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INCH-POUND

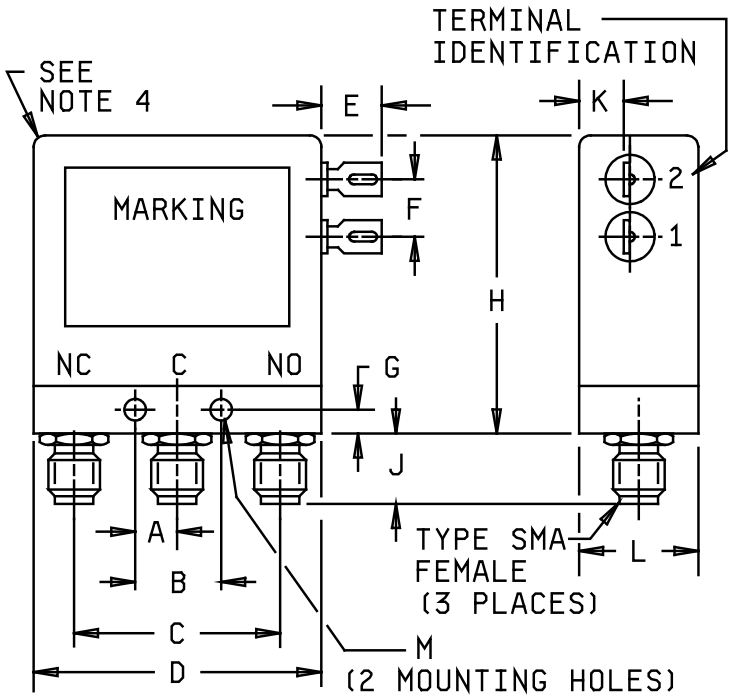
MIL-DTL-3928/15G
w/AMENDMENT 1
1 June 2021
SUPERSEDING
MIL-DTL-3928/15G
4 April 2011

DETAIL SPECIFICATION SHEET

SWITCHES, RADIO FREQUENCY TRANSMISSION LINE (COAXIAL) (ELECTRICALLY OPERATED) (OPTIONAL VENTING FOR SPACE APPLICATIONS) CLASS 5, 1P2T

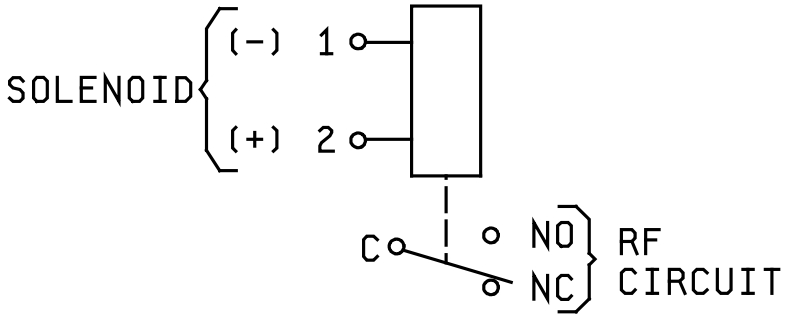
This specification is approved for use by all Departments and Agencies of the Department of Defense.

The requirements for acquiring the switch described herein shall consist of this specification sheet and MIL-DTL-3928.



Dimensions									
Letter	Inches		Millimeters		Letter	Inches		Millimeters	
	Max	Min	Max	Min		Max	Min	Max	Min
A	.230	.210	5.84	5.33	G	.103	.083	2.62	2.11
B	.450	.430	11.43	10.92	H	1.2	---	30	---
C	.890	.870	22.61	22.10	J	.35	---	8.9	---
D	1.5	---	38	---	K	.23	.17	5.8	4.3
E	.35	---	8.9	---	L	.570	---	14.50	---
F	.28	.22	7.1	5.6	M	.130 dia	.110 dia	3.30 dia	2.79 dia

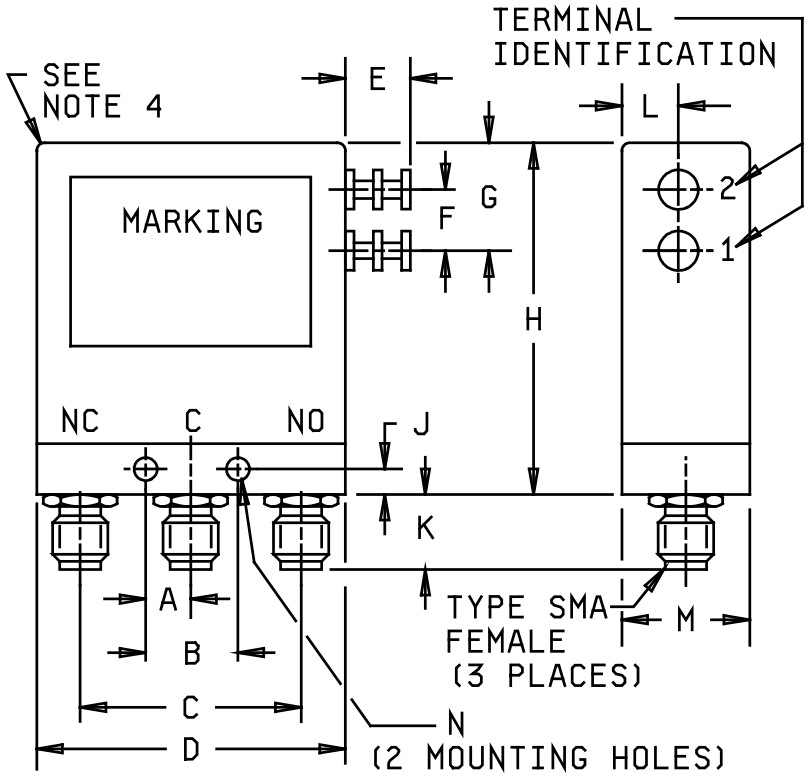
FIGURE 1. Switch configuration and schematic, PINs M3928/15-01, M3928/15-02, and M3928/15-12.



Position 1. (Deenergized or failsafe position),
C connects to NC connector.
NO is open circuit.
Position 2. (Engerized position),
C connects to NO connector,
NC is open circuit.

