


Requirements for dimmable DALI control gears for fluorescent lamps and LED

Version 0

| Manufacturer: Osram GmbH Marcel-Breuer-Straße 6 D-80807 München | Type / description: ECG-type: Oti DALI 160/220-240/24 1-2 CH (ident code: AB49086) | | |
|---|---|--|--|
| Features: | | Comment: | Complies: (Yes/No) |
| Control gear suitable for a DC voltage range: | 186V - 260V DC (for Lead-Battery) 186V - 275V DC (for NiCD-Battery) | Possible voltage range of the battery in emergency mode. (Not for AT-S ⁺ Systems required) | Yes |
| Control gear compatible with the switch-over time of the system? | Switch-over time: 180 ms - 450 ms | Typical switch-over time of CEAG systems between mains supply and emergency power supply | Yes |
| Starting behavior of the control gear: | Stable current consumption after less than 1.6 sec. maximum. | Necessary for an individual monitoring. $\Delta I < 12,5 \text{ mA}$ per luminaire, with max. 20 luminaires per circuit $\Delta I \text{ sum} < 250 \text{ mA}$ | Yes |
| <u>only for fluorescent lamps:</u> Control gear complies with the standard: | DIN EN 60929 | AC and/or DC-supplied electronic control gear for tubular fluorescent lamps - Performance requirements | not relevant |
| <u>only for fluorescent lamps:</u> Control gear complies with the standard: | DIN EN 61347-2-3 (incl. Attachment J) | Particular requirements for AC and/or DC supplied electronic control gear for fluorescent lamps | not relevant |
| <u>only for LED:</u> Control gear complies with the standard: | DIN EN 62384 | DC. Or AC supplied electronic control gear for LED modules - Performance requirements | Yes |
| <u>only for LED:</u> Control gear complies with the standard: | DIN EN 61347-2-13 | Lamp controlgear — Part 2-13: Particular requirements for d. c. or a. c. supplied electronic controlgear for LED modules | Yes |
| Fulfilled the standard: | DIN EN 55015 (Measurement on AC And DC) | Limits and methods of measurement of radio disturbance characteristics of electrical lighting and similar equipment | Yes |
| Fulfilled the standard: | DIN EN 61000-3-2 | Electromagnetic compatibility (EMC) — Part 3-2: Limits — Limits for harmonic current emissions (equipment input current $\leq 16 \text{ A}$ per phase) | Yes |
| Fulfilled the standard: | DIN EN 61547 | Equipment for general lighting purposes — EMC immunity requirements | (*3) Yes |
| Fulfilled 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 | | | |
| Features: | CEAG-Data: | Comment: | Manufacturer's instructions: |
| <u>Important for function test!</u> According to IEC 62386 Part 102 Support of : DALI command 145 (Query Control Gear) DALI command 146 (Query Lamp Failure) | According to IEC 62386 Part 102 | To detect a lamp failure, the V-CG-SB.1 module send DALI command queries (145/146) to the DALI LED driver | Yes |
| <u>Important for DC light output:</u> Behavior in DC operation: - Unlocked DC light output level - Locked DC light output level | DC light output settings on V-CG-SB.1 only active if control gear is unlocked! | In case of locked DC light output level, the DC level of V-CG-SB.1 is not active ! | Unlocked DC [] Locked DC [x] |
| <u>Important for lighting design:</u> If locked DC light output the lightout level in % is required | No control of light output level from V-CG-SB.1 in DC operation possible! | Locked light output level in %, e.g. 15% | (*2)15% |
| <u>Important for the contact load SKU:</u> Max. inrush current each converter/luminaire in AC-operation: | Max. permitted inrush current per circuit: SKU 2 x 3A (CG) => 120 A SKU 1 x 6A (CG) => 180 A SKU 4 x 1,5A CG-S => 60 A SKU 2 x 3A CG-S => 250 A SKU 1 x 6A CG-S => 250 A SOU CG-S // S ⁺ => 250 A SU S ⁺ => 250 A | Describes the max. inrush current of all ballasts in a circuit, to calculate the maximum contact rating of the circuit. | Ip=60A / Th=246µs |
| <u>Important for lighting design:</u> Luminous flux ratio: DC-operation at 186 V in comparison to 230 V AC operation | - | Light output In battery operation of the ballast, for the light calculation | (*2) 15% |
| <p>Luminaires, which are used for emergency lighting, must be according to the standard DIN EN 60598-2-22 (particular requirements - Luminaires for emergency lighting)</p> <p>*1: Control of V-CG-SB.1 to the DALI LED driver is 100% done via DALI-commands according to IEC 62386-101 /-102 so the DALI LED driver must sign with the DALI logo</p> <p>*2: The DC Output Level is locked in DC Mode to 15%, it is possible to unlock with DALI magic and Tuner 4 Tronic</p> <p>*3: Not to be used in high risk areas, special release required</p> <p>Max. 1 DALI- Driver to wire with 1 V-CG-SB.1</p> <p>In use of manifold ballasts, the different lamp failure detection of the manufacturer must be consider! Some devices don't detect a failure if one lamp is defect.</p> <p>Date: 28.August.2017</p> | | | |

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| Requirements for electronic non-dimmable control gears for fluorescent lamps and LED |  |
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| Manufacturer: OSRAM GmbH Marcel-Breuer Str. 6 D-80807 München | Product: Oti DALI 160/220-240/24 1-2 CH |  |
|--|---|---|

| 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 160/220-240/24 1-2 CH | Imin | 77,00 | 79,50 | 40,44 | 34,51 | 30,60 | 28,51 |
| | I _{max} (760mA) | 136,72 | 133,67 | 40,37 | 34,55 | 30,85 | 28,38 |
| | | | | | | | |
| | | | | | | | |
| | Open Load | 68,06 | 81,09 | 28,64 | 27,10 | 25,46 | 23,60 |
| | Short Load | 66,26 | 77,72 | 20,99 | 20,08 | 18,51 | 17,52 |

Maximum inrush current for ECG in AC Operation

I_{peak}=

60 A

TH=

246 µs