ABB i-bus^â EIB / KNX   **Software Information**

Product:	**Switch Actuator SA/S**

Type:	**SA/S x.y.z.1**^{*)}

Current application program: **Switch xf w/3.2b & c** (w = 6A, 6M, 10A, 16A, 16C, 16CS)

*) Description
  x = Number of outputs (2, 4, 8 and 12 fold)
  y = Rated current (6A, 10A, 16A)
  z = 1 without manual operation
      2 with manual operation
      5 C-Load without current detection
      6 C-Load with current detection

*Note: …/3.2**c** only for SA/S x.16.**5**.1, for every other SA/S x.y.z.1 Version …/3.2**b** is the latest.*

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Application program:

to: **Switch xf 16C/3.2c** (x = 2, 4, 8 and 12 fold)

Only for SA/Sx.16.5.1. Other SA/S x.y.z.1 have V3.2b as latest application version.

at: 6/2016

In the application, with index "c" text corrections were carried out in English language. Only for SA/S x.16.5.1 (x = 2, 4, 8 and 12).

Functions have not been changed.

Application program:

to: **Switch xf w/3.2b** (x = 2, 4, 8 and 12 fold)

For all SA/S x.y.z.1

at: 7/2014

In the application, with index "b" text corrections were carried out in different languages (e.g. 3-line parameter texts)

The applications with index "a" are now available in 8 languages.
(German, English, French, Spanish, Italian, Russian, Dutch, Polish)

Application program:

to: **Switch xf w/3.2a** (x = 2, 4, 8 and 12 fold)

For all SA/S x.y.z.1

at: 7/2013

General

The applications with index "a" are now available in 8 languages.
(German, English, French, Spanish, Italian, Russian, Dutch, Polish)

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Application program:

        to: **Switch xf w/3.2** **(x = 2, 4, 8 and 12 fold)**

                      For all SA/S x.y.z.1

        at: 6/2013

        Note: Application programs Switch xf…/3.2 are unchanged.

General

        Application programs Switch xf …/3.2 are unchanged.

        6A Switch Actuators with manual operation SA/S x.6.2.1 (x = 2, 4, 8 and 12) and application program Switch xf…/3.2 are NEW in SA/S range.

        Herby follows the new conversion.

Device type source device	Application name source device	Convertible to	Device type target device	Application name target device
SA/S x.16.6.1	Switch xf 16CS/3.0, 3.1 or 3.2	→	SA/S x.16.6.1 SA/S x.16.5.1 SA/S x.16.2.1 SA/S x.10.2.1 SA/S x.6.2.1	Switch xf 16CS/3.2 Switch xf 16C/3.2 Switch xf 16A/3.2 Switch xf 10A/3.2 Switch xf 6M/3.2
SA/S x.16.5.1	Switch xf 16C/3.1 or 3.2	→		
SA/S x.16.2.1	Switch xf 16A/3.2	→	SA/S x.6.1.1 SA/S x.6.2.1 SA/S x.10.2.1 SA/S x.16.2.1 SA/S x.16.5.1 SA/S x.16.6.1	Switch xf 6A/3.2 Switch xf 6M/3.2 Switch xf 10A/3.2 Switch xf 16A/3.2 Switch xf 16C/3.2 Switch xf 16CS/3.2
SA/S x.10.2.1	Switch xf 10A/3.2	→		
SA/S x.6.2.1	Switch xf 6M/3.2	→	SA/S x.6.2.1	Switch xf 6M/3.2
SA/S x.6.1.1	Switch xf 6A/3.2	→	SA/S x.6.1.1 SA/S x.10.2.1 SA/S x.16.2.1	Switch xf 6A/3.2 Switch xf 10A/3.2 Switch xf 16A/3.2
SA/S 2.16.5S SA/S 4.16.5S SA/S 8.16.5S	Switch 2f 16CS/2.0 Switch 4f 16CS/2.0 Switch 8f 16CS/2.0	→ → →	SA/S x.6.1.1 SA/S x.6.2.1 SA/S x.10.2.1 SA/S x.16.2.1 SA/S x.16.5.1 SA/S x.16.6.1	Switch xf 6A/3.2 Switch xf 6M/3.2 Switch xf 10A/3.2 Switch xf 16A/3.2 Switch xf 16C/3.2 Switch xf 16CS/3.2
SA/S 12.16.5	Switch 12f 16C/2.0	Non-convertible		
SA/S 2.20.1S SA/S 4.20.1S SA/S 8.20.1S	Switch 2f 20S/2.0 Switch 4f 20S/2.0 Switch 8f 20S/2.0	→ → →	SA/S x.6.1.1 SA/S x.6.2.1 SA/S x.10.2.1 SA/S x.16.2.1 SA/S x.16.5.1 SA/S x.16.6.1	Switch xf 6A/3.2 Switch xf 6M/3.2 Switch xf 10A/3.2 Switch xf 16A/3.2 Switch xf 16C/3.2 Switch xf 16CS/3.2
SA/S 12.20.1 SA/S x.16.1 SA/S x.10.1 SA/S x.6.1	Switch 12f 20A/2.0 Switch xf 16A/2.0 Switch xf 10A/2.0 Switch xf 6A/2.0	Non-convertible		