NOTES:
1. Dimensions are in inches.
2. Metric equivalents are given for general information only (1.00 inch = 25.4 mm).
3. Unless otherwise specified, tolerances are ± .010 (± 0.25 mm) for three place decimals and ± .03 (± 0.8 mm) for two place decimals.
4. Round corners of case may be squared.

FIGURE 1. Switch configuration and schematic, PINs M3928/15-01, M3928/15-02, and M3928/15-12 - Continued.



Dimensions									
Lette	Inches		Millimeters		Letter	Inches		Millimeters	
	Max	Min	Max	Min		Max	Min	Max	Min
A	.230	.210	5.84	5.33	H	1.2	---	30	---
B	.450	.430	11.43	10.92	J	.103	.083	2.62	2.11
C	.890	.870	22.61	22.10	K	.35	---	8.9	---
D	1.5	---	38	---	L	.160	.140	4.06	3.56
E	.35	---	8.9	---	M	.570	---	14.5	---
F	.23	.17	5.8	4.3	N	.126 dia	.106 dia	3.20 dia	2.69 dia
G	.56	---	14.2	---					

NOTES:
1. Dimensions are in inches.
2. Metric equivalents are given for general information only (1.00 inch = 25.4 mm).
3. Unless otherwise specified, tolerances are ± .010 (± 0.25 mm) for three place decimals and ± .03 (± 0.8 mm) for two place decimals.
4. Round corners of case may be squared.

FIGURE 1A. Alternate construction for PINs M3928/15-01, M3928/15-02, and M3928/15-12.

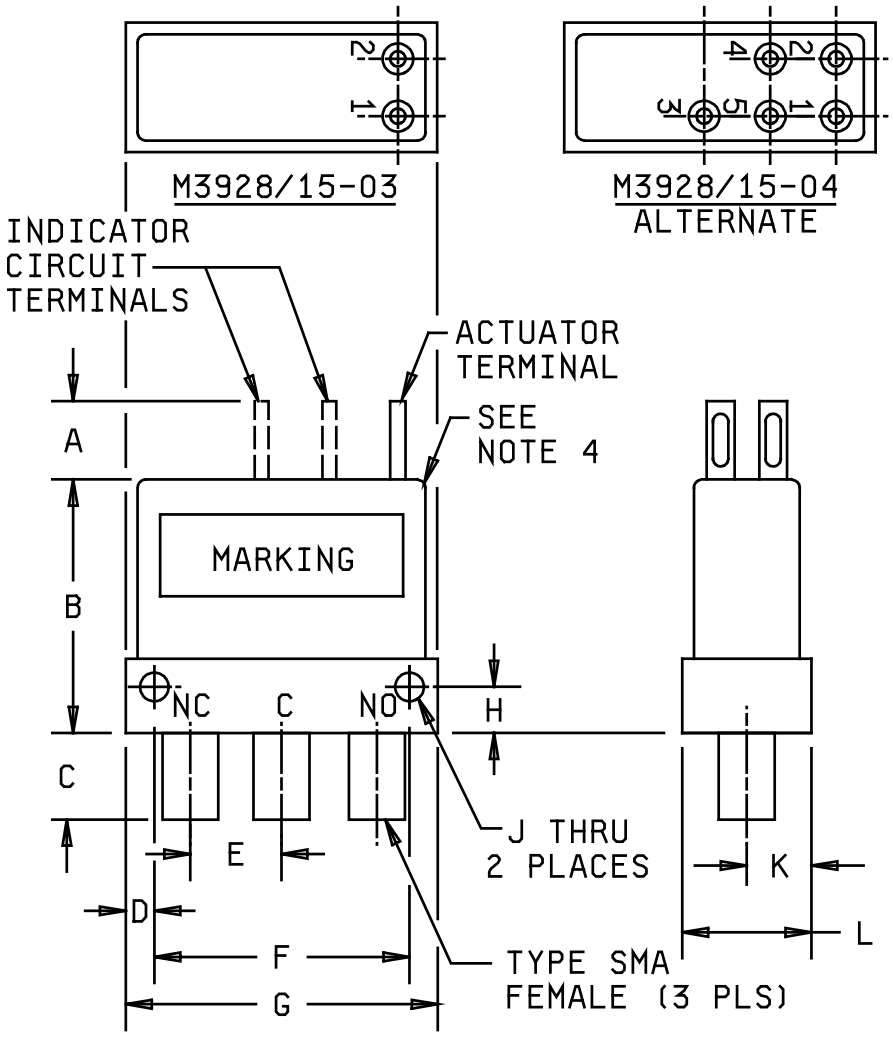
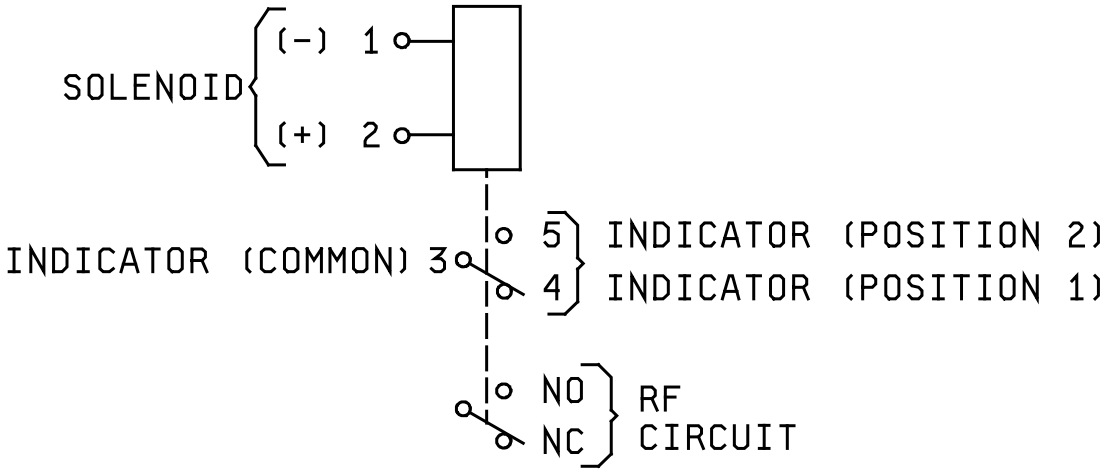


FIGURE 2. Switch configuration and schematic, PINs M3928/15-03 and M3928/15-04.



