

Explosion-proof sand-filled LED control gear



Safety Standards



1101002 Series

Highlights & Features

- DC52–125V voltage output, constant current output design
- Efficiency up to 85%
- Isolated high power factor architecture
- Encapsulated design, suitable for use in explosion-proof luminaire locations
- Obtained electrical safety certification
- Suitable for Class I luminaire types
- Five-year warranty

Description

The 15W×2 and 30W×2 series fixed output current LED drivers from KFLY are suitable for explosion-proof luminaire lighting and general luminaire lighting applications. The drivers comply with global certification requirements and have various built-in abnormal-condition protections. They ensure safety even if wiring or the LED board is damaged; they are designed in accordance with the Class I standard for luminaires and are easy to install. The internal circuits and electronic components of this product are designed in accordance with the standard for sand-filled electrical equipment for explosive atmospheres, and the internal cavity of the product is filled with silicone potting. In addition, their high efficiency meets energy-saving requirements, and optimal EMC performance has been fully taken into account during product development. They have been carefully designed and rigorously tested to operate under various lighting conditions. Their excellent ruggedness provides customers with peace of mind and reduces maintenance costs.

Model Information

Model No.	Input Voltage Range	Rated Output Voltage	Rated Output Current
110100200018	100 – 240Vac	52 – 125Vdc	0.25A
110100200017			0.5A

Input Ratings / Characteristics

Model No.		110100200018	110100200017
Nominal Input Voltage		100–240 Vac	
Input Voltage Range		100–264 Vac	
Nominal Input Frequency		50–60 Hz	
Input Frequency Range		47–63 Hz	
Input Current (Typical)		0.15 typ.	0.3 typ.
Efficiency¹) @ 230Vac		85% typ.	
Inrush Current Peak >50% Duration		24.5A / 100us	36.4A / 100us
Max. Number of Drivers Connected to a Circuit Breaker	B16	46 ↑	23 ↑
	C16	58 ↑	29 ↑
Power Factor @ Full Load		> 0.95	
Total Harmonic Distortion @ Full Load		Complies with IEC 61000-3-2 Class C	
Leakage Current		< 0.7mA @ 230Vac	

1) At 100% load (typical), tested after 30 minutes of warm-up.

Output Ratings / Characteristics

Model No.	110100200018	110100200017
Nominal Output Voltage	52.0–125.0Vdc	
Output Current Range	0.25A	0.5A
Max. No-load Output Voltage	150Vdc	
Max. Output Power	30W	60W
Output Voltage Tolerance	± 3%	
Line Regulation	± 1%	
Load Regulation	± 3%	
Output Ripple	4.5V	
Rise Time	< 50ms	
Start-up Time	< 1.0s	

Mechanical Specifications

Model No.	110100200018	110100200017
Housing	Aluminum alloy	
Unit Weight		
[kg]	0.53	0.53
[lb]	1.17	1.17
Cooling System	Natural convection cooling	
Commercial Carton: Qty. per Carton	20 ↑	
Commercial Carton: Weight/Carton		
[kg]	11	11
[lb]	24.25	24.25
Input Terminal	Screw-fixed terminal connection with electrode plates	
Output Terminal	Screw-fixed terminal connection with electrode plates	
Noise (at 30 cm distance)	Sound pressure level (SPL) < 24 dBA	

Environmental Specifications

Model No.		110100200018	110100200017
Ambient Temperature	Operating Temperature	-40°C to +55°C	
	Storage Temperature	-40°C to +85°C	
Max. Case Temperature (Tc)		+75°C	
Life Test Case Temperature (Tc)		+80°C	
Relative Humidity	Operating Humidity	10 to 90% RH (non-condensing)	
	Storage Humidity	5 to 95% RH (non-condensing)	
Environmental Rating		IP54; suitable for dry and humid environments	
Operating Altitude		Up to 5000 m	

