



30.5 mm Pushbuttons T series & E34

EATON

Powering Business Worldwide

Control and indication

Eaton 30.5 mm pushbuttons



Eaton's 30.5mm pushbuttons are versatile, durable, rugged, & stand the test of time in even the most hostile environments.

The range includes momentary, illuminated & mushroom head pushbuttons, selector switches, indicating lights & push-pull units.

The T Series Chrome 30.5 mm pushbutton line features a zinc die cast construction with chrome-plated housing & mounting nut. The same durable construction is also available with the corrosive resistant E34 line of pushbuttons.

All operators are IP66 rated to protect against dirt & moisture. Additionally, most devices come complete with grounding hardware to prevent electrical shock. Rugged metal construction, handsome appearance, extra features, & competitive prices makes Eaton's 30.5mm range of pushbuttons the logical choice for OEM's & board builders looking for value, durability, & reliability.

Features

- Die-cast metal housings create robust & heavy-duty devices that can endure repetitive & heavy handed use in industrial environments.
- IP66 rated for protection against dirt & moisture.
- The corrosion resistant E34 range can withstand extremely harsh environments.
- Contact blocks are colour coded (green for N.O. & red for N.C.) to permit easy identification & troubleshooting.
- Up to 6 contact blocks can stack on each other, allowing for up to 12 circuits per operator.
- Heavy-duty zinc die cast construction
- Enclosed silver contacts with reliability nibs
- 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.
- Diaphragm seals with drainage holes
- Grounding nibs on the operator casing.
- Logic level contact blocks have palladium tipped contacts to ensure circuit integrity down to 1mA @ 5V AC/DC.
- Bright, long-lasting & vibration-proof LED's are available for illuminated operators.

Standards

- CE EN60947-5-1
- UL 508 — File No. 131568
- CSA C22.2 No. 14 — File No. LR68551

Contact blocks

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 improve performance in dry circuit, corrosive, fine dust & other contaminated atmospheres. Under normal environmental conditions, the minimum operational voltage is 5V & 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. Diaphragm Seal with Drainage Holes 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 every time.

Grounding nibs

Most operators have green earthing screws to prevent electrical shock. Operators also have "grounding nibs" — four metal points on the operator casting designed to bite through most paints & other coatings on metal panels to enhance the ground connection when the operator is securely tightened.

Standard Pushbuttons

Chrome, T Series pushbuttons

Chrome

The 30.5 mm pushbutton line features a zinc die cast construction with chrome-plated housing & mounting nut.

Applications for the chrome operators:

- Aggregate
- Automotive
- Construction Vehicles
- Industrial Equipment
- Material Handling
- Metal Forming
- Metal Stamping
- Mining
- Petrochemical
- Pulp & Paper

Corrosion Resistant, E34 Pushbuttons

Corrosion resistant

Eaton's Corrosion Resistant E34 Range of 30.5 mm pushbuttons features the same rugged die cast construction of our T Series with an additional two-layer 100% solid thermosetting cathodic epoxy coating. This coating provides a smooth flat black smooth, flat back, corrosion resistant surface that has passed a demanding 600 hour salt spray test.

Applications for corrosion resistant operators:

- Automotive
- Chemical Plants
- Food & Beverage
- Food Service Equipment
- Industrial Equipment
- Mining
- Pulp & Paper
- Waste Water Treatment Plants

Ultraviolet light

E34 cathodic coating is not recommended for use in applications where exposure to ultraviolet light exists, use chrome operators.



Standard Pushbuttons, flush, extended & half-shrouded buttons,



Flush button

Colour	Chrome	Corrosion resistant
● Black	T101	E34PB1
● Red	T102	E34PB2
● Green	T103	E34PB3
● Yellow	T104	E34PB4
● Grey	T105	-
○ White	T106	E34PB5
● Brown	T107	-
● Blue	T108	E34PB6

Extended button

Colour	Chrome	Corrosion resistant
● Black	T111	E34EB1
● Red	T112	E34EB2
● Green	T113	E34EB3
● Yellow	T120	E34EB4
○ White	T116	-
● Blue	T118	E34EB6

Half-shrouded

Colour	Chrome	Corrosion resistant
● Black	T501	E34EVB1
● Red	T502	E34EVB2
● Green	T503	E34EVB3
● Yellow	T504	E34EVB4
● Blue	T508	E34EVB6

Base mounted contact blocks

Description	Item no.
1NO 1NC	T6
2NO	T7
2NC	T8
1NC	T52
1NO	T54
1LONC 1ECNO	T56
1LONC 1ECNO	T58

Logic level contact blocks

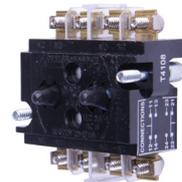
Description	Item no.
1NO 1NC	T1E
2NO	T2E
2NC	T3E
1NC	T51E
1NO	T53E

Standard contact blocks

Description	Item no.
1NO 1NC	T1P
2NO	T2P
2NC	T3P
1NC	T51P
1NO	T53P
2NO 2NC	T44
1LONC 1ECNO	T55
1ECNO 1NO	T57
1LONC	T71
2LONC	T45



T1P



T44



T57

NO = Normally Open, NC = Normally Closed, LONC = Late Open Normally Closed, ECNO = Early Close Normally Open, Logic Level contact blocks have palladium contacts.

