klik
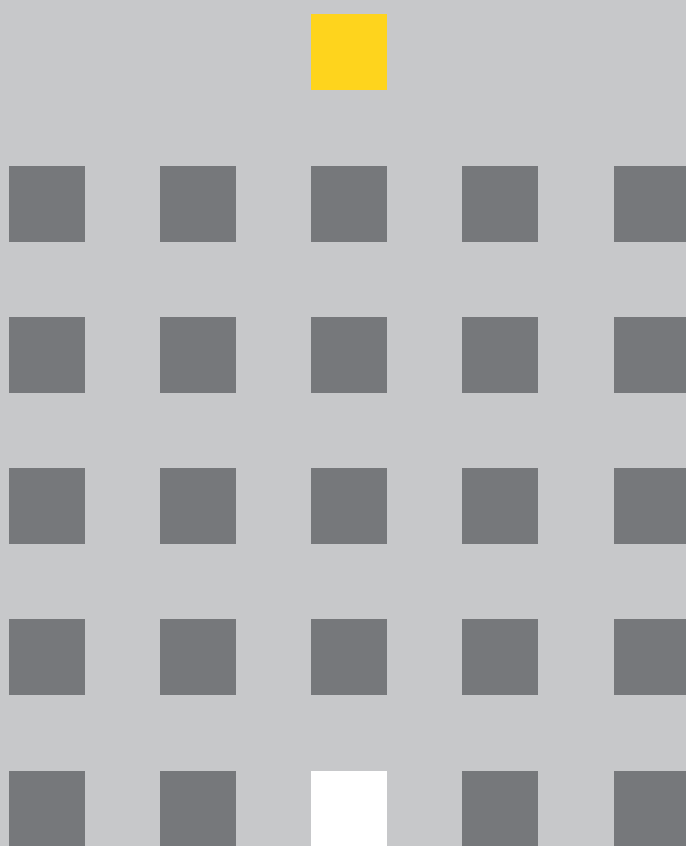
Lighting connection and control accessories

2005 Issue 1

klik

Klik is part of the Hager group. And that's important to you. It means you'll enjoy the benefits of massive on-going investment in better manufacturing resources, research and development and customer service plus a cross-fertilisation of skills and technologies between the member companies. Hager itself was founded in 1955. It began as a family business and is still independently owned, even though, today, it is one of the world's leading manufacturers and suppliers of electrical control and distribution systems.

In addition to Klik the group includes Hager and Ashley.

Customer service centre for national sales enquiries.

Technical engineers offer both national and local support.

Help is just a call or click away

Sales Hotline	For all your sales enquiries.	**0870 240 2400**
	e-mail:	sales@hager.co.uk
Technical Helpline	For all your technical enquiries.	**0870 607 6677**
	e-mail:	technical@hager.co.uk
Hager Online		
www.hagergroup.co.uk	For general information on Hager brands.	
	e-mail:	info@hager.co.uk

hager

Hager offer a comprehensive range of electrical distribution equipment up to 800 Amps.

ashley

Ashley, whose wiring accessories are synonymous with quality and reliability.

klik

Klik has transformed the speed and efficiency of electrical connections.

3

Klik the unique secure connection system

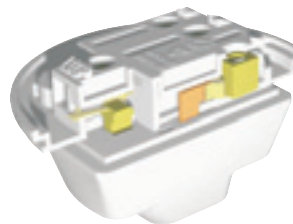The Klik Connector System, simply brings plug-in convenience and versatility for lighting.

It is a unique modular plug and socket interface that provides simultaneous mechanical and electrical connection in one click-in action.

Luminaires can be plugged in, in seconds, in absolute safety, without circuit isolation. All live contacts are inaccessible and the earthing connection is made before any other.

The non-wander design prevents disconnection of the plug from its socket by vibration or snatch withdrawals. Strong load grips provide support for luminaires up to 10kg, so all types and sizes of luminaires can be safely used.

The electrical connection is made by latch contacts perpendicular to the natural load direction thus eliminating strain on the contacts. Klik exceeds the relevant British Standard requirements and enables compliance with IEE Wiring Regulations and Safety Regulations.

Sockets

- Socket outlet module - install wherever required.

- Live contacts are inaccessible.

- Contact plane at 90º to load direction.

Plugs

- Earth contact is the first to make, last to break.

- Mechanical and Electrical connection.

- Strong load grips support up to 10kg.

- One 'click-in' action.

Boots

Boots has used Hager's Klik lighting support couplers for the refurbishment of all its self-select cosmetic merchandising counters across its 1300 stores in the UK.

Products:
S28 ultra flush round socket

Installation:
Boots stores nationwide

Key benefit:
Flexibility

The refurbishment is part of a planned campaign by the company to enhance its in store appeal. The entire project was rolled out across the stores and used the "plug and play" interface that Klik offers so that the installation caused no or minimal disruption to customers.

Klik sockets were installed in the stores' ceilings so that the shopfitters could bring the preassembled cabinets into store and plug them in to power its built in display lighting. Using the sockets also enables the stores to use new illuminated signage near ceiling height to help customers navigate.

Flexible leads from the cabinets were prewired with Klik plugs before installation. The plug in interface also makes maintenance and future refurbishment simple. In the event of a fault with the built in lighting a cabinet is simply unplugged for isolation of

supply, so other display areas are unaffected during maintenance. For future refurbishments the old cabinet can be unplugged and removed with the new one positioned and plugged straight into the power supply.

Most of the stores were refurbished over a single night, with a few larger stores completed over two nights. The Klik connection offers a secure electrical and mechanical connection in absolute safety without circuit isolation, which allowed the shopfitter to plug in the new units. An electrician then checked the integrity of the fixture before the store was opened to the public.

The non-wander design of Klik prevents disconnection of the plug from its socket by vibration or snatch withdrawals.

House of Fraser

Electrical contractors DIS has used Hager's Klik LDS as a flexible connection system for a lighting control solution in the new 160,000 sq. ft House of Fraser store in Croydon.

Products:
KLDS10
10 outlet lighting distribution system

Installation:
House of Fraser store Croydon

Key benefit:
Reduced installation time

Ten way Klik LDS marshalling boxes were installed side by side each with its own circuit. Using a BMS, timers switch the lighting on/off and to 50% levels for cleaning. Using LDS ten way boxes as standard provided the store with future flexibility since several sockets were left blank allowing light fittings to be added or repositioned for future shop displays with minimal disruption.

The connection system also helped DIS meet tight installation deadlines with pressure for the store to open quickly and generate revenue. First fix simply involved hard wiring the LDS marshalling boxes, which could take place while other trades were still on site. Second fix then involved plugging up to ten prewired luminaires into each box.

Emergency luminaires were also connected into the system since the sockets in Klik have four connections allowing an auxiliary loop.

Comments technical director for DIS, Mike Armstrong: "For large open plan areas such as this, using Klik LDS saved us about 60% labour time. It also provides us and the store with flexibility for both the lighting control and for positioning and adding extra luminaires both now and in the future."

In addition using the Klik LDS connection system simplifies future maintenance for the store. If a luminaire fails it is unplugged and taken away for repair while a replacement is plugged into its place thus causing minimum disruption to the sales area.

Gateshead Schools Klik into Digital Lighting Control

Gateshead council is using Hager's Klik DCS for digital lighting control in its primary schools to help teachers get more effective use of interactive wipeboards and to help save energy.
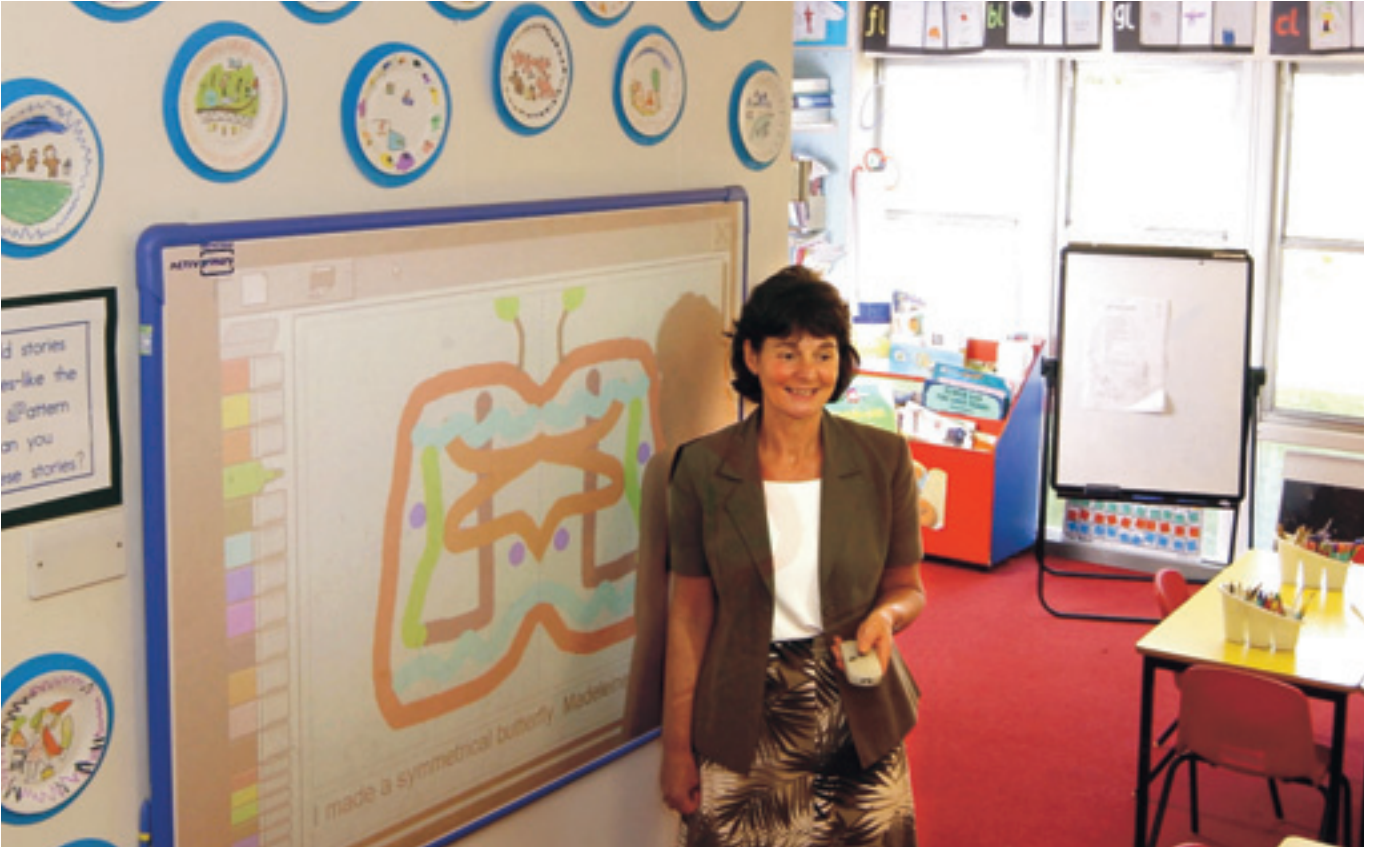
Products:
KDCS Klik digital connection system

Installation:
Primary schools Gateshead

Key benefit:
Ease of installation / commisioning

Klik DCS consists of a marshalling box, which distributes both power and data to the HF ballasts, and a programmable sensor that combines movement detection with daylight linking and allows scene setting. Using the system the lighting is switched on to a programmed ambient light level when movement is detected and then switched off or dimmed down when no movement is detected after a preset time.

In addition to maintaining a constant ambient light level, the system is programmed with different scene sets so if the interactive wipe board is used the teacher can adjust the lighting using a simple remote control. The remote control also allows manual dimming up and down of the lighting.

All primary schools in Gateshead council are being upgraded to digital lighting in an ongoing rollout programme.

Comments Peter Fallen, electrical engineer for Gateshead council: "We specified Klik DCS because it is a cost-effective and easy means of giving us the digital lighting control that we need. The system is fast to install, causing minimum disruption and typically takes just 10 minutes to commission for each classroom. Another advantage is that we need no commissioning engineers to programme the system, our electricians can do it themselves while they are on site.

"In addition future maintenance is simple, since Klik DCS is a plug and play system if there is a fault a luminaire can be simply unplugged and replaced with minimal disruption."