Protection Functions

Model No.	110100200018	110100200017
Overvoltage Protection	Auto recovery after fault removal	
Overload/Overcurrent Protection	Auto recovery after fault removal	
Short-circuit Protection	Auto recovery after fault removal	
Overtemperature Protection	Auto recovery after fault removal	
Applicable Luminaire Class	Class I, insulation class per IEC 60598	

Reliability Data

Model No.	110100200018	110100200017
Lifetime	50,000 hours at life test case temperature	
MTTF	850,000 hours @ ambient temperature +45°C (according to Telcordia SR-332, total failure rate below 10%)	

Safety Standards / Directives

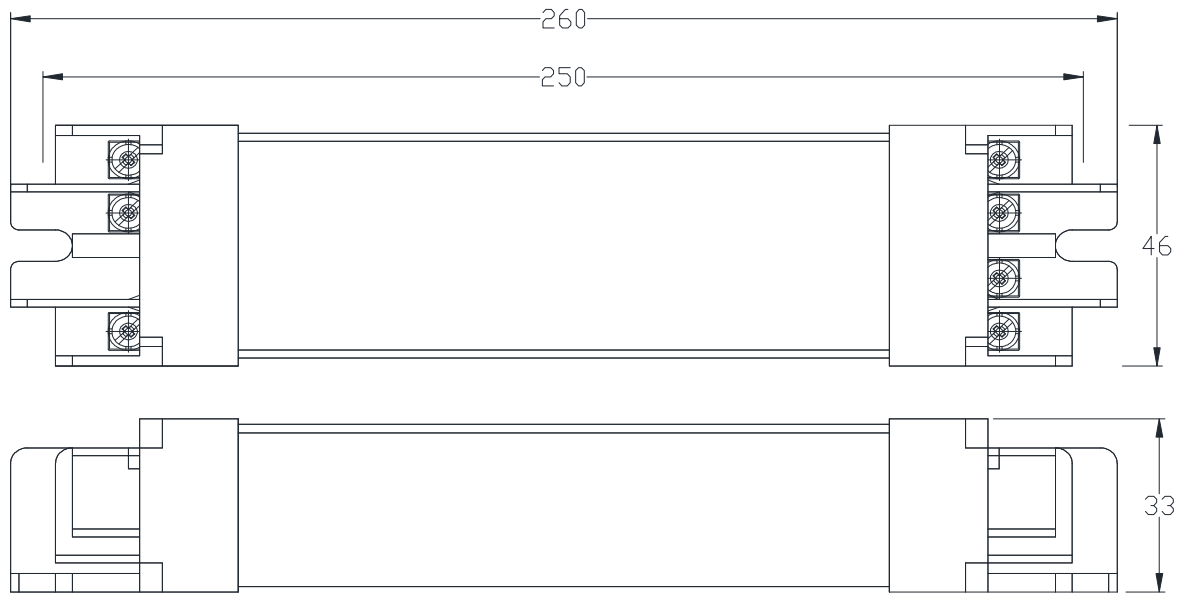
Model No.		110100200018		110100200017
Electrical Safety	UL	UL 8750, Class P, Type "HL". Class 2 output		
	CSA	CAN/CSA C22.2 No.250.13		
	CB scheme	IEC 61347-1, IEC 61347-2-13, SELV output IEC 60335-1, IEC 60335-2-89 and Annex BB, IEC 60335-2-24 and Annex CC		
	CCC	GB 17625.1-2012, GB/T 17743-2021; GB 19510.1-2009, GB 19510.14-2009		
	RCM	AS 61347.2.13:2018 AS/NZS 61347.1:2016 including Amendment A1		
CE		Complies with the following directives: Low Voltage Directive 2014/35/EU; EMC Directive 2014/30/EU; RoHS Directive 2011/65/EU + (EU) 2015/863; ErP Directive 2009/125/EC implementing measure Commission Regulation (EU) 2019/2020.		
Ex		Complies with the following regulations: GB/T 3836.1-2021 Explosive atmospheres — Part 1: Equipment — General requirements; GB/T 3836.2-2021 Explosive atmospheres — Part 2: Equipment protected by flameproof enclosures "d"		
Isolation		Input	Output	Enclosure
	Input	N/A	3000Vac	1800Vac
	Output	3000Vac	N/A	500Vac
	Enclosure	1800Vac	500Vac	N/A

