

Pole Position S

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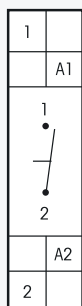
Pole Position S

When we introduced the first ELTAKO impulse switches in 1949, they were already standing in the pole position in Europe and since then we have defended this position time and again with innovative products, highest quality, best possible service and attractive prices. Then, impulse switches were also called impulse relays, step switches or latching relays.

S12-100-/200-/110-



S12-100-230V



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

Modular devices for DIN 60715 TH35 rail mounting with manual control and switch position indicator.

1 module = 18mm wide, 55mm deep.

100% time on. Control power demand 5-6W only.

Contacts 1 NO, 2 NO, 1 NO + 1 NC.

Contact gap 3mm. Spacing of control connections/contact > 6mm.

For control voltages up to 48V AC and 110V DC suitable for SELV net.

4-pole devices S12, page J3 and devices for 25A XS12, page J5.

Retrofittable auxiliary contact KM12, page J3.

* **Non-standard control voltages:** 42, 48, 60 and 110V/50Hz or 110, 115, 127 and 220V/60Hz as well as 6, 8, 42, 48, 60, 110 and 220V DC.

The terminal compatible hybrid impulse switches ES12DX-UC, ES12-200-8..230V UC and ES12-110-8..230V UC may be used as well.

Technical data page J7.

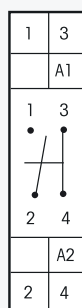
S12-100-12V	1 NO 16 A	EAN 4010312100455	21,30 €/pc.
S12-100-230V	1 NO 16 A	EAN 4010312100479	21,30 €/pc.
S12-100-8V, 24V, 12V DC, 24V DC	1 NO 16 A		23,00 €/pc.
S12-100-*	1 NO 16 A		24,70 €/pc.
S12-200-12V	2 NO 16 A	EAN 4010312100530	26,70 €/pc.
S12-200-230V	2 NO 16 A	EAN 4010312100554	26,70 €/pc.
S12-200-8V, 24V, 12V DC, 24V DC	2 NO 16 A		28,50 €/pc.
S12-200-*	2 NO 16 A		30,60 €/pc.
S12-110-12V	1 NO + 1 NC 16 A	EAN 4010312100493	26,70 €/pc.
S12-110-230V	1 NO + 1 NC 16 A	EAN 4010312100516	26,70 €/pc.
S12-110-8V, 24V, 12V DC, 24V DC	1 NO + 1 NC 16 A		28,50 €/pc.
S12-110-*	1 NO + 1 NC 16 A		30,60 €/pc.

J2

SS12-110-



SS12-110-230V



Impulse multicircuit switch, 1 + 1 NO contacts 16A/250V AC

Modular devices for DIN 60715 TH35 rail mounting with manual control and switch position indicator.

1 module = 18mm wide, 55mm deep.

100% time on. Control power demand 5-6W.

Contact gap 3mm. Spacing of control connections/contact > 6mm.

For control voltages up to 48V AC and 110V DC suitable for SELV net.

* **Non-standard control voltages:** 8, 24, 42, 48, 60, 110V/50Hz or 110, 115, 127 and 220V/60Hz as well as 6, 8, 12, 24, 42, 48, 60, 110 and 220V DC.

The hybrid impulse switch ES12DDX-UC may be used as well.

Technical data page J7.

SS12-110-12V	1 + 1 NO 16 A	EAN 4010312101346	27,70 €/pc.
SS12-110-230V	1 + 1 NO 16 A	EAN 4010312101124	27,70 €/pc.
SS12-110-*	1 + 1 NO 16 A		31,80 €/pc.

Recommended retail prices excluding VAT.

S09-



1 NO contact 16A/230V AC

Modular devices for DIN 60715 TH35 rail mounting with manual control and switch position indicator.

Only ½ module = 9 mm wide, 55 mm deep.

Control power demand 5W. For impulse control.

Contact gap 3 mm.

S09-230V

Technical data page J7.

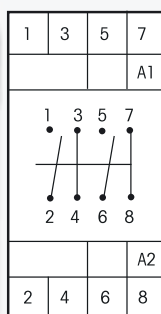
S09-12V
S09-230V

1 NO 16A
1 NO 16A

EAN 4010312104187
EAN 4010312104200

22,10 €/pc.
22,10 €/pc.

