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3SK5 Cam Starter



Application

3SK5 cam starter is mainly used to directly start, stop, or reverse three phase asynchronous motor in AC 50Hz, voltage up to 500V supply and motor capacity up to 22.5KW , each model can be produced either by aluminum or resin.

Specifications

Model	Type	Rated current (A)	Motor control capacity (HP)	Electrical life (times)	Mechanical life (times)	Frequency of operation (per hr)	Applications	Position of lever
3SK5-15A	I-O	15	5.5	100000	250000	200	ON-OFF switching	0-60
3SK5-30A		30	10					
3SK5-15N	I-O- I	15	5.5				Forward & reverse	60-0-60
3SK5-30N		30	10					
3SK5-15P/3	I-O- II	15	5.5				for 3 pole two circuits	60-0-60
3SK5-30P/3		30	10					
3SK5-63A	I-O	63	22	80000	200000	180	ON-OFF switching	0-60
3SK5-100A		100	30					
3SK5-63N	I-O I	63	22				Forward & reverse	60-0-60
3SK5-100N		100	30					
3SK5-63P/4	I-O- II	63	22				for 3 pole two circuits	60-0-60
3SK5-100P/4		100	30					

GZ-Cam Starter

Specifications



GZ-25



GZ-63

Model	Type	Rated current (A)	Electrical life (times)	Mechanical life (times)	Frequency of operation (perhr)	Applications	Position of lever
GA-16A	I-O	16	10000	250000	200	ON-OFF switching for 3 pole two circuits	0-60
GZ-16A	I-O- II	16					60-0-60
GA-25A	I-O	25				ON-OFF switching for 3 pole two circuits	0-60
GZ-25A	I-O- II	25					60-0-60
GA-32A	I-O	32	8000	200000	180	ON-OFF switching for 3 pole two circuits	0-60
GZ-32A	I-O- II	32					60-0-60
GA-40A	I-O	40				ON-OFF switching for 3 pole two circuits	0-60
GZ-40A	I-O- II	40					60-0-60
GA-63A	I-O	63				ON-OFF switching for 3 pole two circuits	0-60
GZ-63A	I-O- II	63					60-0-60

Limit Switch



MJ1-6101

MJ1-6102

MJ1-6112

MJ1-6111



MJ1-6114

MJ1-6117

MJ1-6104

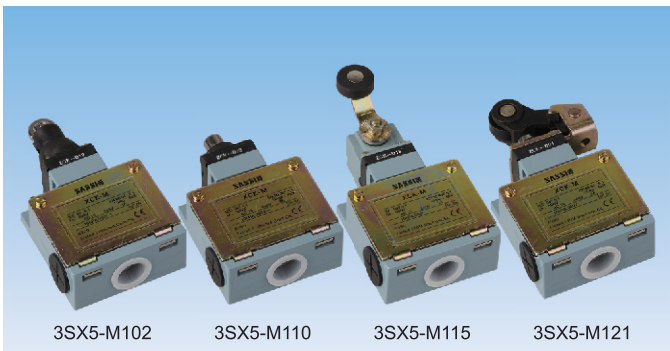
Limit Switch



K244

Limit switches are ideal electrical control switches. They feature compact structure, nice appearance, excellent performance, reliable action, easy installation, operation, maintenance and adjustment. At Sassin we have a variety of limit switches so you can find the limit switch that fits your individual needs.

The switches are applicable to AC control circuits of 50 to 60Hz, with a voltage up to 500V or DC control circuits with a voltage up to 250V, and a current up to 15A to convert a mechanical signal into an electrical signal for the purpose of controlling mechanical movement or performing sequential control.



3SX5-M102

3SX5-M110

3SX5-M115

3SX5-M121



3SX5-P102

3SX5-P106

3SX5-P110

3SX5-P118

3SX5-P121

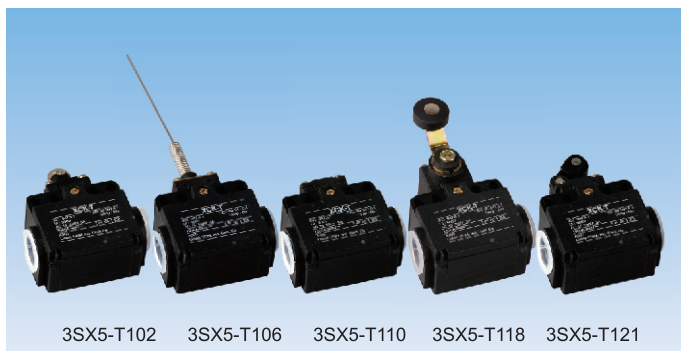


3SX5-S14

3SX5-S101

3SX5-S102

3SX5-S131



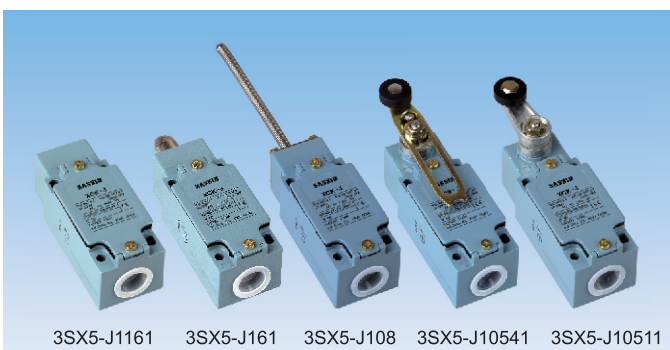
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3SX5-T106

