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Tech sheet POWERdrive 561/M, 56*/A, 56*/S — AC Series

Electrical specifications

POWERdrive 561/M

Input

- Voltage:
  120-250V AC, 50-60Hz
  120-250V DC
  120-277V AC, 50-60Hz (UL approved)
- Current, max: 0.7A

POWERdrive 562/A

Output

- Power: 50W max
- Voltage: 55V max
- Current range: 200 - 1,050 mA (configurable)
- Current: +/- 5% accuracy

POWERdrive 562/S

General

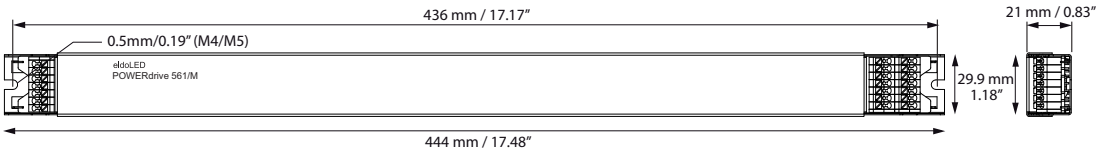
- Standby power: < 0.5W
- Inrush current: negligible, 30mA^{2}s @ 277V
- Surge protection: 1kV differential mode surge, 2kV common mode surge
- Efficiency: 89% at full load, ≥ 85% above 67% load
- Power factor: > 0.9
- THD: <20% between 67% and 100% load
- DMX / RDM: USITT DMX512A and ANSI E1.20 (explore & address)
- Three (562) or four (561) LED outputs

Dimensions, weight and packaging

POWERdrive 561/M

Weight:
360 g, 12.7 oz

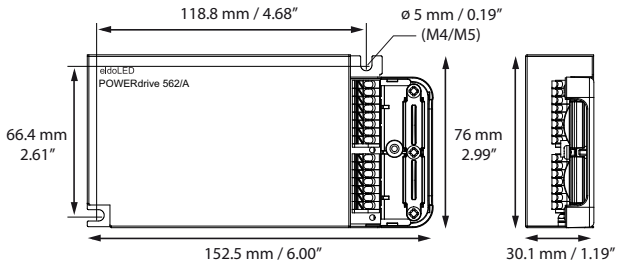
Packaging:
8 or 28 pcs/carton



POWERdrive 561/A, 562/A

Weight: 372 g, 13.12 oz

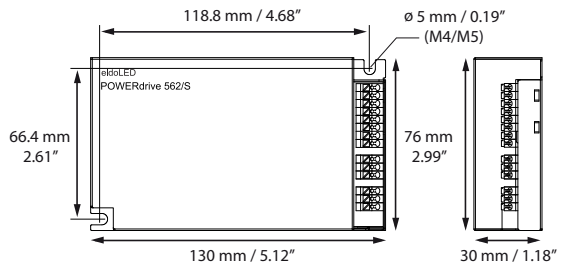
Packaging: 6 or 45 pcs/carton



POWERdrive 561/S, 562/S

Weight: 350 g, 12.35 oz

Packaging: 6, 10 or 45 pcs/carton



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Wiring data

- Wire type: solid or stranded copper
- Wire strip length: 9mm, 0.35 in.
- Wire core cross section: 0.5 - 1.5 mm², AWG 20 - 16
- For POWERdrive 561/S and 561/A only:
  onboard DMX out and LEDcode connector: Molex 87437-0843

Optional available wiring harness:
WH0081S1: wiring harness, 8-pin Molex, DMX, POWERdrive 561/S and 561/A

