

Technical requirements for electronic control gears for
LED- / fluorescent- luminaires for connection at INOTEC
central battery systems

Manufacturer: OSRAM GmbH Marcel-Breuer-Str. 6 D-80807 München	Type / Description:
	Luminaire: EVG: OT FIT 120/220-240/ 750 D LT2 L (ident code: AM05489)
	LED:
Project / Place / Project ID:	Specified by:
	Name: D. Graser
	Company: OSRAM GmbH
	Date: 02.05.2017

Features		Techn. data / INOTEC requirements	Explanation	Fulfilled (Yes / No)
1	Voltage range AC	230V ± 10%	Voltage range in normal mains operation	Yes
2	Voltage range DC	186V - 260V	Possible voltage range in emergency operation	Yes
3	Control gear suitable for "Joker-Voltage" ?	B2-rectification of the AC voltage (without smoothing)	Pulsating DC voltage 	Yes
4	Control gear compatible with change-over time of the system?	Change-over time: 150 - 1000ms	Typical change-over time of INOTEC systems between mains- and battery operation	Yes
5	Starting behavior of the control gear in DC operation	Stable current consumption within 3s	Necessary for individual lamp monitoring (SV)	Yes
6	Control gear complies with the standard: (only for fluorescent lamps)	DIN EN 60929	AC and/or DC-supplied electronic control gear for tubular fluorescent lamps - Performance requirements	Not relevant
7	Control gear complies with the standard: (only for fluorescent lamps)	DIN EN 61347-2-3 (incl. Attachment J)	Particular requirements for AC and/or DC supplied electronic control gear for fluorescent lamps	Not relevant
8	Control gear complies with the standard: (only for LED)	DIN EN 62384	DC or AC supplied electronic control gear for LED modules - Performance requirements	Yes
9	Control gear complies with the standard: (only for LED)	DIN EN 61347-2-13	Lamp control gear - Part 2-13: Particular requirements for DC or AC supplied electronic control gear for LED modules	Yes
10	Control gear complies with the standard:	DIN EN 55015 (Measurement on AC and DC)	Limits and methods of measurement of radio interference	Yes
11	Control gear complies with the standard:	DIN EN 61000-3-2	Electromagnetic compatibility (EMC) - Part 3-2: Limits - Limits for harmonic current emissions (equipment input current ≤ 16 A per phase)	Yes
12	Control gear complies with the standard:	DIN EN 61547	Equipment for general lighting purposes — EMC immunity requirements	(*2)Yes

Note: VDE 0108 is not a standard for ECG, marking is not applicable

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Features	Techn. data / INOTEC requirements	Explanation	Manufacturer information
13 Nominal current of the control gear with connected illuminant in AC- operation (230V)		Selection guide for the calculation of the max. number of luminaires per circuit	See attachment Table 1
14 Nominal current of the control gear with connected illuminant in DC- operation (216V)		Selection guide for the calculation of the necessary battery capacity	See attachment Table 1
15 Nominal current of the control gear with connected illuminant in DC- operation (186V und 260V) and pre-set luminous flux	J-SV-Modul/S (5-120W): > 20mA = OK J-SV-Modul.2/S (20-300W): > 70mA = OK J-SV-Modul.3/S (2-30W): > 12mA = OK J-SV-Modul.4/S (18-120W): > 70mA = OK J-SV-Modul.L/S (20-120W): > 20mA = OK J-SV-Modul T/S (20-100W): > 60mA = OK	Selection guide for determination of the monitoring module: The values are not to be undercut within the voltage range 186VDC - 260VDC to recognise a normal working lamp correctly.	See attachment Table 1
			See attachment Table 1
16 Luminous flux in DC- operation (186V)		Important for the safety lighting design	100%
17 Standby current of the control gear with no illuminant connected or with defective illuminant in DC-operation (186V und 260V) *1	J-SV-Modul/S (5-120W): < 10mA = n.OK J-SV-Modul.2/S (20-300W): < 45mA = n.OK J-SV-Modul.3/S (2-30W): < 8mA = n.OK J-SV-Modul.4/S (18-120W): < 45mA = n.OK J-SV-Modul.L/S (20-120W): < 10mA = n.OK J-SV-Modul T/S (20-100W): < 50mA = n.OK	Selection guide for determination of the monitoring module: The values are not to be exceeded within the voltage range 186VDC - 260VDC to recognise a lamp failure correctly.	See attachment Table 1
18 Max. inrush current of the control gear with connected lamp in AC operation (230V)	Max. permitted inrush current per circuit / monitoring module: SK 4x2A: 250A / 500µs SK 2x4A: 250A / 500µs SK 2x3A: 250A / 500µs SK 1x6A: 250A / 500µs J-SV-Modul T/S: 40A / 500µs all other J-SV-modules: 80A / 500µs	Describes the max. inrush current of all ballasts in a circuit, to calculate the maximum contact rating of the circuit	I _{peak} =15,6A TH=35 µs

Luminaires, which should work as emergency lighting, have to be in accordance with DIN EN 60598-2-22. (Particular requirements - Luminaires for emergency lighting).

*1: The J-SV-monitoring modules monitor the current consumption on the primary side of the control gear for LED modules within the specified limits. Failures of individual LEDs (low-impedance) on the secondary side do not inevitably lead to a modification of current consumption on the primary side, and in such cases cannot be detected as a failure.

*2: Not to be used in high risk areas, special release required

Notes:

For the correctness:

Grading 16.05.2017

Place, Date

DS D SST
Dr. Kay Schmidtman

Signature

DS QM LAB&SQM
Bernhard Schenker

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Table1:

LED controller type	Values for load range	I _{in} in AC-operation (230V) / mA (trms)	I _{in} in AC- operation (240V) / mA (trms)	I _{in} in DC-operation (186V) / mA (trms)	I _{in} in DC- operation (216V) / mA (trms)	I _{in} in DC- operation (240V) / mA (trms)	I _{in} in DC- operation (260V) / mA (trms)
OT FIT 120 220-240 750 D L T2 L	Maximum Load /mA U _{out} /V= 216 I _{out} /mA= 750	593.59	568.03	734.46	627.62	563.55	518.65
	Minimum Load /mA U _{out} /V= 54 I _{out} /mA= 250		93.65			72.68	
	No Load		36.42	0.30		0.30	0.33
	Short Load		54.76	29.41		21.70	18.96

Maximum inrush current for ECG in AC Operation:

I_{peak}= 15,6A

T_H= 35µs

