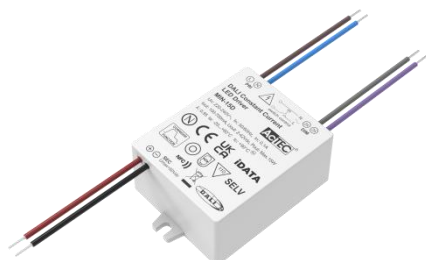


DALI Dimming Constant Current LED Driver

MIN-15D



Features



- Super compact design for built-in use
- Flicker-free
- DALI-2 certified (incl. Parts 251, 252, 253)
- Easy and fast output current setting via NFC in 1-mA-step
- Switch-Dim function
- Corridor function application
- Dimming range 0.1...100%
- Primary and secondary sides come with leads
- Protections: opencircuit, shortcircuit, overload, overtemperature
- SELV equivalent
- Suitable for protection class II luminaires



Selection Guide

Model No.	Nominal Voltage (V)	Nominal Current (A)	Max. Input (W)	Power Factor (λ)	THD Full load (%)	Max. Output (W)	Output Current (mA)	Output Voltage (V)	No Load Voltage (V)	Efficiency Full Load (%)
MIN-15D	220-240	0.1	19	0.95	15	4.2	100	2-42	50	73
										
						15	417	2-36	50	83
										
						15	700	2-21	50	81

Input Parameters

Parameter	Condition	Min.	Typ.	Max.																				
Input Voltage Range	AC Input	198VAC	--	264VAC																				
	DC Input	N/A	--	N/A																				
Rated Input Frequency	AC Input	--	50/60Hz	--																				
No-load Power Consumption		--	--	0.5W																				
Standby Power Consumption		--	--	0.5W																				
Inrush Current	Cold Start@230V	5A/300us																						
Max.units Per Circuit Breaker																								
<table><tr><td>Circuit Breaker</td><td colspan="4">Circuit Breaker Current</td></tr><tr><td>Typ.</td><td>10A</td><td>13A</td><td>16A</td><td>20A</td></tr><tr><td>B</td><td>35</td><td>46</td><td>56</td><td>70</td></tr><tr><td>C</td><td>74</td><td>96</td><td>118</td><td>148</td></tr></table>					Circuit Breaker	Circuit Breaker Current				Typ.	10A	13A	16A	20A	B	35	46	56	70	C	74	96	118	148
Circuit Breaker	Circuit Breaker Current																							
Typ.	10A	13A	16A	20A																				
B	35	46	56	70																				
C	74	96	118	148																				

Output Parameters

Parameter	Condition	Min.	Typ.	Max.
Output Accuracy	Full Load@230V	--	±8%	--
Ripple & Noise	Low Frequency < 120Hz, Full Load@230VAC	--	--	10%
Pst LM		--	--	1

DALI Dimming Constant Current LED Driver

MIN-15D



SVM		--	--	0.4
Galvanic Isolation	SELV			
Short-Circuit Protection (SCP)	The system restarts after the abnormal condition is removed			
Over-Voltage Protection (OVP)	The system restarts after the abnormal condition is removed			
Over-Current Protection (OCP)	N/A			

General Parameters

Parameter	Condition	Value
Ambient Temperature Range t_a		-20...+60°C@Max.12W -20...+50°C@Max.15W
Maximum Case Temperature t_c	Measured on t_c point indicated of the product label	90°C
Max.Case Temp.In Fault Condition		110°C
Storage Temperature Range		-20...+70°C
Relative Humidity	Non Condensing	5...85%
Withstand Voltage	I/P-O/P	N/A
Surge Transient Protection	L-N, L/N-PE	1kV, 2kV
Environmental Rating		Indoor
IP Rating		IP20
Mains Switching Cycles		> 100,000
Expected Lifetime	$t_{cmax}=90$, 0.2%/1000h failure rate	50,000h

Dimming Parameters

Dimmable	Yes
Dimming control	DALI-2/Switch-Dim
Dimming range	0.1-100%
Dimming method	PWM+Amplitude
PWM frequency	400Hz-25kHz@0.1-10%

Physical Parameters

Housing Material	PC
Type of connection	Cable
Dimensions (LxWxH)	65x43x24mm
Mounting hole spacing	59mm
Weight	84g Min. (Thermally Conductive Encapsulant AB: HUITIAN/5295S)

