

## DALI PS3

DALI power supply

### Product description

- DALI-2 power supply providing 70 mA for a DALI-2 installation
- Excellent scalability allowing to connect up to 2 PS3 in a DALI-2 installation
- Compact form factor combined with detachable mounting flaps allowing high installation flexibility, e.g. in luminaire or behind wall sockets or switches
- Up to 100,000 guaranteed operating hours enable outstanding life-time of the entire lighting system
- 10-year guarantee



**Wiring diagrams and installation examples**, page 3



## DALI PS3

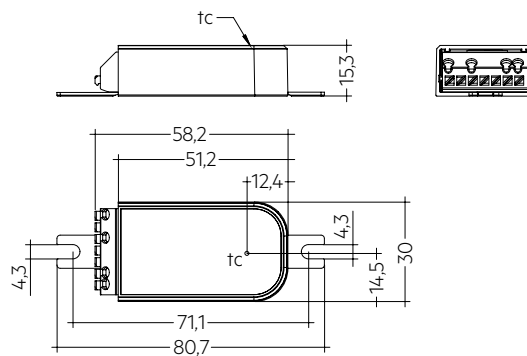
DALI power supply

### Technical data

Rated supply voltage	230 – 240 V
Mains frequency	50 / 60 Hz
Typ. current <sup>①</sup>	0.0172 A
Power consumption <sup>①</sup>	1.75 W
Power output <sup>①</sup>	1.2 W
Typ. power input on stand-by <sup>②</sup>	0.31 W
Output	DALI
Max. level voltage DC, DALI	18.4 V
Min. level voltage DC, DALI	13.6 V
Typ. level voltage DC, DALI	16 V
Guaranteed output current, DALI	0.07 A
Max. output current, DALI	0.105 A
Ambient temperature ta	0 ... +50 °C
Dimensions L x W x H	80.7 x 30 x 15.3 mm
Type of protection	IP20

<sup>①</sup> Test condition at 230 V, 50 Hz and full load.

<sup>②</sup> No DALI traffic at the interface.



### Ordering data

Type	Article number	Packaging, carton	Weight per pc.
DALI PS3	87500873	60 pc(s).	0.02 kg

## 1. Standards

EN/IEC 61347-2-11: 2001  
EN 55015: 2013  
EN 61000-3-2: 2014 Part 3-2  
EN 61000-3-3: 2013 Part 3-3  
EN 61547: 2009  
EN 62386-101 Ed.2.1

### 1.1 Glow-wire test

according to EN 61347-2-11 passed for temperatures up to 850 °C.

## 2. Common

### 2.1 Functional description

DALI PS3 is developed according to EN 62386-101 Ed.2.1 also known as DALI-2. DALI PS3 is a power supply, rated at 16 V DC and providing 70 mA.

With the provided 70 mA current up to 35 DALI loads can be connected.



Standard DALI loads are specified to consume max. 2 mA. Some DALI control devices may consume more than 2 mA (e.g. MSensor G3). If such devices are connected to the PS3 the amount of possible connected devices will be reduced. This has to be considered during the application design.

Up to 2 PS3 can be connected in parallel to provide up to 140 mA.



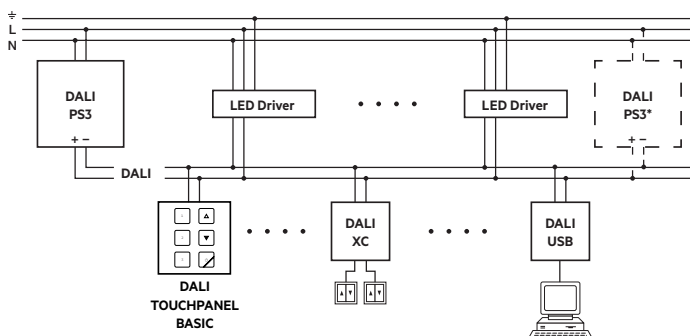
Additional PS3 must be connected in parallel and the polarity has to be considered. Do not connect more than 2 PS3 in one installation. This may cause damage to the device and all other devices connected to the control wires.

The housing provides mounting flaps (manually removable) which can be used for easy installation inside a luminaire.

## 3. Installation

- DALI signals are not SELV. Therefore the same procedures should be applied as working with mains voltage.
- The DALI signal wires must not drop more than 2 V.

### 3.1 Wiring



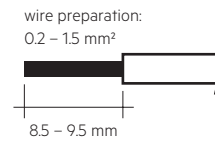
\* Possible connection of additional DALI PS3

### 3.2 Cable types and cable cross-sections

For wiring, stranded wire with ferrules or solid wire with a cable cross-section of 0.2–1.5 mm<sup>2</sup> can be used.

Strip 8.5–9.5 mm of insulation from the cables to ensure perfect operation of the push-wire terminals.

Use one wire for each terminal connector only.



When loosening the wiring, always use the push-button handle and never pull on the wire until the latch is released.

### 3.3 Max. output cable length

Material	Cross-section	Max. cable length		
		25 °C	50 °C	75 °C
Copper	0.20 mm <sup>2</sup>	45 m	41 m	37 m
	0.50 mm <sup>2</sup>	112 m	102 m	93 m
	0.75 mm <sup>2</sup>	168 m	153 m	140 m
	1.00 mm <sup>2</sup>	224 m	204 m	187 m
	1.50 mm <sup>2</sup>	300 m <sup>①</sup>	300 m <sup>①</sup>	281 m
Aluminium	0.20 mm <sup>2</sup>	27 m	25 m	23 m
	0.50 mm <sup>2</sup>	68 m	62 m	57 m
	0.75 mm <sup>2</sup>	102 m	93 m	86 m
	1.00 mm <sup>2</sup>	136 m	125 m	115 m
	1.50 mm <sup>2</sup>	205 m	187 m	172 m

<sup>①</sup> Cable lengths of more than 300 m are not recommended.

### 3.4 Output short circuit conditions

Output short circuit behavior has no delay, retry and restart period of shutdown mechanism, but short circuit proof. The PS3 keeps working even output is short with limited max. output current.

## 4. Thermal details and life-time

### 4.1 Expected life-time

Expected life-time			
Type	ta	40 °C	50 °C
DALI PS3	tc	55 °C	65 °C
	Life-time	>100,000 h	100,000 h

The device is designed for a life-time stated above under reference conditions and with a failure probability of less than 10 %.

## 5. Miscellaneous

### 5.1 Disposal



According to the WEEE directive return old equipment at appropriate collection facilities.

### 5.2 Additional information

Additional technical information at [www.tridonic.com](http://www.tridonic.com) → Technical Data

Guarantee conditions at [www.tridonic.com](http://www.tridonic.com) → Services

Life-time declarations are informative and represent no warranty claim. No warranty if device was opened.