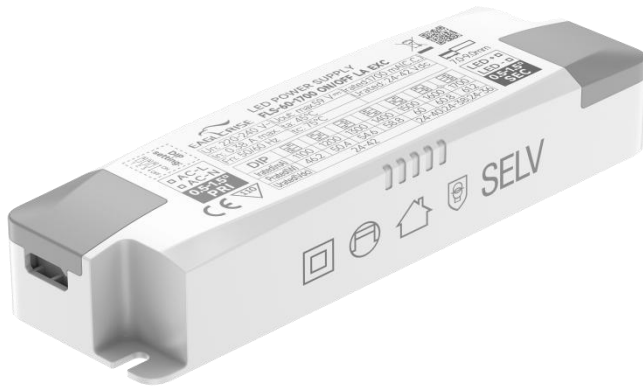


60W Constant Current power supply



■ Approve

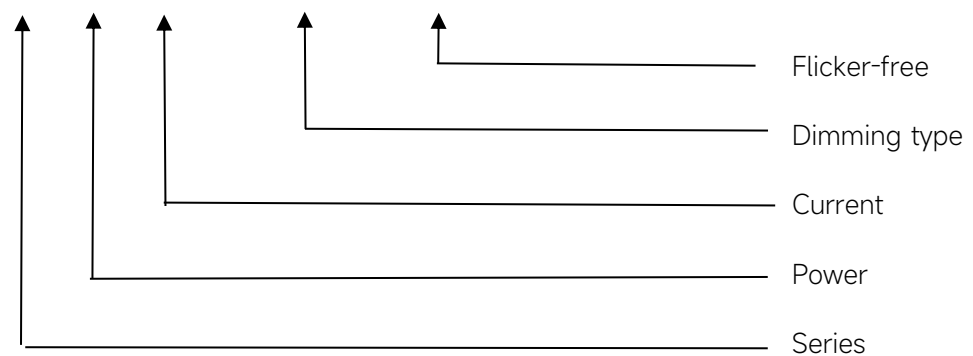


◆ Description

FLS-60-1700 ON/OFF LA EXC is a 60W constant current LED driver with 1100 to 1700mA output current and a forward voltage range from 24 to 42Vdc. With its compact dimensions from 150 x 45 x 30 mm. It is easy to integrate in LED panel and Ceiling lights. To ensure trouble-free operation, protection is provided against output short circuit, over load, over voltage, over temperature and open circuit.

◆ Model code

FLS-60-1700 ON/OFF LA EXC



Features

- For luminaires of protection Class II, SELV, Independent
- Input Voltage 220-240VAC
- Protections: OLP/OVP/SCP/OTP
- Power Factor: ≥ 0.95
- Efficiency: $> 89\%$
- 5 years warranty

Applications

- LED Panel
- Ceiling Light

◆ Specification

Output	Constant Current	1100	1200	1300	1400	1500	1600	1700
	Voltage Range	24-42V				24-40V	24-38V	24-36V
	Unload voltage Max.	59VDC						
	Current Accuracy	±5%						
	Output HF current	±5%						
	Output LF current	±5%						
	SVM	≤0.4@Full Load						
	Pst	≤1@Full Load						
	Efficiency(Typ.)	>89%@Full Load,230VAC						
Input	Rated input voltage	220-240VAC						
	Range of input voltage	198-264VAC						
	Frequency(Hz)	50/60 Hz						
	Power Factor	≥0.95@Full Load, 230VAC						
	Input Current max	0.38A MAX.@Full Load, 220-240VAC						
	Start-up time	< 0.5S						
	Unload Power	≤0.5W						
	THD	<10%@Full load						
Protection	Over Voltage Protection	59VDC						
		YES/Auto Resume						
	Over Load Protection	>103%						
		YES/Auto Resume						
	Short circuit Protection	YES/Auto Resume						
capability	Surge capability (L-N)	1KV						
	Surge capability	NA						
Environment	Operating Temperature	-20°C~+45°C						
	Humidity	20%-90%RH						
	Tc (Max)	75°C						
	Storage Temperature	-20°C...+60°C						
	Life time	> 30000h@Tc=75°C						
	Noise	≤25dB(A)@20cm						
Dimming	Three-level Dimming	100%-50%-12%(with memory function)						
Surface	Dimension	150x45x30(LXWXH)mm						
	material	PC						
Standards	Safety	GB19510. 1, GB19510. 14;IEC61347- 1, IEC61347-2- 13;AS/NZS 61347- 1						
	EMC	GB/T17743, GB17625. 1;EN55015, EN61000-3-2, EN61000-3-3, EN61547;EN55015, EN61000-3-2, EN61000-3-3, EN61547,EN 62493;EN61000-4-5;EN61000-4-2,3,4,5,6,8,11, EN61547						

