



# Command Non-Illuminated 22mm Metal Pushbuttons



AR22F0R-01RZA



AR22M0R-10YZA



AR22E0R-10SZA



AR22FAR-01C01ZA

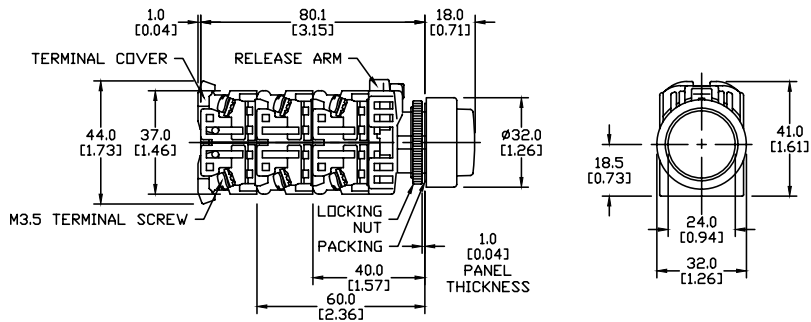


AR22FAR-10C03ZA

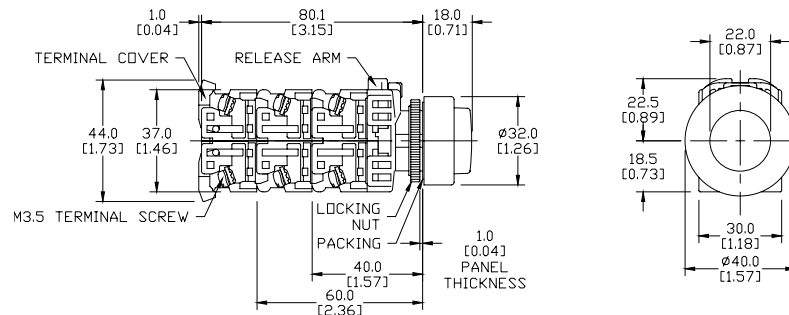
Command Non-Illuminated 22mm Metal Pushbuttons				
Part Number	Color	Price	Operator	Contacts
AR22F0R-10BZA	Black	\$9.50	momentary 30mm flush round head	NO
AR22F0R-01RZA	Red	\$9.50		NC
AR22F0R-10GZA	Green	\$9.50		NO
AR22F0R-10YZA	Yellow	\$9.50		NO
AR22F0R-10SZA	Blue	\$9.50		NO
AR22F0R-10WZA	White	\$9.50		NO
AR22FAR-01C01ZA	White	\$11.50		momentary 30mm flush round head w/OFF imprint (red)
AR22FAR-10C03ZA	White	\$11.50	momentary 30mm flush round head w/ON imprint (green)	NO
AR22M0R-10BZA	Black	\$11.00	momentary 40mm mushroom head	NO
AR22M0R-01RZA	Red	\$11.00		NC
AR22M0R-10GZA	Green	\$11.00		NO
AR22M0R-10YZA	Yellow	\$11.00		NO
AR22M0R-10SZA	Blue	\$11.00		NO
AR22M0R-10WZA	White	\$11.00		NO
AR22E0R-10BZA	Black	\$9.50		momentary 30mm extended round head
AR22E0R-01RZA	Red	\$9.50	NC	
AR22E0R-10GZA	Green	\$9.50	NO	
AR22E0R-10YZA	Yellow	\$9.50	NO	
AR22E0R-10SZA	Blue	\$9.50	NO	
AR22E0R-10WZA	White	\$9.50	NO	

## Dimensions mm [in]

AR22-FOR-xxxx, AR22-FAR-xxxx, AR22-EOR-xxxx



AR22-MOR-xxxx



Please see our website [www.AutomationDirect.com](http://www.AutomationDirect.com) for complete engineering drawings. Dimensions are approximate. Not for construction purposes.