(PIN M3928/15-03 does not have indicator circuit provisions and, therefore, does not have terminals 2, 4 and 5.)

Position 1. (De-energized or failsafe position),
C connects to NC connector,
NO is open circuit

Position 2. (Energized position),
C connects to NO connector,
NC is open circuit

Dimensions									
Lette	Inches		Millimeters		Letter	Inches		Millimeters	
	Max	Min	Max	Min		Max	Min	Max	Min
A	.35	---	8.9	---	G	1.37	1.31	34.8	33.3
B	1.18	---	30.0	---	H	.20	.14	5.1	3.6
C	.34	.28	8.6	7.1	J	.103 dia	.083 dia	2.62 dia	2.11 dia
D	.11	.05	2.8	1.3	K	.28	.22	7.1	5.6
E	.47	.41	11.9	10.4	L	.53	.47	13.5	11.9
F	1.22	1.16	31.0	29.5					

NOTES:
1. Dimensions are in inches.
2. Metric equivalents are given for general information only (1.00 inch = 25.4 mm).
3. Unless otherwise specified, tolerances are ± .010 (± 0.25 mm) for three place decimals and ± .03 (± 0.8 mm) for two place decimals.
4. Round corners of case may be squared.

FIGURE 2. Switch configuration and schematic, PINs M3928/15-03 and M3928/15-04 - Continued.

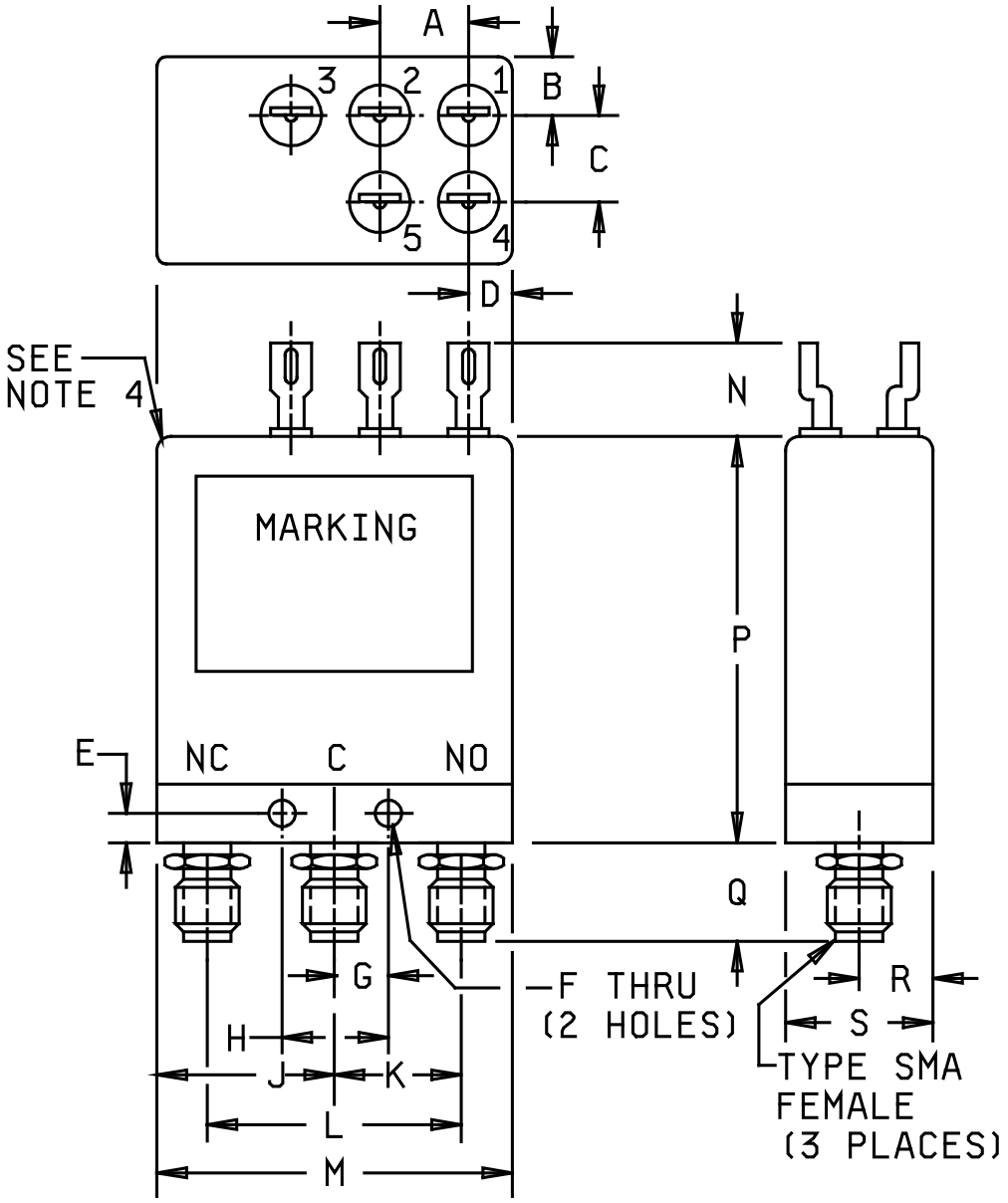
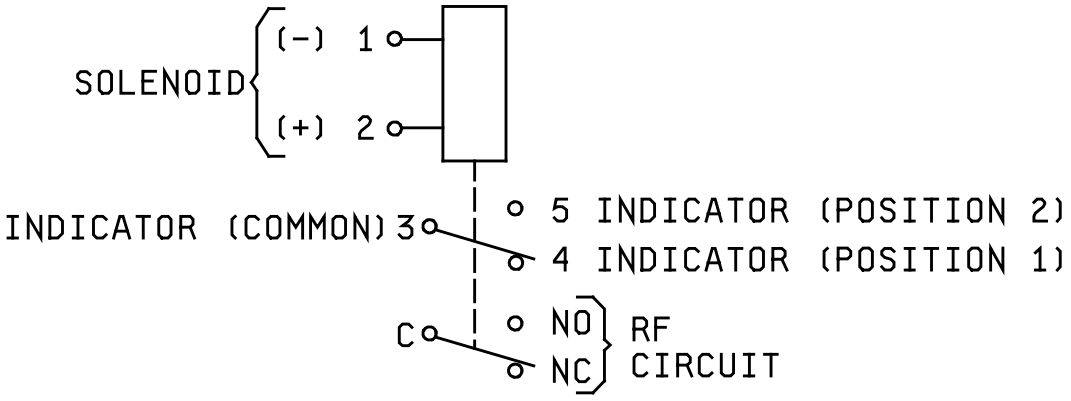


FIGURE 3. Switch configuration and schematic, PIN M3928/15-05.



