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

### Manufacturer:

<table>
<thead>
<tr>
<th>Control gear:</th>
<th>Type / Description</th>
<th>Manufacturer information</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Complies: YES/NO</td>
</tr>
</tbody>
</table>

#### Specifications:

<table>
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<tr>
<th>CEAG data:</th>
<th>Explanation:</th>
<th>Manufacturer information:</th>
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#### Control gear suitable for a DC voltage range:

- Voltage: 186V - 260V DC (for Lead-Battery)
- Possible voltage range of the battery in emergency mode.

#### 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.

#### 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.

#### 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

#### Only for LED:

- 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

### Important note!

- The labeling "according to VDE 0108" is not meaningful, because this is not a control gear standard!

### Specifications:

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#### Important for function test:

- Voltage-dependent
  - V-CG-S2: >9.4 mA or >12.7 mA = OK
  - V-CG-S: >16 mA or >47 mA = OK
  - V-CG-SE: >16 mA or >47 mA = OK
  - V-CG-SUW: >47 mA = OK
  - CG-K: >16 mA or >47 mA = OK
  - Minimum current of the LED driver with LED module to GOOD detection via the monitoring module.
  - In the voltage range of 189 - 264V AC on AT-S+ or 186 - 260V DC on ZB-S/LP-STAR the input current must be higher than the specified current values.

#### Important for function test:

- Voltage-dependent
  - V-CG-S2: <5.8 mA or <7.9 mA = n.OK
  - V-CG-S: <10 mA or <28 mA = n.OK
  - V-CG-SE: <10 mA or <28 mA = n.OK
  - V-CG-SUW: <28 mA = n.OK
  - CG-K: <10 mA or <28 mA = n.OK
  - Maximal current of the LED driver with LED module for SAD detection via the monitoring module.
  - In the voltage range of 189 - 264V AC on AT-S+ or 186 - 260V DC on ZB-S/LP-STAR the input current must be lower than the specified current values.

#### Important for function test:

- Voltage-dependent
  - V-CG-S2 = 30 A
  - V-CG-S = 30 A
  - V-CG-SE = 30 A
  - V-CG-SUW = 80 A
  - CG-K = 30 A
  - The max. inrush current of each monitoring module has to be considered.

#### Important note!

- For AT-S+ systems and for battery systems (ZB-S / LP-STAR) with active preliminary time for AC about 300 seconds (EOL detection of T5 lamps) for the function test, the current consumption must be sinusoidal, t.m. all control gears (<25W as well) must have an active PFC (Power Factor Correction)!
  - See DIN EN 61000-3-2, Pkt. 7.3 a.)

### Additional information:

- Luminaires for emergency lighting must comply with DIN EN 60598-2-22 (Particular requirements -Luminaires for emergency lighting)

### Notes:

- The max. permitted inrush current per circuit:
  - SKU 2 x 3A (CG) => 128 A
  - SKU 4 x 1.5A CG-S => 66 A

### Important note:

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  - See DIN EN 61000-3-2, Pkt. 7.3 a.)

Note: The labeling "according to VDE 0108" is not meaningful, because this is not a control gear standard!