DIGIDIM ROUTER SYSTEM FOR DALI / S-DIM / DMX

For larger applications Helvar routers provide an extension to increase the number of DALI subnets. Each router provides two powered DALI subnets supporting up to 128 DALI devices per router. Multiple routers can be networked together using standard Ethernet switches to accommodate for large network solutions. Ethernet provides a high speed system backbone through which the entire system can be monitored and controlled.

**SINGLE ROUTER**
- Supports up to 128 DALI devices
- Supports up to 252 S-DIM channels (920 only)
- Supports up to 512 non-consecutive channels DMX, in or out (920 only)
- Each load interface has 128 scenes
- Integrated 250mA DALI power supply for each DALI subnet
- 10/100Mbit/s Ethernet connection using internet protocol (TCP/IP)
- Supports OPC, allowing connection to BMS
- Supports Ethernet I/O communication
- Supports DALI Emergency devices

**NETWORKED ROUTERS**
- Up to 100 routers in a single cluster providing:
  - Up to 12,800 DALI devices
  - Up to 16,000 DALI groups
- Networks may be further enlarged up to several 100’s of routers, if set up through multiple clusters.

**SYSTEM BOUNDARIES**
- 10 mA per modular button panel
- 10 - 40 mA per sensor
- 2 mA per load interface
Modular Panels 1xx Modules / 2xx Frames

- Fully DALI compatible range
- Allow basic control of the system
- The range includes push button, rotary and slider controls in a range of panel finishes
- Indicator LED and infrared receiver
- Out of box operation
- Fits DIN and UK standard back boxes
- Double gang version can take up to 3 independent module types

Modular Panels 13xx Modules / 23xx Frames

- Fully DALI compatible range of user interfaces with modern styling
- Allow basic control of the system
- The range includes a wide variety of buttons arrangements
- The button panels are complemented by a range of panel finishes
- Indicator LED and infrared receiver
- Out of box operation
- Designed to fit both DIN and UK standard back boxes
- Double gang version can take up to 3 independent module types

Modular Panels

- Fully DALI compatible range of user interfaces with modern styling
- Allow basic control of the system
- The range includes a wide variety of buttons arrangements
- The button panels are complemented by a range of panel finishes
- Indicator LED and infrared receiver
- Out of box operation
- Designed to fit AUS standard back boxes
Control Panels (16xx)

16xx series is a range of DALI compatible button panels that allow control of the system. The buttons have LEDs indicating the selected scene. Each module is fitted with an infrared receiver that gives the option of remote operation using DIGIDIM hand held remote control.

- Range of switch combinations
- LED brightness programmable
- DIGIDIM / DALI

EnOcean Switches (18xx)

The 18xx wireless switch modules are an EnOcean-compatible range of user interfaces that allow control of the system. Designed to work with the Helvar EnOcean Gateway, each switch is fully programmable in Designer or Toolbox.

Key Features
- Choice of single or dual rocker, and black (B) or white (W) modules
- Self powered batteryless and wireless
- EnOcean RF technology
- Easy installation: double-sided mounting film (enclosed) or screwed onto flat surface

1-10V ballast controls (TK4)

- Offers EN 60929 (1-10V) ballast control together with a mains power switch
- Styled to compliment the Helvar DIGIDIM panel range
- Offers the same flexibility that the modular concept provides which allows any mix of TK4 and DIGIDIM control panels
- High power mains switch
- Easy to use slider control
- Switch on to last level

LCD Touch Panel (924x)

- A 3.5” touch sensitive 65,000 colour LCD screen
- Can be used for controlling and programming a Helvar lighting control systems
- Built-in astronomic real time clock
- Automatic scene changing (Sequences and cycles)
- Integral infrared receiver
- Customisable graphics and user language selection
- Available in 3 standard finishes
uSee USER INTERFACE
End-user lighting system control and energy monitoring interface

uSee is a web-based lighting system management interface that allows end-users to monitor their energy usage and adjust scene levels via any web accessing device be it a PC or tablet. uSee Interface puts the management of a lighting system in the hand of end-users, without any need for Designer programming software knowledge. The Interface’s contemporary and intuitive design allows end users to call up real-time energy usage reports a few easy steps.

uSee works by automatically scanning your lighting system’s Designer programme settings and interpreting them into plain English so that the people who use the system day to day can make adjustments to their scene setting levels and rename label fields to suite their need.

