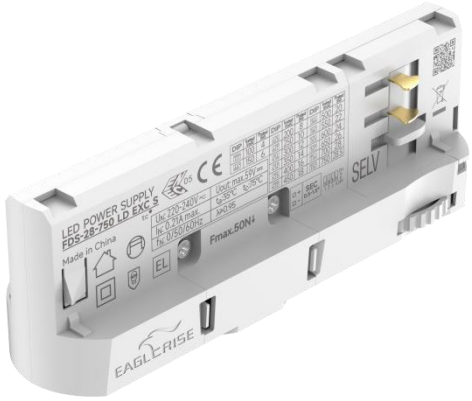
28W Constant Current in-track driver



Features

- For luminaries of protection Class II,SELV
- Input Voltage 220-240VAC
- Protections: SCP/OLP/OTP
- Power Factor: ≥0.95@Full Load,230VAC
- Efficiency: 88%
- Adjustable Output Current with dip-switch
- 5 years warranty

Applications

- Track Spot light

■Approve

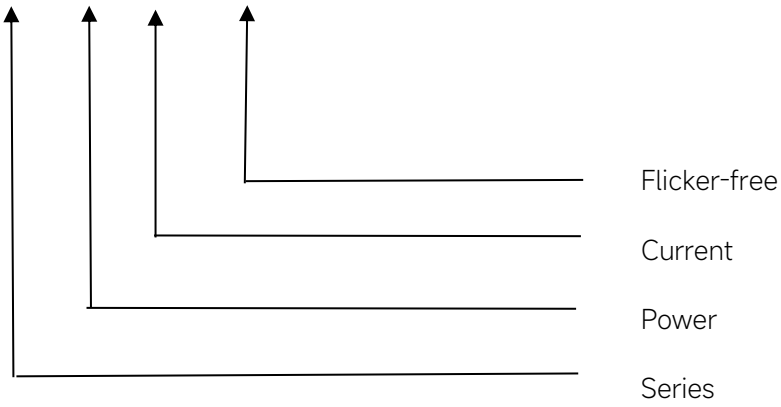
CE CB SELV

◆ Description

FDS-28-750 LD EXC S is a 28W constant current LED driver that operates from 198-264Vac input with 100 to 750mA output current and a forward voltage range from 10 to 40Vdc. The output current is adjustable by DIP Switch. With it's compact dimensions from 123.1x31.1x42.2mm. It is easy to integrate in track spot light products. To ensure trouble-free operation, protection is provided against output short circuit and over Load.

◆ Model code

FDS-28-750 LD EXC S



◆ Specification

Output	Constant Current	100mA	150mA	...	750mA
	Voltage Range(VDC)	10-40VDC			10-38VDC
	Unload voltage Max.	59VDC			
	Current Accuracy	±5%@150-750mA ; ±7%@100mA			
	Output HF current ripple(≥1KHz)	±5%			
	Output LF current ripple(≤120Hz)	±3%			
	SVM	≤0.4			
	P_{st}	≤1			
	Efficiency(Typ.)	88%@350-600mA			
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			
	Frequency(Hz)	50/60 Hz			
	Displacement factor	≥0.9			
	Power Factor	≥0.95@Full Load,230VAC			
	Input Current max	0.18A MAX. @Full Load,230VAC			
	Start-up time	< 0.5S			
	No Load Power	≤0.5W			
	THD (Typ.)	<20% @Full Load,230VAC			
Protection	Over Load Protection	103-130%			
		YES/Auto Resume			
	Short circuit Protection	YES/Auto Resume			
capability	Surge capability (L-N)	1KV			
	Surge capability (L/N-Ground)	NA			
Environment	Operating Temperature	-25℃~+35℃			
	Humidity	10%-90%RH			
	Tc	75℃			
	Storage Temperature	-25℃...+75℃			
	Life time	> 50000h@Tc=75℃			
	Noise	≤25dB(A)@20cm			
Surface	Dimension	123.1x31.1x42.2mm(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			
	Energy Efficiency	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 considered. 4.Switch and dimmer are not recommended to connect between this product output and luminaries. 5.The over-temperature protection of the product is provided by the IC. 6.The power supply can be briefly applied to DC. 7.All Eaglerise power supply are complied with EMI regulations. Since they are belong to component and will be installed inside system enclosure. When they are integrated into a system, the EMI characteristics of the system must be re-verified again.

