

22MM NEMA **PILOT DEVICES**



SERIES 22 PRODUCT PROFILE

c3controls' **22mm NEMA Pilot Devices** are for all those tight fitting places. Our non-illuminated momentary and maintained push buttons, toggle switches, pilot lights, and selector switches are compact and ready for field wiring in almost any environment. Full-voltage, resistor, and dual input operators are available from 6V-480V AC/DC.



DELIVERING THE MOST RUGGED 22MM NEMA DEVICES IN THE INDUSTRY

| | |
|--|--|
| ✓ Easy to Install | Our NEMA operators' compact and thin design comes with integral circuits ready for field wiring. |
| ✓ Simple Customization | Our light modules come with various lens color options for appropriate operator interface and are available in incandescent, neon, or our LED lamps with leakage protection. |
| ✓ Rugged Design | Optional polyester or polished aluminum clamp rings with coarse 16 pitch threads for quick and easy utilization that won't cross thread or strip. |
| ✓ Visible Certifications | Our product certifications and electrical ratings are clearly marked on the outside of the contact blocks for easy reference during installation. |
| ✓ Heavy Duty | Polyester construction provides superior durability, corrosion resistance, moisture rejection and electrical insulation. |
| ✓ Flexible | Our "Add-On" Contact Blocks can be added to the basic operator to increase the number and type of contacts. Up to 3 blocks with 2 circuits each may be added, giving a total of 8 contacts per operator. |
| ✓ Convenient | Reduce inventory with our interchangeable modular design, providing endless options for appropriate operator interface. |
| ✓ Environmentally Secure | With 4/4X and IP65 ratings, our 22mm line of Pilot Devices are built to last and withstand dust, corrosion, ice, and rain. |
| ✓ Limited Lifetime Warranty* | Every product is backed by our limited lifetime warranty—unmatched in the industry—bringing you quality components that perform in the most demanding applications. |
| ✓ Guaranteed Same-Day Shipping* | Product availability reduces inventory, and improves cash-flow—saving you money. With c3controls any order for standard catalog items received by 6:00pm ET is guaranteed to ship same-day. |
| ✓ Advantage Pricing | Our approach to product development, manufacturing, and focus on servicing the OEM and Electrical Equipment Builder reduces cost. The result—the best value in the industry. |

*See c3controls Terms & Conditions

UNIQUE FEATURES

Metal on the inside—where it counts!

- c3controls Maintained Push Buttons contain a solid brass detent mechanism ensuring reliable operation in emergency stop applications, and providing safe interruption of circuits and longer life.

U-Cup Seal

- Our revolutionary U-Cup seal is infused with a Teflon coating to eliminate cracking when exposed to harsh conditions and keeps water, oils, and dust away from the contact blocks.

Internal Self-Lubricant

- All frictional parts are molded with an internal self-lubricant to provide outstanding wear without troublesome greases used by others.

One Cam Design

- Our single cam design eliminates the need for multiple cam and selector switch configurations, reducing inventory and saves you labor time and costs.

Rubber Boots

- Our state-of-the-art rubber boots protect both the operators and the circuits behind them from harsh chemicals and climates. They feature a built-in clamp ring that is molded with Neoprene and has been modified to provide added pliability and protection against dust, freezing and thawing environments.



22MM NEMA PILOT DEVICES

SPECIFICATIONS

| ELECTRICAL RATINGS | | | | | | | | |
|--------------------|-----------------|-------------|---------------------------------------|--------------------|-------------------|----------------|-------------------|--------------------|
| Lamp | Industry Number | Rated Volts | Lumens (MSCD) | Design Life (Hrs.) | Current Draw (mA) | Lamp Type | Shock & Vibration | Leakage Protection |
| FVB6 | 1866 | 6.3V | 0.65 | 5,000 | 250 | Incand. | Very Good | N/A |
| FVB12 | 756 | 14V | 0.31 | 15,000 | 80 | Incand. | Good | N/A |
| FVB24 | 757 | 28V | 0.62 | 7,500 | 80 | Incand. | Good | N/A |
| FVB55 | 1835 | 55V | 1.1 | 5,000 | 50 | Incand. | Good | N/A |
| FVB120 | ** | 130V | 0.36 | 10,000 | 20 | Incand. | Good | N/A |
| LED6 | ** | 6V | Varies w/Color 2000 mcd Typical | 100,000 | 50 | LED | Excellent | 14 mA |
| LED12 | ** | 12V | | 100,000 | < 20 | LED | Excellent | 4 mA |
| LED24 | ** | 24V | | 100,000 | < 20 | LED | Excellent | 4 mA |
| LED130 | ** | 130V | | 100,000 | < 10 | LED | Excellent | 2 mA |
| FVB120NG | — | 95-135V | Typical (Glow) | 25,000 | < 5 | Neon/ Green | Very Good | N/A |
| FVB120NR | — | 95-135V | | 25,000 | < 5 | Neon/ Red | Very Good | N/A |

