

The trusted value of OSRAM Digital Systems continues with Inventronics Global – where experience meets innovation.

IT DX 110/220-240/1A0 NFC E (NEW)

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



Product family features

- DEXAL interface based on DALI-2 communication
- DALI-2 and D4i Certified
- Always-on Auxiliary Power: 24Vdc, 125mA, 3W (Transient Peak up to 6W)
- Integrated 16Vdc Bus Power Supply Based on DALI-2
- Full Power at Wide Output Current Range (Constant Power)
- Adjustable Output Current (AOC) with NFC
- Autonomous Dimming with Five Independent Levels (Astro, Time Mode)
- Dim-to-Off with Standby Power ≤ 0.5 W
- Constant Lumen
- End-of-life indication
- Input Surge Protection: DM 6kV, CM 10kV
- All-Around Protection: OTP, OVP, SCP, OLP, NLP
- Support DALI Programming and NFC Programming
- Integrated Power Monitoring with Accuracy up to $\pm 5\%$
- Enables programming via DALI cables up to 15m length
- Full Compatibility with T4T(Tuner4TRONIC) and T4T Field App

Product family benefits

- For Zhaga Book18 Luminaires and D4i certified incl. Parts 25x + AUX
- 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)
- DEXAL interface (with 15V current supply on DALI-2 lines - DALI Part 250)
- Standardized DALI-2 communication (incl. monitoring data, energy metering)
- Inventronics DALI light- and presence sensor connectable
- Full compatibility with Tuner4TRONIC and T4T Field App
- Enables programming via DALI cables up to 15m length



Areas of application

- IP20 Design and Suitable for Outdoor Applications in Luminaires with IP>54
- Suitable for luminaires of protection class I and II
- Street and urban lighting

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 | 176...276 V ¹⁾ |
| Nominal input current at 230 V | 0.57 A |
| Total harmonic distortion | < 7 % |
| Power factor λ | 0.71C...0.99 ³⁾ |
| Efficiency in full-load | 93 % ⁴⁾ |
| Device power loss | 10.9 W ⁵⁾ |
| Networked standby power | 0.50 W ⁶⁾ |
| Inrush current | 50.4 A ⁷⁾ |
| Max. ECG no. on circuit breaker 10 A (B) | 8 |
| Max. ECG no. on circuit breaker 16 A (B) | 13 |
| Surge capability (L-N) | 6 kV ⁸⁾ |
| Surge capability (L/N-Ground) | 10 kV |
| Protective conductor current | 0.7 mA |
| Nominal output voltage | 65...230 V |
| U-OUT (working voltage) | 280 V |
| Nominal output current | 200...1050 mA |
| Minimum output current | 50 mA |
| Default output current | 700 mA |
| Output current tolerance | ± 5 % ⁹⁾ |
| Output ripple current (100 Hz) | 4 % |
| Output PSTLM | ≤ 1 |
| Output SVM | ≤ 0.4 |
| Nominal output power | 110 W ¹⁰⁾ |
| Maximum output power | 110 W |
| Galvanic isolation primary/secondary | Double |
| Galvanic isolation dimming/output | Basic |
| Galvanic isolation DALI/mains | Reinforced |
| Galvanic isolation DALI/output | Basic |
| DEXAL Supply Voltage | 15 V |
| DEXAL Peak Supply Current | 62 mA |
| DEXAL Guaranteed Supply Current | 53 mA |
| Auxiliary Power Supply | 24 V ¹¹⁾ |

