DALI Buswire One module

product ref: 205A1

The module provides individual addressable control and monitoring of up to 64 DALI devices as well as enabling the connection of 16 DALI sensors/switches.

- individual addressing and monitoring of up to 64 DALI ballasts / drivers
- also accepts connection of additional 16 DALI sensors / switches
- individual DALI lamp and ballast failure monitoring
- individual DALI emergency light testing and monitoring per DALI device
- DALI sensors, switches and emergency devices connect to the DALI bus
- designed for single or two-fix installation via wall-mount or drop-rod

The module provides a DALI signal to each lamp while the mains supply is fed directly to the lamps and powers the module. Multiple power supplies to the lamps are possible but because DALI is not SELV they should be limited to single phase.

Buswire installation

The DALI Buswire One enables control of individual Dali lamps connected to a shared two-core Dali buswire or flexible conduit installation: the Dali bus to lamps and devices can run alongside mains cables or as part of a five core cable.

Busbar installation

The DALI Buswire One enables control of individual Dali lamps connected to a shared busbar. 3 poles of the busbar provide L, N & E while the Dali output from the module uses 2 poles to connect to Dali lamps & Dali devices.
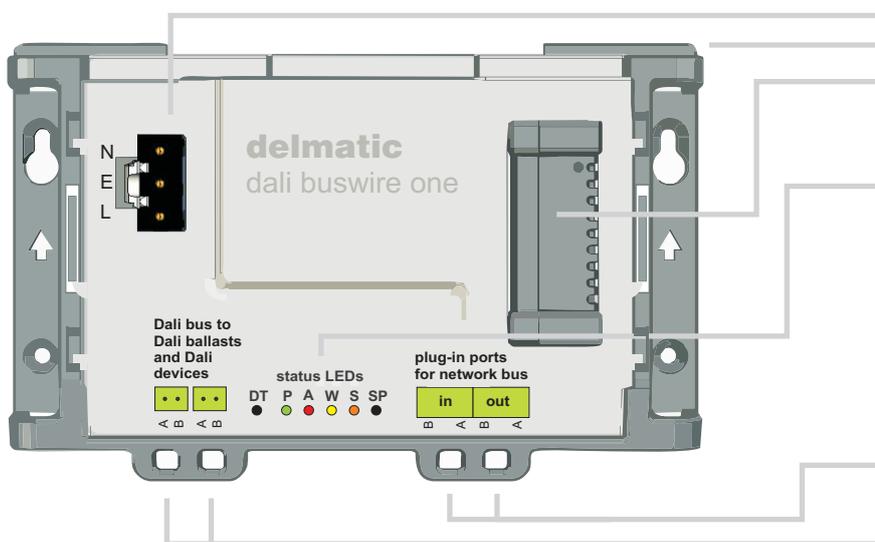
Chilled beam installation

The DALI Buswire One enables individual control of Dali lamps connected to a single two core bus within the chilled beam. The lighting circuit is wired direct to the lamps: the Dali bus to lamps and devices can run alongside mains cables or as part of a five core cable.

Dali ballast addressing

The ability to individually address DALI lamps on a common buswire requires each ballast to be addressed; this has to be done on after installation on site with associated time and cost considerations: addresses are assigned using a hand-held programmer or laptop computer.

To avoid the need to address ballasts on-site, Delmatic offer a range of DALI controllers including DALI Broadcast Modules and DALI Plug-in Modules.

module features

plug-in mains input (plug supplied with module)

frame with clip-in module

plug-in intelligent pod (80-003) provides distributed intelligence, stores module operational parameters and enables seamless integration with other Lon devices

diagnostic LEDs and service pin

Power LED - indicates module is powered up

Alert LED - lights to indicate a short on the Dali bus

Wink LED - winks when instructed by software

Service LED - lights when service pin pressed and flashes if module has no application software

