

1- AND 2-POLE ELECTROMECHANICAL IMPULSE SWITCHES S12-



S12-100-230V



Technical data page 18-7.

S12-100-/200-/110-



1- and 2-pole 16 A/250 V AC

Modular devices for DIN 60715 TH35 rail mounting with manual control and switch position indicator.  
1 module = 18 mm wide, 55 mm deep.  
100% time on. Control power demand 5-6 W only.  
Contacts 1 NO, 2 NO, 1 NO + 1 NC.  
Contact gap 3 mm. Spacing of control connections/contact > 6 mm.  
**Devices for 25 A XS12, page 18-5.**  
**Retrofittable auxiliary contact KM12, page 18-3.**  
**The pin-compatible ES12DX-UC, ES12-200-UC and ES12-110-UC electronic impulse switches can also be used.**  
**Their universal control voltage UC covers the voltage ranges of 8 to 253 V AC at 50-60 Hz and 10 to 230 V DC.**

|                                 |                  |                   |  |
|---------------------------------|------------------|-------------------|--|
| S12-100-12V                     | 1 NO 16 A        | EAN 4010312100455 |  |
| S12-100-230V                    | 1 NO 16 A        | EAN 4010312100479 |  |
| S12-100-8V, 24V, 12V DC, 24V DC | 1 NO 16 A        |                   |  |
| S12-200-12V                     | 2 NO 16 A        | EAN 4010312100530 |  |
| S12-200-230V                    | 2 NO 16 A        | EAN 4010312100554 |  |
| S12-200-8V, 24V, 12V DC, 24V DC | 2 NO 16 A        |                   |  |
| S12-110-12V                     | 1 NO + 1 NC 16 A | EAN 4010312100493 |  |
| S12-110-230V                    | 1 NO + 1 NC 16 A | EAN 4010312100516 |  |
| S12-110-8V, 24V, 12V DC, 24V DC | 1 NO + 1 NC 16 A |                   |  |

