

454 Transistor Dimmer

The DIN-rail mounted 454 is a four-channel transistor dimmer. It can operate in one of two modes: leading edge or trailing edge. All four channels operate in the same selected mode, with each channel capable of controlling 2.2 A.

It supports capacitive and resistive loads, and it can be connected directly to mains-voltage lamps and to lowvoltage lamps with electronic transformers. The 454 is not for use with inductive loads.

Each channel of the dimmer has both current and thermal protection.

The dimmer features an LED segment display. There is a push button user interface for monitoring, manual configuration and control purposes.



Key Features

- Trailing-edge or leading-edge dimming
- LED segment and push buttons for manual configuration, including the following output types: linear, square, S-law, DALI logarithmic, LED curve, and DALI linear.
- Capable of handling resistive and capacitive loads
- Manual wired override input
- Voltage and frequency compensation
- Overcurrent and temperature protection included
- Power-on to last level or to user-defined level

Additional Features

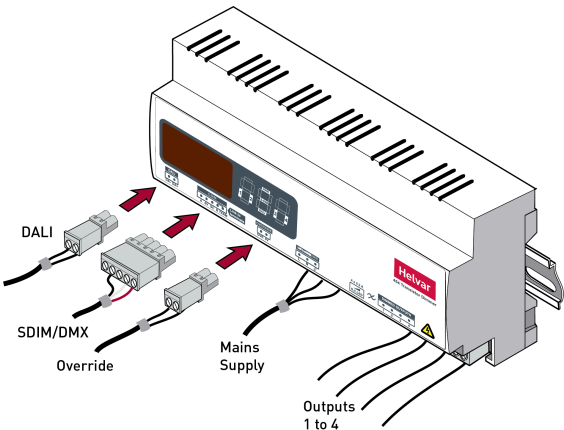
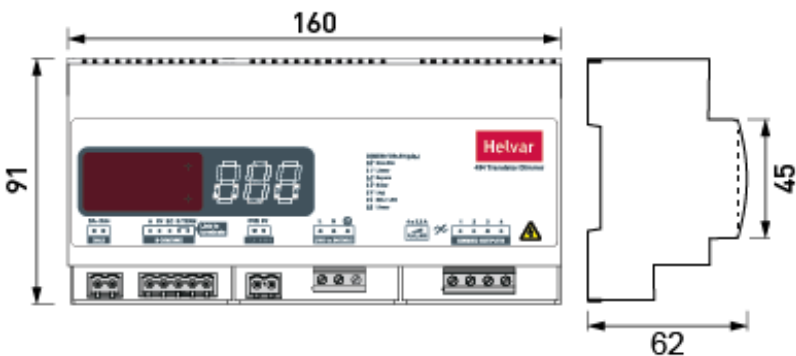
The following features may be accessed using Helvar’s Toolbox or Designer software:

- Max./Min. levels, fade times, scenes and groups
- System failure level/ignore

Output	Output type	Additional Information
t 0	Non-Dim	Switched on and off only
t 1	Linear	Optimised for incandescent
t 2	Square	Optimised for incandescent
t 3	S-law	Optimised for incandescent
t 4	DALI logarithmic	IEC 62386-205
t 5*	LED curve	Optimised for LED
t 6	DALI linear	IEC 62386-205

* t5 is the default output type.

Dimensions (mm) and Connections



Technical Data

Connections	
Mains:	Solid core: up to 4 mm ² Stranded: 2.5 mm ²
DALI:	0.5 mm ² – 1.5 mm ² , max. 300 m @ 1.5 mm ²
SDIM/DMX:	0.22 mm ² – 1.5 mm ² low-loss RS485 type (multistranded, twisted and shielded)

Electrical data	
Mains supply:	100 VAC – 240 VAC (nominal) 85 VAC – 264 VAC (absolute) 45 Hz – 65 Hz DNV-CG-0339 applications: 230 VAC / 50 Hz
Power consumption:	2.3 W (excluding loads)
Load current:	2.2 A per channel
Heat dissipation:	11 W with maximum load (resistive)
DALI consumption:	2 mA
External protection:	10 A Type C MCB maximum The external supply must be protected.

Inputs	
Communication:	DALI, SDIM and DMX
Override:	Switched input
User interface:	2 push buttons for configuration

Operating and storage conditions	
Ambient temperature:	0 °C to +40 °C
Relative humidity:	Max. 90 %, noncondensing
Storage temperature:	-10 °C to +70 °C

Mechanical data	
Dimensions:	160 mm × 91 mm × 62 mm
Weight:	250 g
Housing:	DIN-rail case; 9 module width
Material:	Polycarbonate/ABS mix, UL94 V-0
Mounting:	DIN rail (installation in switchgear/controlgear cabinet)
IP rating:	IP30 (IP 00 at terminals)

Conormity and standards	
Conformity:	
DALI:	DALI standard IEC 62386, with Helvar additions
SDIM:	Helvar SDIM protocol
DMX:	DMX512-A protocol (max. refresh rate: 33 Hz)
EMC emission:	EN 55015
Safety:	EN 61347-2-11
Environment:	Complies with WEEE and RoHS directives.

Software compatibility	
Designer:	4.1 or later
Toolbox:	2.3.6 or later

4-Channel Ballast Controller

The DIGIDIM 474 is a 4-channel ballast controller fitted with high-inrush relays rated at 16 A per channel. These relays handle short-lived high peak currents during switch-on of loads

The outputs can be configured to match common ballast control loads including 0/1–10 V, DSI® and DALI broadcast. They can be set to be independent of, or paired with, relay channels. The 474 ballast controller can operate with a Helvar DIGIDIM or Imagine lighting control system. It is a DIN rail mounted device for ease of installation.

The 474 ballast controller has an intuitive LED segment display and push buttons for monitoring, manual configuration and control purposes.



Key Features

- High inrush specification relays.
- Wired override input.
- LED segment display and push buttons.
- Multiple output configurations of:

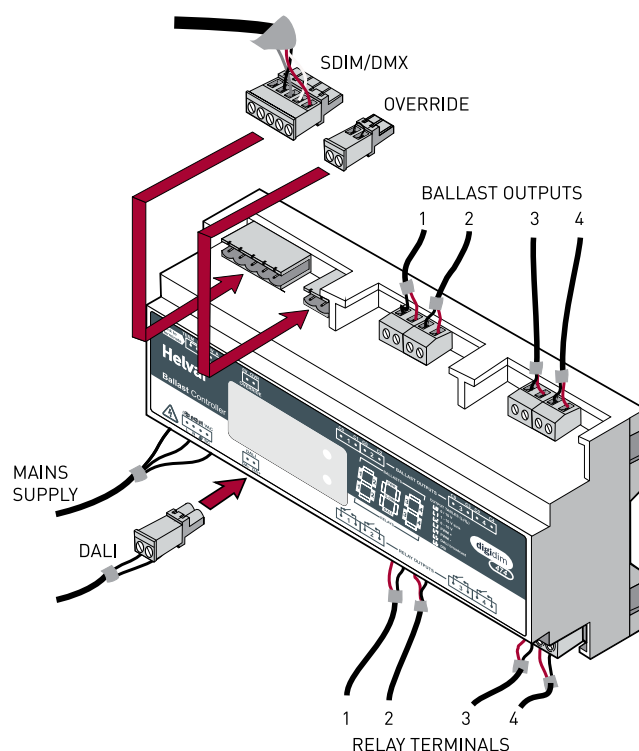
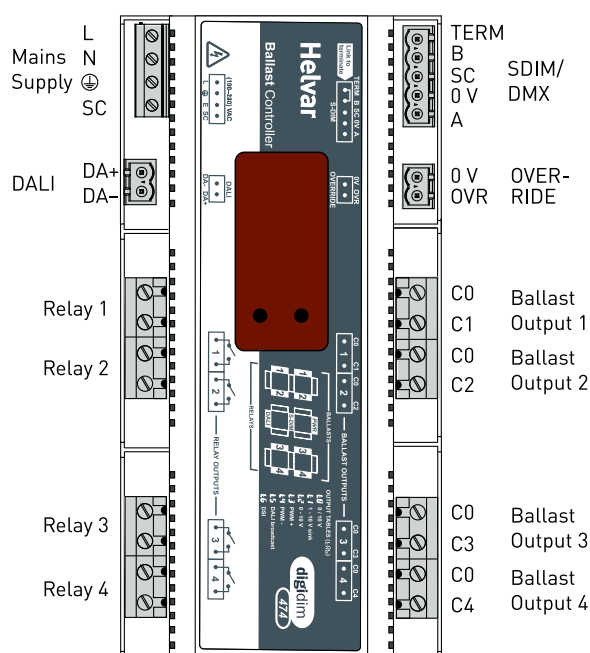
0 – 10 V: source 10 mA

1–10 V: sink 100 mA

DALI broadcast: source 100 mA

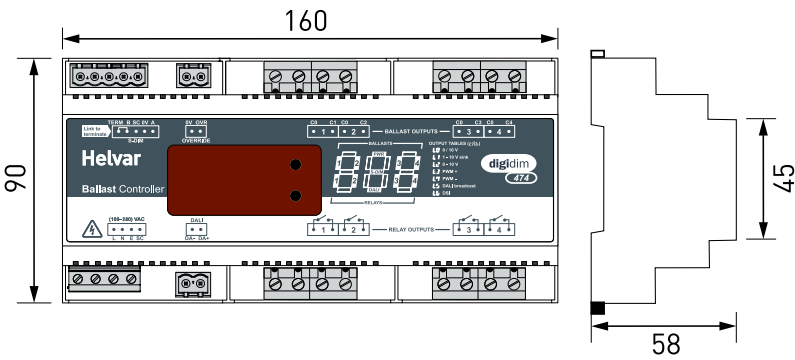
DSI®: source 100 mA

Connections



DSI® is a registered trademark of Tridonic GmbH.

