TE-DC 2 0300 D101 300 VA one4all with current guard

SELV RoHS

Field of application

Surface-mounted transformer for low-voltage halogen systems, 12 V

Functions of the protective devices

The device is fitted with a microprocessor-controlled current guard. The power output on the secondary output is measured on the primary input by the current guard during commissioning and stored as a reference value.
In the event of deviations from the reference value of ±40 W as a result of overload or short-circuit, the output circuit will be disconnected for safety reasons. An action by the user is necessary (dimming command "DALI 0" or "DSI 0" followed by an arbitrary dim-level) to switch the transformer on again. After restarting, the current guard will again disconnect the output circuit within 1 second if the source of the fault is not removed. If short-circuiting occurs, it will not be possible to switch on the system again. A temperature relay is installed as additional protection for the DC transformer. In the event of overload, the output voltage will be reduced in order to lower the temperature of the device. Should the temperature still continue to rise, the device will be disconnected. When the correct operating temperature for the transformer is reached, the transformer starts automatically.

Read the assembly instructions carefully before initial commissioning!

Commissioning of the current guard when operated via switchDIM or DSI (DSI-T)

1. Switch off your transformer at the push-to-make-switch.
2. Turn the push-to-make-switch on and off 3 times. The switch must be on or off for less than 1 second. The connected lamp output will be stored as a reference value.
3. To acknowledge the storage TE-DC will dim from minimum dim-level to maximum dim-level. This process takes about 10 seconds. A user intervention (e.g. dimming command) during this time will abort the commissioning for safety reasons (e.g. playing children).
   If the reference commissioning was successful, TE-DC will continue to operate with the minimum dim-level. Commissioning is then complete. In case of a fault the TE-DC will switch off.
4. In the event of a malfunction, repeat from point 1.

Commissioning of the current guard when operated via DALI.

The commissioning will be effected through the software "configTOOL" (www.tridonicatco.com → Services → Download → Software → configTOOL).

Changing the lamp output when operated via switchDIM or DSI (DSI-T)

1. Switch off the transformer at the push-to-make-switch.
2. Connect the desired number of lamps. In doing so, observe the maximum TE-DC transformer output.
3. Turn the push-to-make-switch on and off 3 times. The switch must be on for less than 1 second. The connected lamp output will be stored as a new reference value.
4. To acknowledge the storage TE-DC will dim from minimum dim-level to maximum dim-level. This process takes about 10 seconds. A user intervention (e.g. dimming command) during this time will abort the commissioning for safety reasons (e.g. playing children). If the reference commissioning was successful, TE-DC will continue to operate with the minimum dim-level. Commissioning is then complete. In case of a fault the TE-DC will switch off.
5. In the event of a malfunction, repeat from point 1.

Changing the lamp output when operated via DALI.

The changing of the lamp output will be effected through the software "configTOOL" (www.tridonicatco.com → Services → Download → Software → configTOOL).

Possible faults during operation

If the current guard detects insufficient load, the light flashes every 15 seconds briefly. This allows to detect defective light sources. Switch off the transformer then and remove the source of the fault. Afterwards the system can be reconnected unless the connected lamp output has not changed.
On overload the transformer will switch off and can be restarted with off/on (with push-to-make-switch or DALI/DSI = 0).

Possible operating faults

Foreign objects between conductors. Faulty / defective terminals, conductors and lamp ways, insufficient load on secondary or too great a load, short-circuit, faulty lamps, power circuit interruptions.
Re-commissioning: remove fault source, switch lighting system on.

Characteristics of surface-mounted transformer

Technical data:	see data sheet
Housing:	polycarbonate
Tested in accordance with:	EN 61347-2-2, EN 61047, EN 55015, EN 61000-3-2, EN 61547, VDE 0710-14
Protection:	Class II
Test symbol:	
Dimmer:	switchDIM (Single push-to-make switch), DSI, DALI
Conformity:	CE

Assembly instructions

Installation and assembly to be carried out by an authorised / competent individual.

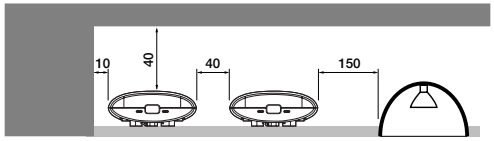
Nominal voltage:	230 – 240 V primary
Nominal frequency:	50/60/0 Hz
Nominal lamp wattage:	100 – 300 W
Earthing:	The conection of or protective earth is not required (protection class II transformer)
Fixing:	max. diameter 6 mm or M6, min. length 25 mm fixing centres 218 – 226 mm
Fixing to the DIN rail:	Utilise screws provided or round head screws; max. 3.5 – 4 mm dia. (no countersunk head screws); DIN 7981C 3.5 x 16
Installation Requirements:	dry, acid-free, oil-free, grease-free 35 °C (max. ambient temperature)
Mounting surface:	level, can be mounted on combustible materials

Max. Rating of miniature circuit-breakers (B, C)

Min. circuit-breakers	10 A	13 A	16 A	20 A
Installation ∅	1.5 mm²	1.5 mm²	2.5 mm²	2.5 mm²
TE-DC 2 0300 D101	6	8	10	13

Due to the low in-rush current only the nominal operating current needs to be considered.

