style-type: none"> <li>Insulated according Norm 1000 V 05 IEC 60900.</li> <li>VDE / GS certificated.</li> <li>Co-molded handles for maximum comfort.</li> </ul>	
HLCP180	Insulated Combination Pliers	<b>High Leverage Combination Pliers</b> <ul style="list-style-type: none"> <li>Insulated according Norm 1000 V 05 IEC 60900.</li> <li>VDE / GS certificated.</li> <li>Co-molded handles for maximum comfort.</li> </ul>	
LNP200	Insulated Long Nose Pliers	<b>Long Nose Pliers</b> <ul style="list-style-type: none"> <li>Insulated according Norm 1000 V 05 IEC 60900.</li> <li>VDE / GS certificated.</li> <li>Co-molded handles for maximum comfort.</li> </ul>	
TGP200	Tongue & Groove Pliers	<b>Long Nose Pliers</b> <ul style="list-style-type: none"> <li>Insulated according Norm 1000 V 05 IEC 60900.</li> <li>VDE / GS certificated.</li> <li>Co-molded handles for maximum comfort.</li> </ul>	
80968	Little Nic Hacksaw	<b>Utility Hacksaw</b> <ul style="list-style-type: none"> <li>Ergonomic cushioned handle</li> <li>Gets into small places, makes difficult cutting jobs easy.</li> <li>Overall length 254 mm, will fit into any tool box.</li> <li>Uses any standard size hacksaw blade</li> </ul>	
80956	High Tension Hacksaw	<b>High Tension Hacksaw</b> <ul style="list-style-type: none"> <li>Quick changing blades.</li> <li>Adjustable crank handle for tension up to 30.000 PSI</li> <li>Torque and micro-adjustment.</li> <li>Spare blades can be stored inside frame.</li> <li>Blade can be positioned for 45° or 90° cutting.</li> <li>End of frame can be used as a jab saw.</li> </ul>	
80975EU	Pro Series Hacksaw	<b>Pro Series Hacksaw With Cushion Grip</b> <ul style="list-style-type: none"> <li>4-in-1 Hacksaw Frame comes complete with Bi-Metalloy® 18-tooth 12-inch hacksaw blade with High Speed Steel edge and 8" x 3/4" x 0.035" High Speed Steel Bi-Metal reciprocal saw blade.</li> <li>Visible blade storage holds either standard hacksaw blade or reciprocal saw blade.</li> <li>Cast aluminum construction for durability and light weight.</li> <li>Co-molded cushion grips at both ends of the saw add comfort and reduce slippage for better control.</li> </ul>	
99MP	39 Piece Multi-purpose Tool Kit	<b>39 Piece Multi-purpose Tool Kit</b> 39-piece kit contains most popular Series 99® tools. 2 extra pockets permit addition of pliers, snips or other tools. Available in a durable, roll-up plastic coated canvas for easy selection and storage. Includes: <ul style="list-style-type: none"> <li>99-1 Regular Handle</li> <li>99-4 Tee Handle</li> <li>99-8M Magnetic Nut driver</li> <li>99-6 to 99-16 Regular Nut drivers 9pcs</li> <li>99-20 to 99-26 Allen Hex Drivers 9pcs</li> <li>99-61 to 99-69 Bristol Spline Drivers 9pcs</li> <li>99-125, 99-811, 99-250, 99-312 Slotted Screwdrivers</li> <li>99-820, 99-821, 99-822 Philips Screwdrivers</li> <li>99-38 Reamer</li> <li>99-X-5 Extension</li> </ul>	
CAGETOOL	Cage Nut Insert Tool	<b>Cage Nut Insertion Tool</b> Allows quick and easy installation of cage nuts in to 19-inch angles.	



CABLE MANAGEMENT



### CHARACTERISTICS AND BENEFITS OF PEMSA METAL TRAYS

- They eliminate the possibility of trays acting as fire propagation elements.
- They eliminate the risk of inhalation of toxic gases or halogens.
- They facilitate sufficient time and visibility in order to completely evacuate personnel, and facilitate access to fire sources for firemen.
- They eliminate harmful effects to equipment, or electronic or computer circuits, due to the corrosive effect of smoke on these elements.

### IN BRIEF:

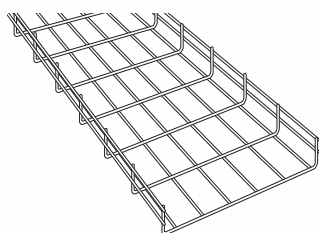
The use of Rejiband and Pemsaband metal trays significantly improves the safety of owners and users of electrical installations.

### Comparison of the allowable load values of various cable trays

Measurements of trays	PVC tray	Rejiband tray
100x60	11 Kg/m	60 Kg/m
200x60	22 Kg/m	60 Kg/m
300x60	34 Kg/m	93 Kg/m
400x100	77 Kg/m	110 Kg/m

Note: load data according to manufacturer catalogues

## rejiband®



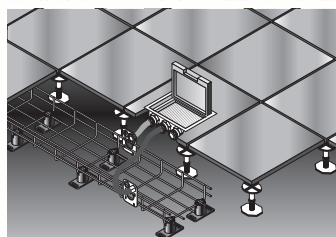
The market-leading electrically welded steel mesh trays, with a safety edge that prevents personal injury and cable damage.

Easy to handle, its "cut, bend and link" system allows easy adaptation to every installation and provides assembly time saving exceeding 30%.

It is lightweight, offers maximum ventilation and cleanliness, provides great strength and elasticity, and allows the addition of accessories during construction.

It has a very wide range of accessories: "Click," Omega and reinforced supports; optic fibre outlet systems, etc., as well as various finishes and materials: electrolytic zinc coating, hot-dip galvanising, AISI 304 and 316 stainless steel.

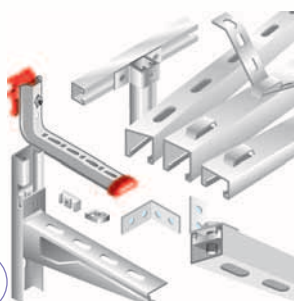
## false floor



The Rejiband tray has a specific system for installation under false floors. This system allows quick, flexible and easy installation, thereby ensuring maximum cleanliness and ventilation.

The Rejiband false floor is supplied with a complete range of specific supports and accessories for these types of installation.

## Supports and structures

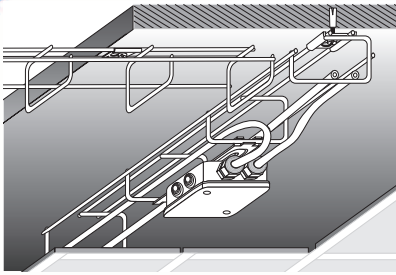


They are basic in a tray installation. If they are not appropriate, the entire installation will fail. When selecting these elements, the load capacity of the support and the corrosion resistance are the main considerations.

Pemsa has a complete range of installation solutions:

- Supports for Ceiling / False Ceiling installations.
- Supports for Floor / False Floor installations.
- Supports for Vertical / Horizontal Wall installations.
- Supports for Ceiling / Pendulum installations.
- Supports for installations Outdoors / Indoors / In highly corrosive environments.
- Structures for special installations.

**rejitech®**  
**Installation on ceilings and false ceilings**



This is a specific tray for ceilings and false ceilings. It is a tray made of high-strength, electrically welded wire mesh, which provides multiple advantages.

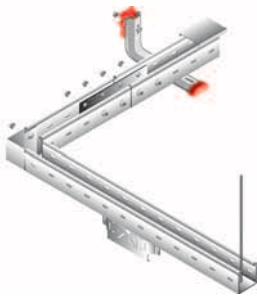
Its design prevents the accumulation of dust and dirt. It provides maximum cleanliness and faster and easier handling.

The reduction in installation time exceeds 55%, given that it has been designed to be fastened to the ceiling by a single bolt. Its open design ensures lateral access to cables.

The savings in materials exceeds 40%, and given that it is manufactured in 2-meter sections, transport is highly simplified and it can be easily transported in a small van.

Furthermore, it provides for easy and effortless cable handling, given that the cables are completely visible.

**inducanal®**



This is a metal channel of reduced size, appropriate for industrial installations.

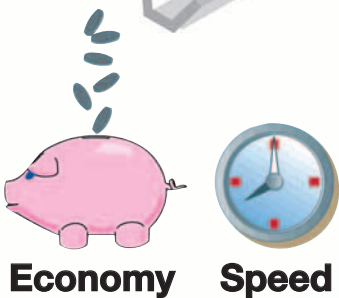
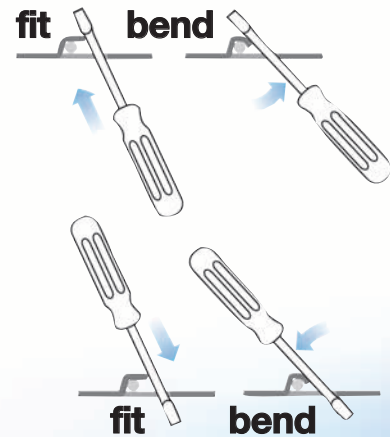
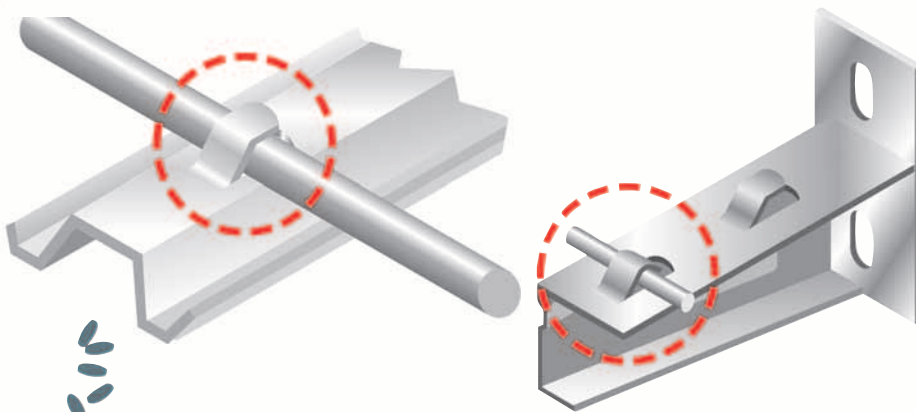
It has great impact resistance and resistance to temperature, and is manufactured with perforations that facilitate cable outlets.

The Inducanal metal channel requires the use of the IP 2x cover.



