

ZHEJIANG GOTO ELECTRICAL CO.,LTD

Add: Marine economic Industry park 10 buildings. Harbour area
Yueqing City Zhejiang Province,China
Tel:+86-577-62361357 Fax:+86-577- 62371357
E-mail: sales@gkswitch.com
www.gkswitch.com

 **Goto Electrical**

Product Overviews 2023~2024



The Company reserves the right to change the specifications without prior notice.

The S series Metal push button switches & Pilot lamps are a innovative

Vandal-proof control units & Indicator lamp.

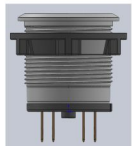
The practicability, reliability and stability of the product are considered in the design. With the development of emerging industries, for the application requirements of various special environments.

The S series control unit uses new materials and new processing technology, applied to a variety of functional components, combined with design-oriented new industrial applications, can be widely used in a variety of control panels, as well as special equipment and other industrial fields.

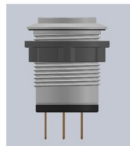
Key Feature:

- Rugged Design: Vandal-resistant to IK10, front protection up to IP68
- Compact Design: The S series is the shortest in the industry, only 16mm deep behind the panel. Reduces the size of machines and control panels
- Devices flush mounting and raised mounting are available
- A variety of diameter of mounting available.
Φ12mm, Φ16mm, Φ19mm, Φ22mm, Φ25mm, Φ30mm
- All illuminated units feature two lens styles,
one is ring, the other is lens
- PCB mount, Solder terminals or plug are available.
- The lenses can be marked by engraving and made either from plastic or metal. Specific symbols and markings are available on request.
- Full illumination of Single or Multi-LEDs are available
- Silver/Gold-plated silver contacts available for low voltages and currents
- Excellent operating feedback
- Long life > 1 million cycles of operation

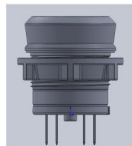
* Shape view



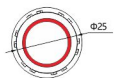
Flat style (F)



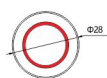
Flat/raised (R)



Raised style (E)



Flat (F)



Flat/wide-brimmed (G)*

* Only for the S22 series

□ General technical data

Standards

IEC/EN60947-5-1
GB13048.5

Environmental Conditions

Operating temperature
-25°C~+55°C(No Freezing)
Storage temperature
-40°C~+75°C(No Freezing)
Operating Humidity
40~85%RH(No condensation)
Vibration resistant:
5~55Hz, Amplitude 0.5mm
Shock resistant:
1000m/s²
Protection degree
Ip67 front side
as per EN IEC 60529

Material

Actuator & operating parts
SUS304
Aluminum anodize (Mushroom)
Zinc alloys, Iron(key switch)

Lens
PC

Switching housing

Plastic PA66/PBT

Contact

Silver / Gold-plated silver

Switching element

Action type
Momentary & Maintained

Contacts

1NO
1NC
1NO+1NC
2NO
2NC

Electrical Characteristics

Rated voltage Ui:
250V
Rated current Ith:
5A
Electric strength:
1500VAC 50Hz/60Hz 1Minutes
between all terminals and earth
Insulation Resistance:
≥100 MΩ
Contact Resistance:
< 25 mΩ
Switch rating
Silver contact

	24V	110V	220V
AC-15	2A	1A	0.5A
DC-13	0.7A	0.2A	0.1A

Gold-plated Silver contact

	24V	110V	220V
AC-15	2A	1A	0.5A
DC-13	0.7A	0.2A	0.1A

The usable range depends on the use condition and the load type

5VACDC*1mA 250VAC*0.5A

Mechanical characteristics

Actuating force

4N...7N

Actuating travel

3mm

Tightening torque

for fixing nut max.12N

Terminal

Soldering /Tab terminal 110#: 2.8x0.5mm²
PC board Terminal: 1.2x0.5mm
Quickly connector

Lifetime

Mechanical lifetime

Momentary ≥20X10⁵
Maintained ≥10X10⁵
Mixed ≥20X10⁵

Electrical lifetime

≥10×10⁴ (220V AC 0.5A)



□ Illuminated units

Front view



Lens(D)



Ring(U)



Standby(M)

