Instructional Leaflet **P26841**

Effective August 2014
Supersedes July 2014

10250T/E34 Pushbuttons and Indicating Lights Class I Division 2 Application and Installation Instructions

Ratings

Hazardous Location Class I Division 2 pushbuttons and indicating lights include both the 10250T and E34 corrosion-resistant product lines. The 10250T1H (CBFS) factory-sealed contact blocks have one NO and one NC contact.

UL LISTED
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FOR HAZARDOUS
LOCATIONS.
A162

For use on a flat surface of Type 1, 2, 3, 3S*, 3R, 4, 4X, 12 and 13 enclosures.
* Applies to indicating lights only.
UL Listed and CSA Certified for Class I Division 2 Groups B, C, D, and Class I Zone 2, Group IIB + H2.

Contact Ratings A600, Q300

Ingress Protection IP65

Temperature Codes per NEC Table 500-5(d) for indicating lights and illuminated operators having a maximum temperature over 100°C:

10250T	E34	Temp. code
201H	RB120H	T3C
471H	SB120H	T3C
80H	-	T3C
All selector switches with lamp 120MB		T3C
202H	RB240H	T3A
472H	SB240H	T3B
81H	-	T3B
All illuminated devices with lamp 1835		T4A

⚠ WARNING

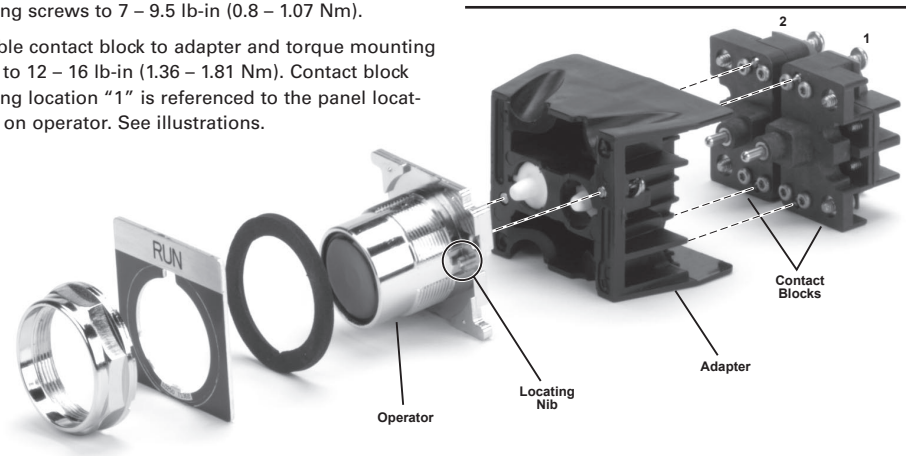
A LENS MUST BE ATTACHED TO ALL ILLUMINATED DEVICES

⚠ WARNING

TOUT DISPOSITIF LUMINEUX DOIT COMPORTER UNE LENTILLE

Operator And Adapter Assembly

1. Assemble adapter to operator or light unit and torque mounting screws to 7 – 9.5 lb-in (0.8 – 1.07 Nm).
2. Assemble contact block to adapter and torque mounting screws to 12 – 16 lb-in (1.36 – 1.81 Nm). Contact block mounting location "1" is referenced to the panel locating nib on operator. See illustrations.



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Mounting

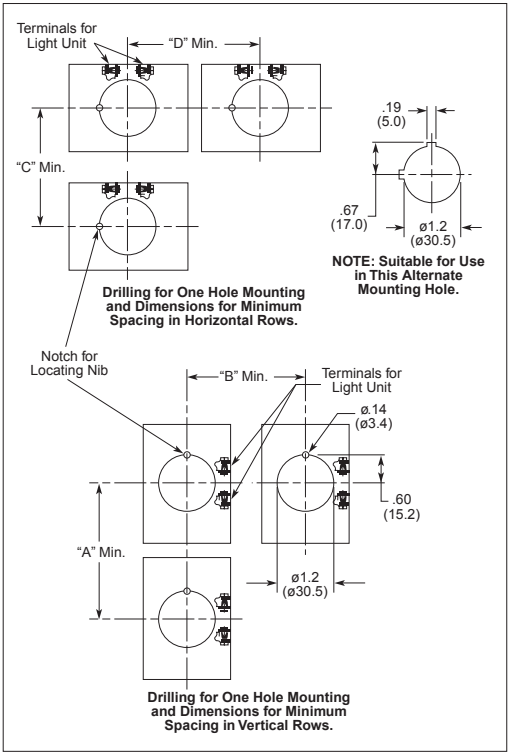
1. Drill mounting hole for vertical or horizontal mounting per the matrix below and diagram to the right.
2. Ensure sealing gasket is in place on the operator. Align locating nib on operator with notch in panel and insert through mounting hole. If notched hole is not desired, remove locating nib by placing a flat head screwdriver between nib and operator and prying outward. Note: When using protective boots, see special instruction publication 20437 for placement of sealing gasket.
3. Place legend plate and mounting nut over operator. Tighten mounting nut securely (5 lb-ft / 6.8 Nm).
4. If applicable, assemble lenses, mushroom buttons, etc. to operator. Tighten selector switch set screw to 8 – 12 lb-in (0.9 – 1.35 Nm). Note: Ensure lens is securely tightened to provide oiltight and watertight seal.