S12-400-/310-/220-



4-pole 16A/250V AC

Modular devices for DIN 60715 TH35 rail mounting with manual control and switch position indicator, for impulse control.

2 modules = 36 mm wide, 55 mm deep.

Time on: **impulse control only**. Control power demand 12-15W.

Contacts: 4 NO, 3 NO + 1 NC, 2 NO + 2 NC. Contact gap 3 mm.

Devices for 25A XS12, page J5.

Retrofittable auxiliary contact KM12.

* **Non-standard control voltages:** 8, 12, 24, 42, 48, 60, 110V/50Hz or 110, 115, 127 and 220V/60Hz as well as 6, 8, 12, 24, 42, 48, 60, 110 and 220V DC.

Technical data page J7.

S12-220-230V

S12-400-230V
S12-400-*

4 NO 16A
4 NO 16A

EAN 4010312104484

40,70 €/pc.
46,80 €/pc.

S12-310-230V
S12-310-*

3 NO + 1 NC 16A
3 NO + 1 NC 16A

EAN 4010312100639

40,70 €/pc.
46,80 €/pc.

S12-220-230V
S12-220-*

2 NO + 2 NC 16A
2 NO + 2 NC 16A

EAN 4010312100592

40,70 €/pc.
46,80 €/pc.

KM12



Contact module, 1 NO contact and 1 NC contact 4A/250V AC

Retrofittable to the left of all impulse switches S12 and XS12 as well as switching relays and installation contactors R12 and XR12.

½ module = 9 mm wide, 55 mm deep.

KM12

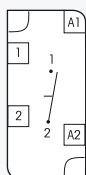
Auxiliary contact
1 NO + 1 NC, 4A

EAN 4010312901243

13,60 €/pc.

1- and 2-pole impulse switches S91 and S81, impulse multi-circuit switch SS81 and impulse group switch GS81

S91-100-



1 NO contact 10A/250V AC

Built-in devices for installation and surface mounting. With manual control and switch position indicator. 50mm long, 26mm wide, 32mm deep.

Time on 100%. Control power demand 4-5W. Contact gap 2mm.

The hybrid impulse switch ES61-8..230V UC may be used as well.

S91-100-230V

Technical data page J7. Mounting accessory page Z4.

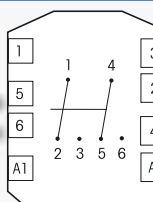
S91-100-12V
S91-100-230V
S91-100-*

1 NO 10A
1 NO 10A
1 NO 10A

EAN 4010312103517
EAN 4010312103531

22,00 €/pc.
22,00 €/pc.
25,60 €/pc.

S81-001-/002-



1 or 2 CO contacts 10A/250V AC

Built-in devices for installation and surface mounting. With manual control and switch position indicator. 50mm long, 42mm wide, 32mm deep.

Time on 100%. Control power demand 5-5.5W. Contact gap 2mm.

In applications with 1 CO without glowlamp current the hybrid impulse switch ESR61M-UC may be used as well.

S81-002-230V

Technical data page J7. Mounting accessory page Z4.

S81-001-12V
S81-001-230V
S81-001-*

1 CO 10A
1 CO 10A
1 CO 10A

EAN 4010312103470
EAN 4010312103494

21,90 €/pc.
21,90 €/pc.
25,40 €/pc.

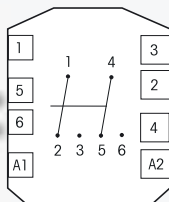
S81-002-12V
S81-002-230V
S81-002-*

2 CO 10A
2 CO 10A
2 CO 10A

EAN 4010312103319
EAN 4010312103333

26,70 €/pc.
26,70 €/pc.
30,60 €/pc.

SS81-002-



Multicircuit switch 1 + 1 CO contacts 10A/250V AC

Built-in device for installation and surface mounting. With manual control and switch position indicator. 50mm long, 42mm wide, 32mm deep.

Time on 100%. Control power demand 5-5.5W. Contact gap 2mm.