DESIGNER IC SOFTWARE

Helvar’s Designer software is an intuitive tool for engineers to design, commission and program Helvar router systems.

COLOUR
The latest generation of Designer is name iC – Intelligent Colour. Utilising the new DALI Type 8 protocol for LED drivers allows improved control. Colour-enabled devices are automatically recognised by the routers. Designer iC provides one-click selection of colour, temperature, or level.

A suite of user interfaces provide the ideal visualisation tools. The scene table and channel graph now include colour as well as level, along with the usual copy/paste and multi-select features.
DIGIDIM Router (905)

The DIGIDIM Router uses standard Ethernet communication (TCP/IP) to combine multiple DALI networks. The router features one DALI subnet allowing for a total of 64 DALI control devices and load interfaces.

Key Features
- One DALI subnet, with 250 mA power supply
- Ethernet port for network backbone
- Supports OPC, allowing connection to BMS
- Supports Ethernet I/O communication
- Supports DALI Emergency devices

DIGIDIM Router (910)

The DIGIDIM Router uses standard Ethernet communication (TCP/IP) to combine multiple DALI networks. The router features two DALI subnets allowing for a total of 128 DALI control devices and load interfaces.

Key Features
- Two DALI subnets, each with 250 mA power supply
- Ethernet port for network backbone
- Supports OPC, allowing connection to BMS
- Supports Ethernet I/O communication
- Supports DALI Emergency devices

Imagine Router (920)

The 920 Imagine Router uses an Ethernet connection (TCP/IP) as a network backbone to combine DIGIDIM / DALI, DMX and S-DIM networks seamlessly together. A PC can be connected to the system for control, monitoring and logging purposes.

Key Features
- Two DALI subnets with 250 mA power supply
- S-DIM port for Helvar Imagine systems
- DMX-port (in or out)
- Override port for S-DIM
- Supports OPC, allowing connection to BMS
- Supports Ethernet I/O communication
- Supports DALI Emergency devices
1000 W, Universal Dimmer (452)

Single-channel universal dimmer, suitable for leading or trailing-edge loads including mains-dimmable LED. The dimmer is a DIN-rail mounted unit that can control a maximum load of 1000 W. Out-of-box operation. No programming required when using DIGIDIM slider, rotary, or push button panels.

Key Features
- Status LED
- Switch for load selection
- Switch for manual DALI group selection
- Over current, power and temperature protection

500 W, Thyristor Dimmer (455)

Single-channel thyristor dimmer, suitable for leading edge loads and some mains-dimmable LED. The dimmer is a DIN-rail mounted unit that can control a maximum load of 500 W. Out-of-box operation. No programming required when using DIGIDIM slider, rotary, or push button panels.

Key Features
- Stabilised output
- Over current and over temperature protection
- Status LED
1-10 V / DSI Converter (472)

DALI to 1-10 V / DSI® converter. Switch a maximum of 15 electronic ballasts or LED drivers. The analogue 1-10 V / digital DSI signal can control up to 50 electronic ballasts.

Key Features
• Switch for manual DALI group selection
• 1-10 V & DSI® output for 50 ballasts / LED drivers
• Status LED

4-Channel Ballast Controller (474)

4-channel DALI to 0/1-10 V / DSI® / PWM converter, suitable for controlling electronic ballasts and LED drivers, fitted with high inrush relays rated at 16 A per channel, which handle short-lived high peak currents during switch on of loads. The outputs can be configured independent of, or paired with relay channels.

