OPTOTRONIC Intelligent – DEXAL

Compact constant current LED driver – Dimmable



Areas of application

- DEXAL, easy connection to different partner BMS systems
- Suitable for "Works with OSRAM DEXAL" partner components
- Installation in emergency lighting systems according to IEC 61347-2-13, appendix J
- Suitable for use in luminaires with flexible current setting
- Suitable for indoor SELV installations
- Suitable for luminaires of protection classes I and II
- Suitable for downlights, spotlights and LED panels
- Installation via Cable Clamp Kit possible (depending on version of product)

Product family benefits

- Versatile DALI window driver due to flexible output characteristic
- Integrated DEXAL Bus power supply for sensors and wireless radios
- Simplified luminaire design for wireless lighting control system and sensors
- Locking and unlocking of luminaire/driver data
- Advanced luminaire/driver data (power, energy, operating hours...) for analytics
- D4i certified incl. Parts 250, 251, 252, 253
- Easy and fast output current setting via NFC
- Very high efficiency
- High-quality dimming of 1...100 % by amplitude dimming

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Versatile scope of application due to OSRAM DALI Technology:

- Suitable for emergency Installations (acc. to EN 60598-2-22 and IEC 61347-2-13,appendix J) thanks to DC detection (0 Hz, pulsating DC), on/off switchable
- Feedback of power consumption and operating hours (Fit for SMART GRID)
- Suitable for buildings according to EPBD/BREEAM/LEED due to automatic Constant Lumen Output setting

Product family features

- Supply voltage: 220…240 V
- Line frequency: 0 Hz | 50 Hz | 60 Hz
- Line voltage: 198…264 V
- According to EN 61347-1, 61347-2-13, 62384
- RI suppression: to EN 55015/CISPR 15
- Immunity according to EN 61547
- Lifetime: up to 100,000 h
- Type of protection: IP20

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Technical data

Electrical data

Product description	Nominal input voltage	Mains frequency	Input voltage AC	Input voltage DC	Total harmonic distortion	Power factor λ
OTI DX 25/220…240/700 NFC	220…240 V	0/50/60 Hz	198…264 V [1)]	176…276 V	< 10 % [2)]	0.67C…0.97
OTI DX 35/220…240/1A0 NFC	220…240 V	0/50/60 Hz	198…264 V [1)]	176…276 V	< 10 % [2)]	0.67C…0.98
OTI DX 50/220…240/1A4 NFC	220…240 V	50…60 Hz	198…264 V [1)]	176…276 V	< 10 % [2)]	0.83C…0.98

Product description	Efficiency in full-load	Device power loss	Inrush current	Max. ECG no. on circuit breaker 10 A (B)	Max. ECG no. on circuit breaker 10 A (C)
OTI DX 25/220…240/700 NFC	88 % [3)]	-	15 A [4)]	18	-
OTI DX 35/220…240/1A0 NFC	90 % [3)]	-	15 A [4)]	18	-
OTI DX 50/220…240/1A4 NFC	91 % [3)]	6.2 W	30 A [11)]	12	-

Product description	Max. ECG no. on circuit breaker 16 A (C)	Max. ECG no. on circuit breaker 16 A (B)	Max. ECG no. on circuit breaker 25 A (B)	Surge capability (L/N-Ground)	Surge capability (L-N)
OTI DX 25/220…240/700 NFC	-	28	-	2 kV	1 kV
OTI DX 35/220…240/1A0 NFC	-	28	-	2 kV	1 kV
OTI DX 50/220…240/1A4 NFC	-	20	-	2 kV	1 kV

Product description	Nominal output voltage	U-OUT (working voltage)	Nominal output current	Default output current	Output current tolerance
OTI DX 25/220…240/700 NFC	15…54 V [5)]	60 V	180…700 mA [6)]	500 mA	±3 %
OTI DX 35/220…240/1A0 NFC	15…54 V [5)]	60 V	350…1050 mA [6)]	700 mA	±3 %
OTI DX 50/220…240/1A4 NFC	15…54 V [5)]	60 V	600…1400 mA [6)]	1050 mA	±3 %

