Vossloh power supply

Ref: 38.050

Features:

- Programmable via NFC interface (contactless)
- With integrated switchable DALI power supply
- Protection against transient main peaks up to 1KV (between L and N) and up to 2KV (between L/N and PE).
- Electrical short-circuit protection
- Overload protection
- Overtemperature protection
- Protection against “no load” operation
- It is marketed configured at 350mA.

Electrical characteristics

Electrical characteristics	
Power	95 - 165W
Voltage	220V - 240V
Frequency	50-60 Hz
Power factor at full load	>0.97
Inrush current A / µs	51A / 250A
Current output DC mA (±5%)	350mA / 800mA*
Voltage output DC	120-360V
THD %	<9%
Efficiency at full load % (230V)	>96%
Ripple 100 Hz	<1%
Protection class	I
Degree of protection	IP20

Dimming	
Dimmable	Yes
Control system	DALI
Programmable by	NFC
Min. dimming level	1.2%
Max. dimming level	100%
PWM dimming frequency	0Hz
DALI bus power supply guaranteed	50mA
DALI bus power supply max.	62mA

Expected service life time	
Life time	100,000h (75ºC) - 50,000h (80ºC)

Maximum ratings	
Ambient temperature range ºC min./max.	-25ºC / +50ºC
Operation humidity range % min./max.	5% / 60%
Storage temperature range ºC min./max.	-40ºC / +85 ºC
Storage humidity range % min./max.	5% / 95%
Max. operation temperature at tc point ºC	+80 ºC

*On request it can be programmed to the requested current (between 350mA and 800mA).

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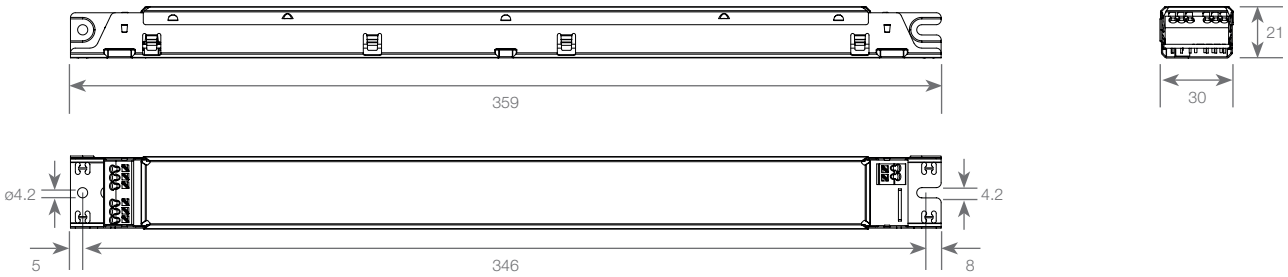
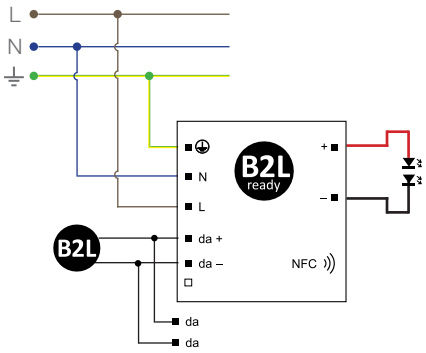


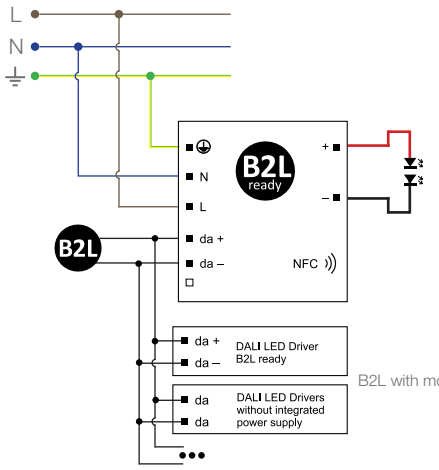
Dimensions and weight

Length	359mm	Weight	285g
Width	30mm	Casing	M10
Height	21mm		

Diagram



B2L with one B2L ready led driver



B2L with more than two B2L ready led drivers

- DALI wiring – Blu2Light ready:
  - As a standard DALI bus is not SELV-compliant, the DALI lead must be rated for mains voltage.
  - The power supply and the DALI lead can be laid in a single cable provided the cable does not exceed a maximum length of 100m, e.g. using 5x1.5mm².

