

30MM HAZARDOUS DUTY PILOT DEVICES



c3controls' 30mm H-Line Pilot Devices are designed for your most demanding hazardous duty applications. Specially engineered for Class 1, Division 2 and Zone 2, our 30mm H-Line offers a wide selection of hermetically sealed reed and factory sealed contact blocks, and each is made of an all-polyester construction with nickel-plated or stainless steel metal parts for superior corrosion resistance.



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PROVEN



Conformity to Standards: PILOT DEVICES

UL 508, 698, 1604, and 2279
CSA C22.2 No. 0, 14, 25,
30M, 157, and 213
IEC 60947-1, 60947-5-1

Certifications:

UL File #: E157436 (Guide NOIV, NOIV2, NOIV7), E68568 (Guide NKCR, NKCR7)
CSA File #: LR47446



MULTI-VOLTAGE PILOT LIGHTS

UL 508, 1604
IEC 60947-1, 60947-5-1

CE Marked (per EU Low Voltage Directive 2006/95/EC and
RoHS Directive 2011/65/EU)


UL File #: E68568 (Guide NKCR, NKCR7), E157436 (Guide NOIV)
CE Marked (per EU Low Voltage Directive 2006/95/EC and
RoHS Directive 2011/65/EU)

Visit www.c3controls.com to download product certifications.

30MM HAZARDOUS DUTY PILOT DEVICES

Every product in our portfolio is designed and manufactured to meet the needs of the machine builder, including our comprehensive line of 30mm Hazardous Location Pilot Devices. Check out all the features of our Series 30 H-Line below!

LEADING THE INDUSTRY WITH OUR INNOVATIVE AND RUGGED DESIGN

✓ Proven	Our 30mm hazardous operators are UL Listed and CE Marked meeting global standards requirements. 
✓ Easy to Install	Our contact blocks snap-on for secure assembly and are color coded for quick circuit identification.
✓ 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.
✓ 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. For added protection, metal parts are nickel-plated.
✓ Convenient	Reduce inventory with our interchangeable modular design, providing endless options for appropriate operator interface.
✓ 100% Reliability	Hermetically sealed and factory sealed contact blocks are manufactured with all stainless steel hardware for use in harsh environments.
✓ Added Security	All 30mm hazardous location operators come with a screw-tightening mounting bracket to ensure contact blocks remain snug against operator.
✓ Environmentally Secure	With 4/4X and IP65 ratings, our 30mm line of pilot devices are built to last and withstand dust, corrosion, ice, and rain.
✓ Lifetime Warranty*	Every product is backed by our 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

“ We were very pleased with the performance of c3controls’ 30mm Hazardous Duty Pilot Devices, and by purchasing direct from the manufacturer, we have reduced costs without reducing quality. ”

Charlie Johnson, Applications Engineer • ECI Industrial, LLC

Momentary Push Button



Maintained Illuminated Push Button



Pilot Light

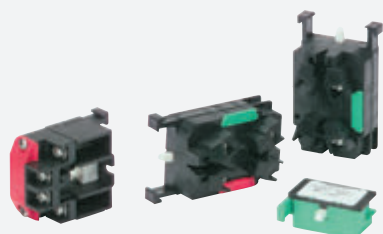


Selector Switch



UNIQUE PRODUCT LINE FEATURES

CLASS 1, DIVISION 2



Leading the industry with the widest range of hermetically sealed reed and factory sealed contact blocks.

METAL ON THE INSIDE



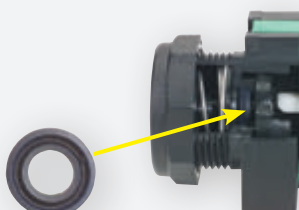
c3controls 30mm Push-Twist-Release Emergency Stop devices feature a nickel-plated detent mechanism with stainless steel ball, and our Push-Pull operators contain a solid stainless steel detent mechanism. These features ensure reliable operation in emergency stop applications and provide safe interruption of circuits and longer life.

EXCLUSIVE MULTI-VOLTAGE LIGHTS



c3controls state-of-the-art multi-voltage light modules—the only U.S. manufactured multi-voltage light in the industry!—operate at any voltage from 20V to 277V AC or DC without losing intensity.

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.

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.

INTERNAL SELF-LUBRICANT



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

FIND IT FAST

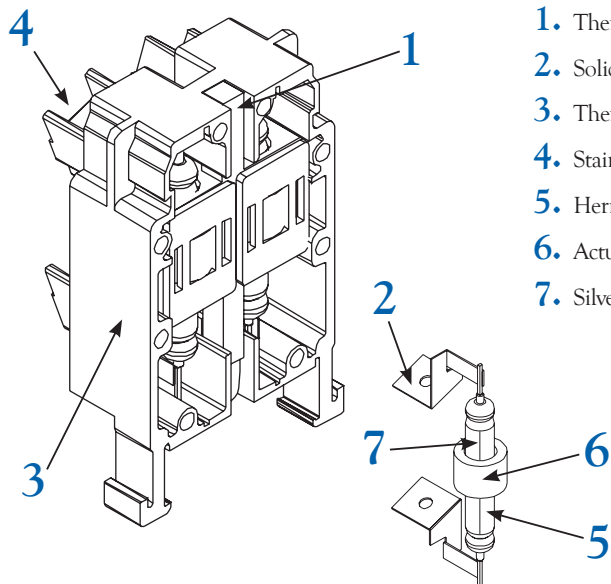
30mm Hazardous Duty Pilot Devices



- Certifications
- Specifications
- Dimension Drawings
- Installation Instructions
- Easy to Buy

www.c3controls.com

HERMETICALLY SEALED FEATURES



1. Thermoplastic Stroker
2. Solid Brass Bus Connection
3. Thermoplastic Polyester Body
4. Stainless Steel Terminal Screw
5. Hermetically Sealed Glass Chamber
6. Actuator Magnet
7. Silver Alloy Contacts

- Logic Reeds are great for low power levels (resistive loads only), especially PLC inputs.
- Power Reeds are hermetically sealed, which is excellent for harsh environments and for 100% reliable operations.

HERMETICALLY SEALED POWER REED CONTACT BLOCK CONFIGURATION - (360 VA INDUCTIVE)

CODE	CONTACT SYMBOL	DESCRIPTION	COLOR	LIST
PRNO		1 Normally Open Contact Block	Green	\$74.00
PRNC		1 Normally Closed Contact Block	Red	\$74.00
PR2NO		2 Normally Open Contact Blocks	Green/ Green	\$118.00
PR2NC		2 Normally Closed Contact Blocks	Red/Red	\$118.00
PRNONC		1 Normally Open and 1 Normally Closed Contact Blocks	Green/ Red	\$118.00

Class 1, Division 2 (Groups A,B,C,D) - Zone 2 (Groups IIC) Rated B300, 240V AC, 5 Amps (Thermal) Continuous, 3600 VA Make, 360 VA Break (AC), C600 AC, Q300 DC, 250V DC, 69 VA Make and Break (DC).

HERMETICALLY SEALED MID-POWER REED CONTACT BLOCK CONFIGURATION - (180 VA INDUCTIVE)

CODE	CONTACT SYMBOL	DESCRIPTION	COLOR	LIST
MPRNO		1 Normally Open Contact Block	Green	\$59.00
MPRNC		1 Normally Closed Contact Block	Red	\$59.00
MPR2NO		2 Normally Open Contact Blocks	Green/ Green	\$102.00
MPR2NC		2 Normally Closed Contact Blocks	Red/ Red	\$102.00
MPRNONC		1 Normally Open and 1 Normally Closed Contact Blocks	Green/ Red	\$102.00

Class 1, Division 2 (Groups A,B,C,D) - Zone 2 Gr. IIC Mid-Power Reed MPRNO Series C300 AC, 240V AC Max., 2.5 Amps Continuous Thermal, 1800 VA (Make) 180 VA (Break), Q150 DC, 69 VA Make and Break, 125V DC Max., 2.5 Amps Continuous Thermal.

HERMETICALLY SEALED MEDIUM LOGIC REED CONTACT BLOCK CONFIGURATION - (40 VA INDUCTIVE, 100 WATTS RESISTIVE)

CODE	CONTACT SYMBOL	DESCRIPTION	COLOR	LIST
MLRNO		1 Normally Open Contact Block	Green	\$35.00
MLRNC		1 Normally Closed Contact Block	Red	\$35.00
MLR2NO		2 Normally Open Contact Blocks	Green/ Green	\$55.00
MLR2NC		2 Normally Closed Contact Blocks	Red/ Red	\$55.00
MLRNONC		1 Normally Open and 1 Normally Closed Contact Blocks	Green/ Red	\$55.00

*Class 1, Division 2 - (Groups A,B,C,D) Zone 2 Gr. IIC Medium Logic Reed Blocks are Rated 250V, 3.0 Amps Max. (Thermal), 40 VA Inductive Max., 100 Watts Resistive Max.

*NOTE: Circuits are electrically isolated. However, the Normally Open (NO) contact may make circuit before the Normally Closed (NC) contact opens.

HERMETICALLY SEALED LOGIC REED CONTACT BLOCK CONFIGURATION - (40 WATTS RESISTIVE)

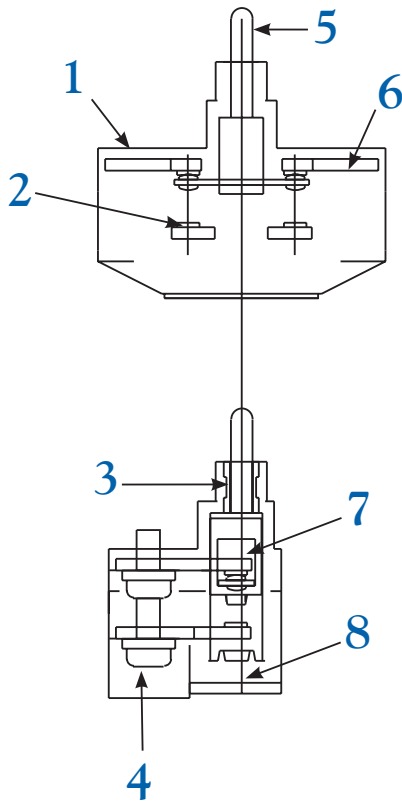
CODE	CONTACT SYMBOL	DESCRIPTION	COLOR	LIST
LRNO		1 Normally Open Contact Block	Green	\$22.00
LRNC		1 Normally Closed Contact Block	Red	\$22.00

Class 1, Division 2 - (Groups A,B,C,D) Zone 2 Gr. IIC Logic Reed Blocks are Rated 220V Max., 2 Amps Max. (Thermal), 40 Watts Resistive Max.



30MM H-LINE CONTACT BLOCKS

Our H-Line Contact Blocks feature convenient snap-on secured assembly, saving valuable time and money. For added security, all H-Line operators come standard with a screw-tightening mounting bracket to ensure the contact blocks remain snug to the operator. The hermetically sealed and factory sealed contact blocks are manufactured with all stainless steel hardware, which is excellent for harsh environments and for 100% reliability. We also offer ordinary location contact blocks, please refer to pages 185-186 in our 30mm section.



FACTORY SEALED FEATURES

1. Glass Reinforced Thermoplastic Body
2. Fine Silver Contacts
3. Stainless Steel Bushing
4. Stainless Steel Terminal Screw
5. Stainless Steel Shaft
6. Nickel-Plated Terminals
7. Stainless Steel Overtravel Spring
8. Stainless Steel Kickout Spring

FACTORY SEALED CONTACT BLOCK CONFIGURATION (720 VA)

CODE	CONTACT SYMBOL	DESCRIPTION	LIST
CBFS		1 Normally Open and 1 Normally Closed Contact Blocks (to be used with linear devices)	\$ 94.00
CBFSR		1 Normally Open and 1 Normally Closed Contact Blocks (to be used with rotary selector devices)	\$ 94.00

Class 1, Division 2 (Groups B,C,D) T6 (85°C) - Zone 2 Gr. IIB+H2, A600 Rating Designation, 10A Continuous @ 600V AC (Thermal), 7200 VA (Make), 720 VA (Break). P300 DC, 250V DC Max., 138 VA Make and Break.

DISCOUNT SCHEDULE **E**

AVAILABLE CONTACT BLOCKS FOR H-LINE LOCATIONS



IT'S EASY TO BUILD YOUR OWN PUSH BUTTON

Simply pick the code number from each of the sections below and combine them to build your part number.

Momentary Push Buttons (Non-Illuminated)



Example: To build one of our most popular Push Buttons, the part number would be **I + II + III + IV + V + VI** or **HPBO-FCGN-PRNO**



I. OPERATOR TYPE

CODE	DESCRIPTION	LIST
HPBO	Push Button Operator w/bracket	\$ 20.00
PBO	Push Button Operator*	\$ 18.00

*NOTE: PBO can only be used with a Logic Reed contact block.

II. CLAMP RING

CODE	DESCRIPTION	LIST
FOR USE WITH ALL CAP TYPES (EXCLUDES RUBBER BOOTS)		
(Blank)	Black Polyester (Type 4X)	—
A	Aluminum (Type 4)*	\$ 4.30
FOR USE WITH RUBBER BOOTS		
(Blank)	Clamp Ring Included**	—

*NOTE: Aluminum clamp rings are NOT corrosion resistant and are NOT an option for SMC or SJC cap types.

**NOTE: Rubber boots come standard with a built in clamp ring and thrust washer. When installing the operator we recommend that the thrust washer be placed behind the panel to prevent rotation.

III. CAP TYPE

CODE	DESCRIPTION	LIST
(Blank)	Operator Less Cap	—
FC	Flush	\$ 5.20
GFC	Guarded Flush	\$ 12.00
XC	Extended	\$ 5.20
GXC	Guarded Extended	\$ 12.00
MC	Mushroom	\$ 17.00
JMC	Jumbo Mushroom	\$ 22.00
SMC	Shrouded Mushroom*	\$ 26.00
SJC	Shrouded Jumbo Mushroom*	\$ 30.00
HRB	Fluorosilicone Rubber Boot‡	\$ 39.00

*NOTE: Aluminum clamp rings are NOT an option for SMC or SJC.

‡NOTE: Rubber boots come standard with a built in clamp ring and thrust washer. When installing the operator we recommend that the thrust washer be placed behind the panel to prevent rotation.

IV. CAP COLOR

CODE	DESCRIPTION
ALL CAP TYPES (EXCLUDES RUBBER BOOTS)	
(Blank)	Operator less Cap
BK	Black
BE	Blue
GN	Green
GY	Grey
RD	Red
WE	White
YW	Yellow
RUBBER BOOTS	
BK	Black
GN	Green
RD	Red
YW	Yellow

V. CONTACT BLOCK CONFIGURATION (LEFT SIDE)

CODE	DESCRIPTION	LIST
FACTORY SEALED, CLASS 1, DIV. 2/ZONE 2, 720 VA		
(Blank)	Operator without Contact Blocks	—
CBFS	Contact Block with 1 Normally Open/1 Normally Closed	\$ 94.00
POWER REED, CLASS 1, DIV. 2/ZONE 2, 360 VA INDUCTIVE		
(Blank)	Operator without Contact Blocks	—
PRNO	1 Normally Open Contact Block	\$ 74.00
PRNC	1 Normally Closed Contact Block	\$ 74.00
PR2NO	Contact Block w/2 Normally Open	\$118.00
PR2NC	Contact Block w/2 Normally Closed	\$118.00
PRNONC	Contact Block with 1 Normally Open/1 Normally Closed	\$118.00
MID-POWER REED, CLASS 1, DIV. 2/ZONE 2, 180 VA INDUCTIVE		
(Blank)	Operator without Contact Blocks	—
MPRNO	1 Normally Open Contact Block	\$ 59.00
MPRNC	1 Normally Closed Contact Block	\$ 59.00
MPR2NO	Contact Block w/2 Normally Open	\$102.00
MPR2NC	Contact Block w/2 Normally Closed	\$102.00
MPRNONC	Contact Block with 1 Normally Open/1 Normally Closed	\$102.00
MEDIUM LOGIC REED, CLASS 1, DIV. 2/ZONE 2, 40 VA INDUCTIVE, 100 WATTS RESISTIVE		
(Blank)	Operator without Contact Blocks	—
MLRNO	1 Normally Open Contact Block	\$ 35.00
MLRNC	1 Normally Closed Contact Block	\$ 35.00
MLR2NO	Contact Block w/2 Normally Open	\$ 55.00
MLR2NC	Contact Block w/2 Normally Closed	\$ 55.00
MLRNONC	Contact Block with 1 Normally Open/1 Normally Closed	\$ 55.00
LOGIC REED, CLASS 1, DIV. 2/ZONE 2, 40 WATTS RESISTIVE*		
(Blank)	Operator without Contact Blocks	—
LRNO	1 Normally Open Contact Block	\$ 22.00
LRNC	1 Normally Closed Contact Block	\$ 22.00

*NOTE: Logic Reeds do not require and are not provided with a Mounting Screw and must be used with a PBO.

VI. CONTACT BLOCK CONFIGURATION (RIGHT SIDE)

(USE CHART V. FROM ABOVE)

DISCOUNT SCHEDULE **E**

LEGEND PLATES in almost any size & color are available for same day shipping. See pages 245-246 for complete selection.



