

ASi Module for controlling damper actuators and for detection the damper position

Meets requirements for Switzerland (IG-BSK)

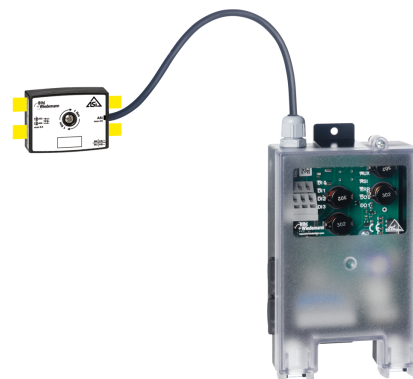
Supply of the motors out of ASi

AB address (up to 62 ASi nodes with AB addresses per ASi circuit)

Runtime monitoring of the damper motor in master possible

Connection by external profile cable terminal via insulation penetration technology

ASi Specifications 2.1



(Figure similar)



Article no. BW2080: ASi Module for controlling damper actuators, supply of inputs out of ASi, supply of outputs out of ASi

The ASi module to control damper actuators meets the requirements of the ASi Specifications 2.1. It is used to control the damper actuator and detect the damper position **damper open** and **damper closed** as well as the intermediate position „**damper opens**“ or „**damper closes**“. In addition external contact can be requested, e.g. of an smoke detector or an temperature switch.

O1 to the output can be connected in series with a smoke detector and an external fusible link. If they are not connected, the contacts have to be each bridged.

The connections are short-circuit -and overload protected. The integrated watchdog function, which switches the outputs to their currentless switching state if there is no communication on the ASi circuit, is integrated.

The transfer function is permanent monitored in the integrated ASi node and in the ASi Master. This module can be connected via cage clamp terminals or ready to plug via Belimo-compatible connector.

The module is equipped with advanced diagnostic capabilities and is able, by an short circuit at the outputs, to trigger a peripheral error message in the master.

| | |
|--|---|
| Article no. | BW2080 |
| Connection | |
| Connection to damper actuator | cage clamp terminals or Belimo-compatible connectors |
| ASi connection | Connection by external profile cable terminal via insulation penetration technology |
| Length of connector cable to motor | ≤ 30 m ⁽²⁾ |
| ASi | |
| Profile | S 7.A.E (ID1=7 default) |
| Address | 1 AB address |
| Required Master profile | ≥ M3 |
| Since ASi specification | 2.1 |
| Operating voltage | 30 V _{DC} (26,5 ... 31,6 V) |
| Max. current consumption | ≤ 420 mA |
| Max. current consumption without sensor/ actuator supply | ≤20 mA |

| | |
|---|---|
| Article no. | BW2080 |
| Input | |
| Number | 4 |
| Power supply | out of ASi |
| Sensor supply | short-circuit and overload protected according to EN 61131-2 |
| Supply of attached sensors | max. 400 mA $\Sigma (In/Out) \leq 400 \text{ mA}$ |
| Switching threshold | $\leq 0,8 \text{ mA}$ (low); $\geq 5 \text{ mA}$ (high) |
| Output | |
| Number | 2 x electronic |
| Power supply | out of ASi |
| Output | short-circuit and overload protected according to EN 61131-2 |
| Max. output current | 400 mA |
| Loading capacity | max. 400 mA per output $\Sigma (In/Out) \leq 400 \text{ mA}$ |
| Display | |
| LED ASi (green) | on: ASi voltage on flashing: ASi voltage on, but peripheral fault ⁽³⁾ or address 0 off: no ASi voltage |
| LED ERR (red) | on: address 0 or offline flashing: peripheral fault ⁽³⁾ off: online |
| LEDs DI 0, 2, 3 (yellow) | state of inputs I1, I3, I4 |
| LED DI 1 (blue ⁽¹⁾) | state of input I2 |
| LED DO 0, 1 (yellow) | state of outputs O1, O2 |
| Environment | |
| Applied standards | EN 60529 EN 61131-2 EN 61000-6-2, EN 61000-6-3, EN 61000-6-4 |
| Operating altitude | max. 2000 m |
| Operating temperature | -25 °C ... +60 °C |
| Storage temperature | -40 °C ... +70 °C |
| Housing | plastic, for screw mounting |
| Pollution degree | 2 |
| Protection category (acc. EN 60529) | IP54 |
| Tolerable loading referring to humidity | according to EN 61131-2 |
| Insulation voltage | $\geq 500 \text{ V}$ |
| Weight | 250 g |
| Dimensions (L / W / H in mm) | 160 / 90 / 55 |

