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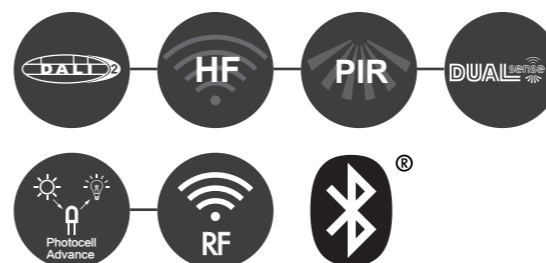
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HYTRONIK®

SENSORS & LIGHTING CONTROL

STAND-ALONE PRODUCT GUIDE 2017-2018



HYTRONIK INDUSTRIAL LIMITED

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Detection Technologies



Advantages of HF sensors

- ※ Fast reaction time, sensitive to minor movement to avoid switching off when sat at a desk, etc.
- ※ Sensitive to radial movement.
- ※ Performance unaffected by heat, aging and dust contamination, airconditioning and smoke
- ※ Adjustable detection range
- ※ HF is reflected, covering wide areas

Advantages of PIR sensors

- ※ Occupancy detection is confined to the monitored area.
- ※ Sensitive to tangential movement.
- ※ Not affected by vibrations, such as fans and lift mechanisms
- ※ Tuned to the human body temperature for reliable occupancy sensing of human traffic.

By combining the advantages of both HF and Microwave Occupancy detection technologies, reliable fast and accurate occupancy detection sensors can be realised. Configurable to operate as a combination of both technologies for sensitivity and accuracy or use as PIR only or HF only



Detection of movement by radar

Commonly known as 'Microwave sensors', Hytronik has gained an enviable reputation for being one of the leading manufacturers of this technology, holding international patents on our core technology. Microwave sensors do not require line of sight and can 'see' through pillars and partitions. Microwave sensors have a wider detection range and increased sensitivity to that of PIR.



Detection of movement by heat

Passive Infrared (PIR) is a long-established means of occupancy detection. It still is the first choice for cost effective lighting control and simple installation in domestic and office environments. This technology remains the best choice for outdoor applications.

Product Features



One-key Commissioning

Fast and simple commissioning is possible by using Hytronik newly developed remote controller HRC-11. The settings are programmed once and are then saved on the remote controller as a custom scene. With just one press, the programmed scene can be applied to other sensors.



Photocell Advance

Hytronik are now offering an outstanding improvement to our integrated photocell; A true photocell feature which daylight has priority control over the occupancy sensor, ensuring maximum energy savings are gained. The technology will ensure the light is turned off within 5 minutes of the natural light exceeding the the set daylight threshold.



Rotary Switch Built-in Programming

Quick installation is made possible by a 'click' to choose one of the 16 built-in programs on the rotary switch! Each parameter of detection range, motion hold-time, daylight threshold, stand-by period, stand-by dimming level is instantly set. Customisation of each individual parameter remains available for flexibility.



Rotary Switch Grouping

Fast and simple commissioning of wireless sensors is possible using by using Hytronik products with this feature. Just set the rotary switch numbers to the same position on all members (both transmitter and receiver) in the group and its job done! On DALI models, this switch is used to assign the product to the required DALI channel.



Daylight Harvest (Daylight Regulating)

Right time, right place and the right amount of light!! Daylight harvest (also known as daylight regulating) is a must in the future lighting norms. The daylight sensor measures the available surrounding natural light and calculates how much artificial light is needed to reach the target lux level. The control output is passed to the drivers by DALI or 1-10V signals which then deliver the needed amount of light .



Ambient Daylight Threshold

Switch the power supply to the sensor two times within 2s, and the current ambient lux level will be stored as the new threshold. On applicable models, this can also be carried out using the remote control handset. This feature enables the daylight sensor to be commissioned to the environment in which it is installed. Either the remote control handset, DIP switch settings and the ambient lux threshold learned can overwrite each other. The latest action controls.



Latest DALI Protocol for Sensor Control

Being a member of the DALI group, Hytronik remain compliant with the latest DALI standards for sensor controls. We offer both DALI sensors for DALI systems as well independent DALI sensors (containing DALI power supply) suited to small and medium projects for DALI 'Plug N' Play' installation.



Further 20% Saving @ Initial 10,000 Hours

It is common in LED luminaire lumen output specification to rate the performance after 10,000 hours, which means an installation may be over-lit by as much 20% during the first 10,000 hours. In some cases of a retro fit of fluorescent to LED, the occupants may also complain of discomfort from the new lit environment. This 20% @ 10,000 hrs wasted energy and any discomfort can now be controlled by the press of a button using Hytronik controls. 100% output is simply restored via the remote control.



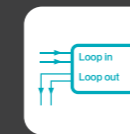
8H Manual on Mode for LED Lamp

Switching off/on the power supply three times within 3 seconds, will initiate an 8-hour manual override of the occupancy sensor. During this 8-hour period the light will be on at 100% before returning automatically to occupancy detection mode. Useful when sensor function is not needed in special occasion. On applicable models, this can also be carried out using the remote control handset.



Synchronisation Function

In many cases, several sensors are connected together to control the same fixture. This requirement places extra demand on the reliability and noise handling capability of such sensors. Hytronik offer this feature with specially designed hardware & software to ignore such interferences and ensure stable operation.



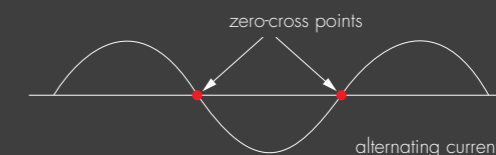
Loop-in and Loop-out Terminal

Whether you are saving component cost and assembly work on sensors designed for built-in fixtures, or looking for easy installation on stand alone sensors, Hytronik sensors are designed with the all terminals you need. With this feature, L and N terminals are provided for power in and L' and N for power out to the load. Easy, logical and clean!



