732 Series

Fluorescent Lamp Driver Unit (254V AC)

Long Life Reliability does not cost the earth

LPA-EXCIL ELECTRONICS

Feature Summary

- Advanced Electronic Lamp Drive incorporating soft-start technology, prolongs lamp life and reduces maintenance costs.
- Automatic shutdown gives enhanced passenger comfort.
- High reliability design - all variants > 140,000 hours MTBF*
- In-built lamp failure and misconnection protection

Product Codes

- Individual products in the 732 series are referred to by product code.

All Product Variants		
Nominal Input Voltage	254V AC RMS (50/60 Hz)	
Number of Lamps	Single	
Enclosure	Custom Space Envelope (Figure 1)	
Input / Output Connectors	Beau Connectors	

Lamp Type		Product Code #
T8	58W	732114
	30W	732121

Input Specification

Input Voltage and Current Data

All Variants	
Operating Input Supply Voltage Range	207-280V AC RMS (50/60Hz)
Nominal Input Supply	254V AC RMS (50/60Hz)

* MTBF figure calculated using US MIL-217F GM standard, assuming 40°C ambient temperature

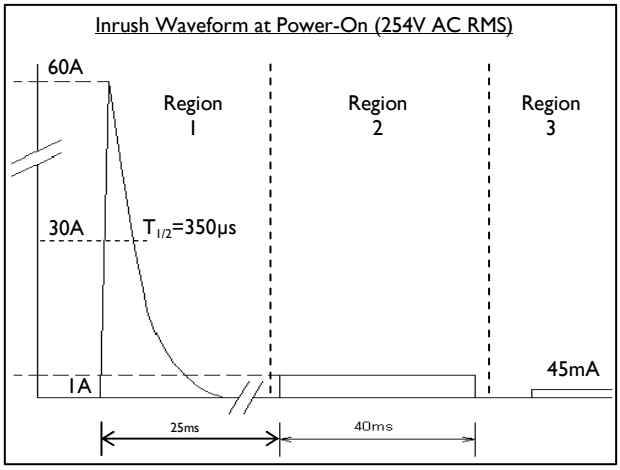
Input Voltage Limits Without Damage	317V AC RMS (50/60Hz)

All Variants		
Lamp Type		**Input Current (@ 254V AC RMS)***
T8	**58W**	250
	30W	146
		mA DC

All Variants		
Quiescent Current*— No Lamp	45 (@ 254V AC RMS)	**mA DC**

Power On Inrush Data

All Variants		
Peak Inrush	60A (@ peak sine)	**A**
Time to half value	350µs (@ T=25°C)	**s**



Region 1: All variants incorporate an inductor to limit the peak value of the input capacitor charging current.

Region 2: The input supply voltage is boosted to a regulated value via a current controlled process. During this process the input current is limited to a fixed value.

Region 3: The input current drops to quiescent levels until the lamp drive is activated and steady state current consumption results.

Output Specification†

	58W T8	**30W T8**	
Arc Current Crest Factor	< 1.5		
Minimum Must Strike Temp.	-25‡		**°C**
Lamp Strike Switch Cycles (UIC555-1 2.13/3.5)	>300,000 strikes	> 100,000 strikes	

* Input current values across the entire operational voltage range are available on request

† Further details of lamp drive output parameters are available on request.

‡ The 732 Series FLDU will strike the lamp without the requirement for a 'Striking Aid' within the above temperature limits.

Environmental Specification

All Variants			
Unit Weight		475	**g**
Dry Heat (Steady State)	**EN50155**	55	**°C**
		6	**Hrs**
Operating Temperature Range		-25 to +55	**°C**
Sealing Rating (UIC 555 Enclosure)		IP20	
Shock and Vibration		EN50155 & EN61373	
MTBF Ground Mobile 40°C (16 hours/day)		140,000	**Hrs**
		24	**Yrs**

Compliance

The 732 Series FLDUs comply with the following standards:

- EN50121-3-2
- EN61373
- EN50155
- EN60529 to IP65

Safety Specification

All 732 series variants come equipped with the following protection circuitry as standard:

- Lamp misconnection and failure protection.
- Under voltage cut-off.
- No lamp, no strike feature
- Auto lamp restart

‡ All immunity tests comply with performance criteria 'A'.