Key Features
• High inrush relays
• Wired override input to allow for external triggers
• LED segment display and push buttons
• Multiple output configurations of either:
  • 0 - 10 V source 10 mA
  • 1 - 10 V sink 100 mA
  • DALI-broadcast- / DSI®- / PWM source 100 mA
  • DALI / S-DIM / DMX control inputs

8-Subnet DALI Controller (478)

8-subnet DALI Controller, suitable for controlling ballasts/drivers when device addressing is not required. This reduces commissioning and maintenance cost, as failed devices can be simply replaced. The flexible control inputs support multiple protocols, by routing an input address/group to its corresponding subnet output.

Key Features
• Control using DALI Broadcast messages on each subnet
• Integral DALI Power Supply – supports up to 512 DALI devices (2 mA per driver/ballast)
• Lamp failure reporting per subnet (when supported by DALI devices)
• Lower commissioning costs - device addressing/grouping on subnet not required
• DALI / S-DIM / DMX control inputs

DSI® is a registered trademark of Tridonic
Helvar | Data is subject to change without notice. More information at: www.helvar.com
2 Channel Blinds Controller (490)

Two-channel blinds controller, designed for control of blinds and curtains. Two independent control channels each with two single pole, volt free contacts for switching up / down or power / direction motors. Programmable “blind travel time”.

Key Features
• “Break before Make” operation to prevent motor damage
• Isolated mains rated relays, normally open and volt-free
• Status LED

1 Channel Relay Unit (491)

Single channel relay unit for, integration in luminaires or electrical cabinets. Designed to allow control of switched loads.

Key Features
• Switches up to 3 Helvar ballasts or drivers

16 A 1-channel Relay Unit (492)

Single channel relay unit, designed to allow control of non-DALI, non-dimmable loads. The relay is a latching, volt-free contact, high inrush type, with a contact rating of 16 A. The unit forms a DALI relay node with a typical current consumption of 2 mA, and is programmable as a single channel relay by Helvar’s lighting design software, Designer and Toolbox.

Key Features
• High power switching capability [16 A]
• High inrush relay
• Compact size for luminaire, electrical panel or in-line mounting
• Secure strain relief
1-Channel Signal Relay Unit [493]

Single channel relay unit, designed to allow interfacing with other building control and management systems. The relay is a solid-state, normally open signal relay, with a contact rating of 60 VAC or VDC, at a maximum of 0.5 A. The unit forms a DALI relay node with a typical current consumption of 10 mA, and is programmable as a single channel relay by Helvar’s lighting design software, Designer and Toolbox.

Key Features
- Low power switching capability (0.1 mA to 0.5 A; 60 V)
- Solid state low-current relay
- Compact size for electrical panel or in-line mounting
- Secure strain relief

4 Channel Relay Unit [494]

Four channel DALI Relay Unit, designed to allow control of non-dimmable loads. The relay unit is a DIN-rail mounted unit that has four individually programmable relays. The relays are ‘normally open’, volt free and can switch up to 10 A resistive loads.

Key Features
- Isolated relays, normally open and volt free
- Manual override
- Status LED

8 Channel Relay Unit [498]

Eight-channel Relay Unit, fitted with individually programmable high-inrush relays to allow control of non-dimmable loads. The relay unit is DIN-rail mounted. The relays are ‘normally open’, volt-free relays rated at 16 A per channel. The relay unit has DALI, DMX, and S-DIM ports.

Key Features
- LED display and control buttons
- High-inrush relays
- Override input for external triggers
- DALI / S-DIM / DMX control inputs
4-channel Thyristor dimmer module (458/DIM4)

Four channel thyristor dimmer module, for leading-edge dimming of resistive and inductive loads. The module has 4 channels rated at 10A each, with a total current capacity of 40A. The module has DALI, DMX, and S-DIM interfaces for integration into DIGIDIM and Imagine systems. The optional 458/OPT4 module allows 4 dimmed channels to be converted to 4 ballast control channels.