# Fuji Electric Accessories for 22mm Command Series Pilot Devices



AR9B290

Contact Blocks for Command Series 22mm Pilot Devices				
Part Number	Qty	Price	Contacts	Color
AR9B290	1	\$5.50	NO	Blue
AR9B291	1	\$5.50	NC	Red

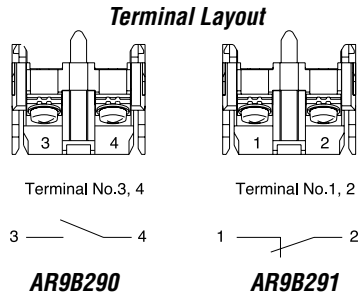
Max 6 contacts for non-illuminated momentary devices. Max 4 for alternate action non-illuminated devices.

Max 5 contacts for illuminated momentary devices. Max 3 for alternate action illuminated devices.

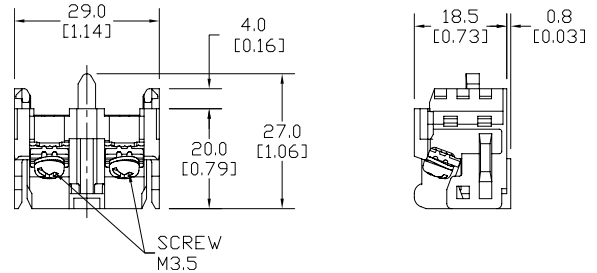
\*Exceeding the maximum number of contacts could affect the mechanical durability of the operators.



AR9B291



## Dimensions mm [in]



LED Bulbs for Command Series 22mm Pilot Devices								
Part Number	Color	Qty	Price	Use With	Lamp Voltage	Current Consumption	Power Consumption	Lamp Durability
APX510-24R	Red	2	\$14.00	AR22 / DR22 Series	24V AC/DC	12mA AC 11mA DC	0.8 W	30,000h
APX510-24G	Green	2	\$14.00					
APX510-24Y	Yellow	2	\$14.00					
APX510-24S	Blue	2	\$53.00					
APX510-24O	Orange	2	\$14.00					

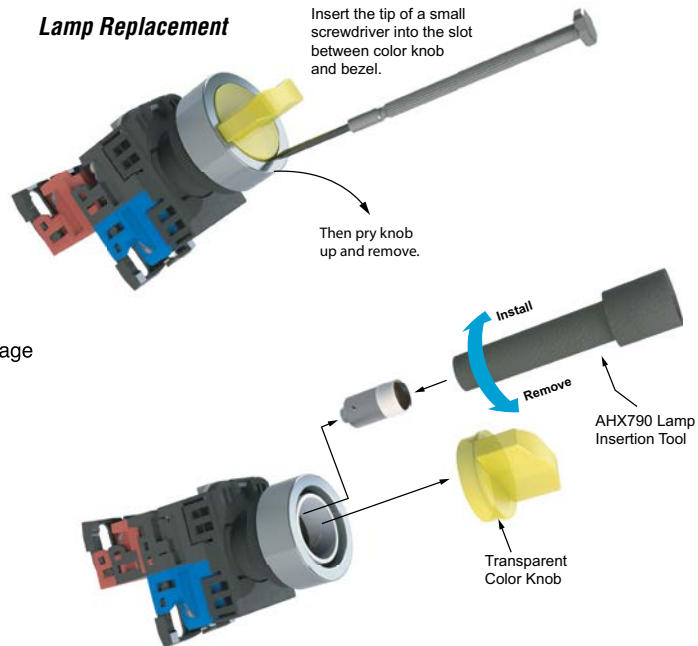


APX510-24R

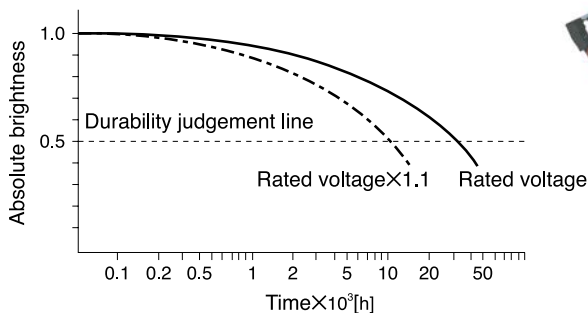
\*Lamp base: Ba9s/13

## Lamp Replacement

Insert the tip of a small screwdriver into the slot between color knob and bezel.



