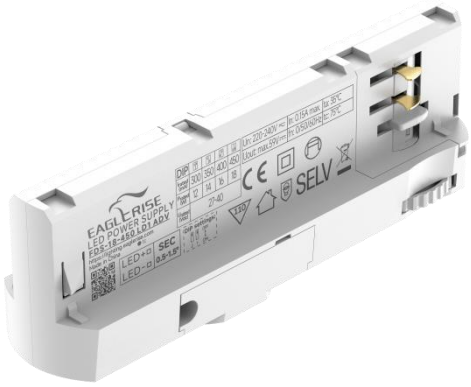
18W Constant Current -FDS power supply



Features

- For luminaries of protection Class II, SELV, Independent
- Input Voltage: 220-240V
- Protections: SCP/OLP/OVP/OTP
- Power Factor：0.95(Typ.)
- Efficiency：92%(Typ.)
- Adjustable Output Current with dip-switch
- 5 years warranty

Applications

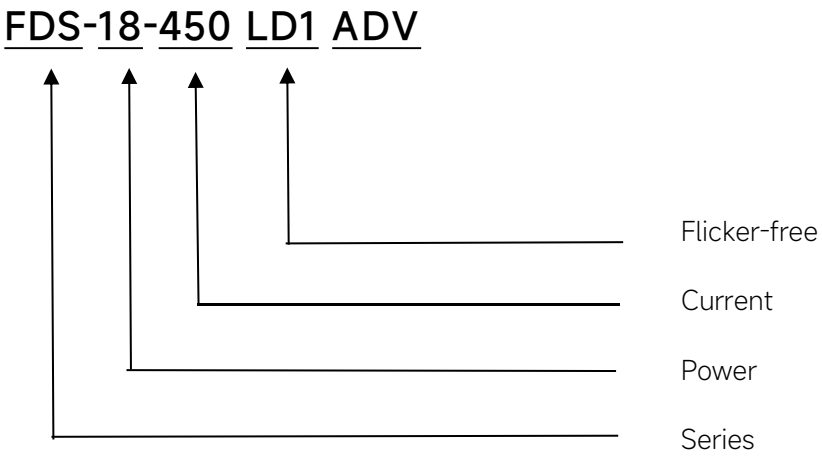
- Track light

■Approve

◆ Description

FDS-18-450 LD1 ADV is a 18W constant current LED driver with 300 to 450mA output current and a forward voltage range from 27 to 40Vdc. The output current is adjustable by DIP Switch.With it's compact dimensions from 133x31x42mm. It is easy to integrate in track spot light products. To ensure trouble-free operation, protection is provided against output short circuit, over load, over voltage and over temperature.

◆ Model code



◆ Specification

Output	Constant Current	300mA	350mA	400mA	450mA
	Voltage Range(VDC)	27-40VDC			
	Unload voltage Max.	59VDC			
	Current Accuracy	±7%			±5%
	Output LF current ripple(≤120Hz)	±5%			
	SVM	≤0.4@Full Load, 230Vac			
	Pst	≤1@Full Load, 230Vac			
	Efficiency(Typ.)	92%@Full load, 230Vac			
	EOFI	100%			
Input	Rated input voltage	220-240V			
	Range of input voltage	198-264VAC			
	Maximum voltage	300VAC@1 h maximum,unit might not operate in this abnormal condition			
	Range of input voltage(VDC)	176-280VDC			
	Frequency(Hz)	0/50/60 Hz			
	Displacement factor	≥0.9@Full load, 230Vac			
	Power Factor	0.95@Full load, 230Vac			
	Input Current max	0.15A max			
	Start-up time(AC mode)	< 0.5S			
	No Load Power	≤0.5W			
	THD (Typ.)	<10%@Full load, 230Vac			
Protection	Over Load Protection	103-120%			
		YES/Auto Resume			
	Over Voltage Protection	> 59VDC			
		YES/Auto Resume			
	Short Circuit Protection	YES/Auto Resume			
	Over Temperature Protection	YES/Auto Resume			
Capability	Surge capability (L-N)	2KV			
	Surge capability (L/N-Ground)	2KV			
Withstand voltage	Input-Output	3750V/5mA/60S			
Environment	Operating Temperature	-20℃~+35℃			
	Humidity	20%-90%RH			
	Tc	75℃			
	Storage Temperature	-40℃...+75℃			
	Life time	> 50000h@Tc=75℃			
	Noise	≤25dB(A)@20cm			
Surface	Dimension	133x31x42mm(LXWXH)mm			
	material	PC			

