

NT SERIES

005429
Issue 10

MICRO SWITCH Commercial-Grade Toggle Switches



DESCRIPTION

MICRO SWITCH NT Series toggle switches meet the need for a rugged, cost-effective toggle switch. Quality construction features include a seal between the toggle lever and bushing and between the cover and case. These switches are suitable for applications in many demanding outdoor environments, where the installed panels are subjected to vibration from equipment, temperature extremes, dust, splashing water and/or hose directed water.

They are capable of withstanding exposure to heavy accumulations of early morning dew that may condense on the control panel in cabs of vehicles left outdoors overnight. The NT toggle switches with larger standard metal or plastic levers are well suited for gloved-hand operation.

Available in both step-base and flat-base housing styles, the NT Series offers three popular styles of termination: 6-32 screws, solder lugs with 3,0 mm [0.12 in] diameter hole, or 6,35 mm [0.25 in] quick connect terminals.

The optional "Easy Start" threaded bushing enables quick alignment of the mounting nut to minimize any cross threading. The panel stand-off with O-ring feature available on select-NT listings eliminates the need for behind-the-panel hardware, provides a uniform panel height and a panel-to-cover seal.

FEATURES

- Sealed to NEMA 3, 3R, 4, 13 and IP67/IP68 for global use
- Suitable for applications in many demanding outdoor environments, where the panels are subjected to vibration from equipment, temperature extremes, dust, splashing water, and/or hose directed water
- UL recognized, File E12252, Vol. 1, Section 44, CSA certified, UKCA and CE certified for global use
- Spring-loaded actuating mechanism provides excellent tactile feedback
- Optional flat base case design with a quick connect terminal pattern mates to a commercial-type connector for plug-and-play connectivity
- 2- and 3-position, maintained and momentary toggle action
- Delivers high performance in a wide range of temperatures: -40°C to 71°C [-40°F to 160°F]
- Choice of silver alloy or gold-plated contacts
- Optional engineered step-design case provides added space between terminals to prevent shorting
- Optional panel stand-off with O-ring panel seal eliminates behind-the-panel hardware

DIFFERENTIATION

- NEMA 3, 3R, 4, 13 and IP67/68 environmental sealing for demanding applications
- UL recognized, CSA certified, UKCA and CE certified for global use
- 1-, 2- and 4-pole options to meet a variety of circuitry requirements
- 2- or 3-position maintained and momentary action to meet circuit and actuator requirements
- Optional step-case design provides added space between terminals to prevent shorting

APPLICATIONS

- Aerial platform lifts
- Platform lifts for trucks
- Industrial equipment
- Railroad locomotives and maintenance equipment
- Construction equipment
- Agricultural machinery
- Syringes (end of travel)

PORTFOLIO

The MICRO SWITCH NT is part of the Honeywell Toggle Switch Series offering a variety of electrical, position and load choices, with options for MIL qualifications, momentary and/or maintained action and poles. To view the entire product portfolio, [click here](#).

Honeywell

MICRO SWITCH COMMERCIAL-GRADE TOGGLE SWITCHES

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TABLE 1. SPECIFICATIONS

Characteristic	Parameter
Description	Commercial-grade toggle switch (step base and flat base options)
Sealing	IP67/IP68; NEMA 3, 3R, 4, and 13
Operating temperature	-40°C to 71°C [-40°F to 160°F]
Actuators	Standard, locking, special design, tab
Action	2- or 3- position; momentary and maintained
Mounting	Bushing 15/32 in (0.47 in) Ø
Circuitry	SPST, SPDT, DPST, DPDT, 4PST, 4PDT
Terminations	Screw, solder, quick connect
Contacts	Silver alloy, gold plated
Amp rating	Up to 20 A (resistive)
Approvals	UL, CSA, CE, UKCA
Measurement	26,7 mm H × 33,5 mm W × 22,6 mm D [1.05 in H × 1.32 in W × 0.89 in D]

TABLE 2. UL AND CSA ELECTRICAL RATINGS

Rating Code	Electrical Rating
L192	10 amps, 125, 250, 277 Vac; 1/4 Hp, 125 Vac; 1/2 Hp, 250, 277 Vac; 3 amps, 125 Vac “L”
L191*	15 amps, 125, 250, 277 Vac; 1/2 Hp, 125 Vac; 1 Hp, 250, 277 Vac; 5 amps, 125 Vac “L”

* The L191 rating is specified to builds with 'maintained' only action (builds with any 'momentary' action specified would specify the L192 UL coverage)

TABLE 3. ELECTRICAL RATINGS (IN AMPERES)

Electrical Rating Code	28 Vdc			115 Vdc	250 Vdc	115 Vac, 60 Hz & 400 Hz max.			230 Vac
	Ind.	Res.	Lamp	Res.	Res.	Ind.	Res.	Lamp	Res.
1	12	20	5	0.75	0.5	10	15	3	6
2	10	15	4	0.75	0.5	7	15	2	6
3	15	20	7	0.75	0.5	15	15	4	6
4	10	18	5	0.75	0.5	8	11	2	6
5	12	20	5	0.75	0.5	15	15	4	6
6	10	18	4	0.75	0.5	8	11	2	6

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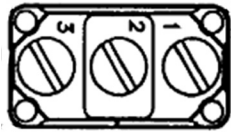
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TERMINAL CIRCUIT IDENTIFICATION

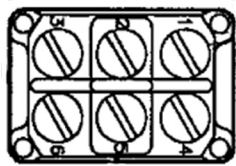
Terminal identifications are referred to in the order guides to indicate which circuits are made in each toggle position (i.e., 1-2 refers to circuit closure through terminals 1 and 2).