LED rating

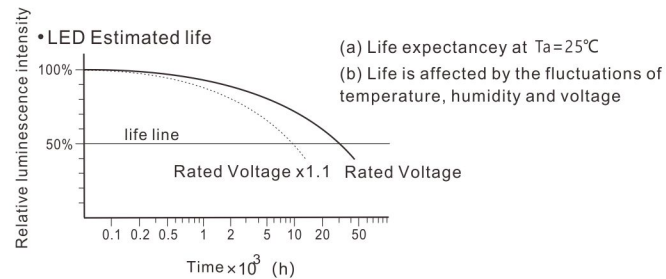
Color(Single-LED)
Red, Green, Yellow, Blue,
White, Amber

Color (Multi-LED)
Bi-color
Tri-color

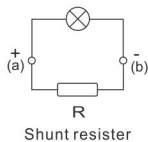
Rated Voltage	Rated Current
5V	-
12V	6.2~6.8mA
24V	7~7.5 mA
110V	1.4~1.7 mA
220V	1.2~1.7 mA
Voltage range	±10%

Light life

30000h (the brightness reduce to 50% of the initial value)



LED countermeasures against dim lighting

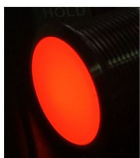


•LED dim lighting

Leakage currents through transistors or a contact protection circuit may cause the LED lamp to illuminated dimly even when the output is off

•Countermeasures

When the Light is illuminated by a transistor output, take the following measure, leakage current shunt resistor allotment table



□ Model Specification

S □ □ □ - □ □ □ □ □ □ □ □
① ② ③ ④ ⑤ ⑥ ⑦ ⑧

1. Diameter

16	Ø16mm
19	Ø19mm
22	Ø22mm
25	Ø25mm
30	Ø30mm

2. Bezel

F	Flat design
E	Raised design
G	Flat /wide-brimmed
R	Flat/Extended
FMR	Flat/Mushroom-head

3. Lens/Illumination

	Non-illuminated
U	Ring-illuminated
D	Lens-illuminated
M	Standby-illuminated
H	Lens convexe
I	Illuminated

4. Contacts

11	1NO+1NC
20	2NO
02	2NC
22	2NO+2NC

6. Switching action

	Momentary
T	Maintained

5. Function

	Pushbuttons
D	Pilot lamp
X	Selector switch
Y	Key switch
Z	Emergency switch
F	Buzzer
FI	Buzzer with lamp

8. LED voltage

6	6V AC/DC
12	12V AC/DC
24	24V AC/DC
110	110V AC/DC
220	220V AC/DC

7. Terminal

L	Solder/Plug-in (2.8*0.5T)
S	PCB (1.2*0.5T)
M	M12 QC

9. LED Color

R	Red	B	Blue
G	Green	W	White
Y	Yellow	A	Amber



S19
Pilot lamp

- $\Phi 19\text{mm}$
- Translucent face appears gray when off, to avoid false indication from ambient light.
- Si-color, Bi-color, Tri-color are available
- Models rated to IP68 and IP69K for use in harsh environments
- M12 connector are available
- Available with PNP or NPN input, depending on model

Mounting dimensions and styles

19FH=19mm+flat/convexe
19RH=19mm+flat/Extended

Voltage①

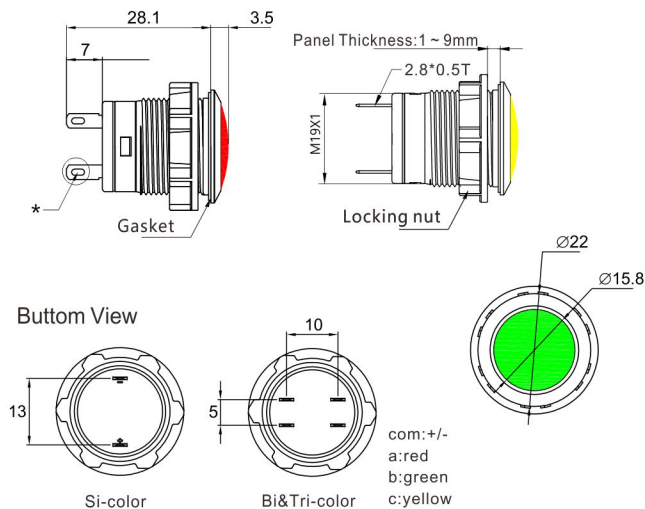
06=6VAC/DC 110=110VAC/DC
12=12VAC/DC 220=220VAV/DC
24=24VAC/DC