In applications with 1 + 1 NO without glowlamp current the hybrid impulse switch ESR61M-UC may be used as well.

SS81-002-230V

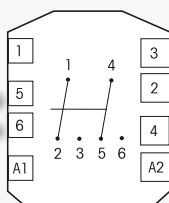
Technical data page J7. Mounting accessory page Z4.

SS81-002-*

1 + 1 CO 10A

31,80 €/pc.

GS81-002-



Group switch 1 + 1 CO contact 10A/250V AC

Built-in device for installation and surface mounting. With manual control and switch position indicator. 50mm long, 42mm wide, 32mm deep.

Time on 100%. Control power demand 5-5.5W only. Contact gap 2mm.

In applications with 1 + 1 NO without glowlamp current the hybrid impulse switch ESR61M-UC may be used as well.

GS81-002-12V

Technical data page J7. Mounting accessory page Z4.

GS81-002-*

1 + 1 CO 10A

31,80 €/pc.

* **Non-standard control voltages:** 8, 24, 42, 48, 60 and 110V/50Hz or 110, 115, 127 and 220V/60Hz as well as 6, 8, 12, 24, 42, 48, 60, 110 and 220V DC. SS81 and GS81 also 12V and 230V/50Hz.

Recommended retail prices excluding VAT.

XS12-100-/200-/110-



1-pole and 2-pole, 25A/250V AC

Modular devices for DIN 60715 TH35 rail mounting with manual control and switch position indicator.

1 module = 18mm wide, 55 mm deep.

100% time on. Control power demand 5-6W.

Contacts: 1 NO, 2 NO, 1 NO + 1 NC.

Contact gap 3 mm.

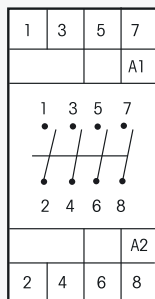
Retrofittable auxiliary contact KM12, page J3.

XS12-110-230V

Technical data page J7.

XS12-100-12V	1 NO 25A	EAN 4010312101490	27,00 €/pc.
XS12-100-24V	1 NO 25A	EAN 4010312101506	27,00 €/pc.
XS12-100-230V	1 NO 25A	EAN 4010312101513	25,10 €/pc.
XS12-100-12V DC	1 NO 25A	EAN 4010312104354	27,00 €/pc.
XS12-100-24V DC	1 NO 25A	EAN 4010312101476	27,00 €/pc.
XS12-200-12V	2 NO 25A	EAN 4010312101582	32,20 €/pc.
XS12-200-24V	2 NO 25A	EAN 4010312101599	32,20 €/pc.
XS12-200-230V	2 NO 25A	EAN 4010312101605	29,60 €/pc.
XS12-200-12V DC	2 NO 25A	EAN 4010312104392	32,20 €/pc.
XS12-200-24V DC	2 NO 25A	EAN 4010312101612	32,20 €/pc.
XS12-110-12V	1 NO + 1 NC 25A	EAN 4010312101537	32,20 €/pc.
XS12-110-24V	1 NO + 1 NC 25A	EAN 4010312101544	32,20 €/pc.
XS12-110-230V	1 NO + 1 NC 25A	EAN 4010312101551	29,60 €/pc.
XS12-110-12V DC	1 NO + 1 NC 25A	EAN 4010312104385	32,20 €/pc.
XS12-110-24V DC	1 NO + 1 NC 25A	EAN 4010312101568	32,20 €/pc.

XS12-400-/310-/220-



4-pole 25A/250V AC

Modular devices for DIN 60715 TH35 rail mounting with manual control and switch position indicator, for impulse control.

2 modules = 36mm wide, 55 mm deep.

Time on: **impulse control only**. Control power demand 12-15W.

Contacts: 4 NO, 3 NO + 1 NC, 2 NO + 2 NC.

Contact gap 3 mm.

Retrofittable auxiliary contact KM12, page J3.

XS12-400-230V

Technical data page J7.

