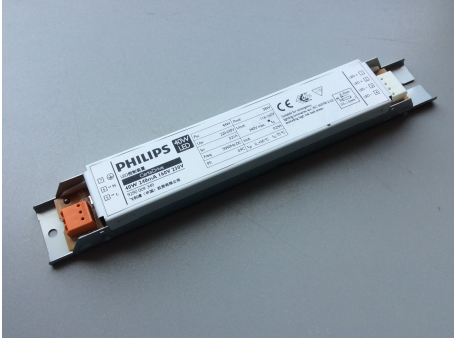


CertaDrive LED drivers – Linear HV non-isolated

CertaDrive 40w 240mA 160V 230V

January 28, 2015



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. Life time of the driver is set at 50,000 hours. Philips will extend the portfolio of CertaDrive LED drivers to match high volume CertaFlux LED line propositions as well as high volume opportunities of other LED board manufactures.

Benefits

- Design freedom
- Optimized to operate CertaFlux LED lines
- 3-years warranty

Features

- Small dimensions
- Specific current and voltage
- 50,000 hours life time
- Fast Time to Market

Applications

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



PHILIPS

Electrical input data

Specification item	Value	Unit	Condition
Nominal input voltage	220...240	V _{ac}	
Nominal input frequency	50...60	Hz	
Nominal input current	0.21	A	Input voltage 230 V _{ac} , full load
Nominal input power	44	W	Input voltage 230 V _{ac} , full load
Power factor	≥ 0.9		Input voltage 230 V _{ac} , full load
Total harmonic distortion	≤ 20	%	Input voltage 230 V _{ac} , full load
Efficiency	88	%	Input voltage 230 V _{ac} , full load, maximum output power
Nominal input voltage DC	186...250	V _{dc}	
Nominal input current DC	0.21	A	Input voltage 230 V _{dc} , full load
Input voltage AC	202...254	V _{ac}	Performance range
Input frequency AC	47.5...63	Hz	Maximum permissible range
Input voltage DC	168...275	V _{dc}	Maximum permissible range

Electrical output data

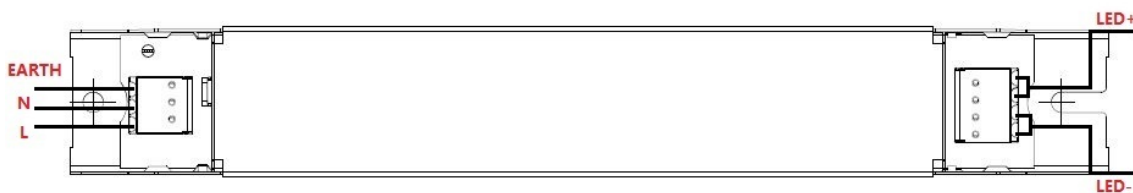
Specification item	Value	Unit	Condition
Regulation method	Constant Current		
Output voltage	116...160	V _{dc}	
Output voltage max.	250	V	Peak voltage (RMS) at open load
Output current	0.24	A	Full output current setting
Output current tolerance	± 8	%	
Output current ripple	≤ 30	%	Ripple (100Hz) = peak / average
Output power	38	W	Full output
Galvanic isolation	No		Lamp to mains

Electrical data controls input

Specification item	Value	Unit	Condition
Control method	Fixed		

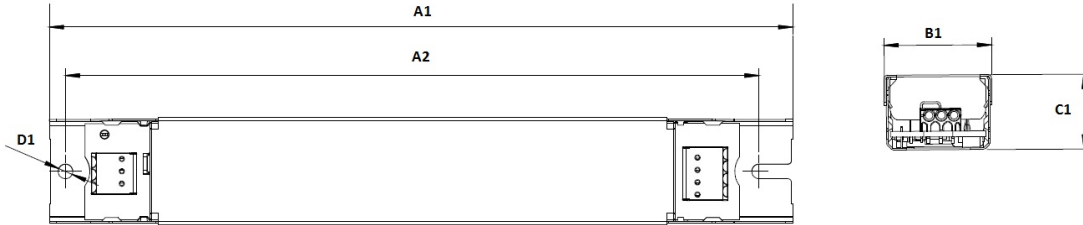
Wiring

Specification item	Value	Unit	Condition
Input wire cross-section	0.5...1.5	mm ²	WAGO744, solid wire
	16...20	AWG	WAGO744, solid wire
Input wire strip length	8...9	mm	
Output wire cross-section	0.5...1.5	mm ²	WAGO744, solid wire
	16...20	AWG	WAGO744, solid wire
Output wire strip length	8...9	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)	209	mm	
Width (B1)	30	mm	
Height (C1)	20.9	mm	
Fixing hole diameter (D1)	4.1	mm	
Fixing hole distance (A2)	195	mm	
Weight	140	gram	