Color②

R= Red Y= Yellow
G= Green W= White
B= Blue A= Amber
RG= Red/Green RY= Red/Yellow
YG= Yellow/Green RB= Red/Blue
GB= Green/Blue
RGY= Red/Green/Yellow
RGB= Red/Yellow/Blue

Ordering code

Shape	Terminal	Code		Note
		Convexe	Extended	
Flat (F)	Solder/plug-in	S19FH-L①②	S19RH-L①②	Reference the tables①②
	M12 connector	S19FH-M①②	S19RH-M①②	

Outline Dimensional drawing_{mm}

- Mounting Hole Layout & Mini Mounting spacing reference to P32

S19
Mushroom switches

- $\Phi 19\text{mm}$
- Action: Momentary; Maintained
- Terminal: Solder/Plug-in 2.8*0.5
- Silver alloy/Gold plated silver alloy
- Contact : 1NO+1NC □ 2NO+2NC
- IP67
- IEC/EN 60947-5-1, IEC/EN 60073, IEC/EC 60529

Contact arrangement①

11=1NO+1NC 02=2NC

Mounting dimensions and styles

19FMR= $\Phi 19\text{mm}$ +Mushroom head

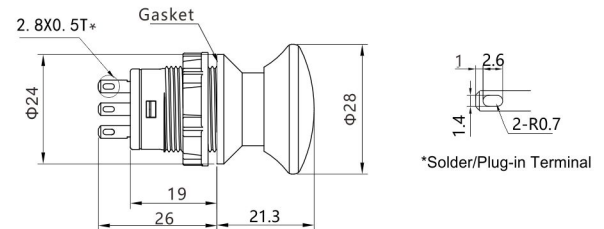
Switching action②

Blank =Momentary T=Maintained

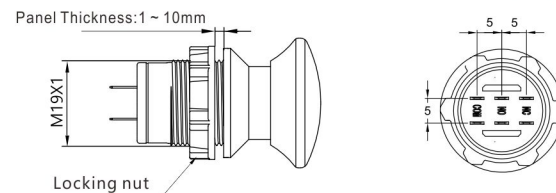
Ordering code

Shape	Switching action	Contact	Code	Note
$\Phi 19\text{mm}$ Mushroom -head (FMR)	Momentary	1NO+1NC	S19FMR-11L	
		2NO+2NC	S19FMR-22L	
	Maintained	1NO+1NC	S19FMR-11TL	
		2NO+2NC	S19FMR-22TL	

PS: Except for the listed products models, Special and Customized Products are available. please consult the factory for more details.

Outline Dimensional drawing_{mm}

Bottom View



- Mounting Hole Layout & Mini Mounting spacing Reference P32
- Quick connector is possible

S19
Pushbutton

- $\Phi 19\text{mm}$
- Front Bezel : Flat, Flat/Exten, Raised
- Action: Momentary; Maintained
- Terminal: Solder/Plug-in 2.8×0.5
- Silver alloy/Gold plated silver alloy
- Contact: 1NO+1NC □ 2NO+2NC
- IP67
- IEC/EN 60947-5-1,
IEC/EN 60073, IEC/EC 60529

Mounting Dimensions and styles

19F=16mm +Flat
19R=16mm +Flat/Extended
19E=16mm + Raised

Contact arrangement①

11=1NO+1NC 22=2NO+2NC

Switching action②

Blank =Momentary T=Maintained

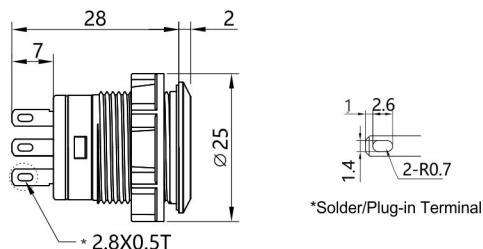
Ordering code

Shape	Switching action	Code		Note
		1NO+1NC	2NO+2NC	
Flat (F)	Momentary	S19F-11L	S19F-22L	Reference the tables①②
	Maintained	S19F-11TL	S19F-22TL	
Flat/Extended (R)	Momentary	S19R-11L	S19R-22L	
	Maintained	S19R-11TL	S19R-22TL	
Raised (E)	Momentary	S19E-11L	S19E-22L	
	Maintained	S19E-11TL	S19E-22TL	

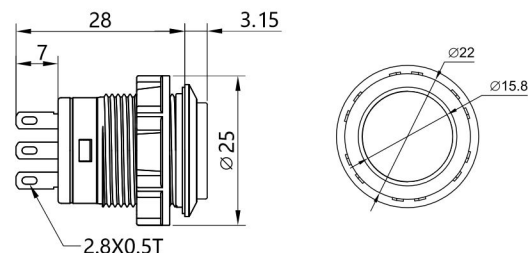
PS: Except for the listed products models, Special and Customized Products are available. please consult the factory for more details.