XS12-400-12V	4 NO 25A	EAN 4010312101636	46,30 €/pc.
XS12-400-24V	4 NO 25A	EAN 4010312101643	46,30 €/pc.
XS12-400-230V	4 NO 25A	EAN 4010312101650	40,70 €/pc.
XS12-400-12V DC	4 NO 25A	EAN 4010312103036	46,30 €/pc.
XS12-400-24V DC	4 NO 25A	EAN 4010312101667	46,30 €/pc.
XS12-310-12V	3 NO + 1 NC 25A	EAN 4010312101681	46,30 €/pc.
XS12-310-24V	3 NO + 1 NC 25A	EAN 4010312101698	46,30 €/pc.
XS12-310-230V	3 NO + 1 NC 25A	EAN 4010312101704	40,70 €/pc.
XS12-310-12V DC	3 NO + 1 NC 25A	EAN 4010312104408	46,30 €/pc.
XS12-310-24V DC	3 NO + 1 NC 25A	EAN 4010312101711	46,30 €/pc.
XS12-220-12V	2 NO + 2 NC 25A	EAN 4010312101735	46,30 €/pc.
XS12-220-24V	2 NO + 2 NC 25A	EAN 4010312101742	46,30 €/pc.
XS12-220-230V	2 NO + 2 NC 25A	EAN 4010312101759	40,70 €/pc.
XS12-220-12V DC	2 NO + 2 NC 25A	EAN 4010312103029	46,30 €/pc.
XS12-220-24V DC	2 NO + 2 NC 25A	EAN 4010312101766	46,30 €/pc.

Switch positions of Electromechanical Impulse Switches Comparable electronic types

Contacts	Type	Contacts	Type
1 NO contact 	S12-100- XS12-100- S91-100-	1 CO contact 	S81-001
2 NO contacts 	S12-200- XS12-200-	2 CO contacts 	S81-002
1 NO contact + 1 NC contact 	S12-110- XS12-110-	1+1 CO contacts 	SS81-002-
Multicircuit switch 1+1 NO contacts 	SS12-110-	1+1 CO contacts 	GS81-002-
4 NO contacts 	S12-400- XS12-400-		
3 NO contacts + 1 NC contact 	S12-310- XS12-310-		
2 NO contacts + 2 NC contacts 	S12-220- XS12-220-		

J6

Comparable electronic types

ES12DX-UC	replaces terminal compatible the S12-100- , all control voltages
ES12-200-8..230V UC	replaces terminal compatible the S12-200- , all control voltages
ES12-110-8..230V UC	replaces terminal compatible the S12-110- , all control voltages
ESR12DDX-UC	replaces the SS12-110- , all control voltages
ES61-8..230V UC	replaces the S91-100- , all control voltages
ESR61M-UC	replaces partially S81- , SS81- and GS81- , all control voltages

Contacts	S09/S12	S91/S81/SS81/GS81	XS12
Contact material/contact gap	AgSnO ₂ /3 mm	AgSnO ₂ /2 mm	AgSnO ₂ /3 mm ¹⁾
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 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 ¹⁾ 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 ²⁾	I _{on} ≤ 70 A/10 ms ²⁾	I _{on} ≤ 140 A/10 ms ²⁾
HQL and HQI non compensated	500 W	–	500 W
Max. switching current DC1: 12V/24V DC	8 A	8 A	12 A
Life at rated load cos φ = 1 or incandescent lamps 1000 W at 100/h	> 10 ⁵	> 10 ⁵	> 10 ⁵
Life at rated load, cos φ = 0.6 at 100/h	> 4 x 10 ⁴	> 4 x 10 ⁴	> 4 x 10 ⁴
Max. operating cycles	10 ³ /h	10 ³ /h	10 ³ /h
Switch position indication	yes	yes	yes
Manual control	yes	yes	yes
Maximum conductor cross-section	6 mm ²	4 mm ²	6 mm ²
Two conductors of same cross-section	2.5 mm ²	1.5 mm ²	2.5 mm ²
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 S09	100% ³⁾	100% ³⁾	100% ³⁾
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; 4-pole 12 - 15 W	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 230V 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 1 μF/250V AC capacitor in parallel with coil	10 mA	10 mA	10 mA
With 2.2 μF/250V AC capacitor in parallel with coil	15 mA	15 mA	15 mA

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

¹⁾ Contact spacing of NC contacts 1.2 mm.

²⁾ 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. Product group G, page G4.

³⁾ 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.