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-T1-264** to **V7-T1-298**.

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—

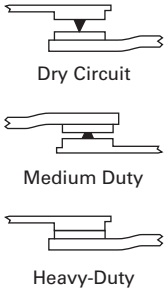
- Standard indicating lights
  - UL (NEMA) Type 1, 2, 3, 3R, 3S, 4, 4X, 12, 13
  - IEC IP65
- Most other operators
  - UL (NEMA) Type 1, 2, 3, 3R, 4, 4X, 12, 13
  - IEC IP65

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.

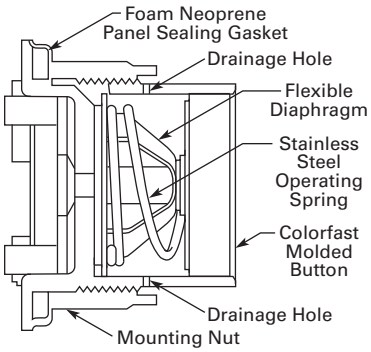
Grounding Nibs

Diaphragm Seal with Drainage Holes

Liquid Drainage

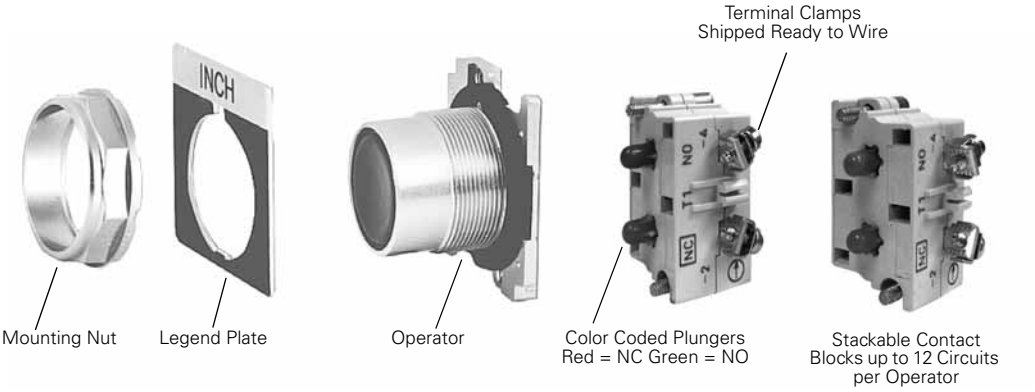
Eaton's pushbutton operators offer front of panel drainage via holes in the operator bushing. Hidden from view by the mounting nut, these holes prevent buildup of liquid inside the operator, which can prevent operation in freezing environments. The holes also provide a route for escaping liquid in high 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



1

Catalog Number Selection

Catalog Number Selection is for illustrative purposes only and not to be used to create new catalog numbers.

Non-Illuminated Pushbuttons

10250T 10 1 – 1 ①

Operator
10 = Flush
11 = Extended
12 = 40 mm mushroom
17 = 65 mm mushroom
50 = 1/2 shroud vertical mount
51 = 1/2 shroud horizontal mount

Button Color	
1 = Black	**5** = Gray
2 = Red	**6** = White
3 = Green	**8** = Blue
4 = Yellow	**9** = Orange

Circuit
Blank = Operator only
1 = 1NO-1NC
2 = 2NO
3 = 2NC
51 = 1NC
53 = 1NO

Illuminated and Non-Illuminated Push-Pulls

10250T 5 63 C47 ___ – 1 ①

Operator
5 = Two-position maintained
4 = Three-position mom push-mom pull
9 = Three-position mt push-mom pull
10 = Three-position mom push-mom pull

Incandescent Light Unit	LED Light Unit
Blank = Non-illuminated	**Blank** = Non-illuminated
89 = 24V/XFR	**89L** = 24V/XFR
63 = 120V/XFR	**63L** = 120V/XFR
64 = 208V/XFR	**64L** = 208V/XFR
65 = 240V/XFR	**65L** = 240V/XFR
82 = 277V/XFR	**82L** = 277V/XFR
66 = 380V/XFR	**66L** = 380V/XFR
67 = 480V/XFR	**67L** = 480V/XFR
68 = 600V/XFR	**68L** = 600V/XFR
69 = 6V/FV	**97L** = Full voltage
70 = 12V/FV	
79 = 24V/FV	
83 = 32V/FV	
80 = 120V/RES	
81 = 240V/RES	

LED Voltage
Blank = Non-illuminated
Blank = Incandescent
06 = 6 Vac/Vdc
12 = 12 Vac/Vdc
24 = 24 Vac/Vdc
48 = 48 Vac/Vdc
60 = 60 Vac/Vdc
2A = 120 Vac
2D = 120 Vdc

Circuit
Blank = Operator only
1 = 1NO-1NC
2 = 2NO
3 = 2NC
51 = 1NC
53 = 1NO

Non-Illuminated	Illuminated		
Button	Incandescent	LED	Lens Type
B60 = Black 40 mm	**C47** =	**RD** =	Red 40 mm
B62 = Red 40 mm	**C53** =	**ED** =	Red 40 mm—"E" STOP
B63 = Red 40 mm—"E" STOP	**C48** =	**GD** =	Green 40 mm
B61 = Green 40 mm	**C49** =	**LD** =	Blue 40 mm
B64 = Blue 40 mm	**C50** =	**AD** =	Amber 40 mm
J60 = Black 65 mm	**C51** =	**WD** =	White 40 mm
J62 = Red 65 mm	**C52** =	**—** =	Clear 40 mm
J63 = Red 65 mm—"E" STOP	**C57** =	**RS** =	Red side light
J61 = Green 65 mm	**C63** =	**ES** =	Red side light—"E" STOP
J64 = Yellow 65 mm	**C58** =	**GS** =	Green side light
	C59 =	**LS** =	Blue side light
	C64 =	**AS** =	Amber side light
	C60 =	**YS** =	Yellow side light
	C61 =	**WS** =	White side light
	C62 =	**—** =	Clear side light
	C65 =	**RH** =	Red heavy-duty
	C66 =	**GH** =	Green heavy-duty
	C67 =	**AH** =	Amber heavy-duty

Note

① Add **X** at end of catalog number to receive parts assembled from factory.

Catalog Number Selection is for illustrative purposes only and not to be used to create new catalog numbers.

Illuminated Pushbuttons

10250T 416 C21 ___ – 1 ①

Incandescent Light Unit	LED Light Unit
416 = 24V/XFR	**397L** = Full voltage
411 = 120V/XFR	**416L** = 24V/XFR
412 = 240V/XFR	**411L** = 120V/XFR
419 = 277V/XFR	**412L** = 240V/XFR
413 = 380V/XFR	**419L** = 277V/XFR
414 = 480V/XFR	**413L** = 380V/XFR
415 = 600V/XFR	**414L** = 480V/XFR
473 = 6V/FV	**415L** = 600V/XFR
474 = 12V/FV	
476 = 24V/FV	
477 = 32V/FV	
478 = 48V/FV	
471 = 120V/RES	
472 = 240V/RES	

Incandescent Lens Color	LED Lens Color
C21 = Red	**RD** = Red
C22 = Green	**GD** = Green
C23 = Yellow	**YD** = Yellow
C26 = White	**WD** = White
C24 = Blue	**LD** = Blue
C43 = Amber	**AD** = Amber
C25 = Clear	

LED Voltage
Blank = Incandescent
06 = 6 Vac/Vdc
12 = 12 Vac/Vdc
24 = 24 Vac/Vdc
48 = 48 Vac/Vdc
60 = 60 Vac/Vdc
2A = 120 Vac
2D = 120 Vdc

Circuit
Blank = Operator only
1 = 1NO-1NC
2 = 2NO
3 = 2NC
51 = 1NC
53 = 1NO

Standard Indicating Lights, PresTest and Master Test

10250T 203N C1N ___ ①

Light Unit Type	
Standard—Incandescent	**Standard—LED**
181N = 120V/XFR	**181L** = 120V/XFR
182N = 240V/XFR	**182L** = 240V/XFR
198N = 277V/XFR	**198L** = 277V/XFR
183N = 380V/XFR	**183L** = 380V/XFR
184N = 480V/XFR	**184L** = 480V/XFR
185N = 600V/XFR	**185L** = 600V/XFR
203N = 6V/FV	**197L** = Full voltage
204N = 12V/FV	**PresTest—LED**
206N = 24V/FV	**221L** = 120V/XFR
207N = 32V/FV	**222L** = 240V/XFR
208N = 48V/FV	**223L** = 380V/XFR
201N = 120V/RES	**224L** = 480V/XFR
202N = 240V/RES	**225L** = 600V/XFR
226N = 120V/neon	**297L** = Full voltage
227N = 240V/neon	
PresTest—Incandescent	
221N = 120V/XFR	
222N = 240V/XFR	
223N = 380V/XFR	
224N = 480V/XFR	
225N = 600V/XFR	
232N = 6V/FV	
233N = 12V/FV	
235N = 24V/FV	
238N = 32V/FV	
239N = 48V/FV	
231N = 120V/RES	
240N = 240V/RES	
Master Test—Incandescent	
187N = 120V/XFR	
189N = 240 Vac—SS	

Plastic	Glass	Lens Color
Standard/Master—Incandescent		
C1N =	**C7N** =	Red
C2N =	**C8N** =	Green
C3N =	— =	Yellow
C6N =	**C12N** =	White
C4N =	**C10N** =	Blue
C19N =	**C9N** =	Amber
C5N =	**C11N** =	Clear
PresTest—Incandescent		
C21 =	**C13N** =	Red
C22 =	**C14N** =	Green
C23 =	— =	Yellow
C26 =	**C18N** =	White
C24 =	**C16N** =	Blue
C43 =	**C15N** =	Amber
C25 =	**C17N** =	Clear

Plastic	Glass	Lens Color
Standard/Master/PresTest—LED		
RP =	**RG** =	Red
GP =	**GG** =	Green
YP =	— =	Yellow
WP =	**WG** =	White
LP =	**LG** =	Blue
AP =	**AG** =	Amber

LED Voltage
Blank = Incandescent
06 = 6 Vac/Vdc
12 = 12 Vac/Vdc
24 = 24 Vac/Vdc
48 = 48 Vac/Vdc
60 = 60 Vac/Vdc
2A = 120 Vac
2D = 120 Vdc

LED Voltage
Blank = Incandescent
06 = 6 Vac/Vdc
12 = 12 Vac/Vdc
24 = 24 Vac/Vdc
48 = 48 Vac/Vdc
60 = 60 Vac/Vdc
2A = 120 Vac

Note

① Add **X** at end of catalog number to receive parts assembled from factory.

1

Product Selection

Point-of-Purchase Packaging

Point-of-Purchase Packaged Pilot Device

10250T Point-of-Purchase Packaged Pilot Devices

Product	Description	Catalog Number
Emergency Stop Operators		
Red non-illuminated push-pull	1NO-1NC contact block. Also includes two square engraved legend plates: EMERG. STOP and STOP.	**10250T5B62-1-POP**
Red mushroom pushbutton	1NO-1NC contact block. Also includes two square engraved legend plates: EMERG. STOP and STOP.	**10250T32R-POP**
Red jumbo mushroom pushbutton	Engraved EMERG. STOP with 1NO-1NC contact block.	**10250T33-POP**
Momentary Pushbuttons		
Black flush pushbutton	1NO-1NC contact block. Also includes two square engraved legend plates: START and JOG.	**10250T30B-POP**
Red extended pushbutton	1NO-1NC contact block. Also includes one square engraved legend plate: STOP.	**10250T31R-POP**
Indicating Lights		
Red indicating light	Full voltage 24 Vac/Vdc with two extra lenses: Green and amber. Also includes two square engraved legend plates: RUN and JOG.	**10250T206NC1N-POP**
Red indicating light	Resistor 120 Vac/Vdc with two extra lenses: Green and Amber. Also includes one square engraved legend plate: RUN and JOG.	**10250T34R-POP**
Illuminated Pushbuttons		
Red illuminating pushbutton	Full voltage 24 Vac/Vdc with 1NO-1NC contact block and two extra lenses: Green and amber. Also includes one square engraved legend plate: POWER ON.	**10250T476C21-1-POP**
Red illuminating pushbutton	Resistor 120 Vac/Vdc with 1NO-1NC contact block and two extra lenses: Green and amber. Also includes one square engraved legend plate: POWER ON.	**10250T411C21-1-POP**
Selector Switches		
Black knob two-position selector switch	1NO-1NC contact block. Also includes three square engraved legend plates: OFF/ON, HAND/AUTO and RUN/JOG.	**10250T20KB-POP**
Black knob three-position selector switch	2NO-2NC contact blocks. Also includes 1 square engraved legend plate: HAND/OFF/AUTO.	**10250T22KB-POP**
Black knob three-position selector switch	1NO-1NC contact block. Also includes legend plate: HAND/OFF/AUTO	**10250T21KB-POP**

Non-Illuminated Momentary Pushbutton Units

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

Flush Button

Extended Button

Mushroom Button

Jumbo Mushroom

Pushbutton Units—Flush, Extended, Mushroom Head or Jumbo Mushroom Head Operators

Contact Type	Button Color	Flush Button Catalog Number	Extended Button Catalog Number	Mushroom Button Catalog Number	Jumbo Mushroom ① Catalog Number
1NO	Black	**10250T23B**	**10250T25B**	**10250T26B**	**10250T27B**
	Red	**10250T23R**	**10250T112-53**	**10250T122-53**	**10250T172-53**
	Green	**10250T23G**	**10250T25G**	**10250T26G**	**10250T27G**
	Yellow	**10250T23Y**	**10250T25Y**	**10250T26Y**	**10250T27Y**
	Red—Engraved EMERG. STOP	—	—	—	**10250T17213-53**
1NC	Black	**10250T101-51**	**10250T111-51**	**10250T121-51**	**10250T171-51**
	Red	**10250T102-51**	**10250T25R**	**10250T26R**	**10250T27R**
	Green	**10250T103-51**	**10250T113-51**	**10250T123-51**	**10250T173-51**
	Yellow	**10250T104-51**	**10250T120-51**	**10250T124-51**	**10250T174-51**
	Red—Engraved EMERG. STOP	—	—	—	**10250T29**
1NO-1NC	Black	**10250T30B**	**10250T31B**	**10250T32B**	**10250T33B**
	Red	**10250T30R**	**10250T31R**	**10250T32R**	**10250T33R**
	Green	**10250T30G**	**10250T31G**	**10250T32G**	**10250T33G**
	Yellow	**10250T30Y**	**10250T31Y**	**10250T32Y**	**10250T33Y**
	Red—Engraved EMERG. STOP	—	—	—	**10250T33**
2NO	Black	**10250T101-2**	**10250T111-2**	**10250T121-2**	**10250T171-2**
	Red	**10250T102-2**	**10250T112-2**	**10250T122-2**	**10250T172-2**
	Green	**10250T103-2**	**10250T113-2**	**10250T123-2**	**10250T173-2**
	Yellow	**10250T104-2**	**10250T120-2**	**10250T124-2**	**10250T174-2**
	Red—Engraved EMERG. STOP	—	—	—	**10250T17213-2**
2NC	Black	**10250T101-3**	**10250T111-3**	**10250T121-3**	**10250T171-3**
	Red	**10250T102-3**	**10250T112-3**	**10250T122-3**	**10250T172-3**
	Green	**10250T103-3**	**10250T113-3**	**10250T123-3**	**10250T173-3**
	Yellow	**10250T104-3**	**10250T120-3**	**10250T124-3**	**10250T174-3**
	Red—Engraved EMERG. STOP	—	—	—	**10250T17213-3**

Note

① Anodized aluminum head is not suitable for use in ultraviolet light applications.

1

Pushbuttons

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

Momentary Pushbutton Operators, Non-illuminated

	Button	Color	Catalog Number	
10250T10_ 	Flush button ①	Black	**10250T101**	
		Red	**10250T102**	
		Green	**10250T103**	
		Yellow	**10250T104**	
		Gray	**10250T105**	
		White	**10250T106**	
		Blue	**10250T108**	
		Orange	**10250T109**	
10250T11_ 	Extended button	Black	**10250T111**	
		Red	**10250T112**	
		Green	**10250T113**	
		Yellow	**10250T120**	
		White	**10250T116**	
		Blue	**10250T118**	
		Orange	**10250T119**	
10250T5_ 	Half shrouded button		**Vertical**	**Horizontal**
		Black	**10250T501**	**10250T511**
		Red	**10250T502**	**10250T512**
		Green	**10250T503**	**10250T513**
		Yellow	**10250T504**	**10250T514**
		Gray	**10250T505**	**10250T515**
		White	**10250T506**	**10250T516**
		Blue	**10250T508**	**10250T518**
		Orange	**10250T509**	**10250T519**
10250T12_ 	Mushroom button	Black	**10250T121**	
		Red	**10250T122**	
		Green	**10250T123**	
		Yellow	**10250T124**	
		Blue	**10250T129**	
10250T17_ 	Jumbo mushroom button ②	Black	**10250T171**	
		Red	**10250T172**	
		Red (EMERG. STOP)	**10250T17213**	
		Green	**10250T173**	
		Yellow	**10250T174**	
10250ED1164_ 	Low operating force—jumbo mushroom ②③	Black	**10250ED1164-2**	
		Red	**10250ED1164-3**	
		Green	**10250ED1164-4**	
		Yellow	**10250ED1164-5**	
		Clear	**10250ED1164**	

Notes

① To order operator with factory assembled extended retaining nut, **10250TA12**, for thick panel applications, add suffix letter **E** to listed catalog number. Example: 10250T101**E**.

② Anodized aluminum head is not suitable for use in ultraviolet light applications.

③ Operating force—Standard = 2.4 lb; low force = 1.6 lb.

Note: To order complete assembled unit using one composite catalog number, add contact block and legend plate suffix to the end of operator catalog number. Example: 10250T101-**1TS33**

Operator
10250T101

+

Contact Block
10250T1

+

Legend Plate
10250TS33

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

10250TA_

Mechanically Interlocked Pushbutton Operators

Description	Catalog Number
Black flush and green flush	**10250TA66**
Black flush and long red	**10250TA67**
Black flush and red mushroom head	**10250TA68**
Black flush and lock-down red mushroom head	**10250TA69** ①
Black flush and red jumbo mushroom head	**10250TA76**
Green flush and long red	**10250TA72**
Black long and long red	**10250TA73**
Green flush and red mushroom head	**10250TA77**
Green flush and black flush	**10250TA75**

Note

① NC contacts must be mounted behind lock-down mushroom head operator to ensure lockout.

1

Lockout Pushbutton Operators with Padlock Attachments

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

The following pushbutton and mushroom operators include an integral padlock attachment for applications requiring lockout/tagout of specific machine functions. They are available in styles which allow locking of a button in the down position (stopped position) or locking a button in the up position (to prevent starting). Select the **"Hand"** latch type which functions as a momentary pushbutton until the operator presses the button and moves the padlock attachment into position for locking, or choose the **"Spring Loaded"** latch type where the padlock attachment springs into place when the button is pressed. Units accept a customer supplied 1/4 in padlock.

10250TA16

Padlockable in the Down Position ①

Operator Type	Color	Latch Type	Catalog Number
Flush head	Red	Hand	**10250TA16**
Mushroom head	Red	Hand	**10250TA42**
	Red	Spring loaded	**10250TA45**
Jumbo head ②	Red	Hand	**10250TA52**
	Red	Spring loaded	**10250TA55**
	Red (EMERG. STOP)	Spring loaded	**10250ED952**

Padlockable in the Up Position ①

Operator Type	Color	Latch Type	Catalog Number
Mushroom head	Black	Hand	**10250TA41**
	Green	Hand	**10250TA43**
Jumbo mushroom head ②	Black	Hand	**10250TA51**
	Green	Hand	**10250TA53**
	Yellow	Hand	**10250TA54**

10250TA4_

10250TA5_

Notes

Hand attachment must be manually moved into place for locking. Spring loaded: when operator is pressed—attachment springs into place. Must be moved manually to release button.

① Operators can be latched down without a padlock. Padlock not included.

② Jumbo mushroom heads are not recommended for use in applications where exposure to ultraviolet light exists.

Key Pushbutton Operator

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

These devices incorporate an integral locking mechanism which enables locking units in various positions (**Locked Down**), locking units to prevent operation (**Locked Up**) or setting unit to lock when the button is pressed (**Push to Lock**), requiring the key to be inserted to return to normal operation. With the key in the center position, these operators function as a normal momentary pushbutton (**Free**).

