30.5 mm Heavy-Duty Watertight/Oiltight—10250T

Contents

Drawings Online

Product Description

The 30.5 mm pushbutton line features a zinc die cast construction with chrome-plated housing and mounting nut. The same durable construction is also available with the corrosive resistant E34 line of pushbuttons. See E34 section on **Pages V7-T1-284** to **V7-T1-325**.

Features

- Heavy-duty zinc die cast construction
- Enclosed silver contacts with reliability nibs
- Diaphragm seals with drainage holes
- Grounding nibs on the operator casing

Benefits

- Reliability nibs improve contact reliability even under dry circuit and fine dust conditions
- Drainage holes prevent buildup of liquid inside the operator which can prevent operation in freezing environments
- Grounding nibs bit through paint and other coatings to provide secure ground

Application Description

Contact Operation

Slow make and break. All normally closed contacts have positive opening operation, i.e., normally closed contacts are forced open in the event of contact weld or spring breakage.

Standards and Certifications

- CE EN 60947-5-1 and 60947-5-5
- UL 508—File No. 131568
- CSA C22.2 No. 14—File No. LR68551

Ingress Protection

When mounted in similarly rated enclosure—

- Standard indicating lights
  - UL (NEMA) Type 1, 2, 3, 3R, 3S, 4, 4X, 12, 13
  - IEC IP65
- Most other operators
  - UL (NEMA) Type 1, 2, 3, 3R, 4, 4X, 12, 13
  - IEC IP65

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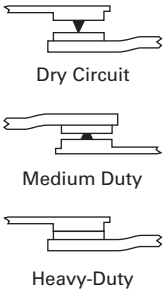
Product Overview

Reliability Nibs

Eaton's contact blocks feature enclosed silver contacts with pointed "reliability nibs" for reliable performance from logic level up to 600V. To ensure reliable switching, nibs bite through oxide which can form on silver contacts, eliminating the need for expensive logic level blocks for most applications.

Reliability Nibs

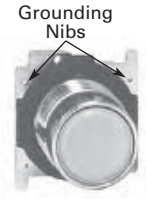


Reliability nibs improve performance in dry circuit, corrosive, fine dust and other contaminated atmospheres. Under normal environmental conditions, the minimum operational voltage is 5V and the minimum operational current is 1 mA, AC/DC. For operation under a wider range of environmental conditions, logic level contact blocks with inert palladium tipped contacts are recommended.

Grounding Nibs

10250T line operators have "grounding nibs"—four metal points on the operator casting designed to bite through most paints and other coatings on metal panels to enhance the ground connection when the operator is securely tightened.