Product description	Output ripple current (100 Hz)	Output PSTLM	Output SVM	Nominal output power
OTI DX 25/220…240/700 NFC	< 3 % [7)]	≤1	≤0.4	27 W [8)]
OTI DX 35/220…240/1A0 NFC	< 3 % [7)]	≤1	≤0.4	35 W [10)]
OTI DX 50/220…240/1A4 NFC	< 3 % [7)]	≤1	≤0.4	55 W [12)]

Product description	Maximum output power	DEXAL Guaranteed Supply Current	DEXAL Peak Supply Current
OTI DX 25/220…240/700 NFC	27 W	53 mA	60 mA
OTI DX 35/220…240/1A0 NFC	35 W	53 mA	60 mA
OTI DX 50/220…240/1A4 NFC	55 W	53 mA	60 mA

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Product description	DEXAL Supply Voltage	Current set	Power loss in stand-by mode	Galvanic isolation DALI/mains
OTI DX 25/220...240/700 NFC	15 V	DALI / NFC	0.1 W [9]	SELV
OTI DX 35/220...240/1A0 NFC	15 V	DALI / NFC	0.1 W [9]	SELV
OTI DX 50/220...240/1A4 NFC	15 V	DALI / NFC	<0.15 W [9]	SELV

Product description	Galvanic isolation DALI/output	Networked standby power	Galvanic isolation primary/secondary
OTI DX 25/220...240/700 NFC	SELV	≤0.10 W [3]	SELV
OTI DX 35/220...240/1A0 NFC	SELV	≤0.10 W [3]	SELV
OTI DX 50/220...240/1A4 NFC	SELV	≤0.15 W [3]	SELV

[1] Permitted voltage range

[2] At full load, 220...240 V, 50 Hz / see graphs

[3] at 230 V, 50 Hz

[4] t_{width} = 220 µs (measured at 50 % I_{peak})

[5] Maximum 60 V

[6] ±3%

[7] Ripple average at 100 Hz

[8] Partial load 7...27 W

[9] DEXAL"OFF"

[10] Partial load 15...35 W

[11] t_{width} = 200 µs (measured at 50 % I_{peak})

[12] Partial load 22...55 W

Dimensions & weight

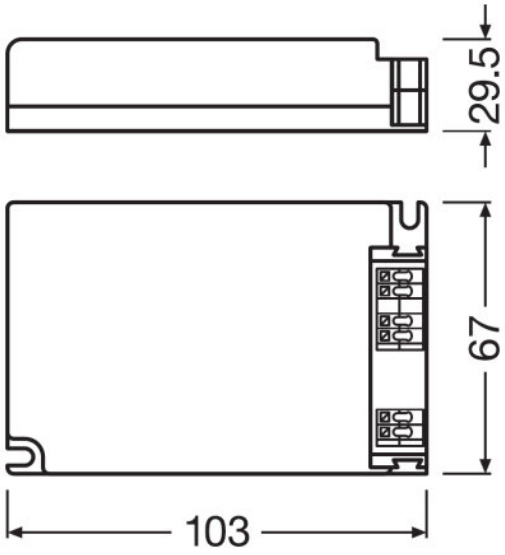
Product description	Mounting hole spacing, length	Mounting hole spacing, width	Product weight	Cable cross-section, input side	Cable cross-section, output side
OTI DX 25/220...240/700 NFC	94.0 mm	58.0 mm	155.00 g	0.2...1.5 mm² [1]	0.2...1.5 mm² [1]
OTI DX 35/220...240/1A0 NFC	94.0 mm	58.0 mm	155.00 g	0.2...1.5 mm² [1]	0.2...1.5 mm² [1]
OTI DX 50/220...240/1A4 NFC	99.0 mm	64.0 mm	185.00 g	0.2...1.5 mm² [1]	0.2...1.5 mm² [1]

Product description	Wire preparation length, input side	Wire preparation length, output side	Height	Width	Length
OTI DX 25/220...240/700 NFC	8.0...9.0 mm	8.0...9.0 mm	29.5 mm	67.0 mm	103.0 mm
OTI DX 35/220...240/1A0 NFC	8.0...9.0 mm	8.0...9.0 mm	29.5 mm	67.0 mm	103.0 mm
OTI DX 50/220...240/1A4 NFC	8.0...9.0 mm	8.0...9.0 mm	25.0 mm	75.0 mm	110.0 mm