SP service pin - uploads module address

DT Dali test button - pressing button for 2 seconds transmits an on/off/dimming command to all ballasts enabling the operation of luminaires to be verified.
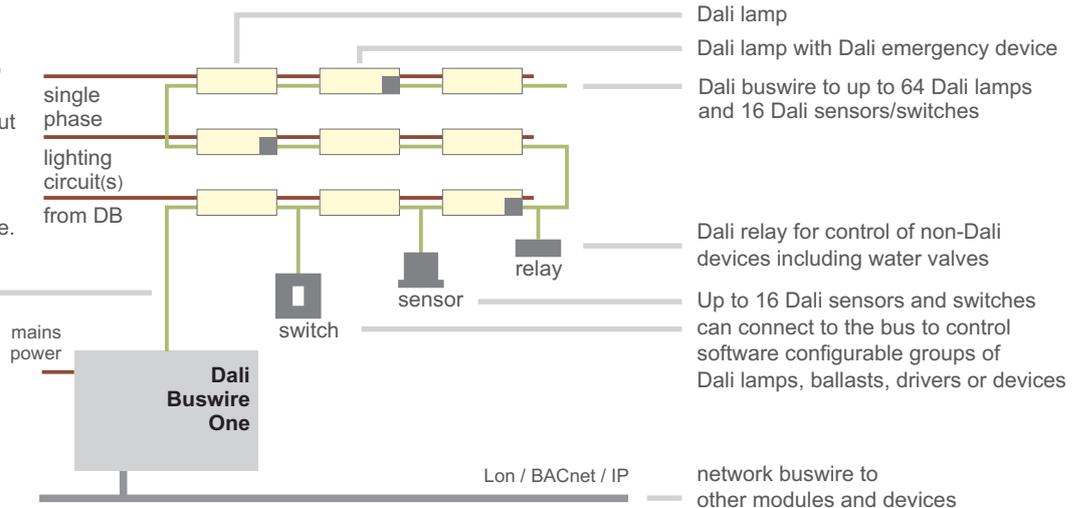
Lon bus - plug-in terminals for connection of two core Lon bus (from router or previous module and to next module).   plug ref. 91041

Dali bus to up to 64 Dali ballasts/devices and up to 16 Dali sensors/switches.   plug ref. 91040 connects to D+ & D- (two ports operate in parallel)

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connection details

Lighting circuit(s) wire direct to lamps from distribution board. Multiple circuits are possible but because DALI is not SELV should be limited to single phase. For three-phase wiring see Dali Buswire Three module.

2-core cable
Dali +
Dali -

single phase

lighting circuit(s) from DB

mains power

Dali Buswire One

switch

sensor

relay

Dali lamp

Dali lamp with Dali emergency device

Dali buswire to up to 64 Dali lamps and 16 Dali sensors/switches

Dali relay for control of non-Dali devices including water valves

Up to 16 Dali sensors and switches can connect to the bus to control software configurable groups of Dali lamps, ballasts, drivers or devices

Lon / BACnet / IP   network buswire to other modules and devices

technical details

outputs
Mains supply to power lamps is wired direct from distribution board to lamps.
DALI buswire output controls up to sixty-four DALI ballasts/drivers.
Module is equipped with two-ports for connection of Dali buswire.

Dali monitoring
Module monitors and displays individual lamp/ballast failure for up to sixty-four Dali devices.
Module monitors individual Dali emergency lamps/devices and displays emergency lamp and device failures on an individual basis.

Dali sensors, switches and emergency devices
Module accepts 16 DALI sensors, switches and switch interfaces on the Dali buswire plus Dali emergency devices .

Dali bus connection
Two 2-pin ports for Dali bus connection (max 1.5 sq.mm cable): the two ports operate in parallel.

network Lon bus inputs
2 plug-in ports for twisted pair Lon network bus connection.

buswire specification
for latest buswire specifications and cable lengths refer to Buswire Specification data sheet

supply voltage
1 x 220-240V~ 50/60Hz single phase power supply to power module.
(three-pin plug-in mains input connector supplied)

diagnostic LEDs
Power LED - shows secondary power circuit operational.
Alert LED - indicates short on the sensor bus or issue with Communication card.
Wink LED - winks when instructed through software
Service LED - indicates fault mode.

construction
flame-retardant low smoke moulded housing

ambient temperature / relative humidity
0 to +50°C / 20% to 90% non condensing

dimensions (mm)
225 w x 133 h x 66 d
100mm depth including mains plug

Lon specification

FT5000 Neuron and FTX3 transceiver conforms to LonMark 3.4 profiles:

16 switch objects	# 3200
16 light sensor objects	# 1010
16 occupancy sensor objects	# 1060
16 open-loop actuator objects	# 0003
16 occupancy controller objects	# 3071
16 light controller objects	# 3050

plug details

mains input to module (plug supplied)
3 pole female plug with locking device
(Live, Earth, Neutral)

N		Neutral
E		Earth
L		Live

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