

DR12MWDALI DALI2.0 LED Driver



SPECIFICATION

Output	Constant Current (mA)	150mA	200mA	250mA	300mA
	Voltage Range (VDC)	24-42VDC			
	Unload voltage Max. (VDC)	60V DC			
	Current Accuracy	±7%	±5%		
	Output current ripple (≤120Hz)	±3%			
	SVM	≤0.4@Full Load			
	PST	≤1@ Full Load			
	Efficiency (Typ.)	91%@Full Load, 230VAC			
	EOFI	15%			
Input	Rated input voltage (VAC)	220-240VAC			
	Range of input voltage (VAC)	198-264VAC			
	Maximum voltage	300VAC@1 h maximum,unit might not operate in this abnormal condition			
	Range of input voltage (VDC)	176-280VDC			
	Frequency (Hz)	0/50/60 Hz			
	Displacement Factor	≥0.9@full load, 230VAC			
	Power Factor	0.95@full load, 230VAC			
	Input Current max	0.1A max			
	Start-up time	<0.8S			
	Switch over time (AC/DC mode)	<0.5S			
	No Load Power	≤0.3W, @220VAC			
	Standby Power	≤0.3W, @220VAC			
	Network Standby Power	≤0.3W,@220VAC			
	THD (Typ.)	<10%@full load,230VAC			
Dimming	Dimming	YES			
	Dimming mode	DALI-2 (IEC 62386-101,102,207,251,252,253) & Push Dimming (Corridor Function)			
	Dimming depth	1%			
	Dimming current range	1~100%			
	Dimming method	1%-10% @AM dimming			

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Protection	Over Load Protection	103-120%
		YES/Auto Resume
	Over Voltage Protection	60VDC
		YES/Auto Resume
	Short circuit Protection	YES/Auto Resume
Capability	Over Temperature Protection	YES/Auto Resume
	Surge capability (L-N)	1KV
	Surge capability (L/N-Ground)	NA
Environment	Operating Temperature	-20°C...+45°C
	Humidity	20%-90%RH
	Tc	80°C
	Storage Temperature	-40°C...+80°C
	Lifetime	> 50,000h@ta=80°C
	Ripple&Noise	≤25dB(A)@20cm
Surface	Dimension	L 98mm X W 43mm X H 22 mm (With side caps: 132x43x22mm)
	Material	Polycarbonate
Standards	Safety	GB19510.1, GB19510.14; IEC61347-1, IEC61347-2-13; AS/NZS61347-1, AS/NZS61347-2-13; AS 61347.2.13; EN62384
	EMC	GB/T17743, GB17625. 1;EN55015, EN61000-3-2, EN61000-3-3, EN61547;EN55015, EN61000-3-2, EN61000-3-3, EN61547,EN 62493;EN61000-4-5;EN61000-4-2,3,4,5,6,8,11, EN61547
	ErP	Erp2.0 EU 2019/2020
	RoHS	RoHS (2011/65/EU) (EU)2015/865
DALI performance	EN 62386-101 (DALI-2) EN 62386-102 (DALI-2) EN 62386-207 (DALI-2,inclusing part251,252,253)	
Note	- All parameters not specially mentioned are measured at 230VAC input , full load and 25°C of ambient temperature. - Ripple & Noise are measured at 20MHz of bandwidth by using a 300mm twisted pair-wire terminated with a 0.1uF & 47uF parallel capacitor. - DALI protocol comprises 16 groups and 64 addresses.Up to 32 drivers can perform the PUSH dimming at the same time when utilizing one push button. - EL compatible with IEC 61347-2-13 Annex J, compatible with EN 60598-2-22 emergency lighting fixtures, compatible with EN 50172 central battery system applications. - The DC input for this product is only used for emergency lighting and applies to functional and safety requirements, EMC is not considered.	

