

## Fuji Electric Command LED-Illuminated **16mm Plastic Pushbuttons**











AR16F0N-C2E3G

AF16F0N-C2E3R

AR16F5N-C2E3W

AF16F5N-C2E3Y

AF16F5N-C2E3S

Command LED-Illuminated 16mm Plastic Pushbuttons									
Part Number	Color	Price	Drawing Link	Operator	Туре*	Voltage	Protection	Contacts	Material
AR16F0N-C2E3G	Green	\$17.50	PDF						
AR16F0N-C2E3R	Red	\$17.50	PDF	Momentary,		24 VAC/VDC	IP65	DPDT	
AR16F0N-C2E3W	White	\$17.50	<u>PDF</u>	flush, 24.0 x 18.0 mm,	Standard				
AR16F0N-C2E3Y	Yellow	\$17.50	PDF	rectangular	Standard				
AR16F0N-C2E3S	Blue	\$17.50	<u>PDF</u>						
AR16F0N-C2E3A	Orange	\$17.50	<u>PDF</u>						wBase: Plastic Bezel: Plastic
AF16F0N-C2E3G	Green	\$20.50	PDF		Thin				
AF16F0N-C2E3R	Red	\$20.50	<u>PDF</u>	Momentary,					
AF16F0N-C2E3W	White	\$20.50	PDF	flush, 28.0 x 22.0 mm,					
AF16F0N-C2E3Y	Yellow	\$20.50	PDF	rectangular	'''''				
AF16F0N-C2E3S	Blue	\$20.50	PDF						
AF16F0N-C2E3A	Orange	\$20.50	PDF						
AR16F5N-C2E3G	Green	\$18.50	PDF		Standard				
AR16F5N-C2E3R	Red	\$18.50	PDF	Push ON - push OFF,					
AR16F5N-C2E3W	White	\$18.50	PDF	flush,					
AR16F5N-C2E3Y	Yellow	\$18.50	<u>PDF</u>	24.0 x 18.0 mm,					
AR16F5N-C2E3S	Blue	\$18.50	PDF	rectangular					
AR16F5N-C2E3A	Orange	\$18.50	<u>PDF</u>						
AF16F5N-C2E3G	Green	\$21.50	PDF		Thin	full voltage			
AF16F5N-C2E3R	Red	\$21.50	PDF	Push ON - push OFF,					
AF16F5N-C2E3W	White	\$21.50	PDF	flush,					
AF16F5N-C2E3Y	Yellow	\$21.50	PDF	28.0 x 22.0 mm					
AF16F5N-C2E3S	Blue	\$21.50	PDF	rectangular					
AF16F5N-C2E3A	Orange	\$21.50	PDF						
AR16G0N-C2E3G	Green	\$17.50	<u>PDF</u>						
AR16G0N-C2E3R	Red	\$17.50	<u>PDF</u>	Momentary,					
AR16G0N-C2E3W	White	\$17.50	<u>PDF</u>	flush, 24.0 x 18.0 mm,	Standard				
AR16G0N-C2E3Y	Yellow	\$17.50	<u>PDF</u>	rectangular,	Otanuaru				
AR16G0N-C2E3S	Blue	\$17.50	<u>PDF</u>	guarded					
AR16G0N-C2E3A	Orange	\$17.50	<u>PDF</u>						
AR16G5N-C2E3G	Green	\$18.50	<u>PDF</u>	D I ON LOSS					
AR16G5N-C2E3R	Red	\$18.50	<u>PDF</u>	Push ON - push OFF, flush,					
AR16G5N-C2E3W	White	\$18.50	<u>PDF</u>	24.0 x 18.0 mm,	Standard				
AR16G5N-C2E3Y	Yellow	\$18.50	<u>PDF</u>	rectangular,	Statitiatu				
AR16G5N-C2E3S	Blue	\$18.50	<u>PDF</u>	guarded					
AR16G5N-C2E3A	Orange	\$18.50	PDF						

<sup>\*</sup> Type: Standard = 28.4 mm deep, Thin - 35.9 mm deep



# Fruji Electric Command Series 16mm/19mm **Pilot Devices Specifications**

Specifications (Indoor Use)								
	Pushbuttons / Selector Switches / Indicating Lights	Emergency Stop Pushbuttons						
Rated thermal current (contact block)	D300	C300 / R300						
Mechanical durability	Pushbuttons: Momentary 1 million operations Alternate: 250,000 operations Selector Switch: 250,000 operations Indicating Lights: NA	100,000 operations						
Electrical durability	100,000 operations (220 VAC 0.7A)	100,000 operations (AC-15, AC-13, AC-12, DC-13, DC-12)						
Operating frequency	1200 operations/hour (On-load factor: 40%)							
Operating force (Avg)	Pushbuttons: 10N max Selector switches 0.1 N·m max	Push to lock: 25N max Pull to reset: 20N max Turn to reset: 0.3 N⋅m max						
Dielectric strength	2000 VAC	C for 1 min						
Insulation resistance	100ΜΩ (500	VDC megger)						
Rated impulse dielectric strength	2.5	5kV						
Conditional short-circuit current	100	00A						
Short-circuit protective device	2A	6A						
Pollution degree	3 (inside the	enclosure 2)						
Vibration	Resonance: 10 to 55Hz, double amplitude 0.1 mm	n* / Constant: 16.7 Hz, double amplitude 3mm						
Shock	Malfunction: 100 m/s² Mechanical: 500 m/s²	Malfunction:150m/s <sup>2</sup> Durability: 1000 m/s <sup>2</sup>						
Ambient temperature	-10 to +55°C [+14 to +131°F] (no icing or no condensation)							
Temperature ratings	Storage: -40 to +70°C [-40 to +158°F]							
Humidity	45 to 85% RH (within -5° to +40°C) (no icing or no condensation)							
Degree of protection	IP	65						
Initial contact resistance		C 1A voltage drop						
Connections		(22 to 18 AWG) gth: 11 ± 1mm crimp-on disconnect connector						
Mounting tightening torque	0.6 to 1.0 N•m,	, 5.3 to 8.8 in·lb						
Contacts operation	Self-cleaning types. Slow action. Positive opening.							
Operation frequency	1,200 cycle/hour (A	pplication ratio 40%)						
Utilization category/contact ratings	120 VAC 1A (AC-13), 24 VDC 0.7 A (DC-13, to 0.95 = 21ms) 240 VAC 0.7 A (AC-13), 125 VDC 0.15 A (DC-13, to 0.95 = 21ms)	_						
Rated insulation voltage	250V	AC/DC						
Materials	Enclosure: Polyamide	/ Contacts: silver, nickel						
Standards	TUV - EN Pushbutton, Illuminated Selector: F	UL 508, CSA C22.2, No.14, TUV - EN60947-5-1 ushbutton, Illuminated pushbutton: R50116757 Selector: R50116759 Pilot lights: R50116762						
Approvals	cURus File Number E44592, CE							

