

Command Illuminated 22mm Metal and Plastic Pushbuttons



AR22F0L-10E3YZA



AR22F5L-10E3SZA



AR22E0L-01E3GZA



AR22V5L-01L3R



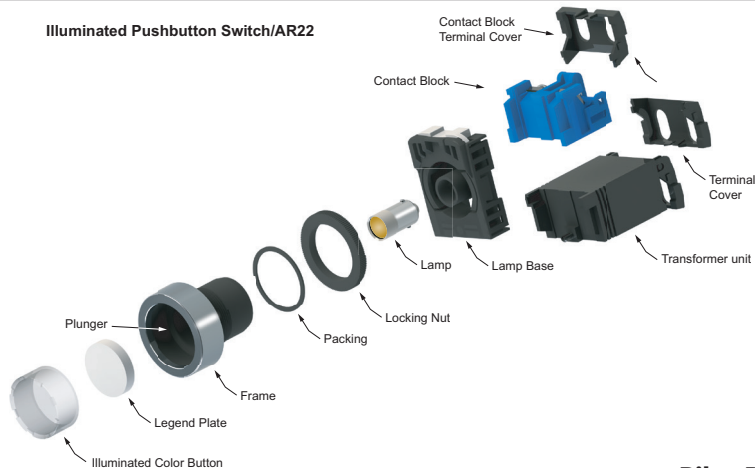
AR22M0L-01E3RZA



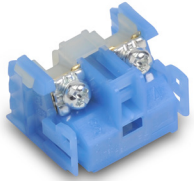
AR22M0L-01L3RZA

| Command LED Illuminated 22mm Pushbuttons | | | | | | | |
|--|--------|-------|---------------------|---|----------|---------------------------------|----------|
| Part Number | Color | Price | Drawing Link | Operator | Material | Lamp Voltage | Contacts |
| AR22F0L-01E3RZA | Red | | PDF | 30mm momentary flush round head | Metal | 24V AC/DC (without transformer) | N.C. |
| AR22F0L-10E3GZA | Green | | PDF | | | | N.O. |
| AR22F0L-10E3YZA | Yellow | | PDF | | | | N.O. |
| AR22F0L-10E3SZA | Blue | | PDF | | | | N.O. |
| AR22F0L-10E3WZA | White | | PDF | | | | N.O. |
| AR22F0L-01L3RZA | Red | | PDF | | | 115-127 VAC (with transformer) | N.C. |
| AR22F0L-10L3GZA | Green | | PDF | | | | N.O. |
| AR22F0L-10L3YZA | Yellow | | PDF | | | | N.O. |
| AR22F0L-10L3SZA | Blue | | PDF | | | | N.O. |
| AR22F0L-10L3WZA | White | | PDF | | | | N.O. |
| AR22F5L-10E3RZA | Red | | PDF | 30mm push-push flush round head | Metal | 24V AC/DC (without transformer) | N.O. |
| AR22F5L-10E3GZA | Green | | PDF | | | | N.O. |
| AR22F5L-10E3YZA | Yellow | | PDF | | | | N.O. |
| AR22F5L-10E3SZA | Blue | | PDF | | | | N.O. |
| AR22F5L-10E3WZA | White | | PDF | | | | N.O. |
| AR22F5L-10L3RZA | Red | | PDF | | | 115-127 VAC (with transformer) | N.O. |
| AR22F5L-10L3GZA | Green | | PDF | | | | N.O. |
| AR22F5L-10L3YZA | Yellow | | PDF | | | | N.O. |
| AR22F5L-10L3SZA | Blue | | PDF | | | | N.O. |
| AR22F5L-10L3WZA | White | | PDF | | | | N.O. |
| AR22E0L-01E3RZA | Red | | PDF | 30mm momentary extended round head | Metal | 24V AC/DC (without transformer) | N.C. |
| AR22E0L-10E3GZA | Green | | PDF | | | | N.O. |
| AR22E0L-10E3YZA | Yellow | | PDF | | | | N.O. |
| AR22E0L-10E3SZA | Blue | | PDF | | | | N.O. |
| AR22E0L-10E3WZA | White | | PDF | | | | N.O. |
| AR22E0L-01L3RZA | Red | | PDF | | | 115-127 VAC (with transformer) | N.C. |
| AR22E0L-10L3RZA | Red | | PDF | | | | N.O. |
| AR22E0L-10L3GZA | Green | | PDF | | | | N.O. |
| AR22E0L-10L3YZA | Yellow | | PDF | | | | N.O. |
| AR22E0L-10L3SZA | Blue | | PDF | | | | N.O. |
| AR22E0L-10L3WZA | White | | PDF | N.O. | | | |
| AR22M0L-01E3RZA | Red | | PDF | 40mm momentary mushroom head | Metal | 24V AC/DC (without transformer) | N.C. |
| AR22M0L-01L3RZA | Red | | PDF | | | 115-127 VAC (with transformer) | N.C. |
| AR22V5L-01E3R | Red | | PDF | 40mm push-lock, twist release, with white arrow | Plastic | 24V AC/DC (without transformer) | N.C. |
| AR22V5L-01L3R | Red | | PDF | | | 115-127 VAC (with transformer) | N.C. |