Key Features
• Module plugs into any 458 mechanical chassis
• LCD display screen with navigation keys
• Built-in power supplies for the LCD TouchPanel & DIGIDIM
• Accepts options module 458/OPT4
• DALI / S-DIM / DMX control inputs

8-channel Thyristor dimmer module (458/DIM8)

Eight channel thyristor dimmer module, for leading-edge dimming of resistive and inductive loads. The module has 8 channels rated at 10 A each, with a total current capacity of 48 A. The module has DALI, DMX, and S-DIM interfaces for integration into DIGIDIM and Imagine systems. The optional 458/OPT4 module allows 4 dimmed channels to be converted to 4 ballast control channels.

Key Features
• Module plugs into any 458 mechanical chassis
• LCD display screen with navigation keys
• Built-in power supplies for the LCD TouchPanel & DIGIDIM
• Accepts options module 458/OPT4
• DALI / S-DIM / DMX control inputs

8-channel Universal dimmer module (458/UNI8)

Eight channel transistor dimmer module, for leading or trailing edge dimming of the majority of load types including Incandescent and dimmable LED’s. The module has 8 channels that can be individually selected as leading or trailing edge, rated at 6A each. The module has a DALI, S-DIM and DMX interface, for integration into DIGIDIM and Imagine systems.

Key Features
• Module plugs into any 458 mechanical chassis
• LCD display screen with navigation keys
• DALI / S-DIM / DMX
8-channel Ballast control module (458/CTR8)

Eight channel ballast control module, for control of common ballast loads. Capable of controlling 0-10 V (source), 1-10 V (sink), DSI®, DALI- broadcast and PWM loads. Also included are 8 high inrush relays, rated at 16 A per channel. The module has DALI, DMX, and S-DIM interfaces for integration into DIGIDIM and Imagine systems.

Key Features
• Module plugs into any 458 mechanical chassis
• LCD display screen with navigation keys
• DALI / S-DIM / DMX control inputs

8-channel Switching module (458/SW8)

Eight channel switching module. The module contains 8 high inrush relay channels (normally open), for switching 16 A per channel. The module has DALI, DMX, and S-DIM interfaces for integration into DIGIDIM and Imagine systems. The optional 458/OPT4 module provides a further 4 ballast control channels.

Key Features
• Module plugs into any 458 mechanical chassis
• LCD display screen with navigation keys
• DALI / S-DIM / DMX control inputs
• Accepts options module 458/OPT4

4-channel Option module (458/OPT4)

The options module is a 4-channel ballast control unit for use inside the dimmer module (458/DIM8 / 458DIM4) or switching module (458/SW8). It provides 4 channels of ballast control including 0-10 V, 1-10 V, DSI®, DALI-broadcast and PWM.

Key Features
• DIN-rail mounted inside the 458 mechanical chassis
• Simply plugs into module via a flat cable
• Powered from the Dimmer or Switching module
The DIGIDIM 458M1/4S10 is a single mechanical chassis which can house one DIGIDIM 458/DIM4 control module, to provide 4 channels of control. The DIGIDIM 458/DIM4 control modules can be ordered separately.

**Key Features**
- Vertical wall-mounted and installer-friendly
- By-pass connectors for operation without a module
- S-DIM cable loom for easy module connection included

**Single Mechanical Chassis (458M1/4S10)**

The DIGIDIM 458M1/ is a single mechanical chassis which can house any one DIGIDIM 458 control module, to provide 8 channels of control. The chassis is provided with an MCB per channel.

**Key Features**
- Vertical wall-mounted and installer-friendly
- By-pass connectors for operation without a module
- S-DIM cable loom for easy module connection included

**Single Mechanical Chassis (458M1/)**

The DIGIDIM 458M2/ is a double mechanical chassis which can house any two DIGIDIM 458 control modules, to provide up to 16 channels of control. The chassis is provided with an MCB per channel.

