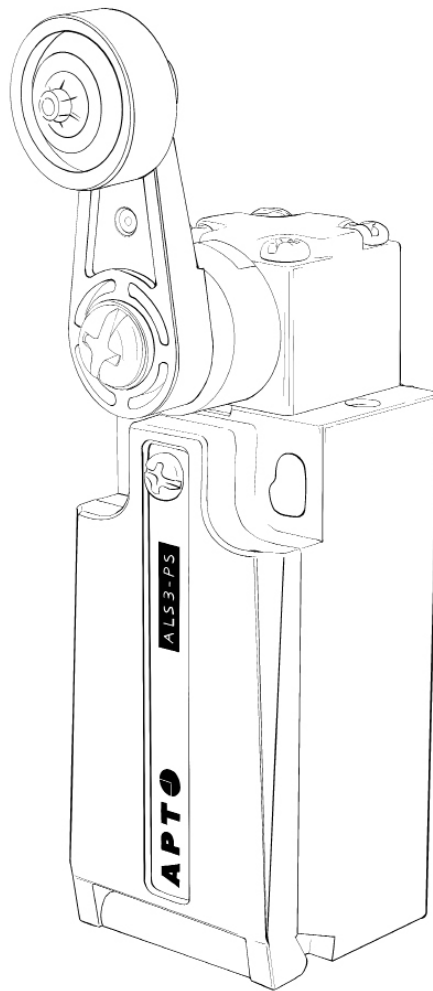




Limit Switch

ALS Series

Your brand of choice
www.si-apt.com

Limit Switch

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APT

ALS Series Limit Switch

ALS1-M/ALS1-P

CCC CE RoHS



Company Profile

APT has been established in 1993. Today it is now a Chinese leading manufacturer of low-voltage components and has been specialized in the manufacturing of low voltage products such as pushbuttons, indicators, cam switches and general-purpose relays. In August 2008, Siemens Electrical Apparatus Ltd. Suzhou (hereinafter referred to as "Siemens") made the wholly-owned acquisition of APT, putting the APT brand and related products under the operation of Siemens. With unified quality control and R&D resources of Siemens, APT focuses on manufacturing pushbuttons, indicators and other important low-voltage products such as tower lights, control cabinets, combined lights, current transformers and limit switches etc.

Through over 20 years of promotion and application, the APT products have been widely serving dozens of industrial fields in China including power, energy, rail transit, elevator, logistics, machine tool, etc. They have been successively selected and applied in Qinshan Nuclear Power Plant, the Three Gorges Project, Shenzhou V Spacecraft, Qinghai-Tibet Railway locomotives, "Harmony" Electric Multiple Unit, "Fuxing" Electric Multiple Unit, international airports and urban metros and have become the preferred brand for national key projects. At the same time, Siemens gives full play to its international operation experience to continuously enhance the management and business development of APT and better serve the Chinese market through advanced technology and improved product line.



ALS Series Limit Switch

Typical application fields, order code description

◦ Page 02

ALS3-PSeries Limit Switch

◦ Page 04

Technical Feature of ALS1-M

Installation method, installation hole dimensions, product order code selection list

◦ Page 16

Technical Feature of ALS1-P

Installation method, installation hole dimensions, product order code selection list

◦ Page 22

Ordering Instructions

Accessory order code selection list

◦ Page 28

© Typical application fields

- Machine tool equipment
- Textile machinery
- Rail transit
- ☒ Food & beverage equipment
- Conveyor and handling equipment: assembly line, conveyor belt, elevator, escalator
- Plastic injection machinery
- Packaging and printing machinery
- Heavy machinery equipment: crane, lifting machine



Order code description

Main order code

No.	$\frac{ALS}{1} \frac{\square}{2} - \frac{\square}{3} \frac{\square}{4} \frac{\square}{5} \frac{\square}{6} / \frac{\square}{7}$						
1	Main order code of product	ALS					
2	Product specification	1:28mm metal + 30mm plastic					
3	Enclosure material	M: Metal P: Plastic					
4	Contact type	Q: quick action S: slow action					
5	Contact code	11: 1NO 1NC					
6	Type of waterproof connector	A:M20 B:M16 C:Pg11 D:Pg13.5					
7	Actuator code	See pages 8~9 and pages 14~15 for details					

Accessory order code

No.	$\frac{ALS}{1} \frac{\square}{2} - \frac{\square}{3} \frac{F}{4} - \frac{\square}{5}$				
1	Main order code of product	ALS			
2	Product series	1:1 series 3:3 series			
3	Enclosure material	M: Metal P: Plastic			
4	Accessory				
5	Actuator code	See pages 17~19 for details			