STEP 1



Select Pushbutton operator above.

STEP 2



Select contact block above.

Control and indication

Eaton 30.5 mm pushbuttons

Mushroom operators momentary



Mushroom button 38.1mm

Colour	Chrome	Corrosion resistant
● Black	T121	E34LB1
● Red	T122	E34LB2
● Green	T123	E34LB3
● Yellow	T124	E34LB4
● Blue	T129	E34LB6

Palm head button 63.5mm zinc

Colour	Chrome	Corrosion resistant
● Black	T171	E34JB1
● Red	T172	E34JB2
● Red (Emergency Stop)	T17213	E34JB2N
● Green	T173	E34JB3

Accessories for complete push-pull operators*

Description	Item no.
Padlock Assembly Kit	6-A474
Replacement Locking Tongue	6-A475
Padlock with Chain	52-A1617

Legend Plates

Engraving	Material	Item no.
STOP Pull to reset	Metal	D2179-53CP
STOP Pull to reset	Plastic	E34LP179

* For use with push-pull mushroom operators maintained.

STEP 1



Select Pushbutton operator above.

STEP 2



Select contact block. (previous page)

Mushroom operators components



Bare shaft operator for mushroom or palm pushbutton

Description	Item no.
Momentary, Spring Return	T100
Auto-Latch - Twist Base to Release	T140

38.1 Mushroom button for bare shaft operators

Colour	Item no.
● Black	T281
● Red	T282
● Green	T283
● Yellow	T284
● Blue	T288

63.5Mm palm button (anodized aluminium) for bare shaft operators

Colour	Item no.
● Black	T291
● Red	T292
● Green	T293

STEP 1



Select bare shaft operator above.

STEP 2



Select mushroom button above

STEP 3



Select contact block. (previous page)

Push-pull mushroom operators maintained



T129P



T176P



T129M



E34129S

Push-pull operators complete padlockable

Head diameter	Colour	Material	Chrome	Corrosion resistant
45mm	Red	Zinc	T129P	E34129P
63.5mm	Red	Zinc	T176P	E34176P

Push-pull operators complete non-padlockable

Head diameter	Colour	Material	Chrome	Corrosion resistant
38mm	Red	Plastic	T129S	E34129S
45mm	Red	Zinc	T129M	E34129M
63.5mm	Red	Zinc	T176M	E34176M

STEP 1



Select Pushbutton operator above.

STEP 2



Select contact block.
(previous page)

Push-Pull operators components



Push-pull operators

Description	Position	Chrome	Corrosion resistant
Maintained Push & Pull	2	T5	E34GDB
Momentary Push & Pull	3	T4	E34GEB
Maintained Push & Momentary Pull	3	T9	E34GFB

38.1mm mushroom button for push-pull operators

Description	Colour	Item no.
Operator Head	● Black	E34C1
Operator Head	● Red	E34C2
Operator Head	● Red (Emergency Stop)	10250TB63
Operator Head	● Green	E34C3

63.5mm palm button (anodized aluminium) for push-pull operators

description	Colour	Item no.
Operator Head	● Red	E34J2
Operator Head	● Red (Emergency Stop)	E34J2N8

STEP 1



Select push-pull operator above.

STEP 2



Select mushroom button above

STEP 3

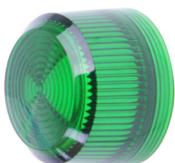


Select contact block.
(previous page)

Control and indication

Eaton 30.5 mm pushbuttons

Illuminated operators, indicating light lenses



Plastic lenses

Colour	Plastic
● Red	E34H2
● Green	E34H3
● Amber	E34H9
○ Clear	E34H0
● Yellow	E34H4
○ White	E34H5
● Blue	E34H6

Glass lenses (chrome)

colour	Glass (chrome)
● Red	TC7N
● Green	TC8N
● Amber	TC9N
○ Clear	TC11N
○ White	TC12N
● Blue	TC10N

Glass lenses (corrosion resistant)

Colour	Glass (corrosion resistant)
● Red	E34G2
● Green	E34G3
● Amber	E34G9
○ Clear	E34G0
● Yellow	E34G4
○ White	E34G5
● Blue	E34G6

Indicating Light Units



Direct voltage indicating light unit

Description	Voltage	Chrome	Corrosion resistant
Direct voltage - order bulb separately	6-240V	T197N	E34FB197L*

See next page for bulbs.
Can be used with LEDs.

*LED only 6-240V

Resistor type indicating light units

Description	Voltage	Chrome	Corrosion resistant
Resistor Type 120V bulb supplied	110/120	T201N	E34RB120
	220/240	T202N	E34RB240

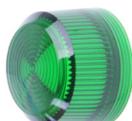
Incandescent bulb indicating light units

Description	Voltage	Chrome	Corrosion resistant
With incandescent bulb supplied	6	T197N/2	E34FB06
	12	T197N/3	E34FB12
	24	T197N/4	E34FB24
	48	T197N/5	E34FB48
	110	T197N/7	E34FB110
	240	T197N/8	E34FB240

Transformer type indicating light units

Description	Voltage	Chrome	Corrosion resistant
Transformer Type 6V Secondary bulb supplied	110/120	T181N	E34TB120
	220/240	T182N	E34TB240
	380/415	T183N	E34TB380
	440/480	T184N	E34TB480
	550/600	T185N	E34TB600
	415	-	E34TB415

STEP 1



Select a lens from above.