Replacement Keys or Dissimilar Locks for Key Operators Below

Listed operators have identical locks and keys (Key Code H661) Catalog Number 10250ED824. For dissimilar lock and key combinations, see listing on **Page V7-T1-222.**

Replacement Keys

Description	Catalog Number
Replacement keys (code H661)	**10250ED824**

10250T43_

Key Pushbutton Operator

Key Position and Pushbutton Operations 			Key Removal Positions	Vertical Mounting ① Catalog Number
Three-Position				
Lock up	Free	Lock down	All	**10250T430**
Lock up	Free	Lock down	L and R	**10250T431**
Lock up	Free	Lock down	C and R	**10250T432**
Two-Position				
Lock up	Free	—	L and C	**10250T433**
Lock up	Free	—	L	**10250T434**
—	Free	Lock down	C and R	**10250T435**
—	Free	Lock down	R	**10250T436**
—	Free	Push to lock	C and R	**10250T437**
—	Free	Push to lock	R	**10250T438**

Latch-In, Twist-to-Release Operator

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

10250ED1043-4

Operator Only with Button

Description	Catalog Number
Latch-in, twist-to-release operator with red mushroom head button	**10250ED1043-4**

Note

① Horizontal mounting available on request.

1

Illuminated Momentary Pushbutton Units

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

- LED or incandescent
- Full voltage, resistor or transformer type
- Plastic lenses

24V Full Voltage Illuminated Pushbutton

Illuminated Pushbutton Units

Type	Voltage	Color	LED/Lamp Number	Illuminated Pushbutton 1NO Catalog Number	1NO-1NC Catalog Number	1NC Catalog Number
LED Lamp						
Full voltage	24 Vac/Vdc	Red	Bayonet base	**10250T397LRD24-53**	**10250T397LRD24-1**	**10250T397LRD24-51**
		Green		**10250T397LGD24-53**	**10250T397LGD24-1**	**10250T397LGD24-51**
		Amber		**10250T397LAD24-53**	**10250T397LAD24-1**	**10250T397LAD24-51**
		Yellow		**10250T397LYD24-53**	**10250T397LYD24-1**	**10250T397LYD24-51**
		Blue		**10250T397LLD24-53**	**10250T397LLD24-1**	**10250T397LLD24-51**
		White		**10250T397LWD24-53**	**10250T397LWD24-1**	**10250T397LWD24-51**
	120 Vac/Vdc	Red		**10250T397LRD2A-53**	**10250T397LRD2A-1**	**10250T397LRD2A-51**
		Green		**10250T397LGD2A-53**	**10250T397LGD2A-1**	**10250T397LGD2A-51**
		Amber		**10250T397LAD2A-53**	**10250T397LAD2A-1**	**10250T397LAD2A-51**
		Yellow		**10250T397LYD2A-53**	**10250T397LYD2A-2**	**10250T397LYD2A-51**
		Blue		**10250T397LLD2A-53**	**10250T397LLD2A-1**	**10250T397LLD2A-51**
		White		**10250T397LWD2A-53**	**10250T397LWD2A-1**	**10250T397LWD2A-51**
Transformer	120 Vac	Red		**10250T411LRD06-53**	**10250T411LRD06-1**	**10250T411LRD06-51**
		Green		**10250T411LGD06-53**	**10250T411LGD06-1**	**10250T411LGD06-51**
		Amber		**10250T411LAD06-53**	**10250T411LAD06-1**	**10250T411LAD06-51**
		Yellow		**10250T411LYD06-53**	**10250T411LYD06-1**	**10250T411LYD06-51**
		Blue		**10250T411LLD06-53**	**10250T411LLD06-1**	**10250T411LLD06-51**
		White		**10250T411LWD06-53**	**10250T411LWD06-1**	**10250T411LWD06-51**
Incandescent Lamp						
Full voltage	24 Vac/Vdc	Red	#757	**10250T476C21-53**	**10250T476C21-1**	**10250T476C21-51**
		Green		**10250T476C22-53**	**10250T476C22-1**	**10250T476C22-51**
		Amber		**10250T476C43-53**	**10250T476C43-1**	**10250T476C43-51**
		Yellow		**10250T476C23-53**	**10250T476C23-1**	**10250T476C23-51**
		Blue		**10250T476C24-53**	**10250T476C24-1**	**10250T476C24-51**
		Clear		**10250T476C25-53**	**10250T476C25-1**	**10250T476C25-51**
		White		**10250T476C26-53**	**10250T476C26-1**	**10250T476C26-51**
Resistor	120 Vac/Vdc	Red	120MB	**10250T471C21-53**	**10250T471C21-1**	**10250T471C21-51**
		Green		**10250T471C22-53**	**10250T471C22-1**	**10250T471C22-51**
		Amber		**10250T471C43-53**	**10250T471C43-1**	**10250T471C43-51**
		Yellow		**10250T471C23-53**	**10250T471C23-1**	**10250T471C23-51**
		Blue		**10250T471C24-53**	**10250T471C24-1**	**10250T471C24-51**
		Clear		**10250T471C25-53**	**10250T471C25-1**	**10250T471C25-51**
		White		**10250T471C26-53**	**10250T471C26-1**	**10250T471C26-51**
Transformer	120 Vac	Red	#755	**10250T75R** ①	**10250T76R** ①	**10250T77R** ①
		Green		**10250T75G** ①	**10250T76G** ①	**10250T77G** ①
		Amber		**10250T75A** ①	**10250T76A** ①	**10250T77A** ①
		Yellow		**10250T75Y** ①	**10250T76Y** ①	**10250T77Y** ①
		Blue		**10250T75B** ①	**10250T76B** ①	**10250T77B** ①
		Clear		**10250T75C** ①	**10250T76C** ①	**10250T77C** ①
		White		**10250T75W** ①	**10250T76W** ①	**10250T77W** ①

Note

① For flashing module catalog number 10250TFL1, add suffix code **FM** to listed catalog number. Example: 10250T75R**FM**.

Indicating Light Units ①

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

- LED or incandescent
- Full voltage, resistor or transformer type
- Standard and PresTest types
- Plastic lenses

PresTest—This device incorporates a press-to-test feature whereby depressing the lens disconnects the light from the source being monitored and connects the lamp to a continuously energized circuit for immediate detection of faulty lamps.

24V Full Voltage Illuminated Light

120 Vac Transformer PresTest

Indicating Light Units

Type	Voltage	Color	LED/Lamp Number	Indicating Light Catalog Number	PresTest Catalog Number
LED Lamp					
Full voltage	24 Vac/Vdc	Red	Bayonet base	**10250T197LRP24**	**10250T297LRP24**
		Green		**10250T197LGP24**	**10250T297LGP24**
		Amber		**10250T197LAP24**	**10250T297LAP24**
		Yellow		**10250T197LYP24**	**10250T297LYP24**
		Blue		**10250T197LLP24**	**10250T297LLP24**
		White		**10250T197LWP24**	**10250T297LWP24**
	120 Vac	Red		**10250T197LRP2A**	**10250T297LRP2A**
		Green		**10250T197LGP2A**	**10250T297LGP2A**
		Amber		**10250T197LAP2A**	**10250T297LAP2A**
		Yellow		**10250T197LYP2A**	**10250T297LYP2A**
		Blue		**10250T197LLP2A**	**10250T297LLP2A**
		White		**10250T197LWP2A**	**10250T297LWP2A**
Transformer	120 Vac	Red		**10250T181LRP06**	**10250T221LRP06**
		Green		**10250T181LGP06**	**10250T221LGP06**
		Amber		**10250T181LAP06**	**10250T221LAP06**
		Yellow		**10250T181LYP06**	**10250T221LYP06**
		Blue		**10250T181LLP06**	**10250T221LLP06**
		White		**10250T181LWP06**	**10250T221LWP06**
Incandescent Lamp					
Full voltage	24 Vac/Vdc	Red	#757	**10250T206NC1N**	**10250T235NC21**
		Green		**10250T206NC2N**	**10250T235NC22**
		Amber		**10250T206NC19N**	**10250T235NC43**
		Yellow		**10250T206NC3N**	**10250T235NC23**
		Blue		**10250T206NC4N**	**10250T235NC24**
		Clear		**10250T206NC5N**	**10250T235NC25**
		White		**10250T206NC6N**	**10250T235NC26**
Resistor	120 Vac/Vdc	Red	120MB	**10250T201NC1N**	**10250T231NC21**
		Green		**10250T201NC2N**	**10250T231NC22**
		Amber		**10250T201NC19N**	**10250T231NC43**
		Yellow		**10250T201NC3N**	**10250T231NC23**
		Blue		**10250T201NC4N**	**10250T231NC24**
		Clear		**10250T201NC5N**	**10250T231NC25**
		White		**10250T201NC6N**	**10250T231NC26**
Transformer ②	120 Vac	Red	#755	**10250T34R**	**10250T74NR**
		Green		**10250T34G**	**10250T74NG**
		Amber		**10250T34A**	**10250T74NA**
		Yellow		**10250T34Y**	**10250T74NY**
		Blue		**10250T34B**	**10250T74NB**
		Clear		**10250T34C**	**10250T74NC**
		White		**10250T34W**	**10250T74NW**

Notes

① Standard indicating lights are rated UL (NEMA) 3S as well.

② For flashing lamp add letter **F** to listed catalog number. Example: 10250T34R**F**.

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Illuminated Pushbuttons and Indicating Lights

- LED or incandescent
- Full voltage, resistor or transformer type

Illuminated Pushbutton

Indicating Light

PresTest

Master Test

Operators without Lens

Type	Voltage	LED/Lamp Number	Illuminated Pushbutton Catalog Number	Indicating Light Catalog Number	PresTest Catalog Number	Master Test Catalog Number
Incandescent Unit						
Full voltage AC/DC	6	#755	**10250T473**	**10250T203N**	**10250T232N**	—
	12	#756	**10250T474**	**10250T204N**	**10250T233N**	—
	24	#757	**10250T476**	**10250T206N**	**10250T235N**	—
	32	#1828	**10250T477**	**10250T207N**	**10250T238N**	—
	48	#1835	**10250T478**	**10250T208N**	**10250T239N**	—
Resistor AC/DC ②	120	120MB	**10250T471**	**10250T201N**	**10250T231N**	—
	240	120MB	**10250T472**	**10250T202N**	**10250T240N**	—
Transformer AC only ③	24	#755	**10250T416**	—	—	—
	120		**10250T411**	**10250T181N**	**10250T221N**	—
	240		**10250T422**	**10250T182N**	**10250T222N**	—
	277		**10250T419**	**10250T198N**	—	—
	380		**10250T413**	**10250T183N**	**10250T223N**	—
	480		**10250T414**	**10250T184N**	**10250T224N**	—
	600		**10250T415**	**10250T185N**	**10250T225N**	—
Neon AC/DC ④	120	NE51H-R22	—	**10250T226N**	—	—
	240	NE51H-R68	—	**10250T227N**	—	—
Solid-state 50/60 Hz only	120	120MB	—	—	—	**10250T189N**
LED (LEDs not included) ①						
Full voltage	—	Bayonet base	**10250T397L**	**10250T197L**	**10250T297L**	—
Transformer AC only	24		**10250T416L**	—	—	—
	120		**10250T411L**	**10250T181L**	**10250T221L**	—
	240		**10250T412L**	**10250T182L**	**10250T222L**	—
	277		**10250T419L**	**10250T198L**	—	—
	380		**10250T413L**	**10250T183L**	**10250T223L**	—
	480		**10250T414L**	**10250T184L**	**10250T224L**	—
	600		**10250T415L**	**10250T185L**	**10250T225L**	—

Notes

① These units do not include lamps. Order LED separately to match lens color. See **Page V7-T1-249** for LED Selection and **Page V7-T1-195** for Catalog Numbering System.

② Resistor units are not available for use with LEDs, choose either transformer or full voltage LED style.

③ For flashing lamp, add letter **F** to listed catalog number. Example: 10250T181N**F.**

④ Resistant to shock and vibration. For best illumination use amber, yellow or clear lens.

Indicating and Master Test Lenses

Plastic

Glass

Color	Plastic Catalog Number	Glass Catalog Number
Red	**10250TC1N**	**10250TC7N**
Green	**10250TC2N**	**10250TC8N**
Amber	**10250TC19N**	**10250TC9N**
Yellow	**10250TC3N**	—
Blue	**10250TC4N**	**10250TC10N**
Clear	**10250TC5N**	**10250TC11N**
White	**10250TC6N**	**10250TC12N**

Illuminated Pushbutton Lenses

10250TC2_

Color	Catalog Number
Red	**10250TC21**
Green	**10250TC22**
Yellow	**10250TC23**
Amber	**10250TC43**
Blue	**10250TC24**
Clear	**10250TC25**
White	**10250TC26**

PresTest Lenses

Plastic

Glass

Color	Plastic Catalog Number	Glass Catalog Number
Red	**10250TC21**	**10250TC13N**
Green	**10250TC22**	**10250TC14N**
Amber	**10250TC43**	**10250TC15N**
Yellow	**10250TC23**	—
Blue	**10250TC24**	**10250TC16N**
Clear	**10250TC25**	**10250TC17N**
White	**10250TC26**	**10250TC18N**

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Push-Pull Emergency Stops (Compliant with IEC 60947-5-5)

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

- Two- and three-position
- Non-illuminated
- LONC contact block

10250T579C47-71X

Two-Position Push-Pull Units

Operator Position ①

Pull	Push	Button Type/Color	Lamp	Type	Voltage	Catalog Number
X	O	40 mm red—illuminated	Incandescent	Transformer	120 Vac/Vdc	**10250T563C47-71X**
X	O	40 mm red—illuminated EMERG. STOP	Incandescent	Transformer	120 Vac/Vdc	**10250T563C53-71X**
X	O	40 mm red—illuminated EMERG. STOP	LED	Transformer	120 Vac/Vdc	**10250T563LED06-71X**
X	O	40 mm red—illuminated	Incandescent	Full voltage	24 Vdc	**10250T579C47-71X**
X	O	40 mm red—illuminated EMERG. STOP	Incandescent	Full voltage	24 Vdc	**10250T579C53-71X**
X	O	40 mm red—illuminated	Incandescent	Resistor	120 Vac/Vdc	**10250T580C47-71X**
X	O	40 mm red—illuminated EMERG. STOP	Incandescent	Resistor	120 Vac/Vdc	**10250T580C53-71X**
X	O	40 mm red—illuminated	Incandescent	Transformer	24 Vac	**10250T589C47-71X**
X	O	40 mm red—illuminated EMERG. STOP	Incandescent	Transformer	24 Vac	**10250T589C53-71X**
X	O	40 mm red—illuminated EMERG. STOP	LED	Transformer	24 Vac	**10250T589LED06-71X**
X	O	40 mm red—illuminated	LED	Transformer	24 Vac	**10250T589LRD06-71X**
X	O	40 mm red—illuminated EMERG. STOP	LED	Full voltage	24 Vdc	**10250T597LED24-71X**
X	O	40 mm red—illuminated EMERG. STOP	LED	Full voltage	120 Vac/Vdc	**10250T597LED2A-71X**
X	O	40 mm red—illuminated	LED	Full voltage	24 Vdc	**10250T597LRD24-71X**
X	O	40 mm red—illuminated	LED	Full voltage	120 Vac/Vdc	**10250T597LRD2A-71X**
X	O	40 mm red	—	—	—	**10250T5B62-71X**
X	O	40 mm red—EMERG. STOP	—	—	—	**10250T5B63-71X**
X	O	65 mm red	—	—	—	**10250T5J62-71X**
X	O	65 mm red—EMERG. STOP	—	—	—	**10250T5J63-71X**

Note

① X = closed circuit, O = open circuit.

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

Two-Position Push-Pull Units

	Operator Position ① Pull	Push	Button Type/Color ②	Contact Type	Mounting Location A	Mounting Location B	Catalog Number ②
	Two-Position Maintained Push, Maintained Pull						
10250T5B62-1X 	0 X	X 0	40 mm/red	1NO			**10250T5B62-1X**
				1NC			
10250T5B63-1X 	0 X	X 0	40 mm engraved EMERG. STOP/red	1NO			**10250T5B63-1X**
				1NC			
10250T5J63-1X 	0 X	X 0	65 mm aluminum engraved EMERG. STOP/red	1NO			**10250T5J63-1X**
				1NC			
10250ED1080-2 	0 X	X 0	65 mm aluminum engraved EMERG. STOP/red	1NO			**10250ED1080-2**
			Special security jumbo mushroom head	1NC			

Button and Color Selection

	Color	Suffix Code	Catalog Number
Standard 	**Standard—40 mm**		
	Red	**B62**	**10250TB62**
	Red (EMERG. STOP)	**B63**	**10250TB63**
	Green	**B61**	**10250TB61**
	Black	**B60**	**10250TB60**
	Blue	**B64**	**10250TB64**
Jumbo Mushroom Head 	**Jumbo Mushroom Head ③ (Anodized) Aluminum—65 mm**		
	Red	**J62**	**10250TJ62**
	Red (EMERG. STOP)	**J63**	**10250TJ63**
	Green	**J61**	**10250TJ61**
	Black	**J60**	**10250TJ60**
	Yellow	**J64**	**10250TJ64**

Notes

① X = closed circuit, O = open circuit.

② To order different type or color buttons, substitute the underlined characters with appropriate suffix code from the table. Example: 10250T5**B64**-1X.

③ Anodized aluminum head is not suitable for use in ultraviolet light applications.

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

10250T_

Three-Position Push-Pull Units

Operator Position ①

Pull	Intermediate	Push	Button Type/Color ②	Contact Type	Mounting Location A	Mounting Location B	Catalog Number ②
Maintained Push, Momentary Pull							
X	0	0	40 mm/black	1NC			**10250T9B60-3X**
X	X	0	40 mm/red	1NC			**10250T9B62-3X**
			40 mm engraved EMERG. STOP/red				**10250T9B63-3X**
Momentary Push, Momentary Pull							
X	0	0	40 mm/black	1NC			**10250T4B60-3X**
X	X	0	40 mm/red	1NC			**10250T4B62-3X**
0	0	X	40 mm/black	1NO			**10250T10B60-1X**
X	0	0	40 mm/red	1NC			**10250T10B62-1X**

Button and Color Selection

Standard

Jumbo Mushroom Head

Color	Suffix Code	Catalog Number
Standard—40 mm		
Red	**B62**	**10250TB62**
Red (EMERG. STOP)	**B63**	**10250TB63**
Green	**B61**	**10250TB61**
Black	**B60**	**10250TB60**
Blue	**B64**	**10250TB64**
Jumbo Mushroom Head ③ (Anodized) Aluminum—65 mm		
Red	**J62**	**10250TJ62**
Red (EMERG. STOP)	**J63**	**10250TJ63**
Green	**J61**	**10250TJ61**
Black	**J60**	**10250TJ60**
Yellow	**J64**	**10250TJ64**

Notes

① X = closed circuit, 0 = open circuit.

② To order different type or color buttons, substitute the underlined characters with appropriate suffix code from the table. Example: 10250T5**B64**-1X.

③ Anodized aluminum head is not suitable for use in ultraviolet light applications.

Illuminated Push-Pull Units

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

- LED or incandescent
- Full voltage, resistor or transformer type
- Two-position maintained

Two-Position Push-Pull Operator

Two-Position Illuminated Maintained Push, Maintained Pull

Operator Position ①

Maintained—Pull	Maintained—Push	Lamp	Type	Voltage	Contact Type	Mounting Location A	Mounting Location B	LED/Lamp Number	Red Standard Push-Pull Catalog Number ②
0	X	LED	Full Voltage	24 Vac/Vdc	1NO			Bayonet base	**10250T597LRD24-1X**
X	0			120 Vac/Vdc	1NC				**10250T597LRD2A-1X**
			Transformer	24 Vac					**10250T589LRD06-1X**
				120 Vac					**10250T563LRD06-1X**
0	X	Incandescent	Full voltage	24 Vac/Vdc	1NO			#757	**10250T579C47-1X**
X	0		Resistor	120 Vac/Vdc	1NC			120MB	**10250T580C47-1X**
			Transformer	24 Vac				#755	**10250T589C47-1X**
				120 Vac					**10250T563C47-1X**

10250ED137_

Jumbo Lens Illuminated E-Stops

Lamp	Button Type/Color	Type	Voltage	Contact Type	Catalog Number
LED	Two-position illuminated maintained push/pull—50 mm jumbo lens/red	Full voltage	24 Vac/Vdc	1NO 1NC	**10250ED1375**
LED	Three-position illuminated momentary push/pull—50 mm jumbo lens/red	Full voltage	24 Vac/Vdc	1NC 1NC	**10250ED1376**
LED	Three-position illuminated momentary push/pull—50 mm jumbo lens/red	Full voltage	24 Vac/Vdc	1NO 1NC	**10250ED1377**
LED	Three-position illuminated maintained push/momentary pull—50 mm lens/red	Full voltage		1NO 1NC	**10250ED1378**

Notes

① X = closed circuit, O = open circuit.