Grounding Nibs

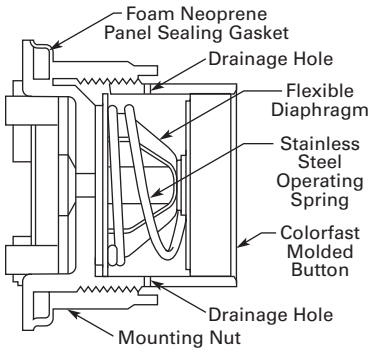


Diaphragm Seal with Drainage Holes

Liquid Drainage

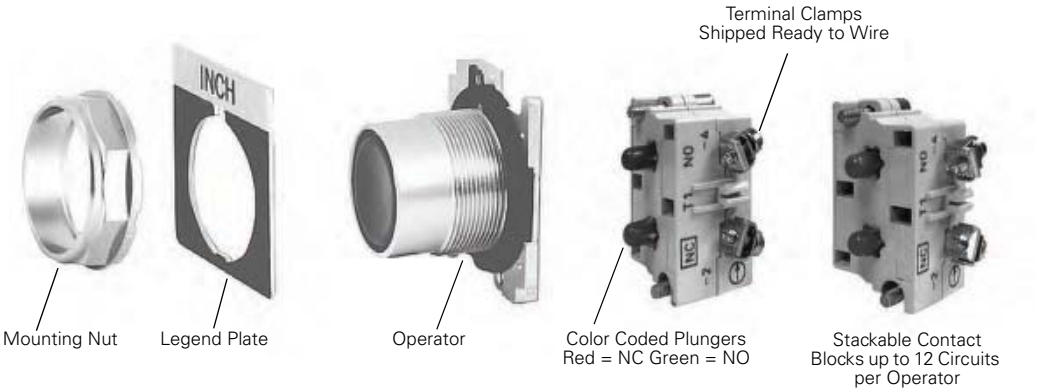
Eaton's pushbutton operators offer front of panel drainage via holes in the operator bushing. Hidden from view by the mounting nut, these holes prevent buildup of liquid inside the operator, which can prevent operation in freezing environments. The holes also provide a route for escaping liquid in high pressure washdowns, effectively relieving pressure from the internal diaphragm seal, ensuring reliable sealing in applications even beyond NEMA 4.

Diaphragm Seal



Product Identification

30.5 mm Heavy-Duty Watertight/Oiltight—10250T Series



Push-Pull Operators

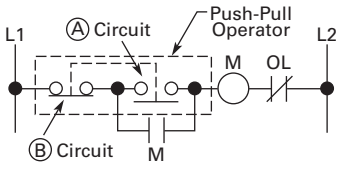
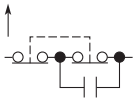
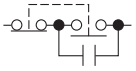
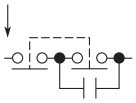
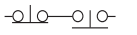
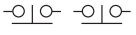
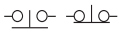
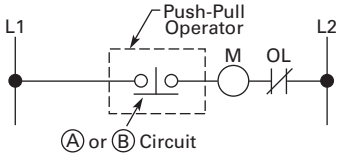
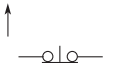
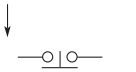
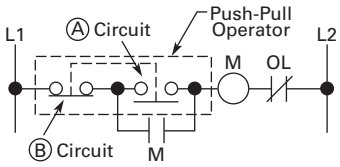
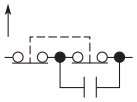
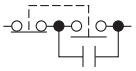
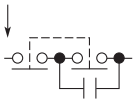
An illuminated push-pull pushbutton unit, arranged for one-hole mounting, can replace two pushbuttons and a pilot light or the non-illuminated form can replace two pushbuttons. These units are available in three basic types:

- **Maintained**—(Two-position). Maintains in the pulled or pushed position until manually actuated to the opposite mode.
- **Momentary**—(Three-position). Spring returns to an intermediate position when pulled or pushed and released.
- **Momentary Pull, Maintained Push**—(Three-position). Spring returns to intermediate position when pulled. Maintains in pushed position until manually returned to intermediate (ready to reset) position. Maintained stop holds circuit open and will prevent other series connected operators from starting the system.

The operators, buttons, contact blocks, etc., are offered as building block components that can be intermixed to satisfy many requirements. This minimizes the need for a varied and costly inventory.

Two-Position Maintained Push-Pull ①

Typical Applications

Control	Line—Diagram	Operator	Circuits	Operator Mode		
Three-wire three-position momentary		Momentary push and pull 10250T4	2NC contact block 10250T3	START (mom.) 	Normal pos. (maint.) 	STOP (mom.) 
		Momentary push and pull 10250T10	1NO-1NC contact block 10250T1			
Two-wire two-position maintained		Maintained push and pull 10250T5	1NC contact block 10250T51	START (maint.) 	No intermediate position	STOP (maint.) 
Three-wire momentary pull maintained push		Maintained push and momentary pull 10250T9	2NC contact block 10250T3	START (mom.) 	Normal pos. (maint.) 	STOP (maint.) 

Notes

A and **B** circuits shown in the application illustrations are defined in the "Application Guide" on the following page.