30MM H-LINE MOMENTARY NON-ILLUMINATED PUSH BUTTONS

c3controls goes the extra step to make sure that our products outlast the competition. Our 30mm H-Line Momentary Non-Illuminated Push Buttons are durable and flexible for a variety of uses, and all metal parts are nickel-plated for superior corrosion resistance. All c3controls 30mm H-Line operators are UL Listed and are rated Type 4/4X standard for watertight and corrosion resistance. In addition, operators are also listed for Type 1, 2, 3, 3R, 12 and 13, and meet global standards requirements.

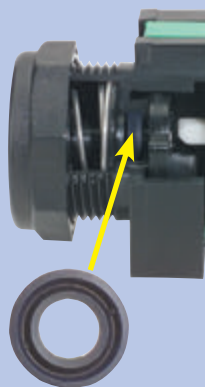
Product features include:

- Polyester construction for superior corrosion resistance, moisture rejection and electrical insulation.
- Our 30mm H-Line operators come standard with a polyester clamp ring, although optional aluminum clamp rings are available.
- #6 stainless steel terminal screws with self-lifting captive wire clamps accommodate #22 through two #12 AWG wires (0.5 - 4mm²) per terminal.
- Operators conveniently mount in a round 1-13/64" (30.5mm) hole that is directly interchangeable with competitors units and eliminates the labor required for notching.

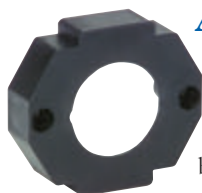


30MM HAZARDOUS DUTY PILOT DEVICES

UNIQUE PRODUCT FEATURES



1. Our revolutionary U-Cup seal is infused with a Teflon coating to eliminate cracking when exposed to harsh conditions such as heat, dryness and sunlight. The U-Cup seal rides easily along the stroker and keeps water, oils, dust and other corrosive particles in the air away from the contact blocks. This U-cup seal also acts like a squeegee and forms a permanent watertight seal that meets Type 4/4X with or without a rubber boot. *In fact, our push button was the first to be rated Type 4X without using a rubber boot!*
2. Our push buttons modular design provides endless options for appropriate operator interface by alternating cap types and colors which ultimately will save you time and money by reducing your inventory.



ADDED SECURITY!

For added security, all H-Line Push Buttons come standard with a screw tightening mounting bracket to ensure the contact blocks remain snug to the operator.

SOME OF OUR POPULAR CONFIGURATIONS:

MOMENTARY NON-ILLUMINATED PUSH BUTTON OPERATORS WITH POLYESTER CLAMP RING (TYPE 4X)

CAP COLOR	FLUSH CAP		EXTENDED CAP	
	CATALOG NUMBER	LIST	CATALOG NUMBER	LIST
Green	HPBO-FCGN-PRNO	\$ 99.20	HPBO-XCGN-PRNO	\$ 99.20
Red	HPBO-FCRD-PRNC	\$ 99.20	HPBO-XCRD-PRNC	\$ 99.20
Green	HPBO-FCGN-CBFS	\$119.20	HPBO-XCGN-CBFS	\$119.20
Red	HPBO-FCRD-CBFS	\$119.20	HPBO-XCRD-CBFS	\$119.20

MIX AND MATCH ANY COLOR AND MOMENTARY NON-ILLUMINATED PUSH BUTTON CAP



IT'S EASY TO BUILD YOUR OWN PUSH BUTTON

Simply pick the code number from each of the sections below and combine them to build your part number.

**Maintained Push Buttons (Non-Illuminated)
2-Position Push-Twist Release**



Example: To build one of our most popular Push Buttons, the part number would be **I + II + TMC + IV + V + VI** or **HPTR-TMCRD-CBFS**



I. OPERATOR TYPE

CODE	DESCRIPTION	LIST
HPTR	Push-Twist Release w/bracket	\$ 67.00
PTR	Push-Twist Release*	\$ 65.00

*NOTE: PTR can only be used with a Logic Reed Contact Block.

II. CLAMP RING

CODE	DESCRIPTION	LIST
(Blank)	Black Polyester (Type 4X)	—
Y	Yellow Polyester (Type 4X)	\$ 4.30
A	Aluminum (Type 4)*	\$ 4.30

*NOTE: Aluminum clamp rings are NOT corrosion resistant.

The linear push-off twist to release style operator requires a "twist" for the "out" or "on" position and a linear "push" for the "in" or "off" position. The twist mushroom cap is marked with arrows identifying the direction for the twist release.

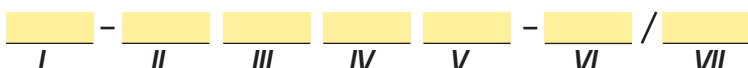
III. CAP TYPE

CODE	DESCRIPTION	LIST
TMC	Twist Mushroom	\$ 17.00

IV. CAP COLOR

CODE	COLOR
BK	Black
BE	Blue
GN	Green
GY	Grey
RD	Red
WE	White
YW	Yellow

Maintained Push Buttons (Non-Illuminated) 2-Position Push-Pull



Example: To build one of our most popular Push Buttons, the part number would be **I + II + III + IV + V + VI + VII** or **HPBO-HPPMCRD-PRNONC**



I. OPERATOR TYPE

CODE	DESCRIPTION	LIST
HPBO	Push Button Operator w/bracket	\$ 20.00
PBO	Push Button Operator*	\$ 18.00

*NOTE: PBO can only be used with a Logic Reed CB.

II. CLAMP RING

CODE	DESCRIPTION	LIST
(Blank)	Black Polyester (Type 4X)	—
Y	Yellow Polyester (Type 4X)	\$ 4.30
A	Aluminum (Type 4)*	\$ 4.30

*NOTE: Aluminum clamp rings are NOT corrosion resistant.

III. CAP FUNCTION

CODE	DESCRIPTION	LIST
HPP	Stainless Steel Push-Pull Maint.	\$ 89.00
PP	Brass Push-Pull Maint.	\$ 57.00

IV. CAP TYPE

CODE	DESCRIPTION	LIST
MC	Mushroom	—
JMC	Jumbo Mushroom	\$ 8.60

V. CAP COLOR

CODE	COLOR
BK	Black
BE	Blue
GN	Green
GY	Grey
RD	Red
WE	White
YW	Yellow

V. CONTACT BLOCK CONFIGURATION (LEFT SIDE)

CODE	DESCRIPTION	LIST
FACTORY SEALED, CLASS 1, DIV. 2/ZONE 2, 720 VA		

(Blank)	Operator without Contact Blocks	—
CBFS	Contact Block with 1 Normally Open/1 Normally Closed	\$ 94.00

POWER REED, CLASS 1, DIV. 2/ZONE 2, 360 VA INDUCTIVE

(Blank)	Operator without Contact Blocks	—
PRNO	1 Normally Open Contact Block	\$ 74.00
PRNC	1 Normally Closed Contact Block	\$ 74.00
PR2NO	Contact Block w/2 Normally Open	\$118.00
PR2NC	Contact Block w/2 Normally Closed	\$118.00
PRNONC	Contact Block with 1 Normally Open/1 Normally Closed	\$118.00

MID-POWER REED, CLASS 1, DIV. 2/ZONE 2, 180 VA INDUCTIVE

(Blank)	Operator without Contact Blocks	—
MPRNO	1 Normally Open Contact Block	\$ 59.00
MPRNC	1 Normally Closed Contact Block	\$ 59.00
MPR2NO	Contact Block w/2 Normally Open	\$102.00
MPR2NC	Contact Block w/2 Normally Closed	\$102.00
MPRNONC	Contact Block with 1 Normally Open/1 Normally Closed	\$102.00

MEDIUM LOGIC REED, CLASS 1, DIV. 2/ZONE 2, 40 VA INDUCTIVE, 100 WATTS RESISTIVE

(Blank)	Operator without Contact Blocks	—
MLRNO	1 Normally Open Contact Block	\$ 35.00
MLRNC	1 Normally Closed Contact Block	\$ 35.00
MLR2NO	Contact Block w/2 Normally Open	\$ 55.00
MLR2NC	Contact Block w/2 Normally Closed	\$ 55.00
MLRNONC	Contact Block with 1 Normally Open/1 Normally Closed	\$ 55.00

LOGIC REED, CLASS 1, DIV. 2/ZONE 2, 40 WATTS RESISTIVE*

(Blank)	Operator without Contact Blocks	—
LRNO	1 Normally Open Contact Block	\$ 22.00
LRNC	1 Normally Closed Contact Block	\$ 22.00

*NOTE: Logic Reeds do not require and are not provided with a Mounting Screw and must be used with a PTR or PBO.

VI. CONTACT BLOCK CONFIGURATION (RIGHT SIDE)

(USE CHART V FROM ABOVE)

DISCOUNT SCHEDULE **E**

VII. CONTACT BLOCK CONFIGURATION (LEFT SIDE)

(USE CHART V FROM ABOVE)

VII. CONTACT BLOCK CONFIGURATION (RIGHT SIDE)

(USE CHART V FROM ABOVE)

The 2-Position Push-Pull is maintained in both the push and pull positions. The primary application is "push" to "stop" and "pull" to "start".

30MM H-LINE MAINTAINED NON-ILLUMINATED PUSH BUTTONS

THE MOST RUGGED EMERGENCY STOP AVAILABLE IN THE INDUSTRY!

The 30mm H-Line of maintained non-illuminated push buttons feature all polyester construction and all metal parts are nickel-plated for superior corrosion resistance; #6 stainless steel terminal screws have self-lifting captive wire clamps to accommodate #22 through two #12 AWG wires (0.5 - 4mm²) per terminal. Units mount in a round 1-13/64" (30.5mm) hole and are directly interchangeable with competitors units. Operators are UL Listed and are rated Type 4/4X standard for watertight and corrosion resistance. In addition, operators are also listed for Type 1, 2, 3, 3R, 12 and 13, and meet global standards requirements.



SOME OF OUR POPULAR CONFIGURATIONS:

2-POSITION PUSH-TWIST RELEASE OPERATORS MAINTAINED IN/MAINTAINED OUT						
O = OPEN X = CLOSED	POWER REED CONTACT BLOCK 2 CIRCUIT (1 NO/1 NC)			FACTORY SEALED CONTACT BLOCK 2 CIRCUIT (1 NO/1 NC)		
		OUT	IN		OUT	IN
	NC	X	O	NC	X	O
	NO	O	X	NO	O	X
CAP COLOR	CATALOG NUMBER	LIST	CATALOG NUMBER	LIST	CATALOG NUMBER	LIST
Black	HPTR-TMCBK-PRNONC	\$202.00	HPTR-TMCBK-CBFS	\$178.00	HPTR-TMCBK-CBFS	\$178.00
Green	HPTR-TMCGN-PRNONC	\$202.00	HPTR-TMCGN-CBFS	\$178.00	HPTR-TMCGN-CBFS	\$178.00
Red	HPTR-TMCRD-PRNONC	\$202.00	HPTR-TMCRD-CBFS	\$178.00	HPTR-TMCRD-CBFS	\$178.00
Yellow	HPTR-TMCYW-PRNONC	\$202.00	HPTR-TMCYW-CBFS	\$178.00	HPTR-TMCYW-CBFS	\$178.00

2-POSITION PUSH-PULL MAINTAINED OPERATORS MAINTAINED IN/MAINTAINED OUT						
O = OPEN X = CLOSED	POWER REED CONTACT BLOCK 2 CIRCUIT (1 NO/1 NC)			FACTORY SEALED CONTACT BLOCK 2 CIRCUIT (1 NO/1 NC)		
		OUT	IN		OUT	IN
	NC	X	O	NC	X	O
	NO	O	X	NO	O	X
CAP COLOR	CATALOG NUMBER	LIST	CATALOG NUMBER	LIST	CATALOG NUMBER	LIST
Black	HPBO-HPPMCBK-PRNONC	\$227.00	HPBO-HPPMCBK-CBFS	\$203.00	HPBO-HPPMCBK-CBFS	\$203.00
Green	HPBO-HPPMCGN-PRNONC	\$227.00	HPBO-HPPMCGN-CBFS	\$203.00	HPBO-HPPMCGN-CBFS	\$203.00
Red	HPBO-HPPMCRD-PRNONC	\$227.00	HPBO-HPPMCRD-CBFS	\$203.00	HPBO-HPPMCRD-CBFS	\$203.00
Yellow	HPBO-HPPMCYW-PRNONC	\$227.00	HPBO-HPPMCYW-CBFS	\$203.00	HPBO-HPPMCYW-CBFS	\$203.00

UNIQUE FEATURES

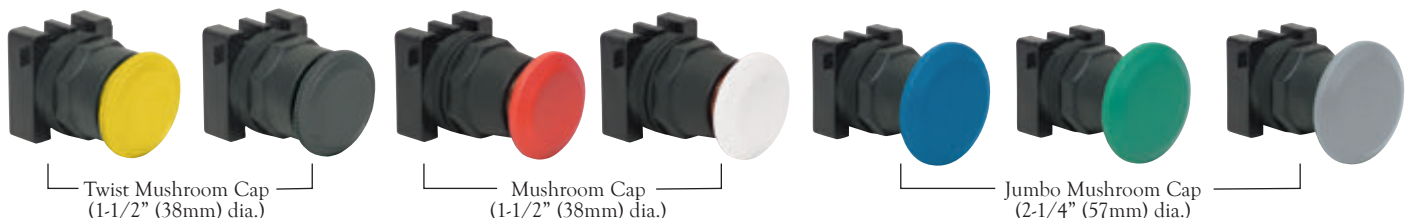
We Put The Metal On The Inside — Where It Counts!

Our push-twist operator features a nickel-plated detent mechanism with stainless steel ball while our push-pull operator contains a solid stainless steel detent mechanism. These are the best-engineered, most reliable heavy-duty emergency stop buttons in the world. This rugged design, which comes standard with a polyester clamp ring or optional aluminum clamp ring, ensures reliable operation in emergency applications, providing safe interruption of circuits, and much longer life when compared to any competitor's product.

ADDED SECURITY!

For added security, all H-Line Push Buttons come standard with a screw tightening mounting bracket to ensure the contact blocks remain snug to the operator.

AVAILABLE CAP COLORS FOR 2-POSITION MAINTAINED NON-ILLUMINATED PUSH BUTTONS



30MM HAZARDOUS DUTY PILOT DEVICES

IT'S EASY TO BUILD YOUR OWN PUSH BUTTON

Simply pick the code number from each of the sections below and combine them to build your part number.

Momentary Push Buttons (Illuminated)*



Example: To build one of our most popular Push Buttons, the part number would be **I + II + III + IV + V + VI + VII** or **HFVLU120-HIPBCGN-PRNO**



*NOTE: Our momentary illuminated push buttons must be ordered as an assembled part. Contact blocks may be ordered separately.

I. ILLUMINATED PUSH BUTTON OPERATOR

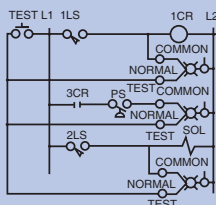
CODE	DESCRIPTION	LIST
HFVLU	Full Voltage	\$ 64.00
HTFLU	Transformer (50/60 Hz)	\$ 82.00
HRLU	Resistor	\$ 64.00
HRTLU	Dual Input Remote Test	\$100.00

II. VOLTAGE BASED ON OPERATOR TYPE

CODE	DESCRIPTION	LIST
FULL VOLTAGE		
6	6V AC/DC	
12	12V AC/DC	
24	24V AC/DC	
120	120V AC/DC	
TRANSFORMER		
120	120V AC	
240	240V AC	
277	277V AC	
480	480V AC	
RESISTOR		
120	120V AC/DC	
240	240V AC/DC	
480	480V AC/DC (LED & Neon only)	
DUAL INPUT REMOTE TEST		
6	6V AC/DC	
12	12V AC/DC	
24	24V AC/DC	
120	120V AC/DC	

DUAL INPUT REMOTE TEST

Our unique Dual Input Remote light unit can be used as an illuminated push button while also permitting the testing of a number of lights from a single push button. A diode circuit isolates the test supply from the normal supply. The schematic shown represents a typical dual input application.



III. LAMP TYPE/COLOR

CODE	COLOR	LIST
LED		
LA	Amber	\$ 18.00
LB	Blue	\$ 18.00
LG	Green	\$ 18.00
LR	Red	\$ 18.00
LW	White	\$ 18.00
INCANDESCENT		
(Blank)	Clear†	—
†NOTE: Incandescent bulbs are not an option for HRLU480.		
F	Clear Flashing Bulb*	\$ 7.10
*NOTE: Incandescent flashing bulbs available for any 6V full voltage or transformer application.		
NEON†		
NG	Green	—
NR	Red	—
†NOTE: Only Available in HFVLU120, HRLU240 and HRLU480.		
NL	No Lamp	— \$ 1.80

IV. CLAMP RING

CODE	DESCRIPTION	LIST
(Blank)	Black Polyester (Type 4X)	—
A	Aluminum (Type 4)*	\$ 4.30

*NOTE: Aluminum clamp rings are NOT corrosion resistant.