Dimensions (mm)



Technical Data

Connections	
Mains/relay/output:	Solid core: up to 4 mm ² Stranded: 2.5 mm ²
DALI:	0.5 mm ² – 1.5 mm ² Max. length: 300 m @ 1.5 mm ²
SDIM/DMX:	0.22 mm ² – 1.5 mm ² low-loss RS485 type (multistranded, twisted and shielded). Max. length: 1000 m (low-loss cable). Examples: Belden 8102 or Alpha 6222C.
 Note: One twisted pair for A and B (85 Ω to 100 Ω impedance), one core or twisted pair for 0 V, and shield for screen.	
Relays	
Channels:	4
Relay contacts:	High inrush (800 A at 200 μs), single pole normally open (SPNO)
Max. load per contact:	16 A resistive/incandescent; 10 A HID (cos φ = 0.6). For ballasts, quantity is limited by MCB: refer to the manufacturer's data.
Operating and storage conditions	
Ambient temperature:	0 °C to +40 °C
Relative humidity:	Max. 90 %, noncondensing
Storage temperature:	–10 °C to +70 °C
Electrical data	
Mains supply:	100 VAC – 240 VAC (nominal) 85 VAC – 264 VAC (absolute) 45 Hz – 65 Hz
Power consumption:	2.4 W (minimum) to 11 W (all outputs fully loaded)
External protection:	The mains supply must be protected at 6 A maximum. The relays must be protected by a 16 A Type C MCB maximum.
DALI consumption:	2 mA
Mechanical data	
Dimensions:	160 mm × 90 mm × 58 mm
Housing:	DIN-rail case; 9U
Weight:	280 g
Mounting:	DIN rail (installation in switchgear/controlgear cabinet)
IP code:	IP30 (IP00 at terminals)
Inputs	
Communication:	DALI, SDIM and DMX
Override:	Wired override input
User interface:	2 push buttons for configuration
Outputs	
0–10 V:	Source 10 mA
1–10 V:	Sink 100 mA
DALI/DSI®:	[50 ballasts] Source 100 mA
Conformity and standards	
Conformity:	 
EMC emission:	EN 55015
EMC immunity:	EN 61547
Safety:	EN 61347-2-11
DALI:	According to DALI standard IEC 62386, with Helvar additions
SDIM:	According to Helvar SDIM protocol
DMX:	DMX512-A protocol (max. refresh rate: 33 Hz)
Isolation:	All connectors are isolated from each other, except for SDIM/ DMX to Override, and ballast output 1–2 to ballast output 3–4.
Environment:	Complies with WEEE and RoHS directives.

498 8-Channel Relay Unit

The 498 8-Channel Relay Unit is fitted with high-inrush specification relays, rated at 16 A per channel, which handle short-lived, high-peak inrush currents during switch-on of loads.

It can be networked through either DALI or SDIM communication to be incorporated into a a or Imagine lighting control system.

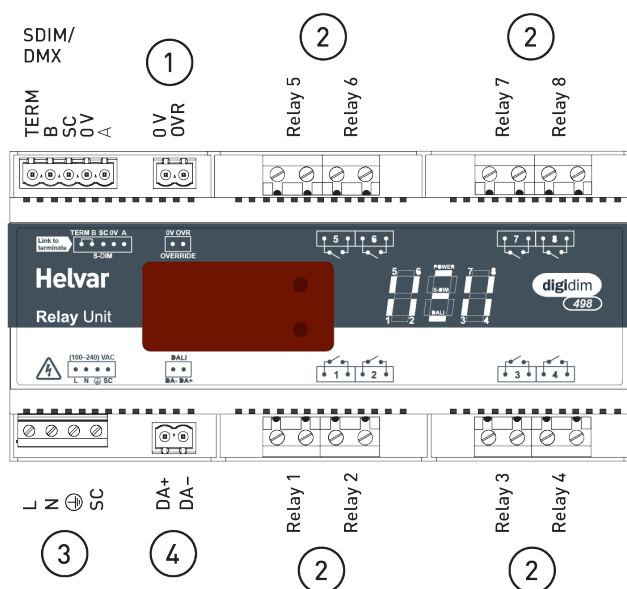
The unit has an intuitive LED segment display and push buttons for monitoring, manual configuration and control purposes.

Key Features

- High-inrush specification relays (single pole, normally open).
- Wired override input to allow for external triggers.
- LED segment display and push buttons.
- Can operate as:
 - 8 individual channels (8 × 1)
 - 4 sets of 2 channels (4 × 2)
 - 2 sets of 4 channels (2 × 4)

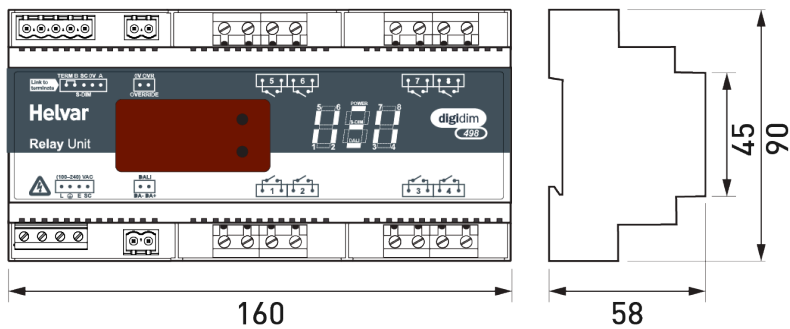


Connections



1. Override
2. Relays
3. Mains supply
4. DALI

Dimensions (mm)



Technical Data

Connections	
Mains/relay:	Up to 4 mm² solid or up to 2.5 mm² stranded
DALI:	0.5 mm² – 1.5 mm² solid or stranded. Max. length: 300 m @ 1.5 mm²
SDIM/DMX:	0.22 mm² – 1.5 mm² low-loss RS485 type (multistranded, twisted and shielded). Max. length: 1000 m (lowloss cable). Examples: Belden 8102 or Alpha 6222C.  Note: One twisted pair for A and B (85 Ω to 100 Ω impedance), one core or twisted pair for 0 V, and shield for screen.
Cable rating:	Mains cables, relay cables and DALI cables must be mains rated.

Electrical data	
Mains supply:	100 VAC – 240 VAC (nominal) 85 VAC – 264 VAC (absolute) 45 Hz – 65 Hz
Power consumption:	2.6 W
Standby power consumption:	1.1 W
Internal losses:	2.1 W + max. 1.6 W per channel
External protection:	The mains supply must be protected at 6 A maximum. The relays must be protected by a 16 A Type C MCB maximum.
DALI consumption:	2 mA
Compliance:	Complies with DSI standard v 2.0.
Isolation:	Between every connector, with this exception: 'SDIM 0 V' and 'OVR 0 V' are not isolated from each other.

Operating and storage conditions	
Ambient temperature:	0 °C to +40 °C
Relative humidity:	Max. 90 %, non-condensing
Storage temperature:	-10 °C to +70 °C

Inputs	
Communication:	DALI, SDIM and DMX
Override:	Wired override input
User interface:	2 push buttons for configuration
Channels:	8 (2 channels per four-way connector)
Relay contacts:	High inrush (800 A at 200 µs), singlepole, single-throw (SPST) relay. W premake contact + AgSnO₂. Optimised for high currents.
Relay voltage:	240 VAC (400 VAC between channels)
Max. load per contact:	16 A resistive/incandescent 10 A HID (cos γ = 0.6)
Number of devices:	For ballasts, quantity is limited by MCB; refer to manufacturer's data. These are power relays and therefore not suitable for extra-low voltage operation. Where power relays are used to control contactors, make sure that snubbers are fitted.

Mechanical data	
Dimensions:	160 mm × 90 mm × 58 mm
Weight:	400 g
Housing:	Plastic (polycarbonate) DIN-rail case
Mounting:	DIN rail (installation in switchgear/ control-gear cabinet)
IP rating:	IP30 (IP00 at terminals)

Conformity and standards	
Conformity:	 
EMC emission:	EN 55015
EMC immunity:	EN 61547
Safety:	EN 61347-2-11
DALI:	IEC 60929, with Helvar extensions
SDIM:	Helvar protocol (RS485, 115 kbps)
DMX:	DMX512-A protocol (max. refresh rate: 33 Hz)
Environment:	Complies with WEEE and RoHS directives.

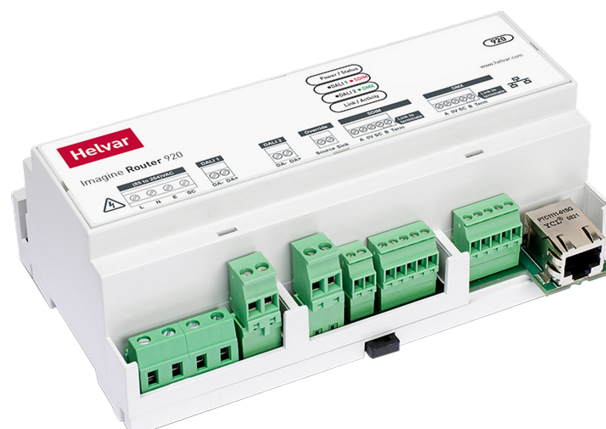
920 Router

The 920 Router uses an Ethernet connection (10/100 Mb/s) as a network backbone to seamlessly combine DIGIDIM/DALI, SDIM and DMX networks.

Basic functionality is available out of the box without any programming. Helvar's Designer software allows for advanced configuration and functional programming of the router.

The system provides energy-saving features via presence detection and daylight harvesting. Further automation can be achieved through scheduled events.

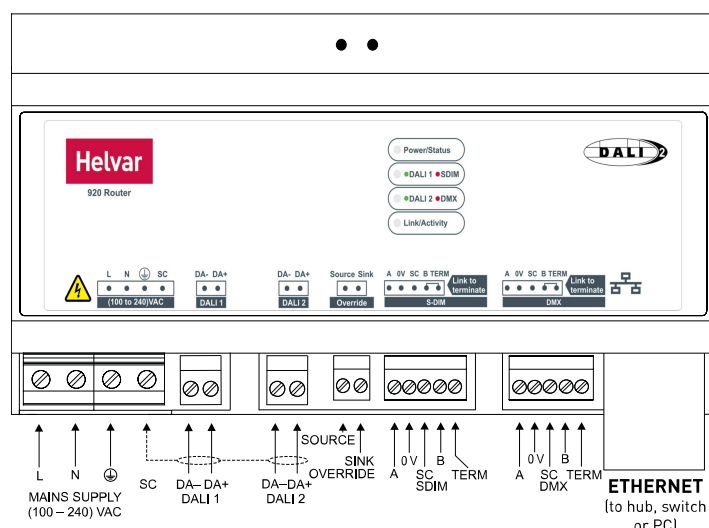
A PC can be connected to the system for diagnostics and logging purposes if required, but there is no need for PC control in daily operation, as all data is stored within the system itself. The elimination of a central controller ensures that no single point of failure can cause a total system shutdown.



