



## Electronic Transformer with DALI® interface for 12 V halogen lamps

### Features

- Dimmable via DALI® interface (according to DALI® standard) or TouchDIM® or TouchDIM® Sensor
- Suitable for emergency installation
- Reversible switch off in case of short-circuits, overload and overtemperature
- Compliance with all relevant standards

### Connecting the transformer to the lamps

- Ensure that the lamp load is within the output range of the transformer (see table)
- Transformer can be connected in parallel on the primary side (see fig. 1a)
- Do not connect the transformer in parallel or series on the secondary side (see fig. 1b)

### Wiring

- In accordance with EN 60598 standard,

the recommended connecting cables (see table) must be held firmly by the cable clamp to prevent it from being pushed or pulled

- Secondary side: cable length maximum 2 m, minimum 0.3 m (fig. 2)
- To prevent radio interference keep lamp cables as short as possible, keep them away from metal surfaces and keep them separated as far as possible from mains cables (fig. 2: angles  $\geq 90^\circ$ ). Do not route cables along the transformer
- When using single leads of a cable, secondary wires have to be twisted in pairs
- For units installed in fixtures the luminaire manufacturer is responsible for RFI-compliance

### Temperatures

- Avoid high temperatures. Do not place the transformer close to the lamp (minimum distance 0.3 m). Maximum ambient temperature must not exceed 50 °C. Make sure there is adequate space to avoid a build-up of heat. In

critical installations the temperature at  $t_c$  has to be controlled.

### Caution

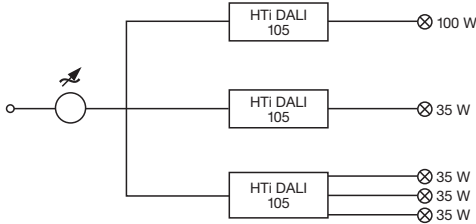
- Transformers must be installed by a qualified electrician
- Electronic transformers are not suitable for any other load than low voltage halogen lamps
- No switching or dimming on the secondary side

### General hints

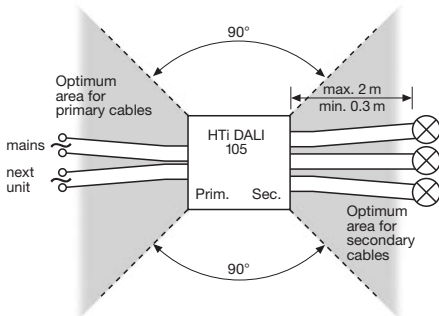
- Do not use DALI® control and TouchDIM® or TouchDIM® Sensor simultaneously (see fig. 4 and 5)
- In case of emergency installation it is recommended to short-circuit the DALI® interface (e.g. with a relais) while emergency operation.
- For further information please refer to "HALOTRONIC – Technical guide" or "DALI-Technical Guide" available at: [www.osram.com/ecg-downloads](http://www.osram.com/ecg-downloads)