Outline Dimensional drawing_{mm}

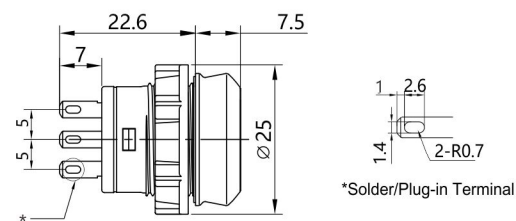
Flat Style



Flat/Extended style



Raised style



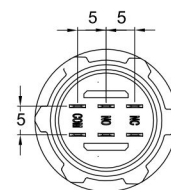
Panel Thickness: 1 ~ 8mm

Gasket

M19X1

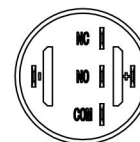
Locking nut

(Bottom View)

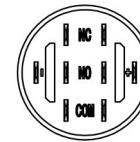


Terminal Arrangement

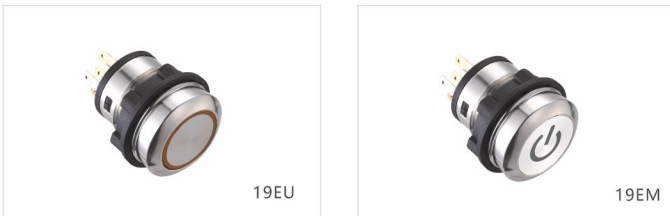
1NO+1NC(11)



2NO+2NC(22)



- Mounting Hole Layout & Mini Mounting spacing Reference P32
- Quick connector and wire length is possible.

S19
Illuminated Pushbutton

- $\Phi 19\text{mm}$
- Front Bezel : Flat, Flat/Exten, Raised
- Illuminated style: Lens; Ring; Standby
- Action: Momentary; Maintained
- Terminal: Solder/Plug-in 2.8*0.5
- Gold contacts available for low-level applications
- Customised markings
- IP67
- IEC/EN 60947-5-1, IEC/EN 60073, IEC/EC 60529

Mounting Dimensions and styles

- 19FU=19mm+Flat+ring
- 19RU=19mm +Flat/Extended+ring
- 19FM=19mm+Flat+Standby
- 19EU=19mm+Raised+ring
- 19EM=19mm +Raised+Standby

Switching action

Blank =Momentary T=Maintained

Contact arrangement

11=1NO+1NC 22=2NO+2NC

Voltage①

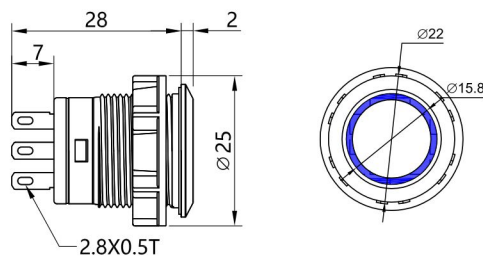
- 06 =6VAC/DC
- 12 =12VAC/DC
- 24 =24VAC/DC
- 110 =110VAC/DC
- 220=220VAV/DC

Color②

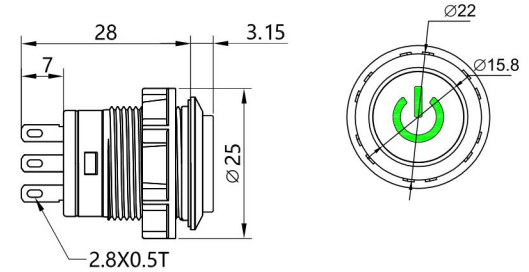
- R= Red Y= Yellow
- G= Green W= White
- B= Blue A=Amber