② To order different type or color lens, substitute the underlined characters with appropriate suffix code from table on next page. Example: 10250T579**C63**-1X. For LEDs with different voltages see ordering example on **Page V7-T1-215**.

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

Lens and Color Selection

Standard

Side-Lighted Aluminum

Aluminum Transparent Center

Jumbo Lens

Color	Incandescent Suffix Code	LED Suffix Code	Catalog Number
Standard—40 mm			
Red	**C47**	**RD**	**10250TC47**
Red (EMERG. STOP)	**C53**	**ED**	**10250TC53**
Green	**C48**	**GD**	**10250TC48**
Blue	**C49**	**LD**	**10250TC49**
Amber	**C50**	**AD**	**10250TC50**
White	**C51**	**WD**	**10250TC51**
Clear	**C52**	**CD**	**10250TC52**
Side-Lighted Aluminum—40 mm ①			
Red	**C57**	**RS**	**10250TC57**
Red (EMERG. STOP)	**C63**	**ES**	**10250TC63**
Green	**C58**	**GS**	**10250TC58**
Blue	**C59**	**LS**	**10250TC59**
Amber	**C64**	**AS**	**10250TC64**
Yellow	**C60**	**YS**	**10250TC60**
White	**C61**	**WS**	**10250TC61**
Clear	**C62**	**CS**	**10250TC62**
Aluminum Transparent Center—40 mm ①			
Red	**C65**	**RH**	**10250TC65**
Green	**C66**	**GH**	**10250TC66**
Amber	**C67**	**AH**	**10250TC67**
Jumbo Lens—50 mm			
Red	—	—	**10250TC77**

Note

① Clear anodized aluminum and colored lens.

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

Three-Position Push-Pull Operator

Three-Position Illuminated Momentary Push, Momentary Pull

Operator Position ①

Momentary—Pull	Maintained—Intermediate	Momentary—Push	Lamp	Type	Voltage	Contact Type	Mounting Location A	Mounting Location B	LED/ Lamp Number	Red Standard Push-Pull Catalog Number ③
0 X	0 0	X 0	LED	Full voltage	24 Vac/Vdc	1NO			Bayonet base	**10250T1097LRD24-1X**
					120 Vac	1NC				**10250T1097LRD2A-1X**
				Transformer	24 Vac					**10250T1089LRD06-1X**
					120 Vac					**10250T1063LRD06-1X**
X X	0 X	0 0		Full voltage	24 Vac/Vdc	1NC			Bayonet base	**10250T497LRD24-3X**
					120 Vac	1NC				**10250T497LRD2A-3X**
				Transformer	24 Vac					**10250T489LRD06-3X**
					120 Vac					**10250T463LRD06-3X**
0 X	0 0	X 0	Incan-descent	Full voltage	24 Vac/Vdc	1NO			#757	**10250T1079C47-1X**
				Resistor	120 Vac	1NC			120MB	**10250T1080C47-1X**
				Transformer	24 Vac				#755	**10250T1089C47-1X**
					120 Vac					**10250T1063C47-1X**
X X	0 X	0 0		Full voltage	24 Vac/Vdc	1NC			#757	**10250T479C47-3X**
				Resistor	120 Vac	1NC			120MB	**10250T480C47-3X**
				Transformer	24 Vac				#755	**10250T489C47-3X**
					120 Vac					**10250T463C47-3X**

Three-Position Push-Pull Operator

Three-Position Illuminated Maintained Push, Momentary Pull

Operator Position ①

Momentary—Pull	Maintained—Intermediate	Momentary—Push	Lamp	Type	Voltage	Contact Type	Mounting Location A	Mounting Location B	LED/ Lamp Number	Red Standard Push-Pull Catalog Number ②
X X	0 X	0 0	LED	Full voltage	24 Vac/Vdc	1NC			Bayonet base	**10250T997LRD24-3X**
					120 Vac	1NC				**10250T997LRD2A-3X**
				Transformer	24 Vac					**10250T989LRD06-3X**
					120 Vac					**10250T963LRD06-3X**
X X	0 X	0 0	Incan-descent	Full voltage	24 Vac/Vdc	1NC			#757	**10250T979C47-3X**
				Resistor	120 Vac	1NC			120MB	**10250T980C47-3X**
				Transformer	24 Vac				#755	**10250T989C47-3X**
					120 Vac					**10250T963C47-3X**

Notes

① X = closed circuit, 0 = open circuit.

② To order different type or color lens, substitute the underlined characters with appropriate suffix code from table on **Page V7-T1-210.** Example: 10250T1079**C53**-1X. For LEDs with different voltages see ordering example on **Page V7-T1-215**.

③ To order different type or color lens, substitute the underlined characters with appropriate suffix code from table on **Page V7-T1-210**. Example: 10250T979**C53**X. For LEDs with different voltages see ordering example on **Page V7-T1-215**.

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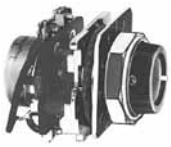
Potentiometers

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

Vertical or Horizontal ①
One-Hole Mounting



Potentiometer with Knob and Standard Dial Plate—Linear Type ±10%

Potentiometer Ohms	Catalog Number
2 Watt (60V Max.) Single Potentiometer with Standard Aluminum Dial Plate ②③	
1000	**10250T331**
2500	**10250T332**
5000	**10250T338**
10000	**10250T333**
25000	**10250T334**
50000	**10250T335**
Operator only ④	**10250T330**
Alternative—black plastic large legend with standard markings	**E34LP99**

Notes

① Shown with standard aluminum dial plate.

② Large dial plate with space for legend is available at no charge. To order, add suffix **36** to catalog number. Example: 10250T331**36**. To order separately, see footnote ③ below.

③ Large dial plate has space at top for 15 letters. 3/32 in high. For custom stamped legend plates, order legend plate as separate item **10250TR30** and specify stamping.

④ For use with commercially purchased potentiometers having shaft dimensions per dimension drawing on **Page V7-T1-259**.

Push-Pull Operators

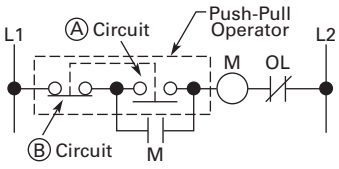
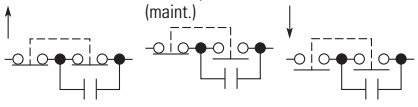
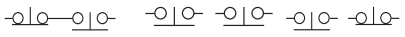
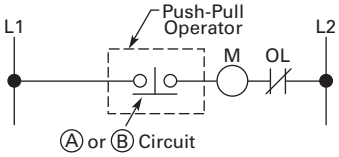
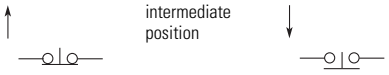
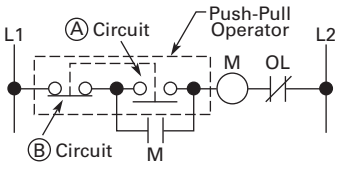
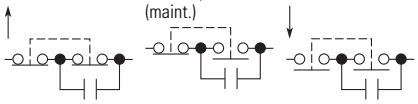
An illuminated push-pull pushbutton unit, arranged for one-hole mounting, can replace two pushbuttons and a pilot light or the non-illuminated form can replace two pushbuttons. These units are available in three basic types:

- **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.

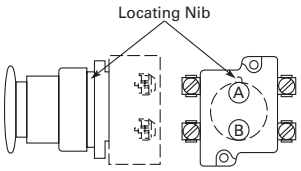
① Shown without button on lens.

1

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

Operator Position and Circuit Arrangement

Out—Pull | **Intermediate** | **In—Push**

Contact Block Mounting Location

Type of Operator	A		B	A		B	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-T1-245** CANNOT be used with three-position push-pull operators 10250T4, 10250T9 or 10250T10.

Push-Pull Light Units, Lenses and Buttons

Ordering Example with One Composite Number

Non-illuminated:
10250T5 + 10250TB62 + 10250T1 = **10250T5B62-1X**

Incandescent:
10250T5 + 10250T79 + 10250TC47 + 10250T1 = **10250T579C47-1X**

LED:
10250T5 + 10250T97L + 10250TC47 + Voltage code + 10250T1 = **10250T597LRD24-1X**

06—6 Vac/Vdc
12—12 Vac/Vdc
24—24 Vac/Vdc
48—48 Vac/Vdc
60—60 Vac/Vdc
2A—120 Vac
2D—120 Vdc

Light Units for Illuminated Push-Pull Devices

Light Unit Type	Type	Voltage	LED/Lamp Number	Catalog Number
LED (LEDs not included) ①	Full voltage	—	Bayonet base	**10250T97L**
	Transformer AC only 50/60 Hz	24		**10250T89L**
		120		**10250T63L**
		208		**10250T64L**
		240		**10250T65L**
		277		**10250T82L**
		380		**10250T66L**
		480		**10250T67L**
		600		**10250T68L**
Incandescent	Full voltage AC or DC	6		**10250T69**
		12		**10250T70**
		24/28		**10250T79**
		32		**10250T83**
	Resistor AC or DC	120	120MB	**10250T80**
		240		**10250T81**
	Transformer AC only 50/60 Hz	24	#755	**10250T89**
		120		**10250T63**
		208		**10250T64**
		240		**10250T65**
		277		**10250T82**
		380		**10250T66**
		480		**10250T67**
		600		**10250T68**

Note

① These units do not include lamps. Order LED separately to match lens color, see **Page V7-T1-249**.

Alternate Lenses for Illuminated Push-Pull Devices

Lens Color	Incandescent Suffix Code	LED Suffix Code ①	Catalog Number
Standard			
			
Red	**C47**	**RD**	**10250TC47**
Red (EMERG. STOP)	**C53**	**ED**	**10250TC53**
Green	**C48**	**GD**	**10250TC48**
Blue	**C49**	**LD**	**10250TC49**
Amber	**C50**	**AD**	**10250TC50**
White	**C51**	**WD**	**10250TC51**
Clear	**C52**	**CD**	**10250TC52**
Side-Lighted Anodized Aluminum Ring			
			
Red	**C57**	**RS**	**10250TC57**
Red (EMERG. STOP)	**C63**	**ES**	**10250TC63**
Green	**C58**	**GS**	**10250TC58**
Blue	**C59**	**LS**	**10250TC59**
Amber	**C64**	**AS**	**10250TC64**
Yellow	**C60**	**YS**	**10250TC60**
White	**C61**	**WS**	**10250TC61**
Clear	**C62**	**CS**	**10250TC62**
Heavy-Duty Aluminum			
			
Heavy-Duty Aluminum with Transparent Center			
Red	**C65**	**RH**	**10250TC65**
Green	**C66**	**GH**	**10250TC66**
Amber	**C67**	**AH**	**10250TC67**
White	**C68**	—	**10250TC68**
Jumbo Lens			
			
Jumbo Lens—50 mm			
Red	—	—	**10250TC77**

Buttons for Non-Illuminated Push-Pull Devices

Color	Suffix Code	Catalog Number
Standard		
		
Red	**B62**	**10250TB62**
Red (EMERG. STOP)	**B63**	**10250TB63**
Green	**B61**	**10250TB61**
Black	**B60**	**10250TB60**
Blue	**B64**	**10250TB64**
Jumbo Mushroom Head ② **(Anodized) Aluminum**		
		
Red	**J62**	**10250TJ62**
Red (EMERG. STOP)	**J63**	**10250TJ63**
Green	**J61**	**10250TJ61**
Black	**J60**	**10250TJ60**
Yellow	**J64**	**10250TJ64**

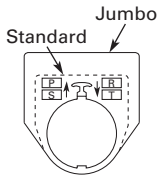
Notes

① Suffix codes should only be used for assembling composite catalog numbers. To order lens above, order by catalog number.

② Anodized aluminum head is not suitable for use in ultraviolet light applications.

Legend Plates

For a complete listing of available legend plates see **Pages V7-T1-240** to **V7-T1-242**.



Selector Switch Units

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

- Two-, three- and four-position maintained
- Non-illuminated and illuminated

Two-Position Maintained Switch

Two-Position Selector Switch

Operator Position ①		Operator Action ②	Contact Type	Mounting Location A	Mounting Location B	Non-Illuminated Black Knob Catalog Number ③	Non-Illuminated Black Lever Catalog Number ③	Illuminated—120V Transformer Red Knob Catalog Number ③	Illuminated—120V Transformer Red Lever Catalog Number ③
X	0	M M	1NC			10250T20K**B**	10250T20L**B**	10250ED1117-K**R**	10250ED1117-L**R**
0	X		1NO						

Three-Position Maintained Switch

Three-Position Selector Switch

Operator Position ①			Operator Action ②	Contact Type	Mounting Location A	Mounting Location B	Non-Illuminated Black Knob Catalog Number ③	Non-Illuminated Black Lever Catalog Number ③	Illuminated—120V Transformer Red Knob Catalog Number ③	Illuminated—120V Transformer Red Lever Catalog Number ③
X	0	0	M M M	1NO			10250T21K**B**	10250T21L**B**	10250ED1117-2K**R**	10250ED1117-2L**R**
0	0	X		1NO						
X	0	0		1NO			10250T22K**B**	10250T22L**B**	10250ED1117-3K**R**	10250ED1117-3L**R**
0	X	0		2NC (Series)						
0	0	X		1NO						

Three-Position Maintained Switch

Four-Position Selector Switch

Operator Position ①				Operator Action ②	Contact Type	Mounting Location A	Mounting Location B	Non-Illuminated Black Knob Catalog Number ③	Non-Illuminated Black Lever Catalog Number ③	Illuminated—120V Transformer Red Knob Catalog Number ③	Illuminated—120V Transformer Red Lever Catalog Number ③
X	0	0	0	M M M M	1NC			10250T46K**B**	10250T46L**B**	10250ED1117-4K**R**	10250ED1117-4L**R**
0	X	0	0		1NO						
0	0	X	0		1NO						
0	0	0	X		1NC						

Color Selection

Illuminated

Color	Code Letter	Color	Code Letter	Color	Code Letter
Red	**R**	White	**W**	Amber	**A**
Green	**G**	Blue	**B**	Clear	**C**

Non-Illuminated

Color	Code Letter	Color	Code Letter	Color	Code Letter
Black	**B**	Green	**G**	Blue	**L**
Red	**R**	White	**W**	Orange	**O**

Notes

① X = closed circuit, 0 = open circuit.

② M = Maintained.

③ To order different type or color selector switch, substitute the underlined character with appropriate suffix code from the Color Selection table. Example: 10250T20K**G**.

1

Selector Switch Selection

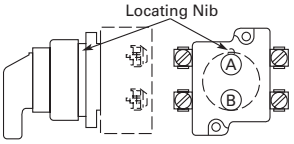
Cam and Contact Block Selection

Selector switches in their varied forms (two-position, three-position and four-position) are a big factor contributing to the great flexibility of control that a well rounded line of "pushbuttons" can achieve. Because of their flexibility, they tend to cause difficulty with product selection and application. The following systematic approach should simplify that task.

Cam and contact block selection is better understood if you:

- Work with each incoming and outgoing wire/circuit separately.
- Recognize the terms NO and NC only identify the type of contact by its mode before mounting to the operator. The "X-O" table (**Page V7-T1-220**) shows how that contact will act after assembly to the operator with the selected cam shape. X = closed circuit, O = open circuit.
- Up to six NO or NC contacts may be mounted behind each plunger location for a total of twelve contacts. Single circuit contact blocks have only one plunger with the other side of the block "open." Therefore, single circuit contact blocks transmit motion to blocks behind them only for the position containing the circuit.
- Each cam has two separate lobes, each of which operates one of the two contact block plungers independently of each other. Those are identified as position A (locating nib side) and position B (opposite of locating nib). The position designations give direction in selecting and mounting of the contact blocks.

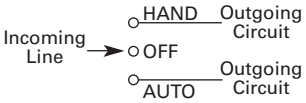
Contact Circuit Locations



Systematic Approach

Application: **HAND-OFF-AUTO** selector switch. In this circuit, one incoming line is distributed to two other outgoing circuits by the switch. The two circuits can be looked at individually.

Step 1: Elementary Diagram.
Construct on paper, or in your mind, a simple elementary diagram of the switching scheme as follows:



Step 2: "X-O" Pattern.
From the elementary diagram, you can construct an "X-O" diagram which describes when the contacts are to be closed (X) or open (O) in the various positions of the switch. The "X-O" for the **HAND** circuit looks like this:

HAND OFF AUTO
X O O

In this circuit, you want a contact closed on the left (HAND) but open in the center and right.

For the **AUTO** circuit, the "X-O" diagram would look like this:

HAND OFF AUTO
O O X

Putting them together, the complete "X-O" diagram is:

X O O
O O X

Once the "X-O" diagram has been generated the next step is to select the cam and contact block, or blocks, needed to perform the desired "X-O" functions. The selection tables on the following pages list the various types (shapes) of cams by number to choose from and the type of contact and position to achieve the function outlined in your "X-O" diagram.

Step 3: Cam Selection.
The cam you select determines the operation of all contact blocks mounted to the operator. It is selected on the basis that it provides the simplest circuitry for the desired "X-O" diagram. The selection tables show all the "X-O" combinations. For the purpose of this example, the applicable portion of those tables is shown on this page.

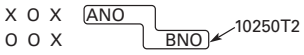
Now to make the cam selection, make a simple worksheet such as:

	Cam 2	Cam 3
X O O	(A)NO-(B)NC	**(A)NO**
O O X	(B)NO	**(B)NO**

It becomes immediately obvious that cam 3 is the better choice for two reasons, (1) the series combination can be avoided making it simpler to wire, (2) only two contacts are required, which is less expensive than the three contacts required by cam 2.

Step 4: Contact Block Selection.
Having selected the cam, contact block selection is simply a matter of gathering the A position and B position circuits into pairs which make up the most convenient contact block arrangement. If there is an imbalance in the number of circuits under A or B, then single circuit blocks must be selected for these leftover circuits.

Back to the worksheet, having selected cam 3 do this:



Step 5: Selector Switch Operator.
Lastly, you have to choose from the many types of operators—knob and lever in various colors or keyed. Also what combinations of maintained and spring return functions are required. Selection of these operators can be found on **Page V7-T1-222**. For the example in step 4 you may want a three-position maintained black knob, cam 3—Catalog Number 10250T1323.

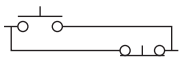
The Complete Switch:
10250T1323 with one 10250T2 or, for one composite catalog number, 10250T21KB found on **Page V7-T1-217.**

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

X = Closed circuit
O = Open circuit

Wiring of Jumper Connections


Series Connection


Parallel Connection

Four-position selector switches are limited to four contact blocks.

Contact Blocks
For selection and number of available contact blocks per operator, see **Pages V7-T1-245** to **V7-T1-248**.

Example Selection Table

No.	"X-O" Pattern			Cam Code #2 Top A	Cam Code #2 Bottom B	Cam Code #3 Top A	Cam Code #3 Bottom B
1	X	O	O	① NO	NC	NO	—
4	O	O	X	—	NO	—	NO

Two-Position Selector Switch Contact Block Selection

No.	Desired Circuit and Operator Position		Contact Blocks Required to Accomplish Circuit Function: Top Plunger A		Bottom Plunger B
1	X	O	NC	or	NC
2	O	X	NO	or	NO

Note
① Wired in series.