	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°C 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 over-temperature protection of the product is provided by the IC. 3.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.	

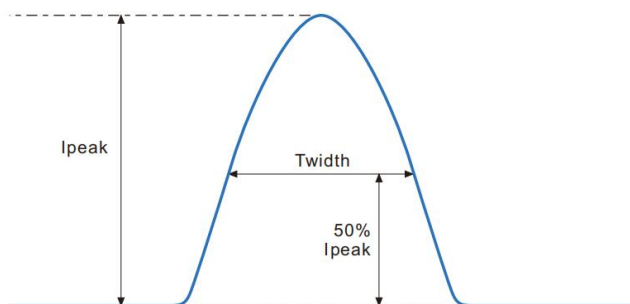
◆ Parameter

Number	Output				Switch position		
	Current (mA)	Voltage (VDC)	Voltage No load (VDC)	Power (W)	1	2	3
1	1100mA	24-42VDC	59	46.2	ON	--	--
2	1200mA	24-42VDC		50.4	--	ON	--
3	1300mA	24-42VDC		54.6	ON	ON	--
4	1400mA	24-42VDC		58.8	--	--	ON
5	1500mA	24-40VDC		60	ON	--	ON
6	1600mA	24-38VDC		60.8	--	ON	ON
*7	1700mA	24-36VDC		61.2	ON	ON	ON

* Factory default

◆ Inrush Current

I_{peak}	Twidth	B10	B16	B20	C10	C16	C20
34.6A	202μs	11pcs	18pcs	23pcs	19pcs	31pcs	39pcs

