



The 8-fold switch actuator is a DIN rail mounted device for insertion in the distribution board. It is connected to the EIB via a bus terminal.

The device does not require an additional power supply.

It switches eight independent groups of electrical loads with eight floating contacts.

In the event of bus voltage failure, the actuator can activate the load circuit (e.g. for workplace or emergency lighting).

The following functions can be implemented using the parameter settings in ETS2:

- Selection of default position on bus voltage failure and recovery,
- Inversion of the outputs,
- Logic operation,
- Status response,
- ON/OFF delay
- and staircase lighting function.

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Technical data

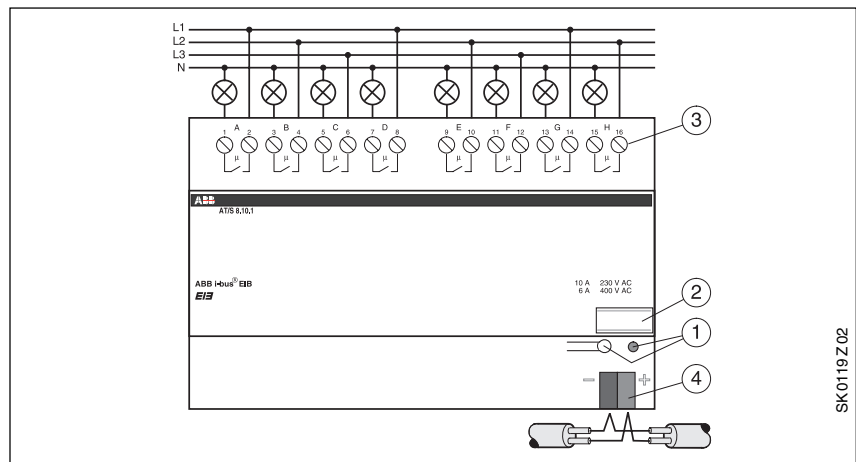
Power supply	- EIB	24 VDC, via the bus line
Outputs	- 8 floating contacts	
	- Nominal voltage	min. 5 V DC up to max. 253 V AC, 50 ... 60 Hz
	- Nominal current at 5 V DC	min. 100 mA
	- Nominal current at 10 V DC	min. 10 mA
	- Nominal current at 24 V DC	min. 1 mA
	- Nominal current at 230 V AC	max. 10 A per output
Operating and display elements	- Red LED and push button	for entering the physical address
Connections	- Load circuit	2 screw terminals each output Wire range: 0.2 ... 2.5 mm ² finely-stranded 0.2 ... 4.0 mm ² single core
	- EIB	Bus connecting terminal (supplied)
Type of protection	- IP 20, in accordance with 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, proM	
Housing, colour	- Plastic housing, grey	
Mounting	- on 35 mm mounting rail, DIN EN 50022	
Dimensions	- 90 x 144 x 64 mm (H x W x D)	
Mounting depth/width	- 68 mm / 8 modules at 18 mm	
Weight	- 0.6 kg	
Certification	- EIB-certified	
CE norm	- in accordance with the EMC guideline and the low voltage guideline	

Application programs	Number of communication objects	Max. number of group addresses	Max. number of associations
Switch Logic Status Time /6	24	35	36

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Wiring diagram



- 1 Programming push button and LED
- 2 Marker tags

- 3 Connecting terminals for outputs A ... H
- 4 Bus connecting terminal

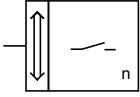
Note

Caution: Prior to programming the according actual version of ETS2 V1.1 or higher must be installed on the commissioning-PC. If this is not carried out, the device cannot function and can no longer be programmed.

In order to avoid the danger of electric shock due to feedback from various external conductors, an all-pole disconnection must be complied with.

The basic time delay is extended if the outputs are switched several times in succession.

Switch Logic Status Time /6



Selection in ETS2

- ABB
 - └ Output
 - └ Binary output, 8-fold

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The application program makes the same number of parameters and communication objects available for each output. Depending on the settings selected in the individual parameters, various communication objects and parameters are displayed or hidden.

Switch

In the default setting, the actuator switches the relay on when it receives a telegram with the value "1" and switches it off on receipt of a telegram with the value "0". If the parameter "Switching mode" is set to "normally closed contact", the actuator switches the relay on when it receives a telegram with the value "0" and switches it off on receipt of a telegram with the value "1".

Status

The individual outputs can send their status on the bus. The parameter "Operation mode" must be set to "switch with active status feedback" in order to do so. In this mode, the current output status is sent via a further communication object "Output ... / Status telegr.". Depending on the setting selected in the parameter "Send status feedback", this object can always send its status on the bus or only if the value changes.

In the setting "always", if the "Switch" object receives a telegram that does not cause a change at the output, the status object continues to send, regardless of its status. This status signal is also sent even if the same status has previously been sent. In the setting "only if value changes", the output status is only sent after a change in the output value.

It is also possible to invert the status response. As a result, a "0" is sent after switching on while a "1" is sent after switching off.