1

Three-Position Switch—Cam and Contact Block Selection

No.	Desired Circuit and Operator Position			Contact Blocks Required to Accomplish Circuit Function (Jumpers must be installed where indicated) Operator with Cam Code #2 Mounting Location Top Plunger A	Bottom Plunger B	Operator with Cam Code #3 Mounting Location Top Plunger A	Bottom Plunger B
1	X	0	0	NO	NC	NO	
2	X	X	0		NC		NC
3	X	0	X	NO		NO	NO
4	0	0	X		NO		NO
5	0	X	X	NC	NO	NC	
6	0	X	0	NC		NC	NC

Four-Position Switch—Contact Block Selection

No.	Desired Circuit and Operator Position				Contact Blocks Required to Accomplish Circuit Function Mounting Location Top Plunger A	Bottom Plunger B
1	X	0	0	0	NC	
2	0	X	0	0		NO
3	0	0	X	0	NO	
4	0	0	0	X		NC
5	X	0	0	X	NC	NC
6	0	X	X	0	NO	NO
7	0	0	X	X	NO	NC
8	X	X	0	0	NC	NO
9	0	X	0	X		NO NC
10	X	0	X	0	NC NO	
11	X	X	X	0	NC NO	NO
12	0	X	X	X	NO	NC NO
13	X	0	X	X	NO NC	NC
14	X	X	0	X	NC	NO NC

Selector Switch Operators

Key Operators

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

Two-Position Maintained ①

Key Operators with Cam

Positions	Operator Action ②	Cam Code ③	Optional Key Removal Positions ④	Vertical Mounting Catalog Number	Horizontal Mounting Catalog Number
Two-position—60° throw		1	1, 2, 3	**10250T1511_**	**10250T1611_**
		1	2	**10250T1571_**	**10250T1581_**
Three-position—60° throw		2	1–7	**10250T1522_**	**10250T1622_**
		3		**10250T1523_**	**10250T1623_**
		2	1, 4, 5	**10250T1532_**	**10250T1632_**
		3		**10250T1533_**	**10250T1633_**
		2	4	**10250T1542_**	**10250T1642_**
		3		**10250T1543_**	**10250T1643_**
		2	2, 4, 6	**10250T1652_**	**10250T1662_**
		3		**10250T1653_**	**10250T1663_**
Four-position—40° throw		7	7	**10250T1677_**	**10250T1687_**

Notes

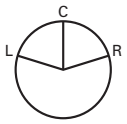
① Horizontal mount, key removal #1 keyed selector switch, cam 1 shown.

② M = Maintained. S = Spring return in direction of arrow (R).

③ For selection of the proper cam and contact block to obtain the proper circuit sequence, see selection instructions and tables on **Pages V7-T1-218**, **V7-T1-219** and **V7-T1-220**.

④ Choose key removal position required for application from table on **Page V7-T1-222**. Add key removal code no. to listed catalog number. Example: 10250T1511**2**.

Key Removal Positions



Code Suffix	Key Removal Position
1	Right only
2	Left only
3	Right and left
4	Center only
5	Right and center
6	Left and center
7	All positions

Note: Key removal in "spring return from" positions not recommended.

Replacement Keys or Dissimilar Locks for Key Operators

Operators listed on **Page V7-T1-222** have identical locks and keys (Key Code H661) Catalog Number 10250ED824. For dissimilar lock and key combinations, see listing on this page.

Replacement Key

Description	Catalog Number
Replacement keys (code H661)	**10250ED824**

Selector Switch Operators with Dissimilar Locks and Keys (UL [NEMA] 4, 4X and 13)

The locks in all key operators listed on **Pages V7-T1-201, V7-T1-222** and **V7-T1-359** are identical and use key code number H661. Two keys are supplied with every lock. For additional code number H661 keys, order **Catalog Number 10250ED824**. For others, order 10250ED1130 and designate lock number. When dissimilar locks for each operator or each group of operators are required, select from the lock and key combination listed below. **When Ordering Operator Only** or a complete control unit with a substitute lock, order from table below and add "except Lock and Key Code No. …"

"H" Series Locks without Master Key—with Key Slot Cover

Lock and Key Code Numbers

H501	**H635**	**H663**
H620	**H639**	**H675**
H621	**H643**	**H683**
H634	**H654**	**H688**

"M" Series Locks with Master Key—with Key Slot Cover

Lock and Key Code Numbers

MD1	**MD14**	**ME8**	**MJ6**
MD2	**MD15**	**ME11**	**MJ10**
MD3	**MD16**	**ME16**	**MJ11**
MD4	**MD19**	**ME17**	**MJ13**
MD5	**MD20**	**ME18**	**MJ15**
MD7	**ME2**	**ME19**	**MJ16**
MD9	**ME3**	**MJ1**	**MD17**
MD10	**ME5**	**MJ3**	
MD11	**ME6**	**MJ4**	
MD13	**ME7**	**MJ5**	

Master Keys for Above Locks

Application	Catalog Number
For code:	
MD1–MD20	**10250ED825-3**
ME2–ME18	**10250ED825-4**
MJ1–MJ16	**10250ED825-5**

Selector Switch Operators with Caps

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

Selector Switch Operators with Caps

	Positions	Operator Action ②	Black Knob Selector Switch—Vertical Mounting ③ Cam Code ④	Black Knob Selector Switch—Vertical Mounting ③ Catalog Number	Black Lever Selector Switch—Vertical Mounting ③ Cam Code ④	Black Lever Selector Switch—Vertical Mounting ③ Catalog Number
Two-Position Maintained ① 	Two-position—60° throw	M M	1	**10250T1311**	1	**10250T3011**
		M S	1	**10250T1371**	1	**10250T3071**
Three-Position Maintained ⑤ 	Three-position—60° throw	M M M	2	**10250T1322**	2	**10250T3022**
			3	**10250T1323**	3	**10250T3023**
		M S M	2	**10250T1332**	2	**10250T3032**
			3	**10250T1333**	3	**10250T3033**
		M S S	2	**10250T1342**	2	**10250T3042**
			3	**10250T1343**	3	**10250T3043**
		M M S	2	**10250T1352**	2	**10250T3052**
			3	**10250T1353**	3	**10250T3053**
	Four-position—40° throw	M M M M	7	**10250T1367**	7	**10250T3067**

Notes

① Black knob selector switch, cam 1 shown.
② M = Maintained. S = Spring return in direction of arrow (R).
③ Field convertible to horizontal mounting or order operator only and separate operator cap.
④ For selection of the proper cam and contact block to obtain the proper circuit sequence, see selection instructions and tables on **Pages V7-T1-218**, **V7-T1-219** and **V7-T1-220**.
⑤ Black lever selector switch, cam 3 shown.

Selector Switch Operators without Caps

Operators can be ordered with caps assembled to them by adding the code number from the table on this page to the end of catalog number below.
Example: 10250T4011**KB**

Two-Position Selector Switch Maintained

Selector Switch Operators without Caps

Positions	Operator Action ①	Cam Code ②	Catalog Number
Two-position—60° throw	M M	1	**10250T4011**
	M S	1	**10250T4081**
Three-position—60° throw	M M M	2	**10250T4022**
		3	**10250T4023**
	M S M	2	**10250T4032**
		3	**10250T4033**
	M S S	2	**10250T4042**
		3	**10250T4043**
	M M S	2	**10250T4052**
		3	**10250T4053**
Four-position—40° throw	M M M M	7	**10250T4067**

Knob

Lever

Lever for Use with Maintained Operators

Coin Slot

Operating Caps

Color	Knob Catalog and Code Number	Lever Catalog and Code Number	Color	Lever ③ Catalog and Code Number	Coin Slot Catalog and Code Number
Black	**10250TKB**	**10250TLB**	Black	**10250TSB**	**10250TCB**
Red	**10250TKR**	**10250TLR**	Red	**10250TSR**	**10250TCR**
Green	**10250TKG**	**10250TLG**	Green	**10250TSG**	**10250TCG**
Yellow	**10250TKY**	**10250TLY**	Yellow	**10250TSY**	**10250TCY**
White	**10250TKW**	**10250TLW**	White	**10250TSW**	**10250TCW**
Gray	**10250TKA**	**10250TLA**	Gray	**10250TSA**	**10250TCA**
Blue	**10250TKL**	**10250TLL**	Blue	**10250TSL**	**10250TCL**
Orange	**10250TKD**	**10250TLO**	Orange	**10250TSO**	**10250TCO**

Notes

① M = Maintained. S = Spring return in direction of arrow (R).

② For selection of the proper cam and contact block to obtain the proper circuit sequence, see selection instructions and tables on **Pages V7-T1-218**, **V7-T1-219** and **V7-T1-220**.

③ Designed for added ingress protection. For use in maintained operators only.

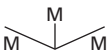
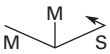
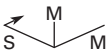
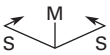
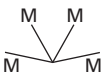
1

Illuminated Selector Switch Operators

Illuminated Selector Switches without Caps

Two-Position Selector Switch Maintained

Operator without Knob or Lever

Positions	Operator Action ①	Transformer Type—50/60 Hz 6 Volt #755 Lamp: Cam Code ②	Voltage	Code Number and Catalog Number ③	Full Voltage Type—AC or DC ④ Lamps: 6V—#755, 12V—#756, 24V—#757, 48V—#1835, 120/240V—120MB: Cam Code ②	Voltage	Code Number and Catalog Number ③
Two-position—60° throw		1	24	**10250T5961**	1	6	**10250T6201**
			120	**10250T5971**		12	**10250T6211**
			208	**10250T6511**		24	**10250T6221**
			240	**10250T5981**		48	**10250T6231**
			380	**10250T5991**		120	**10250T6361**
			480	**10250T6001**		240 ⑤	**10250T6371**
			600	**10250T6011**			
Three-position—60° throw		+ 2 or 3	24	**10250T602_**	+ 2 or 3	6	**10250T624_**
			120	**10250T603_**		12	**10250T625_**
			208	**10250T652_**		24	**10250T626_**
			240	**10250T604_**		48	**10250T627_**
			380	**10250T605_**		120	**10250T638_**
			480	**10250T606_**		240 ⑤	**10250T639_**
			600	**10250T607_**			
		+ 2 or 3	24	**10250T654_**	+ 2 or 3	6	**10250T612_**
			120	**10250T620_**		12	**10250T632_**
			208	**10250T655_**		24	**10250T642_**
			240	**10250T656_**		48	**10250T672_**
			380	**10250T657_**		120	**10250T622_**
			480	**10250T658_**		240	**10250T682_**
			600	**10250T659_**			
		+ 2 or 3	24	**10250T660_**	+ 2 or 3	6	**10250T613_**
			120	**10250T621_**		12	**10250T633_**
			208	**10250T661_**		24	**10250T643_**
			240	**10250T662_**		48	**10250T673_**
			380	**10250T663_**		120	**10250T623_**
			480	**10250T664_**		240	**10250T683_**
			600	**10250T665_**			
		+ 2 or 3	24	**10250T614_**	+ 2 or 3	6	**10250T628_**
			120	**10250T615_**		12	**10250T629_**
			208	**10250T653_**		24	**10250T630_**
			240	**10250T616_**		48	**10250T631_**
			380	**10250T617_**		120	**10250T640_**
			480	**10250T618_**		240 ⑤	**10250T641_**
			600	**10250T619_**			
Four-position—40° throw		7	24	**10250T6087**	7	6	**10250T6327**
			120	**10250T6097**		12	**10250T6337**
			208	**10250T6547**		24	**10250T6347**
			240	**10250T6107**		48	**10250T6357**
			380	**10250T6117**		120	**10250T6427**
			480	**10250T6127**		240 ⑤	**10250T6437**
			600	**10250T6137**			

Notes

① M = Maintained. S = Spring return in direction of arrow (R).

② For selection of the proper cam and contact block, to obtain the proper circuit sequence, see selection tables on **Pages V7-T1-218**, **V7-T1-219** and **V7-T1-220**.

③ Operator includes lens gasket and lens attachment screws.

④ Full voltage light units can be used at other than listed voltages by changing lamp. Replacement lamps are listed on **Page V7-T1-249**.

⑤ Resistor type. May generate excess heat if used in high density.

Knob

Lever

Illuminated Knobs and Levers

Color ①	Knob Code Number and Catalog Number	Lever Code Number and Catalog Number
Red	**10250TER**	**10250TFR**
Green	**10250TEG**	**10250TFG**
Yellow	**10250TEA**	**10250TFA**
Blue	**10250TEL**	**10250TFL**
Clear	**10250TEC**	**10250TFC**
White	**10250TEW**	**10250TFW**
Amber	**10250TEM**	**10250TFM**

Joystick Units

Two-Position Joystick

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

Operator Position ②

Up	Center	Down	Operator Action ③	Contact Type	Mounting Location A	Mounting Location B	Two-Position Assembled Unit Catalog Number ④
X	O	O	M S	1NC			**10250T452-3X**
O	O	X	M S	1NC			

Notes

① Amber, clear and white lenses have a black arrow (pointer), red, green and blue lenses have a white arrow (pointer).
② X = closed circuit, O = open circuit.
③ M = Maintained. S = Spring return in direction of arrow (R).
④ Field convertible momentary to maintained or vice versa.

1

Joysticks

Two-Position Joystick Operators

The device mounts in the standard 30.5 mm mounting hole. Allow sufficient panel space for lever movement.

The maximum travel of the knob operator (full up to full down) is 2.2 in (24°) momentary, 2.5 in (30°) maintained, but ample space for lever operation must be allowed. These operators are field convertible from momentary to maintained operation or vice versa.

The use of NC contacts is preferred because they provide positive drive contact opening and a direct relationship between lever movement and affected terminal, i.e., up movement affects the top terminals.

Application Caution

Joystick operators are not recommended on certain DC applications above 24 Vdc which may involve lightly engaging the contacts (teasing) to achieve speed control, positioning, jogging, etc. Excessive arcing and deterioration of the contacts will occur.

Two-Position Joystick Operator

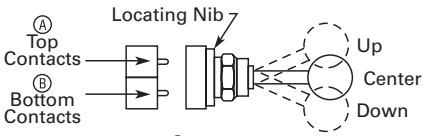
Two-Position Joystick Operators—UL (NEMA) Type 3, 3R, 4, 4X, 12, 13

Contact Block Limitations	Two-Position Operator Only—AC Applications Only Description ①	Catalog Number
Momentary Mode 4NC contact blocks max. 3NO contact blocks max.	Momentary up and down	**10250T452**
	Maintained up—momentary down	**10250T4521**
	Maintained down—momentary up	**10250T4522**
Maintained Mode 2 contact blocks max.	Maintained up and down	**10250T4525**

Contact Block Operation and Selection

Handle Position ② Up	Center	Down	Contact Block Type ④	Mounting Location ②③ Top A	Bottom B	Catalog Number
X	0	0	1NC			**10250T51**
0	0	X	1NC			**10250T51**
0	X	0	2LONC (Series)			**10250T45**
X	0	0	1NC			**10250T3**
0	0	X	1NC			
X	X	0	1LONC			**10250T45**
0	X	X	1LONC			
X	0	0	1NC			**10250T44** ⑤
0	0	X	1NO			
0	0	X	1NC			
X	0	0	1NO			

A and B Mounting Location



Up
NC Contact at Top Is Closed, NO at Bottom Is Closed

Center
All NC and NO Contacts Are Open (1/2 Way), Late Opening NC Is Closed

Down
NC Contact at Bottom Is Closed, NO at Top Is Closed

Notes

① Field convertible momentary to maintained or vice versa. To expedite shipment of maintained types, order momentary operator 10250T452 which is a stocked device.
② Bolded circuit corresponds to "X-0" circuit selection. X = closed circuit, 0 = open circuit.
③ See above for "A" and "B" mounting location.
④ NO = normally open, NC = normally closed, LONC = late opening normally closed.
⑤ Four circuits in single block depth—rated 300V max.

Four-Position Joystick Operators

The joystick operated control unit is intended for AC application only. For other use, see **Application Caution** on preceding page.

The panel area required for the four-position operator is equivalent to two standard pushbutton operators.

The latch holds the lever in the center position. The trigger latch must be released before lever can moved into any position.

Four-Position Joystick Operator

Four-Position Joystick Operator with Latch

Four-Position Joystick Operators—UL (NEMA) Type 3, 3R, 4, 4X, 12, 13

Contact Block Limitations	Description ①	Catalog Number
Operator Only—AC Application Only		
Four contact blocks max.—two in each position	Four-position—without latch	**10250T451_**
	Four-position—with latch	**10250T461_**
Hole Plug		
Four contact blocks max.—two in each position	To plug unused hole	**10250TA7**

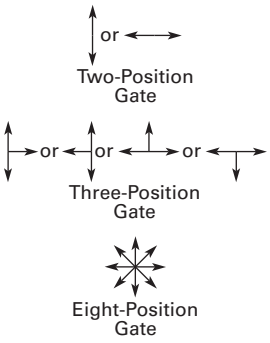
Field Conversion—Gate

The factory assembled four-position operator is assembled with a gate arranged for four handle positions.

Handle Positions

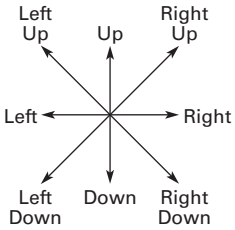
Three additional gates, supplied with every operator, allow on the job conversion to three- or eight-position operation as illustrated.

Two-, Three- or Eight-Position Operation



The eight-position gate controls the four functions shown as "Up," "Down," "Left" and "Right." The remaining four diagonal positions each actuate two adjacent functions; for example, "Left Down" actuates both "Left" and "Down." The operator may be arranged for spring return of handle to center position, or maintained in up to eight positions (see description of maintained position operator).

Adjacent Functions



Maintained Position

For maintained position (non-spring return), locate required maintained position or positions of operating lever and add appropriate suffix number to the catalog number selected from the table above.

Maintained Positions

Maintained Positions				Suffix
Up	Down	Left	Right	Number
X	—	—	—	**1**
—	—	—	—	**2**
—	X	—	—	**3**
—	—	X	—	**4**
—	—	—	—	**5**
X	—	X	—	**6**
X	—	—	X	**7**
—	X	X	—	**8**
—	X	—	X	**9**
—	—	X	X	**10**
X	X	X	—	**11**
X	X	—	X	**12**
X	—	X	X	**13**
—	X	X	X	**14**
X	X	X	X	**15**

On an eight-position gate, when an adjacent vertical and horizontal position are both maintained, the included diagonal position is also maintained.

Note

① Momentary operators—spring return to center. For maintained operators add suffix code from table on this page. Example: 10250T451**10**. Operator without latch, maintained in left and right positions.

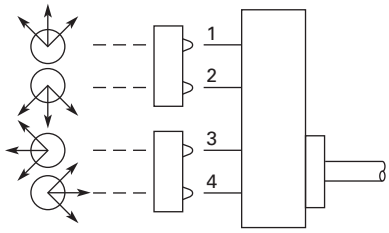
1

Contact Block Operation

Contact blocks mount directly to the back of the operator. For reliable operation, the maximum number of contact blocks that should be installed behind each operator lever is two (four total).

The figure below identifies the circuits activated by each of the eight possible lever positions. Contact block plungers 1, 2, 3, 4 are depressed (change state) when handle is in the position indicated by arrows below.

Circuit Activation



Note: Joystick in its resting state, center position, does not activate contact block plungers.

Ordering Example:

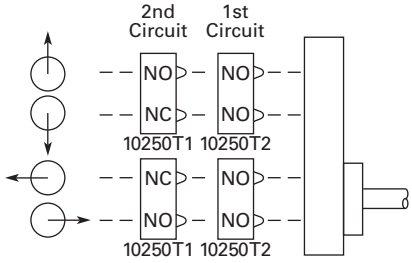
Suppose you are looking for a four-position momentary joystick without a latch and the following circuit arrangements.
X = Closed Circuit, O = Open Circuit.

Example Circuit Arrangements

Circuit	Up	Down	Left	Right
1st	X	X	X	X
2nd	X	O	O	X

The contact blocks and their mounting locations would be as follows:

Example Contact Blocks and Locations



A complete bill of material for this example would include:

Example Order

Qty.	Catalog Number
1	**10250T451**
2	**10250T2**
2	**10250T1**

Blank Legend Plates for Joystick Operators

When ordering engraved legend plates, order by catalog number and insert the following into order notes:

- Legend required
- Size of characters: 3/16, 1/8, 3/32 in (4.8, 3.2, 2.4 mm)
- Location by letter (A–N)

Locations K and M can accommodate up to two lines horizontally; L and N up to two lines vertically.

Maximum number of characters:

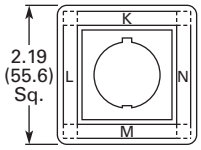
- Horizontal
  3/16 in—13, 1/8 in—14, 3/32 in—19
- Vertical
  3/16 in—10, 1/8 in—13, 3/32 in—14

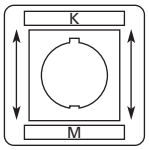
Ordering Example:

Two-position legend plate to be marked "UP" "DOWN."