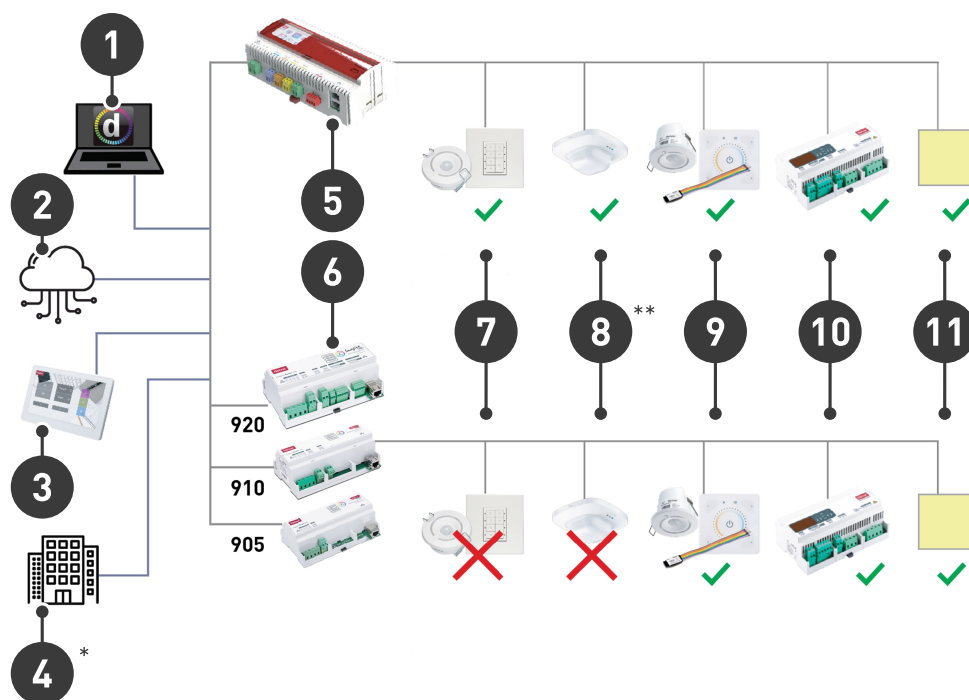
Key Features

- Support for 128 DALI devices (64 DALI devices on each subnet)
- Certified DALI-2 Single Master - DALI-2 Lighting (Control Gear), not DALI-2 controls (Control Devices)
- Built-in real-time clock
- Can be networked together to form large scalable systems
- Provides local as well as central control if required
- Compatible with other Helvar Application Controllers
- Integration with other building systems
- Universal supply input

Inputs and Outputs



Example Solution Diagram



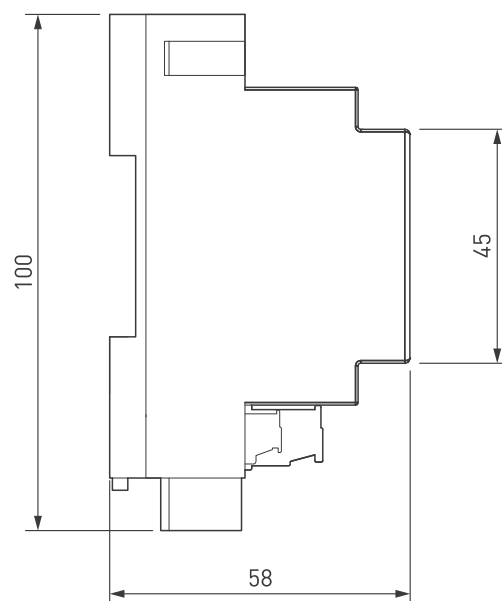
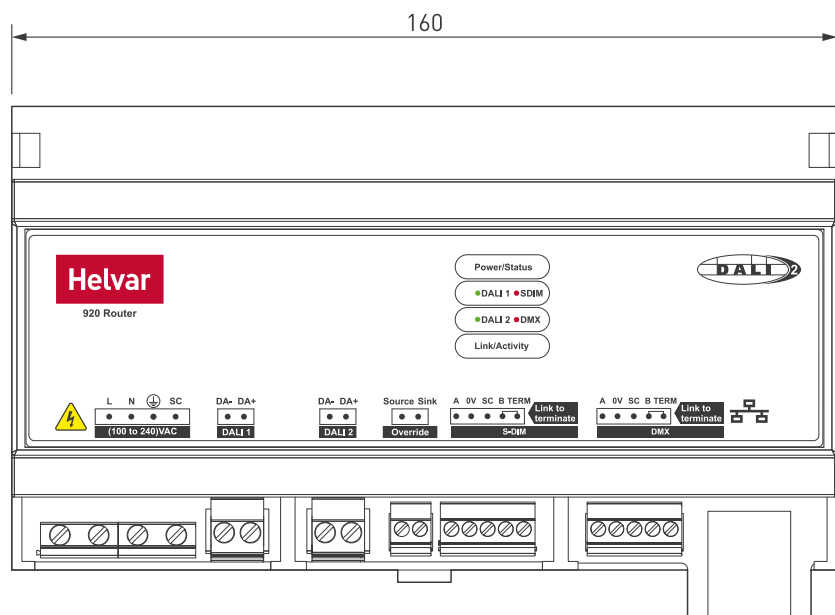
1. Programming Software
2. Helvar Insights
3. Touch Panels, Apps AV Integration
4. Building Integration*
5. 950 Application Controller
6. Other Routers
7. Helvar DALI-2 (D2) Controls
8. Other DALI-2 Controls**
9. DigiDim Controls
10. Load Controllers
11. DALI/DALI-2 Lighting

* = Gateways required

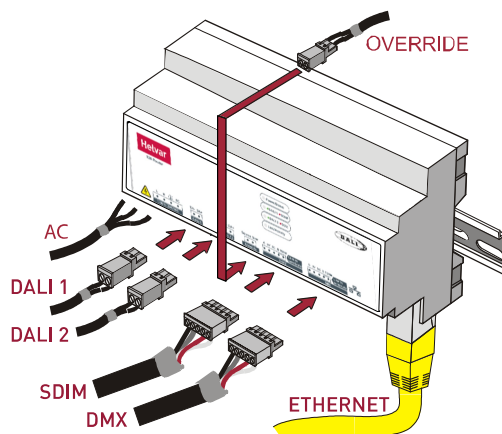
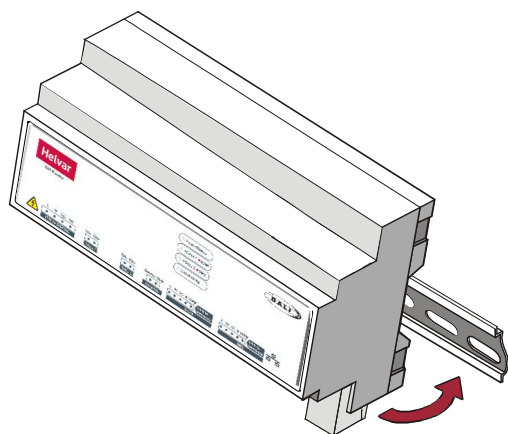
** = Product dependent, ask local Helvar representative

Compatibility: DALI and DALI-2 Lighting (Control Gear), DigiDim Controls, NOT DALI-2 (D2) controls (Control Devices)

Dimensions (mm)



Installation



Technical Data

Connections

Mains:	Solid up to 4 mm ² Stranded up to 2.5 mm ²
DALI:	0.5–2.5 mm ² , Max. length: 300 m @ 1.5 mm ²
Override (OVR):	Source: 3 V, 50 mA Sink: max. 28 V, 50 mA
SDIM/DMX:	Low-loss RS485 Type (multi-stranded, twisted and shielded), 3 or 4 cores + screen 0.22–1.5 mm ² , Max. length: 1 km
Ethernet:	1 × RJ45 10/100 Mb/s, Cat 5E up to 100 m (Auto MDI/MDI-X crossover)

Electrical data

Mains supply:	100–240 VAC, 50/60 Hz
Power consumption:	23 VA (DALI subnet fully loaded)
Power circuit protection:	External protection max. 6 A. Earth mandatory.

DALI output supply

DALI-OUT current:	2 × 240 mA (guaranteed) 2 × 250 mA (maximum)
-------------------	---

Operating and storage conditions

Ambient temperature:	0 °C to +40 °C
Relative humidity:	Max. 90 %, noncondensing
Storage temperature:	-10 °C to +70 °C

Mechanical data

Dimensions:	160 × 100 × 58 mm (9U)
Weight:	260 g
Mounting:	DIN Rail. Keep mains and DALI wiring separate from Ethernet cable.
IP code:	IP30 (IP00 at connectors)

Conformity and standards

Conformity:	 
DALI:	DALI-2 Application Controller (Single Master) parts 101, 103
EMC emission:	EN 55032 Class A
EMC immunity:	EN 55035
Safety:	EN 61347-2-11
Environment:	Complies with WEEE, RoHS and REACH directives.

950 Application Controller

The 950 is a certified DALI-2 Multi Master Application Controller capable of controlling DALI-2 Lighting (Control Gear), DALI-2 Controls (Control Devices) as well as Helvar's unique range of loads and controls which also connect to the DALI-2 network.

Control and power up to four DALI-2 networks with the 950 Application Controller. Scale up to large and complex projects by networking multiple Imagine Application Controllers together using standard TCP/IP Ethernet connection.

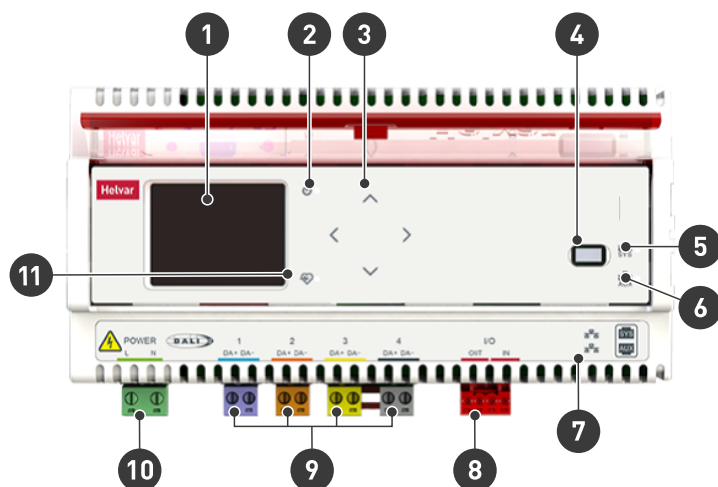
Programming can be carried out using Helvar's Designer software. All programming data is stored within the system itself eliminating a central point of failure and the need to always program with the latest saved configuration file.



Key Features

- DALI-2 Certified Multi-master application controller
- Support for 512 DALI devices (128 per subnet consisting of 64 lighting and Helvar DigiDim services + 63 DALI-2 Controls (Control Devices). Address 128 reserved for Application Controller)
- Built in display for DALI network testing and alerts
- Built-in real-time clock
- Can be networked together to form large scalable systems
- Compatible with other Helvar Application Controllers (905, 910, 920 and 945)
- Integration with other building systems
- LightOverTime Circadian Rhythm Control
- No central database required for system operation
- Hybrid connectivity to ActiveAhead wireless system via Node Link 5611

Connections



1. Display
2. Power On Indicator
3. Navigation buttons
4. Do not use. USB-C for developer purposes only
5. SYS Indicator
6. AUX Indicator
7. SYS and AUX and Ethernet connectors
SYS for lighting system network AUX for developer purposes only
8. I/O Port (currently not in use)
9. DALI Connectors
10. Mains connections
11. System Heartbeat

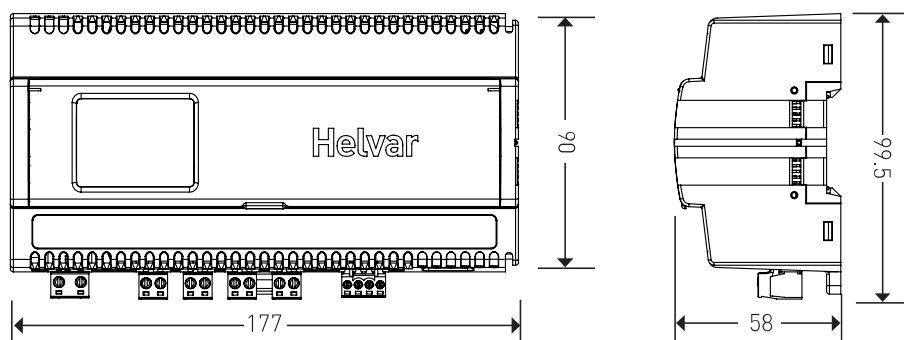
Note: The 950 Application Controller has been designed not to require an earth connection.