STEP 2



Select indicating light above

STEP 3



Select bulb (if not supplied)
(next page)

STEP 4



Select contact block.
(previous page)

Illuminated operators, illuminated pushbutton lenses



Plastic illuminated lenses

Colour	Plastic
● Red	E34V2
● Green	E34V3
● Amber	E34V9
○ Clear	E34V0
● Yellow	E34V4
○ White	E34V5
● Blue	E34V6

Glass illuminated lenses (chrome)

Colour	Glass (chrome)
● Red	TC13N
● Green	TC14N
● Amber	TC15N
○ Clear	TC17N
○ White	TC18N
● Blue	TC16N

Glass illuminated lenses (chrome) (corrosion resistant)

Colour	Glass (chrome)
● Red	E34P2
● Green	E34P3
● Amber	E34P9
○ Clear	E34P0
● Yellow	E34P4
○ White	E34P5
● Blue	E34P6

Press-to-test light units



Illuminated pushbutton light units



Press-To-Test Indicating Lights - Direct Voltage

Description	Supply voltage	Chrome	Corrosion resistant
Direct voltage order bulb separately	6-240V	T230N	E34FPB
	380/415	T413	E34XB380

See next page for bulbs.
Can be used with LEDs.

Illuminated pushbuttons - transformer type

Description	Supply voltage	Chrome	Corrosion resistant
Transformer type 6V secondary bulb supplied	110/120	T411	E34XB120
	220/240	T412	E34XB1240
	380/415	T413	E34XB380
	440/480	T414	E34XB480

Direct Voltage Indicating Light Unit

Description	Supply voltage	Chrome	Corrosion resistant
Direct voltage - order bulb separately	6 - 240V	T441	E34CB 497L*

See next page for bulbs.
Can be used with LEDs.

*LED only 6-240V

Press-to-test indicating lights - transformer type

Description	Supply voltage	Chrome	Corrosion resistant
Transformer Type 6V, 1W secondary bulb supplied	110/120	T221N	E34TPB120
	220/240	T222N	E34TPB240
	380/415	T223N	E34TPB380

Press-to-test indicating lights - resistor type

Description	Supply voltage	Chrome	Corrosion resistant
Resistor Type 120V, bulb supplied	110/120	T231N	E34RPB120
	220/240	T240N	E34RPB240

STEP 1



Select a lens from above.

STEP 2



Select light from above

STEP 3



Select bulb (if not supplied)
(next page)

STEP 4



Select contact block.
(previous page)

Control and indication

Eaton 30.5 mm pushbuttons

Illuminated operators, push-pull mushroom lenses



Standard push-pull lenses

Colour	Item no.
● Red	E34M2
● Red (Emergency Stop)	E34M2N8
● Green	E34M3
● Amber	E34M9
○ Clear	E34M0
○ White	E34M5
● Blue	E34M6

Side lighted anodised aluminium lenses

Colour	Item no.
● Red	10250TC57
● Red (Emergency Stop)	10250TC63
● Green	10250TC58
● Amber	10250TC64
○ Clear	10250TC62
○ White	10250TC61
● Blue	10250TC59

Illuminated push-pull operators



Illuminated push-pull operators

Description	Supply voltage	Chrome	Corrosion resistant
Maintained Push & Pull	2	T5	E34GDB
Momentary Push & Pull	3	T4	E34GEB
Maintained Push & Momentary Pull	3	T9	E34GFB

Light units for illuminated push-pull operators



Direct voltage light modules for push-pull operators

Description	Voltage	Item no.
Direct Voltage	6-240V	10250T70

Order bulb separately - see next page for bulbs.
Can be used with LEDs.



Transformer type light modules for push-pull operators

Description	Voltage	Item no.
	110/120	10250T63
Transformer Type 6V secondary bulb supplied	220/240	10250T65
	380/415	10250T66
	440/480	10250T67



Resistor type light modules for push-pull operators

Description	Voltage	Item no.
Resistor Type 120V bulb supplied	120	10250T80
	240	10250T81

STEP 1



Select a lens from above.

STEP 2



Select push-pull operator from above

STEP 3



Select light unit from above

STEP 4



Select bulb (if not supplied)

STEP 5



Select contact block. (previous page)

Illuminated operators, bulbs



Incandescent bulbs

Supply voltage	Watts	Item no.
6.3V	0.9W	28-2225-33
24V	1.2W	28-2225-13
130V	2.2W	28-2225-24



Super bright LED bulbs

(recognisable in outdoor daylight applications - ac/dc)

Colour	6-12V	24V	120V
Red	E22LED612RN	E22LED024RN	E22LED120RN
Green	E22LED612GN	E22LED024GN	E22LED120GN
Yellow	E22LED612YN	E22LED024YN	E22LED120YN
White	E22LED612WN	E22LED024WN	E22LED120WN



Bright LED bulbs - single chip (ac/dc)