Minimum spacing (mm):



Recommended conductor cross-section – primary:

0.75 – 2.5 mm², light plastic-sheathed cable with a min. ∅ (external) of 6 mm

rigid wires:	1 x 2.5 mm²
	2 x 1.5 mm²
flexible wires:	1 x 2.5 mm²
	2 x 1.5 mm²

Recommended conductor cross-section/max. length – secondary:

2.5 – 10.0 mm²

Output	Current	Line length from transformer to lamp			
VA	A	5 m	10 m	15 m	20 m
		Line cross-section in mm²			
100	8.3	2.5	4.0	6.0	10.0
150	12.5	2.5	6.0	10.0	10.0
210	17.5	4.0	10.0	10.0	10.0
250	20.8	4.0	10.0	10.0	10.0
300	25.0	6.0	10.0	10.0	10.0

These values apply to flexible copper conductors.

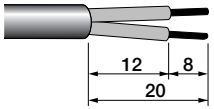
Note: Long feeders, connecting elements and couplings represent a higher electrical resistance and reduce the line lengths specified above.

Min. thermal stability of the secondary conductor 100 °C

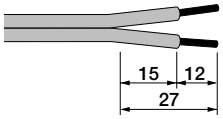
Tighten terminals firmly!

Length of the wires to be stripped of insulation (mm):

Primary:



Secondary:



Installation instructions:

H03VV-F, H05VV-F

Data secondary terminal:

possible Wiring	
Clamping area	0.33 ... 16.00 mm²
Single wire / H05(07) V-U	0.5 ... 16.00 mm²
braided wire / H05(07) V-K	0.5 ... 10.00 mm²
braided wire / DIN 46228-1	2.5 ... 10.00 mm²
braided wire / DIN46228-4	2.5 ... 10.00 mm²
plug gage / EN 60999	Ø 5.3 (B6)

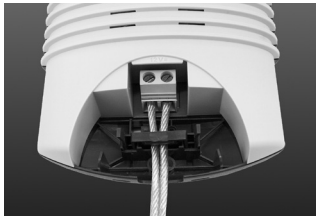
DC operation:

The TE-DC can be operated using DC voltage in installations in accordance with EN 50172.

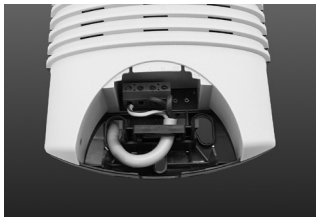
Strain relief:

- Wide adjustment range for strain relief (3 – 12 mm)
- Rapid installation of strain relief and terminal cover in the shortest possible time without having to use any tools
- Do not feed single insulated conductors through the strain relief on the primary side

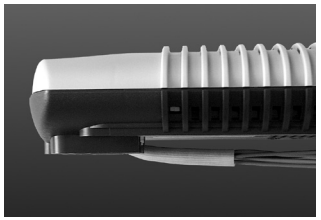
Primary side



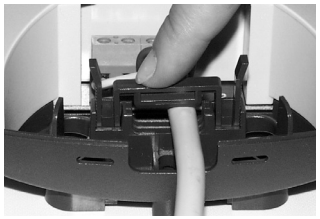
Secondary side



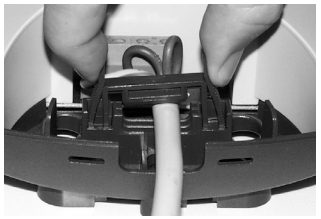
Ceiling mounting



Ceiling mounting



Closing

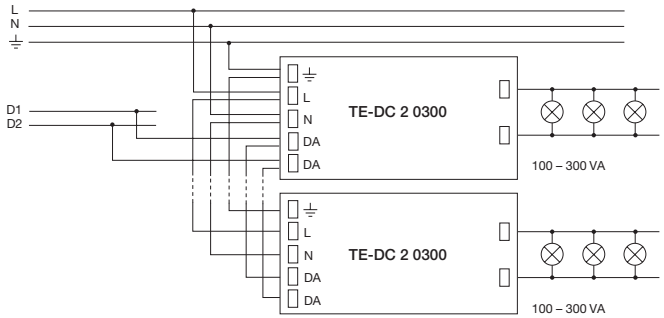


Opening

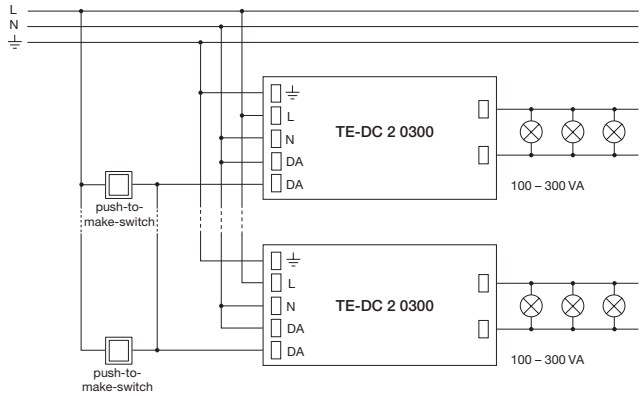
Intelligent Voltage Guard:

Intelligent Voltage Guard is the name of the new electronic monitor from TridonicAtco. This innovative feature of the TE-DC family of control gear from TridonicAtco immediately shows if the mains voltage rises above or falls below certain thresholds. Measures can then be taken quickly to prevent damage to the control gear.

- If the mains voltage rises above 290 V the lamps start flashing on and off.
- This signal "demands" disconnection of the power supply to the lighting system.
- If the mains voltage falls below 180 V the control gear will automatically dim down to 10 % to protect the control gear from being irreparably damaged.



DALI / DSI



switchDIM

Safety instructions:

Installation of this device may only be carried out by specialist staff who have provided proof of their skills. The power supply must be switched off before handling the device. The relevant safety and accident prevention regulations must be observed.