# Fuji Electric Command Non-Illuminated **30mm Metal Pushbuttons**

### Non-Illuminated Metal Mushroom-Style Pushbuttons

These pushbuttons feature large 65mm diameter plastic actuator and mount in standard 30.5 mm hole. All pushbuttons include operator, support base and contact block(s).

All switches in this series use replacement contact block AR9B290 (Blue, N.O.) or AR9B291 (Red, N.C.), sold separately in packages of one.



**Command Non-Illuminated 30mm Metal Pushbuttons** Drawing Part Number Color Price Material Contacts Operator Link AR30B0R-10G Green \$26.00 PDF N.O. AR30B0R-10B Black \$26.00 PDF N.O. AR30B0R-10Y Yellow \$26.00 PDF N.O. \$26.00 N.C. AR30B0R-01R Red PDF Momentary Metal 65mm giant mushroom head AR30B0R-11G Green \$33.00 PDF 1 N.O. + 1 N.C. Black 1 N.O. + 1 N.C. AR30B0R-11B \$33.00 PDF <u>AR30B0R-11Y</u> Yellow \$33.00 PDF 1 N.O. + 1 N.C. <u>AR30B0R-11R</u> \$33.00 PDF 1 N.O. + 1 N.C. Red



AR30B0R-10G

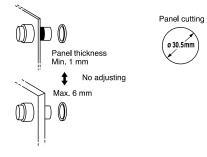
## 1-800-633-0405 Fuji Electric 30mm Pilot Devices Overview

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

Fuji Electric AR30 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 Electric AR30 pilot devices can be mounted on panels between 1 and 6mm thick and are mountable in panel cutouts of 30.5 mm.



#### Pushbuttons



AR30F0R-01RZC

**E-Stop Pushbuttons** 

AR30Q2R-01RZC

Short depth



**Illuminated Pushbuttons** 

AR30E0L-10L3GZC

**Selector Switches** 

AR30PR-210BZC

Pilot Lights



DR30D0L-L9SZC

**Buzzers** 



DR30B5-EBZC

#### Wiring

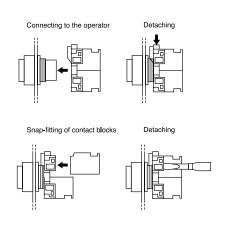
These pilot devices can be wired in both vertical and lateral directions making wiring in narrow spaces easier. Contact block color coding makes wiring even easier.

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

Lamp terminal and transformer unit: black  $\otimes$ 

#### **Quick contact block and** transformer replacement

Fuji AR30 pilot devices have a snap-on mounting that makes replacing or adding a contact block and transformer unit easier.



#### Safety

AR30 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

Fuji AR30 pilot devices are designed to occupy less

space than traditional 30mm devices.

#### Protection

AR30 pilot devices feature oil- and dust-tight operator construction (IP65), except for buzzers DR30B5 (IP00).



TO OBTAIN THE MOST CURRENT AGENCY APPROVAL INFORMATION. SEE THE AGENCY COMPLIANCE & CERTIFICATIONS CHECKLIST SECTION ON THE SPECIFIC PART NUMBER'S WEB PAGE.

## 1-800-633-0405 Fuji Electric Accessories for 30mm Command Series Pilot Devices



#### AHX177-00



#### <u>AHX177-0B</u>

Legend Plates for Command Series 30mm Devices					
Part Number	Price	Drawing Link	Legend	Material	Color
<u>AHX177-00</u>	\$2.50	<u>PDF</u>	Blank	Brass	Silver field, silver background
<u>AHX177-0B</u>	\$2.50	PDF	OFF		Silver field, silver background, black text
<u>AHX177-0A</u>	\$2.50	PDF	ON		
<u>AHX177-0C</u>	\$2.50	PDF	START		
<u>AHX177-0D</u>	\$2.50	PDF	STOP		
<u>AHX177-2A</u>	\$2.50	PDF	OFF-ON		
<u>AHX720-5A</u>	\$9.50	<u>PDF</u>	EMERGENCY STOP	Aluminum	Yellow field, yellow background, black text



Tools and Lock Nut for Use with Command Series 30mm Pilot Devices			
Part Number	Price	Description	
<u>AR9A006</u>	\$34.00	Fuji Electric mounting wrench. For use with AR22, AR30, DR22 and DR30 series pushbuttons, switches, indicators and buzzers.	
<u>AR9R055</u>	\$18.00	Fuji Electric guard ring, replacement, 30mm, metal. Package of 5. For use with AR30G2L series pushbuttons.	
<u>AHX082</u>	\$1.00	Fuji Electric key washer, replacement, 30mm, metal. Package of 5. For use with AR30 and DR30 series pushbuttons, switches, indicators and buzzers.	
<u>AHX088</u>	\$5.75	Fuji Electric lock nut, replacement, 30mm, metal. Package of 5. For use with AR30F0R, DR30D0L, E0L, E0R and Q7L series pushbuttons, switches and indicators.	
<u>AHX093</u>	\$5.75	Fuji Electric lock nut, replacement, 30mm, metal. Package of 5. For use with AR30M0R, A_N, JR, PL, PR, Q2R and WR series pushbuttons, switches and indicators.	
<u>AHX282</u>	\$1.00	Fuji Electric sealing/spacer washer, replacement, 30mm. Package of 5. For use with AR30 and DR30 series pushbuttons, switches, indicators and buzzers.	