7

new

New Products Featured

KLDS 12 Way

12 outlet lighting distribution box

Surface Mounted Occupancy Sensor

The new Klik OS2/PSM has the same functionality and market leading features as the OS2/P

Klik Digital

Klik Digital is a lighting control system that provides simple and efficient lighting control, which consistently monitors lighting levels to achieve cost and efficiency savings.

Index

klik

Klik LDS
specification notes

Installation

Klik LDS can be hung from the ceiling suspension system via drop rod and Caddy Clips™.
Caddy Clip is a registered trade mark of Erico Europa (GB) LTD – Reading.

Compact dimensions allow for installation in confined ceiling voids. Terminal cover slides off from the front facilitating KLDS usage in confined spaces.

LDS can be fixed direct to ceiling or wall with No. 8 screws.

Flexibility

Each socket outlet will accept 3 or 4 pin plugs.

Single or dual switching capability is selected via a copper link. Use of this link will switch all outlets as one circuit or remove it to control two lighting circuits from one LDS unit.

Safety

Moulded parts are manufactured from PC-ABS, which is a low smoke and fume material and provides a "halogen free" product.

A separate terminal block is provided for connection of flexible cords. Large barriers between terminals provide improved segregation.

Clear circuit and terminal identification simplifies the installation process.

In today's environment, the pressure in all areas of development is to reduce costs. The introduction of the Klik plug-in connector system for lighting, made a significant contribution to the reduction of on-site wiring and maintenance time.

When Klik introduced the LDS (Lighting Distribution System) even further time and cost savings were made. Supplied with 4, 6, 8, 10, 12 Klik socket outlets, which accept either Klik lighting 3 pin plugs or Klik AX 4 pin plugs. Klik LDS eliminates the need for on-site wiring of individual fittings.

Klik LDS now has the capacity for dual circuit switching. Supplied as a single circuit, simply removing the link converts KLDS into two separate circuits.

With the ever increasing demand for the ceiling void KLDS offers a compact product. Also to ease installation the overall weight has been reduced. The addition of a second terminal block improves the electrical connection of flexible conductors such as these supplied with Klik occupancy sensors.

klik

Klik LDS - Marshalling Boxes

- Complies with BS 5733

- Main terminal capacity
  5 x 4 mm²·

- Flexible conductor terminal
  capacity 1 x 1 mm²

- Main terminals rated 16
  Amps. Each socket outlet
  rated 6 Amps. Flexible
  conductor terminals rated at
  10 Amps.

- All socket outlets factory
  connected and tested.

- Aluminium extruded body

- All plastic 'V0' rated.

- Socket outlets accept either
  Klik lighting (3 pin) plugs,
  Klik AX (4 pin) plugs and
  Klik pre-wired leads

- Cable entries will accept
  20mm or can be drilled out
  to 25mm

- Self-retained cover screw.

|	description	dimensions	pack qty	cat ref.
KLDS4	4 outlet lighting distribution box	73mm x 222mm x 238mm	1	**KLDS4**
KLDS6	6 outlet lighting distribution box	73mm x 222mm x 288mm	1	**KLDS6**
KLDS8	8 outlet lighting distribution box	73mm x 222mm x 338mm	1	**KLDS8**
KLDS10	10 outlet lighting distribution box	73mm x 222mm x 388mm	1	**KLDS10**
KLDS12	12 outlet lighting distribution box new	73mm x 222mm x 438mm	1	**KLDS12**

Klik occupancy sensor
specification notes

Energy Saving

Adjustable photocell optimizes energy saving by holding lights off when ambient light conditions are adequate.

Installation
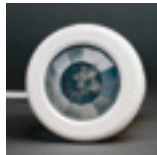
New quad element pyro and improved Fresnel lens provide increased sensitivity.

Programming remote controllers can be provided to maintenance or facilities management staff to set tamperproof time out periods, which mean sensors can be tailored to the specific needs of the installation.

Mounted via a 50mm cutout in the ceiling tile with a rear retaining ring which ratchets down to provide a secure fixing on even the thinnest tiles.

Flexibility

Separate active infra red remote controllers for programming and manual override functions. The lower cost manual controller can be issued to occupants providing full manual override.

Compatibility with Klik LDS boxes allows simple local group lighting control systems to be planned and installed.

The Klik OS occupancy sensor is an energy saving development of the already successful Klik range.

The Klik occupancy sensor responds automatically to occupancy and ambient light levels. Using built in photocell control, lights remain off when ambient light is sufficient even though the area is occupied. When the ambient light falls below the required level the lights will automatically switch on when the area is entered. The need for costly hard wiring of switches is eliminated when using Klik occupancy sensors.

For multi luminaire control, up to two Klik OS occupancy sensors can be fitted to the Klik LDS lighting distribution system.

The Klik OS Occupancy Sensor, whilst providing a quick and efficient means of lighting control, will effectively save energy and reduce costs.

klik

Klik OS

- Switching capacity 6 Amps for all fluorescent loads.

- Connections: live, neutral and earth inputs to occupancy sensor. Switched live output to luminaire(s) or Klik LDS

- Residual current consumption: 30mA @24V

- Occupancy sensor range: 6m diameter at 2.4m high

- Occupancy time out period: 2 to 37 minutes

- Materials: All materials 'V0' rated

- Pre-wired cord set: 3m conductor 1.00 mm^2 low smoke zero halogen as standard

- All parts factory connected and tested

- Factory settings 20min delay off photocell deactivated. N.B. OSRCA programming tool required to change factory settings.

	description	fixing	pack qty	cat ref.
	time adjustable occupancy sensor	flush	1	**OS2/P**
	new	surface mounted	1	**OS2/PSM**
	remote control on/off switching and programmer 2 to 37 minute time out settings light level setting	N/A	1	**OSRCA**
	remote control on/off switching	N/A	1	**OSRCB**

OS2/P

OS2/PSM

OSRCA

OSRCB

klik

Klik lighting
specification notes

Installation

Large terminal capacities make it easier to install irrespective of the cable sizes used.

Electrical contact plane is at 90° to the mechanical load direction means that the contact is not under strain and the plug will not wander.

Angled terminal identification reduces potential stress on conductors during installation.

Flexibility

Wide choice of sockets outlet styles and fixing centres provide solutions for every application and mounting method.

Plug and socket arrangement support a 10kg static load, but up to 5kg suspended by a flexible cord.

Safety

Mechanical and electrical connection made in one "click-in" action provides for a simple time saving and safe installation.

Designed for on load isolation which allows individual light fittings to be removed for maintenance without affecting other fittings on the circuit.

Maintenance testing and cleaning tasks can be carried out at bench level thereby minimising time up a ladder.

The Klik connector system brings plug-in convenience and versatility to lighting.

Klik is a unique modular plug and socket interface that provides simultaneous mechanical and electrical connection in one click-in action.

Lights can be plugged in, in seconds, in absolute safety, without circuit isolation. All live contacts are inaccessible and the earthing connection is made before any other.

The non-wander design prevents disconnection of the plug from its socket by vibration or snatch withdrawals.

klik

6 Amp plug in ceiling roses

- Complies with BS 6972 and BS 5733

- PCR2000 plug cat. ref. P22, socket cat ref. S27 and Cover, cat. ref. A1.

- PCR2900 plug cat. ref. P22, Surface socket cat. ref. S29 and Cover cat. ref. A1.

- PCR2900 base accepts Ashley RL602 halo.

- PCR2900 provides loop-in terminal bank wiring within integral surface mounting socket base.

- PCR2900 base terminals accepts 1 x 4mm^2 conductor.

- 6 Amp 250V a.c.

- Sockets have 4 terminations: live, neutral, earth and loop-in.

- Plugs have 3 terminations: live, neutral and earth.

- Static loading 10kg, except when load suspended by flexible cord - 5kg maximum.

	description	fixing	pack qty	cat ref.
PCR2000	**3 pin ceiling rose** 75mm dia x 44mm 7mm back projection	50.8mm standard Diagonal (BESA)	10	**PCR2000**
	surface plug-in ceiling rose 80mm dia x 58mm	Surface	10	**PCR2900**
A1	**A1 cover** 75mm dia x 44mm A1 cover snap fits S27, S29 sockets		10	**A1**

6 Amp lighting trunking socket with clamp

- Complies with BS 6972 and BS 5733

- The Klik lighting S26/TC socket is an S26 architrave socket pre-assembled with a trunking

- Clamp fast and easy installation of sockets, that have been prewired at bench level, into return edge trunking

- Designed to fit either Davis or Salamandre 50mm x 50mm return edge trunking profiles

- This product may not be suitable for all installations. Suitability should be checked prior to commencing work

	description	fixing	pack qty	cat ref.
S26/TC	**lighting trunking socket** 86mm x 33mm x 6mm 7mm back projection	via integral trunking clamp	10	**S26/TC**

klik

6 Amp plugs

- Complies with BS 6972 and BS 5733

- Suitable for use with any Klik lighting or Klik AX socket and Klik LDS

- 3 pins and cord grip enable up to a 5kg load to be suspended by a flexible cord

- Integral luminaire plugs enable support up to 10kg load

- P22 plug is supplied in plug-in Ceiling Rose, Cat No. PCR2000 and PCR2900

- Luminaire plugs are designed for incorporation by OEM's.

- Plugs have 3 terminations: live, neutral and earth

- Static loading 10kg, except when load suspended by flexible cord - 5kg maximum

Warning
N.B. plugs must not be fitted on the supply side of any installation - they must be connected to the load/fitting/appliance side of the installation

	description	fixing	pack qty	cat ref.
P22	**3 pin plug** with cord grip and cover 57mm x 25mm x 25mm	Lead	10	**P22**
P23	**luminaire plug** 80mm x 27mm x 6mm 10mm back projection	65mm non-standard Vertical	10	**P23**
	round luminaire plug 73mm dia x 9mm 7mm back projection with two M4 threaded inserts	50.8mm horizontal 2 x M4 inserts	10	**P25**
P25	**threaded entry luminaire plug** (M10) 69mm dia x 33mm for use with rod and hook for chandeliers	M10 at centre	10	**P26**
P26	**round luminaire plug** 63mm dia x 5mm 12mm back projection	50.8mm horizontal	10	**P27**

klik

6 Amp socket outlets

- Complies with BS 6972 and BS 5733

- All suitable for use with any standard Klik lighting plug.

- All have four terminations: live, neutral, earth and loop. Cat. No. S29 provides loop-in terminal bank wiring within integral surface mounting base as standard ceiling rose.

- S27 socket is supplied in plug-in ceiling rose, Cat No. PCR2000.

- S29 socket is supplied in plug-in ceiling rose, Cat. No. PCR2900.

- S27 and S29 socket will accept A1 cover.

- 6 Amp 250V a.c.

- Sockets have 4 terminations: live, neutral, earth and loop-in

description	fixing	pack qty	cat ref.
3 socket module 54mm x 28mm x 13mm Complete with panel mounting kit	panel cut-out 58mm x 32mm	10	**S20/MOP**
ultra flush socket 86mm x 36mm x 1.5mm 10mm back projection	60.3mm standard Vertical	10	**S21**
architrave socket 86mm x 33mm x 6mm 7mm back projection	60.3mm standard Vertical	10	**S26**
round socket 74mm dia x 7mm 7mm back projection	50.8mm standard Diagonal (BESA)	10	**S27**
ultra flush round socket 86mm dia x 1.5mm 10mm back projection	60.3mm standard Vertical	10	**S28**
surface mounting socket 80mm dia x 27mm	Surface	10	**S29**

S20/MOP

S21

S26

S27

S28

S29

Klik AX
specification notes

Installation

Choice of colour of the plug cover allows simple identification of special applications.

Choice of colour of the cover allows identification of special applications.

Klik AX gives large incorporating two or more lamps a greater degree of control as the fourth contact enables alternative switching and supply options.

Flexibility
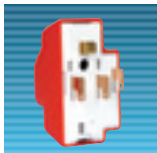
Klik AX provides a 4th pin for uses such as emergency lighting with a permanent live as well as a switched live.

Klik AX sockets accept Klik Lighting 3 pin plugs providing easy reconfiguration of office lighting.

4th contact provides extra connection required by stand-alone energy management control modules.

Safety

On-load isolation allows individual emergency luminaires to be unplugged simulating a power failure during "walk tests".