Colour	6V	12V	24V
Red	21BA9SL6R	21BA9SL12R	21BA9SL24R
Green	21BA9SL6V	21BA9SL12V	21BA9SL24V
Yellow	21BA9SL6G	21BA9SL12G	21BA9SL24G
White	21BA9SL6W	21BA9SL12W	21BA9SL24W

Bright LED bulbs - single chip (ac/dc)

Colour	110V	240V
Red	21BA9SL110R	21BA9SL240R
Green	21BA9SL110V	21BA9SL240V
Yellow	21BA9SL110Y	21BA9SL240A
White	21BA9SL110W	21BA9SL240W



Neon bulbs

Supply voltage	Colour	Item no.
110V	Clear	BA9S110N
240V	Clear	BA9S240N
240V	Green	BA9S240NG
240V	Red	BA9S240NR

Control and indication

Eaton 30.5 mm pushbuttons

Selector switch operators,

2 Position selector switches



Description (M = Maintained, S = Spring Return)	Chrome	Corrosion resistant
	T4011	E34VFB
	T4081	E34VEB

4 Position selector switches

Description (M = Maintained, S = Spring Return)	Cam code*	Chrome	Corrosion resistant
Maintained	7	T4067	E34VTB

* See cam selection chart to determine cam code.

3 Position selector switches

Description (M = Maintained, S = Spring Return)	Cam code*	Chrome	Corrosion resistant
	2	T4022	E34VGB
	3	T4023	E34VHB
	4	T4024	-
	6	T4026	-
	2	T4032	E34VJB
	3	T4033	E34VKB
	2	T4042	E34VLB
	3	T4043	E34VMB
	2	T4052	E34VNB
	3	T4053	E34VPB



E34K1

T341M



E34L1

E34A1

Selector switch knobs & levers

Knobs & levers

Description	Material	Item no.
Knob	Plastic	E34K1
	Metal	T341M
Lever	Plastic	E34L1
	Plastic	E34A1*

* For maintained operators only.

Selector switches & joystick operators, cam selection guide

Cam selection chart showing contact sequence

Item No. of contact block	Circuit ①	Position selector switch					
		2	3	3	3	3	4
		Cam code no. 1	Cam code no. 2	Cam code no. 3	Cam code no. 4	Cam code no.6	Cam code no.7
T1P	A.N.C.	XO	OXO	OXX	XOO	XOO	XOOO
	B.N.O.	OX	OOX	OOX	OXO	OXO	OXOO
T1P	A.N.O.	OX	XOX	XOO	OXX	OOX	OOXO
	B.N.C.	XO	XXO	XXO	XOX	OOX	OOOX
T2P	A.N.O.	OX	XOX	XOO	OXX	OOX	OOXO
	B.N.O.	OX	OOX	OOX	OXO	OXO	OXOO
T3P	A.N.C.	XO	OXO	OXX	XOO	XOO	XOOO
	B.N.C.	XO	XXO	XXO	XOX	OOX	OOOX

Switching angle 60° between each position. Rated for ac only. Refer to actual installation instructions given with each switch for additional switching combinations. To determine the number of the cam you require & the correct contact block, select the contact sequence desired from table above. O = contacts open, x = contacts closed. The cam number is shown at top of column. The item number of the appropriate contact block is shown in column 1. At extreme left of table.

① Each contact block contains two contact circuits. The top set of contacts is identified as 'circuit a' & the lower set as 'circuit b' is indicated in the table. The chart shows the contact arrangements with the three contact blocks available & in each operator position. Additional contacts are obtainable by stacking contact blocks up to a maximum of 6 blocks (12 circuits). A maximum of 2 can be used with cam 6.

STEP 1



Select bare shaft operator (previous page)

STEP 2

Choose cam based on contact sequence from cam selection guide table above (applies to 3 position selector switches only)

STEP 3



Select knob or lever

STEP 3



Select contact block. (previous page)

Key operated selector switches

2 Position key operated selector switches

2 Position	Cam	Key removal	Chrome	Corrosion resistant
	-	Right & Left	T15113	E34KFB3
	-	Left Only	T15712	E34KEB2

Spare key

Description	Item no.
Replacement Keys (2)	TA152

Other key codes are available contact eaton for more information.

3 Position key operated selector switches

3 Position	Cam	Key removal	Chrome	Corrosion resistant
	2	Left Right & Centre	T15227	E34KGB7
	3	Left Right & Centre	T15237	E34KHB7
	4	Left Right & Centre	T15247	-
	6	Left Right & Centre	T15267	-
	2	Right & Centre	T15325	E34KJB5
	3	Right & Centre	T15335	E34KKB5
	2	Centre Only	T15424	E34KLB4
	3	Centre Only	T15434	E34KMB4



STEP 1



Select switch operator

STEP 2

Choose cam based on contact sequence from cam selection guide table above (applies to 3 position selector switches only)

STEP 3



Select contact block. (previous page)

Control and indication

Eaton 30.5 mm pushbuttons



Selector switches & joystick operators, joystick operators

Two-Position Joystick Operators
The device mounts in the standard 30.5 mm mounting hole.

