



## CertaDrive 60W 24VDC 220/240V

### The constant voltage driver for LED applications

High frequency, compact size and long lifetime. The constant voltage LED drivers, operation with 24VDC LED module, LED strip and other LED application where need 24VDC constant voltage.

#### Product features and benefits

- Optimal performance thanks to the dedicated LED solution
- Long lifetime
- Safe operation, SELV compliant, CB
- Complete protection, overload, short circuit, overheat protection
- Installation friendly for Class I and II systems.
- CQC, CE, CB certificate

#### Applications

- Hotel, partially light the space, living rooms, corridors
- Retail & shopping mall, cabinet or shelf lighting
- Restaurant, enhance the ambience, create the mood
- Decoration, create space and layers, light sculpture

#### Quality

We ensure optimum quality regarding:

- System supplier:  
As manufactures of lamps and gear, Philips ensures that, from the earliest development stage, optimum LED light source and gear performance is designed
- International supplier:  
Philips LED transformer fully comply with SELV standards, IEC 61347-1, IEC 61347-2-13

## Electrical input data

Specification item	Value	Unit	Condition
Rated input voltage range	220 ... 240	Vac	Performance
Rated input voltage range	198 ... 264	Vac	Operational
Rated input frequency	50 ... 60	Hz	Performance
Rated input frequency	45 ... 66	Hz	Operational
Rated input current	0.31	A	230Vac, full load
Rated input power	69.2	W	230Vac, full load
Power factor	≥0.97		230Vac, full load
Power factor	≥0.90		230Vac, 50% load
Total harmonic distortion	≤20	%	230Vac, full load
Efficiency	≥88	%	230Vac, full load

## Electrical output data

Specification item	Value	Unit	Condition
Regulation method	Constant Voltage		Rated output voltage: 24VDC
Output voltage range	23.0 ... 25.3	VDC	
Output current range	0.1 ... 2.5	ADC	
Output short-circuit current	<10.5 / 5	Ap / Arms	Hiccup mode
Output voltage ripple	<300	mVp-p	
Output power range	60	W	
Line regulation	<3	%	
Load regulation	<5	%	
Turn-on delay	<1	s	
Output voltage rise time	<50	ms	
Hold-up time	<10	ms	

## Logistical data

Specification item	Value
Product name	CertaDrive 60W 24V 220V/240V
European Order Code	871869679693100
Logistic code 12NC	9290 014 24106
Pieces per box	20pcs

## Wiring & Connections

Specification item	Value	Unit	Condition
Input wire cross-section	0.75	mm <sup>2</sup>	Solid wire, 300 +/- 10mm length
Input cable diameter	0.82	mm	
	18	AWG	
Input wire strip length	9	mm	
Output wire cross-section	0.75	mm <sup>2</sup>	Solid wire, 300 +/- 10mm length
Output cable diameter	0.82	mm	
	18	AWG	
Output wire strip length	9	mm	
Maximum output cable length	1.0	m	CISPR15: between driver and LED module/strip

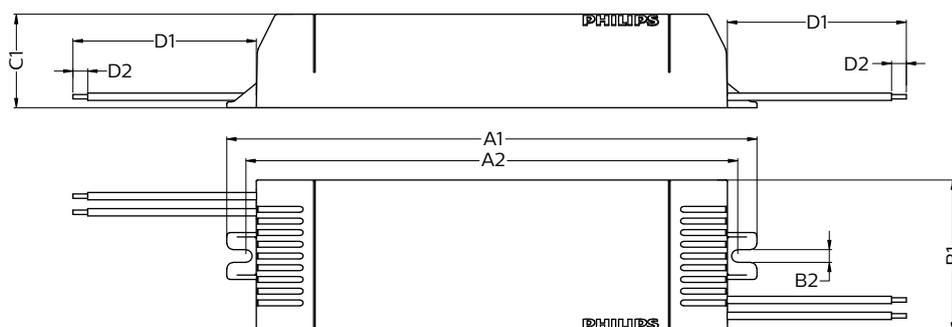


## Insulation

Insulation	Mains	LED
Mains	N/A	SELV (double)
LED	SELV (double)	N/A

## Dimensions and weight

Specification item	Value	Unit	Condition
Length (A1)	180	mm	
Width (B1)	52	mm	
Height (C1)	32	mm	
Fixing hole distance (A2)	167	mm	
Fixing hole diameter (B2)	4.2	mm	
Weight	315	gram	



