

# CertaDrive

CertaDrive 30W 0.7A 42V | 230V

July 25, 2014



## Affordable and reliable LED Drivers

Affordable LED Driver range offering Philips reliability. The CertaDrive range is compatible with COB and mid-power LEDs from any LED manufacturer.

## Benefits

- Driver design based on Philips' experience and knowledge of conventional fluorescent and HID technologies
- Various power wattage Drivers that are related to the lumen packages/applications
- Fixed output Drivers
- Independent-version housing design for stand-alone installations

## Features

- High reliability
- Luminaire design flexibility to keep stable/constant
- Lumen output and light quality levels
- Fast Time to Market
- One supplier for professional general lighting LED Drivers
- Affordable LED Drivers

## Applications

- Public buildings (airports, cinemas, theaters, exhibition halls)
- Retail (supermarkets, shops)
- Office



# PHILIPS

### Electrical input data

| Specification item        | Value     | Unit            | Condition   |
|---------------------------|-----------|-----------------|---|
| Nominal input voltage     | 220...240 | V <sub>ac</sub> |   |
| Nominal input frequency   | 50...60   | Hz              |   |
| Nominal input current     | 0.16      | A               | Input voltage 230 V <sub>ac</sub> , full load                       |
| Nominal input power       | 35        | W               | Input voltage 230 V <sub>ac</sub> , full load                       |
| Power factor              | ≥ 0.9     |                 | Input voltage 230 V <sub>ac</sub> , full load                       |
| Total harmonic distortion | ≤ 20      | %               | Input voltage 230 V <sub>ac</sub> , full load                       |
| Efficiency                | 85        | %               | Input voltage 230 V <sub>ac</sub> , full load, maximum output power |
| Input voltage AC          | 202...254 | V <sub>ac</sub> | Performance range   |
| Input frequency AC        | 47.5...63 | Hz              | Maximum permissible range   |

### Electrical output data

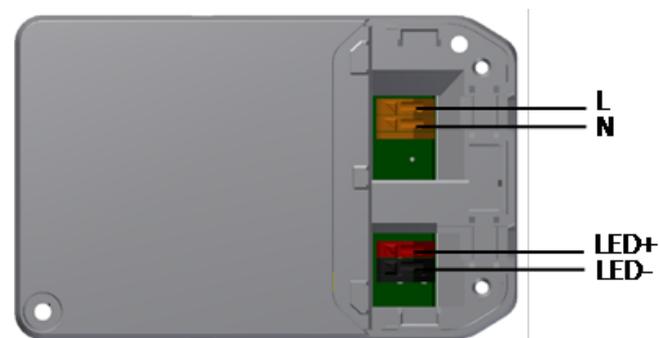
| Specification item       | Value            | Unit            | Condition                       |
|--------------------------|------------------|-----------------|---------------------------------|
| Regulation method        | Constant Current |                 |                                 |
| Output voltage           | 32...42          | V <sub>dc</sub> |                                 |
| Output voltage max.      | 60               | V               | Peak voltage (RMS) at open load |
| Output current           | 0.63...0.77      | A               | Full output current setting     |
| Output current tolerance | ± 10             | %               |                                 |
| Output current ripple    | ≤ 30             | %               | Ripple (100Hz) = peak / average |
| Output power             | 22...30          | W               | Full output                     |
| Galvanic isolation       | SELV             |                 | Lamp to mains                   |

### Electrical data controls input

| Specification item | Value | Unit | Condition |
|--------------------|-------|------|-----------|
| Control method     | Fixed |      |           |

