


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

|  |                                  |
|--|----------------------------------|
| Manufacturer:<br><b>OSRAM GmbH</b><br>Marcel-Breuer-Str. 6<br>D-80807 Munich | Type / Description:              |
|  | Luminaire: ---                   |
|  | EVG: OTi DALI 15/220-240/1A0 LT2 |
|  | LED: ---                         |
| Project / Place / Project ID:  | Specified by:                    |
|  | Name: Buenyamin Ocak             |
|  | Company: OSRAM GmbH              |
|  | Date: 2016-02-29                 |

| Features |   | Techn. data / INOTEC requirements                             | Explanation   | Fullfilled (Yes / No) |
|----------|---|---|---|-----------------------|
| 1        | Voltage range AC  | <b>230V ± 10%</b>   | Voltage range in normal mains operation   | Yes                   |
| 2        | Voltage range DC  | <b>186V - 260V</b>  | Possible voltage range in emergency operation   | Yes                   |
| 3        | Control gear suitable for "Joker-Voltage" ?                           | <b>B2-rectification of the AC voltage (without smoothing)</b> | Pulsating DC voltage                                   | Yes                   |
| 4        | Control gear compatible with change-over time of the system?          | <b>Change-over time: 150 - 1000ms</b>                         | Typical change-over time of INOTEC systems between mains- and battery operation   | Yes                   |
| 5        | Starting behavior of the control gear in DC operation                 | <b>Stable current consumption within 1,6s</b>                 | Necessary for individual lamp monitoring (SV)   | Yes                   |
| 6        | Control gear complies with the standard: (only for fluorescent lamps) | <b>DIN EN 60929</b>   | 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) | <b>DIN EN 61347-2-3 (incl. Attachment J)</b>                  | 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)               | <b>DIN EN 62384</b>   | DC or AC supplied electronic control gear for LED modules - Performance requirements  | Yes                   |
| 9        | Control gear complies with the standard: (only for LED)               | <b>DIN EN 61347-2-13</b>                                      | 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:                              | <b>DIN EN 55015 (Measurement on AC and DC)</b>                | Limits and methods of measurement of radio interference   | Yes                   |
| 11       | Control gear complies with the standard:                              | <b>DIN EN 61000-3-2</b>                                       | 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:                              | <b>DIN EN 61547</b>   | Equipment for general lighting purposes — EMC immunity requirements   | Yes                   |
| 13       | Control gear complies with the DALI-standards:                        | <b>DIN EN 62386-101 /-102 / -207 *1</b>                       | Control gear must have the DALI Logo  | Yes                   |

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

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|   | EVG: OTi DALI 15/220-240/1A0 LT2 |
| Project / Place / Project ID:   | LED: ---                         |
|   | Specified by:                    |
|   | Name: Buenyamin Ocak             |
|   | Company: OSRAM GmbH              |
|   | Date: 2016-02-29                 |

| Features   | Techn. data / INOTEC requirements  | Explanation  | Manufacturer information |
|--|--|--|--------------------------|
| 14<br>Nominal current of the control gear with connected illuminant in <b>AC-operation (230V)</b>  |  | Selection guide for the calculation of the max. number of luminaires per circuit   | 117,88 mA                |
| 15<br>Nominal current of the control gear with connected illuminant in <b>DC-operation (216V)</b>  |  | Selection guide for the calculation of the necessary battery capacity  | 48,12 mA                 |
| 16<br>Behavior control gear in DC operation:<br>- <b>Unlocked</b> light output level<br>- <b>Locked</b> light output level (Dimming on DC) | The DC-light output settings on the DALI-SV-Module is only active if control gear is <b>unlocked</b>   | In case of locked DC light output level, the DC level of the DALI-SV-Module is not active!   | locked                   |
| 17<br>Light output level in DC operation with <b>locked</b> 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.   | 15 *) %                  |
| 18<br>Using the DALI command 146 (Query Lamp Failure) acc. IEC 62386 Part 102  | According to IEC 62386 Part 102  | Important for function test:<br>To detect a lamp failure, the DALI-SV-Module send the DALI command query 146 to the DALI driver<br><b>Attention:</b> The query is made after 2 / 2,5 / 3 seconds | Yes                      |
| 19<br>Max. inrush current of the control gear with connected illuminant in <b>AC operation (230V)</b>                                      | Max. permitted inrush current per circuit:<br>SK 4x2A: 250A / 500µs<br>SK 2x4A: 250A / 500µs<br>SK 2x3A: 250A / 500µs<br>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)  | 5A / 45µs A / 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: 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!

Notes:

\*) 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 this the software DALI magic is needed.

For the correctness:

2016-02-29

Place, Date



Signature