ABB i-bus® EIB

Time Switch, 2-channel, MDRC
SW/S 2.5, GH Q605 0062 R0001

The 2-fold week time switch is a DIN rail mounted device with a width of two modules for insertion in the distribution board.

It is connected to the EIB via a bus connecting terminal.

Using the keypad on the front of the housing, 36 time periods can be set for both channels with free weekday block formation.

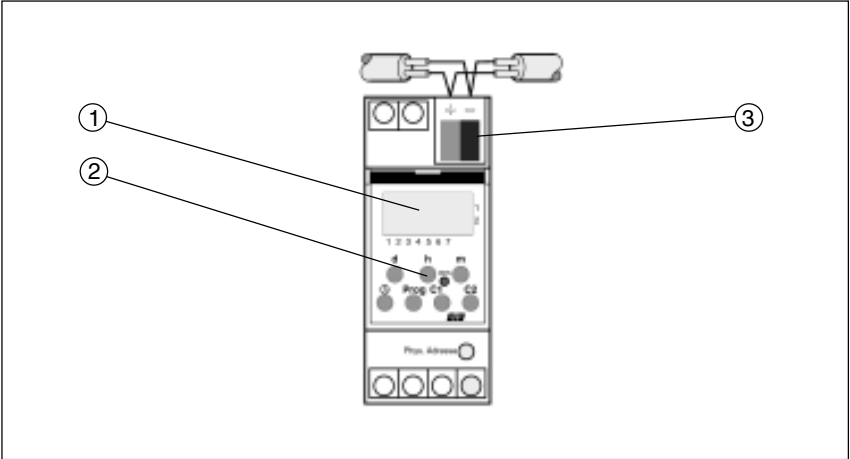The cover in front of the keypad and the display can be sealed.

The time switch can send time-dependent switching or 1 byte value telegrams to EIB actuators.

Technical data

Power supply	– EIB	24 V DC, via the bus line
Display and operating elements	– Red LED and push button	for assigning the physical address
	– 7 push buttons	for setting the time and manual control
	– LCD	for displaying the time and switching state
Connections	– EIB	via bus connecting terminal
Type of protection	– IP 20, EN 60 529	
Ambient temperature range	– Operation	- 5 °C … 45 °C
	– Storage	-25 °C … 55 °C
	– Transport	-25 °C … 70 °C
Design	– Modular installation device, pro*M*	
Housing, colour	– Plastic housing, grey	
Mounting	– on 35 mm mounting rail, DIN EN 50022	
Dimensions	– 86 x 36 x 64 mm (H x W x D)	
Mounting depth/width	– 36 mm / 2 modules at 18 mm	
Weight	– 0.17 kg	
Certification	– EIB-certified	
CE norm	– in accordance with the EMC guideline and the low voltage guideline	
Special features	– Memory locations	36
	– Time base	Quarz
	– Accuracy	< 1 s per day
	– Min. switching interval	1 minute
	– Power reserve	6 years

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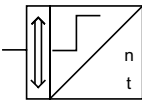| Application programs	Number of communication objects	Max. number of group addresses	Max. number of associations
Switch /4	2	6	6
Switch Value /1	4	4	4
Switch Value Priority Scene Cyclic /1	9	11	11

Wiring diagram

1 LCD
2 Keypad for setting the time

3 Bus connecting terminal

Information

Further information about the handling and operation of this device can be found in the operation instructions or in the manual that is supplied with the device. You can likewise find this information on our EIB CD-ROM.

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Switch Default-Setting /2

Selection in ETS2

– ABB
  └Timer
    └Clock switch

Switch

The time switch has two communication objects that can send switch telegrams. Whether a channel sends an "On" or "Off" telegram, is dependent on the programming of the switching times via the keypad and on the setting of the parameter "Reaction if timer switches". It can be established for each of the two switching impulses "ON" and "OFF", which telegram the timer sends.

It is possible to assign parameters to the reaction of the time switch on bus voltage recovery. The communication object can either send its actual value or only send its value if it has changed since the bus voltage failure or it can send no telegram.

If a channel is set to "TOGGLE", a further parameter is displayed, where it is possible to specify the value of the object after commissioning. If the first telegram after commissioning should switch off, the object value must be set to "ON".