Note: Where DALI cable has screen, terminate to cabinet earth.

Network limits and design recommendations

	Absolute limits (DALI / DALI2)	Recommended (DALI / DALI2)
Power:	240 mA guaranteed, 250 mA max	220 mA max
Cable length:	300 m	250 m max
Cable type:	Mains rated	1.5 mm ² , mains rated
Addresses:	64 Lighting (Control gear) and DigiDim 63 DALI-2 controls (Control devices)	55 max control gear and Digidim devices, Keep under 220 mA DALI-2 and/or Digidim control devices: 15 max; Keep under 220 mA
Product compatibility:	Use recommended DALI-2 controls and application controllers only. Recommended max 1 DALI repeater per subnet.	

Dimensions (mm)



Technical Data

Connections

Mains:	Solid up to 2.5 mm ² Stranded up to 2.5 mm ²
DALI:	0.5–2.5 mm ² , Max. length: 300 m @ 1.5 mm ²
Ethernet:	2 × RJ45 10/100 Mb/s, CAT 5E up to 100 m (Auto MDI/MDI-X crossover) Sys for Lighting System Network Aux for developer purposes only

Electrical data

Mains supply:	230 VAC, 50/60 Hz 110 VAC, 50/60 Hz
Power consumption:	24 W (All DALI subnets fully loaded)
Heat dissipation:	12 W
Fusing:	Max. 16 A miniature circuit breaker

DALI output supply

DALI-OUT current:	4 × 240 mA (guaranteed) 4 × 250 mA (maximum)
-------------------	---

Variants

950:	230 V version
950-110V:	110 V version

Operating and storage conditions

Ambient temperature:	0 °C to +40 °C
Relative humidity:	Max. 90 %, noncondensing
Storage temperature:	–10 °C to +70 °C
Real Time Clock backup:	36 hrs in nominal environmental conditions

Mechanical data

Dimensions:	177 × 99.5 × 58 mm (10U)
Weight:	460 g
Mounting:	DIN Rail
Colour, body / lid:	White (RAL 9003) / Translucent red (RAL 3027)
Enclosure:	Polycarbonate
IP rating:	IP20 (IP00 at connectors)
Display:	Colour display 320 x 240 px

Conformity and standards

Conformity:	 
DALI:	DALI-2 Application controller (Multi Master) IEC 62386 Parts 101 and 103
EMC emission:	EN 55015, EN 61000-6-3
EMC immunity:	EN 55035, EN 61547
Safety:	EN 61347
Environment:	Complies with WEEE, RoHS and REACH directives.

Note: See DALI Alliance Website for full detail of supported parts <https://www.dali-alliance.org/products>.

Compatibility

Designer:	5.7.0 or later
-----------	----------------

Note: To ensure complete DALI-2 compatibility, use only with Helvar recommended DALI-2 controls (Control Devices).

5609 ActiveAhead Node Advanced

ActiveAhead Node Advanced is a member of the truly intelligent wireless lighting control solution Helvar ActiveAhead®. It connects standard DALI devices to the ActiveAhead Bluetooth® mesh network. It offers addressed local DALI control line which allows individually set light output levels for the connected DALI luminaires.

The connected ActiveAhead nodes share information, such as movement detections, through the mesh network, and a mobile app allows you to adjust the parameters of the system.

The ActiveAhead Node Advanced is very easy to install even with thick mains cables and is equipped with integrated spacious strain reliefs. Each Node Advanced has a DALI output with dual parallel connectors.



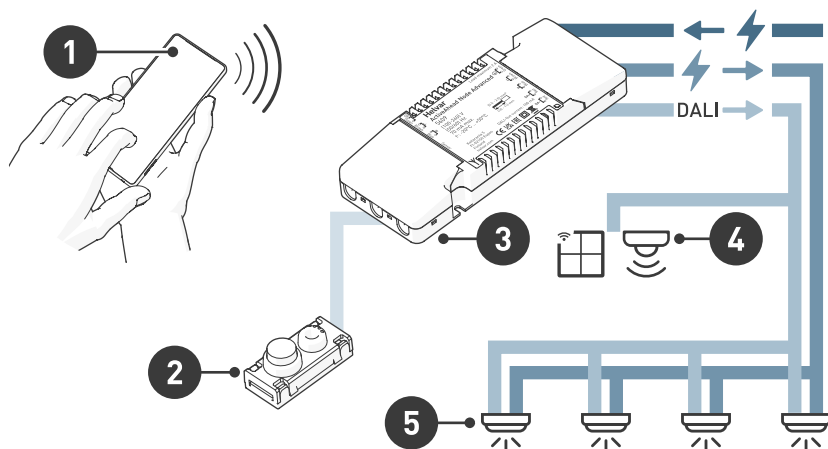
Both ActiveAhead sensors as well Helvar DALI-2 system sensors can be connected to anticipate the most suitable lighting conditions right before they are needed. Thanks to its smart software algorithm, Helvar ActiveAhead is able to learn how the space is used to predict the luminaire operation accordingly.

Learning is based on the data that the node receives from locally connected sensors and from other ActiveAhead nodes in the network. Since it never stops learning, the ActiveAhead Node Advanced will adapt to any future changes in its environment, such as a wall installation or removal.

Key Features

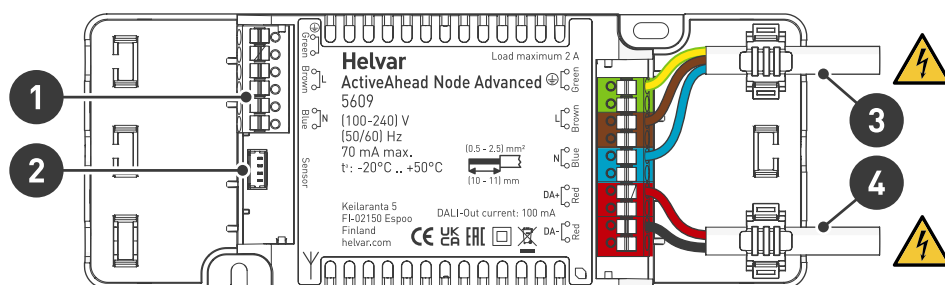
- Connects DALI devices into the wireless Helvar ActiveAhead network
- Offers local addressed DALI control line
- Customisation via mobile app
- Quick and simple installation with mains power and inbuilt DALI power supply unit

Installation Diagram



1. ActiveAhead Mobile App
2. ActiveAhead Sense
3. ActiveAhead Node Advanced
4. DALI-2 sensors and DALI-2 panels
5. DALI Luminaires

Connections



1. Alternative mains supply
2. Sensor connection
3. Preferred mains supply (max. 2 A*)
4. DALI connectors

* = 2 A fuse between alternative mains supply (1.) and preferred mains supply (3.)

Note: The wire cover has been removed from the unit for this illustration.

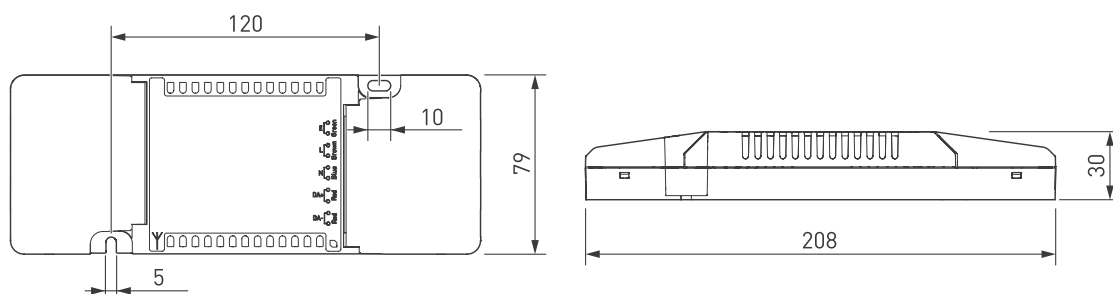
Note: Mains through connection max. 2 A resistive load.

Note: Do not cover! Leave a minimum clearance of 50 mm.

An independent controlgear that can be used where normally flammable materials, including building insulation, are or may be present, but cannot be abutted against any material and cannot be covered in normal use.

Warning: FELV terminals marked "Risk of electric shock" are not safe to touch!

Dimensions (mm)



Technical Data

Supported DALI device types

DT0 Fluorescent lamp control gear
 DT1 Self-contained emergency control gear
 DT4 Incandescent lamp dimmer
 DT5 Analog-to-digital converter Conversion to DC (0/1-10 V)
 DT6 LED lamp control gear
 DT7 Switching (relay) control gear
 DT8 Colour control gear (colour temperature Tc only)
 Part 301 Push buttons
 Part 303 Occupancy sensors
 Part 304 Light sensors
 Helvar DIGIDIM system sensors: 320, 321, 322, 341 and 342

Note: Supported device types depend on the software version of the Node Advanced.

Connections

Doubled terminals for extending the mains and DALI cables

Mains: 3 × 2-pole push-fit terminals
 Wire section: 0.5–2.5 mm², solid or stranded.

Note: Mains through connection max. 2 A resistive load.

DALI: 2 × 2-pole push-fit terminals
 Wire section: 0.5–2.5 mm², solid or stranded.

Electrical data

Mains supply: 100–240 VAC, 50/60 Hz,
 Max. 70 mA

Mains output: Max. 2 A

Output pulse withstand (inrush) capability: Max. 8 pcs load devices

Note: 2 A fuse between alternative mains supply and preferred mains supply.

Input power: Max. 5 W

Output current for DALI: Typical 100 mA (Max. 250 mA)

Note: Other DALI power supply units must not be present on the DALI line

Sensor interface: 3.3 V
Isolation mains to DALI: Basic isolation (250 V)
Isolation mains to sensor: Reinforced isolation (250 V)
Isolation DALI to sensor: Supplementary isolation (250 V)

Wireless connectivity

Frequency: 2.4 GHz
Technology: Bluetooth® Mesh
Antenna pattern: Omnidirectional
Max. distance between Nodes: 15 m in free space

Note: To ensure proper operation the mesh network must consist of a minimum 10 ActiveAhead Nodes.

Operating and storage conditions

Number of connected DALI devices: Max. 16 DALI control gear and DIGIDIM addresses
 Max. 8 DALI-2 input device addresses
 In total, max. 100 mA current consumption

Note: The total number of connected devices is limited by the addresses and the DALI current consumption limitation.

Note: There must be only one ActiveAhead Node on one DALI line.

