

OT 20/170-240/1A0 4DIM NFC G3 CE

OPTOTRONIC - 4DIM NFC IP20 G3 | DALI-2, AstroDIM, StepDIM, MainsDIM – constant current LED drivers



Product family features

- Supply voltage: 220...240 V
- Wide current output range: 150 mA...1050 mA or 1500 mA
- Easy and fast wireless luminaire programming via NFC
- Flexible current setting with one additional wire (LEDset2)
- AstroDIM for autonomous dimming with five independent levels (astro, time mode)
- Allows for energy saving in twilight phases
- MainsDIM function for dimming via reduction of line voltage amplitude
- Isolated DALI interface for bidirectional telemanagement systems
- Standby power consumption: < 0.35 W
- Constant Lumen Output (CLO)
- Integrated customizable thermal management (Driver Guard)

Product family benefits

- 4DIM functionality in one device (StepDIM, AstroDIM, MainsDIM, DALI)
- DALI-2 certified incl. Parts 251, 252, 253
- Easy and fast wireless luminaire programming
- Very high efficiency
- High surge protection: up to 10 kV (in protection class I or II)
- Great flexibility due to wide operating temperature range of -40...55 °C or 60 °C
- High surge DALI protection: 1 kV
- Protection through double isolation between mains input and LED output
- Optimized NFC for programming from the top: easy accessibility in luminaires



Specifications are subject to changes without notice.

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support@inventronicsglobal.com

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

Max. ECG no. on circuit breaker 10 A (B)	30
Max. ECG no. on circuit breaker 16 A (B)	48
Maximum output power	22 W
Minimum output current	70 mA
Nominal output current	150...1050 mA
Nominal output power	22 W ¹⁾
Nominal output voltage	10...38 V
Nominal input voltage	220...240 V
Input voltage AC	170...264 V ²⁾
Input voltage DC	176...276 V ³⁾
Device power loss	3.5 W
Efficiency in full-load	87 % ⁴⁾
Inrush current	21 A ⁵⁾
Power factor λ	0.39C...0.99 ⁶⁾
Mains frequency	0/50/60 Hz
Surge capability (L-N)	6 kV
Surge capability (L/N-Ground)	10 kV
U-OUT (working voltage)	60 V
Output current tolerance	± 3 % ⁷⁾
Output ripple current (100 Hz)	< 4 %
Total harmonic distortion	< 5 % ⁶⁾
Default output current	700 mA