V. LENS TYPE

CODE	DESCRIPTION	LIST
HIPBC	Illuminated Push Button Lens	\$ 24.00
HIPBCM	Illuminated Push Button Mushroom Lens	\$ 36.00
HGIPBC	Guarded Illuminated Push Button Lens*	\$ 36.00
HSIPBCM	Shrouded Illuminated Push Button Mushroom Lens*	\$ 48.00

*NOTE: Aluminum clamp rings are not an option for HGIPBC or HSIPBCM.
NOTE: When specifying a Logic Reed (LRNO, LRNC) from Chart VII, delete the "H" from the Lens Type code above.

SEE PAGE 249 FOR LAMP REPLACEMENT CHART AND PAGE 250 FOR LAMP TECHNICAL DATA.



VI. LENS COLOR

CODE	COLOR
AR	Amber
BE	Blue
CR	Clear
GN	Green
RD	Red
WE	White
YW	Yellow

VII. CONTACT BLOCK CONFIGURATION

CODE	DESCRIPTION	LIST
FACTORY SEALED, CLASS 1, DIV. 2/ZONE 2, 720 VA		
(Blank)	Operator without Contact Blocks	—
CBFS	Contact Block with 1 Normally Open/1 Normally Closed	\$ 94.00
POWER REED, CLASS 1, DIV. 2/ZONE 2, 360 VA INDUCTIVE		
(Blank)	Operator without Contact Blocks	—
PRNO	1 Normally Open Contact Block	\$ 74.00
PRNC	1 Normally Closed Contact Block	\$ 74.00
PR2NO	Contact Block w/2 Normally Open	\$118.00
PR2NC	Contact Block w/2 Normally Closed	\$118.00
PRNONC	Contact Block with 1 Normally Open/1 Normally Closed	\$118.00
MID-POWER REED, CLASS 1, DIV. 2/ZONE 2, 180 VA INDUCTIVE		
(Blank)	Operator without Contact Blocks	—
MPRNO	1 Normally Open Contact Block	\$ 59.00
MPRNC	1 Normally Closed Contact Block	\$ 59.00
MPR2NO	Contact Block w/2 Normally Open	\$102.00
MPR2NC	Contact Block w/2 Normally Closed	\$102.00
MPRNONC	Contact Block with 1 Normally Open/1 Normally Closed	\$102.00
MEDIUM LOGIC REED, CLASS 1, DIV. 2/ZONE 2, 40 VA INDUCTIVE, 100 WATTS RESISTIVE		
(Blank)	Operator without Contact Blocks	—
MLRNO	1 Normally Open Contact Block	\$ 35.00
MLRNC	1 Normally Closed Contact Block	\$ 35.00
MLR2NO	Contact Block w/2 Normally Open	\$ 55.00
MLR2NC	Contact Block w/2 Normally Closed	\$ 55.00
MLRNONC	Contact Block with 1 Normally Open/1 Normally Closed	\$ 55.00
LOGIC REED, CLASS 1, DIV. 2/ZONE 2, 40 WATTS RESISTIVE*		
(Blank)	Operator without Contact Blocks	—
LRNO	1 Normally Open Contact Block	\$ 22.00
LRNC	1 Normally Closed Contact Block	\$ 22.00

*NOTE: Logic Reeds do not require and are not provided with a Mounting Screw.

30MM H-LINE MOMENTARY ILLUMINATED PUSH BUTTONS

c3controls 30mm H-Line Momentary Illuminated Push Buttons are durable and flexible for a variety of uses, and all metal parts are nickel-plated for superior corrosion resistance. All c3controls 30mm H-Line operators are UL Listed and are rated Type 4/4X standard for watertight and corrosion resistance. In addition, operators are also listed for Type 1, 2, 3, 3R, 12 and 13, and meet global standards requirements.

Product features include:

- Polyester construction for superior corrosion resistance, moisture rejection and electrical insulation.
- Our 30mm H-Line operators come standard with a polyester clamp ring, although optional aluminum clamp rings are available.
- Full voltage lights incorporate a unique insulated socket design to minimize accidental contact during lamp change.
- All lights use miniature bayonet base lamps that are nickel-plated for corrosion-resistance and to provide reliable lamp secureness.
- #6 stainless steel terminal screws with self-lifting captive wire clamps accommodate #22 through two #12 AWG wires (0.5 - 4mm²) per terminal.
- Operators conveniently mount in a round 1-13/64" (30.5mm) hole that is directly interchangeable with competitors units and eliminates the labor required for notching.



30MM HAZARDOUS DUTY PILOT DEVICES

UNIQUE PRODUCT FEATURES



1. Our revolutionary U-Cup seal is infused with a Teflon coating to eliminate cracking when exposed to harsh conditions such as heat, dryness and sunlight. The U-Cup seal rides easily along the stroker and keeps water, oils, dust and other corrosive particles in the air away from the contact blocks. This U-cup seal also acts like a squeegee and forms a permanent watertight seal that meets Type 4/4X standards.
2. All frictional parts are molded with an internal self lubricant to provide outstanding wear without troublesome greases used by others.

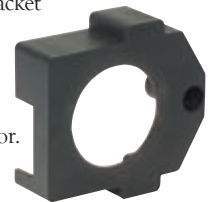
SOME OF OUR POPULAR CONFIGURATIONS:

MOMENTARY ILLUMINATED PUSH BUTTON OPERATORS WITH POLYESTER CLAMP RING (TYPE 4X)

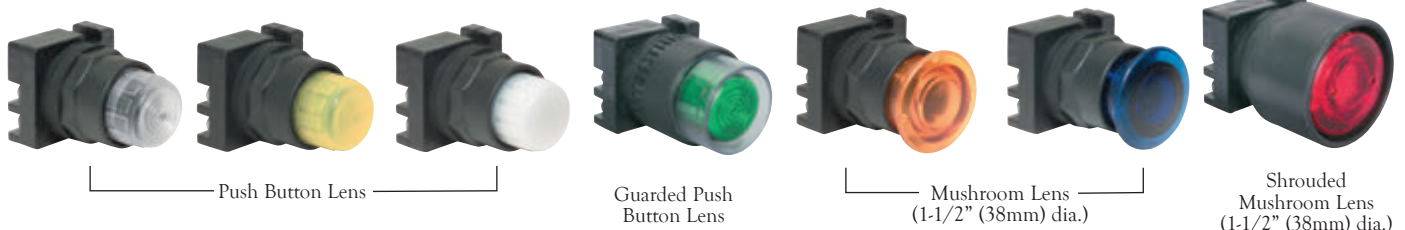
LENS COLOR		PUSH BUTTON LENS		MUSHROOM LENS	
		CATALOG NUMBER	LIST	CATALOG NUMBER	LIST
Full Voltage	Amber	HFVLU120-HIPBCAR-PRNONC	\$206.00	HFVLU120-HIPBCMAR-PRNONC	\$218.00
	Green	HFVLU120-HIPBCGN-PRNO	\$162.00	HFVLU120-HIPBCMGN-PRNO	\$174.00
	Red	HFVLU120-HIPBCRD-PRNC	\$162.00	HFVLU120-HIPBCMRD-PRNC	\$174.00
Transformer	Amber	HTFLU120-HIPBCAR-PRNONC	\$224.00	HTFLU120-HIPBCMAR-PRNONC	\$236.00
	Green	HTFLU120-HIPBCGN-PRNO	\$180.00	HTFLU120-HIPBCMGN-PRNO	\$192.00
	Red	HTFLU120-HIPBCRD-PRNC	\$180.00	HTFLU120-HIPBCMRD-PRNC	\$192.00
Resistor	Green	HRLU120-HIPBCGN-PRNO	\$162.00	HRLU120-HIPBCMGN-PRNO	\$174.00
	Red	HRLU120-HIPBCRD-PRNC	\$162.00	HRLU120-HIPBCMRD-PRNC	\$174.00

ADDED SECURITY!

For added security, all H-Line Push Buttons come standard with a screw tightening mounting bracket to ensure the contact blocks remain snug to the operator.



MIX AND MATCH ANY COLOR AND MOMENTARY ILLUMINATED PUSH BUTTON LENS



IT'S EASY TO BUILD YOUR OWN PUSH BUTTON

Simply pick the code number from each of the sections below and combine them to build your part number.

Maintained Push Buttons (Illuminated)

2-Position Push-Pull



Example: To build one of our most popular Push Buttons, the part number would be **I + PPM + III + IV + V + IMC + VII + VIII** or **HFVPPM120-IMCAR-PRNONC**



I. ILLUMINATED PUSH BUTTON OPERATOR

CODE	DESCRIPTION	LIST
HFV	Full Voltage	\$ 92.00
HTF	Transformer (50/60 Hz)	\$124.00
HRL	Resistor	\$ 96.00

II. CAP TYPE

CODE	DESCRIPTION
PPM	Push-Pull Maintained

III. VOLTAGE BASED ON OPERATOR TYPE

CODE	DESCRIPTION
FULL VOLTAGE	
6	6V AC/DC
12	12V AC/DC
24	24V AC/DC
120	120V AC/DC
TRANSFORMER	
120	120V AC
240	240V AC
277	277V AC
480	480V AC
RESISTOR	
120	120V AC/DC
240	240V AC/DC
480	480V AC/DC (LED & Neon only)

The 2-Position Push-Pull is maintained in both the push and pull positions. The primary application is "push" to "stop" and "pull" to "start".



IV. LAMP TYPE/COLOR

CODE	COLOR	LIST
LED		
LA	Amber	\$ 18.00
LB	Blue	\$ 18.00
LG	Green	\$ 18.00
LR	Red	\$ 18.00
LW	White	\$ 18.00
INCANDESCENT		
(Blank)	Clear†	—
†NOTE: Incandescent bulbs are not an option for HRLPPM480.		
F	Clear Flashing Bulb*	\$ 7.10
*NOTE: Incandescent flashing bulbs available for any 6V full voltage or transformer application.		
NEON†		
NG	Green	—
NR	Red	—
†NOTE: Only Available in HFVPPM120, HRLPPM240 and HRLPPM480.		
NL	No Lamp	— \$ 1.80

V. CLAMP RING

CODE	DESCRIPTION	LIST
(Blank)	Black Polyester (Type 4X)	—
A	Aluminum (Type 4)*	\$ 4.30
*NOTE: Aluminum clamp rings are NOT corrosion resistant.		

VI. LENS TYPE

CODE	DESCRIPTION	LIST
IMC	Illuminated Push Button Mushroom Lens	\$ 36.00

VII. LENS COLOR

CODE	COLOR
AR	Amber
BE	Blue
CR	Clear
GN	Green
RD	Red
WE	White

VIII. CONTACT BLOCK CONFIGURATION

CODE	DESCRIPTION	LIST
FACTORY SEALED, CLASS 1, DIV. 2/ZONE 2, 720 VA		
(Blank)	Operator without Contact Blocks	—
CBFS	Contact Block with 1 Normally Open/1 Normally Closed	\$ 94.00
POWER REED, CLASS 1, DIV. 2/ZONE 2, 360 VA INDUCTIVE		
(Blank)	Operator without Contact Blocks	—
PRNO	1 Normally Open Contact Block	\$ 74.00
PRNC	1 Normally Closed Contact Block	\$ 74.00
PR2NO	Contact Block w/2 Normally Open	\$118.00
PR2NC	Contact Block w/2 Normally Closed	\$118.00
PRNONC	Contact Block with 1 Normally Open/1 Normally Closed	\$118.00
MID-POWER REED, CLASS 1, DIV. 2/ZONE 2, 180 VA INDUCTIVE		
(Blank)	Operator without Contact Blocks	—
MPRNO	1 Normally Open Contact Block	\$ 59.00
MPRNC	1 Normally Closed Contact Block	\$ 59.00
MPR2NO	Contact Block w/2 Normally Open	\$102.00
MPR2NC	Contact Block w/2 Normally Closed	\$102.00
MPRNONC	Contact Block with 1 Normally Open/1 Normally Closed	\$102.00
MEDIUM LOGIC REED, CLASS 1, DIV. 2/ZONE 2, 40 VA INDUCTIVE, 100 WATTS RESISTIVE		
(Blank)	Operator without Contact Blocks	—
MLRNO	1 Normally Open Contact Block	\$ 35.00
MLRNC	1 Normally Closed Contact Block	\$ 35.00
MLR2NO	Contact Block w/2 Normally Open	\$ 55.00
MLR2NC	Contact Block w/2 Normally Closed	\$ 55.00
MLRNONC	Contact Block with 1 Normally Open/1 Normally Closed	\$ 55.00
LOGIC REED, CLASS 1, DIV. 2/ZONE 2, 40 WATTS RESISTIVE*		
(Blank)	Operator without Contact Blocks	—
LRNO	1 Normally Open Contact Block	\$ 22.00
LRNC	1 Normally Closed Contact Block	\$ 22.00
*NOTE: Logic Reeds do not require and are not provided with a Mounting Screw.		

SEE PAGE 249 FOR LAMP REPLACEMENT CHART AND PAGE 250 FOR LAMP TECHNICAL DATA.

30MM H-LINE MAINTAINED ILLUMINATED PUSH BUTTONS

c3controls 30mm H-Line Maintained Illuminated Push Buttons are durable and flexible for a variety of uses, and all metal parts are nickel-plated for superior corrosion resistance. All c3controls 30mm H-Line operators are UL Listed and are rated Type 4/4X standard for watertight and corrosion resistance. In addition, operators are also listed for Type 1, 2, 3, 3R, 12 and 13, and meet global standards requirements.

Product features include:

- Polyester construction for superior corrosion resistance, moisture rejection and electrical insulation.
- Our 30mm H-Line operators come standard with a polyester clamp ring, although optional aluminum clamp rings are available.
- Full voltage lights incorporate a unique insulated socket design to minimize accidental contact during lamp change.
- All lights use miniature bayonet base lamps that are nickel-plated for corrosion-resistance and provide reliable lamp secureness.
- #6 stainless steel terminal screws with self-lifting captive wire clamps accommodate #22 through two #12 AWG wires (0.5 - 4mm²) per terminal.
- Operators conveniently mount in a round 1-13/64" (30.5mm) hole that is directly interchangeable with competitors units and eliminates the labor required for notching.



30MM HAZARDOUS DUTY PILOT DEVICES

UNIQUE PRODUCT FEATURES



1. Our seal is infused with a coating to eliminate cracking when exposed to harsh conditions such as heat, dryness and sunlight. This seal also acts as a light reflector because it is white which increases light output and improves visibility from all angles.
2. All frictional parts are molded with an internal self lubricant to provide outstanding wear without troublesome greases used by others.
3. Our rugged Lexan™ lenses can resist high impact for reliable performance in most environments even in high ambient temperatures.

SOME OF OUR POPULAR CONFIGURATIONS:

2-POSITION PUSH-PULL MAINTAINED OPERATORS WITH POLYESTER CLAMP RING (TYPE 4X)

	POWER REED CONTACT BLOCK 2 CIRCUIT (1 NO/1 NC)			FACTORY SEALED CONTACT BLOCK 2 CIRCUIT (1 NO/1 NC)		
O = OPEN X = CLOSED						
		OUT	IN		OUT	IN
	PRNONC	X	O	CBFS	X	O
	PRNONC	O	X	CBFS	O	X
TYPE	CATALOG NUMBER	LIST		CATALOG NUMBER	LIST	
Transformer	HTFPPM120-IMCRD-PRNONC	\$278.00		HTFPPM120-IMCRD-CBFS	\$254.00	
Full Voltage	HFVPPM120LR-IMCRD-PRNONC	\$268.30		HFVPPM120LR-IMCRD-CBFS	\$240.00	
Resistor	HRLPPM120-IMCRD-PRNONC	\$250.00		HRLPPM120-IMCRD-CBFS	\$226.00	

AVAILABLE LENS COLORS FOR 2-POSITION MAINTAINED ILLUMINATED PUSH BUTTONS



IT'S EASY TO BUILD YOUR OWN PILOT LIGHT

Simply pick the code number from each of the sections below and combine them to build your part number.