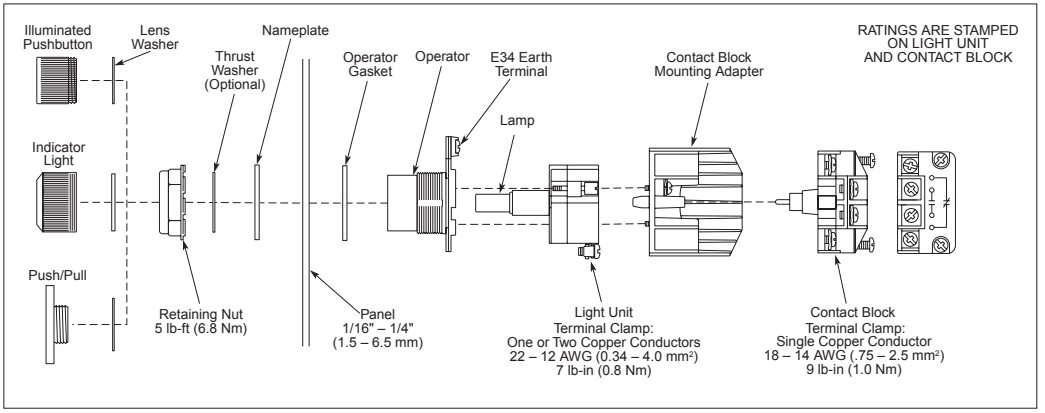
For ease of assembly, the following tools are recommended: 10250TA95 or E22CW for tighening octagonal nuts. 10250TA74 — lamp removal tool for transformertype light units. E30KV1 — lamp removal tool for full voltage light units.

Mounting Matrix

Legend Plate	Dimensions in Inches (mm)			
	A	B	C	D
Small	72.6 (2.87)	57.2 (2.25)	57.2 (2.25)	72.6 (2.87)
Jumbo	72.6 (2.87)	58.6 (2.32)	58.6 (2.32)	72.6 (2.87)
Extra Large	72.6 (2.87)	65.2 (2.56)	64.1 (2.52)	72.6 (2.87)

Panel Spacing And Drilling Drawings





Selector Switch Selection And Assembly — Refer To Contact Block Selection Charts

1. Select intended schematic circuit function. Note in your "cam" column the type of contact (NO or NC), the "1" and "2" circuit locations, and any series or parallel jumper connections that may be required.
2. Choose contact blocks that have the required schematic circuits and assemble in any convenient sequence that fulfills the "1" and "2" circuit location requirements.
3. If applicable, assemble the operator cap. Recommended, set screw tightening torque for selector switches is 8 – 12 lb-in (0.9 – 1.35 Nm).
4. The two sections of the operating cam work independently. It is important that the contact blocks be oriented with their plungers in the correct "1" and "2" circuit locations. The drawing to the right identifies these positions with respect to the locating nib on operator or marked top.
5. Assembled operators are factory set for Vertical Mounting. For Horizontal Mounting, loosen the set screw and assemble with the locating nib on the left.

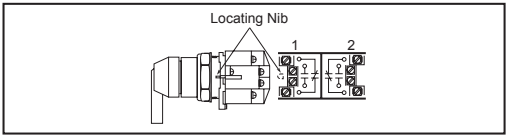
Note: Circuits shown illustrate connections to obtain a selector circuit combination and are shown with their appropriate line diagrams in BOLD. Field wiring of jumper connections are required as shown.

