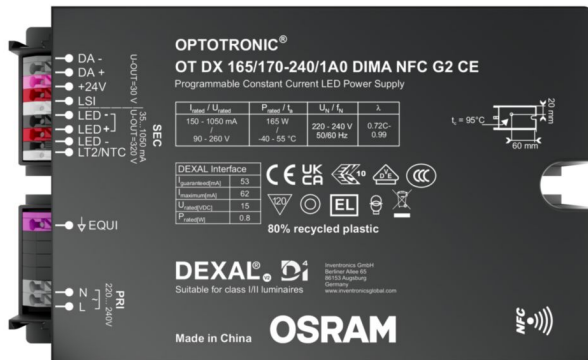


OT DX 165/170-240/1A0 DIMA NFC G2 CE

OPTOTRONIC - DEXAL NFC IP20 G2 | D4i, DEXAL, AstroDIM, StepDIM - constant current LED drivers



Product family features

- DEXAL interface based on DALI-2 communication
- Current output range: 35...1,050 mA
- Available with different wattage: 40 W, 75 W, 110 W, 165 W and 200 W
- AstroDIM for autonomous dimming with five independent levels (astro, time mode)
- Standby power consumption: < 0.35 W
- Integrated customizable thermal management (Driver Guard)
- Constant Lumen Output (CLO)
- Easy and fast wireless luminaire programming via NFC
- Flexible current setting with one additional wire (LEDset2)

Product family benefits

- For Zhaga Book18 Luminaires and D4i certified incl. Parts 25x + AUX
- Electrical interface and data communication fully based on open standards
- Fully programmable via software (DALI Interface, NFC)
- Low luminous efficacy tolerance through low output current tolerance of $\pm 1,5 \%$
- High surge protection: up to 10 kV in protection class I or II
- Lifetime: up to 100,000 h (depending on T_c temperature, max. 10 % failure rate)
- Mains input undervoltage protection
- Fulfill safety requirement due to overload, overtemperature, Hot Plug protection
- DEXAL interface (with 15V current supply on DALI-2 lines - DALI Part 250)
- SELV DEXAL and 24V AUX interface (DALI Part 150) up to 6W
- Standardized DALI-2 communication (incl. monitoring data, energy metering)
- Integrated ESD protection: more robust for installation on non-conductive poles
- Optimized NFC for programming from the top: easy accessibility in luminaires
- Surge and overvoltage protection on DALI interface for DALI installations
- Full compatibility with Tuner4TRONIC and T4T Field App
- BOX Programming: all drivers in one BOX can be programmed in one step



Areas of application

- Street and urban lighting
- Industry
- Suitable for outdoor applications in luminaires with IP > 54
- Suitable for use in outdoor luminaires of protection class I and II

Technical data

Electrical data

Nominal input voltage	220...240 V
Mains frequency	0/50/60 Hz ¹⁾
Input voltage AC	170...264 V ²⁾
Input voltage DC	170...276 V ¹⁾
Total harmonic distortion	< 5 % ³⁾
Power factor λ	0.98 / 0.95 ⁴⁾
Efficiency in full-load	94 % ⁵⁾
Device power loss	9.9 W ⁶⁾
Inrush current	3.3 A ⁷⁾
Max. ECG no. on circuit breaker 10 A (B)	12 ⁸⁾
Max. ECG no. on circuit breaker 16 A (B)	20 ⁸⁾
Surge capability (L/N-Ground)	10 kV
Surge capability (L-N)	6 kV ⁹⁾
Nominal output voltage	90...260 V
U-OUT (working voltage)	300 V
Nominal output current	150...1050 mA
Default output current	700 mA
Output current tolerance	± 1.5 % ¹⁰⁾
Output current LEDset open	70 mA
Output current LEDset shorted	Not allowed
Output ripple current (100 Hz)	4 %
Output PSTLM	≤ 1
Output SVM	≤ 0.4
Nominal output power	165 W ¹¹⁾
Maximum output power	165 W
Galvanic isolation	Double
Networked standby power	0.35 W ¹²⁾