A description of conversion is given in product manual of Switch Actuators SA/S.

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| Application program: | to: | **Switch xf w/3.2** (x = 2, 4, 8 and 12 fold) |
| | | **For all SA/S x.y.z.1** |

at: 10/2012

Note: Application program Switch xf 16C/3.2 for SA/S x.16.5.1 and
        Switch xf 16CS/3.2 for SA/S x.16.6.1 are unchanged.

<u>General</u>

Application program at time of market lunch of
Switch Actuator SA/S x.y.z.1

x = Number of outputs
y = Rated current
z = 1 without manual operation / 2 with manual operation
    5 C-Load without current detection / 6 C-Load with current detection

Forerunner:

SA/S x.6.1	->	SA/S x.6.1.1
SA/S x.10.1	->	SA/S x.10.2.1
SA/S x.16.1	->	SA/S x.16.2.1
SA/S 12.16.5	->	SA/S x.16.5.1
SA/S x.16.5S	->	SA/S x.16.6.1

Only for SA/S x.16.5S it is possible to convert an old parameterization from
an old ETS project. A complete descript of the conversion possibilities see
abstract *Conversion*.

<u>Optimised features:</u>

Function:

- Function of SA/S x.y.z are still available in the follower type
  SA/S x.y.z.1.

- Copy and change function of the channel parameterisation

- Conversion in SA/S x.y.z.1 Range (Switch xf w/3.2) is possible. This
  means a 2 fold parameterization can conversion into a 12 fold device. Or
  6A parameterizations can conversion into a 16A device. An overview of
  all conversions you find in abstract conversion.

- Behaviour of response of logical function
  If in parameter window *x: General* the response of the switching status is
  parameterised with *always*, the response will send always even if a
  telegram receive via object *Logical connection 2*.

- Change of default value:
  The parameter Status response of switching state object „status switch")
  is changed from „no" to „only after changing".

<u>Conversion:</u>

A conversion of application *Switch xf w/2.0* (x = 2, 4, 8 and 12 fold, w = 6A, 10A,
16A, 16C, 16CS) into his forerunner application switch *xf 1w/3.2* is **not** possible.

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Device type source device	Application name source device	Convertible to	Device type target device	Application name target device
SA/S 2.16.5S SA/S 4.16.5S SA/S 8.16.5S	Switch 2f 16CS/2.0 Switch 4f 16CS/2.0 Switch 8f 16CS/2.0	→ → →	SA/S x.6.1.1 SA/S x.10.2.1 SA/S x.16.2.1 SA/S x.16.5.1 SA/S x.16.6.1	Switch xf 6A/3.2 Switch xf 10A/3.2 Switch xf 16A/3.2 Switch xf 16C/3.2 Switch xf 16CS/3.2
SA/S 2.20.1S SA/S 4.20.1S SA/S 8.20.1S	Switch 2f 20S/2.0 Switch 4f 20S/2.0 Switch 8f 20S/2.0	→ → →	SA/S x.6.1.1 SA/S x.10.2.1 SA/S x.16.2.1 SA/S x.16.5.1 SA/S x.16.6.1	Switch xf 6A/3.2 Switch xf 10A/3.2 Switch xf 16A/3.2 Switch xf 16C/3.2 Switch xf 16CS/3.2
SA/S 12.20.1 SA/S 12.16.5 SA/S x.16.1 SA/S x.10.1 SA/S x.6.1	Switch 12f 20A/2.0 Switch 12f 16C/2.0 Switch xf 16A/2.0 Switch xf 10A/2.0 Switch xf 6A/2.0	Non-convertible		
SA/S x.16.6.1 SA/S x.16.5.1	Switch xf 16CS/3.0, 3.1 or 3.2 Switch xf 16C/3.1 or 3.2	→ →	SA/S x.16.6.1 SA/S x.16.5.1 SA/S x.16.2.1 SA/S x.10.2.1	Switch xf 16CS/3.2 Switch xf 16C/3.2 Switch xf 16A/3.2 Switch xf 10A/3.2
SA/S x.16.2.1 SA/S x.10.2.1 SA/S x.6.1.1	Switch xf 16A/3.2 Switch xf 10A/3.2 Switch xf 6A/3.2	→ → →	SA/S x.6.1.1 SA/S x.10.2.1 SA/S x.16.2.1 SA/S x.16.5.1 SA/S x.16.6.1	Switch xf 6A/3.2 Switch xf 10A/3.2 Switch xf 16A/3.2 Switch xf 16C/3.2 Switch xf 16CS/3.2