Zero-cross relay operation

Our intelligent software design means our sensors switch the load right at the zero-cross point to minimise inrush current passing through the relay contact point, and enable the maximum load and life-time of the relay.

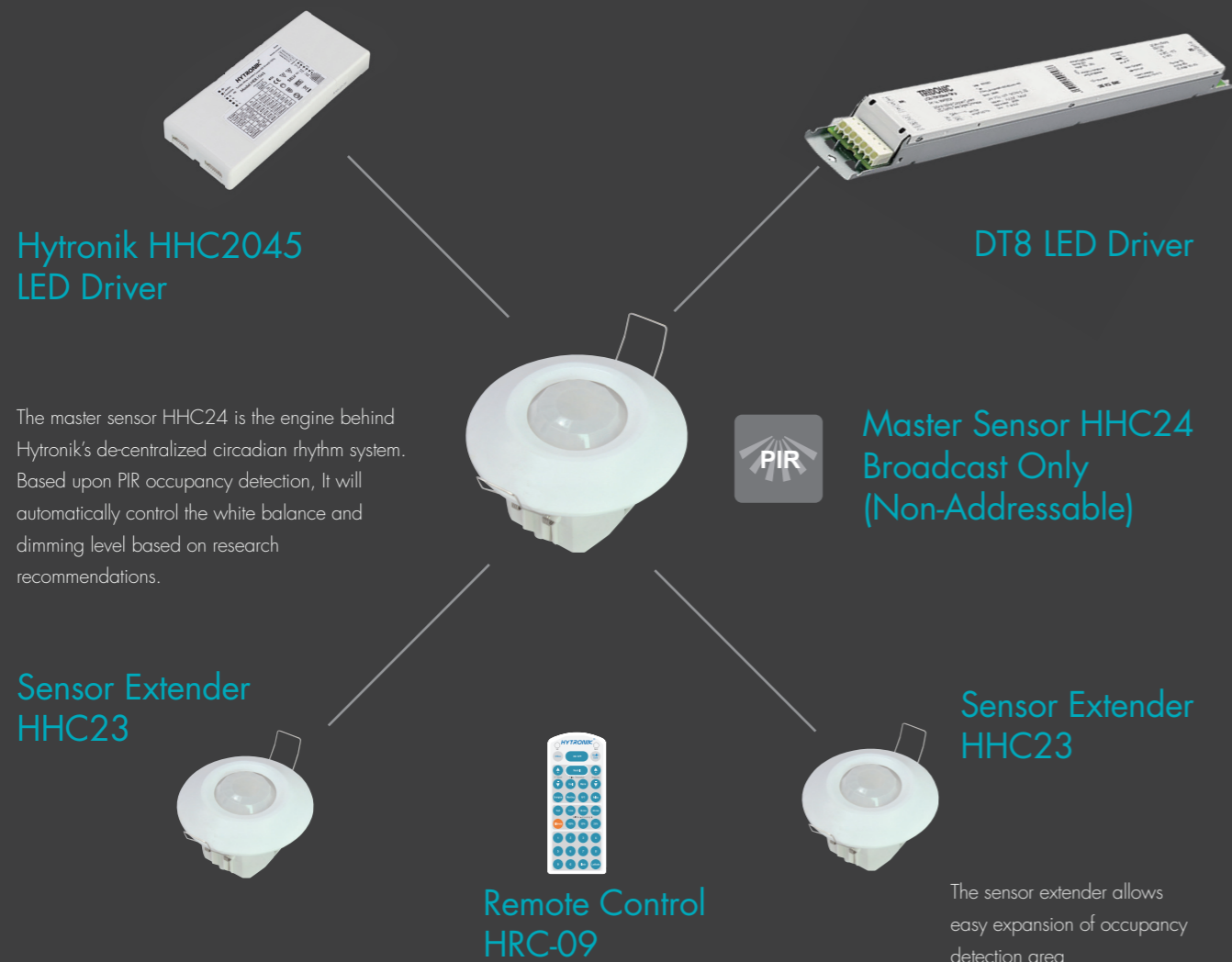


Typical Application Example



Hytronik Human Centric Lighting Open / Large Area

Lighting can reduce energy bills, it can also boost productivity and promote the wellbeing of humans in artificially lit environments. Hytronik has added to its de-centralised tunable white LED driver range with a new concept of time keeping for the most cost effective Human Centric Lighting.



The master sensor HHC24 is the engine behind Hytronik's de-centralized circadian rhythm system. Based upon PIR occupancy detection, It will automatically control the white balance and dimming level based on research recommendations.

The sensor extender allows easy expansion of occupancy detection area

System Capacity	Component	DT8 Driver = 2mA	HHC23 Extender = 8mA
HHC24 Includes 80mA max. DALI PSU	Max. No of DT8 Drivers	40	0
	Max. No. of HHC23 Extender	4	9

