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Requirements for dimmable DALI control gears for fluorescent lamps and LED			Version 4
Manufacturer: OSRAM GmbH Marcel-Breuer-Str. 6 D-80807 München München	Type / description: ECG-type: IT DALI 12/220-240/300 CS (AM46357)		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 ☑ NO ☐
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 ☑ NO ☐
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 ☑ NO ☐
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 ☑ NO ☐
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	YES ☐ NO ☑
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	YES ☐ NO ☑
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 ☑ NO ☐
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 ☑ NO ☐
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 ☑ NO ☐
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 ☑ NO ☐
Fullfilled the standard:	DIN EN 61547	Equipment for general lighting purposes — EMC immunity requirements	YES ☑ NO ☐
Fullfilled the DALI standards:	DIN EN 62386-101 /-102 / -207*	Control gear must have the DALI Logo*	YES ☑ NO ☐
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 ☑ NO ☐
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.	Unlocked ☐ 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	Ipeak=25A; TH=100us pc. 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

See notes listed in Annex.
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 considerl Some devices don`t detect a failure if one lamp is defect.

13.June.2022

Notes:
1: In DC mode, the output current is reduced to 15% lighting level base on the default parameter setting. This level can be changed via T4T(The level is limited 50% maximum).
2: Not to be used in high risk areas, special release required.
3: To enable the adjustment of the luminous flux via the DALI module, the DC detection has to be deactivated via T4T.
4: This LED driver declaration does not substitute a system test and release in a specific installation.

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Table 1

		AC-operation			
Values for load range		**189VAC I_in (mA)**	**230VAC I_in (mA)**	**240VAC I_in (mA)**	**264VAC I_in (mA)**
Min. Load /mA	Uout= 9 V Iout= 90 mA P= 0,81 W	19,5	19,8	19,9	20,0
Mid Load /mA	Uout= 42V Iout= 150mA P= 6,3W	46,3	40,5	39,6	38,2
Max. Load /mA	Uout= 42V Iout= 300mA P= 12,6W	86,4	72,4	69,4	64,3
Short Load		14,7	14,8	14,7	13,9
Open Load		14,8	14,8	14,7	13,9

		DC-operation			
Values for load range		**186VDC I_in (mA)**	**216VDC I_in (mA)**	**240VDC I_in (mA)**	**260VDC I_in (mA)**
Min. Load /mA	Uout= 9 V Iout= 90 mA P= 0,81 W	16,3	15,0	14,4	14,3
Mid Load /mA	Uout= 42V Iout= 90mA P= 3,78W	29,7	26,1	24,8	24,5
Max. Load /mA	Uout= 42V Iout= 150mA P= 6,3W	45,7	39,8	36,1	33,9
Short Load		11,4	11,5	11,4	11,7
Open Load		11,4	11,7	11,6	11,8

Remarks:
This table shows the currents consumption of the driver at three different operating points (Pmax, Pmid, Pmin) for AC and DC operation.