Catalog No. **10250TJ2S4STAMP**
Letter Size: 3/16 in (4.8 mm)
Pos. K—UP
Pos. M—DOWN

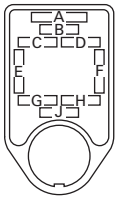
Two-Position

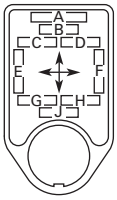




Catalog Number	Catalog Number
Blank Plate	
10250TJS3	**10250TJS4**
Engraved Plate	
10250TJS3STAMP	**10250TJS4STAMP**

Four-Position





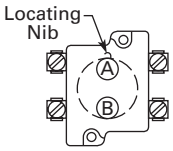
Catalog Number	Catalog Number
Blank Plate	
10250TJS1	**10250TJS2**
Engraved Plate	
10250TJS1STAMP	**10250TJS2STAMP**

Roto-Push Units

Two-Position Momentary

Complete assembled two-position Roto-Push® Units are listed below. These operators have black flush buttons and are arranged for vertical mounting. Order legend plates separately.

Mounting Location



Roto-Push—Black Flush Button

Roto-Push Units—UL (NEMA) Type 3, 3R, 4, 4X, 12, 13

Typical Applications (Most Common Examples)	Operator Position ① Collar Left Normal	Collar Left Depressed	Collar Right Normal	Collar Right Depressed	Contact Type	Mounting Location A	Mounting Location B	Catalog Number ②
Two-Position								
FORWARD/REVERSE; HIGH/LOW; OPEN/CLOSE; UP/DOWN; etc.	0 0	0 X	0 0	X 0	1NO 1NO			**10250T2411-2**
JOG/RUN; MAN./AUTO; etc.	0 0	X 0	0 X	X X	1NO 1NO			**10250T24111-2**
RUN/JOG; START/JOG; etc.	0 X	X X	0 0	X 0	1NO 1NC			**10250T24111-1**
SAFE/RUN; etc.	0 0	0 0	0 X	X X	1NO 1NO			**10250T2415-2**

Two-Position Latched

The two-position Roto-Push Latch Unit is fully assembled and only requires a legend plate for a great variety of applications. When the selector collar is in the extreme left position, the button is in the free or normal position and can be operated as a standard pushbutton. Rotating the collar to the extreme right position automatically depresses and latches the button in the depressed position. The white filled groove in the button indicates the selector collar position. The selector collar has spring return to the left position except when in the extreme right latched position.

Red Long

Rotates to a Latch-Out Mode

Color and Type of Button	Contact Block	Vertical Mounting Catalog Number
Red long	1NC	**10250T72**
	2NC	**10250T73**

Notes

① X = closed circuit, 0 = open circuit.

② Roto-Push assembled with contact blocks.

1

Roto-Push Operators

Roto-Push Components

A Roto-Push control unit combines the function of a pushbutton and a selector switch. The contacts are operated by the combined action of rotating the outer collar and pushing a button contained in the collar.

In selecting the cam and contact blocks for the listed function, the analysis involves considering the function with the collar rotated to the given position with the button free (designated as "N") and then in that same position with the button depressed (designated "D"). This is done for each rotational position of the collar.

When Ordering Specify

- Catalog number of operator with cam code suffix from tables below and on following pages, Example: 10250T241**1**.
- Catalog number(s) for contact blocks and legend plates if required.
- To select the cam and contact blocks needed for two-position and three-position switches, use the tables on following pages.

Operator and Cam

Operator and Cam

Color and Type of Button	Cam Code No. Select from Tables	Vertical Mounting Catalog and Code Number	Horizontal Mounting Catalog and Code Number
Black flush	+ 1 to 18	**10250T241_**	**10250T251_**
Red flush ①		**10250T242_**	**10250T252_**
Green flush		**10250T243_**	**10250T253_**
Black long		**10250T261_**	**10250T271_**
Red long ①		**10250T262_**	**10250T272_**
Green long		**10250T263_**	**10250T273_**

Two-Position Roto-Push Operator—Rotates to a Latch-Out Mode

Special Rotor Latch

This differs from the other Roto-Push operators in that as the collar is rotated to the right it depresses the button and releases the button when rotated left. But the button in the released position can be momentarily pushed independent of the collar or its position. As the button is depressed by rotating the collar, the button also rotates and indicates its mode by a white line on the button face. This button can be used as an emergency stop or latched stop.

Special Roto Latch—Red Long Button

Special Rotor Latch—UL (NEMA) Type 3, 3R, 4, 4X, 12, 13

Color and Type of Button	Vertical Mounting Catalog Number
Red long	**10250T3213**
Black long	**10250T3214**

Note

① Not to be used for emergency stop application.

Cam and Contact Block Selection for Two-Position Roto-Push

Combination Number	Collar Position / Circuit Sequence ① N	D	N	D	Cam Code 1	Cam Code 2	Cam Code 3	Cam Code 4	Cam Code 5	Cam Code 6
1	0	0	0	X	A NO	A NO	—	—	A NO	—
2	0	0	X	0	—	—	—	A NC B NO	A NC B NO	—
3	0	0	X	X	—	—	—	—	B NO	A NO
4	0	X	0	0	B NO	A NC B NO	—	—	—	A NC B NO
5	0	X	0	X	A NO B NO	B NO	—	A NO	—	—
6	0	X	X	0	—	—	—	—	—	—
7	0	X	X	X	—	—	A or B NO	B NO	—	B NO
8	X	0	0	0	—	—	A or B NC	B NC	—	B NC
9	X	0	0	X	—	—	—	—	—	—
10	X	0	X	0	A NC B NC	B NC	—	A NC	—	—
11	X	0	X	X	B NC	A NO B NC	—	—	—	A NO B NC
12	X	X	0	0	—	—	—	—	B NC	A NC
13	X	X	0	0	—	—	—	A NO B NC	A NO B NC	—
14	X	X	X	0	A NC	A NC	—	—	A NC	—

Series and Parallel Connections

A NO
B NC

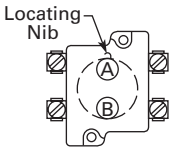
Series Connection

A NO
B NC

Parallel Connection

The connections are not made at the factory. They are illustrated in the selection table as requirements, but must be made on the job.

Circuit Location



Letters "A" and "B" represent the locations which the two circuits of a contact block will occupy in relation to the locating nib of the operator.

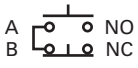
Note

① N = Button in free or normal position. D = Button depressed.

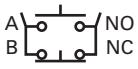
Cam and Contact Block Selection for Two-Position Roto-Push, continued

Combination Number	Collar Position / Circuit Sequence ① N	D	N	D	Cam Code 10	Cam Code 11	Cam Code 12	Cam Code 13	Cam Code 14
15	0	0	0	X	—	A NO B NO	—	—	—
16	0	0	X	0	—	A NC B NO	A NC	A or B NC	A NC
17	0	0	X	X	B NO	B NO	—	—	—
18	0	X	0	0	A NO	A NO B NC	—	—	B NO
19	0	X	0	X	—	A NO	B NO	—	—
20	0	X	X	0	—	—	—	—	A NC B NO
21	0	X	X	X	A NO B NO	A NO B NO	A NC B NO	—	—
22	X	0	0	0	A NC B NC	A NC B NC	A NO B NC	—	—
23	X	0	0	X	—	—	—	—	A NO B NC
24	X	0	X	0	—	A NC	B NC	—	—
25	X	0	X	X	A NC	A NO B NO	—	—	B NC
26	X	X	0	0	B NC	B NC	—	—	—
27	X	X	0	0	—	A NO B NC	A NO	A or B NO	A NO
28	X	X	X	0	—	A NC B NC	—	—	—

Series and Parallel Connections



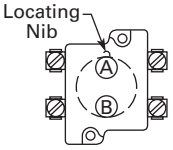
Series Connection



Parallel Connection

The connections are not made at the factory. They are illustrated in the selection table as requirements, but must be made on the job.

Circuit Location



Letters "A" and "B" represent the locations which the two circuits of a contact block will occupy in relation to the locating nib of the operator.

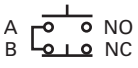
Note

① N = Button in free or normal position. D = Button depressed.

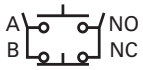
Cam and Contact Block Selection for Three-Position Roto-Push

Combination Number	Collar Position / Circuit Sequence ① N	D	N	D	N	D	Cam Code 7	Cam Code 8	Cam Code 9	Cam Code 15 ②	Cam Code 16	Cam Code 17	Cam Code 18
1	0	0	0	0	0	X	A NO B NO	A NC B NO	—	B NO ②	B NO	—	A NC B NO
2	0	0	0	0	X	X	—	—	B NO	—	—	A NO	—
3	0	0	0	X	0	0	—	—	A NO B NC	—	—	—	A NO B NO
4	0	0	0	X	0	X	—	—	—	—	—	—	B NO
5	0	0	0	X	X	X	—	—	A NO ②	—	—	—	—
6	0	0	X	X	0	0	—	A NO B NO	—	—	—	—	—
7	0	0	X	X	0	X	—	B NO	—	—	—	—	—
8	0	0	X	X	X	0	A NC B NO	—	—	—	—	—	—
9	0	0	X	X	X	X	B NO	—	—	—	—	—	—
10	0	X	0	0	0	0	A NO B NC	A NO B NC	—	A NO ②	A NO	B NO	A NO B NC
11	0	X	0	0	0	X	A NO	—	—	A NO B NO	A NO B NO	—	—
12	0	X	0	0	X	X	—	—	—	—	—	A NO B NO	—
13	0	X	0	X	0	0	—	—	—	—	—	—	A NO
14	0	X	0	X	0	X	—	—	—	—	—	—	A NO B NO
15	0	X	X	X	0	0	—	A NO	—	—	—	—	—
16	0	X	X	X	0	X	—	A NO B NO	—	—	—	—	—
17	0	X	X	X	X	X	A NO B NO	—	—	—	—	—	—

Series and Parallel Connections



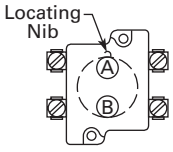
Series Connection



Parallel Connection

The connections are not made at the factory. They are illustrated in the selection table as requirements, but must be made on the job.

Circuit Location



Letters "A" and "B" represent the locations which the two circuits of a contact block will occupy in relation to the locating nib of the operator.

Notes

① N = Button in free or normal position. D = Button depressed.

② Limited to 4 contact blocks. See Note on **Page V7-T1-246**.

1

Cam and Contact Block Selection for Three-Position Roto-Push, continued

Combination Number	Collar Position / Circuit Sequence ① N	D	N	D	N	D	Cam Code 7	Cam Code 8 ②	Cam Code 9	Cam Code 15	Cam Code 16	Cam Code 17	Cam Code 18
18	X	0	0	0	0	0	A NC B NC	—	—	—	—	—	—
19	X	0	0	0	X	X	—	A NC	—	—	—	—	—
20	X	0	0	0	X	0	—	A NC B NC	—	—	—	—	—
21	X	0	X	X	0	0	—	—	—	—	—	A NC B NC	—
22	X	0	X	X	X	X	A NC B NO	A NC B NO	—	—	A NC	B NC	A NC B NO
23	X	0	X	X	X	0	A NC	—	—	—	A NC B NC	—	—
24	X	0	X	0	X	0	—	—	—	A NC B NC	—	—	A NC B NC
25	X	0	X	0	X	X	—	—	—	A NC ③	—	—	A NC
26	X	X	0	0	0	0	B NC	—	A NC ③	—	—	—	—
27	X	X	0	0	0	X	A NO B NC	—	—	—	—	—	—
28	X	X	0	0	X	0	—	B NC	—	—	—	—	—
29	X	X	0	0	X	X	—	A NC B NO	A NC B NO	—	—	—	—
30	X	X	X	X	0	0	—	—	B NC	—	—	A NC	—
31	X	X	X	X	X	0	A NC B NC	A NO B NC	—	—	B NC	—	A NO B NC
32	X	X	X	0	X	0	—	—	—	B NC ②	—	—	B NC
33	X	X	X	0	X	X	—	—	—	A NO B NC	—	—	A NC B NC

Series and Parallel Connections

A NO
B NC

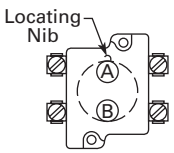
Series Connection

A NO
B NC

Parallel Connection

The connections are not made at the factory. They are illustrated in the selection table as requirements, but must be made on the job.

Circuit Location



Letters "A" and "B" represent the locations which the two circuits of a contact block will occupy in relation to the locating nib of the operator.

Notes

① N = Button in free or normal position. D = Button depressed.

② Limited to 4 contact blocks. See Note on **Page V7-T1-246.**

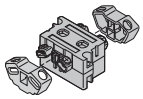
Accessories

Padlocks not included with padlocking attachments. For operators with built-in padlock attachment, see **Page V7-T1-200**.

Accessories

	Description	Catalog Number
	Padlock Attachments	
10250TA2 	**Padlocking Attachment for Flush Pushbutton Operators** Permits locking NC contacts in open position with 1/4 in padlock. Will not lock NO contact.	**10250TA2**
10250TA26 	**Padlocking Attachment for Use with Extended Pushbutton** Permits locking NC contacts in open position with 1/4 in padlock.	**10250TA26**
10250TA36 	**Padlocking Cover Guard** Cover locked over flush button makes it unaccessible or on extended button locks NC contacts open. Takes 1/4 in shank size padlock.	**10250TA36**
10250TA38 	**Padlock Hasp or Flip-Up Guard** When used with a 1/4 in padlock, makes flush and long button and knob selector switch unaccessible, but not locked down. Without the padlock, it is a flip-up guard. Padlock hasp can be removed before assembly.	**10250TA38**
10250TA63 	**Padlocking Attachment for Use with Flexible Weather Resistant Boot** Used on long button operators. Stainless steel. Use only for locking NC contacts open.	**10250TA63**
10250TA64 	**Padlock Attachment** For use with illuminated pushbuttons and maintained push-pull operators having standard button or lens only. Use 1/4 in padlock. Locks in down position only.	**10250TA64**
10250TA11 	**Padlocking Attachment for Non-Illuminated Knob Selector Switches** Provision for up to 5, 1/4 in padlocks.	**10250TA11**

Accessories, continued

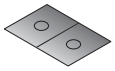
	Description	Catalog Number
	Shrouds and Guards	
10250TA6 	**Shroud for Mushroom Head Operator** Prevents accidental operation. (Not for push-pull operators.)	**10250TA6**
10250TA12 	**Extended Retaining Nut** Replaces standard nut and provides guard for flush head pushbutton operators.	**10250TA12**
10250TA15 	**Guard for Illuminated Pushbutton**	**10250TA15**
10250TA56_ 	**Shroud** For jumbo mushroom head operator.	
	Gray	**10250TA56**
	Yellow	**10250TA56Y**
10250ED1241 	**Half Shroud**—Yellow For jumbo mushroom head operator.	**10250ED1241**
10250TA101 	**Fingerproof Shroud**—10 per package Fits new style contact blocks and light units.	**10250TA101**
	Boots	
10250TA_ 	**Flexible Weather Resistant Boot** For use with button operators (extended buttons preferred). Temperature to –25°F (–32°C). (See **Page V7-T1-239** for 10250TA96 Tightening Tool.)	
	Black	**10250TA3**
	Red	**10250TA4** ①
	Green	**10250TA10**
10250TA25 	**Transparent Boot** For regular illuminated pushbutton operators and PresTest— Temperature to –38°F (–39°C). ②	**10250TA25**
10250TA4_ 	**Boot for Flush Pushbutton**	
	Clear	**10250TA46**
	Black	**10250TA47**
	Red	**10250TA48**
	Green	**10250TA49**

Notes

① Should not be used on flush button for STOP function.

② Not suitable for single contact block depth cast enclosure. Cover is too thick.

Accessories, continued

	Description	Catalog Number
	Hardware and Kits	
10250TK3 	**Thrust Washers**— To meet Ford Motor Co. mounting specifications.	**10250TK3**
10250TK5 	**Contact Block Tape Seal**— Seals plunger openings on last contact block. Order in multiples of 10 pieces.	**10250TK5**
56-9337 	**Selector Switch Operator Gasket**— Seals out dust from getting in-between the cam and contact block plungers. Supplied as standard with all selector switches.	**56-9337**
10250TA3_ 	**Special Retaining Nut**— To accommodate thick panel:	
	Indicating lights	**10250TA30**
	PresTest, pushbuttons and selector switches	**10250TA31**
10250TA62 	**Terminal Block**— Two terminals, each will accommodate two wire terminations.	**10250TA62**
10250TA8 	**Spacer Ring**— Used when legend plate is not required.	**10250TA8**
10250TA79 	**Stacking Screw**— Replaces transformer mounting screws on indicating light so terminal block 10250TA62 can be mounted to light to support and connect a series resistor. This screw also fits all contact blocks. Order in multiples of 10.	**10250TA79**
10250TA2_ 	**Base Mounting Spacers** ①	
	Equivalent to contact block in depth (one block deep).	**10250TA22**
	Complete with screws, washers, etc. (two block deep).	**10250TA23**
10250TKG_ 	**Grounding Kits**— Kits consist of a ring connector and a #6 screw for mounting connector to rear of contact block mounting screw.	
	All components except standard indicating lights and PresTest indicating lights.	**10250TKG1**
	Standard indicating lights	**10250TKG2** ②
	PresTest indicating lights	**10250TKG3** ②
10250TA7_ 	**Contact Block Terminal Jumpers**— Available in multiples of 100 only.	
	Terminal to terminal—within block (short)	
	100 per pkg.	**10250TA70**
	1000 per pkg.	**10250TA70-2**
	Terminal to terminal—block to block (long)	
	100 per pkg.	**10250TA71**
	1000 per pkg.	**10250TA71-2**

Notes

① Component only. Not to be used for custom built (factory assembled) stations.

② Not suitable for single contact block depth cast enclosure. Cover is too thick.

Accessories, continued

	Description	Catalog Number
	Special Operators and Attachments	
10250TA5 	**Wobble Stick** Complete with retaining nut—fits standard button.	**10250TA5**
10250TA14 	**Lever Operator** For use with two vertically mounted flush pushbuttons.	**10250TA14**
10250TA_ 	**Maintained Contact Attachment Release Button Assembly** ① Mechanically interlocks with another pushbutton and contact block (not included). Provides mode indication. Minimum hole centers 1.62 in (41.1 mm), maximum 2.313 in (58.8 mm).	
	Black	**10250TA17**
	Red	**10250TA18**
	Green	**10250TA19**
	Yellow	**10250TA20**
	Same with Long Button—Black	**10250TA39**
10250TA1 	**Maintained Contact Attachment** ① Mechanically interlocks two buttons and provides position indication for one. Use with two pushbutton operators and one or more contact blocks.	**10250TA1**
10250TA13 	**Roto-Push Lever Operator**— Used to provide lever operation for Roto-Push operators.	**10250TA13**
	Special Light Modules	
10250TA79 	**Master Test (Dual Input) Module**— Internal Form C relay suitable for either AC or DC applications. Total electrical isolation between monitored and test circuit. Fits all illuminated 10250T, E22, E30 and E34 devices.	
	48 Vdc	**10250TMT8**
10250TFL_ 	**Flasher Module**— Changes any AC illuminated device to a controlled flashing light. Fits 10250T, E30 and E34 devices.	
	24V	**10250TFL2**
	120V	**10250TFL1**
10250ED986-4 	**Flashing Incandescent Lamp**— For use with 120V transformer type or 6V full voltage type indicating lights including PresTest and most E29 devices.	**10250ED986-4**

Note

① Not suitable for single contact block depth cast enclosure. Cover is too thick.

Accessories, continued

	Description	Catalog Number
	Hole Plugs	
10250TA7 	**Plug**— For unused holes—steel, painted gray (stainless steel, use **E30KT5**, see **Page V7-T1-185**)	**10250TA7**
	Tools	
10250TA95 	Octagonal 10250T (notched to fit over selector switch lever), E29 and E30	**10250TA95**
E22CW 	E22, E30, E34 and octagonal 10250T (will not fit over selector switch levers)	**E22CW**
10250TA96 	**Tool for Tightening Boots**— Used to install boot Catalog Numbers 10250TA3, A4, A10 and A25.	**10250TA96**
10250TA102 	**10250T, E34 Allen Wrench**— Used for removal of jumbo mushroom head.	**10250TA102**
10250TA74 	**Lamp Removal Tools**— For transformer type illuminated pushbuttons, push-pull and selector switches. Fits #12 lamp.	**10250TA74**
E30KV1 	For full voltage and resistor type illuminated pushbuttons, push-pull and selector switches and E30.	**E30KV1**
E29KLT 	Standard indicating lights. Fits #44, #755, #6S6 and #10S6.	**E29KLT**

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Options

Legend Plates

Legend Plates with Standard Markings

The legend plates listed below are sized for all standard commercial enclosures and Eaton's cast enclosures. For vertical spacing less than 1.75 in, replace the **S** in the catalog number with **MS**, or the **M** with **P** (except push-pull). No change in price. The smaller size legend plates, "MS" or "P" size, have limited space for legend.