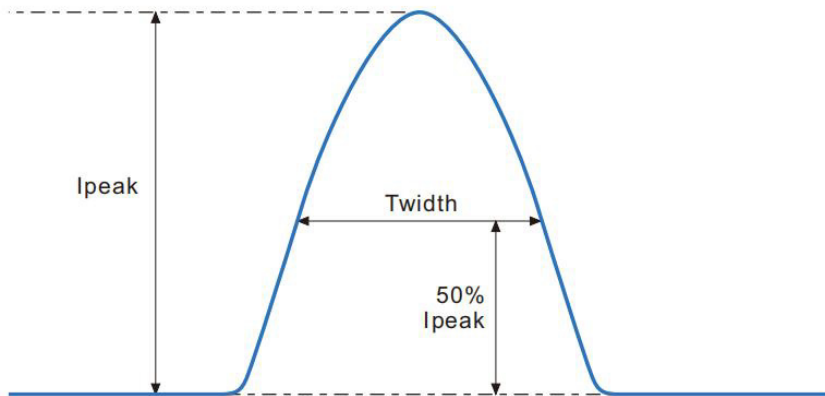
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INPUT & OUTPUT

No.	Output				Switch Position	
	Current (mA)	Voltage (VAC)	Voltage No load (VDC)	Power (W)	1	2
1	150mA	24-42VDC	60VDC	6.3W	--	--
2	200mA			8.4W	ON	--
3	250mA			10.5W	--	ON
4* Factory Default	300mA			12.6W	ON	ON

CIRCUIT BREAKER

$I_{[Peak]}$	$T_{[width]}$	B10	B16	B20	C10	C16	C20
21.7A	138 μ s	27pcs	44pcs	55pcs	46pcs	74pcs	93pcs



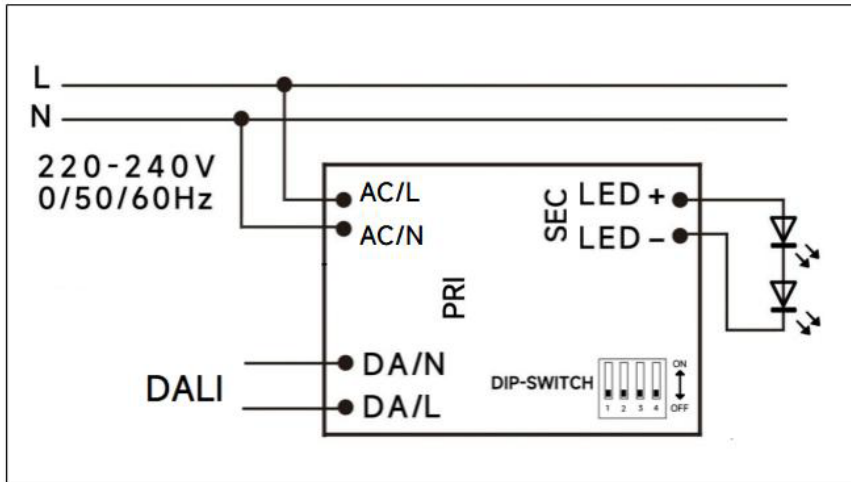
Remarks:

1. The number of drives mounted under different MCBs in the table is the maximum value. Please do not exceed this number during installation.
2. Different brands and models of miniature circuit breakers, the number of drives mounted will be slightly different.

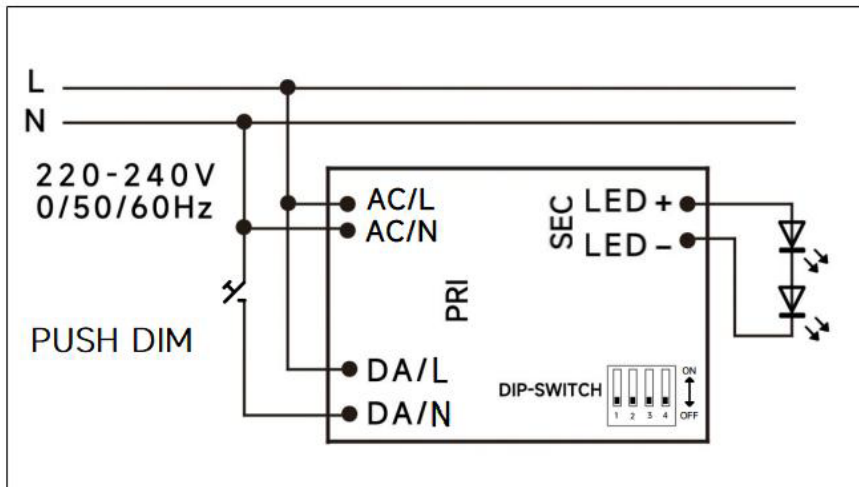
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WIRING DIAGRAM