Standards	Safety	IEC61347- 1, IEC61347-2- 13;EN61347- 1, EN61347-2- 13;EN62384
	EMC	EN55015, EN61000-3-2, EN61000-3-3, EN61547;EN61000-4-5
	ErP	Erp2.0 EU 2019/2020
	RoHS	RoHS (2011/65/EU) (EU)2015/863
Note	1.All parameters not specially mentioned are measured at 230VAC input , full load and 25℃ of ambient temperature. 2.Ripple & Noise are measured at 20MHz of bandwidth by using a 300mm twisted pair-wire terminated with a 0.1uF & 47 uF parallel capacitor. 3.The DC input for this product is only used for emergency lighting and applies to functional and safety requirements, EMC is not conside. 4.Switch and dimmer are not recommended to connect between this product output and luminaries. 5.EL compatible with IEC 61347-2-13 Annex J, compatible with EN 60598-2-22 emergency lighting fixtures, compatible with EN 50172 central battery system applications.	

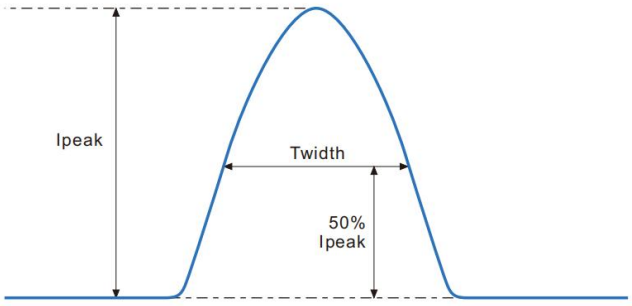
◆ Parameter

Number	Output				Switch position	
	Current (mA)	Voltage (VDC)	Voltage No load (VDC)	Power (W)	1	2
1	300mA	27-40V	59VDC	12W	--	--
2	350mA			14W	ON	--
3	400mA			16W	--	ON
*4	450mA			18W	ON	ON

* Factory default

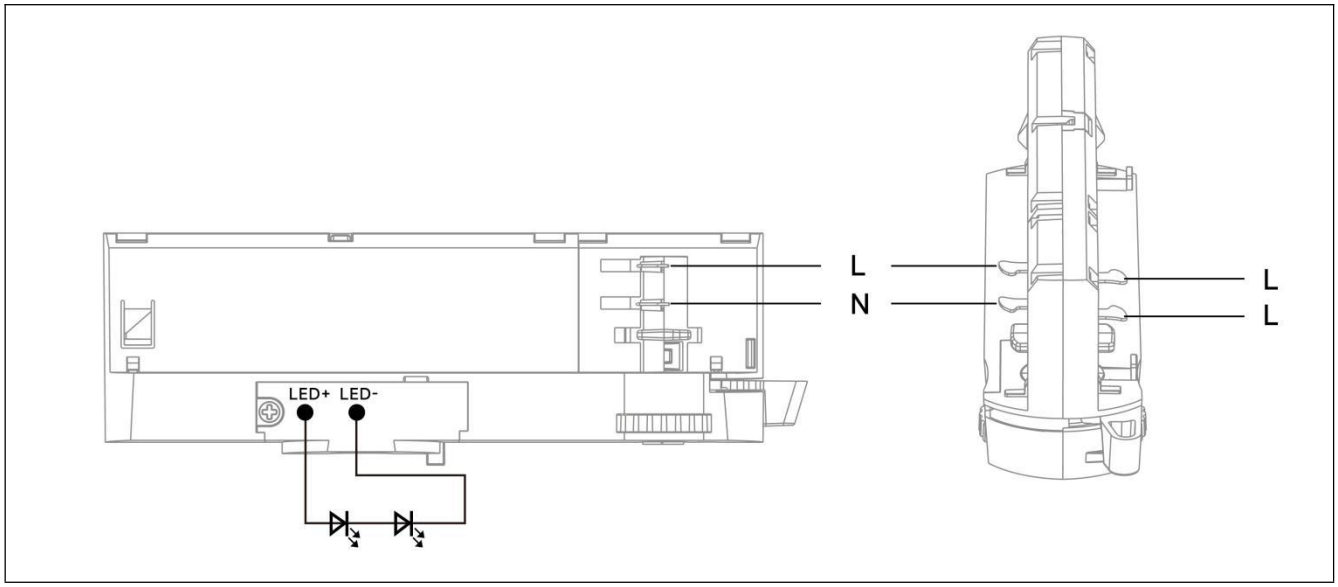
◆ Inrush Current

I_{peak}	Twidth	B10	B16	B20	C10	C16	C20
20A	132μs	31pcs	50pcs	63pcs	52pcs	84pcs	105pcs

