OPTOTRONIC Intelligent Industry – DEXAL (non-isolated)

Linear constant current LED driver – Dimmable

Areas of application

- Linear and area lighting
- Industry lighting
- Suitable for luminaires of protection class I

Product family benefits

- Versatile non-isolated DEXAL LED driver up to 150 W 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
- Prepared for DiiA Specification Parts -250, -251, -252 and -253
- Fully programmable via T4T software (NFC, DALI Interface)
- Lifetime: up to 100,000 h (temperature at T_C = 75 °C, max. 10 % failure rate)
- High light quality: 1...100% amplitude dimming and <1% output ripple current
- Wide operating temperature range: -40...+65 °C
- High surge protection: up to 4 kV (L-N) / 4 kV (L/N-PE)
- Integrated inrush current limiter
- Very high efficiency (up to 96%)

Product family datasheet

Product family features

- Line frequency: 0 Hz | 50 Hz | 60 Hz
- Versatile scope of application due to output power range of up to 150 W
- Monitoring of luminaire operating parameters
- Supply voltage: 220…240 V
- Available with output current range: up to 850 mA
- Constant Lumen Output (CLO)
- Integrated customizable thermal management (Driver Guard)
- Non-isolated drivers

Technical data

Electrical data

Product description	Nominal input voltage	Mains frequency	Input voltage AC	Input voltage DC	Current set
OTI DX 100/220...240/700 D NFC IND L	220...240 V	0/50/60 Hz	198...264 V	176...276 V	NFC / LEDset / Programmable
OTI DX 150/220...240/850 D NFC IND L	220...240 V	0/50/60 Hz	198...264 V	176...276 V	NFC / LEDset / Programmable

Product description	Total harmonic distortion	Power factor λ	Efficiency in full-load	Device power loss
OTI DX 100/220...240/700 D NFC IND L	< 10 %	> 0.95	93 % [1)]	2.0 W
OTI DX 150/220...240/850 D NFC IND L	< 10 %	> 0.95	95 % [1)]	2.5 W

Product description	Networked standby power	Inrush current	Max. ECG no. on circuit breaker 10 A (B)	Max. ECG no. on circuit breaker 10 A (C)	Max. ECG no. on circuit breaker 16 A (C)
OTI DX 100/220...240/700 D NFC IND L	<0.25 W [1)]	≤ 5 A	21	-	-
OTI DX 150/220...240/850 D NFC IND L	<0.25 W [1)]	≤ 5 A	18	-	-

Product description	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 100/220...240/700 D NFC IND L	36	-	4 kV	4 kV
OTI DX 150/220...240/850 D NFC IND L	32	-	4 kV	4 kV

Product description	Nominal output voltage	U-OUT (working voltage)	Nominal output current	Output current LEDset open
OTI DX 100/220...240/700 D NFC IND L	64...300 V	< 310 V	200...700 mA	100 mA
OTI DX 150/220...240/850 D NFC IND L	64...300 V	< 310 V	250...850 mA	125 mA

Product description	Output current LEDset shorted	Default output current	Output current tolerance
OTI DX 100/220...240/700 D NFC IND L	200 mA	100 mA [2)]	±3 %
OTI DX 150/220...240/850 D NFC IND L	250 mA	125 mA [2)]	±3 %

Product family datasheet

Product description	Output ripple current (100 Hz)	Output PSTLM	Output SVM	Nominal output power
OTI DX 100/220...240/700 D NFC IND L	< 1 %	≤1	≤0.4	23...100 W
OTI DX 150/220...240/850 D NFC IND L	< 1 %	≤1	≤0.4	43...150 W

Product description	Maximum output power	Galvanic isolation
OTI DX 100/220...240/700 D NFC IND L	100 W	Non isolated
OTI DX 150/220...240/850 D NFC IND L	150 W	Non isolated