1) Max. 75% in DC operating mode

2) Permitted voltage range

3) Additional fuse needed in DC operation

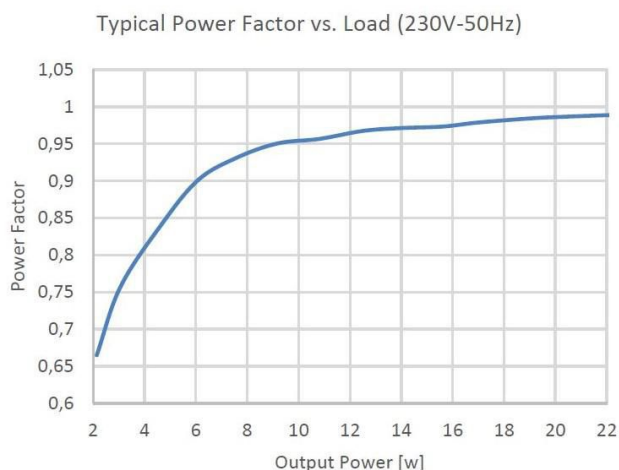
4) at 230 V, 50 Hz

5) At 180 μ s

6) At full power

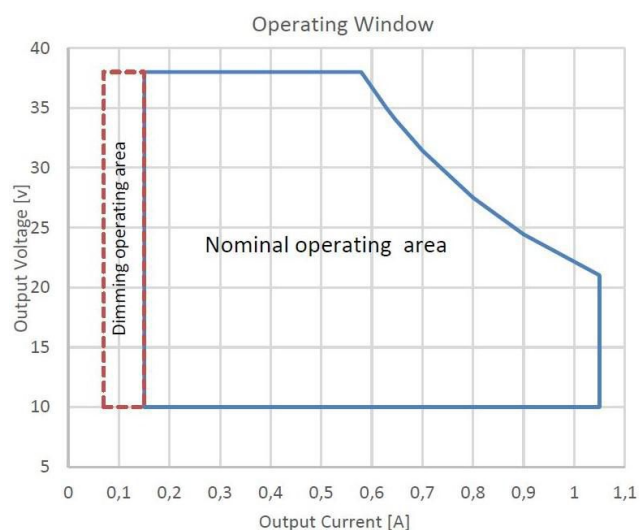
7) +/- 5% for LEDset down to 150mA

Typical Power Factor v Load



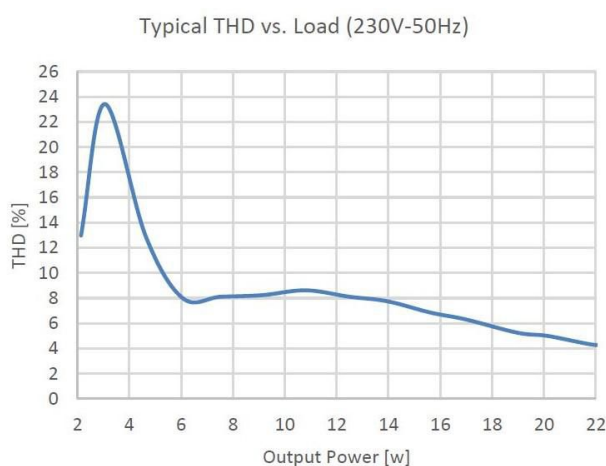
OT 20 1A0 NFC G3 Typical power factor vs Load

