



Single-Channel Leading Edge Dimmer (416S and 425S)

freedom in lighting

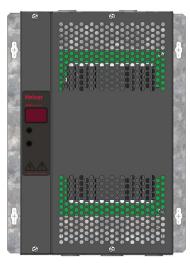
The DIGIDIM 416S (16 Amp) and 425S (25 Amp) are wall-mounted single-channel leading edge (thyristor) dimmers. Both units also include a 16 A relay circuit.

Controllable by S-DIM, DMX, and Analogue, and DALI-compatible for use as Load Interface Units in a DIGIDIM lighting control system, the 416S and 425S can also function as standalone dimmers.

They can be connected to mains voltage lamps directly, or to low voltage lamps via a wire-wound transformer, and have a selectable, integral DALI power supply.

Key features

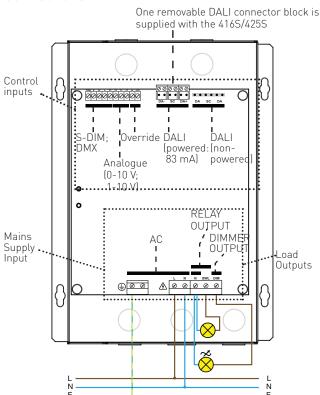
- Out of box operation. No programming required when using DIGIDIM slider, rotary or push button panels.
- Input voltage fluctuation compensation ensures stable output levels with fluctuating incoming mains levels.
- Selectable, integral DALI power supply.
- Over-temperature protection.
- Programmable interface with buttons and LED display.
- Programmable in Designer[™] and Digidim Toolbox[™]



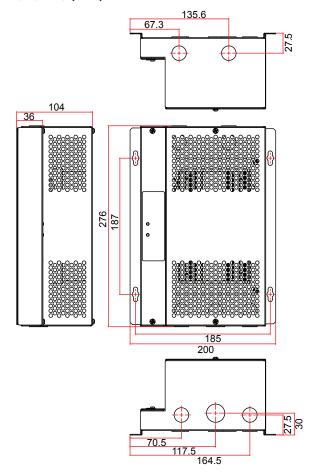
Installation notes

- The dimmer is for use with incandescent lamps and low voltage lamps via wire-wound transformers. It is suitable for use with electronic transformers if use is approved by the transformer manufacturer.
- The external mains supply must be protected.
- DALI and Mains cabling must be 230 V mains rated

Connections



Dimensions (mm)





Technical Data

Freedom in lighting

Connections

Power consumption: 1.3 W (with no output load)

Heat dissipation: 416S: 39 W with maximum load (resistive); 425S: 67 W with

maximum load (resistive)

External protection: The mains supply input must be

externally protected by an MCB or

fuse of a suitable rating.

416S: 16 A Type C MCB maximum 425S: 25 A Type C MCB maximum

Thermal protection: Control board – resettable fuse

Power devices – thermal sensing

Mains supply input

Connections (L, N, E): Solid: ≥ 6 mm²; Stranded: ≥ 4 mm²

Terminal type: Screw terminals

Mains supply voltage: 85 VAC to 264 VAC, 45 Hz to 65 Hz

Cable strip length: 8 mm

Control inputs

DALI connections: 1 × DALI (standard, non-powered);

 $1 \times DALI$ powered (83 mA). DIGIDIM terminal block (one

supplied with unit)

Cable type and size: $0.5 \text{ mm}^2 - 1.5 \text{ mm}^2 \text{ stranded or}$

solid

Cable strip length: 6 mm **DALI consumption:** 2 mA

DALI supply output: Powered DALI: 83 mA (max.),

20 VDC (nominal)

DALI data transfer: DALI standard IEC62386, with

Helvar extensions

S-DIM / DMX inputs

Connections: S-DIM and DMX use the same

input connections

Terminal type: Screw terminals

Cable type and size: 0.22 mm² – 1.5 mm²; low-loss

RS485 Type (multistranded, twisted

and shielded).

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. Example: Belden 8102 or

Alpha 6222C

Cable strip length: 6 mm

Max. cable length: 100 m (low-loss cable)

S-DIM data transfer: Helvar protocal (RS485, 115 kbps)

DMX data transfer: DMX512-A protocol

Analogue input

Terminal type: Screw terminals

Cable type and size: 2-wire; 0.22 mm² – 1.5 mm²

(screened and twisted)

Max. cable length: 50 m

Override input

Terminal type: Screw terminals

Cable type and size: 2-wire; 0.22 mm² – 1.5 mm²

(screened and twisted)

Cable strip length: 6 mm **Max. cable length:** 50 m

Voltage and current: Input voltage: Vin < 1.5 V; Short-

circuit current Ishort = 1 mA

Load outputs

Terminal type: Screw terminals

Cable type and size: Solid: ≥ 6 mm²; Stranded: ≥ 4 mm²

Cable strip length: 8 mm

Relay output (switched load output)

Terminal type: Screw terminals

Cable type and size: Solid: ≥ 6 mm²; Stranded: ≥ 4 mm²

Cable strip length: 8 mm

Load current: 416S: 16 A; 425S: 16 A

Relay contacts: High inrush

Mechanical data

Dimensions: 200 mm \times 274 mm \times 104 mm

Material: Power coated steel (grey)

Mounting: Vertical mounted, secured by four

'keyhole slots'

Weight: 416S: 2 kg; 425S: 2.6 kg

IP code: IP20

Operating conditions

Ambient temperature: 0 °C to +40 °C

Relative humidity: Max. 90 %, non-condensing

Storage temperature: -10 °C to +70 °C

Conformity and standards

EMC emission: EN 61000-6-3 **EMC immunity:** EN 61547

Harmonics: EN 61000-3-2*

* May be subject to conditional connection for use above 16 A.

Safety: EN 60950

Environment: Complies with WEEE and RoHS

directives