## Estimated durability for LED lamps



Notes: • Durability at Ta=25°C  
• Durability is affected by temperature, humidity, and voltage fluctuation.

# Fuji Electric Command Series 22mm Pilot Devices Specifications

Specifications (indoor use)			
	<b>Pushbuttons Emergency stop pushbuttons Selector switches</b>	<b>Joysticks</b>	<b>Pilot Lights</b>
Rated thermal current (contact block)	A600 / P600	-	-
Mechanical durability	See durability table below	250,000 operations	-
Electrical durability	500,000 operations at 220V AC 6A 1 million operations at 220V AC 3A	100,000 operations at 220V AC 1A (Res. load)	-
Operating frequency	1200 operations/hour (On-load factor: 40%)		-
Operating force (Avg)	9N – Pushbuttons 30-45 N – Emergency stop pushbuttons 0.15 - 0.1 N-m – Selector switches	Less than 100N	
Positive opening operation	All functions incorporating a N.C. contact are positive-opening operation.		
Dielectric strength	2,500VAC, 1 minute (w/o transformer 2000VAC)	2000VAC, 1 minute (Pilot light with transformer: 2500 VAC, 1minute)	
Insulation resistance	100MΩ or more (500VDC megger)		
Rated impulse dielectric strength	6kV	-	6kV
Conditional short-circuit current	1000A		
Short-circuit protective device	Fuse 15A (recommended, not supplied)	Fuse 1A (recommended, not supplied)	-
Pollution degree	3		
Vibration	Resonance: 10 to 55Hz, double amplitude 0.1 mm* / Constant: 16.7 Hz, double amplitude 3mm		
Shock	Malfunction durability: 100 m/s <sup>2</sup> ** /	Mechanical durability: 500 m/s <sup>2</sup>	Mechanical durability: 500 m/s <sup>2</sup>
Ambient temperature (no condensation or no icing)	-20° to +70°C [-4° to +158°F] Illuminated type: -20° to -50°C [-4° to -58°F]	-5° to +60°C [+23° to +140°F]	-20° to +50°C [-4° to +122°F]
Temperature ratings	Storage: -40° to +80°C [-40° to +176°F]		
Humidity	45 to 85% RH (within -5° to +40°C)		
Degree of protection	IP65		
Initial contact resistance	≤ 50mΩ	-	-
Terminal markings	IEC 60445	-	-
Connections	AWG 18 to AWG 14; Stripping length: 8mm to 11mm / Tightening torque: 0.8 to 1.0 N-m, 7.1 in-lb to 8.8 in-lb		
Contacts operation	Self-cleaning types. Slow action. Positive opening.		
Operation frequency	1,200 cycle/hour (Application ratio 40%)	-	-
Utilization category/contact ratings	AC-15: 24VAC at 6A, 110VAC at 6A DC-13: 24VDC at 4A, 110VDC at 1.3 A	AC-1: 110VAC at 0.3 A DC-13: 24VDC at 0.7 A, 110VDC at 0.15 A	-
Rated insulation voltage	600V AC/DC***	250V AC/DC	250V AC/DC (w/transformer 600VAC)
Materials	Enclosure: Polyamide / Contacts: silver, nickel		
Standards	UL 508, CSA C22.2, No.14, TUV - EN60947-5-1		
Approvals	UL file E44592, CSA file LR20479		

\* Emergency stop type: 10 to 500 Hz, double amplitude 0.7mm(acceleration 50m/s<sup>2</sup>), according to test condition of EN60947-5-5 (1998)

\*\* Emergency stop type: 150 m/s<sup>2</sup>

\*\*\* Illuminated type without transformer

To obtain the most current agency approval information, see the Agency Approval Checklist section on the specific part number's web page.