3SX5-T110

3SX5-T118

3SX5-T121



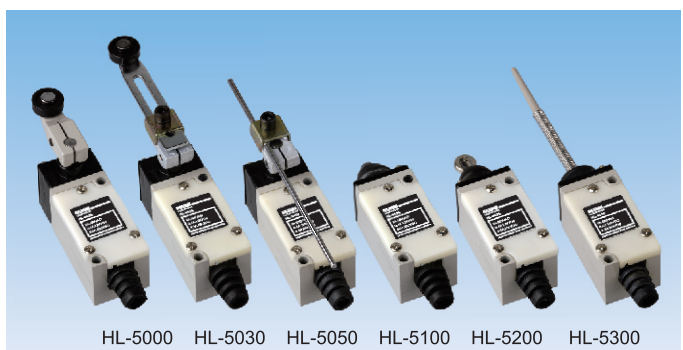
3SX5-J1161

3SX5-J161

3SX5-J108

3SX5-J10541

3SX5-J10511



HL-5000

HL-5030

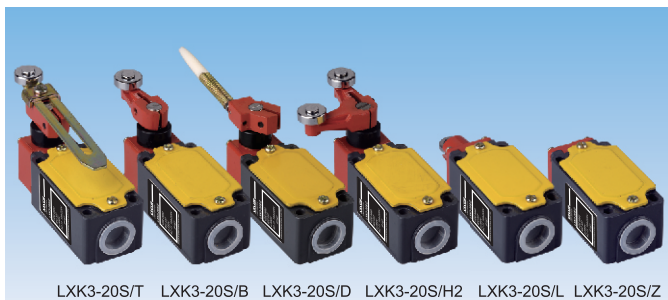
HL-5050

HL-5100

HL-5200

HL-5300

Limit Switch



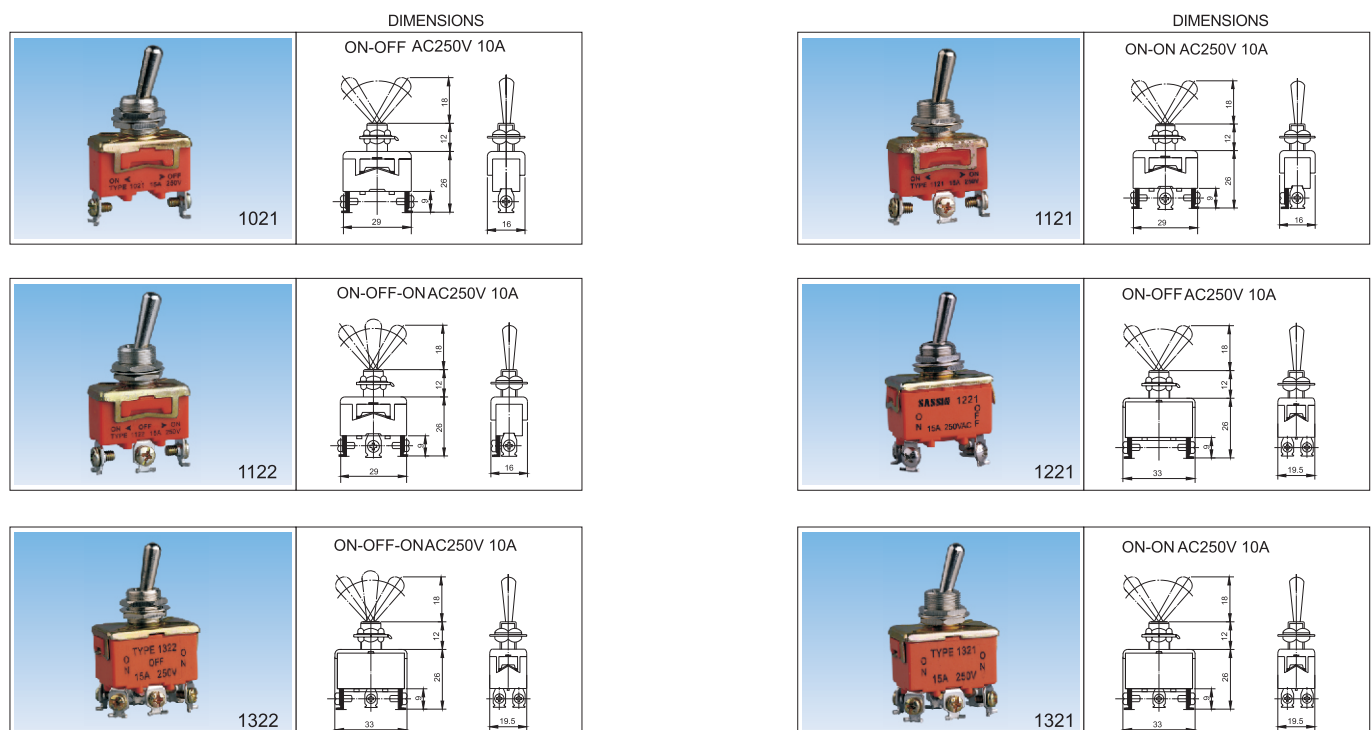
Micro Switch

■ Application

General purpose micro switches may be used in AC control circuits of 50 or 60 Hz, with a voltage up to 380V and a rated control capacity of 100VA or in DC control circuits with a voltage up to 220V and a rated control capacity of 10W.



Toggle Switch

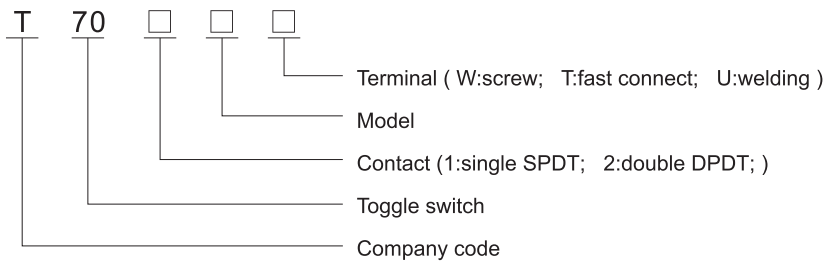


Toggle Switch



T700 series toggle switch is used for 50/60Hz, voltage up to 250V, current up to 10A.

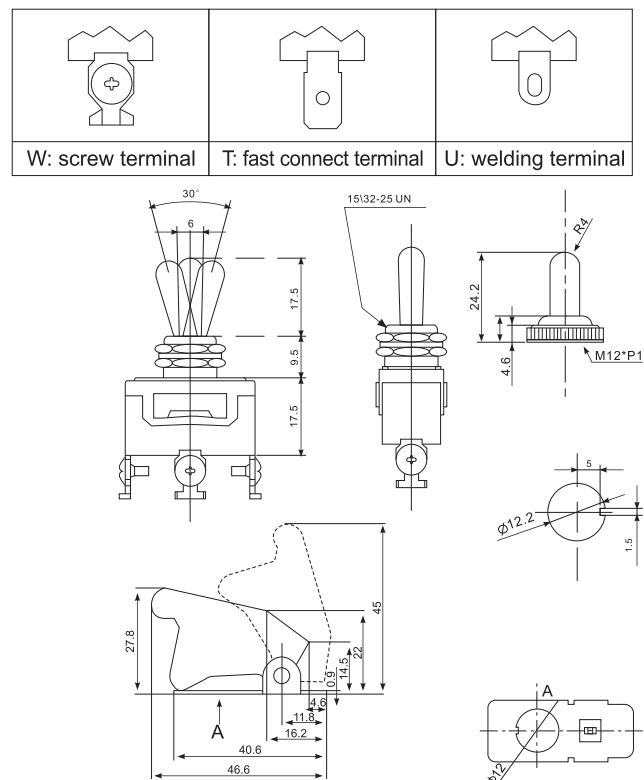
Model & Reference



Main technical parameters and performance

T701A	T701B	T701C	T701D	T701M	T701R
1Pole;1Stay ON-OFF	1Pole;2Stay ON-ON	1Pole;2Stay ON-OFF-ON	1Pole;2Stay (ON)-ON	1Pole;2Stay (ON)-OFF-(ON)	1Pole;2Stay (ON)-OFF-ON
T702A	T702B	T702C	T702D	T702M	T702R
2Pole;1Stay ON-OFF	2Pole;2Stay ON-ON	2Pole;2Stay ON-OFF-ON	2Pole;2Stay (ON)-ON	2Pole;2Stay (ON)-OFF-(ON)	2Pole;2Stay (ON)-OFF-ON

