GB

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Eltako ELECTRONICS

Digital settable staircase time switch

CE

TLZ12D-plus

Only skilled electricians may install this electrical equipment otherwise there is the risk of fire or electric shock!

Temperature at mounting location:
-20°C up to +50°C.
Storage temperature: -25°C up to +70°C.
Relative humidity:
annual average value <75%.

1 NO contact not potential free 16A/250V AC. Incandescent lamps up to 2300W, energy saving lamps ESL and LED lamps up to 200W. Control voltage 230V and/or 8..230V UC. Switch-off early warning and permanent light by pushbutton switchable. Standby loss 0.5 watt only. With ESL optimisation and multifunction.

Modular device for DIN EN 60715 TH35 rail mounting. 1 module = 18mm wide, 58mm deep.

The functions and times are entered using the MODE and SET keys as described in the operating manual and indicated on the LC display. A keylock function is provided.

Zero passage switching to protect contacts and lamps. This prolongs in particular the lifetime of energy saving lamps.

The noiseless electronics do not even bother the sensitive ear – unlike many synchronous motors with mechanical gears.

By using a bistable relay coil power loss and heating is avoided even in the on mode.

The switched consumer may not be connected to the mains before the short automatic synchronisation after installation has terminated.

Control voltage, supply voltage and switching voltage 230V. In addition electrically isolated universal voltage from 8 to 230V UC. 3-wire and 4-wire circuits, resettable, with attic lighting if 4-wire circuit.

Automatic detection of the method of connection.

Glow lamp current up to 50mA, dependent on the ignition voltage of the glow lamps.

Precise variable time range from 1 to 99 minutes.

Separate continuous light pushbutton with projecting SET button in the functions STS, ISO, IS and R.

With motion detector control input BM, which converts the input signal into a control impulse if the function STS is set. In this case the permanent light by pushbutton function is not active.

If the function STS is set, the lighting is switched on again after a power failure provided the set time has not yet elapsed.

The elapsed period is shown in the middle of the display. The set time flashes at the bottom edge of the display until the set period elapses. **The accrued switch-on time** is displayed there outside the elapsed time, first in hours (h), then in months (m) with 1 digit after the decimal point. When the set time flashes but the elapsed time does not change, a control pushbutton is inhibited.

If switch-off early warning function is switched on, the light starts flickering in time variable from 10 to 50 seconds before time-out and is repeated three times at decreasing time intervals.

If permanent light by pushbutton is switched on, permanent light can be switched on by pressing the pushbutton longer than 1 second. This is switched off automatically after time variable from 0.5 to 10 hours or by pressing the pushbutton longer than 2 seconds. This function is not active at the BM input.

If both switch-off early warning function and permanent light by pushbutton are switched on, the switch-off early warning function is activated before the permanent light switches off.

If energy saving lamps are switched completely or partially, activate position 'ESL' in the menu guidance. This is indicated by a + sign next to the abbreviation for the function at the top of the display.

If the function STS is selected **the time can be extended** within the first second after switching on or resetting **by pressing the pushbutton repeatedly up to three times** (incrementing). Each momentary-contact control increments the set time once. This function is not active at the BM input.

With multifunction: Switchable to the functions **IS** (impulse switch), **R** (relay), **ISO** (impulse switch with off-delay) and **HC** (hour counter). After setting the required function, the function can be blocked. An arrow on the right of the abbreviation indicates the blocking status.

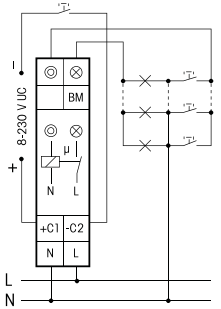
ISO: The impulse switch automatically disconnects after the set delay from 0.1 to 9.9 hours is timed out, provided there is no manual OFF command.

Switch-off early warning, permanent light by pushbutton and ESL are also switchable if the function ISO is set.