Position 1. (De-energized or failsafe position),
C connects to NC connector.
NO is open circuit

Position 2. (Energized position).
C connects to NO connector.
NC is open circuit

SCHEMATIC (SHOWN IN POSITION 1)

Dimensions									
Letter	Inches		Millimeters		Letter	Inches		Millimeters	
	Max	Min	Max	Min		Max	Min	Max	Min
A	.28	.22	7.1	5.6	K	.450	.430	11.4	10.9
B	.20	.14	5.1	3.6	L	.890	.870	22.6	22.1
C	.20	.14	5.1	3.6	M	1.43	1.37	36.3	34.8
D	.29	.23	7.4	5.8	N	.35	---	8.9	---
E	.095	---	2.41	---	P	1.67	1.61	42.4	40.9
F	.130 dia	.110 dia	3.30 dia	2.79 dia	Q	.31	---	7.9	---
G	.230	.210	5.84	5.33	R	.31	.25	7.9	6.4
H	.450	.430	11.4	10.9	S	.59	.53	15.0	13.5
J	.73	.67	18.5	17.0					

NOTES:
1. Dimensions are in inches.
2. Metric equivalents are given for general information only (1.00 inch = 25.4 mm).
3. Unless otherwise specified, tolerances are ± .010 (± 0.25 mm) for three place decimals and ± .03 (± 0.8 mm) for two place decimals.
4. Round corners of case may be squared.

FIGURE 3. Switch configuration and schematic, PIN M3928/15-05 - Continued.

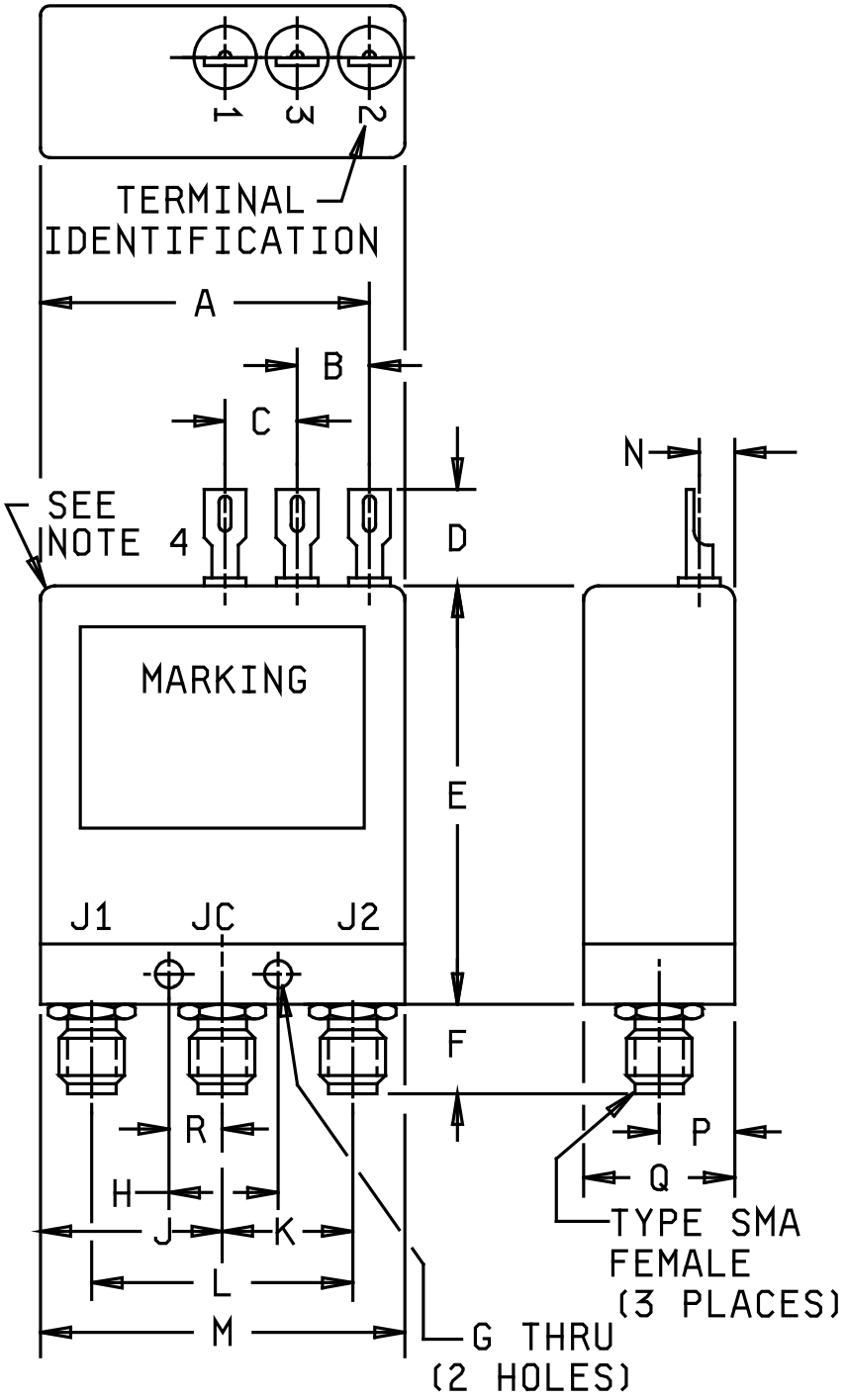
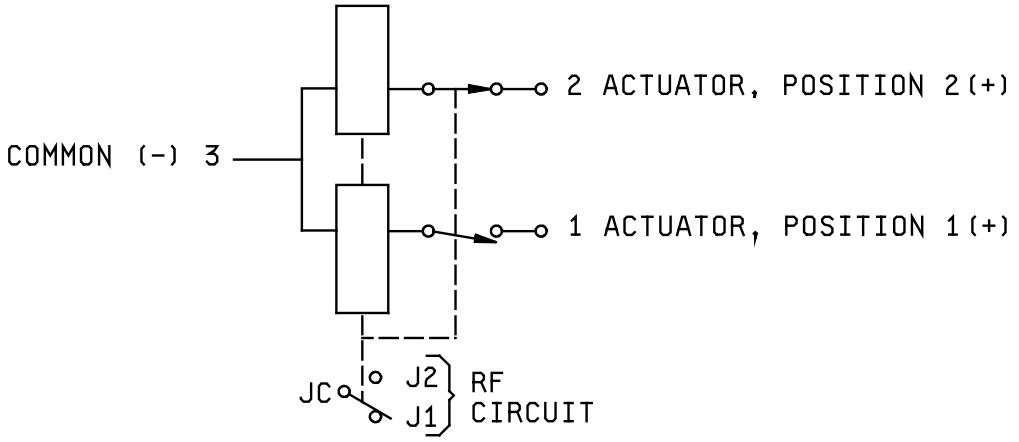