EMC

Model No.	110100200018	110100200017
Radiated / Conducted Emission	Complies with BS EN / IEC 55015 Complies with FCC Part 15 Class A	
Immunity	Complies with BS EN / IEC 61547	
Electrostatic Discharge (ESD)	IEC 61000-4-2	ESD, Criteria A ¹) or B ²) Air discharge: 8 kV; Contact discharge: 4 kV
Radiated Immunity (RS)	IEC 61000-4-3	RS, Criteria A ¹)80 MHz–1 GHz, 3 V/m, 1 kHz sine wave / 80% AM modulation
Electrical Fast Transient / Burst (EFT/Burst)	IEC 61000-4-4	1kV, Criterion A ¹) or B ²)
Surge	IEC 61000-4-5	Criterion A ¹) or B ²)Common mode: 4kV; Differential mode: 2kV1.2/50μs, 8/20μs combination wave, source impedance 2Ω (L-N), 12Ω (L-PE & N-PE) Meets Category A1, with 2.5kV/100kA ring wave, Criterion A ¹)
	ANSI C62.41	
Conducted Immunity (CS)	IEC 61000-4-6	150kHz-80MHz, 3Vrms, Criterion A ¹)
Power Frequency Magnetic Field (PFMF)	IEC 61000-4-8	3A/m, Criterion A ¹)
Voltage Dips / Interrupts (Dips)	IEC 61000-4-11	Criterion A ¹) or B ²); 100% dip; 0.5 cycle; self-recoverable; 30% dip; 10 cycles; self-recoverable
Harmonic Current Emission	IEC 61000-3-2	Class C (230Vac @ 100% 负载)

1. Criterion A: Normal operation within specification limits.
2. Criterion B: Temporary degradation or loss of function, self-recoverable.