Klik AX is a four contact connector for special circuit wiring applications enabling a second supply or special connection to be made.

Klik AX is perfect for emergency lighting and plays an important role in energy management systems.

The fourth auxiliary contact allows alternative switching and supply options.

klik

Klik AX - 6 Amp plug-in ceiling rose

- Complies with BS 6972 and BS 5733

- CR64AX plug cat. ref. P64AXR, socket cat. ref. S64AX and cover cat. ref. A1

- CR64AX/R plug cat ref P64AXR, socket cat cat S64AX and cover cat ref A1/R

- 6 Amp 250V a.c.

- Sockets have 5 terminations: live, neutral, earth, auxiliary and loop-in.

- Plugs have 4 terminations: live, neutral, earth and auxiliary.

- Static loading 10kg, except when load suspended by flexible cord - 5kg maximum.

CR64AX

CR64AX/R

A1

A1/R

description	fixing	pack qty	cat ref.
4 pin, ceiling rose 74mm dia x 44mm 7mm back projection	50.8 standard diagonal (BESA)	10	**CR64AX**
4 pin, ceiling rose, Red 74mm dia x 44mm 7mm back projection	50.8 standard diagonal (BESA)	10	**CR64AX/R**
A1 cover 75mm dia x 44mm A1 cover snap fits S27, S29, S127/BL S64AX sockets		10	**A1**
A1 Red cover 75mm dia x 44mm A1/R cover snap fits S27, S29, S64AX sockets		10	**A1/R**

note other colours are available as specials

klik

Klik AX - 6 Amp plugs

- Complies with BS 6972 and BS 5733

- Special purpose 4 pin plug, suitable only for use with Klik AX sockets and Klik LDS

- 4 pins and cord grip enable a 5kg load to be suspended

- P64AXR plug as supplied in plug-in ceiling rose, Cat. No. CR64AX

- 6 Amp 250V a.c.

- Plugs have 4 terminations: live, neutral, earth and auxiliary

- Static loading 10kg, except when load suspended by flexible cord - 5kg maximum

Warning
N.B. plugs must not be fitted on the supply side of any installation - they must be connected to the load/fitting/appliance side of the installation

P64AX

P64AXR

description	fixing	pack qty	cat ref.
4 pin plug with cord grip and cover - white 57mm x 35mm x 44mm	LEAD	10	**P64AX**
4 pin plug with cord grip and cover - red 57mm x 35mm x 44mm	LEAD	10	**P64AXR**

Klik AX - 6 Amp sockets

- Complies with BS 6972 and BS 5733

- Sockets suitable for use with any Klik lighting or Klik AX plug.

- All sockets have 5 terminations: live, neutral, earth, auxiliary and loop-in.

- For special purpose applications eg: emergency lighting.

- S64AX socket is supplied in plug-in ceiling rose, Cat ref. CR64AX.

- S64AX socket will accept A1 A1/R cover.

- S65AX supplied with M3.5 x 25mm fixing screws.
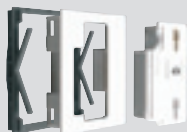
S60AX/MOP

S64AX

S65AX

description	fixing	pack qty	cat ref.
socket module 54mm x 37mm x 13mm complete with panel mounting kit	panel cut-out 58mm x 59mm	10	**S60AX/MOP**
round socket 74mm dia x 7mm 7mm back projection	50.8mm standard Diagonal (BESA)	10	**S64AX**
1 gang, square socket 86mm x 86mm x 9mm 5mm back projection	60.3mm standard Horizontal	10	**S65AX**

klik

Moulded mounting boxes

- Complies with BS 5733
- To complement the range of Klik products a selection of moulded mounting boxes is available for either flush or surface mounting.
- For more hazardous areas, 1 gang and 2 gang metalclad boxes have been adapted to take the Klik socket interface.

	description	fixing	pack qty	cat ref.
	joist box 75mm x 30mm x 20mm	60.3mm standard	10	**MB1/E**
	round surface box 85mm dia x 31mm	50.8mm standard diagonal (BESA)	10	**MB2**
	architrave flush box 80mm x 29mm x 20mm	60.3mm standard vertical	10	**MB3/E**
	architrave surface box 87mm x 34mm x 20mm	60.3mm standard vertical	10	**MB4**

MB1/E

MB2

MB3/E

MB4
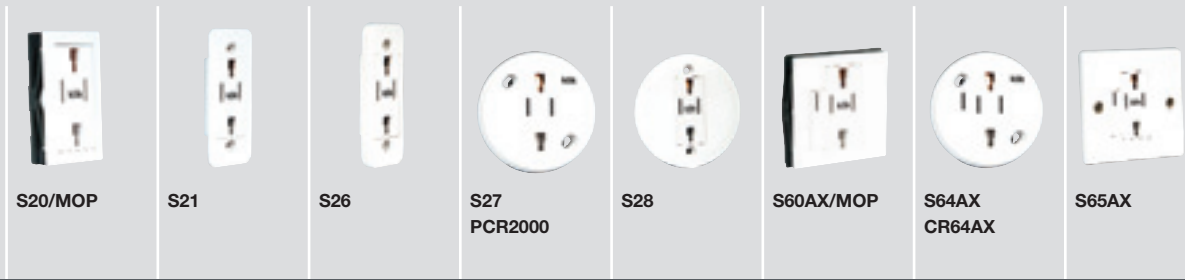
	S20/MOP	S21	S26	S27 PCR2000	S28	S60AX/MOP	S64AX CR64AX	S65AX
mounting boxes								
surface mounting								
ceiling				MB2			MB2	
wall			MB4					P815 Ashley 1 gang 20mm mounting box
conduit				BESA box			BESA box	
flush mounting								
ceiling		MB1/E		BESA box	MB1/E		BESA box	
partition wall		MB3/E	MB3/E		MB3/E			MB81 Ashley 1 gang partition wall mounting box
solid wall		MB3/E less wings	MB3/E less wings	BESA box	MB3/E less wings		BESA box	25mm 1 gang flush metal box
panel	58mm x 32mm aperture					58mm x 59mm aperture		

klik

Klik pre-wired
specification notes

Installation

Reduces on-site wiring, time and costs on site.

Used in conjunction with KLDS will dramatically reduce time and cost of lighting installations.

Flexibility

Choice of high temperature PVC or LSOH flexible cables with 3 or 4 pin plug options.

Choice of standard lengths from 1 to 5M.

Special lengths available please contact technical support.

Installation / Safety

Crimped ends on all leads minimise damage on site.

Pre-wired leads are supplied complete with protective covers to minimise the risk of exposure to live conductors.

Pre-Wired LSC plugs offer a 50% time reduction in connecting the luminaires to the system.

Klik pre-wired leads are available as ceiling roses and plugs in 3 or 4 pin configurations offering a choice of PVC or LSOH flexible cords of 0.75mm² or 1mm² CSA and standard cord lengths are from 1 to 5m.

When used in conjunction with Klik LDS boxes even greater time savings can be achieved.

Pre-wired 6 Amp plug-in ceiling roses

- Complies with BS 6972 and BS 5733

- Comprehensive range of pre-wired Klik lighting plugs and ceiling roses reduces on-site installation time and cost. All leads have crimped ends to eliminate breakage, and minimise on-site cable preparation.

- Heat resisting PVC flexible cord, complies with BS 6500

- Low smoke zero halogen flexible cord, complies with BS 6500 and BS 7211

PCR2000/1.0

description	length	pack qty	heat resisting PVC	low smoke zero halogen
0.75mm² flexible cord				
PCR2000 3 pin 6 Amp Ceiling rose	1 metre	10	**PCR2000/1.0**	**PCR2000/LSF/1.0**
	2 metre	10	**PCR2000/2.0**	**PCR2000/LSF/2.0**
	3 metre	5	**PCR2000/3.0**	**PCR2000/LSF/3.0**
	4 metre	5	**PCR2000/4.0**	**PCR2000/LSF/4.0**
1.00mm² flexible cord				
PCR2000 3 pin 6 Amp Ceiling rose	2 metre	10	**PCR2000/1.0PVC/2**	**PCR2000/1.0LSF/2**
	3 metre	5	**PCR2000/1.0PVC/3**	**PCR2000/1.0LSF/3**
	4 metre	5	**PCR2000/1.0PVC/4**	**PCR2000/1.0LSF/4**
	5 metre	5	**PCR2000/1.0PVC/5**	**PCR2000/1.0LSF/5**

pre-wired 6 Amp plugs
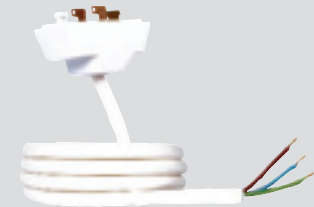
P22/1.0

description	length	pack qty	heat resisting PVC	low smoke zero halogen
0.75mm² flexible cord				
P22 3 pin 6 Amp plug	1 metre	10	**P22/1.0**	**P22/LSF/1.0**
	2 metre	10	**P22/2.0**	**P22/LSF/2.0**
	3 metre	5	**P22/3.0**	**P22/LSF/3.0**
	4 metre	5	**P22/4.0**	**P22/LSF/4.0**
1.00mm² flexible cord				
P22 3 pin 6 Amp plug	2 metre	10	**P22/1.0PVC/2**	**P22/1.0LSF/2**
	3 metre	5	**P22/1.0PVC/3**	**P22/1.0LSF/3**
	4 metre	5	**P22/1.0PVC/4**	**P22/1.0LSF/4**
	5 metre	5	**P22/1.0PVC/5**	**P22/1.0LSF/5**

klik

Klik AX 6 Amp plug-in ceiling roses

- Complies with BS 6972 and BS 5733
- Heat resisting PVC flexible cord: BS 6500
- Low smoke zero halogen flexible cord: BS 6500 and BS 7211

CR64AX/1.0

description	length	pack qty	heat resisting PVC	low smoke zero halogen
0.75mm² flexible cord **CR64AX** 4 pin 6 Amp Ceiling rose	1 metre	10	**CR64AX/1.0**	**CR64AX/LSF/1.0**
	2 metre	10	**CR64AX/2.0**	**CR64AX/LSF/2.0**
	3 metre	5	**CR64AX/3.0**	**CR64AX/LSF/3.0**
	4 metre	5	**CR64AX/4.0**	**CR64AX/LSF/4.0**
1.00mm² flexible cord **CR64AX** 4 pin 6 Amp Ceiling rose	2 metre	10	**CR64AX/1.0PVC/2**	**CR64AX/1.0/LSF/2**
	3 metre	5	**CR64AX/1.0PVC/3**	**CR64AX/1.0/LSF/3**
	4 metre	5	**CR64AX/1.0PVC/4**	**CR64AX/1.0/LSF/4**
	5 metre	5	**CR64AX/1.0PVC/5**	**CR64AX/1.0/LSF/5**

Pre-wired Klik AX 6 Amp plugs
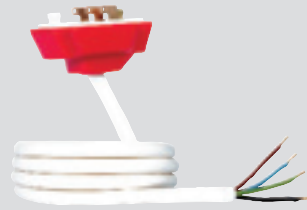
P64AXR/1.0

P64AX/1.0

description	length	pack qty	heat resisting PVC	low smoke zero halogen
0.75mm² flexible cord **P64AXR** 4 pin 6 Amp plug plug **RED**	1 metre	10	**P64AXR/1.0**	**P64AXR/LSF/1.0**
	2 metre	10	**P64AXR/2.0**	**P64AXR/LSF/2.0**
	3 metre	5	**P64AXR/3.0**	**P64AXR/LSF/3.0**
	4 metre	5	**P64AXR/4.0**	**P64AXR/LSF/4.0**
1.00mm² flexible cord **P64AXR** 4 pin 6 Amp plug plug **RED**	2 metre	10	**P64AXR/1.0PVC/2**	**P64AXR/1.0LSF/2**
	3 metre	5	**P64AXR/1.0PVC/3**	**P64AXR/1.0LSF/3**
	4 metre	5	**P64AXR/1.0PVC/4**	**P64AXR/1.0LSF/4**
	5 metre	5	**P64AXR/1.0PVC/5**	**P64AXR/1.0LSF/5**
0.75mm² flexible cord **P64AX** 4 pin 6 Amp plug plug **WHITE**	1 metre	10	**P64AX/1.0**	**P64AX/LSF/1.0**
	2 metre	10	**P64AX/2.0**	**P64AX/LSF/2.0**
	3 metre	5	**P64AX/3.0**	**P64AX/LSF/3.0**
	4 metre	5	**P64AX/4.0**	**P64AX/LSF/4.0**
1.00mm² flexible cord **P64AX** 4 pin 6 Amp plug plug **WHITE**	2 metre	10	**P64AX/1.0PVC/2**	**P64AX/1.0LSF/2**
	3 metre	5	**P64AX/1.0PVC/3**	**P64AX/1.0LSF/3**
	4 metre	5	**P64AX/1.0PVC/4**	**P64AX/1.0LSF/4**
	5 metre	5	**P64AX/1.0PVC/5**	**P64AX/1.0LSF/5**
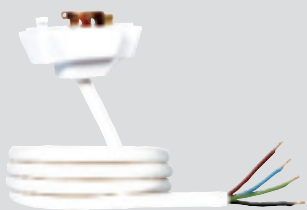
New Products Featured

Klik Digital

Klik Digital is a lighting control system that provides simple and efficient lighting control, which consistently monitors lighting levels to achieve cost and efficiency savings.

