


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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| 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 OM 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 |  |
|--|--|---|

| LED controller type | Values for load range | I _n in AC-operation (230V) / mA (trms) | I _n in AC-operation (240V) / mA (trms) | I _n in DC-operation (186V) / mA (trms) | I _n in DC-operation (216V) / mA (trms) | I _n in DC-operation (240V) / mA (trms) | I _n in DC-operation (260V) / mA (trms) |
|------------------------------------|-------------------------------------|---|---|---|---|---|---|
| Oti DALI 25/220-240/700 LT2 | U _{min} , I _{min} | 53,57 | 55,04 | 9,15 | 9,68 | 9,54 | 9,20 |
| | U _{min} , I _{max} | 65,49 | 69,47 | 13,29 | 11,88 | 12,00 | 12,04 |
| | U _{max} , I _{min} | 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 A
TH= 38 μs

