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 **Goto Electrical**

Product Overviews 2023~2024



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

AF16 Series, 16mm Minature & 19/22mm Flush Mount Control Units. The full range of products are divided into AF16S standard type , AF16B Flush Silhouette type, AF16L big OP Flush silhouette type and Raised style. Customers can select more reasonable products according function, use-method and design etc.

AF16S standard type, Combination type, maintenance wiring operation is simple. reasonable structure, miniature size, full varieties. which has a very positive effect on the miniaturization of automation equipment.

Standard type is suitable for all kinds of CNC control panel.

AF16B Flush type, Flush bezel projects only2mm from front of panel, they are ideal for single board mounting. Eliminate convex and concave face.

Flush type is most suitable of frequent operation for panel.

AF16L Flush type , operation button is larger, improve the accuracy of operation, effectively prevent misoperation, more comfortable and fast operation. AF16L is suitable for all kinds of high-end precision equipment, and the Raised type is more suitable for use of the control equipment which has strict requirements for misoperation.

Feature:

- Compact design ,removable contact blocks ideal for single board mounting.
- Silver Contact (90: 8),Rated Thermal Current 5A(24VAC-DC/5mins).in same time, Contact resistance $\leq 20m\Omega$.
- Pushbuttons, Illuminated pushbuttons, Selector switches key selector switches with up to 3PDT contacts.
- 2-position and 3-position selector switches. Maintained and spring return available.
- Key selectors with keys that are difficult to duplicate.
- Bright and clear LED illuminated face.
- Pushbuttons can be printed with legend marking plate which is placed in the lens.

The product has passed CE,TUV,CB,CCC certification etc, Product design, raw production and quality management is strict implementation of in accordance with EN60947-5-1 and GB14085.5.



Large surface AF16L series

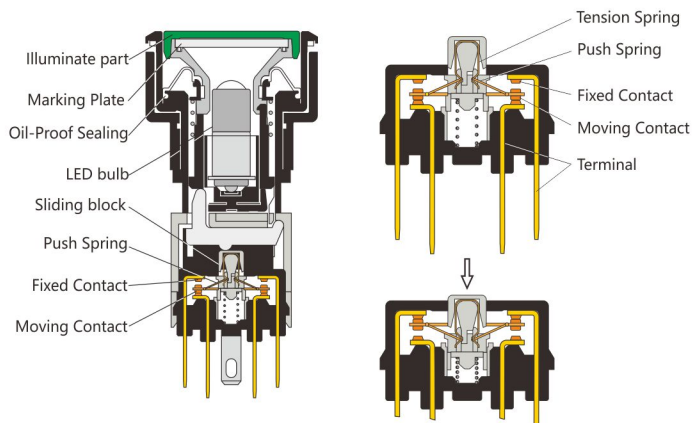
Smart appearance with Large surface for secure operation (Flush design and Raised design)
Large button surface for easy usability. Ideal for frequently used switches such as STOP and START
Removable contact blocks ideal for single board mounting.

Panel Depth

- Pilot lamp, Buzzer, Which depth behind panel is only 35mm.
- Flush design, Pushbuttons, Selector Switch, Keylock Switch Which depth behind panel is 53.5mm.
- Raised design, Pushbuttons, Selector Switch, Key Switch Which depth behind panel is 48mm



Oil Proof Type and contact Structure Chart



Specifications

- Pilot lamp, Pushbuttons, Selector Switch & Emergency Stop Switch

Item	Pushbutton	Selector Switch	E-Stop Switch	Pilot lamp
Protection Degree	Ip67			Ip67
Stroke	1.5 ~ 3 mm			—
Life	Mechanical	Momentary: $\geq 10 \times 10^5$	Momentary: $\geq 25 \times 10^4$	—
		Maintained: $\geq 25 \times 10^4$	Maintained: $\geq 25 \times 10^4$	
	Electrical	220V AC 0.5A $\geq 10 \times 10^4$		—
Operating Frequency	1200 operations/hr			—
Power Frequency	2000 V AC			
Insulation Resistance	$\geq 100 \text{ M}\Omega$			
Contact Resistance	$< 25 \text{ M}\Omega$			
Vibration Resistance	Damage Limits	5 ~ 55Hz, Amplitude 0.5mm		—
	Operating Extremes	5 ~ 55Hz, Amplitude 0.5mm		
Operating Temperature	-25°C ~ +55°C (No Freezing)			
Storage Temperature	-40°C ~ +70°C (No Freezing)			
Operating Humidity	40 ~ 85%RH (No Condensation)			