Four-Position Joystick Operators
The joystick operated control unit is intended for AC application only. The panel area required for the 4-position operator is equivalent to two standard pushbutton operators.

Latched Joystick Operators
The latch holds the lever in the centre position. The trigger latch must be released before lever can moved into any position.

2 Position joystick operator

Description	Item no.
2 position operator - Momentary Up & Down	T452

4 Position joystick operators (spring return only)

Description	Item no.
4 position - Without Latch	T450
4 position - With Latch	T460

4 Position joystick operators (maintained)

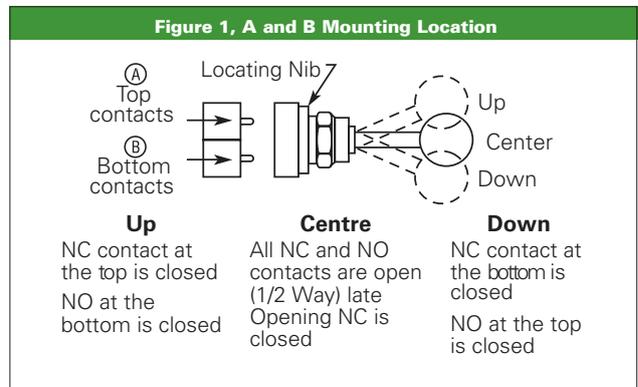
Description	Item no.
4 position - Without Latch	10250 T451_*
4 position - With Latch	10250 T461_*

*Maintained Position
For maintained position (non-spring return), locate required maintained position or positions of operating lever in the Maintained table below & add appropriate Suffix Number to the Item Number selected from the table above.

Maintained positions

Up	Down	Left	Right	Suffix No.*
X	—	—	—	1
—	X	—	—	2
—	—	X	—	3
—	—	—	X	4
X	X	—	—	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

Two-position joystick operators - contact block operation



Contact block selection & mounting

Handle position			Contact block	Mounting location	Item no.		Type	Suffix No.	
Up	Centre	Down			A	B			
			T51P	1NC			1NC		
			T45	2LONC			1NC 1NO		
			T3P	1NC 1NC			1NC 1NO		
			T45	1LONC 1LONC			1NC 1NO		
			T44	1NC			1NC		
				1NO			1NC		
				1NC			1NO		
				1NO					

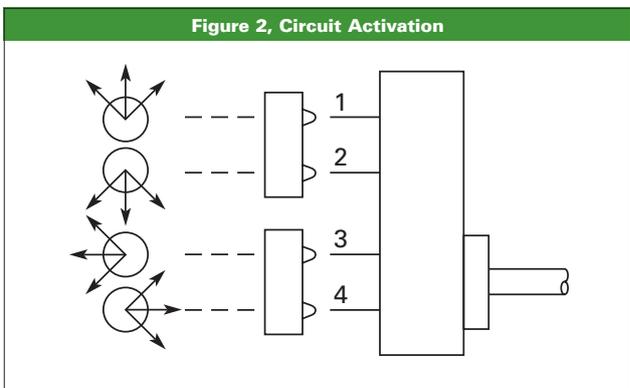
X = closed circuit, O = open circuit.

NO = Normally Open, NC = Normally Closed, LONC = Late Opening Normally Closed.

Four circuits in single block depth — rated 300V max.

Four-position joystick operators - contact block operation

Contact blocks mount directly on the back of the operator. For reliable operation, the maximum number of contact blocks that should be installed behind each operator lever is 2 (4 contacts total). Figure 2 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 in Figure 2.



Application caution

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

Pushbuttons, Control station and Enclosures

Standard pushbuttons, flush, extended & half-shrouded buttons,

Diecast aluminium enclosures

Standard

No. Of holes	Single - depth T series	Corrosion resistant
1	TN1	E34N1
2	TN2	E34N2
3	TN3	E34N3
4	TN4	E34N4

Corrosion resistant

No. of holes	Double depth T series	Corrosion resistant
1	TN11	E34N11
2	TN12	E34N12
3	TN13	E34N13
4	TN14	E34N14
6	TN15	-

1-2 Hole: 3/4 inch conduit entry hole, 2-6 hole: 1 inch conduit bottom-entry hole, 1.5 Inch unf thread IP66.



TN4

TN2

TN11

Stainless steel enclosures

Stainless steel

No. of holes	316 Stainless
1	XBS130
2	XBS230
3	XBS330
4	XBS430
6	XBS630
8	XBS830
9	XBS930

Fibreglass enclosures

Fibreglass

No. of holes	Item no.
1	TFG11
2	TFG12
3	TFG13

20mm non-threaded conduit bottom-entry hole IP66, UV stabilised.