Contact resistant	$\geq 15\text{m}\Omega$ (initial)
Insulation resistant	$\leq 15\text{m}\Omega$ ($U_i \geq 660\text{V}$)
Withstand voltage	2000VAC, 50/60Hz last 1 min
Vibration	10 to 55 Hz, 1.5mm double vibration
Ambient Temperature	-25°C ~ 80°C
Humidity	$\leq 80\%\text{RH}$
Life	Mechanical life $\leq 50,000$
	Electrical life $\leq 10,000$



Proximity Switch



■ Model explanation of proximity switch:

L M18-30 05 N A □
1 2 3 4 5 6 7

No.	Composition	Code and definition		
1	Switch category	L:inductance type A:safety explosion-proof type H:reed type	C:capacitance type X:mimic linear type R: ring type	S:hall type
2	Appearance code	M□:cylinder type	T□:angular column type and plane installation type	
3	Working voltage	30:6-36VDC 20:90-250VAC 4:12-240VDC/24-240VAC	310:5-24VDC 210:24-250VAC	320:12-60VDC 220:380VAC
4	Detection distance	01:1mm	05:5mm	10:10mm
5	Output form	N:three-wire DC NPN output P:three-wire DC PNP output L:two-wire DC output	□: AC two-wire output J: relay contact output NP: NPN+PNP double output	W: AC three-wire output
6	Output state	A: normally open (NO) C: normally open+normally closed (NO+NC) MI: mimic current	B: normally colsed (NC) Mu: mimic voltage	
7	Subsidiary function	T: with aviation socket I: special requirement	Y: water proof, oil proof H: high temp resistant	

Photoelectric Switch



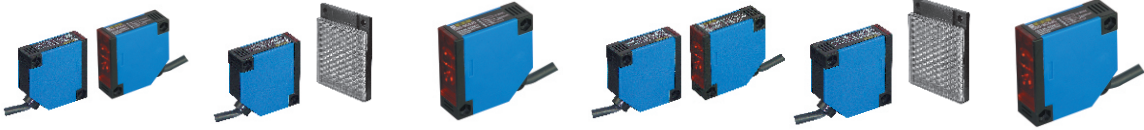
■ Model composition and definition of infrared ray photoelectric switch.

$\frac{G}{1} \frac{18}{2} - \frac{3}{3} \frac{A}{4} \frac{10}{5} \frac{N}{6} \frac{A}{7} \frac{\square}{8}$

No.	Composition	Code and definition
1	Basic form	G: infrared ray photoelectric switch
2	Outward appearance code	18, 50, 76
3	Working voltage	2.90-250VAC 3:10-30VDC 4:12-240VDC/24-240VAC Special voltage
4	Detection way	A: diffused reflection type(scattered reflection type) B: feedback reflection type mirror(mirror reflection type) C: penetration type(correlation type) D: marking detection type G: optical fibre type
5	Detection distance	05:5cm 10:10cm 3:3cm 101:10m
6	Output form	N: NPN transistor output P: PNP transistor output J: Relay contact output L: AC two-wire output S: with two outputs: NPN and PNP
7	Output state	A: Normally open(light entering ON) B: Normally closed (light sheltering ON) C: normally open+normally closed
8	Subsidiary	T1: front delay T2: rear delay T: with aviation connector I: special requirement

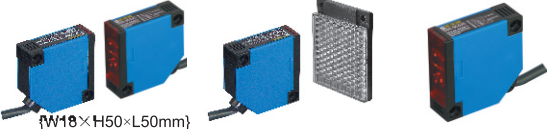
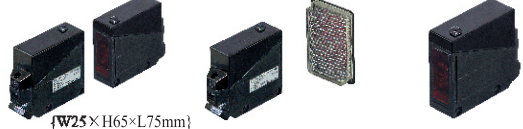
Photoelectric Switch

■ PHOTO SENSOR (G50 SERIES)

Type	Free voltage,Relay contact output					
Model	Through beam	Retroreflective(*1)	Diffuse	Through beam	Retro reflective (*1)	Diffuse
	G50-3C5JC	G50-3B4JC	G50-3A30JC	G50-2C5JC	G50-2B4JC	G50-2A30JC
Appearances & dimensions W18×H50×L50mm						
Detecting distance	5m	0.1-3.5m	300mm (100×100mm Non glossy white paper)	5m	0.1-3.5m	300mm (100×100mm Non glossy white paper)
Detecting target	Opaque material of Min. φ 16mm	Opaque material of Min. φ 60mm	Transpqrnt, Translucent, Opaque materials	Opaque material of Min. φ 16mm	Opaque material of Min. φ 60mm	Transpqrnt, Translucent, Opaque materials
Hysterisis			Max.15% at detecting distance			Max.15% at detecting distance
Response time	Max.20mS			Max.20mS		
Power supply	DC10-30V±10%(Ripple P-P Max10%)			90 to 250VAC±10%50/60Hz, Ripple		
Sensitivity			Adjustable by VR			Adjustable by VR
Operating	Selectable Light ON/D or Dark ON by slide switch					
Control output	Relay contact output <div><input type="checkbox"/> Capacity: 30VDC 3A Resistive load,250VAC 3A Resistive load <input type="checkbox"/> Contact orde: 1C</div>					
Protection circuit						
Protection	IP50 (IEC Standard)					
Material	Case: ABS、Lens cover: Acryl、Lens: Acryl					
Cable	φ 6.0mm, 5P, Length:2m(Emitter of through-beam type φ :6.0mm,2P,length:2m)					

*(*1)Detecting distance and detecting target of retroreflective type is the value for MS-2 and detecting distance shows available setting range of MS-2,It is able to detect the target at under 0.1m.