[1] at 230 V, 50 Hz

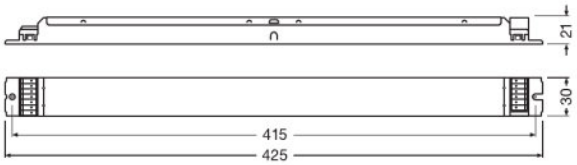
[2] LEDset deactivated

Dimensions & weight

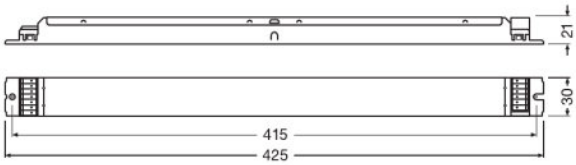
Product description	Mounting hole spacing, length	Product weight	Cable cross-section, input side	Cable cross-section, output side	Wire preparation length, input side
OTI DX 100/220...240/700 D NFC IND L	414.0 mm	311.13 g	0.5...1.5 mm²	0.5...1.5 mm²	8.0...9.0 mm
OTI DX 150/220...240/850 D NFC IND L	414.0 mm	318.93 g	0.5...1.5 mm²	0.5...1.5 mm²	8.0...9.0 mm

Product description	Wire preparation length, output side	Length	Width	Height
OTI DX 100/220...240/700 D NFC IND L	8.0...9.0 mm	425.0 mm	30.0 mm	21.0 mm
OTI DX 150/220...240/850 D NFC IND L	8.0...9.0 mm	425.0 mm	30.0 mm	21.0 mm

Product line drawing



OTI DX 100/220...240/700 D NFC IND L



OTI DX 150/220...240/850 D NFC IND L

Colors & materials

Product description	Casing material
OTI DX 100/220...240/700 D NFC IND L	Metal
OTI DX 150/220...240/850 D NFC IND L	Metal

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 100/220...240/700 D NFC IND L	-40...+70 °C	85 °C	110 °C	-40...+85 °C
OTI DX 150/220...240/850 D NFC IND L	-40...+65 °C	85 °C	110 °C	-40...+85 °C

Product description	Permitted rel. humidity during operation
OTI DX 100/220...240/700 D NFC IND L	5...85 % [1)]
OTI DX 150/220...240/850 D NFC IND L	5...85 % [1)]

[1] Maximum 56 days/year at 85 %

Lifespan

Product description	ECG lifetime
OTI DX 100/220...240/700 D NFC IND L	100000 / 50000 h
OTI DX 150/220...240/850 D NFC IND L	100000 / 50000 h

Additional product data

Product description	Encapsulated
OTI DX 100/220...240/700 D NFC IND L	No
OTI DX 150/220...240/850 D NFC IND L	No

Capabilities

Product description	Programming interface	Dimmable	Dimming interface	Dimming range
OTI DX 100/220...240/700 D NFC IND L	DEXAL, NFC, LEDset	Yes	DALI-2 / DEXAL	1...100 %
OTI DX 150/220...240/850 D NFC IND L	DEXAL, NFC, LEDset	Yes	DALI-2 / DEXAL	1...100 %

Product description	Dimming method	Overheating protection	Overload protection
OTI DX 100/220...240/700 D NFC IND L	Full analogue dimming / AM/PWM selectable	Automatic reversible	Automatic reversible
OTI DX 150/220...240/850 D NFC IND L	Full analogue dimming / AM/PWM selectable	Automatic reversible	Automatic reversible

Product description	Short-circuit protection	No-load proof	Intended for no-load operation	Max. cable length to lamp/LED module
OTI DX 100/220...240/700 D NFC IND L	Automatic reversible	Yes	No	2.0 m
OTI DX 150/220...240/850 D NFC IND L	Automatic reversible	Yes	No	2.0 m

Product description	Suitable for fixtures with prot. class	Type of connection, input side	Type of connection, output side
OTI DX 100/220...240/700 D NFC IND L	I	Push terminal	Push terminal
OTI DX 150/220...240/850 D NFC IND L	I	Push terminal	Push terminal