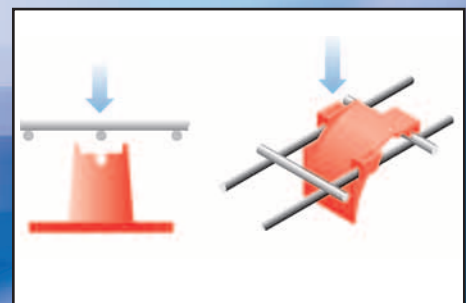
**THE “CLICK” SYSTEM**

**Exclusive, developed and patented by PEMSA. It brings quick fastening with no need for bolts or special tools, giving savings of up to 30%.**



**Economy Speed**

**It takes just one movement to fasten the item down securely. Quick fastening, with no bolts needed.**



## rejiband® 35

### E.B.

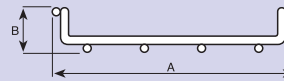
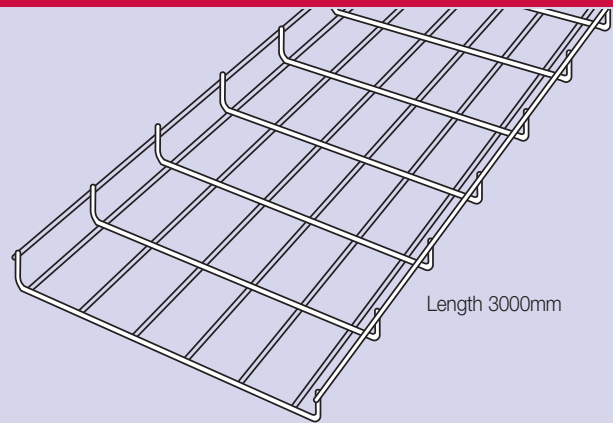
AxB	Order Code	Pack Unit
100x35	CBL60221100	8
150x35	CBL60221150	8
200x35	CBL60221200	6
300x35	CBL60221300	6
400x35	CBL60221400	4

### H.D.G.

AxB	Order Code	Pack Unit
100x35	CBL60231100	8
200x35	CBL60231200	6
300x35	CBL60231300	6
400x35	CBL60231400	4

### S.S. 304

AxB	Order Code	Pack Unit
100x35	CBL60251100	8
200x35	CBL60251200	6
300x35	CBL60251300	6
400x35	CBL60251400	4



### S.S. 316

AxB	Order Code	Pack Unit
100x35	CBL60261100*	8
200x35	CBL60261200*	6
300x35	CBL60261300*	6
400x35	CBL60261400*	4

\*Available to Special Order

## rejiband® 60

### E.B.

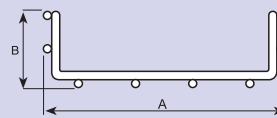
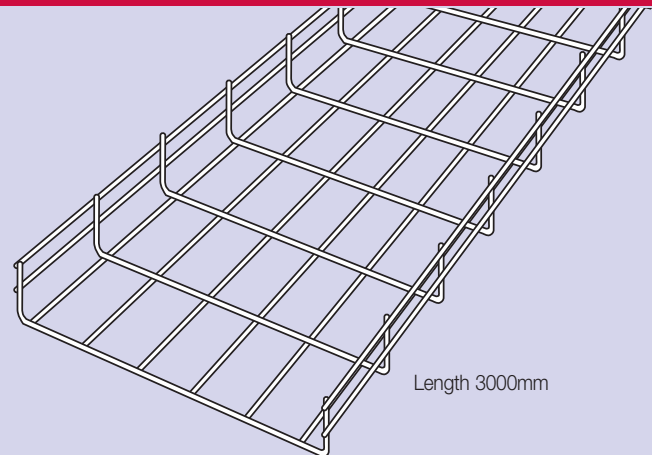
AxB	Order Code	Pack Unit
060x60	CBL60222060	8
100x60	CBL60222100	8
150x60	CBL60222150	8
200x60	CBL60222200	6
300x60	CBL60222300	4
400x60	CBL60222400	2
450x60	CBL60222450	2
500x60	CBL60222500	2
600x60	CBL60222600	2

### H.D.G.

AxB	Order Code	Pack Unit
060x60	CBL60232060	8
100x60	CBL60232100	8
150x60	CBL60232150	8
200x60	CBL60232200	6
300x60	CBL60232300	4
400x60	CBL60232400	2
500x60	CBL60232500	2
600x60	CBL60232600	2

### S.S. 304

AxB	Order Code	Pack Unit
060x60	CBL60252060	8
100x60	CBL60252100	8
150x60	CBL60252150	8
200x60	CBL60252200	6
300x60	CBL60252300	4
400x60	CBL60252400	2
500x60	CBL60252500	2
600x60	CBL60252600	2



### S.S. 316

AxB	Order Code	Pack Unit
60x60	CBL60262060*	8
100x60	CBL60262100*	8
150x60	CBL60262150*	8
200x60	CBL60262200*	6
300x60	CBL60262300*	4
400x60	CBL60262400*	2
500x60	CBL60262500*	2
600x60	CBL60262600*	2

\*Available to Special Order

## rejiband® 100

### E.B.

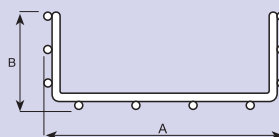
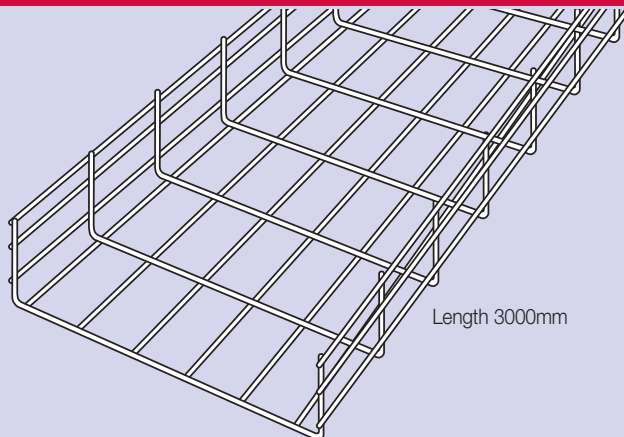
AxB	Order Code	Pack Unit
200x106	CBL60223200	2
300x106	CBL60223300	2
400x106	CBL60223400	2
500x106	CBL60223500	2
600x106	CBL60223600	2

### H.D.G.

AxB	Order Code	Pack Unit
200x106	CBL60233200	2
300x106	CBL60233300	2
400x106	CBL60233400	2
500x106	CBL60233500	2
600x106	CBL60233600	2

### S.S. 304

AxB	Order Code	Pack Unit
200x106	CBL60253200	2
300x106	CBL60253300	2
400x106	CBL60253400	2
500x106	CBL60253500	2
600x106	CBL60253600	2



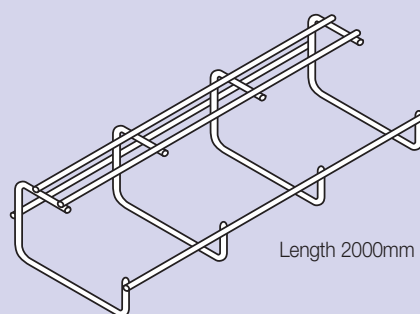
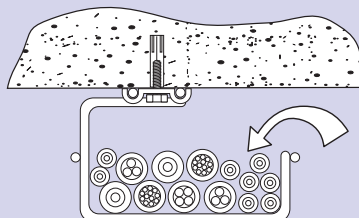
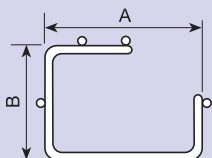
### S.S. 316

AxB	Order Code	Pack Unit
200x106	CBL60263200*	2
300x106	CBL60263300*	2
400x106	CBL60263400*	2
500x106	CBL60263500*	2
600x106	CBL60263600*	2

\*Available to Special Order

## rejitech® (false-ceiling tray)

AxB	Order Code	Finish	Pack Unit
100x60	CBL60225020	E.B.	8



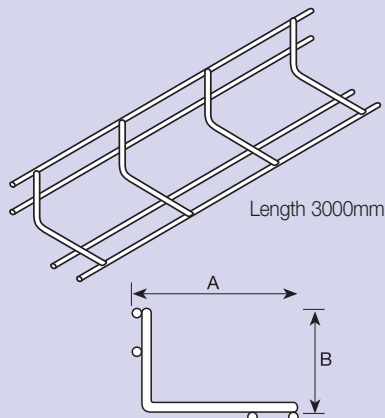
E.B.  
P.G.  
H.D.G.

Electrolytic Bichromate BS-EN 12329  
Pre-galvanised BS-EN 10142  
Hot-dip galvanised BS-EN-ISO 1461

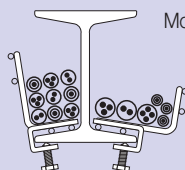
S.S.  
E.G.

Passivated stainless steel AISI 304 or AISI 316  
Electro-galvanised BS-EN 12329 available on request

## Angle Tray

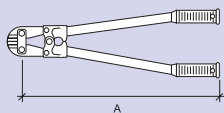


AxB	Order Code	Finish	Pack Unit
1109x60	CBL60220000	E.B.	6
109x60	CBL60230000	H.D.G.	6
109x60	CBL60250000	S.S. 304	6
109x60	CBL60260000	S.S. 316	6



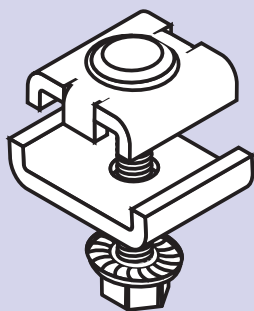
Mount with Angle tray fastener Ref. CBL67020051.

## Bolt Cutters (asymmetrical-cut)

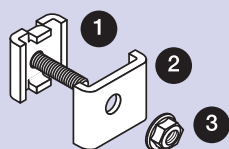


A	Order Code	Pack Unit
450	CBL68000058	1
600	CBL68000059	1

## Reinforced Joint Clamp



JUST 3 PARTS!



- Captive bolt
- Simplifies assembly
- 20% improvement in mechanical performance

Order Code	Finish	Pack Unit
CBL64020061	E.B.	50
CBL64030061	H.D.G.	50
CBL64050061	S.S. 304	50
CBL64060061	S.S. 316*	50

\*Available to Special Order

CONNECTORS NEEDED FOR EVERY 3 METERS

Wide	60	100	150	200	300	400	500	600
	2	2	2	2+1	2+1	2+2	2+2	2+2

## Click Connector

- Quick fitting
- No bolts
- No special tools
- Electrical continuity guaranteed



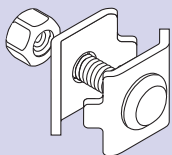
Order Code	Finish	Pack Unit
CBL64020030	E.B.	25

CONNECTORS NEEDED FOR EVERY 3 METERS

Wide	100	150	200	300	400	500	600
	2	2	2+1	2+1	2+2	2+2	2+2



## Earth Terminal for rejiband®

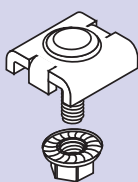


- New design
- More economical
- Less weight
- Smaller pack size. In bags of 20 units

SUITABLE FOR CABLE SIZES 16-35 MM<sup>2</sup>

Order Code	Finish	Pack Unit
CBL68000032	Brass	20

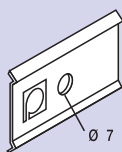
## Part Clamp



\*Available to Special Order

Order Code	Finish	Pack Unit
CBL64020060	E.B.	50
CBL64030060	H.D.G.	50
CBL64050060	S.S. 304	50
CBL64060060*	S.S. 316	50

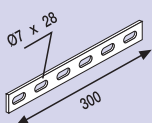
## Side Joint-Plate



\*Available to Special Order

Order Code	Finish	Pack Unit
CBL64020041	E.B.	50
CBL64030041	H.D.G.	50
CBL64050041	S.S. 304	50
CBL64060041*	S.S. 316	50

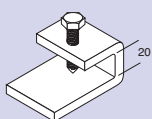
## Splice Plate



\*Available to Special Order

Order Code	Finish	Pack Unit
CBL67020053	E.B.	10
CBL67030047	H.D.G.	10
CBL67050053	S.S. 304	10
CBL67060053*	S.S. 316	10

## Angle Tray Fastener



Use with hexagonal cone point screw M10 x 20 ref. 67020098 (not included)

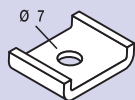
**E.B.**

Order Code	Pack Unit
CBL67020051	10

E.B. Electrolytic Bichromate BS-EN 12329  
 P.G. Pre-galvanised BS-EN 10142  
 H.D.G. Hot-dip galvanised BS-EN-ISO 1461

S.S. Passivated stainless steel AISI 304 or AISI 316  
 E.G. Electrogalvanised BS-EN 12329 available on request

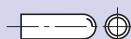
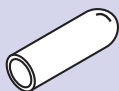
## Connector Plate



\*Available to Special Order

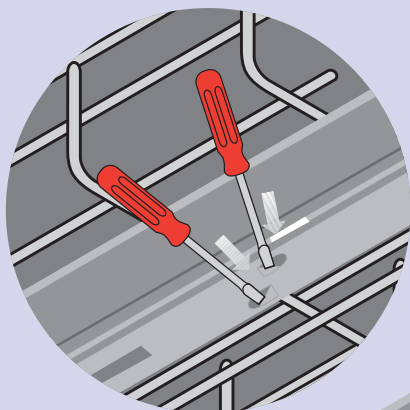
Order Code	Finish	Pack Unit
CBL64020062	E.B	50
CBL64030062	H.D.G	50
CBL64050062	S.S. 304	50
CBL64060062	S.S. 316	50