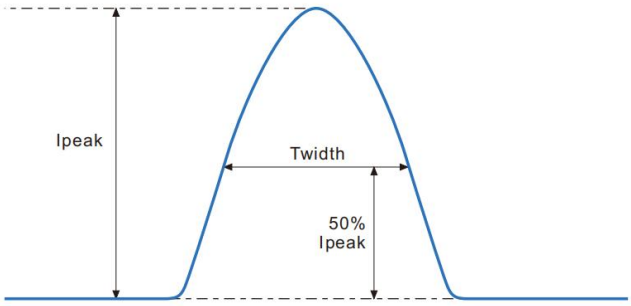
◆ Parameter

Number	Output				Switch position			
	Current (mA)	Voltage (VDC)	Voltage No load (VDC)	Power (W)	1	2	3	4
1	100mA	10-40VDC	59V	4	--	--	--	--
2	150mA			6	--	--	--	ON
3	200mA			8	--	--	ON	--
4	250mA			10	--	--	ON	ON
5	300mA			12	--	ON	--	--
6	350mA			14	--	ON	--	ON
7	400mA			16	ON	--	--	--
8	450mA			18	ON	--	--	ON
9	500mA			20	ON	--	ON	--
10	550mA			22	ON	--	ON	ON
11	600mA			24	ON	ON	--	--
12	650mA			26	ON	ON	--	ON
13	700mA			28	ON	ON	ON	--
*14	750mA	10-38VDC		28.5	ON	ON	ON	ON

* Factory default

◆ Inrush Current

I^{peak}	Twidth	B10	B16	B20	C10	C16	C20
9.5A	**16μs**	36pcs	58pcs	73pcs	58pcs	94pcs	117pcs

