

## 30.5 mm Square Multifunction Watertight/Oiltight—E30



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## Product Description

The E30 industrial pushbutton and indicating light line from Eaton's Electrical Sector features a wide selection of square, multifunction operators which conveniently mount in a standard 30.5 mm (1-13/64 in) 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 600 Vac supply line voltage or full voltage light unit up to 120 Vac/Vdc 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

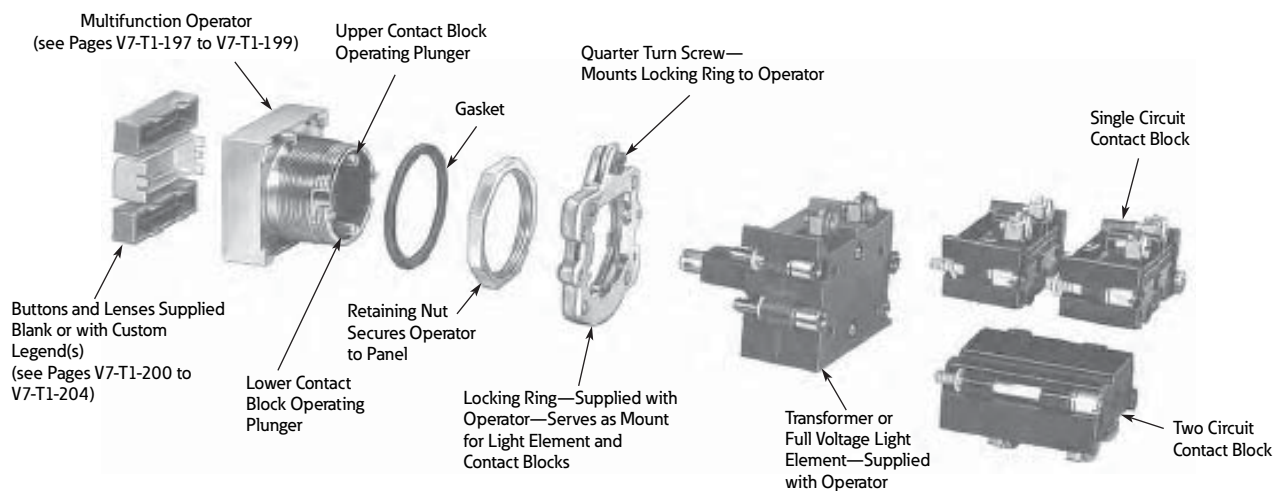
- UL Listed—File No. E131568
- CSA Certified—File No. LR68551



## 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

## 1

**Product Identification****30.5 mm Square Multifunction Watertight/Oiltight**

## Product Selection

### Operators

#### When Ordering a Complete E30 Control Unit Specify

Catalog Number of ...	Ordering Example (E30AB)	
Operator	E30KB130	"START"
Button(s)	E30KB231	"STOP"
Contact block(s)	E30KLA1	1NO
Accessories (if required)	E30KLA2	1NC

#### Square Multifunction Operators

UL (NEMA) Type 3, 3R, 4, 4X, 12, 13

##### Single Button Operator



Shown with  
Extended Button

##### Single Button Operator/without Button (Order Button Separately)

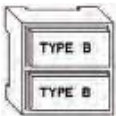
Button Type Required <sup>①</sup>	Operation	Special Features	Catalog Number
	Momentary	—	<b>E30AA</b>

##### Two Button Operator



Shown with  
Extended Buttons

##### Two Button Operator/without Buttons (Order Buttons Separately)

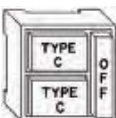
Button Types Required <sup>①</sup>	Operation		Special Features	Catalog Number
Top Button	Bottom Button			
	Momentary	Momentary	—	<b>E30AB</b>
	Momentary	Momentary	With mechanical interlock	<b>E30AC</b>
	Maintained (all contacts)	Release (all contacts)	—	<b>E30AD</b> <sup>②</sup>
	Maintained (all contacts)	Release (all contacts)	With mechanical interlock	<b>E30AP</b> <sup>②③</sup>

##### Two Button Operator



Shown with Long  
Release Bar

##### Two Button Operator with Long (OFF) Release Bar—Includes OFF Bar/Button (Order Other Buttons Separately)

Button Types Required <sup>④⑤</sup>	Operation		Special Features	Catalog Number
Top Button	Bottom Button			
	Maintained	Maintained	—	<b>E30AF</b>
	Maintained	Maintained	With mechanical interlock	<b>E30AG</b>
	Maintained	Momentary	With mechanical interlock	<b>E30AH</b>
	Maintained (all contacts)	Maintained (bottom contacts only)	Top button operates both top and bottom contacts	<b>E30AK</b> <sup>⑥</sup>