Operational temperatures and humidity

Specification item	Value	Unit	Condition
Ambient temperature	+0...+50	°C	
T _{case-max}	75	°C	Maximum temperature measured at T _c -point
T _{case-life}	65	°C	Measured at T _c -point
Maximum housing temperature	110	°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	50,000	hours	Measured temperature at T _c -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: 0.24 A	
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	No		
Suitable for fixtures with protection class	I		

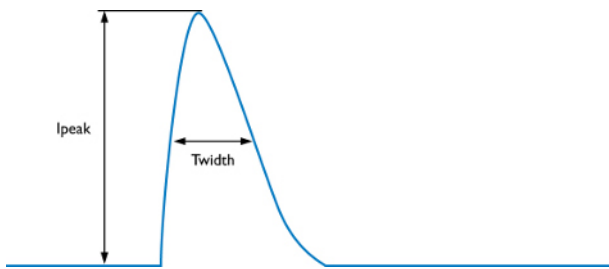
Certificates and standards

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}	5.3	A	Input voltage 230V
Inrush current T_{width}	70	μs	Input voltage 230V, measured at 50% I_{peak}
Drivers / MCB 16A type B	≤ 24	pcs	



Earth leakage current

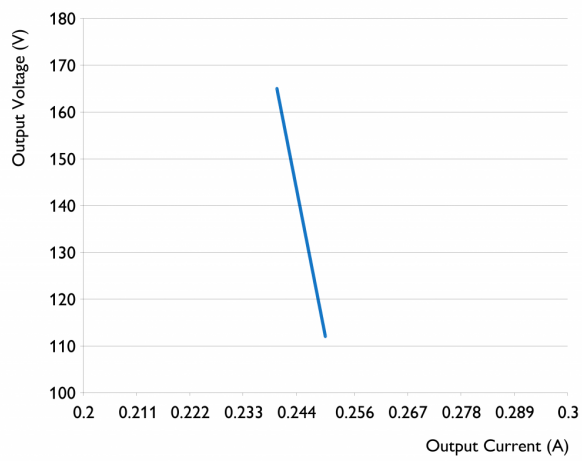
Specification item	Value	Unit	Condition
Earth leakage current	0.7	mApk	LED module contribution not included

Surge capability

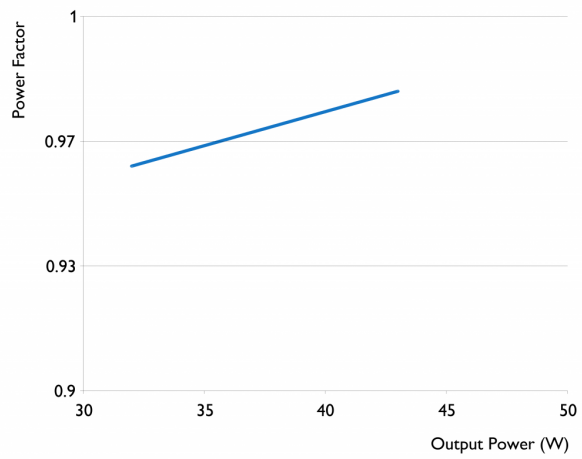
Specification item	Value	Unit	Condition
Mains surge capability (L-N)	1	kV	
Mains surge capability (L/N-Ground)	2	kV	

Graphs

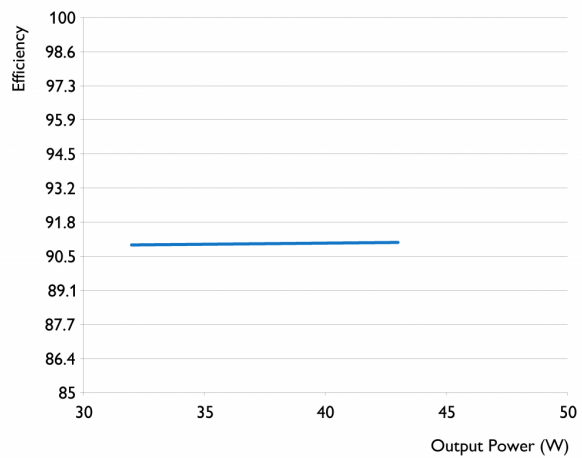
Operating window



Power factor versus output power



Efficiency versus output power



Logistical data

Specification item	Value
Product name	CertaDrive 40w 240mA 160V 230V
Order code	99956000
Logistic code 12NC	9290 009 34906
EAN3	8718291999577
Pieces per box	20



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