# MILANO in LED® 4PN - 20 - 40 - 75 - 110 - 165

TCI LED

**Direct current dimmable electronic drivers**
**Alimentatori elettronici regolabili in corrente continua**

Made in Europe

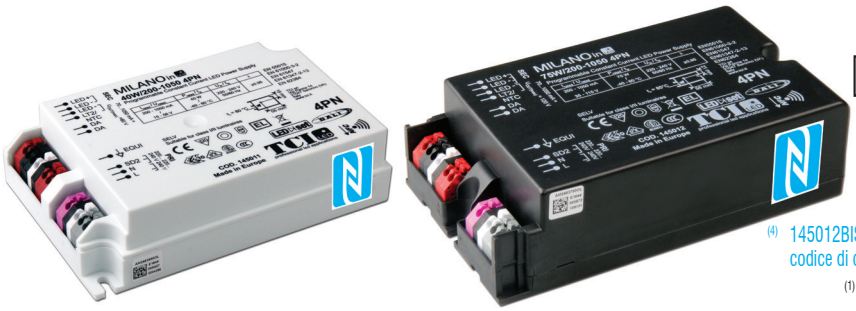
4PN · DALI 2 · % · BILEVEL · MIDNIGHT · AMP DIM · CLO · constant CURRENT

IS 15885 (Part 2 / Sec 13) (4) · R - 41049751 · EN 61347-2-10

120 · EL · SELV 60V (2) · SELV 120V (3)

RIPPLE FREE · Pst LM ≤ 1 SVM ≤ 0,4 · AM DIMMING

DIM-TO-WARM



(4) 145012BIS: order code for BIS marked product
codice di ordine per il prodotto marchiato BIS

(1) Referred to $V_{in}$ = 230 V, 100% load
Riferito a $V_{in}$ = 230 V, carico 100%

ENERGY MONITORING LED · 6kV DIFF. 10kV COMM. · ACTIVE PFC · LED set · AOC · NTC INPUT · SEC. SWITCH · SAFETY PROTECTIONS

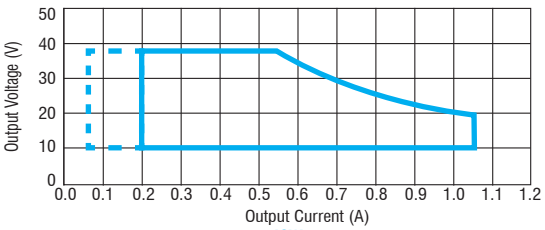




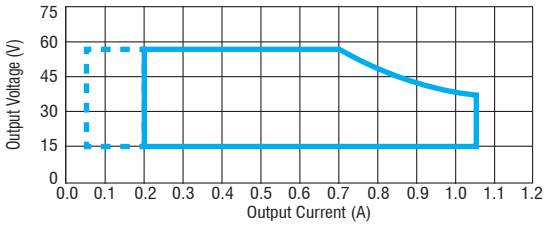
| Article<br>Articolo | Code<br>Codice | P out<br>W | V out<br>DC | I out<br>DC | Default<br>I out DC | U out<br>V | ta<br>°C | tc<br>°C | λ max.<br>Power Factor | η max.<br>Efficiency(1) |
|---|---|---|---|---|---|---|---|---|---|---|
| **MILANOinLED 20W/200-1050 4PN** (2) | 145010 | 2...20 | 10...38 | 70...1050 mA cost. | 700 mA | 60 | -40...+60 | 75 | 0,95 / 0,9 C | > 87 % |
| **MILANOinLED 40W/200-1050 4PN** (2) | 145011 | 3...40 | 15...56 | 70...1050 mA cost. | 700 mA | 60 | -40...+60 | 80 | 0,95 / 0,9 C | > 90 % |
| **MILANOinLED 75W/200-1050 4PN** (3)(4) | 145012 | 7...75 | 35...115 | 70...1050 mA cost. | 700 mA | 120 | -40...+55 | 85 | 0,98 / 0,97 | > 93 % |
| **MILANOinLED 110W/200-1050 4PN** | 145013 | 16...110 | 80...220 | 70...1050 mA cost. | 700 mA | 250 | -40...+55 | 85 | 0,98 / 0,97 | > 93 % |
| **MILANOinLED 165W/200-1050 4PN** | 145014PN | 26...165 | 130...260 | 70...1050 mA cost. | 700 mA | 300 | -40...+55 | 90 | 0,98 | > 93 % |

**Light output level in DC operation: Programmable 1-100% (factory default =100% EOFi=1)**
**Livello di emissione luminosa in funzionamento DC: Programmabile 1-100% (impostazione di fabbrica =100% EOFi=1)**

