

## Requirements for dimmable DALI control gears for fluorescent lamps and LED

**Version 0**

<b>Manufacturer:</b> OSRAM GmbH Marcel - Breuer - Straße 6 D 80807 München	<b>Type / description:</b>  ECG-type: OTi DALi 15/220-240/1A0 LT2		
<b>Features:</b>	<b>CEAG data:</b>	<b>Comment:</b>	<b>Complies: (Yes/No)</b>
Control gear suitable for a DC voltage range:	<b>186V - 260V DC (for Lead-Battery)</b> <b>186V - 275V DC (for NiCD-Battery)</b>	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?	<b>Switch-over time:</b> <b>180 ms - 450 ms</b>	Typical switch-over time of CEAG systems between mains supply and emergency power supply	Yes
Starting behavior of the control gear:	<b>Stable current consumption after less than 1.6 sec. maximum.</b>	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:	<b>DIN EN 60929</b>	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:	<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
<u>only for LED:</u> Control gear complies with the standard:	<b>DIN EN 62384</b>	DC. Or AC supplied electronic control gear for LED modules - Performance requirements	Yes
<u>only for LED:</u> Control gear complies with the standard:	<b>DIN EN 61347-2-13</b>	Lamp controlgear — Part 2-13: Particular requirements for d. c. or a. c. supplied electronic controlgear for LED modules	Yes
Fullfilled the standard:	<b>DIN EN 55015 (Measurement on AC And DC)</b>	Limits and methods of measurement of radio disturbance characteristics of electrical lighting and similar equipment	Yes
Fullfilled the standard:	<b>DIN EN 61000-3-2</b>	Electromagnetic compatibility (EMC) — Part 3-2: Limits — Limits for harmonic current emissions (equipment input current $\leq 16 \text{ A}$ per phase)	Yes
Fullfilled the standard:	<b>DIN EN 61547</b>	Equipment for general lighting purposes — EMC immunity requirements	Yes
Fullfilled the DALI standards:	<b>DIN EN 62386-101 /-102 / -207*</b>	<b>Control gear must have the DALI Logo</b>	Yes

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

<b>Features:</b>	<b>CEAG-Data:</b>	<b>Comment:</b>	<b>Manufacturer's instructions:</b>
<u>Important for function test!</u> According to IEC 62386 Part 102 Support of : <b>DALI command 145</b> (Query Control Gear) <b>DALI command 146</b> (Query Lamp Failure)	<b>According to IEC 62386 Part 102</b>	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: - <b>Unlocked</b> DC light output level - <b>Locked</b> DC light output level	<b>DC light output settings on V-CG-SB.1 only active if control gear is unlocked!</b>	<b>In case of locked DC light output level, the DC level of V-CG-SB.1 is not active !</b>	<b>Unlocked DC [ ]</b> <b>Locked DC [ X ] **)</b>
<u>Important for lighting design:</u> If locked DC light output the lightout level in % is required	<b>No control of light output level from V-CG-SB.1 in DC operation possible!</b>	Locked light output level in %, e.g. 15%	<b>15% **)</b>
<u>Important for the contact load SKU:</u> Max. inrush current each converter/luminaire in AC-operation:	<b>Max. permitted inrush current per circuit:</b> 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.	<b>5A / 45µs</b>
<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	<b>15% **)</b>

**Luminaires, which are used for emergency lighting, must be according to the standard DIN EN 60598-2-22 (particular requirements - Luminaires for emergency lighting)**

\*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

\*\* The lightout 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.

**Max. 1 DALI- Driver to wire with 1 V-CG-SB.1**

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.

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