Outline Dimensional drawing_{mm}

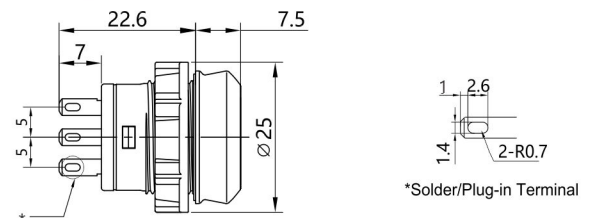
Flat Style



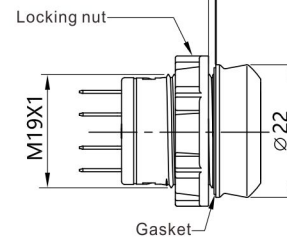
Flat/Extended style



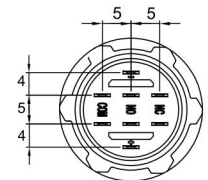
Raised style



Panel Thickness: 1 ~ 9mm

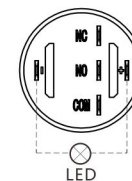


(Bottom View)

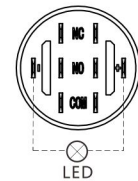


Terminal Arrangement

1NO+1NC(11)



2NO+2NC(22)



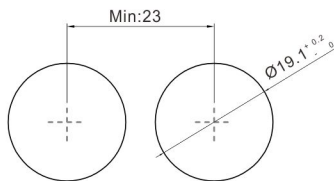
- Mounting Hole Layout & Mini Mounting spacing Reference P32
- Quick connector and wire length is possible.

Ordering code

Shape	Switching action	Code		Note
		1NO+1NC	2NO+2NC	
Flat+Ring (FU)	Momentary	S19FU-11L①②	S19FU-22L①②	Color and Voltage Reference the tables①②
	Maintained	S19FU-11TL①②	S19FU-22TL①②	
Flat/Extended +Ring (RU)	Momentary	S19RU-11L①②	S19RU-22L①②	
	Maintained	S19RU-11TL①②	S19RU-22TL①②	
Flat+Standby (FM)	Momentary	S19FM-11L①②	S19FM-22L①②	
	Maintained	S19FM-11TL①②	S19FM-22TL①②	
Raised+Ring (EU)	Momentary	S19EU-11L①②	S19EU-22L①②	
	Maintained	S19EU-11TL①②	S19EU-22TL①②	
Raised +Standby (EM)	Momentary	S19EM-11L①②	S19EM-22L①②	
	Maintained	S19EM-11TL①②	S19EM-22TL①②	

PS: Except for the listed products models, Special and Customized Products are available. please consult the factory for more details.

Mini Mounting hole layout (mm)



Note: The limit size of the shell is available.

Accessories

Name/Shape	Part No.	Specifications	Outline Dimensions
connector	S19-B	<ul style="list-style-type: none"> for S19 series The length of wire are available. 	

S19
Key Switches

- $\Phi 19\text{mm}$
- Material: SUS304
- Switch rating: 3A for 250VAC
- Contact: 1NO+1NC
- 2 Position
- IP67
- IEC/EN 60947-5-1,
IEC/EN 60073, IEC/EC 60529

Contact arrangement①

11 = 1NO + 1NC

Mounting Dimensions and styles

19F = $\Phi 19\text{mm}$ + Flat

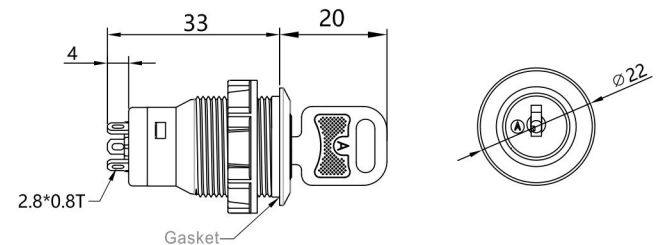
Switching action②

Blank = Momentary T = Maintained

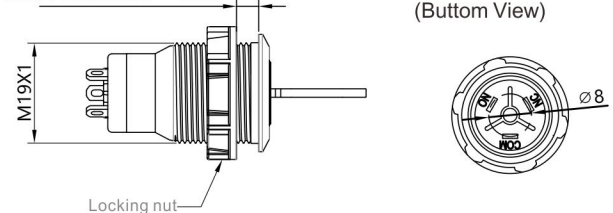
Ordering code

Shape	Switching action	Contact	Code	Note
Flat (F)	Momentary	1NO+1NC	S19F-11Y	
	Maintained	1NO+1NC	S19F-11YT	

PS: Except for the listed products models, Special and Customized Products are available. please consult the factory for more details.