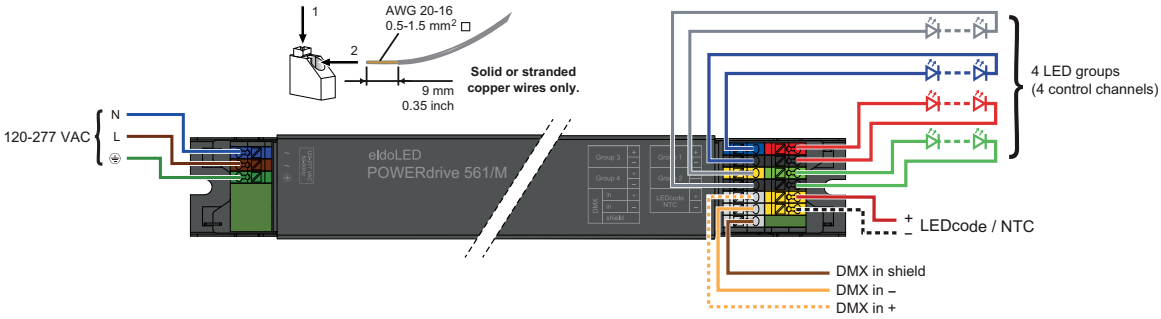
- Maximum LED wiring length:

AWG value	20	19	18	17	16
Distance (m)	14	18	22	28	36
Distance (ft)	46	59	72	92	118

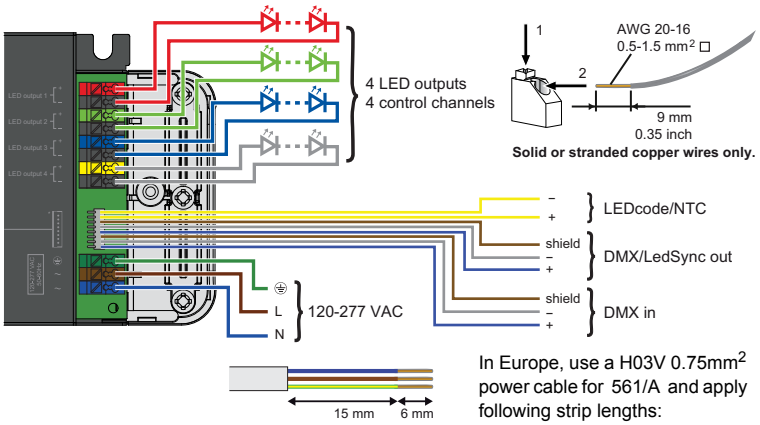
⚠ Please observe voltage drop over long cable lengths.

⚠ Longer cable lengths increase EMI susceptibility.

POWERdrive 561/M

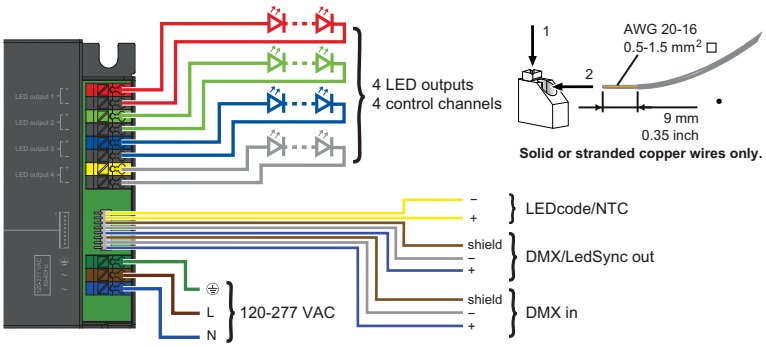


POWERdrive 561/A



In Europe, use a H03V 0.75mm² power cable for 561/A and apply following strip lengths:

POWERdrive 561/S



⚠ WARNING: Risk of electrical shock. May result in serious injury or death. Disconnect power before servicing or installing.

⚠ CAUTION: The device may only be connected and installed by a qualified electrician. All applicable regulations, legislation and building codes must be observed. Incorrect installation of the device can cause irreparable damage to the device and the connected LEDs.

⚠ CAUTION: Pay attention when connecting the LED groups: polarity reversal results in no light output and often damages the LEDs.