**Key Features**
- Vertical wall-mounted and installer-friendly
- By-pass connectors for operation without a module
- S-DIM cable loom for easy module connection included

**Double Mechanical Chassis (458M2/)**

The DIGIDIM 458M3/ is a triple mechanical chassis which can house any three DIGIDIM 458 control modules, to provide up to 24 channels of control. The chassis is provided with an MCB per channel.

**Key Features**
- Vertical wall-mounted and installer-friendly
- By-pass connectors for operation without a module
- S-DIM cable loom for easy module connection included

**Triple Mechanical Chassis (458M3/)**
The 434 EnOcean Gateway lets you connect wireless and battery-less EnOcean controls to a Helvar DALI lighting network. The 434 is for mounting on the ceiling or on walls, and requires only a single electrical connection to a DALI network.

**Key Features**
- Integrate wireless, battery-less switches into DALI network
- Simple installation
- Gateway is powered by the DALI network
- Up to 20 switches can be integrated via one gateway

---

**Helvar IP Driver**

Our NiagaraAX driver provides a clear advantage to our customers and freedom of choice for integration.

**Key Features**
- Integrates all DALI & EnOcean devices
- Control of 1280 devices per JACE
- Only 1 Ethernet port required
- Automatic Discovery - devices/points
- Widgets - easy creation of PX graphic for luminaires, button panels, PIR sensor and Emergency DALI Ballasts
- Component Creator – runtime

---

**AV-interface (503)**

- Permits the connection of a DIGIDIM system to the RS232 port on a personal computer / AVsystem
- DIN-rail mounted
- Status led
- 4 kV isolation between DALI and the RS232 port
- Terminal blocks for wiring

---

**USB to DALI Interface (510)**

USB to DALI interface connecting a PC, running Helvar Toolbox programming software, to a Helvar DIGIDIM DALI network. The 510 Interface unit is housed in a standard Helvar panel module.

**Key Features**
- Simple insertion into DIGIDIM modular panels
- Quick and simple PC-to-DALI connection
- Black and white fascias included
- Standard mini-B USB connector
- Powered from DALI network
**Switch Interface Unit (445)**

- Very compact interface for the conversion of 3rd party switches or button panels
- 4 LED driver outputs
- Connections to the unit are via screw terminals
- Compatible with a Helvar lighting control system
- Operation is configured with Helvar Toolbox or Designer software
- Powered from DALI network

**Mini-Input Unit (444)**

- Allows customer specified switches, sensors, time clocks or other on/off control devices to be incorporated into a Helvar lighting control system
- Manufactured in the form of a ribbon cable with encapsulated electronic module
- Suitable for installing behind a switch plate, in the back box
- Has 4 volt free contacts that may be momentary or latching
- Comprehensive programming options via Designer and Toolbox Software

**Input Unit (440)**

- DALI compatible interface
- DIN-rail mounted
- Allows customer specified switches, sensors, time clocks or other on/off control devices to be incorporated into a Helvar lighting control system
- Has 8 volt-free inputs which may be momentary or latching
- Inputs are volt free
- Comprehensive programming options via Toolbox Software

*Note: Not compatible with 905, 910 or 920 Routers.*
iDim

iDim - Easy intelligence in luminaires

The luminaire based iDim concept provides 6 out-of-box application modes that are easy to select just by rotating the Mode Selector on the iDim Sense. The modes are designed to fulfill the needs for easy-to-use, energy saving lighting control. The basic functions are pre-programmed and are fully adjustable to meet all requirements.

iDim Sense (316)

The iDim Sense is a luminaire based DALI sensor. It combines a movement detector (PIR), remote control receiver (IR) and photocell (CL) in one enclosure. The manual mode selector allows the user to easily select one of the 6 out-of-box application modes. The 316 is also able to act as an extension PIR sensor, connected to the DALI bus of the iDim Solo.