NOTE: Keyside is on #3 terminal side.

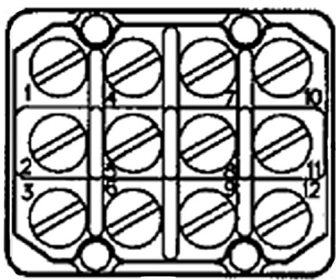
Step Base - One Pole



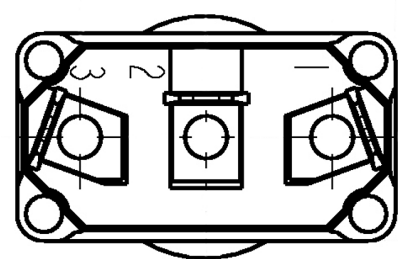
Step Base - Two Pole



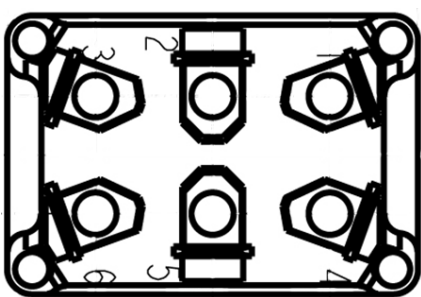
Step Base - Four Pole



Flat Base - One Pole



Flat Base - Two Pole



SPECIAL CIRCUITRIES

Catalog listings with -10, -50 and -70 suffix numbers, as shown in the order guides, have special “on-on-on” circuits, as illustrated below. NTs with -12 suffix are the same as -50 except the keyway position is maintained and the center position circuits 2-3 and 4-5 are made.

-10 CIRCUITRY			
No of poles	Keyway Side Maint. Position	Center Maint. Position	Opposite Keyway Maint. Position
2			
4			

-50 CIRCUITRY			
No of poles	Keyway Side Maint. Position	Center Maint. Position	Opposite Keyway Maint. Position
2			
4			

-70 CIRCUITRY			
No of poles	Keyway Side Maint. Position	Center Maint. Position	Opposite Keyway Maint. Position
2			
4			

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TABLE 4. NT (STEP BASE) 2-POSITION ORDER GUIDE								
	Circuits Made with Toggle At:				Catalog Listing (Standard Lever)			Pull-To-Lock Lever (Add suffix to Standard Lever Listing)**
No. of Poles	Keyway Position	Opposite Keyway	UL Rating Code	Elect. Rating Code	Screw	Solder	Quick Connect	
1	OFF	2-3	L191	1	1NT1-2	11NT1-2	1NT91-2	D, F, G
	1-2	2-3	L191	1	1NT1-3	11NT1-3	1NT91-3	D, F, G
	OFF*	2-3	L192	2	1NT1-4	11NT1-4	1NT91-4	F
	1-2*	OFF	L192	2	1NT1-6	11NT1-6	1NT91-6	F
	1-2*	2-3	L192	2	1NT1-8	11NT1-8	1NT91-8	F
2	OFF	2-3, 5-6	L191	3	2NT1-2	12NT1-2	2NT91-2	D, F, G
	1-2, 4-5	2-3, 5-6	L191	3	2NT1-3	12NT1-3	2NT91-3	F
	OFF*	2-3, 5-6	L192	4	2NT1-4	12NT1-4	2NT91-4	F
	1-2, 4-5*	OFF	L192	4	2NT1-6	12NT1-6	2NT91-6	D, F, G
	1-2, 4-5*	2-3, 5-6	L192	4	2NT1-8	12NT1-8	2NT91-8	F
4	OFF	2-3, 5-6, 8-9, 11-12	L191	5	4NT1-2	14NT1-2	4NT91-2	D, F, G
	1-2, 4-5, 7-8, 10-11	2-3, 5-6, 8-9, 11-12	L191	5	4NT1-3	14NT1-3	4NT91-3	F
	OFF*	2-3, 5-6, 8-9, 11-12	L192	6	4NT1-4	14NT1-4	4NT91-4	F
	1-2, 4-5, 7-8, 10-11*	OFF	L192	6	4NT1-6	14NT1-6	4NT91-6	D, F, G
	1-2, 4-5, 7-8, 10-11*	2-3, 5-6, 8-9, 11-12	L192	6	4NT1-8	14NT1-8	4NT91-8	F

* These positions are momentary. All others are maintained.

** See page 17 for locking configurations.

TABLE 5. NT (STEP BASE) 2-POSITION ORDER GUIDE • PANEL STAND-OFF FEATURE					
	Circuits Made with Toggle At:				Catalog Listing (Standard Lever)
No. of Poles	Keyway Position	Opposite Keyway	UL Rating Code	Elect. Rating Code	Screw Terminals
1	OFF	2-3	L191	1	61NT1-2
	1-2	2-3	L191	1	61NT1-3
	1-2*	OFF	L192	2	61NT1-6
	1-2*	2-3	L192	2	61NT1-8
2	OFF	2-3, 5-6	L191	3	62NT1-2
	1-2, 4-5	2-3, 5-6	L191	3	62NT1-3
	1-2, 4-5*	OFF	L192	4	62NT1-6
	1-2, 4-5*	2-3, 5-6	L192	4	62NT1-8

* These positions are momentary. All others are maintained.