A description of conversion is given in product manual of Switch Actuators SA/S.

Application program:	to:	**Switch xf 16C/3.2 (x = 2, 4, 8 and 12-fold)**
		for SA/S x.16.5.1, C-load
	at:	07/2011

General

Application program at time start of SA/S x.16.5.1 (x = 2, 4, 8 and 12-fold) market launch. Previous product SA/S 12.16.5. (C-load)

There is no possibility to convert old ETS-Project with SA/S 12.16.5 automatically with the new application.

Optimised features:

Function:

- Function of SA/S 12.16.5 are still available in the follower type SA/S 12.16.5.1

- Copy and change function of the channel parameterisation

- Behaviour of response of logical function
  If in parameter window *x: General* the response of the switching status is parameterised with *always*, the response will send always even if a telegram receive via object *Logical connection 2*.

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- Change of default value:
  The parameter Status response of switching state object „status switch") is changed from „no" to „only after changing".

- It is possible to convert a SA/S x.16.5.1 to a SA/S x.16.5.1 with a different channel number. As well a conversion to a SA/S x.16.6.1 with current detection is possible too.

Application program:	from: **Switch xf 16CS/3.1 (x = 2, 4 and 8-fold)**
	for SA/S x.16.6.1, C-load with current detection
	to: **Switch xf 16CS/3.2 (x = 2, 4, 8 and 12-fold)**
	at: 7/2011

General

Together with the market launch of the switch actuators SA/S 12.16.6.1, C-load with current detection, new application programs for all SA/S x.16.6.1 (x = 2, 4, 8 and 12-fold) are available:

switch *Switch xf 16CS/3.2* (x = 2, 4, 8 and 12-fold).

Optimised features: Function:

- Conversion of the SA/S x.16.5.1 and SA/S x.16.6.1 among each other is possible, as well as different number of outputs.

- Function "copying and exchange" of an output parameterisation in a device is possible.

Optimisation:

- Behaviour after a second preset 1 recall

- Saving behaviour of scene and preset value after KNX failure

Conversion:

A conversion of an application switch *xf 16CS/3.0* and 3.1 of SA/S x.16.6.1 (x = 2, 4 and 8-fold) in an application *Switch xf 16CS/3.2* (x = 2, 4, 8 and 12-fold) is possible.

An application switch xf 16C/3.2 of SA/S x.16.5.1 (x = 2, 4, 8 and 12), C-load in an application Switch xf 16CS/3.2 of SA/S x.16.6.1, C-load with current detection is possible

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Application program:	from:	**Switch xf 16CS/3.0 (x = 2, 4 and 8-fold)**
		for SA/S x.16.6.1, C-load with current detection
	to:	**Switch xf 16CS/3.1**
	at:	1/2011

General

Since January 2011, an optimised application Switch xf 16CS/3.1 for the switch actuators with current detection, SA/S x.16.6.1 (x = 2, 4, 8 and 12-fold), is available. A conversion from Version 3.0 to 3.1 is possible.

Optimised features: Parameter:

- In the function current detection / threshold values the parameter option „non hysteresis" has changed in the minimum hysteresis of „3mA". With this adaption the normal current variation in the installation equipment and the tolerance of the current transformer are considered.

Function:

- The behaviour of KNX telegrams of the current threshold information via communication object „status current threshold" with a current scaling of 10mA was optimised.