Pilot Lights



Example: To build one of our most popular Pilot Lights, the part number would be **I + II + III + IV + PLL + VI** or **HFVLU120LG-PLLGN**



I. PILOT LIGHT OPERATOR

CODE	DESCRIPTION	LIST
HFVLU	Full Voltage	\$ 64.00
HTFLU	Transformer (50/60 Hz)	\$ 82.00
HRLU	Resistor	\$ 64.00
HRTLU	Dual Input Remote Test	\$100.00

II. VOLTAGE BASED ON OPERATOR TYPE

CODE	DESCRIPTION
FULL VOLTAGE	
6	6V AC/DC
12	12V AC/DC
24	24V AC/DC
120	120V AC/DC
TRANSFORMER	
120	120V AC
240	240V AC
277	277V AC
480	480V AC
RESISTOR	
120	120V AC/DC
240	240V AC/DC
480	480V AC/DC (LED & Neon only)
DUAL INPUT REMOTE TEST	
6	6V AC/DC
12	12V AC/DC
24	24V AC/DC
120	120V AC/DC
240	240V AC/DC

III. LAMP TYPE/COLOR

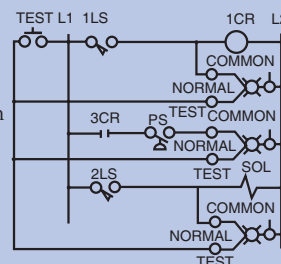
CODE	COLOR	LIST
LED		
LA	Amber	\$ 18.00
LB	Blue	\$ 18.00
LG	Green	\$ 18.00
LR	Red	\$ 18.00
LW	White	\$ 18.00
INCANDESCENT		
(Blank)	Clear [‡]	—
‡NOTE: Incandescent bulbs are not an option for HRLU480.		
F	Clear Flashing Bulb*	\$ 7.10
*NOTE: Incandescent flashing bulbs available for any 6V full voltage or transformer application.		
NEON†		
NG	Green	—
NR	Red	—
†NOTE: Only Available in HFVLU120, HRLU240 and HRLU480.		
NL	No Lamp	-\$ 1.80

SEE PAGE 249 FOR LAMP REPLACEMENT CHART AND PAGE 250 FOR LAMP TECHNICAL DATA.

DISCOUNT SCHEDULE **E**

DUAL INPUT REMOTE TEST

Our unique Dual Input Remote light unit can be used as a pilot light while also permitting the testing of a number of lights from a single push button. A diode circuit isolates the test supply from the normal supply. The schematic shown represents a typical dual input application.



AVAILABLE LENS COLORS FOR PILOT LIGHTS



30MM H-LINE PILOT LIGHTS

Our 30mm H-Line Pilot Lights, when utilized with our LED lamps provide leakage protection, long-lasting life and high quality with tremendous resistance to shock and vibration. Our reflection technology and state-of-the-art LED lamps improve visibility from all angles. c3controls LED lamps last 100,000 hours – *that's 11.4 years!* Combine these LEDs with our full voltage, transformer or resistor packages for optimum durability. All c3controls 30mm H-Line operators are UL Listed and are rated Type 4/4X standard for watertight and corrosion resistance. In addition, operators are also listed for Type 1, 2, 3, 3R, 12 and 13, and meet global standards requirements.

Product features include:

- Polyester construction for superior corrosion resistance, moisture rejection and electrical insulation.
- All metal parts are nickel-plated for superior corrosion resistance.
- Full voltage lights incorporate a unique insulated socket design to minimize accidental contact during lamp change.
- #6 stainless steel terminal screws with self-lifting captive wire clamps accommodate #22 through two #12 AWG wires (0.5 - 4mm²) per terminal.
- Operators conveniently mount in a round 1-13/64" (30.5mm) hole that is directly interchangeable with competitors units and eliminates the labor required for notching.



30MM HAZARDOUS DUTY PILOT DEVICES

UNIQUE PRODUCT FEATURES



1. Compact, thin design is also vibration resistant.
2. Our seal is infused with a coating to eliminate cracking when exposed to harsh conditions such as heat, dryness and sunlight. This seal also acts as a light reflector because it is white which increases light output and improves visibility from all angles.
3. Our rugged Lexan™ lenses provide better visibility and can resist high impact for reliable performance in most environments, even in high ambient temperatures.
4. These light units use a miniature bayonet base lamp which are nickel-plated for corrosion resistance and provide reliable lamp secureness.

SOME OF OUR POPULAR CONFIGURATIONS:

PILOT LIGHTS WITH POLYESTER CLAMP RING (TYPE 4X)

CATALOG NUMBER	DESCRIPTION	LIST
HFVLU24LA-PLLAR	Full Voltage 24V Amber LED w/Amber Lens	\$ 93.00
HFVLU24LG-PLLGN	Full Voltage 24V Green LED w/Green Lens	\$ 93.00
HTFLU120LR-PLLRD	Transformer 120V Red LED w/Red Lens	\$111.00

IT'S EASY TO BUILD YOUR OWN PILOT LIGHT

Simply pick the code number from each of the sections below and combine them to build your part number.

Push-To-Test Pilot Lights



Example: To build one of our most popular Pilot Lights, the part number would be **I + II + PTT + IV + V + VI + VII + VIII** or **HFSFVPTT120-HIPBCGN**



I. CONTACT BLOCK CONFIGURATION

CODE	DESCRIPTION	LIST
HPR	Hermetically Sealed Reed Contact (wired at factory)	\$118.00
HFS	Factory Sealed Contact (wired at factory)	\$106.00

II. PUSH-TO-TEST OPERATOR

CODE	DESCRIPTION	LIST
FV	Full Voltage	\$ 64.00
TF	Transformer (50/60 Hz)	\$ 82.00
RL	Resistor	\$ 64.00

III. OPERATOR TYPE

CODE	DESCRIPTION	LIST
PTT	Push-To-Test	\$ 9.00

IV. VOLTAGE BASED ON OPERATOR TYPE

CODE	DESCRIPTION
FULL VOLTAGE	
6	6V AC/DC
12	12V AC/DC
24	24V AC/DC
120	120V AC/DC
TRANSFORMER	
120	120V AC
240	240V AC
277	277V AC
480	480V AC
RESISTOR	
120	120V AC/DC
240	240V AC/DC
480	480V AC/DC (LED & Neon only)

V. LAMP TYPE/COLOR

CODE	COLOR	LIST
LED		
LA	Amber	\$ 18.00
LB	Blue	\$ 18.00
LG	Green	\$ 18.00
LR	Red	\$ 18.00
LW	White	\$ 18.00
INCANDESCENT		
(Blank)	Clear†	—
†NOTE: Incandescent bulbs are not an option for RLPTT480.		
F	Clear Flashing Bulb*	\$ 7.10
*NOTE: Incandescent flashing bulbs available for any 6V full voltage or transformer application.		
NEON†		
NG	Green	—
NR	Red	—
†NOTE: Only Available in FVPTT120, RLPTT240 and RLPTT480.		
NL	No Lamp	— \$ 1.80

VI. CLAMP RING

CODE	DESCRIPTION	LIST
(Blank)	Black Polyester (Type 4X)	—
A	Aluminum (Type 4)*	\$ 4.30
*NOTE: Aluminum clamp rings are NOT corrosion resistant.		

VII. LENS TYPE

CODE	DESCRIPTION	LIST
HIPBC	Illuminated Push Button Lens	\$ 24.00
HIPBCM	Illuminated Push Button Mushroom Lens	\$ 36.00
HGIPBC	Guarded Illuminated Push Button Lens*	\$ 36.00
HSIPBCM	Shrouded Illuminated Push Button Mushroom Lens*	\$ 48.00

*NOTE: Aluminum clamp rings are not an option for HGIPBC or HSIPBCM.

VIII. LENS COLOR

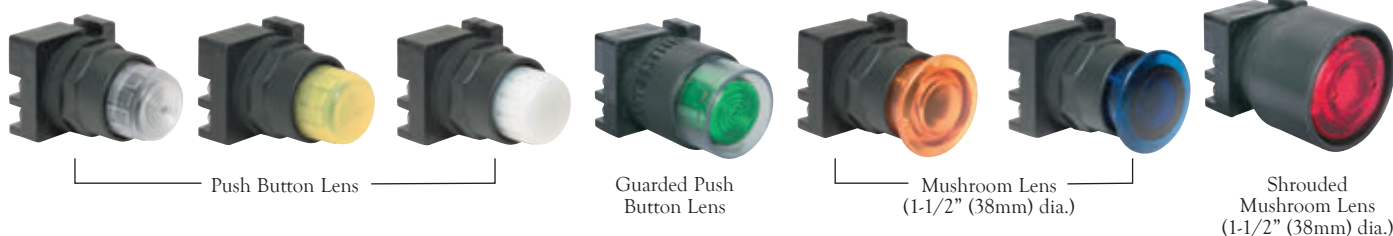
CODE	COLOR
AR	Amber
BE	Blue
CR	Clear
GN	Green
RD	Red
WE	White

Push-To-Test Pilot Lights combine an illuminated push button with a normally open/normally closed contact block factory wired for three-point wiring in standard push-to-test circuits. See page 240 for wiring schematic.

SEE PAGE 249 FOR LAMP REPLACEMENT CHART AND PAGE 250 FOR LAMP TECHNICAL DATA.



AVAILABLE LENS COLORS FOR PUSH-TO-TEST PILOT LIGHTS.



30MM H-LINE PUSH-TO-TEST PILOT LIGHTS

Our 30mm H-Line Illuminated Push-To-Test Pilot Lights, when utilized with our LED lamps provide leakage protection, long-lasting life and high quality with tremendous resistance to shock and vibration. Our reflection technology and state-of-the-art LED lamps improve visibility from all angles. c3controls LED lamps last 100,000 hours – *that's 11.4 years!* Combine these LEDs with our full voltage, transformer or resistor packages for optimum durability. All c3controls 30mm H-Line operators are UL Listed and are rated Type 4/4X standard for watertight and corrosion resistance. In addition, operators are also listed for Type 1, 2, 3, 3R, 12 and 13, and meet global standards requirements.

Product features include:

- Polyester construction for superior corrosion resistance, moisture rejection and electrical insulation.
- All metal parts are nickel-plated for superior corrosion resistance.
- Full voltage lights incorporate a unique insulated socket design to minimize accidental contact during lamp change.
- #6 stainless steel terminal screws with self-lifting captive wire clamps accommodate #22 through two #12 AWG wires (0.5 - 4mm²) per terminal.
- Operators conveniently mount in a round 1-13/64" (30.5mm) hole that is directly interchangeable with competitors units and eliminates the labor required for notching.



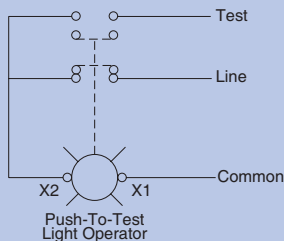
UNIQUE PRODUCT FEATURES



1. Our push-to-test pilot lights aid in the troubleshooting of the circuit.
2. Our seal is infused with a coating to eliminate cracking when exposed to harsh conditions such as heat, dryness and sunlight. This seal also acts as a light reflector because it is white which increases light output and improves visibility from all angles.
3. Our rugged Lexan™ lenses provide better visibility and can resist high impact for reliable performance in most environments, even in high ambient temperatures.
4. These light units use a miniature bayonet base lamp which are nickel-plated for corrosion resistance and provide reliable lamp secureness.

WIRING DIAGRAM

Customer connections of line and test power supplies. Light unit is powered by the line circuit. Depressing the lens cap will disconnect the line and connect the test supply, confirming bulb status.



SOME OF OUR POPULAR CONFIGURATIONS:

PUSH-TO-TEST PILOT LIGHTS W/POLYESTER CLAMP RING (TYPE 4X)

CATALOG NUMBER	DESCRIPTION	LIST
HPRFVPTT120-HIPBCAR	FV 120V w/ Incand. Lamp, Amber Lens & Herm. Seal. Reed	\$215.00
HFSFVPTT120-HIPBCGN	FV 120V w/ Incand. Lamp, Green Lens & Factory Seal. CB	\$203.00
HFSFVPTT120-HIPBCRD	FV 120V w/ Incand. Lamp, Red Lens & Factory Seal. CB	\$203.00

ADDED SECURITY!



For added security, all H-Line Push-To-Test Pilot Lights come standard with a screw tightening mounting bracket to ensure the contact blocks remain snug to the operator.

IT'S EASY TO BUILD YOUR OWN PILOT LIGHT

Simply pick the code number from each of the sections below and combine them to build your part number.

20-277V Multi-Voltage Pilot Lights



Example: To build one of our most popular Pilot Lights, the part number would be **I + II + III + IV + PLL + VI + VII** or **30MV20-277DLW-PLLRD**



I. OPERATOR TYPE		
CODE	DESCRIPTION	LIST
30MV20-277	Non-Relampable Multi-Voltage Pilot Light	\$107.00
30RMV20-277	Relampable Multi-Voltage Pilot Light	\$114.00

II. LED LAMP FUNCTION		
CODE	DESCRIPTION	LIST
D	Standard	—
F	Flashing	\$ 18.00

III. LED LAMP COLOR		
CODE	COLOR	LIST
LED MULTI-VOLTAGE, NON-RELAMPABLE		
LW	White	—
LED MULTI-VOLTAGE, RELAMPABLE		
LA	Amber	\$ 9.80
LB	Blue	\$ 9.80
LG	Green	\$ 9.80
LR	Red	\$ 9.80
LT	Translucent White	\$ 9.80
LW	White	\$ 9.80

IV. CLAMP RING		
CODE	DESCRIPTION	LIST
(Blank)	Black Polyester (Type 4X)	—
A	Aluminum (Type 4)*	\$ 4.30

*NOTE: Aluminum clamp rings are NOT corrosion resistant.

V. LENS TYPE		
CODE	DESCRIPTION	LIST
PLL	Pilot Light Lens	\$ 11.00

VI. LENS COLOR	
CODE	COLOR
AR	Amber
BE	Blue
CR	Clear
GN	Green
RD	Red
WE	White

VII. OPTIONS		
CODE	DESCRIPTION	LIST
(Blank)	None	—
IP20	IP20 Guard	\$ 4.00



SEE PAGE 249 FOR LAMP REPLACEMENT CHART AND PAGE 250 FOR LAMP TECHNICAL DATA.

c3controls LED lamps last 100,000 hours — that's 11.4 years!

SOME OF OUR POPULAR CONFIGURATIONS:

MULTI-VOLTAGE PILOT LIGHTS		
CATALOG NUMBER	DESCRIPTION	LIST
30MV20-277DLW-PLLAR	Multi-Voltage 20-277V, Non-Relampable w/ White LED and Amber Lens	\$118.00
30MV20-277DLW-PLLGN	Multi-Voltage 20-277V, Non-Relampable w/ White LED and Green Lens	\$118.00
30MV20-277DLW-PLLRD	Multi-Voltage 20-277V, Non-Relampable w/ White LED and Red Lens	\$118.00
30RMV20-277DLA-PLLAR	Multi-Voltage 20-277V, Relampable w/ Amber LED and Amber Lens	\$134.80
30RMV20-277DLG-PLLGN	Multi-Voltage 20-277V, Relampable w/ Green LED and Green Lens	\$134.80
30RMV20-277DLR-PLLRD	Multi-Voltage 20-277V, Relampable w/ Red LED and Red Lens	\$134.80

AVAILABLE LENS COLORS FOR MULTI-VOLTAGE PILOT LIGHTS



30MM MULTI-VOLTAGE PILOT LIGHTS

When you match up our 30mm Pilot Lights with our LED lamps you get a quality, long-lasting, leakage protected pilot device that withstands shock and vibration. Our state-of-the-art LED lamps last 100,000 hours—that's 11.4 years! And we nest them in a bright white cup that casts light through two lenses scored to improve visibility from all angles. c3controls' 30mm multi-voltage pilot lights are UL listed and rated Type 4/4X as standard to resist water and corrosion. In addition, these lights are listed for Type 1, 2, 3, 3R, 12 and 13, and meet global standards.

Product features include:

- Available in non-relampable and relampable constructions.
- Polyester construction for superior corrosion resistance, moisture rejection and electrical insulation.
- #6 terminal screws with self-lifting captive wire clamps to accommodate #22 through two #12 AWG wires (0.5 - 4mm²) per terminal.
- Nickel plated clamp rings are ideal for corrosive environments. Heavy-duty brass current carrying components for improved conductivity and corrosion resistance.
- Bi-polar design means functionality is independent of which lead is connected to each terminal.
- Rugged Lexan™ lenses can resist high impact for reliable performance in most environments—even in high ambient temperatures.
- Superior performance even in high vibration and shock applications.
- Enhanced safety with field installable IP20 terminal guards are transparent to maintain terminal visibility. Their construction provides easy access to the device terminals—so wiring is convenient and quick, and they snap securely in place without tools.

For your convenience when marking terminals, our IP20 guards use Series WTB2 markers (see page 439), simplifying wiring and troubleshooting.



UNIQUE PRODUCT FEATURES



ELIMINATE THE HEADACHE OF MULTIPLE LIGHTS TO MATCH MULTIPLE VOLTAGES!

Our state-of-the-art, super bright LEDs and printed circuit boards allow you to operate this light at any voltage from 20V to 277V AC or DC without losing light intensity or consuming a lot of power. We offer the same range in our flashing light as well. One light unit covers a lot of applications, reducing your inventory! All you have to do is choose your lens color.

- Wider operating voltage range of 20V-277V AC or DC.
- Depth behind the panel at 1-11/16" / 42.8mm.
- Integrated light circuit protection. We included a fusible link in the electronic circuit, resulting in predictable failure mode (open circuit) and improving reliability.
- A redesigned circuit allows you to use the light unit in a wider range of applications, including electronic and coil applications where leakage current and voltages may exist.



IT'S EASY TO BUILD YOUR OWN SELECTOR SWITCH

Simply pick the code number from each of the sections below and combine them to build your part number.

Selector Switches



Example: To build one of our most popular Selector Switches, the part number would be **I + II + III + IV + V + VI** or **HSSOR3-SHWE-PRNO/PRNO**



*NOTE: Contact block configurations are based on circuit designations (see page 244 for circuit designation charts).

