


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

Manufacturer: OSRAM GmbH Marcel-Breuer-Str. 6 D-80807 Munich	Type / Description:
	Luminaire: EVG: Oti DALI 25/220-240/700 LT2 (ident code: AB42877)
	LED:
Project / Place / Project ID:	Specified by:
	Name: D. Graser
	Company: OSRAM GmbH
	Date: 21.03.2017

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 (ind. 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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Project / Place / Project ID:	LED:
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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 luminaires per circuit	See Table 1
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 Table 1
16 Behavior 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 (*2)	10,2A / 38 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)			

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 considered!

*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, 21.03.2017

Place, Date

DS D SST
Dr. Kay Schmidt
Signature

DS QM LAB&SQM
Bernhard Schemmel

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Table1:

Manufacturer: OSRAM GmbH Marcel-Breuer Str. 6 D-80807 München	Product: Oti DALI 25/220-240/700 LT2	OSRAM
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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)
Oti DALI 25/220-240/700 LT2	Umin, Imin	53,57	55,04	9,15	9,68	9,54	9,20
	Umin, I _{max}	65,49	69,47	13,29	11,88	12,00	12,04
	U _{max} , Imin	65,40	66,14	13,82	12,16	12,17	12,22
	U _{max} , I _{max}	133,81	130,29	36,14	31,83	29,23	27,51
	Open Load	34,54	42,92	11,08	10,97	10,85	10,81
	Short Load	34,51	42,90	11,05	10,96	10,83	10,77

Maximum inrush current for ECG in AC Operation

$I_{peak} = 10,2 \text{ A}$
 $TH = 38 \mu\text{s}$