TABLE 6. NT (STEP BASE) 3-POSITION ORDER GUIDE • PANEL STAND-OFF FEATURE						
	Circuits Made with Toggle At:					
No. of Poles	Keyway Position	Center Position	Opposite Keyway	UL Rating Code	Elect. Rating Code	Screw Terminals
1	1-2	OFF	2-3	L191	1	61NT1-1
	1-2*	OFF	2-3*	L192	2	61NT1-7
2	1-2, 4-5	OFF	2-3, 5-6	L191	3	62NT1-1
	1-2, 4-5*	OFF	2-3, 5-6*	L192	4	62NT1-7

*These positions are momentary. All others are maintained.

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TABLE 7. NT (STEP BASE) 3-POSITION ORDER GUIDE									
	Circuits Made with Toggle At:					Catalog Listing (Standard Lever)			Pull-To-Unlock Lever (Add suffix to Standard Lever Listing)***
No. of Poles	Keyway Position	Center Keyway	Opposite Keyway	UL Rating Code	Elect. Rating Code	Screw	Solder	Quick Connect	
1	1-2	OFF	2-3	L191	1	1NT1-1	11NT1-1	1NT91-1	ALL TYPES
	1-2*	OFF	2-3	L192	2	1NT1-5	11NT1-5	1NT91-5	E, F, K, L, M, N
	1-2*	OFF	2-3*	L192	2	1NT1-7	11NT1-7	1NT91-7	E, L, N
	NONE**	OFF	2-3	L191	1	1NT1-21	11NT1-21	1NT91-21	E, F, K, M
	NONE**	1-2	2-3	L191	1	1NT1-31	11NT1-31	1NT91-31	E, F, K, M
	NONE**	1-2	2-3*	L192	2	1NT1-51	11NT1-51	1NT91-51	E
	1-2*	OFF	NONE**	L192	2	1NT1-61	11NT1-61	1NT91-61	E
2	1-2, 4-5	OFF	2-3, 5-6	L191	3	2NT1-1	12NT1-1	2NT91-1	ALL TYPES
	1-2, 4-5*	OFF	2-3, 5-6	L192	4	2NT1-5	12NT1-5	2NT91-5	E, F, K, L, M, N
	1-2, 4-5*	OFF	2-3, 5-6*	L192	4	2NT1-7	12NT1-7	2NT91-7	E, L, N
	NONE*	OFF	2-3, 5-6	L191	3	2NT1-21	12NT1-21	2NT91-21	E, F, K, M
	NONE**	1-2, 4-5	2-3, 5-6	L191	3	2NT1-31	12NT1-31	2NT91-31	E, F, K, M
	NONE**	1-2, 4-5	2-3, 5-6*	L192	4	2NT1-51	12NT1-51	2NT91-51	E
	1-2, 4-5*	OFF	NONE**	L192	4	2NT1-61	12NT1-61	2NT91-61	E
	1-2, 4-5	2-3, 4-5	2-3, 5-6	L191	3	2NT1-12	12NT1-12	2NT91-12	ALL TYPES
	1-2, 4-5	1-2, 5-6	2-3, 5-6	L191	3	2NT1-10	12NT1-10	2NT91-10	ALL TYPES
	1-2, 4-5*	1-2, 5-6	2-3, 5-6	L192	4	2NT1-50	12NT1-50	2NT91-50	E, F, K, L, M, N
	1-2, 4-5*	1-2, 5-6	2-3, 5-6*	L192	4	2NT1-70	12NT1-70	2NT91-70	E, L, N
4	1-2, 4-5, 7-8, 10-11	OFF	2-3, 5-6, 8-9, 11-12	L191	5	4NT1-1	14NT1-1	4NT91-1	ALL TYPES
	1-2, 4-5, 7-8, 10-11*	OFF	2-3, 5-6, 8-9, 11-12	L192	6	4NT1-5	14NT1-5	4NT91-5	E, F, K, L, M, N
	1-2, 4-5, 7-8, 10-11*	OFF	2-3, 5-6, 8-9, 11-12*	L192	6	4NT1-7	14NT1-7	4NT91-7	E, L, N
	NONE*	OFF	2-3, 5-6, 8-9, 11-12	L191	5	4NT1-21	14NT1-21	4NT91-21	E, F, K, M
	NONE**	1-2, 4-5, 7-8, 10-11	2-3, 5-6, 8-9, 11-12	L191	5	4NT1-31	14NT1-31	4NT91-31	E, F, K, M
	NONE**	1-2, 4-5, 7-8, 10-11	2-3, 5-6, 8-9, 11-12*	L192	6	4NT1-51	14NT1-51	4NT91-51	E
	1-2, 4-5, 7-8, 10-11*	OFF	NONE**	L192	6	4NT1-61	14NT1-61	4NT91-61	E
	1-2, 4-5, 7-8, 10-11	2-3, 4-5, 7-8, 11-12	2-3, 5-6, 8-9, 11-12	L191	5	4NT1-12	14NT1-12	4NT91-12	ALL TYPES
	1-2, 4-5, 7-8, 10-11	2-3, 4-5	2-3, 5-6, 8-9, 11-12	L191	5	4NT1-10	14NT1-10	4NT91-10	ALL TYPES
	1-2, 4-5, 7-8, 10-11*	2-3, 4-5, 7-8, 11-12	2-3, 5-6, 8-9, 11-12	L192	6	4NT1-50	14NT1-50	4NT91-50	E, F, K, L, M, N
	1-2, 4-5, 7-8, 10-11*	2-3, 4-5	2-3, 5-6, 8-9, 11-12*	L192	6	4NT1-70	14NT1-70	4NT91-70	E, L, N
	1-2, 4-5, 7-8, 10-11*	2-3, 4-5, 7-8, 11-12	2-3, 5-6, 8-9, 11-12*	L192	6	4NT1-72	–	–	E, L, N

* These positions are momentary. All others are maintained.
** Toggle lever is blocked from these products. Toggle becomes 2-position with center being one extreme position.
*** See page 17 for locking configurations.