① Shown without button on lens.

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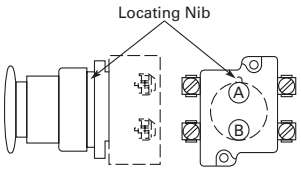
Application Guide

To assist in the selection of contact blocks, the sketch to the right shows pictorially by symbols **A** and **B** locations of contact circuits after assembly of contact blocks and adapter to the operator. The table below shows the effect of the push and pull operations on either NO or NC contacts. (X = contact closed, O = contact open).

Contact Circuit Locations



10250T579C47-71X

Push-Pull Operator Components

Type of Operator	Operator Position and Circuit Arrangement: Out—Pull Contact Block Mounting Location A		B	Intermediate A		B	In—Push A		B	Contact Block ①	Catalog Number
Two-Position Operator without Lens											
Maintained push-pull	0 X	or	0 X	No intermediate position			X 0	or	X 0	1NO 1NC	**10250T5**
	0 X		0 X				X 0		X 0	2NO 2NC	
Maintained push-pull with anti-theft jumbo mushroom	0 X	or	0 X	No intermediate position			X 0	or	X 0	1NO 1NC	**10250ED1080**
	0 X		0 X				X 0		X 0	2NO 2NC	
Three-Position Operator without Lens											
Momentary push-pull	0 X	or	0 X	0 0	or	0 X	X 0	or	0 0	1NO 1NC	**10250T4** ①
	0 X		0 X	0 0		0 X	X 0		0 0	2NO 2NC	
Maintained push-momentary pull	0 X	or	0 X	0 0	or	0 X	X 0	or	0 0	1NO 1NC	**10250T9** ①
	0 X		0 X	0 0		0 X	X 0		0 0	2NO 2NC	
Momentary push-pull	0 X	or	0 X	0 0	or	0 0	X 0	or	X 0	1NO 1NC	**10250T10** ①
	0 X		0 X	0 0		0 0	X 0		X 0	2NO 2ND	

Note

① Maximum of two blocks, four circuits. Special function contact blocks shown on **Page V7-T1-265** CANNOT be used with three-position push-pull operators 10250T4, 10250T9 or 10250T10.

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Push-Pull Operators

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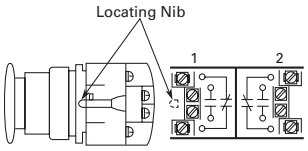
Application Guide

To assist in the selection of contact blocks, the sketch below shows pictorially by symbols **1** and **2** locations of contact circuits after assembly of contact blocks and adapter to the operator. The table below shows the effect of the push and pull operations on either NO or NC contacts. (X = contact closed, O = contact open).

Locating Nibs



10250T_

E34G_

Push-Pull Operator Components

Type of Operator	Contact Block	Operator Position and Circuit Arrangement: Out—Pull — Contact Block Mounting Location 1	2	Intermediate 1	2	In—Push 1	2	10250T Catalog Number	E34 Catalog Number
Two-Position Operator without Lens									
Maintained push-pull	1NO 1NC	0 X	or 0 X	No intermediate position		X 0	or X 0	**10250T5**	**E34GDB**
	2NO 2NC	0 X	0 X			X 0	X 0		
Three-Position Operator without Lens									
Momentary push-pull	1NO 1NC	0 X	or 0 X	0 0	or 0 X	X 0	or 0 0	**10250T4**	**E34GEB**
Maintained push-momentary pull	2NO 2NC	0 X	0 X	0 0	0 X	X 0	0 0	**10250T9**	**E34GFB**
Momentary push-pull	1NO 1NC	0 X	or 0 X	0 0	or 0 0	X 0	or X 0	**10250T10**	**E34GHB**
	2NO 2NC	0 X	0 X	0 0	0 0	X 0	X 0		

Note

Use NEMA 4X 10250T operators where exposed to ultraviolet light.