

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 80/220-240/24 4CH DT6/DT8 G3 (4062172274302) Date: 20.07.2022	
		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: ΔI in sum < 250 mA are allowed	Yes
Control gear compatible with CEAG STAR-Technology:	Phase-out 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
<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
Fullfilled the standard:	DIN EN 55016 (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 61647	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
<small>Note: VDE 0108 is not a standard for ECG, marking is not applicable</small>			
Features:	CEAG-Data:	Explanation:	Manufacturer information:
<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. These DALI commands are necessary to ensure the lamp failure detection, and must be support by the control gear.	Yes
<u>Important for DC operation:</u> 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
<u>Important for lighting design:</u> 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 luminaires per circuit			
<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 1,6A CG-S => 60 A SKU 2 x 3A CG-S => 260 A SKU 1 x 6A CG-S => 260 A SOU CG-S // S* => 260 A SU S* => 260 A	41A/150us per pcs.	
Luminaires, which are used for emergency lighting, must be according to the standard DIN EN 60598-2-22 (particular requirements - Luminaires for emergency lighting)			
<small>*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</small>			
Max. 1 DALI- Driver to wire with 1 V-CG-SB.1			
<small>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.</small>			
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Table 1

Values for load range	AC-operation					DC-Operation (For DALI Devices @ default DC Dim level e.g. 15%)				
	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	104	94	92	90	194	101	87	78	72	194
Mid. Load /mA P_out= 40 W	235	194	188	174	229	242	207	185	171	229
Max. Load /mA P_out= 80 W	456	374	357	327	254	468	398	357	329	254
Short/Open Load	39	39	40	42	/	13	11	11	11	/

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 decisions . It is not a replacement for individual functional measurements!

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