I. SELECTOR SWITCH OPERATOR FUNCTION

CODE	POS./FUNCTION	LIST
FACTORY SEALED CONTACT BLOCKS		
HSSO2	2/Maintained	\$ 25.00
HSROLR	2/Spring Return, L to R	\$ 42.00
HSRORL	2/Spring Return, R to L	\$ 42.00
HSSO3	3/Maintained	\$ 25.00
HSROLC	3/Spring Return, L to C	\$ 42.00
HSRORC	3/Spring Return, R to C	\$ 42.00
HSROLRC	3/Spring Return, L & R to C	\$ 42.00

HERMETICALLY SEALED REED CONTACT BLOCKS*

HSSO2	2/Maintained	\$ 25.00
HSROLR	2/Spring Return, L to R	\$ 42.00
HSRORL	2/Spring Return, R to L	\$ 42.00
HSSOR3	3/Maintained	\$ 25.00
HSROR3LC	3/Spring Return, L to C	\$ 42.00
HSROR3RC	3/Spring Return, R to C	\$ 42.00
HSROR3LRC	3/Spring Return, L & R to C	\$ 42.00

*NOTE: Remove "H" from code when ordering a Hermetically Sealed Reed in conjunction with a Logic Reed Contact Block.

II. CLAMP RING

CODE	DESCRIPTION	LIST
(Blank)	Black Polyester (Type 4X)	—
A	Aluminum (Type 4)*	\$ 4.30

*NOTE: Aluminum clamp rings are NOT corrosion resistant.

III. HANDLE TYPE

CODE	DESCRIPTION	LIST
SH	Standard	\$ 9.80
SL	Lever	\$ 9.80

IV. HANDLE INSERT COLOR

CODE	COLOR
BE	Blue
GN	Green
GY	Grey
RD	Red
WE	White
YW	Yellow

Each operating handle is black with a factory assembled color insert.

† We recommend that any Normally Closed Logic Reed Contact Block be mounted to the operator before Normally Open Contact Blocks are mounted.

V. CONTACT BLOCK CONFIGURATION (LEFT SIDE)

CODE	DESCRIPTION	LIST
FACTORY SEALED, CLASS 1, DIV. 2/ZONE 2, 720 VA		
(Blank)	Operator without Contact Blocks	—
CBFSR	Contact Block with 1 Normally Open/1 Normally Closed	\$ 94.00
POWER REED, CLASS 1, DIV. 2/ZONE 2, 360 VA INDUCTIVE		
(Blank)	Operator without Contact Blocks	—
PRNO	1 Normally Open Contact Block	\$ 74.00
PRNC	1 Normally Closed Contact Block	\$ 74.00
PR2NO	Contact Block w/2 Normally Open	\$118.00
PR2NC	Contact Block w/2 Normally Closed	\$118.00
PRNONC	Contact Block with 1 Normally Open/1 Normally Closed	\$118.00
PRNCS	2 Normally Closed Contact Blocks Wired in Series	\$153.00
PRNOP	2 Normally Open Contact Blocks Wired in Parallel	\$153.00
MID-POWER REED, CLASS 1, DIV. 2/ZONE 2, 180 VA INDUCTIVE		
(Blank)	Operator without Contact Blocks	—
MPRNO	1 Normally Open Contact Block	\$ 59.00
MPRNC	1 Normally Closed Contact Block	\$ 59.00
MPR2NO	Contact Block w/2 Normally Open	\$102.00
MPR2NC	Contact Block w/2 Normally Closed	\$102.00
MPRNONC	Contact Block with 1 Normally Open/1 Normally Closed	\$102.00
MPRNCS	2 Normally Closed Contact Blocks Wired in Series	\$123.00
MPRNOP	2 Normally Open Contact Blocks Wired in Parallel	\$124.00
MEDIUM LOGIC REED, CLASS 1, DIV. 2/ZONE 2, 40 VA INDUCTIVE, 100 WATTS RESISTIVE†		
(Blank)	Operator without Contact Blocks	—
MLRNO	1 Normally Open Contact Block	\$ 35.00
MLRNC	1 Normally Closed Contact Block	\$ 35.00
MLR2NO	Contact Block w/2 Normally Open	\$ 55.00
MLR2NC	Contact Block w/2 Normally Closed	\$ 55.00
MLRNONC	Contact Block with 1 Normally Open/1 Normally Closed	\$ 55.00
MLRNCS	2 Normally Closed Contact Blocks Wired in Series	\$ 74.00
MLRNOP	2 Normally Open Contact Blocks Wired in Parallel	\$ 75.00
LOGIC REED, CLASS 1, DIV. 2/ZONE 2, 40 WATTS RESISTIVE††		
(Blank)	Operator without Contact Blocks	—
LRNO	1 Normally Open Contact Block	\$ 22.00
LRNC	1 Normally Closed Contact Block	\$ 22.00
LRNCS	2 Normally Closed Contact Blocks Wired in Series	\$ 47.00
LRNOP	2 Normally Open Contact Blocks Wired in Parallel	\$ 48.00

*NOTE: Logic Reeds do not require and are not provided with a Mounting Screw.

VI. CONTACT BLOCK CONFIGURATION (RIGHT SIDE)

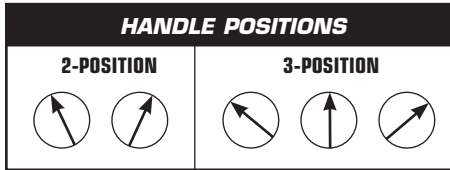
(USE CHART V FROM ABOVE)



30MM H-LINE SELECTOR SWITCHES

With our unique universal cam design, c3controls Selector Switches offer multiple functions in a single device eliminating the need to install separate devices to perform individual functions based on contact block configuration. In addition, interchangeable selector handles provide product selection and field flexibility. All operators feature polyester housings, are UL

Listed and are rated Type 4/4X standard for watertight and corrosion resistance. In addition, operators are also listed for Type 1, 2, 3, 3R, 12 and 13, and meet global standards requirements.



UNIQUE PRODUCT FEATURES

SAVE TIME & MONEY - WITH c3CONTROLS, ONE CAM DOES IT ALL!



1. One-Cam does it all vs. our competitors who need up to fifteen cams to perform the same function. This One-Cam design eliminates the need for multiple cam configurations and selector switch configuration nightmares, saving time, inventory, money, and ensuring 100% cam selection configuration accuracy.
2. Our revolutionary U-Cup seal is infused with a Teflon coating to eliminate cracking when exposed to harsh conditions such as heat, dryness and sunlight.
3. All frictional parts are molded with an internal self-lubricant to provide outstanding wear and smooth cam operations without troublesome greases used by others that attracts dust and other particles in the area.



FACTORY SEALED BLOCK SELECTION FOR 2-POSITION SELECTOR SWITCHES				
CIRCUIT DESIG.	HANDLE POSITION		CONTACT BLOCK CATALOG NO.	MOUNTING POSITION
	LEFT	RIGHT		
A	0 X	X 0	CBFSR	EITHER

0 = OPEN X = CLOSED

FACTORY SEALED BLOCK SELECTION FOR 3-POSITION SELECTOR SWITCHES					
CIRCUIT DESIG.	HANDLE POSITION			CONTACT BLOCK CATALOG NO.	MOUNTING POSITION
	LEFT	CENTER	RIGHT		
B	X 0	0 X	0 0	CBFSR	LEFT
C	0 0	0 X	X 0	CBFSR	RIGHT

HERMETICALLY SEALED BLOCK SELECTION FOR 2-POSITION SELECTOR SWITCHES				
CIRCUIT DESIG.	HANDLE POSITION		CONTACT BLOCK CATALOG NO.	MOUNTING POSITION
	LEFT	RIGHT		
D	0	X	PRNO	EITHER
E	X	0	PRNC	EITHER
F	0 X	X 0	PRNONC	EITHER

HERMETICALLY SEALED REED CONTACT BLOCK SELECTION FOR 3-POSITION SELECTOR SWITCHES								
CIRCUIT DESIG.	HANDLE POSITION			POWER REED	MID-POWER REED	MEDIUM REED	LOGIC REED	MOUNTING POSITION
	LEFT	CENTER	RIGHT	CAT. #	CAT. #	CAT. #	CAT. #	
G	X	0	0	PRNO	MPRNO	MLRNO	LRNO	LEFT
H	0	X	0	PRNCS (PRNC/PRNC)	MPRNCS (MPRNC/MPRNC)	MLRNCS (MLRNC/MLRNC)	LRNCS (LRNC/LRNC)	BOTH WIRED IN SERIES
I	0	0	X	PRNO	MPRNO	MLRNO	LRNO	RIGHT
J	0	X	X	PRNC	MPRNC	MLRNC	LRNC	LEFT
K	X	0	X	PRNOP (PRNO/PRNO)	MPRNOP (MPRNO/MPRNO)	MLRNOP (MLRNO/MLRNO)	LRNOP (LRNO/LRNO)	BOTH WIRED IN PARALLEL
L	X	X	0	PRNC	MPRNC	MLRNC	LRNC	RIGHT

MIX AND MATCH ANY INSERT COLOR AND SELECTOR SWITCH HANDLE



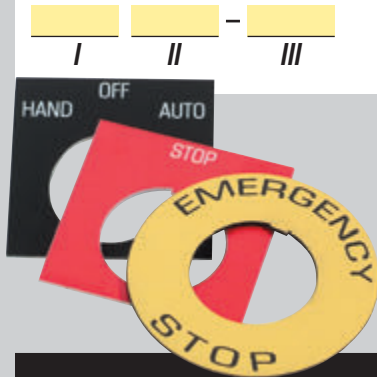
Standard Handle

Lever Handle

IT'S EASY TO BUILD YOUR OWN LEGEND PLATE

Simply pick the code number from each of the sections below and combine them to build your part number.

Legend Plates



Legend plates feature 2 lines of text with approximately 16 characters per line. Uppercase is standard unless specified. *The tall legend plate (LPT) features 3 lines of text with approximately 16 characters per line.

I. LEGEND PLATE TYPE		
CODE	DESCRIPTION	LIST
LP	Standard 2" h x 2" w	\$ 4.00
LPN	Narrow 2" h x 1-3/4" w	\$ 4.00
LPS	Short 1-3/4" h x 2" w	\$ 4.00
LPT	Tall 2-1/4" h x 2" w*	\$ 5.00
LPR	Standard Round 2-13/32" Dia.	\$ 9.00
LPRM	Medium Round 2-3/4" Dia.	\$11.00
LPRJ	Jumbo Round 3-3/4" Dia.	\$12.00

II. FACE AND LETTER COLOR		
CODE	FACE COLOR	LETTER COLOR
AL	Aluminum	Black
(Blank)	Black	White
BE	Blue	White
GN	Green	White
RD	Red	White
WE	White	Black
YW	Yellow	Black

III. LEGEND DESIGNATION

A. PUSH BUTTONS AND LIGHTS

CODE	DESCRIPTION
00	(Blank)
01	AUTO
02	CLOSE
31	CYCLE START
100	CYCLE STOP
03	DOWN
102	EMERGENCY
04	EMERGENCY STOP
06	FAST
101	FAULT
07	FORWARD
08	HAND
32	HIGH
33	IN
09	INCH
10	JOG
38	JOG FORWARD
39	JOG REVERSE
34	LOW
35	LOWER
11	MANUAL
26	MOTOR RUN
12	OFF
13	ON
14	OPEN
36	OUT
27	OVERLOAD
15	POWER OFF
16	POWER ON
30	PUSH TO RESET
17	PUSH TO TEST
37	RAISE
109	READY
18	RESET
19	REVERSE
20	RUN
21	SLOW
22	START
23	STOP
24	TEST
29	TRIP
25	UP

B. 2-POSITION SELECTOR

CODE	LEGEND LEFT	LEGEND RIGHT
00	(Blank)	(Blank)
50	AUTO	HAND
68	AUTO	MANUAL
51	DOWN	UP
63	FAST	SLOW
52	FWD	REV
53	HAND	AUTO
73	HIGH	LOW
54	INCH	RUN
75	LEFT	RIGHT
70	LOCAL	REMOTE
55	MANUAL	AUTO
56	OFF	ON
57	ON	OFF
58	OPEN	CLOSE
65	PULL START	PUSH STOP
66	PUSH OFF	PULL ON
64	PUSH ON	PUSH OFF
67	PUSH TO STOP	PULL TO START
71	RAISE	LOWER
59	REV	FWD
60	RUN	JOG
69	SLOW	FAST
61	START	STOP
62	STOP	START
74	SUMMER	WINTER
72	UP	DOWN

C. 3-POSITION SELECTOR

CODE	LEGEND LEFT	LEGEND CENTER	LEGEND RIGHT
00	(Blank)	(Blank)	(Blank)
108	A	O	H
92	AUTO	OFF	HAND
93	AUTO	MAN	OFF
80	DOWN	OFF	UP
81	FWD	AUTO	REV
82	FWD	OFF	REV
107	H	O	A
83	HAND	OFF	AUTO
94	HIGH	OFF	LOW
99	JOG	OFF	AUTO
90	LOCAL	OFF	REMOTE
84	MANUAL	OFF	AUTO
89	OFF	RUN	START
85	OFF	START	RUN
86	OFF	1	2
95	OPEN	OFF	CLOSE
91	RAISE	OFF	LOWER
96	SLOW	OFF	FAST
97	SUMMER	OFF	WINTER
98	UP	OFF	DOWN
87	1	OFF	2
88	1	2	3

NOT FINDING WHAT YOU NEED IN A STANDARD PLATE?

We offer Special and Custom Engraving up to 12" x 24" (304.8mm x 609.6mm). Consult factory or see page 246 for details. While our standard legend plates are available for same day shipping, our special and custom legend plates are not.

POPULAR CONFIGURATIONS:

LEGEND PLATES		
CATALOG NO.	DESIGNATION	LIST
LPRYW-04	EMERGENCY STOP	\$ 9.00
LP-22	START	\$ 4.00
LPT-83	HAND OFF AUTO	\$ 5.00



IT'S EASY TO BUILD YOUR OWN LEGEND PLATE

Simply pick the code number from each of the sections below and combine them to build your part number.

Special Legend Plates

I **II** **SP** All legend plates are a 2-ply laminated plastic, laser engraved for a permanent and quality appearance. Uppercase is standard unless specified.



I. LEGEND PLATE TYPE

CODE	DESCRIPTION	LIST
LP	Standard 2" h x 2" w	\$ 4.00
LPN	Narrow 2" h x 1-3/4" w	\$ 4.00
LPS	Short 1-3/4" h x 2" w	\$ 4.00
LPT	Tall 2-1/4" h x 2" w*	\$ 5.00
LPR	Standard Round 2-13/32" Dia.	\$ 9.00
LPRM	Medium Round 2-3/4" Dia.	\$11.00
LPRJ	Jumbo Round 3-3/4" Dia.	\$12.00

Legend plates feature 2 lines of text with approximately 16 characters per line.
*The tall legend plate (LPT) features 3 lines of text with 16 characters per line.

DISCOUNT SCHEDULE **E**

II. FACE AND LETTER COLOR

CODE	FACE COLOR	LETTER COLOR
AL	Aluminum	Black
(Blank)	Black	White
BE	Blue	White
GN	Green	White
RD	Red	White
WE	White	Black
YW	Yellow	Black

III. LEGEND DESIGNATION

CODE	DESCRIPTION	LIST
SP	Special Legend	\$14.00

NOTE: \$6.00 each when ordering 3 or more of the same exact legend plate.

Upon receipt of your order, legend plates will be set-up as specified and a proof will be sent to you prior to production to ensure accuracy.

To order, submit your drawing to:
Mail: c3controls
 Attn: Customer First
 PO Box 496
 Beaver, PA 15009
Fax: 724.775.5283
Email: legendplates@c3controls.com

To help simplify your order process, templates are available by calling our factory at 724.775.7926 or reference one of the drawings shown on page 259.

Special legend plates are not available for same day shipping.

30MM HAZARDOUS DUTY PILOT DEVICES



(Sample custom plate)

CUSTOM LEGEND PLATES

- **Add your Corporate Logo!** Send us your corporate logo electronically to promote your company image in a clean professional legend plate.
- Available in 2-ply 12" x 24" (304.8mm x 609.6mm) sheets of laminated plastic for custom laser engraving.
- To order, specify part number LPCP.
- Initial Set-Up Fee Per Legend Plate: \$50/hour (minimum fee \$50.00).
- \$2.00/Square Inch (minimum \$18.00).
- Design services available. Consult factory for details and hourly rate.
- Custom legend plates are not available for same-day shipping.

To order, submit your drawing to:
Mail: c3controls
 Attn: Customer First
 PO Box 496
 Beaver, PA 15009
Fax: 724.775.5283
Email: legendplates@c3controls.com

EXTENDED CLAMP RINGS



We offer four types of 30mm extended clamp rings that guard against accidental operation. Use our Extended Clamp Rings (ECR or AECR) with flush caps, our Clear Guarded Clamp Ring (EECR) with illuminated push buttons and our Large Extended Clamp Ring (LECR) with flush or extended caps, which also provides easier access to your push buttons.