1) Additional fuse needed in DC operation

2) Permitted voltage range

3) Full load, 230V, 50 Hz

4) Within the full operating window

5) at 230 V, 50 Hz

6) Maximum

7) At 3 ms

8) Type B

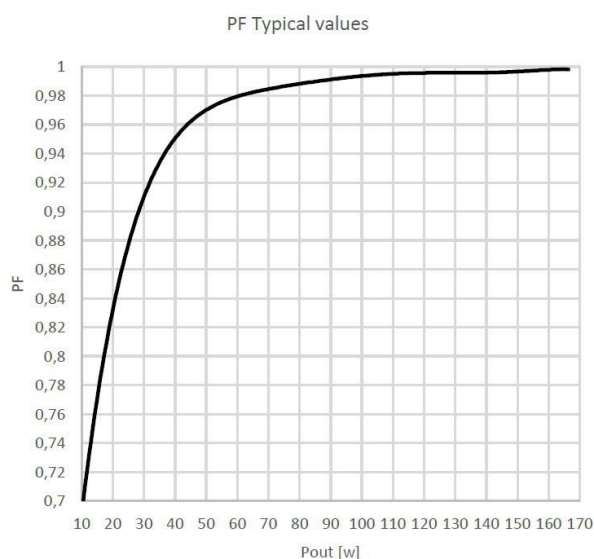
9) @ 2 Ohm, acc. to EN61547

10) $\pm 3\%$ for Output current lower than 150 mA

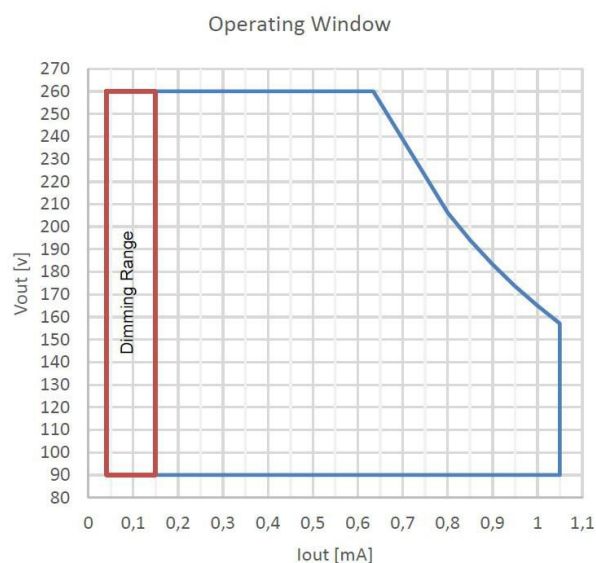
11) Max. 75% in DC operating mode

12) DEXAL power supply disabled

Typical Power Factor v Load

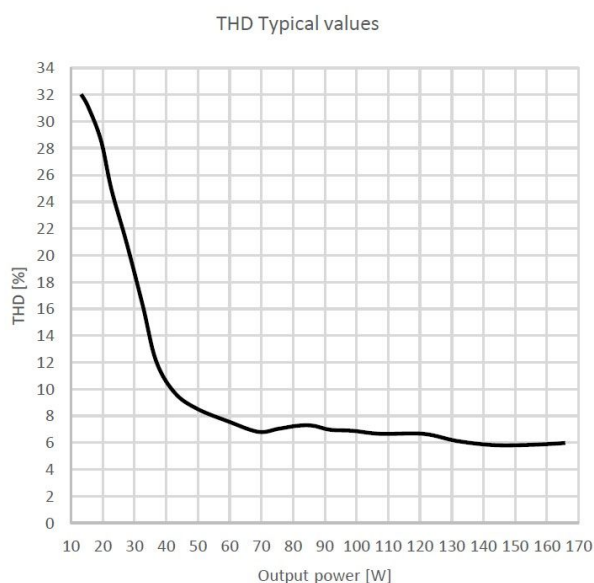


Operating Window



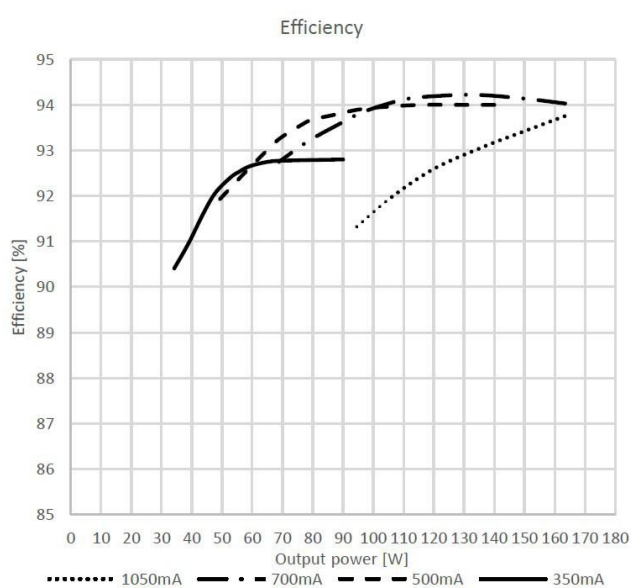
OT DX 165 Typical Power Factor vs. Load

Typical THD v Load



OT DX 165 G2 Operating Window

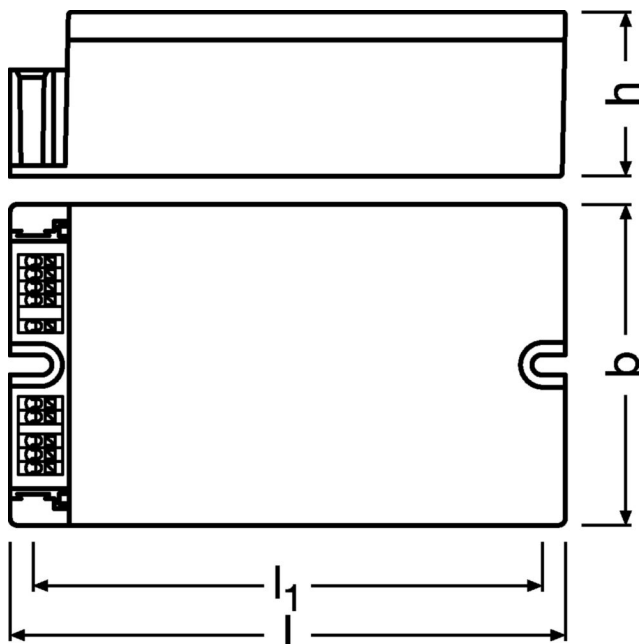
Typical Efficiency v Load 230 V 50 Hz



OT DX 165 G2 Typical THD vs Load

OT DX 165 G2 Typical Efficiency vs. Load (230 V 50 Hz)

Dimensions & weight



Length	150.0 mm
Width	85.0 mm
Height	40.0 mm
Mounting hole spacing, length	134.0 mm
Cable cross-section, input side	0.2... 1.5 mm ² ¹⁾
Cable cross-section, output side	0.2... 1.5 mm ² ²⁾
Wire preparation length, input side	8.5...9.5 mm
Product weight	790.00 g

1) Solid/ Flexible Leads

2) Wire cross section for LT2/NTC and LED-: 0.2... 1.0 mm²

Colors & materials

Casing material	Plastic
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Temperatures & operating conditions

Ambient temperature range	-40...+55 °C
Maximum temperature at tc test point	95 °C
Max.housing temperature in case of fault	110 °C
Temperature range at storage	-40...+85 °C
