

MIL-DTL-3950

Specifications

Characteristic	Parameter
Description	military-grade toggle switch
Sealing	qualified to MIL-DTL-3950
Operating temperature	-65 °C to 71 °C [-85 °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	IWTS, solder, screw, quick-connect, leadwire
Contacts	Silver alloy or gold-plated
Amp rating	Up to 20 A, ac and dc capability
Approvals	UL, CSA, CE, UKCA
Measurement	26.7 mm H x 33.5 mm W x 22.6 mm D [1.05 in H x 1.32 in W x 0.89 in D]

UL and CSA electrical ratings

Rating code	Electrical rating
L192	10 amps, 125, 250, 277 Vac; ¼ Hp, 125 Vac; ½ Hp, 250, 277 Vac; 3 amps, 125 Vac “L”
L191	15 amps, 125, 250, 277 Vac; ½ Hp, 125 Vac; 1 Hp, 250, 277 Vac; 5 amps, 125 Vac “L”

Electrical ratings(Amp)

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	15	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

Screw terminal 2-Position order guide

Circuits Made with Toggle At:					Standard Toggle	Pull-to-Unlock Toggle	
No. of poles	Keyway position	Opposite keyway	Elect. Rating code	UL rating code	Military Number	Add Suffix to Standard Toggle Listing	Military Number
1	OFF	2-3	1	L191	MS24523-22	D, F, G	MS24658-22
	OFF	2-3	2	L192	MS24523-29	F	MS24658-29
	1-2	OFF	2	L192	MS24523-30	F	MS24658-30
	1-2	2-3	1	L191	MS24523-23	D, F, G	MS24658-23
	1-2	2-3	2	L192	MS24523-26	F	MS24658-26
2	OFF	2-3, 5-6	3	L191	MS24524-22	D, F, G	MS24659-22
	OFF	2-3, 5-6	4	L192	MS24524-29	F	MS24659-29
	1-2, 4-5	OFF	4	L192	MS24524-30	F	MS24659-30
	1-2, 4-5	2-3, 5-6	3	L191	MS24524-23	D, F, G	MS24659-23
	1-2, 4-5	2-3, 5-6	4	L192	MS24524-26	F	MS24659-26
4	OFF	2-3, 5-6, 8-9, 11-12	5	L191	MS24525-22	D, F, G	MS24660-22
	OFF	2-3, 5-6, 8-9, 11-12	6	L192	MS24525-29	F	MS24660-29
	1-2, 4-5, 7-8, 10-11	OFF	6	L192	MS24525-30	F	MS24660-30
	1-2, 4-5, 7-8, 10-11	2-3, 5-6, 8-9, 11-12	5	L191	MS24525-23	D, F, G	MS24660-23
	1-2, 4-5, 7-8, 10-11	2-3, 5-6, 8-9, 11-12	6	L192	MS24525-26	F	MS24660-26

Screw terminal 3-Position order guide

Circuits Made with Toggle At:						Standard Toggle	Pull-to-Unlock Toggle	
No. of poles	Keyway position	Center position	Opposite keyway	Elect. Rating code	UL rating code	Military Number	Add Suffix to Standard Toggle Listing	Military Number
1	1-2	OFF	2-3	1	L191	MS24523-21	ALL TYPES	MS24658-21
	1-2	OFF	2-3	2	L192	MS24523-31	E, F, K, L, M, N	MS24658-31
	1-2	OFF	2-3	2	L192	MS24523-27	E, L, N	MS24658-27
	NONE	OFF	2-3	1	L191	MS24523-24	E, F, K, M	MS24658-24
	NONE	1-2	2-3	1	L192	MS24523-33	E, F, K, M	MS24658-33
	NONE	1-2	2-3	2	L192	MS24523-32	E	MS24658-32
	1-2	OFF	NONE	2	L192	MS24523-28	E	MS24658-28
2	1-2, 4-5	OFF	2-3, 5-6	3	L191	MS24524-21	ALL TYPES	MS24659-21
	1-2, 4-5	OFF	2-3, 5-6	4	L192	MS24524-31	E, F, K, L, M, N	MS24659-31
	1-2, 4-5	OFF	2-3, 5-6	4	L192	MS24524-27	E, L, N	MS24659-27
	NONE	OFF	2-3, 5-6	3	L191	MS24524-24	E, F, K, M	MS24659-24
	NONE	1-2, 4-5	2-3, 5-6	3	L191	MS24524-33	E, F, K, M	MS24659-33
	NONE	1-2, 4-5	2-3, 5-6	4	L192	MS24524-32	E	MS24659-32
	1-2, 4-5	OFF	NONE	4	L192	MS24524-28	E	MS24659-28
	1-2, 4-5	OFF	2-3, 5-6	3	L191	MS27407-4	ALL TYPES	MS27408-4
	1-2, 4-5	1-2, 5-6	2-3, 5-6	4	L192	MS27407-5	E, F, K, L, M, N	MS27408-5
	1-2, 4-5	1-2, 5-6	2-3, 5-6	4	L192	MS27407-6	E, L, N	MS27408-6
4	1-2, 4-5, 7-8, 10-11	OFF	2-3, 5-6, 8-9, 11-12	5	L191	MS24525-21	ALL TYPES	MS24660-21
	1-2, 4-5, 7-8, 10-11	OFF	2-3, 5-6, 8-9, 11-12	6	L192	MS24525-31	E, F, K, L, M, N	MS24660-31
	1-2, 4-5, 7-8, 10-11	OFF	2-3, 5-6, 8-9, 11-12	6	L192	MS24525-27	E, L, N	MS24660-27
	NONE	OFF	2-3, 5-6, 8-9, 11-12	5	L191	MS24525-24	E, F, K, M	MS24660-24
	NONE	1-2, 4-5, 7-8, 10-11	2-3, 5-6, 8-9, 11-12	5	L191	MS24525-33	E, F, K, M	MS24660-33