FOR USE WITH NON-ILLUMINATED CAPS

CODE	DESCRIPTION	LIST
ECR	Extended Ring	\$ 6.00
LECR	Large Extended Ring	\$10.00
AECR	Aluminum Extended Ring	\$10.00

FOR USE WITH ILLUMINATED CAPS

CODE	DESCRIPTION	LIST
EECR	Guarded Clear Polyester Ring	\$ 8.00

GUARD ATTACHMENT



Our PPGD guards against accidental operation and is made of a high strength polyester material.

CODE	FITS	LIST
PPGD	Maintained Push Buttons	\$40.00

MECHANICAL INTERLOCK



Our Mechanical Interlock features a 2" (50.8mm) center and can be used to interlock two adjacent operators. This may also be used to interlock a two-unit maintained/momentary assembly. NOTE: Factory installation recommended.

CODE	DESCRIPTION	LIST
MI	30mm Mechanical Interlock	\$48.00

HOLE PLUG

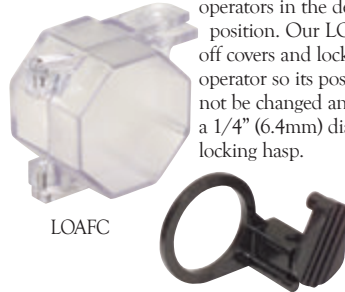


Use to seal unused panel holes. Our hole plug comes with additional sealing panel gaskets to ease installation and is rated Type 4X.

CODE	DESCRIPTION	LIST
HP	30mm Grey Hole Plug	\$11.00

LOCK OFF ATTACHMENTS

c3controls offers a wide variety of 30mm corrosive resistant lock-off attachments for maintained and momentary push buttons and selector switches. Our LOAX, LOAM and LOAP lock-offs permit locking operators in the depressed position. Our LOAFC lock-off covers and locks the operator so its position cannot be changed and features a 1/4" (6.4mm) diameter pad locking hasp.



LOAX/LOAM/LOAP

CODE	FITS	LIST
LOAX	Standard Extended Cap	\$32.00
LOAM	Standard Momentary Mushroom Cap	\$32.00
LOAP	Push-Pull Maintained Mushroom Cap (PPMC) or Push Maintained Extended Cap (PMXC)	\$32.00
LOAFC	Most Push Buttons and Selector Switches	\$50.00

PANEL GASKETS



Our panel gaskets are constructed of Neoprene for long life and low compression set and provide a watertight seal. Panel gaskets are supplied to accommodate different panel thickness. In order to meet Type 4/4X requirements, at least one 1/16" (1.6mm) gasket must be used. NOTE: All c3controls 30mm operators are provided with gaskets.

CODE	DESCRIPTION	LIST
PG2	1/16" (1.6mm) Gasket	\$ 1.00
PG6	3/16" (4.8mm) Gasket	\$ 1.00

THRUST & TRIM WASHERS



Anti-rotation device for use with 30mm push buttons, selector switches and pilot lights to provide additional protection from rotation and aid in alignment. This product is optional with c3controls gasket technology.

CODE	DESCRIPTION	LIST
TTW	30mm Anti-Rotation Washers	\$ 4.00

PUSH MAINTAINED FLUSH AND EXTENDED CAPS



Use with a secondary standard cap and mechanical interlock to provide two button momentary/maintained operation or use on adjacent operators with mechanical interlock to provide two-button maintained/maintained operation.

COLOR	FLUSH CODE	EXTENDED CODE	LIST
WITH BLACK POLYESTER (TYPE 4X) CLAMP RING			
Black	PMFCBK	PMXCBK	\$44.00
Green	PMFCGN	PMXCGN	\$44.00
Red	PMFCRD	PMXCRD	\$44.00
Yellow	PMFCYW	PMXCYW	\$44.00
WITH ALUMINUM (TYPE 4) CLAMP RING*			
Black	APMFCBK	APMXCBK	\$48.00
Green	APMFCGN	APMXCGN	\$48.00
Red	APMFCRD	APMXCRD	\$48.00
Yellow	APMFCYW	APMXCYW	\$48.00

*NOTE: Aluminum clamp rings are NOT corrosion resistant.

CLAMP RING WRENCH



To simplify tightening and loosening of standard polyester and aluminum 1-3/8" (34.9mm) octagonal clamp rings. Won't scratch your lens or panel.

CODE	DESCRIPTION	LIST
CRW	30mm Clamp Ring Wrench	\$20.00

RESET PUSH BUTTON

Our unique Reset Push Button mounts in a standard 1-13/64" (30.5mm) hole and accepts either 20 hex head bolts or 20 thread rod to provide adjustable extension and save on all rod cutting and fitting labor. Universal styles include two bolts to cover 1" to 3" (25.4mm to 76.2mm) space from cover to overload reset rod. It is rated Type 4/4X as standard.



CODE	DESCRIPTION	LIST
RPB	Reset Push Button	\$18.00
RPB-B	RPB w/Bolts (1/4-20 x 1-3/4" & 3")	\$20.00
RPB-W	RPB w/Washers	\$20.00
RPB-BW	RPB w/Bolt & Washer Set	\$22.00
RPB BOLTS	2 Bolts (1/4-20 x 1-3/4" & 3")	\$ 2.00
RPB WASHERS	Washer Set	\$ 2.00

Special bolt lengths available - please consult factory (not available for guaranteed same day shipping).

DISCOUNT SCHEDULE **E**

LED, INCANDESCENT & NEON REPLACEMENT LAMPS

c3controls offers a full range of lamp options in a miniature bayonet base for direct interchangeability which provides flexibility in choosing the best lamp for each installation application. Multiple voltage options in Incandescent, LED and Neon lamps are available. Refer to the chart on page 249 to determine the appropriate replacement lamp based on your operator voltage. For lamp technical data, see page 250.

LED Lamps (for use with 30mm illuminated pilot devices and pilot lights)

LED
/ // ///



To order LED Lamps, the part number would be LED + II + III

I. LAMP TYPE

CODE	DESCRIPTION	LIST
LED	LED Lamp	\$28.00

Our LED lamps feature built-in leakage protection.

II. VOLTAGE

CODE	DESCRIPTION
6	6V
12	12V
24	24V
130	130V

III. LAMP COLOR

CODE	COLOR
AR	Amber
BE	Blue
GN	Green
RD	Red
WE	White

Not for use with 30RMV20-277 relampable multi-voltage pilot lights.

LED Lamps (for use with 30mm relampable multi-voltage pilot lights)

RMVLED1
/ //



To order LED Lamps, the part number would be RMVLED1 + II

I. LAMP TYPE

CODE	DESCRIPTION	FOR USE WITH	LIST
RMVLED1	LED Lamp	30RMV20-277 Relampable Multi-Voltage Pilot Lights	\$16.00

II. LAMP COLOR

CODE	COLOR
AR	Amber
BE	Blue
GN	Green
RD	Red
TW	Translucent White
WE	White

Incandescent Lamps



CODE	VOLTAGE	LIST
FVB6	6V	\$ 4.00
FVB12	12V	\$ 4.00
FVB24	24V	\$ 4.00
FVB55	55V	\$ 8.00
FVB120	120V	\$ 8.00
FVB6F	6V Flashing*	\$12.00

*NOTE: There may be a 5-15 second delay before flashing begins.

Neon Lamps



CODE	VOLTAGE	COLOR	LIST
FVB120NG	120V	Green	\$ 9.00
FVB120NR	120V	Red	\$ 9.00

DISCOUNT SCHEDULE **E**

LAMP REMOVAL TOOL



Used to facilitate the removal of lamps particularly in illuminated push buttons and push-to-test operators.

CODE	DESCRIPTION	LIST
LRT	Lamp Removal Tool	\$ 8.00

30MM REPLACEMENT LAMPS & TEMPERATURE RATINGS

30MM REPLACEMENT LAMP REFERENCE CHART
(FOR REFERENCE ONLY - USE CHARTS ON PAGE 248 TO ORDER)

OPERATOR CODE	OPERATOR VOLTAGE	LED (ALL COLORS)	INCANDESCENT	NEON
HFVLU6	Full Voltage 6V AC/DC	LED6	FVB6 or FVB6F	—
HFVLU12	Full Voltage 12V AC/DC	LED12	FVB12	—
HFVLU24	Full Voltage 24V AC/DC	LED24	FVB24	—
HFVLU120	Full Voltage 120V AC/DC	LED120	FVB120	FVB120NG or FVB120NR
HTFLU120	Transformer 120V AC	LED6	FVB6 or FVB6F	—
HTFLU240	Transformer 240V AC	LED6	FVB6 or FVB6F	—
HTFLU277	Transformer 277V AC	LED6	FVB6 or FVB6F	—
HTFLU480	Transformer 480V AC	LED6	FVB6 or FVB6F	—
HRLU120L	Resistor 120V AC/DC*	LED24	—	—
HRLU120I	Resistor 120V AC/DC*	—	FVB55	—
HRLU240L	Resistor 240V AC/DC*	LED24	—	—
HRLU240I	Resistor 240V AC/DC*	—	FVB120	—
HRLU240N	Resistor 240V AC/DC*	—	—	FVB120NG or FVB120NR
HRLU480	Resistor 480V AC/DC*	LED130	—	FVB120NG or FVB120NR
HRTL6	Dual Input 6V AC/DC	LED6	FVB6	—
HRTL12	Dual Input 12V AC/DC	LED12	FVB12	—
HRTL24	Dual Input 24V AC/DC	LED24	FVB24	—
HRTL120	Dual Input 120V AC/DC	LED120	FVB55	—
30RMV20-277	Multi-Voltage 20-277V AC/DC	RMVLED1	—	—

*NOTE: Lamps are unique to Resistor Light Units. Refer to side of light unit for correct replacement lamp part number.

H-LINE UL TEMPERATURE RATINGS

LAMP TYPE	CLASS DESIGNATION	TEMPERATURE
FULL VOLTAGE INDICATING LIGHTS (Temperature rating is determined based on maximum lamp temperature)		
Incandescent	Class 1, Div 2, Groups A,B,C,D	T4A, 248° F (120° C)
	Class 1, Zone 2 IIC	T4A, 248° F (120° C)
Neon	Class 1, Div 2, Groups A,B,C,D	T6, 185° F (85° C)
	Class 1, Zone 2 IIC	T6, 185° F (85° C)
LED	Class 1, Div 2, Groups A,B,C,D	T6, 185° F (85° C)
	Class 1, Zone 2 IIC	T6, 185° F (85° C)
RESISTOR LIGHTS (Temperature rating is a function of the maximum lamp or resistor temperature obtained under power)		
Incandescent	Class 1, Div 2, Groups A,B,C,D	T3C, 320° F (160° C)
	Class 1, Zone 2 IIC	T3C, 320° F (160° C)
Neon	Class 1, Div 2, Groups A,B,C,D	T4A, 248° F (120° C)
	Class 1, Zone 2 IIC	T4A, 248° F (120° C)
LED	Class 1, Div 2, Groups A,B,C,D	T4A, 248° F (120° C)
	Class 1, Zone 2 IIC	T4A, 248° F (120° C)
TRANSFORMER LIGHTS (Temperature rating is a function of the maximum transformer winding temperature)		
Incandescent	Class 1, Div 2, Groups A,B,C,D	T4A, 248° F (120° C)
	Class 1, Zone 2 IIC	T4A, 248° F (120° C)
LED	Class 1, Div 2, Groups A,B,C,D	T4A, 248° F (120° C)
	Class 1, Zone 2 IIC	T4A, 248° F (120° C)
MULTI-VOLTAGE LIGHTS (20V - 277V AC/DC)		
LED	Class 1, Div 2, Groups A,B,C,D	T4A, 248° F (120° C)
	Class 1, Zone 2 IIC	T4A, 248° F (120° C)

30MM HAZARDOUS DUTY PILOT DEVICES

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	Incandescent	Very Good	N/A
FVB12	756	14V	0.31	15,000	80	Incandescent	Good	N/A
FVB24	757	28V	0.62	7,500	80	Incandescent	Good	N/A
FVB55	1835	55V	1.1	5,000	50	Incandescent	Good	N/A
FVB120	**	130V	0.36	10,000	20	Incandescent	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	**	120/130V		100,000	<10	LED	Excellent	2 mA
FVB120NG	—	95-135V	Typical (Glow)	25,000	<5	Neon/Green	Very Good	N/A
FVB120NR	—	95-135V	Typical (Glow)	25,000	<5	Neon/Red	Very Good	N/A
RMVLED1	***	20-277V	Varies w/ Color 2000 mcd Typical (white 6000 mcd)	100,000	See Multi- Voltage Chart Below	LED	Very Good	N/A

**Designates a lamp design optimized for c3controls illuminated devices. See LED replacement lamps on page 248.
 ***Specifications for both integral and relampable multi-voltage lights.

MULTI-VOLTAGE POWER CONSUMPTION & CURRENT DRAW			
System Voltage	AC Current Draw (mA)	DC Current Draw (mA)	Power Consumption (W)
24V	21	20	AC: <1 DC: <1/2
48V	17	7	
120V	3.5	—	
125V	—	3	
240V	2.5	—	
250V	—	2	
277V	2.5	—	

FLASHING RATE (Flashing board only) 40-50 ops/min

PROTECTION FEATURES
 Fused to Fail Open Yes

DIELECTRIC STRENGTH (TERMINAL TO GROUND) 2200V for 1 Minute

CONTACT BLOCKS
FACTORY SEALED: Contact Blocks are Certified as "Explosion Proof". Devices employing this method of protection are designed so that all electrical parts are enclosed in a switch housing that is capable of withstanding, without damage, an explosion of a specified gas or vapor/air mixture which may occur during the operation of the switch. Further, the explosion internal to the switch body is controlled so that the hot gases are extinguished and cooled before they are allowed to escape to the surrounding atmosphere.
HERMETICALLY SEALED: Contact Blocks are Certified as "Non-Incendive". Devices employing this method of protection are designed so that all electrical parts are a bonded part of the switch housing that forms an arcing chamber that is evacuated of all oxygen, filled with an inert gas, and then sealed to prohibit the exchange of gases with the surrounding environment. These devices are incapable of igniting the surrounding gases or vapor/air mixtures under normal operation. Devices of this type are suitable for use in Div. 2/ Zone 2 applications. Hermetically Sealed contact blocks are also extremely useful for switching low energy circuits or circuits applied in atmospheres containing oxidizing agents and pollutants that might effect the performance of silver switching and metal contact elements. Hermetically Sealed Switch performance is consistent and repeatable in almost any environment.

FACTORY SEALED CONTACT BLOCK - CBFS/CBFSR - Class I Div. 2 Gr. B, C & D / Zone 2 Gr. IIB +H2

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

NOTE: For AC voltage below 72V AC the maximum allowed switching current is 10A = Ith. For DC voltages below 28V DC the maximum allowed switching current is 5A = Ith. For switching applications below 24V/40mA, Hermetic REED contacts are recommended.

HERMETICALLY SEALED POWER REED CONTACT BLOCK - Class I Div. 2 Gr. A, B, C & D / Zone 2 Gr. IIC

	Utilization Category		Make Rating	Break Rating	Ith-Thermal Current
	IEC	UL			
AC	AC-15	B300	3600VA	360VA	5A
	AC-15	C600	1800VA	180VA	2.5A
DC	DC-13	Q300	69VA	69VA	2.5A

NOTE: For AC voltage below 72V AC the maximum allowed switching current is 5A = Ith. For DC voltages below 28V DC the maximum allowed switching current is 2.5A = Ith. Suitable for switching DRY Circuits and Low Energy Circuits (Less than 24V-40mA).

30MM HAZARDOUS DUTY PILOT DEVICES

CONTACT BLOCKS (CONTINUED)

HERMETICALLY SEALED MEDIUM-LOGIC REED CONTACT BLOCK - Class I Div. 2 Gr. A, B, C & D / Zone 2 Gr. IIC

	Utilization Category			Inductive	Resistive	Ith-Thermal Current
	IEC	UL				
AC	AC-12	250V Max.	40VA	100 Watt	3A	

NOTE: Suitable for switching DRY Circuits and Low Energy Circuits (Less than 24V-40mA).

HERMETICALLY SEALED MID-POWER REED CONTACT BLOCK - Class I Div. 2 Gr. A, B, C & D / Zone 2 Gr. IIC

	Utilization Category			Make Rating	Break Rating	Ith-Thermal Current
	IEC	UL				
AC	AC-15	C300	1800VA	180VA	2.5A	
DC	DC-13	Q150	69VA	69VA	2.5A	

NOTE: For AC voltage below 72V AC the maximum allowed switching current is 2.5A = Ith. For DC voltages below 28V DC the maximum allowed switching current is 2.5A = Ith. Suitable for switching DRY Circuits and Low Energy Circuits (Less than 24V-40mA).

