



## 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 60/220-240/550 LT2 L (ident code: AM00138)		
<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. <i>(Not for AT-S* Systems required)</i>	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	(*3) Yes
Fullfilled the DALI standards:	<b>DIN EN 62386-101 / -102 / -207</b>	<b>Control gear must have the DALI Logo</b>	(*1) Yes
<small>Note: VDE 0108 is not a standard for ECG, marking is not applicable</small>			
<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 (Query Control Gear)</b> <b>DALI command 146 (Query Lamp Failure)</b>	<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>(*2) 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>Ip=23 A / Th=193 µs</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	(*2) 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)</b>			
*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			
*2: The DC Output Level is locked in DC Mode to 15%, it is possible to unlock with DALI magic and Tuner 4 Tronic			
*3: Not to be used in high risk areas, special release required			
<b>Max. 1 DALI- Driver to wire with 1 V-CG-SB.1</b>			
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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<b>Requirements for electronic non-dimmable control gears for fluorescent lamps and LED</b>	 <i>Powering Business Worldwide</i>
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Manufacturer: OSRAM GmbH Marcel-Breuer Str. 6 D-80807 München	Product:  <b>Oti DALI 60/220-240/550 LT2 L</b>	
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LED controller type	Values for load range	I <sub>N</sub> in AC- operation (230V) / mA (trms)	I <sub>N</sub> in AC- operation (240V) / mA (trms)	I <sub>N</sub> in DC- operation (186V) / mA (trms)	I <sub>N</sub> in DC- operation (216V) / mA (trms)	I <sub>N</sub> in DC- operation (240V) / mA (trms)	I <sub>N</sub> in DC- operation (260V) / mA (trms)
Oti DALI 60/220-240/550 LT2 L	U <sub>min</sub> , I <sub>min</sub>	55,24	55,02	13,78	11,75	10,77	9,66
	U <sub>min</sub> , I <sub>max</sub>	162,98	145,63	31,61	27,01	24,22	22,37
	U <sub>max</sub> , I <sub>min</sub>	149,36	144,12	36,39	31,09	27,88	25,73
	U <sub>max</sub> , I <sub>max</sub>	299,57	286,26	60,68	52,15	46,62	42,95
	Open Load	25,25	31,65	1,11	2,21	2,16	2,14
	Short Load	24,68	31,66	1,11	2,21	2,16	2,14

Maximum inrush current for ECG in AC Operation

I<sub>peak</sub>= 23 A  
 TH= 193 μs