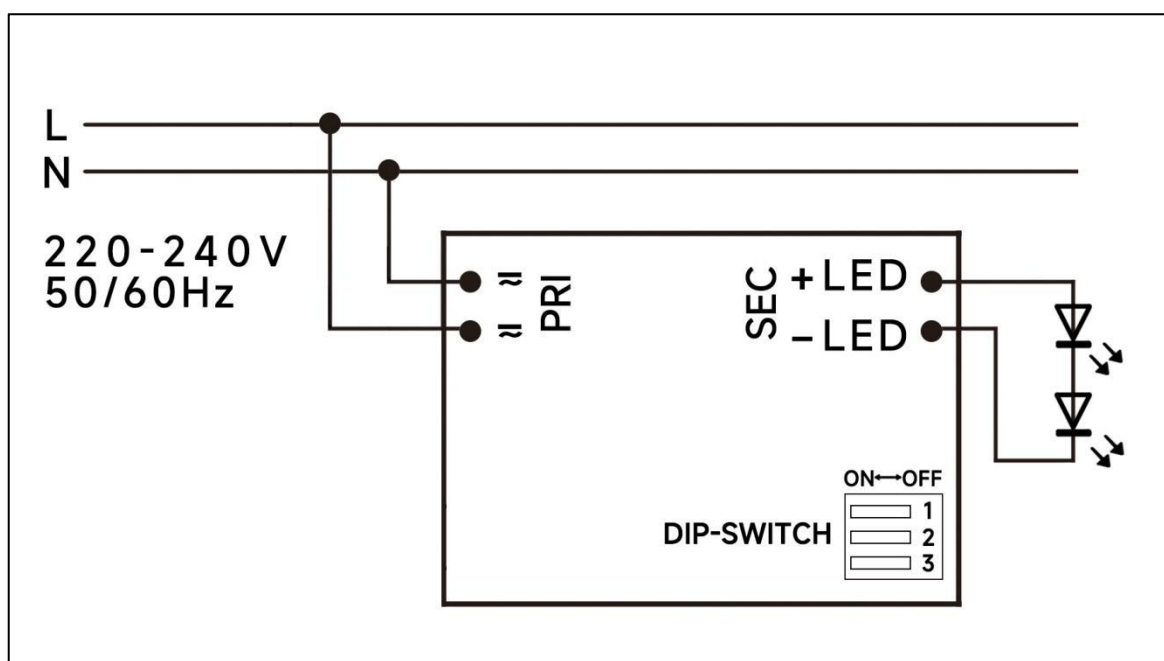


Remarks:

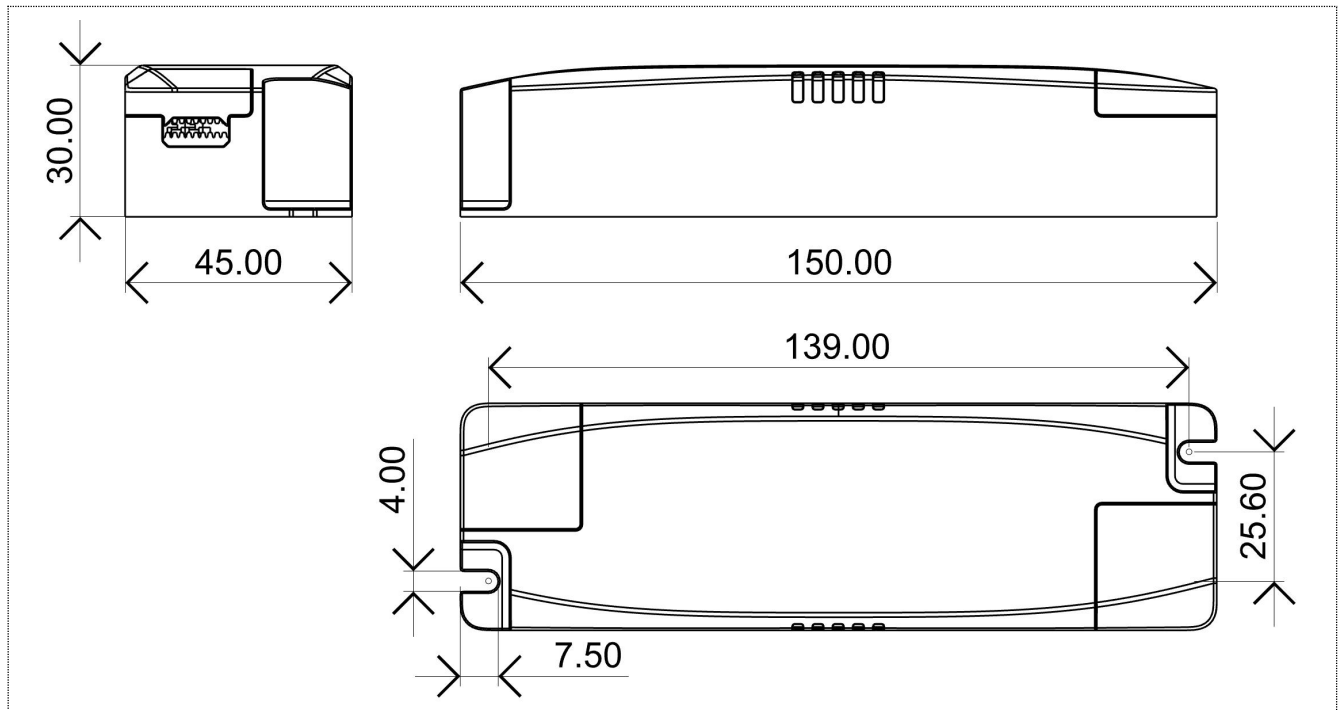
1.The number of drives mounted under different MCBs in the table is the maximum value. Please do not exceed this number during installation.