1) Additional fuse needed in DC operation

2) Permitted voltage range

3) Within the full operating window

4) at 230 V, 50 Hz

5) Maximum

6) DEXAL power supply disabled

7) At 200 μ s

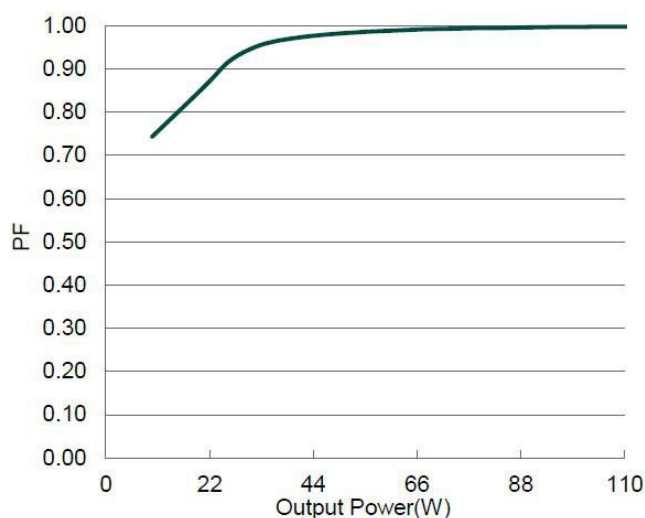
8) @ 2 Ohm, acc. to EN61547

9) ± 3 % for Output current lower than 150 mA

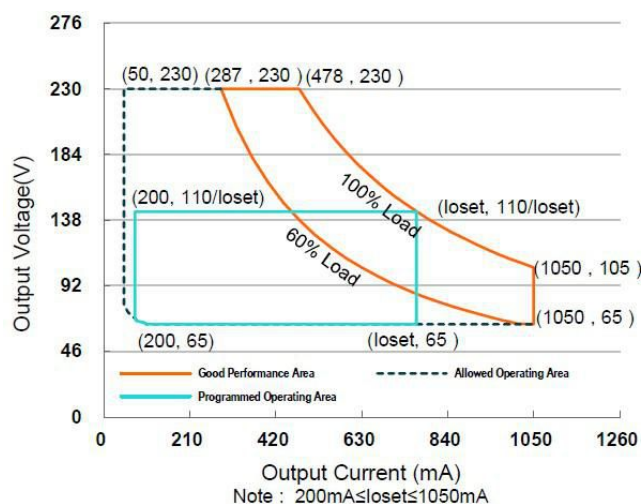
10) Max. 75% in DC operating mode

11) 3W average, 6W peak power

Typical Power Factor v Load

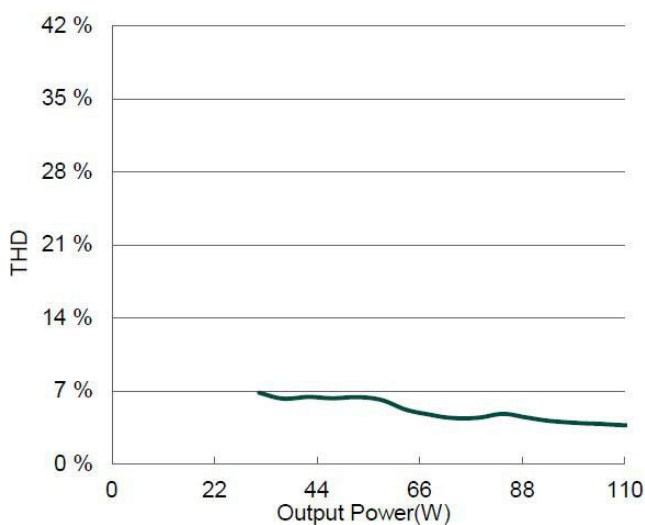


Operating Window



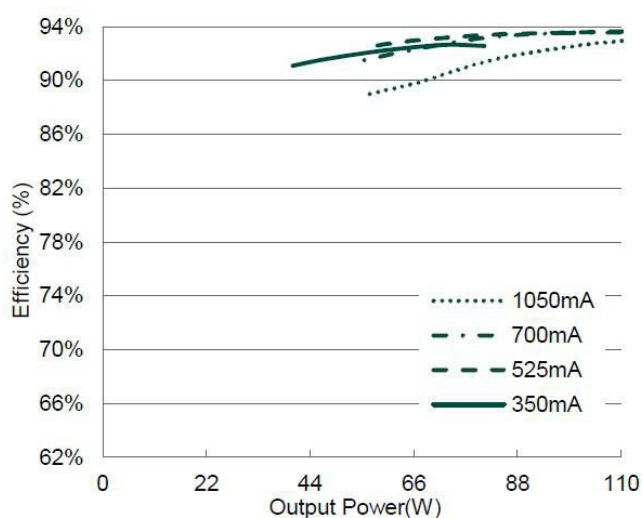
IT DX NFC E 110W Typical Power Factor vs Load

