

LED Driver Linear non-SELV NFC 40W, 80W & 170W

Product description

- Constant current LED driver
- Fixed current output, adjustable in 1 mA steps by NFC
- Built-in type, for class I luminaire
- Safety according to EN 61347-1, 61347-2-13
- Performance according to EN 62384
- Harmonic current emission according to EN 61000-3-2
- Immunity according to EN 61547
- Non-isolated (non-SELV) versions
- Low output ripple current - high quality of light
- Long lifetime - 100 000 hours
- Metal housing
- Optimized for indoor MST LED modules
- Possibility of programming entire carton - quick programming (current setting)
- Increased surge immunity (170W)
- Increased temperature range (170W)



Electrical data

| Specification item | Unit | LED Driver 40W 65-200V 0.1-0.42A NFC-L280 | LED Driver 80W 90-220V 0.1-0.42A NFC-L280 | LED Driver 170W 100-300V 0.4-1.05A NFC-L360 |
|--|------|--|--|--|
| Rated input voltage range | [V] | 220...240 | 220...240 | 220...240 |
| Rated input current ¹ | [A] | 0.20 | 0.38 | 0.78 |
| Rated input power ¹ | [W] | 45 | 88 | 180 |
| Rated input frequency | [Hz] | 50/60 | 50/60 | 50/60 |
| Power factor ² | [-] | 0.99 | 0.99 | 0.99 |
| Total harmonic distortion ¹ | [%] | ≤7 | ≤8 | ≤10 |
| Efficiency ⁴ | [%] | 91 | 92 | 94 |
| Output voltage range ² | [V] | 65...200 | 90...220 | 100...300 |
| Maximum output voltage U-OUT | [V] | 250 | 270 | 350 |
| Output current range ² | [A] | 0.1...0.42 | 0.1...0.42 | 0.4...1.05 |
| Output current tolerance | [%] | ±5 | ±5 | ±5 |
| Output power range | [W] | 12...40 | 20...80 | 40...170 |
| Current ripple (LF) ³ | [%] | ≤4 | ≤4 | ≤4 |
| PstLM | [-] | ≤1 | ≤1 | ≤1 |
| SVM | [-] | ≤0.4 | ≤0.4 | ≤0.4 |
| Dimmable | [-] | no | no | no |
| Control method | [-] | NFC | NFC | NFC |

¹ at 230V, 50Hz, full load

² see operating window

³ ripple = peak / average; ≤120 Hz

Lifetime

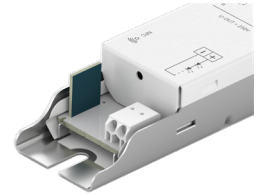
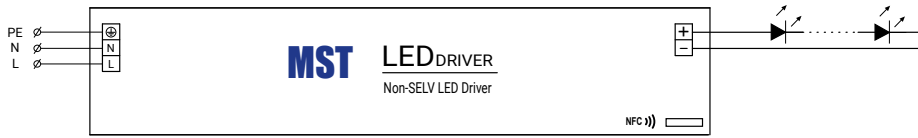
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|---|------|--|--|--|
| Lifetime at T _p (max 10% failures) | [h] | 100 000 | 100 000 | 100 000 |
| T _p - temperature measured at T _c point | [°C] | 65 | 60 | 65 |

Wiring (solid wire only)

| Specification item | Unit | Value |
|--------------------|--------------------|-----------|
| Wire cross section | [mm ²] | 0.5...1.5 |
| Strip length | [mm] | 8...9 |

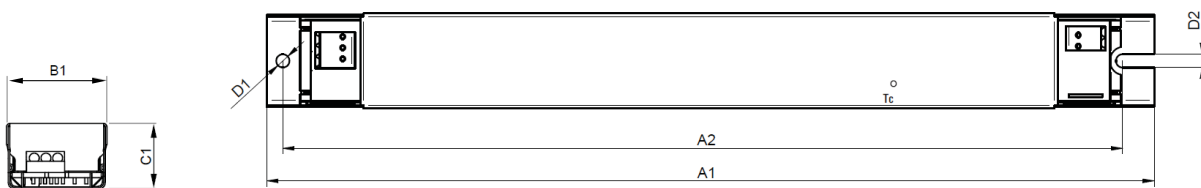
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Wiring