** Designates a lamp design optimized for c3controls Illuminated Devices.

DIELECTRIC STRENGTH (MECHANICAL CONTACTS) 2200V for 1 Minute

STANDARD CONTACTS

| | Utilization Category | | | | |
|----|----------------------|------|-------------|--------------|---------------------|
| | IEC | UL | Make Rating | Break Rating | Ith Thermal Current |
| AC | AC-15 | A600 | 7200VA | 720VA | 10A |
| DC | DC-13 | P300 | 138VA | 138VA | 5A |

NOTE: For AC voltages below 72VAC the max. allowed switching current is 10A=Ith.
For DC voltages below 28VDC the max. allowed switching current is 5A=Ith.

ENVIRONMENTAL RATINGS

| | |
|-----------------------|--|
| | Type 1, 2, 3, 3R, 4/4X, 12, 13, and IP65 |
| Operating Temperature | -40° F to +131° F (-40° C to +55° C) |
| Storage Temperature | -40° F to +185° F (-40° C to +85° C) |

TERMINAL & WIRING CONSIDERATION

| | |
|---------------------|---|
| Wire: AWG 22 -12 CU | (Copper only - Solid & Stranded) [.5 ~ 4mm ²] One or two wires permitted per termination. |
| Recommended Torque | 7-10 lb-in [.8 Nm] |

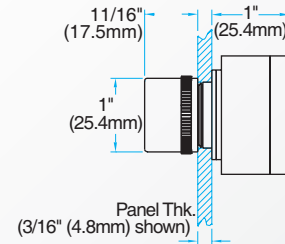
ROHS COMPLIANCE

For RoHS compliance documentation by product, refer to www.c3controls.com.

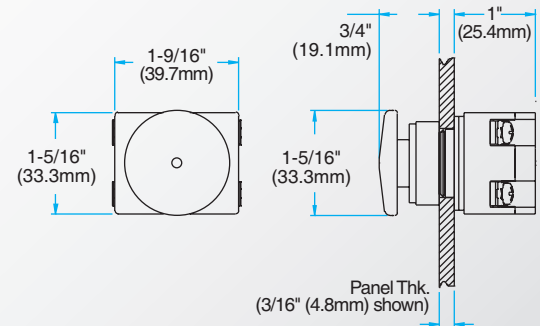
For complete ratings and detailed specifications refer to www.c3controls.com.

DIMENSIONS

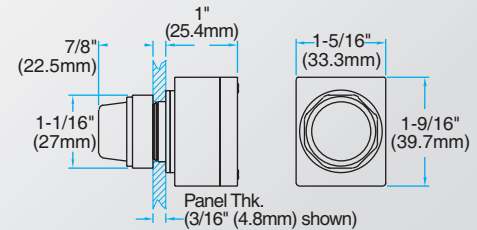
Momentary Non-Illuminated Operator (shown with Flush Cap)



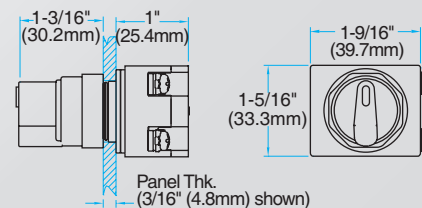
2-Position Push-Pull Maintained Non-Illuminated Operator (shown with 1-1/2\" [38mm] Mushroom Cap)



Full Voltage and Dual Input Pilot Light Operators



Selector Switch Operator (shown with Standard Handle)



CERTIFICATIONS

Conformity to Standards:

UL 508
CSA C22.2 No. 14
IEC 60947-1, 60947-5-1

Certifications:

UL File #: E68568 (Guide NKCR, NKCR7)
CSA File #: LR47446-1
CE Marked (per EU Low Voltage Directive 2006/95/EC and RoHS Directive 2011/65/EU)



Visit www.c3controls.com to download product certifications.



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