■ PHOTO SENSOR (G50/G74 SERIES)

Type	Free voltage, Relay contact output					
Model	Through beam	Retroreflective(*1)	Diffuse	Through beam	Retro reflective (*1)	Diffuse
	G50-4C5JC	G50-4B4JC	G50-4A30JC	G74-3C7JC	G74-3B4JC	G74-3A70JC
Appearances & dimensions	 {W18×H50×L50mm}			 {W25×H65×L75mm}		
Detecting distance	5m	0.1-3.5m	300mm (100×100mm Non glossy white paper)	7m	0.1-3.5m	700mm (200×200mm Non glossy white paper)
Detecting target	Opaque material of Min. φ 16mm	Opaque material of Min. φ 60mm	Transpqrnt, Translucent, Opaque materials	Opaque material of Min. φ 15mm	Opaque material of Min. φ 60mm	Transpqrnt, Translucent, Opaque materials
Hysterisis	_____		Max.15% at detecting distance	_____		Max.20% at detecting distance
Response time	Max.20mS			Max.20mS		
Power supply	24to240VAC ± 10%50/60Hz, 24to240VDC ± 10%(Ripple P-P: Max10%)			10to30VDC ± 10%(Ripple P-P: Max10%)		
Sensitivity	_____		Adjustable by VR	_____		Adjustable by VR
Operating	Selectable Light ON/D or Dark ON by slide switch					
Control output	Relay contact output <input type="checkbox"/> Capacity: 30VDC 3A Resistive load, 250VAC 3A Resistive load Contact orde: 1C					
Protection	IP54 (IEC Standard)			IP48 (IEC Standard)		
Protection circuit	_____			Self-diagnostic Output – Green LED turns on at unstable operation		
Material	Case: ABS、Lens cover: Acryl、Lens: Acryl			Timer function ON Delay, OFF Delay, Selectable one shot delay by slide switch Delay Time :0.1 to 5sec adjustable by VR		
Cable	φ 6.0mm, 5P, Length:2m(Emitter of through-beam type φ :6.0mm, 2P, length:2m)					

*(*1)Detecting distance and detecting target of retroreflective type is the value for MS-2 and detecting distance shows available setting range of MS-2,It is able to detect the target at under 0.1m.



Photoelectric Switch

PHOTO SENSOR (G74 SERIES)

Type	Free voltage,Relay contact output					
Model	Through beam	Retroreflective(*1)	Diffuse	Through beam	Retro reflective (*1)	Diffuse
	G74-2C7JC	G74-2B4JC	G74-2A70JC	G740-4C75JC	G74-4B4JC	G74-4A70JC
Appearances & dimensions						
Detecting distance	7m	0.1-3.5m	700mm (200×200mm Non glossy white paper)	7m	0.1-3.5m	700mm (200×200mm Non glossy white paper)
Detecting target	Opaque material of Min. ϕ 15mm	Opaque material of Min. ϕ 60mm	Transpqrnt, Translucent, Opaque materials	Opaque material of Min. ϕ 15mm	Opaque material of Min. ϕ 60mm	Transpqrnt, Translucent, Opaque materials
Hysterisis	_____		Max.20% at detecting distance	_____		Max.20% at detecting distance
Response time	Max.20mS			Max.20mS		
Power supply	AC90-250V ± 10%50/60Hz			24to240VAC ± 10%50/60Hz,24to240VDC ± 10%(Ripple P-P: Max10%)		
Sensitivity	_____		Adjustable by VR	_____		Adjustable by VR
Operating	Selectable Light ON/D or Dark ON by slide switch					
Control output	Relay contact output <input type="checkbox"/> Capacity: 30VDC 3A Resistive load,250VAC 3A Resistive load Contact orde: 1C					
Self-diagnosticOutput	Green LED turns on at unstable operation					
Timer function	ON D elay,OFF Delay,Selectable one shot delay by slide switch Delay Time :0.1 to 5sec adjustable by VR					
Protection	IP48(IEC Standard)			IP54(IEC Standard)		

(*1) Detecting distance and detecting target of retroreflective type is the value for MS-2 and detecting distance shows available setting range of MS-2, It is able to detect the target at under 0.1m.





PHOTO SENSOR (BEN SERIES)

Type	Free voltage,Relay contact output					
Model	Through beam	Retroreflective(*1)	Diffuse	Through beam	Retro reflective (*1)	Diffuse
	BEN10M-TDR	BEN5M-MDR	BEN500-DDR	BEN10M-TAR	BEN5M-MAR	BEN500-DAR
Appearances & dimensions	 W18×H50×L50mm			 {W18×H50×L50mm}		
Detecting distance	10m	0.1-5m	500mm(100×100mm Non glossy white paper)	10m	0.1-5m	500mm (100×100mm Non glossy white paper)
Detecting target	Opaque material of Min. φ 16mm	Opaque material of Min. φ 60mm	Transpqrnt, Translucent, Opaque materials	Opaque material of Min. φ 16mm	Opaque material of Min. φ 60mm	Transpqrnt, Translucent, Opaque materials
Hysterisis	_____		Max.15% at detecting distance	_____		Max.15% at detecting distance
Response time	Max.20mS			Max.20mS		
Power supply	DC10-30V±10%(Ripple P-P Max10%			90 to 250VAC±10%50/60Hz, Ripple		
Sensitivity	_____		Adjustable by VR	_____		Adjustable by VR
Operating	Selectable Light ON/D or Dark ON by slide switch					
Control output	Relay contact output <input type="checkbox"/> Capacity: 30VDC 3A Resistive load,250VAC 3A Resistive load Contact orde: 1C					
Protection circuit	_____			_____		
Protection	IP50 (IEC Standard)			IP50 (IEC Standard)		
Material	Case: ABS、Lens cover: Acryl、Lens: Acryl			Case: ABS、Lens cover: Acryl、Lens: Acryl		
Cable	φ 6.0mm,5P,Length:2m(Emitter of through-beam type φ :6.0mm,2P,length:2m)			φ 6.0mm,5P,Length:2m(Emitter of through-beam type φ :6.0mm,2P,length:2m)		

(*1) Detecting distance and detecting target of retroreflective type is the value for MS-2 and detecting distance shows available setting range of MS-2, It is able to detect the target at under 0.1m.



Photoelectric Switch

■ PHTO SENSOR (BEN/BX SERIES)

Type	Free voltage,Relay contact output					
Model	Through beam	Retroreflective(*1)	Diffuse	Through beam	Retro reflective (*1)	Diffuse
	BEN10M-TFR	BEN5M-MFR	BEN500-DFR	BX15M-TDR	BX5M-MDR	BX700-DDR
Appearances & dimensions	 W18×H50×L50mm			 W25×H67×L81mm		
Detecting distance	10m	0.1-5m	500mm (100×100mm Non glossy white paper)	15m	0.1-5m	700mm (200×200mm Non glossy white paper)
Detecting target	Opaque material of Min. ϕ 16mm	Opaque material of Min. ϕ 60mm	Transpqrnt, Translucent, Opaque materials	Opaque material of Min. ϕ 15mm	Opaque material of Min. ϕ 60mm	Transpqrnt, Translucent, Opaque materials
Hysterisis	_____		Max.15% at detecting distance	_____		Max.20% at detecting distance
Response time	Max.20mS			Max.20mS		
Power supply	24to240VAC±10%50/60Hz,24to240VDC±10%(Ripple P-P: Max10%)			10to30VDC±10%(Ripple P-P: Max10%)		
Sensitivity	_____		Adjustable by VR	_____		Adjustable by VR
Operating	Selectable Light ON/D or Dark ON by slide switch					
Control output	Relay contact output <div><input type="checkbox"/> Capacity: 30VDC 3A Resistive load,250VAC 3A Resistive load Contact orde: 1C</div>					
Protection circuit	_____			Self-diagnostic Output: Green LED turns on at unstable operation		
Protection	IP54 (IEC Standard)			Timer function: ON D elay,OFF Delay,Selectable one shot delay by slide switch Delay Time :0.1 to 5sec adjustable by VR		
Material	Case: ABS、Lens cover: Acryl、Lens: Acryl					
Cable	ϕ 6.0mm,5P,length:2m(Emitter of through-beam type ϕ :6.0mm,2P,length:2m)			Protection: IP48(IEC Standard)		

(*1) Detecting distance and detecting target of retroreflective type is the value for MS-2 and detecting distance shows available setting range of MS-2. It is able to detect the target at under 0.1m.