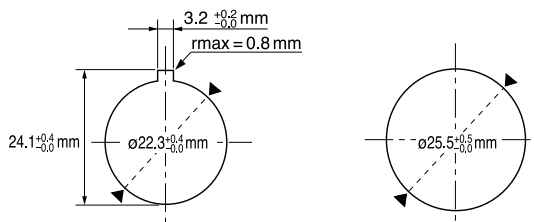
Mechanical Durability		
		<b>Operations</b>
Pushbutton switch Illuminated pushbutton switch E-stop pushbutton switch E-stop illuminated pushbutton	Momentary action	5 million
	Alternate action	1 million
	Push-lock, turn-reset	100,000
	Push-lock, pull-reset	30,000
Selector switch	Maintained 1, 2, 3, 4-contact	1 million
	Maintained 5, 6-contact	500,000
	Spring return, spring/manual return	200,000
Illuminated selector switch	Maintained	
	Without transformer 1, 2, 3-contact	1 million
	4-contact	500,000
	With transformer 1, 2-contact	1 million
	3-contact	500,000
Spring return, spring/manual return	200,000	

Note: Key insertion/removal durability for selector switch key types

• Key type 10,000

## 22mm Pilot Devices Cutouts

AR22 pilot devices can be mounted in either 22.3 or 25.5 mm diameter holes as shown in the figure below without any extra adapter.



Note: If key washer or legend plate is not used, 3.2 mm-wide location holes do not need to be cut out.

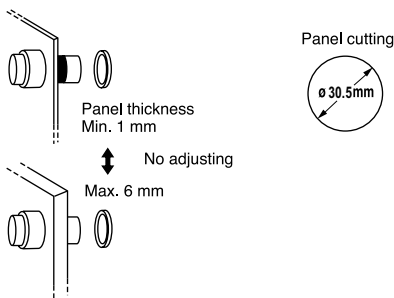
# Fuji Electric 22mm Pilot Devices Overview

## Pushbuttons, Selectors, Pilot Lights, Joysticks, Buzzers

Fuji Electric AR22 pilot devices can be mounted on panels up to 6mm thick by securing the operator with a locking nut from behind the panel without needing any adjustment.

### Easy mounting

Fuji AR22 pilot devices can be mounted on panels between 1 and 6mm thick and are mountable in panel cutouts of 22.3 or 25.5 mm. The button and lens can be mounted on a panel while the operator is engaged.

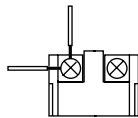


### Wiring

These pilot devices can be wired in both vertical and lateral directions making wiring in narrow spaces easier. Contact block color coding makes wiring even easier.

1NO: Blue, 1NC: Red

Lamp terminal and transformer unit: black



### Short depth

Fuji AR22 pilot devices are designed to occupy less space than traditional 22mm devices.

#### Pushbuttons



AR22FOR-01RZA

#### Illuminated Pushbuttons



AR22FOL-10E3YZA

#### Pilot Lights



DR22E3L-E3SZA

#### E-Stop Pushbuttons



AR22VOR-01R

#### Selector Switches



AR22PR-210BZA

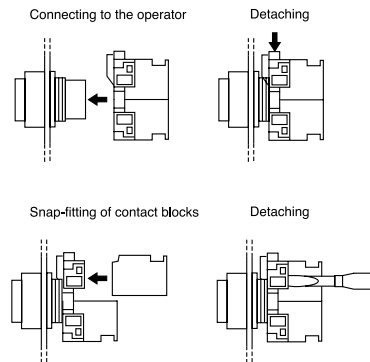
#### Buzzers



DR22B8-EB

### Quick contact block and transformer replacement

Fuji AR22 pilot devices have a snap-on mounting that makes replacing or adding a contact block and transformer unit easier.



### Safety

AR22 pilot devices include terminal covers for added safety and security. Emergency stop pushbuttons include a trigger action mechanism that prevents the contacts from moving until the button is pushed and locked.

### Protection

AR22 pilot devices feature oil and dust-tight operator construction (IP65), except for buzzers DR22B5 (IP00), DR22B8 (IP54).