Max. DALI cable length: 300 m
Operating temperature: 0 °C to +40 °C
Relative humidity: Max. 85 %, noncondensing
Storage temperature: -20 °C to +70 °C

Mechanical data

Dimensions: 208 x 79 x 30 mm
Material (casing): PC-FR
Colour: White (RAL 9016)
Weight: 182 g
Safety class: For independent use

Conformity and standards

Conformity:



EMC emission / immunity:

EN 55015 / EN 61547

Safety:

EN 61347-2-11

RED:

EN 300 328, EN 301 489-1,
EN 301 489-17

Environment:

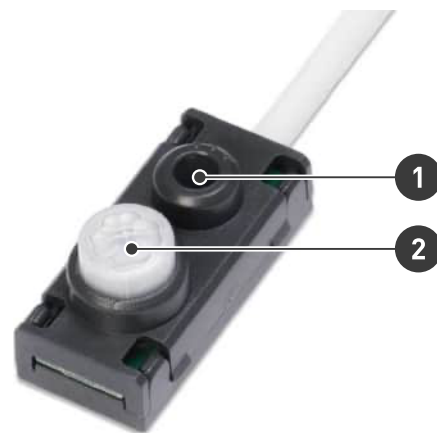
Complies with WEEE,
RoHS and REACH
directives.

5630 ActiveAhead Sense

The ActiveAhead Sense is a small luminaire-based sensor that combines a light sensor for constant light control and a passive infrared movement detector.

This sensor can be used on the self-learning smart wireless lighting control solution Helvar ActiveAhead.

If the sensor is connected to non-SELV control gear, the luminaire must be Class I.

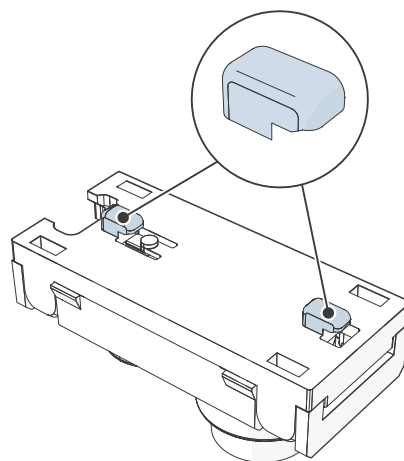


1. Light sensor
2. PIR sensor

Key Features

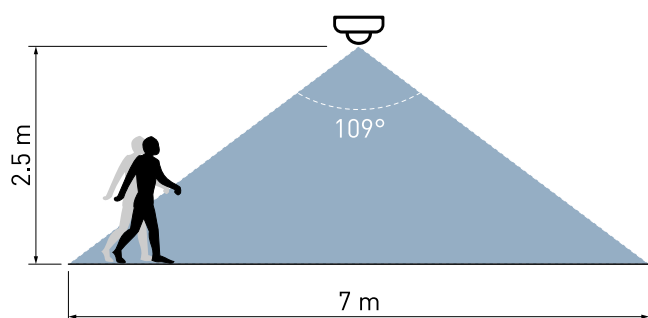
- Small and inconspicuous, it does not change the appearance of the luminaire.
- Provided with mounting features that can be snapped into sheet metal: two on each long side, and two on the rear.
- Part of the ActiveAhead self-learning wireless lighting control solution.

Mounting features



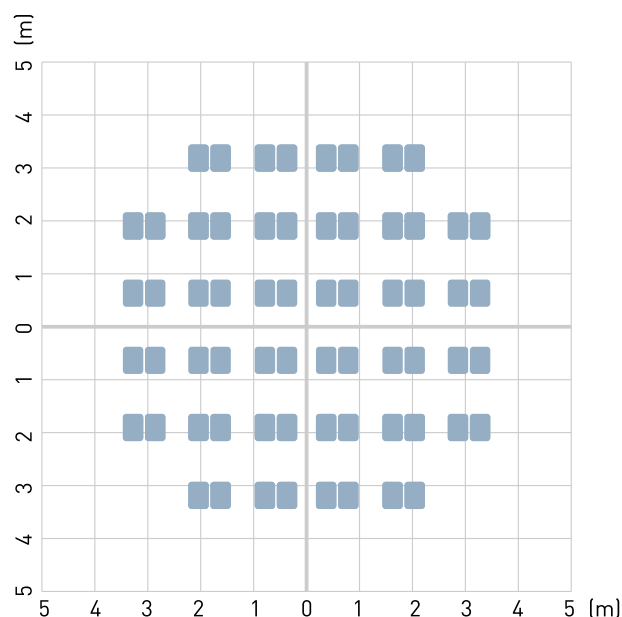
Detection

Detection Coverage



Max. recommended mounting height: 4 m

Detection Pattern

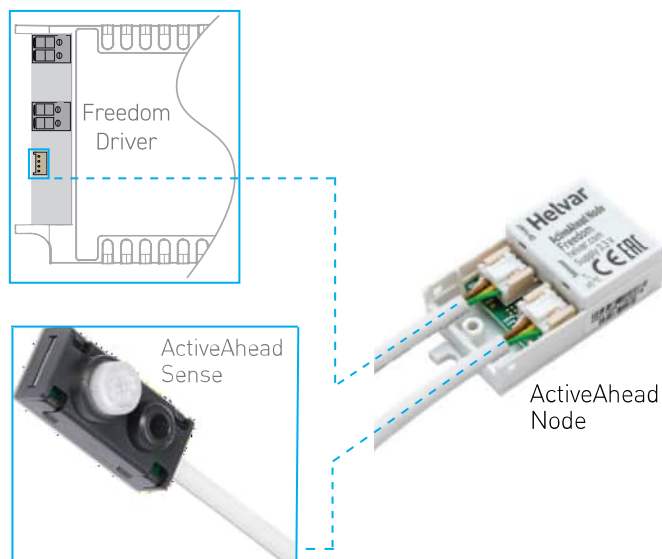


Detection Pattern at floor level for 2.5 m mounting height

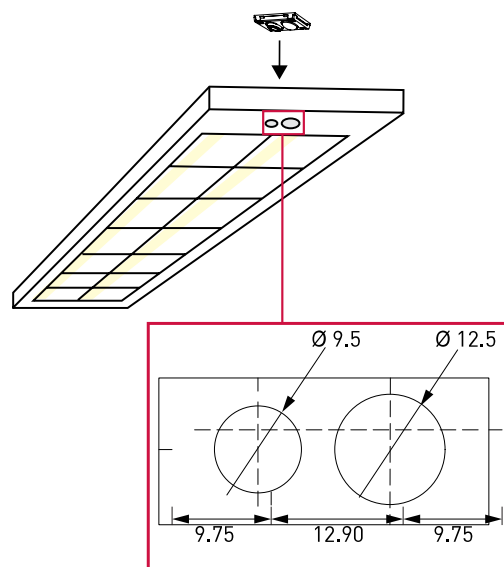
Detection range and sensitivity depends on the speed and size of the moving object as well as its temperature difference to the surroundings. Moving directionally towards the sensor will give worse detection than crossing the detection area on an angle.

Connections

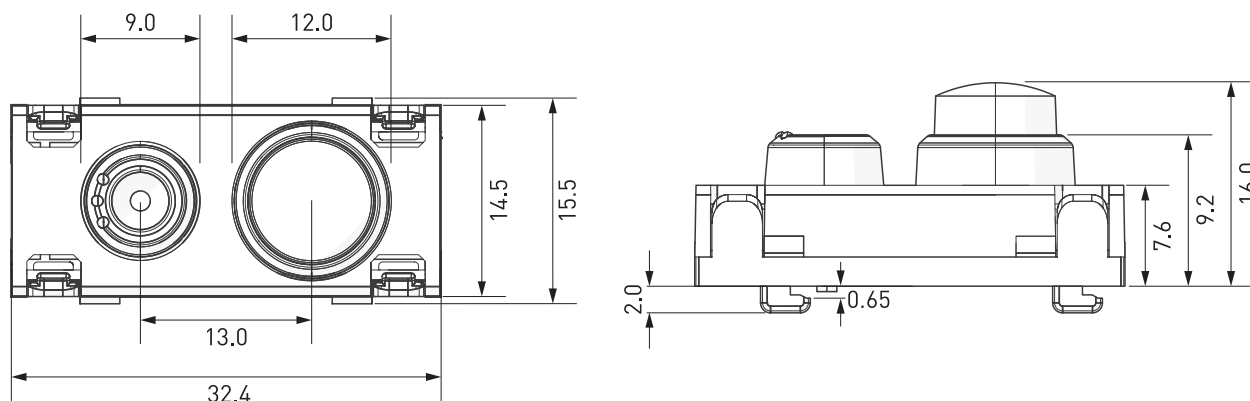
Picture below presents how a 5630 ActiveAhead Sense is connected using ActiveAhead Node and Freedom LED driver.



Mounting



Dimensions (mm)



Note: Sensor holders are available to be used with the ActiveAhead Sense:

- 5691 - ActiveAhead Sense Rectangular Holder
- 5692 - ActiveAhead Sense Circular Holder

Technical Data

Connections

Freedom: Flexible cable terminated with a four-way, 2 mm locking connector

Note: If the sensor is connected to non-SELV control gear, the luminaire must be Class I.

Movement detection sensor

Technology: Passive infrared (PIR) detects moving temperature differences

Detection coverage area: 38 m² @ 2.5 m mounting height achieved with:

- 8 C° temperature difference to target
- 1.0 m/s movement speed
- 700 x 250 mm object size

Max. recommended mounting height: 4 m

Operating and storage conditions

Operating temperature: -20 °C to +50 °C

Note: The temperature difference between the detection target and the background must be at least 4 °C.

Relative humidity: Max. 85 %, noncondensing

Storage temperature: -20 °C to +70 °C

Mechanical data

Dimensions: 32.4 mm × 15.5 mm × 18 mm

Material (casing): Fire-retardant PC/ABS blend.

Colour: White (RAL 9003)
Anthracite Grey (RAL 7016)

IP rating: IP30

Weight: 22 g

Light sensor

Technology:	Closed loop reflected light
Illuminance:	5 lx to 5000 lx
Max. recommended mounting height:	3 m

Order codes

5630	Length: 80 cm, Colour: White
5630-30	Length: 30 cm, Colour: White
5630-150	Length: 150 cm, Colour: White
5630B	Length: 80 cm, Colour: Anthracite Grey
5630B-150	Length: 150 cm, Colour: Anthracite Grey

Conformity and standards

Conformity:	 
EMC emission:	EN 55015
EMC immunity:	EN 61547
Safety:	EN 61347-2-11
Environment:	Complies with RoHS directive.

5640 ActiveAhead Node Multisensor

ActiveAhead Node Multisensor is a member of the truly intelligent wireless lighting control solution Helvar ActiveAhead®. It connects standard DALI devices to the ActiveAhead system offering a flexible room or space solution. Node Multisensor offers addressed local DALI control line which allows individually set light output levels for the connected DALI luminaires to suit the space and scene needs. In addition to the DALI luminaires, also relays, dimmers, additional DALI-2 sensors and DALI-2 wall panels can be connected to the DALI control line. It can also be used as a wireless sensor to control nearby other ActiveAhead nodes in the Bluetooth® mesh network.