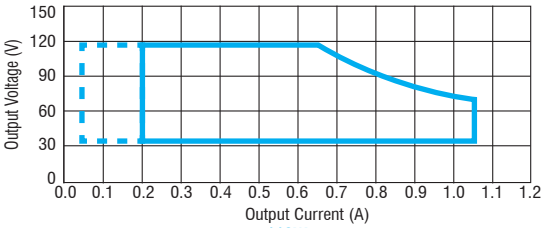
20W



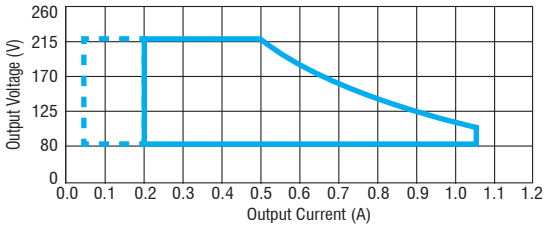

40W



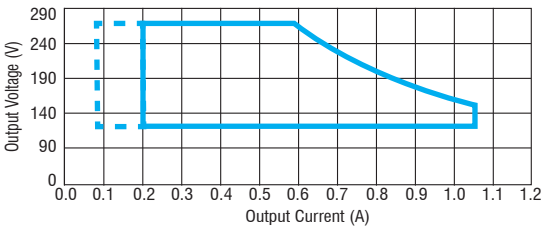

75W




110W




165W




Programmed Range · Operating Window

**Rated Voltage**
**Tensione Nominale**
220 ÷ 240 V

**Frequency**
**Frequenza**
50-60 Hz

**AC Operation range**
**Tensione di utilizzo AC**
170 ÷ 264 V

**DC Operation range**
**Tensione di utilizzo DC**
(see page info15)
DC 176 ÷ 276 V

**Power - Potenza**
5 ÷ 165 W

**iTHD**
≤ 10% (1)

**Stand by power**
≤ 0,5 W

**Output current ripple**
≤ 6% (1)
≤ 15% (1) for 165W

**Standards compliance**
EN 55015
EN 61000-3-2
EN 61000-3-3
EN 61347-1
EN 61347-2-13
EN 61547
EN 62386-101
EN 62386-102
EN 62386-207

**Max. pcs for CB B16A**
(see page info17)
20W: 36 pcs
40W: 28 pcs
75W: 12 pcs
110W: 11 pcs
165W: 9 pcs

**In rush current**
20W: 25A 150$\mu$sec
40W: 26A 180$\mu$sec
75W: 54A
110W: 65A
165W: 77A 180$\mu$sec

**Features**
- **Ultra high input spikes protection up to 10kV.**
- Programmable multipower driver.
- Driver for built-in use.
- It can be used for lighting equipment in protection class I and II.
- Active Power Factor Corrector.
- Analogical input for thermal sensor connection.
- Current regulation ±3 % including temperature variations.
- Input and output terminal blocks on same side (wire cross-section 0,2...1,5 mm²).
- Protections:
  - against overheating and short circuits;
  - against mains voltage spikes;
  - against overloads.
- Thermal protection = C.5.a.

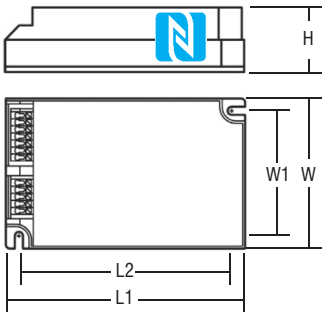
**Caratteristiche**
- **Elevata protezione contro spike di rete fino a 10kV.**
- Alimentatore multipotenza programmabile.
- Alimentatore da incorporare.
- Utilizzabile per apparecchi di illuminazione in classe di protezione I e II.
- PFC attivo.
- Entrata analogica per sensore termico.
- Corrente regolata ±3 % incluse variazioni di temperatura.
- Morsetti di entrata e uscita sullo stesso lato (sezione cavo fino a 0,2...1,5 mm²).
- Protezioni:
  - termica e cortocircuito;
  - contro le extra-tensioni di rete;
  - contro i sovraccarichi.
- Protezione termica = C.5.a.