## Wire End Cap



Order Code	Material	Pack Unit
CBL68000049	Polyethylene	100

## Click Type Divider



3M LENGTH



**Speed**



**Economy**

### H.D.G.

A	Order Code	Pack Unit
25	CBL67030610	20
50	CBL67030611	16
80	CBL67030612	12

### P.G.

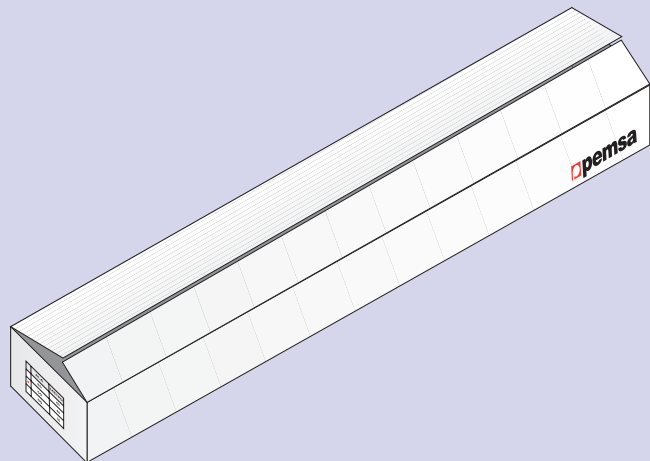
A	Order Code	Pack Unit
25	CBL67020610	20
50	CBL67020611	16
80	CBL67020612	12

### S.S. 316

A	Order Code	Pack Unit
25	CBL67060610*	20
50	CBL67060611*	16
80	CBL67060612*	12

\*Available to Special Order

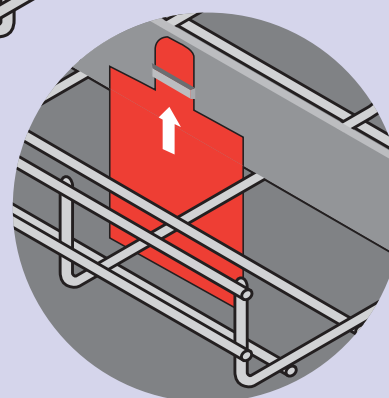
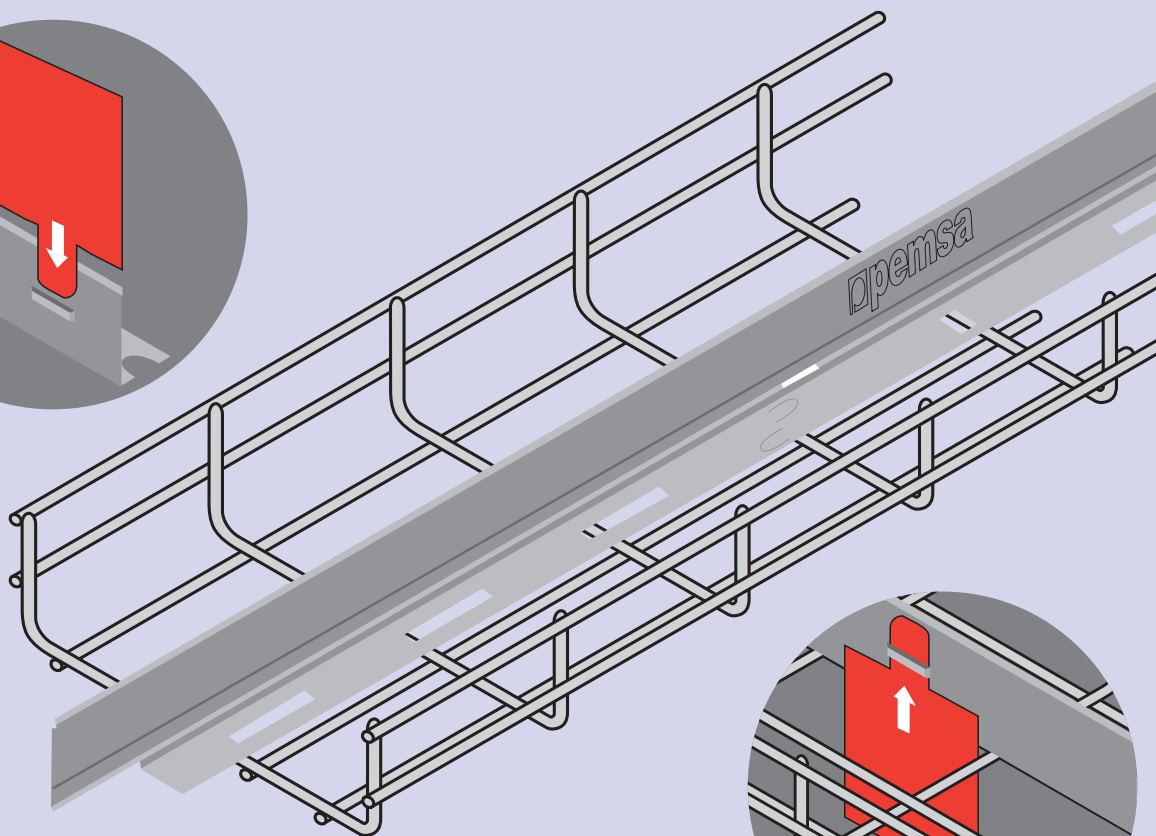
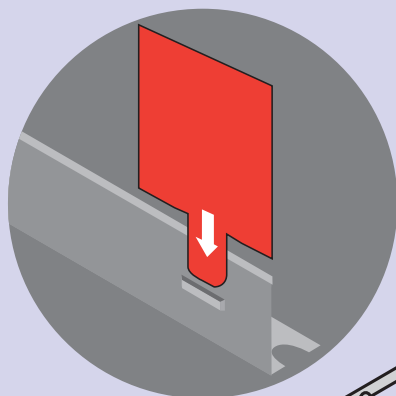
## Identification Label



Order Code	Material	Pack Unit
CBL68000020	Plastic	50

THE PG FINISH ON THE 25, 50 AND 80 FLANGE COMS PACKAGED FOR CORRECT STORAGE.

FASTER INSTALLATION



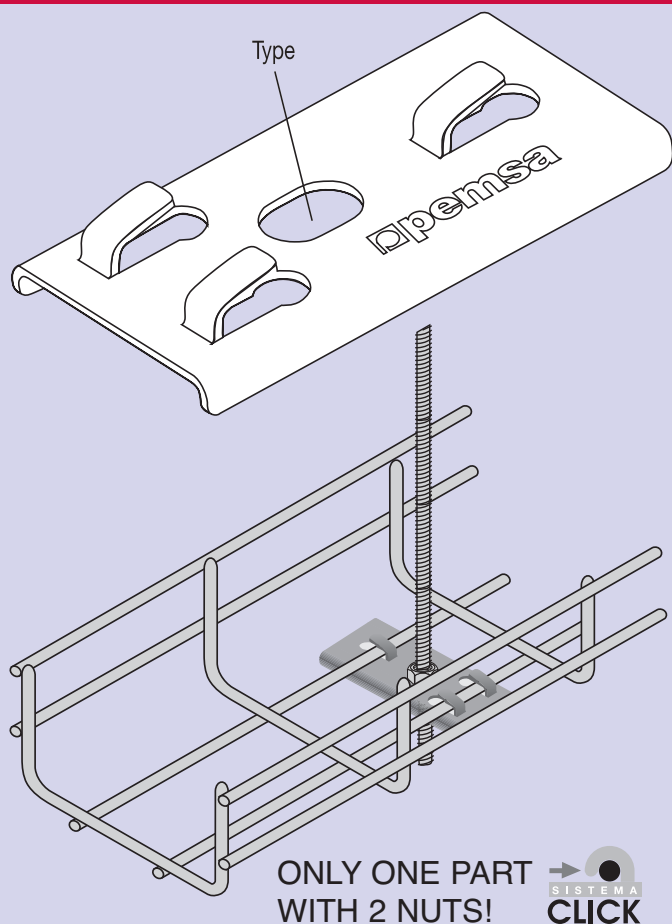
E.B.  
P.G.  
H.D.G.

Electrolytic Bichromate BS-EN 12329  
Pre-galvanised BS-EN 10142  
Hot-dip galvanised BS-EN-ISO 1461

S.S.  
E.G.

Passivated stainless steel AISI 304 or AISI 316  
Electrogalvanised BS-EN 12329 available on request

## Click Central Suspension



### E.B.

Type	Order Code	Pack Unit
M6	CBL67020143	20
M8	CBL67020043	20
M10	CBL67020243	20

### H.D.G.

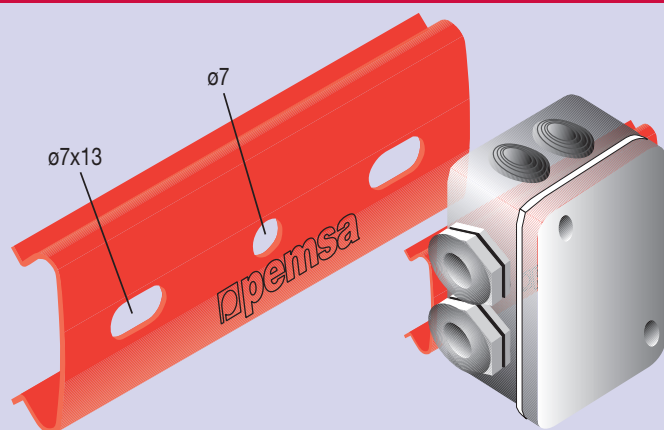
Type	Order Code	Pack Unit
M6	CBL67030143	20
M8	CBL67030043	20
M10	CBL67030243	20

### S.S. 316

Type	Order Code	Pack Unit
M6	CBL67060143*	20
M8	CBL67060043*	20
M10	CBL67060243*	20

\*Available to Special Order

## rejiband® Box Support



Order Code	Material	Pack Unit
CBL68000040	Plastic	20

- It is very economical
- The support is pressed on
- Without the need for any other accessory
- It allows no electrical conductivity between the box and the tray

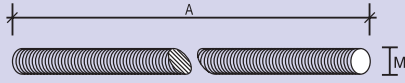
**CLICK PRESS FIT**

E.B. Electrolytic Bichromate BS-EN 12329  
 P.G. Pre-galvanised BS-EN 10142  
 H.D.G. Hot-dip galvanised BS-EN-ISO 1461

S.S. Passivated stainless steel AISI 304 or AISI 316  
 E.G. Electrogalvanised BS-EN 12329 available on request

## Threaded Rod M6/M8/M10

### EXPANDED RANGE



#### E.B.

M	kg	A	Order Code	Pack Unit
M6	202	500	CBL67020140	50
	202	1000	CBL67020141	50
M8	407	500	CBL67020044	50
	407	1000	CBL67020045	50
M10	509	1000	CBL67020145	50

#### E.G.

M	kg	A	Order Code	Pack Unit
M6	202	500	CBL67010140	50
	202	1000	CBL67010141	a 50

#### S.S. 304

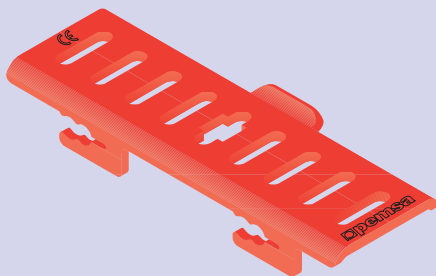
M	kg	A	Order Code	Pack Unit
M8	407	500	CBL67050044	50
	407	1000	CBL67050045	50
M10	509	1000	CBL67050145	30

#### S.S. 316

M	kg	A	Order Code	Pack Unit
M6	202	1000	CBL67060141*	50
M8	407	500	CBL67060044*	50
	407	1000	CBL67060045*	50
M10	509	1000	CBL67060145*	30