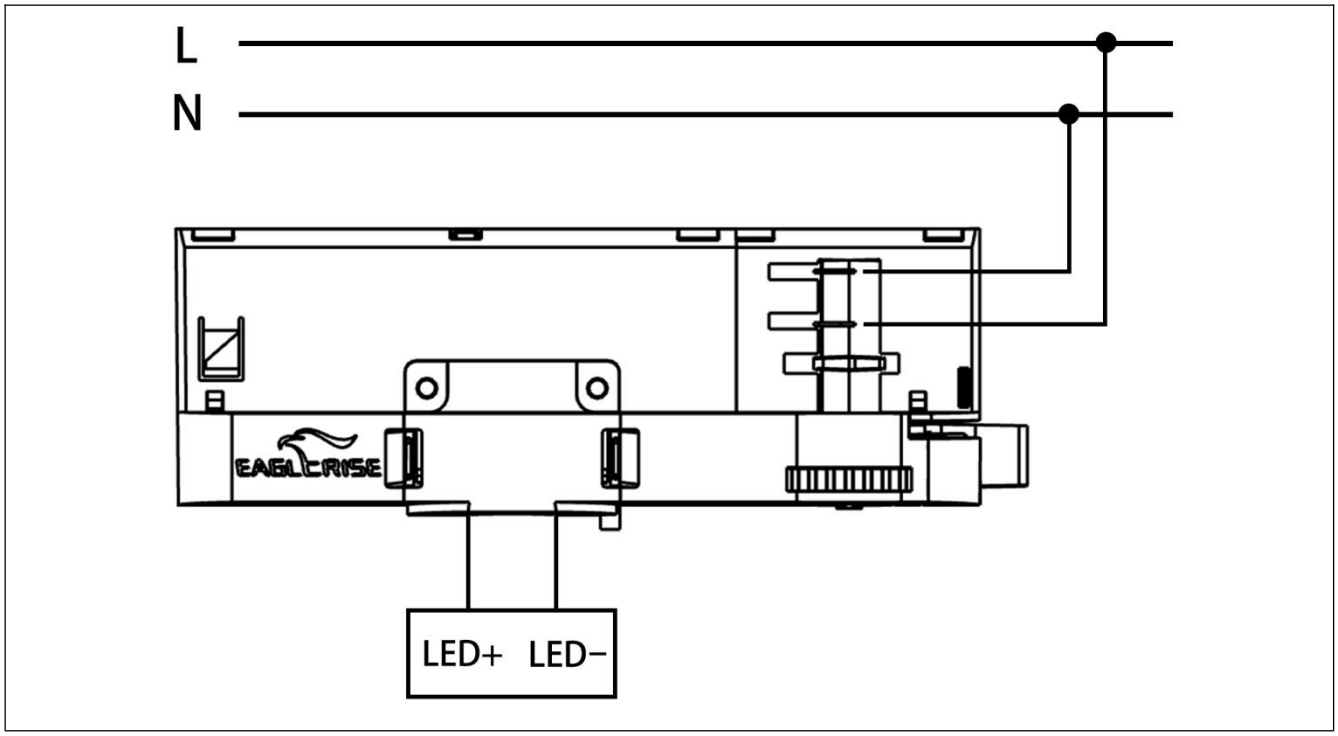


Remarks:

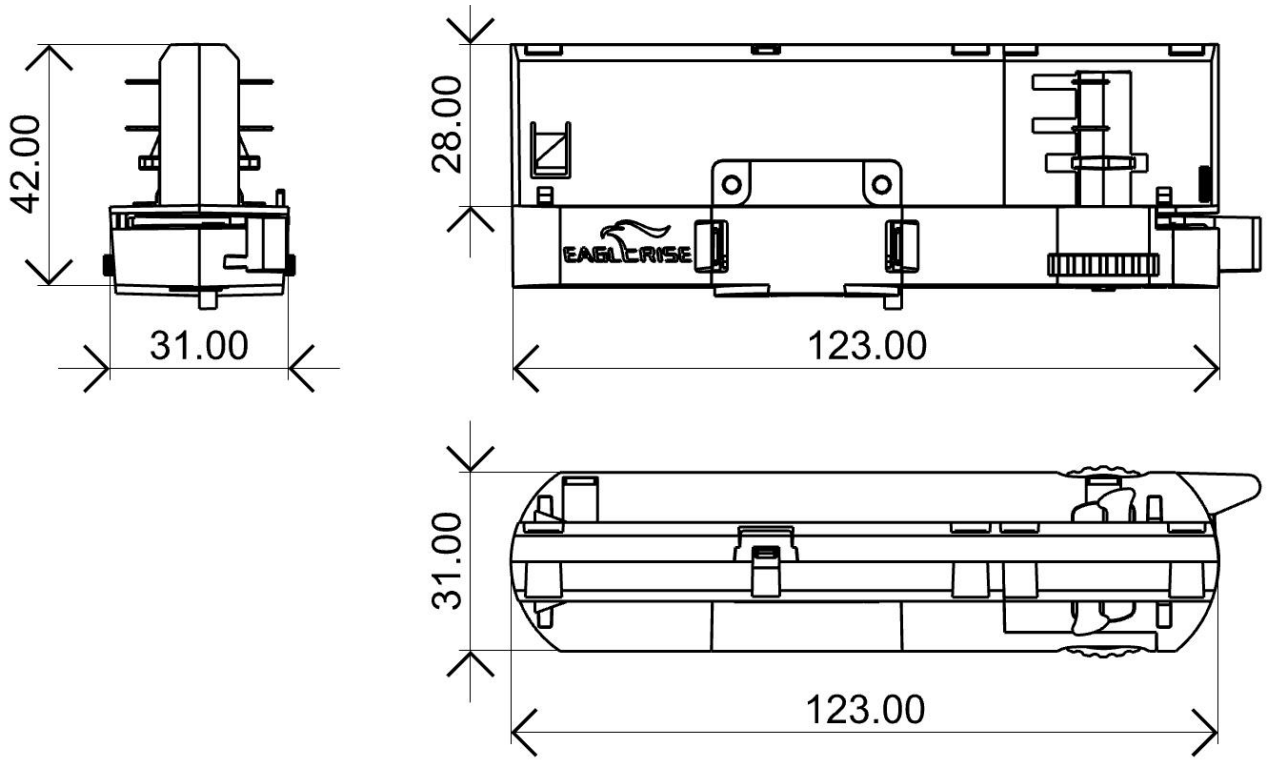
1.The number of drives mounted under different MCBs in the table is the maximum value. Please do not exceed this number during installation.

2.Different brands and models of miniature circuit breakers, the number of drives mounted will be slightly different.