#### Notes

- ① Order from table on **Page V7-T1-200**.
- ② Limited to two single circuit, one double circuit 600V or two 120V (E30KLA9) contact blocks behind each button.
- ③ Buttons are interlocked so that one of the two is maintained at all times.  
Depressing the other button releases the maintained button and maintains the depressed button.
- ④ Operators are supplied as standard with red extended 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 **E30KR100**.
- ⑤ Order from table on **Page V7-T1-201**.
- ⑥ Limited to two single circuit, one double circuit 600V or two 120V (E30KLA9) contact blocks behind each button.

## Contact Blocks

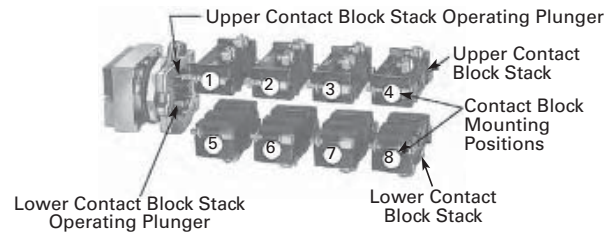
**Standard Contact Blocks**—Molded, phenolic construction. Enclosed silver contacts with reliability “nibs” that improve the reliability of switching performance under dry circuit, corrosive atmosphere and fine dust conditions. For more extreme conditions, the logic level contact blocks described below are recommended.

**Logic Level Contact Blocks**—Feature palladium contacts. Palladium, which is more inert than gold, is well suited for voltages and currents approaching zero. When mounted in an enclosure rated for highly corrosive environments, logic level contact blocks can be used where exposure to chemicals may cause failure to other types of materials.

### Mounting Limitations

See the contact block mounting limitations for Type E30 pushbutton and combination pushbutton and light operators on this page. Mounting positions 1 thru 8 indicate single depth contact blocks. Each of these positions can represent either a single circuit 600 volt block or a two-circuit 120 volt block. The two-circuit 600 volt block requires two of the numbered positions shown.

### Mounting Positions



Catalog Number of Operator	Contact Blocks Can Be Mounted in Positions Listed Below	
	Upper Stack	Lower Stack
<b>E30AA thru E30AM</b> ①	1-2-3-4	5-6-7-8
<b>E30BA thru E30CM</b>	None	None
<b>E30DA thru E30DM</b>	None	5-6-7-8
<b>E30EA thru E30GM</b>	2-3-4	6-7-8
<b>E30JA thru E30JM</b>	3-4	7-8

### Contact Block Type ②

### Contact Block Selection

#### Single Circuit, Screw Terminals



#### Two Circuit, Screw Terminals





#### Two Circuit, Quick Connect Terminals



#### 120 Vac Only—Two Circuit



		Pressure Terminals	Quick Connect Terminals ③	
Circuit		Standard Catalog Number	Logic Level Catalog Number	Standard Catalog Number
	1NO	600 Vac, 250 Vdc—Single Circuit		
		E30KLA1	E30KLAE1	E30KLB1
	1NC	E30KLA2	E30KLAE2	E30KLB2
	1NO-1NC	600 Vac, 250 Vdc—Two Circuit		
		E30KLA3	E30KLAE3	E30KLB3
	2NO	E30KLA4	E30KLAE4	E30KLB4
	2NC	E30KLA5	E30KLAE5	E30KLB5
Special Contact Operation				
	1NO-1NC Overlapping	E30KLA6 ④	—	E30KLB6 ④
	2NO (One early closing)	E30KLA7 ④	—	E30KLB7 ④
	2NC (One late opening)	E30KLA8	—	E30KLB8
	1NO-1NC	120 Vac Only—Two Circuit		
		E30KLA9 ⑤	—	E30KLB9 ⑤

#### Notes

- ① Except operator E30AD, AJ or AK which will accommodate contact blocks 1, 2, 5 and 6 only. (See Mounting Positions above.)
- ② Individually boxed contact blocks master packed 10 per carton.
- ③ Supplied with non-stacking screws. Limited to 2 contact blocks mounted in positions 1 and 5.
- ④ Do not use with maintained operators.
- ⑤ Contacts must be same polarity.