Contact Ratings

- Pushbuttons, Selector Switch & Emergency Switch

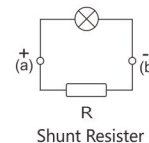
Rated Insulation Voltage U_i	250 V			
Rated Thermal Current I_{th}	5 A			
Type	Rated Voltage U_e	24 V	110 V	220 V
AC-15	Rated Current I_e	2 A	1 A	0.5 A
DC-13		0.7 A	0.2 A	0.1 A

Rated Voltage and Working Current

- Pilot lamp & Illuminated Pushbuttons

Model	LED Voltage	Working Current	
Full Voltage	5V AC/DC	—	
	12V AC/DC	6.2 ~ 6.8mA	
	24V AC/DC	7 ~ 7.5 mA	
	Specific	110V AC/DC	1.4 ~ 1.7mA
		220V AC/DC	1.2 ~ 1.7mA

LED Countermeasures against Dim lighting

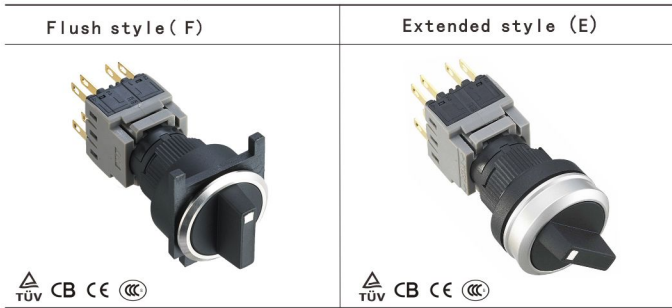


Shunt Resistor

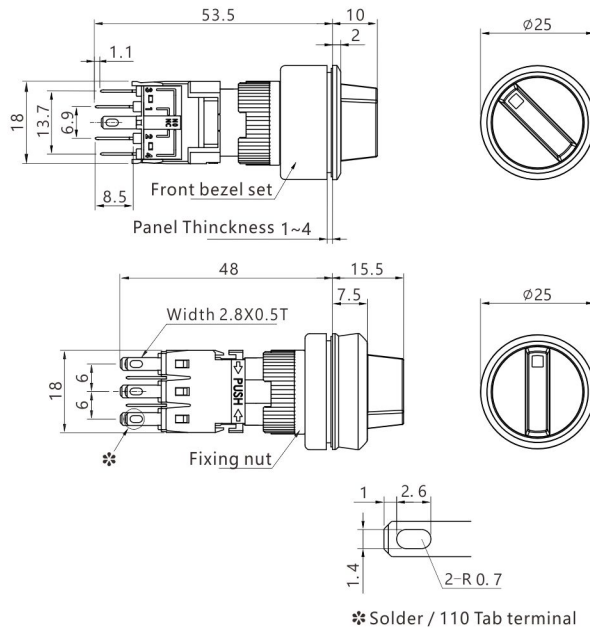
- LED Dim Lighting
Leakage Currents through transistors or a contact protection circuit may cause the LED lamp to illuminate dimly even when the output is off

- Countermeasures
When the LED lamps is illuminated by a transistor output, take the following measure, leakage current shunt resistor allotment table

Product Shape

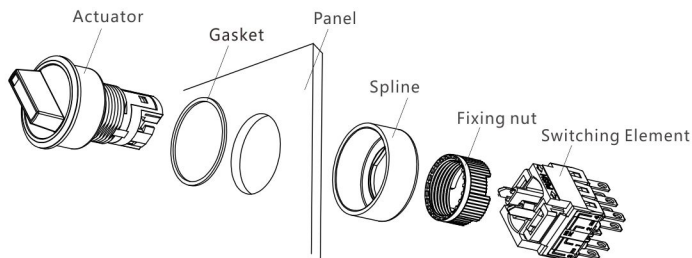


Outline Dimensional drawing (mm)