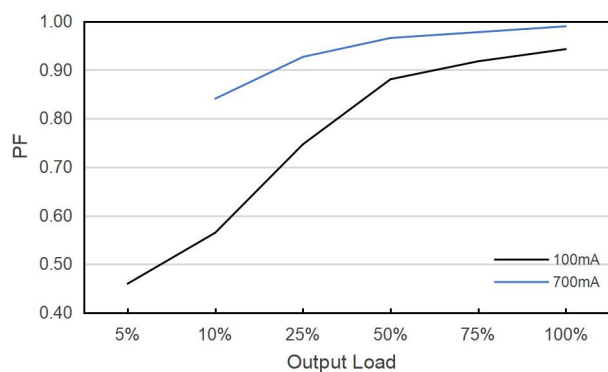
Standards

Safety Standards	EN 61347-1, EN 61347-2-13
Performance	EN 62384
EMC Standards	EN 55015, EN 61000-3-2, EN 61000-3-3, EN 61547
DALI Standards	EN 62386-101, EN 62386-102, EN 62386-207, EN 62386-251, EN 62386-252, EN 62386-253

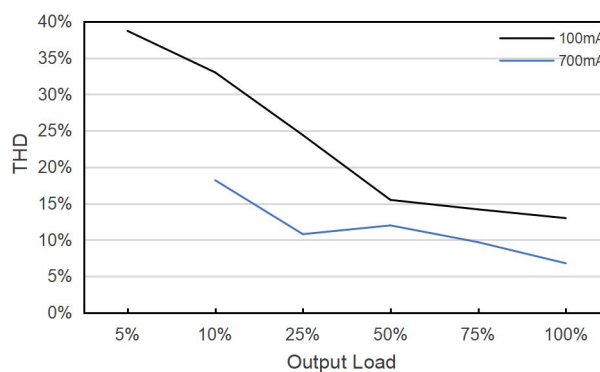
*ALL parameters NOT specially mentioned are measured at 230VAC input, rated current and 25°C of ambient temperature.

Product Characteristic Curve

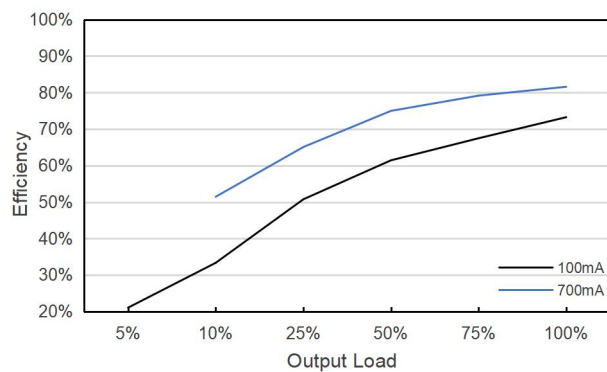
Power Factor vs Load



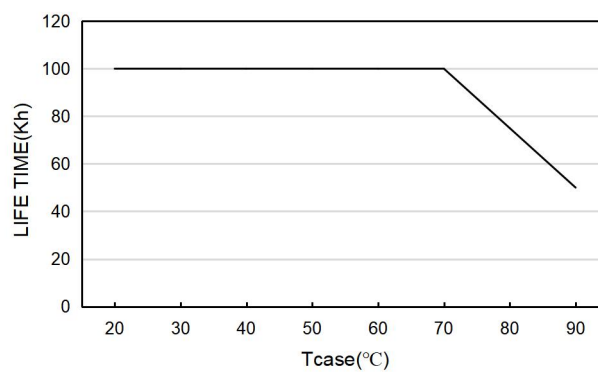
Total Harmonic Distortion vs Load



Efficiency vs Load



Life Time vs Case Temperature



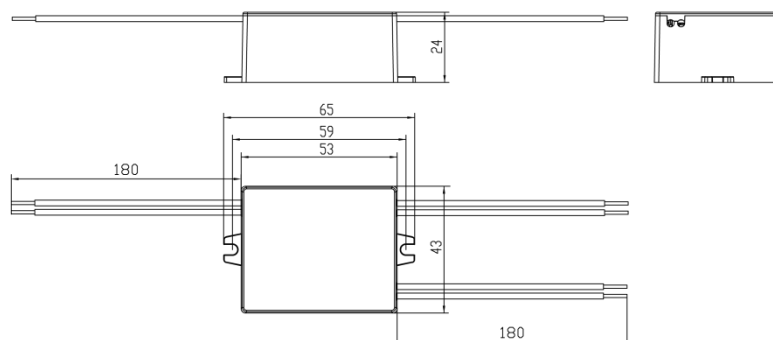
DALI Dimming Constant Current LED Driver

MIN-15D

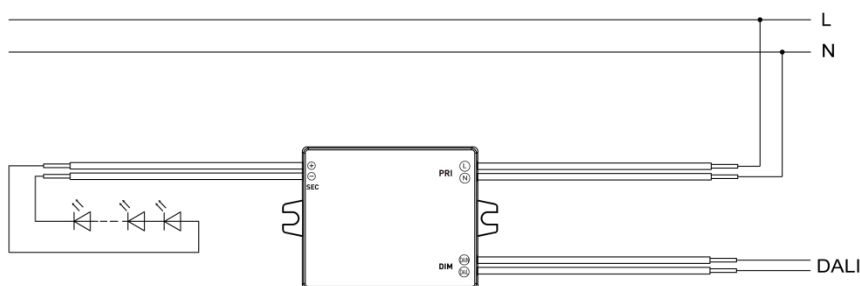


Appearance of Size

Dimension Drawing(mm)



