

E30 Series

Product Description

The E30 industrial pushbutton and indicating light line from Eaton's electrical business features a wide selection of square, multifunction operators which conveniently mount in a standard 30.5 mm [1-13/64 inches] diameter panel hole. Up to six input and indicating functions can be grouped into a single operating head, saving valuable panel space. Attractive square operator styling, coupled with custom legending of colored buttons and lenses and many special function accessories, makes E30 components ideally suited for use on control consoles and for a variety of industrial OEM applications.

Features

Type E30 control units consist of a basic operator with one or more buttons and lenses and contact block selection dependent on the specific operator configuration.

- **Pushbutton operators** will accommodate up to four single depth stackable contact blocks behind each operating button, up to eight circuits maximum.

- **Indicating lights** are supplied complete with either a transformer light unit up to 600V AC supply line voltage or full voltage light unit up to 120V AC/DC supply line voltage.
- **Combination pushbutton with indicating light** operators are supplied complete with a transformer or full voltage unit. Contact blocks must be ordered separately, up to four circuits maximum.

Die Cast Construction

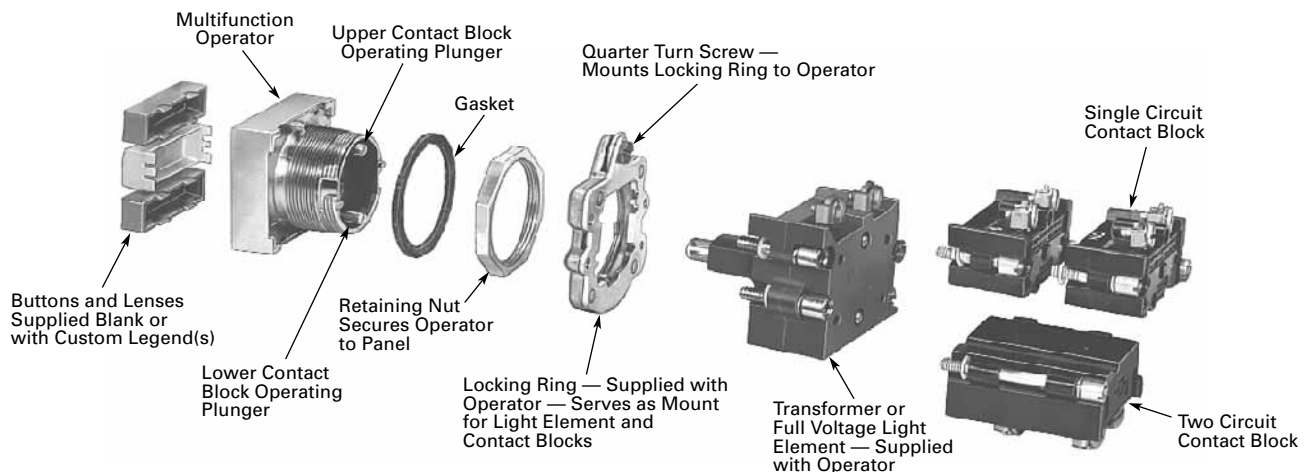
Each operator has high pressure type seals to prevent the passage of oil and other contaminants through the operator into the contact structure or panel interior. Each operator uses a Buna N cork gasket between the mounting flange on the operator and the panel to maintain oiltightness.

Standards and Certifications

- UL Listed — File No. E131568
- CSA Certified — File No. LR68551

Ingress Protection

- Single and Dual Indicating Lights
 - UL (NEMA) Type 1, 2, 3, 3R, 3S, 4, 4X, 12, 13
- All Other Operators
 - UL (NEMA) Type 3, 3R, 4, 4X, 12, 13



E30 Series

Technical Data and Specifications

Climate Conditions

- Operating: -20° to 150°F (-29° to 65°C)

Terminals

Light Units

- Terminals are saddle clamp type for 2 stranded or solid wires up to 12 AWG (4.0 mm²)
- Torque — 7 lb-in (0.8 Nm)

Contact Block

- Terminals are saddle clamp type for 2 stranded or solid wires up to 12 AWG (4.0 mm²)
- Torque — 7 lb-in (0.8 Nm)

Material

- Operator is a zinc base die casting with a copper-nickel-chrome plated finish. Withstands the 200 hr. salt spray test in accordance with MIL Spec. QQ-M-151A and NEMA 4X testing. All internal parts, including shafts, washers and springs, are made of stainless steel. The buttons and lenses are made of colorfast, wear resistant, molded acetal resin. The contact blocks are made of molded, heat resistant, mineral filled phenolic. The contact block plungers are molded of nylon filled phenolic. The contacts are silver.