| Type   | S09/S12/SS12                               | S91/S81                         | XS12                                       |
|--|--|---------------------------------|--|
| <b>Contacts</b>  |  |                                 |  |
| Contact material/contact gap   | AgSnO <sub>2</sub> /3 mm                   | AgSnO <sub>2</sub> /2 mm        | AgSnO <sub>2</sub> /3 mm <sup>1)</sup>     |
| Spacing of control connections/contact                                 | > 6 mm                                     | > 6 mm                          | > 6 mm                                     |
| Test voltage contact/contact   | 2000 V                                     | 2000 V                          | 2000 V                                     |
| Test voltage control connections/contact                               | 4000 V                                     | 4000 V                          | 4000 V                                     |
| Rated switching capacity   | 16 A/250 V AC<br>10 A/400 V AC             | 10 A/250 V AC<br>6 A/400 V AC   | 25 A/250 V AC<br>16 A/400 V AC             |
| 230 V LED lamps  | up to 200 W <sup>5)</sup>                  | up to 200 W <sup>5)</sup>       | up to 200 W <sup>5)</sup>                  |
| Incandescent lamp and halogen lamp load <sup>2)</sup> 230 V            | 2300 W                                     | 2300 W                          | 2300 W                                     |
| Fluorescent lamp load with KVG* in lead-lag circuit or non compensated | 2300 VA                                    | 2300 VA                         | 3600 VA                                    |
| Fluorescent lamp load with KVG* shunt-compensated or with EVG*         | 500 VA                                     | 500 VA                          | 1000 VA                                    |
| Compact fluorescent lamps with EVG* and energy saving lamps ESL        | I on ≤ 140 A/10 ms <sup>3)</sup>           | I on ≤ 70 A/10 ms <sup>3)</sup> | I on ≤ 140 A/10 ms <sup>3)</sup>           |
| HQL and HQL non compensated  | 500 W                                      | –                               | 500 W                                      |
| Max. switching current DC1: 12 V/24 V DC                               | 8 A  | 8 A                             | 12 A                                       |
| Life at rated load cos φ = 1 or incandescent lamps 1000 W at 100/h     | > 10 <sup>5</sup>                          | > 10 <sup>5</sup>               | > 10 <sup>5</sup>                          |
| Life at rated load, cos φ = 0.6 at 100/h                               | > 4x10 <sup>4</sup>                        | > 4x10 <sup>4</sup>             | > 4x10 <sup>4</sup>                        |
| Max. operating cycles  | 10 <sup>3</sup> /h                         | 10 <sup>3</sup> /h              | 10 <sup>3</sup> /h                         |
| Switch position indication   | yes  | yes                             | yes  |
| Manual control   | yes  | yes                             | yes  |
| Maximum conductor cross-section  | 6 mm <sup>2</sup>                          | 4 mm <sup>2</sup>               | 6 mm <sup>2</sup>                          |
| Two conductors of same cross-section                                   | 2.5 mm <sup>2</sup>                        | 1.5 mm <sup>2</sup>             | 2.5 mm <sup>2</sup>                        |
| Screw head   | slotted/crosshead, pozidriv                | slotted/crosshead, pozidriv     | slotted/crosshead, pozidriv                |
| Type of enclosure/terminals  | IP50/IP20                                  | IP50/IP20                       | IP50/IP20                                  |
| <b>Solenoid</b>  |  |                                 |  |
| Time on at rated voltage 1- and 2-pole, without S09                    | 100% <sup>4)</sup>                         | 100%                            | 100% <sup>4)</sup>                         |
| Time on at rated voltage 4-pole as well as S09                         | impulse control                            | –                               | impulse control                            |
| Max./min. temperature at mounting location                             | +50°C/-5°C                                 | +50°C/-5°C                      | +50°C/-5°C                                 |
| Control voltage range  | 0.9 to 1.1 x rated voltage                 | 0.9 to 1.1 x rated voltage      | 0.9 to 1.1 x rated voltage                 |
| Coil power loss AC+ DC ±20%  | 1- and 2-pole 5 - 6 W;<br>4-pole 12 - 15 W | S81: 5 W<br>S91: 2.5 W          | 1- and 2-pole 5 - 6 W;<br>4-pole 12 - 15 W |
| Min. command duration  | 50 ms                                      | 50 ms                           | 50 ms                                      |
| Max. parallel capacitance (length) of single control lead at 230 V AC  | 0.06 µF (approx. 200 m)                    | 0.06 µF (approx. 200 m)         | 0.06 µF (approx. 200 m)                    |
| Max. voltage induced at the control inputs                             | 0.2 x rated voltage                        | 0.2 x rated voltage             | 0.2 x rated voltage                        |
| Glow lamps in parallel with the 230 V control switches                 | 5 mA                                       | 5 mA                            | 5 mA                                       |
| With 1 µF/250 V AC capacitor in parallel with coil                     | 10 mA                                      | 10 mA                           | 10 mA                                      |
| With 2.2 µF/250 V AC capacitor in parallel with coil                   | 15 mA                                      | 15 mA                           | 15 mA                                      |

\* EVG = electronic ballast units; KVG = conventional ballast units

<sup>1)</sup> Contact distance of the NC contacts 1.2 mm.

<sup>2)</sup> For lamps with 150 W max.

<sup>3)</sup> A 40-fold inrush current must be calculated for electronic ballast devices. For steady loads of 1200 W or 600 W use the current-limiting relay SBR12 or SBR61. See chapter 14, page 14-8.

<sup>4)</sup> Whenever several impulse switches are continuously energised make sure there is adequate ventilation and, in addition, a ventilation clearance of approx. half a module. Use the DS12 spacer as necessary.

<sup>5)</sup> Due to different lamp electronics and depending on the manufacturer, the maximum number of lamps may be limited, especially if the wattage of the individual lamps is very low (e.g. with 2 W LEDs).

To comply with DIN VDE 0100-443 and DIN VDE 0100-534, a Type 1 or Type 2 surge protection device (SPD) must be installed.