

## 2-Channel Week Time Switch TR 612S - EIB



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## 1 Operational Characteristics

The 2-channel week time switch **TR 612S - EIB** is a product installed in serie with integrated bus coupler for installation in panels. The connection to the EIB is made via bus connecting terminal.

The time switch offers: 36 captive switching times which are programmable by free block formation on one, several or all weekdays. In addition the TR 612S - EIB is already programmed ex factory with valid Middle-European switching for automatic summer/winter time switching and current time-of-day. If another or no switching is required, this can be programmed as described in the operating instruction.

On each channel, switching, priority and dimming or value messages can be transmitted at determined times.

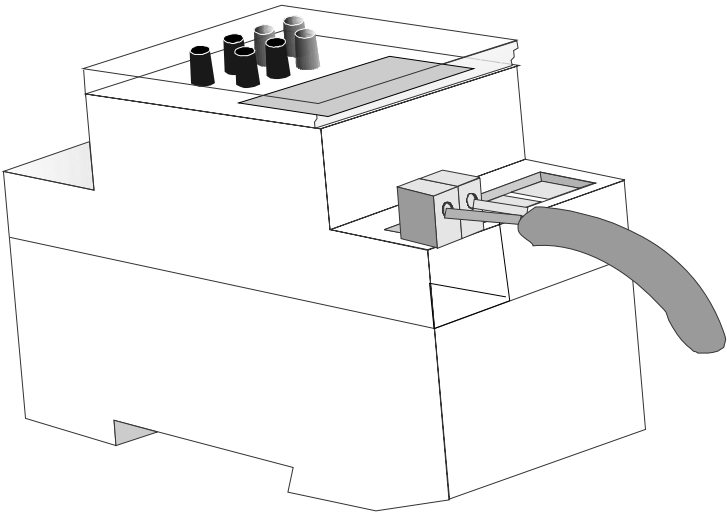
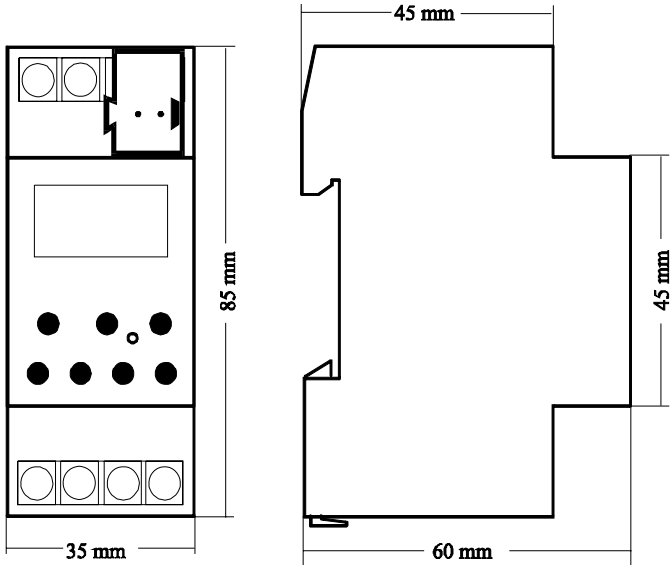
## 2 Technical Data