  Please observe the maximum lengths of the DALI lead during installation:

	≥ 1.5 mm²	1 mm²	0.75 mm²	0.5 mm²
6.2 Ω max.	300m	180m	130m	80m

- DALI power supply – Blu2Light ready:
  - The DALI2-B2L interface has an integrated power supply for further DALI devices, e.g. sensors. **The programming unit must not exceed the max. urrent on the DALI bus of 250 mA including driver current**. The DALI control system is connected via the terminal pair da+/da-.
  - Please pay attention to the polarity.

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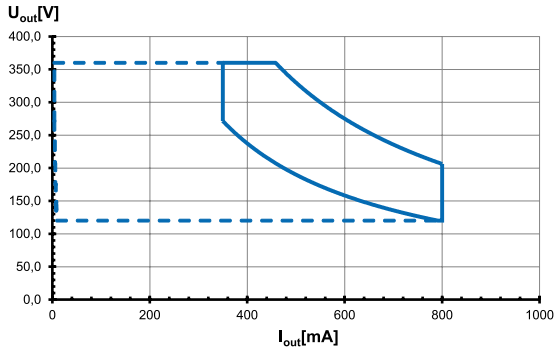
- DALI supply voltage:
  - Guaranteed possible current output: 50mA.

    Note: With a parallel connection, the sum of guaranteed current output is the basis for calculating additional DALI participants. Please take the current consumption of active DALI devices (e.g. sensors) from the corresponding data sheet. Passive DALI devices (f.e. drivers without DALI power supply) are assumed to have a current consumption of 2mA.
  - Max. possible current output: 62mA.

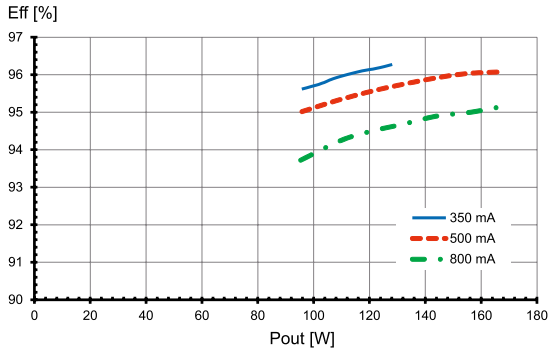
    Note: When DALI power supplies are connected in parallel, it must be ensured that the sum of the maximum possible current output of all voltage sources on the DALI bus does not exceed 250mA.

Type performance graphs / type EDXe

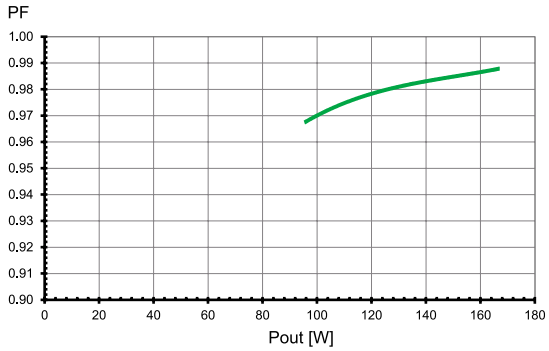
Working area



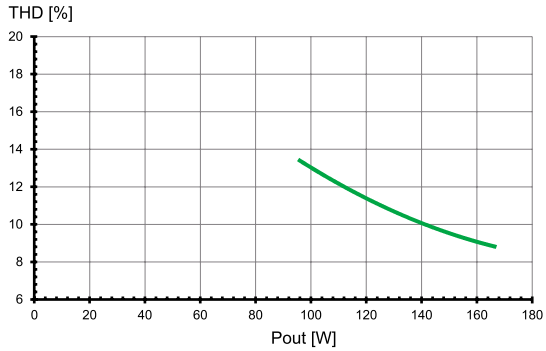
Efficiency



Power factor



Total harmonic factor (THD)