Square Legend Plate

1/2 Round Legend Plate

For Pushbutton Operators and Indicating Lights—Standard

Legend	Color of Field	Square ① Catalog Number	1/2 Round Catalog Number	Legend	Color of Field	Square ① Catalog Number	1/2 Round Catalog Number
Blank—see table on Page V7-T1-242.							
Letters on Legend Plates Below are 3/16 in High							
CLAMP	Black	**10250TS90**	**10250TM90**	OFF	Red	**10250TS24**	**10250TM24**
CLOSE		**10250TS73**	**10250TM11**	ON	Black	**10250TS25**	**10250TM25**
DOWN		**10250TS74**	**10250TM12**	OPEN		**10250TS26**	**10250TM26**
EMERG. STOP	Red	**10250TS13**	**10250TM13**	OUT		**10250TS27**	**10250TM27**
FAST	Black	**10250TS75**	**10250TM14**	POWER ON		**10250TS80**	**10250TM80**
FASTER		**10250TS87**	**10250TM87**	RAISE		**10250TS28**	**10250TM28**
FEEDER ON		**10250TS94**	**10250TM94**	READY		**10250TS86**	**10250TM86**
FEEDER OFF		**10250TS95**	**10250TM95**	RESET		**10250TS29**	**10250TM29**
FORWARD		**10250TS15**	**10250TM15**	REVERSE		**10250TS30**	**10250TM30**
HIGH		**10250TS16**	**10250TM16**	RUN		**10250TS31**	**10250TM31**
IN		**10250TS17**	**10250TM17**	SAFE		**10250TS85**	**10250TM85**
INCH		**10250TS18**	**10250TM18**	SLOW		**10250TS32**	**10250TM32**
JOG		**10250TS19**	**10250TM19**	SLOWER		**10250TS88**	**10250TM88**
JOG FOR.		**10250TS20**	**10250TM20**	START		**10250TS33**	**10250TM33**
JOG REV.		**10250TS21**	**10250TM21**	STOP	Red	**10250TS34**	**10250TM34**
LOW		**10250TS22**	**10250TM22**	TEST	Black	**10250TS83**	**10250TM83**
LOWER		**10250TS23**	**10250TM23**	TRANSFER		**10250TS93**	**10250TM93**
LUBE-FAIL		**10250TS92**	**10250TM92**	TRIP		**10250TS84**	**10250TM84**
MOTOR RUN		**10250TS81**	**10250TM81**	UNCLAMP		**10250TS91**	**10250TM91**
MOTOR STOP		**10250TS82**	**10250TM82**	UP		**10250TS35**	**10250TM35**

Blank Plastic Legend Plates—Square

Color Lettering	Field	Standard Catalog Number	Jumbo ② Catalog Number	Extra Large Catalog Number
Black	White or silver ③	**10250TSP76**	**10250TLP76**	**10250TEP76**
White	Red or black ③	**10250TSP77**	**10250TLP77**	**10250TEP77**

Notes

① Square legend plates have a satin aluminum field. Color is on lower portion.
② Cannot be used on cast enclosures except for top row. Suitable for most sheet metal enclosures.
③ If legend plate is to be engraved, specify field color required.

Square Legend Plate

1/2 Round Legend Plate

For Selector Switch and Roto-Push Operators—Standard Size

Legend	Color of Field	Square ① Catalog Number	1/2 Round Catalog Number
Blank—see table on Page V7-T1-242.			
2-Position—5/32 in High Lettering			
FOR. REV.	Black	**10250TS38**	**10250TM38**
HAND AUTO		**10250TS39**	**10250TM39**
HIGH LOW		**10250TS40**	**10250TM40**
JOG RUN		**10250TS41**	**10250TM41**
MAN. AUTO		**10250TS67**	**10250TM67**
OFF ON		**10250TS42**	**10250TM42**
OPEN CLOSE		**10250TS43**	**10250TM43**
RUN JOG		**10250TS44**	**10250TM44**
SAFE RUN		**10250TS45**	**10250TM45**
START JOG		**10250TS46**	**10250TM46**
START STOP		**10250TS47**	**10250TM47**
UP DOWN		**10250TS48**	**10250TM48**
3-Position—1/8 in High Lettering			
AUTO OFF HAND	Black	**10250TS49**	**10250TM49**
FOR. OFF REV.		**10250TS50**	**10250TM50**
FOR. SAFE REV.		**10250TS69**	**10250TM69**
HAND OFF AUTO		**10250TS51**	**10250TM51**
MAN. OFF AUTO		**10250TS68**	**10250TM68**
OPEN OFF CLOSE		**10250TS53**	**10250TM53**
RUN SAFE JOG		**10250TS70**	**10250TM70**
UP OFF DOWN		**10250TS54**	**10250TM54**
ON STOP SAFE	Red	**10250TS71**	**10250TM71**

70 mm Round—Plastic Legend Plate

45 mm and 70 mm Plastic—Round

Lettering	Color Field	Catalog Number
45 mm		
Blank	Yellow or red ②	**10250TRP78**
70 mm		
Blank	Yellow or red ②	**10250TRP76**
Red EMERG. STOP	Yellow	**10250TRP79**

For Push-Pull Units ③

Legend	Color of Field	Square ① Catalog Number	1/2 Round Catalog Number
Standard Size—Letters on Legend Plates Below are 3/32 in High			
PULL START/PUSH STOP	Green/red	**10250TPP2**	**10250TR2**
PUSH ON/PULL OFF	Black	**10250TPP5**	**10250TR5**
PULL OPEN/PUSH CLOSE	Black	**10250TPP8**	**10250TR8**
PULL UP/PUSH DOWN	Black	**10250TPP11**	**10250TR11**
Jumbo Size—Letters on Legend Plates Below are 1/8 in High			
PULL START/PUSH STOP	Green/red	**10250TPP3**	**10250TR3**
PULL ON/PUSH OFF	Black	**10250TPP6**	**10250TR6**
PULL OPEN/PUSH CLOSE	Black	**10250TPP9**	**10250TR9**
PULL UP/PUSH DOWN	Black	**10250TPP12**	**10250TR12**

Notes

① Square legend plates have a satin aluminum field. Color is on lower portion.
② If legend plate is to be engraved, specify field color required.
③ All push-pull legend plates include the symbols ≠ Ø in the center of the plate.

1

Legend Plates with Non-Standard Markings

When Ordering Specify

- Catalog number of blank plate phase plus Suffix "STAMP."
- Insert the following into Order Notes: legend, letter size and locations (letters A–W)—combine letters for definitive locations as shown.

Ordering Example:

Catalog No.:
10250TS36STAMP
Letter Size: 3/32 in (2.4 mm)
Pos. A—POWER HOUSE
Pos. B—START PUMP 1

Legend Characters Available

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z / - . , 1 2 3 4 5 6 7 8 9 0

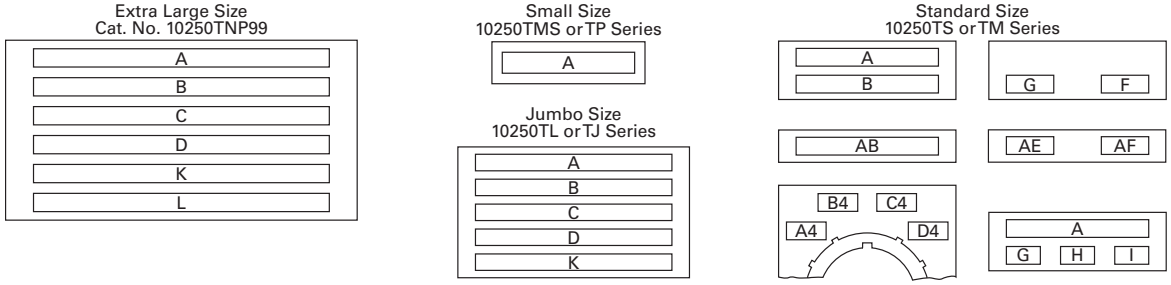
Legend characters on black and red plates are white—on satin aluminum plates, characters are black.

Blackening Kit

Solution blackens aluminum exposed by engraving process. Must be applied immediately after engraving. 0.3 oz. bottle—sufficient for approximately 1100 legend plates.

Catalog Number: **10250TBK**

Legend Positions



Blank and Custom Engraved Legend Plates

Style	Color	Small Catalog Number	Standard Catalog Number	Jumbo ② Catalog Number	Extra Large ③ Catalog Number	Four-Position Selector Switch Custom ④ Catalog Number	Four-Position Selector Switch Standard Catalog Number	Push-Pull with Symbols ① Standard Catalog Number	Push-Pull with Symbols ① Jumbo ② Catalog Number
Square ⑤	Black	**10250TMS36**	**10250TS36**	**10250TL36**	—	**10250TS76**	**10250TS72**	**10250TPP17**	**10250TPP18**
	Red	**10250TMS37**	**10250TS37**	**10250TL37**	—	—	—	—	—
	Green/red	—	—	—	—	—	—	**10250TPP20**	**10250TPP21**
	Satin alum.	—	—	—	**10250TNP99**	—	—	—	—
1/2 Round	Black	**10250TP36**	**10250TM36**	**10250TJ36**	—	—	**10250TM72**	**10250TR17**	**10250TR18**
	Red	**10250TP37**	**10250TM37**	**10250TJ37**	—	—	—	—	—
	Green/red	—	—	—	—	—	—	**10250TR20**	**10250TR21**
	Satin alum.	—	**10250TM89**	**10250TJ89**	—	—	—	—	—

Maximum Characters per Legend Plate and Approximate Dimensions

Top (Aluminum and Plastic)	Approximate Dimensions in Inches (mm) Width	Height	Style	Character Size 3/32 in High Number of Lines	3/32 in High Number of Characters	1/8 in High Number of Lines	1/8 in High Number of Characters	3/16 in High Number of Lines	3/16 in High Number of Characters
Small ⑥	1.59 (40.4)	1.59 (40.4)	Square	1	17	—	—	—	—
			1/2 Round	1	15	1	12	1	9
Standard and custom	1.75 (44.5)	1.75 (44.5)	Square	2	18	2	13	1	9
			1/2 Round	2	15	2	12	1	9
Jumbo ⑦	2.19 (55.6)	2.19 (55.6)	Square	5	23	3	18	2	12
			1/2 Round	5	19	4	15	2	11
Extra large ③	2.44 (62.0)	2.44 (62.0)	Square	6	25	3	18	3	12

Notes

① All push-pull legend plates include the symbols ≠ Ø in the center of the plate.
② Cannot be used on cast enclosures except for top row. Suitable for most sheet metal enclosures.
③ When used to meet Ford Motor Co. specifications, specify engraved legend. Cannot be used on standard cast or sheet metal enclosures.
④ Slightly larger than standard size for legends requiring more space—fits cast enclosures.
⑤ Square legend plates have a satin aluminum field. Color is on lower portion.
⑥ Recommended only when mounting on minimum centers (less than 1-3/4 in [44.5 mm] vertical centers).
⑦ Can be used on top row only of any enclosure.

Enclosures

Die Cast, Polyester and Stainless Steel Enclosures

Enclosures (Case and Cover)—Surface Mounting ①

	Number of Elements	One Contact Block Depth Catalog Number	Two Contact Block Depth Catalog Number
Die Cast Enclosure 	**Die Cast Enclosure—In-Line** ②③④ **NEMA 4, 4X, 12, 13**		
	1	**10250TN1**	**10250TN11**
	2	**10250TN2**	**10250TN12**
	3	**10250TN3**	**10250TN13**
	4	—	**10250TN14**
Polyester Enclosure 	**Polyester** ④**—In-Line NEMA 3, 4X, 12**		
	1	—	**E34N51**
	2	—	**E34N52**
	3	—	**E34N53**
	4	—	**E34N54**
Stainless Steel Enclosure 	**Stainless Steel** ④⑤**—In-Line NEMA 4, 4X, 12**		
	1	—	**10250TN33**
	2	—	**10250TN34**
	3	—	**10250TN35**
	4	—	**10250TN36**

Dimensions, see **Page V7-T1-256**.

Mounting Instructions

Two-position joystick must be used with two contact block deep enclosures (maximum number of contact blocks = 1). Four-position joysticks cannot be used within these enclosures.

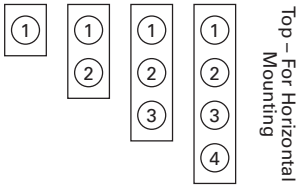
One and Two Contact Block Depth Enclosures

One Contact Block Depth Enclosure

Two Contact Block Depth Enclosure

Enclosure Layouts

Top – For Vertical Mounting



Top – For Horizontal Mounting

Notes

① For spacing increments, see **Page V7-T1-244.**

② All die cast enclosures can be converted to base mounting of contact blocks, with spacers 10250TA22 or 10250TA23. See listing on **Page V7-T1-237.**

③ When used with E30 pushbuttons, only the one element enclosure can be used.

④ When used with resistor light units, only the 2 contact block depth enclosure can be used.

⑤ 14 gauge, type 304.

1

Die Cast and Stainless Steel—Flush Mount, Covers Only

Flush Mounting Covers

Covers Only—Flush Mounting

Number of Elements	Catalog Number	Catalog Number
Flush Die Cast Covers		
	In-Line Deep Cover	**In-Line Flat Cover**
1	**10250TF11**	**10250TF1**
2	**10250TF12**	**10250TF2**
3	**10250TF13**	**10250TF3**
4	**10250TF14**	**10250TF4**
In-Line Stainless Steel Flush Plates ①		
	With Pullbox	**Without Pullbox**
1	**10250TS10**	**10250TS1**
2	**10250TS11**	**10250TS2**
3	**10250TS12**	**10250TS3**
4	**10250TS14**	**10250TS4**

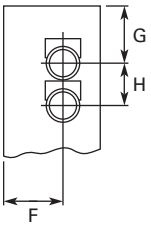
Dimensions, see **Page V7-T1-257**.

Spacing Increments

Approximate Dimensions in Inches (mm)

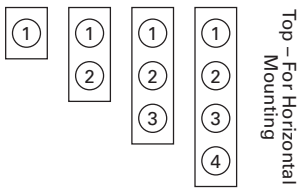
Type	F	G	H
Die cast	2.44 (62.0)	2.5 (63.5)	1.88 (47.8)
Polyester	1.88 (47.8)	Min. 2.13 (54.1)	2.25 (57.2)
Stainless steel	1.69 (42.9)	Min. 1.73 (43.9)	2.25 (57.2)

Spacing Increments for Enclosures



Enclosure Layouts

Top – For Vertical Mounting



Note

① Not oiltight. NEMA 1 applications only.

Contact Blocks

Standard Contact Blocks

- UL A600/P600 rated
- Color-coded plungers—red/green for NC/NO circuits
- Silver contact tips with "reliability nibs"
- Gray (opaque) or amber (translucent) housings
- Pressure plate or spade terminals
- Fingerproof shrouds (for pressure terminals only)

Logic Level Contact Blocks

- UL A600/P600 rated
- Color-coded plungers
- Inert palladium knife-blade contacts
- Gray (opaque) housings
- Pressure plate or spade terminals

Special Function Contact Blocks

- UL A600/P600 rated
- Color-coded plungers
- Silver contact tips with "reliability nibs"
- Gray (opaque) housings
- Pressure plate terminals only

Special Purpose Contact Block

- Maximum 300V rated
- Black plungers
- Silver contact tips with "reliability nibs"
- Black (opaque) housings
- Pressure plate terminals only
- Fingerproof shrouds not available

Reliability Nibs

Reliability nibs are the hallmark of Eaton's contact blocks. A pointed silver nib on the contact tip ensures reliable switching from logic level (5V) up to 600V applications. Therefore standard contact blocks can be used for most logic level applications where the contacts are not exposed to any harsh environmental conditions.

Palladium Contacts

Palladium, which is more inert than gold, is well suited for voltages and currents approaching zero and is recommended for applications where environmental conditions are a factor.

Maximum Contact Block Mounting per Operator Type

Operator	Max. Stack
Pushbuttons	6
Push-pull operators	2
Roto-push operators	4
Two- or three-position selector switches	6
Four-position selector switches	4
Joysticks	4

1

10250T1

Contact Blocks

Symbol	Circuit	Description ①	Standard Pressure Terminal Catalog Number	Standard Spade Terminal ② Catalog Number	Logic Level Pressure Terminal Catalog Number	Logic Level Spade Terminal ② Catalog Number
Blank No Plunger	1NC	Stack up to six blocks (six circuits) unless otherwise noted.	**10250T51**	**10250T59**	**10250T51E**	**10250T59E**
Blank No Plunger	1NO	Stack up to six blocks six circuits) unless otherwise noted.	**10250T53**	**10250T60**	**10250T53E**	**10250T60E**
	NO-NC	Stack up to six blocks (12 circuits) unless otherwise noted.	**10250T1**	**10250T40**	**10250T1E**	**10250T40E**
	2NC	Stack up to six blocks (12 circuits) unless otherwise noted.	**10250T3**	**10250T42**	**10250T3E**	**10250T42E**
	2NO	Stack up to six blocks (12 circuits) unless otherwise noted.	**10250T2**	**10250T41**	**10250T2E**	**10250T41E**
Special Function Blocks ③						
Blank No Plunger	LONC	Late opening NC. Stack up to six blocks (six circuits) unless otherwise noted.	**10250T71** ③	—	**10250T71E** ③	—
	ECNO-NC	Early closing NO and standard NC. Stack up to six blocks unless otherwise noted.	**10250T47** ③④	—	**10250T47E** ③	—
	ECNO-NO	Early closing NO and standard NO. Stack up to four blocks unless otherwise noted.	**10250T57** ③④	—	**10250T57E** ③	—
	2LONC	Two late opening NC contacts. Stack up to six blocks unless otherwise noted.	**10250T45** ③	—	**10250T45E** ③	—
	LONC-ECNO	Overlapping contacts. Stack up to four blocks unless otherwise noted.	**10250T55** ③④	—	**10250T55E** ③	—
Special Purpose Blocks ⑤						
	2NO-2NC	Four circuits in single block depth. Rated 300V max. Stack up to four blocks unless otherwise noted.	**10250T44** ⑤	—		

Notes

① All 10250T contact blocks shown are suitable for use on standard 10250T and E34 operators. These contact blocks are not suitable for Class I Division 2 type 10250T or E34 devices.

② Contact blocks with spade terminals are limited to a maximum of one contact block per operator and minimum spacing between devices is 2.5 in (63.5 mm). Not suitable for use in 10250T or E34 enclosures. Also available in amber housing. Not available with fingerproof shrouds.

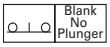
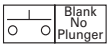
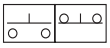
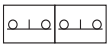
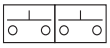
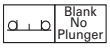
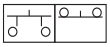
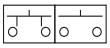
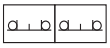
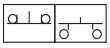
③ Special function contact blocks are not suitable for use with roto-push operators, three-position push-pull operators, or four-position selector switches.

④ ECNO contact blocks are not suitable for use with two-position joysticks or when operators are used with padlock attachments.

⑤ Special purpose 10250T44 contact blocks are not suitable on selector switches or roto-push operators. Okay to use with three-position push-pull operators only on low voltage (30V or less) circuits. Fingerproof shrouds not available.

10250T1CP

Contact Blocks with Fingerproof Shrouds

Symbol	Circuit	Description ①	Standard Pressure Terminal ② Catalog Number	Logic Level Pressure Terminal ② Catalog Number
	1NC	Stack up to six blocks (six circuits) unless otherwise noted.	**10250T51P**	**10250T51EP**
	1NO	Stack up to six blocks (six circuits) unless otherwise noted.	**10250T53P**	**10250T53EP**
	NO-NC	Stack up to six blocks (12 circuits) unless otherwise noted.	**10250T1P**	**10250T1EP**
	2NC	Stack up to six blocks (12 circuits) unless otherwise noted.	**10250T3P**	**10250T3EP**
	2NO	Stack up to six blocks (12 circuits) unless otherwise noted.	**10250T2P**	**10250T2EP**
Special Function Blocks ③				
	LONC	Late opening NC. Stack up to six blocks (six circuits) unless otherwise noted.	**10250T71P** ④	**10250T71EP** ④
	ECNO-NC	Early closing NO and standard NC. Stack up to six blocks unless otherwise noted.	**10250T47P** ③④	**10250T47EP** ④
	ECNO-NO	Early closing NO and standard NO. Stack up to four blocks unless otherwise noted.	**10250T57P** ③④	**10250T57EP** ④
	2LONC	Two late opening NC contacts. Stack up to six blocks unless otherwise noted.	**10250T45P** ④	**10250T45EP** ④
	LONC-ECNO	Overlapping contacts. Stack up to four blocks unless otherwise noted.	**10250T55P** ③④	**10250T55EP** ④

Notes

① All 10250T contact blocks shown are suitable for use on standard 10250T and E34 operators. These contact blocks are not suitable for Class I Division 2 type 10250T or E34 devices.