FIGURE 4. Switch configuration and schematic, PIN M3928/15-07.



POSITION 1. Energize terminal 1. JC connects to J1, J2 is open circuit.

POSITION 2. Energize terminal 2. JC connects to J2, J1 is open circuit.

SCHEMATIC (shown in position 1)

Dimensions									
Lette	Inches		Millimeters		Letter	Inches		Millimeters	
	Max	Min	Max	Min		Max	Min	Max	Min
A	1.15	1.09	29.2	27.7	J	.680	.660	17.27	16.76
B	.28	.22	7.1	5.6	K	.450	.430	11.43	10.92
C	.28	.22	7.1	5.6	L	.890	.870	22.61	22.10
D	.35	---	8.9	---	M	1.37	1.31	34.8	33.3
E	1.50	---	38.1	---	N	.19	.13	4.8	3.3
F	.31	----	7.9	---	P	.28	.22	7.1	5.6
G	.130 dia	.110 dia	3.30 dia	2.79 dia	Q	.53	.47	13.5	11.9
H	.450	.430	11.43	10.92	R	.230	.210	5.84	5.33

NOTES:
1. Dimensions are in inches.
2. Metric equivalents are given for general information only (1.00 inch = 25.4 mm).
3. Unless otherwise specified, tolerances are ± .010 (± 0.25 mm) for three place decimals and ± .03 (± 0.8 mm) for two place decimals.
4. Round corners of case may be squared.

FIGURE 4. Switch configuration and schematic, PIN M3928/15-07 - Continued.

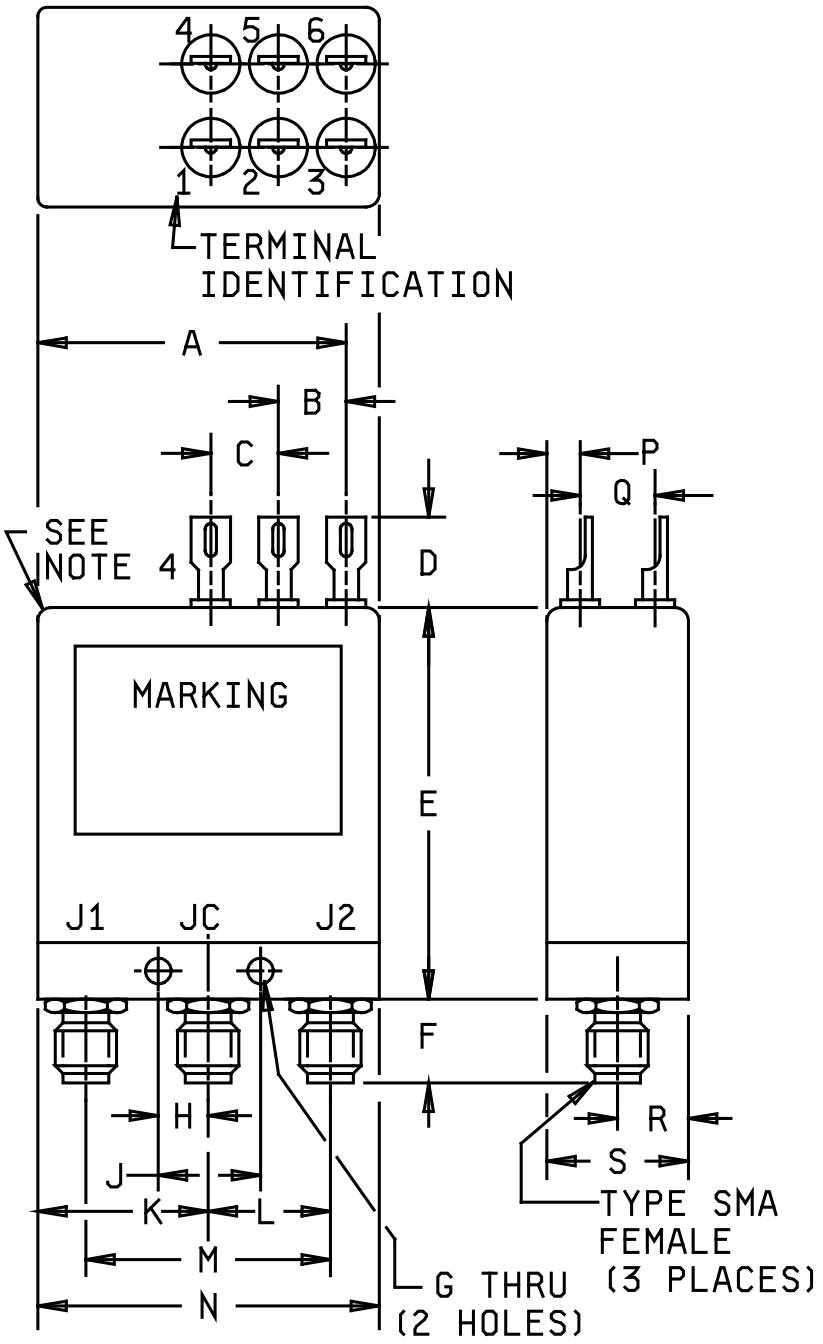
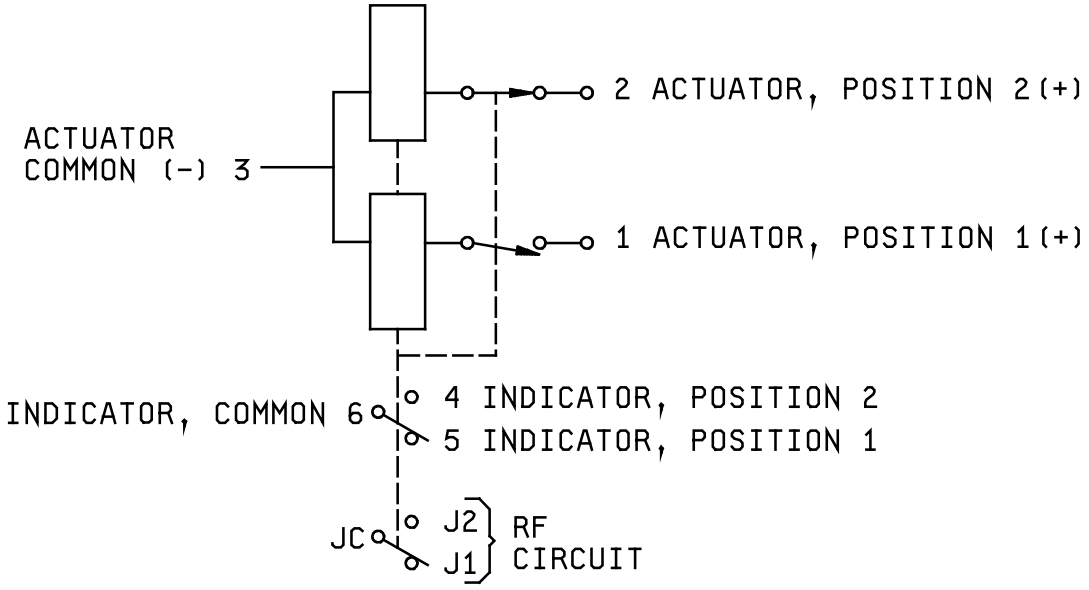