Logic

A logic AND or a logic OR function can be selected with the parameter "Logical connection". In both cases, ETS2 displays an additional communication object for the output. The actuator then links the values of communication objects 0 and 8 for output A and objects 1 and 9 for output B etc. and switches the relay according to the result.

The parameter "Invert object no. ..." is available to implement for example a logic AND or logic OR function with an inverted input.

Normally all communication objects have the value "0" after bus voltage recovery. If a logical connection has been assigned, it is possible to specify a definite value using the parameters "Value of object no. 8/.../no. 15 at bus voltage recovery". The logical connection is evaluated immediately after bus voltage recovery.

Time

A time function can be assigned separately to each output. The parameter "Time function" must therefore be activated. In case a time function is assigned, it is possible to choose between a staircase lighting function and an ON/OFF delay. If a logical connection has already been assigned, only an ON and/or OFF delay can be assigned.

The time for the staircase lighting function and the ON/OFF delay is calculated using a base and factor. The smallest possible base and the largest possible factor should be selected when setting these two values.

The following applies for both time function: after the receipt of each telegram that triggers a time function, the respective time function is restarted.

Staircase lighting function

The staircase lighting function is activated by a telegram with the value "1" at the "Switch" communication object. After the set time, the output is automatically switched off again.

In addition, it is possible to activate or deactivate the staircase lighting function via the communication object "Operation mode". The parameter "Staircase lighting function can be activated/deactivated by object no. ..." must be set to "yes" so that the communication object "Operation mode" can be enabled. If a "0" is sent to this object, the staircase lighting function is activated. If a "1" is sent, it is deactivated.

If the staircase lighting function is activated and a "1" is sent to the "Operation mode" object, the staircase lighting function remains active until the set period has elapsed. It is then deactivated and the actuator output can be switched on permanently with a "1" to the "Switch" communication object or permanently switched off with a "0".

If the output is switched on and a "0" is sent to the "Operation mode" object, the staircase lighting function switches on and the output is switched off after the preset time.

With the parameter "Invert object no. ...", it is also possible to invert the "Operation mode" object. In this case, the staircase lighting function switches on with a "1" and switches off again with a "0".

ON/OFF delay

If the type of the time function is set to "switch ON/OFF delay", the output switches on with the set ON delay after the receipt of a "1" at the "Switch" communication object. If a "0" is received at the "Switch" object, the output switches off with the set delay.

If a logical connection has been assigned, the ON delay only becomes active once the logical condition has been met. The OFF delay is only active when the logical condition is no longer being met.

Default

The default position of the relay contact on bus voltage failure and recovery can be set separately for each output. The two parameters "Preferred position at ..." are available for this purpose. This setting refers to the relay contact and is independent of the setting "normally opened contact" or "normally closed contact" that has been selected for the switching mode.

Bus voltage failure/recovery

There is the possibility with the general parameter "Inactive waiting time after bus voltage recovery" to set the period after which the execution or sending of incoming telegrams shall be triggered again after bus voltage recovery.

The behaviour after bus voltage recovery can be set separately for each output with the parameter "Value of obj. no. ... at bus voltage recovery". Directly after bus voltage recovery, the individual outputs assume the set default positions of the contacts.

During the inactive waiting time, incoming telegrams are registered but not evaluated. Once the waiting time has elapsed, the objects assume the value that has been defined in the parameters "Value of obj. no. ... at bus voltage recovery". If however this parameter has been set to "read value via EIB", the actuator sends a read telegram and then assumes the value of the response telegram.

If the parameter "Preferred position after inactive waiting time" is set at "depending on obj. no. ...", the output contact is switched according to the value of object no. If the parameter "Preferred position after inactive waiting time" is set at "unchanged", the output contact remains in the position that has been set for bus voltage recovery until new telegrams are received via the EIB.

After the programming of the device the default position of the outputs is open (switched off). In the following inactive waiting time the devices behave as after bus voltage recovery.

Communication objects

No.	Type	Object name	Function
0	1 bit	Output A	Switch
1	1 bit	Output B	Switch
2	1 bit	Output C	Switch
3	1 bit	Output D	Switch
4	1 bit	Output E	Switch
5	1 bit	Output F	Switch
6	1 bit	Output G	Switch
7	1 bit	Output H	Switch

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Communication objects with status response

No.	Type	Object name	Function
...			
16	1 bit	Output A	Status telegr.
17	1 bit	Output B	Status telegr.
18	1 bit	Output C	Status telegr.
19	1 bit	Output D	Status telegr.
20	1 bit	Output E	Status telegr.
21	1 bit	Output F	Status telegr.
22	1 bit	Output G	Status telegr.
23	1 bit	Output H	Status telegr.

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Communication objects with inverted status response

No.	Type	Object name	Function
...			
16	1 bit	Output A	Invert status telegr.
17	1 bit	Output B	Invert status telegr.
18	1 bit	Output C	Invert status telegr.
19	1 bit	Output D	Invert status telegr.
20	1 bit	Output E	Invert status telegr.
21	1 bit	Output F	Invert status telegr.
22	1 bit	Output G	Invert status telegr.
23	1 bit	Output H	Invert status telegr.