Hytronik Human Centric Lighting Single Point Luminaire Control



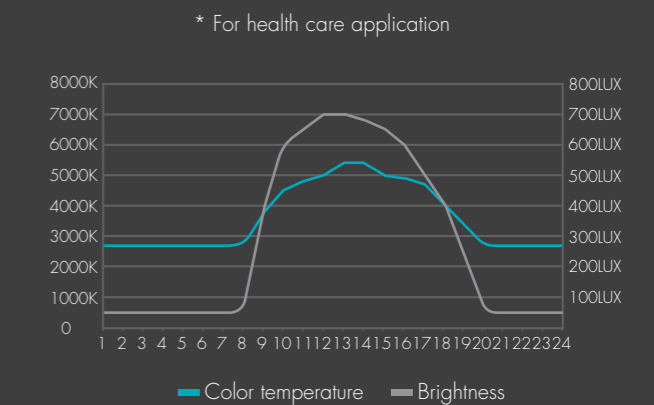
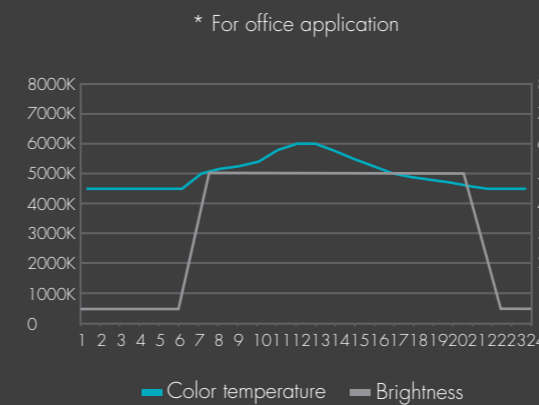
Features

- ※ HER1045 - 45W, 2-channel tunable white LED driver with multi-current selection to suit a wide range of luminaires
- ※ Microwave occupancy sensor - detection range 12m (D) x 6m (H)
- ※ PIR occupancy sensor - detection range 6m (D) x 5m (H)
- ※ Daylight Harvest
- ※ Pre-programed automatic colour tuning and brightness control - also sometimes known as circadian rhythm.

Offering the same functionality as the Hytronik Human Centric System in a package optimised for single office fixtures, such as tunable white recessed panels. Applications may be found where it is desirable that each occupant has control over his or her own individual lighting needs on a point-by-point basis

This simple set-up requires the following 3 elements:

- ※ HER1045 - 45W, 2-channel tunable white LED driver
- ※ Microwave or PIR occupancy sensor with following features:
 - IR receiver
 - Daylight harvest unit
 - Recess design fits into 41mm cutout.
- ※ Remote control for set-up and user operation.



Corridor



Occupancy sensors for corridors should provide safety and accuracy. To deliver the best performance and energy savings possible, passive infrared (PIR) is a good choice for most corridors as the detection area remains confined to the corridor space. Combined with automatic dimming, the best compromise of energy savings, comfort and safety can be realized. Consider the use of DualSense technology for more complex corridor networks, and HF for those with higher ceiling mounting heights.



HIR21

- ※ Fully automatic on/off or 1-10V tri-level light control
- ※ Daylight detection prior to motion detection
- ※ 360°/maximum detection 10m (D) x 3m (H)
- ※ Compact flush mounting design
- ※ Remote control or pre-set programmable
- ※ One-key commissioning for easy installation
- ※ DALI and daylight harvest versions available



HMW21

- ※ Fully automatic on/off or 1-10V tri-level light control
- ※ Daylight detection prior to motion detection
- ※ 360°/maximum detection 12m (D) x 6m (H)
- ※ Discreet flush mounting design
- ※ Remote control or pre-set programmable
- ※ One-key commissioning for easy installation
- ※ DALI and daylight harvest versions available



HIM11

- ※ Fully automatic on/off or 1-10V tri-level light control
- ※ Daylight detection prior to motion detection
- ※ 360°/maximum detection 12m (D) x 6m (H)
- ※ Dual flush or surface mounting design
- ※ Remote control or pre-set programmable
- ※ One-key commissioning for easy installation
- ※ DALI, daylight harvest and trailing edge phase dimming versions available

Related OEM Products



HIRO2
HC038V



HIRO1/FM
HED1045



SAM7/FM
HEM09

Stairwell



Stairwell sensors require high sensitivity and fast reaction time to ensure the stairwell is adequately lit when in use. Hytronik Dual sense and HF sensors both provide this characteristic, especially in stairwells with a high ceiling void. DualSense lends itself to high accuracy and surface mounting options, whilst HF provides the most cost effective solution. Combined with automatic dimming, the best possible energy savings and pedestrian safety are maintained.



HIM11

- ※ Fully automatic on/off or 1-10V tri-level light control
- ※ Daylight detection prior to motion detection
- ※ 360°/maximum detection 12m (D) x 6m (H)
- ※ Dual flush or surface mounting design
- ※ Remote control or pre-set programmable
- ※ One-key commissioning for easy installation
- ※ DALI, daylight harvest and trailing edge phase dimming versions available



HMW21

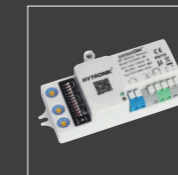
- ※ Fully automatic on/off or 1-10V tri-level light control
- ※ Daylight detection prior to motion detection
- ※ 360°/maximum detection 12m (D) x 6m (H)
- ※ Discreet flush mounting design
- ※ Remote control or pre-set programmable
- ※ One-key commissioning for easy installation
- ※ DALI and daylight harvest versions available



HIR20

- ※ Fully automatic light control
- ※ Daylight detection prior to motion detection
- ※ 360°/maximum detection 10m (D) x 3m (H)
- ※ Compact flush mounting design
- ※ Remote control or pre-set programmable
- ※ One-key commissioning for easy installation

Related OEM Products



HC028V/RF



HEM09
SAM7



HC019V
IP20

Small Office, Kitchen and Single Room



For smaller offices, kitchenette areas and other smaller closed spaces, passive infrared (PIR) technology provides the most accurate and cost effective solution. With our daylight harvesting sensors, a room may never be over-lit or the lights unnecessarily left on, meaning energy savings and user comfort are truly optimized for this type of space. DualSense should be considered in rooms with higher ceilings. Where occupancy sensing is not cost effective or viable, a simple daylight sensor maybe employed to ensure the small space is never over-lit.