FIGURE 5. Switch configuration and schematic, PIN M3928/15-08.



POSITION 1. Energize terminal 1. JC connects to J1, J2 is open circuit.

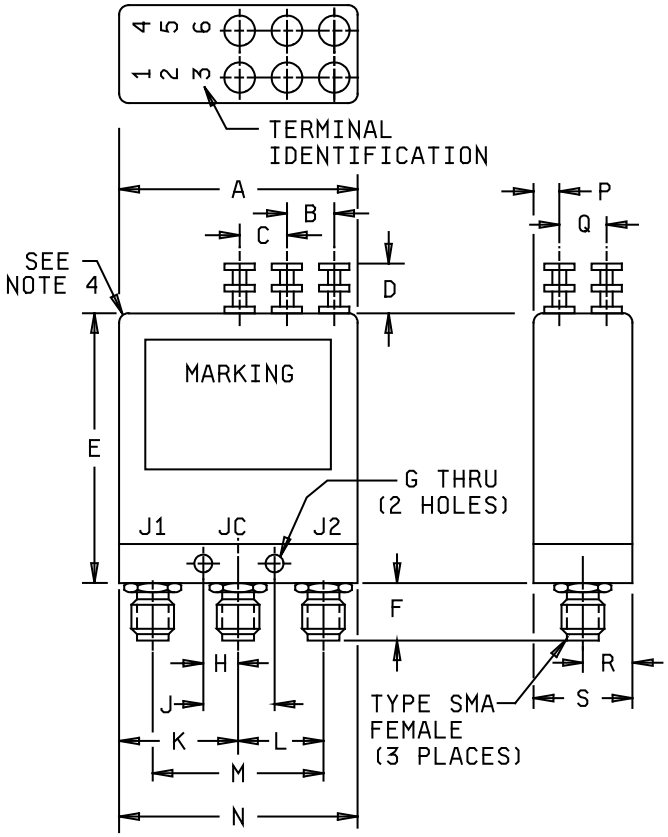
POSITION 2. Energize terminal 2. JC connects to J2, J1 is open circuit.

SCHEMATIC (shown in position 1)

Dimensions									
Lette	Inches		Millimeters		Letter	Inches		Millimeters	
	Max	Min	Max	Min		Max	Min	Max	Min
A	1.15	1.09	29.2	27.7	K	.680	.660	17.27	16.76
B	.28	.22	7.1	5.6	L	.450	.430	11.43	10.92
C	.28	.22	7.1	5.6	M	.890	.870	22.6 1	22.10
D	.35	---	8.9	---	N	1.37	1.31	34.8	33.3
E	1.50	---	38.1	---	P	.19	.13	4.8	3.3
F	.31	---	7.9	---	Q	.20	.14	5.1	3.6
G	.130 dia	.110 dia	3.30 dia	2.79 dia	R	.28	.22	7.1	5.6
H	.230	.210	5.84	5.33	S	.53	.47	13.5	11.9
J	.450	.430	11.43	10.92					

NOTES:
1. Dimensions are in inches.
2. Metric equivalents are given for general information only (1.00 inch = 25.4 mm).
3. Unless otherwise specified, tolerances are ± .010 (± 0.25 mm) for three place decimals and ± .03 (±0.8 mm) for two place decimals.
4. Round corners of case may be squared.

FIGURE 5. Switch configuration and schematic, PIN M3928/15-08 - Continued.