Application program:	to:	**Switch xf 16CS/3.0 (x = 2, 4 and 8-fold)**
	from:	4/2010

General

For the optimised switch actuators hardware SA/S x.16.6.1 (x = 2, 4 and 8-fold) you must use the new application program V3.0.

Existing SA/S-Application (V2.0) are conversable to the V3.0-Application. With this convert-function you have the possibility to convert a SA/S x.16.5S in any SA/S x.16.6.1. E.g. you can convert a 2-fold application from the SA/S 2.16.5S or SA/S 2.20.1S in a SA/S 2.16.6.1 or in the first two channels of a SA/S 4.16.6.1 or SA/S 8.16.6.1 actor application.

(Product Manual „Switch Actuators SA/S" – Order Number 2CDC 505 056 D0205)

Optimised features: Functions:

- Copy and change function of the channel parameterisation
- Parameter options for current detection are adapted to the enlarged current range (0,02A – 20A).
- Detected current can send via communication object as 4Byte (Float value) DTP 14.019 or as 2Byte (counter value) DTP 7.012
- Behaviour of response of logical function

  If in parameter window *x: General* the response of the switching status is parameterised with *always*, the response will send always even if a telegram receive via object *Logical connection 2*.

  This is different to the behaviour of SA/S x.6.1, SA/S x.10.1 and SA/S x.16.1. In this case the response of switch status only will send if a telegram receives via object *switching*.

Change of default value:

The parameter Status response of switching state object „status switch") is changed from „no" to „only after changing".

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Changes in wording:

Old	New
Telegr. status switch	status switch
Telegr. RTR fault	RTR fault
Telegr. status heating	status heating
Telegr. status value purge	status value purge
Telegr. warning stair lighting	warning stair lighting

Application program: changed **Switch xf y/2**

                            to: **Switch xf y/2a**

                            from: 4/2010

General

With the launch of SA/S x.16.6.1 (x = 2, 4, 8-fold), optimised current detection some changes in wording had happened.

 (Handbuch „Schaltaktoren SA/S" - Druckschriftennummer 2CDC 505 056 D0104)

Optimised features: Changes in wording:

Old	New
Telegr. status switch	status switch
Telegr. RTR fault	RTR fault
Telegr. status heating	status heating
Telegr. status value purge	status value purge
Telegr. warning stair lighting	warning stair lighting

Change of default value:

The parameter Status response of switching state object „status switch") is changed from „no" to „only after changing".

Software-Information   to: Switch xf y/2

     at: 10/2006

<u>General</u>

The application *Switch xf y/2*
(Product manual „Switch Actuators SA/S" – Pub. No 2CDC 505 056 D0202)
no changes

SA/S 12.16.1 is new in the SA/S portfolio.

The name of the Application is **switch 12f 16/2**

Software-Information   to: Switch xf y/2

     at: 10/2006

<u>General</u>

The application *Switch xf y/2*
(Product manual „Switch Actuators SA/S" – Pub. No 2CDC 505 056 D0202)

 updates the actual application *Switch, xfy/1*
(Product manual „Switch Actuators SA/S" – Pub. No. 2CDC 505 056 D0201)

There is no possibility to convert old ETS-Project automatically with the new application.

The update includes the following changes.

<u>1. Name of Application:</u>

Sample	old	new
SA/S 4.6.1	Switch, 4f6/1	Switch 4f 6A/2
SA/S 8.6.1	Switch, 8f6/1	Switch 8f 6A/2
SA/S 12.6.1	Switch, 12f6/1	Switch 12f 6A/2
SA/S 2.10.1	Switch, 2f10/1	Switch 2f 10A/2
SA/S 4.10.1	Switch, 4f10/1	Switch 4f 10A/2
SA/S 8.10.1	Switch, 8f10/1	Switch 8f 10A/2
SA/S 12.10.1	Switch, 12f10/1	Switch 12f 10A/2
SA/S 2.16.1	Switch, 2f16/1	Switch 2f 16A/2
SA/S 4.16.1	Switch, 4f16/1	Switch 4f 16A/2
SA/S 8.16.1	Switch, 8f16/1	Switch 8f 16A/2
SA/S 2.16.5S	Switch, 2f16S/1	Switch 2f 16CS/2
SA/S 4.16.5S	Switch, 4f16S/1	Switch 4f 16CS/2
SA/S 8.16.5S	Switch, 8f16S/1	Switch 8f 16CS/2
SA/S 12.16.5	Switch, 12f16/1	Switch 12f 16C/2

<u>1. Current Value on EIB/KNX:</u>

Devices with current detection (Type „S") can send the current value as an mA value on the EIB/KNX Bus. This object is a 2-Byte counter value (EIS 10, DTP 7.012).
With the application …/2 it is not longer possible to send the current value in Ampere over an 1-Byte Object on the Bus.