Operating Window



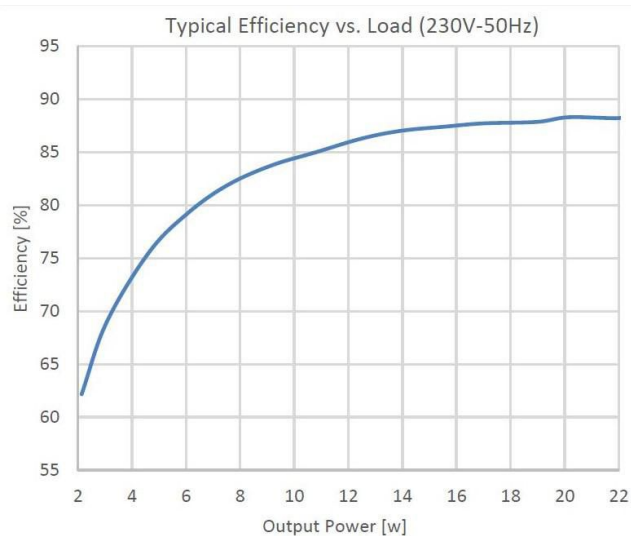
OT 20 1A0 NFC G3 Operating Window

Typical THD v Load



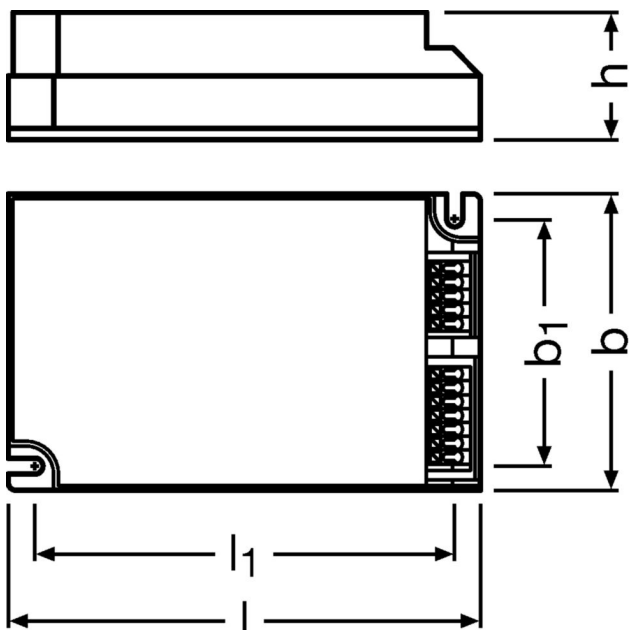
OT 20 1A0 NFC G3 Typical THD vs Load

Typical Efficiency v Load 230 V 50 Hz



OT 20 1A0 NFC G3 Typical Efficiency vs Load

Dimensions & weight



Product weight	210.00 g
Length	123.0 mm
Height	33.0 mm
Width	79.0 mm
Cable cross-section, input side	0.2... 1.5 mm ²
Cable cross-section, output side	0.2... 1.5 mm ²
Mounting hole spacing, length	111.0 mm
Mounting hole spacing, width	67.0 mm
Wire preparation length, input side	8.5...9.5 mm

Colors & materials

Casing material	Plastic
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Temperatures & operating conditions

Ambient temperature range	-40...+60 °C
Max.housing temperature in case of fault	120 °C
Maximum temperature at tc test point	75 °C
Permitted rel. humidity during operation	5...95 % ¹⁾
Temperature range at storage	-40...+85 °C

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

Expected Lifetime

Product name				
OT 20/170-240/1A0 4DIM NFC G3 CE	ECG ambient temperature [ta]	60	50	48
	Temperature at tc-point [°C]	75	65	63
	Lifetime [h]	50000	85000	100000

Lifespan

ECG lifetime	50000 / 100000 h ¹⁾
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1) At maximum $T_c = 75^\circ\text{C}$ / 10% failure rate / At $T_c = 63^\circ\text{C}$ / 10% failure rate

Additional product data

Predecessor EAN	4052899981928
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Capabilities

Max. cable length to lamp/LED module	2.0 m ¹⁾
Number of channels	1
Dimmable	Yes
Dimming interface	4DIM / AstroDIM / DALI / MainsDIM / StepDIM
Dimming range	10...100 %
Overload protection	Automatic reversible
Short-circuit protection	Automatic reversible
Suitable for emergency lighting	Yes
Suitable for fixtures with prot. class	I / II
Constant lumen function	Programmable
LEDset	Yes
No-load proof	Yes

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

Programming

Box programming	Yes
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Programmable features

AstroDIM	Yes
Configuration Lock	Yes
DALI-2 Luminaire Data	Yes ¹⁾
Driver Guard	Yes
Emergency Mode	Yes
MainsDIM	Yes
StepDIM	Yes
Thermal Protection	Yes

1) Acc. DALI part 251

Certificates & standards

Type of protection	IP20
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 / UL-8750
Approval marks – approval	CCC / CE / DALI-2 / EL / ENEC / RCM / VDE

Logistical data

Commodity code	85044083900
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Wiring diagram for the OPTOTRONIC® 4DIM NFC G3 outdoor lighting fixture. The diagram shows the connection of the fixture to a power supply and a control system.

Power Supply Connections:

- DA (Data)
- Lx (Line)
- N (Neutral)

Control System Connections:

- 0-10V

Fixture Connections:

- DA
- Lx
- N
- SD (Signal)
- EQ (Earth)
- LED+
- LED-
- LED+
- LED-

Fixture Components:

- OPTOTRONIC® 4DIM NFC G3
- CE mark
- Res/NTC
- LED

OT 4DIM NFC G3 Wiring diagram II

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Download Data

File		
Certificates	PDF	▶ OT VDE ENEC 40050684 290923
Certificates	PDF	▶ OT 4DIM NFC G3 ZHAGA 4497157 111023
Mandatory Publications	PDF	▶ OT 1DIM 4DIM NFC G3 CE CE 4375359 270923
Mandatory Publications	PDF	▶ OT 1DIM 4DIM NFC G3 UK DoC 4375360 270923
User instruction	PDF	▶ UI OT Outdoor 4DIM NFC G3 CE

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

Logistical Data

Product code	Product description	Packaging unit (Pieces/Unit)	Dimensions (length x width x height)	Volume	Gross weight
4062172218917	OT 20/170-240/1A0 4DIM NFC G3 CE	Shipping carton box 18 Pieces	272 x 260 x 125 mm	8.84 dm ³	372.00 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.