Permitted rel. humidity during operation	5...95 % ¹⁾

1) The luminaire manufacturer must ensure that condensation water cannot be created within the fixture.

Expected Lifetime

Product name				
OT DX 165/170-240/1A0 DIMA NFC G2 CE	ECG ambient temperature [ta]	55	48	45
	Temperature at tc-point [°C]	95	88	85
	Lifetime [h]	50000	85000	100000

Lifespan

ECG lifetime	50000 / 100000 h ¹⁾
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1) At maximum $T_c = 95^\circ\text{C}$ / 10% failure rate / At $T_c = 85^\circ\text{C}$ / 10% failure rate

Capabilities

Dimmable	Yes
Dimming interface	AstroDIM / DALI/DEXAL/D4i / StepDIM ¹⁾
Dimming range	3...100 %
DALI-2 Diagnostic Data	Yes ²⁾
DALI-2 Energy Data	Yes ³⁾
Constant lumen function	Yes
LEDset	Yes
Max. cable length to lamp/LED module	2.0 m ⁴⁾
Suitable for fixtures with prot. class	I / II
Suitable for emergency lighting	Yes
Number of channels	1
Overheating protection	Yes
Overload protection	Yes
Short-circuit protection	Yes
Intended for no-load operation	No
No-load proof	Yes

1) StepDIM functionality with external component 'OT DX SD BOX' only

2) Acc. DALI part 253

3) Acc. DALI part 252

4) Output wires must be routed as close as possible to each other

Programming

Programming device	DALI / NFC
Tuner4TRONIC	Yes
Tuner4TRONIC Field App	Yes
Box programming	Yes

Programmable features

Emergency Mode	Yes
DALI-2 Luminaire Data	Yes ¹⁾
Configuration Lock	Yes
AstroDIM	Yes
StepDIM	Yes ²⁾
MainsDIM	No
Driver Guard	Yes
Thermal Protection	Yes
Emergency Mode	Yes