HERMETICALLY SEALED LOGIC REED CONTACT BLOCK - Class I Div. 2 Gr. A, B, C & D / Zone 2 Gr. IIC

	Utilization Category			Inductive	Resistive	Ith-Thermal Current
	IEC	UL				
AC		250V Max.	N/A	40 Watt	2A	

NOTE: Suitable for switching DRY Circuits and Low Energy Circuits (Less than 24V-40mA).

	UNITS	
ENVIRONMENTAL RATINGS		
Operators		Rated and Certified for us in Type 1, 2, 3, 3R, 4/4X, 12 & 13 and IP65
Operating Temperature	°F / °C	-40 to +131 / -40 to +55
Storage Temperature	°F / °C	-40 to +185 / -40 to +85

NOTE: Operating environments below freezing temperatures are assumed to be absent of freezing liquids or pollutants

TERMINAL & WIRING CONSIDERATION		
AWG Conductor		22-12 CU (Copper only - Solid & Stranded) [.5 - 4mm ²] One or two wires permitted per termination
Recommended Torque	Lb-in. [Nm]	7 - 10 [.8]

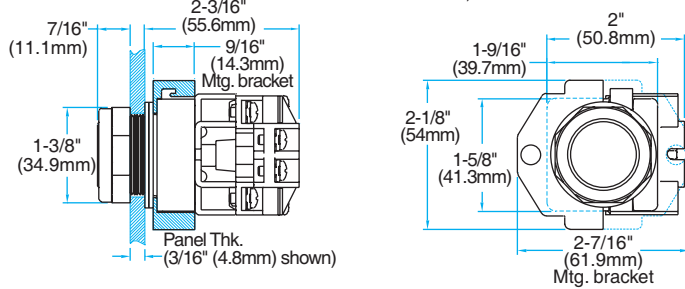
CONSTRUCTION		
OPERATING FORCES		
PUSH BUTTONS (OPERATORS ONLY)		
Momentary	lbs. [N]	1.3 [5.8]
Illuminated Momentary	lbs. [N]	2.8 [12.4]
Maintained	lbs. [N]	4 - 6 [17.9 - 26.7]
Illuminated Maintained	lbs. [N]	4.6 [20.5]
RESET PUSH BUTTON	lbs. [N]	1.5 [6.7]
SELECTOR SWITCHES		
Maintained	in-lbs. [Nm]	1.7 [.19]
Momentary	in-lbs. [Nm]	1.7 [.19]
PUSH-TWIST RELEASE	lbs. [N]	4.7 [20.9]
STANDARD CONTACT BLOCKS	lbs. [N]	1 [4.45]
INDICATING LIGHTS		Refer to the appropriate Lamp Data
MULTI-VOLTAGE LIGHTS	VAC/VDC	20-277 (Burden .816W Max.)
TRANSFORMER	VA	2
MECHANICAL ENDURANCE		
PUSH BUTTONS		
Maintained	Ops.	5,000,000
Momentary	Ops.	250,000
SELECTOR SWITCHES	Ops.	500,000
ALL OTHER DEVICES	Ops.	250,000
STANDARD CONTACT BLOCKS	Ops.	10,000,000
INDICATING LIGHTS	Ops.	Refer to the appropriate Lamp Data

30MM HAZARDOUS DUTY PILOT DEVICES		
	UNITS	
MATERIALS		
Operator Housings		Thermoplastic Polyester and Polyester Blends (UV Stabilized for outdoor use)
Operator Caps and Handles - Non-Illuminated (Glass Reinforced Grades)		Thermoplastic Polyester and Polyester Blends (UV Stabilized for outdoor use)
Mounting Rings and Nuts		Thermoplastic Polyester and Polyester Blends (UV Stabilized for outdoor use)
Thrust Washer		Thermoplastic Polyester and Polyester Blends (UV Stabilized for outdoor use)
Trim Washer		Thermoplastic Polyester and Polyester Blends (UV Stabilized for outdoor use)
Pilot Light Lens		High Impact Polycarbonate (UV Stabilized for outdoor use)
Transparent Push Button and Mushroom Caps		High Impact Polycarbonate (UV Stabilized for outdoor use)
Certain CAM and Bearing Parts		Custom Polymers: Teflon, Silicon and Moly-Disulfide impregnated for improved wearability
Rubber Boots		Custom Polymers: Fluorosilicone and Thermoplastic Neoprene
Seals		Neoprene Gaskets
		Thermoplastic - Molded Neoprene and Alloy Derivatives
		BUNA N - Rubber - Teflon Coated
		Thermoplastic - Elastomer Molded Seals
		Fluorosilicone - Boots
Push Pull Bearings		Stainless Steel
Internal Tubes for Maintained Devices		Stainless Steel
Detents for Maintained Devices		Stainless Steel
Springs & Screws		Stainless Steel
Optional Mounting Nut		Aluminum
ROHS COMPLIANCE		For RoHS compliance documentation by product, refer to www.c3controls.com

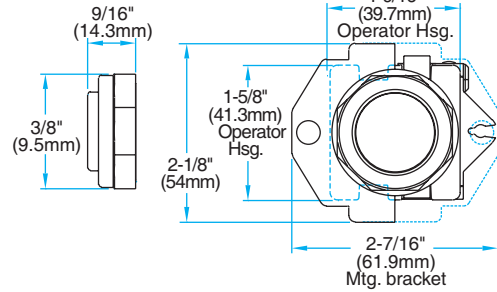
MOMENTARY NON-ILLUMINATED H-LINE PUSH BUTTONS

Fully-assembled operators come standard with one 3/16" (4.8mm) and three 1/16" (1.6mm) gaskets.
See mounting gasket specifications chart #3 on page 259.

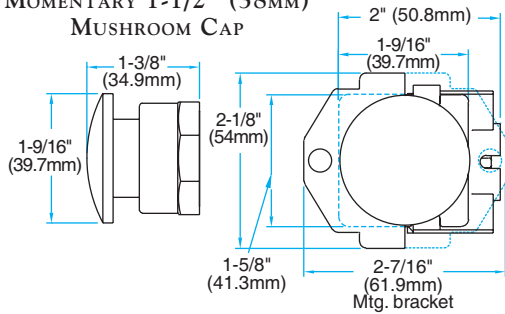
NON-ILLUMINATED OPERATOR
(SHOWN WITH FLUSH CAP & FACTORY SEALED CONTACT BLOCK)



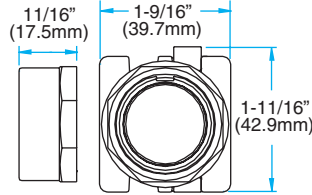
MOMENTARY EXTENDED CAP



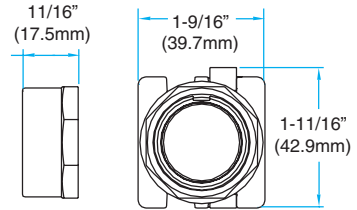
MOMENTARY 1-1/2" (38MM) MUSHROOM CAP



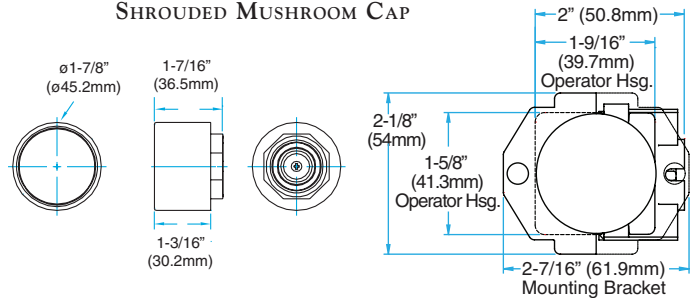
MOMENTARY GUARDED FLUSH CAP



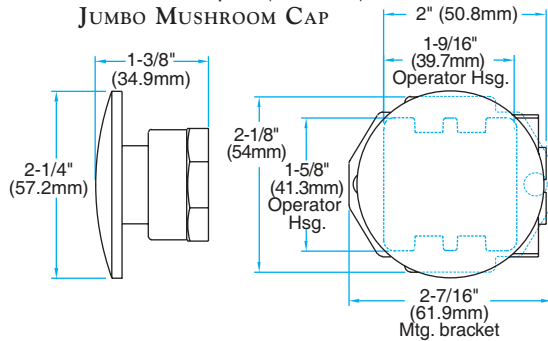
MOMENTARY GUARDED EXTENDED CAP



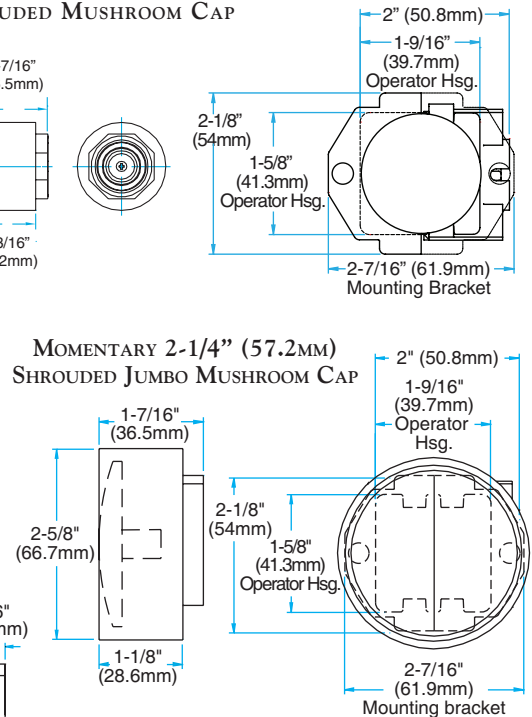
MOMENTARY 1-1/2" (38MM) SHROUDED MUSHROOM CAP



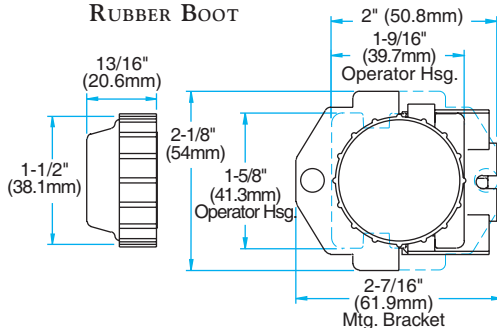
MOMENTARY 2-1/4" (57.2MM) JUMBO MUSHROOM CAP



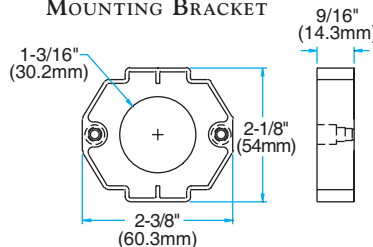
MOMENTARY 2-1/4" (57.2MM) SHROUDED JUMBO MUSHROOM CAP



MOMENTARY FLUROSILICONE RUBBER BOOT



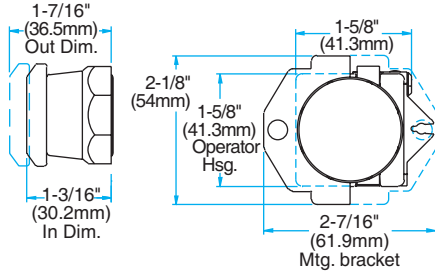
NON-ILLUMINATED PUSH BUTTON MOUNTING BRACKET



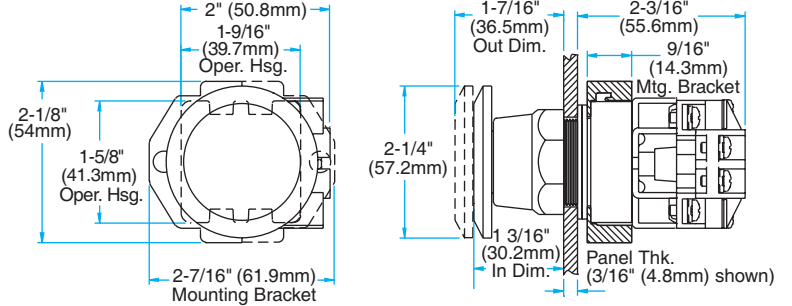
MAINTAINED NON-ILLUMINATED H-LINE PUSH BUTTONS

Fully-assembled operators come standard with one 3/16" (4.8mm) and three 1/16" (1.6mm) gaskets.
See mounting gasket specifications chart #3 on page 259.

**2-POSITION PUSH-PULL MAINTAINED
1-1/2" (38MM) MUSHROOM CAP**



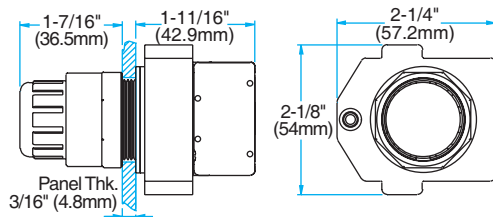
**2-POSITION PUSH-PULL MAINTAINED OPERATOR
(SHOWN WITH 2-1/4" (57.2MM) JUMBO MUSHROOM CAP)**



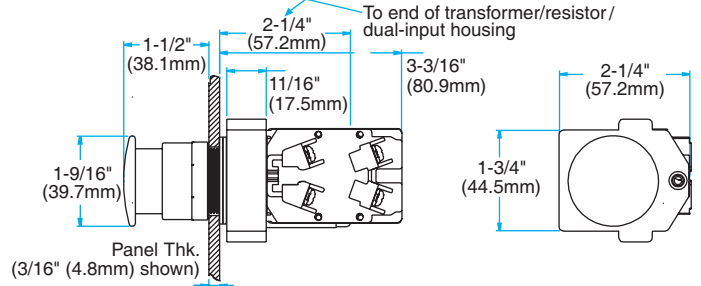
MOMENTARY ILLUMINATED H-LINE PUSH BUTTONS

Fully-assembled operators come standard with one 3/16" (4.8mm) and three 1/16" (1.6mm) gaskets.
See mounting gasket specifications chart #3 on page 259.

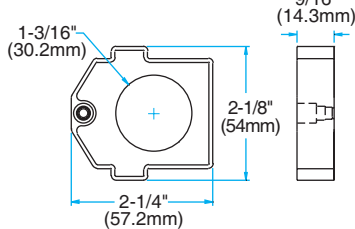
**ILLUMINATED FULL VOLTAGE OPERATOR
(SHOWN WITH HIPBC)**



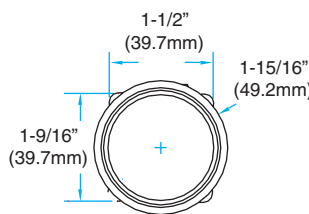
**ILLUMINATED TRANSFORMER, RESISTOR
AND DUAL INPUT OPERATORS (SHOWN WITH HIPBC)**



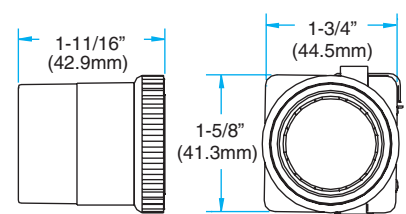
**ILLUMINATED PUSH BUTTON
MOUNTING BRACKET**



**ILLUMINATED SHROUDED
MUSHROOM LENS (SIPBC)**



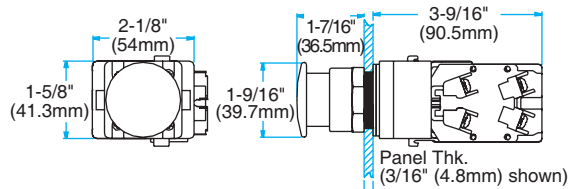
**ILLUMINATED GUARDED LENS
(GIPBC)**



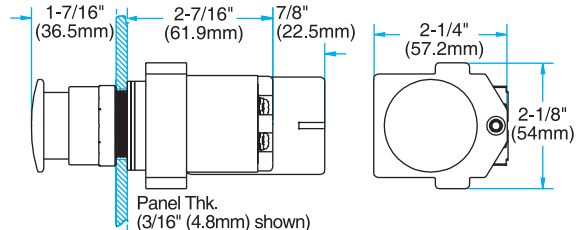
2-POSITION PUSH-PULL MAINTAINED ILLUMINATED H-LINE PUSH BUTTONS

Fully-assembled operators come standard with one 3/16" (4.8mm) and three 1/16" (1.6mm) gaskets.
See mounting gasket specifications chart #1 on page 259.

**ILLUMINATED FULL VOLTAGE
OPERATOR (SHOWN WITH IMC)**



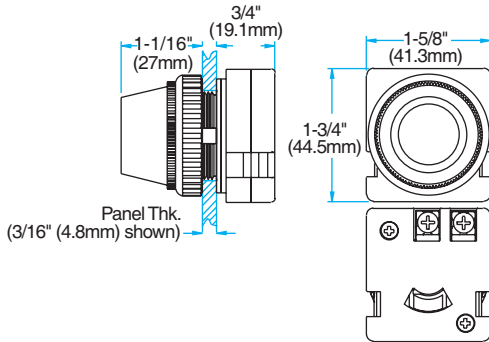
**ILLUMINATED TRANSFORMER AND RESISTOR
OPERATORS (SHOWN WITH IMC)**



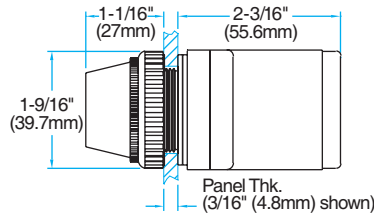
H-LINE PILOT LIGHTS

Fully-assembled operators come standard with one 3/16" (4.8mm) and two 1/16" (1.6mm) gaskets.
See mounting gasket specifications chart #2 on page 259.