◆ Wiring diagram



◆ 2D diagram



◆ Wiring & Connections

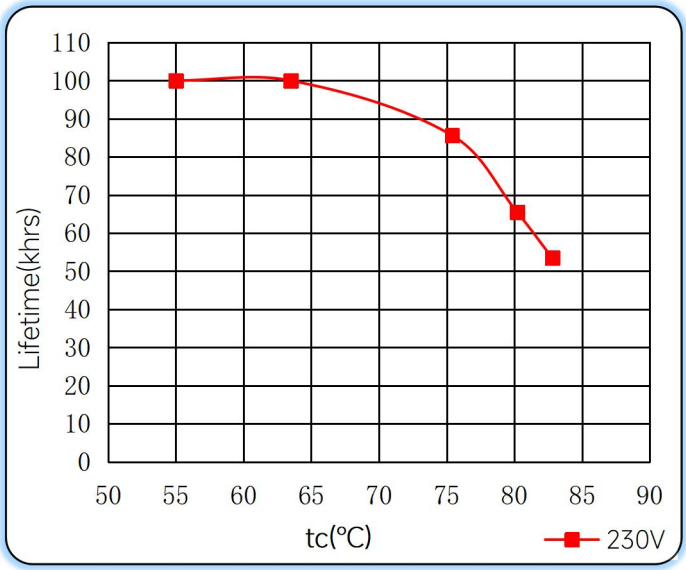
Specification item		Value （Unit ）
Output	Output wire cross-section	0.5...1.5 mm^2
	Output wire gauge.	16...20 AWG
	Output wire strip length	8...9mm

◆ Matching brand

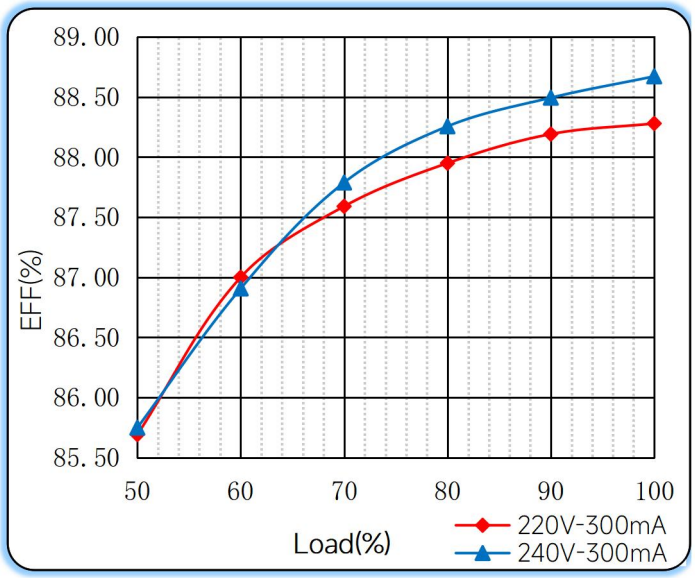
Serial number	Serial number	Serial number	Serial number
1	Global	XTSC&XTSCF6	3P
2	Stucchi	9000XX Series	3P
3	Unipro	T32B	3P
4	Eutrac	2510x	3P
5	Lvela	7501	3P
6	ERCO	ZUMTOBEL	3P