② To order contact blocks with translucent amber housing, change suffix P to **CP** in catalog number e.g. 10250T51**CP**.

③ ECNO contact blocks are not suitable for use with two-position joysticks or when operators are used with padlock attachments.

④ Special function contact blocks are not suitable for use with roto-push operators, three-position push-pull operators, or four-position selector switches.

10250T1C

Amber Contact Blocks

Symbol	Circuit	Description ①	Standard Pressure Terminal ② Catalog Number	Standard Spade Terminal ③ Catalog Number	Logic Level Pressure Terminal ② Catalog Number	Logic Level Spade Terminal ③ Catalog Number
Blank No Plunger	1NC	Stack up to six blocks (six circuits) unless otherwise noted.	**10250T51C**	**10250T59C**	**10250T51EC**	**10250T59EC**
Blank No Plunger	1NO	Stack up to six blocks (six circuits) unless otherwise noted.	**10250T53C**	**10250T60C**	**10250T53EC**	**10250T60EC**
	NO-NC	Stack up to six blocks (12 circuits) unless otherwise noted.	**10250T1C**	**10250T40C**	**10250T1EC**	**10250T40EC**
	2NC	Stack up to six blocks (12 circuits) unless otherwise noted.	**10250T3C**	**10250T42C**	**10250T3EC**	**10250T42EC**
	2NO	Stack up to six blocks (12 circuits) unless otherwise noted.	**10250T2C**	**10250T41C**	**10250T2EC**	**10250T41EC**
Special Function Blocks ③						
Blank No Plunger	LONC	Late opening NC. Stack up to six blocks (six circuits) unless otherwise noted.	**10250T71C** ④	—	**10250T71EC** ④	—
	ECNO-NC	Early closing NO and standard NC. Stack up to six blocks unless otherwise noted.	**10250T47C** ④⑤	—	**10250T47EC** ④	—
	ECNO-NO	Early closing NO and standard NO. Stack up to four blocks unless otherwise noted.	**10250T57C** ④⑤	—	**10250T57EC** ④	—
	2LONC	Two late opening NC contacts. Stack up to six blocks unless otherwise noted.	**10250T45C** ④	—	**10250T45EC** ④	—
	LONC-ECNO	Overlapping contacts. Stack up to four blocks unless otherwise noted.	**10250T55C** ④⑤	—	**10250T55EC** ④	—

Notes

① All 10250T contact blocks shown are suitable for use on standard 10250T and E34 operators. These contact blocks are not suitable for Class I Division 2 type 10250T or E34 devices.

② To order amber contact blocks with fingerproof shrouds, change suffix to **CP** in the catalog number e.g. 10250T51**CP**. Not available with spade terminals.

③ Contact blocks with spade terminals are limited to a maximum of one contact block per operator and minimum spacing between devices is 2.5 in (63.5 mm). Not suitable for use in 10250T or E34 enclosures. Also available in amber housing. Not available with fingerproof shrouds.

④ Special function contact blocks are not suitable for use with roto-push operators, three-position push-pull operators, or four-position selector switches.

⑤ ECNO contact blocks are not suitable for use with two-position joysticks or when operators are used with padlock attachments.

Replacement Parts

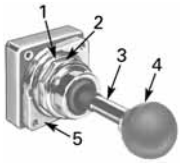
Replacement Lamps—For 10250T Illuminated Operators

Mfg. Lamp Type	Voltage	Base Style	Application	Part Number
120MB	120V	T 3-1/4 bayonet	10250T resistor indicating light	**28-3044**
#267	6.3V	T 3-1/4 bayonet	10250T flasher	**10250ED986-4**
#755	6.3V	T 3-1/4 bayonet	10250T transformer, PresTest and full voltage	**28-2202**
#756	12V	T 3-1/4 bayonet	10250T full voltage	**28-5184**
#757	24V	T 3-1/4 bayonet	10250T full voltage	**28-5185**
#1828	32V	T 3-1/4 bayonet	10250T full voltage	**28-5186**
#1835	55V	T 3-1/4 bayonet	10250T resistor	**28-5187**
NE48	120V	T 4-1/2 bayonet	10250T neon	**28-494**
NE51H-R22	120V	T 3-1/4 bayonet	10250T neon	**28-3754**
NE51H-R68	240V	T 3-1/4 bayonet	10250T neon	**28-3755**

Standard LED Lamp

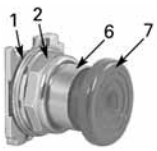
Replacement LED Lamps—For 10250T, E34 and E22 Units

Voltage	Color	Continuous AC/DC Catalog Number	Flashing AC Catalog Number	Flashing DC Catalog Number
6–12V	Red	**E22LED612RN**	**E22LED006RAF**	**E22LED006RDF**
	Orange	**E22LED612ON**	**E22LED006OAF**	**E22LED006ODF**
	Yellow	**E22LED612YN**	**E22LED006YAF**	**E22LED006YDF**
	Green	**E22LED612GN**	**E22LED006GAF**	**E22LED006GDF**
	Blue	**E22LED612BN**	**E22LED006BAF**	**E22LED006BDF**
	White	**E22LED612WN**	**E22LED006WAF**	**E22LED006WDF**
24V	Red	**E22LED024RN**	**E22LED024RAF**	**E22LED024RDF**
	Orange	**E22LED024ON**	**E22LED024OAF**	**E22LED024ODF**
	Yellow	**E22LED024YN**	**E22LED024YAF**	**E22LED024YDF**
	Green	**E22LED024GN**	**E22LED024GAF**	**E22LED024GDF**
	Blue	**E22LED024BN**	**E22LED024BAF**	**E22LED024BDF**
	White	**E22LED024WN**	**E22LED024WAF**	**E22LED024WDF**
48V	Red	**E22LED048RN**	**E22LED048RAF**	**E22LED048RDF**
	Orange	**E22LED048ON**	**E22LED048OAF**	**E22LED048ODF**
	Yellow	**E22LED048YN**	**E22LED048YAF**	**E22LED048YDF**
	Green	**E22LED048GN**	**E22LED048GAF**	**E22LED048GDF**
	Blue	**E22LED048BN**	**E22LED048BAF**	**E22LED048BDF**
	White	**E22LED048WN**	**E22LED048WAF**	**E22LED048WDF**
60V	Red	**E22LED060RN**	**E22LED060RAF**	**E22LED060RDF**
	Orange	**E22LED060ON**	**E22LED060OAF**	**E22LED060ODF**
	Yellow	**E22LED060YN**	**E22LED060YAF**	**E22LED060YDF**
	Green	**E22LED060GN**	**E22LED060GAF**	**E22LED060GDF**
	Blue	**E22LED060BN**	**E22LED060BAF**	**E22LED060BDF**
	White	**E22LED060WN**	**E22LED060WAF**	**E22LED060WDF**
120V	Red	**E22LED120RN**	**E22LED120RAF**	**E22LED120RDF**
	Orange	**E22LED120ON**	**E22LED120OAF**	**E22LED120ODF**
	Yellow	**E22LED120YN**	**E22LED120YAF**	**E22LED120YDF**
	Green	**E22LED120GN**	**E22LED120GAF**	**E22LED120GDF**
	Blue	**E22LED120BN**	**E22LED120BAF**	**E22LED120BDF**
	White	**E22LED120WN**	**E22LED120WAF**	**E22LED120WDF**



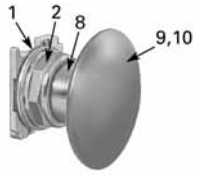
Two-Position Joystick Operator

Flush Head Pushbutton Operator



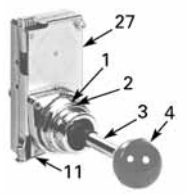
Mushroom Head Pushbutton Operator

Mushroom Head Operator with Padlock Attachment



Jumbo Mushroom Head Operator

Knob-Operated Selector Switch Operator

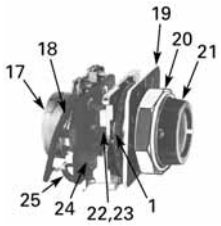


Four-Position Joystick Operator (without Latch)

Illuminated Pushbutton Operator

Full Voltage, Resistor and Transformer Type Illuminated Selector Switch

Transformer Type Indicating Light



Potentiometers

10250T Style Operator Replacement Parts

Item No.	Description	No. Req.	Part Number
1	Gasket	1	**16-1548**
2	Mounting nut	1	**15-1530**
3	Handle	1	**24-5045**
4	Knob	1	**53-3157**
	Knob (not shown) for joystick operator with latch	1	**53-3159**
5	Common gate (supplied with operator)	2	**16-3400**
6	Set screw (#6-32 x 0.250 in long hollow hex)	2	**11-2014**
7	Mushroom head button (includes [2] Item 6)	1	**As Req. Below**
	Black	—	**53-1317**
	Red	—	**53-1317-2**
	Yellow	—	**53-1317-3**
	Green	—	**53-1317-4**
	Blue	—	**53-1317-22**
8	Set screw (#10-32 x 0.250 in long hollow hex)	2	**11-544**
9	Jumbo mushroom head button (aluminum—includes [2] Item 8)	1	**As Req. Below**
	Red	—	**53-1317-9**
	Black	—	**53-1317-10**
	Yellow	—	**53-1317-11**
	Green	—	**53-1317-12**
10	Jumbo mushroom head button (aluminum—red EMERG. STOP) does not include Item 8	1	**53-1349-18**
11	Position gate:		
	Two-position	1	**54-7278**
	Three-position	1	**54-7173**
	Four-position	1	**54-12278**
	Eight-position	1	**54-12279**
12	Mounting screw (#6-32 x 0.710 in long)	2	**10250TA79**
	Washer	2	**16-2038**
13	Terminal screw and lug (captive)	Req.	**80-5502KIT**
14	Gasket (supplied with basic unit)	1	**32-803**
15	Round head screw (#4-40 x 0.344 in long) (supplied with basic unit)	2	**11-4553**
16	Mounting screw	2	**11-1632**
17	Simple potentiometer (does not include items 18, 28 or 29)	1	**As Req. Below**
	1,000 ohms	—	**41-782-2**
	2,500 ohms	—	**41-782-3**
	5,000 ohms	—	**41-782-10**
	10,000 ohms	—	**41-782-4**
	25,000 ohms	—	**41-782-5**
	50,000 ohms	—	**41-782-6**
18	Connector (includes screw and lug)	2	**25-1851**
19	Indicating plate	1	**As Req. Above**
	Standard size (without legend)	—	**30-4460**
	Large size (specify legend)	—	**10250TR30**
20	Retaining nut	1	**15-1547**
21	Knob	1	**53-1314**
	Socket set screw (#6-32 x 0.250 in long)	2	**11-2014**
22	Coupling	1	**29-3749-2**
23	Set screw (#6-32 x 0.188 in long)	1	**11-1199**
24	Spacer	2	**56-1066-18**
25	Connector (includes screw and lug)	1	**25-1851-2**
26	Mounting nut	1	**15-1938**
27	Four-position joystick operating mechanism (complete)	1	**24-6565**
28	Four-position joystick operating mechanism (not shown) (with latch) complete	1	**24-6565-2**
29	Spring loaded latch	1	**52-1214-2**
30	Hand operated latch	1	**52-913-3**

Technical Data and Specifications

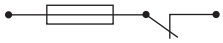
Mechanical Ratings

Description	Specification
Frequency of Operation	
All pushbuttons	6000 operations/hr.
Key and lever selection switches	3000 operations/hr.
Auto-latch devices	1200 operations/hr.
Life	
Pushbuttons	10 x 10^6 operations
Contact blocks	10 x 10^6 operations
PresTest units	10 x 10^6 operations
Lever and key selector switches	0.25 x 10^6 operations
Twist to release pushbuttons	0.3 x 10^6 operations
Shock Resistance	
Duration	20 ms ≥5g

General Specifications

Description	Specification
Climate Conditions	
Operating temperature	1° to 150°F (–17° to 66°C)
Storage temperature	–40° to 176°F (–40° to 80°C)
Altitude	6,562 ft (2,000m)
Humidity	Max. 95% RH at 60°C
Terminals	
Marking	NC-NO on the contact block to meet the NEMA requirements. Dual marking system 1–2 for normally closed, 3–4 for normally open to meet BS5472 (Cenelec EN50 005).
Clamps	Terminals are saddle clamp type for 1 x 22 AWG (0.34 mm^2) to 2 x 14 AWG (2.5 mm^2) conductors
Torque	7 lb-in (0.8 Nm)
Degree of protection against direct electrical contact	IP2X with fingerproof shroud
Light Units	
Transformers	Will withstand short-circuit for 1 hour per IEC 60997-5-1
Bulbs—average life:	
Transformer type	20,000 hrs.
Resistor/direct voltage type	2500 hrs. minimum at rated voltage
LED	60,000 to 100,000 hrs.

Electrical Ratings

Description	Specification
Insulation	U_i = 660 Vac or Vdc
Thermal	I_{th} = 10A
Short Circuit Coordination to IEC/EN 60947-5-1	
Rated conditional short circuit current	1 kA
Fuse type 	GE power controls TIA 10, red spot type gG, 10A, 660 Vac, 460 Vdc, BS88-2, IEC 60269-2-1
UL rating	A600, P600
AC load life duty cycle 1200 operations/hour	
10A	110V pf 0.4—1 x 10^6 operations
5A	250V pf 0.4—1 x 10^6 operations
2A	600V pf 0.4—1 x 10^6 operations
Switching capacity	
AC 15 rated make/break (11 x I_e at 1.1 x U_e)	
6A	120V pf 0.3
4A	240V pf 0.3
2A	660V pf 0.3
DC13 rated make/break (1.1 x I_e at 1.1 x U_e)	
1.0A	125V L/R ≥0.95 at 300 ms
0.55A	250V L/R ≥0.95 at 300 ms
0.1A	660V L/R ≥0.95 at 300 ms
10A	110V pure resistive
Maximum ratings for logic level and hostile atmosphere application	
Maximum amperes	0.5A
Maximum volts	120 Vac/Vdc

Electrical Ratings—Contact Block

	50 Vac or 60 Hz				Vdc		
Description	**120**	**240**	**480**	**600**	**24/28**	**125**	**250**
Meet or Exceed NEMA Rating Designations A600, A300 and B300 for AC and P600 for DC							
Make and emerg. interrupting capacity (amp)	60	30	15	12	5.7	1.1	0.55
Normal load break (amp)	6	3	1.5	1.2	5.7	1.1	0.55
Thermal current (amp)	10	10	10	10	5.0	5.0	5.0
Voltamperes:							
Make and emerg. interrupting capacity	7200	7200	7200	7200	138	138	138
Normal load break	720	720	720	720	138	138	138

Mounting Options

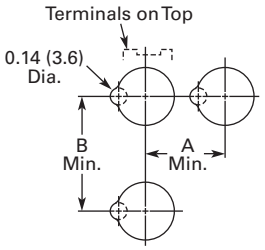
Panel Thickness

- Minimum: 0.06 in (1.6 mm)
- Maximum: 0.25 in (8 mm) including legend plate
- Maximum can be increased to 0.375 in (15.9 mm) using optional retaining nut
  - Indicating light: 10250TA30
  - Pushbutton/selector switch: 10250TA31

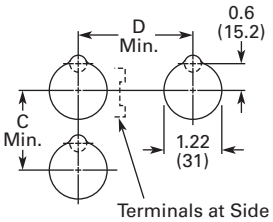
Mounting Matrix

Legend Plate	Dimensions in Inches (mm) A	B	C	D
Small	1.63 (41.3)	2.25 (57.2)	2.25 (57.2)	1.63 (41.3)
Medium	1.75 (44.5)	2.25 (57.2)	2.25 (57.2)	1.75 (44.5)
Large	2.25 (57.2)	2.25 (57.2)	2.25 (57.2)	2.25 (57.2)

Mounting Options in Inches (mm)



Horizontal Mounting

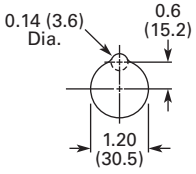


Vertical Mounting

Horizontal mounting means terminals are located top and bottom of contact block.
Vertical mounting means terminals are left and right of contact block.
This allows close spacing of adjacent operators with easy access to terminals.

Locating nib hole or notch is 0.14 in (3.6 mm) #29 drill.

Drilling Dimensions in Inches (mm)

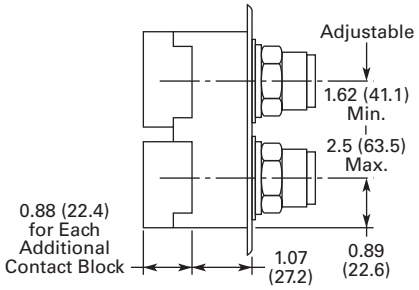


1

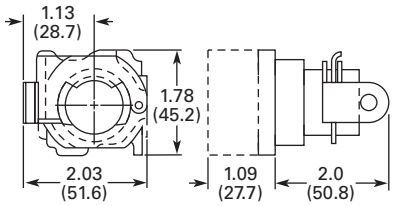
Dimensions

Approximate Dimensions in Inches (mm)

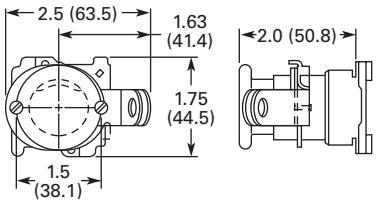
Mechanically Interlocked Pushbutton Operators



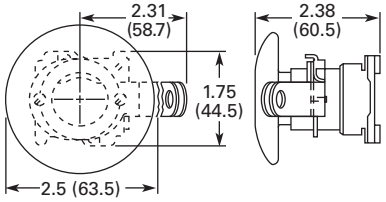
Lockout Pushbutton Operator Padlockable in the Down Position



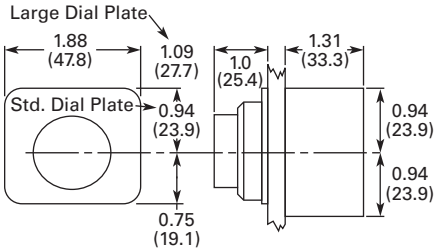
Lockout Pushbutton Operator Padlockable in the Up Position—Mushroom Head



Lockout Pushbutton Operator Padlockable in the Up Position—Jumbo Mushroom Head

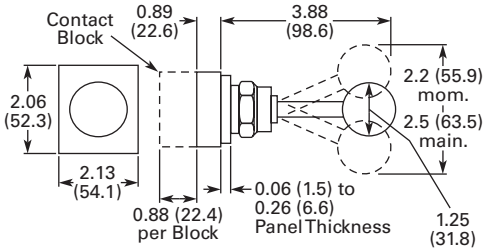


Potentiometer

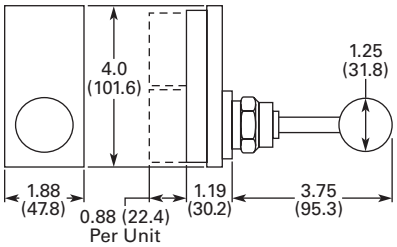


Potentiometer	A	B	C
2 watt single	1.31 (33.3)	0.94 (23.9)	0.94 (23.9)
25 watt—up to 25 mohms	2.38 (60.5)	1.19 (30.2)	0.81 (20.6)
50 mohms	2.56 (65.0)	1.69 (42.9)	1.25 (31.8)

Two-Position Joystick Operator

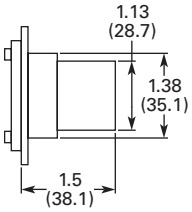


Four-Position Joystick Operator

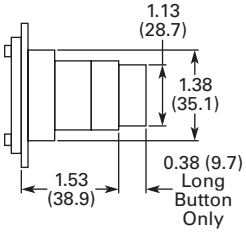


Approximate Dimensions in Inches (mm)