Installation Guide

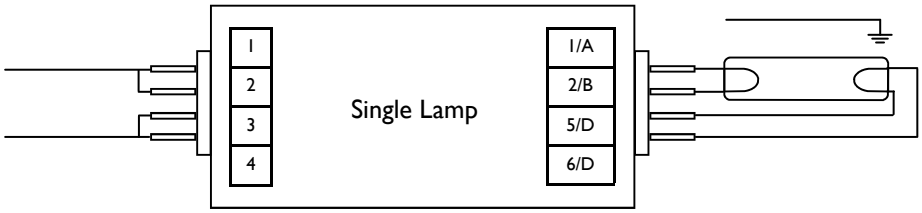
Maximum Supply Cable Impedance		
No. FLDU's	**Input Voltage V AC, RMS**	**Impedance Ω†**
1	207-230	1
	230-254	2
	254-280	4

Recommended Cable Size	
On input side (Supply/Control Signal)	0.5-1.0mm²
On lamp side	0.5-1.0mm²

Maximum Output Cable Length	2m

Maximum Cable Capacitance for Optimum Performance and EMC Suppression		
Max	15pF	between two sets of lamp wires
Max	75pF	between one set of lamp wires and earth

Installation Diagram - Faston Connector Devices



Input Connector Pin-Out	
Pin ID	**Pin Function**
1	254V RMS AC Input (LIVE)
2	
3	254 V RMS AC Input (NEUTRAL)
4	

To achieve optimum performance the following output cables must be kept as short as possible:

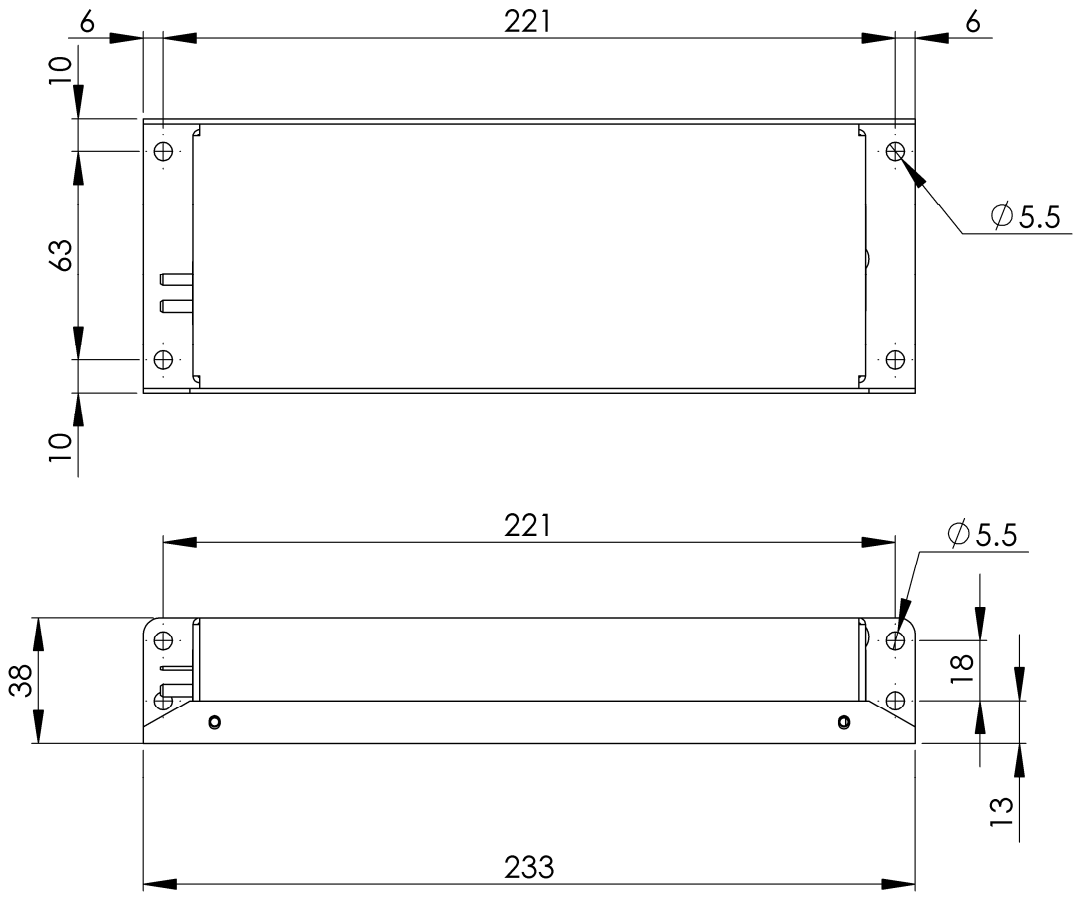
All Variants	
Faston Blades	1/A & 2/B

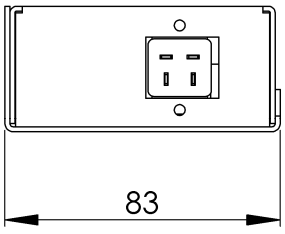
† Source impedance value MUST be divided by the number of FLDUs on each supply cable.

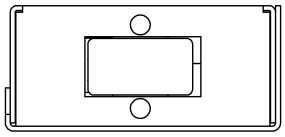
Mechanical Specification

All Dimensions in mm unless stated otherwise

Figure 1 - 732 Series Enclosure (254V AC)
Aluminium Enclosure, Custom Space Envelope
Beau Connectors







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