

Requirements for dimmable DALI control gears for fluorescent lamps and LED			Version 5
<b>Manufacturer:</b> LEDVANCE GmbH Parking 1-5, 85748 Garching, Germany	<b>Type / description:</b> ECG-type: <u>DR EXTERNAL DALI-P -2X7-26W 220-240 4099854295171</u>		<b>Manufacturer information</b> Complies: YES/NO
<b>Features:</b>	<b>CEAG data:</b>	<b>Explanation:</b>	
Control gear suitable for a DC voltage range:	<b>186V - 260V DC (for Lead-Battery)</b>	Possible voltage range of the battery in emergency mode. (Not for AT-S* Systems required)	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>
Control gear compatible with the switch-over time of the system?	<b>Switch-over time:</b> <b>180 ms - 450 ms</b>	Typical switch-over time of CEAG systems between mains supply and emergency power supply	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>
Starting behavior of the control gear:	<b>Stable current consumption after less than 1.6 sec. maximum.</b>	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: $\Delta I$ in sum < 250 mA are allowed	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>
Control gear compatible with CEAG STAR-Technology:	<b>Phase-cut telegram (PAT):</b> <b>max. 30 phases (half waves) with max. 60° phase-cuts</b>	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 <input checked="" type="checkbox"/> NO <input type="checkbox"/>
<u>only for fluorescent lamps:</u> Control gear complies with the standard:	<b>DIN EN 60929</b>	AC and/or DC-supplied electronic control gear for tubular fluorescent lamps - Performance requirements	YES <input type="checkbox"/> NO <input type="checkbox"/>
<u>only for fluorescent lamps:</u> Control gear complies with the standard:	<b>DIN EN 61347-2-3 (incl. Attachment J)</b>	Particular requirements for AC and/or DC supplied electronic control gear for fluorescent lamps	YES <input type="checkbox"/> NO <input type="checkbox"/>
<u>only for LED:</u> Control gear complies with the standard:	<b>DIN EN 62384</b>	DC. Or AC supplied electronic control gear for LED modules - Performance requirements	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>
<u>only for LED:</u> Control gear complies with the standard:	<b>DIN EN 61347-2-13</b>	Lamp controlgear — Part 2-13: Particular requirements for d. c. or a. c. supplied electronic controlgear for LED modules	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>
Fullfilled the standard:	<b>DIN EN 55015 (Measurement on AC And DC)</b>	Limits and methods of measurement of radio disturbance characteristics of electrical lighting and similar equipment	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>
Fullfilled the standard:	<b>DIN EN 61547</b>	Equipment for general lighting purposes — EMC immunity requirements	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>
Fullfilled the DALI standards:	<b>DIN EN 62386-101 /-102 / -207*</b>	<b>Control gear must have the DALI Logo*</b>	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>
Note: VDE 0108 is not a standard for ECG, marking is not applicable			
<b>Features:</b>	<b>CEAG-Data:</b>	<b>Explanation:</b>	<b>Manufacturer information:</b>
<b>Important for function test!</b> According to IEC 62386 Part 102 Support of : <b>DALI command 145</b> (Query Control Gear) <b>DALI command 146</b> (Query Lamp Failure)	<b>According to IEC 62386 Part 102</b>	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 <input checked="" type="checkbox"/> NO <input type="checkbox"/>
<b>Important for DC operation:</b> DALI light level	<b>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 !</b>	In DC-emergency case the DALI-Light Level is locked to prevent unwanted changes of the luminous flux.	Unlocked <input checked="" type="checkbox"/> Locked <input type="checkbox"/>
<b>Important for lighting design:</b> 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)	<u>100</u> %
<b>Note: Important for the planning - Max. no. Of luminaires per circuit</b>			
<b>Important for the contact load SKU:</b> Max. inrush current each converter/luminaire in AC-operation:	<b>Max. permitted inrush current per circuit:</b> 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	<b>20 A / pcs.</b>	
<b>Luminaires, which are used for emergency lighting, must be according to the standard DIN EN 60598-2-22 (particular requirements - Luminaires for emergency lighting)</b>			
*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			
<b>Max. 1 DALI- Driver to wire with 1 V-CG-SB.1</b> 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.			

**Current consumption with specified tubes/lamps**

Table 1

Voltage for load range per channel			AC - operation		DC - operation (current measured at driver's default DC level of 100%)			
			AC-operation @230V (mA)	AC-operation @240V (mA)	186V (mA)	216V (mA)	240V (mA)	260V (mA)
<b>LED TUBE T5 EXTERNAL HE family</b>			<b>Driver output per channel</b>					
LEDTUBE T5 EXT P HE14 549 7,3W 8xx	Uout: Iout: Pout:	21 V 350mA 7,3W	84	82	93	80	72	67
2x LEDTUBE T5 EXT P HE14 549 7,3W 8xx in series	Uout: Iout: Pout:	42 V 350mA 14,6W	150	144	183	158	136	131
LEDTUBE T5 EXT P HE21 849 10,5W 8xx	Uout: Iout: Pout:	21 V 500mA 10,5W	112	108	133	115	103	95
2x LEDTUBE T5 EXT P HE21 849 10,5W 8xx	Uout: Iout: Pout:	42 V 500mA 21W	209	202	258	220	198	182
LEDTUBE T5 EXT P HE28 1149 16W 8xx	Uout: Iout: Pout:	41 V 400mA 16W	165	158	201	173	156	142
LEDTUBE T5 EXT P HE35 1449 18W 8xx	Uout: Iout: Pout:	41 V 450mA 18W	188	181	227	196	185	164
<b>LED TUBE T5 EXTERNAL HO family</b>			<b>Driver output per channel</b>					
LEDTUBE T5 EXT P HO24 549 10,5W 8xx	Uout: Iout: Pout:	21 V 500mA 10,5W	112	108	133	115	103	95
2x LEDTUBE T5 EXT P HO24 549 10,5W 8xx in series	Uout: Iout: Pout:	42 V 500mA 21W	209	202	258	220	198	182
LEDTUBE T5 EXT P HO39 849 17W 8xx	Uout: Iout: Pout:	43 V 400mA 17W	172	165	200	172	155	149
LEDTUBE T5 EXT P HO49 1449 26W 8xx	Uout: Iout: Pout:	42 V 600mA 26W	254	242	307	263	236	219
LEDTUBE T5 EXT P HO54 1149 26W 8xx	Uout: Iout: Pout:	42 V 600mA 26W	254	242	307	263	236	219
<b>LED TUBE T8 EXTERNAL family</b>			<b>Driver output per channel</b>					
LEDTUBE T8 EXT P 600 7,3W 8xx	Uout: Iout: Pout:	21 V 350mA 7,3W	84	82	93	80	72	67
2x LEDTUBE T8 EXT P 600 7,3W 8xx in series	Uout: Iout: Pout:	42 V 350mA 14,6W	150	144	183	158	136	131
LEDTUBE T8 EXT P 1200 15W 8xx	Uout: Iout: Pout:	42 V 350mA 15W	158	152	191	164	148	136
LEDTUBE T8 EXT P 1500 23W 8xx	Uout: Iout: Pout:	42 V 550mA 23W	228	219	280	239	215	198
<b>Current consumption with defective or disconnected lamps</b>								
No lamp / defective lamp			21	22	7	6	6	6