1) Acc. DALI part 251

2) StepDIM functionality with external component 'OT DX SD BOX' only

Certificates & standards

Approval marks – approval	CCC / CE / D4i / DALI-2 / EL / ENEC / RCM / VDE
Standards	Acc. to EN 61347-1 / Acc. to EN 61347-2-13 / Acc. to EN 62384 / Acc. to EN 55015:2006 + A1:2007 + A2:2009 / Acc. to EN 61547 / Acc. to FCC 47 part 15 class B / Acc. to IEC 61000-3-2 / Acc. to IEC 61000-3-3 / Acc. to IEC 62386-101 / Acc. to IEC 62386-102 / Acc. to IEC 62386-207 / Acc. to IEC 62386-150 / Acc. to IEC 62386-250 / Acc. to IEC 62386-251, -252, -253
Type of protection	IP20
Protection class	I,II

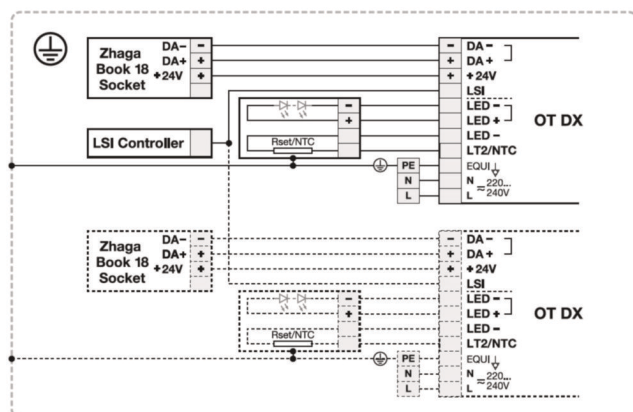
Logistical data

Commodity code	85044083900
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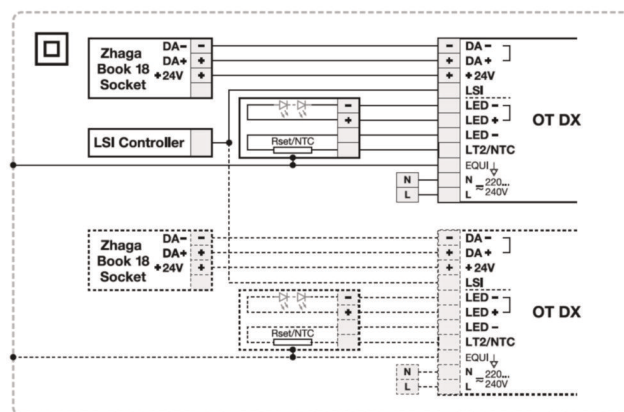
Environmental information

Information according Art. 33 of EU Regulation (EC) 1907/2006 (REACH)	
Date of Declaration	19-04-2024
Primary Article Identifier	4052899631717
Declaration No. in SCIP database	In work

Wiring Diagram



OT DX NFC G2 Wiring diagram I



OT DX NFC G2 Wiring diagram II

Download Data

File		
Mandatory Publications	PDF	►OT DX NFC G2 CE UK DoC 4486035 270923
Mandatory Publications	PDF	►OT DX NFC G2 CE CE 4486034 270923

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.

ISOLATION	Input/Mains	EQUI	DALI	LEDset	LED Output	Case	AUX	LSI	NTC
Input/Mains	-	Double		Double	Double	Double	Double	Double	Double
EQUI	Double	-		Basic	Basic	Basic	Supplementary	Supplementary	Basic
DALI			-						
LEDset	Double	Basic		-		Basic	Basic	Basic	
LED Output	Double	Basic			-	Basic	Basic	Basic	
Case	Double	Basic		Basic	Basic	-	Basic	Basic	Basic
AUX	Double	Supplementary		Basic	Basic	Basic	-		Basic
LSI	Double	Supplementary		Basic	Basic	Basic		-	Basic
NTC	Double	Basic				Basic	Basic	Basic	-

Logistical Data

Product code	Product description	Packaging unit (Pieces/Unit)	Dimensions (length x width x height)	Volume	Gross weight
4052899631717	OT DX 165/170-240/1A0 DIMA NFC G2 CE	Shipping carton box 12 Pieces	319 x 210 x 156 mm	10.45 dm³	9868.00 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

Disclaimer

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