

For Fuji Electric Command Non-Illuminated **30mm Metal and Plastic Pushbuttons**



AR30F0R-10GZC



AR30E0R-10RZC



AR30M0R-10SZC

Com	mand N	on-Illun	ninated	30mm Push	buttons	
Part Number	Color	Price	Drawing Link	Operator	Material	Contacts
AR30F0R-10GZC	Green	\$14.00	PDF			N.O.
AR30F0R-10BZC	Black	\$14.00	PDF			N.O.
AR30F0R-10RZC	Red	\$14.00	PDF			N.O.
AR30F0R-01RZC	Red	\$14.00	PDF	35mm momentary		N.C.
AR30F0R-10SZC	Blue	\$14.00	PDF	indoir found field		N.O.
AR30F0R-10WZC	White	\$14.00	PDF			N.O.
AR30F0R-10YZC	Yellow	\$14.00	PDF			N.O.
AR30E0R-10GZC	Green	\$14.00	PDF			N.O.
AR30E0R-10BZC	Black	\$14.00	PDF			N.O.
AR30E0R-10RZC	Red	\$14.00	PDF	35mm momentary	Base: Plastic Bezel: Metal	N.O.
AR30E0R-01RZC	Red	\$14.00	PDF	extended round		N.C.
AR30E0R-10SZC	Blue	\$14.00	PDF	head		N.O.
AR30E0R-10WZC	White	\$14.00	PDF			N.O.
AR30E0R-10YZC	Yellow	\$14.00	PDF			N.O.
AR30M0R-10GZC	Green	\$15.00	PDF			N.O.
AR30M0R-10BZC	Black	\$15.00	PDF			N.O.
AR30M0R-10RZC	Red	\$15.00	PDF	40mm momentary	-	N.O.
AR30M0R-01RZC	Red	\$15.00	PDF	mushroom		N.C.
AR30M0R-10SZC	Blue	\$15.00	PDF	round head		N.O.
AR30M0R-10WZC	White	\$15.00	PDF			N.O.
AR30M0R-10YZC	Yellow	\$15.00	PDF			N.O.

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		Silver field, silver background
<u>AHX177-0B</u>	\$2.50	PDF	OFF	Brass	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

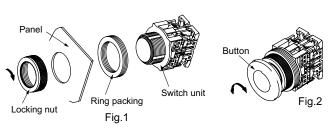


Max 6 contacts for non-illuminated momentary devices. Max 4 for alternate action non-illuminated devices. Max 5 contacts for illuminated momentary devices. Max 3 for alternate action illuminated devices. *Exceeding the maximum number of contacts could affect the mechanical durability of the operators.

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.



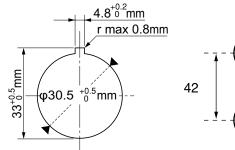
Example mounting diagram for AR30M0R

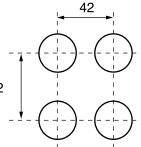
Panel Holes

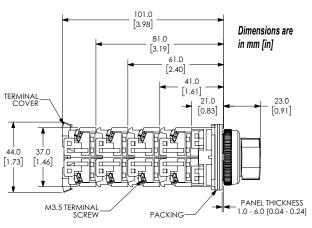
For safe operation, use these mounting hole drawings to ensure that there is adequate space between switches.

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.

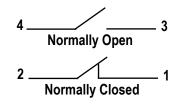






NOTE: Contact blocks can be arranged up to four deep by two wide.

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	Inveticke			
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	Less that	n 100N		
Positive opening operation	All	functions incorporating an N.C. contact a positive-opening operation.	re		
Dielectric strength	2,000VAC, 1 minute*** 2,500VAC, 1 minute****	2,000VAC.	, 1 minute		
Insulation resistance		100M Ω or more (500VDC megger)			
Rated impulse dielectric strength	6kV	-	6kV		
Conditional short-circuit current	100	0A	—		
Short-circuit protective device	Fuse 15A	Fuse 1A	_		
Pollution degree		3			
Vibration	Resonance: 10 to 55 Hz, do	Resonance: 10 to 55 Hz, double amplitude 0.1mm*, Constant: 16.7 Hz, double amplitude 3mm			
Shock		Malfunction: 100m/s ^{2**} Mechanical: 500m/s ²			
Ambient temperature (no condensation or no icing)	-20 to 70°C [-4 to 158°F]	-20 to 70°C [-4 to 158°F] -5 to 60°C [23 to 140°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	leaning types. Slow action. Positive oper	ning.		
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/s²), according to test condition of EN60947-5-5 (1998)

