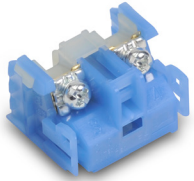
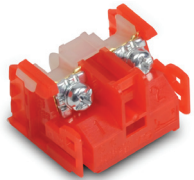


# Accessories for 22mm Command Series Pilot Devices



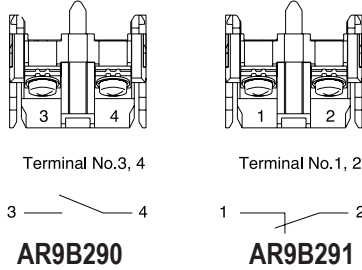
AR9B290



AR9B291

Contact Blocks for Command Series 22mm Pushbuttons					
Part Number	Qty	Price	Drawing Link	Color	Contacts
<a href="#">AR9B290</a>	1		<a href="#">PDF</a>	Blue	N.O.
<a href="#">AR9B291</a>	1		<a href="#">PDF</a>	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

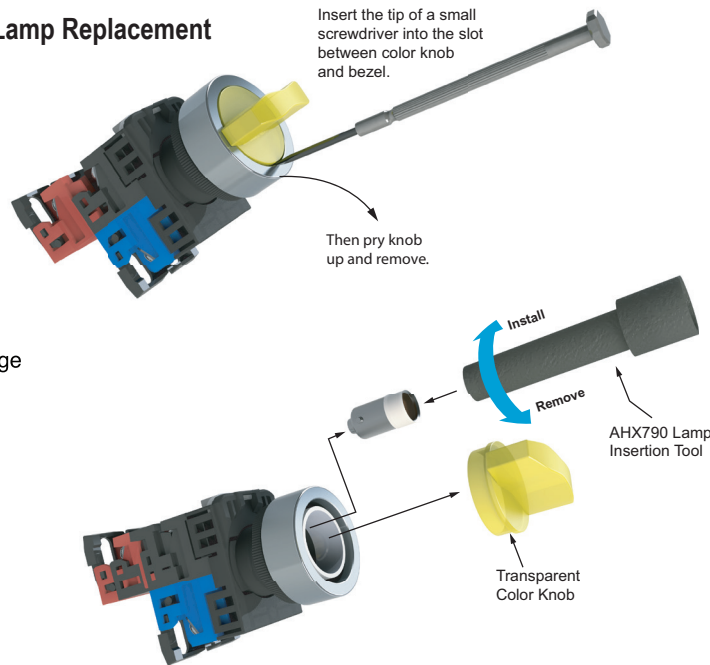
LED Bulbs for Command Series 22mm Pilot Devices								
Part Number	Color	Qty	Price	Use With	Lamp Voltage	Current Consumption	Power Consumption	Lamp Durability
APX510-24R	Red	2		AR22 / DR22 Series	24V AC/DC	12mA AC 11mA DC	0.8 W	30,000h
APX510-24G	Green	2						
APX510-24Y	Yellow	2						
APX510-24S	Blue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

\*Lamp base: Ba9s/13

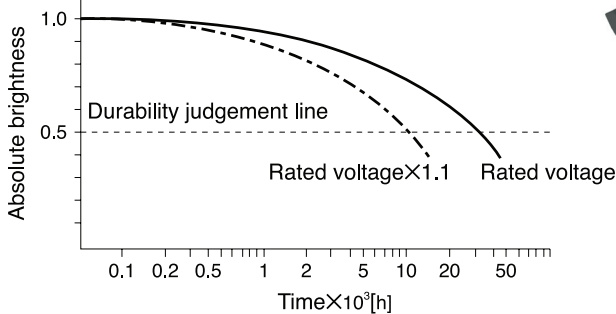
### Lamp Replacement

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

Then pry knob up and remove.

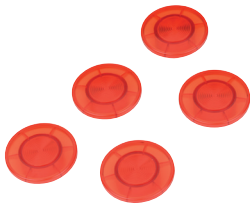


### Estimated durability for LED lamps



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

# Accessories for 22mm Command Series Pilot Devices

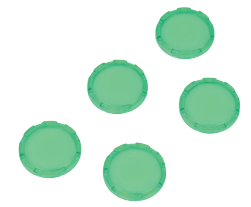


AR9C016-R

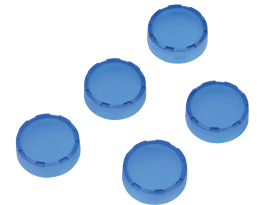


AR9C021-R

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



AR9C011-G



AR9C012-S

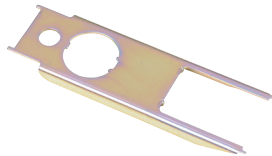


AHX790

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



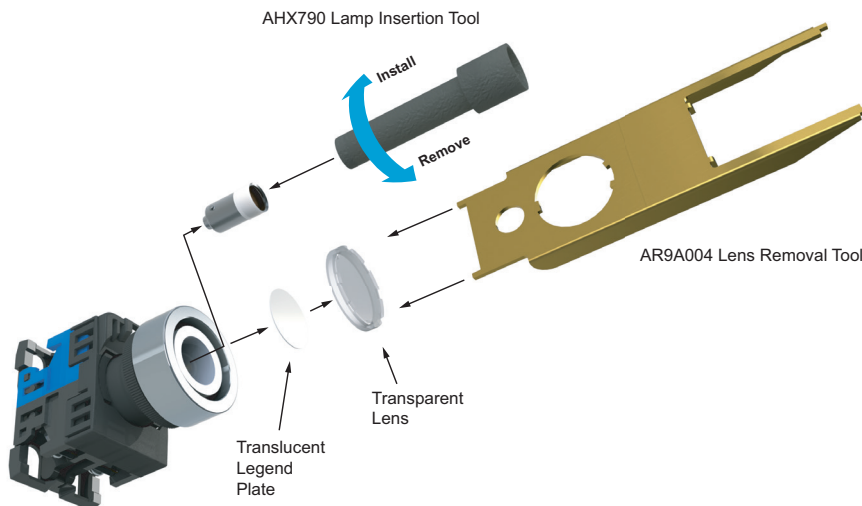
AHX702



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 <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]	-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/s<sup>2</sup>), according to test condition of EN60947-5-5 (1998)

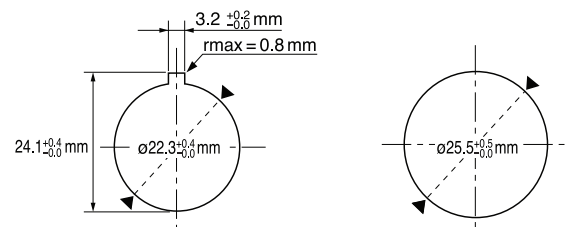
\*\* Emergency stop type: 150 m/s<sup>2</sup> \*\*\*Illuminated type without transformer

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.