Key Features
- PIR, Constant Light and Infrared control
- Easy to select application modes
- Clip-on fascia in different colours
- Clip-on PIR Restrictor
- Mode selector with LED feedback

Note: Not compatible with DIGIDIM Toolbox and Helvar 905/910/920 Router systems

iDim Solo (403)

The iDim Solo is used as an interface module to connect the iDim Sense (316 Standalone) and iDim ballasts as well as user interfaces. Additionally, the iDim Solo can be used as a DALI power supply unit (PSU). The unit is housed in a standard ballast-style enclosure (30 mm width x 21 mm height) making it fast and easy to assemble.

Key Features
- Power capability: 64 mA (DALI 1), 32 mA (DALI 2) or 96 mA when operating in parallel
- 2 x DALI outputs
- 2 x Switch control inputs
- iDim Sense connection (RJ style, 4P4C)
- Mains connection

iDim Remote (304)

The Infra-red iDim remote control allows the user to control, modify and configure standalone lighting applications fitted with a 316 iDim Sense. This hand held unit is fitted with eleven buttons that control basic functions such as raising and lowering the general light level and selecting four pre-set scenes and off. Pressing certain button combinations together allow basic programming functionality. These include modifying pre-set levels and running test sequences.

Additional Features
- Mountable wall bracket / desk stand included
- Connects to PC for advanced lighting setup via USB cable
<table>
<thead>
<tr>
<th>DIGIDIM SYSTEM SENSORS</th>
<th>Functionality</th>
<th>Motion detection area</th>
<th>Constant light reception area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ceiling PIR Detector (311)</td>
<td>PIR</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Multisensor (312)</td>
<td>PIR</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Low Profile Microwave Detector (313)</td>
<td>Microwave</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Tilting Microwave Detector (314)</td>
<td>Microwave</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>iDim System Sensor (315)</td>
<td>PIR</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>High Bay PIR Presence / Absence Detector (317)</td>
<td>PIR</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Wall-Mounted PIR Presence / Absence Detector (318)</td>
<td>PIR</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>DALI External Light Sensor (329)</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

When mounted vertically: 85° from vertical; Horizontal plane: 360°
### Key features

- The PIR Sensor detects movement within the unit’s detection range allowing load control in response to changes in room occupancy
- Status LEDs
- Surface-mount box available
- Small physical appearance

- Programmable constant light
- Presence detection
- Control using the 303 Infrared Remote
- Switch-Control input
- Surface-mount box available
- DIGIDIM DALI

- Microwave sensor detects movement within the detection range allowing load control in response to changes in room occupancy
- Infra-red receiver for 303 handset
- Surface-mount box available
- Status LEDs

- Microwave sensor detects movement within the detection range allowing load control in response to changes in room occupancy
- Adjustable sensitivity
- Infra-red receiver for 303 handset
- Surface-mount box available
- Status LEDs

- Easy to select application modes
- Clip-on fascia in different colours
- Clip-on PIR Restrictor
- Mode selector with LED feedback
- Network compatible with DIGIDIM Toolbox and Helvar 905/910/920 Router systems

- Controls lighting loads based on presence / absence detection
- Clip-on masks to customise the detection area
- Simple connection and integration into a Helvar DALI control network
- Programmable in Designer™ and DIGIDIM Toolbox™
- Sensitivity can be adjusted
- Infra-red receiver for 303 handset
- Surface-mount box available

- Controls lighting loads based on presence/absence detection
- Manual Override/Dimming button built in
- For wall mounting using Helvar panel surrounds
- Available in black or white finish to match the Helvar button panel range
- Simple connection and integration into a Helvar DALI control network
- Programmable in Designer™ and DIGIDIM Toolbox™

- Open loop light control
- Light range of 1 - 100,000 LUX
- Simple mounting
- Easy connection to Helvar router system
# Luminaire Based Sensors (standalone)