\*Available to Special Order

## Fixing Support for rejiband®

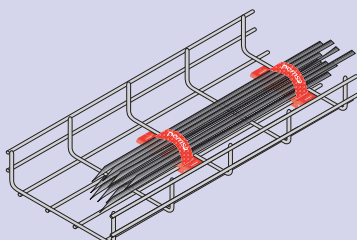


Order Code	Material	Pack Unit
CBL68000040	Plastic	20



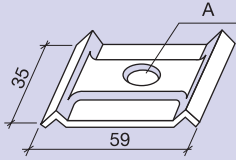
SUITABLE FOR VOICE, DATA AND FIBRE OPTIC INSTALLATIONS

## Rejifix



- It is very economical and reusable
- The support allows for adjacent installation
- It requires no bolts or other fastenings for installation
- Manufactured from a fire retardant ABS plastic material

## Central Hanging Plate 9 and 11



M8 =  $\varnothing$  9x16  
M10 =  $\varnothing$  11x18

### E.B.

Type	A	Order Code	Pack Unit
9	M8	CBL67020046	20
11	M10	CBL67020146	20

### H.D.G.

Type	A	Order Code	Pack Unit
9	M8	CBL67030046	20
11	M10	CBL67030146	20

### S.S. 304

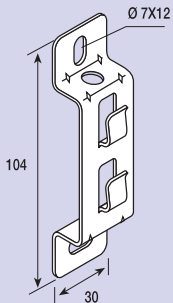
Type	A	Order Code	Pack Unit
9	M8	CBL67050046	20
11	M10	CBL67050146	20

### S.S. 316

Type	A	Order Code	Pack Unit
9	M8	CBL67060046*	20
11	M10	CBL67060146*	20

\*Available to Special Order

## Side Support 60



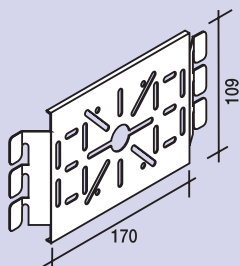
ESSENTIAL FOR 60x60  
WIRE MESH TRAY



\*Available to Special Order

Order Code	Finish	Pack Unit
CBL62021060	E.B.	25
CBL62031060	H.D.G.	25
CBL62051060	S.S. 304	25
CBL62061060*	S.S. 316	25

## Universal Bracket



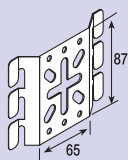
FOR INSTALLING  
BOXES USE M5  
BOLTS



\*Available to Special Order

Order Code	Finish	Pack Unit
CBL62026011	P.G.	10
CBL62036011	H.D.G.	10
CBL62056011	S.S. 304	10
CBL62066011*	S.S. 316	10

## Mini Universal Bracket



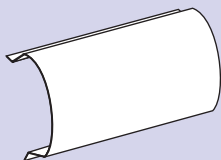
FOR INSTALLING  
BOXES USE M5  
BOLTS



\*Available to Special Order

Order Code	Finish	Pack Unit
CBL62026010	P.G.	10
CBL62036010	H.D.G.	10
CBL62056010	S.S. 304	10
CBL62066010*	S.S. 316	10

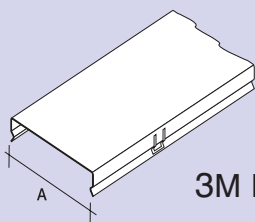
## Identification Plate



NO TEXT - FOR  
MARKING BY THE  
USER

Order Code	Finish	Pack Unit
CBL89010000	Plastic	50

## Cover



3M LENGTH



- Click fit for fast fixing to tray.
- Does not require any additional nuts, bolts or clips.

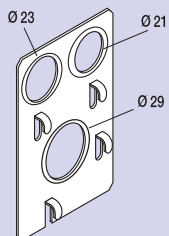
H.D.G.		
A	Order Code	Pack Unit
060	CBL73031060	8
100	CBL73031100	8
150	CBL73031150	4
200	CBL73031200	4
300	CBL73031300	2
400	CBL73031400	2
500	CBL73031500	2
600	CBL73031600	2

P.G.		
A	Order Code	Pack Unit
060	CBL73021060	8
100	CBL73021100	8
150	CBL73021150	4
200	CBL73021200	4
300	CBL73021300	2
400	CBL73021400	2
500	CBL73021500	2
600	CBL73021600	2

S.S. 316		
A	Order Code	Pack Unit
060	CBL73061060*	8
100	CBL73061100*	8
150	CBL73061150*	4
200	CBL73061200*	4
300	CBL73061300*	2
400	CBL73061400*	2
500	CBL73061500*	2
600	CBL73061600*	2

\*Available to Special Order

## Gland Bracket



**PRESS FIT**

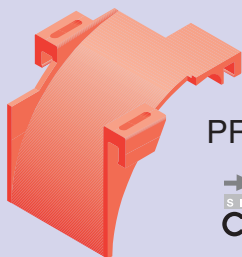


For conduit size:

- M20 PG 13
- M20 PG 16
- M25 PG 21

Order Code	Finish	Pack Unit
CBL67020040	E.B.	10

## Data Outlet



**PRESS FIT**



Order Code	Material	Pack Unit
CBL67020039	PP	10

## Gland Bracket



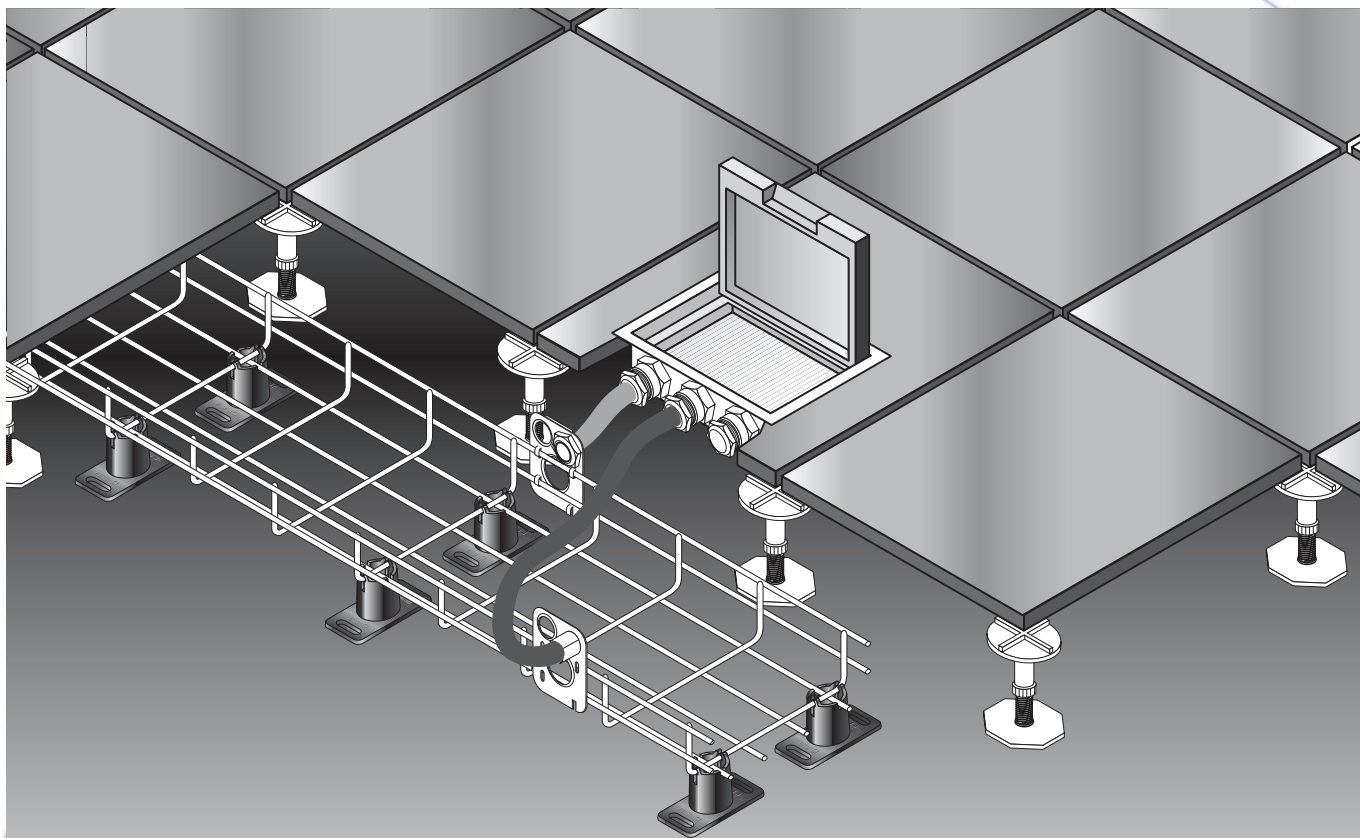
Contents: 400ml

Order Code	Pack Unit
CBL68000052	1

E.B. Electrolytic Bichromate BS-EN 12329  
 P.G. Pre-galvanised BS-EN 10142  
 H.D.G. Hot-dip galvanised BS-EN-ISO 1461

S.S. Passivated stainless steel AISI 304 or AISI 316  
 E.G. Electrogalvanised BS-EN 12329 available on request

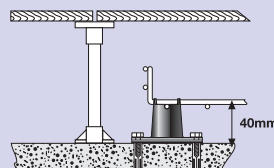
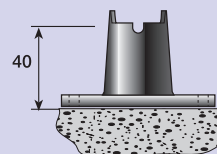




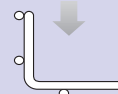
### rejitech® False Floor

Quick, easy installation

- For proper maintenance, the rack should be at least 40mm away from the floor
- If the rack crosses pipes, the rack must always be above the pipes
- rejiband® ensures the highest cleaning and ventilation levels



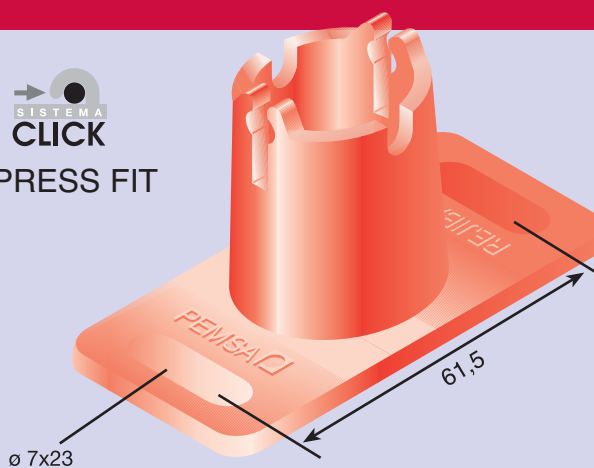
Press fit



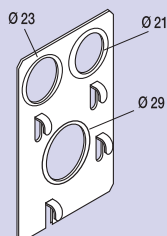
### Floor Foot (reinforced)

Order Code	Material	Pack Unit
CBL6800060	Polystyrene	100

  
**CLICK**  
 PRESS FIT



### Gland Bracket



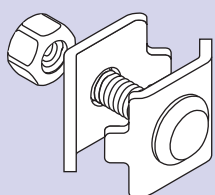
Quick, easy installation

For conduit size:

- M20 PG 13
- M20 PG 16
- M25 PG 21

Order Code	Material	Pack Unit
CBL67020040	E.B.	10

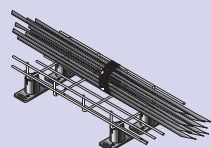
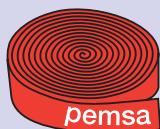
### Earth Terminal



Suitable for cable sizes 16-35mm<sup>2</sup>

Order Code	Material	Pack Unit
CBL68000032	Brass	20

### Rejifix



- Self sticking self-adhesive for data cables and telecommunications
- Does not damage the cables
- Re-usable

Order Code	Colour	Wide	m/roll.	Pack Unit
CBL89011000	Black	10mm	25m	1
CBL89011001	Red	10mm	25m	1
CBL89011002	Yellow	10mm	25m	1