The ActiveAhead Node Multisensor is mains powered and includes an inbuilt DALI power supply unit to power the local DALI control line. This makes the design and installation easy as wiring is simple. The unit can be flush mounted to a ceiling using the included spring clips. Surface mounting accessories are available (sold separately) when unit is to be mounted onto a solid surface.

The connected ActiveAhead nodes share information, such as movement detections, through the mesh network, and a mobile app allows you to configure the system where needed. Thanks to its smart software algorithm, Helvar ActiveAhead is able to learn how the space is used to predict the connected luminaires operation accordingly. Learning is based on the data that the node receives from locally connected sensors and from other ActiveAhead nodes in the network. Since it never stops learning, the ActiveAhead Node Multisensor will adapt to any future changes in its environment, such as a wall installation or removal.

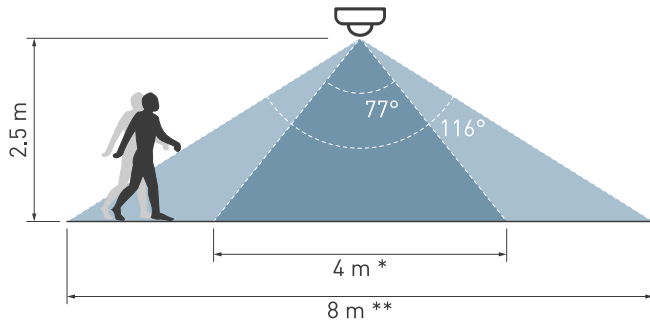


Key Features

- Scalable and easy to setup room solution
- Offers local addressed DALI control line
- Customisation via mobile app
- Quick and simple installation with mains power and inbuilt DALI power supply unit

Detection

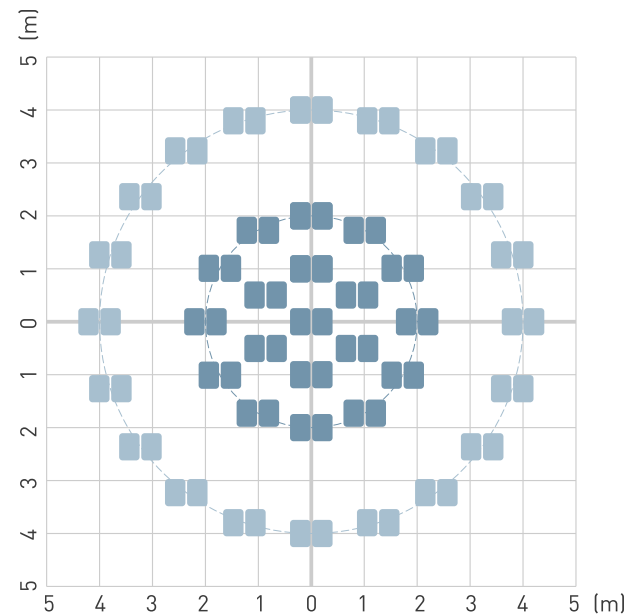
Detection Coverage



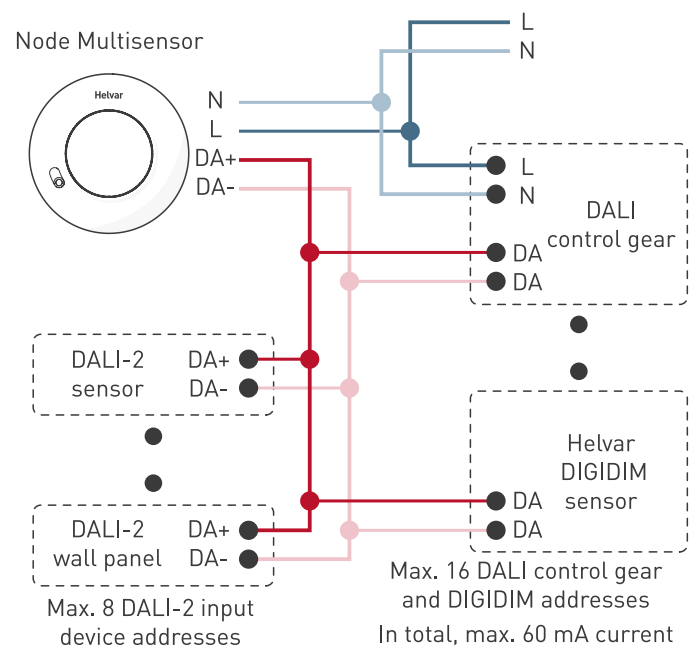
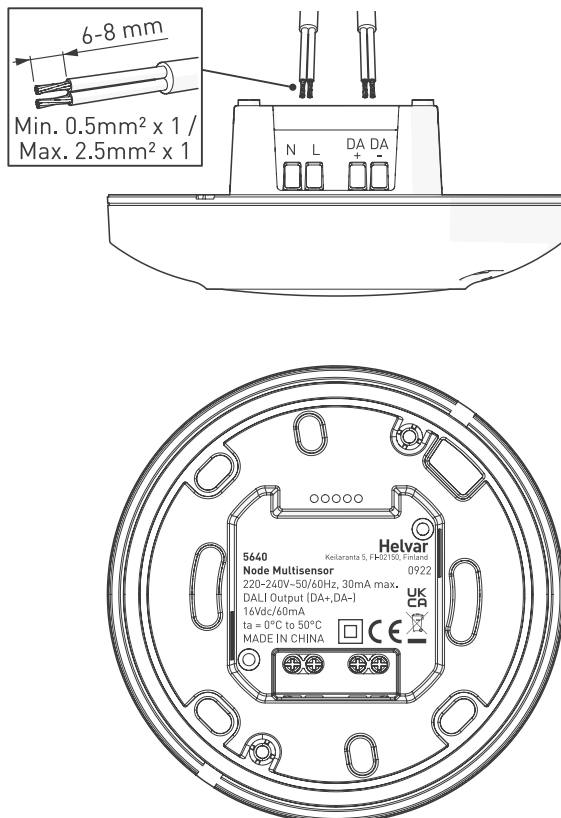
* = small movement

** = big movement

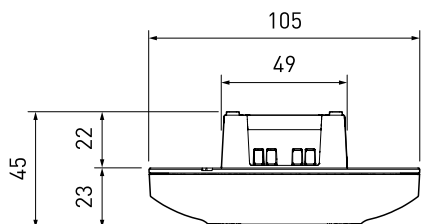
Detection Pattern



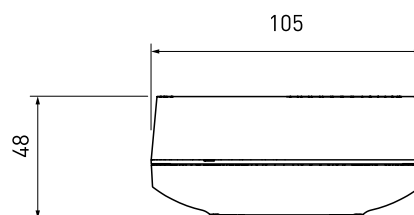
Connections



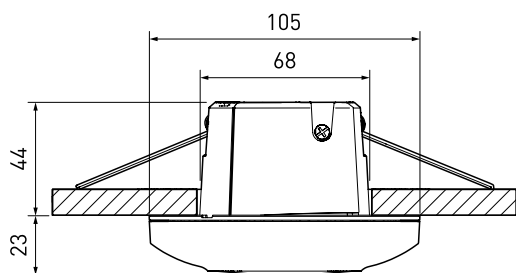
Dimensions (mm)



Standard



w/ Surface-Mounted Box (accessory)



w/ Recess Spring Mount (included)

Technical Data

Supported DALI device types

- DT0: Fluorescent lamp control gear
- DT1: Self-contained emergency control gear
- DT4: Incandescent lamp dimmer
- DT5: Analog-to-digital converter, Conversion to DC (0/1-10 V)
- DT6: LED lamp control gear
- DT7: Switching (relay) control gear
- DT8: Colour control gear (colour temperature T_c only)
- Part 301 Push buttons
- Part 303 Occupancy sensors
- Part 304 Light sensors
- Helvar DIGIDIM system sensors: 320, 321, 322, 341 and 342

Note: Supported device types depend on the software version of the Node Multisensor

Operating and storage conditions

- | | |
|--|---|
| Number of connected DALI devices: | Max. 16 DALI control gear and DIGIDIM addresses |
| | Max. 8 DALI-2 input device addresses |
| | In total, max. 60 mA current consumption |

Note: The total number of connected devices is limited by the addresses and the DALI current consumption limitation.

Note: There must be only one ActiveAhead Node on one DALI line.

- | | |
|--------------------------------|----------------|
| Max. DALI cable length: | 300 m |
| Operating temperature: | 0 °C to +50 °C |

Note: The temperature difference between the detection target and the background must be at least 4 °C.

- | | |
|-----------------------------|--------------------------|
| Relative humidity: | Max. 90 %, noncondensing |
| Storage temperature: | -40 °C to +70 °C |

Connections

Mains:	Wire section: 0.5–2.5 mm ² solid or stranded
DALI cable:	Wire section: 0.5–2.5 mm ² solid or stranded

Electrical data

Input voltage:	220–240 VAC, 50/60 Hz
Input current:	Max. 30 mA
Input power:	Max. 3.5 W
Output current for DALI:	Typical 60 mA (Max. 250 mA) Other DALI power supply units must not be present on the DALI line.
Isolation mains to DALI:	Basic isolation

Sensors

Light sensor:	Closed loop reflected light SW version 1.20 and older: For bright-out function
Presence detector:	Passive infrared (PIR) detects moving temperature differences
Max. recommended mounting height:	4 m

Wireless Connectivity

Frequency:	2.4 GHz
Technology:	Bluetooth® Mesh
Antenna Pattern:	Omnidirectional
Max distance between Nodes:	15 m in free space

Note: To ensure proper operation the mesh network must consist of a minimum 10 ActiveAhead Nodes.

Mechanical data

Dimensions:	105 x 45 mm 105 x 48 mm with surface box 105 x 67 mm with flush mount
Material (casing):	Polycarbonate
Weight:	170 g / 250 g (with packaging)
Safety class:	Class II IP20 with EU standard junction box or spring clip box IP54 with surface mounting box

Conformity and standards

Conformity:	CE UK CA
EMC emission / immunity:	EN 55015 / EN 61547
Safety:	EN 61347-1, EN 61347-2-11
RED:	EN 300 328, EN 301 489-1, EN 301 489-17
Environment:	Complies with WEEE, RoHS and REACH directives.

Order Codes

5640000	Colour: White (RAL 9003)
5640001	Colour: Black (RAL 9005)
Delivered with Recess Spring Mount and PIR detection mask.	
Accessories (sold separately):	
5002	Surface-Mounted Box, White
5002B	Surface-Mounted Box, Black

5641 ActiveAhead Node Multisensor High Bay

ActiveAhead Node Multisensor High Bay is a member of the truly intelligent wireless lighting control solution Helvar ActiveAhead®. It connects standard DALI devices to the ActiveAhead system offering a flexible solution for high bay applications. Node Multisensor High Bay offers addressed local DALI control line which allows individually set light output levels for the connected DALI luminaires to suit the space and scene needs. In addition to the DALI luminaires, also relays, dimmers, additional DALI-2 sensors and DALI-2 wall panels can be connected to the DALI control line. It can also be used as a wireless sensor to control nearby other ActiveAhead nodes in the Bluetooth® mesh network.