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)
Input	Input wire cross-section	0.5...1.5 mm ²
	Input wire gauge.	16...20 AWG
	Input wire strip length	7...9mm
Output	Output wire cross-section	0.5...1.5 mm ²
	Output wire gauge.	16...20 AWG
	Output wire strip length	7...9mm

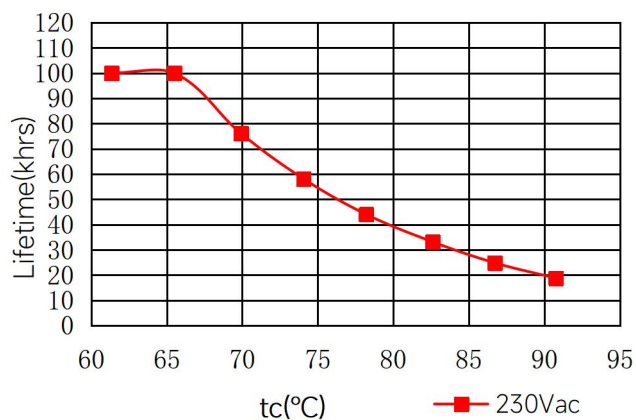
Note: Solid wire is risky to use on an angled terminal. Stranded wire is recommended for this kind of use.

◆ Packaging

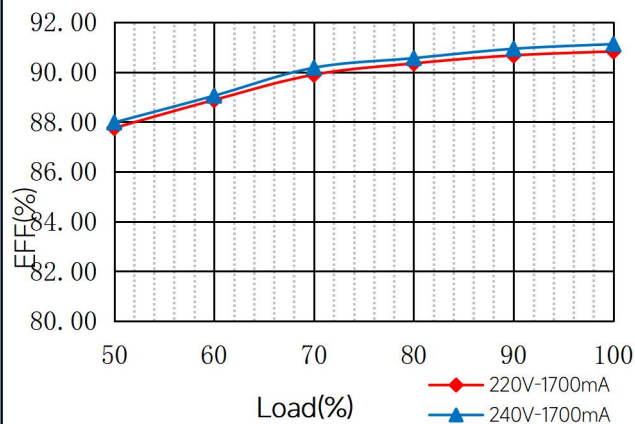
Model	Product Dimensions(mm)	weight/piece	Outer carton dimension(mm)	Quantity/carton	Net weight/carton(Kg)	Gross weight/carton(Kg)
FLS-60-1700 ON/OFF LA EXC	150x45x26mm	0.15	405X315X170mm	72	10.8	11.68

