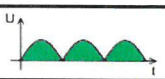
Technical requirements for dimmable DALI control gears
for fluorescent lamps and LED

INOTEC Sicherheitstechnik GmbH

Manufacturer: **OSRAM GmbH** **Marcel-Breuer-Str. 6** **D-80807 Munich**	Type / Description: Luminaire: EVG: Oti DALI 90/220-240/700 LT2 L (ident code: AM00140) LED:
Project / Place / Project ID:	Specified by: Name: D. Graser Company: OSRAM GmbH Date: 22.06.2017

	Features	Techn. data / INOTEC requirements	Explanation	Fullfilled (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 1,6s	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	(*3) YES
13	Control gear complies with the DALI-standards:	DIN EN 62386-101 /-102 / -207	Control gear must have the DALI Logo	(*1) YES

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

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	EVG: Oti DALI 90/220-240/700 LT2 L (ident code: AM00140)
	LED:
Project / Place / Project ID:	Specified by: Name: D. Graser
	Company: OSRAM GmbH
	Date: 22.06.2017

	Features	Techn. data / INOTEC requirements	Explanation	Manufacturer information
14	Nominal current of the control gear with connected illuminant in AC- operation (230V)		Selection guide for the calculation of the max. number of luminairs per circuit	See Table1
15	Nominal current of the control gear with connected illuminant in DC- operation (216V)		Selection guide for the calculation of the necessary battery capacity	See Table1
16	Behavier control gear in DC operation: - Unlocked light output level - Locked light output level (Dimming on DC)	The DC-light output settings on the DALI-SV-Module is only active if control gear is unlocked	In case of locked DC light output level, the DC level of the DALI-SV-Module is not active!	(*4) locked
17	Light output level in DC operation with locked light output level (Dimming on DC)	No control of light output level from DALI-SV-Module in DC operation possible	Locked light output level in %. Important for lighting design.	(*4) 15%
18	Using the DALI command 146 (Query Lamp Failure) acc. IEC 62386 Part 102	According to IEC 62386 Part 102	Important for function test: To detect a lamp failure, the DALI-SV-Module send the DALI command query 146 to the DALI driver Attention: The query is made after 2 / 2,5 / 3 seconds	YES
19	Max. inrush current of the control gear with connected illuminant in AC operation (230V)	Max. permitted inrush current per circuit: SK 4x2A: 250A / 500µs SK 2x4A: 250A / 500µs SK 2x3A: 250A / 500µs SK 1x6A: 250A / 500µs	Describes the max. inrush current of all ballasts in a circuit, to calculate the maximum contact rating of the circuit	27A / 193 µs (*2)
Luminaires, which should work as emergency lighting, have to be in accordance with DIN EN 60598-2-22. (Particular requirements - Luminaires for emergency lighting)				

Notes:
(*1): Control of DALI-SV-Module to the DALI driver is 100% done via DALI-commands according to IEC 62386-101 /-102, so the DALI driver must sign with the DALI logo.
(*2): For calculation the inrush current of the monitoring module must be taken into consideration!
(*3): Not to be used in high risk areas, special release required
(*4): The light input level is locked in DC-operation. Factory setting is **15%** of the maximum level. It is possible to change the behavior of the controlgear in DC-operation.

For the correctness:

Munich, 22.06.2017
Place, Date

DS D SST
Dr. Kay Schmidtmann
Signature

DS QM LAB&SQM
Bernhard Schemmel

Table1:

Manufacturer: OSRAM GmbH Marcel-Breuer Str. 6 D-80807 München	Product: **Oti DALI 90/220-240/700 LT2 L**	OSRAM

LED controller type	Values for load range	IN in AC-operation (230V) / mA (trms)	IN in AC-operation (240V) / mA (trms)	IN in DC-operation (186V) / mA (trms)	IN in DC-operation (216V) / mA (trms)	IN in DC-operation (240V) / mA (trms)	IN in DC-operation (260V) / mA (trms)
Oti DALI 90/220-240/700 LT2 L							
	Umin, Imin	91,97	90,62	20,81	17,71	15,88	15,04
	Umin, Imax	198,93	177,43	41,00	34,96	31,30	28,89
	Umax, Imin	300,20	287,10	63,29	54,41	48,55	44,78
	Umax, Imax	453,47	431,25	85,51	73,26	65,96	60,48
	Open Load	25,38	32,04	2,28	2,19	2,14	2,13
	Short Load	25,53	32,04	1,50	2,18	2,15	2,12

Maximum inrush current for ECG in AC Operation Ipeak= 27 A
TH= 193 µs