

# DLS-DALI Lighting Control System (MODBUS)

## Datasheet

The DALI64 lighting control system is a fully featured standalone DALI lighting control system embedded into a state of the art PIR. DALI64MODPSU can seamlessly integrate with Building Energy Management Systems (BEMS) with a simple MODBUS connection or operate as a standalone DALI addressable system.

Designed to DALI 2 open protocol, it provides 64 DALI luminaire addresses and 64 Device addresses (e.g. PIR, switch input etc.)

Room level environment control of HVAC and lighting is achieved through integration with a BEMS via a MODBUS connection.

DALI64MODPSU is optimised for connection to Honeywell controllers on the Niagara platform, e.g. Merlin NX, EHNX, JACE8000, but can connect to any BEMS that can accept MODBUS RTU slave devices.

When connected to a BEMS DALI64MODPSU gives you the ability to visualise and make changes, such as time delay, light level, absence / presence mode and load shedding, to the Lighting Control system through a BEMS supervisor.

When integrated with BEMS DALI64MODPSU enables you to automate the control of the colour temperature of the luminaires to match natural circadian rhythms. This creates lighting that makes us feel more alert and productive.

The integral power supply within the DALI64MODPSU provides 150mA of power to the DALI bus eliminating the need for an additional DALI power supply, reducing installation complexity and the associated costs and time.



### Product Comparison

|               | Commission with Light Touch App | Flush Mount | Surface Mount | Addressable DALI Luminaires per system | Lens tilting | Wireless maintenance free switches | MODBUS connection (to BEMS) | Occupancy Zones | Power to DALI bus | Switch Input (Mains) |
|---------------|---------------------------------|-------------|---------------|--|--------------|------------------------------------|-----------------------------|-----------------|-------------------|----------------------|
| DALI64F       | •                               | •           |               | 64                                     | •            | •                                  |                             | 16              |                   |                      |
| DALI64S       | •                               |             | •             | 64                                     | •            | •                                  |                             | 16              |                   |                      |
| DALI64MODPSUF | •                               | •           |               | 64                                     | •            | •                                  | •                           | 16              | •                 | 1                    |
| DALI64MODPSUS | •                               |             | •             | 64                                     | •            | •                                  | •                           | 16              | •                 | 1                    |
| DALINETF      |                                 | •           |               |  |              |                                    |                             |                 |                   |                      |
| DALINETS      |                                 |             | •             |  |              |                                    |                             |                 |                   |                      |

## FEATURES & BENEFITS

- A maximum of 64 DALI luminaires can be connected via DALI Bus.
- DALI scene plates can be added to enable simple and effective scene selection.
- 1 mains switch input can be connected directly to PSU variants.
- Commissioning is performed via Bluetooth using the Light Touch App (Android only).
- Partition and join features enable up to 3 rooms with 2 partitions between them to be grouped, enabling rooms to operate as one entity when one or both partitions are opened.
- DALI switch input modules can be added to connect normal 'push-to-make' switches.
- Wireless switches can also be used for installation convenience.
- Connection to BEMS via MODBUS.
- PSU variants provide 150mA of power to the DALI network.

