


Features

- Octagonal Mounting Nuts
- Meets Type 1, 3, 3R, 4, 4X, 12, 13 and Automotive Standards
- Heavy Duty Rated NEMA A600/P600 Contacts
-  Positively Driven Contacts
- Positive Indexing Selectors
- Bifurcated Movable Contacts
- Attractive Chrome Plating
- Boots Not Required for Type 4
- UL Listed File # E22655
- CSA Certified File # LR6535
- Touchsafe Terminals

Application

Oil tight pilot controls and accessories are designed to provide long, trouble free service in the most demanding industrial applications. These controls are oil and dust tight and meet Type 3, 4, 4X, 12 and 13 specifications.

Rugged

Industrial control operators are durable one piece castings. Heavy duty plastic buttons resist oils and corrosion. Silver contacts carry heavy duty ratings.

Flexible

Accessories modify standard push buttons, selector switches and pilot lights. Building block construction of contact blocks makes possible many circuitry combinations.

Industrial Appearance

Pilot controls add luster to panels. Chrome plating covers exposed metal parts.

Push Button Operators


The Operator Base consists of a durable, one piece casting equipped with a heavy duty actuator with a stainless steel spring, a neoprene actuator sealing ring to prevent oil and dust from penetrating to the contact blocks, a neoprene gasket to seal operator mounting hole and a chrome plated lock nut.

Mushroom Head Push Button Operators

The Mushroom Head base construction is identical to the push button base. The actuator is molded of high impact material for either a 1 5/8 inch or 2 1/2 inch diameter molded head.

E-STOP Mushroom Head Operators according to EN 60947-5-5 Cat. No. 52BP, 52BR, 52PP, and 52PR, 2 Position, Twist-To-Release & 2 Position, Push Pull Maintained operators provided with red operating heads and 52BJK contact blocks meet the requirements of EN 60947-5-5 for Electrical Emergency Stop Device With Mechanical Latching Function (e-stop).

Contact Blocks

Contact Blocks have double break bifurcated silver contacts, with gold flashing as standard, which improves contact reliability. Contact blocks are heavy duty rated NEMA A600 and suitable for applications down to 5V/1mA solid state outputs. 52BJK offers  Positive Opening Contacts according to IEC 60947-5-1, Appendix K. Molded bodies and pushers resist arcing and tracking. All units have stainless steel springs that resist corrosion and provide strong contact pressure. Captive mounting screws speed panel assembly.

Push Pull Operators

Push Pull Operators combine two or three functions in one unit. The maintained operator has two positions, typically pull to start, push to stop. The momentary operator with three positions provides spring return from both pull and push positions. In addition, a three position push maintained, pull momentary operator is available. The actuator come is 1 3/4 inch or 2 1/2 inch diameter and is available in an illuminated version.

2 Button Maintained Operator

Maintained Push Buttons consist of two push buttons and a latching assembly. When actuated the button remains depressed and is freed only by the release operator to which it is linked. The button assembly adjusts for mounting from a 1 13/16 inch to a 2 5/8 inch center.

Transformer Type Pilot Lights

Transformer Type Pilot Lights are available with a 120, 240, 480 or 600 Volt primary (50/60 Hertz) and a separate secondary winding which supplies reduced voltage to a miniature bayonet base 6 Volt lamp. These units are suitable for applications where vibration is present and long bulb life is desirable.

Full Voltage Type Pilot Lights

Full Voltage Pilot Lights are available for 6, 12, 24 and 120 Volt AC and DC applications.

Electrical Ratings

NEMA AC Ratings 50/60Hz
NEMA A600 10 Continuous Amps

Volts	Make	Break
120	60	6
240	30	3
480	15	1.5
600	12	1.2
VA	7200	720

Ordering Information

- Accessories: pages 10/158 – 10/161.
- Selector Position and Contact Operation: page 10/156.
- Legend Plates: page 10/168.
- Enclosures: page 10/167.
- Technical Specifications: page 10/169A.

Resistor Type Pilot Lights

Resistor Type Pilot Lights are available for 240 Volt AC and DC applications. The 240 Volt pilot light is supplied with a 120 Volt lamp and a voltage dropping resistor.

LED Type Pilot Lights

LED's (light emitting diodes) can be used in pilot lights instead of incandescent bulbs because of their long life (up to 10 years), resistance to vibration and ambient sensitivity. Clustered LED options are available for standard pilot lights only. Cluster LED options are not available on Push to test Pilot Lights, Illuminated Pushbuttons, Push-pull, or Twist-to-Release Operators.

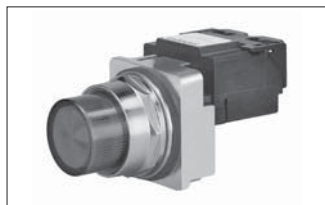
Integrated LED Module Type Pilot Lights

The integrated LED module is available for 24, 120, and 240 V. LED modules are vibration resistant and have a long life (up to 10 years). The integrated LED module is available for 24, 120, and 240 V. LED modules are vibration resistant and have a long life (up to 10 yrs.).

Selector Operators

Selector Operators have positive action indexing. Operators are available with either a short or long lever. The molded black lever is designed to accept a color insert. A white insert is provided as standard. Each operator is equipped with a cam to actuate plungers of contact blocks assembled behind the operator. Two, three and four position operators are available with seven different cams.

Lever color inserts are available in 8 colors.