## correct

### 1. a

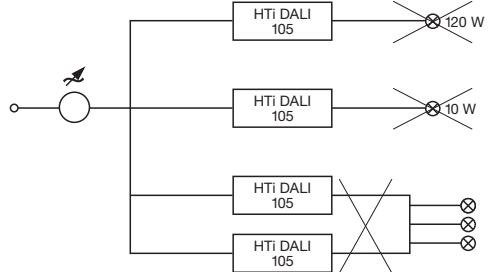


### 2.

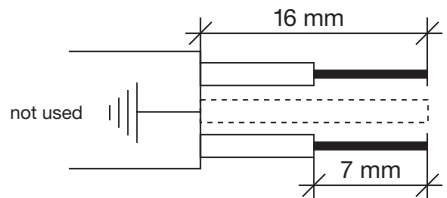


## incorrect

### 1. b

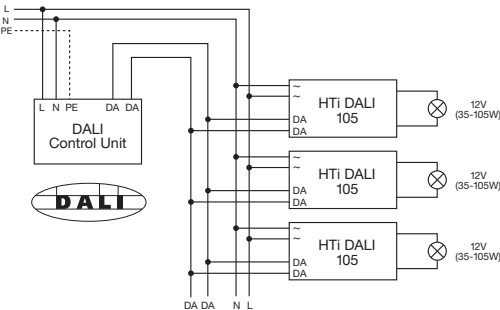


## 3. Wire stripping

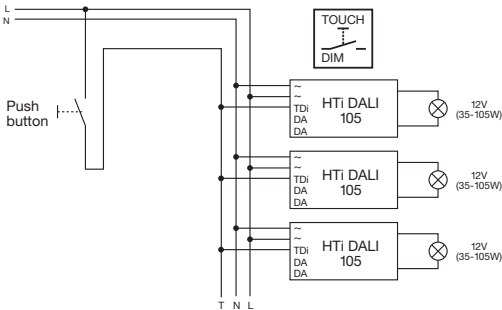


|                                                             |                                                                                                                                                                                                                                                                                                           |
|-------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Reference:                                                  | HTI DALI 105/230-240 DIM                                                                                                                                                                                                                                                                                  |
| Nominal line voltage:                                       | 230 V - 240 V                                                                                                                                                                                                                                                                                             |
| Voltage range (AC):                                         | 207 V - 254 V                                                                                                                                                                                                                                                                                             |
| Safe operation:                                             | 207 V - 264 V <sub>AC</sub> ; 176 V - 275 V <sub>DC</sub>                                                                                                                                                                                                                                                 |
| Range of battery voltage for emergency installation:        | 176 V - 275 V                                                                                                                                                                                                                                                                                             |
| Nominal line current:                                       | ≤ 0.45 A <sub>eff</sub>                                                                                                                                                                                                                                                                                   |
| Line frequency:                                             | 0; 50 - 60 Hz                                                                                                                                                                                                                                                                                             |
| Power factor:                                               | ≥ 0.95                                                                                                                                                                                                                                                                                                    |
| Output voltage (@ 240 V):                                   | 11.5 V (35 W); 11.8 V (105 W)                                                                                                                                                                                                                                                                             |
| Losses:                                                     | ≤ 6 W (@ 105 W)                                                                                                                                                                                                                                                                                           |
| Stand-by/No-load input power                                | < 0.5 W                                                                                                                                                                                                                                                                                                   |
| Load range:                                                 | 35 - 105 W                                                                                                                                                                                                                                                                                                |
| Standards:                                                  | EN 55015 (A1: 2007); EN 61000-3-2; EN 61547; EN 61347-2-2                                                                                                                                                                                                                                                 |
| Approvals:                                                  |                                                                                                                                                                                                                                                                                                           |
| Temperature range:                                          | -20 °C to +50 °C                                                                                                                                                                                                                                                                                          |
| Max. inrush current for cold lamps @ 150 W:                 | < 0.6 A                                                                                                                                                                                                                                                                                                   |
| Dimming interface:                                          | <b>DALI®</b> or <b>TouchDIM®</b> (1-switch-dimm-function) with separated and <b>not isolated TouchDIM®</b> input (TDI)<br><b>TouchDIM® Sensor</b> functions are also integrated.<br><b>DALI®</b> interface is protected against polarity reversal and over-voltage (max. 500 V, basic isolation, no SELV) |
| Dimming range:                                              | 0.1 - 100% luminous flux with AC; 1 - 100% with DC                                                                                                                                                                                                                                                        |
| Protection against short circuit, overload and overheating: | Automat. switch off, reversible                                                                                                                                                                                                                                                                           |
| Suitable cable types for primary side:                      | H03VV-F2x0.50mm <sup>2</sup> ; H03VV-F2x0.75mm <sup>2</sup> ; H05VVH2-F2X0.75mm <sup>2</sup> ; H03VVH2-F2x0.75mm <sup>2</sup> ; NYM-O 2x1.5 mm <sup>2</sup> ; NYM-J 3x1.5 mm <sup>2</sup>                                                                                                                 |
| Wire cross section, primary:                                | 0.5 mm <sup>2</sup> to 1.5 mm <sup>2</sup>                                                                                                                                                                                                                                                                |
| Suitable cable types for secondary side:                    | H05VVH2-F2x0.75mm <sup>2</sup> ; H05VV-F2x1.5mm <sup>2</sup> ; H05VV-F2x2.5mm <sup>2</sup> ; H03VV-F2x0.75mm <sup>2</sup> ; NYM-J 3x1.5 mm <sup>2</sup> ; NYM-J 3x2.5 mm <sup>2</sup> ; NYM-O 2x1.5 mm <sup>2</sup>                                                                                       |
| Wire cross section, secondary:                              | 0.75 mm <sup>2</sup> to 2.5 mm <sup>2</sup>                                                                                                                                                                                                                                                               |

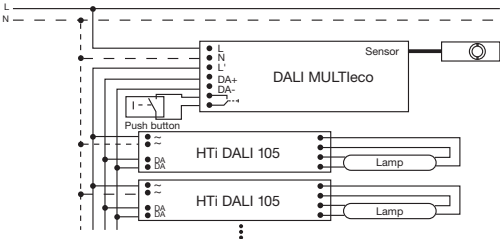
4. Sample DALI® wiring diagram



5. Sample TouchDIM® wiring diagram



6. Sample Sensor & TouchDIM® wiring (MULTeCo)



| Recommended energy saving accessories (not included)             |                                                                                                  |                       |
|------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|-----------------------|
| DALI MULTeCo                                                     | <b>DALI®</b> control unit for use of LS/PD MULTI 3 sensors                                       | 4008321 <b>371300</b> |
| LS/PD MULTI 3 CI                                                 | Light- and presence sensor for ceiling integration                                               | 4008321 <b>916648</b> |
| ECO CI KIT                                                       | Cable clamp for independent mounting of the DALI MULTeCo control unit (e.g. ceiling integration) | 4008321 <b>392091</b> |
| <a href="http://www.osram.com/ecg-lms">www.osram.com/ecg-lms</a> |                                                                                                  |                       |