

INCH-POUND

MIL-DTL-3928/31
w/AMENDMENT 1
24 July 2024
SUPERSEDING
MIL-DTL-3928/31
5 December 2014

DETAIL SPECIFICATION SHEET

SWITCHES, RADIO-FREQUENCY TRANSMISSION LINE (COAXIAL) (ELECTRICALLY OPERATED) MINIATURE CLASS 5, 1P2T

This specification is approved for use by all Departments
and Agencies of the Department of Defense.

Requirements for acquiring the switches described herein
shall consist of this specification sheet and [MIL-DTL-3928](#).

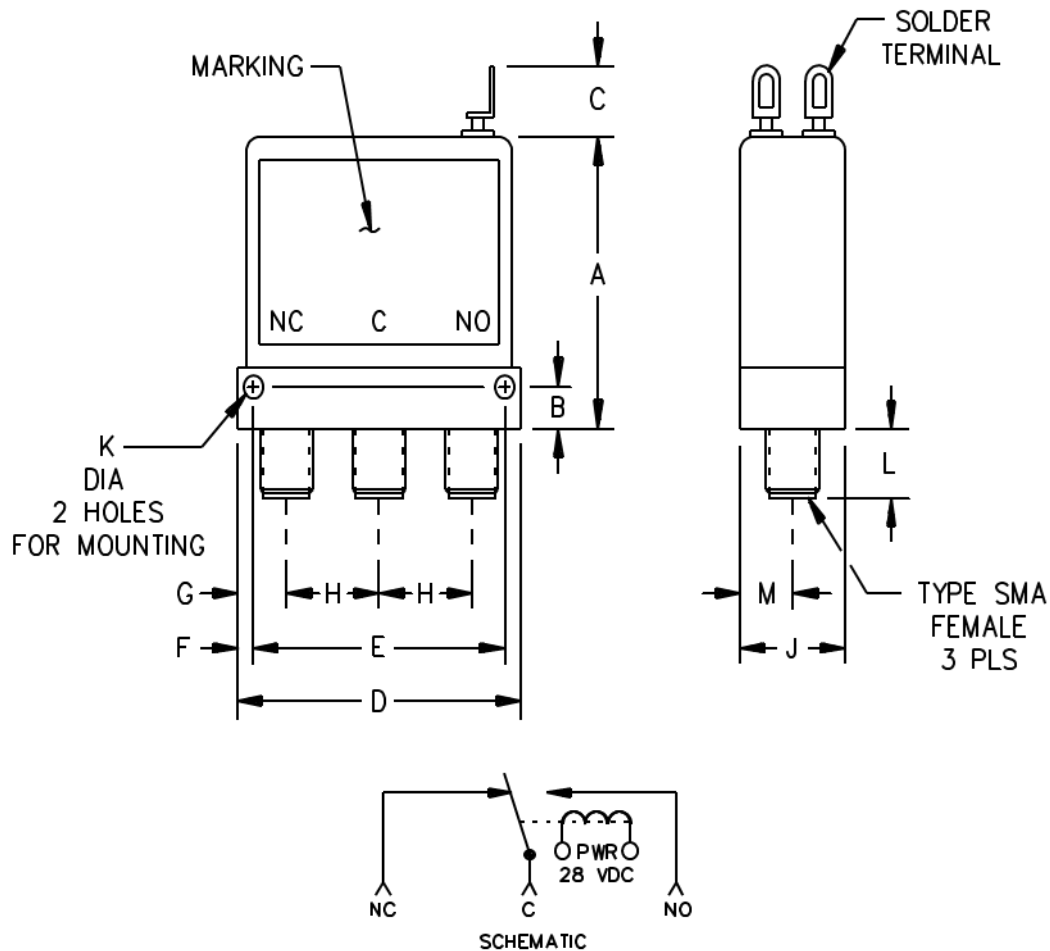


FIGURE 1. Switch configuration and schematic, part or identifying numbers M3928/31-01.