Pilot Light



Push Button



Selector Operator



Selector Push Operation

Pushbutton Units and Indicator Lights

30 mm Pilot Devices

• Revised •
03/20/2012

Technical Specifications

Standards	UL Listed File # E22655	CSA Certified File # LR6535
Utilization	Category NEMA	A600/P600
Degree of Protection	52B, 52P-, 52S-, 52M- Operators	NEMA: 1, 3, 3R, 4, 4X, 12 and 13 IEC 529; IP10, IP11, IP14, IP52, IP54, and IP56

Rated Operational Current

NEMA A600 – 10 Continuous Amps			NEMA P600 – Rating Codes for DC Control Circuit Application	
Voltage AC	Make Amps	Break Amps	Thermal Continuous Test Current Amps	
120V	60	6	125V	5.0
240V	30	3	250V	1.10
480V	15	1.5	301-600V	0.55
600V	12	1.2	Maximum Make or Break	0.20
Total VA	7200	720	Volt amperes at 300V or Less	138

Contact Blocks	52BAK, -BAJ [Ⓞ] , -BAH, -BAU, -BJK [Ⓞ] 52BAR	600VAC Maximum, Heavy Duty 200VAC .25 Amp, 10 Watt Maximum 200VDC .50 Amp, 10 Watt Maximum
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Ⓞ [Ⓞ] Positively driven contacts. Contact blocks are suitable for applications down to 5V/1mA low voltage applications as found in PLCs. 52BAR are Class 1; Division 2 Compliant

Pilot Light	Full Voltage	52PL4/52PL5	-B (6-8V), -C (12V), -D (24V), -E (120V)	120V AC Max.
	LED Module	or	-L (24V), -M (120V) -N (240V)	240V AC Max.
	Transformer Type	52BL4/52BL5	-G (120V), -H (240V), -J (480V), -K (600V)	600V AC Max., 50/60 Hz
Push-to-Test	Full Voltage	52PT6	-B (6-8V), -C (12V), -D (24V), -E (120V)	120V AC Max.
	LED Module	or	-L (24V), -M (120V), -N (240V)	240V AC Max.
	Transformer Type	52BT6	-G (120V), -H (240V), -J (480V), -K (600V)	600VAC Max., 50/60 Hz
Illuminated Push-Pull	Full Voltage	52PP2(3,7)	-B (6-8V), -C (12V), -D (24V), -E (120V)	120V AC Max.
	LED Module	or	-L (24V), -M (120V), -N (240V)	240V AC Max.
	Transformer	52BP2(3,7)	-G (120V), -H (240V), -J (480V), -K (600V)	600VAC Max., 50/60 Hz
Illuminated Selector Switch	Full Voltage	52SA7(A,B,C)	-B (6-8V), -C (12V), -D (24V), -E (120V)	120V AC Max.
	Transformer	or	-G (120V), -H (240V), -J (480V), -K (600V)	600V AC Max., 50/60 Hz
		52SX7(A,B,C)		

Dielectric Strength 2200V for one minute

Mechanical Design Life Cycles

Vibration	Frequency 5 - 60Hz.; Disp. .030 inches, sweep 5 minutes for a duration of 30 minutes on each axis. Not to exceed 5.5 G's for maximum of 1 minute.	
Pushbuttons	Momentary, Non-illuminated	5,000,000 Operating Cycles
	Momentary, Illuminated	300,000 Operating Cycles
Push-Pull	Maintained	300,000 Operating Cycles
	Momentary	2,000,000 Operating Cycles
Twist-to-Release		300,000 Operating Cycles
Selector Switches	Non-illuminated	2,000,000 Operating Cycles
	Illuminated, Key-operated	2,000,000 Operating Cycles
Contact Operation	Standard Contact Black Logic Reed	
Wire Gauge	#18-12 AWG	
Terminal Screw Torque	2-10 lb-in / 20 lb-in max; 8 lb-in recommended	
Locknut Torque	15 ft. lbs. max	
Temperature Range	Operating	31F to +158F (-35C to +70C)
	Storage	40F to +185F (-40C to +85C)

All parts are designed and manufactured of corrosion resistant material or are plated or painted as corrosion protection. All contact block contacts are gold flashed as a standard offering. Internal return spring mechanisms of operators and contact blocks of stainless steel. RoHS Compliant.

Declaration of Conformity — The products listed below, to which this declaration relates, are in conformity with the following standards, following the provisions of the Low Voltage Directive (LVD) (73/23/EEC), and the Electromagnetic Compatibility Directive (89/336/EEC.)

Products: Contact Blocks: Cat Nos. 52BAE, 52BAH, 52BAJ, 52BAK, 52BAR, 52BAU and 52BJK, with suffixes. Pilot Lights: Cat Nos 52P, with suffixes. Operators: Cat Nos 52S or 52P, with suffixes.

Applicable Standards: EN 60947-5-1 Low-Voltage Switchgear and controlgear. Enclosed devices meet the requirements of environmental ratings of IP10, IP11, IP14, IP52, IP54, and IP56. Open devices, when mounted as instructed, in environmental type IP10, IP11, IP14, IP52, IP54 or IP56 enclosures, maintain the environmental requirements for those enclosure types. Cat. No. 52BP, 52BR, 52PP, and 52PR, 2 Position, Twist-To-Release and 2 Position, Push Pull Maintained operators provided with red operating heads and 52BJK contact blocks meet the requirements of EN 60947-5-5 for Electrical Emergency Stop Device With Mechanical Latching Function (e-stop).