Assembly and safety information

Applied standards:

- EN 60598-2-22
- EN 61347-1
- EN 61347-2-13
- EN 61547
- EN 61000-3-2
- EN 62384
- EN 50172
- EN 55015
- EN 62386 DALI Ed. 2 Part 101,102,207, 250,251,252,253
- DIN VDE 0100
- EN 60598-1

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Mechanical mounting:

- Mounting position:
  - Any position inside a luminaire is allowed.
  - Led drivers are not allowed to use for independent applications.
- Mounting location:
  - led drivers are designed for integration into luminaires or aomparable devices.
  - Installation in outdoor luminaires: degree of protection for luminaire with water protection rate ≥ 4 (e.g. IP54 required).
- Degree of protection: IP20
- Clearance: min. 0.10m from walls, celings and insulation.
- Surface: solid and plane surface for optimum heat dissipation required.
- Heat transfer:
  - If the led drivers is destined for installation in a luminaire. Sufficient heat transfer must be ensured between the led driver and the luminaire casing.
  - Led drivers should be mounted with the greatest possible clearance to heat soucres. During operation, the temperature measure at the led driver's t_c point must not exceed the specified maximum value.
- Fixing: using M4 screws in the designated holes.
- Tightening torque: 0.2 Nm.

Electrical installation:

- Connection terminals: push-in terminals for rigid or flexible conductors with a section of 0.2 - 1.5mm^2, AWG24-16.
- Stripped length: 8.5–9.5mm.
- Wiring: the mains conductor within the luminaire must be kept short (to reduce the induction of interference). Mains and lamp conductors must be kept separate and if possible should not be laid in parallel to one another.
- Polarity: please ensure the correct polarity of the leads prior to commissioning. Reversed polarity can destroy the modules.
- Through-wiring: is not allowed.
- Secondary load: the sum of forward voltages of led leads is within the tolerances which are mentioned in the "Electrical characteristics" on the data sheet.

DALI:

- DALI function: The DALI interface (Digital Addressable Lighting Interface) is a digital interface for communication between the control gear and the DALI control system. The DALI control system enables, for example, the dimming of the led module. The respective triggers (e.g. by sensors) for dimming or parameter queries depend on the respective DALI control system. In addition, the control gear can be configured via the DALI interface. This requires an additional programming unit, e.g. commercially available DALI programming units. The DALI control system is connected via the terminal pair da/da.
- DALI bus: If the DALI bus is connected, the device starts with the preset PowerOnLevel 100%. If no DALI bus is connected, the device also starts with 100% light level in system failure mode.
- D4i: D4i drivers contain the standardized DALI bus power supply for further DALI devices according to DALI part 250.

  They also enable extended data functions:
  - DALI Part 251 – Luminaire data
  - DALI Part 252 – Performance data
  - DALI Part 253 – Diagnostic data

Selection of automatic cut-outs for vs led drivers:

- Dimensioning automatic cut-outs: high transient currents occur when an led driver is switched on because the capacitors have to load. Ignition of led modules occurs almost simultaneously. This also causes a simultaneous high demand for power. These high currents when the system is switched on put a strain on the automatic conductor cut-outs. which must be selected and dimensioned to suit.
- Release reaction: the release reaction of the automatic conductor cut-outs comply with VDE 0641. part 11. for B. C characteristics.
- No. of led drivers: the maximum number of vs led drivers applies to cases where the devices are switched on simultaneously. Specifications apply to single-pole fuses. The number of permissible drivers must be reduced by 20% for multi-pole fuses. The considered circuit impedance equals 400 mΩ (approx. 20 m [2.5 mm^2] of conductor from the power supply to the distributor and a further 15 m to the luminaire).