

Requirements for dimmable DALI control gears for fluorescent lamps and LED

Version 0

Manufacturer: Osram GmbH Marcel-Breuer-Straße 6 D-80807 München	Type / description: ECG-type: Oti DALI 50/220-240/1A4 LT2 FAN (ident code: AB42878)		
Features:	CEAG data:	Comment:	Complies: (Yes/No)
Control gear suitable for a DC voltage range:	186V - 260V DC (for Lead-Battery) 186V - 275V DC (for NiCD-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.	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:	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 $\leq 16 \text{ A}$ per phase)	Yes
Fullfilled the standard:	DIN EN 61547	Equipment for general lighting purposes — EMC immunity requirements	Yes (*3)
Fullfilled the DALI standards:	DIN EN 62386-101 /-102 / -207	Control gear must have the DALI Logo (*1)	Yes
<small>Note: VDE 0108 is not a standard for ECG, marking is not applicable</small>			
Features:	CEAG-Data:	Comment:	Manufacturer's instructions:
<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	Yes
<u>Important for DC light output:</u> Behavior in DC operation: - Unlocked DC light output level - Locked DC light output level	DC light output settings on V-CG-SB.1 only active if control gear is unlocked!	In case of locked DC light output level, the DC level of V-CG-SB.1 is not active !	Unlocked DC [] Locked DC [x]
<u>Important for lighting design:</u> If locked DC light output the lightout level in % is required	No control of light output level from V-CG-SB.1 in DC operation possible!	Locked light output level in %, e.g. 15% (*2)	15%
<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	Describes the max. inrush current of all ballasts in a circuit, to calculate the maximum contact rating of the circuit.	Ip=20A / Th=194µs
<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%

Luminaires, which are used for emergency lighting, must be according to the standard DIN EN 60598-2-22 (particular requirements - Luminaires for emergency lighting)

*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

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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Requirements for electronic non-dimmable
control gears for fluorescent lamps and LED



Manufacturer:
OSRAM GmbH
Marcel-Breuer Str. 6
D-80807 München

Product

Oti DALI 50/220-240/1A4 LT2 FAN

OSRAM

LED controller type	Values for load range	I _n in AC- operation (230V) / mA (trms)	I _n in AC- operation (240V) / mA (trms)	I _n in DC- operation (186V) / mA (trms)	I _n in DC- operation (216V) / mA (trms)	I _n in DC- operation (240V) / mA (trms)	I _n in DC- operation (260V) / mA (trms)
Oti DALI 50/220-240/1A4 LT2 FAN	U _{min} , I _{min}	97,43	96,10	19,11	16,57	15,28	14,24
	U _{min} , I _{max}	136,96	125,50	26,81	23,13	21,28	20,14
	U _{max} , I _{min}	212,14	204,29	40,38	35,03	31,89	29,97
	U _{max} , I _{max}	273,06	262,16	65,27	56,14	50,84	47,37
	Open Load	57,57	59,78	47,88	45,19	42,94	40,98
	Short Load	57,62	59,80	47,89	45,20	42,95	40,99

Maximum inrush current for ECG in AC Operation

I_{peak}= 20 A
T_H= 194 µs