Hytronik Human Centric Lighting

HHC
PIR



HER1045

- ※ HER1045 - 45W, 2-channel tunable white LED driver with multi-current selection to suit a wide range of luminaires
- ※ PIR occupancy Sensor - detection range 6m (D) x 5m (H)
- ※ Daylight Harvest
- ※ Pre-programmed Automatic colour tuning and brightness control - also sometimes known as circadian rhythm.

PIR



HIR22

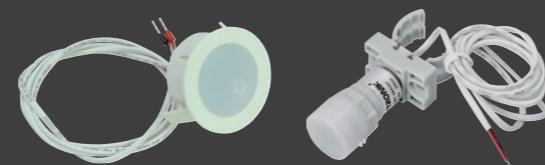
- ※ Daylight harvest, makes use of natural daylight, 1-10V control
- ※ Daylight detection prior to motion detection
- ※ 360°/maximum detection 10m (D) x 3m (H)
- ※ Compact flush mounting design
- ※ Remote control or pre-set programmable
- ※ One-key commissioning for easy installation
- ※ DALI version available

DUALsense™



HIM12

- ※ Daylight harvest, makes use of natural daylight, 1-10V control
- ※ Daylight detection prior to motion detection
- ※ 360°/maximum detection 12m (D) x 6m (H)
- ※ Dual flush or surface mounting design
- ※ Remote control or pre-set programmable
- ※ One-key commissioning for easy installation
- ※ DALI and trailing edge phase dimming versions available



DS02/FM & DS02

Where occupancy sensing is not cost effective or viable, a simple daylight sensor maybe employed to ensure the small space is never over-lit.

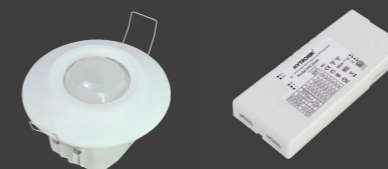
Open Office / Canteen



Large open office spaces have many possibilities, including zonal occupancy control, making use of natural daylight, human centric lighting or simply detecting a large area with as few sensors as possible. With Hytronik sensor technologies, any of these demands may be easily and cost effectively met.

Hytronik Human Centric Lighting

HHC
PIR



HCC23 / HHC24 HHC2045

- ※ HHC2045 - 45W, 2-channel tunable white LED driver with multi-current selection to suit a wide range of luminaires
- ※ PIR occupancy Sensor - detection range 10m (D) x 3m (H)
- ※ Daylight Harvest
- ※ Pre-programmed Automatic colour tuning and brightness control - also sometimes known as circadian rhythm.

PIR



HIR22

- ※ Daylight harvest, makes use of natural daylight, 1-10V control
- ※ Daylight detection prior to motion detection
- ※ Daylight detection prior to motion detection
- ※ 360°/maximum detection 10m (D) x 3m (H)
- ※ Compact flush mounting design
- ※ Remote control or pre-set programmable
- ※ One-key commissioning for easy installation
- ※ DALI version available

HF



HMW22

- ※ Daylight harvest, makes use of natural daylight, 1-10V control
- ※ Daylight detection prior to motion detection
- ※ 360°/maximum detection 12m (D) x 6m (H)
- ※ Discreet flush mounting design
- ※ Remote control or pre-set programmable
- ※ One-key commissioning for easy installation
- ※ DALI version available

DUALsense™



HIM12

- ※ Daylight harvest, makes use of natural daylight, 1-10V control
- ※ Daylight detection prior to motion detection
- ※ 360°/maximum detection 12m (D) x 6m (H)
- ※ Dual flush or surface mounting design
- ※ Remote control or pre-set programmable
- ※ One-key commissioning for easy installation
- ※ DALI and trailing edge phase dimming versions available

Conference Room



A conference room will always require good lighting control, from maximizing the available light on the table to lighting areas of display and dimming control for projected presentations. Hytronik's range of system DALI or independent DALI products allow scenes to be easily selected by the end user. The combinations of occupancy control and daylight harvest also mean that the functionality of the lighting is met whilst still ensuring energy savings are made at all possible times.

Hytronik Human Centric Lighting



HCC23 / HHC24 HHC2045

- ※ HHC2045 - 45W, 2-channel tunable white LED driver with multi-current selection to suit a wide range of luminaires
- ※ PIR occupancy Sensor - detection range 10m (D) x 3m (H)
- ※ Daylight Harvest
- ※ Pre-programmed Automatic colour tuning and brightness control - also sometimes known as circadian rhythm.



HIR24

- ※ Daylight harvest, makes use of natural daylight using simple self-powered DALI broadcast.
- ※ Daylight detection prior to motion detection
- ※ 360°/maximum detection 10m (D) x 3m (H)
- ※ Compact flush mounting design
- ※ Remote control or pre-set programmable
- ※ One-key commissioning for easy installation
- ※ Independent DALI can supply up to 15 DALI drivers
- ※ 1-10V dimming versions available



HMW24

- ※ Daylight harvest, makes use of natural daylight using simple self-powered DALI broadcast.
- ※ Daylight detection prior to motion detection
- ※ 360°/maximum detection 12m (D) x 6m (H)
- ※ Discreet flush mounting design
- ※ Remote control or pre-set programmable
- ※ One-key commissioning for easy installation
- ※ Independent DALI can supply up to 20 DALI drivers
- ※ 1-10V dimming versions available

Related OEM Products



HIRO1/FM
HED1045



HIRO2
HCO38V



SAM5/DH
HER1045 (Circadian rhythm)
HER3045 (Tunable white)

Classroom



Classroom specifications can have many demands, including daylight harvest, semi-automatic occupancy control (absence detection), zonal dimming, and increasingly colour control for where human centric lighting is being implemented.