Mechanical

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|---------------------------|------|--|--|--|
| Length (A1) | [mm] | 280 | 280 | 360 |
| Width (B1) | [mm] | 30 | 30 | 30 |
| Height (C1) | [mm] | 21 | 21 | 21 |
| Fixing hole diameter (D1) | [mm] | 4.2 | 4.2 | 4.2 |
| Fixing hole distance (A2) | [mm] | 265 | 265 | 345 |
| Weight | [g] | 166 | 185 | 295 |
| Ingress protection | [-] | IP20 | IP20 | IP20 |



Temperature & humidity

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|--|------|--|--|--|
| Ambient temperature | [°C] | -20...+50 | -20...+45 | -40...+50 |
| Tcase | [°C] | 75 | 75 | 85 |
| Relative humidity (non-condensing) | [%] | 10...90 | 10...90 | 10...90 |
| Storage relative humidity (non-condensing) | [°C] | -25...+85 | -25...+85 | -25...+85 |
| Relative humidity (non-condensing) | [%] | 10...90 | 10...90 | 10...90 |

Surge immunity

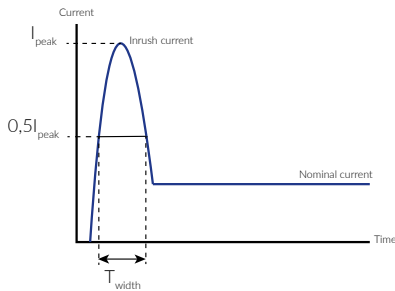
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|--|------|--|--|--|
| Mains surge immunity - differential mode | [kV] | 1 | 1 | 2 |
| Mains surge immunity - common mode | [kV] | 2 | 2 | 4 |
| Surge voltage at output side (against PE)* | [kV] | ≤3.5 | ≤3.5 | ≤6 |

* common mode

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Inrush current

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|----------------------------|------------|--|--|--|
| Inrush current I_{peak} | [A] | 18 | 28 | 50 |
| Inrush current T_{width} | [μ s] | 260 | 240 | 250 |



Maximum number of drivers

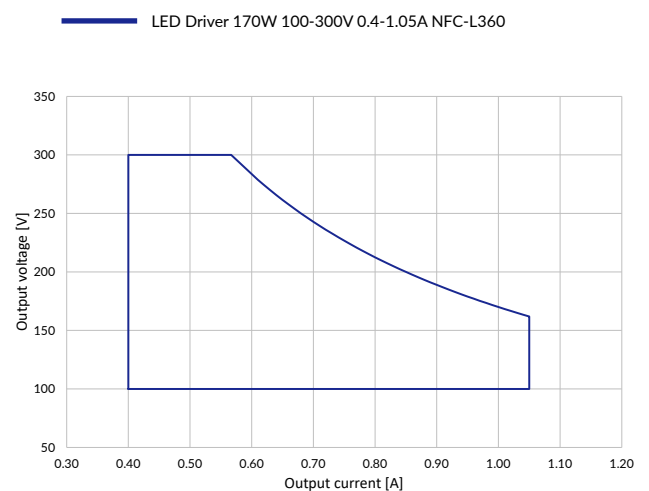
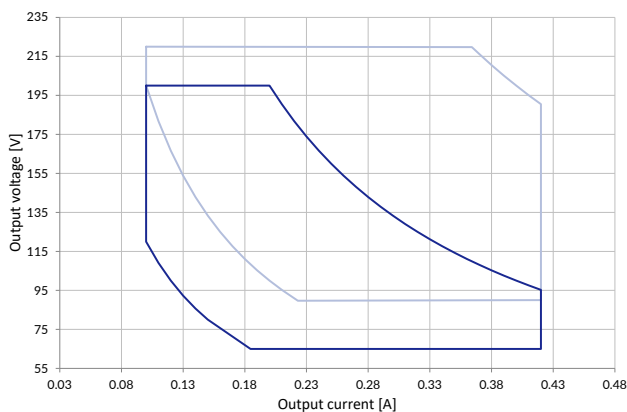
| Type of circuit breaker | Unit | LED Driver 40W 65-200V 0.1-0.42A NFC-L280 | LED Driver 80W 90-220V 0.1-0.42A NFC-L280 | LED Driver 170W 100-300V 0.4-1.05A NFC-L360 |
|-------------------------|-------|--|--|--|
| B10 | [pcs] | 13 | 9 | 5 |
| B13 | [pcs] | 16 | 12 | 6 |
| B16 | [pcs] | 20 | 14 | 8 |
| B20 | [pcs] | 25 | 18 | 10 |
| B25 | [pcs] | 32 | 22 | 12 |
| C10 | [pcs] | 21 | 15 | 8 |
| C13 | [pcs] | 27 | 19 | 10 |
| C16 | [pcs] | 34 | 24 | 13 |
| C20 | [pcs] | 42 | 30 | 16 |
| C25 | [pcs] | 53 | 37 | 20 |