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TABLE 8. NT (FLAT BASE) 2-POSITION ORDER GUIDE

	Circuits Made with Toggle At:				Catalog Listing (Standard Lever)
No. of poles	Keyway Position	Opposite Keyway	UL Rating Code	Elect. Rating Code	Quick Connect
1	OFF	2-3	L191	1	31NT91-2
	1-2	2-3	L191	1	31NT91-3
	OFF**	2-3	L192	2	31NT91-4
	1-2**	OFF	L192	2	31NT91-6
	1-2**	2-3	L192	2	31NT91-8
2	OFF	2-3, 5-6	L191	3	32NT91-2
	1-2, 4-5	2-3, 5-6	L191	3	32NT91-3
	OFF*	2-3, 5-6	L192	4	32NT91-4
	1-2, 4-5**	OFF	L192	4	32NT91-6
	1-2, 4-5**	2-3, 5-6	L192	4	32NT91-8

** These positions are momentary. All others are maintained.

TABLE 9. NT (FLAT BASE) 2-POSITION ORDER GUIDE • PANEL STAND-OFF FEATURE

	Circuits Made with Toggle At:				Catalog Listing (Standard Lever)
No. of poles	Keyway Position	Opposite Keyway	UL Rating Code	Elect. Rating Code	Quick Connect
1	OFF	2-3	L191	1	631NT91-2
	1-2**	2-3	L191	1	631NT91-3
	OFF	2-3	L192	2	631NT91-4
	1-2**	OFF	L192	2	631NT91-6
	1-2**	2-3	L192	2	631NT91-8
2	OFF	2-3, 5-6	L191	3	632NT91-2
	1-2, 4-5	2-3, 5-6	L191	3	632NT91-3
	OFF**	2-3, 5-6	L192	4	632NT91-4
	1-2, 4-5**	OFF	L192	4	632NT91-6
	1-2, 4-5**	2-3, 5-6	L192	4	632NT91-8

** These positions are momentary. All others are maintained.

TABLE 10. NT (FLAT BASE) Z-POSITION ORDER GUIDE • PANEL STAND-OFF FEATURE

No. of Poles	Keyway Position
19PA168-NT	2-pole connector
19PA169-NT	1-pole connector, same package size as 2-pole connector

MICRO SWITCH COMMERCIAL-GRADE TOGGLE SWITCHES

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TABLE 11. NT (FLAT BASE) 3-POSITION ORDER GUIDE

TABLE 11. NT (FLAT BASE) 3-POSITION ORDER GUIDE						
		Circuits Made with Toggle At:				Catalog Listing (Standard Lever)
No. of Poles	Keyway Position	Center Position	Opposite Keyway	UL Rating Code	Elect. Rating Code	Quick Connect
1	1-2	OFF	2-3	L191	1	31NT91-1
	1-2**	OFF	2-3	L192	2	31NT91-5
	1-2**	OFF	2-3**	L192	2	31NT91-7
	NONE***	OFF	2-3	L191	1	31NT91-21
	NONE***	1-2	2-3	L191	1	31NT91-31
	NONE***	1-2	2-3**	L192	2	31NT91-51
	1-2**	OFF	NONE***	L192	2	31NT91-61
2	1-2, 4-5	OFF	2-3, 5-6	L191	3	32NT91-1
	1-2, 4-5**	OFF	2-3, 5-6	L192	4	32NT91-5
	1-2, 4-5**	OFF	2-3, 5-6**	L192	4	32NT91-7
	NONE***	OFF	2-3, 5-6	L191	3	32NT91-21
	NONE***	1-2, 4-5	2-3, 5-6	L191	3	32NT91-31
	NONE***	1-2, 4-5	2-3, 5-6**	L192	4	32NT91-51
	1-2, 4-5**	OFF	NONE***	L192	4	32NT91-61
	1-2, 4-5	2-3, 5-6	2-3, 5-6	L191	3	32NT91-12
	1-2, 4-5	1-2, 5-6	2-3, 5-6	L191	3	32NT91-10
	1-2, 4-5**	1-2, 5-6	2-3, 5-6	L192	4	32NT91-50
	1-2, 4-5**	1-2, 5-6	2-3, 5-6**	L192	4	32NT91-70

** These positions are momentary. All others are maintained.

*** Toggle lever is blocked from these positions. Toggle becomes 2-position, with center being one extreme position.

TABLE 12. NT (FLAT BASE) 3-POSITION ORDER GUIDE • PANEL STAND-OFF FEATURE

TABLE 12. NT (FLAT BASE) 3-POSITION ORDER GUIDE • PANEL STAND-OFF FEATURE						
		Circuits Made with Toggle At:				Catalog Listing (Standard Lever)
No. of Poles	Keyway Position	Center Position	Opposite Keyway	UL Rating Code	Elect. Rating Code	Quick Connect
1	1-2**	OFF	2-3**	L192	2	631NT91-7
	1-2	OFF	2-3	L191	1	631NT91-1
	1-2**	OFF	2-3	L191	2	631NT91-5
2	1-2, 4-5	OFF	2-3, 5-6	L191	3	632NT91-1
	1-2, 4-5**	OFF	2-3, 5-6	L192	4	632NT91-5
	1-2, 4-5**	OFF	2-3, 5-6**	L192	4	632NT91-7
	1-2, 4-5**	1-2, 5-6	2-3, 5-6**	L192	4	632NT91-70

** These positions are momentary. All others are maintained.

MICRO SWITCH COMMERCIAL-GRADE TOGGLE SWITCHES
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STEP BASE • STANDARD ACTUATOR OPTIONS, TERMINALS, & DIMENSIONS

NOTE: Three-position switches shown.