Electrical Ratings

Table 47-138. Contact Block

Meet or Exceed NEMA Contact Rating Designation A600 and P300							
Description	A600 (AC)				P300 (DC)		
	120V	240V	480V	600V	24/28V	125V	250V
Make and Emergency Interrupting Capacity (Amps)	60	30	15	12	5.73	1.1	0.55
Normal Load Break (Amps)	6	3	1.5	1.2	5.73	1.1	0.55
Continuous Amperes	10				5		

- UL A600/P300 nominal connect 10A
- 1NO, 1NC, 2NO, 2NC, 1NO-1NC, early make, late break and overlapping configurations
- Mechanical positive drive operation on NC contacts
- Palladium alloy contact for logic level or highly corrosive environments

Reliability Nibs

These nibs combine a scrubbing action with high pressure density when the contacts are closed. They push through particles and films found on contact surfaces in industrial environments. The reliability nibs self-adjust to the application — dry circuit, normal or heavy-duty.

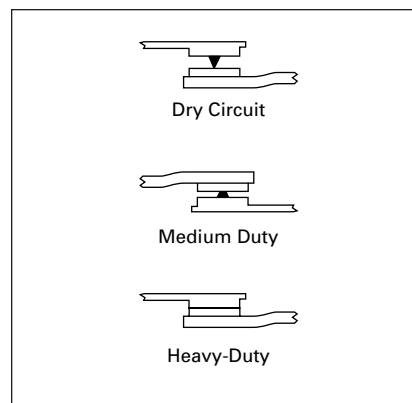


Figure 47-82. Reliability Nibs

Maximum Ratings for Logic Level and Hostile Atmosphere Applications

- Maximum amperes: 0.5A
- Maximum volts: 120V AC/DC


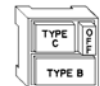

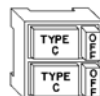
Light Unit

- Bulbs — average life:
 - Transformer type: 20,000 hrs.
 - Resistor/direct voltage type: 2,500 hrs. min. @ rated voltage
 - LED: 60,000 to 100,000 hrs.

E30 Series, Operators & Indicating Lights


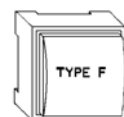
Square Multifunction Operators and Indicating Lights

Table 47-142. Two Button Operator with (OFF) Release — Includes OFF Bar/Button(s) — Order Other Buttons Separately — UL (NEMA) Type 3, 3R, 4, 4X, 12, 13

	Operation		Special Features	Catalog Number	Price U.S. \$	Button Type
	Top Button	Bottom Button				
 <p>Two Button Operator shown with Release Bar for Top Button</p>	Maintained	Momentary	Release Bar for Top Button	E30AL		Button Types Required ^①  Order from Table on Page 47-105
	Maintained	Maintained	Individual Release Bars for Each Button	E30AN		
 <p>Two Button Operator shown with Individual Release Bars for Each Button</p>	Maintained with Interlock	Maintained with Interlock	Individual Release Bars for Each Button	E30AM		Button Types Required ^①  Order from Table on Page 47-105


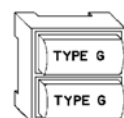
^① Operators are supplied as standard with red extended release bar(s) marked "OFF" as shown in sketch. For other colors or markings, contact your nearest Eaton Distributor or call our Customer Service Center 1-800-356-1243. For replacement of standard red release bar, order E30KR101.

Table 47-143. Single Indicating Light Unit/without Lens — Order Lenses Separately — UL (NEMA) Type 3, 3R, 3S, 4, 4X, 12, 13

	Type of Light Element								Lens Type
	Transformer (60/50 Hertz AC)				Full Voltage (60/50 Hertz AC or DC)				
	Voltage	Lamp Number ^②	Catalog Number	Price U.S. \$	Voltage	Lamp Number ^②	Catalog Number	Price U.S. \$	
 <p>Single Indicating Light Unit shown with Lens</p>	120	6PSB	E30BA		24 120	24PSB 120PSB	E30BJ E30BM		Lens Type Required  Order from Table on Page 47-106

^② Light units will also accept LED lamps. For LED Part Numbers, see Table 47-149 on Page 47-104.

Table 47-144. Dual Indicating Light Unit/without Lenses — Order Lenses Separately — UL (NEMA) Type 3, 3R, 3S, 4, 4X, 12, 13

	Type of Light Element								Lens Type
	Transformer (60/50 Hertz AC)				Full Voltage (60/50 Hertz AC or DC)				
	Voltage	Lamp Number ^③	Catalog Number	Price U.S. \$	Voltage	Lamp Number ^③	Catalog Number	Price U.S. \$	
 <p>Dual Indicating Light Unit shown with Lens</p>	120	6PSB	E30CA		24 120	24PSB 120PSB	E30CJ E30CM		Lens Type Required  Order from Table on Page 47-107

^③ Light units will also accept LED lamps. For LED Part Numbers, see Table 47-149 on Page 47-104.