Index

klik

Klik DCS Overview

Presence detection is by passive infrared effectively enhanced to improve sensitivity to small movements.

Regulating photocell ensures a minimum maintained light level, taking account of the contribution from adjacent luminaires and daylight.

Incorporates simple scene setting, up to six scenes can be set via user remote.

Off delay in minutes following the last observed movement after which the lights switch off/dim down.

Detection pattern and range in metres under normal operating conditions.

Hand controller provides local user override.

Remote programming tool ensures changes can be easily accommodated.

Klik have added to their market leading range of unique plug and sockets with a choice of products ideal for the electrical contractor who wants to add digital lighting control to his portfolio.

Using a design based on our very successful Klik Lighting distribution System (KLDS) we have introduced the Klik Digital Connection System (KDCS) a marshalling box capable of distributing power and data to 4, 6, 8, or 10 digital ballasts.

KDCS can be sub-divided into two circuits for greater flexibility. Klik Digital plugs connect the luminaires to the KDCS marshalling box, a blue five pin plug for non emergency luminaires and a red auxiliary plug for emergency luminaires. All plugs are factory pre-wired with a bespoke cable that combines the power and data cables together but allows them to be separated by a double insulation.

High performance, programmable presence detectors that monitor and regulate the lighting level.

For lighting specialists who already install lighting management systems the KDCS can be used as part of a larger system in terms of the distribution box.

Qualified for
**Energy
Technology
List**
www.eca.gov.uk

National Audit Commission Kliks Into Lighting Control Savings

The national audit commission is realising cost and energy savings of its own thanks to the installation of Hager's Klik DCS digital lighting control system in several of its offices.

Products Uses:
KDCS Klik digital connection system
Installation:
National Audit Commision nationwide
Key benefit:
Energy saving

Contractors SES electrical has completed the first three phases of the Audit Commission's Bristol offices and has also installed the system in its regional Bolton and Solihull offices.

Functionality

The specification demanded local control in response to occupancy and natural daylight, with light levels set at 360 lux at desk top height. In addition there is a set back facility where the lights dim to 200 lux after 30 minutes if no movement is detected, and then they dim to off after a further period of time. Some meeting rooms and cellular offices have a semi auto mode where a hand held remote control (OSDC) can override the Klik sensors and dim the lighting up and down manually. There are also wall switches by the main exits that override the sensors and turn the lighting on or off.

The scheme is designed to meet CIBSE LG3 guidelines. It addresses the twin demands of energy saving through local control as well as user comfort since it avoids the "cave effect", where people working late are in light but they are surrounded by darkness.

Time Saving

For the Bristol offices, each phase had to be refurbished in just eight weeks while the workforce moved into adjacent buildings. This involved not only replacing the entire lighting system but also the power and data cabling and air conditioning systems.

Simplicity

According to Geoff Stewart of SES Consulting Klik DCS offered the most cost effective and simple solution. Using the system's simple and secure "plug and play" technology for distributing power and data can give installation time-savings of up to 50% according to Hager.

At the heart of a system is a marshalling box to distribute both power and data to four, six, eight or ten digital ballasts via its secure plug and socket interface. Both power and data share the same plug in connection with blue plugs used for normal digital ballasts and red for emergency luminaires.

For this project, DALI Klik sensors are wired into the marshalling box to provide the intelligent control for the ballasts. These sensors achieve pressure detection by passive infared and incorporate a regulating photocell to ensure a consistent light level.

Flexibility

SES Contracting commissioned the control scenarios using a Klik hand held programmer (OSDP). Two switches inside the programmer alter the brightness settings and dill switches offer yes/no choices for different control options. The

programmer is then pointed at all the sensors that will have that control setting and the programming button is pressed.

Klik DCS can be used as a simple stand-alone digital lighting control system, as in this project, or as part of a more complex building management system for distribution purposes.
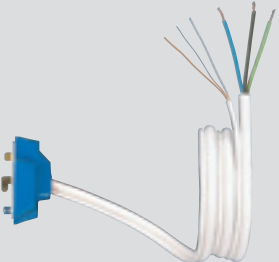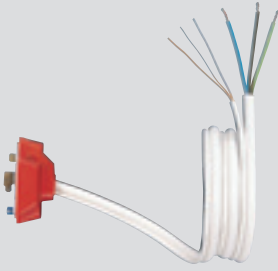
Klik digital connection system KDCS

description	dimensions	pack qty.	cat ref.
klik Digital Connection System KDCS			
4 outlet distribution box	73mm x 222mm x 238mm	1	**KDCS4**
6 outlet distribution box	73mm x 222mm x 288mm	1	**KDCS6**
8 outlet distribution box	73mm x 222mm x 338mm	1	**KDCS8**
10 outlet distribution box	73mm x 222mm x 388mm	1	**KDCS10**

KDCS4

KDCS6

KDCS8

KDCS10

Pre-wired plugs

description	pack qty.	cat ref.
pre-wired plugs with low smoke zero halogen flexible cord		
digital plug with 1 metre 1.0 mm^2 LS0H flexible cord	10	**P55/1**
digital plug with 2 metre 1.0 mm^2 LS0H flexible cord	10	**P55/2**
digital plug with 3 metre 1.0 mm^2 LS0H flexible cord	5	**P55/3**
digital plug with 4 metre 1.0 mm^2 LS0H flexible cord	5	**P55/4**
digital plug with 5 metre 1.0 mm^2 LS0H flexible cord	5	**P55/5**

P55

klik

Pre-wired auxiliary plugs for emergency luminaires

description	pack qty.	cat ref.
auxiliary plugs with low smoke zero halogen flexible cord digital AX plug with 1 metre 1.0 mm² LS0H flexible cord	10	**P55AXR/1**
digital AX plug with 2 metre 1.0 mm² LS0H flexible cord	10	**P55AXR/2**
digital AX plug with 3 metre 1.0 mm² LS0H flexible cord	5	**P55AXR/3**
digital AX plug with 4 metre 1.0 mm² LS0H flexible cord	5	**P55AXR/4**
digital AX plug with 5 metre 1.0mm² LS0H flexible cord	5	**P55AXR/5**

P55AXR

Occupancy sensor and associated products

description	pack qty.	cat ref.
occupancy sensor occupancy sensor with scene setting for DSI ballasts	1	**OS3/DS**
occupancy sensor with wall switch dimming - DSI	1	**OS3/DSW**
occupancy sensor with scene setting for DALI ballasts	1	**OS4/DS**
occupancy sensor with wall switch dimming - DALI	1	**OS4/DSW**
infrared programming tool	1	**OSDP**
hand held controller	1	**OSDC**
hand held controller (scene setting)	1	**OSDCS**
plasterboard fixing kit	1	**OSPB64**

OS4/DS

OSDP

OSDC

Digital design guide

klik
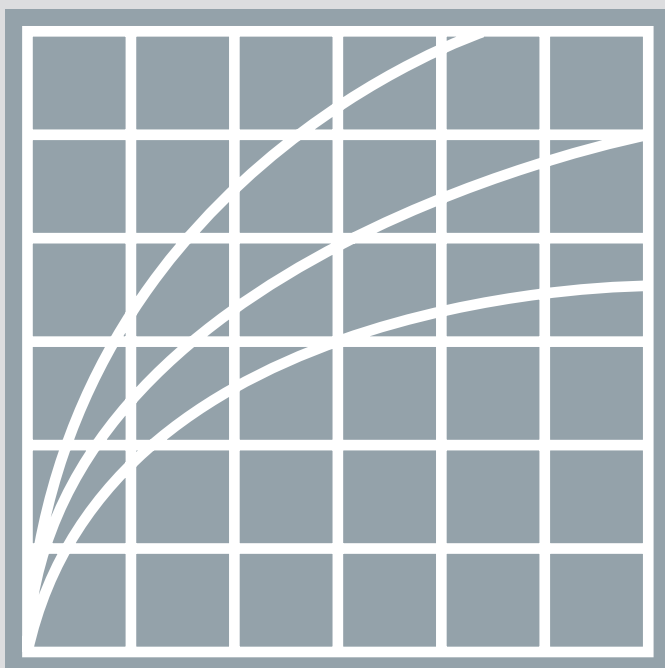
Lighting design considerations

The following factors need to be considered when designing a lighting control system. This list is not exhaustive it should only be used as a guide.

Step 1   **Survey Room**

- Size of Room
- Levels of Natural Light
- Natural Corridors
- Qty of Detectors Required

Step 2   **Type of Control**

- Full or Partial
- Override Facility
- Remote Control
- Wall Switch

Step 3   **Layout of Marshalling Boxes & Detectors**

- Switching Requirements - Single or Dual Circuit
- Overlap and Natural Corridors

Step 4   **Installation and Commissioning**

- Wiring Diagrams
- Programming setup
- Functionality

Positioning of sensors

KDCS makes best use of the available natural daylight. The digital sensors will regulate the light level in accordance with the natural daylight and light provided from adjacent luminaries.

In this example KDCS is installed around the edge of the room where natural daylight is available.