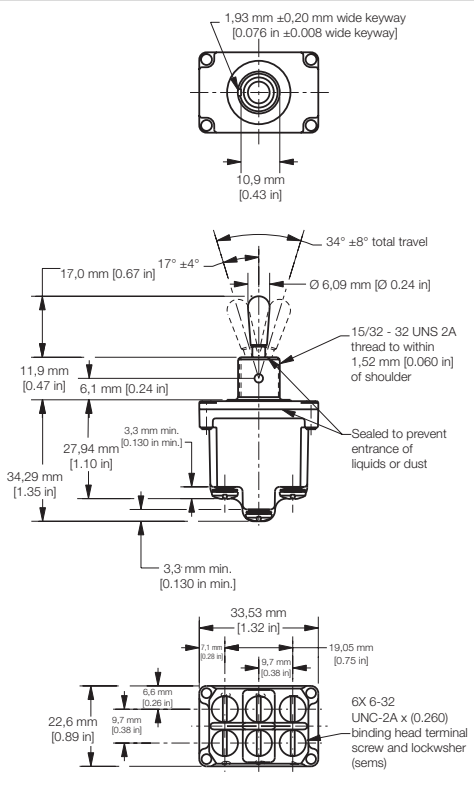
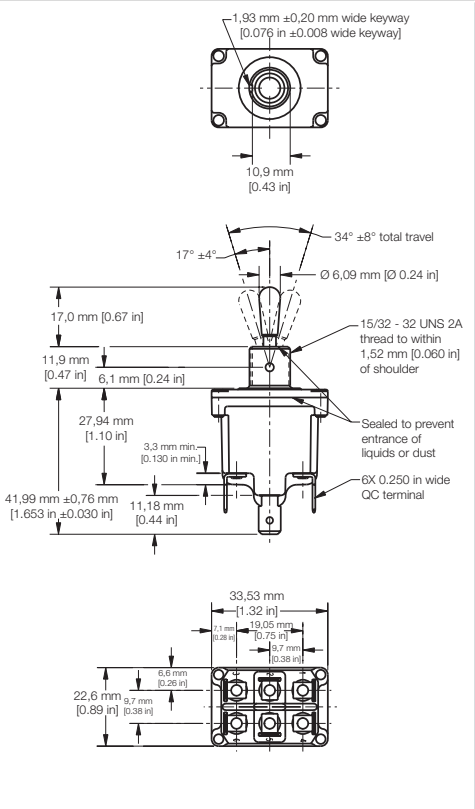
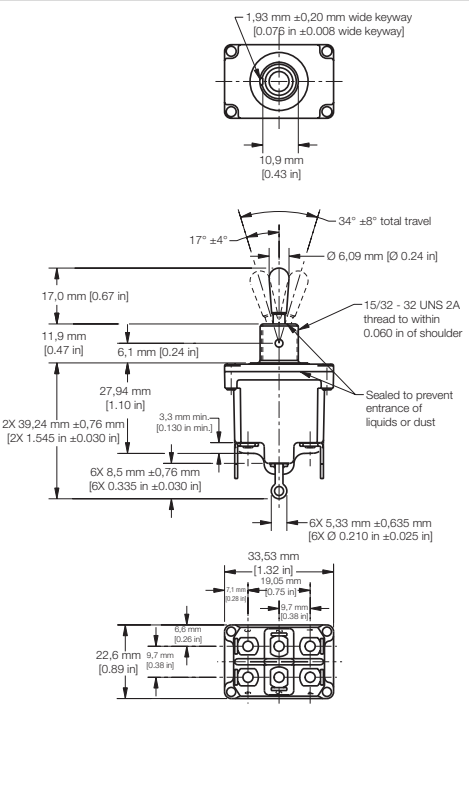
1NT1: Single pole, standard lever, screw terminals	1NT91: Single pole, standard lever, quick-connect terminals	11NT1: Single pole, standard lever, solder terminals
1,93 mm $\pm 0,20$ mm wide keyway [0.076 in ± 0.008 wide keyway] 10,9 mm [0.43 in] 15° 30' $\pm 3^\circ 30'$ 31° $\pm 7^\circ$ total travel $\varnothing 6,09$ mm [$\varnothing 0.24$ in] 17,0 mm [0.67 in] 11,9 mm [0.47 in] 6,1 mm [0.24 in] 15/32 - 32 UNS 2A thread to within 1,52 mm [0.060 in] of shoulder 23,1 mm [0.91 in] 29,5 mm [1.16 in] Sealed to prevent entrance of liquids or dust 28,4 mm [1.12 in] 19,05 mm [0.75 in] 4,8 mm [0.19 in] 9,7 mm [0.38 in] 15,7 mm [0.62 in] 3X 6-32 UNC-2A X (0.260) binding head terminal screw and lockwasher (sems)	1,93 mm $\pm 0,20$ mm wide keyway [0.076 in ± 0.008 wide keyway] 10,9 mm [0.43 in] 15° 30' $\pm 3^\circ 30'$ 31° $\pm 7^\circ$ total travel $\varnothing 6,09$ mm [$\varnothing 0.24$ in] 17,0 mm [0.67 in] 11,9 mm [0.47 in] 6,1 mm [0.24 in] 15/32 - 32 UNS 2A thread to within 1,52 mm [0.060 in] of shoulder 23,1 mm [0.91 in] 41,99 mm $\pm 0,76$ mm [1.653 in ± 0.030 in] 10,9 mm [0.43 in] 3X 0.250 in QC terminal Sealed to prevent entrance of liquids or dust 28,4 mm [1.12 in] 19,05 mm [0.75 in] 4,8 mm [0.19 in] 9,7 mm [0.38 in] 15,7 mm [0.62 in]	1,93 mm $\pm 0,20$ mm wide keyway [0.076 in ± 0.008 wide keyway] 10,9 mm [0.43 in] 15° 30' $\pm 3^\circ 30'$ 31° $\pm 7^\circ$ total travel $\varnothing 6,09$ mm [$\varnothing 0.24$ in] 17,0 mm [0.67 in] 11,9 mm [0.47 in] 6,1 mm [0.24 in] 15/32 - 32 UNS 2A thread to within 1,52 mm [0.060 in] of shoulder 23,1 mm [0.91 in] 29,5 mm [1.16 in] Sealed to prevent entrance of liquids or dust 28,4 mm [1.12 in] 19,05 mm [0.75 in] 4,8 mm [0.19 in] 9,7 mm [0.38 in] 15,7 mm [0.62 in] 3X 8,51 mm $\pm 0,38$ mm [3X 0.335 in ± 0.015 in] 3X $\varnothing 5,33$ mm $\pm 0,64$ mm [3X $\varnothing 0.210$ in ± 0.025 in]
Locking lever dimensions for single pole NT toggles		
31° $\pm 7^\circ$ total travel 15° $\pm 3^\circ$ $\varnothing 10,67$ mm [$\varnothing 0.42$ in] 2,28 mm [0.090 in] approx. pullout to change position 26,67 mm [1.05 in]		

