

PHILIPS

CertaDrive

LED driver



Datasheet

CertaDrive LED drivers – Linear

CertaDrive 30W 0.4A 80V 230V

Fixed current/voltage LED drivers for high volume LED propositions

The CertaDrive LED drivers are designed to fulfill the market need for essential lighting. The CertaDrive LED drivers offer basic specifications such as specific current and voltage settings, optimal to operate CertaFlux LED modules and mid-power LED's from any other LED board manufactures.

Benefits

- Design based on Philips's experience and knowledge of conventional fluorescent and HID technologies
- High reliability
- Design freedom for compact luminaire design
- Various power wattage Drivers that are related to the lumen packages/applications
- 3-years warranty

Features

- Small dimensions
- Specific current and voltage
- Luminaire design flexibility to keep stable/constant lumen output and light quality levels
- 30,000 hours life time
- Product safety thanks to overload protection, short circuit protection, over power protection and hot-wiring features

Application

- Waterproof luminaires
- Recessed, surface and suspended luminaires in offices
- High bay luminaires

Electrical input data

Specification item	Value	Unit	Condition
Rated input voltage range	220...240	V _{ac}	Performance range
Rated input voltage	230	V _{ac}	
Rated input frequency range	50...60	Hz	Performance range
Rated input current	0.16	A	@ rated output power @ rated input voltage
Rated input power	35	W	@ rated output power @ rated input voltage
Power factor	≥ 0.9		@ rated output power @ rated input voltage
Total harmonic distortion	≤ 30	%	@ rated output power @ rated input voltage
Efficiency	≥ 88	%	@ rated output power @ rated input voltage
Input voltage AC range	202...254	V _{ac}	Operational range
Input frequency AC range	47.5...63	Hz	Operational range
Isolation input to output	Basic		

Electrical output data

Specification item	Value	Unit	Condition
Regulation method	Constant Current		
Output voltage	51...82	V _{dc}	
Output voltage max.	400	V	Peak voltage at open load
Output current	0.36...0.44	A	Full output current setting
Output current tolerance	± 5	%	
Output current ripple LF	≤ 30	%	Ripple = peak / average
Output power	22...30	W	Full output

Electrical data controls input

Specification item	Value	Unit	Condition
Control method	Fixed		

Logistical data

Specification item	Value
Product name	CertaDrive 30W 0.4A 80V 230V
Order code	
Logistic code 12NC	9290 014 09780
EAN3	
Pieces per box	50

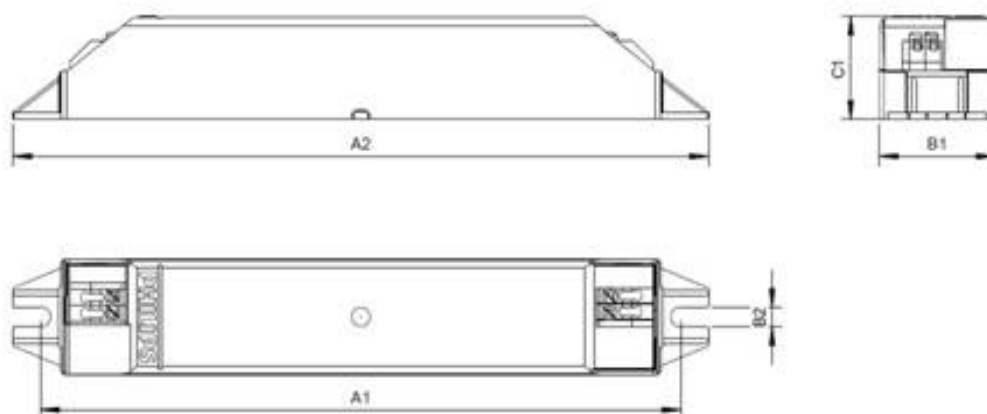
Wiring & Connections

Specification item	Value	Unit	Condition
Input wire cross-section	0.2...1.5	mm ²	WAGO250 (3.5 mm), solid / stranded wire
	16...24	AWG	WAGO250 (3.5 mm), solid / stranded wire
Input wire strip length	8.5...9.5	mm	
Output wire cross-section	0.2...1.5	mm ²	WAGO250 (3.5 mm), solid / stranded wire
	16...24	AWG	WAGO250 (3.5 mm), solid / stranded 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)	138	mm	
Width (B1)	25.2	mm	
Height (C1)	22	mm	
Fixing hole diameter (D1)	4.2	mm	
Fixing hole distance (A2)	150	mm	
Weight	56	gram	