Digital Occupancy Sensor

Standard Occupancy Sensor

KDCS

KLDS

Digital Dimmable Luminaires

Standard Luminaires

Natural Light

Exit

Occupancy Sensor Positioning

D or S

sensor detection
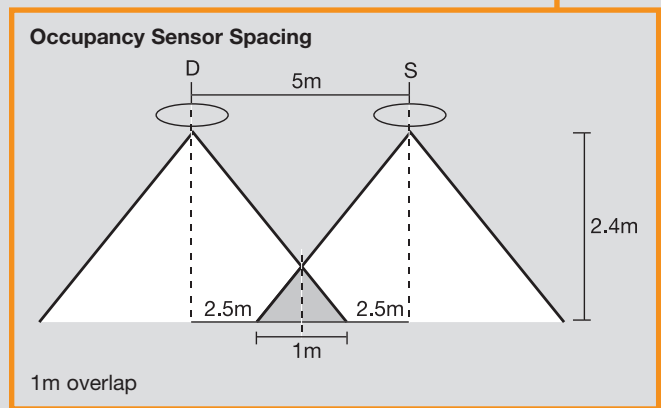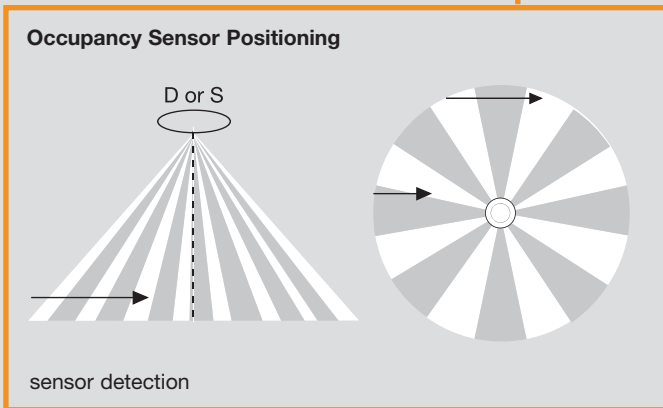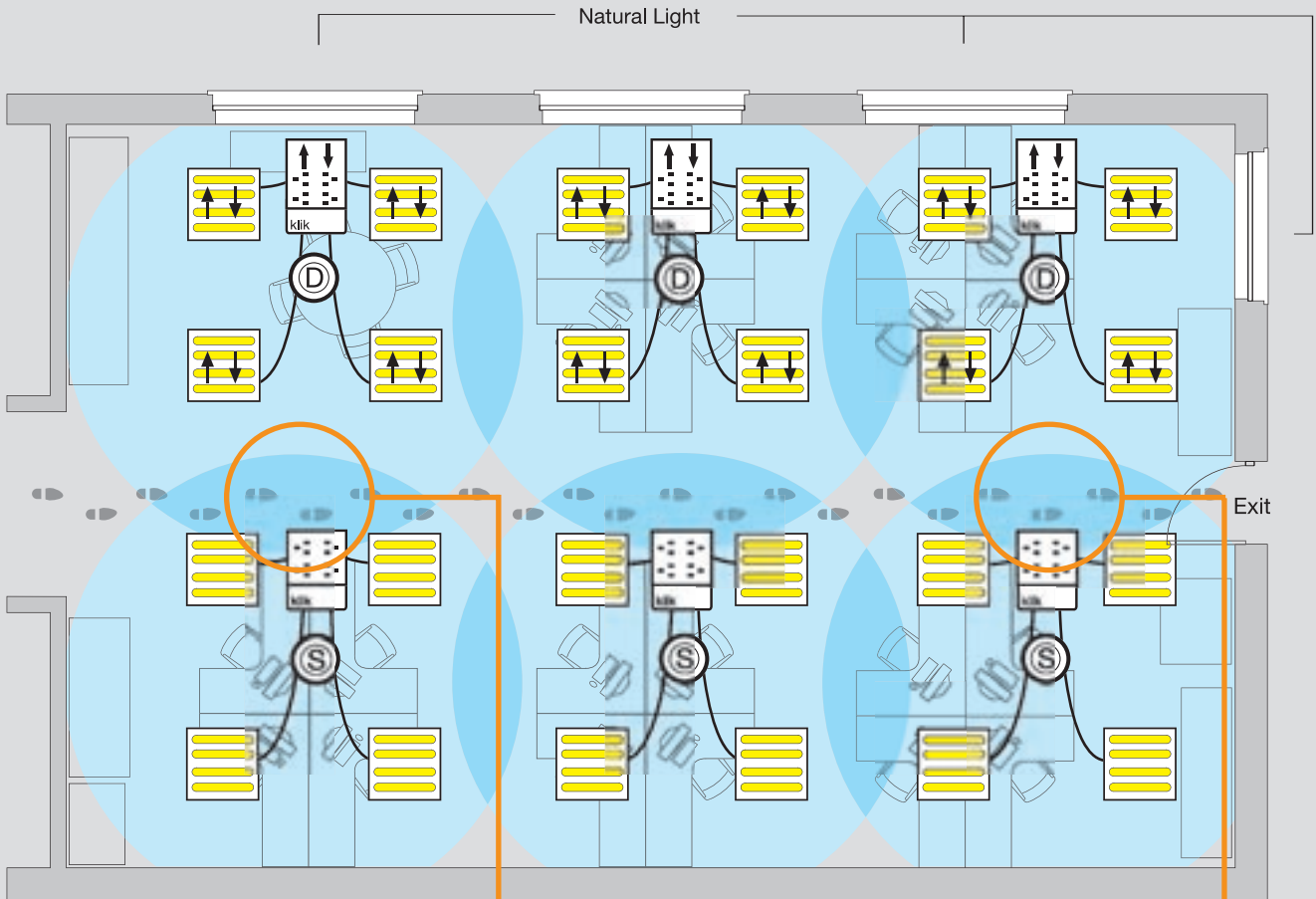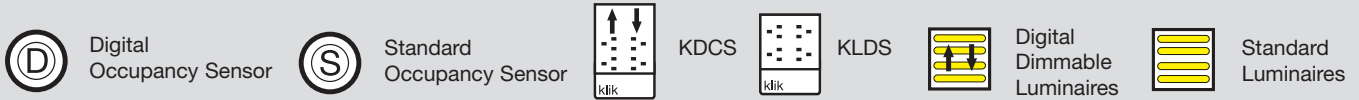
Best detection is achieved by walking across the detector beams not towards them. This should be considered for natural corridors.

Occupancy Sensor Spacing

D   5m   S

2.4m

2.5m   2.5m

1m

1m overlap

Increase the level of overlap to reduce the possibility of dead spots.
See page 35 for more information.

klik

Quantity and type of detectors

The following table provides a guide to the number of occupancy sensors based on the room size.

Type of Dectector

For digital lighting there are typically two types of ballast protocols, DSI or DALI. The type of detectors specified must correspond to the type of ballast being installed i.e. DSI or DALI

Note: Not to scale

No overlap   1m overlap   2m overlap
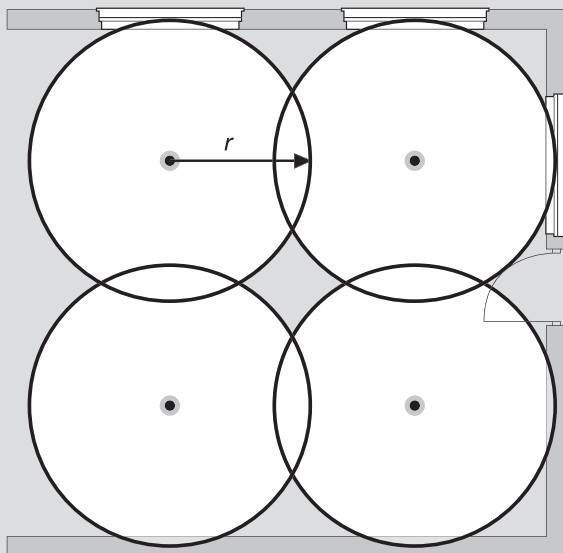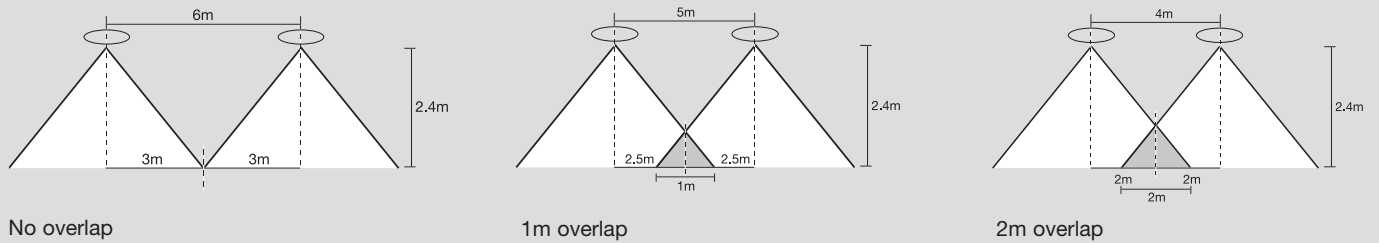
Area coverage $= \pi r^2$
where r = radius @ 2.4m

for 1m overlap area coverage $\quad = \pi \times 2.5m^2$

$$= 19.6m^2$$

Example:

For an office of $110m^2$ the number of sensors required could be approximated as below:

No. of sensors $\quad = \dfrac{Area}{Coverage} \quad = \dfrac{110}{19.6} = 5.6$

$\qquad\qquad\qquad = 6$ sensors
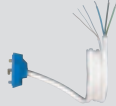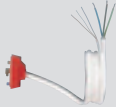
Quick reference chart - Number of sensors

Room Size (m²)	Zero Overlap	Min 1m Overlap	Min 2m Overlap
<15	1	1	1
<25	1	2	2
<50	2	3	3
<75	3	4	4
<100	4	5	6
<125	5	6	7
<150	6	7	8
<175	7	8	9
<200	8	9	11
Coverage per detector	28.3m²	23.8m²	19.6m²

klik

Comparison chart

KDCS can be used when an installation uses digital dimmable luminaires throughout. It can also be used in conjunction with KLDS if digital dimming is not required throughout the installation. This has the benefit of reducing the capital costs without compromising the performance.

The following provides a comparison between klik LDS and klik DCS part number references:

	Klik LDS		Klik DCS	
Marshalling boxes	KLDS4 KLDS6 KLDS8 KLDS10 KLDS12		KDCS4 KDCS6 KDSC8 KDCS10	
Pre-wired plugs	P22/1.0LSF/2 P22/1.0LSF/3 P22/1.0LSF/4 P22/1.0LSF/5		P55/2 P55/3 P55/4 P55/5	
	P64AXR/1.0LSF/2 P64AXR/1.0LSF/3 P64AXR/1.0LSF/4 P64AXR/1.0LSF/5		P55AXR/2 P55AXR/3 P55AXR/4 P55AXR/5	
Occupancy sensor	OS2/P OS2/PSM		OS3/DS (for DSI ballasts) OS4/DS (for DALI ballasts)	
Controller	OSRCA OSRCB		OSDP OSDC or OSDCS	

37

Technical and service information
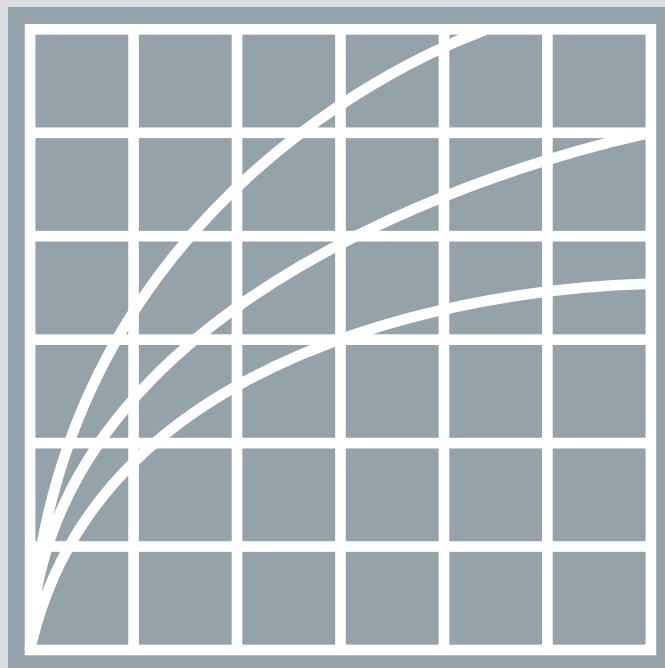
Product standards

Product description	Klik product identification	BS number	description
Klik Lighting Distribution System	KLDS/KDCS	BS 5733:1995	General Requirements for Electrical Accessories
Occupancy Sensor	OS	BSEN 60669-2-1: 2000	Switches for household & similar fixed electrical installations Part 2-1 for Electronic switches.
Mounting Boxes	MB	BS 6972 : 1988	General requirements for Luminaire supporting couplers for domestic, light industrial & commercial use
Mounting Boxes	MP	BS5733 : 1995	General Requirements for Electrical Accessories
Klik ceiling roses, plugs, outlets & prewired leads	S, P, PCR"	BS5733 : 1995 BS6972 : 1988	General Requirements for Electrical Accessories General requirements for Luminaire supporting couplers for domestic, light industrial & commercial use
PVC flexible cord	PVC	BS6500 : 2000	Flexible cords rated to 300/350V for use with appliances & equipment intended for domestic, office & similar environments.
LSF flexible cord	LSF	BS6500 : 2000 BS7211 : 1998	Flexible cords rated to 300/350V for use with appliances & equipment intended for domestic, office & similar environments.

Product materials
Klik plugs and sockets feature solid brass terminals and phosphor bronze contacts for good conductivity. Moulded components are manufactured from high quality thermoplastics.

Klik terminal capacities

|	Number of conductors				
	$0.75mm^2$	$1.0mm^2$	$1.5mm^2$	$2.5mm^2$	$4.0mm^2$
Socket outlets	-	5	4	3	2
Plugs P22, P 64AX, P26	1	1	-	-	-

The S29 socket terminal bank will accept up to $4.0mm^2$ conductor in each terminal access

Cables for klik plugs

	$0.75mm^2$ PVC/LSF 3 core	$0.75mm^2$ PVC/LSF 4 core	$1.0mm^2$ PVC/LSF 3 core	$1.0mm^2$ PVC/LSF 4 core			
P22	Y	-	Y	-			
P64AX	Y	Y	Y	Y			

Application notes. The mating face of each interface module must be mounted 0.1mm minimum proud of its proposed surround. Engaged plug sits centrally on socket but a minimum of 12mm extra clearance should be maintained north of the upper load grip to allow plug travel.