Measurements of inrush and continuous current were taken at rated input voltage. Calculations are based on ABB series S200 circuit breakers as reference. The values shown in the table above are for guidance purpose only. Actual values may differ due to installation environment and used MCBs.

Protections / Approvals

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|--------------------------|--|--|--|
| Open load protection | yes | yes | yes |
| Short circuit protection | yes | yes | yes |
| Over power protection | no | no | yes |
| Approval marks | CE / ENEC | CE / ENEC | CE / ENEC |

Operating window

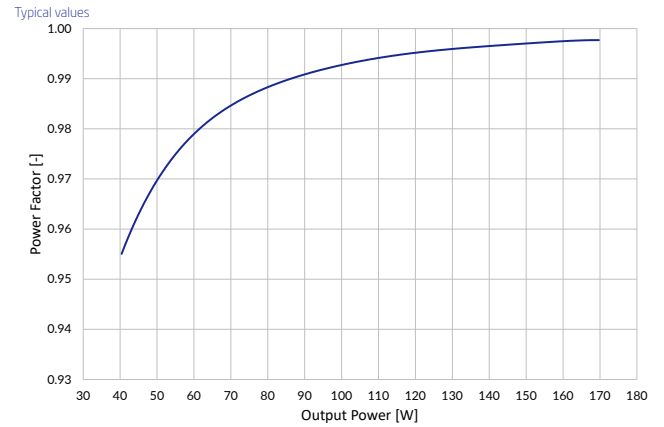
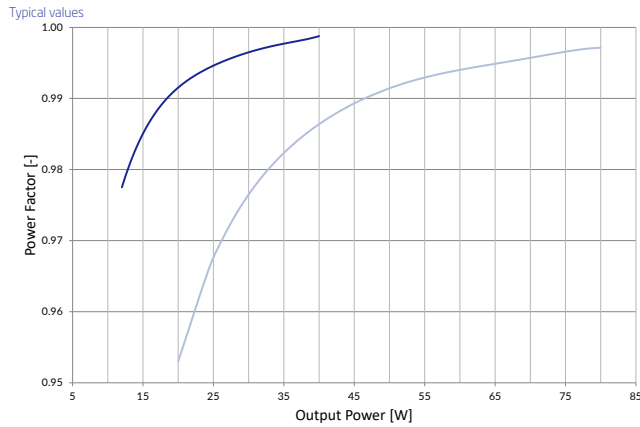