<table>
<thead>
<tr>
<th>DIGIDIM SYSTEM SENSORS</th>
<th>Control Output</th>
<th>Functionality</th>
<th>Motion detection area</th>
<th>Constant light reception area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minisensor3</td>
<td>DALI * PIR</td>
<td></td>
<td><img src="image1" alt="Motion detection area" /></td>
<td><img src="image2" alt="Constant light reception area" /></td>
</tr>
<tr>
<td>iDim Sense 316</td>
<td>DALI * PIR</td>
<td></td>
<td><img src="image3" alt="Motion detection area" /></td>
<td><img src="image4" alt="Constant light reception area" /></td>
</tr>
<tr>
<td>µDim SL-MW-DA</td>
<td>DALI * Microwave</td>
<td></td>
<td><img src="image5" alt="Motion detection area" /></td>
<td><img src="image6" alt="Constant light reception area" /></td>
</tr>
<tr>
<td>µDim SL-MW-AN</td>
<td>1 - 10 V Microwave</td>
<td></td>
<td><img src="image7" alt="Motion detection area" /></td>
<td><img src="image8" alt="Constant light reception area" /></td>
</tr>
<tr>
<td>µDim SL-MW-SW</td>
<td>Switching Microwave</td>
<td></td>
<td><img src="image9" alt="Motion detection area" /></td>
<td><img src="image10" alt="Constant light reception area" /></td>
</tr>
<tr>
<td>µDim SS-PIR-AN</td>
<td>1 - 10 V PIR</td>
<td></td>
<td><img src="image11" alt="Motion detection area" /></td>
<td><img src="image12" alt="Constant light reception area" /></td>
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<tr>
<td>µDim SS-PIR-SW</td>
<td>Switching PIR</td>
<td></td>
<td><img src="image13" alt="Motion detection area" /></td>
<td><img src="image14" alt="Constant light reception area" /></td>
</tr>
<tr>
<td>MIMO3</td>
<td>1 - 10 V -</td>
<td></td>
<td><img src="image15" alt="Motion detection area" /></td>
<td><img src="image16" alt="Constant light reception area" /></td>
</tr>
</tbody>
</table>
Linear LED Modules

With its linear mechanics, easy to use connections and best colour consistency, the Linear modules are the perfect solution for creating linear shaped LED luminaires.

Module Benefits
• Accurate LED binning for colour consistency and high uniformity
• Modular and Zhaga compliant allowing flexible and future proof designs
• Helvar LED driver offering (CC and DALI) for smooth dimming and compatibility
• Helvar complementary Lighting Controls for maximum energy efficiency

Multiplex LED Modules

The high-efficacy Multiplex LED modules provide a cost effective solution whilst delivering a uniform light output, offering a competitive solution for creating square shaped LED luminaires (like 600 x 600 ceiling panels).

Module Benefits
• Easy to design-in for flexibility in luminaire design
• Value-add optical technology (LAM-type) enabling slimmer luminaire designs
• Good thermal performance providing greater durability and long lifetime
• Choice of square and rectangular design for flexibility in design

Chip on Board LED Modules

The range of Chip on Board modules (COB) are the ideal components for creating circular spot lights and down lights fittings. Its range of luminous flux and colour temperature give design flexibility and choice to the luminaire manufacturer.