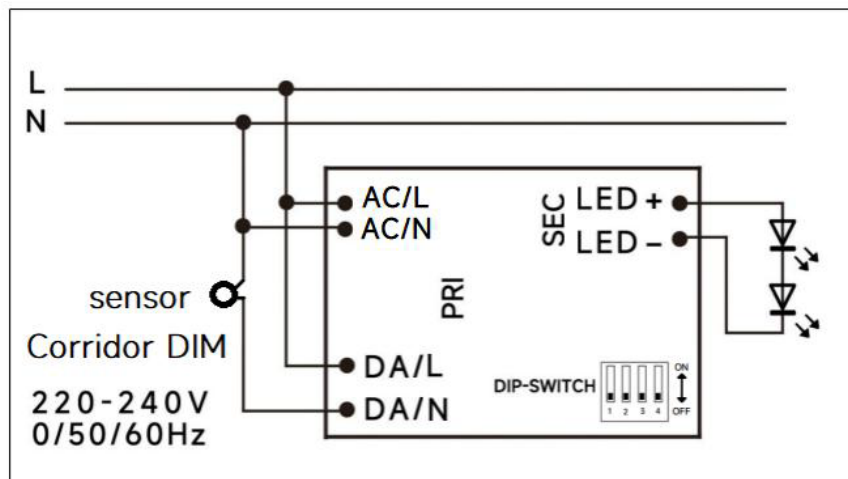
DALI DIMMING APPLICATION



PUSH DIM DIMMING APPLICATION

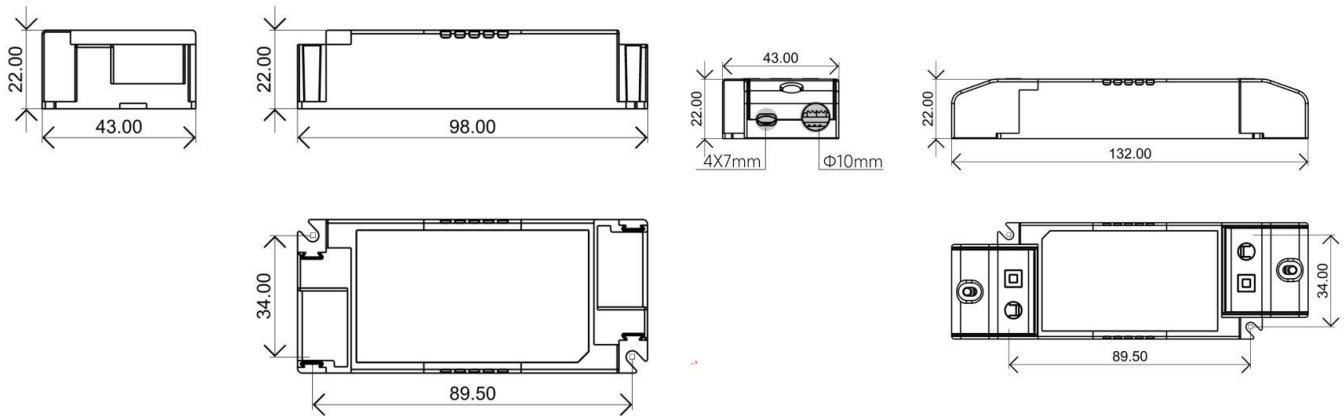


CORRIDOR DIM DIMMING APPLICATION



DR12MWDALI DALI2.0 LED Driver

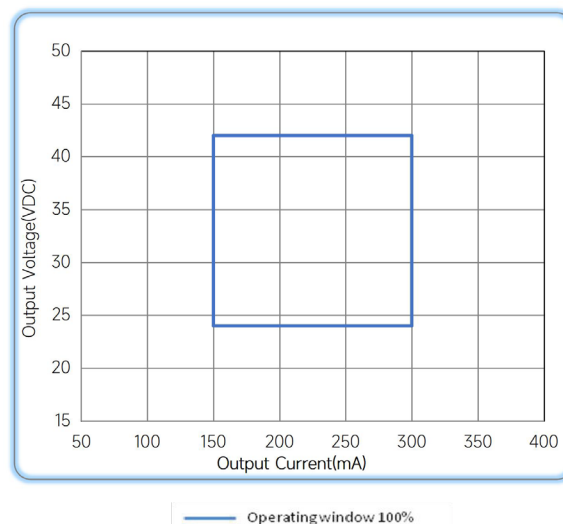
2D DIAGRAM



WIRING & CONNECTIONS

Specification item		Value (Unit)
Input	Input wire cross-section	0.5...1.5 mm ²
	Input wire gauge.	16...20 AWG
	Input wire strip length	7...9mm
Output	Output wire cross-section	0.5. 1.5 mm ²
	Output wire gauge.	16...20 AWG
	Output wire strip length	7...9mm

