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

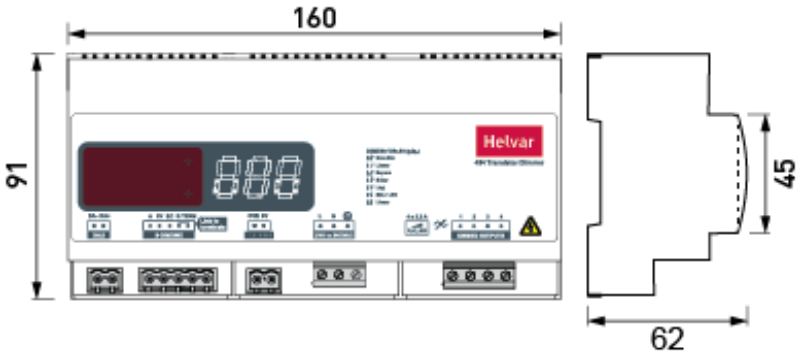
The following features may be accessed using Helvar's Toolbox or Designer software:

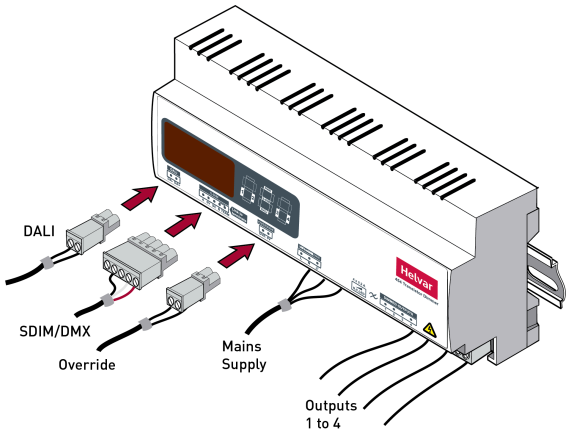
- Max./Min. levels, fade times, scenes and groups
- System failure level/ignore

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 mm² Stranded: 2.5 mm²
DALI:	0.5 mm² – 1.5 mm², max. 300 m @ 1.5 mm²
SDIM/DMX:	0.22 mm² – 1.5 mm² 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:	CE UK CA
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