ALS

APT

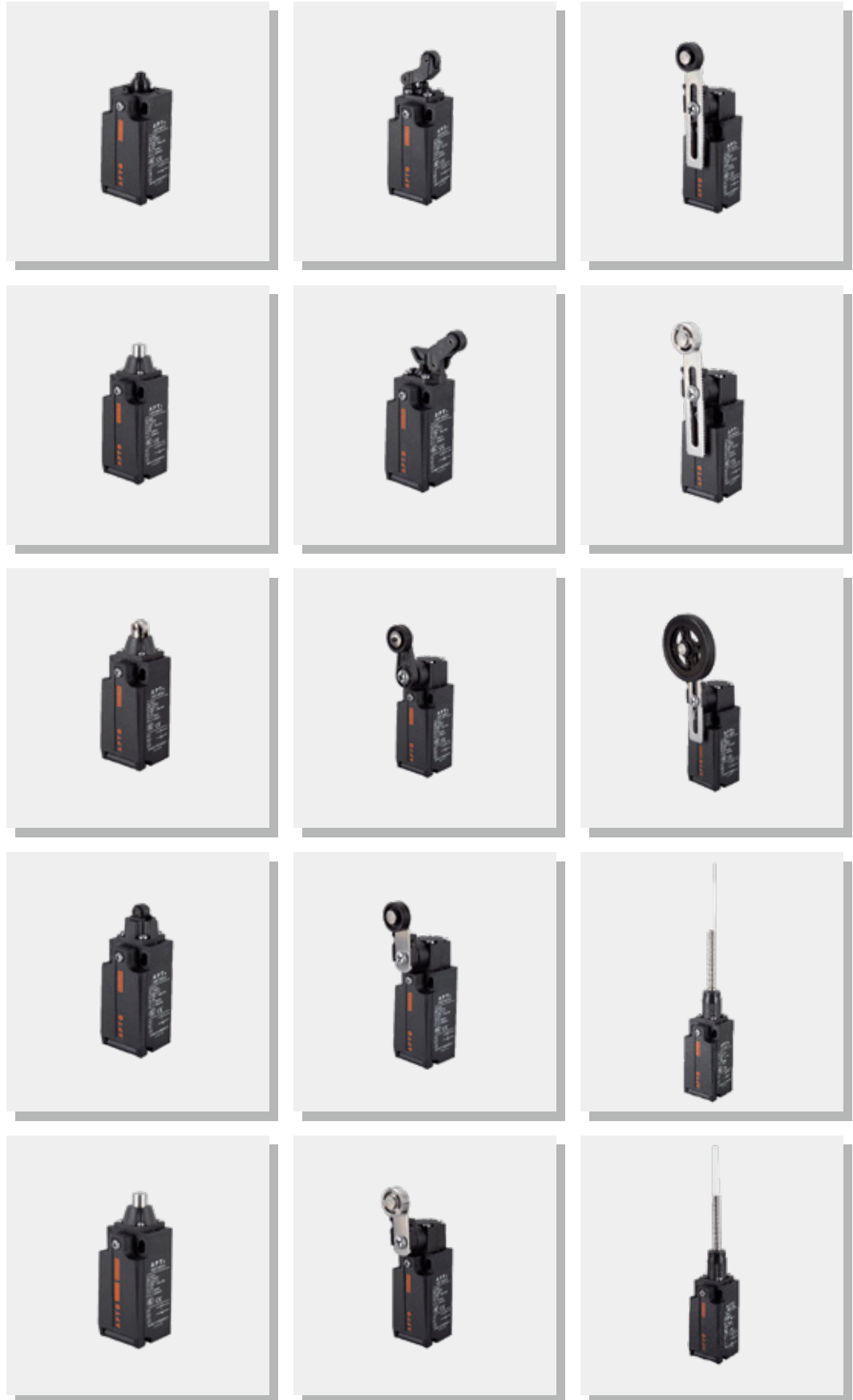


ALS3P-M Series Limit Switch

Product feature

- Protection class IP67.
- EN50047 installation.
- Hinge & flip upper cover, more user friendly.
- Two contact structures, quick action and slow action, covering more fields.
- Multiple types of waterproof connectors are available.
- Metal screw holes for easier installation and use.

ALS-3-P



ALS3-P

LIMIT SWITCH

ALS3-P ALS3-P SERIES LIMIT SWITCH

◎ 基本技术参数

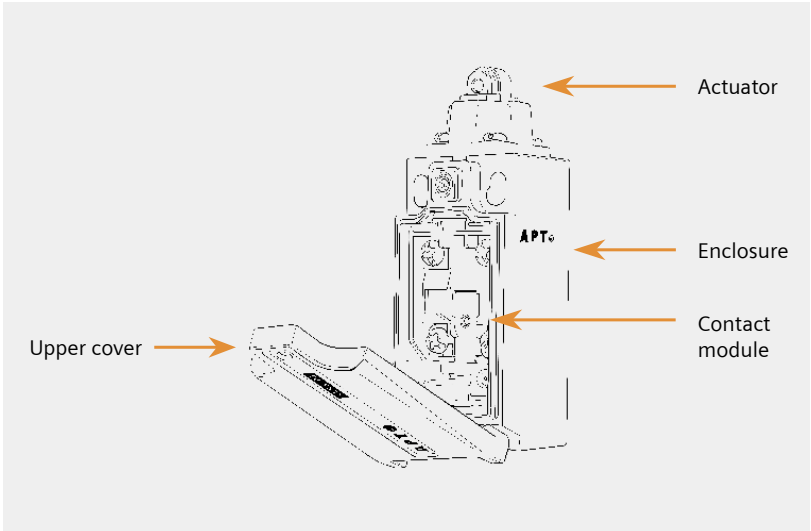
Product specification	ALS3-P
Standard	IEC60947-5-1 GB14048.5
Rated insulation voltage	AC500V
Power frequency withstand voltage	AC1890V 50Hz 1min
Conventional thermal current	10A
Product certification	CCC/CE
Mechanical endurance	About 15 million times *
Electrical endurance	500,000 times (inductive load)
Ambient temperature	-25~+70
Ambient humidity	<95%RH
Protection class	IP67
Action frequency	7,200 times/hour (mechanical action frequency)
Anti-impact class	30gn 18ms
Anti-vibration class	10~55Hz 0.75mm single amplitude
Contact material	Silver alloy
Forced break function	Yes
Wiring method	Minimum: 6 x0.5 Maximum: 2 x 1.5
Cable outer diameter	Applicable to ISO M16 x 1.5 cable sealing pipe inlet hole ISO M20 x 1.5 cable sealing pipe inlet hole PG11 PG13.5

注：除万向式。万向式机寿为 700 万次

◎ 额定触点容量

Rated insulation voltage Ui	Conventional thermal current Ith	AC-15	DC-13
AC500V	10A	250V/3A	220V/0.3A

备注：“/” 不适用



◎ Installation method



1. Loosen the screws of the upper cover and remove the upper cover.



2. Lead the waterproof connector in at the end of conductor.



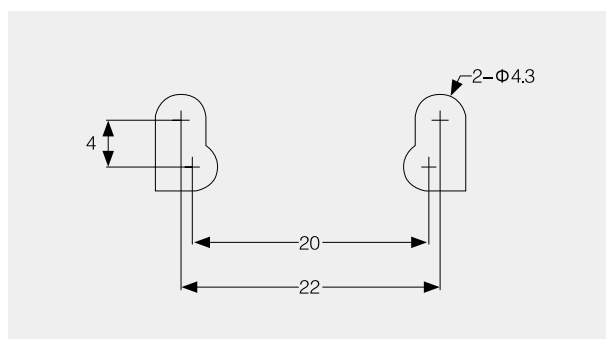
3. Connect the wire according to the requirements.



4. Fasten the screws to the upper cover.



5. Fasten the waterproof connector.



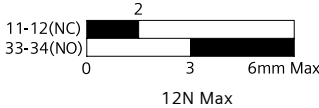
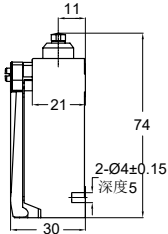
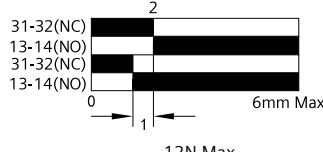
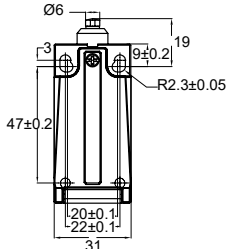
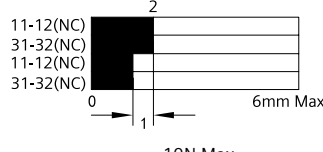
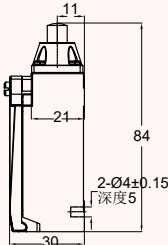
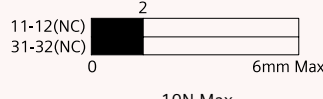
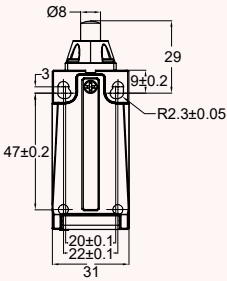
Installation hole dimensions