# DLS-DALI Lighting Control System (MODBUS) Technical Specifications

## ELECTRICAL

### Power input

**DALI64MODPSU:** 220 – 240Vac 50/60 Hz

**DALI64:** Powered from DALI bus

**DALI64PSU:** 220 – 240Vac 50/60 Hz

**DALINET:** Powered from DALI bus

### Power Consumption

**DALI64MODPSU:** 5W

**DALI64:** 12mA

**DALI64PSU:** 3W active, <0.5W static

**DALINET:** 4mA

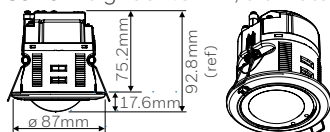
### Load Rating

**DALI:** 64 DALI Ballasts/Drivers

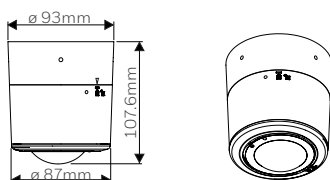
## MECHANICAL

### Dimensions

**Flush Mount:** Height 92.8mm, diameter 87mm



**Surface Mount:** Height 107.6mm, diameter 93mm



**Fascia Colour:** White (RAL9010)

**Weight:** Flush 121g Surface 215g

**Material:** Flame retardant PC/ABS

**IP Rating:** IP20

### Terminal Connections

**DALI:** Pluggable screwless

**MODBUS:** Pluggable rising cage clamp

**Power:** Pluggable rising cage clamp

**Switch input:** Pluggable rising cage clamp

### Cable

**DALI:** 2 core cable

**MODBUS:** Screened twisted pair

**Power:** Derive from appropriate wiring regulations

**Switch input:** 0.75mm<sup>2</sup>

### Terminal Capacity

**DALI:** 1 x 0.5-1.5 mm<sup>2</sup> solid or stranded

**MODBUS:** 2 x 0.5 mm<sup>2</sup> solid or stranded

**Power:** 1 x 0.5-2.5 mm<sup>2</sup> solid or stranded

**Switch input:** 1 x 0.5-2.50 mm<sup>2</sup> solid or stranded

### Max Cable Length

**DALI:** up to 300m - If using 1.50mm<sup>2</sup> cable

**Modbus:** 400m

**Power:** Derive from appropriate wiring regulations

**Manual Switch:** 10m

## ENVIRONMENTAL

**Operating Temperature:** 0° C to 45° C\*.

**Storage Temperature:** -20° C to 80° C

**Humidity:** 20% to 80% non-condensing

*\*Note a difference of ±3°C is required between ambient temperature and temperature of the target to be detected.*

## CONFORMITY

**Conformity:** EMC-2014/30/EU, LVD – 2014/35/EU, RoHS-2011/65/EU, RED2014/53EU

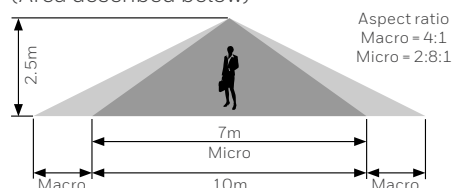
## SENSING

**Technology:** PIR

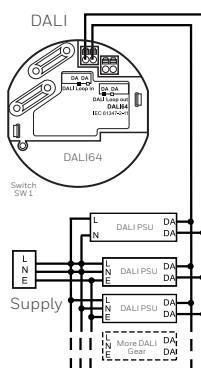
**Max recommended mounting height:** 3.5m

**Points of detection:** 155

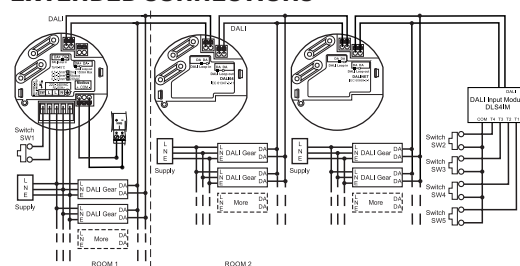
**Coverage:** 360° (Area described below)



## BASIC CONNECTIONS



## EXTENDED CONNECTIONS



## ORDER CODES

|   |  |
|---|--|
| <b>DALI64MODPSUF</b>                      | Mains powered flush mount DALI Lighting Controller with 150mA Integral Power Supply and MODBUS connection.   |
| <b>DALI64MODPSUS</b>                      | Mains powered surface mount DALI Lighting Controller with 150mA Integral Power Supply and MODBUS connection. |
| <b>DALI64F</b>                            | Bus powered, flush mount DALI Lighting Controller  |
| <b>DALI64S</b>                            | Bus powered surface mount DALI Lighting Controller   |
| <b>DALINETF</b>                           | Bus powered flush mount DALI Network Sensor.   |
| <b>DALINETS</b>                           | Bus powered surface mount DALI Network Sensor.   |
| <b>SURFMT</b>                             | Surface Mount Kit  |
| <b>LOCKRING</b>                           | Secure Flush Mount Adaptor   |
| <b>28001987</b>                           | DALI Touchplate - Multi – 3 scenes, dim up/ down, broadcast toggle – recall max/off- DALI BUS 10mA           |
| <b>28001989</b>                           | DALI Touchplate - Select – 6 scenes, activate/deactivate - DALI BUS 10mA                                     |
| <b>DLS4IM</b>                             | DALI Switch input module   |
| <b>LSHDQBL2210</b>                        | 10 metre DALI / QuickLink lead   |
| <b>LSHDQBL226</b>                         | 6 metre DALI / QuickLink lead  |
| <b>DLSDSLW765</b>                         | DALI HD Dimming Lead 7 core, 5 metre   |
| <b>BESA6PSR</b>                           | Connect BESA Box 6 Pole  |
| <b>00030366</b>                           | Wireless switch 1 gang   |
| <b>00030666</b>                           | Wireless switch 2 gang   |
| <b>TP3006</b>                             | T Piece connector 6 pole   |
| <b>COMMISSIONING &amp; END USER TOOLS</b> |  |
| <b>LIGHT TOUCH BY HONEYWELL</b>           | Commissioning App for DALI lighting  |