◆ Curve for FLS-60-1700 ON/OFF LA EXC, $I_o=1700\text{mA}$

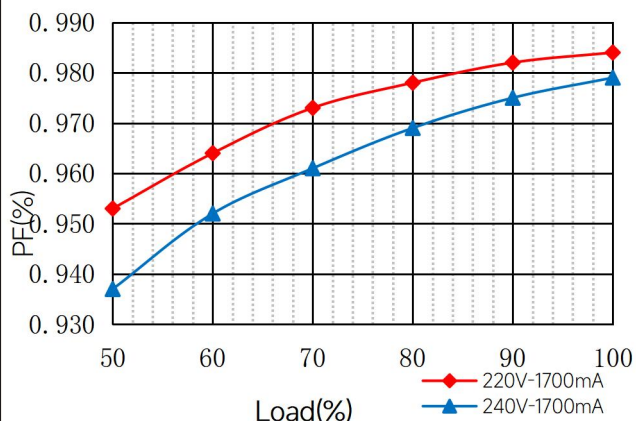
Lifetime vs. Ambient Temperature Curve



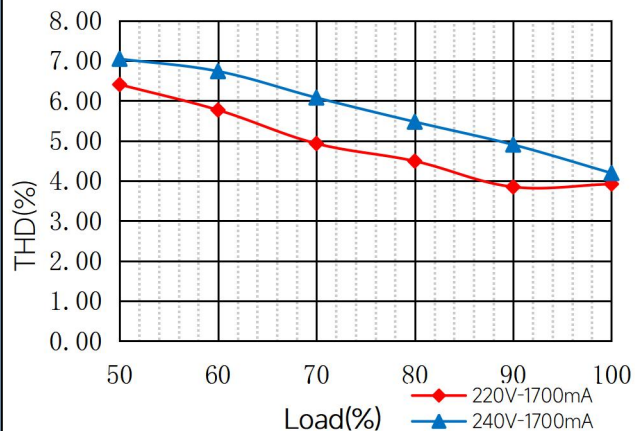
Efficiency vs. Load



Power Factor Characteristics

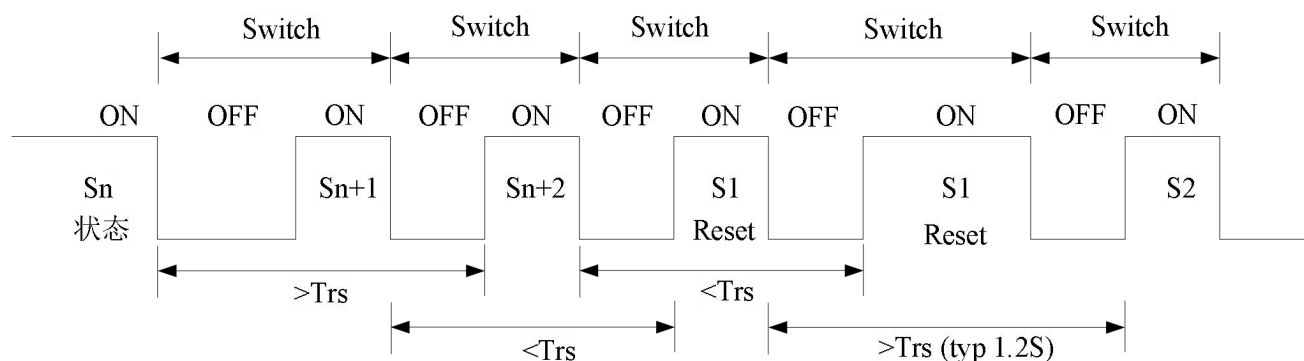


THD vs. Load



◆ Operation

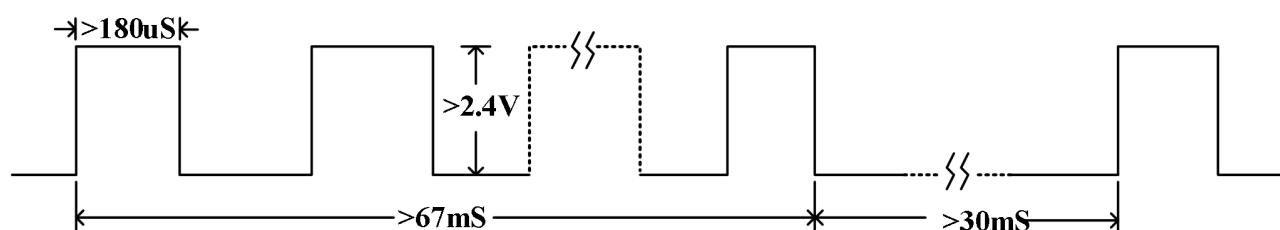
Reset Mode— Power off and on twice within 1 second to reset.