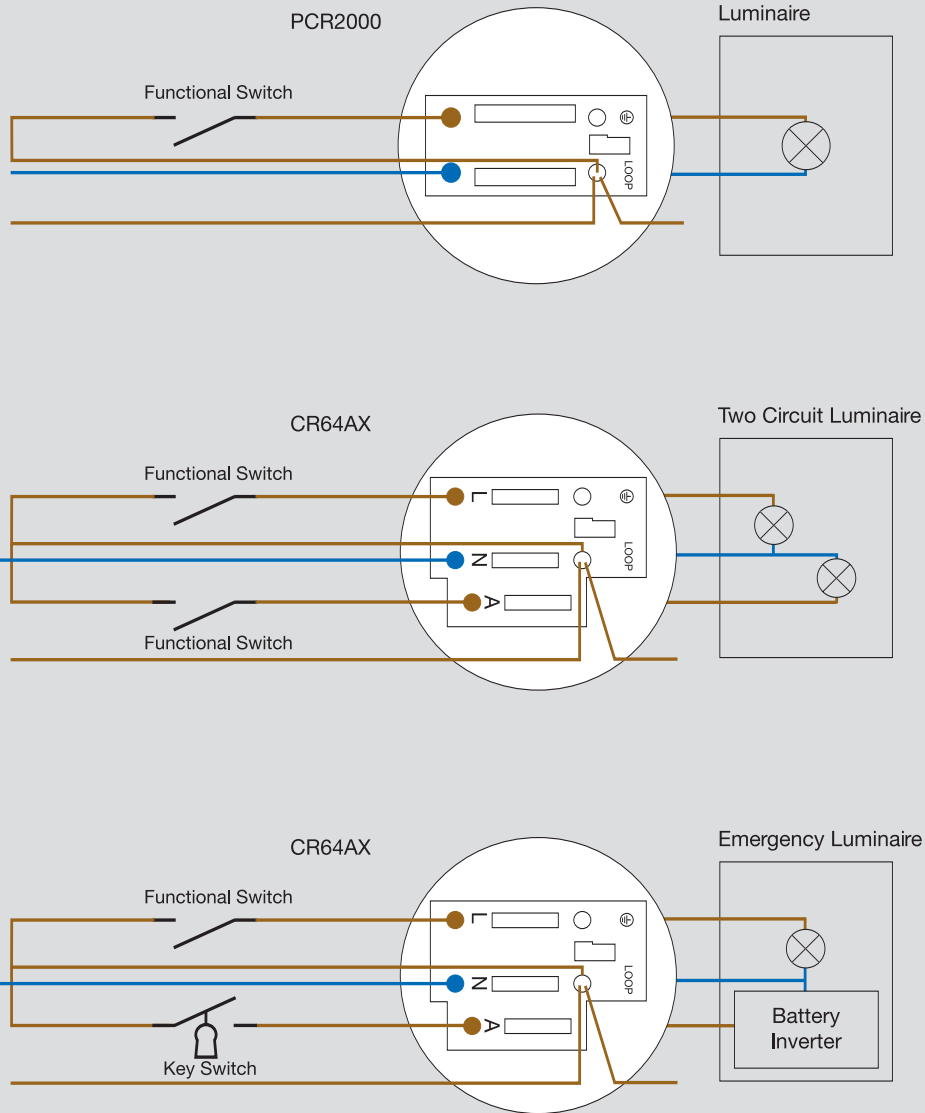**For specific information contact our technical support helpline on: 0870 6076677**
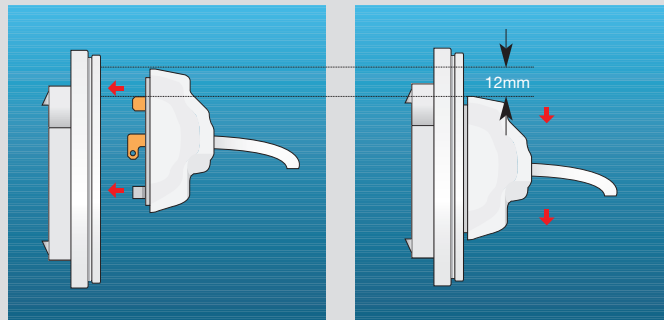
Wiring diagrams

Klik plugs
*easy to wire -*
very compact design
These wiring diagrams are typical examples of the applications shown.

Typical wiring diagrams

PCR2000

Luminaire

Functional Switch

LOOP

CR64AX

Two Circuit Luminaire

Functional Switch

L
N
A

LOOP

Functional Switch

CR64AX

Emergency Luminaire

Functional Switch

L
N
A

LOOP

Key Switch

Battery
Inverter

Note: earth connections omitted for clarity

1 Strip cable as above - N.B. Trim cable tails to double over for better terminal contact.

2 Remove plug cover.

3 Pass cable through plug cover centre hole.

4 Terminate conductors into terminals.

5 Push outer sheath of cable firmly into jaws of sheath grip, making sure that at least 2mm of sheath protrudes below the grip.

6 Refit cover.

5mm
5mm
40mm

2mm
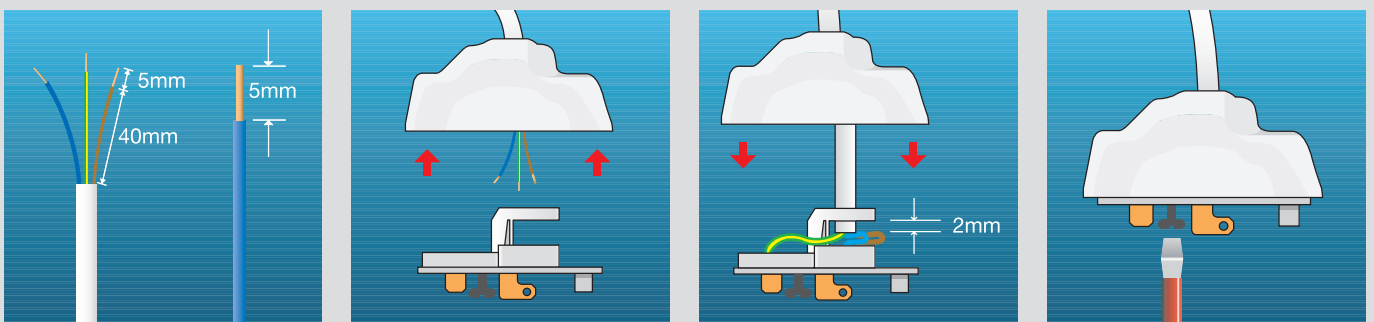
Installation

klik mounting box installation

- **MB1/E** has specially angled screw fixing for mounting to side of ceiling joist. Single wood screw provided.

  Supplied with M3.5 x 20mm long fixing screws.

- Cable entry through spout in base of box for maximum wiring space. Earth terminal.

- **MB2** knockouts in base and sides. Supplied with M4 x 20mm long fixing screws.

- **MB3/E** is dual purpose box for flush mounting in solid or partition walls. Provided with mounting wings for partition use. Supplied with M3.5 x 20mm long fixing screws. Cable entry in one end. Earth terminal.

- **MB4** supplied with M3.5 x 20mm long screws. Knockouts in base and sides.

Flush ceiling mounting
The mounting wings sit on the ceiling and stop the box from being pushed through, while the box is secured via the angled fixing screw hole.

discard wings after mounting.

Cat. No. MB1/E

Cat. No. S28 or S128/BL
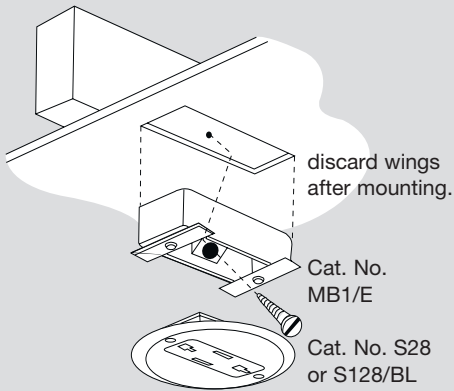
Flush mounting for solid walls

For solid walls Cat. No. S21 or S121/BL

Cat. No. MB/3E less wings
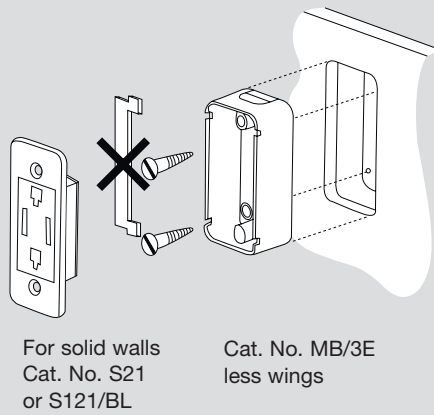
Flush mountings for partition walls
The mounting wings act as a flange, stopping the box from being pulled out of the partition.
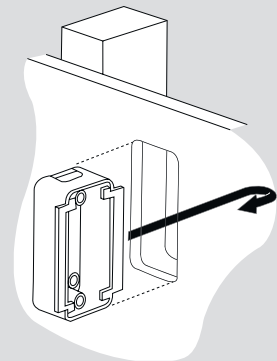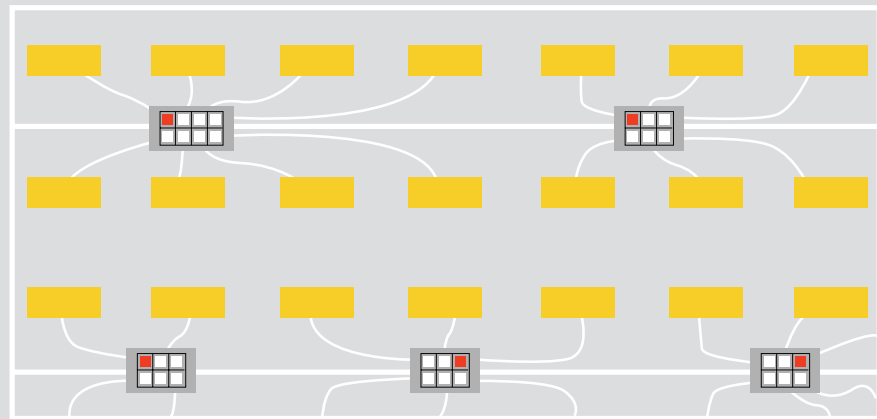

Cat. No. MB/3E
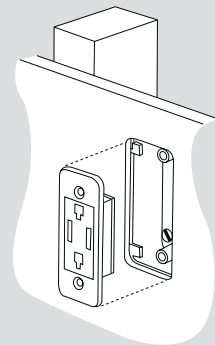
Lighting schemes and wiring diagrams

Typical lighting scheme utilising Klik LDS 6 and Klik LDS 8 way lighting distribution system for standard and emergency l ighting. Also shown is an LDS 6 with only 4 luminaires connected leaving capacity for future connections.