Hytronik Human Centric Lighting



HCC23 / HHC24 HHC2045

- ※ HHC2045 - 45W, 2-channel tunable white LED driver with multi-current selection to suit a wide range of luminaires
- ※ PIR occupancy Sensor - detection range 10m (D) x 3m (H)
- ※ Daylight Harvest
- ※ Pre-programmed Automatic colour tuning and brightness control - also sometimes known as circadian rhythm.



HIR24

- ※ Daylight harvest, makes use of natural daylight using simple self-powered DALI broadcast.
- ※ Daylight detection prior to motion detection
- ※ 360°/maximum detection 10m (D) x 3m (H)
- ※ Compact flush mounting design
- ※ Remote control or pre-set programmable
- ※ One-key commissioning for easy installation
- ※ Independent DALI can supply up to 20 DALI drivers
- ※ 1-10V dimming versions available
- ※ Semi-automatic for manual on, auto off (absence detection)

Related OEM Products



SAM7/FM
HED1045



SAM5/DH
HER1045 (Circadian rhythm)
HER3045 (Tunable white)



SAM5/FM
HEC7030

Washroom

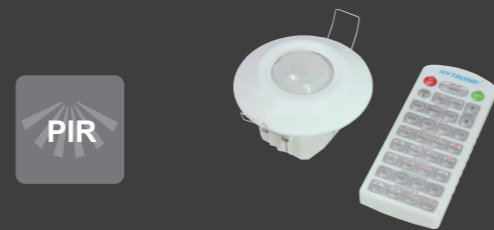


Toilet areas generally have partitions and HF sensing technology comes into its own as the most cost effective solution to provide sensing area coverage with as few sensors as possible. Where smaller WC's are adjacent to sleeping areas, such as in student accommodation, PIR is recommended. As natural daylight is not normally a feature in this kind of space, automatic dimming is an often overlooked feature and is recommended to provide extra comfort and safety.



HMW21 Recommended for large washroom

- ※ Fully automatic on/off or 1-10V tri-level light control
- ※ Daylight detection prior to motion detection
- ※ 360°/maximum detection 12m (D) x 6m (H)
- ※ Discreet flush mounting design
- ※ Remote control or pre-set programmable
- ※ One-key commissioning for easy installation
- ※ DALI and daylight harvest versions available



HIR21 Recommended for small/single washroom

- ※ Fully automatic on/off or 1-10V tri-level light control
- ※ Daylight detection prior to motion detection
- ※ 360°/maximum detection 10m (D) x 3m (H)
- ※ Compact flush mounting design
- ※ Remote control or pre-set programmable
- ※ One-key commissioning for easy installation
- ※ DALI and daylight harvest versions available

Related OEM Products



HIRO1/FM
HER1045 (Circadian rhythm)
HER3045 (Tunable white)



HIRO2
HC038V



SAM5/IP65
HEC7030

Car Park



Car parks present interesting engineering challenges when adding occupancy and lighting controls, with wiring restrictions/alterations usually constricting the budget to provide a reasonable solution. Hytronik's range of RF wireless sensors provide the perfect solution for cost effective functionality and accuracy.



HMW39/RF Recommended for large and multi-storey car parks

- ※ Independent DALI control with automatic dimming
- ※ Daylight detection prior to motion detection
- ※ 360°/maximum detection 10m (D) x 12m (H)
- ※ IP65, multi-mount enclosure
- ※ Remote control or pre-set programmable
- ※ One-key commissioning for easy installation
- ※ Wireless communication - create connected zones for progressive lighting response.

Related OEM Products



SAM11
HCO38V
HCO34RF



SAM8/RC11
HCO38V



SAM8/RC11
HED1050L



DUALsense™ HIM39/RF

- ※ Wireless independent DALI control with automatic dimming
- ※ Wireless communication - create connected zones for progressive lighting response.
- ※ 1-10V dimming version available
- ※ Maximum detection 18m (D) x 15m (H)
- ※ Both microwave and PIR for high sensitivity and high accuracy
- ※ IP65, multi-mount enclosure
- ※ Remote control or pre-set programmable
- ※ One-key commissioning for easy installation

Equipment/Changing and Plant Rooms



Rooms which are generally in less frequent use present ideal opportunities to reduce energy costs by only lighting the space when necessary. Where these areas do not benefit from natural daylight, use of 2-step lighting control should be considered for comfort and safety of the occupants.

Warehouse



Warehouse luminaire mounting infrastructure and wiring limitations demand sensors with innovative and flexible mounting options. Hytronik high bay solutions provide the designer with freedom to select and implement lighting controls in the most convenient and cost effective manner.