Wiring Diagram (DALI)



PRI

Wire: VDE 7022 0.75mm²

Length: 180±10mm

DALI

Wire: VDE 7022 0.5mm²

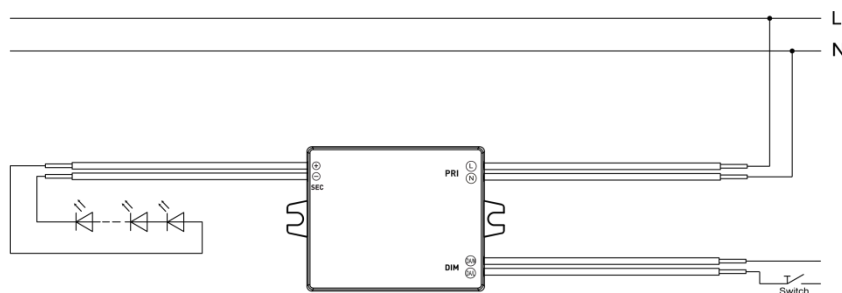
Length: 180±10mm

SEC

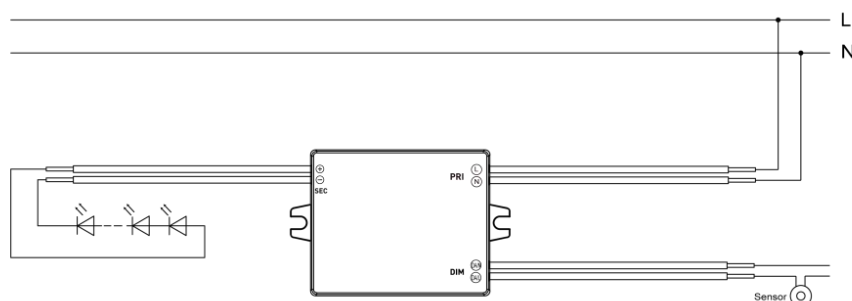
Wire: VDE 7902 20AWG

Length: 180±10mm

Wiring Diagram (Switch-DIM)



Wiring Diagram (Corridor Function)



Hot plug-in or secondary switching of LEDs is not permitted and may cause a very high current to the LEDs.

DALI Dimming Constant Current LED Driver

MIN-15D



Functions

DALI

In this operating mode the light level of the device is controlled via its DALI address.

Switch-DIM

Alternatively the device can be controlled using switch-inputs for mains voltage, the dim level is saved at power-down and restored at power-up.

-Short press(<1S): switches LED driver ON and OFF

-Long press: LED modules are dimmed. After repush the LED modules are dimmed in the opposite direction.

Synchronization

In installations with LED drivers with different dimming levels or opposite dimming directions, all LED drivers can be synchronized to 50% dimming level by a 15S push, switch off the light by short press one time, then long press. Up to 25 LED drivers can be controlled via direct switch-button use. The number of switch-button is limited by the sum of the overall cable length between switch(es) and the connected LED drivers, which may not exceed 20m.

Corridor Function

Activating the Corridor Function

-By supply voltage: Activate the Corridor Function by permanently applying the supply voltage (220-240V, 50/60Hz) to the DALI input of the driver for at least 5 minutes, the light up 100%(under the default setting).

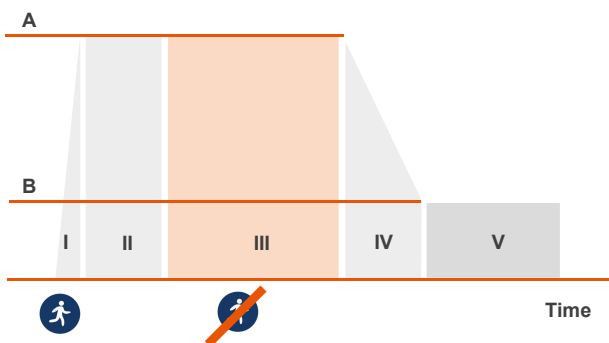
-By sensor: Activate the Corridor Function by keeping the movement in the effective sensing area for at least 5 minutes, the light up 100%(under the default setting).

Changing from the Corridor Function to the Switch-DIM function

-By briefly pressing a push-button 5 times (at the DALI input, 220-240V, 50/Hz) within 3 seconds.

Corridor Function Phasing

Light value



Factory-set parameters:

A: Presence value=100%

B: Absence value=10%

I: Fade-in time=1s

II: By sensor setting

III: Run-on time=2min

IV: Fade time=30s

V: Unlimited

Notice

The compatibility with other devices must be tested in advance to the installation.

DALI application and switch-control application can not apply to the system at the same time.