AR9R055

AHX082





## 1-800-633-0405 Fuji Electric Accessories for 30mm **Command Series Pilot Devices**

## **Contact Blocks**



AR9B290



AR9B291

Contact Blocks for Command Series 30mm Pushbuttons					
Part Number	Qty	Price	Drawing Link	Color	Contacts
<u>AR9B290</u>	1	\$6.75	PDF	Blue	N.O.
<u>AR9B291</u>	1	\$6.75	PDF	Red	N.C.

Minimum current requirement AC/DC is 5mA

#### **Terminal Layout**





3 \_\_\_\_\_ 4

AR9B290

Terminal No.3, 4

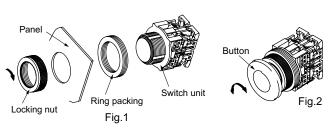


Max 6 contacts for non-illuminated momentary devices. Max 4 for alternate action non-illuminated devices. Max 5 contacts for illuminated momentary devices. Max 3 for alternate action illuminated devices. \*Exceeding the maximum number of contacts could affect the mechanical durability of the operators.

## 1-800-633-0405 Fuji Electric Command Series 30mm Pilot Devices Specifications

### **Assembly Information**

These pushbuttons are supplied with the appropriate contact blocks, unless otherwise indicated. Use these drawings as a guide to make sure there is adequate clearance behind the panel. Insert the switch unit in the panel hole at the back of the panel and secure it with a locking nut at the panel front.



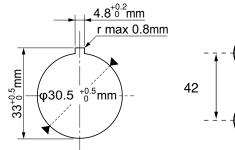
Example mounting diagram for AR30M0R

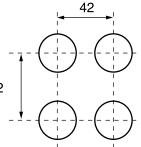
### Panel Holes

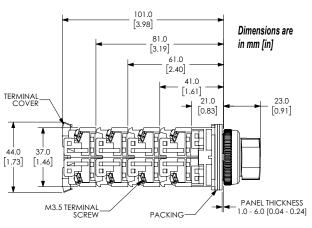
For safe operation, use these mounting hole drawings to ensure that there is adequate space between switches.

Note: Location hole 4.8mm x 33mm is for use with a key washer

or legend plate. If key-washer or legend plate are not used, this location hole is not needed. ADC does not currently carry an appropriate 4.8mm punch if the hole is needed.

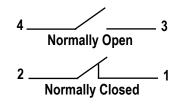






NOTE: Contact blocks can be arranged up to four deep by two wide.

## **Typical Wiring**



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

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

Key type 10,000

1-800-633-0405

# For Fuji Electric Command Series 30mm Pilot Devices Specifications

	Specifications (Inc	door Use)			
	Pushbuttons Selector switches	Joysticks	Pilot Lights		
Rated thermal current (contact block)	A600 P600	_	_		
Mechanical durability	See mechanical durability table	250,000 operations	_		
Electrical durability	500,000 operations at 220VAC 6A 1,000,000 operations at 220VAC 3A	100,000 operations at 220VAC 1A (res. load)	_		
Operating frequency	1200 operations/hour (on-load factor: 40%) —				
Operating force (Avg)	9N – Pushbuttons 0.15 - 0.1 N·m – Selector switches				
Positive opening operation	All	All functions incorporating an N.C. contact are positive-opening operation.			
Dielectric strength	2,000VAC, 1 minute*** 2,000VAC, 1 minute**** 2,000VAC,		1 minute		
Insulation resistance		100MΩ or more (500VDC megger)			
Rated impulse dielectric strength	6kV	-	6kV		
Conditional short-circuit current	100	1000A			
Short-circuit protective device	Fuse 15A	Fuse 1A	_		
Pollution degree		3			
Vibration	Resonance: 10 to 55 Hz, do	ouble amplitude 0.1mm*, Constant: 16.7 I	Hz, double amplitude 3mm		
Shock		Malfunction: 100m/s <sup>2**</sup> Mechanical: 500m/s <sup>2</sup>			
Ambient temperature (no condensation or no icing)	-20 to 70°C [-4 to 158°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°C to 40°C]			
Degree of protection		IEC IP65			
Initial contact resistance	≥ 50mΩ	_	_		
Terminal markings	IEC 60445	IEC 60445 —			
Connections		14 to 18 AWG; Stripping length: 5 to 11mm Tightening torque: 0.8 to 1.0 N·m, 7.1 to 8.8 in·lb			
Contacts operation	Self-c	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	250V AC/DC*** 600V AC/DC 250V AC/DC		250V AC/DC*** 600VAC w/transformer		
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

\*\*\*\* Illuminated type with transformer

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