<b>amount of channels:</b>	2
<b>memory locations:</b>	36
<b>automatic program:</b>	day and week program
<b>special program:</b>	Holiday switching to interrupt the automatic program of both channels for the duration of 1 to 99 days with preselection 0 to 99 days
<b>manual direct access:</b>	<ul style="list-style-type: none"><li>- temporary manual switching</li><li>- permanent manual switching</li></ul>
<b>shortest switching interval:</b>	1 minute
<b>switching accuracy:</b>	1 second
<b>block formation:</b>	free block formation of the week-days
<b>summer/winter adjustment:</b>	automatically
<b>power supply:</b>	is effected via bus voltage
<b>power absorption:</b>	2 mA + BCU
<b>time basis:</b>	quartz
<b>power accuracy:</b>	< 1sec./day at 20 °C
<b>power reserve:</b>	> 6 years with indication during full operation (temp. 20°C)
<b>allowed ambient temp.:</b>	-10°C till +50°C
<b>display:</b>	LCD-display (time, week-day, summer/winter time, holiday program, switching condition and manual switching)
<b>operational elements:</b>	7 tapping keys to adjust week-day, hour, minute, time, program input and 2 manual
<b>protection class:</b>	II according to EN 60335 in the installation
<b>protection type:</b>	IP 20 according to EN 60529
<b>assembly:</b>	on DIN-bus bar
<b>housing measurements:</b>	45 x 35,8 x 60 mm (h/w/d) REG-width 2 TE

Subject to technical modifications!

2.1 Dimensional Drawing / Connection Diagram

Illustration 2-1



### 3 Application Program

The following application programs are available.

Application	Function
<b>2 scenes with switching, value, priority</b>	<p>On each of the 2 channels you can choose between the following message types:</p> <ul style="list-style-type: none"> <li>• switching message (1 Bit)</li> <li>• priority message (2 Bit)</li> <li>• dimming and value message (8 Bit)</li> <li>• cyclic sending selectable</li> </ul> <p>You can also implement a scene with up to 4 different message types on each channel.</p> <p>Thus different types can triggered for by actuators or groups of actuators at one switching time (switching / dimming / shutter actuators). There is additionally the possibility of suppressing the transmission behaviour of a channel by a blocking object.</p>
<b>2 channels with switching</b> (will be replaced by "2 scenes with switching, value, priority")	<p>For each channel a switching message (type 1Bit) can be transmitted time-dependent on the bus. You can adjust by parameters whether it has to be switched on, off, changed or not switched during the change of switching status. The initialization behaviour with bus voltage return is adjustable.</p>
<b>2 channels with switching and value</b> (will be replaced by "2 scenes with switching, value, priority")	<p>For each channel a switching message (type 1Bit) and a value message can be transmitted time-dependent on the bus. You can adjust by parameters whether it has to be switched on, off, changed or not switched during the change of switching status or which value has to be sent. The initialization behaviour with bus voltage return is adjustable.</p>

#### 3.1 Selection of the product data base

<b>Producer:</b>	THEBEN-WERK ZEITAUTOMATIK
<b>Product family:</b>	time switches
<b>Product type:</b>	2-channel week time switch
<b>Product name:</b>	TR 612 EIB

Download the application from: <http://www.theben.de>

### **3.2 Application program "2 scenes with switching, value, priority"**

#### **Function Characteristics**

On each of the 2 channels you can choose between the following types of message:

- switching message (1-Bit)
- priority message (2-Bit)
- dimming or value message (8-bit)

Cyclic transmitting can be selected for each channel, this is controlled by a common timer. In addition the possibility exists of suppressing the time switch program of the clock by control of a blocking object via the bus.

Whether the blocking object has an influence on the transmission behaviour of the individual channel objects can be adjusted by parameters. If this is the case, uniquely, a message corresponding to the switching off instruction, the switching on instruction of the clock or no message can be released subject to choice when setting the blocking object for each channel object.

Subsequently, no further message is transmitted by the corresponding channel object. If the blocking object is again reset, the current status of the channel object is transmitted directly on the bus.

#### **Possibilities of Usage**

- Ideal application for the single family house and smaller EIB projects.
- During a switching time, up to four messages (e.g. point in time end of working day: switch off main lighting, drive shutter down, lower ambient temperature, lock external doors) can be transmitted via bus on one channel.