### Adhesive & Hardener



- Comprises adhesive + hardener
- Contents: enough for approx. 100 feet

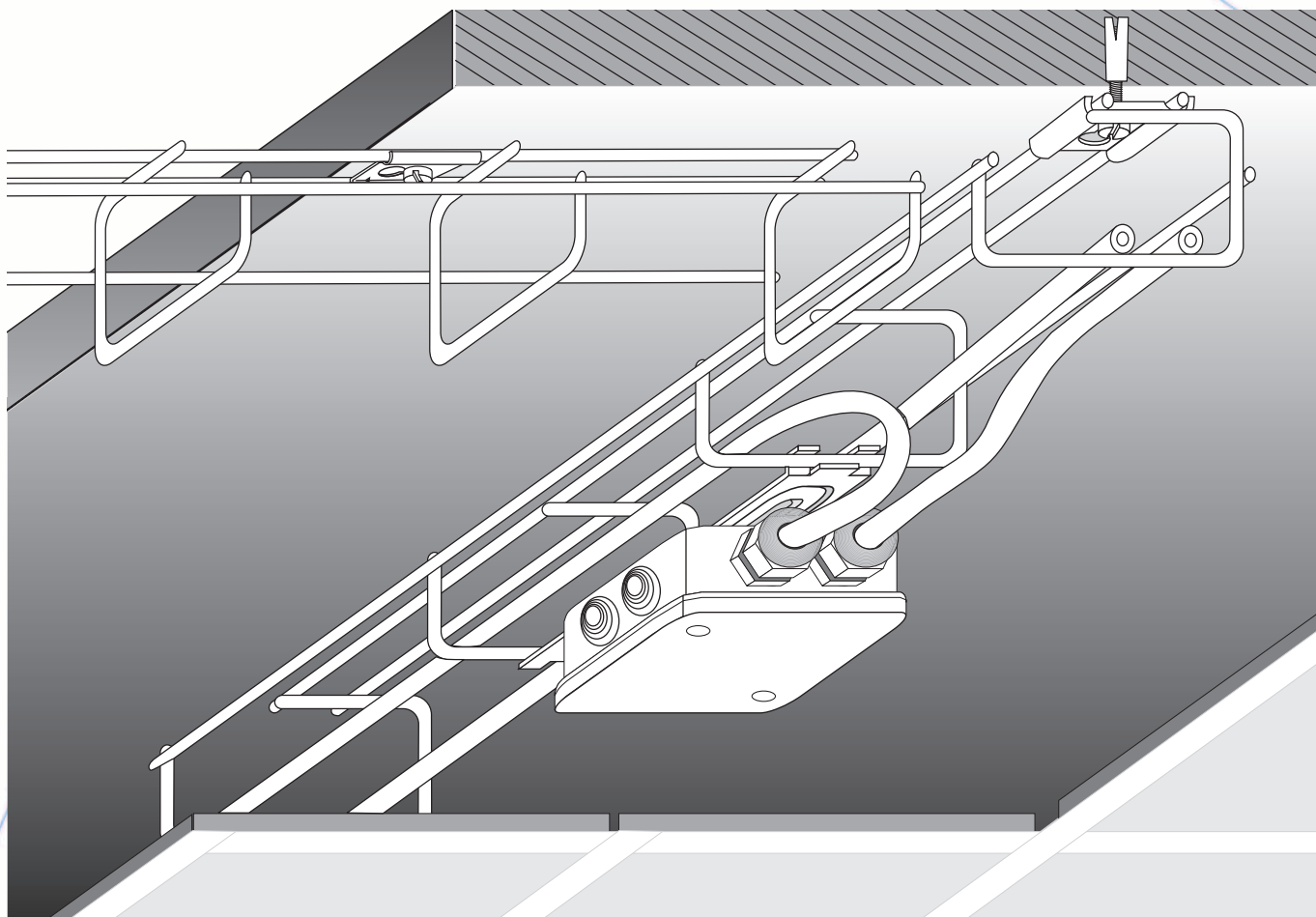
Order Code	Pack Unit
CBL68000065	1

E.B.  
P.G.  
H.D.G.

Electrolytic Bichromate BS-EN 12329  
Pre-galvanised BS-EN 10142  
Hot-dip galvanised BS-EN-ISO 1461

S.S.  
E.G.

Passivated stainless steel AISI 304 or AISI 316  
Electro-galvanised BS-EN 12329 available on request



### rejitech® Assembly in False Ceiling

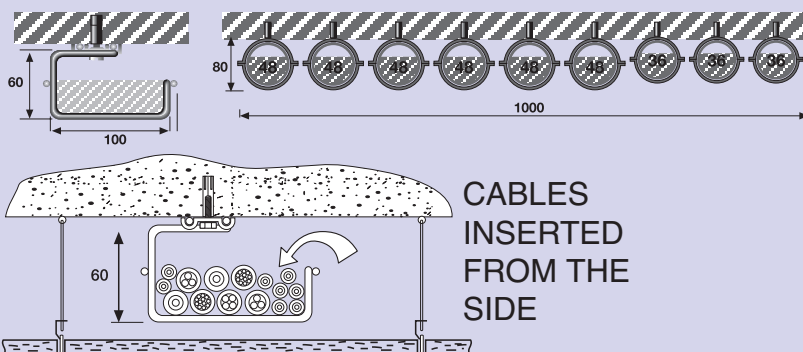
- Quick installation
- The assembly work can be carried out by just one person
- Tidy cabling
- Easy to modify
- Minimum height
- Cables can be inserted from the side
- Maximum ventilation

### SPACE NEEDED (FOR THE SAME NUMBER OF CABLES)

**rejitech®**

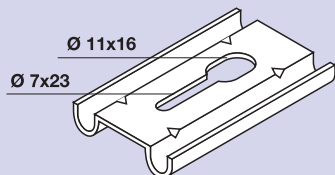
**PVC CONDUITS**

Length: 1m for same cable capacity



A	Order Code	Finish	Pack Unit
100	CBL60225020	E.B.	8

## Ceiling Fastener

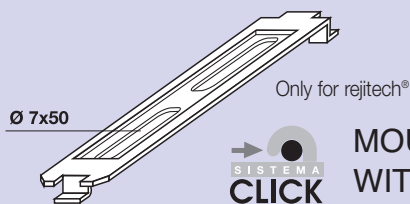


PRESS FIT



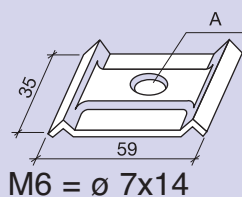
Order Code	Material	Pack Unit
CBL67020052	E.B.	25

## Box Support for rejitech®



Order Code	Material	Pack Unit
CBL67020041	E.B.	10

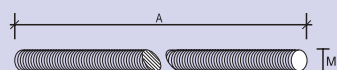
## Central Hanging Plate 7



### E.G.

A	Order Code	Pack Unit
M6	CBL67010144	20

## Threaded Rod M6



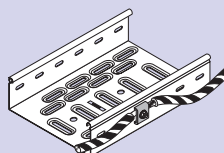
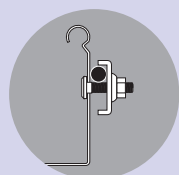
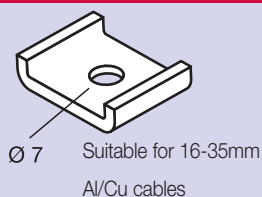
### E.G.

AxB	Order Code	Pack Unit
M6x500	CBL67010140	50
M6x1000	CBL67010141	50

### E.B.

AxB	Order Code	Pack Unit
M6x500	CBL67020140	50
M6x1000	CBL67020141	50

## Connector Plate



Order Code	Finish	Pack Unit
CBL64020062	E.B.	50
CBL64030062	H.D.G	50

E.B.  
P.G.  
H.D.G.

Electrolytic Bichromate BS-EN 12329  
Pre-galvanised BS-EN 10142  
Hot-dip galvanised BS-EN-ISO 1461

S.S.  
E.G.

Passivated stainless steel AISI 304 or AISI 316  
Electro-galvanised BS-EN 12329 available on request

## Omega Bracket

### P.G.

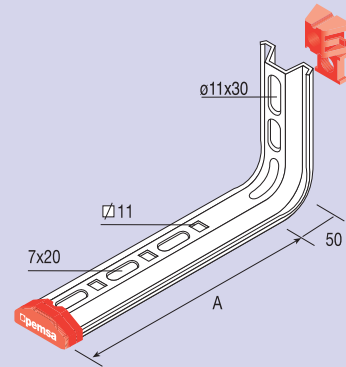
AxB	Order Code	Pack Unit
100	CBL62021103	5
150	CBL62021153	5
200	CBL62021203	5
300	CBL62021303	5
400	CBL62021403	5

### H.D.G.

AxB	Order Code	Pack Unit
100	CBL62031103	5
150	CBL62031153	5
200	CBL62031203	5
300	CBL62031303	5
400	CBL62031403	5

### S.S. 304

AxB	Order Code	Pack Unit
100	CBL62051103	5
150	CBL62051153	5
200	CBL62051203	5
300	CBL62051303	5
400	CBL62051403	5



Including Omega plug (preassembled) and Omega protector.

- Guarantees and improves the performance of the Omega supports
- Makes fitting easier and aids proper fitting of the support out by just one person

### S.S. 316

AxB	Order Code	Pack Unit
100	CBL62061103*	5
150	CBL62061153*	5
200	CBL62061203*	5
300	CBL62061303*	5
400	CBL62061403*	5

\*Available to Special Order

## Omega Ceiling Bracket

### P.G.

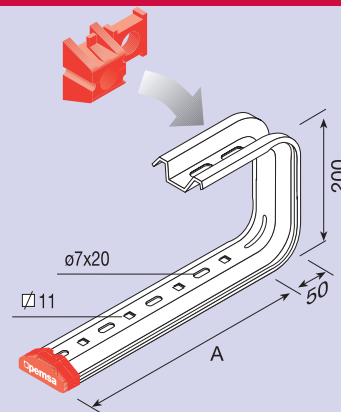
AxB	Order Code	Pack Unit
100	CBL62022103	4
150	CBL62022153	4
200	CBL62022203	4
300	CBL62022303	4
400	CBL62022403	4

### H.D.G.

AxB	Order Code	Pack Unit
100	CBL62032103	4
150	CBL62032153	4
200	CBL62032203	4
300	CBL62032303	4
400	CBL62032403	4

### S.S. 304

AxB	Order Code	Pack Unit
100	CBL62052103	5
150	CBL62052153	5
200	CBL62052203	5
300	CBL62052303	5
400	CBL62052403	5



Including Omega plug (preassembled) and Omega protector.

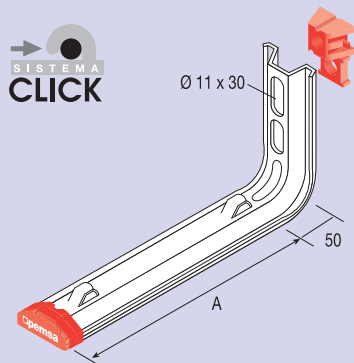
- Guarantees and improves the performance of the Omega supports
- Makes fitting easier and aids proper fitting of the support Omega click bracket

### S.S. 316

AxB	Order Code	Pack Unit
100	CBL62062103*	4
150	CBL62062153*	4
200	CBL62062203*	4
300	CBL62062303*	4
400	CBL62062403*	4

\*Available to Special Order

### Omega Click Bracket



Including Omega plug (preassembled) and Omega protector.

- Guarantees and improves the performance of the Omega supports
- Makes fitting easier and aids proper fitting of the support

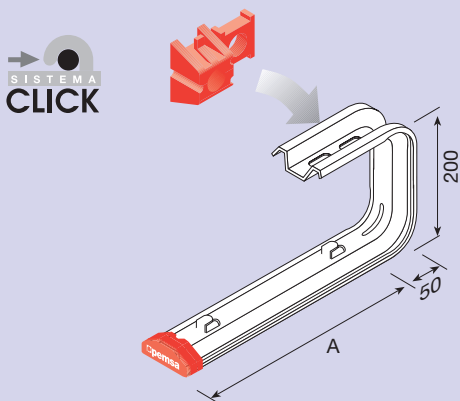
#### P.G.

A	Order Code	Pack Unit
100	CBL62023103	5
150	CBL62023153	5
200	CBL62023203	5
300	CBL62023303	5
400	CBL62023403	5

#### H.D.G.

A	Order Code	Pack Unit
100	CBL62033103	5
150	CBL62033153	5
200	CBL62033203	5
300	CBL62033303	5
400	CBL62033403	5

### Omega Click Ceiling Bracket



Including Omega plug (preassembled) and Omega protector.