◆ Curve for FDS-28-750 LD EXC S, Io=300mA

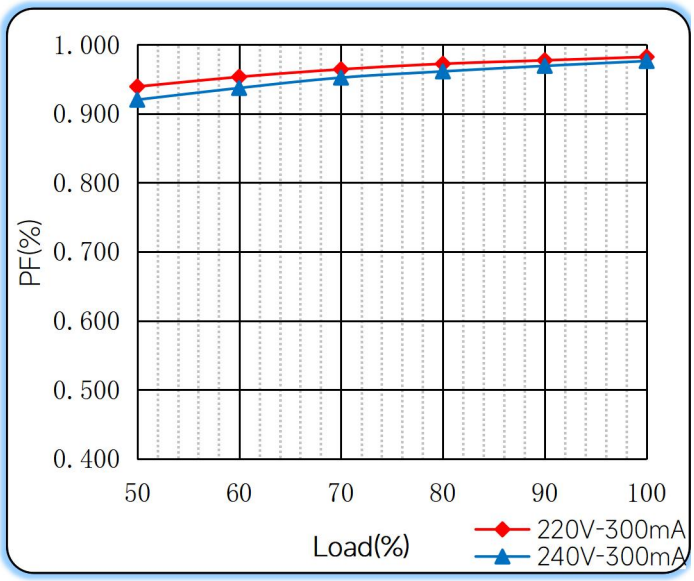
Lifetime vs. Temperature Curve



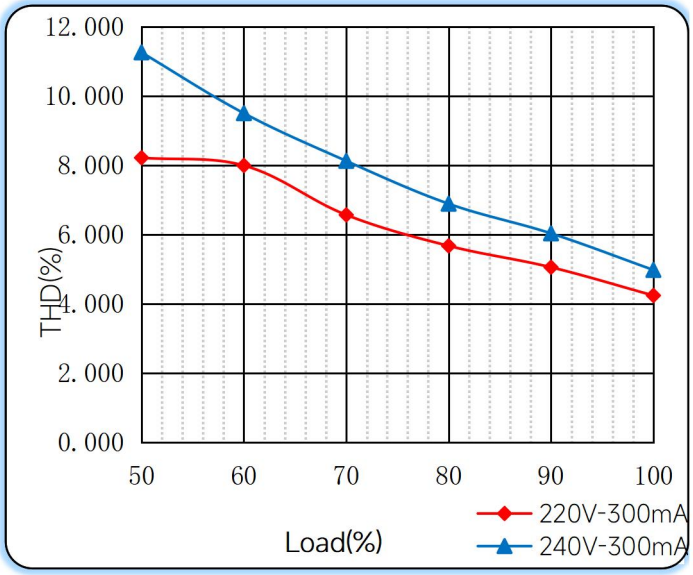
Efficiency vs. Load



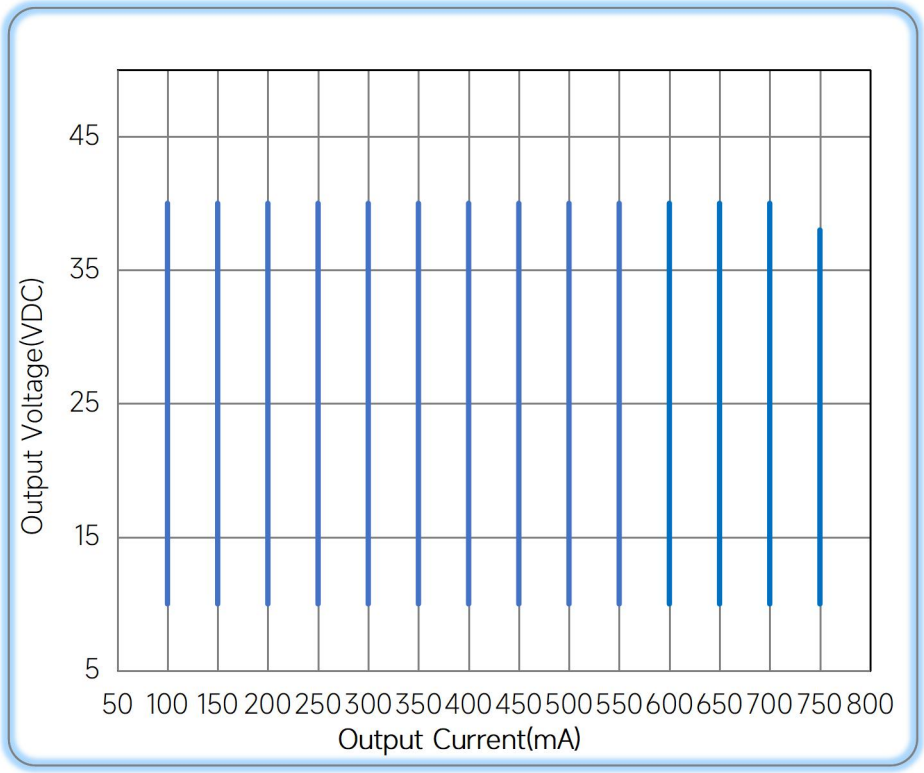
Power Factor Characteristics



THD vs. Load



◆ Operating window



Operating window 100%

◆ Revision Updates

ITEM	BEFORE	AFTER	VERSION	DATE
Initial			A	2024/09/19

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