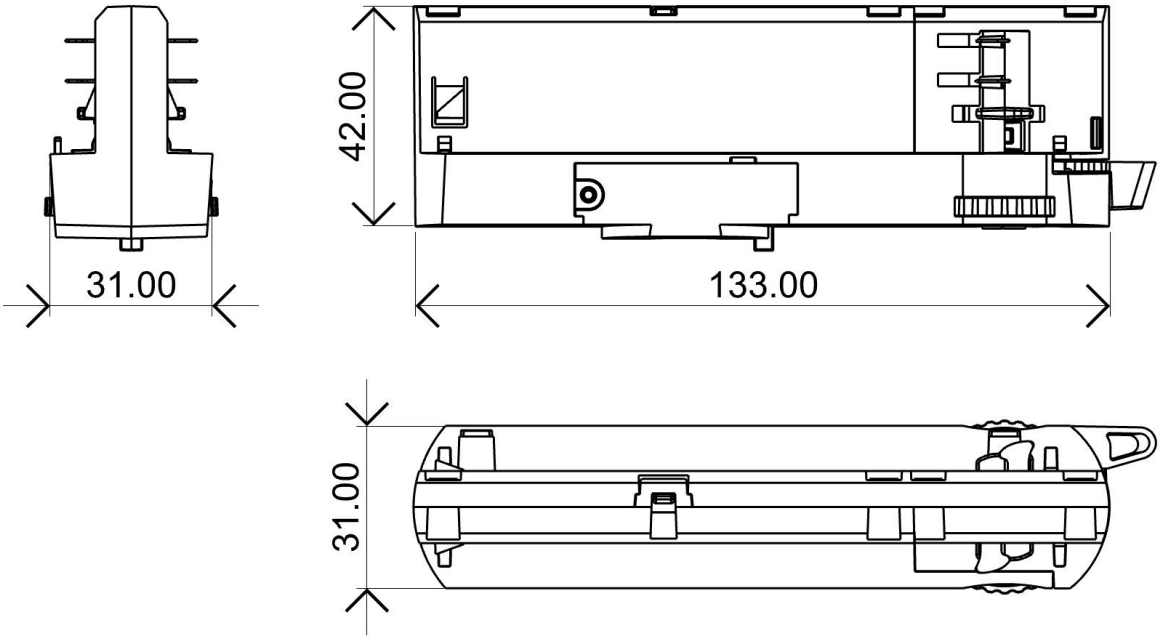


Remarks:
1.The number of drives mounted under different MCBs in the table is the maximum value. Please do not exceed this number during installation.
2.Different brands and models of miniature circuit breakers, the number of drives mounted will be slightly different.

◆ Wiring diagram



◆ 2D diagram



◆ Wiring & Connections

Specification item		Value (Unit)
Output	Output wire cross-section	0.5...1.5 mm^2
	Output wire gauge.	16...20 AWG
	Output wire strip length	8...9mm