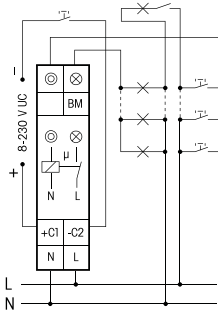
HC: As long as the pushbutton input is excited, the + sign is indicated next to the abbreviation for the function HC at the top of the display. The time is added and indicated at the bottom of the display. Initially up to 9999 hours (h), then automatic change-over to months (m) each with 730 hours and display with 1 digit after the decimal point. The relay is not switched on if the funtion HC is set.

Menu guidance with selectable languages German, English or French as described in the attached operating instructions.

Typical connections



3-wire circuit, resettable



4-wire circuit with attic lighting, resettable

Technical data

Contol voltage	230V+8..230V UC
Rated switching capacity	16A/250V AC
Incandescent lamp load and halogen lamp load[1] 230V	2300W
Fluorescent lamp load with KVG in lead-lag circuit or non compensated	1000VA
Fluorescent lamps with KVG shunt-compensated or wih EVG	500VA
Compact fluorescent lamp with EVG and energy saving lamps	15x7W 10x20W
Standby loss (activ power)	0.5W
◎	Control pushbutton 230V
⊛	Permanent light
BM	Motion detector control input
⊗	Lamp connection

[1] For lamps with 150W max.

How to operate the TLZ12D-plus with display

The left countersunk button is named MODE. The right button is named SET. It projects by 2mm and its functions is permanent light ON/OFF in automatic mode.

Permanent light corresponds to positions ON or ⊛ of the devices with rotary switches and is indicated in the display by PL flashing.

After you switch on the power supply (or the power supply is switched on after a power failure), the display indicates the **language setting** flashing for 10 seconds: D = german, GB = English and F = French.

During this time, press SET to make changes, press MODE to save and then switch over to normal display. This is the staircase time switch function set at the factory, otherwise the function last selected remains.

Press MODE to display the area at the top of the display. Then select the area by pressing SET before you make a change: **functions STS, ISO, IS, R and HC.** Each time you press SET, you move to the next flashing function. Press MODE on the requested function to end the flashing function. Then set by pressing MODE+SET.

Retain and only change a function: Press MODE twice.

If + appears behind STS or ISO, **the optimisation function for energy saving lamps ESL** is switched on.

Action press MODE	**Change press SET**
STS = staircase time switch and ISO = impulse switch with time delay.	
TIM flashes	**STS:** The time delay is incremented in steps of 0.5 min from 1 to 10 minutes and in steps of 1min from 10 to 99 minutes. **ISO:** The time is incremented in steps of 0.1 hr from 0.1 to 9.9 hours. Press and hold down to increment the time slowly followed by rapid increase
AVW flashes	The length of the switch-off early warning is incremented in steps of 5s from 0 to 50s. After 50 the display returns to 0 (then without switch-off early warning).
TDL flashes	The time for the permanent light by pushbutton function is incremented in steps of 0.5hr from 0 to 10 hours. After 10 the display returns to 0 (then without permanent light by pushbutton).
ESL flashes	ESL+ switches on ESL optimisation, without + it is off.
TLZ or **ESV**	no longer flashing: the automatic function is active.

IS = impulse switch, R = switching relay and HC = operating hour counter have no adjustable subfunctions.

If your input ends with a non flashing display, this is the selected function. With time periods, the reference and the residual times are shown at the bottom of the display.

Reset operating hour counter to 0

Press MODE and SET simultaneously for 2 seconds. The bottom line in the display flashes. Press SET to reset to 0.

Lock and unlock

If the automatic function is active (no element is flashing), the setting can be locked against unintentional adjustment and then unlocked.

As long as it is locked, an arrow at the top right of the display points to a lock icon on the front panel.

Lock: Press MODE and SET simultaneously and briefly. **LCK** flashes. Lock by pressing SET.

Unlock: Press MODE and SET simultaneously for 2 seconds. **UNL** flashes. Unlock by pressing SET.



The strain relief clamps of the terminals must be closed, that means the screws must be tightened for testing the function of the device. The terminals are open ex works.

Must be kept for later use!

We recommend the housing for operating instructions GBA12.

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