- Guarantees and improves the performance of the Omega supports
- Makes fitting easier and aids proper fitting of the support

#### P.G.

A	Order Code	Pack Unit
100	CBL62029103	4
150	CBL62029153	4
200	CBL62029203	4
300	CBL62029303	4
400	CBL62029403	4

#### H.D.G.

A	Order Code	Pack Unit
100	CBL62029103	4
150	CBL62029153	4
200	CBL62029203	4
300	CBL62029303	4
400	CBL62029403	4

E.B. Electrolytic Bichromate BS-EN 12329  
 P.G. Pre-galvanised BS-EN 10142  
 H.D.G. Hot-dip galvanised BS-EN-ISO 1461

S.S. Passivated stainless steel AISI 304 or AISI 316  
 E.G. Electrogalvanised BS-EN 12329 available on request

### Omega Pendant Bracket

#### P.G.

AxB	Order Code	Pack Unit
300	CBL62021303	5
400	CBL62021403	5
500	CBL62021503	5
600	CBL62021603	5

#### H.D.G.

AxB	Order Code	Pack Unit
300	CBL62031303	5
400	CBL62031403	5
500	CBL62031503	5
600	CBL62031603	5

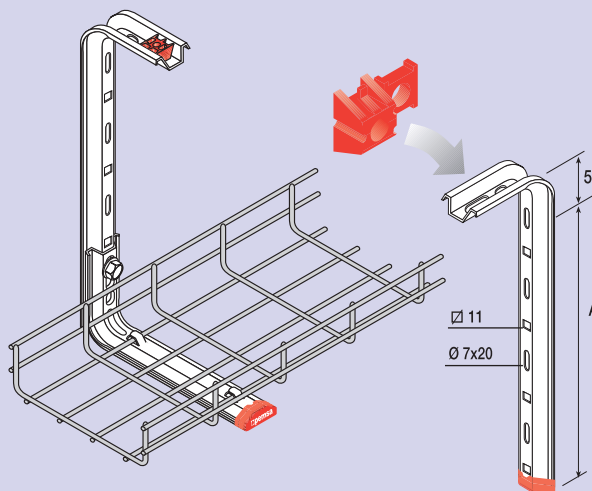
#### S.S. 304

AxB	Order Code	Pack Unit
300	CBL62051303	5
400	CBL62051403	5
500	CBL62051503	5
600	CBL62051603	5

#### S.S. 316

AxB	Order Code	Pack Unit
300	CBL62061303*	5
400	CBL62061403*	5
500	CBL62061503*	5
600	CBL62061603*	5

\*Available to Special Order



Including Omega plug (preassembled) and Omega protector.

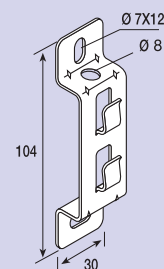
### Side Support 60

Order Code	Finish	Pack Unit
CBL62021060	E.B.	25
CBL62031060	H.D.G.	25
CBL62051060	S.S. 304	25
CBL62061060*	S.S. 316	25

ESSENTIAL FOR 60x60 WIRE MESH TRAY



\*Available to Special Order



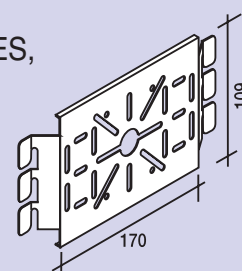
### Mini Universal Bracket

Order Code	Finish	Pack Unit
CBL62026010	P.G.	10
CBL62036010	H.D.G.	10
CBL62056010	S.S. 304	10
CBL62066010	S.S. 316*	10

FOR INSTALLING BOXES, USE M5 BOLTS



\*Available to Special Order

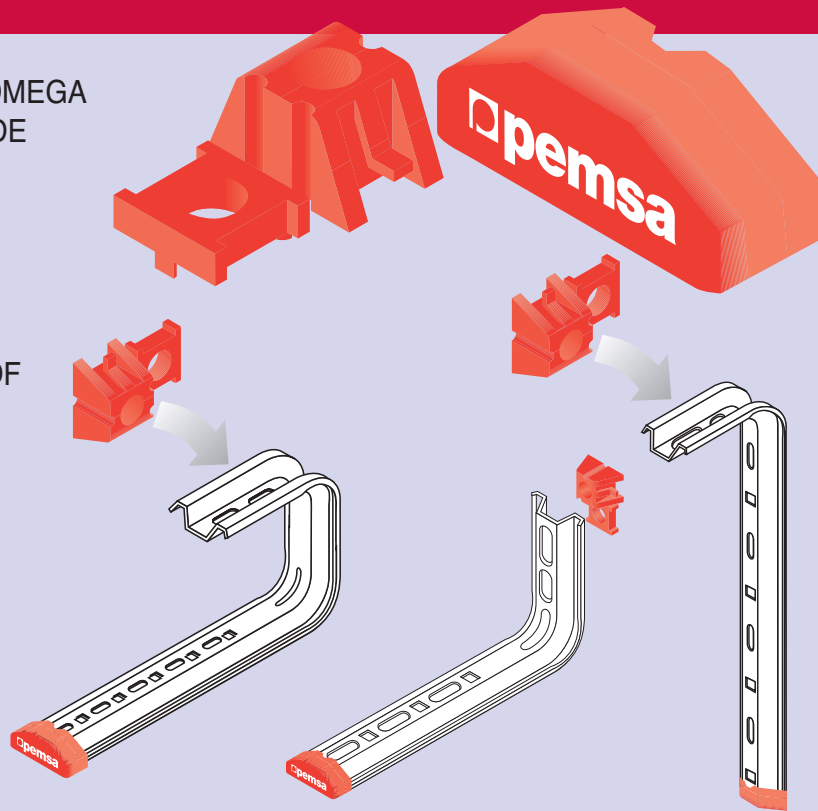
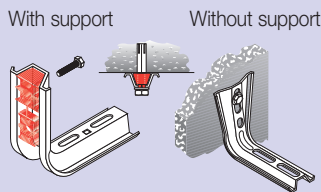


### Omega Support

EXPANDED RANGE OF OMEGA SUPPORTS NOW INCLUDE PROTECTOR AND PLUG.

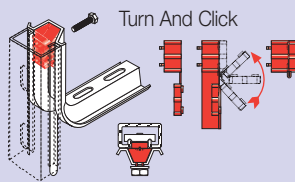
INCLUDED WITH SUPPORT, FREE OF CHARGE.

PREVENTS CRUSHING OF THE OMEGA BRACKET



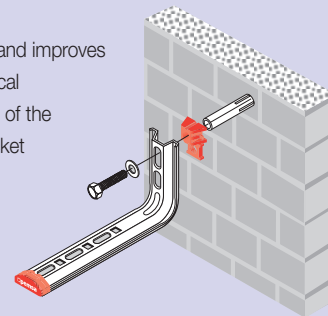
#### Channel mounting

- Facilitates bolt installation and prevents bracket from turning

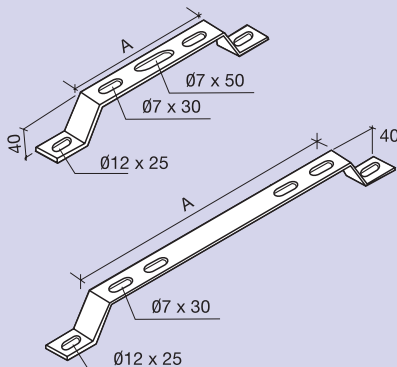


#### Wall mounting

- Guarantees and improves the mechanical performance of the Omega Bracket



### Stand off Bracket



A	Order Code	Finish	Pack Unit
180	CBL67030539	P.G.	10
180	CBL67030541	H.D.G.	10
180	CBL67050541	S.S. 304	10
180	CBL67060541*	S.S. 316	10
350	CBL67030540	P.G.	10
350	CBL67030542	H.D.G.	10
350	CBL67050542	S.S. 304	10
350	CBL67060542*	S.S. 316	10

\*Available to Special Order

E.B.  
P.G.  
H.D.G.

Electrolytic Bichromate BS-EN 12329  
Pre-galvanised BS-EN 10142  
Hot-dip galvanised BS-EN-ISO 1461

S.S.  
E.G.

Passivated stainless steel AISI 304 or AISI 316  
Electro-galvanised BS-EN 12329 available on request



## Medium Duty Cantilever

### P.G.

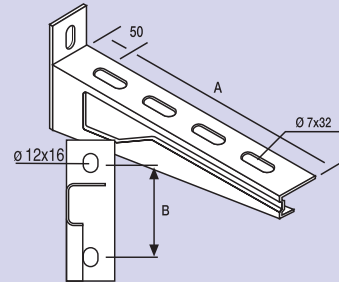
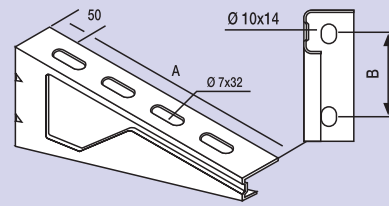
AxB	Order Code	Pack Unit
100x54	CBL62025100	4
150x54	CBL62025150	4
200x54	CBL62025200	4
300x54	CBL62025300	4
400x92	CBL62025400	4
500x92	CBL62025500	4
600x92	CBL62025600	4

### H.D.G.

AxB	Order Code	Pack Unit
100x54	CBL62035100	4
150x54	CBL62035150	4
200x54	CBL62035200	4
300x54	CBL62035300	4
400x77	CBL62035400	4
500x77	CBL62035500	4
600x77	CBL62035600	4

### S.S. 304

AxB	Order Code	Pack Unit
100x54	CBL62055100	4
150x54	CBL62055150	4
200x54	CBL62055200	4
300x54	CBL62055300	4
400x77	CBL62055400	4
500x77	CBL62055500	4
600x77	CBL62055600	4



Reinforced brackets.

- Structural reinforcement
- Prevents twisting and increases load-bearing capacity

### S.S. 316

AxB	Order Code	Pack Unit
100x54	CBL62065100*	4
150x54	CBL62065150*	4
200x54	CBL62065200*	4
300x54	CBL62065300*	4
400x77	CBL62065400*	4
500x77	CBL62065500*	4
600x77	CBL62065600*	4

\*Available to Special Order

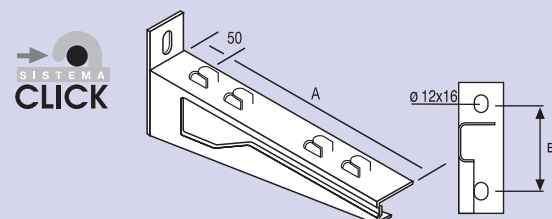
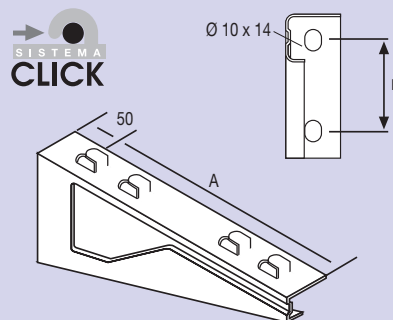
## Medium Duty Click Cantilever

### P.G.

AxB	Order Code	Pack Unit
100x54	CBL62024100	4
150x54	CBL62024150	4
200x54	CBL62024200	4
300x54	CBL62024300	4
400x92	CBL62024400	4
500x92	CBL62024500	4
600x92	CBL62024600	4

### H.D.G.

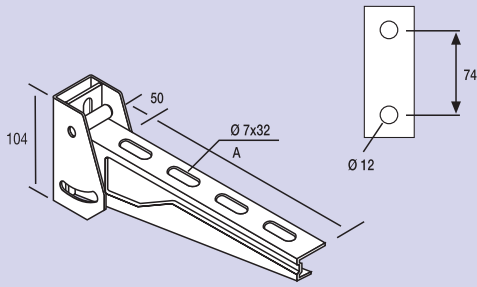
AxB	Order Code	Pack Unit
100x54	CBL62034100	4
150x54	CBL62034150	4
200x54	CBL62034200	4
300x54	CBL62034300	4
400x77	CBL62034400	4
500x77	CBL62034500	4
600x77	CBL62034600	4



Reinforced brackets.