◆ Packaging

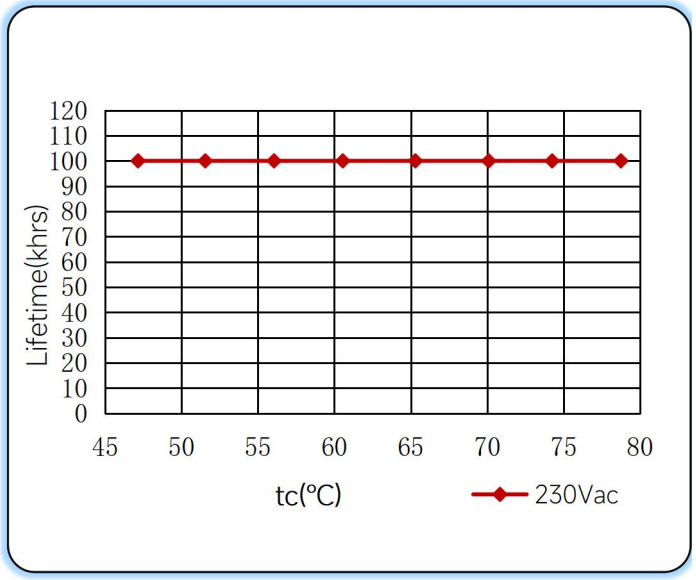
Model	Product Dimensions(mm)	weight/piece(Kg)	Outer carton dimension(mm)	Quantity/carton	Net weight/carton(Kg)	Gross weight/carton(Kg)
FDS-18-450 LD1 ADV	133x31x42	0.096	295x255x200	50	4.8	5.61

◆ Matching brand

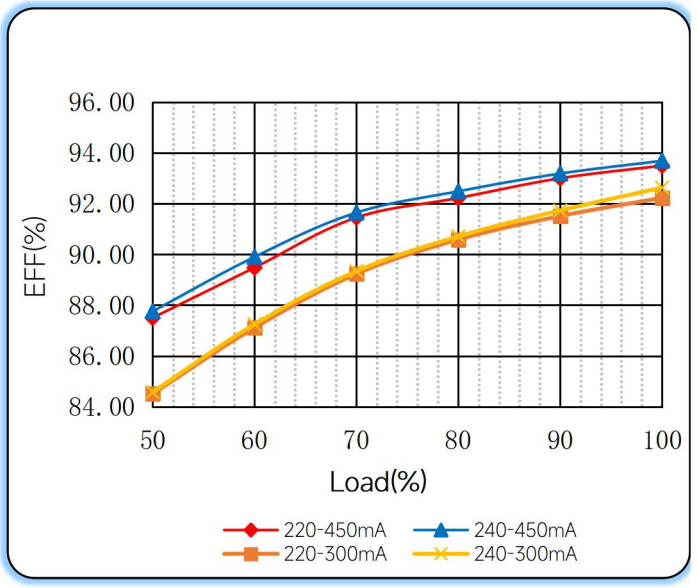
Manufacturer	Type	System	Intrack casing colour
Global	XTS11 & XTSC611	3P	Black, white, gray
A.A.G STUCCHI	9000A-2-ST	3P	Black, white, gray
Eutrac	25-106	3P	Black, white, gray
Unipro	T32B	3P	Black, white, gray
PowerGEAR	PRO-0431L	3P	Black, white, gray
ERCO	107 930 1000	3P	Black, white, gray

