

Requirements for dimmable DALI control gears for fluorescent lamps and LED			Version 3
Manufacturer: OSRAM GmbH Marcel-Breuer-Str. 6 D-80807 München	ECG-type: ETI DALI 35/220-240/400 D LT2 L (AM28155) Date: 18.09.2019	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
<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 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 61000-3-2	Electromagnetic compatibility (EMC) — Part 3-2: Limits — Limits for harmonic current emissions (equipment input current ≤ 16 A per phase)	YES
Fullfilled the standard:	DIN EN 61547	Equipment for general lighting purposes — EMC immunity requirements	(*3) YES
Fullfilled 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:	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)	(*2) 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 1,5A 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	I_{peak} = 28 A, TH = 176 us Describes the max. inrush current of all ballasts in a circuit, to calculate the maximum contact rating 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)			
<p>*1: Communication between V-CG-SB.1 and 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% as preset factory setting. This preset value (luminous flux in case of DC-voltage) can be adjusted project depending via DALI Magic and T4 Tronic. To enable the adjustment of the luminous flux via the V-CG-SB.1, the DC detection has to be deactivated via T4T.</p> <p>*3: Not to be used in high risk areas, special release required.</p> <p>Max. one DALI- Driver to wire with one EL-monitoring module</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>			

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Table 1

Values for load range	AC-operation		DC-Operation			
	AC-operation @ 230V (mA)	AC-operation @ 240V (mA)	186V (mA)	216V (mA)	240V (mA)	260V (mA)
Maximum Load /mA Uout= 54 V Iout= 75 mA P= 4 W	40	40	17	17	18	18
Maximum Load /mA Uout= 54 V Iout= 352 mA P= 19 W	103	100	23	23	23	23
Maximum Load /mA Uout= 240 V Iout= 158 mA P= 38 W	189	181	41	41	34	32
Short Load	26	26	11	11	11	11
Open Load	26	26	11	11	11	11