X = Closed Circuit O = Open Circuit

3-Position Selector Switch

No.	Desired Circuit and Operator Position			Cam Code #2		Cam Code #3	
				Contact Blocks and Mounting Location		Contact Blocks and Mounting Location	
				1	2	1	2
1	X	O	O	NO (Series) NC		NO	
2	X	X	O		NC		NC
3	X	O	X	NO		NO (Parallel) NO	
4	O	O	X		NO		NO
5	O	X	X	NC (Parallel) NO		NC	
6	O	X	O	NC		NC (Series) NC	

Mounting Location Of Contact Blocks With Respect To Operator Locating Nib.



2-Position Selector Switch

Number	Desired Circuit and Operator Position		Cam Code #1	
			Contact Blocks and Mounting Location	
			1	2
1	X	O	NC or	NC
2	O	X	NO or	NO

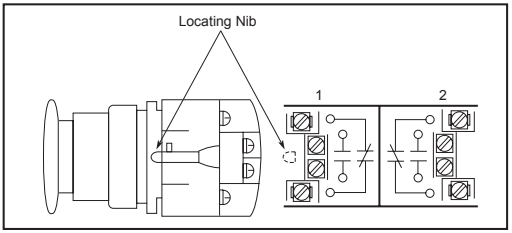
4-Position Selector Switch

No.	Desired Circuit and Operator Position				Cam Code #7	
					Contact Blocks and Mounting Location	
					1	2
1	X	O	O	O	NC	
2	O	X	O	O		NO
3	O	O	X	O	NO	
4	O	O	O	X		NC
5	X	O	O	X	NC (Parallel) NC	
6	O	X	X	O	NO (Parallel) NO	
7	O	O	X	X	NO (Parallel) NC	
8	X	X	O	O	NC (Parallel) NO	
9	O	X	O	X		NO/NC (Parallel)
10	X	O	X	O	NO/NC (Parallel)	

10250T/E34 Pushbuttons And Indicating Lights

Push-Pull Operators — Contact Block Selection And Assembly

The illustration to the right assists in the selection of contact blocks. Symbols 1 and 2 show locations of contact circuits after assembly of contact blocks and adapter to the operator. The chart below shows the effects of the push and pull operations on either NO or NC contacts.



X = Contact Closed O = Contact Open

Type of Operator	Catalog Number	Contact Block	Operator Position and Circuit Arrangement					
			Out — Pull		Intermediate		In — Push	
			Contact Block Mounting Location					
			1	2	1	2	1	2
2-Position Operator without Lens								
Maintained Push-Pull	10250T5/E34GDB	1NO 1NC	O X	or or	O X	No Intermediate Position	X O	or or	X O
		2NO 2NC	O X		O X		X O		X O
3-Position Operator without Lens								
Momentary Push-Pull	10250T4/E34GEB	1NO 1NC	O X	or or	O X	O O	or or	X O	or or	O O
Maintained Push-Momentary Pull	10250T9/E34GFB	2NO 2NC	O X		O X	O O	O X	X O		O O
Momentary Push-Pull	10250T10/E34GHB	1NO 1NC	O X	or or	O X	O O	or or	O O	X O	or or	X O
		2NO 2NC	O X		O X	O O	O O	X O		X O

Grounding Of 10250T And E34 Components General

With any electrical component there is the possibility of a loose wire, moisture, etc. causing a short circuit between the component and ground. If the device is adequately grounded, the condition causes the protective fuse or circuit breaker to open and remove the potential. If not, an electrical hazard may remain unnoticed.

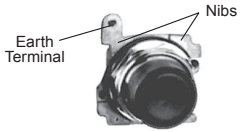
Grounding Nibs — 10250T

The 10250T operator is designed to make direct metallic contact to the rear of the panel (with no intervening spacer washers to interfere with component-to-panel ground continuity). As a further aid in establishing an electrical ground, the operator has four metal points ("grounding nibs") designed to penetrate most paints or other protective coatings.

Penetration of these nibs is dependent upon the torque applied to the mounting nut. Recommended torque is 5 ft-lbs (6.8 Nm). More or less may be necessary to penetrate the specific type and thickness of your panel coating. Test for continuity to ground after installation. If a short circuit to ground does occur, the fault should be corrected and the device replaced.

Earth Ground Terminals — E34

These devices are supplied with an integral earth/ground terminal. A 6-32 terminal screw will accommodate ring type terminations for bonding to international specifications.



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Publication No. P26841 / 004
August 2014

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