

| Requirements for dimmable DALI control gears for fluorescent lamps and LED  |   |  | Version 5   |
|---|---|--|---|
| <b>Manufacturer:</b><br>Inventronics GmbH<br>Parking 31-33<br>85748 Garching<br>Germany   | <b>Type / description:</b><br>ECG-type: OT DX 24/170-240/0A7 DIMA NFC G2 CE (EAN: 4052899632349)<br>Date: 24.05.2024  |  | <b>Manufacturer information</b><br>Complies: YES/NO |
| <b>Features:</b>  | <b>CEAG data:</b>   | <b>Explanation:</b>  |   |
| 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 <sup>+</sup> Systems required)  | Yes   |
| Control gear compatible with the switch-over time of the system?  | Switch-over time:<br>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   |
| Control gear compatible with CEAG STAR-Technology:  | Phase-cut telegram (PAT):<br>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><br>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><br>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><br>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><br>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 61547  | 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   |
| 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>                    |
| <u>Important for function test!</u><br>According to IEC 62386 Part 102 Support of :<br><b>DALI command 145</b><br>(Query Control Gear)<br><b>DALI command 146</b><br>(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><br>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.  | Not locked  |
| <u>Important for lighting design:</u><br>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)   | (*1) 100%   |
| <b>Note: Important for the planning - Max. no. Of luminaires per circuit</b>  |   |  |   |
| <u>Important for the contact load SKU:</u><br>Max. inrush current each converter/luminaire in AC-operation:   | <b>Max. permitted inrush current per circuit:</b><br>SKU 2 x 3A (CG) => 120 A<br>SKU 1 x 6A (CG) => 180 A<br>SKU 4 x 1,5A CG-S => 60 A<br>SKU 2 x 3A CG-S => 250 A<br>SKU 1 x 6A CG-S => 250 A<br>SOU CG-S // S <sup>+</sup> => 250 A<br>SU S <sup>+</sup> => 250 A | <b>27A/216μs per pcs.</b><br><br>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. |   |
| <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  |   |  |   |
| (*1) Emergency feature is disable and factory setting is 100% of the Dali light level. In DC mode at the 100% of Dali light level, the output current is limited. It is possible enable Emergency feature with DALI magic and Tuner 4 Tronic. |   |  |   |
| <b>Max. 1 DALI- Driver to wire with 1 V-CG-SB.1</b><br>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.                     |   |  |   |
| Date: 24.05.2024  |   |  |   |

# Technical requirements for dimmable DALI control gears for fluorescent lamps and LED


|   |  |   |
|---|--|---|
| Manufacturer:<br>Inventronics GmbH<br>Parkring 31-33<br>85748 Garching, Germany<br>www.inventronicsglobal.com | Product:<br><br><b>OT DX 24/170-240/0A7 DIMA NFC G2 CE</b> | <b>INVENTRONICS GmbH</b><br><br> |
|---|--|---|

Table 1

| LED controller type                            | Values for load range                            | IN in AC-operation<br>(230V) / mA (trms) | IN in AC-operation<br>(240V) / mA (trms) | IN in DC-operation<br>(186V) / mA (trms) | IN in DC-operation<br>(216V) / mA (trms) | IN in DC-operation<br>(240V) / mA (trms) | IN in DC-operation<br>(260V) / mA (trms) |
|--|--|--|--|--|--|--|--|
| <b>OT DX 24/170-240/0A7<br/>DIMA NFC G2 CE</b> | Minimum Load<br><br>Uout = 12 V<br>Iout = 150 mA | 17.4                                     | 18.0                                     | 14.9                                     | 12.8                                     | 11.6                                     | 11.0                                     |
|  | Medium Load<br><br>Uout = 34 V<br>Iout = 350 mA  | 63.2                                     | 60.6                                     | 74.8                                     | 64.0                                     | 57.5                                     | 53.1                                     |
|  | Maximum Load<br><br>Uout = 34 V<br>Iout = 700 mA | 118.9                                    | 114.5                                    | 118.8                                    | 101.6                                    | 91.1                                     | 84.3                                     |
|  | No Load<br><br>Uout = 34 V<br>Iout = 350 mA      | 11.0                                     | 11.4                                     | 0.1                                      | 0.1                                      | 0.1                                      | 0.6                                      |
|  | Short Load<br><br>Uout = 34 V<br>Iout = 350 mA   | 11.0                                     | 11.4                                     | 1.0                                      | 1.0                                      | 0.9                                      | 0.9                                      |

Maximum inrush current for ECG in AC Operation:

I<sub>peak</sub> = 27 A

TH = 216 μs