◆ Curve for FDS-18-450 LD1 ADV, Io=300/450mA

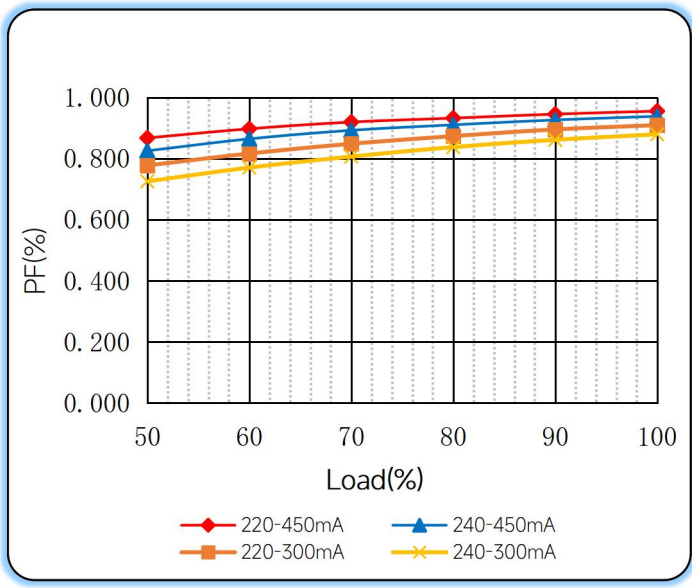
Lifetime vs. Temperature Curve



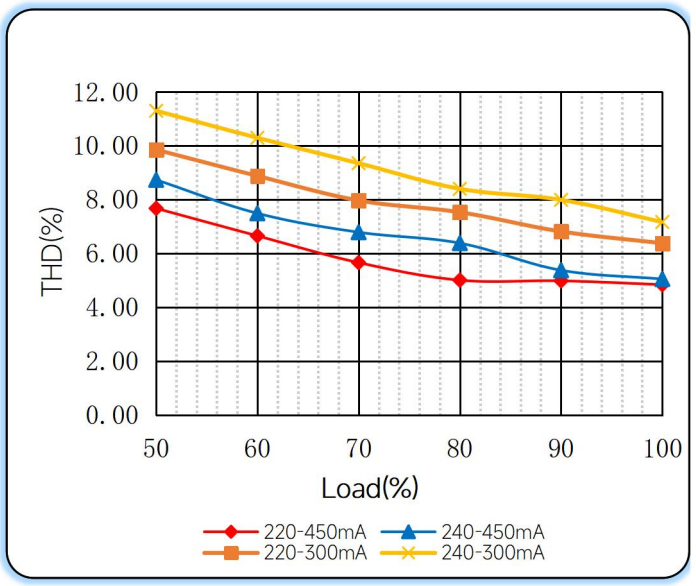
Efficiency vs. Load



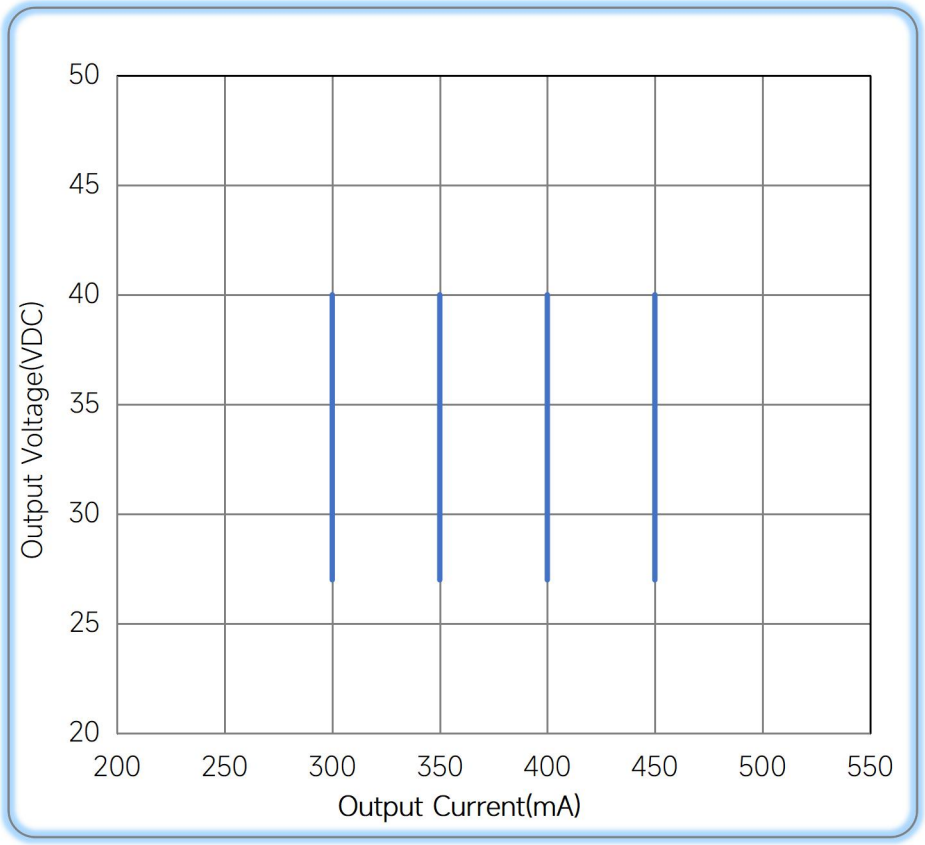
Power Factor Characteristics



THD vs. Load



◆ Operating window



◆ Revision Updates

ITEM	BEFORE	AFTER	VERSION	DATE
Initial			A	2026/04/10
Current Accuracy	±5%	±7%@300-400mA; ±5%@450mA	B	2026/09/21

Remark:The final interpretation of the contents of the specification belongs to Eaglerise Electric & Electronic (China) Co., Ltd.

Tel: +86-0757-86256822, +86-0757-86256831
E-mail: sales@eaglerise.com
Website : https://lighting.eaglerise.com