Operational temperatures and humidity

Specification item	Value	Unit	Condition
Ambient temperature	-20...+50	°C	Higher ambient temperature allowed as long as Tcase-max is not exceeded.
Tcase-max	75	°C	Maximum temperature measured at T _{case} -point
Tcase-life	65	°C	Measured at T _{case} -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 _{case} -point is T _{case} -life. Maximum failures = 10%

Programmable features

Specification item	Value	Remark	Condition
Set output current (AOC)	No	See Design-in guide.	Default output current: = 400 mA
LED module temperature derating (MTP)	No		
Constant Lumen Over Lifetime (CLO)	No		
DC emergency dimming (DCemDIM)	No		
Corridor mode	No		
Energy metering	No		
Diagnostics	No		

Features

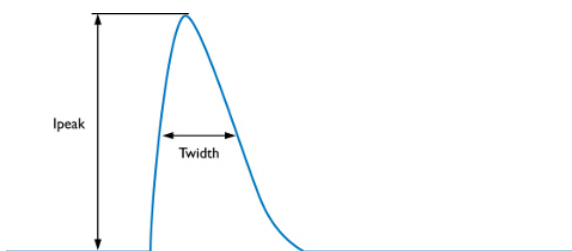
Specification item	Value	Remark	Condition
Open load protection	Yes		Automatic recovering
Short circuit protection	Yes		Automatic recovering
Over power protection	Yes		Automatic recovering
Hot wiring	Yes		
Suitable for fixtures with protection class	I		per IEC60598

Certificates and standards

Specification item	Value
Approval marks	CCC / CE
Ingress Protection classification	20

Inrush current

Specification item	Value	Unit	Condition
Inrush current I_{peak}	5.1	A	Input voltage 230V
Inrush current T_{width}	52	μs	Input voltage 230V, measured at 50% I_{peak}
Drivers / MCB 16A type B	≤ 60	pcs	



MCB	Rating	Relative number of LED drivers
B	10A	63%
B	13A	81%
B	16A	100% (stated in datasheet)
B	20A	125%
B	25A	156%
C	10A	104%
C	13A	135%
C	16A	170%
C	20A	208%
C	25A	260%

Driver touch current / protective conductor current

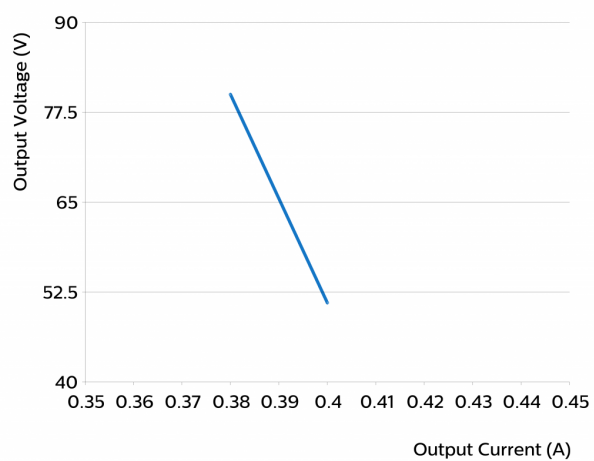
Specification item	Value	Unit	Condition
Typical touch current (ins. Class II)	< 0.7	mA peak	Acc. IEC61347-1. LED module contribution not included

Surge immunity

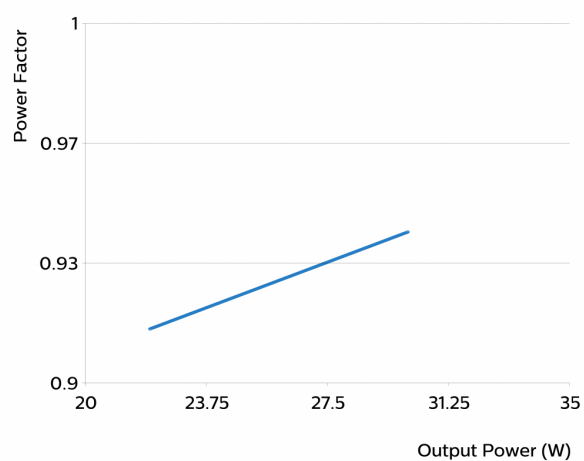
Specification item	Value	Unit	Condition
Mains surge immunity (diff. mode)	0.5	kV	Acc. IEC61000-4-5. 2 Ohm, 1.2/50us, 8/20us
Mains surge immunity (comm. mode)	1	kV	Acc. IEC61000-4-5. 12 Ohm, 1.2/50us, 8/20us

Graphs

Operating window



Power factor versus output power



Efficiency versus output power