■ PHTO SENSOR (BX SERIES)

Type	Free voltage,Relay contact output					
Model	Through beam	Retroreflective(*1)	Diffuse	Through beam	Retro reflective (*1)	Diffuse
	BX15M-TAR	BX5M-MAR	BX700-DAR	BX15M-TFR	BX5M-MFR	BX700-DFR
Appearances & dimensions	 W25×H67×L81mm			 W25×H67×L81mm		
Detecting distance	15m	0.1-5m	700mm(200×200mm Non glossy white paper)	15m	0.1-5m	700mm (200×200mm Non glossy white paper)
Detecting target	Opaque material of Min. φ 15mm	Opaque material of Min. φ 60mm	Transpqrnt, Translucent, Opaque materials	Opaque material of Min. φ 15mm	Opaque material of Min. φ 60mm	Transpqrnt, Translucent, Opaque materials
Hysterisis	_____		Max.20% at detecting distance	_____		Max.20% at detecting distance
Response time	Max.20mS			Max.20mS		
Power supply	AC90-250V ± 10%50/60Hz			24to240VAC ± 10%50/60Hz,24to240VDC ± 10%(Ripple P-P: Max10%)		
Sensitivity	_____		Adjustable by VR	_____		Adjustable by VR
Operating	Selectable Light ON/D or Dark ON by slide switch					
Control output	Relay contact output <input type="checkbox"/> Capacity: 30VDC 3A Resistive load,250VAC 3A Resistive load Contact orde: 1C					
Self-diagnostic Output	Green LED turns on at unstable operation			Green LED turns on at unstable operation		
Timer function	ON D elay,OFF Delay,Selectable one shot delay by slide switch			Delay Time :0.1 to 5sec adjustable by VR		
Protection	IP48(IEC Standard)			IP54(IEC Standard)		

3SY-1

3SY-2

3SY-3

3SY-4

3SY-5

"2"-Plastics clamp plate screw tightened type(with mark)

3S Y-□□□/□

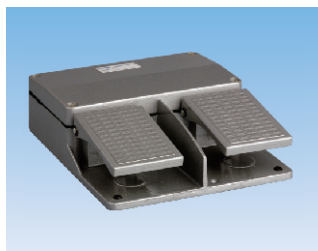
- 3S — Company code
- Y — Fluid level controller code
- — Outline code(see note1)
- — Enclosure body colour code(see note2)
- — Enclosure edge colour code(see note2)
- /□ — Weight code(see note3)

8-12

Pedal Switch

■ Application

Pedal switches are widely used in machine, light-textile, medicine, transportation, industry and automatic production line.



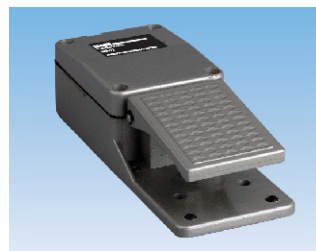
SFMS-10



SFMS-1



SFMP-1



MD-17



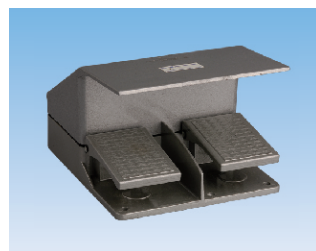
YDT1-101



3ST1-1



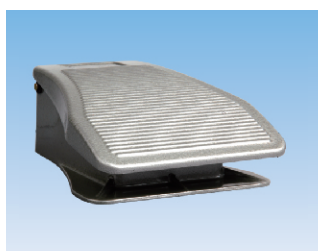
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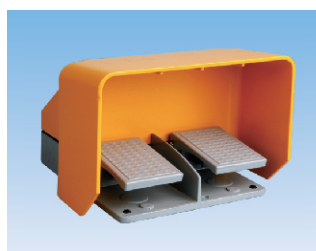
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3ST1-20



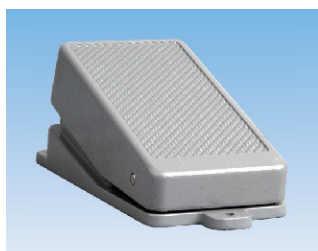
SCF-1



MD-16H



MD-13H



MD-8



KH-8012



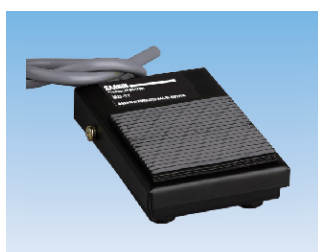
VFS-201



FS-3



FS-3S



FS-1

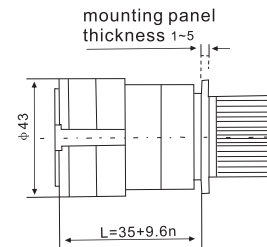
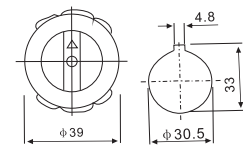
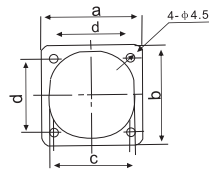
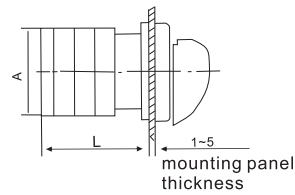


MD-19



KH-17

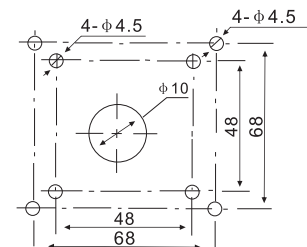
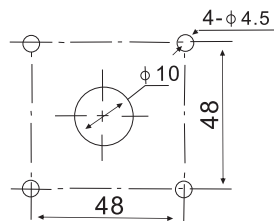
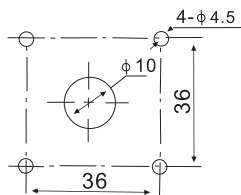
3SLW28 Changeover Switches