If the timer sends a telegram on bus voltage recovery, it takes the sending delay into consideration, that has been set using the "Factor" and fixed "Time base" parameters.
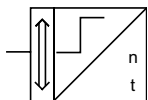
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Communication objects

No.	Type	Name	Function
0	1 bit	Channel 1	Telegr. switch
1	1 bit	Channel 2	Telegr. switch

Parameters
The default setting for the values is **printed in bold type.**

Common for both channels:	
– Factor for transmission delay after bus voltage recovery	**16**
– Time base	**130 ms**
Separate for both channels:	
– Reaction if timer switches	**timer ON -> ON / timer OFF -> OFF**
	timer ON -> OFF / timer OFF -> ON
	timer ON -> ON / timer OFF -> ON
	timer ON -> OFF / timer OFF -> OFF
	timer ON -> ON / timer OFF -> ---
	timer ON -> OFF / timer OFF -> ---
	timer ON -> --- / timer OFF -> ON
	timer ON -> --- / timer OFF -> OFF
	timer ON -> TOGGLE / timer OFF -> TOGGLE
	timer ON -> TOGGLE / timer OFF -> ---
	timer ON -> --- / timer OFF -> TOGGLE
	timer ON -> --- / timer OFF -> ---
– Behaviour on bus voltage recovery	**send actual value**
	send only when status changes
	send no telegram
– Preset for commissioning	**OFF**
	ON

ABB i-bus® EIB

Switch Value /7

Selection in ETS2

– ABB
 └Timer
  └Clock switch

Switch

The time switch has two communication objects that can send switch telegrams. Whether a channel sends an "On" or "Off" telegram is dependent on the programming of the switching times via the keypad and on the settings in the parameters "Send switch switch telegram..." and "Switch command". It can be established for each of the two switching impulses "ON" and "OFF", which telegram the timer sends.

Value

With the 1 byte objects the timer can send e.g. brightness values between 0 (= off) and 255 (= maximum brightness) to dimming actuators. The setting of parameters is carried out in the same way as for switching objects using the two parameters "Send value …" and "Value (0 … 255)".

It is possible to assign parameters to the reaction of the time switch on bus voltage recovery. The communication object can either send its actual value or only send its value if it has changed since the bus voltage failure or it can send no telegram.

If the timer sends a telegram on bus voltage recovery, it takes the sending delay into consideration that has been set using the "Factor" and fixed "Time base" parameters.

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Communication objects

No.	Type	Name	Function
0	1 bit	Channel 1 - switch	Telegr. switch
1	1 bit	Channel 2 - switch	Telegr. switch
2	1 byte	Channel 1 - value	Telegr. value
3	1 byte	Channel 2 - value	Telegr. value

Parameters
The default setting for the values is **printed in bold type.**

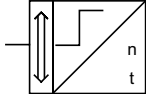|	
Common for both channels:	
– Factor for transmission delay after bus voltage recovery	**16**
– Time base	**130 ms**
Separate for both channels:	
Switch	
– If timer -> ON	**ON** OFF no reaction
– If timer -> OFF	ON **OFF** no reaction
Value	
– If timer -> ON	send following value send no value
only for sending value:	
– value (0…255)	**200**
– If timer -> OFF	send following value send no value
only for sending value:	
– value (0…255)	**50**
– Behaviour on bus voltage recovery	**send actual value** send only when status changes send no telegram

Switch Value Priority Scene Cyclic /1

Selection in ETS2

– ABB
 └ Timer
  └ Clock switch

The application program has a maximum of four communication objects available for the two channels of the timer. The number of communication objects that are used by a channel is set in the parameter "Channel ... controls".

Using the parameter "Object type", it is defined for each of these communication objects, whether they are used for switching (1 bit), sending values (1 byte) or for switching with priority control (2 bit).

The telegrams that are sent by the communication objects are dependent on the programming of the switching points via the keyboard and the parameter settings.

Scene

By combining various objects, it is possible to define scenes with different actuators. These scenes are recalled using time control according to the parameter settings and the programming of the clock.

Switch

Either an On or Off telegram can be sent for both the On and Off signal of the clock.

Value

It is possible to set a 1 byte value between "0" and "255" for the On or Off signal of the clock. This value can then be sent on the bus. This enables dimming actuators for example to be controlled.

Priority

The following values can be sent for each switching signal of the clock in accordance with EIS 8:
– Priority ON (telegram value = 3)
– Priority OFF (telegram value = 2)
– Priority inactive (telegram value = 1 or 0)

Primary control can thus be implemented in connection with appropriate actuators.