ALS3-P

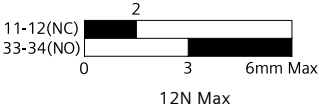
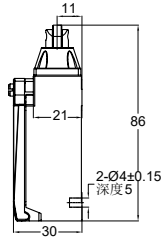
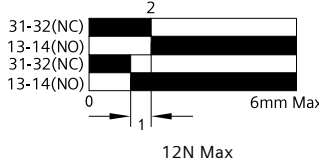
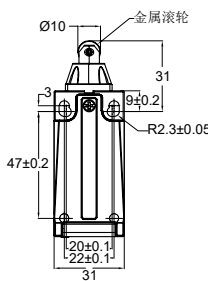
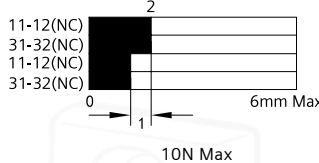
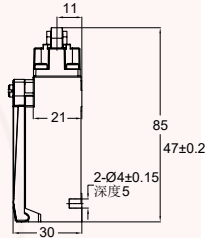
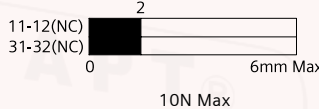
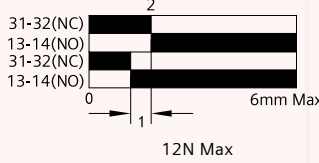
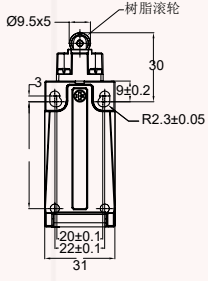
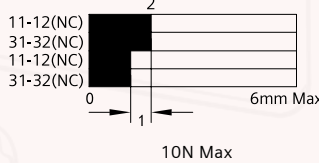
Precautions

- The torque of fastening the wiring screw to the contact module shall be between 0.6 and 0.8Nm.
- The torque of fastening the wiring screw to the upper cover shall be between 0.5 and 0.8Nm.
- Pay attention to the screws of the upper cover during installation and avoid violent installation to prevent damage to the metal screw holes of the body.

Product order code selection list

Name	Type	Module type	Order code	Stroke diagram	Dimension
Circular plunger		Slow action 1NO+1NC	ALS3-PS11 □ /AO		
		Slow action 2NC	ALS3-PS02 □ /AO		
		Quick action 1NO+1NC	ALS3-PQ11 □ /AO		
		Quick action 2NC	ALS3-PQ02 □ /AO		
ALS3-P Circular plunger (SS)		Slow action 1NO+1NC	ALS3-PS11 □ /A1		
		Slow action 2NC	ALS3-PS02 □ /A1		
		Quick action 1NO+1NC	ALS3-PQ11 □ /A1		
		Quick action 2NC	ALS3-PQ02 □ /A1		

Note: □ means the type of waterproof connector (A:M20, B:M16, C:Pg11, D:Pg13.5)

名称	样式	模块类型	订货型号	行程图	外形尺寸
Roller plunger (SS)		Slow action 1NO+1NC	ALS3-PS11 □ /A2		
		Slow action 2NC	ALS3-PS02 □ /A2		
		Quick action 1NO+1NC	ALS3-PQ11 □ /A2		
		Quick action 2NC	ALS3-PQ02 □ /A2		
Roller plunger (plastic)		Slow action 1NO+1NC	ALS3-PS11 □ /A3		
		Slow action 2NC	ALS3-PS02 □ /A3		
		Quick action 1NO+1NC	ALS3-PQ11 □ /A3		
		Quick action 2NC	ALS3-PQ02 □ /A3		

Note: □ means the type of waterproof connector (A:M20, B:M16, C:Pg11, D:Pg13.5)

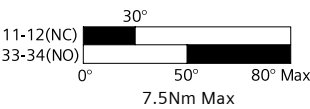
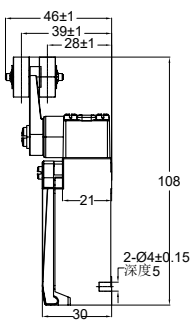
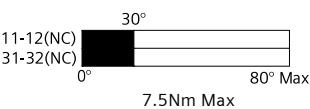
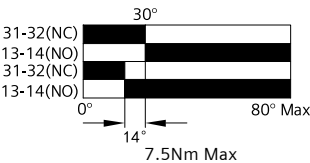
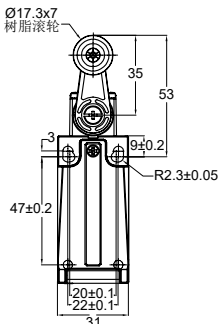
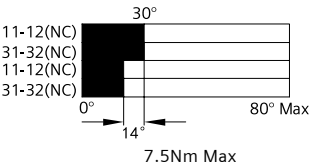
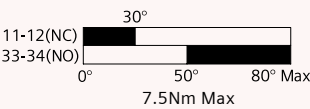
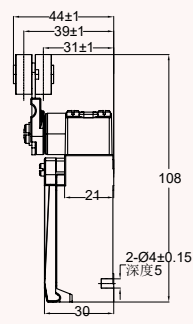
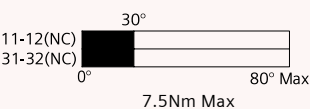
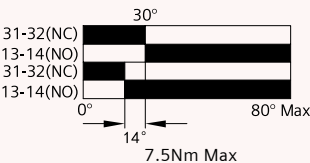
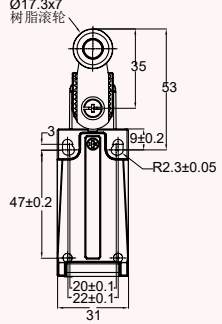
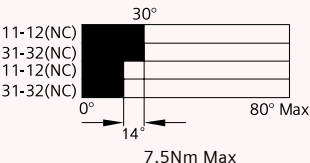
ALS3-P

LIMIT SWITCH

ALS3-P ALS3-P SERIES LIMIT SWITCH

名称	样式	模块类型	订货型号	行程图	外形尺寸
Oblique angle rocker arm (horizontal)		Slow action 1NO+1NC	ALS3-PS11 □ /B1		
		Slow action 2NC	ALS3-PS02 □ /B1		
		Quick action 1NO+1NC	ALS3-PQ11 □ /B1		
		Quick action 2NC	ALS3-PQ02 □ /B1		
ALS3-P		Slow action 1NO+1NC	ALS3-PS11 □ /B2		
		Slow action 2NC	ALS3-PS02 □ /B2		
		Quick action 1NO+1NC	ALS3-PQ11 □ /B2		
		Quick action 2NC	ALS3-PQ02 □ /B2		

Note: □ means the type of waterproof connector (A:M20, B:M16, C:Pg11, D:Pg13.5)