MICRO SWITCH COMMERCIAL-GRADE TOGGLE SWITCHES

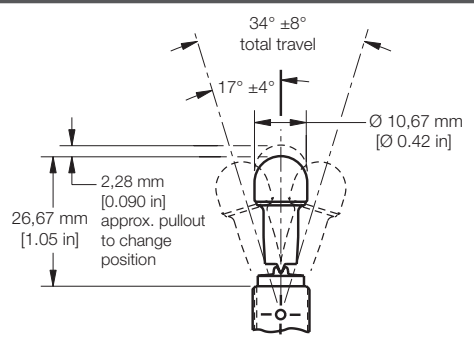
NT SERIES

STEP BASE • STANDARD ACTUATOR OPTIONS, TERMINALS, & DIMENSIONS

NOTE: Three-position switches shown.

2NT1: Double pole, standard lever, screw terminals	2NT91: Double pole, standard lever, quick-connect terminals	12NT1: Double pole, standard lever, solder terminals
 Technical drawing of the 2NT1 toggle switch. The front view shows a 1,93 mm ± 0.20 mm wide keyway [0.076 in ± 0.008 in] and a 10,9 mm [0.43 in] mounting hole. The side view shows a 34° $\pm 8^\circ$ total travel, a 17° $\pm 4^\circ$ lever angle, a 17,0 mm [0.67 in] lever length, a 11,9 mm [0.47 in] mounting height, a 6,1 mm [0.24 in] mounting offset, a 27,94 mm [1.10 in] mounting height, a 3,3 mm min. [0.130 in min.] mounting offset, a 34,29 mm [1.35 in] mounting height, a 3,3 mm min. [0.130 in min.] mounting offset, a 33,53 mm [1.32 in] mounting height, a 19,05 mm [0.75 in] mounting height, a 6,5 mm [0.26 in] mounting offset, a 9,7 mm [0.38 in] mounting offset, a 22,6 mm [0.89 in] mounting height, and a 6X 6-32 UNC-2A x (0.260) binding head terminal screw and lockwasher (serts).	 Technical drawing of the 2NT91 toggle switch. The front view shows a 1,93 mm ± 0.20 mm wide keyway [0.076 in ± 0.008 in] and a 10,9 mm [0.43 in] mounting hole. The side view shows a 34° $\pm 8^\circ$ total travel, a 17° $\pm 4^\circ$ lever angle, a 17,0 mm [0.67 in] lever length, a 11,9 mm [0.47 in] mounting height, a 6,1 mm [0.24 in] mounting offset, a 27,94 mm [1.10 in] mounting height, a 3,3 mm min. [0.130 in min.] mounting offset, a 41,99 mm ± 0.76 mm [1.653 in ± 0.030 in] mounting height, a 11,18 mm [0.44 in] mounting height, a 3,3 mm min. [0.130 in min.] mounting offset, a 33,53 mm [1.32 in] mounting height, a 19,05 mm [0.75 in] mounting height, a 6,5 mm [0.26 in] mounting offset, a 9,7 mm [0.38 in] mounting offset, a 22,6 mm [0.89 in] mounting height, and a 6X 0.250 in wide QC terminal.	 Technical drawing of the 12NT1 toggle switch. The front view shows a 1,93 mm ± 0.20 mm wide keyway [0.076 in ± 0.008 in] and a 10,9 mm [0.43 in] mounting hole. The side view shows a 34° $\pm 8^\circ$ total travel, a 17° $\pm 4^\circ$ lever angle, a 17,0 mm [0.67 in] lever length, a 11,9 mm [0.47 in] mounting height, a 6,1 mm [0.24 in] mounting offset, a 27,94 mm [1.10 in] mounting height, a 3,3 mm min. [0.130 in min.] mounting offset, a 2X 39,24 mm ± 0.76 mm [2X 1.545 in ± 0.030 in] mounting height, a 6X 8,5 mm ± 0.76 mm [6X 0.335 in ± 0.030 in] mounting height, a 6X 5,33 mm ± 0.635 mm [6X 0.210 in ± 0.025 in] mounting height, a 33,53 mm [1.32 in] mounting height, a 19,05 mm [0.75 in] mounting height, a 6,5 mm [0.26 in] mounting offset, a 9,7 mm [0.38 in] mounting offset, a 22,6 mm [0.89 in] mounting height, and a 15/32 - 32 UNS 2A thread to within 1,52 mm [0.060 in] of shoulder. Sealed to prevent entrance of liquids or dust.