** Emergency stop type: 150 m/s²

*** 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.

For Fuji Electric Command 30mm Emergency Stop Pushbuttons Specifications

30mm Emergency Stop Pushbuttons Specifications (Indoor Use)				
	AR30 Q2R, VOL, VOR	AR30 VPR, VPL		
Rated thermal current (contact block)	A600 P600	B300 R300		
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 AC12, DC13, DC12		
Operating frequency	1200 operations/hour (on-load factor: 40%)	900 operations/hour (on-load factor: 40%)		
Operating force (Avg)	30-45 N	Push to Lock: 40N Turn to reset: 0.5 N·m		
Positive opening operation	All functions incorporating positive-opening			
Dielectric strength	2,000VAC, 1 minute**** 2,500VAC, 1 minute****	2,000 VAC, 1 minute		
Insulation resistance	100MΩ or more (500	OVDC megger)		
Rated impulse dielectric strength	6kV	2.5 kV		
Conditional short-circuit current	1000A	A		
Short-circuit protective device	Fuse 15A	Fuse 10A		
Pollution degree	3			
Vibration	Resonance: 10 to 55 Hz, double amplitude 0.1mm*, Constant: 16.7 Hz, double amplitude 3mm	Malfunction: max double amplitude: 0.7 mm (max: 50 m/s2), frequency: 10 to 500 Hz Durability: max double amplitude: 0.7 mm (max: 50 m/s2), frequency: 10 to 500 Hz*		
Shock	Malfunction: 100m/s ² Mechanical: 500m/s ²	Malfunction:150m/s ² Durability: 1000 m/s ² **		
Ambient temperature (no condensation or no icing)	-20 to 70°C [-4 to 158°F]	Non-illuminated -20 to +60°C [-4 to 140°F] Illuminated -20 to +50°C [-4 to 122°F]		
Temperature ratings	Storage: -40 to 80°C	: [-40 to 176°F]		
Humidity	45 to 85% RH [withir	n -5°C to 40°C]		
Degree of protection	IEC IP6	5		
Initial contact resistance	≥ 50mΩ	1000mΩ		
Terminal markings	IEC 604			
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	Stranded wire: up to 1.25 mm ² , 24 to 16 AWG-CU Solid wire: up to ø1.2 mm ² , 24 to 16 AWG-CU Tightening torque: 1.5 to 2.5 N·m, 13.27 to 22.1 in·lb		
Contacts operation	Self-cleaning types. Slow action. Positive opening.			
Operation frequency	1,200 cycle/hour (Application ratio 40%)	900 operations/hour (On-load factor: 40%)		
Utilization category/ contact ratings	AC-15: 24VAC at 6A, 110VAC at 6A DC-13: 24VDC at 4A, 110VDC at 1.3 A	DC-13: 24VDC at 1A DC-12 24VDC at 2A		
Rated insulation voltage	250 VAC/VDC*** 600 VAC/VDC	250 VAC/VDC		
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 CUL Listed, CE, UL Category Emergency Stop Device			

* Emergency stop type: 10 to 500 Hz, double amplitude 0.7mm (acceleration 50m/s²), according to test condition of EN60947-5-5 (1998)

** Except when the switch is mounted upside down

*** Illuminated type without transformer

**** Illuminated type with transformer

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

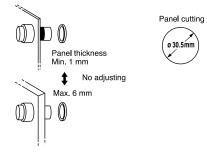
1-800-633-0405 Fuji Electric 30mm Pilot Devices Overview

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

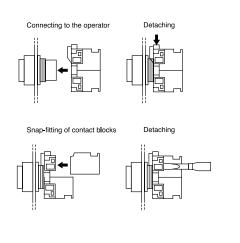
These pilot devices can be wired in both vertical and lateral directions making wiring in narrow spaces easier. Contact block color coding makes wiring even easier.

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.