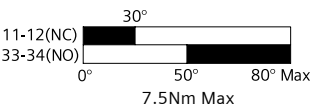
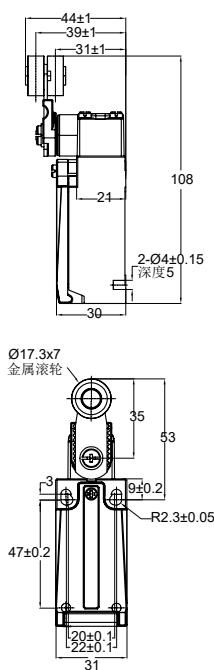
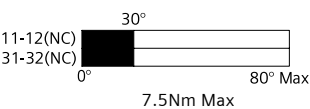
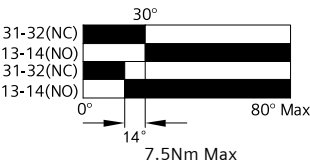
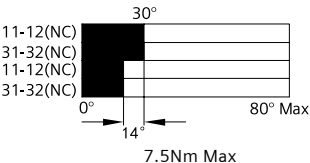
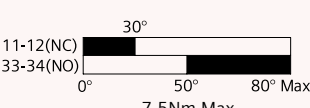
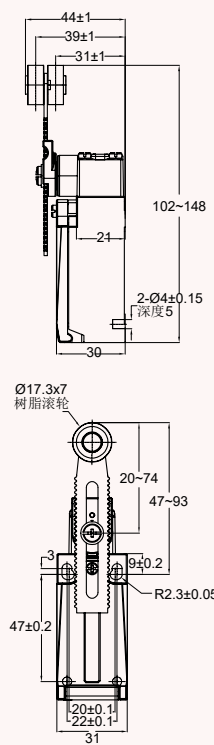
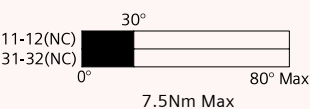
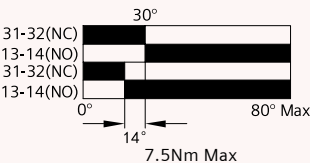
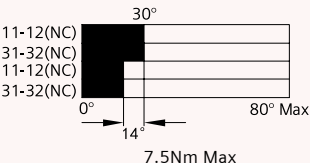
名称	样式	模块类型	订货型号	行程图	外形尺寸
Bidirectional rocker arm (resin roller resin rocker)		Slow action 1NO+1NC	ALS3-PS11 □ /C1	 11-12(NC) 33-34(NO) 0° 50° 80° Max 7.5Nm Max	 46±1 39±1 28±1 108 21 2-Ø4±0.15 30
		Slow action 2NC	ALS3-PS02 □ /C1	 11-12(NC) 31-32(NC) 0° 80° Max 7.5Nm Max	
		Quick action 1NO+1NC	ALS3-PQ11 □ /C1	 31-32(NC) 13-14(NO) 31-32(NC) 13-14(NO) 0° 14° 80° Max 7.5Nm Max	 Ø17.3x7 树脂滚轮 35 53 3 9±0.2 R2.3±0.05 47±0.2 20±0.1 22±0.1 31
		Quick action 2NC	ALS3-PQ02 □ /C1	 11-12(NC) 31-32(NC) 11-12(NC) 31-32(NC) 0° 14° 80° Max 7.5Nm Max	
Bidirectional rocker arm (resin roller metal rocker)		Slow action 1NO+1NC	ALS3-PS11 □ /C2	 11-12(NC) 33-34(NO) 0° 50° 80° Max 7.5Nm Max	 44±1 39±1 31±1 108 24 2-Ø4±0.15 30
		Slow action 2NC	ALS3-PS02 □ /C2	 11-12(NC) 31-32(NC) 0° 80° Max 7.5Nm Max	
		Quick action 1NO+1NC	ALS3-PQ11 □ /C2	 31-32(NC) 13-14(NO) 31-32(NC) 13-14(NO) 0° 14° 80° Max 7.5Nm Max	 Ø17.3x7 树脂滚轮 35 53 3 9±0.2 R2.3±0.05 47±0.2 20±0.1 22±0.1 31
		Quick action 2NC	ALS3-PQ02 □ /C2	 11-12(NC) 31-32(NC) 11-12(NC) 31-32(NC) 0° 14° 80° Max 7.5Nm Max	

Note: □ means the type of waterproof connector (A:M20, B:M16, C:Pg11, D:Pg13.5)

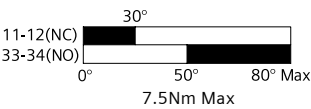
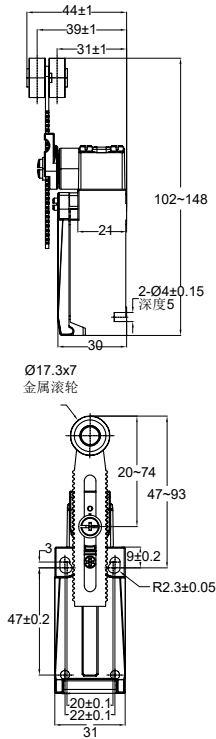
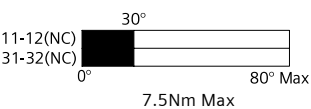
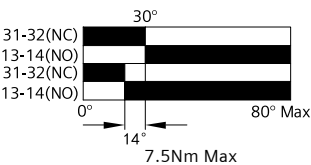
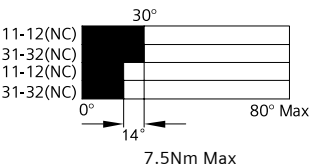
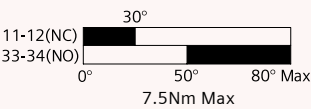
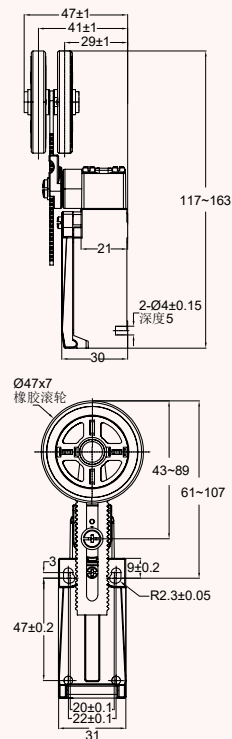
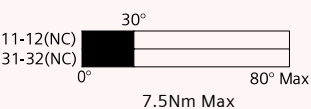
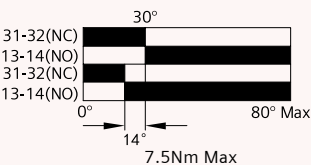
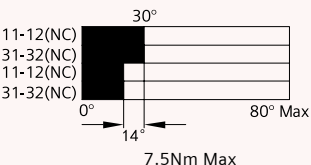
ALS3-P

ALS3-P LIMIT SWITCH

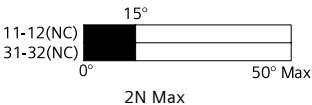
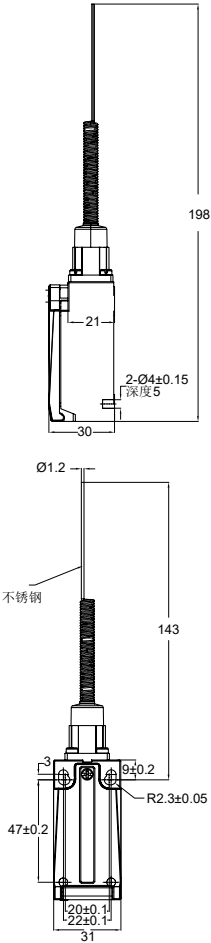
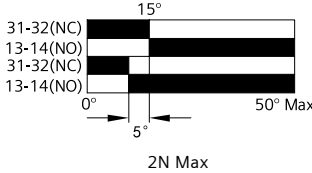
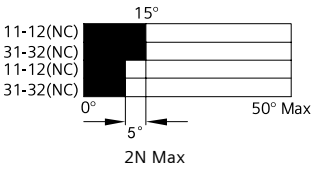
ALS3-P ALS3-P SERIES LIMIT SWITCH