Locking lever dimensions for double pole NT toggles



MICRO SWITCH COMMERCIAL-GRADE TOGGLE SWITCHES
NT SERIES

STEP BASE • STANDARD ACTUATOR OPTIONS, TERMINALS, & DIMENSIONS

NOTE: Three-position switches shown.

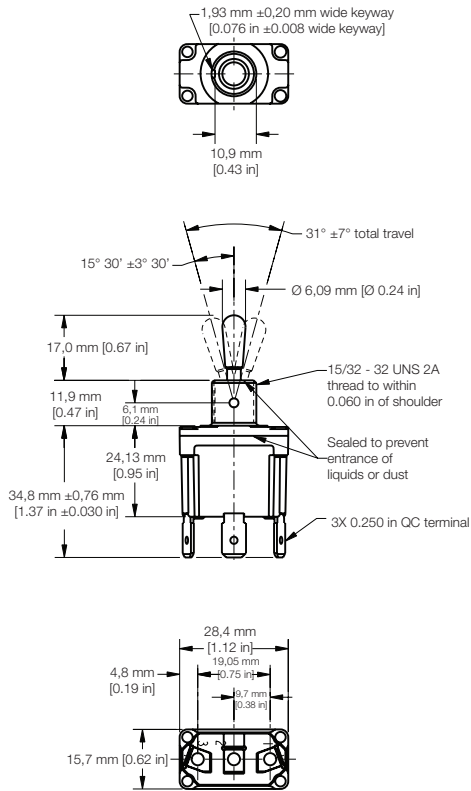
61NT1: Single pole, standard lever, panel standoff, screw terminals	62NT1: Double pole, standard lever, panel standoff, screw terminals
1,93 mm $\pm 0,20$ mm wide keyway [0.076 in ± 0.008 wide keyway] 10,9 mm [0.43 in] 31° $\pm 7^\circ$ total travel 15° 30' $\pm 3^\circ$ 30' Panel seal 17,0 mm [0.67 in] 12,45 mm [0.49 in] 7,4 mm [0.29 in] 15/32 - 32 UNS 2A thread to within 0.060 in of shoulder 23,1 mm [0.91 in] 29,5 mm [1.16 in] Sealed to prevent entrance of liquids or dust 28,4 mm [1.12 in] 19,05 mm [0.75 in] 4,8 mm [0.19 in] 9,7 mm [0.38 in] 15,7 mm [0.62 in] 3X 6-32 UNC-2A X (0.260) binding head terminal screw and lockwasher (sems)	1,93 mm $\pm 0,20$ mm wide keyway [0.076 in ± 0.008 wide keyway] 10,9 mm [0.43 in] 34° $\pm 8^\circ$ total travel 17° $\pm 4^\circ$ Panel seal 17,0 mm [0.67 in] 12,45 mm [0.49 in] 7,4 mm [0.29 in] 15/32 - 32 UNS 2A thread to within 0.060 in of shoulder Sealed to prevent entrance of liquids or dust 27,94 mm [1.10 in] 3,3 mm min. [0.130 in min.] 34,29 mm [1.35 in] 3,3 mm min. [0.130 in min.] 33,53 mm [1.32 in] 19,05 mm [0.75 in] 9,7 mm [0.38 in] 6,6 mm [0.26 in] 22,6 mm [0.89 in] 8,7 mm [0.38 in] 6X 6-32 UNC-2A x (0.260) binding head terminal screw and lockwasher (sems)