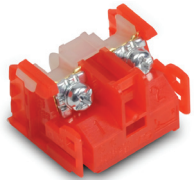
Illuminated Pushbutton Switch/AR22



Accessories for 22mm Command Series Pilot Devices



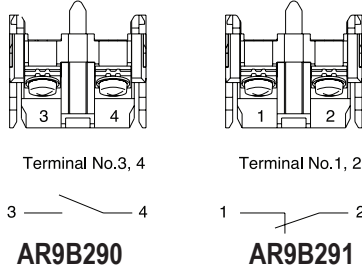
AR9B290



AR9B291

| Contact Blocks for Command Series 22mm Pushbuttons | | | | | |
|--|-----|-------|---------------------|-------|----------|
| Part Number | Qty | Price | Drawing Link | Color | Contacts |
| AR9B290 | 1 | | PDF | Blue | N.O. |
| AR9B291 | 1 | | PDF | Red | N.C. |

Terminal Layout



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.

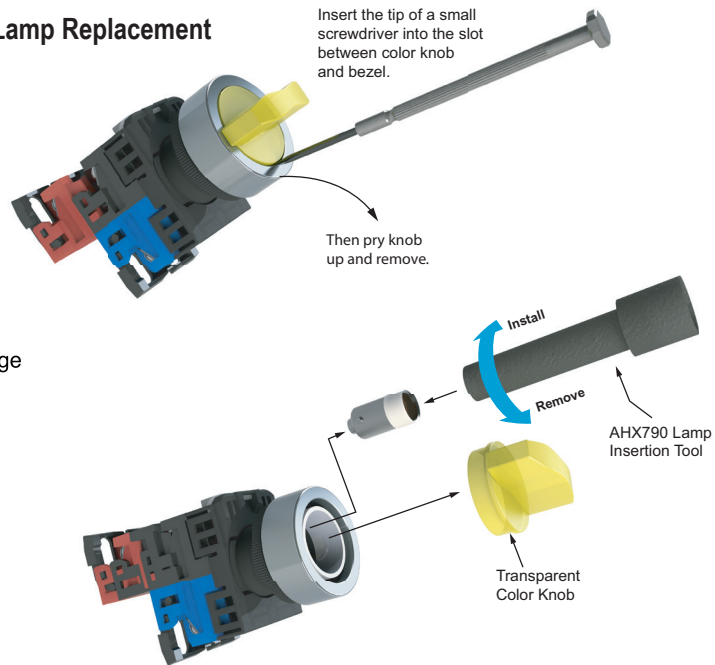


APX510-24R

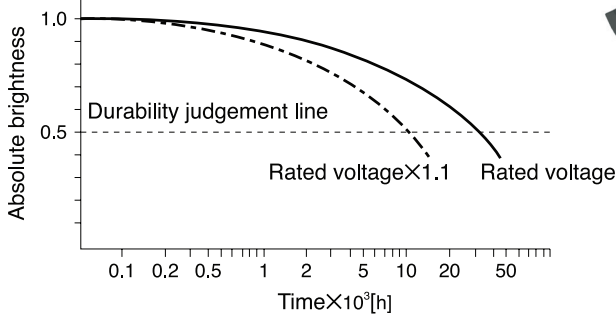
| LED Bulbs for Command Series 22mm Pilot Devices | | | | | | | | |
|---|--------|-----|-------|--------------------|--------------|---------------------|-------------------|-----------------|
| Part Number | Color | Qty | Price | Use With | Lamp Voltage | Current Consumption | Power Consumption | Lamp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

*Lamp base: Ba9s/13

Lamp Replacement

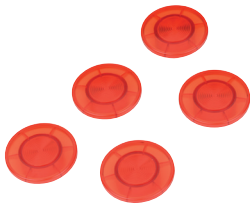


Estimated durability for LED lamps



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

Accessories for 22mm Command Series Pilot Devices

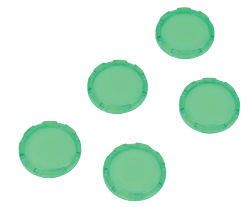


AR9C016-R

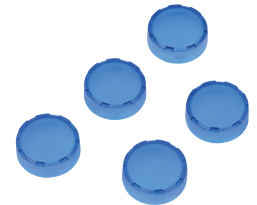


AR9C021-R

| Lenses for Command Series 22mm Illuminated Pushbuttons | | | | | |
|--|--------|-----|-------|---------------------|--------------------|
| Part Number | Color | Qty | Price | Drawing Link | Use With |
| AR9C016-R | Red | 5 | | PDF | AR22MOL, AR22M5L |
| AR9C021-R | Red | 5 | | PDF | AR22VOR, AR22VOL |
| AR9C011-R | Red | 5 | | PDF | AR22FOL AR22F5L |
| AR9C011-G | Green | 5 | | PDF | |
| AR9C011-Y | Yellow | 5 | | PDF | |
| AR9C011-S | Blue | 5 | | PDF | |
| AR9C011-C | Clear | 5 | | PDF | |
| AR9C012-R | Red | 5 | | PDF | AR22EOL |
| AR9C012-G | Green | 5 | | PDF | |
| AR9C012-Y | Yellow | 5 | | PDF | |
| AR9C012-S | Blue | 5 | | PDF | |
| AR9C012-C | Clear | 5 | | PDF | |