Product description	Control interface	DALI-2 Diagnostic Data	DALI-2 Energy Data
OTI DX 100/220...240/700 D NFC IND L	DEXAL	Yes	Yes

Product family datasheet

Product description	Control interface	DALI-2 Diagnostic Data	DALI-2 Energy Data
OTI DX 150/220...240/850 D NFC IND L	DEXAL	Yes	Yes

Product description	Number of channels
OTI DX 100/220...240/700 D NFC IND L	1
OTI DX 150/220...240/850 D NFC IND L	1

Programming

Product description	Programming device	Tuner4TRONIC	Tuner4TRONIC Field App
OTI DX 100/220...240/700 D NFC IND L	DALI magic / NFC Scanner	Yes	Yes
OTI DX 150/220...240/850 D NFC IND L	DALI magic / NFC Scanner	Yes	Yes

Product description	Box programming
OTI DX 100/220...240/700 D NFC IND L	Yes
OTI DX 150/220...240/850 D NFC IND L	Yes

Programmable features

Product description	DALI-2 Luminaire Data
OTI DX 100/220...240/700 D NFC IND L	Yes
OTI DX 150/220...240/850 D NFC IND L	Yes

Certificates & standards

Product description	Approval marks – approval	Standards	Type of protection
OTI DX 100/220...240/700 D NFC IND L	CE / EL / VDE-ENEC / VDE-EMC / EAC / CCC / BIS / RCM	Acc. to IEC 61347-1/Acc. to IEC 61347-2-13/Acc. to IEC 62384/Acc. to IEC 62386/Acc. to IEC 61000-3-2/Acc. to IEC 61000-3-3/Acc. to IEC 61547	IP20
OTI DX 150/220...240/850 D NFC IND L	CE / EL / VDE-ENEC / VDE-EMC / EAC / CCC / BIS / RCM	Acc. to IEC 61347-1/Acc. to IEC 61347-2-13/Acc. to IEC 62384/Acc. to IEC 62386/Acc. to IEC 61000-3-2/Acc. to IEC 61000-3-3/Acc. to IEC 61547	IP20

Logistical data

Product description	Commodity code
OTI DX 100/220...240/700 D NFC IND L	850440829000
OTI DX 150/220...240/850 D NFC IND L	850440829000

Environmental information

Product description	Date of Declaration	Primary Article Identifier	Candidate List Substance 1
OTI DX 100/220...240/700 D NFC IND L	23-12-2021	4062172050883	Lead
OTI DX 150/220...240/850 D NFC IND L	23-12-2021	4062172050920	Lead

Product description	CAS No. of substance 1	Safe Use Instruction	Declaration No. in SCIP database
OTI DX 100/220...240/700 D NFC IND L	7439-92-1	The identification of the Candidate List substance is sufficient to allow safe use of the article.	84f6c99d-52ae-4314-9d27-aa3717f0ab34
OTI DX 150/220...240/850 D NFC IND L	7439-92-1	The identification of the Candidate List substance is sufficient to allow safe use of the article.	9f93bb03-a796-4ce2-9c58-824ceaf02fde

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 OT ENEC 40038085 171221
	Certificates OT EMC 40044675 250621
	Declarations of conformity OTI DX D NFC IND L CE 3790165 020921
	Declarations of conformity OTI DX D NFC IND L UK DoC 4287982 090221
	CAD data OTI DX D NFC IND L IGS 191219
	CAD data OTI DX D NFC IND L STEP 191219
	CAD Data 2-dim OTI DX D NFC IND L CAD2PDF 191219
	CAD data 3-dim OTI DX D NFC IND L CAD3PDF 191219

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
4062172050883	OTI DX 100/220...240/700 D NFC IND L	Shipping carton box 20	447 mm x 160 mm x 101 mm	7.22 dm^3	6421.00 g
4062172050920	OTI DX 150/220...240/850 D NFC IND L	Shipping carton box 20	447 mm x 160 mm x 101 mm	7.22 dm^3	6577.00 g

Logistical Data

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.

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.