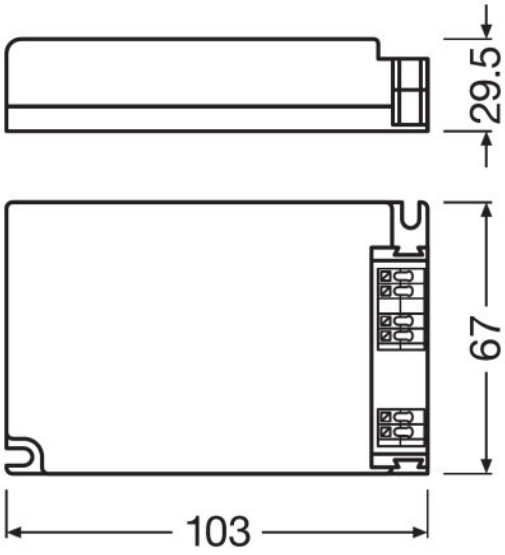
[1] Solid or flexible leads

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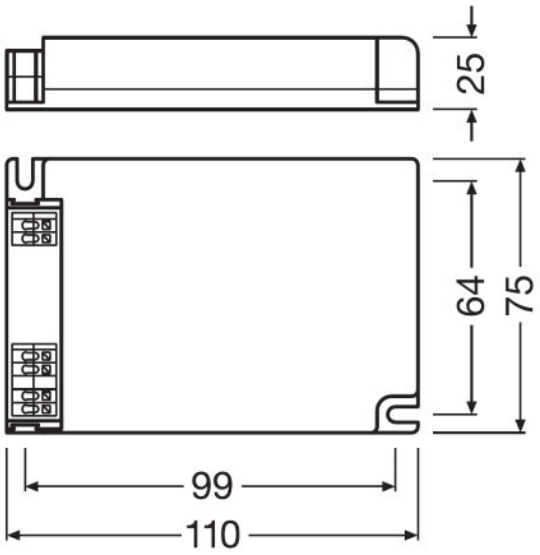
Product line drawing



OTI DX 25/220...240/700 NFC



OTI DX 35/220...240/1A0 NFC



OTI DX 50/220...240/1A4 NFC

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Colors & materials

Product description	Casing material
OTI DX 25/220…240/700 NFC	Plastic
OTI DX 35/220…240/1A0 NFC	Plastic
OTI DX 50/220…240/1A4 NFC	Plastic

Temperatures & operating conditions

Product description	Ambient temperature range	Maximum temperature at tc test point	Max.housing temperature in case of fault	Temperature range at storage
OTI DX 25/220…240/700 NFC	-20…+50 °C	75 °C [1]	110 °C	-40…+85 °C
OTI DX 35/220…240/1A0 NFC	-20…+50 °C	80 °C [1]	110 °C	-40…+85 °C
OTI DX 50/220…240/1A4 NFC	-20…+50 °C	80 °C [1]	110 °C	-40…+85 °C

Product description	Permitted rel. humidity during operation
OTI DX 25/220…240/700 NFC	5…85 % [2]
OTI DX 35/220…240/1A0 NFC	5…85 % [2]
OTI DX 50/220…240/1A4 NFC	5…85 % [2]

[1] Maximum at the Tc-point

[2] Maximum 56 days/year at 85 %

Lifespan

Product description	ECG lifetime
OTI DX 25/220…240/700 NFC	50000 / 100000 h [1]
OTI DX 35/220…240/1A0 NFC	50000 / 100000 h [1]
OTI DX 50/220…240/1A4 NFC	50000 / 100000 h [2]

[1] T_c = 75°C, 0.2% / 1,000 h failure rate / T_c = 65°C, 0.1% / 1,000 h failure rate

[2] T_c = 80°C, 0.2% / 1,000 h failure rate / T_c = 70°C, 0.1% / 1,000 h failure rate