Cyclic

Using the parameter "Cyclic sending", it is possible to define whether each communication object sends its telegrams at regular intervals.

A common cyclic interval is specified for all the objects. It is possible to select a period between 2.5 and 60 minutes.

Disable

The time program of the clock can be suppressed with the communication object "Channels 1+2 – Telegr. disable". It can be set for each of the objects "Channel ... – object ...", whether the disable object influences the sending behaviour. If this is the case, it can further be defined when the disable object is activated whether the channel objects should send a telegram once according to the On or Off signal of the clock or send no telegram. The objects concerned then adjust the sending behaviour. If the disable object is reset, the current status of the channel objects is sent immediately on the bus.

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Communication objects

Nr.	Typ	Objectname	Funktion
0	1 bit	Channel 1 - object 1	Telegr. switch
4	1 bit	Channel 2 - object 1	Telegr. switch
8	1 bit	Channels 1+2	Disable

Communication objects
for „Switch" function

Nr.	Typ	Objectname	Funktion
0	1 bit	Channel 1 - object 1	Telegr. switch
1	1 bit	Channel 1 - object 2	Telegr. switch
2	1 bit	Channel 1 - object 3	Telegr. switch
3	1 bit	Channel 1 - object 4	Telegr. switch
4	1 bit	Channel 2 - object 1	Telegr. switch
5	1 bit	Channel 2 - object 2	Telegr. switch
6	1 bit	Channel 2 - object 3	Telegr. switch
7	1 bit	Channel 2 - object 4	Telegr. switch
8	1 bit	Channels 1+2	Disable

Communication objects
for „Value" function

Nr.	Typ	Objectname	Funktion
0	1 byte	Channel 1 - object 1	Telegr. value
1	1 byte	Channel 1 - object 2	Telegr. value
2	1 byte	Channel 1 - object 3	Telegr. value
3	1 byte	Channel 1 - object 4	Telegr. value
4	1 byte	Channel 2 - object 1	Telegr. value
5	1 byte	Channel 2 - object 2	Telegr. value
6	1 byte	Channel 2 - object 3	Telegr. value
7	1 byte	Channel 2 - object 4	Telegr. value
8	1 bit	Channels 1+2	Disable

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Communication objects
for „Priority" function

Nr.	Typ	Objectname	Funktion
0	2 bit	Channel 1 - object 1	Telegr. priority
1	2 bit	Channel 1 - object 2	Telegr. priority
2	2 bit	Channel 1 - object 3	Telegr. priority
3	2 bit	Channel 1 - object 4	Telegr. priority
4	2 bit	Channel 2 - object 1	Telegr. priority
5	2 bit	Channel 2 - object 2	Telegr. priority
6	2 bit	Channel 2 - object 3	Telegr. priority
7	2 bit	Channel 2 - object 4	Telegr. priority
8	1 bit	Channels 1+2	Disable

Parameters
The default setting for the values
is **printed in bold type.**

General:	
– Time interval for cycling sending	approx. 2,5 min. / approx. 5 min. / **approx. 10 min.** / … / approx. 60 min.
– How many objects shall be allowcated to channel 1	**1 object** 2 objects 3 objects 4 objects
– How many objects shall be allowcated to channel 2	**1 object** 2 objects 3 objects 4 objects

Separate for all objects:	
– Function	**send telegr. switch** send telegr. value send telegr. priority
only for „switch" function:	
– If timer -> OFF	send no telegram **send telegram**
– Telegram	**OFF** ON
– If timer -> ON	send no telegram **send telegram**
– Telegram	OFF **ON**
only for „value" function:	
– If timer -> OFF	send no telegram **send telegram**
– Value (0…255)	**50**
– If timer -> ON	send no telegram **send telegram**
– Value (0…255)	**200**
only for „priority" function:	
– If timer -> OFF	send no telegram **send telegram**
– Priority	**RELEASED** OFF ON
– If timer -> ON	send no telegram **send telegram**
– Priority	RELEASED OFF **ON**
– Cycling sending	**no /**yes
– Object … disable via object 8	**no /**yes
only for yes:	
– On disabling channel sends … object …	one times a telegram **no telegram**
only one times a telegram:	
–	**as defined for timer -> OFF** as defined for timer -> ON

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