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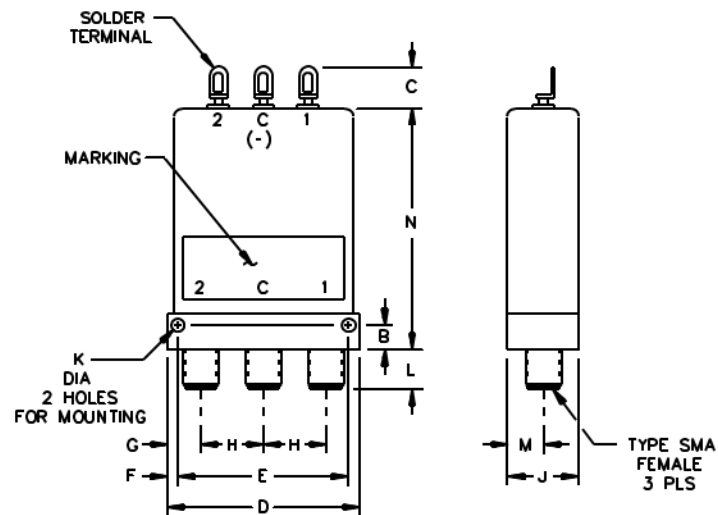
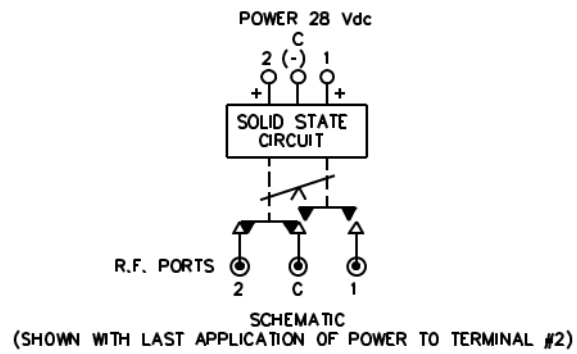


FIGURE 2. Switch configuration and schematic, part or identifying numbers M3928/31-02.

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Dimensions									
Letter	Inches		Millimeters		Letter	Inches		Millimeters	
	Min	Max	Min	Max		Min	Max	Min	Max
A 1.18 ± .030	1.15	1.21	29.2	30.7	H .437 ± .005	.432	.442	11.0	11.2
B .171 ± .005	.166	.176	4.2	4.5	J .50 ± .020	.48	.52	12.2	13.2
C .35 max	----	.35	--	8.9	K .093 ± .005	.088	.098	2.2	2.5
D 1.34 ± .020	1.32	1.36	33.5	34.5	L .30 ± .020	.28	.32	7.1	8.1
E 1.187 ± .005	1.182	1.192	30.0	30.3	M .25 ± .020	.23	.27	5.8	6.9
F .08 ± .020	.06	.10	1.5	2.5	N 1.60 ± .030	1.57	1.63	39.9	41.4
G .23 ± .020	.21	.25	5.3	6.4					

NOTES:

1. Dimensions are in inches.
2. Metric equivalents may be determined using 1.00 inch = 25.4 mm.

TABLE I. Electrical and performance characteristics.

Part or identifying number M3928/31-	Figure No.	Housing	Fre- quency range GHz	Fre- quency rating GHz	VSWR Max	Insertion loss (dB) Max	Isolation (dB) Min	Switch time (ms) Max	Position indication circuit and rating	Life cycles x 1000 Min	Fail-safe or latching	Operating current (A) <u>1</u> / Max	Holding current (A) <u>1</u> / Max	Nominal operating voltage	Pickup voltage (less than)	Dropout voltage (less than)	Power and indicator connector	Weight (oz) Max
M3928/31-01 N,S	1	I	DC - 18	DC -4.0	1.2:1	0.1	80	20	None	1000	F	.16	.16	28 Vdc	20 Vdc	---	Solder Lug	2
				4.0-12.4	1.3:1	0.2	70											
				12.4- 18.0	1.5:1	0.3	60											
M3928/31-02 N,S	2	I	DC - 18	DC -4.0	1.2:1	0.1	80	20	None	1000	L <u>2</u> /	.06	---	28 Vdc	20 Vdc	---	Solder Lug	2
				4.0-12.4	1.3:1	0.2	70											
				12.4- 18.0	1.5:1	0.3	60											

1/ At nominal voltage and 20°C.

2/ Current applied 10 ms minimum. Cutthroat circuitry recovery time 100 ms nominal.

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REQUIREMENTS:

Dimensions and configurations: See figures 1 and 2.

Termination: Open.

Nominal impedance: 50 ohms.

RF connections: Connector shall be SMA Female configuration and shall meet the requirement of MIL-PRF-39012.

Electrical and performance characteristics: See table I.

RF contacts: Break before make.

Part or Identifying Number: M3928/31- (and dash number from table I).

Operating temperature: -55°C to + 85°C.

Referenced documents: In addition to MIL-DTL-3928, this document references the following MIL-PRF-39012

Amendment notations. The margins of this specification sheet are marked with vertical line to indicate modifications generated by this amendment. This was done as a convenience only and the Government assumes no liability whatsoever for any inaccuracies in these notations. Bidders and contractors are cautioned to evaluate the requirements of this document based on the entire content irrespective of the marginal notations.

Custodians:
Army - CR
Navy - EC
Air Force - 85
DLA - CC

Preparing activity:
DLA - CC

(Project 5985-2024-007)

Review activities:
Army - MI
Navy - AS, MC, OS
Air Force - 19

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