XBS330

TFG12

Assembled control stations

Push-pull stop stations (padlockable)

Operator head	Contacts	Item no.
Metal mushroom 45mm	1LONC	10250T700M
	1ECNO,1LONC	10250T701M
Metal palm 63.5mm	1LONC	10250T700P
	1ECNO,1LONC	10250T701P



10250T700P

"Staylock" push-pull stop stations (non-padlockable)

Operator head	Contacts	Padlock included	Item no.
Metal Mushroom 45mm	1LONC	NO	ESM9/5
	1LONC	YES	ESM9/5P
	1ECNO,1LONC	NO	ESM9/6
	1ECNO,1LONC	YES	ESM9/6P
Metal Palm 63.5mm	1LONC	NO	ESP6/5
	1LONC	YES	ESP6/5P
	1ECNO,1LONC	NO	ESP6/6
	1ECNO,1LONC	YES	ESP6/6P



ESM9/6



T3500

Stop start pushbutton station

Description	Item no.
Fibreglass Enclosure. Start: green pushbutton with boot Stop: red padlockable mushroom with boot	T3500

Control and indication

Eaton 30.5 mm pushbuttons



TA38



TA2



TA26



10250TA64



TA48



TA85



TA25



10250TA6
E34TA6



10250TA12
E34TA12



10250TA15
E34TA15



TA56
10250TA56Y



10250ED1241



TA8



TA22

Accessories

Padlock attachments	Description	Item no.
With hinged transparent flap. For flush or extended pushbuttons, & knob-operated selector switches	Plastic Cover	TA38
For flush stop button. Permits locking NC contacts in open position with padlock. Prevents operation of button. Will not lock NO contact	Chrome	TA2
	Corrosion resistant	E34TA2
For extended pushbutton. Permits locking NC contacts in open position with padlock	Chrome	TA26
For illuminated pushbuttons. Locks in down position only	Chrome	10250TA64

Boots	Colour	Item no.
Protective boot for flush pushbutton operators	Clear	10250TA46
	Blue	91000TA46
	Black	TA47
	Red	TA48
	Green	TA49
Protective boot for extended pushbutton operators	Yellow	TA50
	Black	TA3
	Red	TA4
Protective boot for illuminated pushbuttons.	Green	TA10
	Clear	TA85
	Black	TA25
Protective boot for momentary mushroom operators on page 295. Not suitable for use with T140 operator.	Clear	TA88

Shrouds & guards	Description	Item no.
Shroud for Mushroom Head Operator	Prevents accidental operation. Not for push-pull operators. Momentary operators only	10250TA6 E34TA6
Extended Retaining Nut	Replaces standard nut & provides guard for flush head pushbutton operators.	10250TA12 E34TA12
Guard for Illuminated Pushbutton	Guard for Illuminated Pushbutton	10250TA15 E34TA15
Shroud	For jumbo mushroom head operator. Available in Grey & Yellow (Not for push-pull operators, momentary operators only.)	TA56 10250TA56Y
Half Shroud – Yellow	For jumbo mushroom head operator.	10250ED1241

Hardware & kits	Description	Item no.
Fingerproof Shroud	10 per Package Fits new style contact blocks & light units.	10250TA101
Spacer Ring	Used when legend plate is not required.	TA8
Base Mounting Spacers	Equivalent to contact block in depth — Complete with screws, washers, etc. For use in pushbutton stations for base mounting contact blocks. 1 Block Deep 2 Blocks Deep	TA22 TA23

Accessories

Special operators & attachments	Description	Item no.
Wobble Stick	Complete with retaining nut — fits standard button.	TA5
Maintained Contact Attachment	Mechanically interlocks two buttons & provides position indication for one. Use with two pushbutton operators & one or more contact blocks.	TA1

Hole plugs	Description	Item no.
Plug	For unused holes — Steel, painted grey	10250TA7
Stainless Steel Plug	For unused holes — Stainless Steel - Square	E30KT5

Tools	Description	Item no.
Octagonal Tool	Octagonal notched to fit over selector switch lever	10250TA95
Tool for Tightening Boots	Used to install boot	TA96
Allen Key	Used for removal of jumbo mushroom head.	10250TA102

Special light modules	Description	Item no.
Flasher Module	Changes any AC illuminated device to a controlled flashing light. 24V s 120V	TFL2 TFL1



TA5



TA1



10250TA7



10250TA95



TA96



10250TA102



TFL2

Legend Plates

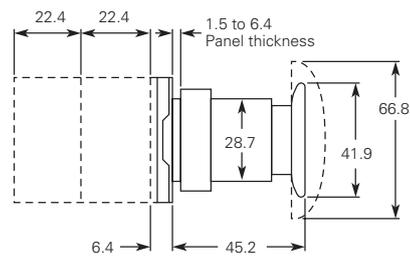
Description	Item no.
Aluminium T-Range, large size, black unless marked "red"	TJ_ _
Aluminium T-Range, medium size, black unless marked "red"	TM_ _
Stainless steel T-Range, medium size, black, blank	TM36S
Stainless steel T-Range, medium size, red, blank	TM37S
Plastic E34 range universal size, black unless marked "red"	E34SP_ _

Legend	T-Range large Item no.	T-Range medium Item no.	E34 universal Item no.
Blank	TJ36	TM36	TSP76
Blank (red)	TJ37	TM37	TSP77
Off (red)	TJ24	TM24	E34SP24
On	TJ25	TM25	E34SP25
Run	TJ31	TM31	E34SP31
Start	TJ33	TM33	E34SP33
Stop (red)	TJ34	TM34	E34SP34