	A1	A2	B1	B2	C1	D1	D2
60W	180	167	52	4.2	32	300±10	9±1

## Operational temperatures and humidity

Specification item	Value	Unit	Condition
Driver ambient temperature	-20 ... +50	°C	At rated output power. Higher ambient temperature allowed as long as Tcase-max is not exceeded.
Tcase-min	-20	°C	
Tcase-max	85	°C	Max. steady-state Tcase
Tcase-life	75	°C	For rated driver lifetime
Maximum housing temperature	110	°C	In case of failure
Relative humidity	10 ... 90	%	Non-condensing
Ingress Protection *	IP40		
Noise and hum	≤ 20	dB	

\*: The CertaDrive 60W/24VDC driver is intended for built-in indoor use only.  
The driver should not be directly exposed to the elements like snow, water and ice.

## Storage temperature and humidity

Specification item	Value	Unit	Condition
Ambient temperature	-40...+85	°C	
Relative humidity	10..95	%	Non-condensing

## Lifetime

Specification item	Value	Unit	Condition
Rated driver lifetime	45,000	hours	Driver Tc ≤ 75°C Maximum failures = 10%

## Features

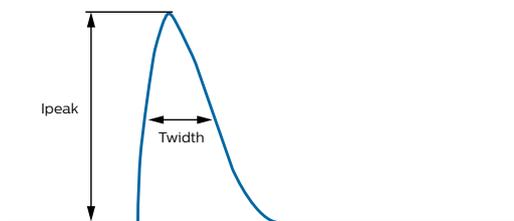
Specification item	Value	Remark	Condition
Open load protection	Yes		Automatic recovering
Short-circuit protection	Yes		Automatic recovering
Overheat protection	Yes		Indicate max temp to stop driver Automatic recovering
Overload protection	Yes		Automatic recovering
Hot wiring	Yes		
Suitable for insulation class applications	I / II		Per IEC60598

## Certificates and standards

Specification item	Value
Approval marks	CE / CCC / SELV / RoHS / EAC / UA / Double insulated

## Inrush current

Specification item	Value	Unit	Condition
Inrush current Ipeak	28	A	Input voltage 230Vac
Inrush current Twidth	330	µs	Input voltage 230Vac, measured at 50% Ipeak
Typical number of drivers	Max. 13	pcs	MCB 16A B type, mains impedance 200mΩ + 400µH



MCB	Rating	Relative number of LED drivers *
B	6A	37%
B	10A	63%
B	13A	81%
B	16A	100%
B	20A	125%
B	25A	156%
C	6A	63%
C	10A	104%
C	13A	135%
C	16A	170%
C	20A	208%
C	25A	260%
D	6A	125%
D	10A	104%
D	13A	135%
D	16A	170%
D	20A	208%

\*: Please check that cable cross sectional area corresponds with MCB rating

## Driver touch current

Specification item	Value	Unit	Condition
Typical touch current	<0.7	mA peak	Acc. IEC61347-1 at 230Vac 50/60Hz LED module contribution not included

## Surge immunity

Specification item	Value	Unit	Condition
Mains surge immunity (diff. mode)	1.0 / 0.5	kV / kA	L-N, acc. IEC61000-4-5. 2 Ohm, 1,2/50µs, 8/20µs
Mains surge immunity (comm. mode)	2.0	kV	L/N – GND acc. IEC61000-4-5. 12 Ohm, 1,2/50µs, 8/20µs



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