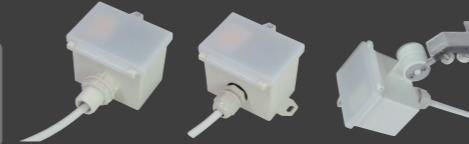
HIR20

- ※ Fully automatic light control
- ※ Daylight detection prior to motion detection
- ※ 360°/maximum detection 10m (D) x 3m (H)
- ※ Compact flush mounting design
- ※ Remote control or pre-set programmable
- ※ One-key commissioning for easy installation



HIR21

- ※ Fully automatic on/off or 1-10V tri-level light control
- ※ Daylight detection prior to motion detection
- ※ 360°/maximum detection 10m (D) x 3m (H)
- ※ Compact flush mounting design
- ※ Remote control or pre-set programmable
- ※ One-key commissioning for easy installation
- ※ DALI and daylight harvest versions available



HMW31

- ※ Fully automatic on/off or 1-10V tri-level light control
- ※ DALI version available

HMW32

- ※ Daylight harvest, makes use of natural daylight, 1-10V control
- ※ DALI version available

HMW39/RF

- ※ Wireless independent DALI control with automatic dimming
- ※ Wireless communication - create connected zones for progressive lighting response.
- ※ 1-10V dimming version available
- ※ Maximum detection 10m (D) x 12m (H)



HIM31

- ※ Fully automatic on/off or 1-10V tri-level light control
- ※ DALI version available

HIM39/RF

- ※ Wireless independent DALI control with automatic dimming
- ※ Wireless communication - create connected zones for progressive lighting response.
- ※ 1-10V dimming version available
- ※ Maximum detection 18m (D) x 15m (H)

Related OEM Products



HIRO1/FM
HED1045



HIRO2
HCO38V



HE2050-A2



HMW21

- ※ Fully automatic on/off or 1-10V tri-level light control
- ※ Daylight detection prior to motion detection
- ※ 360°/maximum detection 12m (D) x 6m (H)
- ※ Discreet flush mounting design
- ※ Remote control or pre-set programmable
- ※ One-key commissioning for easy installation
- ※ DALI and daylight harvest versions available

Features for All Models:

- ※ 360°/ maximum detection 16m (D) x 15m (H)
- ※ Dual Sense PIR lens optimised for aisle 18m (D) x 15m (H)
- ※ Dual Sense PIR open area also available
- ※ Daylight detection prior to motion detection
- ※ Remote control or pre-set programmable
- ※ One-key commissioning for easy installation
- ※ IP65 rated; 3 Options for installation:
 - Screw to the luminaire by conduit
 - Ceiling mount
 - Attach to luminaire shade by clamp





HCD450VDSRC

- ※ Daylight harvest, makes use of natural daylight using simple self-powered DALI broadcast or 1-10V
- ※ Daylight detection prior to motion detection
- ※ Remote control programmable
- ※ Dry contact output
- ※ IP65 enclosure with bracket mount for flexible installation
- ※ 25m x 6m detection at 15m mounting height
- ※ Independent DALI can supply up to 30 DALI drivers

Stand-alone Sensor Summary

Hytronik Dual Sense:

Products	Model	Dimming Feature	Function
	HIM11	1-10V	Tri-level control
	HIM12	1-10V	Daylight harvest
	HIM13	System DALI	Tri-level control
	HIM14	Independent DALI	Daylight harvest
	HIM15	Independent DALI	Tri-level control
	HIM16	Trailing edge	Daylight harvest
	HIM17	Trailing edge	Tri-level control
 High Bay	HIM31	1-10V	Tri-level Control
	HIM32	1-10V	Daylight Harvest
	HIM34	Independent DALI	Daylight Harvest
	HIM35	Independent DALI	Tri-level Control
	HIM38/RF	1-10V	Tri-level Control, RF wireless
	HIM39/RF	Independent DALI	Tri-level Control, RF wireless
 High Bay	HIM54	Independent DALI	Daylight harvest

Hytronik Passive Infrared (PIR):

Products	Model	Dimming Feature	Function
	HIR21	1-10V	Tri-level control
	HIR22	1-10V	Daylight harvest
	HIR23	System DALI	Tri-level control
	HIR24	Independent DALI	Daylight harvest
	HHC23	Hytronik Human Centric (HHC)	N/A
	HHC24	Hytronik Human Centric (HHC)	Daylight harvest

Hytronik High Frequency (Microwave):

Products	Model	Dimming Feature	Function
 High Bay	HMW11	1-10V	Tri-level control
	HMW12	1-10V	Daylight harvest
	HMW14	Independent DALI	Daylight harvest
	HMW15	Independent DALI	Tri-level control
	HMW20	N/A	On/off Control
	HMW21	1-10V	Tri-level control
	HMW22	1-10V	Daylight harvest
	HMW23	System DALI	Tri-level control
	HMW24	Independent DALI	Daylight harvest
	HMW25	Independent DALI	Tri-level control
	HMW31	1-10V	Tri-level control
	HMW32	1-10V	Daylight harvest
	HMW34	Independent DALI	Daylight harvest
	HMW35	Independent DALI	Tri-level control
	HMW38/RF	1-10V	Tri-level control, RF wireless
HMW39/RF	Independent DALI	Tri-level control, RF wireless	

For detailed technical information, please refer to our product data sheets at: www.hytronik.com

Retrofit and Upgrade Products

Hytronik offers an extended range of products to cater for upgrading existing installations. Simple retrofit devices for instant energy savings to advanced controls utilizing daylight offering enhanced comfort and further energy savings, there is a product to suit every budget.



HED1045

HED1045 with flush mount antenna is perfect for upgrading LED panels with high specification lighting control. Simply exchanging the existing driver can add occupancy control, dimming and even daylight harvest with the PIR antenna.

Dimming Driver Upgrades Switch-DIM and 1-10V



HE8030-A

HE8050-A

※ Multi-current selection, suitable for many LED applications.

For DALI drivers, please see the following pages.

EXT



For listed buildings or where the architecture demands hidden lighting controls. This range of products uses the advantage of HF technology to see through partitions, glass and plaster work, meaning lighting control solutions can be achieved without compromise to the fabric and aesthetic of the space. On/off & tri-level lighting control versions available.

HC030S



Ideally suited to linear fixtures, these simple "bolt-on" sensors provide a quick retro-fit solution.