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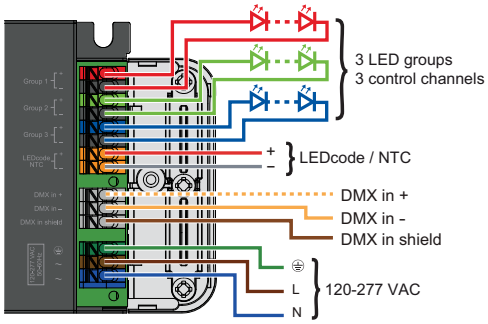
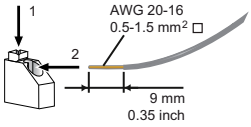
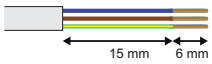
POWERdrive 562/A



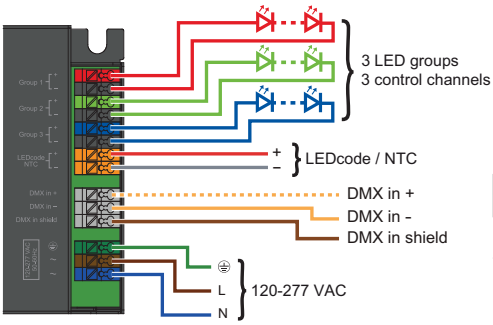


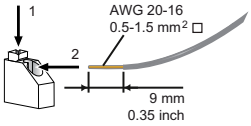
Solid or stranded copper wires only.



In Europe, use a H03V 0.75mm² power cable for 562/A and apply following strip lengths:

POWERdrive 562/S





Solid or stranded copper wires only.

Other information

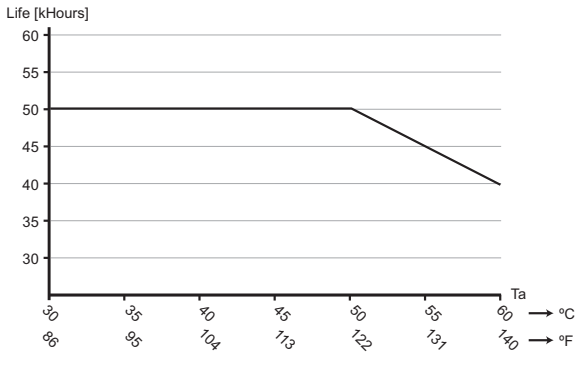
Thermal

- Ta range: -20 ºC to +50 ºC / -4 ºF to +122 ºF
- Tc max: 85 ºC / 185 ºF
- Tc lifetime: 78 ºC / 172 ºF (561/S, 561/M, 562/S, 562/A)
  72 ºC / 161.6 ºF (561/A)
- LED temperature feedback using 47kΩ NTC thermistor.
  Recommended thermistors by Vishay:
  - NTCS0805E4473JXT (SMD version)
  - 238164063473 (leaded version)
  - NTCASCWE3473J (screw version)

Certifications

- EN 61347-1 / -2-7 / -2-13, EN 62384, EN 55015, EN 55022, EN 61000-3-2, EN 61547
- CE
- ENEC by DEKRA
- EL: EN 61347-2-7
- UL: Recognized Component (file no E333135), according to UL1310, UL8750. US/Canada: Class 2 output.
- FCC: Title 47CFR Part 15 Class B
- RCM (561/A and 561/S pending)

Lifetime data



Life vs Ta

- Life expectancy of 50K hours at Ta of lower or equal to 50 ºC / 122 ºF
- MTBF: 480,000 hours

All measurements have been carried out at maximum load in free air without heat sink.

All lifetime-related figures are the result of simulations. Actual lifetime tests are ongoing.