Office layouts are often changed requiring modifications to luminaire switching.
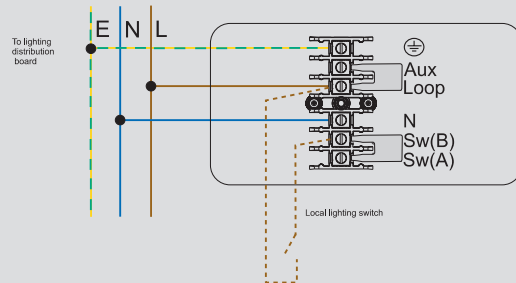This arrangement shows two different offices, each with 4 luminaires being supplied by a single Klik LDS 8. Each office is separately switched from standard wall switches.
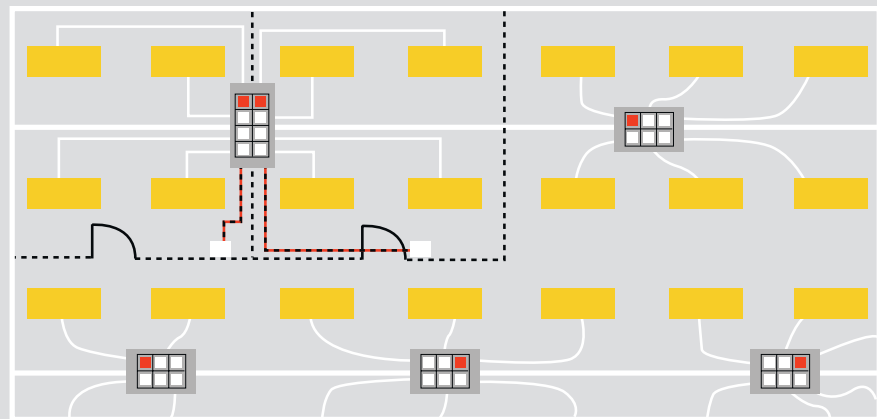
Mounting methods
- Hanging from ceiling suspension system with Caddy Clips
- Direct fixing to lighting trunking
- Direct fixing to ceiling or wall with No. 8 screws

Mounting positions

Top

Rear face

Bottom
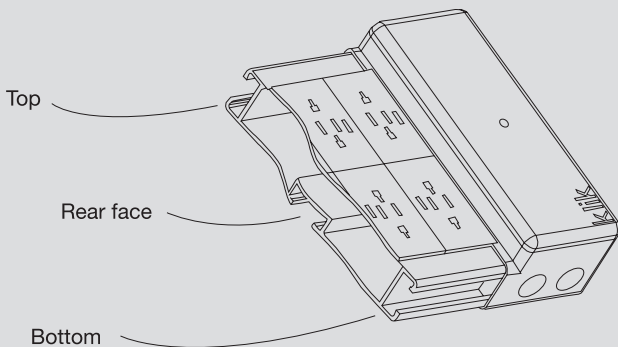
'Local' lighting switch control. Permanent emergency feed

E N L
To lighting distribution board
Aux
Loop
N
Sw(B)
Sw(A)
Local lighting switch

'Zone' lighting control. 'Local' emergency test control

To lighting distribution board
E N L
Aux
Loop
N
Sw(B)
Sw(A)
Remove Copper Link(2)
To other LDS Box
Zone switch to other LDS Box
Emergency test switch N/C
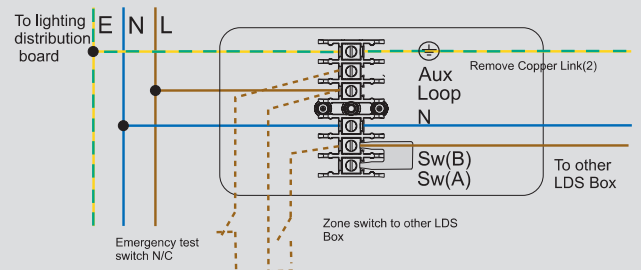
'Local' lighting switch control. Centralised emergency test via keyswitch

To lighting distribution board
E N L
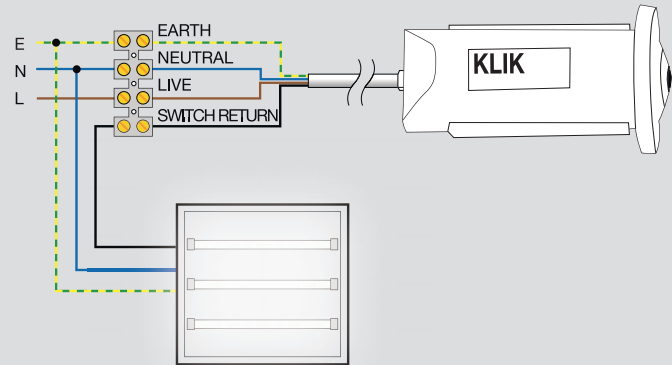Emergency test switch
Aux
Loop
N
Sw(B)
Sw(A)
To other LDS Box
Local lighting switch
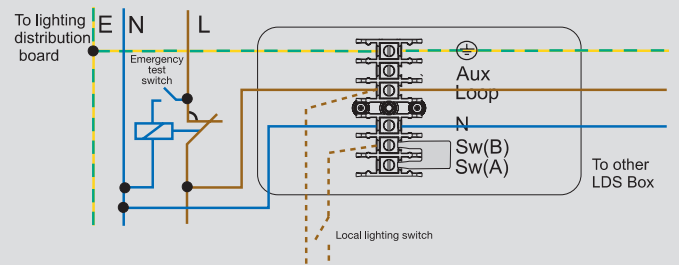
Connected to Klik LDS lighting distribution box
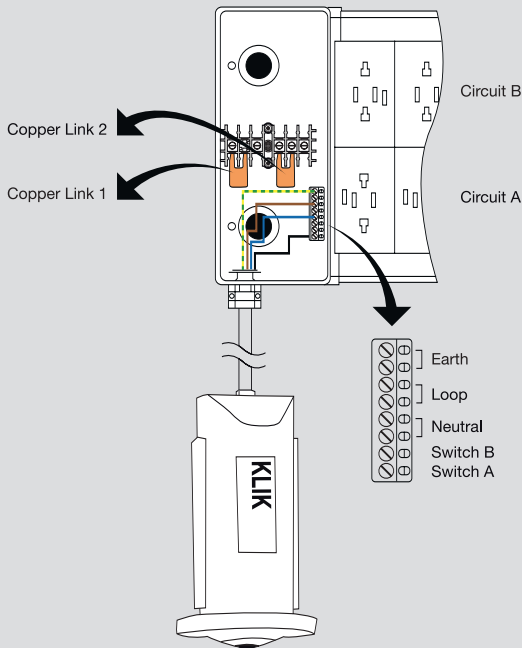
Connected directly to a single luminaire

Infrared programming tool for Klik Occupancy Sensor OS2/P

Setting the DIL switches

switch number					
1	2	3	4	5	6
ON programming tool	set timer	20 min	10 min	5 min	2min
OFF user override	set photocell	0 min	0 min	0 min	0 min

Switch number 1 can be used to make the OSRCA emulate the user override OSRCB. If switch number 1 is in the OFF position, all other switches become inactive. Programming of the OS2/P timer and photocell are separate operations; switch number 2 is used to select which setting is programmed.

Programming the OS2/P timer
Factory set time out is 20 minutes.

1. Set switch 1 to ON
2. Set switch 2 to ON
3. Set switches 3, 4, 5 and 6 to give the required timer setting. Each switch contributes its associated time when it is set to ON, and nothing when set to OFF, e.g. for 25 minutes (3 - ON, 4 - OFF, 5 - ON, 6 - OFF).
4. Aim the handset at the OS1/P and give a short press on the switch.
5. The OS2/P turns the lights off then back on again to acknowledge a successful programming operation. If the lights were already off, the acknowledgement simply turns the lights on.

Programming the OS2/P photocell
Factory set with photocell deactivated.

1. Set switch number 1 to ON
2. Set switch number 2 to OFF
3. Set switchs 3, 4, 5, and 6 according to the following table:

	switch number			
	3	4	5	6
a) disable photocell	OFF	OFF	OFF	OFF
b) recall latest photocell calibration	any pattern other than a) or b)			
c) calibrate new photocell set-point	ON	ON	ON	ON

(To calibrate new photocell set-point it will be necessary to wait until the time of day, or to simulate the light level artificially, when the ambient light level is just at the point where it is desired that the photocell becomes active).

4. Aim the handset at the OS2/P and give a short press on the button
5. The OS2/P turns the lights off (or keeps them off, if they were already off)
6. Two seconds later (immediately for options a or b), the OS2/P turns on to acknowledge that the new photocell calibration has been programmed

Notes
i   The operation of the photcell is such that it can only prevent lights from switching on as an area is entered. It never turns lights off in an occupied area.
ii   All parameters may be re-programmed any number of times and settings will be retained in the event of a power loss.
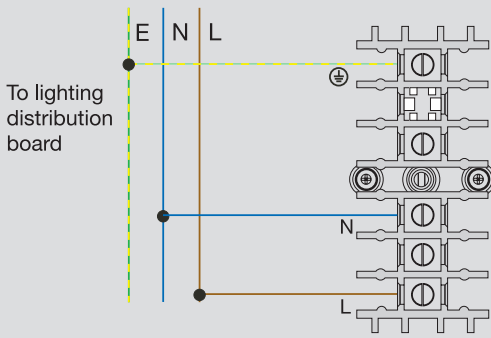
Technical Notes:
For switching applications, refer to our technical support helpline
Tel: 0870 607 6677

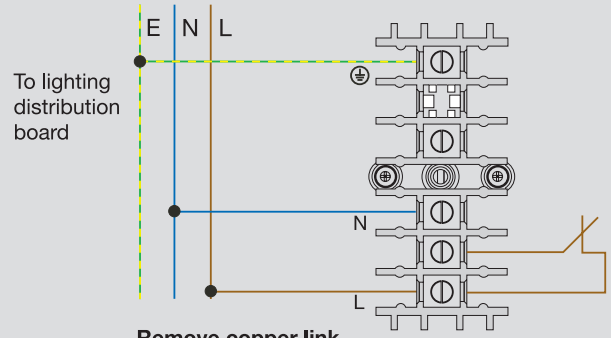For manual switching of occupancy sensors use either OSRCA or OSRCB.

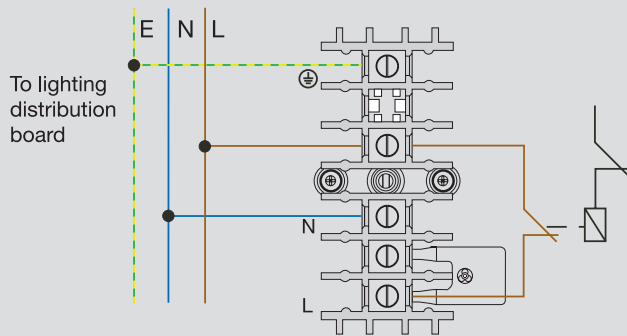**Power wiring arrangements**

Permanent supply
No emergency fittings

E N L

To lighting
distribution
board

N

L

Remove copper link

Local Emergency Testing
(drops out Aux terminals only) i.e. only emergency fittings

E N L

To lighting
distribution
board

N

L

Remove copper link

Central Emergency Testing
drops out supply to all sockets (live & Aux)

E N L

To lighting
distribution
board

N

L

Permanent Supply
emergency test integral to luminaire

E N L

To lighting
distribution
board

N

L
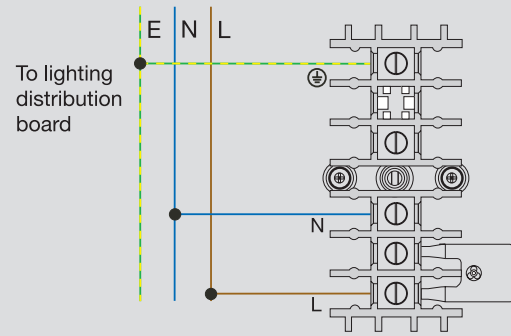
Ensure copper link is fitted

Control wiring arrangements

OS3/D & OS4/D Klik digital sensors control wiring

In single circuit configuration
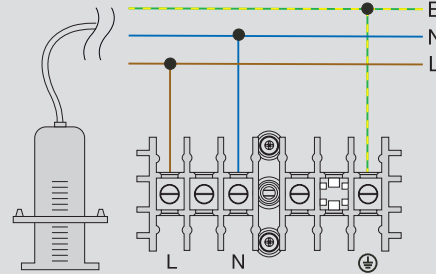"Sensor+" and "Sensor-" can be used to connect a Klik digital sensor into the control wiring.

Klik digital sensor
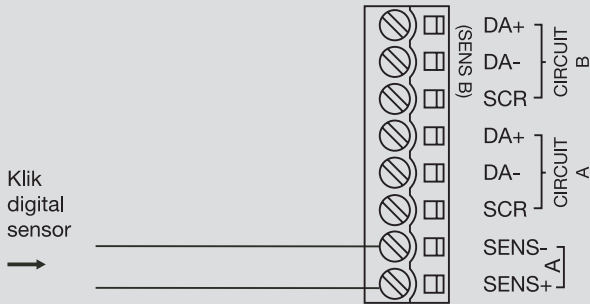
In split circuit mode
You can connect two Klik digital sensors, one to CCTA and a second one to CCTB.