- Structural reinforcement
- Prevents twisting and increases load-bearing capacity

## Adjustable medium duty cantilever

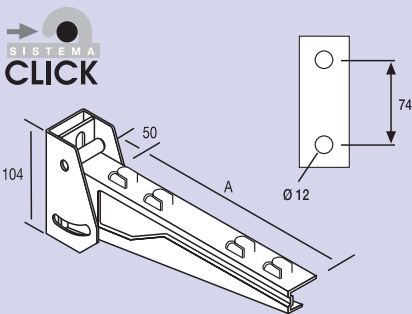


Delivered unassembled all pieces included

### H.D.G.

A	Order Code	Pack Unit
100	CBL62037100	4
150	CBL62037150	4
200	CBL62037200	4
300	CBL62037300	4
400	CBL62037400	4
500	CBL62037500	4
600	CBL62037600	4

## Adjustable medium duty click cantilever

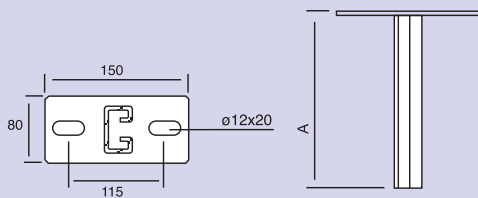


Delivered unassembled all pieces included

### H.D.G.

A	Order Code	Pack Unit
100	CBL62038100	4
150	CBL62038150	4
200	CBL62038200	4
300	CBL62038300	4
400	CBL62038400	4
500	CBL62038500	4
600	CBL62038600	4

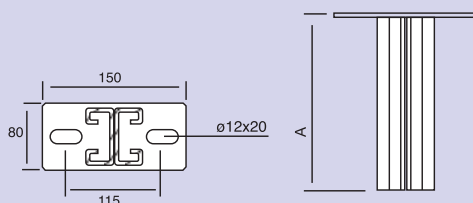
## Heavy duty pendant drop



### H.D.G.

kg	A	Order Code	Pack Unit
101	500	CBL67030660	1
101	1000	CBL67030661	1

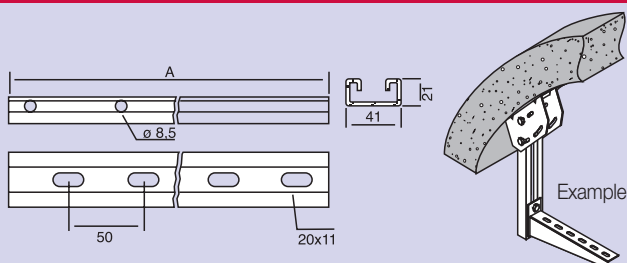
## Double heavy duty pendant drop



### H.D.G.

kg	A	Order Code	Pack Unit
254	500	CBL67030622	1
254	1000	CBL67030663	1

## Heavy duty pendant channel



### P.G.

A	Order Code	Pack Unit
500	CBL67030646	1
1000	CBL67030647	1

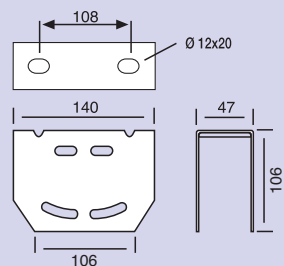
### Heavy duty pendant boss

#### P.G.

Order Code	Pack Unit
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CBL67030645	1
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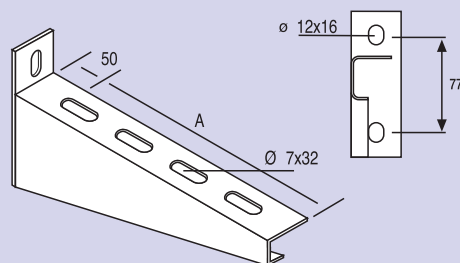
M8x65 screws not included (page ??)



### Heavy duty cantilever

#### H.D.G.

A	Order Code	Pack Unit
300	CBL63033300	4
400	CBL63033400	4
500	CBL63033500	4
600	CBL63033600	4

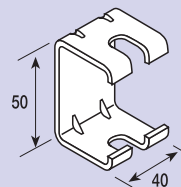


### Ceiling bracket

#### P.G.

A	Order Code	Pack Unit
700	CBL67030060	10

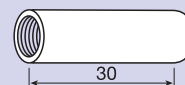
USE WITH M8/M10 RODS



### M8 Rod connector

#### E.B.

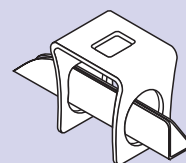
A	Order Code	Pack Unit
407	CBL67020067	50



### Variable ceiling bracket

#### H.D.G.

A	Order Code	Pack Unit
1500	CBL67030061	1

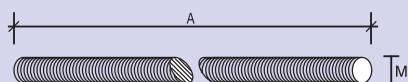


E.B. Electrolytic Bichromate BS-EN 12329  
 P.G. Pre-galvanised BS-EN 10142  
 H.D.G. Hot-dip galvanised BS-EN-ISO 1461

S.S. Passivated stainless steel AISI 304 or AISI 316  
 E.G. Electrogalvanised BS-EN 12329 available on request

### Threaded rod M6/M8/M10

EXPANDED RANGE



#### E.B.

M	kg	A	Order Code	Pack Unit
M6	202	500	CBL67020140	50
	202	1000	CBL67020141	50
M8	407	500	CBL67020044	50
	407	1000	CBL67020045	50
M10	509	1000	CBL67020145	50

#### E.G.

M	kg	A	Order Code	Pack Unit
M6	202	500	CBL67010140	50
	202	1000	CBL67010141	50

#### S.S. 304

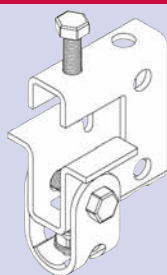
M	kg	A	Order Code	Pack Unit
M8	407	500	CBL67050044	50
	407	1000	CBL67050045	50
M10	509	1000	CBL67050145	30

#### S.S. 316

M	kg	A	Order Code	Pack Unit
M6	202	1000	CBL67060141*	50
M8	407	500	CBL67060044*	50
	407	1000	CBL67060045*	50
M10	509	1000	CBL67060145*	50

\*Available to Special Order

### Beam clamp hanging assembly



#### E.B.

Order Code	Pack Unit
CBL67020048	1

E.B. Electrolytic Bichromate BS-EN 12329  
 P.G. Pre-galvanised BS-EN 10142  
 H.D.G. Hot-dip galvanised BS-EN-ISO 1461

S.S. Passivated stainless steel AISI 304 or AISI 316  
 E.G. Electro-galvanised BS-EN 12329 available on request

### Mesh channel

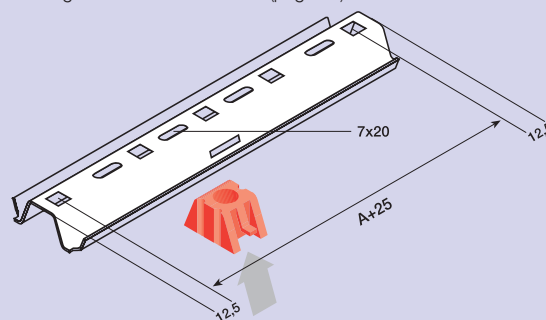
#### P.G.

kg	A	Order Code	Pack Unit
152/254(*)	200	CBL63022203	10
152/254(*)	300	CBL63022303	10
152/254(*)	400	CBL63022403	10
254 (**)	500	CBL63022503	10
254(**)	600	CBL63022603	10

#### P.G.

kg	A	Order Code	Pack Unit
152/254(*)	200	CBL63032203	10
152/254(*)	300	CBL63032303	10
152/254(*)	400	CBL63032403	10
254 (**)	500	CBL63032503	10
254(**)	600	CBL63032603	10

Hang with M10 threaded rod (page ??)



**WITH A SAFETY  
PLUG INCLUDED FOR  
BETTER  
PERFORMANCE ON  
WIDTHS 200-400**

(\*) can be hung with 1 or 2 threaded rods

(\*\*) hang only with 2 threaded rods

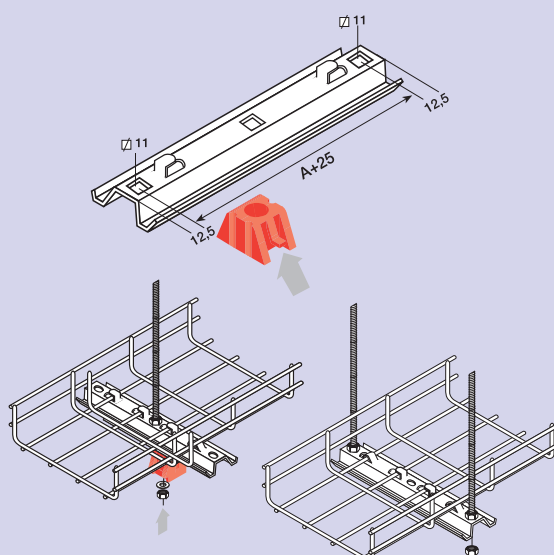
### Mesh click channel

#### P.G.

kg	A	Order Code	Pack Unit
152/254(*)	200	CBL63021203	10
152/254(*)	300	CBL63021303	10
152/254(*)	400	CBL63021403	10
254 (**)	500	CBL63021503	10
254(**)	600	CBL63021603	10

#### P.G.

kg	A	Order Code	Pack Unit
152/254(*)	200	CBL63031203	10
152/254(*)	300	CBL63031303	10
152/254(*)	400	CBL63031403	10
254 (**)	500	CBL63031503	10
254(**)	600	CBL63031603	10



**WITH A SAFETY  
PLUG INCLUDED FOR  
BETTER  
PERFORMANCE ON  
WIDTHS 200-400**

**+ EASY CABLE LAYING**

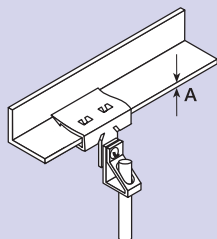
**+ ASSEMBLY TIME SAVING**

(\*) can be hung with 1 or 2 threaded rods

Hang with M10 threaded rod (page ??)

(\*\*) hang only with 2 threaded rods

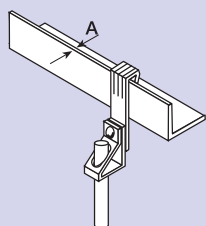
### Horizontal angle hanger



#### Passivated

A	Order Code	Pack Unit
1 5-5	CBL68000721	100
4-10	CBL68000722	100

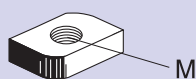
### Horizontal angle hanger



#### Passivated

A	Order Code	Pack Unit
1 5-5	CBL68000731	100
4-10	CBL68000732	100

### Channel nut



#### E.G.

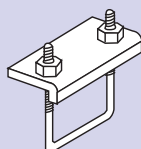
M	Order Code	Pack Unit
M6	CBL67020055	100
M10	CBL67020058	100

#### S.S. 316

M	Order Code	Pack Unit
M10	CBL67060058*	100

\*Available to Special Order

### Channel beam clamp



#### E.G.

Order Code	Pack Unit
CBL67030101	1

E.B. Electrolytic Bichromate BS-EN 12329  
 P.G. Pre-galvanised BS-EN 10142  
 H.D.G. Hot-dip galvanised BS-EN-ISO 1461

S.S. Passivated stainless steel AISI 304 or AISI 316  
 E.G. Electrogalvanised BS-EN 12329 available on request

### Washer

M	Order Code	Finish	Pack Unit
M8	CBL67020083	E.G.	100
M10	CBL67020061	E.G.	100
M8	CBL67020063	E.B.	100
M10	CBL67020013	E.B.	100
M8	CBL67050063	S.S. 304	100
M10	CBL67050064	S.S. 304	100
M8	CBL67060063	S.S. 316	100
M10	CBL67060064	S.S. 316	100



### Serrated washer

#### Passivated

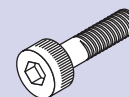
M	Order Code	Pack Unit
M8	CBL67020084	100
M10	CBL67020086	100



### Allen screw

#### E.G.

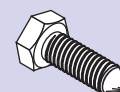
M	Order Code	Pack Unit
M10x20	CBL67020065	50



### Hexagonal cone point screw

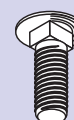
#### E.B.