NONE	1-2, 4-5, 7-8, 10-11	2-3, 5-6, 8-9, 11-12	6	L192	MS24525-32	E	MS24660-32
1-2, 4-5, 7-8, 10-11	OFF	NONE	6	L192	MS24525-38	E	MS24660-28
1-2, 4-5, 7-8, 10-11	2-3, 4-5, 7-8, 11-12	2-3, 5-6, 8-9, 11-12	6	L192	MS27406-2	E, F, K, L, M, N	MS27409-2
1-2, 4-5, 7-8, 10-11	2-3, 4-5, 7-8, 11-12	2-3, 5-6, 8-9, 11-12	5	L191	MS27406-1	ALL TYPES	MS27409-1
1-2, 4-5, 7-8, 10-11	2-3, 4-5, 7-8, 11-12	2-3, 5-6, 8-9, 11-12	6	L192	MS27406-3	E, L, N	MS27409-3

IWTS termination 2-Position order guide

Circuits Made with Toggle At:					No.16 termination	No.20 termination
No. of poles	Keyway position	Opposite keyway	Elect. Rating code	UL rating code	Military Number	Military Number
1	OFF	2-3	1	L191	MS27722-22	MS27784-22
	OFF	2-3	2	L192	MS27722-29	MS27784-29
	1-2	OFF	2	L192	MS27722-30	MS27784-30
	1-2	2-3	1	L191	MS27722-23	MS27784-23
	1-2	2-3	2	L192	MS27722-26	MS27784-26
2	OFF	2-3, 5-6	3	L191	MS27723-22	MS27785-22
	OFF	2-3, 5-6	4	L192	MS27723-29	MS27785-29
	1-2, 4-5	OFF	4	L192	MS27723-30	MS27785-30
	1-2, 4-5	2-3, 5-6	3	L191	MS27723-23	MS27785-23
	1-2, 4-5	2-3, 5-6	4	L192	MS27723-26	MS27785-26
4	OFF	2-3, 5-6, 8-9, 11-12	5	L191	MS27724-22	MS27786-22
	OFF	2-3, 5-6, 8-9, 11-12	6	L192	MS27724-29	MS27786-29
	1-2, 4-5, 7-8, 10-11	OFF	6	L192	MS27724-30	MS27786-30
	1-2, 4-5, 7-8, 10-11	2-3, 5-6, 8-9, 11-12	5	L191	MS27724-23	MS27786-23
	1-2, 4-5, 7-8, 10-11	2-3, 5-6, 8-9, 11-12	6	L192	MS27724-26	MS27786-26

IWTS termination 3-Position order guide

Circuits Made with Toggle At:						Standard Toggle	Pull-to-Unlock Toggle
No. of poles	Keyway position	Center position	Opposite keyway	Elect. Rating code	UL rating code	Military Number	Military Number
1	1-2	OFF	2-3	1	L191	MS27722-21	MS27784-21
	1-2	OFF	2-3	2	L192	MS27722-31	MS27784-31
	1-2	OFF	2-3	2	L192	MS27722-27	MS27784-27
2	1-2, 4-5	OFF	2-3, 5-6	3	L191	MS27723-21	MS27785-21
	1-2, 4-5	OFF	2-3, 5-6	4	L192	MS27723-31	MS27785-31
	1-2, 4-5	OFF	2-3, 5-6	4	L192	MS27723-6	MS27785-27
4	1-2, 4-5, 7-8, 10-11	OFF	2-3, 5-6, 8-9, 11-12	5	L191	MS27724-21	MS27786-21
	1-2, 4-5, 7-8, 10-11	OFF	2-3, 5-6, 8-9, 11-12	6	L192	MS27724-31	MS27786-31
	1-2, 4-5, 7-8, 10-11	OFF	2-3, 5-6, 8-9, 11-12	6	L192	MS27724-27	MS27786-27