Components for Trailing Edge Systems

Occupancy Sensor HC402S/T



To add a motion sensor into a triac dimmer system is usually difficult. This sensor has been specially designed for this application. The output of the dimmer is simply passed through this motion sensor to the connected lights.

Push-type Trailing Edge Dimmer HD2200



- ※ Easily convert trailing edge dimming driver to Switch-dim
- ※ Smooth flicker-free dimming
- ※ Adjustable for minimum load setting
- ※ Provides permanent memory to share last user setting
- ※ 50 x HD2200 can be connected to a single switch
- ※ Simple synchronization for uniform dimming of multiple fixtures

HC009S HC019V



Installing a microwave sensor into an existing fixture is the cleanest and most simply way to realise instant energy savings. These compact sensors have been designed to easily retrofit into most luminaires. Several sensors may be connected to the same lighting circuit, so there is no need to fit a sensor to each fixture. Both simple on/off and synchronised dimming control versions are available.

HC038V + SAM11 + HC034RF



Ideally suited to applications where adding extra wires for lighting controls is difficult or prohibited, such as car parks and listed buildings, our range of Radio Frequency connected sensors provide an ideal and cost-effective solution. Simple commissioning and intelligent design adds great flexibility, comfort and energy savings to any lighting scheme.

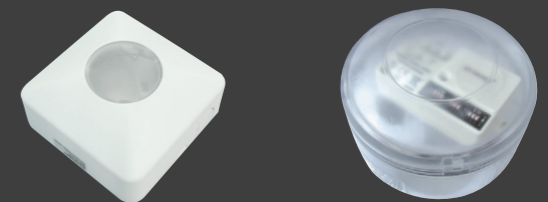
DUALsense™

Occupancy sensor + dimmer

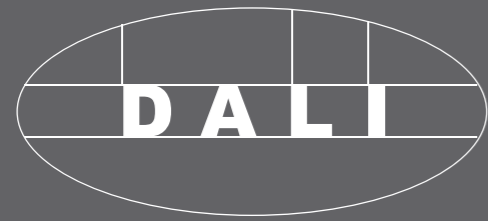
HIM16 (Daylight Harvest) HIM17 (Tri-level Control)

- ※ 200VA trailing edge output
- ※ 360° / maximum detection 12m (D) x 6m (H)
- ※ Dual flush or surface mounting design
- ※ Remote control or pre-set programmable
- ※ One-key commissioning for easy installation

Surface-mount IP20 & IP65 sensor box

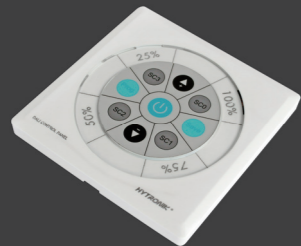


- ※ Suitable for most Hytronik built-in sensors, refer to guide for details.
- ※ Supplied with all necessary fixings and cable clamp.



Components

DALI panel HDP01



For creation of small independent DALI groups, the HDP01 is a basic, yet powerful DALI controller. Featuring a fully integrated 60mA DALI power supply capable of controlling up to 30 devices. 4 Scene memories are customizable from the panel without the need for a DALI master programming tool.

DALI panel HDP03

HDP03 is designed for use in DALI systems under separate power supply and master control. Where it is desirable to make local adjustments at the switch panel, 4 scene memories are provided to simply fine tune the original group scenes, without the need to access the DALI master controller. Simple group assignment to any of the 16 channels is made using rotary switch.

Product Highlights:

- ※ Manual off control, on with one-touch scene recall button.
- ※ Manual real time brightness adjustment of any scene
- ※ Illuminated display panel (can be turned off if not required)

DALI panel HDP02



HDP02 is a self-contained DALI scene controller with 6 programmable scene memories via any DALI master programming tool. Featuring a fully integrated 60mA DALI power supply capable of controlling up to 30 devices.

DALI panel HDP04

HDP04 is a scene controller designed for use in DALI systems under separate power supply and master control. 6 One-touch scene recall memories are available for great flexibility in environments such as hotel rooms, classrooms and conference rooms where it is desirable to accent the light according to task. Simple group assignment to any of the 16 channels is made using rotary switch.

Product Highlights:

- ※ Manual off control, on with one-touch scene recall button.
- ※ Manual real time brightness adjustment of any scene
- ※ 6 Scene memories with one-touch recall
- ※ Illuminated display panel (can be turned off if not required)

The HDP range of DALI wall panels are available in White, black, brushed chrome effect and antique bronze finishes to suit the decor of a range of applications.



DALI dimmer HDD2200

For use in upgrade retrofit of trailing edge phase dimming controls, this dimmer will convert DALI control signals to the trailing edge drivers or transformers. It can realise savings on installation and wiring costs and will also reduce unnecessary waste of electronic equipment making it an environmentally sound solution for a lighting control upgrade.

Highlights:

- ※ Maximum load 200W
- ※ Permanent memory
- ※ Synchronization
- ※ Built-in or stand-alone



DALI switch HDS2400

This on/off DALI controlled switch is ideally suited for retrofit where non-dimmable LED drivers, transformer or fluorescent ballasts have been used. Saving costs on installation, components and wiring this convertor is an extremely cost effective and environmentally sound solution to retrofit of simple lighting control.