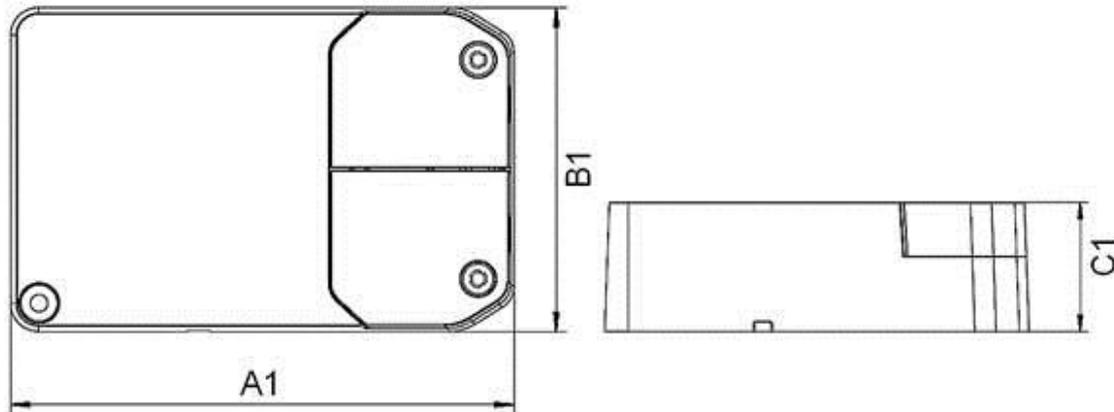
### Wiring

| Specification item        | Value     | Unit            | Condition  |
|---------------------------|-----------|-----------------|--|
| Input wire cross-section  | 0.2...1.5 | mm <sup>2</sup> | WAGO250 (3.5 mm), solid wire                         |
|                           | 16...24   | AWG             | WAGO250 (3.5 mm), solid wire                         |
| Input wire strip length   | 8.5...9.5 | mm              |  |
| Output wire cross-section | 0.2...1.5 | mm <sup>2</sup> | WAGO250 (3.5 mm), solid wire                         |
|                           | 16...24   | AWG             | WAGO250 (3.5 mm), solid wire                         |
| Output wire strip length  | 8.5...9.5 | mm              |  |
| Maximum cable length      | 600       | mm              | Total length of wiring including LED module, one way |



## Dimensions and weight

| Specification item        | Value | Unit | Condition |
|---------------------------|-------|------|-----------|
| Length (A1)               | 105   | mm   |           |
| Width (B1)                | 68    | mm   |           |
| Height (C1)               | 32    | mm   |           |
| Fixing hole diameter (D1) | 3.6   | mm   |           |
| Fixing hole distance (A2) | 87    | mm   |           |
| Weight                    | 129   | gram |           |



## Operational temperatures and humidity

| Specification item          | Value    | Unit | Condition   |
|-----------------------------|----------|------|---|
| Ambient temperature         | +0...+50 | °C   |   |
| T <sub>case-max</sub>       | 75       | °C   | Maximum temperature measured at T <sub>c</sub> -point |
| T <sub>case-life</sub>      | 65       | °C   | Measured at T <sub>c</sub> -point                     |
| Maximum housing temperature | 130      | °C   | In case of a failure                                  |
| Relative humidity           | 10...90  | %    | Non-condensing  |

## Storage temperature and humidity

| Specification item  | Value     | Unit | Condition      |
|---------------------|-----------|------|----------------|
| Ambient temperature | -25...+85 | °C   |                |
| Relative humidity   | 5...95    | %    | Non-condensing |

## Lifetime

| Specification item | Value  | Unit  | Condition   |
|--------------------|--------|-------|---|
| Driver lifetime    | 30,000 | hours | Measured temperature at T <sub>c</sub> -point is T <sub>case-life</sub> .<br>Maximum failures = 10% |

## Programmable features

| Specification item                    | Value | Remark  | Condition                       |
|---------------------------------------|-------|---|---------------------------------|
| Set output current (AOC)              | No    | See Design-in guide.<br>Default output current: 0.7 A |                                 |
| LED module temperature derating (MTP) | No    |   |                                 |
| Constant Lumen Over Lifetime (CLO)    | No    |   |                                 |
| DC emergency dimming (DCemDIM)        | No    |   | Current output decreased to 15% |
| Corridor mode                         | No    |   |                                 |
| Energy metering                       | No    |   |                                 |
| Diagnostics                           | No    |   |                                 |

## Features

| Specification item                          | Value | Remark | Condition            |
|---|-------|--------|----------------------|
| Open load protection                        | Yes   |        | Automatic recovering |
| Short circuit protection                    | Yes   |        | Automatic recovering |
| Over power protection                       | No    |        | Automatic recovering |
| Hot wiring                                  | No    |        |                      |
| Suitable for fixtures with protection class | II    |        |                      |

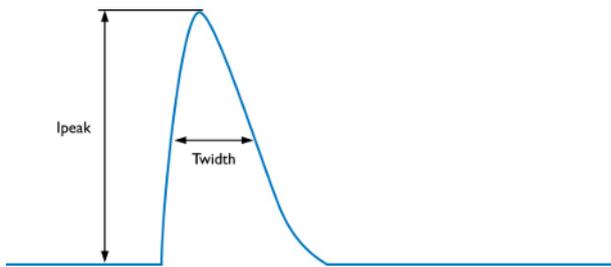
## Certificates and standards

| Specification item                | Value     | Unit | Condition |
|-----------------------------------|-----------|------|-----------|
| Approval marks                    | CE / ENEC |      |           |
| Ingress Protection classification | 20        |      |           |