Typical THD v Load



IT DX NFC E 110W Operating Window

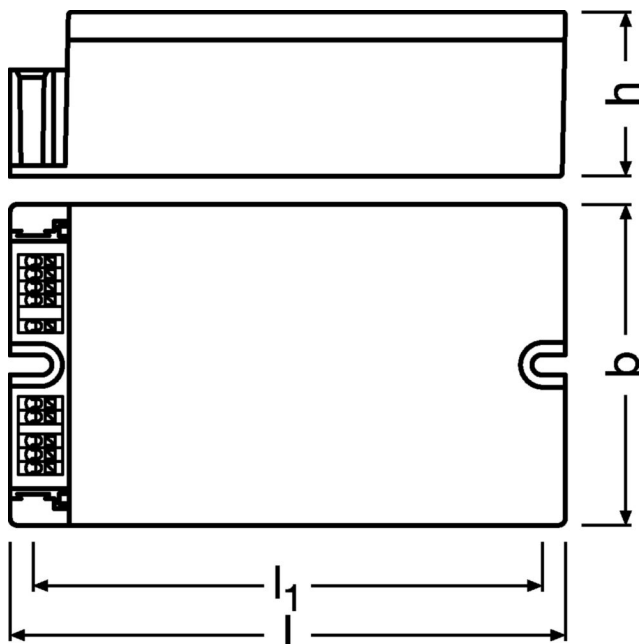
Typical Efficiency v Load 230 V 50 Hz



IT DX NFC E 110W Typical THD vs Load

IT DX NFC E 110W Typical Efficiency vs Load (230 V 50 Hz)

Dimensions & weight



| | |
|--------------------------------------|------------------------------|
| Product weight | 345.00 g |
| 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 |
| Wire preparation length, output side | 8.5...9.5 mm |

1) Solid/ Flexible Leads

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

Colors & materials

| | |
|-----------------|---------|
| Casing material | Plastic |
|-----------------|---------|

Temperatures & operating conditions

| | |
|--|------------------------|
| Ambient temperature range | -40...+55 °C |
| Maximum temperature at tc test point | 85 °C |
| Max.housing temperature in case of fault | 120 °C |
| Temperature range at storage | -40...+85 °C |
| Permitted rel. humidity during operation | 5...85 % ¹⁾ |

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

Expected Lifetime

| Product name | | | | |
|-----------------------------|------------------------------|-------|-------|--------|
| IT DX 110/220-240/1A0 NFC E | ECG ambient temperature [ta] | 55 | 48 | 45 |
| | Temperature at tc-point [°C] | 85 | 78 | 75 |
| | Lifetime [h] | 50000 | 85000 | 100000 |

Lifespan

| | |
|--------------|--------------------------------|
| ECG lifetime | 50000 / 100000 h ¹⁾ |
|--------------|--------------------------------|

1) At maximum $T_c = 80^\circ\text{C}$ / 10% failure rate, At $T_c = 70^\circ\text{C}$ / 10% failure rate

Capabilities

| | |
|--|---|
| Dimmable | Yes |
| Dimming interface | AstroDIM / DALI/DEXAL/D4i ¹⁾ |
| Dimming range | 10...100 % |
| DALI-2 Diagnostic Data | Yes ²⁾ |
| DALI-2 Energy Data | Yes ³⁾ |
| Constant lumen function | Yes |
| LEDset | No |
| Max. cable length to lamp/LED module | 2.0 m ⁴⁾ |
| Suitable for fixtures with prot. class | I / II |
| Suitable for emergency lighting | No |
| 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 | No |

Programmable features

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

1) Acc. DALI part 251

Certificates & standards

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

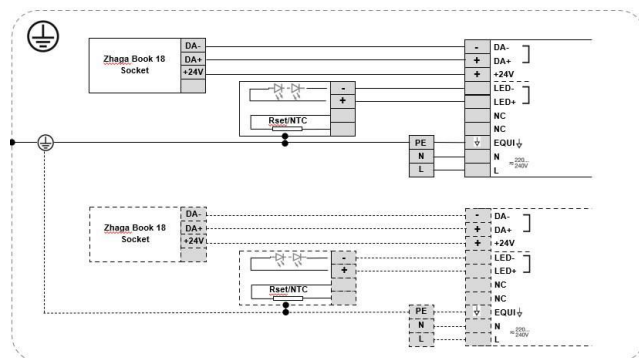
Logistical data

| | |
|----------------|-------------|
| Commodity code | 85044083900 |
|----------------|-------------|