The ActiveAhead Node Multisensor High Bay is mains powered and includes an inbuilt DALI power supply unit to power the local DALI control line. This makes the design and installation easy as wiring is simple. The unit can be surface mounted to a solid surface using the included surface mount box. Flush mounting accessories are available (sold separately) when unit is to be flush mounted to a ceiling using spring clips.

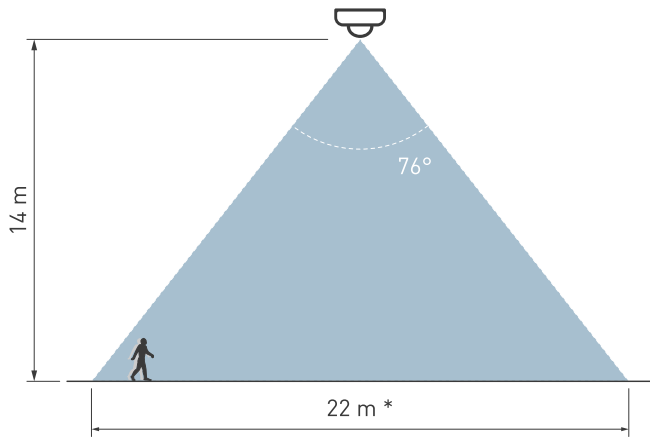
The connected ActiveAhead nodes share information, such as movement detections, through the mesh network, and a mobile app allows you to configure the system where needed. Thanks to its smart software algorithm, Helvar ActiveAhead is able to learn how the space is used to predict the connected luminaires operation accordingly. Learning is based on the data that the node receives from locally connected sensors and from other ActiveAhead nodes in the network. Since it never stops learning, the ActiveAhead Node Multisensor High Bay will adapt to any future changes in its environment, such as a wall installation or removal.

Key Features

- Scalable and easy to setup solution for industrial application
- Offers local addressed DALI control line
- Customisation via mobile app
- Quick and simple installation with mains power and inbuilt DALI power supply unit

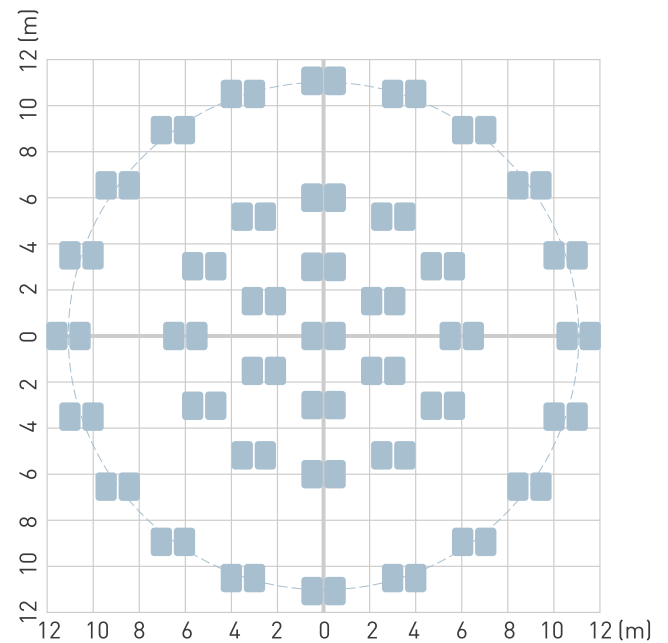
Detection

Detection Coverage

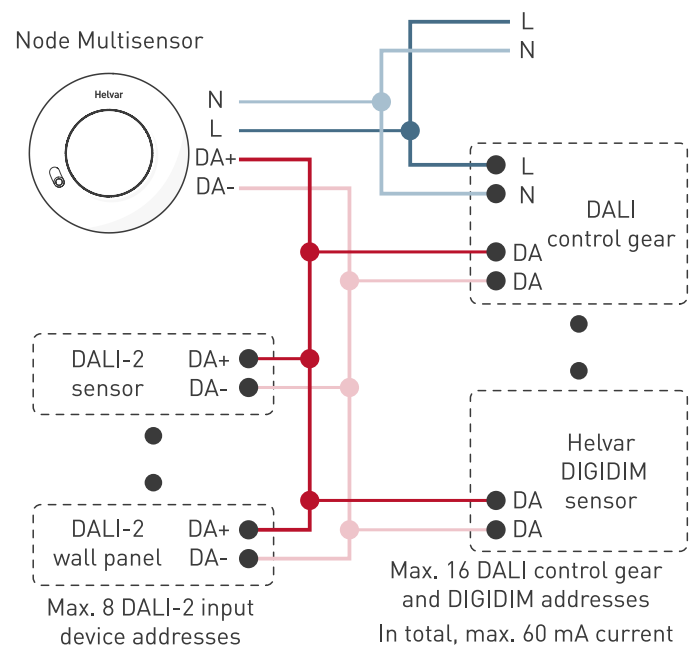
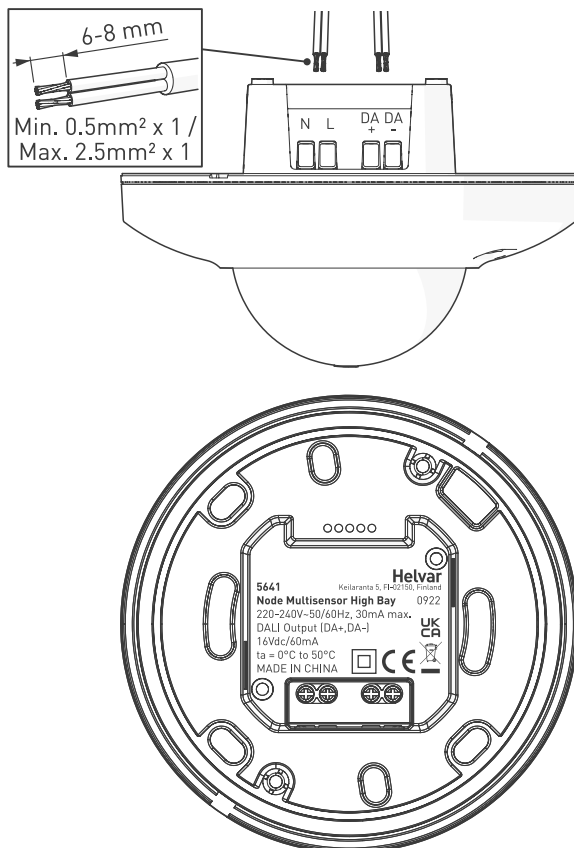


* = big movement

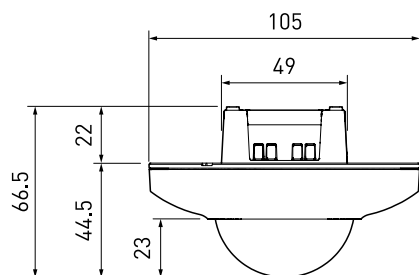
Detection Pattern



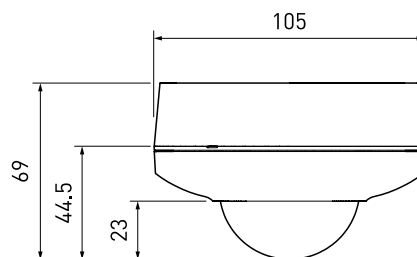
Connections



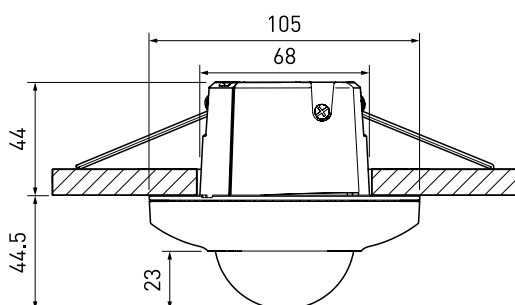
Dimensions (mm)



Standard



w/ Surface-Mounted Box (included)



w/ Recess Spring Mount (accessory)

Technical Data

Supported DALI device types

DT0: Fluorescent lamp control gear
 DT1: Self-contained emergency control gear
 DT4: Incandescent lamp dimmer
 DT5: Analog-to-digital converter, Conversion to DC (0/1-10 V)
 DT6: LED lamp control gear
 DT7: Switching (relay) control gear
 DT8: Colour control gear (colour temperature T_c only)
 Part 301 Push buttons
 Part 303 Occupancy sensors
 Part 304 Light sensors
 Helvar DIGIDIM system sensors: 320, 321, 322, 341 and 342

Note: Supported device types depend on the software version of the Node Multisensor High Bay.

Operating and storage conditions

Number of connected DALI devices: Max. 16 DALI control gear and DIGIDIM addresses
 Max. 8 DALI-2 input device addresses
 In total, max. 60 mA current consumption

Note: The total number of connected devices is limited by the addresses and the DALI current consumption limitation.

Note: There must be only one ActiveAhead Node on one DALI line.

Max. DALI cable length: 300 m
Operating temperature: 0 °C to +50 °C

Note: The temperature difference between the detection target and the background must be at least 4 °C.

Relative humidity: Max. 90 %, noncondensing
Storage temperature: -40 °C to +70 °C

Connections

Mains:	Wire section: 0.5–2.5 mm ² , solid or stranded
DALI cable:	Wire section: 0.5–2.5 mm ² , solid or stranded

Electrical data

Input voltage:	220–240 VAC, 50/60 Hz
Input current:	Max. 30 mA
Input power:	Max. 3.5 W
Output current for DALI:	Typical 60 mA (Max. 250 mA) Other DALI power supply units must not be present on the DALI line.
Isolation mains to DALI:	Basic isolation

Sensors

Light sensor:	Closed loop reflected light SW version 1.20 and older: For bright-out function
Presence detector:	Passive infrared (PIR) detects moving temperature differences
Max. recommended mounting height:	14 m

Wireless Connectivity

Frequency:	2.4 GHz
Technology:	Bluetooth® Mesh
Antenna Pattern:	Omnidirectional
Max distance between Nodes:	15 m in free space

Note: To ensure proper operation the mesh network must consist of a minimum 10 ActiveAhead Nodes.

Mechanical data

Dimensions:	105 × 66.5 mm 105 x 69 mm with surface box 105 x 88.5 mm with flush mount
Material (casing):	Polycarbonate
Weight:	200 g / 260 g (with packaging)
Safety class:	Class II IP20 with EU standard junction box or spring clip box IP54 with surface mounting box

Conformity and standards

Conformity:	 
EMC emission / immunity:	EN 55015 / EN 61547
Safety:	EN 61347-1, EN 61347-2-11
RED:	EN 300 328, EN 301 489-1, EN 301 489-17
Environment:	Complies with WEEE, RoHS and REACH directives.