名称	样式	模块类型	订货型号	行程图	外形尺寸
Bidirectional rocker arm (metal roller metal rocker)		Slow action 1NO+1NC	ALS3-PS11 □ /C3	 11-12(NC) 33-34(NO) 0° 50° 80° Max 7.5Nm Max	 44±1 39±1 31±1 108 24 2-Ø4±0.15 深度5 30 Ø17.3x7 金属滚轮 35 53 3 9±0.2 R2.3±0.05 47±0.2 20±0.1 22±0.1 31
		Slow action 2NC	ALS3-PS02 □ /C3	 11-12(NC) 31-32(NC) 0° 80° Max 7.5Nm Max	
		Quick action 1NO+1NC	ALS3-PQ11 □ /C3	 31-32(NC) 13-14(NO) 31-32(NC) 13-14(NO) 0° 14° 80° Max 7.5Nm Max	
		Quick action 2NC	ALS3-PQ02 □ /C3	 11-12(NC) 31-32(NC) 11-12(NC) 31-32(NC) 0° 14° 80° Max 7.5Nm Max	
ALS3-P Bidirectional rocker arm with adjustable length (resin roller metal rocker)		Slow action 1NO+1NC	ALS3-PS11 □ /C4	 11-12(NC) 33-34(NO) 0° 50° 80° Max 7.5Nm Max	 44±1 39±1 31±1 102~148 24 2-Ø4±0.15 深度5 30 Ø17.3x7 树脂滚轮 20~74 47~93 3 9±0.2 R2.3±0.05 47±0.2 20±0.1 22±0.1 31
		Slow action 2NC	ALS3-PS02 □ /C4	 11-12(NC) 31-32(NC) 0° 80° Max 7.5Nm Max	
		Quick action 1NO+1NC	ALS3-PQ11 □ /C4	 31-32(NC) 13-14(NO) 31-32(NC) 13-14(NO) 0° 14° 80° Max 7.5Nm Max	
		Quick action 2NC	ALS3-PQ02 □ /C4	 11-12(NC) 31-32(NC) 11-12(NC) 31-32(NC) 0° 14° 80° Max 7.5Nm Max	

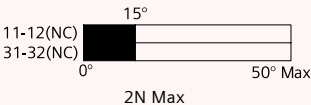
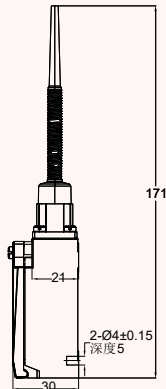
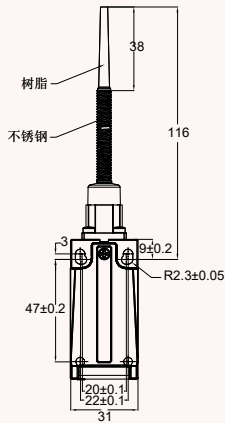
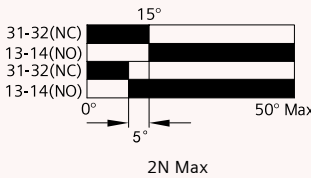
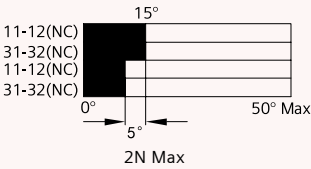
Note: □ means the type of waterproof connector (A:M20, B:M16, C:Pg11, D:Pg13.5)

名称	样式	模块类型	订货型号	行程图	外形尺寸
Bidirectional rocker arm with adjustable length (metal roller metal rocker)		Slow action 1NO+1NC	ALS3-PS11 □ /C5		
		Slow action 2NC	ALS3-PS02 □ /C5		
		Quick action 1NO+1NC	ALS3-PQ11 □ /C5		
		Quick action 2NC	ALS3-PQ02 □ /C5		
Bidirectional rocker arm with adjustable length (rubber roller metal rocker)		Slow action 1NO+1NC	ALS3-PS11 □ /C6		
		Slow action 2NC	ALS3-PS02 □ /C6		
		Quick action 1NO+1NC	ALS3-PQ11 □ /C6		
		Quick action 2NC	ALS3-PQ02 □ /C6		

Note: □ means the type of waterproof connector (A:M20, B:M16, C:Pg11, D:Pg13.5)

名称	样式	模块类型	订货型号	行程图	外形尺寸
Whisker actuator		Whisker actuator	ALS3-PS02 □ /D1		
		Whisker actuator	ALS3-PQ11 □ /D1		
		Whisker actuator	ALS3-PQ02 □ /D1		

Note: □ means the type of waterproof connector (A:M20, B:M16, C:Pg11, D:Pg13.5)

名称	样式	模块类型	订货型号	行程图	外形尺寸
Plastic spring rod actuator		Slow action 2NC	ALS3-PS02 □ /D2		 
		Quick action 1NO+1NC	ALS3-PQ11 □ /D2		
		Quick action 2NC	ALS3-PQ02 □ /D2		

Note: □ means the type of waterproof connector (A:M20, B:M16, C:Pg11, D:Pg13.5)

APT



ALS1-M Series

Limit Switch

Product feature

- Protection class IP65.
- Compact structure with small installation space.
- The material meets the requirements of EU RoHS Standard.

ALS1-M



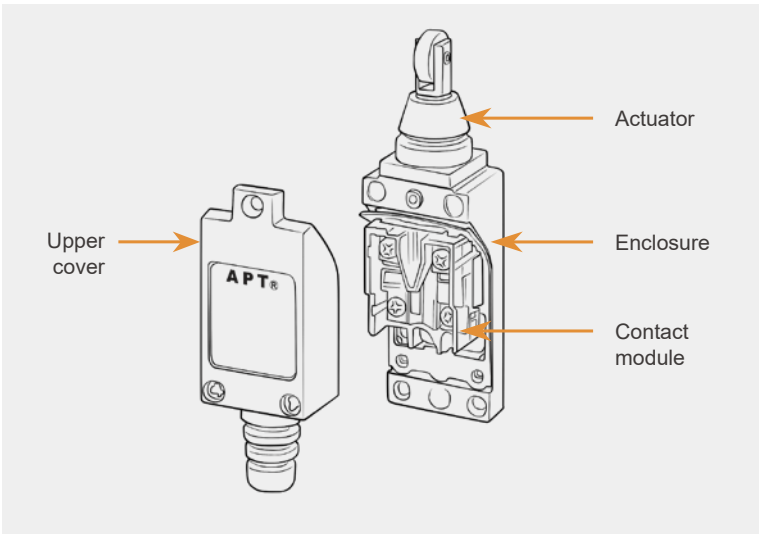
Technical feature

Product specification	ALS1-M	
Standard	IEC 60947-5-1	GB 14048.5
Rated insulation voltage	AC 400V	
Power frequency withstand voltage	AC 1890V 50Hz · 1min (between non-conductive components)	
Conventional thermal current	10A	
Product certification	CCC / CE / RoHS	
Mechanical endurance	About 10 million times	
Electrical endurance	30 万次 /AC-15 at 240V/3A	
Ambient temperature	-20℃ ~ 70℃	
Ambient humidity	<95%RH	
Protection class	IP65	
Action frequency	7,200 times/hour (mechanical action frequency)	
Anti-impact class	Maximum 10g at free position	
Anti-vibration class	10 ~ 55Hz 1.5mm amplitude (excl. spring rod products)	
Contact material	Silver alloy	
Wiring method	2X(0.5···0.75) mm ²	1X(0.5···1.5) mm ²