If shutdown takes ~6.4s or a reset ("OFF→ON→OFF") is executed in ~1.2s, a sync issue might arise.

However, given the $\pm 5\%$ time tolerance, the risk window is minimal, and the occurrence probability is negligible.

Signal Detection Requirements



The S4165M determines power ON/OFF states by detecting pulse signals or high/low levels through the CLK pin. The pulse signal must meet the following requirements:

- Pulse width: $>180\mu\text{s}$
- Pulse amplitude: $>2.4\text{V}$ (AC signals detectable; for design margin, $>4\text{V}$ recommended).

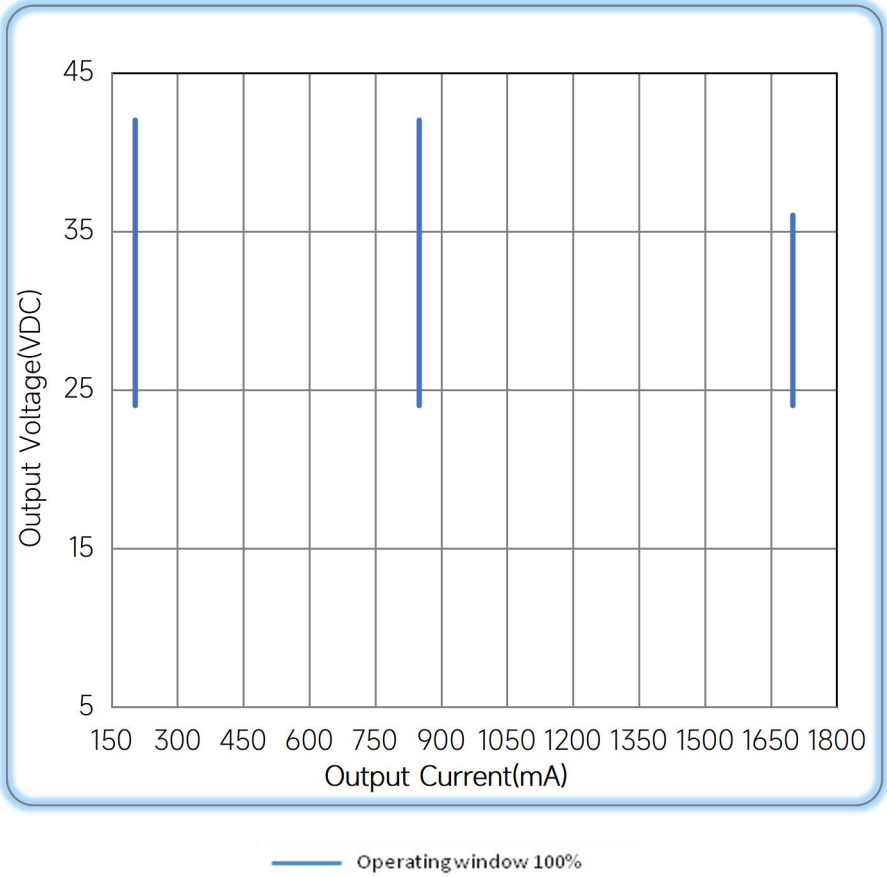
To suppress noise interference, the IC incorporates:

- Power-on delay $T_{\text{d(on)}}$: 67ms (typ. at room temp) to confirm ON state.
- Power-off delay $T_{\text{d(off)}}$: 30ms (typ. at room temp) to confirm OFF state.

State transition logic:

- Shutdown: Triggered only after detecting a valid CLK signal for >67ms.
- Power-on: Activated after >30ms of no valid CLK signal detection.

◆ Operating window



◆ Revision Updates

ITEM	BEFORE	AFTER	VERSION	DATE
Initial			A	2024/11/12
Tc (Max)	80℃	75℃	B	2025/06/06

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

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