AR9C011-G



AR9C012-S

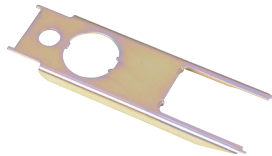


AHX790

| Tools and Lock Nut for Use with Command Series 22mm Pilot Devices | | | | |
|---|-----|-------|---------------------|--------------------------|
| Part Number | Qty | Price | Drawing Link | Description |
| AHX790 | 1 | | PDF | Bulb removal tool |
| AHX702 | 1 | | N/A | Wrench/lamp removal tool |
| AR9A004 | 1 | | N/A | Wrench |
| AR9R744 | 5 | | PDF | Lock nut |



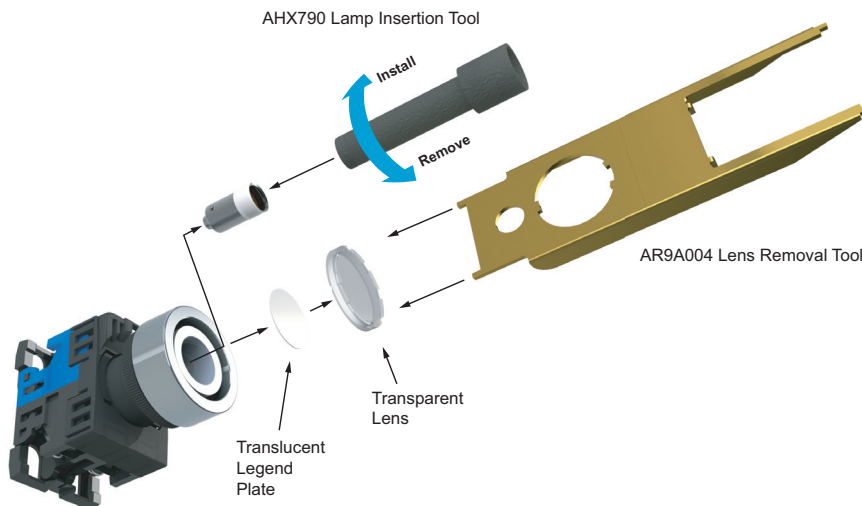
AHX702



AR9A004



AR9R744



Command Series 22mm Pilot Devices Specifications

| Specifications (indoor use) | | | |
|---|---|---|---|
| | Pushbuttons Emergency stop pushbuttons Selector switches | Joysticks | Pilot Lights |
| 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 ² ** / | Mechanical durability: 500 m/s ² | Mechanical durability: 500 m/s ² |
| 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] | -2 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/s²), according to test condition of EN60947-5-5 (1998)

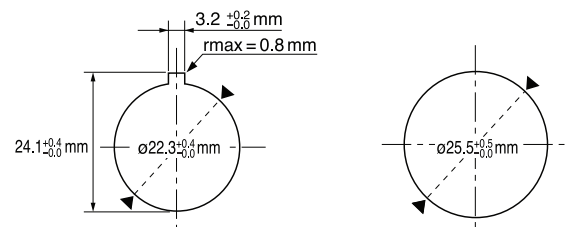
** Emergency stop type: 150 m/s² ***Illuminated type without transformer

| Mechanical Durability | | |
|---|-------------------------------------|------------|
| | | Operations |
| 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.

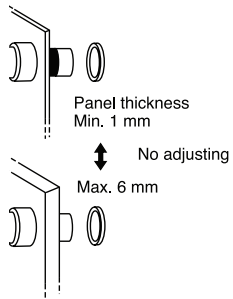
Fuji Electric 22mm Pilot Devices Overview

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.



Panel cutting



Pushbuttons



AR22F0R-01RZA

Illuminated Pushbuttons



AR22F0L-10E3YZA

Pilot Lights



DR22E3L-E3SZA

E-Stop Pushbuttons



AR22V0R-01R

Selector Switches



AR22PR-210BZA

Buzzers



DR22B8-EB

Quick contact block and transformer replacement

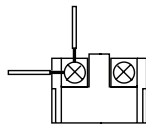
Fuji AR22 pilot devices have a snap-on mounting that makes replacing or adding a contact block and transformer unit easier.

Wiring

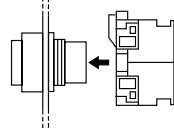
These pilot devices can be wired in both vertical and lateral directions making wiring in narrow spaces easier. Contact block color coding makes wiring even easier.

1N.O. Blue, 1N.C. Red

Lamp terminal and transformer unit: black



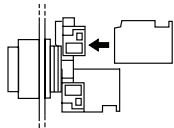
Connecting to the operator



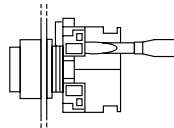
Detaching



Snap-fitting of contact blocks



Detaching



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).

Short depth

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

