Transistor Dimmer (454)

The DIN-rail mounted 454 is a 4-channel transistor dimmer. It can operate in one of two modes; leading edge or trailing edge. All 4 channels operate in the same selected mode, with each channel capable of controlling 2.2 A.

It supports capacitive and resistive loads and can be connected directly to mains voltage lamps, and low voltage 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, SSL curve and DALI linear
- Capable of handling resistive and capacitive loads
- Manual wired override input
- Voltage and frequency compensation
- Over current and temperature protection included
- Power on to last level

Additional Functions

The following features may be accessed using the DIGIDIM Toolbox or Designer software:

- Max/Min levels, Fade times, Scenes and Groups
- Dimmer status report
- System failure level/ignore
- Power on level
- ower on to last level

Installation Notes

- For installation in a restricted access location only
- Isolate the mains supply before installation
- The external mains supply must be protected.
  It is recommended that a 10 A Type C MCB is used
- All DALI and Mains cabling must be 230 V mains rated
- Do not connect DALI or S-DIM / DMX at the same time
- Install the unit horizontally to allow for heat dissipation
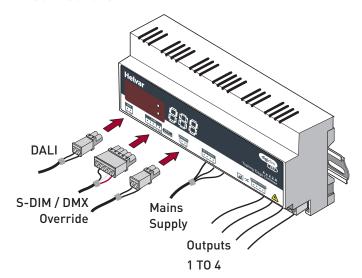- Any enclosure must provide adequate cooling ventilation

Dimmer Output Types

Output	Output Type	Control Protocol	
t 0	Non Dim	All	
t 1	Linear	S-DIM/ DMX	*
t 2	Square	S-DIM/ DMX	*
t 3	S-law	S-DIM/ DMX	*
t 4	DALI logarithmic	DALI	**
t 5	SSL curve	DALI	**
t 6	DALI linear	DALI	**

Notes:

*   Under DALI control, t 4 is used.

** Under S-DIM / DMX control, t is used.

Connections

DALI

S-DIM / DMX
Override

Mains
Supply

Outputs
1 TO 4

Technical Data

Connections

DALI:	0.5 mm² – 1.5 mm² (max. 300 m @ 1.5 mm²)
S-DIM/ DMX:	0.22 mm² – 1.5 mm² low-loss RS485 Type (multistranded, twisted and shielded)
Mains:	Solid core: up to 4 mm² Stranded: 2.5 mm² Note: Functional earth connection used for DALI/S-DIM/ DMX screens only

Power

Mains supply:	85 VAC – 264 VAC, 45 Hz – 65 Hz
Power consumption:	2.3 W (excluding loads)
Load current:	2.2 A (2.2 A × 230 V = 500 W) 4 outputs: 4 × 500 W = 2 kW)
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, S-DIM and DMX
Override:	Switched Input
User interface:	2 push buttons for configuration

Mechanical data

Dimensions:	160 mm × 62 mm × 91 mm
Housing:	DIN-rail case; 9 module width
Material:	Polycarbonate/ABS mix, UL94 V–0
Mounting:	DIN rail mounting
Weight:	250 g
IP code:	30 (00 at terminals)

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

DALI:	DALI standard IEC 62386, with Helvar additions
S-DIM:	Helvar S-DIM protocol
DMX:	DMX512-A protocol
EMC immunity:	EN 61547
Safety:	EN 60950
Environment:	Complies with WEEE and RoHS directives
Isolation:	4 kV