## TECHNICAL DATA – SWITCHING ACTUATORS AND DIMMING ACTUATORS FOR THE ELTAKO RS485 BUS

### Type
- **F4HK14**
- **FH1K4**
- **FSB14**
- **FSR14-4x**
- **FUD14**
- **FUD14/800W**
- **FSG14/1-10V**
- **F2L14**
- **F4SR14-LED**
- **FFR14, FMS14**
- **FMZ14, FSR14-2x**
- **FTN14**, **FZK14**
- **FSR14SSR**

### Contacts

<table>
<thead>
<tr>
<th>Contact material/contact gap</th>
<th>Power MOSFET</th>
<th>Test voltage control connections/contact</th>
<th>Rated switching capacity each contact</th>
<th>Rated incandescent lamps and halogen lamp load 230V</th>
<th>Fluorescent lamp load with KV0* in lead-lag circuit or non compensated</th>
<th>Fluorescent lamp load with KV* shunt-compensated or with EVG*</th>
<th>Compact fluorescent lamps with EVG* and energy saving lamps ESL</th>
<th>Inductive load cos φ = 0,6/230V AC inrush current ≤ 35A</th>
<th>230V LED lamps</th>
<th>Rated switching capacity each contact</th>
<th>Life at rated load, cos φ = 1 or for incandescent lamps 500W at 100/h</th>
<th>Service life at rated load, cos φ = 0.6 at 100/h</th>
<th>Max. operating cyles</th>
<th>Maximum conductor cross-section (3-fold terminal)</th>
<th>Two conductors of same cross-section (3-fold terminal)</th>
<th>Screw head</th>
<th>Type of enclosure/terminals</th>
<th>Electronics</th>
</tr>
</thead>
<tbody>
<tr>
<td>AgSnO₂/0.5 mm</td>
<td>AgSnO₂/0.5 mm</td>
<td>–</td>
<td>4A/250V AC</td>
<td>600 VA</td>
<td>500VA</td>
<td>500VA</td>
<td>up to 200W (3)</td>
<td>–</td>
<td>up to 400W (4)</td>
<td>&gt;10³</td>
<td>&gt;4x10⁴</td>
<td>10³/h</td>
<td>10³/h</td>
<td>6mm² (4mm²)</td>
<td>2.5mm² (1.5mm²)</td>
<td>slotted/crosshead, pozidriv</td>
<td>IP50/IP20</td>
<td>100%</td>
</tr>
<tr>
<td>Power MOSFET</td>
<td>–</td>
<td>–</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>up to 400W</td>
<td>–</td>
<td>up to 400W</td>
<td>&gt;10³</td>
<td>&gt;4x10⁴</td>
<td>10³/h</td>
<td>10³/h</td>
<td>6mm² (4mm²)</td>
<td>2.5mm² (1.5mm²)</td>
<td>slotted/crosshead, pozidriv</td>
<td>IP50/IP20</td>
<td>100%</td>
</tr>
<tr>
<td>AgSnO₂/0.5 mm</td>
<td>AgSnO₂/0.5 mm</td>
<td>500V</td>
<td>10A/250V AC</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>up to 400W</td>
<td>–</td>
<td>up to 400W</td>
<td>&gt;10³</td>
<td>&gt;4x10⁴</td>
<td>10³/h</td>
<td>10³/h</td>
<td>6mm² (4mm²)</td>
<td>2.5mm² (1.5mm²)</td>
<td>slotted/crosshead, pozidriv</td>
<td>IP50/IP20</td>
<td>100%</td>
</tr>
<tr>
<td>Opto-Triac</td>
<td>–</td>
<td>–</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>up to 400W</td>
<td>–</td>
<td>up to 400W</td>
<td>&gt;10³</td>
<td>&gt;4x10⁴</td>
<td>10³/h</td>
<td>10³/h</td>
<td>6mm² (4mm²)</td>
<td>2.5mm² (1.5mm²)</td>
<td>slotted/crosshead, pozidriv</td>
<td>IP50/IP20</td>
<td>100%</td>
</tr>
</tbody>
</table>

### Electronics

<table>
<thead>
<tr>
<th>Time on</th>
<th>Max./min. temperature at mounting location</th>
<th>Standby loss (active power)</th>
<th>Local control current at 230V control input</th>
<th>Max. parallel capacitance (approx. length) of local control lead at 230V AC</th>
<th>Compliance with:</th>
</tr>
</thead>
<tbody>
<tr>
<td>100%</td>
<td>+50°C/-20°C</td>
<td>0.1W</td>
<td>–</td>
<td>–</td>
<td>EN 61000-6-3, EN 61000-6-1 and EN 60669</td>
</tr>
<tr>
<td>100%</td>
<td>+50°C/-20°C</td>
<td>0.3W</td>
<td>–</td>
<td>–</td>
<td></td>
</tr>
<tr>
<td>100%</td>
<td>+50°C/-20°C</td>
<td>0.9W</td>
<td>–</td>
<td>–</td>
<td></td>
</tr>
<tr>
<td>100%</td>
<td>+50°C/-20°C</td>
<td>0.05-0.5W</td>
<td>–</td>
<td>–</td>
<td></td>
</tr>
<tr>
<td>100%</td>
<td>+50°C/-20°C</td>
<td>0.1W</td>
<td>–</td>
<td>–</td>
<td></td>
</tr>
</tbody>
</table>

### Notes
- **KV0* = electronic ballast units; KV = conventional ballast units
- **Bistable relay as relay contact. After installation, wait for short automatic synchronization before teaching-in the wireless pushbuttons.**
- **If the load exceeds 200 W, a ventilation clearance of 1/2 pitch unit to adjacent devices must be maintained.**
- **Applies to lamps of max. 100W.**
- **For dimmer or capacity enhancer it is only allowed to use max. 2 inductive (wound) transformers of the same type, furthermore no load operation on the secondary part is not permitted. The dimmer might be destroyed. Therefore do not permit load breaking on the secondary part. Operation in parallel of inductive (wound) and capacitive (electronic) transformers is not permitted:**
- **When calculating the load a loss of 20% for inductive (wound) transformers and a loss of 5% for capacitive (electronic) transformers must be considered in addition to the lamp load.**
- **Fluorescent lamps or LV halogen lamps with electronic ballast.**
- **Applies to one contact and the sum of both contacts.**
- **Capacity increase for all dimmable lamp types with Capacity Enhancer FUD14.**
- **All actuators with 2 contacts: Inductive load cos φ = 0.6 as sum of both contacts.**
- **Generally applies to energy saving lamps (ESL) and 230 V LED lamps. Due to different lamp electronics, switch on/off problems and a restriction in the maximum number of lamps, however, the dimming ranges may be limited depending on the manufacturer.**
- **In these comfort settings, no inductive (wound) transformers may be dimmed.**

The second terminating resistor has to be plugged to the last actuator included in the FAM14 respectively FSNT14 scope of supply.

Eltako Wireless is based on the EnOcean wireless standard for 868 MHz, frequency 868.3 MHz, data rate 125 kbps, modulation mode ASK, max. transmit power 7 dBm (<10 mW).

Compliance with: EN 61000-6-3, EN 61000-6-1 and EN 60669