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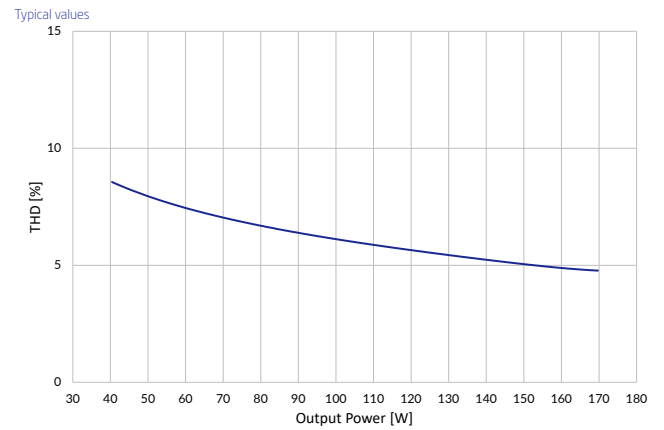
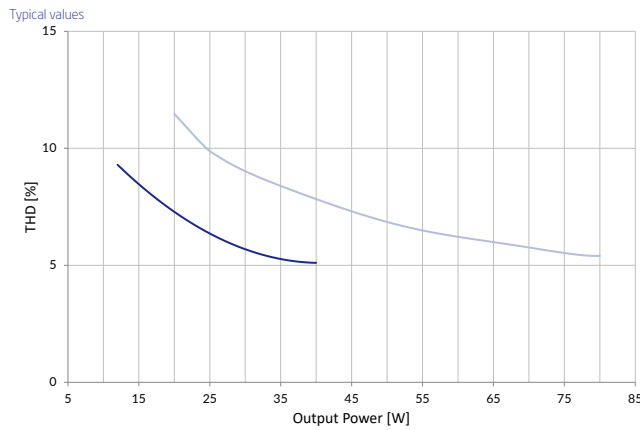
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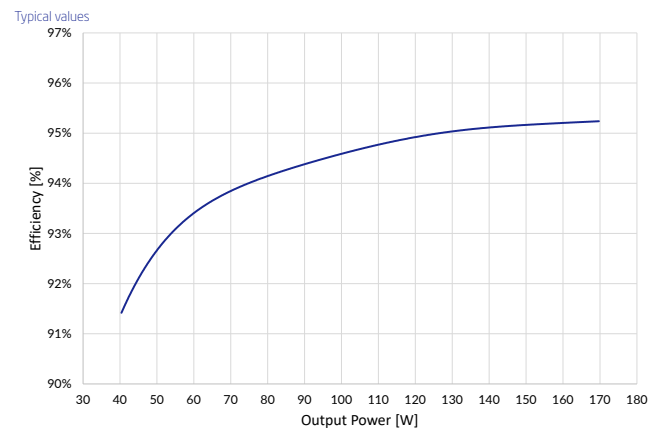
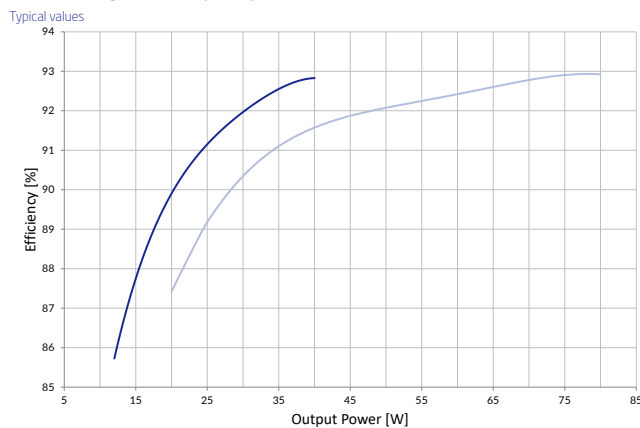
Power factor vs output power



THD vs output power



Efficiency vs output power



Ordering codes

| Specification item | Unit | LED Driver 40W 65-200V 0.1-0.42A NFC-L280 | LED Driver 80W 90-220V 0.1-0.42A NFC-L280 | LED Driver 170W 100-300V 0.4-1.05A NFC-L360 |
|---------------------|-------|---|---|---|
| Ordering code | [-] | 1010 120 12346 | 1010 120 12446 | 1010 120 12946 |
| Pieces per box | [pcs] | 24 | 24 | 24 |
| Pieces per pallet | [pcs] | 2880 | 2880 | 2160 |
| Box dimensions | [mm] | 293 x 133 x 146 | 293 x 133 x 146 | 373 x 133 x 154 |
| Product weight | [g] | 166 | 185 | 295 |
| Pallet gross weight | [kg] | 600 | 630 | 700 |