Order Codes

5641000	Colour: White (RAL 9003)
5641001	Colour: Black (RAL 9005)
Delivered with Surface-Mounted Box and PIR detection mask.	
Accessories (sold separately):	
5001	Recess Spring Mount

5692 ActiveAhead Sense Circular Holder Sensor Accessory Series

Key Features

- Accessory for mounting the Active+ Sense and ActiveAhead Sense sensor to the ceiling
- Easy installation
- Suitable for flush mounting
- Sturdy structure, internal strain relief
- Available in white (5692)

Package contents

One set of ActiveAhead Sense Circular Holder accessory kit consists of the following parts:

1 x Sensory holder

1 x Strain relief part

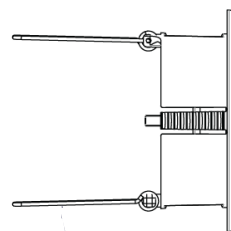
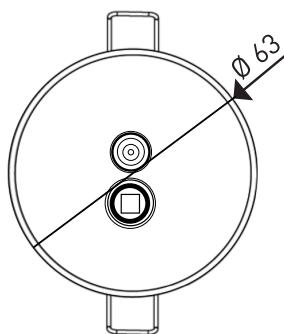
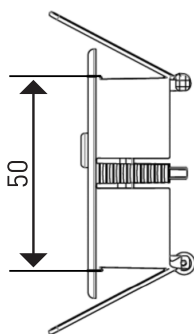
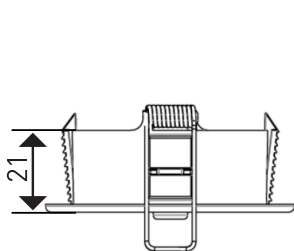
2 x Locking springs



Note: Circular sensor holders are packed in bags of ten sets which also contains 1 x Installation Guide.

Dimensions (mm)

Dimension tolerance ± 0.2 mm



Note: When placing unit into assembly hole (Ø 50-55mm) ensure locking springs are in this position.

Technical Data

Mechanical data		Conformity and standards	
Material (casing):	Polycarbonate	Conformity:	
Fire retardant:	Yes	Luminaires - Part: General requirements and tests	EN 60598-1
UV protected:	Yes	Glow-wire flammability test (GWFI):	650°C (IEC 60695-2-12)
Colour:	White RAL 9016	Compliant with relevant EU directives (when correctly installed in the luminaire).	
Operating conditions			
Operating temperature:	0 °C to +40 °C		
Storage temperature:	-40 °C to +80 °C		
 Note: Holder cannot be used to provide higher classification against ingress of dust or moisture.			

For instructions on how to mount the sensor to the housing and fix the housing to the ceiling please refer to separate Installation guide (Doc. 7860429) which is available on the product website's download and links section.

ST7-X SceneTouch7

The SceneTouch7 Panel is a 7" capacitive touch, full-colour, high-resolution lighting control panel designed to work with Helvar's router system over Ethernet.

An easy-to-use, gesture-controllable and intuitive interface that is customisable to different applications via the SceneStudio online design tool.

The product can be installed in solid or plasterboard walls using the supplied metal back box.

Key Features

- Capacitive touch lighting control panel
- 7" High-resolution colour touch screen
- Gesture controllable
- Ethernet LAN port
- Wi-Fi
- DC power input (PSU included)
- Suitable for solid and plasterboard walls
- Available in black or white

Software Compatibility

- Designer 5.4 or later
- Workgroup size up to 30 routers
- Multicast workgroups are NOT supported

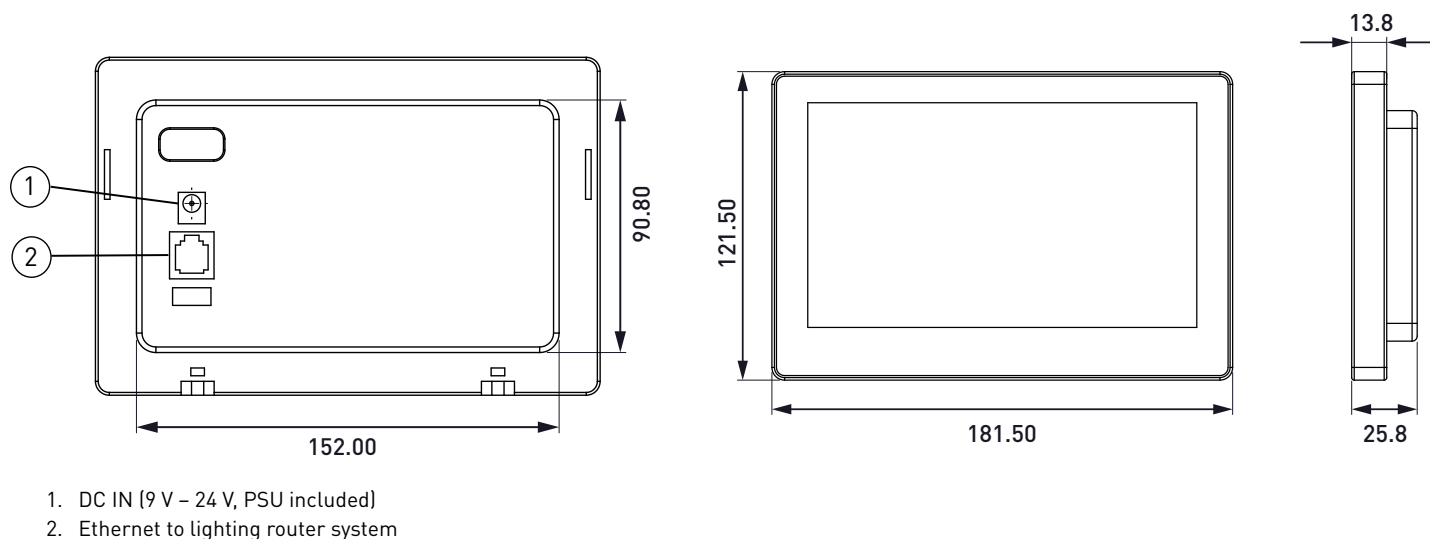


Product order codes

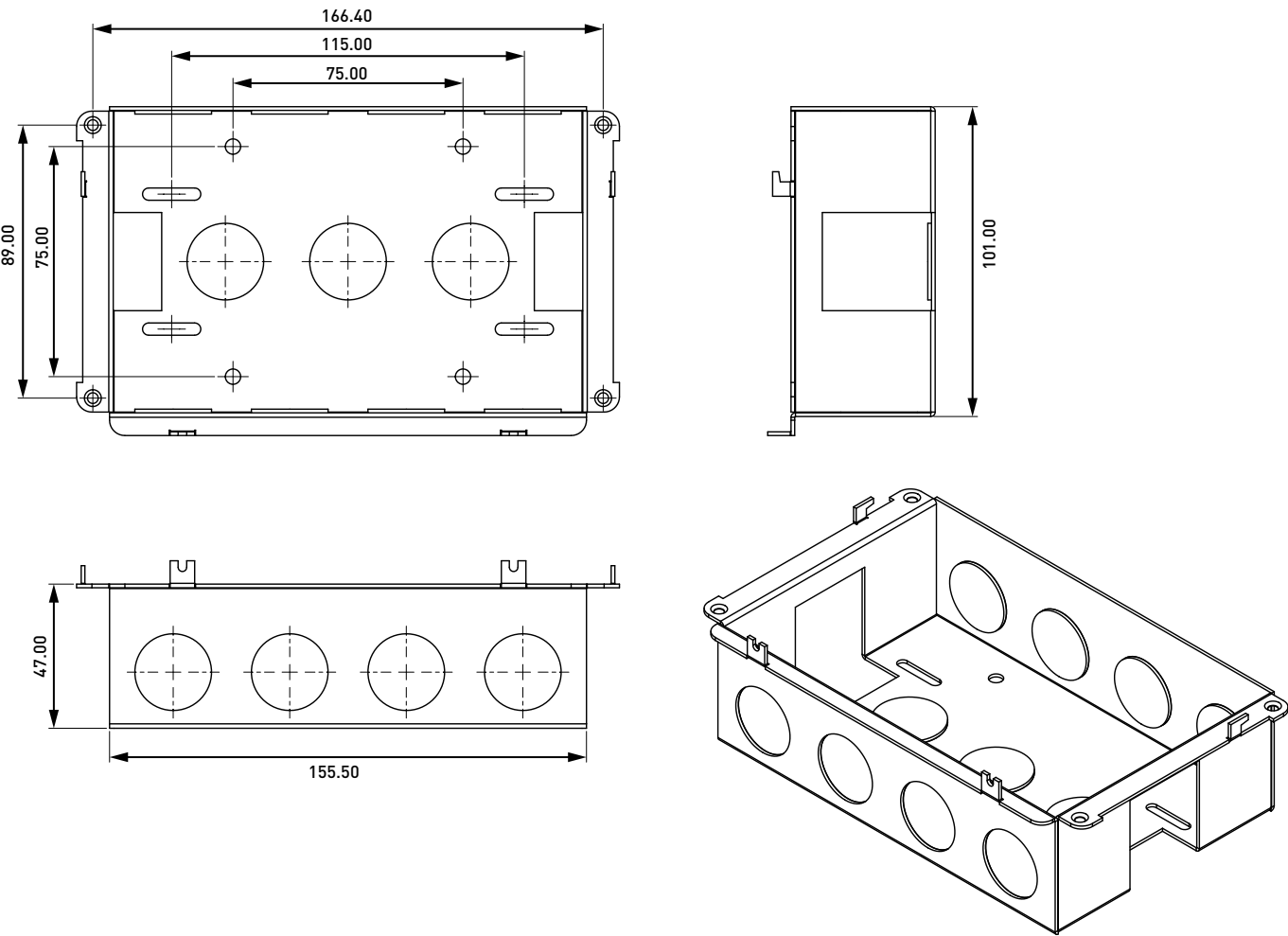
ST7-B: Black

ST7-W: White

Connections and Dimensions (mm)



Wall-mount back box dimensions (mm)



Technical Data

Display	
Screen:	7" IPS
Resolution:	1024 × 600
Brightness:	350 cd/m²

Electrical data	
Input voltage:	9 VDC – 24 VDC
Typical power consumption:	6 W

Connectivity	
LAN:	1 x RJ45 10/100 Mb/s, Cat 5E up to 100 m. For router network.
Wi-Fi:	802.11b/g/n
USB interface:	USB 2.0
Bluetooth®:	V2.1 + EDR/BT v3.0/BT v3.0 + HS/ BT v4.0

Operating and storage conditions	
Ambient temperature:	0 °C to +40 °C
Relative humidity:	Max. 90 %, noncondensing
Storage temperature:	-20 °C to +70 °C

Mechanical data	
Dimensions:	181.5 mm × 121.5 mm × 25.8 mm
Mounting:	In-wall (solid and plasterboard walls)
Weight:	350 g
IP rating:	IP40 (user access)

Conformity and standards	
Conformity:	CE UK CA
RED:	EN 300 328, EN 301 489-1, EN 301 489-17
Safety:	EN 60950-1
Environment:	Complies with WEEE and RoHS directives.