Highlights:

- ※ Maximum load 400W
- ※ Zero-cross relay operation
- ※ Built-in or stand-alone

DALI Power Supply



HT-01

Highlights:

- ※ Built-in type
- ※ 240mA output capability
- ※ Isolated output 3000V



HT-02

Highlights:

- ※ Din rail mounting
- ※ 240mA output capability
- ※ Isolated output 3000V



HT-03

Highlights:

- ※ Compact linear body
- ※ 90mA output capability
- ※ Isolated output 3000V



LED Drivers

DALI 2 Series

At the forefront of our DALI driver range, these LED drivers are DALI2 standard ready and have been designed for ultra low stand-by power consumption to reduce 'parasitic power' as defined by EuP/ErP. Other features such as flicker-free dimming operation, intelligent thermal management and many more features, they are the ideal choice for large high-end DALI projects, or for those who are designing for EuP/ErP compliance.

Technical Note:

We strongly recommend the use of fully isolated DALI Power Supply Units (including those integrated into DALI master units) such as the Hytronik HT02. Comprehensive data sheets for each model are available on our website.



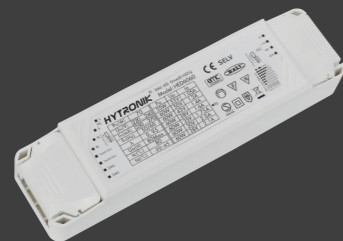
HED6020

- ※ Maximum 20W
- ※ Selectable output currents from 350 - 900mA
- ※ Size (L x W x H): 150 x 53 x 30mm



HED6045 HED6045L

- ※ Maximum 45W
- ※ Selectable output currents from 500 - 1400mA
(350 - 900mA for HED6045L)
- ※ Size (L x W x H): 140 x 79 x 23mm



HED6060 HED6060L

- ※ Maximum 60W
- ※ Selectable output currents from 1.05 - 2.1A
(350 - 900mA for HED6060L)
- ※ Size (L x W x H): 220 x 58 x 42mm

Constant Current

Highlights:

- ※ Standby power < 0.5W
- ※ Intelligent thermal management
- ※ Flick-free dimming
- ※ DALI, switch-DIM and 1-10V dimmable
- ※ In compliance with DALI 2 standard
- ※ Insulated terminals suitable for external mounting



HED4030-A

- ※ Maximum 30W
- ※ Constant voltage 12V
- ※ DALI, switch-DIM and 1-10V dimmable
- ※ Size (L x W x H): 150 x 53 x 30mm



HED6030-A

- ※ Maximum 30W
- ※ Constant voltage 24V
- ※ DALI, switch-DIM and 1-10V dimmable
- ※ Size (L x W x H): 150 x 53 x 30mm

Constant Voltage



HED2075-A

- ※ Maximum 75W
- ※ Constant voltage 12V
- ※ DALI, switch-DIM and 1-10V dimmable
- ※ Size (L x W x H): 220 x 58 x 42mm



HED3075-A

- ※ Maximum 75W
- ※ Constant voltage 24V
- ※ DALI, switch-DIM and 1-10V dimmable
- ※ Size (L x W x H): 220 x 58 x 42mm

Highlights:

- ※ Thermal, short-circuit and overload protection
- ※ Insulated terminals suitable for external mounting
- ※ Manual override
- ※ 0 - 100% dimming range
- ※ Permanent memory
- ※ Switch-DIM synchronisation



LED Drivers

DALI Economy Series

The economy range of DALI drivers are designed as a value-added choice for DALI systems which do not utilise any of the extended features of DALI, such as fault feedback. This range is perfectly suited for connection to DALI controls which operate using only broadcast commands, however they may also be addressed and grouped via a DALI Master if required.

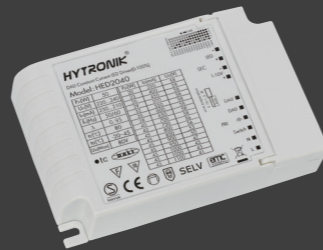
Technical Note:

We strongly recommend the use of fully isolated DALI Power Supply Units (including those integrated into DALI master units) such as the Hytronik HT-02. Comprehensive data sheets for each model are available on our website.



HED2020

- ※ Maximum 20W
- ※ Selectable output currents from 350 - 900mA
- ※ Selectable for constant voltage 12V, 24V
- ※ DALI and switch-DIM
- ※ Size (L x W x H): 150 x 52 x 28mm



HED2040

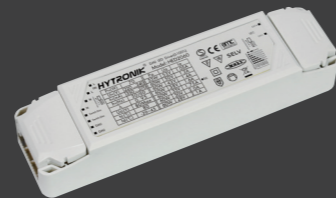
- ※ Maximum 40W
- ※ Selectable output currents from 350 - 1100mA
- ※ DALI, switch-DIM and 1-10V dimmable
- ※ Size (L x W x H): 123 x 79 x 30mm

Constant Current



HED2050

- ※ Maximum 50W
- ※ Selectable output currents from 700 - 1400mA
- ※ DALI, switch-DIM and 1-10V dimmable
- ※ Size (L x W x H): 123 x 79 x 30mm



HED2060

- ※ Maximum 60W
- ※ Selectable output currents from 1.05 - 2.1A
- ※ DALI and switch-DIM
- ※ Size (L x W x H): 220 x 58 x 42mm

Approvals and Warranty



Approvals

Hytronik products are designed to international safety and performance standards as applicable and are manufactured in our ISO9001 factory to our own stringent requirements.

It is our policy to seek 3rd party certification with a recognised international body on our standard product range so you can supply with confidence.



Warranty

All Hytronik products are supplied with a 5-year warranty against defect in design or manufacture. With today's multi-national sourcing strategies, we offer an unrivalled universal warranty with support available in regions where Hytronik has its own office or authorised representation, regardless of where the Hytronik product was purchased. Furthermore, we operate a 24-hour response policy to any claim.



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For regional sales and technical support, please see the back cover of this brochure...