M	Order Code	Pack Unit
M10x20	CBL67020098	10



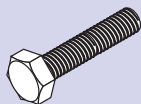
### Shoulder screw c/DIN 603

M	Order Code	Finish	Pack Unit
M6x12	CBL67010099	E.G.	100
M6x20	CBL67010100	E.G.	100
M6x20	CBL67020100	E.B.	100
M6x12	CBL67030099	H.D.G.	100
M6x20	CBL67030100	H.D.G.	100
M6x20	CBL67050100	S.S. 304	100
M6x20	CBL67060100*	S.S. 316	100



\*Available to Special Order

### Hexagonal set screw



#### E.G.

M	Order Code	Pack Unit
M6x15	CBL67020054	100
M8x65	CBL67020092	100
M10x20	CBL67020059	100
M10x35	CBL67020077	100
M10x60	CBL67020010	100

### Serrated hexagon flange nut



M	Order Code	Finish	Pack Unit
M6	CBL64010059	E.G.	50
M6	CBL64020059	E.B.	50
M6	CBL64030059	H.D.G.	50
M6	CBL64050059	S.S. 304	50
M6	CBL64060059*	S.S. 316	50

\*Available to Special Order

### Serrated hexagon flange nut



M	Order Code	Finish	Pack Unit
M8	CBL67020095	E.G.	100
M10	CBL67020079	E.G.	100
M8	CBL67020062	E.B.	100
M10	CBL67020014	E.B.	100
M8	CBL67050062	S.S. 304	100
M10	CBL67050014	S.S. 304	100
M8	CBL67060062*	S.S. 316	100
M10	CBL67060014*	S.S. 316	100

\*Available to Special Order

E.B.  
P.G.  
H.D.G.

Electrolytic Bichromate BS-EN 12329  
Pre-galvanised BS-EN 10142  
Hot-dip galvanised BS-EN-ISO 1461

S.S.  
E.G.

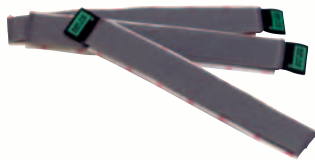
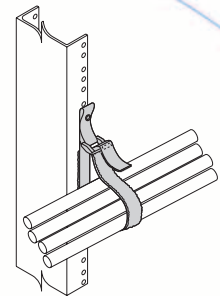
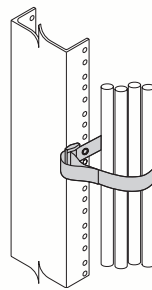
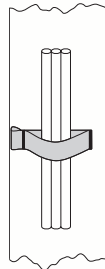
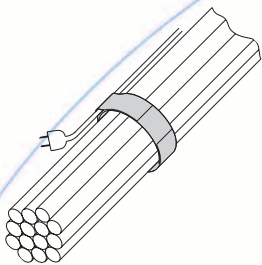
Passivated stainless steel AISI 304 or AISI 316  
Electrogalvanised BS-EN 12329 available on request



# Cable Support

**Velcro**

Order Code	Length (mm)	Shipping Weight (kg)
Cable Wrap (Yellow Nylon)		
SB72558x5	16 x 127	0.04
SB7251x10	25 x 254	0.04
Cable Catch (Gray Nylon)		
SB72658x4	16 x 101	0.04
SB7261x8	25 x 203	0.04
Cable Strap (Gray Nylon)		
SB72758x6	16 x 152	0.04
Cable Hanger (Gray Nylon)		
SB72834x6	19 x 152	0.04



**Cable Wrap**

**Cable Catch**

**Cable Strap**

**Cable Hanger**

### ■ TEST SET-UP

The test set-up consisted of a 3 m length of wire mesh tray, including joints and accessories, supported on brackets at intervals of 1.2m. The power cables, up to 1kV, should be fire resistant at the same or higher level than halogen free, high safety cables. The wire mesh tray was then loaded with chains to simulate the cable weight and other standard conditions of the test.

During the test, a standardised temperature vs. time curve is imposed in the test oven, obtaining the 3 levels of certification and their corresponding times and temperatures

The results prove that the cables maintain electrical continuity during the test, and therefore the operational integrity of the installation is maintained.

As the test was progressing, both cables and trays were damaged by the high temperature as defined in DIN 4102-12. Trays are deformed but maintain their support function. The cable sheathing starts to burn causing risk to the correct functioning of the system.

As shown in figure 3, rejiband® wire mesh cable tray and its accessories neither collapsed nor were they detached from the supports, ensuring enough structural resistance within the system.

■ **rejiband® E90**

The wire mesh cable tray exceeded the fire resistance test, qualifying for the highest level of resistance proposed by this standard, the E90. The tray with cables were tested for 90 minutes at temperatures of 1,000 °C (in accordance with the conditions of DIN 4102-12), maintaining circuit integrity against fire.

### ■ CONCLUSIONS

The combined use of rejiband® wire mesh tray with high safety halogen-free electrical cables improves substantially the safety of the installation. Since both components provide a self extinguishing system, which does not produce toxic, corrosive or opaque fumes (more typical for polymeric & halogen materials), this allows a period of time long enough for evacuation and emergency works.

Investing in safety equipment and systems with high fire resistance must be accompanied by a safe installation that ensures their correct functioning in the most critical situations.

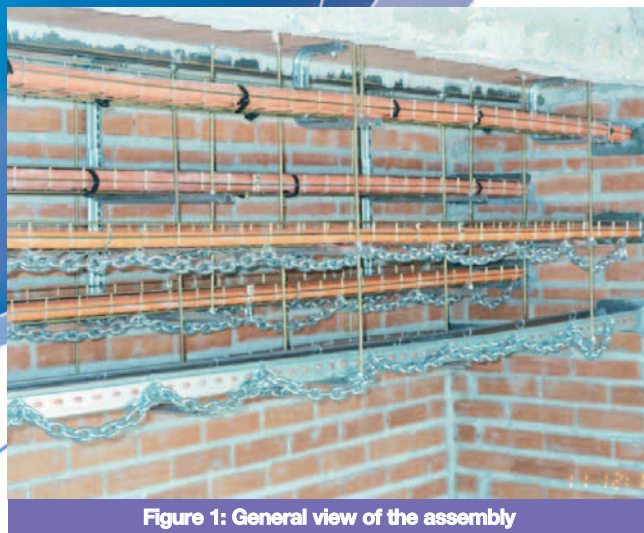


Figure 1: General view of the assembly

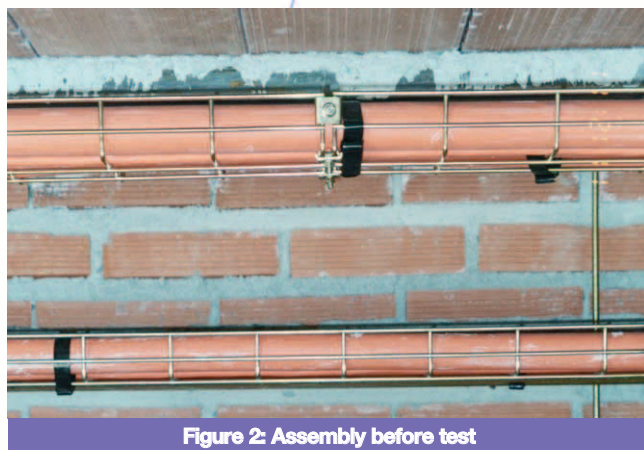


Figure 2: Assembly before test

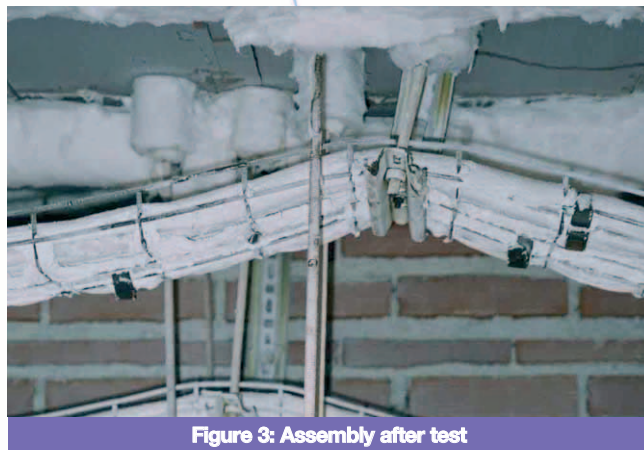


Figure 3: Assembly after test

# **COOPER Industries Worldwide**

Today, Cooper manufactures thousands of products through its seven electrical products divisions, which generate over 80 percent of annual revenues, and two tool divisions, which produce power tool and hand tool lines. Headquartered in Houston, Texas, Cooper has annual revenues of approximately \$4.1 billion, employs over 28,000 people and operates more than 100 manufacturing facilities around the world.

Cooper is a leader in the global electrical products marketplace. They manufacture thousands of well-known products that are used around the world all day, every day.

Cooper's electrical products businesses offer one of the largest and most valued portfolios serving construction, industrial, residential, utilities, telecommunications and consumer markets.

Additionally, Cooper provides key products for power distribution markets and is a leader in the European lighting and security business. Cooper's hand tools are used by tradesmen the world over, and Cooper's power tools offer strength and reliability to automotive, aerospace and industrial manufacturers.

## **COOPER B-Line**

Cooper B-Line manufactures support systems and enclosures used in the installation and retro-fitting of electrical, mechanical and telecommunications applications.

## **COOPER Crouse-Hinds**

Cooper Crouse-Hinds makes electrical products designed to protect electrical systems in demanding commercial and industrial environments

## **COOPER Menvier**

Cooper Menvier manufactures emergency and mains lighting, fixtures and lamps, fire detection systems, building security systems, and electrical installation materials.

## **COOPER Wiring Devices**

Cooper Wiring Devices makes residential, commercial and industrial wiring devices, switches, plugs and receptacles to deliver and control electrical power.

## **COOPER Bussmann**

Cooper Bussmann provides circuit protection and power management products designed to protect electrical and electronic systems.

## **COOPER Lighting**

Cooper Lighting manufactures lighting fixtures and related products for indoor and outdoor use.

## **COOPER Power Systems**

Cooper Power Systems offers equipment, components and systems for the distribution and management of electrical power.

## **COOPER Tools**

Cooper Tools manufactures an extensive line of electric and pneumatic industrial power tools, automated assembly systems and premium hand tools.

## **COOPER Hand Tools**

Cooper Hand Tools manufactures premium hand tools for use in do-it-yourself, commercial and industrial applications.

market sectors  
in  
receipt  
of our  
**enclosures**

Banking/Finance

Industry

Communications

Telecoms

Broadcast

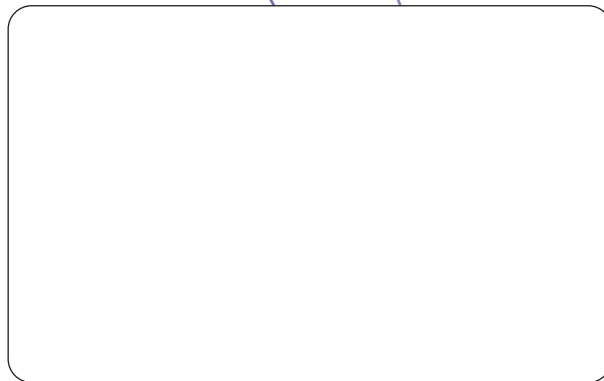
Retail

Air Traffic Control

Computer Networking

Transportation

Local Distributor



ACCSCAT06

**COOPER B-Line**

Cooper B-Line Limited

Walrow, Highbridge, Somerset TA9 4AQ England

Tel: +44 (0) 1278 788000 Fax: +44 (0) 1278 789037

website: [www.cooperblines.co.uk](http://www.cooperblines.co.uk)

website: [www.cooperblines.net](http://www.cooperblines.net)

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