E30 Series, Dimensions

Dimensions

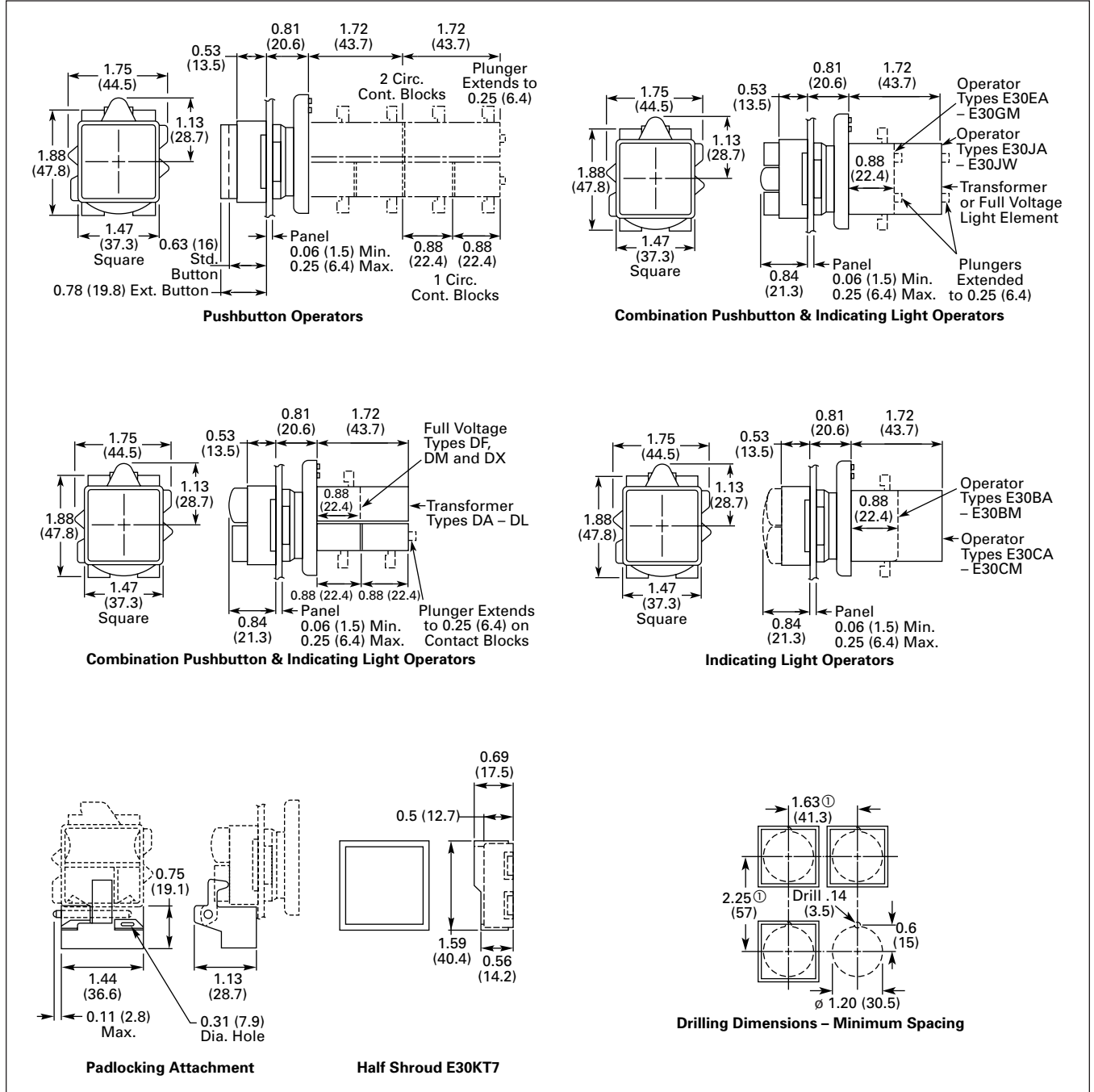


Figure 47-89. Approximate Dimensions in Inches (mm)

Drilling Dimensions — Minimum Spacing
 Dimensions shown allow adequate space for the addition of one or two high legend plates and color coordinating collars.

Note: Locating nib hole or notch is 0.136" (3.5 mm) drill. Alternate to drilling mounting holes use Greenlee Tool Co. punch (No. 730-S) to punch the hole and (No. 730-K) to punch the notch.