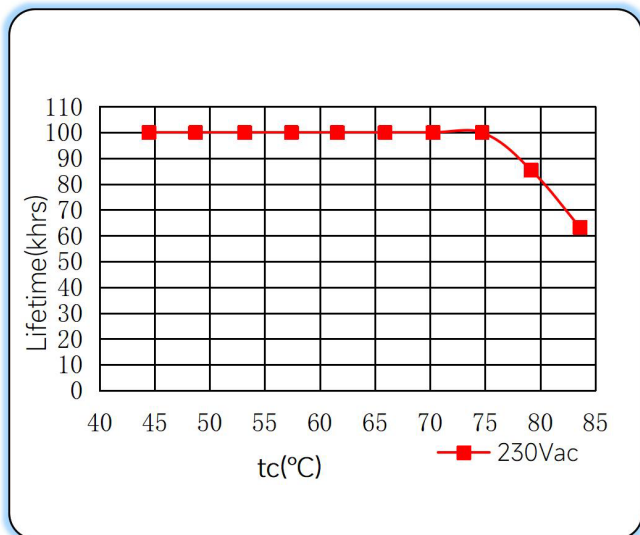
OPERATING WINDOW



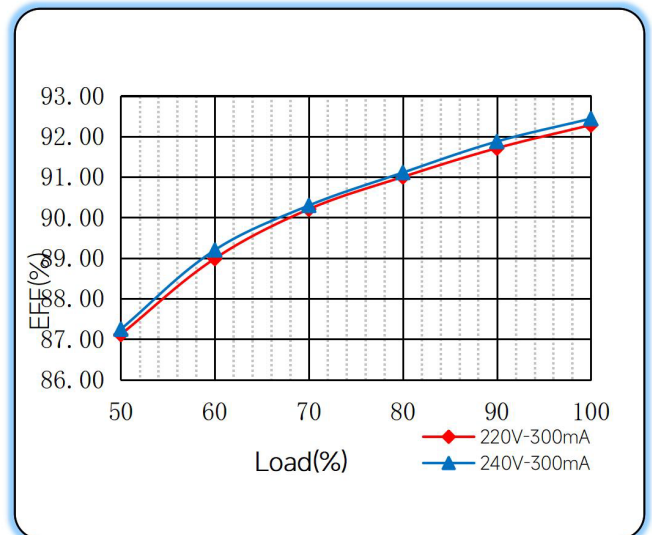
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CURVE FOR DR12MWDALI, $I_o=300\text{mA}$