Capabilities

Product description	Dimmable	Dimming interface	Dimming range	Dimming method
OTI DX 25/220…240/700 NFC	Yes	DALI-2 / DEXAL / D4i	1…100 %	Amplitude Modulation
OTI DX 35/220…240/1A0 NFC	Yes	DALI-2 / DEXAL / D4i	1…100 %	Amplitude Modulation
OTI DX 50/220…240/1A4 NFC	Yes	DALI-2 / DEXAL / D4i	1…100 %	Amplitude Modulation

Product description	Overheating protection	Overload protection	Short-circuit protection	No-load proof
OTI DX 25/220…240/700 NFC	Automatic reversible	Automatic reversible	Automatic reversible	Yes
OTI DX 35/220…240/1A0 NFC	Automatic reversible	Automatic reversible	Automatic reversible	Yes
OTI DX 50/220…240/1A4 NFC	Automatic reversible	Automatic reversible	Automatic reversible	Yes

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Product description	Intended for no-load operation	Max. cable length to lamp/LED module	Suitable for fixtures with prot. class	Type of connection, input side
OTI DX 25/220...240/700 NFC	No	2.0 m [1]	I / II	Push terminal
OTI DX 35/220...240/1A0 NFC	No	2.0 m [1]	I / II	Push terminal
OTI DX 50/220...240/1A4 NFC	No	2.0 m [1]	I / II	Push terminal

Product description	Type of connection, output side	Number of channels	DALI-2 Diagnostic Data
OTI DX 25/220...240/700 NFC	Push terminal	1	Yes [2]
OTI DX 35/220...240/1A0 NFC	Push terminal	1	Yes [2]
OTI DX 50/220...240/1A4 NFC	Push terminal	1	Yes [2]

Product description	Suitable for through-wiring	DALI-2 Energy Data	Programming interface
OTI DX 25/220...240/700 NFC	Yes with optional cable clamp	Yes [3]	DALI, NFC
OTI DX 35/220...240/1A0 NFC	Yes with optional cable clamp	Yes [3]	DALI, NFC
OTI DX 50/220...240/1A4 NFC	Yes with optional cable clamp	Yes [3]	DALI, NFC

Product description	Constant lumen function
OTI DX 25/220...240/700 NFC	Programmable
OTI DX 35/220...240/1A0 NFC	Programmable
OTI DX 50/220...240/1A4 NFC	Programmable

[1] Output wires must be routed as close as possible to each other

[2] Acc. DALI part 253

[3] Acc. DALI part 252

Programming

Product description	Box programming	Tuner4TRONIC	Tuner4TRONIC Field App
OTI DX 25/220...240/700 NFC	Yes	Yes	Yes
OTI DX 35/220...240/1A0 NFC	Yes	Yes	Yes
OTI DX 50/220...240/1A4 NFC	Yes	Yes	Yes

Product description	Programming device
OTI DX 25/220...240/700 NFC	DALI / NFC
OTI DX 35/220...240/1A0 NFC	DALI / NFC
OTI DX 50/220...240/1A4 NFC	DALI / NFC

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Programmable features

Product description	Configuration Lock	OEM Key	Corridor Functionality
OTI DX 25/220…240/700 NFC	Yes	No	No
OTI DX 35/220…240/1A0 NFC	Yes	No	No
OTI DX 50/220…240/1A4 NFC	Yes	No	No

Product description	TouchDIM + Sensor	Dim to Dark	Soft Switch Off
OTI DX 25/220…240/700 NFC	No	Yes	Yes
OTI DX 35/220…240/1A0 NFC	No	Yes	Yes
OTI DX 50/220…240/1A4 NFC	No	Yes	Yes

Product description	Driver Guard	DALI-2 Luminaire Data	Emergency Mode
OTI DX 25/220…240/700 NFC	Yes	Yes [1)]	Yes
OTI DX 35/220…240/1A0 NFC	Yes	Yes [1)]	Yes
OTI DX 50/220…240/1A4 NFC	Yes	Yes [1)]	Yes

Product description	DALI Settings	Lamp Operating Time	Constant Lumen
OTI DX 25/220…240/700 NFC	Yes	Yes	Yes
OTI DX 35/220…240/1A0 NFC	Yes	Yes	Yes
OTI DX 50/220…240/1A4 NFC	Yes	Yes	Yes