Communication objects with logical OR connection

No.	Type	Object name	Function
0	1 bit	Output A	Logical OR connection
1	1 bit	Output B	Logical OR connection
2	1 bit	Output C	Logical OR connection
3	1 bit	Output D	Logical OR connection
4	1 bit	Output E	Logical OR connection
5	1 bit	Output F	Logical OR connection
6	1 bit	Output G	Logical OR connection
7	1 bit	Output H	Logical OR connection
8	1 bit	Output A	Logical OR connection
9	1 bit	Output B	Logical OR connection
10	1 bit	Output C	Logical OR connection
11	1 bit	Output D	Logical OR connection
12	1 bit	Output E	Logical OR connection
13	1 bit	Output F	Logical OR connection
14	1 bit	Output G	Logical OR connection
15	1 bit	Output H	Logical OR connection

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Communication objects
with logical AND connection

No.	Type	Object name	Function
0	1 bit	Output A	Logical AND connection
1	1 bit	Output B	Logical AND connection
2	1 bit	Output C	Logical AND connection
3	1 bit	Output D	Logical AND connection
4	1 bit	Output E	Logical AND connection
5	1 bit	Output F	Logical AND connection
6	1 bit	Output G	Logical AND connection
7	1 bit	Output H	Logical AND connection
8	1 bit	Output A	Logical AND connection
9	1 bit	Output B	Logical AND connection
10	1 bit	Output C	Logical AND connection
11	1 bit	Output D	Logical AND connection
12	1 bit	Output E	Logical AND connection
13	1 bit	Output F	Logical AND connection
14	1 bit	Output G	Logical AND connection
15	1 bit	Output H	Logical AND connection

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Communication objects
with inverted logical connection

No.	Type	Object name	Function
...			
8	1 bit	Output A	Invert logical ... connection
9	1 bit	Output B	Invert logical ... connection
10	1 bit	Output C	Invert logical ... connection
11	1 bit	Output D	Invert logical ... connection
12	1 bit	Output E	Invert logical ... connection
13	1 bit	Output F	Invert logical ... connection
14	1 bit	Output G	Invert logical ... connection
15	1 bit	Output H	Invert logical ... connection

Communication objects
with activation/deactivation of
staircase lighting function

No.	Type	Object name	Function
...			
8	1 bit	Output A	Operation mode
9	1 bit	Output B	Operation mode
10	1 bit	Output C	Operation mode
11	1 bit	Output D	Operation mode
12	1 bit	Output E	Operation mode
13	1 bit	Output F	Operation mode
14	1 bit	Output G	Operation mode
15	1 bit	Output H	Operation mode

Communication objects
with inverted activation/deactivation
of staircase lighting function

No.	Type	Object name	Function
...			
8	1 bit	Output A	Invert operation mode
9	1 bit	Output B	Invert operation mode
10	1 bit	Output C	Invert operation mode
11	1 bit	Output D	Invert operation mode
12	1 bit	Output E	Invert operation mode
13	1 bit	Output F	Invert operation mode
14	1 bit	Output G	Invert operation mode
15	1 bit	Output H	Invert operation mode

Parameters

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

General:

- Inactive waiting time after bus voltage recovery: **5 s** / 10 s / 15 s / ... / 60 s
- At bus voltage recovery, during this time, no telegrams will be sent and incoming telegrams will not be executed

Separate for each output (Output A is used here as an example):

- Switching mode **normally opened contact**
normally closed contact
- Operation mode **switch**
switch with active status feedback
- only if status response is selected:
- Invert status feedback yes
no
- Send status feedback always
only if value changes
- Logical connection **no logical connection**
logical OR connection
logical AND connection
- only if logical connection is assigned:
- Invert object no. 8 yes
no
- Value of obj. no. 8 at bus voltage recovery read value via ABB i-bus EIB
logic 0
logic 1
- Value of obj. no. 0 at bus voltage recovery read value via ABB i-bus EIB
logic 0
logic 1
- Preferred position at bus voltage failure contact opened
contact closed
contact unchanged
- Preferred position at bus voltage recovery contact opened
contact closed
contact unchanged
- Preferred position after inactive waiting time **unchanged**
depending on obj. no. 0

Parameters

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

Output A - time	
- Time function	deactivated activated
Note:	If a logical function is chosen, no staircase lighting function is available.
only if time function is activated:	
- Type of time function	staircase lighting switch ON/OFF delay
only for staircase lighting function:	
- Time base	130 ms / 260 ms / ... / 35 min / 1.2 h
- Factor for duration of staircase lighting (5...127)	5
- Staircase lighting function can be activated/deactivated by object no. 8	yes no
only if "yes" is selected:	
- Invert obj. no. 8	yes no
- Value of obj. no. 8 at bus voltage recovery	read value via ABB i-bus EIB logic 0 logic 1
only for ON/OFF delay:	
- Time base	130 ms / 260 ms / ... / 35 min / 1.2 h
- Factor for switch ON delay (0...127)	0
- Factor for switch OFF delay (0...127)	0

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