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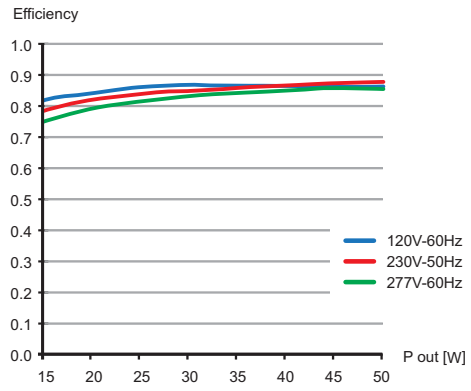
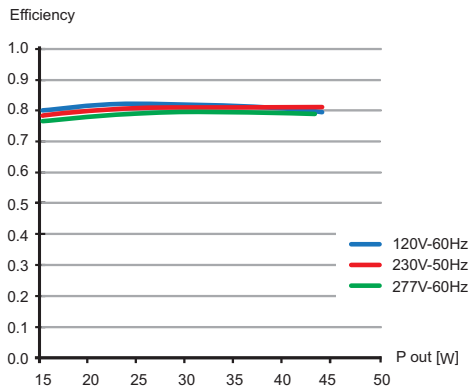
The following efficiency, power factor and THD diagrams are the result of measurements of a worst case scenario: the LED outputs were stressed at full load.

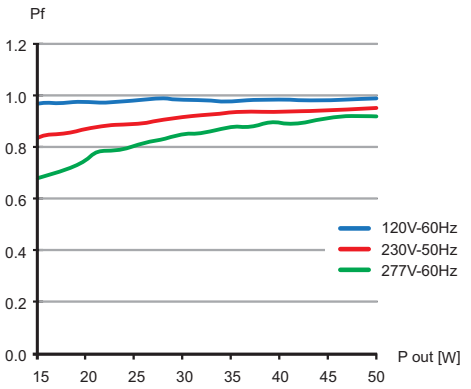
Efficiency data (561/M, 562/S, 562/A)



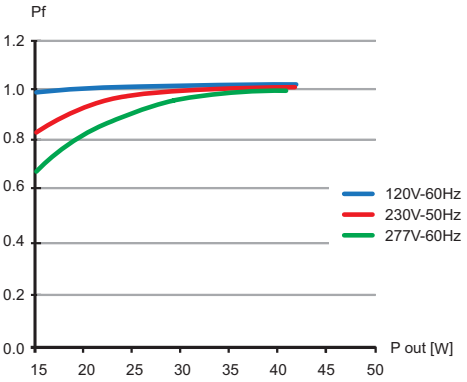
Efficiency data (561/S, 561/A)



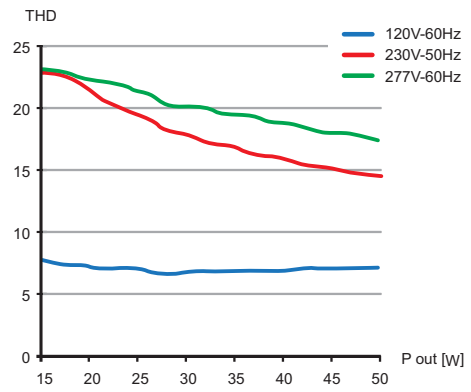
Power factor data (561/M, 562/S, 562/A)



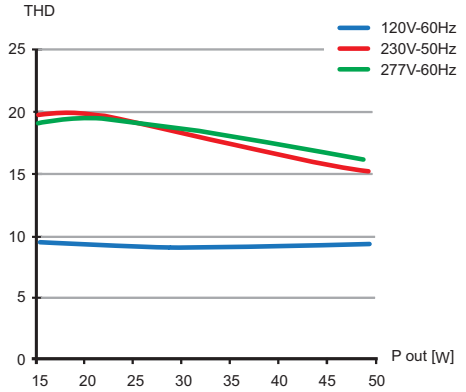
Power factor data (561/S, 561/A)



Total Harmonic Distortion data (561/M, 562/S, 562/A)



Total Harmonic Distortion data (561/S, 561/A)



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Other documentation and support

Visit www.eldoled.com/support for further documentation such as quick start guide, wiring diagram, tech sheet and 3D IGES files.

Warranty

eldoLED represents and warrants that for a period of 3 (three) years, as of the date of invoice, Products materially meet the specifications and specifically agreed upon quality, both as stated in the applicable data-sheet and/or written design-in specifications, or as stated in writing otherwise by eldoLED, provided that these specifications are explicitly designated by eldoLED as "warranted specifications".
For the complete warranty text, visit www.eldoled.com.

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