Vlinca Beleuchtungstechnologie GmbH
Ebenseestr. 15 90482 Nuremberg, Germany

Dali driver

Advantage

- Stylish design
- Nominal lifetime up to 50,000 h
- 5 years guarantee

Product description

- Independent constant current LED driver
- Dimmable via DALI-2
- Dimming range 1 to 100 %
- Output current adjustable between 250 – 600 mA with DIP
- Max. output power 24 W
- Up to 87 % efficiency
- Power input on stand-by < 0.5 W

Housing properties

- Casing: polycarbonate, white
- Type of protection IP20

Functions

- Adjustable output current (DIP)
- Protective features (overtemperature, short-circuit, overload, no load)
- Surge protection voltage 1 kV (L – N)
- For cable cross-sections up to 2.5 mm²

Typical applications

- For applications in downlight and decorative luminaires

Standards

EN 62386-101

EN 62386-102

EN 62386-207

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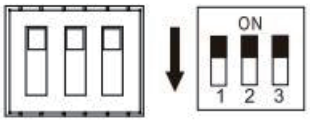
Technical data

	Product type
Rated supply voltage	220 – 240 V
AC voltage range	198 – 264 V
Mains frequency	0 / 50 / 60 Hz
Overvoltage protection	320 V AC, 48 h
Typ. input current (at 230 V, 50 Hz, full load)	⩽125.5mA
Typ. input current (230 V, 50 Hz, full load, dimming)	0 – 125.5mA
Leakage current (at 230 V, 50 Hz, full load)	< 150 µA
Max. input power	27.6 W
Typ. efficiency (at 230 V, 50 Hz, full load)	87.5%
λ (at 230 V, 50 Hz, full load)	0.95
Typ. power consumption on stand-by	< 0.5 W
Typ. input current in no-load operation	17.3 mA
Typ. input power in no-load operation	0.43 W
In-rush current (peak / duration)	TBD
THD (at 230 V, 50 Hz, full load)	< 15 %
Starting time (at 230 V, 50 Hz, full load)	<1 s
Starting time (DC mode)	< 0.3 s
Switchover time (AC/DC)	< 0.2 s
Turn off time (at 230 V, 50 Hz, full load)	< 20 ms
Output current tolerance	± 5 %
Max. output current peak (non-repetitive)	≤ output current + 20 %
Output LF current ripple (< 120 Hz)	± 5 %
Output P_ST_LM (at full load)	≤ 1
Output SVM (at full load)	≤ 0.4
output voltage (U-OUT)	27-40 V
output current (I-OUT)	250/300/350/400/450/500/550/600mA
Dimming range	1 – 100 %
Mains surge capability (between L - N)	1 kV
Mains surge capability (between L/N - PE)	2 kV
Surge voltage at output side (against PE)	< 0.5 kV
Type of protection	IP20
Lifetime up to	50,000 h
Guarantee	5 Year(s)
Dimensions D x H	Ø63 x40mm

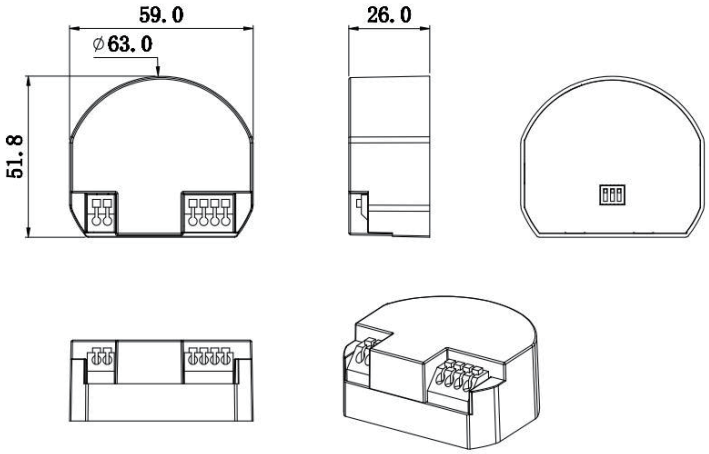
Specific Technical Data

Type	Outpet Mode	Input Voltage	Output Power	Output Voltage	Output Current	Ripple	Module	Dimension
VDL G1 P24DCA40DIP250-600mA R BI	DIM	220-240Vac	Max. 24W	27-40Vdc	250-600mA	/	DALI2 DT6	₵63 x40 mm

Iout	600mA	550mA	500mA	450mA	400mA	350mA	300mA	250mA
1	ON	ON	ON	ON	—	—	—	—
2	ON	ON	—	—	ON	ON	—	—
3	ON	—	ON	—	ON	—	ON	—



Dimensions(unit：mm)



Article number	Description	Dimension of product	Net Wt/pc	Package/ctn	Dimension of carton
1060800394	VDL G1P24DCA40DIP250-600mA R BI	₵63 x40 mm	80g	100PCS	318*154.5*233MM