Module Benefits
• 3-Step MacAdam binning for colour consistency
• High luminous efficacy for maximum energy efficiency
• Range of power versions and colour temperatures from 2700K to 6500K CCT for design freedom
• CRI > 80 for superior light quality
• Compatible Helvar LED drivers (CC and DALI) for peace of mind
1x20 W **Dimmable DALI** LED driver, **LL1x20-E-DA**
- Selectable constant current output: 350 / 500 / 700 mA
- Maximum 20 W load
- DALI control input, 1 % - 100 % dimming range
- Protected up to 4 kV power network fast transients
- High efficiency, 0.88
- iDim compatible

1x30 W **Dimmable DALI** LED driver, **LC1x30-E-DA**
- Selectable constant current output: 350 / 500 / 700 mA
- Maximum 30 W load
- DALI control input, 1 % - 100 % dimming range
- Low stand-by power 0.3 W
- Protected up to 4 kV power network fast transients
- High efficiency, 0.86
- Optional click-on strain relief for independent use
- External NTC thermal input
- iDim compatible

1x40 W **Dimmable DALI** LED driver, **LL1x40-E-DA-350-700**
- Adjustable constant current output: 350 mA (default) - 700 mA
- DALI control input 1 % - 100 % dimming range
- Low stand-by power 0.3 W
- Protected up to 4 kV power network fast transients
- High efficiency, 0.89
- Overload, open & short circuit protection
- Suitable for Class I, II or SELV luminaire
- External NTC thermal input
- Current setting resistor input
- Optional click-on strain relief for independent use (LL1x40-SR)

1x40 W **Dimmable DALI** LED driver, **LL1x40-E-DA-700-1050**
- Adjustable constant current output: 700 mA (default) - 1050 mA
- DALI control input 1 % - 100 % dimming range
- Low stand-by power 0.3 W
- Protected up to 4 kV power network fast transients
- High efficiency, 0.89
- Overload, open & short circuit protection
- Suitable for Class I, II or SELV luminaire
- External NTC thermal input
- Current setting resistor input
- Optional strain relief for independent use (LL1x40-SR)

1x70 W **Dimmable DALI** LED driver, **LC1x70-E-DA**
- Adjustable constant current output: 700 mA (default) - 1400 mA
- DALI control input 1 % - 100 % dimming range
- Low stand-by power <0.5 W
- Protected up to 4 kV power network fast transients
- Overload, open & short circuit protection
- Suitable for Class I, II or SELV luminaire
- External NTC thermal input
- Auxiliary 12 V output for active cooling [not for independent use]
- Current setting resistor input
- Optional strain relief for independent use (LC1x70-SR)
1x42 W **Dimmable DALI** LED driver, LL1x10-42-E-DA *

- Dali control input 1 %-100 % dimming range
- Open & short circuit protection
- Adjustable constant current output: 120 (default) to 350 mA
- Maximum 42 W load
- Low stand-by power 0.4 W
- High efficiency 0.92
- Suitable for Class I luminaires

*Preliminary information. For availability please check with your sales representative.

1x23-80 W **Dimmable DALI** LED driver, LL1x23-80-E-DA*

- Dali control input 1 %-100 % dimming range
- Open & short circuit protection
- Adjustable constant current output: 150 (default) to 350 mA
- Maximum 80 W load
- Low stand-by power 0.4 W
- High efficiency 0.93
- Suitable for Class I luminaires

*Preliminary information. For availability please check with your sales representative.

2x35 W **Dimmable DALI** LED driver, LL2x35-E-DA

- Adjustable constant current output: 350 mA (default) - 700 mA
- Two independent SELV rated output channels
- DALI control input 1 % - 100 % dimming range
- Low standby power, < 0.5 W
- Protected up to 4kV power network fast transients
- High efficiency, 0.90
- Overload, open & short circuit protection
- Suitable for Class I or II luminaire
- External NTC thermal input
- Current setting resistor input
- Also available LL2x35-E-DA-iC version for DALI colour control

1x70 W **Dimmable DALI** LED driver, LL1x70-E-DA

- Adjustable constant current output: 350 mA (default) - 700 mA
- Dali control input 1 %-100 % dimming range
- Low standby power 0.4 W
- Protected up to 4 kV power network fast transients
- Overload, short & open circuit protection
- Accept DC mains in case of central emergency battery
- High efficiency, > 0.91
- Suitable for class I luminaires
- Current setting resistor input

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