Dimensions									
Letter	Inches		Millimeters		Letter	Inches		Millimeters	
	Max	Min	Max	Min		Max	Min	Max	Min
A	1.06	1.00	26.9	25.4	K	.630	.610	16.00	15.49
B	.28	.22	7.1	5.6	L	.450	.430	11.43	10.92
C	.28	.22	7.1	5.6	M	.890	.870	22.61	22.10
D	.35	---	8.9	---	N	1.28	1.22	32.5	31.0
E	1.50	---	38.1	---	P	.19	.13	4.8	3.3
F	.31	---	7.9	---	Q	.20	.14	5.1	3.6
G	.126 dia	.106 dia	3.20 dia	2.69 dia	R	.28	.22	7.1	5.6
H	.230	.210	5.84	5.33	S	.53	.47	13.5	11.9
J	.450	.430	11.43	10.92					

NOTES:
1. Dimensions are in inches.
2. Metric equivalents are given for general information only (1.00 inch = 25.4 mm).
3. Unless otherwise specified, tolerances are ± .010 (± 0.25 mm) for three place decimals and ± .03 (± 0.8 mm) for two place decimals.
4. Round corners of case may be squared.

FIGURE 5A. Alternate construction for PIN M3928/15-08.

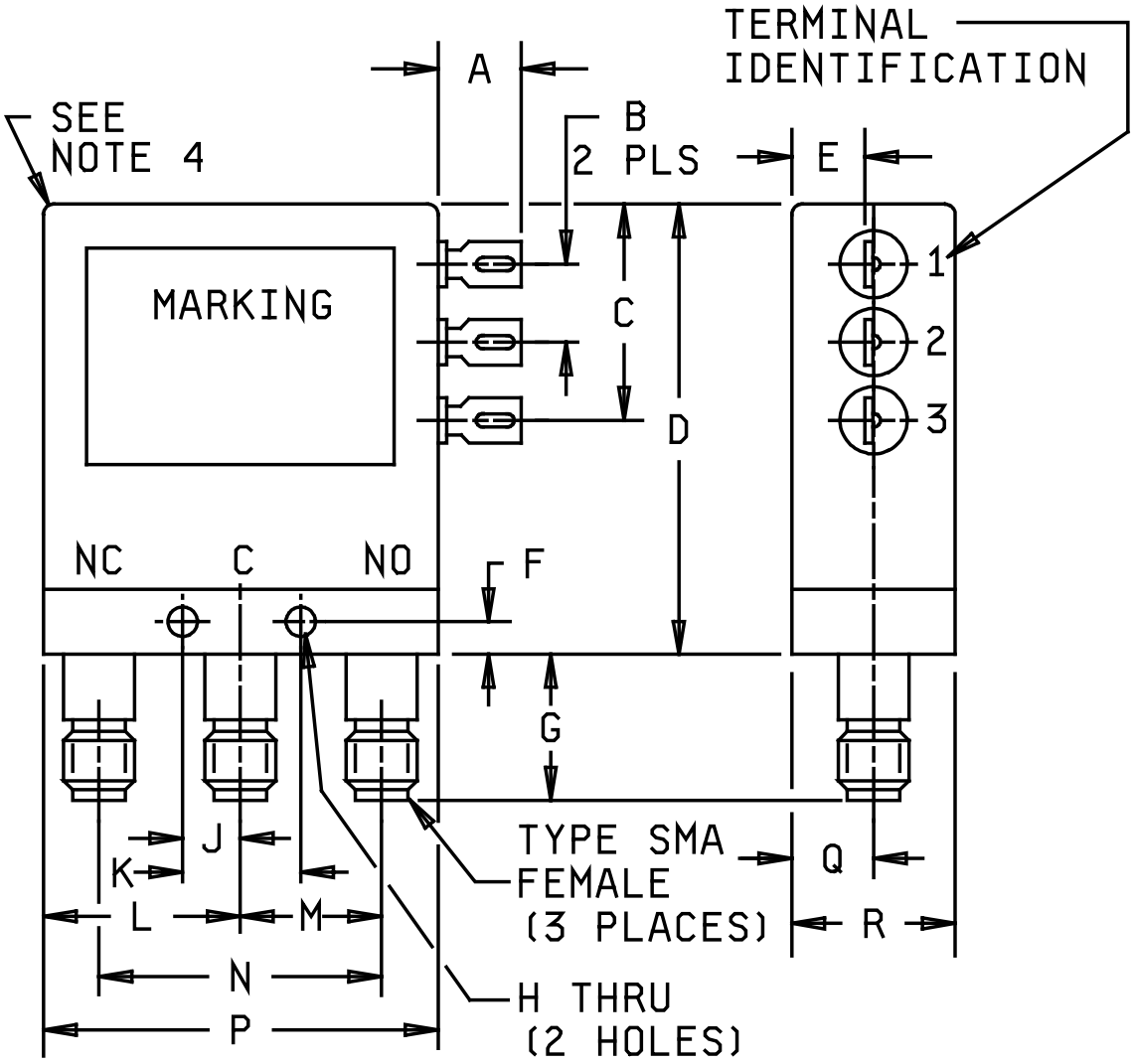
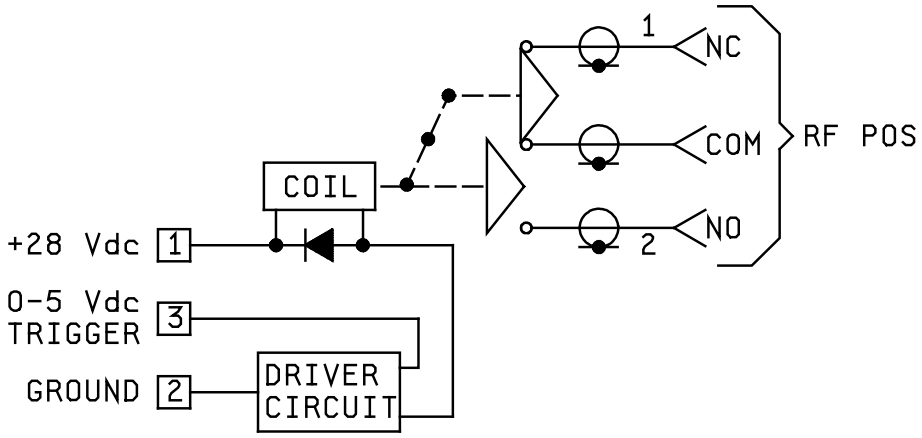


FIGURE 6. Switch configuration and schematic, PIN M3928/15-09.