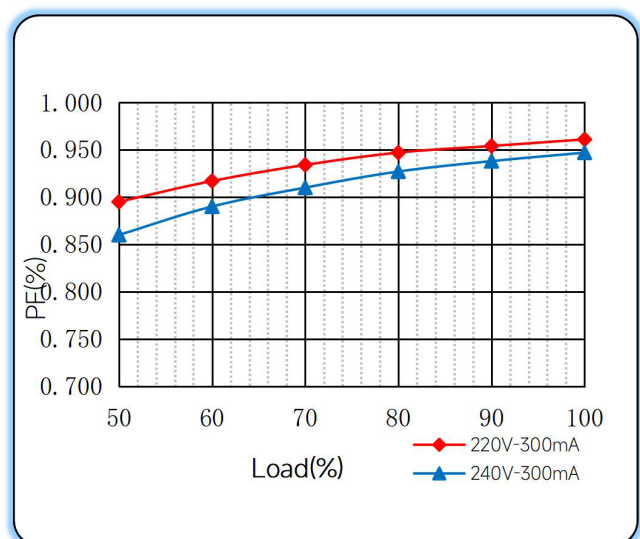
Lifetime vs. Temperature Curve



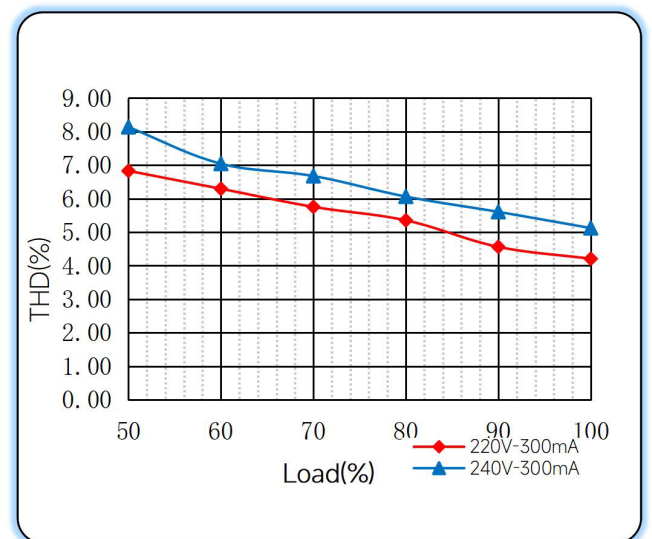
Efficacy vs. Load



Power Factor Characteristics



THD vs. Load



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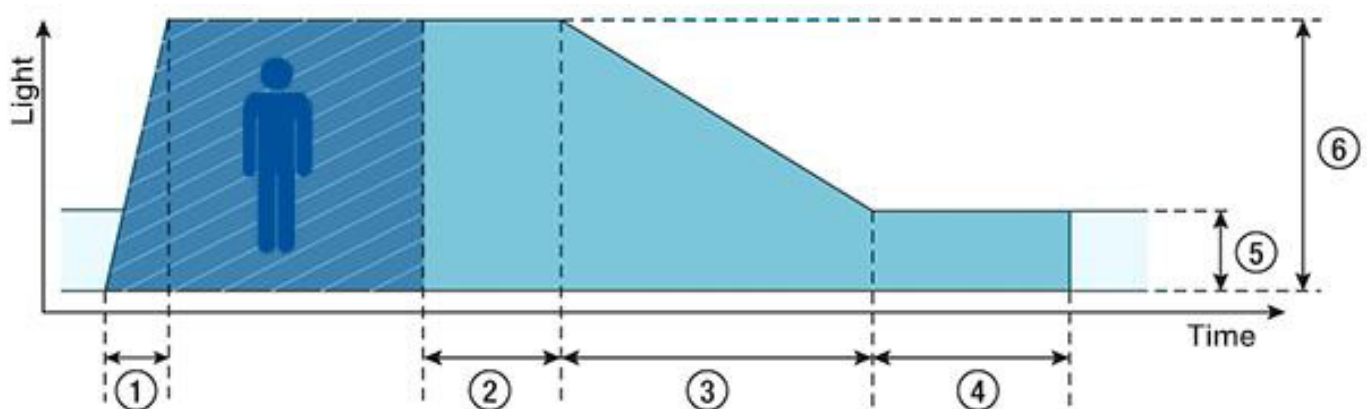
PUSH DIMMING OPERATION

Action	Action duration	Function
Short push	<0.5s	Turn on/off
Short push - twice	<0.5s	LED on: Save current brightness level LED off: Delete saved level and turn on at 100% brightness
Short push - five times	<3s	Quit Corridor mode
Long push	0.5-14s	Dimming up or down
Long push	15s-2mins	Sync all LEDs to be 100% brightness
Long push	>2mins	Enter Corridor mode - LED keep 100% brightness for 2mins. Then brightness will turn to be 10% within 32s if no action during 2mins 100% brightness.

Note:

1. The factory default brightness is at 100%.
2. Up to 30 drivers can perform the PUSH dimming at the same time when utilizing one common push button
3. The maximum length of the cable from the push button to the last driver is 200 meters.

CORRIDOR MODE



1. Fade-in time(0.5s): the time that starts as soon as the presence of a person is detected. During the fade-in time the luminous intensity is faded up to the presence value.
2. Run-on time(120s): the time that starts as soon as the presence of a person is no longer detected. If the presence of a person is detected again during the run-on time the run-on time is restarted from zero. If no presence is detected during the run-on time the fade time is started as soon as the run-on time expires.
3. Fade time(32s): the time during which the luminous intensity is faded from the presence value to the absence value.
4. Switch-off delay (level=10%.Non-configurable): the time during which the absence value is held before the lighting is switched off. Depending on the profile selected the switch-off delay may have different values or may not be defined.
5. Absence value(default: 10 %): the luminous intensity when there is no person present.
6. Presence value (default: 100 %): the luminous intensity when persons are present.