Small panel mounting dimension diagram

Big panel mounting dimension diagram

Oversize panel mounting dimension diagram



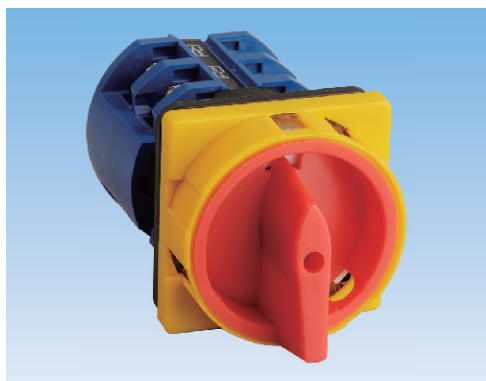
■ Main technical parameters

Type	Ith A	Ui V	Ue V	AC-21A	AC-22A	AC-23A		AC-2		AC-3		AC-4		AC-15	DC-13
				Ie A	Ie A	Ie A	P kw	Ie A	P kw	Ie A	P kw	Ie A	P kw	Ie A	Ie A
3SLW28-20	20	660	440	20	20	15	7.5	15	7.5	11	5.5	3.5	1.5	4	
			240											5	1
			120												5
3SLW28-25	25		440	25	25	22	11	22	11	15	7.5	6.5	3	5	
			240											8	1.5
			120												9
3SLW28-32	32	440	32		30	15	30	15	22	11	11	5.5	6		
		240											14	11	
		120												25	
3SLW28-63	63	440	63		57	30	57	30	36	18.5	15	7.5			
		240													
		120												55	
3SLW28-125	125	125	125	125	100	45	100	45	50	22	18	12		90	
3SLW28-160	160	160	160	160	115	57	115	57	65	33	25	15		110	
Operating cycles	No load			8500										Electrical life (times)	
	With load			1500										Mechanical life (times)	
	Total			1000										60X10 ⁴	

■ Outline and installation dimensions

Type	Panel shape	External dimension(mm)				Mounting dimension(mm)			
		A	B	C	L	a	b	d1	d2
3SLW28-20	M1 square	48	48	43	22+9.6n	36	36	φ 8.5	φ 4.5
	M1 rectangular	48	60	43	22+9.6n	36	36	φ 8.5	φ 4.5
	M2 square	64	64	43	25+9.6n	48	48	φ 10	φ 4.5
	M2 rectangular	64	80	43	25+9.6n	48	48	φ 10	φ 4.5
3SLW28-25	M1 square	48	48	45.2	23+12.8n	36	36	φ 8.5	φ 4.5
	M1 rectangular	48	60	45.2	23+12.8n	36	36	φ 8.5	φ 4.5
	M2 square	64	64	45.2	26.5+12.8n	48	48	φ 10	φ 4.5
	M2 rectangular	64	80	45.2	26.5+12.8n	48	48	φ 10	φ 4.5
3SLW28-32	M2 square	64	64	58	29.2+12.8n	48	48	φ 10	φ 4.5
	M2 rectangular	64	80	58	29.2+12.8n	48	48	φ 10	φ 4.5
	M2 square	64	64	66	29.2+21.5n	48	48	φ 10	φ 4.5
	M2 rectangular	64	80	66	29.2+21.5n	48	48	φ 10	φ 4.5
3SLW28-63	M3 square	88	88	66	29.2+21.5n	68	68	φ 10	φ 4.5
	M3 rectangular	88	107	66	29.2+21.5n	68	68	φ 10	φ 4.5
	M3 square	88	88	84	35+26.5n	68	68	φ 13	φ 6
	M3 rectangular	88	107	84	35+26.5n	68	68	φ 13	φ 6
3SLW28-125	M3 square	88	88	88	35+26.5n	68	68	φ 13	φ 6
	M3 rectangular	88	107	88	35+26.5n	68	68	φ 13	φ 6

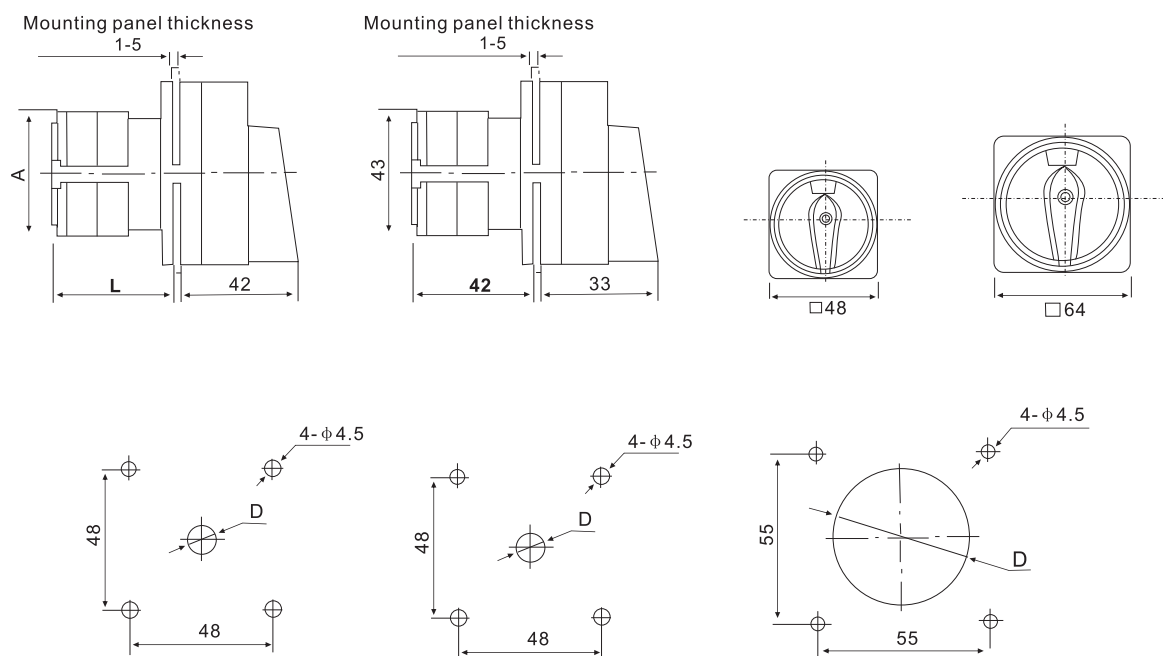
3SLW28GS Changeover Switches



■ Main technical parameters

Type		3SLW28GS -20	3SLW28GS -25	3SLW28GS -32	3SLW28GS -63
Rated insulating voltage U_i	V	690	690	690	690
Rated operating voltage U_e	V	440	440	440	440
Conventional heating current I_{th}	A	20	25	32	63
Rated working current I_e					
AC-21A	A	20	25	32	63
AC-22A	A	20	25	32	63
AC-23A	A	15	22	30	57

■ Outline and installation dimensions



	Dimension (mm)		
	A	L	D
3SLW28GS-20	43	43	Ø 8.5
3SLW28GS-25	45.2	51	Ø 8.5
3SLW28GS-32	58	55	Ø 10
3SLW28GS-63	66	72.5	Ø 10
3SLW28GS-125	84	90	Ø 13
3SLW28GS-160	88	101	Ø 13

