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Eltako ELECTRONICS

Digital settable multifunction impulse switch with integrated relay function ESR12DDX-UC

CE

1+1 NO contacts potential free 16 A/250 V AC. Incandescent lamp load up to 2000 W. Standby loss 0.03-0.4 watt only.

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

With the Eltako Duplex technology (DX) the normally potential-free contacts can still switch in zero passage when switching 230 V AC 50 Hz and therefore drastically reduce wear. Simply connect the neutral conductor to the terminal (N) and L to 1 (L) and/or 3 (L) for this. This results in an additional standby consumption of only 0.1 Watt.

Universal control voltage 8 to 230 V UC. Supply voltage is same as the control voltage.

The functions are set with the keys MODE and SET. They are indicated on the display and can be blocked if required.

The accrued switch-on time is continuously displayed. First in hours (h), then in months (m) with 1 digit after the decimal point.

By using bistable relays 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.

Only impulse switch functions: After a power failure the system is disconnected in a definite sequence or the switch position is kept depending on the setting (then + on the display next to function abbreviations). Settings under RSM in the menu guidance. Furthermore, when using these functions, with the keys MODE and SET, the control inputs A1 and A3 can be defined as central control inputs.

ZA1 = 'central off' with A1, local with A3;

ZE1 = 'central on' with A1, local with A3;

Z00 = no central control. 'Central on' with A1, 'central off' with A3. No local control refer to function RS.

Relays with suitable functions (from manufacturing date week 3 2010 (03/10))

to feed back the switching voltage signal of a dimmer switch.

From 110 V control voltage and in the settings 2S, WS, SS and GS glow lamp current up to 5 mA, dependent on the ignition voltage.

With the keys MODE and SET you can select amongst 18 functions:

OFF = Permanent OFF

2xS = 2-fold impulse switch with 1 NO contact each, control inputs A1 and A3

2S = Impulse switch with 2 NO contacts

WS = Impulse switch with 1 NO contact and 1 NC contact

SS1 = Impulse multi circuit switch 1+1 NO contacts for switching sequence 0 - contact 1 (1-2) - contact 2 (3-4) - contacts 1 + 2

SS2 = Impulse multi circuit switch 1+1 NO contacts for switching sequence 0 - contact 1 - contacts 1 + 2 - contact 2

SS3 = Impulse multi circuit switch 1+1 NO contacts for switching sequence 0 - contact 1 - contacts 1 + 2

GS = Impulse group switch 1+1 NO contacts for switching sequence 0 - contact 1 - 0 - contact 2

RS = Switch with A1 = set control input and A3 = reset control input

2xR = 2-fold switching relay with 1 NO contact each, control inputs A1 and A3

2R = Switching relay with 2 NO contacts

WR = Switching relay with 1 NO contact and 1 NC contact

RR = Switching relay (closed-circuit current relay) with 2 NC contacts

EAW = Impulse relay for fleeting NO contact and fleeting NC contact with 1+1 NO contacts, wiping time 1 sec each

EW = Impulse relay for fleeting NO contact with 1 NO contact and 1 NC contact, wiping time 1 sec

AW = Impulse relay fleeting NC contact with 1 NO contact and 1 NC contact, wiping time 1 sec

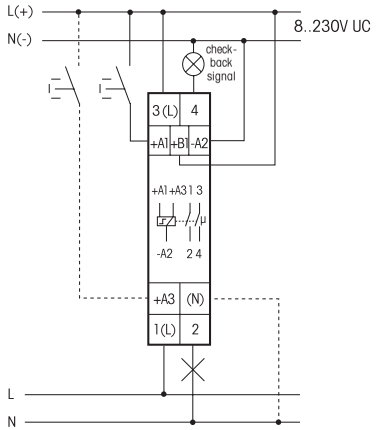
GR = Group relay 1+1 NO contacts (relay with alternating closing contacts)

ON = Permanent ON

The control inputs A1 and A3 have the same functions except for 2xS, 2xR and RS, if not used as central control inputs.

After setting the required function, the function can be blocked. An arrow on the right of the abbreviation indicates the blocking status.

Typical connection



If N is connected, the zero passage switching is active.

Technical data

Control voltage	8..230 V UC
Rated switching capacity	16 A/250 V AC
Incandescent lamp load and halogen lamp load [1] 230 V	2000 W
Fluorescent lamp load with KVG * in lead-lag circuit or non compensated	1000 VA
Fluorescent lamps with KVG * shunt-compensated or wih EVG *	500 VA
Compact fluorescent lamp with EVG * and energy saving lamps	15x7 W, 10x20 W [2]
Standby loss (activ power)	0.4 W

[1] For lamps with 150 W max.

[2] If zero passage switching is activated, otherwise I on ≤ 70 A/10 ms.

* EVG = electronic ballast units;
KVG = conventional ballast units

How to operate the ESR12DDX-UC with display

The left button is named MODE.
The right button is named SET.

Press MODE to display the area at the top of the display, which then can be selected by pressing SET before you make a change. 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.

Action press MODE	Change press SET
RSM flashes	**2xS, 2S, WS, SS1, SS2, SS3, GS:** It is decided if the system is disconnected in a definite sequence or if the switch position should be kept after a power failure. Then "+" on the display next to the function abbreviation.
Z00 flashes	**2S, WS, SS1, SS2, SS3, GS:** A1 can be defined as central control input. ZA1 = central off ZE1 = central on

There are no settable subfunctions of the ER functions.

If your input ends with a non flashing display, this is the selected function.

Reset the accrued switch-on time 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.

Warning!

Only a trained electrician may install this equipment, otherwise there is a risk of fire or electric shock.