## Technical Data Electromechanical Impulse Switches



Contacts	S09/S12/SS12	\$91/\$81	XS12
Contact material/contact gap	AgSnO <sub>2</sub> /3 mm	AgSnO₂/2mm	AgSnO <sub>2</sub> /3 mm <sup>1)</sup>
Spacing of control connections/contact	>6 mm	>6 mm	>6 mm
Test voltage contact/contact Test voltage control connections/contact	2000 V 4000 V	2000 V 4000 V	2000 V 4000 V
Rated switching capacity	16 A/250 V AC 10 A/400 V AC	10 A/250 V AC 6 A/400 V AC	25 A/250 V AC 16 A/400 V AC
Incandescent lamp and halogen lamp load <sup>2)</sup> 230 V	2300 W	2300W	2300W
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 $\leq 140 \text{A}/10 \text{ms}^{3)}$	I on $\leq$ 70 A/10 ms <sup>3)</sup>	I on $\leq 140 \text{A}/10 \text{ms}^{3)}$
HQL and HQl non compensated	500 W	_	500 W
Max. switching current DC1: 12 V/24 V DC	8A	8A	12 A
Life at rated load cos $\phi$ = 1 or incandescent lamps 1000 W at 100/h	> 10 5	> 10 5	> 10 5
Life at rated load, $\cos \varphi = 0.6$ at 100/h	> 4 x 10 <sup>4</sup>	> 4 x 10 <sup>4</sup>	> 4 x 10 <sup>4</sup>
Max. operating cycles	10 <sup>3</sup> /h	10³/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
Solenoid			
Time on at rated voltage 1- and 2-pole, without SO9	100% 4)	100%	100 % 4)
Time on at rated voltage 4-pole as well as SO9	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 - 6W; 4-pole 12 - 15W	5 W	1- and 2-pole 5 - 6 W; 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 230V control switches	5 mA	5 mA	5 mA
With 1µF/250 V AC capacitor in parallel with coil	10 mA	10 mA	10 mA
With 2.2µF/250V AC capacitor in parallel with coil	15 mA	15 mA	15 mA

<sup>\*</sup> EVG = electronic ballast units; KVG = conventional ballast units

<sup>&</sup>lt;sup>1)</sup> Conctact distance of the NC contacts 1.2 mm.

<sup>&</sup>lt;sup>2)</sup> Contact spacing of NC contacts 1.2mm.

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

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.