MICRO SWITCH COMMERCIAL-GRADE TOGGLE SWITCHES NT SERIES

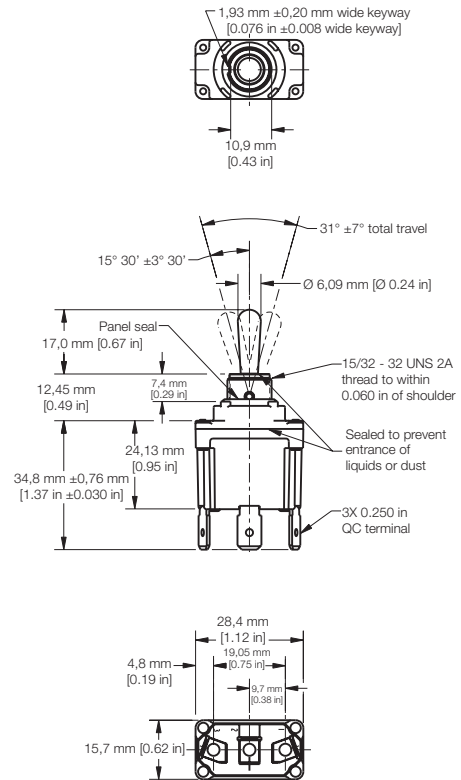
FLAT BASE • STANDARD ACTUATOR OPTIONS, TERMINALS, & DIMENSIONS

NOTE: Three-position switches shown.

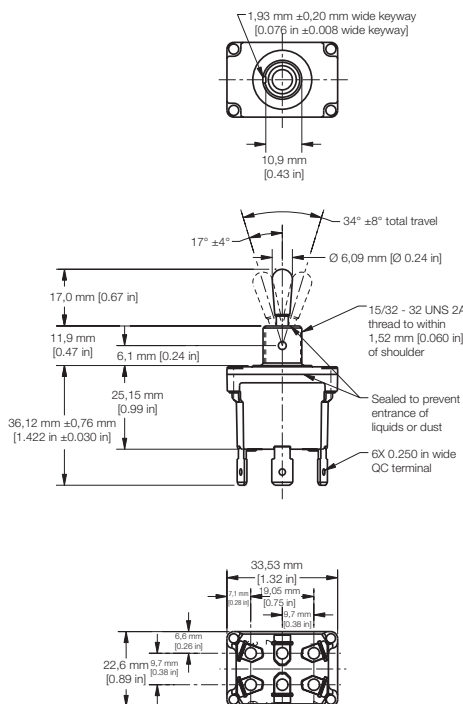
31NT91: Single pole, standard lever, quick-connect terminals



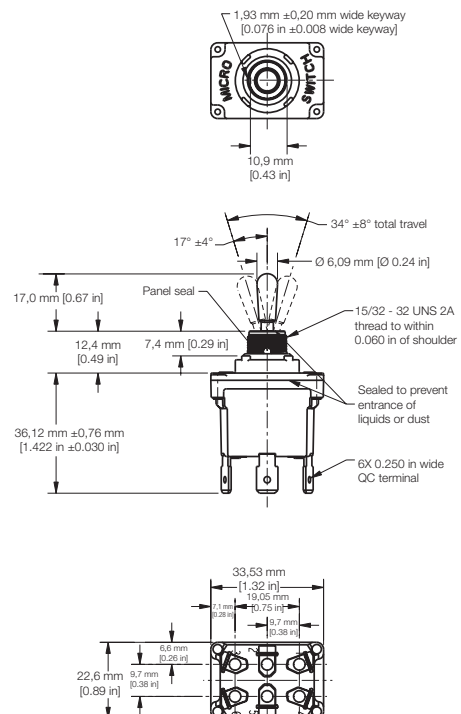
631NT91: Single pole, standard lever, panel standoff, quick-connect terminals



32NT91: Double pole, standard lever, quick-connect terminals



632NT91: standard lever, panel standoff, quick-connect terminals



MICRO SWITCH COMMERCIAL-GRADE TOGGLE SWITCHES

NT SERIES

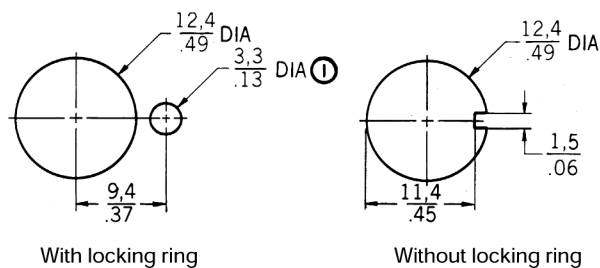
MICRO SWITCH NT SERIES LOCKING CONFIGURATIONS

A  Locked In Three Positions	B  Locked In Center and Extreme Position (Keyway Side)	D  Locked Out Of Center Position	E  Locked In Center Position	F  Locked In Extreme Position (Opposite Keyway)	G  Locked In Extreme Position (Keyway Side)	H  Locked Out Of Center And Extreme Position (Keyway Side)
J  Locked Out Of Center And Extreme Position (Opposite Keyway)	K  Locked In Center And Extreme Position (Opposite Keyway)	L  Locked Out Of Extreme Position (Keyway Side)	M  Locked Out Of And Into Extreme Position (Opposite Keyway)	N  Locked Out Of Extreme Position (Opposite Keyway)	P  Locked Out Of And Into Extreme Position (Keyway Side)	

PULL-TO-UNLOCK LEVERS

Pull-to-unlock toggle levers prevent accidental toggle movement. The knobbed toggle lever must be pulled out approximately 2,3 mm [0.09 in] to change positions. Thirteen different locking configurations are available. This lever style also has a non-glare matte nickel finish. See table below for specific locking configurations.

MICRO SWITCH NT SERIES PANEL CUTOUT



Note:
 © 1,4/.06 MIN DEEP TO ACCOMMODATE LOCKING RING. 15PA87 PANEL SEAL REQUIRES BLIND HOLE TO INSURE SEAL INTEGRITY

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Failure to comply with these instructions could result in death or serious injury.

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