**Direct current dimmable electronic drivers**
**Alimentatori elettronici regolabili in corrente continua**

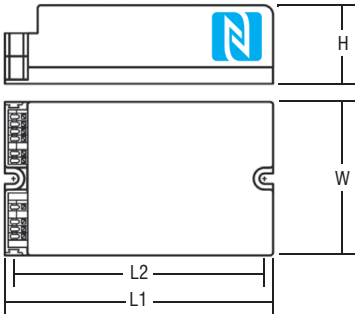
Made in Europe

BUILT-IN | SCREW FIXING

**20W / 40W / 165W**

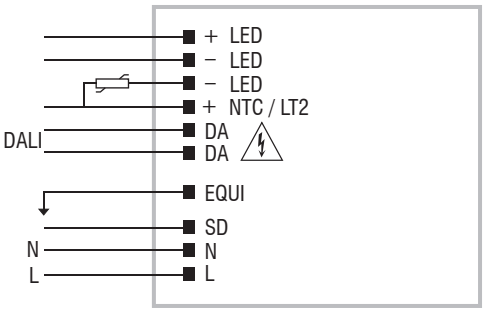



**75W / 110W**

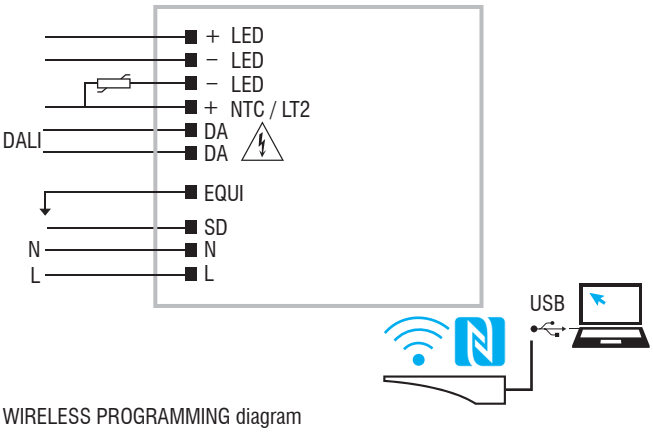



| Article Articolo | Dimensions - Dimensioni | | | | | Weight - Peso |
|---|---|---|---|---|---|---|
| | L1 | L2 | W | W1 | H | |
| **20W / 40W** | 123 | 111 | 79 | 67 | 33 | gr. 220 / 7,8 oz. |
| **75W** | 133 | 122,5 | 77 | - | 40 | gr. 294 / 10,4 oz. |
| **110W** | 150 | 134 | 90 | - | 40 | gr. 772 / 27,3 oz. |
| **165W** | 170 | 160 | 100 | 90 | 40 | gr. 1023 / 36,1 oz. |

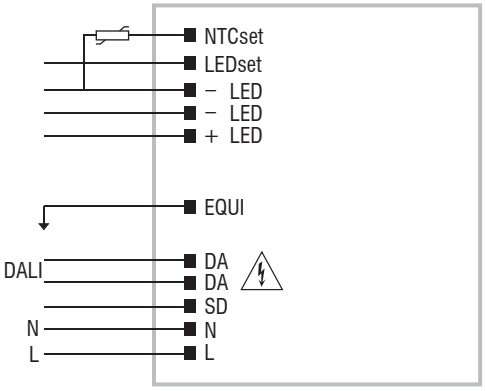
**Wiring diagrams - Schemi di collegamento** (Max. LED distance: 2m - Massima distanza LED: 2m)




DALI / MIDNIGHT / BILEVEL diagram
Collegamento DALI / MIDNIGHT BILEVEL




WIRELESS PROGRAMMING diagram
Collegamento per PROGRAMMAZIONE WIRELESS




DALI / MIDNIGHT /BILEVEL diagram for 165W
Collegamento DALI / MIDNIGHT / BILEVEL per 165W

| Article - Articolo | Code - Codice |
|---|---|
| NFC-A PROGRAMMING TOOL FEIG ISC.PRH101 | 127095A |
| NFC-B PROGRAMMING TOOL FEIG CPR30-USB | 127101 |
| DALI-PN PROGRAMMING TOOL | 127096 |
| LINK TO DOWNLOAD PROGRAMMING SOFTWARE<br>LINK PER SCARICARE SOFTWARE DI PROGRAMMAZIONE<br>www.tci.it/TCI_tools/Tuner4TRONIC_v3.13.0.0-TCI.zip | |

**Operation Mode**
- **4PN** devices allow the user to set different parameters.
- **WIRELESS PROGRAMMING** through **NFC** antenna.
- Compatible with standard DALI interfaces.
- The main available features are:
  - **DALI**: dimming through insulated port;
  - **MIDNIGHT**: automatic dimming according to programmed parameters;
  - **BILEVEL**: dimming according to programmed parameters;
  - **AMP DIM**: dimming according to mains voltage reduction;
  - **REDUCTION**: according to programmed parameters;
  - **CLO**: Constant Light Output;
  - **CURRENT**: output current according to programmed parameters;
  - **NTC**: thermal protection and external NTC according to programmed parameters;
  - **DC EMERGENCY**.
- Light regulation 10 - 100 %.
- Dimming method is linear.

For additional details for regulations see pages info12-14.

**Modalità di funzionamento**
- I dispositivi **4PN** permettono all'utente di impostare diversi parametri.
- La **PROGRAMMAZIONE WIRELESS** avviene attraverso l'antenna **NFC**.
- Compatibilità con interfacce DALI standard.
- Le principali caratteristiche disponibili sono:
  - **DALI**: regolazione attraverso la porta isolata;
  - **MIDNIGHT**: regolazione automatica secondo i parametri programmati;
  - **BILEVEL**: regolazione secondo i parametri programmati;
  - **AMP DIM**: regolazione proporzionata alla riduzione della tensione di rete;
  - **RIDUZIONE**: secondo i parametri programmati;
  - **CLO**: Constant Light Output;
  - **CORRENTE**: corrente di uscita secondo i parametri programmati;
  - **NTC**: protezione termica e NTC esterna secondo i parametri programmati;
  - **DC EMERGENCY**.
- Regolazione della luminosità 10 - 100 %.
- La dimmerazione è di tipo lineare.

Per ulteriori dettagli sulle regolazioni vedi pagine info12-14.

**The data shown are preliminary and may change - I dati riportati sono preliminari e potrebbero subire variazioni**