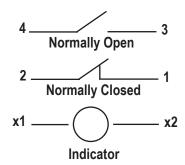
To obtain the most current agency approval information, see the Agency Compliance & Certifications Checklist section on the specific part number's web page.

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# Fruji Electric NEMA Aux Contact Ratings

# **Control Circuit Contact Electrical Ratings and Wiring**

### Typical Wiring



NEMA Mechanical Switching Ratings and Test Values for DC Control Circuit Contacts								
Contact Rating Designation	Thermal	Maximum						
	Continuous Test Current (A)	125 Volts	250 Volts	301 to 600 Volts	Volt amperes			
P300	5.0	1.1	0.55		138			
P600	5.0	1.1	0.55	0.20	138			
Q300	2.5	0.55	0.27		69			
Q600	2.5	0.55	0.27	0.10	69			
R300	1.0	0.22	0.11		28			

This chart is provided as a guideline only, and the ratings and values are not guaranteed to be accurate. It is the users' responsibility to properly size their control circuit devices. The chart values are from NEMA Standard ICS 5-2000, Table 1-4-2.

NEMA Mechanical Switching Ratings and Test Values for AC Control Circuit Contacts											
Contact Rating Designation	Thermal Continuous Test Current (A)	Maximum AC Current, 50/60Hz (A)								Walk ammana	
		120 Volts		240 Volts		480 Volts		600 Volts		Volt amperes	
		Make	Break	Make	Break	Make	Break	Make	Break	Make	Break
A300	10	60	6.00	30	3.00					7200	720
A600	10	60	6.00	30	3.00	15	1.50	12	1.20	7200	720
B300	5	30	3.00	15	1.50					3600	360
B600	5	30	3.00	15	1.50	7.5	0.75	6	0.60	3600	360
C600	2.5	15	1.5	7.5	0.75	3.75	0.375	3.00	0.30	1800	180

This chart is provided as a guideline only, and the ratings and values are not guaranteed to be accurate. It is the users' responsibility to properly size their control circuit devices. The chart values are from NEMA Standard ICS 5-2000, Table 1-4-1.

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### F- Fuji Electric Command Series Pilot Devices

Fuji Electric Command Series pilot devices are used in machine tools, industrial machines, control panels, distribution panels, and instrumentation panels. Pushbuttons improve interfacing by allowing better layout and wiring, easier installation and increased safety. Reliability is also built in to handle complex multi-functional controls.

The AR16, AR22 and AR30 series are configurable with a wide range of choices. Our selection of 16mm, 19mm, 22mm and 30mm pushbuttons include non-illuminated as well as

illuminated models with flush round heads, extended round heads, and mushroom style heads. Other 16mm, 22mm and 30mm pilot devices available include emergency stop pushbuttons, selector switches, pilot lights, joystick selector switches, and buzzers.

We also offer a wide array of accessories to complement our selection of Fuji 16mm, 19mm, 22mm and 30mm Command Series pilot devices.

### **AR16 Series Features**

- 16.2 or 19.2 mm diameter hole
- Fits 1 to 6mm max panel thickness
- Integrated structure with built-in contacts that reduce control panel depth
- Offered in Thin-type profile with only 2mm of panel protrusion for high-density mounting and attractive panel designs
- Bright LED-illuminated surface with less power consumption
- Gold-plated contacts and snap-action mechanism with low 1mA at 5V switching
- Oil- and dust-proof operator modules (IP65)

### **AR22 Series Features**

- 22.3 mm diameter hole
- Fits 1 to 6mm max panel thickness
- Mountable in either a 22.3 or 25.5 mm diameter cutout (except for joysticks and buzzers)
- · Provided with release arm
- · Terminal cover included for added safety
- Wiring possible in vertical and horizontal directions
- Oil- and dust-proof operator modules (IP65), except for buzzers DR22B5 (IP00), DR22B8 (IP54)

#### AR30 Series Features

- 30.5 mm diameter hole
- Fits 1mm to 6mm max panel thickness
- Quick snap-on replacement of contact blocks
- Double-break self-cleaning contacts
- Terminal cover included for added safety
- Wiring possible in vertical and horizontal directions
- Oil- and dust-proof operator modules (IP65) except for buzzer DR30B5 (IP00)



















**Pushbuttons** 

**E-Stop Pushbuttons** 

**Selector Switches** 





**Pilot Lights** 







**Joysticks** 

### **Command Series Accessories**





























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

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