## Communication Objects

Object name	Function	Type	Behaviour
<b>channel</b> <no>/obj. <sno> – <b>switching</b> no = 1,2 (= channel-no.) sno = 1,2,3,4 (scenes-obj. of the channel)	transmitting of a switching message, when the channel switches	1 Bit	transmit
<b>channel</b> <no>/obj. <sno> – <b>value</b> no = 1,2 (= channel-no.) sno = 1,2,3,4 (scenes-obj.)	transmitting of a value message, when the channel switches	8 Bit	transmit
<b>channel</b> <no>/obj. <sno> – <b>priority</b> no = 1,2 (= channel-no.) sno = 1,2,3,4 (scenes-obj.)	transmitting of a priority message, when the channel switches	2 Bit	transmit
<b>block</b>	receiving a message blocking	1 Bit	receive

Max. amount of communication objects: 9  
 Max. amount of group addresses: 11  
 Max. amount of classification: 11

## Parameter

Chart 1: Parameter on page „object selection“

Description	Possible Adjustment	Meaning
How many objects can be controlled by channel 1?	<b>1 object</b> 2 objects 3 objects 4 objects	Adjustment how many scene objects can be produced for channel 1
How many objects can be controlled by channel 2?	<b>1 object</b> 2 objects 3 objects 4 objects	Adjustment how many scene objects can be produced for channel 2

**Chart 2: Parameter on the pages „channel <no> / obj <sno>**

no = 1,2 (= channel number) / sno = 1,2,3,4 (= number of the channel's scene object)

Description	Possible Adjustment	Meaning
object type	<b>switching</b> value priority	Adjustment whether a switching (1 bit), value (8 bits) or priority message (2 bits) has to be transmitted over the channel.
transmitting when switching off the clock	<b>transmitting following message</b> not transmitting a message	Adjustment whether a message is to be sent when switching off the clock channel or not.
switching message	<b>switching off</b> switching on	Parameter appears, if a switching message is to be sent. Adjustment whether a "0" - or "1"-message is transmitted, if the clock channel switches off.
value (0...255)	0 ... 255	Parameter appears, if a value message is to be sent. Adjustment which value is sent when the clock channel switches off.
priority message	priority <b>inactive</b> priority off priority on	Parameter appears, if a priority message is to be sent. Adjustment which priority value is sent when the clock channel switches off.
transmitting when switching on the clock	<b>transmitting following message</b> not transmitting a message	Adjustment whether a message is to be sent when switching on the clock channel or not.
switching message	switching off <b>switching on</b>	Parameter appears, if a switching message is to be sent. Adjustment whether a "0" - or "1"-message is transmitted, if the clock channel switches on.
value (0...255)	0 ... 255	Parameter appears, if a value message is to be sent. Adjustment which value is sent when the clock channel switches on.
priority message	priority inactive priority off <b>priority on</b>	Parameter appears, if a priority message is to be sent. Adjustment which priority value is sent when the clock channel switches off.
transmitting behaviour	<b>only when switching the clock</b> send cyclically	Adjustment whether the message is transmitted only when switching the clock channel or cyclically on the bus.

behaviour when blocking	<b>ignore blocking</b> observe blocking	Adjustment whether the transmitting object shall observe the reception of a blocking message ("1"-message on object "blocking") or not.
transmitting behaviour when beginning to block	<b>not transmitting a message</b> transmitting uniquely following message...	Adjustment of the transmitting behaviour when the blocking message is to be observed.
	<b>similar to off instruction of the clock</b> similar to on instruction of the clock	Parameter appears, if a message is to be sent again uniquely after reception of the blocking message at the transmitting object.

**Chart 3: Parameter on the page „cycle time“**

Description	Possible Adjustments	Meaning
time for all objects sending cyclically	appr. 2,5 min appr. 5 min <b>appr. 10 min</b> appr. 15 min appr. 20 min appr. 30 min appr. 45 min appr. 60 min	Adjustment of the cycle time with which the message is sent repeatedly on the bus. This parameter is applied for all transmitting objects where the transmitting behaviour "transmitting cyclically" is adjusted.

## 4 Further Literary References

- operating instruction TR 612 S (order-no. 310 628 01)