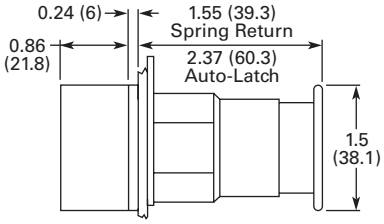
Key Operated Pushbutton Operator



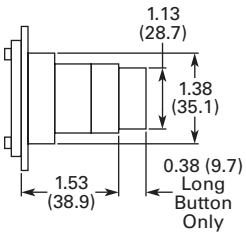
Operator and Cam



Latch-In, Twist-to-Release Operator Only with Button



Special Rotor Latch



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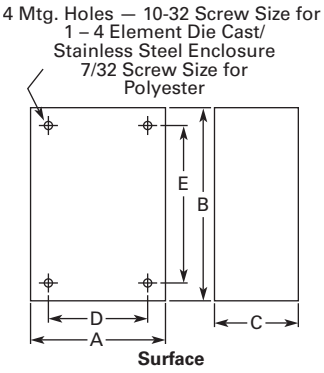
Approximate Dimensions in Inches (mm)

Surface Mounting

Die Cast, Polyester and Stainless Steel Enclosures



Number of Elements	Element Arrangement	Wide A	High B	Deep C	Mounting D	E	Conduit Entrance
Die Cast							
1	In-line	3.88 (98.6)	4.00 (101.6)	3.00 (76.3) ①	2.69 (68.3)	3.25 (82.6)	3/4
2		3.88 (98.6)	5.88 (149.4)	3.00 (76.3) ①	2.69 (68.3)	5.13 (130.3)	
3		3.88 (98.6)	7.75 (196.9)	3.00 (76.3) ①	2.69 (68.3)	7.00 (177.8)	1
4		3.88 (98.6)	9.63 (244.6)	3.00 (76.3) ①	2.69 (68.3)	8.88 (225.6)	
Polyester							
1	In-line	3.81 (96.8)	6.63 (168.4)	3.38 (85.9)	2.94 (74.7)	4.88 (124.0)	②
2		3.81 (96.8)	6.63 (168.4)	3.38 (85.9)	2.94 (74.7)	4.88 (124.0)	
3		3.81 (96.8)	8.88 (225.6)	3.38 (85.9)	2.94 (74.7)	7.13 (181.1)	
4		3.81 (96.8)	11.13 (282.7)	3.38 (85.9)	2.94 (74.7)	9.38 (238.3)	
Stainless Steel							
1	In-line	3.00 (76.2)	3.50 (88.9)	3.00 (76.2)	1.50 (38.1)	4.25 (108.0)	②
2		3.50 (88.9)	6.75 (171.5)	3.00 (76.2)	1.50 (38.1)	7.50 (190.5)	
3		3.50 (88.9)	9.00 (228.6)	3.00 (76.2)	1.50 (38.1)	9.00 (228.6)	
4		3.50 (88.9)	11.25 (285.8)	3.00 (76.2)	1.50 (38.1)	12.00 (304.8)	

Notes

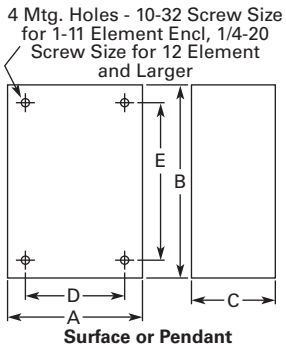
① Depth given is for two contact block deep stations. One contact block deep stations subtract 3/4 in (19.1 mm).

② No conduit entrance holes provided. Drill as required.

Approximate Dimensions in Inches (mm)

Flush Mounting

Die Cast and Stainless Steel Covers Only



Surface or Pendant

Number of Elements	Wide A	High B	Deep C	Mounting D	E
Die Cast					
1	3.88 (98.6)	4.00 (101.6)	0.25 (6.4) ①	3.50 (88.9)	3.63 (92.2)
2	3.88 (98.6)	5.88 (149.4)	0.25 (6.4) ①	3.50 (88.9)	5.50 (139.7)
3	3.88 (98.6)	7.75 (196.9)	0.25 (6.4) ①	3.50 (88.9)	6.00 (152.4)
4	3.88 (98.6)	9.63 (244.6)	0.25 (6.4) ①	3.50 (88.9)	9.25 (235.0)
Stainless Steel					
1	5.00 (127.0)	5.00 (127.0)	2.50 (63.5) ②	3.25 (82.6)	1.88 (47.8)
2	5.00 (127.0)	6.88 (174.8)	2.50 (63.5) ②	3.25 (82.6)	3.63 (92.2)
3	5.00 (127.0)	8.63 (219.2)	2.50 (63.5) ②	3.25 (82.6)	5.50 (139.7)
4	5.00 (127.0)	10.50 (266.7)	2.50 (63.5) ②	3.25 (82.6)	7.25 (184.2)

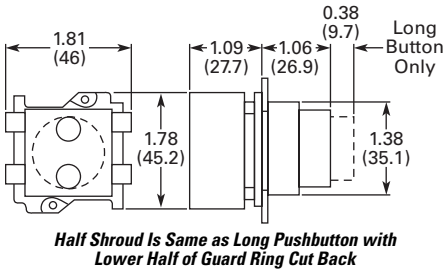
Notes

① Depth given is for flat cover. Deep cover is 3/4 in (19.1 mm) deeper.

② Depth given includes pull box.

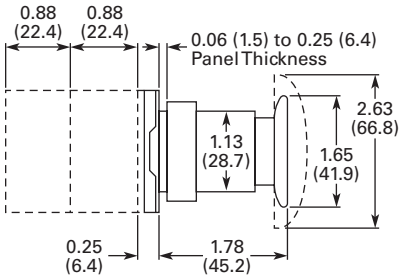
Approximate Dimensions in Inches (mm)

Flush and Long Pushbutton Half Shroud

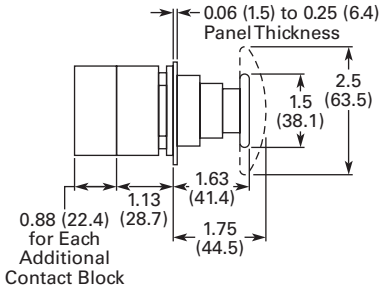


Half Shroud Is Same as Long Pushbutton with Lower Half of Guard Ring Cut Back

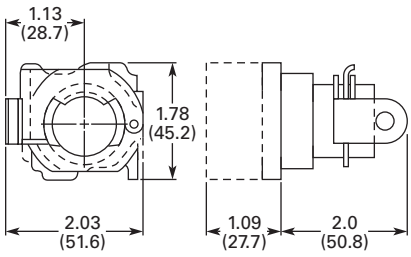
Push-Pull Switch



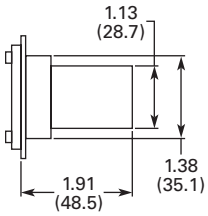
Mushroom and Jumbo Head Pushbutton



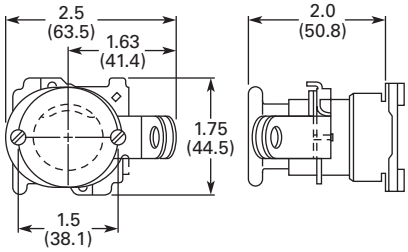
Flush Pushbutton Operator with Padlock Attachment



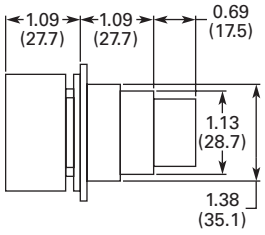
Pushbutton with Cylinder Lock



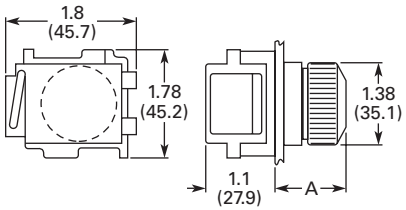
Mushroom Head Pushbutton Operator with Padlock Attachment



Illuminated Pushbutton

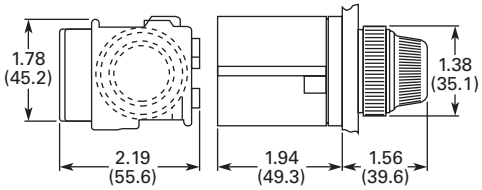


Indicating Light—Transformer Type

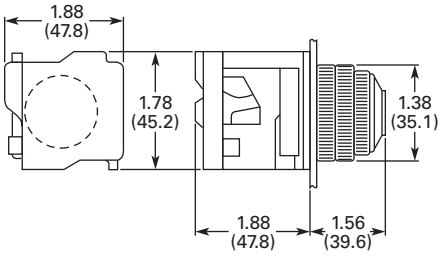


Approximate Dimensions in Inches (mm)

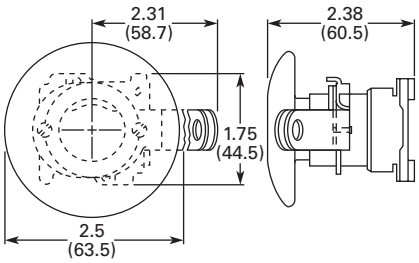
PresTest Indicating Light—Transformer Type



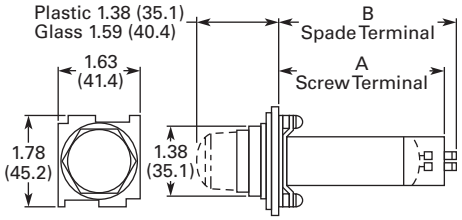
PresTest Indicating Light—Resistor Type



Jumbo Mushroom Head Pushbutton Operator with Padlock Attachment

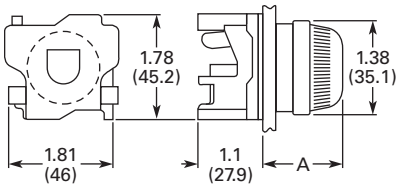


Master Test Indicating Light



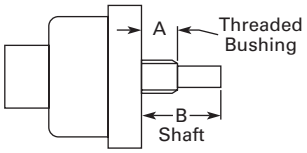
Description	B	C
Relay type	4.38 (111.2)	4.28 (108.7)
Solid-state type	2.94 (74.7)	2.88 (73.2)

Indicating Light—Resistor and Neon Type



Lens	A
Plastic	1.38 (35.1)
Glass	1.56 (39.6)

Potentiometer Shaft



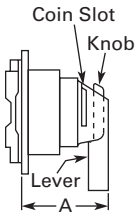
Shaft Dimensions of Potentiometer That C-H Operator Will Accept

Operator Catalog Number	A	B
10250T330	0.38 (9.7) dia. x 0.38 (9.7) long	0.25 (6.4) dia. x 0.63 (16) long

1

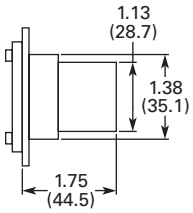
Approximate Dimensions in Inches (mm)

Coin Operated Selector Switch

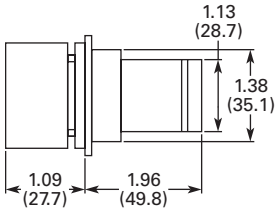


Operator	Dim. A
Knob	1.38 (35.1)
Lever	1.50 (38.1)
Coin slot	1.38 (35.1)

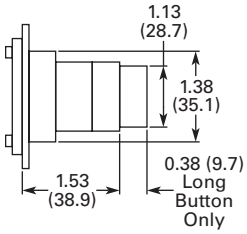
Key Operated Selector Switch



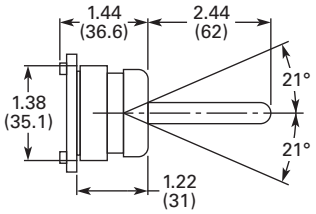
Illuminated Selector Switch



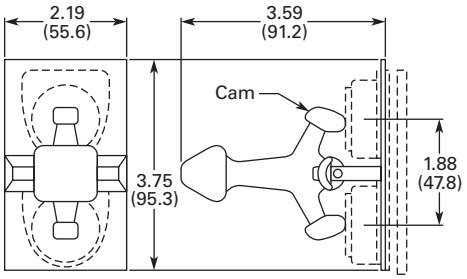
Roto-Push



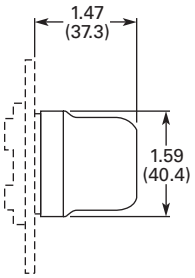
Wobble Stick Catalog No. 10250TA5



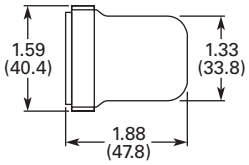
Lever Operator—For Use with Two Vertically Mounted Flush Pushbuttons Catalog No. 10250TA14



Flexible Boot—For Protecting Flush or Long Pushbutton Catalog No. 10250TA3 Typical

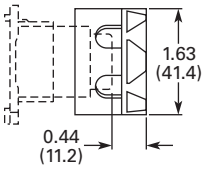


Transparent Flexible Boot—For Illuminated Pushbutton Catalog No. 10250TA25

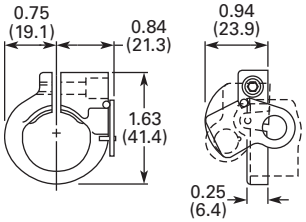


Approximate Dimensions in Inches (mm)

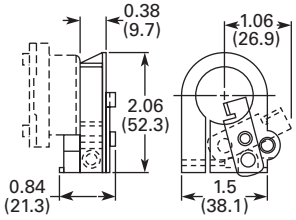
Padlock Attachment—For Knob Selector Switch Catalog No. 10250TA11



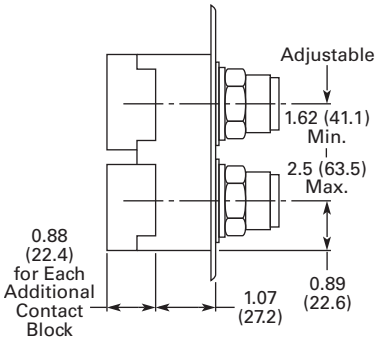
Padlock Attachment—For Flush Pushbutton Catalog No. 10250TA2



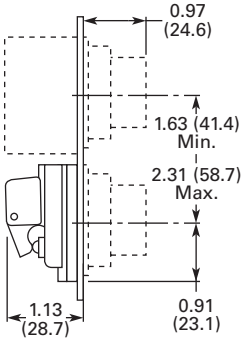
Padlock Attachment—For Extended Pushbutton Catalog No. 10250TA26



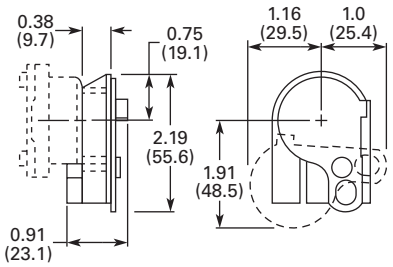
Maintained Pushbutton Catalog No. 10250TA66 Typical



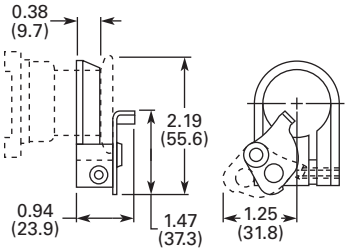
Maintained Contact Attachment Catalog No. 10250TA17 Typical



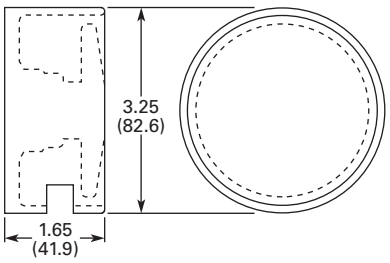
Padlock Cover Guard for Flush Pushbutton Catalog No. 10250TA36



Padlock Attachment for Maintained Push-Pull Operator Catalog No. 10250TA64



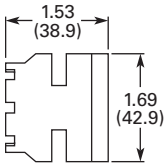
Protecting Shroud for Jumbo Mushroom Head Button Catalog No. 10250TA56



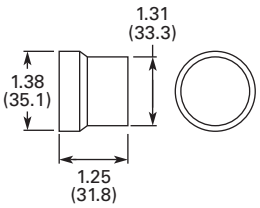
1

Approximate Dimensions in Inches (mm)

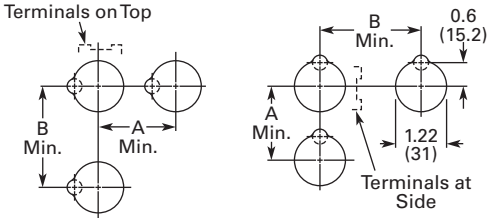
Protecting Shroud for Mushroom Head Button Catalog No. 10250TA6



Extended Retaining Nut Catalog No. 10250TA12

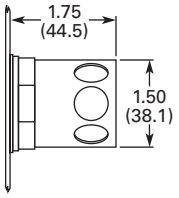


Panel Drilling and Minimum Spacing

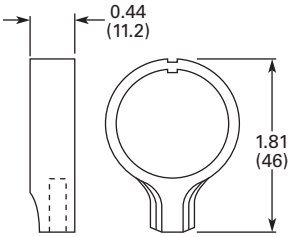


Horizontal Rows **Vertical Rows**

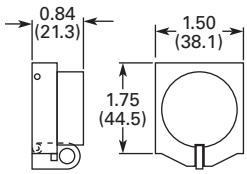
Protecting Shroud for Illuminated Pushbutton Catalog No. 10250TA15



Lever for Roto-Push Operator Catalog No. 10250TA13



Padlock Hasp or Flip-Up Guard Catalog No. 10250TA38



Legend Plate	A Min.	B Min.
1 or 2 Circuit Contact Blocks		
Small or none	1.63 (41.4)	2.25 (57.2)
Standard	1.75 (44.5)	2.25 (57.2)
Jumbo ①	2.25 (57.2)	2.25 (57.2)
Extra large	2.50 (63.5)	2.60 (66.0)
4 Circuit Contact Block 10250T44		
Small or none	1.88 (47.8)	2.25 (57.2)
Standard	1.88 (47.8)	2.25 (57.2)
Jumbo ①	2.25 (57.2)	2.25 (57.2)
Extra large	2.50 (63.5)	2.60 (66.0)

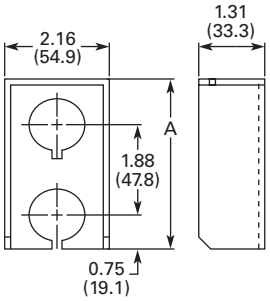
Notes

Locating nib hole or notch is 1.36–1.4 in (34.5–35.6 mm) #29 drill.

① If jumbo plates are to be placed one above the other vertically, add 0.13 (3.3) to minimum dimensions listed.

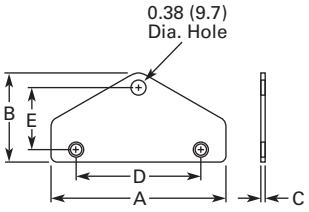
Approximate Dimensions in Inches (mm)

Multiple Button Guard



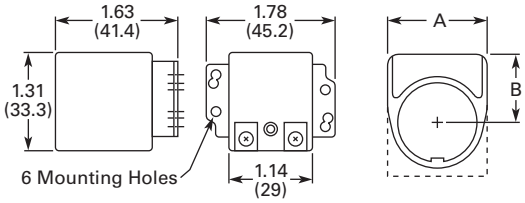
Number of Elements	A
2	4.0 (101.6)
3	5.88 (149.4)
4	7.88 (200.2)
7	13.38 (339.9)

Chain Hook Bracket



Enclosure Size (No. of Elements)	Wide A	High B	Deep C	Mounting D	E
2, 3 and 4	3.75 (95.3)	1.94 (49.3)	0.13 (3.3)	2.69 (68.3)	1.38 (35.1)
6 and 7	4.0 (101.6)	2.19 (55.6)	0.13 (3.3)	2.88 (73.2)	1.63 (41.4)

Master Test Module, Flasher Module and Legend Plate



Master Test Module, Flasher Module | **Legend Plate**

Legend Plate	A	B
1/2 Round Legend Plates		
Small	1.56 (39.6)	0.91 (23.1)
Standard	1.59 (40.4)	1.07 (27.2)
Jumbo	2.06 (52.3)	1.53 (38.9)
Square Legend Plates		
Small	1.59 (40.4) sq.	0.90 (22.9)
Standard	1.75 (44.5) sq.	1.06 (26.9) ①
Jumbo	2.19 (55.6) sq.	1.50 (38.1)
Extra large	2.44 (62.0) sq.	1.63 (41.4)

Notes

Locating nib hole or notch is 1.36–1.4 in (34.5–35.6 mm) #29 drill.

① For plastic legend plate, Dimension B is 1.12 (28.4).