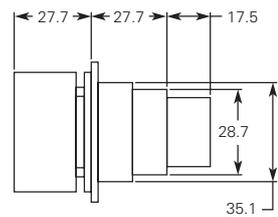
Control and indication

Eaton 30.5 mm pushbuttons

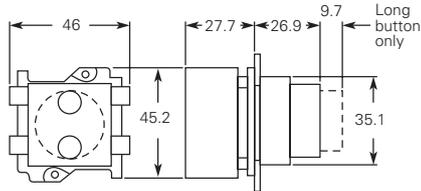
30.5mm Pushbuttons, dimensions & technical data



Push-Pull Switch

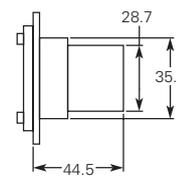
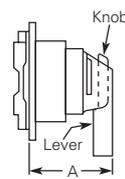


Illuminated Pushbutton

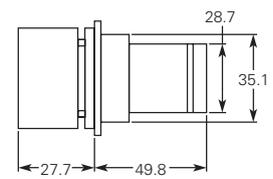


Flush and long pushbutton half shroud is the same as the long pushbutton with lower half of guard ring cut back

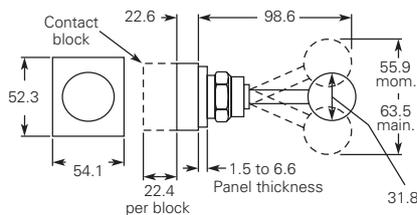
Operator	Dim. A
Knob	35.1
Lever	38.1



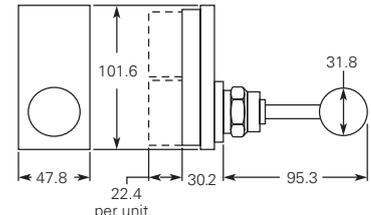
Key operated selector switch



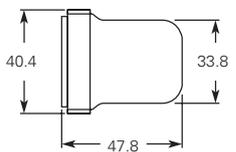
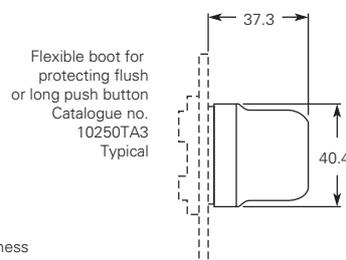
Illuminated Selector Switch



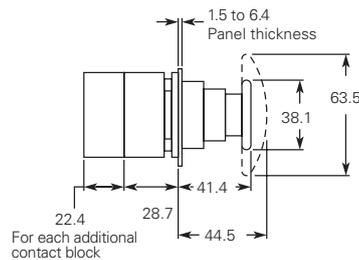
2-position joystick operator



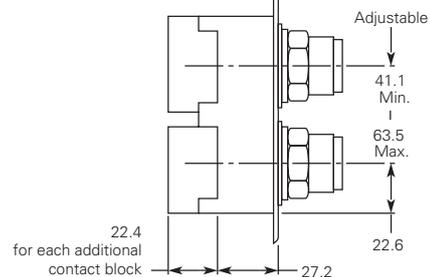
4-position joystick operator



Transparent flexible boot for illuminated pushbutton
Catalogue no. 10250TA25



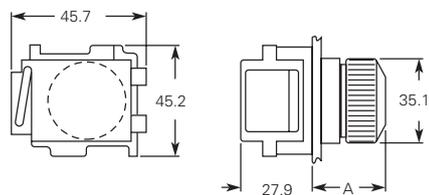
Mushroom and jumbo head pushbutton



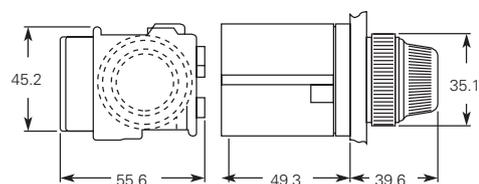
**Maintained Pushbutton
Catalog No. 10250TA66
Typical**

Lens	Dimension A
Plastic	35.1
Glass	39.6

Approximate Dimensions in mm



Indicating Light - Transformer Type



Press-To-Test Indicating Light - Transformer Type

Diecast aluminium enclosure dimensions

	Wide	High	Single depth	Double depth
1	98.6	101.6	57.2	76.3
2	98.6	149.4	57.2	76.3
3	98.6	196.9	57.2	76.3
4	98.6	244.6	57.2	76.3

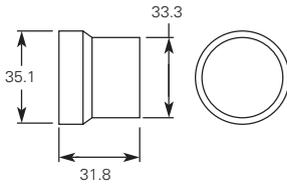
Fibreglass enclosure dimensions

	Wide	High	Deep
1	97	100	75
2	97	150	75
3	97	200	75

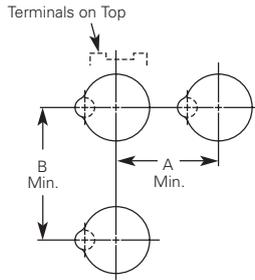
316 Stainless steel enclosure dimensions

	Wide	High	Deep
1	120	120	84
2	120	160	84
3	120	220	84
4	120	280	84

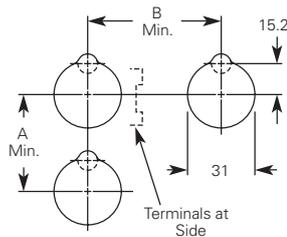
30.5mm Pushbuttons, dimensions & technical data