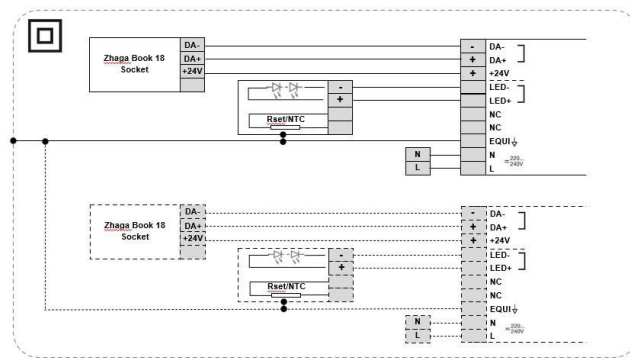
Environmental information

| Information according Art. 33 of EU Regulation (EC) 1907/2006 (REACH) | |
|---|---------------|
| Date of Declaration | 29-07-2025 |
| Primary Article Identifier | 6977078998901 |
| Declaration No. in SCIP database | In work |
| SCIP_ID | |

Wiring Diagram



IT DX NFC E Wiring diagram I



IT DX NFC E Wiring diagram II

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.

Additional product information

- The driver withstands an input voltage of up to 350 V AC for a maximum of two hours. An output load shutdown can occur in case the supply voltage exceeds the input voltage range defined.
- Shut down of output load happens if the input voltage of the load is below the allowed minimum output voltage of the driver. The driver automatically tries to switch on the load cyclically.
- The driver automatically reduces the output current in case the maximum allowed output power is exceeded, as long as the input voltage of the load is within the declared output voltage range of the driver. In all other cases the driver may shut down the load.
- The driver is protected against temporary overheating by automatically reduction of the output current.
- If the dimming mode is changed via NFC while the driver is not powered, one additional power on/off cycle is needed before the dimming mode becomes active.
- The constant lumen feature is disabled by default.
- If any output level is below the physical min level, the physical min level will be used.
- The driver is intended for luminaire built-in use.
- Mind the polarity of the DALI lines. DA+ to DA+, DA- to DA- only.
- 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.
- In order to ensure an optimal NFC programming of the Led Driver during the luminaire production, the luminaire maker shall not place any metal parts in proximity of the NFC reader, at least within a distance of 10 cm.
- The driver withstands an input voltage of up to 320 Vac with unlimited time. Shut down of output load might occur in case the supply voltage exceeds (270 Vac). Under operation conditions in which overvoltage level > 264 Vac occur, the product shall be additionally protected by an external fuse (400V 4A, time lag, I₂ t > 160 160 A²s).
- The maximum number of units per circuit breaker is an indicative value due mainly to high tolerance for the tripping current for narrow pulses.
- The EQUI pin should be connected to the heat sink of the LED module to improve the surge withstand capability of the system and EMI in critical luminaires.
- The luminaire manufacturer must ensure that condensation water cannot be created within the fixture and, in particular, cannot affect the functionality of the product. Failing to comply with this requirement will make invalid any warranty claim

Download Data

| File | | |
|-------------------|-----|---|
| Product Datasheet | PDF | ► FULL Product datasheet IT DX 110 NFC E 090725 |
| Certificates | PDF | ► Recycled Content Declaration 210725 |

| ISOLATION | Input/Mains | EQUI | DALI | LEDset | LED Output | Case | AUX | LSI | NTC |
|-------------|-------------|------------|------|--------|------------|------|------------|-----|-----|
| Input/Mains | - | Reinforced | | | Reinforced | | Reinforced | | |
| EQUI | Reinforced | - | | | Basic | | Basic | | |
| DALI | | | - | | | | | | |
| LEDset | | | | - | | | | | |
| LED Output | Reinforced | Basic | | | - | | Basic | | |
| Case | | | | | | - | | | |
| AUX | Reinforced | Basic | | | Basic | | - | | |
| LSI | | | | | | | | - | |
| NTC | | | | | | | | | - |

Logistical Data

| Product code | Product description | Packaging unit (Pieces/Unit) | Dimensions (length x width x height) | Volume | Gross weight |
|-------------------------------|--------------------------------|----------------------------------|---|-----------------------|--------------|
| 6977078998901 INVENTRONICS | IT DX 110/220-240/1A0 NFC E | Shipping carton box 12 Pieces | 319 x 210 x 156 mm | 10.45 dm ³ | 822.33 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