(1) from ident.No. ≥ 17304

(2) Loop resistance $\leq 150 \Omega$

(3) See table "Peripheral fault indication"

| Article no. | Peripheral fault indication | | |
|-------------|-----------------------------|------------------------|---------------------|
| | Overload sensor supply | Output short circuited | AUX voltage missing |
| BW2080 | - | • | - |

| Programming | Bit assignment | | | |
|---------------------------------|--|---|-------------|----------------|
| | D3 | D2 | D1 | D0 |
| Input | I4 | I3 | I2 | I1 |
| BW2080 | reserverd | external smoke detector, contact closed | damper open | damper closed |
| Output | O4 | O3 | O2 | O1 |
| BW2080 | – | – | reserved | damper open up |
| Parameter bit | P3 | P2 | P1 | P0 |
| BW2080 | not used | 0= off / 1= on (peripheral fault) | not used | not used |
| Programming instructions | | | | |
| BW2080 | preset: address 0 changeable via bus master programming devices | | | |

| Terminal assignment: | | | | | |
|----------------------|-------|-----------------------------|---------------------------------|-------------------------------|------|
| | X1 | X2 | X3 plug | X4 plug | X6 |
| 1 | ASi + | RM A | +24 V _{out o} f ASi | O1 | SL A |
| 2 | ASi + | 0 V | +24 V _{out o} f ASi | 0 V _{out of A} Si | SL B |
| 3 | ASi – | RM B / I3 | n.c. | O2 | |
| 4 | ASi – | +24 V _{out of ASi} | n.c. | | |
| 5 | n.c. | I2 | I1 | | |
| 6 | n.c. | +24 V _{out of ASi} | I2 | | |
| 7 | n.c. | I1 | | | |
| 8 | n.c. | +24 V _{out of ASi} | | | |
| 9 | | I4 | | | |
| 10 | | +24 V _{out of ASi} | | | |
| 11 | | O1 | | | |
| 12 | | 0 V _{out of ASi} | | | |
| 13 | | O2 | | | |
| 14 | | 0 V _{out of ASi} | | | |

SD = smoke detector, FL = fusible link

Variants with bridges

- 1-11: no smoke detector connected no fusible link X6 connected
- 1- 3: no smoke detector connected

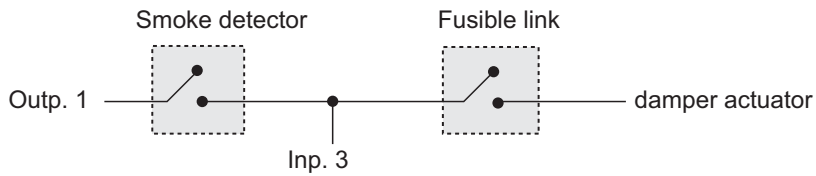
Notice:

- The controller can not recognize that by law bridges smoke detectors or fusible link are missing.

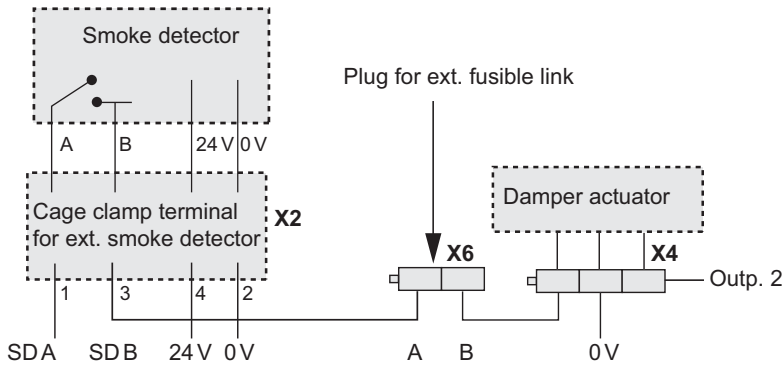
| Double-deck terminal block, 2 x 4/5/6/7 poles (pitch 5 mm) | |
|--|---|
| General | |
| Nominal cross section | 2.5 mm ² |
| Conductor cross section | |
| Conductor cross section solid | 0.8 ... 2.5 mm ² |
| Conductor cross section flexible | 0.8 ... 2.5 mm ² |
| Conductor cross section flexible, with ferrule | without plastic sleeve: 0.25 ... 2.5 mm ² with plastic sleeve: 0.25 ... 1.5 mm ² |
| 2 conductors with same cross section, stranded, with TWIN ferrules | – |
| AWG | 28 ... 12 |
| Stripped insulation length | 6 mm |

ASi Module to control damper actuators

Circuit diagram:



Connection diagram:



Scope of delivery:

- Passive Distributor ASi to 1 x round cable/connecting wires, depth 19 mm, IP67 (art. no. BW3186)

Accessories:

- ASi-5/ASi-3 Address Programming Device (art. no. BW4708)