Rated contact capacity

Rated insulation voltage Ui	Conventional thermal current Ith	AC-15	DC-13
		24V/6A	24V/3A
		110V/6A	110V/0.5A
		240V/3A	250V/0.27A
		380V/0.5A	/
AC400V	10A		

Remark: “ / ” means not applicable



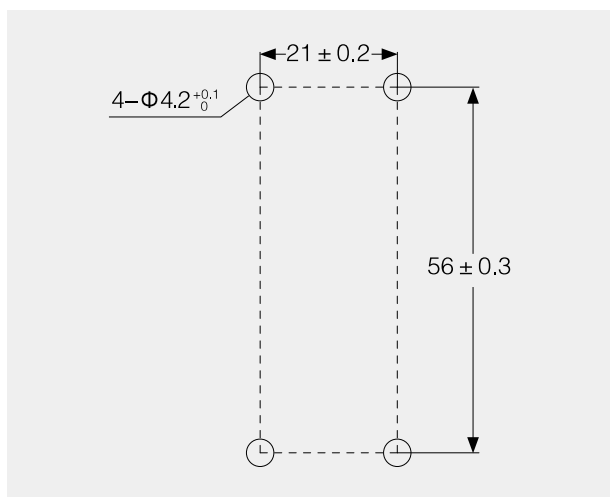
◎ Installation method



1. Loosen the screws of the upper cover and remove the upper cover.



3. Connect the wire according to the requirements.



Installation hole dimensions



2. Lead the conductor in through the waterproof connector.

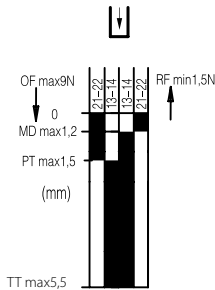
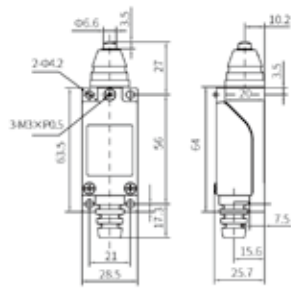
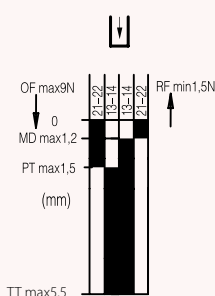
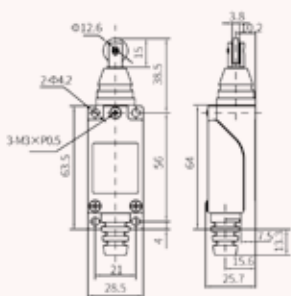
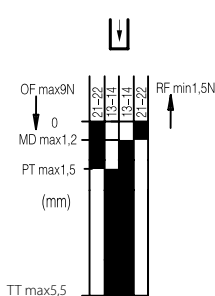
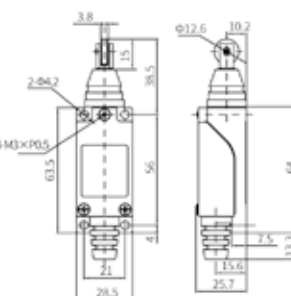
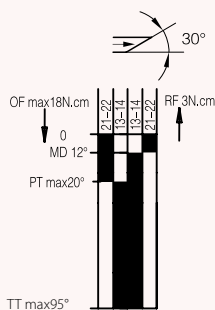
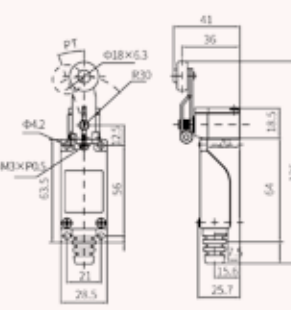


4. Fasten the screws to the upper cover evenly.

Precautions

- The torque of fastening the wiring screw to the contact module is 0.5~0.6Nm.
- The torque of fastening the screws to the upper cover is 0.5~0.6Nm.
- Pay attention to fastening the screws to the upper cover evenly during the installation to avoid damaging the seal ring due to the uneven force.

Product order code selection list

Name	type	Contact status	Order code	Stroke diagram	Dimension
Circular plunger		Quick action 13 — 14NO 21 — 22NC	ALS1-M11/A2		
Horizontal roller plunger		Quick action 13 — 14NO 21 — 22NC	ALS1-M11/B2		
Vertical roller plunger		Quick action 13 — 14NO 21 — 22NC	ALS1-M11/C		
Bidirectional rocker arm		Quick action 13 — 14NO 21 — 22NC	ALS1-M11/F1		

ALS1-M

APT



ALS1-P Series

Limit Switch

Product feature

- Protection class IP67.
- Modularized design with easy installation and reliable structure.
- EN50047 installation.
- The material meets the requirements of EU RoHS Standard.
- Quick wiring.

APS ALS



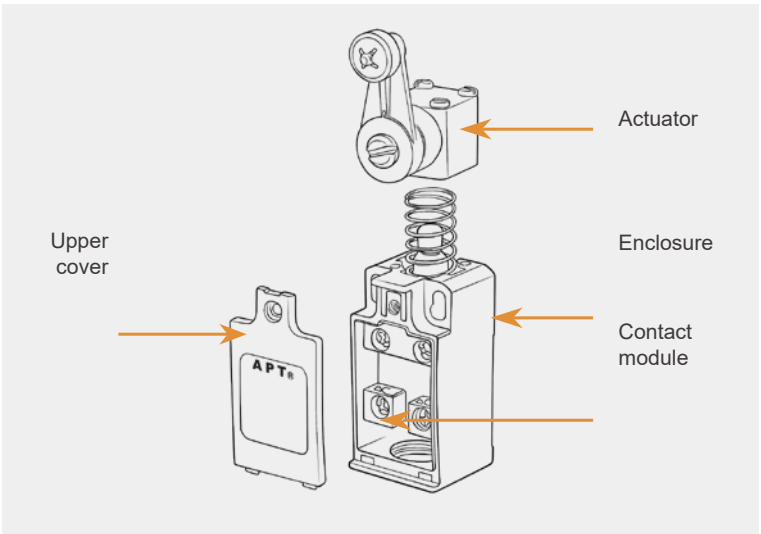
Technical feature

Product specification	ALS1-P		
Standard	IEC 60947-5-1	GB 14048.5	EN 50047
Rated insulation voltage	AC 400V		
Power frequency withstand voltage	AC 1890V	50Hz · 1min	(between non-conductive components)
Conventional thermal current	10A		
Product certification	CCC / CE / RoHS		
Mechanical endurance	10 million times		
Electrical endurance	500,000 times AC-15 at 240V/3A		
Ambient temperature	-25°C ~ 70°C		
Ambient humidity	<95%RH		
Protection class	IP67		
Action frequency	6,000 times/hour (mechanical action frequency)		
Anti-impact class	Maximum 10g at free position		
Anti-vibration class	10 ~ 55Hz 1.5mm amplitude (excl. spring rod products)		
Contact material	Silver alloy		
Direct break function	Yes		
Wiring method	2X(0.5…0.75) mm ²	1X(0.5…1.5) mm ²	
Cable outer diameter	6 ~ 9 mm		