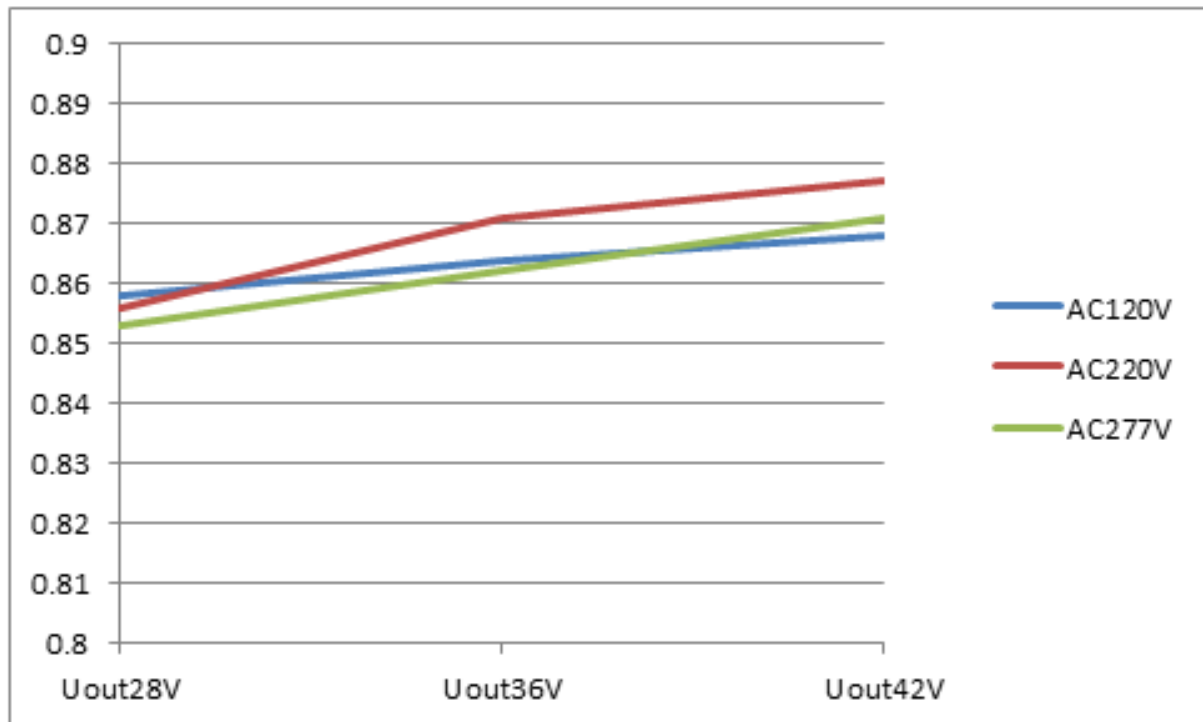
Dimension Drawing



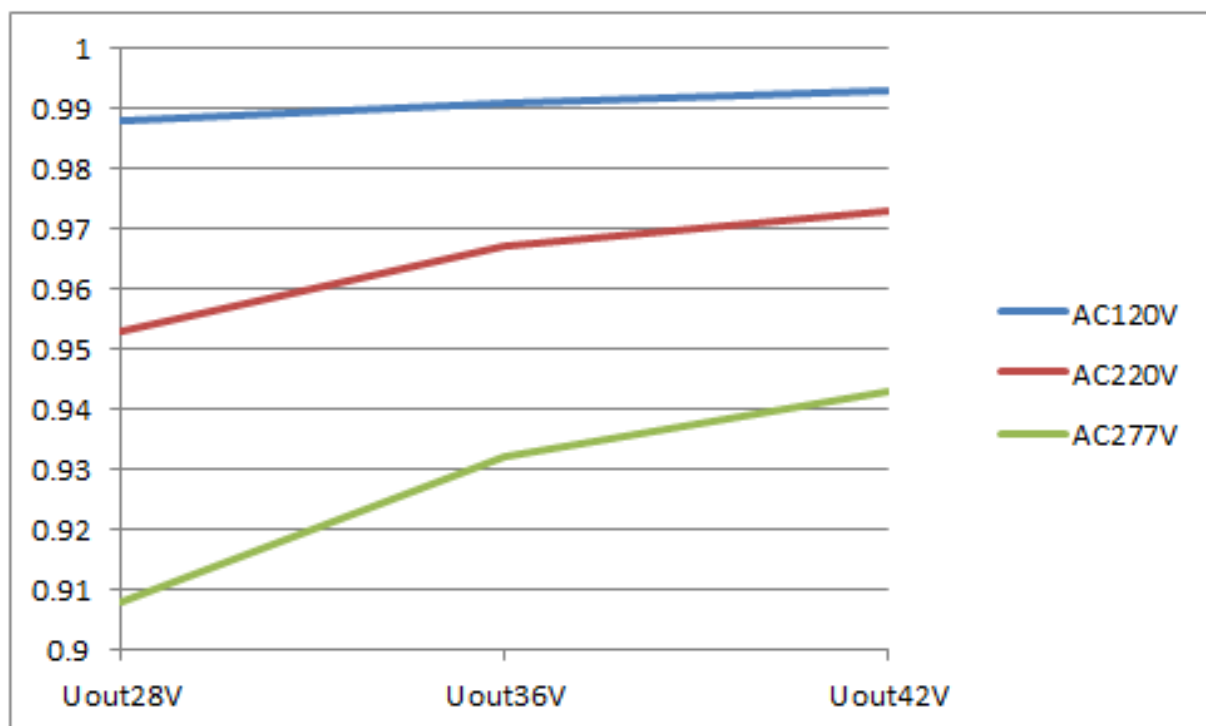
Dimensions (L × W × H)

110100200018	260 x 46 x 33mm
110100200017	260 x 46 x 33mm

Efficiency vs. Output Power Curve



Power Factor vs. Output Power Curve



Total Harmonic Distortion (THD) vs. Output Power Curve