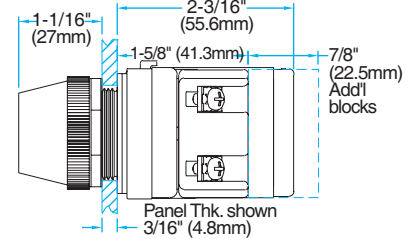
**FULL VOLTAGE PILOT LIGHT OPERATOR
(SHOWN WITH PLL)**



**TRANSFORMER & RESISTOR PILOT
LIGHT OPERATORS
(SHOWN WITH PLL)**



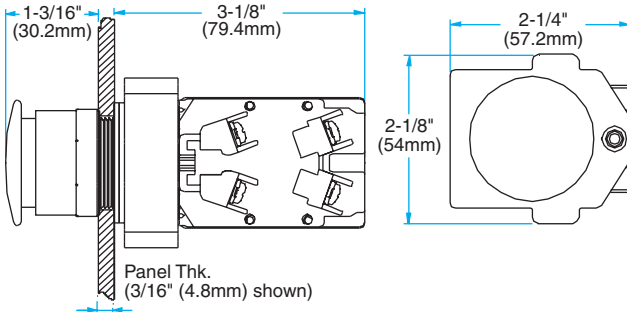
**DUAL INPUT
PILOT LIGHT OPERATOR
(SHOWN WITH PLL)**



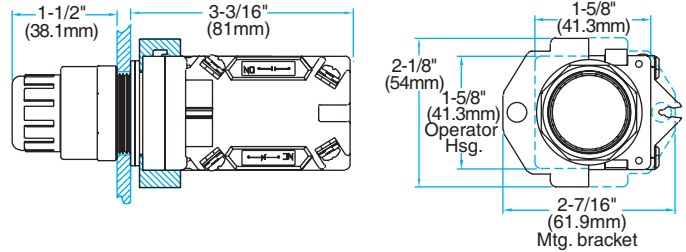
PUSH-TO-TEST H-LINE PILOT LIGHTS

Fully-assembled operators come standard with one 3/16" (4.8mm) and three 1/16" (1.6mm) gaskets.
See mounting gasket specifications chart #2 on page 259.

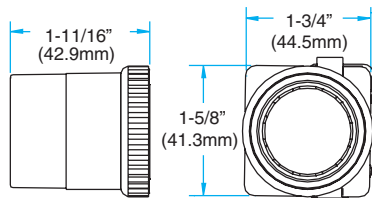
**FULL VOLTAGE PUSH-TO-TEST OPERATOR
(SHOWN WITH HIPBCM)**



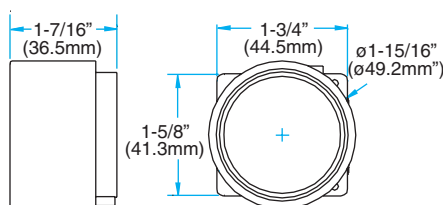
**TRANSFORMER & RESISTOR PUSH-TO-TEST
OPERATORS (SHOWN WITH HIPBC)**



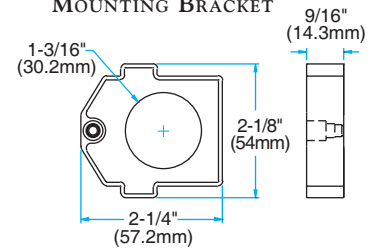
GUARDED LENS



SHROUDED MUSHROOM LENS



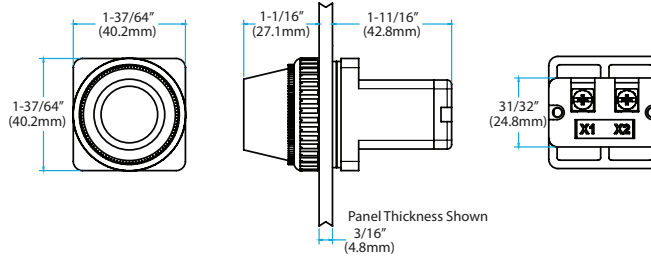
**ILLUMINATED PUSH-TO-TEST
MOUNTING BRACKET**



MULTI-VOLTAGE H-LINE PILOT LIGHT

Fully-assembled operators come standard with four 1/16" (1.6mm) gaskets.
See mounting gasket specifications chart #2 on page 259.

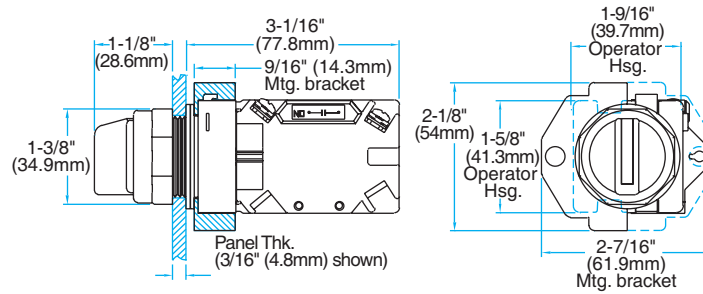
NON-RELAMPABLE & RELAMPABLE



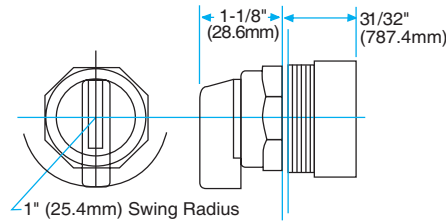
H-LINE SELECTOR SWITCHES

Fully-assembled operators come standard with one 3/16" (4.8mm) and three 1/16" (1.6mm) gaskets.
See mounting gasket specifications chart #3 on page 259.

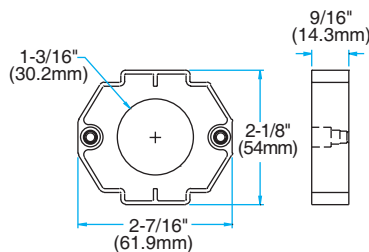
SELECTOR SWITCH OPERATOR (SHOWN WITH STANDARD HANDLE)



SELECTOR SWITCH LEVER HANDLE

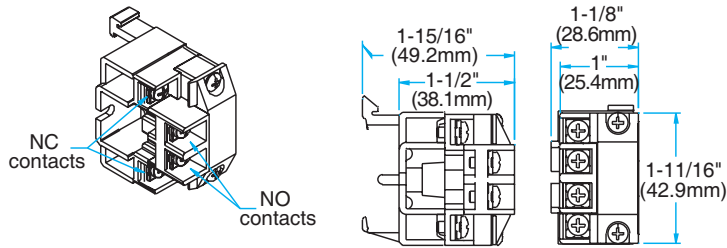


SELECTOR SWITCH MOUNTING BRACKET

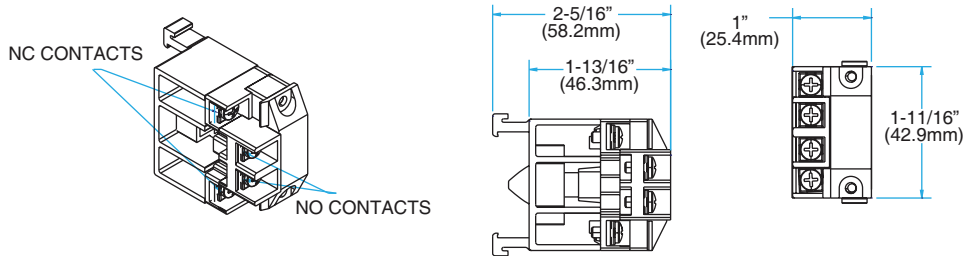


H-LINE CONTACT BLOCKS

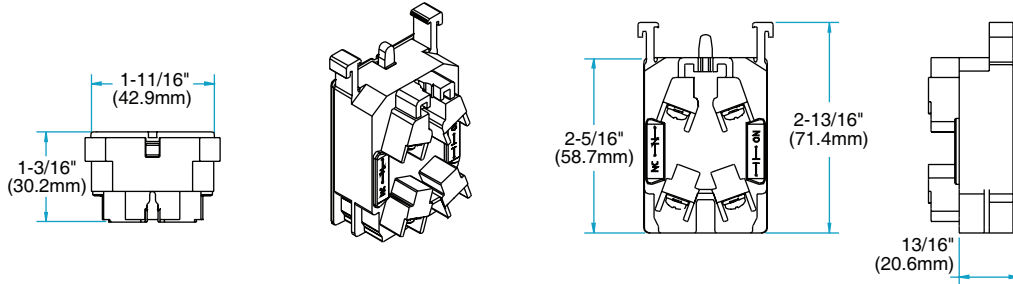
FACTORY SEALED CONTACT BLOCKS - CBFS



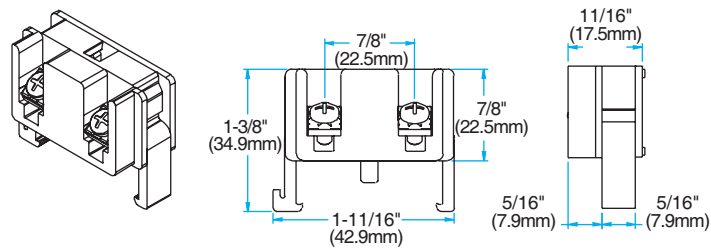
FACTORY SEALED CONTACT BLOCKS - CBFSR



POWER REED, MID-POWER REED & MEDIUM LOGIC REED CONTACT BLOCKS



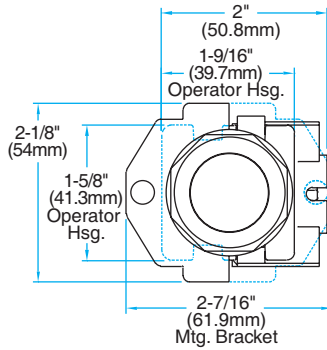
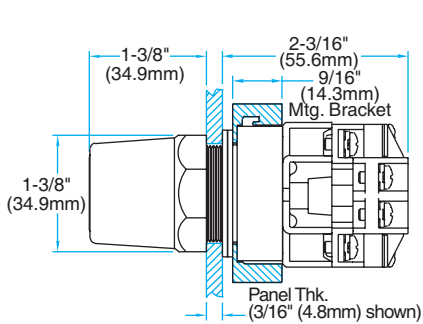
LOGIC REED CONTACT BLOCK



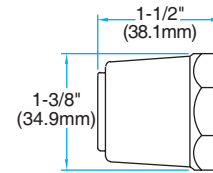
MAINTAINED FLUSH & EXTENDED H-LINE PUSH BUTTON CAPS

Fully-assembled operators come standard with one 3/16" (4.8mm) and three 1/16" (1.6mm) gaskets.
See mounting gasket specifications chart #3 on page 259.

MAINTAINED FLUSH PUSH BUTTON CAP
(SHOWN WITH AN OPERATOR AND CONTACT BLOCK)



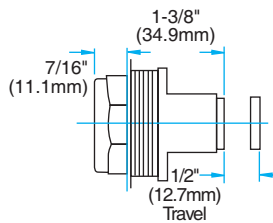
MAINTAINED EXTENDED PUSH BUTTON CAP



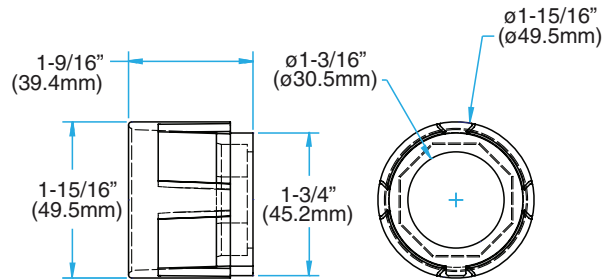
H-LINE RESET PUSH BUTTON

Fully-assembled operators come standard with one 3/16" (4.8mm) and three 1/16" (1.6mm) gaskets.
See mounting gasket specifications chart #3 on page 259.

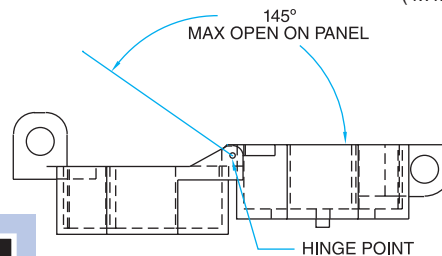
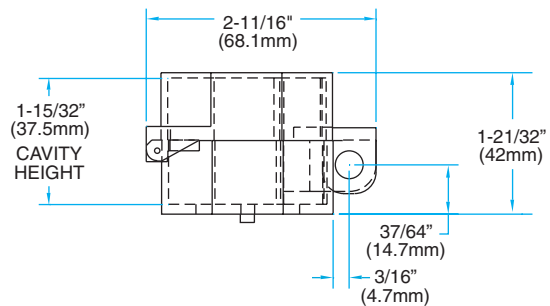
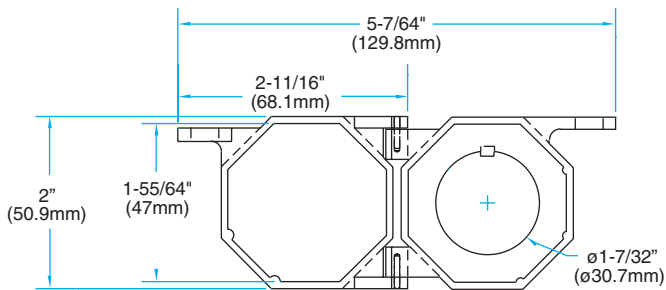
RESET PUSH BUTTON



GUARD ATTACHMENT



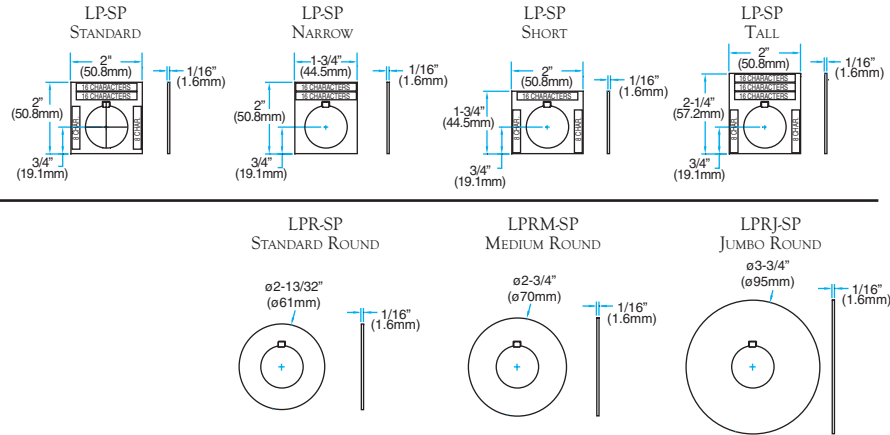
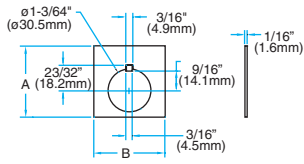
LOCK-OFF ATTACHMENT



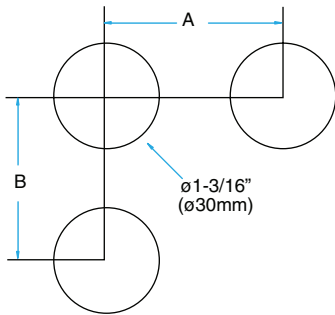
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LEGEND PLATES

STANDARD LEGEND PLATE
WITH BREAK-AWAY POSITIONING
FOR OPTIONAL THRUST WASHER ACCESSORY



MOUNTING HOLE PATTERN



MOUNTING HOLE PATTERN

SPACING	A	B
Minimum	2" (50.8mm)	2" (50.8mm)
Standard	2-1/4" (57.2mm)	2-1/4" (57.2mm)

MOUNTING GASKETS

MOUNTING GASKETS CHART #1

PANEL THICKNESS IN DECIMALS	# OF GASKETS NEEDED	
	3/16" (4.8MM) & 1/16" (1.6MM)	
less than .080	1	2
.080 – .132	1	1
.133 – .185	0	3
.186 – .238	0	2
.239 – .291	0	1

NOTE: Remove one 1/16" (1.6mm) gasket when using a legend plate.

MOUNTING GASKETS CHART #2

PANEL THICKNESS IN DECIMALS	# OF GASKETS NEEDED	
	3/16" (4.8MM) & 1/16" (1.6MM)	
less than .080	1	1
.080 – .132	0	3
.133 – .185	0	2
.186 – .238	0	1

NOTE: Remove one 1/16" (1.6mm) gasket when using a legend plate.

MOUNTING GASKETS CHART #3

PANEL THICKNESS IN DECIMALS	# OF GASKETS NEEDED	
	3/16" (4.8MM) & 1/16" (1.6MM)	
less than .080	1	4
.080 – .132	1	3
.133 – .185	1	2
.186 – .238	1	1
.239 – .291	0	3
.292 – .344	0	2

NOTE: Remove one 1/16" (1.6mm) gasket when using a legend plate.