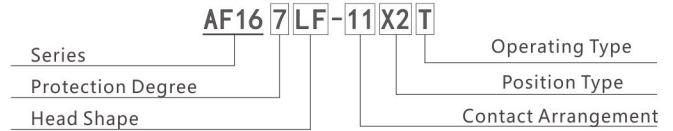













Installation Method

- Selector Switch & Key Switch




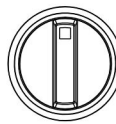

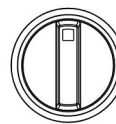
Model Specifications



Style	Operator position	contact	Part No.
Flush (LF)	90°-2	Maintained 	SPDT AF16□LF-11X2T
		DPDT AF16□LF-11X2T	
	Spring return 	SPDT AF16□LF-11X2	
		DPDT AF16□LF-11X2	
	45°-3	Maintained 	3PDT AF16□LF-11X2
			DPDT AF16□LF-22X3T
Spring-return two-way 		3PDT AF16□LF-33X3	
		DPDT AF16□LF-22X3TR	
Left return right Maintained 		3PDT AF16□LF-22X3TR	
		DPDT AF16□LF-22X3TL	
Extend (LE)	90°-2	Maintained 	SPDT AF16□LE-11X2T
		DPDT AF16□LE-11X2T	
	Spring return 	3PDT AF16□LE-11X2T	
		DPDT AF16□LE-11X2	
	45°-3	Maintained 	3PDT AF16□LE-33X3
			DPDT AF16□LE-22X3
Spring-return two-way 		3PDT AF16□LE-33X3	
		DPDT AF16□LE-22X3TR	
Left return right Maintained 	3PDT AF16□LE-22X3TR		
	DPDT AF16□LE-22X3TL		
Left Maintained right return 	3PDT AF16□LE-33X3TL		
	DPDT AF16□LE-22X3TL		

Operator Position

- 2-Position & 3-Position Selector Switch

90°-2P	90°-3P
	
	

Note: other installation methods of the head can be operated conveniently according to the actual operation

□ Product Shape

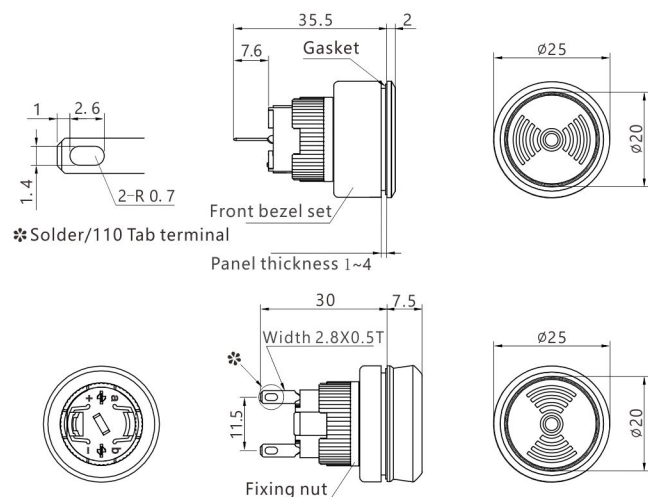


□ Specification

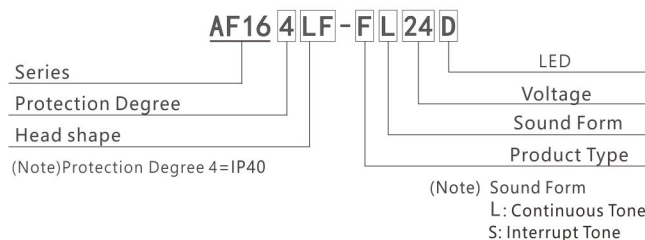
Rated Insulation Voltage	30V DC
Rated Operating Voltage	12V DC $\pm 10\%$ 、24V DC $\pm 10\%$ 、
Current Draw	40 mA
Insulation Resistance	$\geq 100 \text{ M}\Omega$
Sound Pressure (at0.1m)	Steady sound: 80dB minium (at the rated voltage)
Operating Temperature	-25°C ~ +55°C (no freezing)
Storage Temperature	-40°C ~ +70°C (no freezing)
Operating Humidity	40~85%RH (no condensation)

□ Outline Dimensional Drawing (mm)

- Continuous Tone



□ Model Specifications

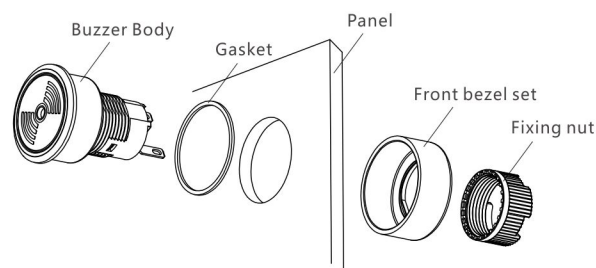


Style	Sound	Part No.		Voltage①	Color②
		without LED	with LED		
Round (YS)	Continuous	AF164YS-FC①	AF164YS-FIC①②	6: 6VAC/DC 12: 12VAC/DC 24: 24VAC/DC	R
	Interrupt	AF164FS-FP①	AF164YS-FIP①②		
Square (FS)	Continuous	AF164FS-FC①	AF164FS-FIC①②	24: 24VAC/DC	Y
	Interrupt	AF164FS-FP①	AF164FS-FIP①②		

1. For part numbers specify:

- Voltage in place of ①. 6(06VACDC); 12(12VACDC); 24(24VACDC);
- LED in place of ②. R(Red); G(Green)

□ Installation Method



□ Contact Type and Terminal Arrangement