Product description	Operating Current
OTI DX 25/220…240/700 NFC	Yes
OTI DX 35/220…240/1A0 NFC	Yes
OTI DX 50/220…240/1A4 NFC	Yes

[1)] Acc. DALI part 251

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Certificates & standards

Product description	Approval marks – approval	Standards	Protection class	Type of protection
OTI DX 25/220…240/700 NFC	ENEC 10 / VDE / EMC / EL / CE / DALI-2 / CCC / EAC / D4i	Acc. to EN 61347-1/Acc. to EN 61347-2-13/Acc. to EN 55015/Acc. to EN 61547/Acc. to EN 61000-3-2/Acc. to EN 62384/Acc. to EN 62386/Acc. to IEC 62386-101:Ed2/Acc. to IEC 62386-102:Ed2/Acc. to IEC 62386-207:Ed1	II	IP20
OTI DX 35/220…240/1A0 NFC	ENEC 10 / VDE / EMC / EL / CE / DALI-2 / CCC / EAC / D4i	Acc. to EN 61347-1/Acc. to EN 61347-2-13/Acc. to EN 55015/Acc. to EN 61547/Acc. to EN 61000-3-2/Acc. to EN 62384/Acc. to EN 62386/Acc. to IEC 62386-101:Ed2/Acc. to IEC 62386-102:Ed2/Acc. to IEC 62386-207:Ed1	II	IP20
OTI DX 50/220…240/1A4 NFC	ENEC 10 / VDE / EMC / EL / CE / DALI-2 / CCC / EAC / D4i	Acc. to EN 61347-1/Acc. to EN 61347-2-13/Acc. to EN 55015/Acc. to EN 61547/Acc. to EN 61000-3-2/Acc. to EN 62384/Acc. to EN 62386/Acc. to IEC 62386-101:Ed2/Acc. to IEC 62386-102:Ed2/Acc. to IEC 62386-207:Ed1/Acc. to IEC 62386-250/Acc. to IEC 62386-251, -252, -253	II	IP20

Logistical data

Product description	Commodity code
OTI DX 25/220…240/700 NFC	85044083900
OTI DX 35/220…240/1A0 NFC	85044083900
OTI DX 50/220…240/1A4 NFC	85044083900

Environmental information
Information according Art. 33 of EU Regulation (EC) 1907/2006 (REACh)

Product description	Date of Declaration	Primary Article Identifier	Candidate List Substance 1
OTI DX 25/220…240/700 NFC	08-12-2023	4062172017947	Lead
OTI DX 35/220…240/1A0 NFC	08-12-2023	4062172017961	Lead
OTI DX 50/220…240/1A4 NFC	14-07-2023	4062172061865	Lead

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Product description	CAS No. of substance 1	Safe Use Instruction	Declaration No. in SCIP database
OTI DX 25/220...240/700 NFC	7439-92-1	The identification of the Candidate List substance is sufficient to allow safe use of the article.	1c96444a-ec99-412f-a42f-74c8212869c0
OTI DX 35/220...240/1A0 NFC	7439-92-1	The identification of the Candidate List substance is sufficient to allow safe use of the article.	0f95edbb-46db-452b-8ae4-875397c4c65f
OTI DX 50/220...240/1A4 NFC	7439-92-1	The identification of the Candidate List substance is sufficient to allow safe use of the article.	a0369a02-b942-498c-9dd5-e3789afa536a

Application advice

For more detailed application information and graphics please see product datasheet.

Additional product information

- The DEXAL interface is polarity sensitive, even if the DEXAL bus power supply in the driver is turned off. Therefore the polarity of all connected drivers should not be mixed.
- For efficiency and standby power measurement, the D4i bus power supply shall be switched off by using Tuner4TRONIC. Refer to www.tuner4tronic.com.