3SCS-68 Changeover Switches



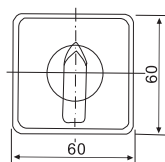
Main technical parameters

Type	Low voltage, low current (contact seat with white indication)	High voltage, high current (contact seat with blue indication)
Contact capacity	24V 0.1A	600V 15A
Contact impedance	During initial period, below 10 Ω	During initial period, below 50 Ω
Voltage withstand	2200VAC	60s
Insulation impedance	Over 100m Ω	500VAC
life	Mechanical: above 100,000 times	

Operation mode	Manual reset	Automatic reset
Switchover angle	30° 、 45° 、 60° 、 90°	45°
Switchover phase number	2-12phases	2-12phases

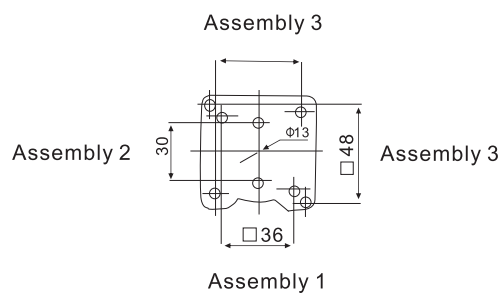
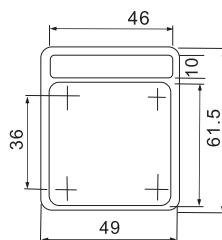
Outline and installation dimensions

Dimension diagram,



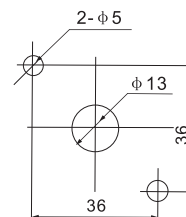
3SCS-68-52

Fixing hole dimension

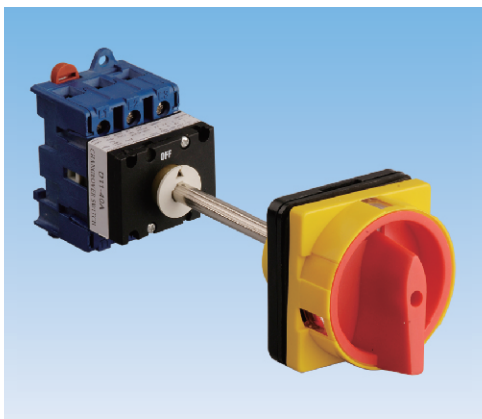


Assembly 1

3SCS-68-36



3SD11 Changeover Switch

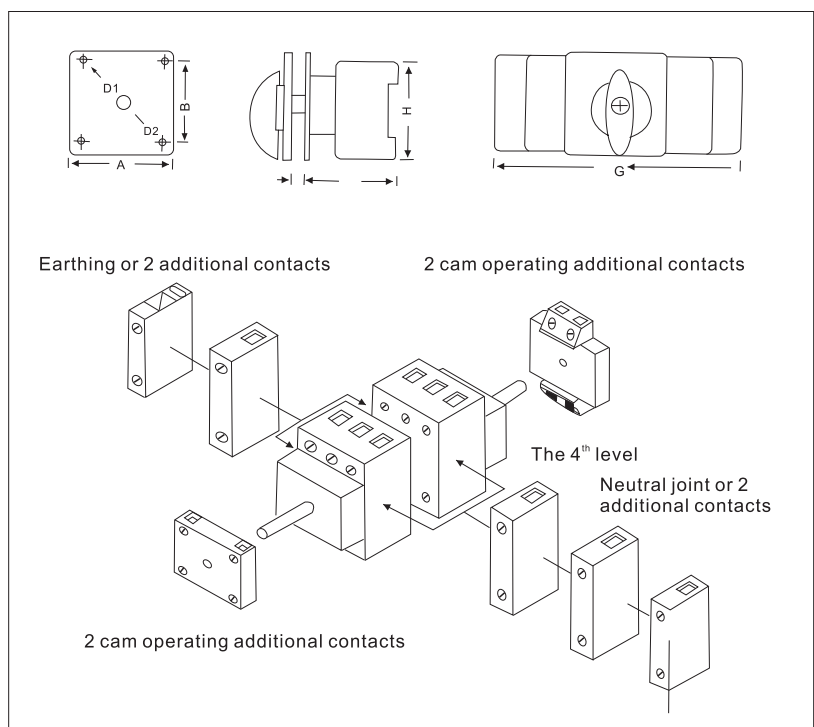


Main technical parameters

Control current or power Switch type	Application category	IEC/BS/VDE rated nominal values				
		Heating current I _{th}	Resistive load Ac21	Ac3 occasional switchover motor or high inductive load		Ac3 direct on-line starting motor
				3X220 ~240V	3X380 ~440V	
3SD11-25		25A	25A	4KW	7.5KW	3KW
3SD11-32		32A	32A	5.5KW	11KW	4KW
3SD11-40		40A	40A	7.5KW	15KW	7.5KW
3SD11-63		63A	63A	11KW	22KW	11KW
3SD11-80		80A	80A	18.5KW	30KW	15KW
3SD11-100		100A	100A	22KW	37KW	18.5KW

Switch	Type	NO. of poles	A	B	Cam	D ₁	D ₂	F	G	H	L
3SD11-25	On-Off	3pole	64	48	4	4	22	42	—	54	62
	On-Off	4pole	64	48	4	4	22	56	—	54	62
	On-Off	3pole+N	64	48	4	4	22	56	—	54	62
3SD11-32	On-Off	3pole+N+E	64	48	4	4	22	69	84	54	62
	On-Off	6pole	64	48	4	4	22	—	—	54	62
	On-Off	6pole	64	48	4	4	22	—	—	54	62
3SD11-40	On-Off	3pole	64	48	4	4	22	50	—	64	67
	On-Off	4pole	64	48	4	4	22	66	—	64	67
	On-Off	3pole+N	64	48	4	4	22	66	—	64	67
3SD11-63	On-Off	3pole+N+E	64	48	4	4	22	82	100	64	67
	On-Off	6pole	64	48	4	4	22	—	—	64	67
	On-Off	6pole	64	48	4	4	22	—	—	64	67
3SD11-80	On-Off	3pole	64	48	4	5.5	22	70	—	80	82
	On-Off	4pole	64	48	4	5.5	22	92	—	80	82
	On-Off	3pole+N+E	64	48	4	5.5	22	104	—	80	82
3SD11-100	On-Off	6pole	88	68	4	5.5	22	—	140	80	82
	On-Off	6pole	88	68	4	5.5	22	—	140	80	82
	On-Off	6pole	88	68	4	5.5	22	—	140	80	82