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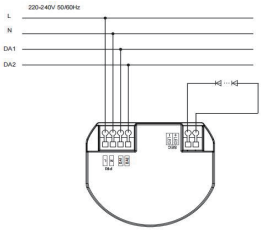
1. Standards

EN 55015
EN 61000-3-2
EN 61000-3-3
EN 61347-1
EN 61347-2-13
EN 61547
EN IEC 62384
EN 61643-11

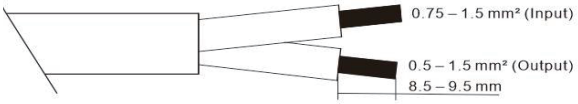
2. Installation and wiring

2.1 Circuit diagram



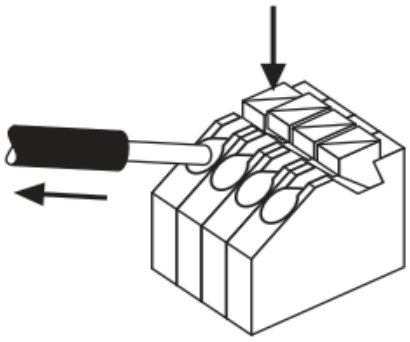
2.2 Wiring type and cross section

The wiring can be in stranded wires with ferrules or solid with a cross section of 0.75–1.5 mm² (mains wires) and 0.5–1.5 mm² (secondary wires, LED moduel). Strip 8.5–9.5 mm of insulation from the cables to ensure perfect operation of the push-wire terminals.



2.3 Release of the wiring

Press down the " push button" and remove the cable from front.



2.4 Wiring guidelines

- All connections must be kept as short as possible to ensure good EMI behaviour.
- Max length of output wires is 80cm.
- Secondary switching is not permitted.
- Incorrect wiring can damage LED modules.
- To avoid the damage of the driver, the wiring must be protected against short circuits to earth (sharp edged metal parts, metal cable, clips. louver. etc..)

2.5 Replace LED module

1. Mains off
2. Remove LED module
3. Wait for 10 seconds
4.Connect LED module again

3. Thermal details and life-time

Expected life-time

Typ	ta	45℃	50℃	55℃
VDL G1 P24DCA40DIP250-600mA R BI	tc	80℃	85℃	90℃
	Life-time	50000h	50000h	30000h

The LED Drivers are designed for a life-time stated above under reference conditions and with a failure probability of less than 10 %.
Life-time declarations are informative and represent no warranty claim.

4. Maximum loading of automatic circuit breakers in relation to inrush current

Maximum loading of automatic circuit breakers

Automatic circuit	C10	C13	C16	C20	B10	B13	B16	B20	Inrush current I_{max}	Inrush current Time
Installation Ø	1.5mm²	1.5mm²	1.5mm²	1.5mm²	2.5mm²	1.5mm²	1.5mm²	2.5mm²		
VDL G1 P24DCA40DIP250-600mA R BI	46	60	74	93	30	39	48	60	16.8A	140.8µs

This are max. values calculated out of inrush current! Please consider not to exceed the maximum rated continuous current of the circuit breaker.Calculation uses typical values from ABB series S200 as a reference.
Actual values may differ due to used circuit breaker types and installation environment.

4.1 Harmonic distortion in the mains supply (at 230 V / 50 Hz and full load) in %

	THD	3	5	7	9	11
VDL G1 P24DCA40DIP250-600mA R BI	<15%	<12%	<10%	<7%	<5%	<3%

Acc. to EN61000-3-2. Harmonics < 5 mA or < 0.6 % (whatever is greater) of the input current are not considered for calculation of THD.

5. Functions

5.1 Short-circuit behaviour

In case of a short circuit on the secondary side (LED) the LED Driver switches off. After elimination of the short circuit the nominal operation is restored automatically.

5.2 No-load operation

The LED Driver works in burst working mode to provide a constant output voltage regulation which allows the application to be able to work safely when LED string opens due to a failure.

5.3 Overload protection

If the output voltage range is exceeded the LED Driver will protect itself by reducing the LED output current.
After elimination of the overload, the nominal operation is restored automatically.

6. Miscellaneous

6.1 Conditions of use and storage

Humidity: 5 % up to max. 85 %, not condensed (40 days/year at 85 %)
Storage temperature: -20 °C up to max. +80 °C
The devices have to be within the specified temperature range (ta) before they can be operated.

6.2 Maximum number of switching cycles

All LED Driver are tested with 50,000 switching cycles.
The actually achieved number of switching cycles is significantly higher.

7. For LED module use only.

8.Installation shall be done by qualified technician.

9.Do not dispose of electrical appliances as unsorted municipal waste, use separate collection facilities. Contact your local government for information regarding the collection systems available. If electrical appliances are disposed of in landfills or dumps, hazardous substances can leak into the groundwater and get into the food chain, damaging your health and well-being.