Extended Retaining Nut
Catalog No. 10250TA12



Horizontal Rows



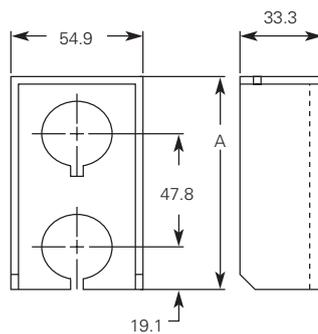
Vertical Rows

Panel drilling and minimum spacing

Legend plate	Dim. in mm	
	A Min	B Min.
1 or 2 Circuit contact blocks		
Small or None	41.4	57.2
Standard	44.5	57.2
Jumbo ①	57.2	57.2
Extra Large	63.5	66
4 Circuit contact block 10250T44		
Small or None	47.8	57.2
Standard	47.8	57.2
Jumbo ①	57.2	57.2
Extra Large	63.5	66

① If Jumbo plates are to be placed one above the other vertically, add 3.3 to minimum dimensions listed.

Note: Locating nib hole or notch is 3.45 - 3.56 mm #29 drill.



Multiple Button Guard

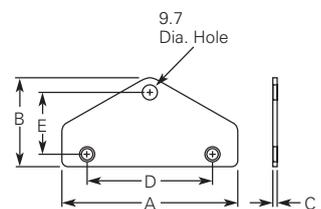
Number of elements	Dimension A
2	101.6
3	149.4
4	202.2
7	339.9

Legend plate	Dim. in mm	
	A	B
1/2 Round Legend Plates		
Small	39.6	23.1
Standard	40.4	27.2
Jumbo	52.3	38.9
Square Legend Plates		
Small	40.4 Sq.	22.9
Standard	44.5 Sq.	26.9 ②
Jumbo	55.6 Sq.	38.1
Extra Large	62.0 Sq.	41.4

② For plastic legend plate, Dimension B is 28.4

Enclosure size (No. of elements)	Dimensions in inches (mm)			Mounting	
	Wide A	High B	Deep C	D	E
2, 3, & 4	95.3	49.3	3.3	68.3	35.1
6 & 7	101.6	55.6	3.3	73.2	41.4

Approximate Dimensions in mm



Chain Hook Bracket

Control and indication

Eaton 30.5 mm pushbuttons

Dimensions & Technical data

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 & fine dust conditions
- Drainage holes prevent buildup of liquid inside the operator which can prevent operation in freezing environments
- Grounding nibs bite through paint & other coatings to provide secure ground

Contact operation

Slow make & 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 & certifications

- CE EN60947-5-1
- 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
- All Other Operators: UL (NEMA) Type 1, 2, 3, 3R, 4, 4X, 12, 13, IEC IP65

Technical data & specifications

Mechanical ratings:

- Frequency of operation: All pushbuttons 6000 operations/hr, Key & lever selector switches 3000 operations/hr, Auto-latch devices 1200 operations/hr.
- Life: Pushbuttons 10 x 106 operations, Contact blocks: 10 x 106 operations, PresTest units 10 x 106 operations, Lever & key selector switches 0.25 x 106 operations, Twist to release pushbuttons 0.3 x 106 operations,
- Shock resistance: Duration 20 mS 5g

Climate conditions:

- Operating Temperature (-17° to 66°C), Storage Temperature (-40° to 80°C), Altitude 2,000m (6,562 ft.), Humidity Max. 95% RH @ 60°C

Terminals:

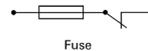
- Marking: NC-NO on the contact block to meet the NEMA requirements. Dual marking system 1 – 2 for normally closed, 3 – 4 for normally open to meet BS5472 (Cenelec EN50 005)
- Clamps: Terminals are saddle clamp type for 1 x 22 AWG (0.34 mm²) to 2 x 14 AWG (2.5 mm²) conductors
- Torque = 7 lb-in (0.8 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 @ rated V, LED 60,000 to 100,000 hrs.

Electrical ratings:

- Insulation: U_i = 660V AC or DC
- 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, 660V AC, 460V DC, BS88-2, IEC 60269-2-1



Fuse

- UL rating: A600, P600: AC load life duty cycle 1200 operations/hour (– 10A: 110V pf 0.4 – 1 x 106 operations, – 5A: 250V pf 0.4 – 1 x 106 operations, – 2A: 660V pf 0.4 – 1 x 106 operations)
- Switching capacity: AC15 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, – .55A: 250V L/R 0.95 at 300 mS, – .1A: 660V L/R 0.95 at 300 mS, – 10A: 110V pure resistive)
- Maximum ratings for logic level & hostile atmosphere application: Maximum amperes: 0.5A
Maximum volts: 120V AC/DC

Contact block

Meet or exceed NEMA rating designations **A600, A300 and B300 AC**
P600 DC

Description	Volts SC 50 or 60 Hz				Volts DC		
	120	240	480	60	24	125	250
Make and Emerg. Interruptimng 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
Voltampress(VA)							
Make and Emerg. Interruptimng capacity	7200	7200	7200	7200	138	138	138
Normal load break	720	720	720	720	138	138	138

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