Sales and Technical Support

Sales and Technical Support www.osram.com

Download Data

	File
	User instruction OPTOTRONIC LED Power Supply
	Brochures Technical application guide DEXAL LED drivers (EN)
	Certificates OTI DX DALI NFC CB DE1 63108 190220
	Certificates OT EMC 40050085 200220
	Certificates OTI DALI DX 25 35 NFC CCC 2020171002003129 071223
	Certificates OTI DALI DX 25 35 NFC CCC 2020171002003130 071223

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	Certificates OT ENEC 40038447 260623
	Certificates OT EMC 40044675 031022
	Declarations of conformity OTI DX DALI NFC CE 3770568 040923
	Declarations of conformity OTI DALI DX NFC UK DoC 4281072 040923
	CAD data OTI DX 25 35 NFC IGS 280120
	CAD data OTI DX 25 35 NFC STEP 280120
	CAD Data 2-dim OTI DX 25 35 NFC CAD2PDF 280120
	CAD data 3-dim OTI DX 25 35 NFC CAD3PDF 280120
	CAD data CAD data OTi DALI 50220-2401A4 NFC built in IGS
	CAD data CAD data OTi DALI 50220-2401A4 NFC built in STEP
	CAD data PDF CAD data OTi DALI 50220-2401A4 NFC built in pdf

Ecodesign regulation information:

Intended for use with LED modules.
The forward voltage of the LED light source shall be within the defined operating window of the control gear in all operating conditions including dimming if applicable.

Separate control gear and light sources must be disposed of at certified disposal companies in accordance with Directive 2012/19/EU (WEEE) in the EU and with Waste Electrical and Electronic Equipment (WEEE) Regulations 2013 in the UK. For this purpose, collection points for recycling centres and take-back systems (CRSO) are available from retailers or private disposal companies, which accept separate control gear and light sources free of charge. In this way, raw materials are conserved and materials are recycled.

Logistical Data

Product code	Product description	Packaging unit (Pieces/Unit)	Dimensions (length x width x height)	Volume	Gross weight
4062172017947	OTI DX 25/220...240/700 NFC	Shipping carton box 20	218 mm x 158 mm x 155 mm	5.34 dm^3	3237.00 g
4062172017961	OTI DX 35/220...240/1A0 NFC	Shipping carton box 20	218 mm x 158 mm x 155 mm	5.34 dm^3	3237.00 g

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Logistical Data

4062172061865	OTI DX 50/220...240/1A4 NFC	Shipping carton box 20	389 mm x 234 mm x 72 mm	6.55 dm^3	4218.00 g

The mentioned product code describes the smallest quantity unit which can be ordered. One shipping unit can contain one or more single products. When placing an order, for the quantity please enter single or multiples of a shipping unit.

Accessories Optional

Product description	Accessory name	Accessory code
OTI DX 25/220...240/700 NFC	OT CABLE CLAMP B-STYLE	4052899077881
OTI DX 25/220...240/700 NFC	OT CABLE CLAMP B-STYLE TL	4052899948051
OTI DX 35/220...240/1A0 NFC	OT CABLE CLAMP B-STYLE	4052899077881
OTI DX 35/220...240/1A0 NFC	OT CABLE CLAMP B-STYLE TL	4052899948051
OTI DX 50/220...240/1A4 NFC	OT CABLE CLAMP A-STYLE	4052899089570
OTI DX 50/220...240/1A4 NFC	OT CABLE CLAMP A-STYLE TL	4052899325982

Data privacy

This OSRAM driver can be configured using the Tuner4TRONIC software. This requires registering on www.myosram.com and downloading theTuner4TRONIC software from the Internet. The Tuner4TRONIC software enables users to access and view the operational data of a luminaire or driver via the corresponding programming interfaces. A password key (Config Lock) must be set up in the driver via the Tuner4TRONIC software in order to control which users can access and view operational data. Follow the instructions for password setup. To grant an external person or company rights to access or view operational data, you can assign password keys. In this case, however, you are responsible for ensuring that the third party concerned takes notice of the information described here. However, OSRAM can read out operating data from devices for maintenance and service purposes even when a password key has been assigned. In individual cases, OSRAM will also use its access rights in order to optimize or improve driver hardware and driver functions. In accordance with data privacy principles, any user of operating data (luminaire manufacturers, third parties with access rights) must ensure that personal data (e.g. name, address, location IDs) are only merged with the prior written consent of the person (end user) concerned. The respective user of the operating data is responsible for providing evidence of consent.

Disclaimer

Subject to change without notice. Errors and omission excepted. Always make sure to use the most recent release.

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