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Requirements for dimmable DALI control gears for fluorescent lamps and LED

Version 5

Manufacturer: **OSRAM GmbH** **Marcel-Breuer-Str. 6** **D-80807 München**	**Type / description:** **ECG-type: OT DALI CV 160/220-240/24 2CH_DT6_DT8 G3 (4062172274326)** **Date: 22.07.2022**		**Manufacturer Information Complies: YES/NO**
Features:	**CEAG data:**	**Explanation:**	
Control gear suitable for a DC voltage range:	**186V - 260V DC (for Lead-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.**	A stable operation of the control gear after 1.6 seconds of start up is required for the right functionality of the individual monitoring. With max. 20 luminaires for one current circuit: Δ I in sum < 250 mA are allowed	**Yes**
Control gear compatible with CEAG STAR-Technology:	**Phase-cut telegram (PAT):** **max. 30 phases (half waves) with max. 60° phase-cuts**	During the CEAG STAR switching process, up to 30 half-waves are cut at a maximum of 60°. The control gear must not exhibit any malfunctions such as switching off, flickering	**Yes**
only for flourescent lamps: 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**
only for flourescent lamps: 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**
only for LED: Control gear complies with the standard:	**DIN EN 62384**	DC. Or AC supplied electronic control gear for LED modules - Performance requirements	**Yes**
only for LED: 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**
Fullfilled 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**
Fullfilled the standard:	**DIN EN 61547**	Equipment for general lighting purposes — EMC immunity requirements	**Yes**
Fullfilled the DALI standards:	**DIN EN 62386-101 /-102 / -207***	**Control gear must have the DALI Logo***	**Yes**

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

Features:	**CEAG-Data:**	**Explanation:**	**Manufacturer information:**
Important for function test! 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. These DALI commands are necessary to ensure the lamp failure detection, and must be support by the control gear.	**Yes**
Important for DC operation: DALI light level	**In case of locked DALI light level in DC operation (EOF=Emergency Output Level), the V-CG-SB.1 can not change the light level !**	In DC-emergency case the DALI-Light Level is locked to prevent unwanted changes of the luminous flux.	**Locked**
Important for lighting design: If DALI-Light level is locked, the value of the preset DC-Lightlevel (in %) is required		Pre-set DC-Light Level e.g. 15% (DALI-value 185 for logarithmic dimming curve)	**15%**
Note: Important for the planning - Max. no. Of luminiares per circuit			
Important for the contact load SKU: 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**	57A/280us per pcs. The declaration of the inrush current of the luminaire is important, to calculate the max. possible luminaires on one circuit, to consider the max. contact load limitation of the circuit.	

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

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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Manufacturer: OSRAM GmbH Marcel-Breuer Str. 6 D-80807 München	Product: **Oti 160/220-240/24 2CH DT6/DT8 G3** **4062172274326**	**OSRAM GmbH**

Table 1

	AC-operation					DC-Operation (For DALI Devices @ default DC Dim level e.g. 15%)				
Values for load range	**189VAC/50Hz Itrms_in (mA)**	**230VAC/50Hz Itrms_in (mA)**	**240VAC/50Hz Itrms_in (mA)**	**264VAC/50Hz Itrms_in (mA)**	**AC Dali level**	**186VDC Itrms_in (mA)**	**216VDC Itrms_in (mA)**	**240VDC Itrms_in (mA)**	**260VDC Itrms_in (mA)**	**DC Dali Level**
Min. Load /mA P_out= 15 W	not supported (128)	120	121	120	170	108	91	82	76	170
Mid. Load /mA P_out= 77 W	not supported (450)	371	357	332	229	455	390	349	323	229
Max. Load /mA P_out= 152 W	not supported (919)	718	693	676	254	899	768	688	634	254
Short/Open Load	not supported (62)	70	72	77		20	20	19	18	

Remarks:

1.) This table shows the currents consumption of the driver at three different operating points (Pmax, Pmid, Pmin) for AC and DC operation.
2.) This table is intended for rough design desicions . It is not a replacement for individual functional measurments!

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