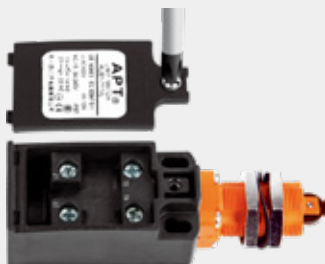
Rated contact capacity

Rated insulation voltage Ui	Conventional thermal current Ith	AC-15	DC-13
AC400V	10A	24V/6A	24V/3A
		120V/6A	125V/0.55A
		240V/3A	250V/0.27A
		380V/0.5A	/

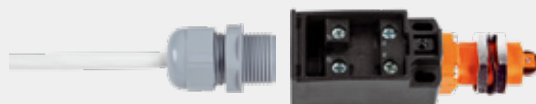
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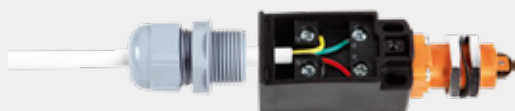
◎ Installation method



1. Loosen the screws of the upper cover and remove the upper cover.



2. Lead the waterproof connector in at the end of conductor.



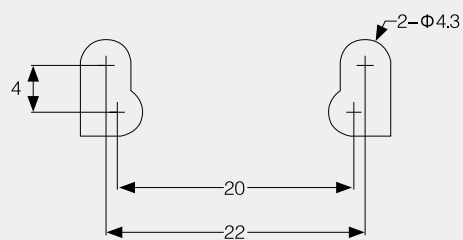
3. Connect the wire according to the requirements.



4. Fasten the screws to the upper cover.



5. Fasten the waterproof connector.

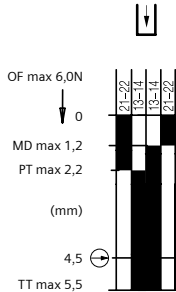
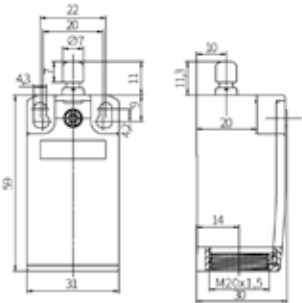
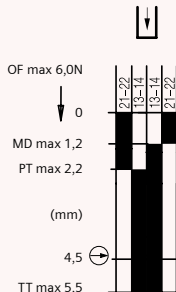
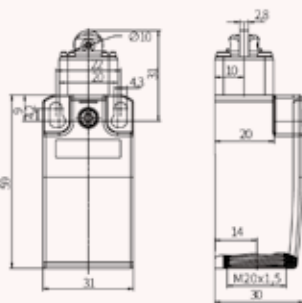
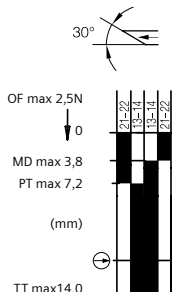
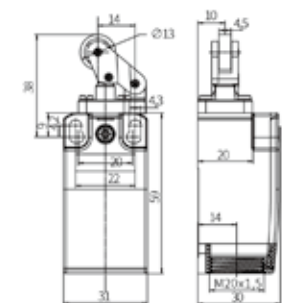
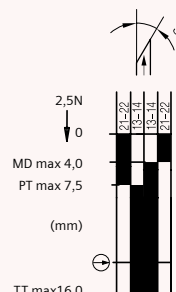
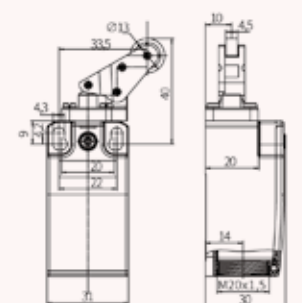
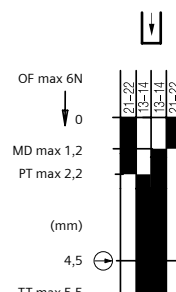
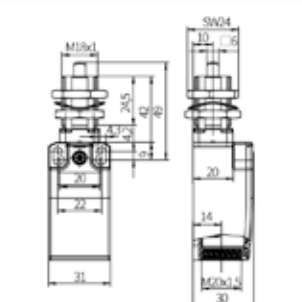


Installation hole dimensions

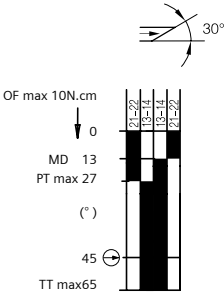
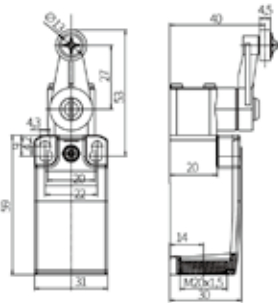
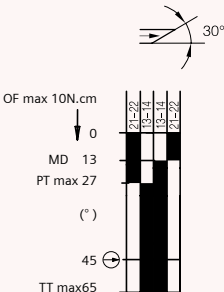
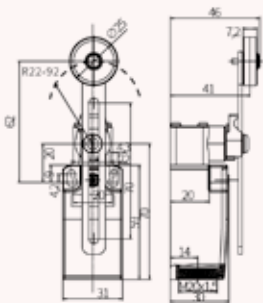
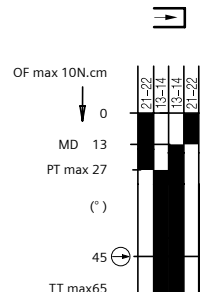
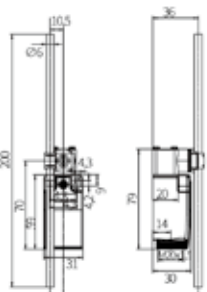
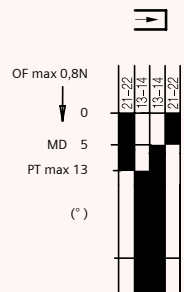
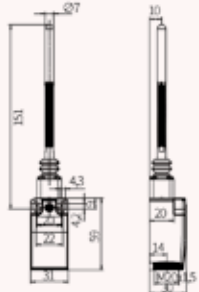
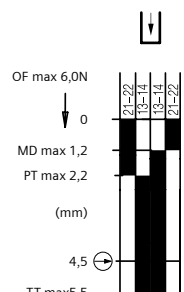
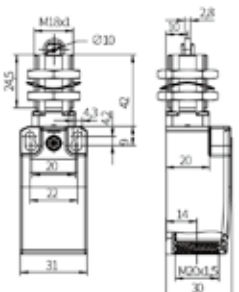
Precautions

- The torque of fastening the wiring screw to the contact module shall not be above 0.7Nm.
- The torque of fastening the screws to the upper cover shall not be above 1Nm.
- Pay attention that the buckle between the upper cover and enclosure shall be installed in place.