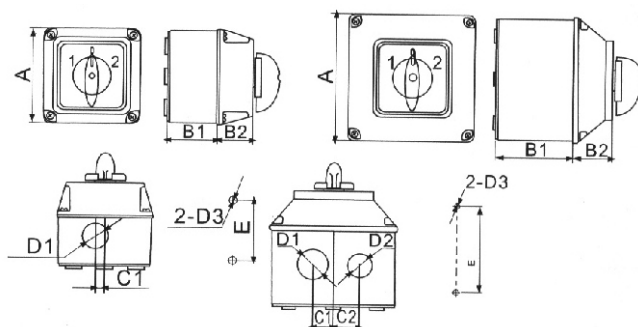
Outline and installation dimensions



3SLW28/F Enclosed changeover switch



Outline and installation dimensions



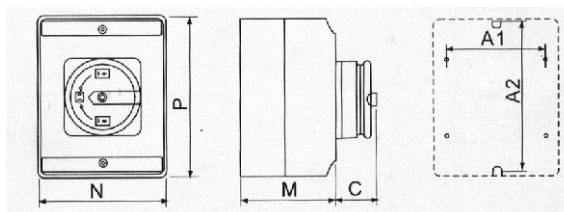
Main technical parameters

Types and specs	Outline dimension (mm)							Installation dimension (mm)	
	A	B1	B2	C1	C2	D1	D2	D3	E
3SLW28/F-20	□68.5	35.5	25.5	6.5		φ 18		φ 5	44
3SLW28/F-20	□68.5	45	25.5	6.5		φ 18		φ 5	44
3SLW28/F-20	□68.5	35.5	32.5	6.5		φ 18		φ 5	44
3SLW28/F-20	□68.5	45	32.5	6.5		φ 18		φ 5	44
3SLW28/F-25	□68.5	35.5	25.5	6.5		φ 18		φ 5	44
3SLW28/F-25	□68.5	45	25.5	6.5		φ 18		φ 5	44
3SLW28/F-25	□68.5	35.5	32.5	6.5		φ 18		φ 5	44
3SLW28/F-25	□68.5	45	32.5	6.5		φ 18		φ 5	44
3SLW28/F-32	□113	70.5	35.5	18	23.5	φ 27	φ 21	φ 5	44
3SLW28/F-63	□113	70.5	35.5	18	23.5	φ 27	φ 21	φ 5	44

3SD12 Enclosed changeover switch



Outline and installation dimensions



Main technical parameters

Types and specs	Outline dimension (mm)				Installation dimension (mm)	
	P	N	M	C	A1	A2
3SD12-20	125	100	85	35	60	115
3SD12-25	125	100	85	35	60	115
3SD12-32	175	114	100	35	60	165
3SD12-40	175	114	100	35	60	165
3SD12-63	240	160	120	45	142	193
3SD12-100	240	160	120	45	142	193

Changeover Switches



3SHZ12 power switch Technical parameters

Type	3SHZ12-16		3SHZ12-25		3SHZ12-40	
Rated working voltage Ue(V)	16		25		40	
Rated working current Ie(A)	500		500		500	
Rated insulating current Ui(V)	380	500	380	500	380	500
Rated heating current Lth(A)	16	10	25	16	40	24
Mechanical life (times)	3 × 10 ⁴					
Electrical life (times/n)	1 × 10 ⁴					



3SEP series universal changeover switch Technical parameters

Type	Lth A	Ui V	Ue V	AC-21A	AC-21A	AC-23A		AC-2		AC-3		AC-4		AC-15	DC-13
				le A	le A	le A	P kw	le A	P kw	le A	P kw	le A	P kw	le A	le A
3SEP-20	20	600	400	20	20	15	7.5	15	7.5	11	5.5	3.5	1.5	4	
			240											5	1
			120												5
3SEP-25	25		440	25	25	22	11	22	11	15	7.5	6.5	3	5	
			240											8	1.5
			120												9
3SEP-32	32		440	32	32	30	15	30	15	22	11	11	5.5	6	
			240											14	11
			120												25
3SEP-75	75		440	75	75	72	30	72	30	32	24	23	11.5		
			120												60
3SEP-125	125		440	125	125	90	45	90	45	36	45	30	18.5		
Number of cycles of operation		No-load	8500											Electrical life	
		loaded	1500											20×10 ⁴	6×10 ⁴
														Mechanical life (times)	
		Total	1000											60×10 ⁴	

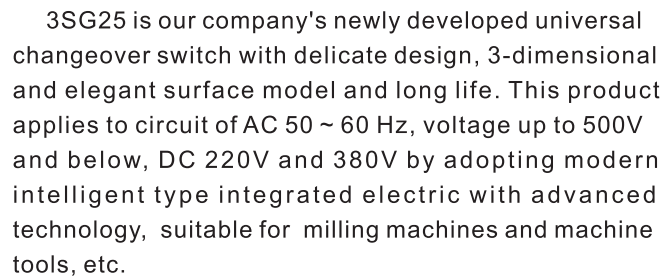


3SLB3, 3SLB4, 3SLB8 series universal combined switch Technical parameters

controlling current or power	Application category	IEC/BS/VD rated nominal value					
		Heat current Lth	Resistant load Ac21	Ac23 occasional switch over motor or high induction load		Ac3 direct on-line starting motor	
				3 × 220 ~240V	3 × 380 ~440V	3 × 220 ~240V	3 × 380 ~440V
Type of switch							
3SLB3-25		25A	25A	4kw	7.5kw	3kw	5.5kw
3SLB4-40		40A	40A	7.5kw	15kw	7.5kw	11kw
3SLB5-63		63A	63A	11kw	22kw	11kw	12.5kw

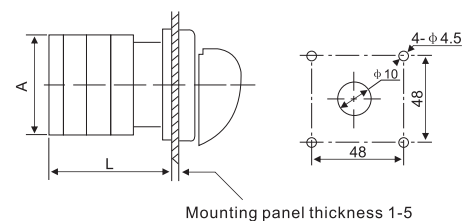


■ Application



1. Ambient air temperature's upper limit shall not exceed +40°C and its average temperature within 24 hours shall not exceed +35°C;
2. the lower limit shall be not less than -5°C;
3. Altitude of the installation place shall not exceed 2000m.
4. Relative humidity shall not exceed 50% when the ambient temperature is +40°C. Higher relative humidity is permissible at lower temperature for example, it can reach 90% at 20°C. Special measures should be taken to address the dew occurred occasionally due to temperature changes.

■ Outline and installation dimensions



Technical drawing of a mechanical assembly showing a side view and a top view.

Side View (Left): Shows a component with a total width of 102. A central section has a width of 45. A gap of 2 is indicated between the central section and the outer part.

Top View (Right): Shows a rectangular plate with a width of 31. It features four holes of diameter $\phi 4.5$ and a central hole of diameter $\phi 10$.

Type	lth A	Ui V	Ue V	AC-21A	AC-22A	AC-23A		AC-2		AC-3		AC-4		AC-15	DC-1
				le A	le A	le A	P kW	le A	P kW	le A	P kW	le A	P kW	le A	le A
3SG-25	20	660	440	20	20	15	7.5	15	7.5	11	5.5	3.5	1.5	4	
			240											5	1
			120												5
			440	25	25	22	11	22	11	15	7.5	6.5	3	5	