Sensor 2 controls CCT B

Sensor 1 controls CCT A

Move into "DUAL" position
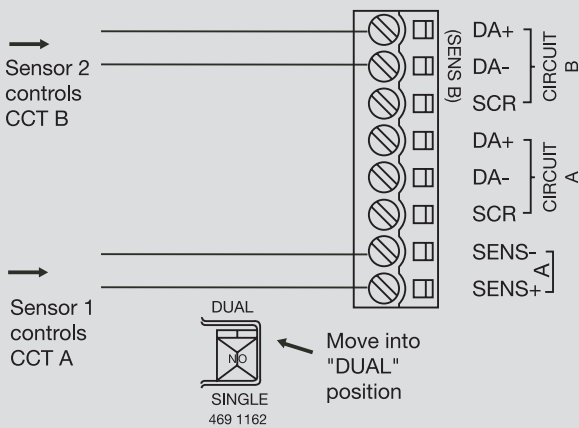
OS3/D & OS4/D Klik digital sensors power wiring

Single circuit configuration
The connections DA+ and DA- of CCT A are common with DA+ and DA- of CCT B respectively. Therefore all socket outlets receive the same control signal.

From controller

To next KDCS

Move into "SINGLE" position
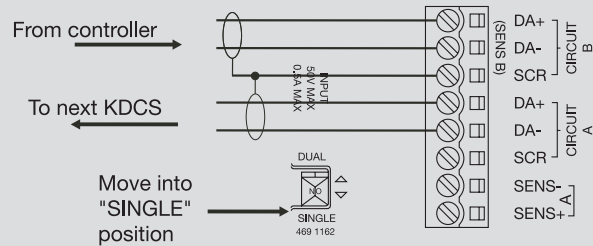
Dual circuit configuration
In split circuit mode, control circuits CCT A and CCT B are seperate and can receive different control singals if required.


CCT B control

CCT A control

Move into "DUAL" position

To next KDCS
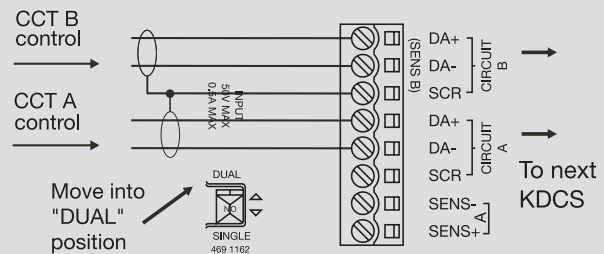
Secure connection systems - KDCS Overview

Wiring Digital installations with KDCS

For connection to non-emergency luminaires use the Klik digital pre-wired blue plugs, ref: **P55/1, P55/2. P55/3, P55/4 or P55/5**. These plugs have **Live** (brown), **Neutral** (blue), **Earth** (green/yellow) and both control pins (white and orange) connected.

For connection to emergency fittings, use Klik digital pre-wired red plugs, ref: **P55AXR/1, P55AXR/2, P55AXR/3, P55AXR/4, P55AXR/5**. These plugs have **Aux** (brown) **Neutral** (blue), **Earth** (green/yellow) and both control pins (white and orange) connected.

The bespoke "shotgun" cable (combined power and control) has a screened twisted pair for the control wired. The foil twisted pair section has been provided with a drain wire to allow easy termination at the luminaire. Where screening is required the drain wire should be connected to a convenient earth point.

data section FTP 0.5mm² single strand.   Drain wire

Power section 3-core 1.00mm² multi stranded.
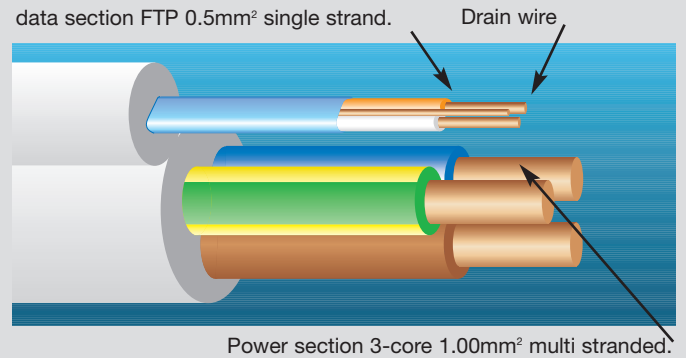
OSDP digital programmer

OSDP Digital Programmer
Instructions for use
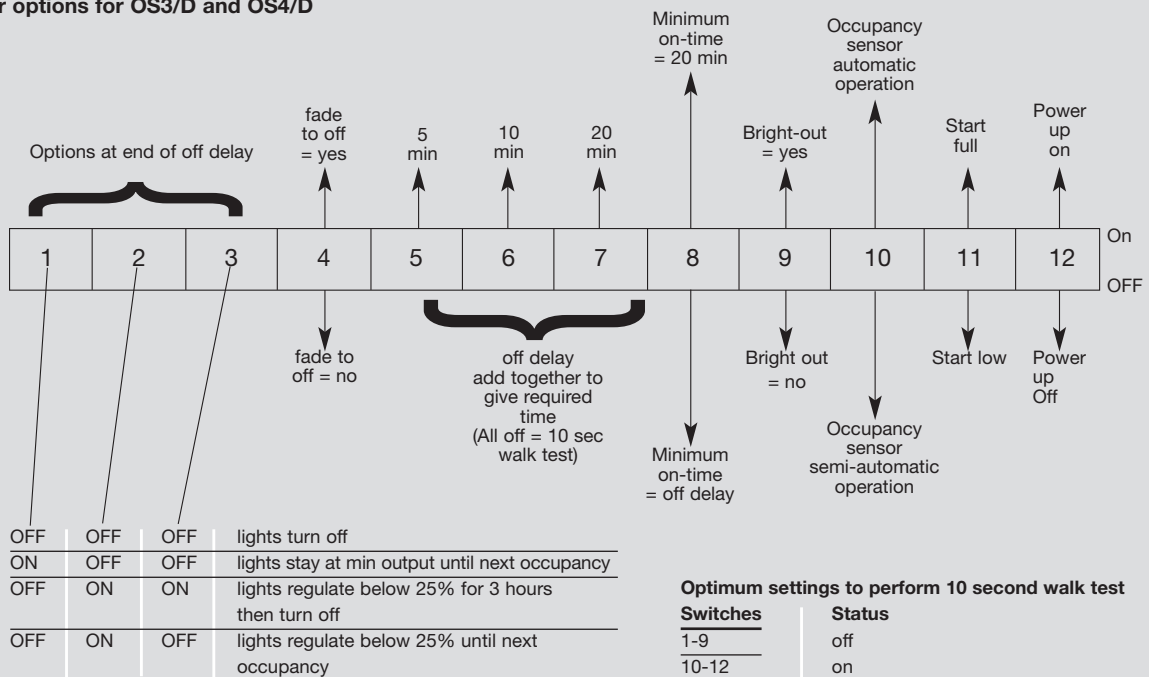
Changing Pre-set parameters

1. Set dill switches to ON or OFF according to desired settings.
2. Hold the programmer vertically beneath the occupancy sensor and press button A. The detector turns its load OFF to indicate the beginning of a programming event and turns back on almost immediately if the operation is a success. If the detector output does not turn back on, repeat the operation.

Setting the regulating light level

1. Point this unit at the occupancy sensor and adjust the light output using the UP/DOWN buttons until the desired light level is achieved locally.
   Note: that it may not be possible to do this in the presence of strong natural light.
2. Press STORE, two seconds later the load (regulating ballasts) blinks to indicate a successful store operation. The occupancy sensor will now regulate the light output in order to maintain the level of illuminance at this new set point.

***All of these parameters will be preserved in the event of power loss** and can be re-programmed any number of times.*

Parameter options for OS3/D and OS4/D

Options at end of off delay

Minimum on-time = 20 min

Occupancy sensor automatic operation

fade to off = yes · 5 min · 10 min · 20 min · Bright-out = yes · Start full · Power up on

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | On / OFF |

fade to off = no

off delay add together to give required time (All off = 10 sec walk test)

Minimum on-time = off delay

Bright out = no

Occupancy sensor semi-automatic operation

Start low

Power up Off

OFF	OFF	OFF	lights turn off
ON	OFF	OFF	lights stay at min output until next occupancy
OFF	ON	ON	lights regulate below 25% for 3 hours then turn off
OFF	ON	OFF	lights regulate below 25% until next occupancy

Optimum settings to perform 10 second walk test

Switches	Status
1-9	off
10-12	on

klik

OSDP digital programmer

Commissioning
The factory default setting will be appropriate for most applications. However, the installer does have the facility to reprogramme a wide range of parameters and to set the regulating light level using OSP Digital Programmer.

The following table shows the pre-set factory settings and a brief explanation of each parameter. These parameters may be re-programmed any number of times and all settings will be retained in the event of a power loss.

Programming information

Parameter	options	Pre-set	Application
Power-Up	on/off	on	Sets the luminaire state at power up irrespective of occupancy. Useful in reducing start-up load following power cut. Power-Up off-responds to occupancy after 30 seconds.
Start-up level	max/min	max	Sets the level at which lamps strike when turning on.
Responses	auto/semi auto	auto	If set to auto, the occupancy sensor switches the luminaires on and off automatically. If set to semi-auto, the luminaire will not turn on automatically when a person enters the area. It can be turned on using the OSDC or OSDCS hand-held controller by toggling the power switch. When the area is vacated, the light will turn off automatically.
Bright-out	yes/no	no	If set to yes, movement fails to refresh the off delay if the ambient light level is 100% higher than its desired level, and the luminaire will switch off when the off delay has elapsed.
Minimum on time	yes/no	no	If set to yes, the luminaire is guaranteed to stay on for at least 20 minutes, regardless of the off delay setting. This effectively overrides the off delay setting.
Off-delay	5-35 minutes	20 minutes	The time for which the luminaire will stay on following the last detected movement. Also 10 second setting for walk-testing.
Fade to off	yes/no	no	When no presence is detected, and after the off delay period, the lamps can fade out instead of switching off (approx 80 seconds to fade from 100% to 0%).
Light level	1-100%	100%	Can be set to regulate at any level achievable within the light output range of the fitting.
When vacant	low/off/reg <25%	off	These are the options for a vacant area after it has timed out. Luminaires can turn off, remain at minimum output, or regulate with a 25% output limit, until the next period of occupancy. If programmed to remain at minimum or regulate below 25%, there is a programmable option to switch off after 3 hours.

Hand held remote controller

OSDC infrared remote dimming controller for occupancy sensor Operation instructions

Point the handset at the occupancy sensor and press a button. The beam angle is quite narrow, so accurate aiming is important. (Optimum distance 1m - 2.5m, LED indicates battery life)

Key assignment OSDC
- Short press to turn off, long press to dim.
+ Short press to turn on, long press to brighten.

Product compatibility
Please note that only those products designed for dimming, and connected to appropriate equipment, can effect dimming with this controller.

Key assignment OSDCS
- Short press to turn off, long press to dim.
+ Short press to turn on, long press to brighten.
6 scene recall buttons.
To store, set the lighting level requirements using - or +, then press and hold the scene button until the luminaires blink.

Technical data
Dimensions:	120 x 56 x 22mm
Weight:	115g
Battery type:	Alkaline AAA x 2
Typical battery life:	1 year
Operating range:	2.5m

OSDC

OSDCS

klik
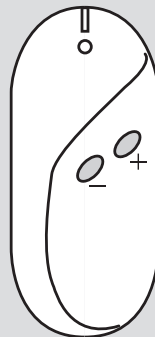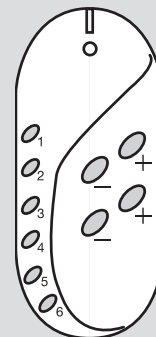
KDCS - simplicity and innovation

1.

A range of mounting options exist for the KDCS. The KDCS can be mounted on a flat surface, vertically or horizontally on drop rods, or beneath trunking or ladder trays.

2.

Large cabling compartment makes wiring easy under site conditions.

3.

Klik digital pre-wired plug are easily connected to the luminaire.

4.

Luminaires are connected to the marshalling box using the click in locking action.

5.

Parameters are selected using the handheld programmer.

6.

Occupancy sensor is programmed with the desired settings.

klik

klik

Alphanumerical index

klik

hager group