Product order code selection list

Name	type	Contact status	Order code	Stroke diagram	Dimension
Circular plunger		Quick action 13 — 14NO 21 — 22NC 	ALS1-P11/A1		
Roller plunger		Quick action 13 — 14NO 21 — 22NC 	ALS1-P11/B1		
Roller rocker arm		Quick action 13 — 14NO 21 — 22NC 	ALS1-P11/D1		
Oblique angle rocker arm		Quick action 13 — 14NO 21 — 22NC 	ALS1-P11/E1		
Circular plunger (with M18x1 sleeve)		Quick action 13 — 14NO 21 — 22NC 	ALS1-P11/K		

- ★ The finished products are sold as a whole; the actuator (head) can be ordered separately.
- ★ Please refer to the following ordering instructions for the exchange principle of the actuator (head).

Name	type	Contact status	Order code	Stroke diagram	Dimension
Bidirectional rocker arm		Quick action 13 — 14NO 21 — 22NC 	ALS1-P11/F1		
Bidirectional rocker arm with adjustable length		Quick action 13 — 14NO 21 — 22NC 	ALS1-P11/G1		
Rod actuator		Quick action 13 — 14NO 21 — 22NC 	ALS1-P11/H1		
Spring rod actuator		Quick action 13 — 14NO 21 — 22NC 	ALS1-P11/S1		
Roller plunger (with M18x1 sleeve)		Quick action 13 — 14NO 21 — 22NC 	ALS1-P11/L		

Ordering Instructions (ALS3 Series)



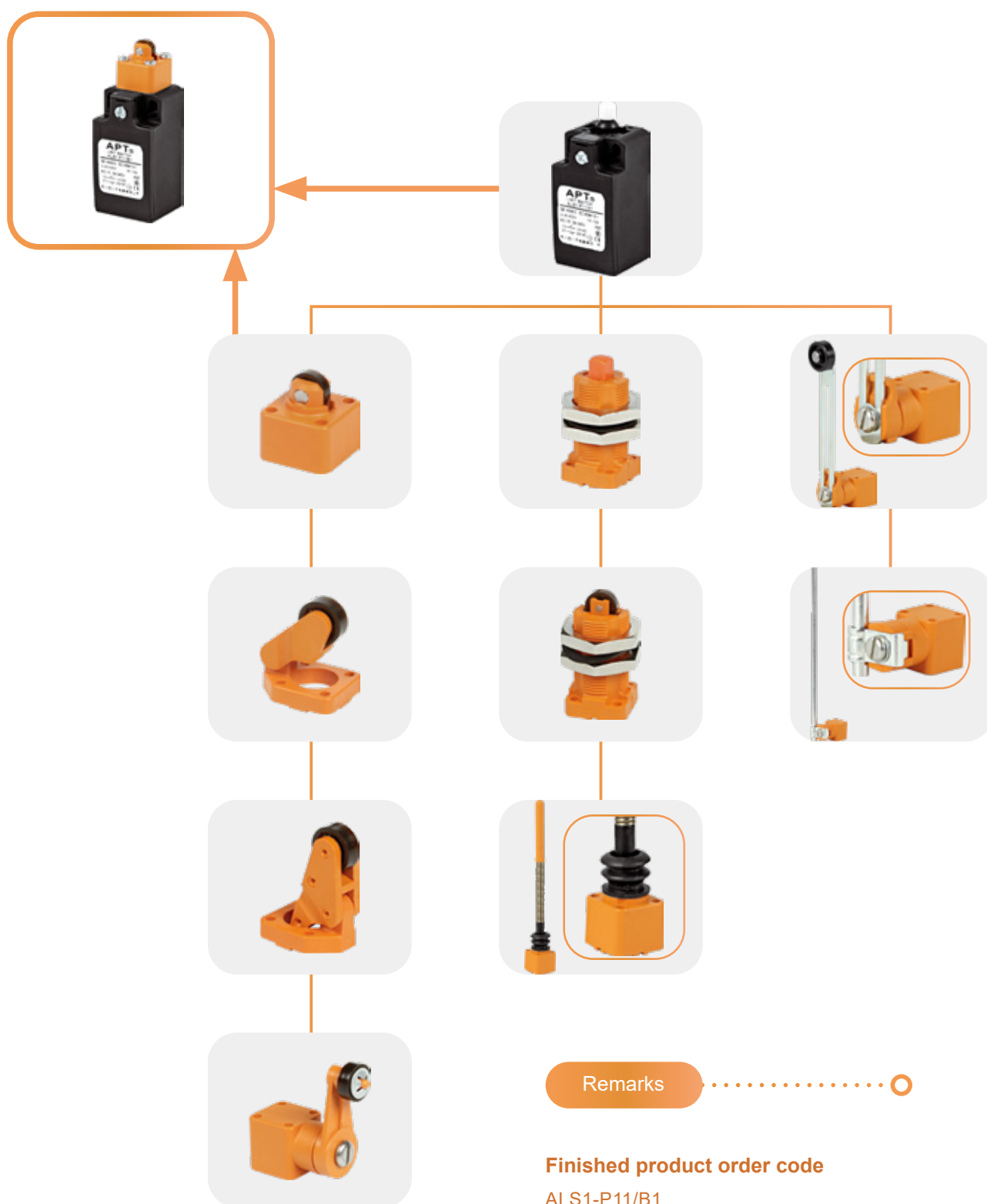
Remarks

Finished product order code

ALS3-P
└─> ALS3-PF-A0 - ALS3-PF-D2

Ordering Instructions

© Ordering Instructions (ALS1 Series)



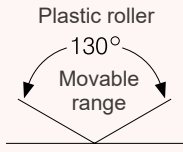
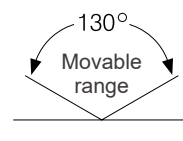
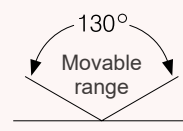
Remarks

Finished product order code

ALS1-P11/B1

↳ ALS1-P11/A1 + ALS1-PF-B1

◎ Accessory order code selection list (actuator)

Name	Type	Order code	Remarks
Roller plunger		ALS1-PF-B1	Plastic roller
Roller plunger		ALS1-PF-B2	Metal roller
Roller rocker arm		ALS1-PF-D1	Plastic roller
Roller rocker arm		ALS1-PF-D2	Metal roller
Oblique angle rocker arm		ALS1-PF-E1	塑料滚轮
Oblique angle rocker arm		ALS1-PF-E2	Metal roller
Bidirectional rocker arm		ALS1-PF-F1	Plastic roller 
Bidirectional rocker Bidirectional rocker arm with adjustable length		ALS1-PF-G1	Φ 19mm Plastic roller 
Bidirectional rocker Bidirectional rocker arm with adjustable length		ALS1-PF-G3	Φ 50mm Plastic roller 

☉ Accessory order code selection list (actuator)

Name	Type	Order code	Remarks
Rod actuator		ALS1-PF-H1	200mm long plastic rod
Rod actuator		ALS1-PF-H2	330mm long plastic rod
Rod actuator		ALS1-PF-H3	200mm long aluminum rod
Rod actuator		ALS1-PF-H4	200mm long spring
Spring rod actuator		ALS1-PF-S1	50mm long plastic rod end
Spring rod actuator		ALS1-PF-S2	50mm long metal rod end
Circular plunger (with M18x1 sleeve)		ALS1-PF-K	With M18x1 sleeve
Circular plunger (with M18x1 sleeve)		ALS1-PF-L	With M18x1 sleeve