Outline Dimensional drawing_{mm}

Panel Thickness: 1 ~ 9mm



S19 Emergency Stop Switch



- Very low back panel depth(21.2mm)
- Vandal resistant: Impact-resistant IK10, Front protection up to IP67
- Safety lock mechanism
- Direct opening action
- Optional M12 connection
- TÜV CE RoHS

Mounting Dimensions and styles

19=Φ19mm+Mushroom head
(skidproof vein)

Terminal

L=Solder/plug-in 2.8x0.5T
S=Solder 2.8X3.5
M=M12 connection

Contact arrangement①

11=1NO+1NC 02=2NC

Specifications

Protection Degree	IP67 from front of the panel ;		
Operator stroke	3.5 mm		
Service life	Mechanical	≥10×10 ⁵	
	Electrical	220V AC 0.5A ≥10×10 ⁴	
	Operating Frequency	1200 operations/hour	
Impulse withstand voltage	1800 V AC		
Insulation Resistance	≥100 MΩ		
Contact Resistance	< 25 MΩ		
Shock Resistance	Operating extremes:150m/s ² damage limits:1000m/s ²		
Vibration Resistance	Operating extremes:5 ~ 55Hz, amplitude 0.5mm acceleration 50 m/s ²		
Operating temperature	-25°C ~ +55°C (no freezing)		
Storage temperature	-40°C ~ +70°C (no freezing)		
Operating humidity	40 ~ 85%RH □ no condensation □		
Operating mode	press lock, rotation reset (Bilateral rotation, clockwise45°)		
Operating force	Maintained	about 10N	
	Spring-return	about 0.25 N·m	

Switch rating

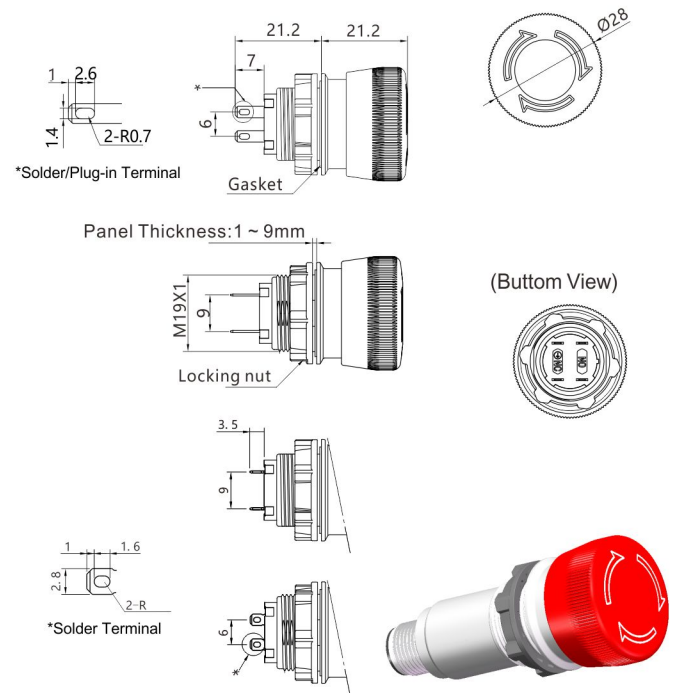
Rated Insulation Voltage U_i	250 V as per EN IEC 60947-1			
Rated Thermal Current I_{th}	5 A			
Item	Rated Operational Voltage U_e	24 V	110 V	220 V
AC-15	Rated Operation current I_e	2 A	1 A	0.5 A
DC-13		0.7 A	0.2 A	0.1 A

Ordering code

Shape/function	Terminal	Contact	Code	Note	
Ø19mm Mushroom head (skidproof vein)	Solder/plug-in 2.8*0.5T	1NO+1NC	S19-11ZL		
		2NC	S19-02ZL		
	Solder 2.8*3.5	1NO+1NC	S19-11ZS		
		2NC	S19-02ZS		
	M12 connection (4P)	1NO+1NC	S19-11ZM		Cable can be available
		2NC	S19-02ZM		

PS: Except for the listed products models, Special and Customized Products are available. please consult the factory for more details.

Outline Dimensional drawing^{mm}



- Mounting Hole Layout & Mini Mounting spacing Reference P32
- Quick connector and wire length is possible.

Note: M12 type are available.