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2. Device Delivery Status:

The default operation mode of the switch actuator is now defined as Switch actuator. Therefore the Object "switch" and "Telegr. status switch" is visible without setting any parameter over the ETS.

3. Limitation of Telegram Rate:

With the new application (…/2) it is possible to limit the sending of telegrams of the switch actuator. The corresponding parameter is in the parameter window „General".

4. Status Response:

The response of the switching status is parameterise in the „X: General" (x= channel).

Options: **nein**
          after a change
          always

If "no" is set the object value will always be updated, but not sent.
The "always" setting has the effect that the status of contact position is updated and always sent, if a "switch option" is received, even if no switching or change in the object value has occurred. With the "after a change" setting the status telegram is only sent if the object value "Telegr. Status Switch" changes. The bus load can be greatly influenced here particularly with multi-channel switch actuators. The object value ("0" or "1") which is used at a contact position is possible with the "Object value contact position (Object "Telegr. Status Switch") parameter. This parameter appears if "after a change" or "always" have been selected.

5. Staircase Retrigger:

The wording of the parameter has changed. The function has not changed.

Parameter „Extending staircase lighting by multiple operation (pumping up)":

new   old

Options:	no (not retriggerable)	**nein**
	yes (retriggerable)	up to max. 1x …
	up to max. 2x …	up to max. 2x …
	up to max. 3x …	up to max. 3x …
	up to max. 4x …	up to max. 4x …
	up to max. 5x …	up to max. 5x …

6. Enable Current Detection:

The current detection is enable in the parameter windows „X: Function" together with the other functions of the switch actuator:

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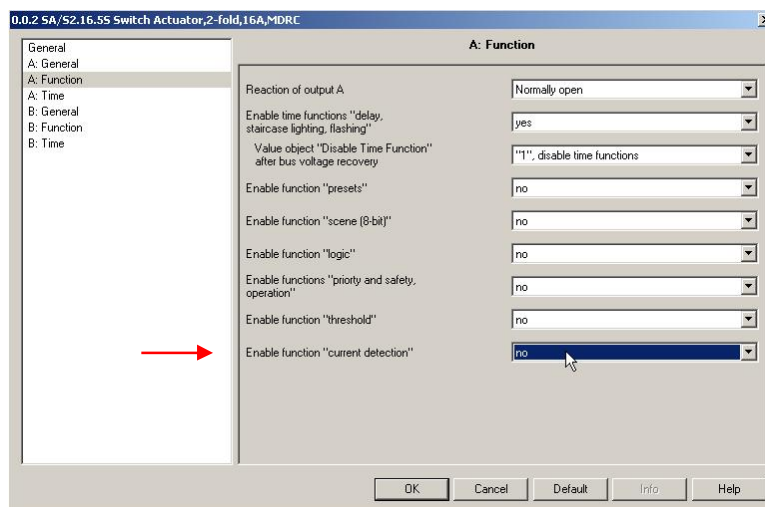
7. Contact Monitoring:

The devices with current detection (Type "S") has get a additional function. Now it is possible to monitor the switching contact of the relay with an integrated logic in the switch actuator.

For this new function the object "contact monitoring" is available. The value "1" (contact fault) is assumed if the contact is opened via a switching action and a current is still detected (contact welded) or if the contact is closed manually and a current will detect. The evaluation if a current flows or does not flow is undertaken in the steady-state approximation of 2 seconds after the switching action. The current is safely detected if it is greater than 100 mA.

8. Evaluation of Current Detection:

With the new application (…/2) it is possible to evaluate the current for the threshold-function of the current detection.

It is possible to evaluate the current only during the contact is open, it is closed or during both contact positions. The parameter is in the parameter window "x: Current Detection".

Further on it is possible to set a delay of the current evaluation, after contact switching, via parameter. Delay times of 0 up to 255 seconds are possible.

9. Staircase lighting time:

If the old application (…/1) is load in an unloaded SA/S device and the object „staircase time" was not enabled. The staircase time was limited up to 4 minutes, even if a larger time was set via parameter.

The new application (…/2) eliminate this bug.