## Additional information

### Inrush current

| Specification item         | Value     | Unit    | Condition                                      |
|----------------------------|-----------|---------|--|
| Inrush current $I_{peak}$  | 16        | A       | Input voltage 230V                             |
| Inrush current $T_{width}$ | 240       | $\mu s$ | Input voltage 230V, measured at 50% $I_{peak}$ |
| Drivers / MCB 16A type B   | $\leq 35$ | pcs     |  |



### Earth leakage current

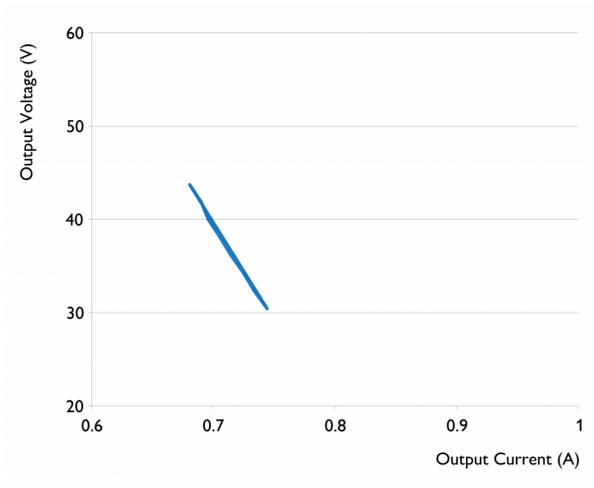
| Specification item    | Value | Unit             | Condition                            |
|-----------------------|-------|------------------|--------------------------------------|
| Earth leakage current | 0.7   | mA <sub>pk</sub> | LED module contribution not included |

### Surge capability

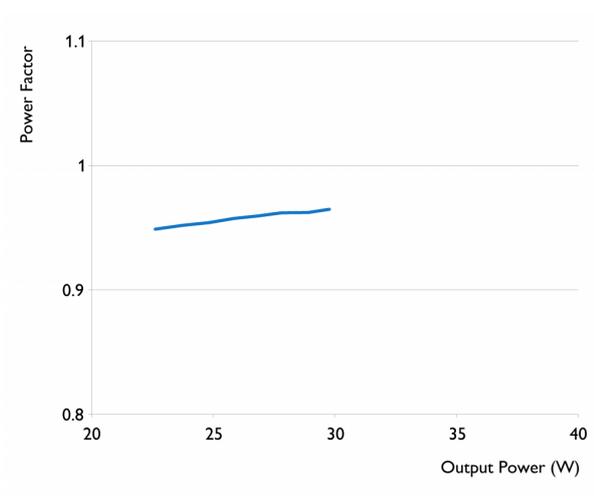
| Specification item                  | Value | Unit | Condition |
|-------------------------------------|-------|------|-----------|
| Mains surge capability (L-N)        | 1     | kV   |           |
| Mains surge capability (L/N-Ground) | 2     | kV   |           |

## Graphs

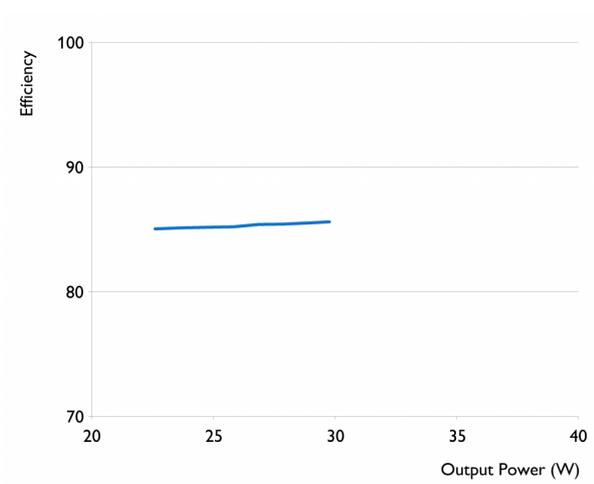
### Operating window



### Power factor versus output power



### Efficiency versus output power



## Logistical data

| Specification item | Value                          |
|--------------------|--------------------------------|
| Product name       | CertaDrive 30W 0.7A 42V I 230V |
| Order code         |                                |
| Logistic code 12NC | 9290 009 32008                 |
| EAN3               |                                |
| Pieces per box     | 32                             |



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