Shown in failsafe position (Position 1).

Energize to connect COM to NO (Position 2).

SCHEMATIC

Dimensions									
Letter	Inches		Millimeters		Letter	Inches		Millimeters	
	Max	Min	Max	Min		Max	Min	Max	Min
A	.23	.17	5.8	4.3	J	.230	.210	5.84	5.33
B	.22	.16	5.6	4.1	K	.450	.430	11.43	10.92
C	.66	.60	16.8	15.2	L	.680	.660	17.27	16.76
D	1.38	1.32	35.1	33.5	M	.450	.430	11.43	10.92
E	.19	.13	4.8	3.3	N	.890	.870	22.61	22.10
F	.103	.083	2.62	2.11	P	1.37	1.31	34.8	33.3
G	.50	---	12.7	---	Q	.28	.22	7.1	5.6
H	.130 dia	.110 dia	3.30 dia	2.79 dia	R	.53	.47	13.5	11.9

NOTES:
1. Dimensions are in inches.
2. Metric equivalents are given for general information only (1.00 inch = 25.4 mm).
3. Unless otherwise specified, tolerances are ± .010 (± 0.25 mm) for three place decimals and ± .03 (± 0.8 mm) for two place decimals.
4. Round corners of case may be squared.

FIGURE 6. Switch configuration and schematic, PIN M3928/15-09 - Continued.

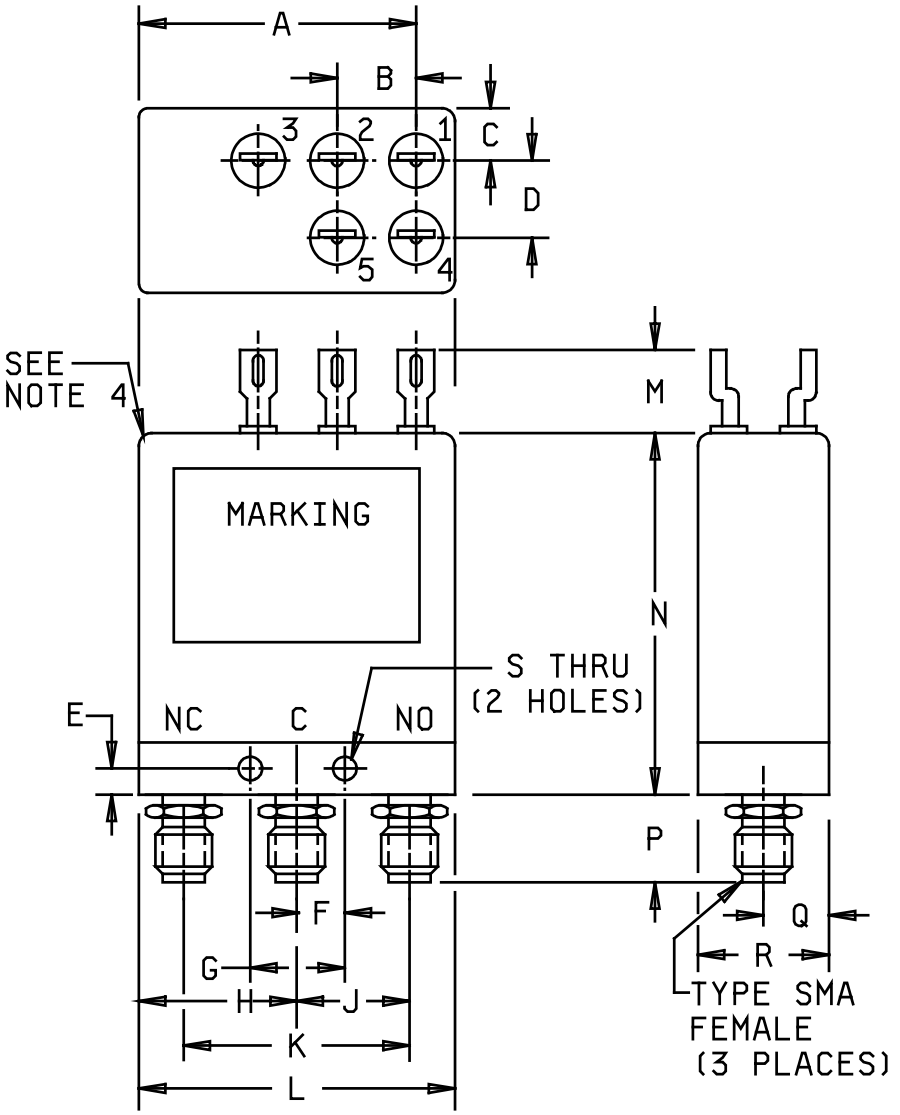
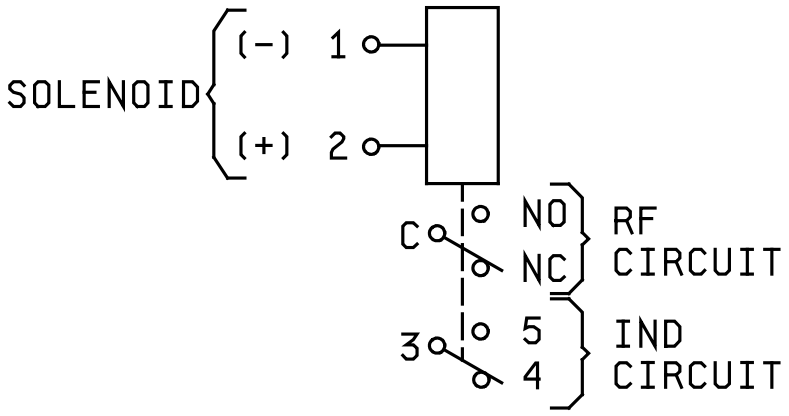


FIGURE 7. Switch configuration and schematic, PINs M3928/15-10 and M3928/15-13.



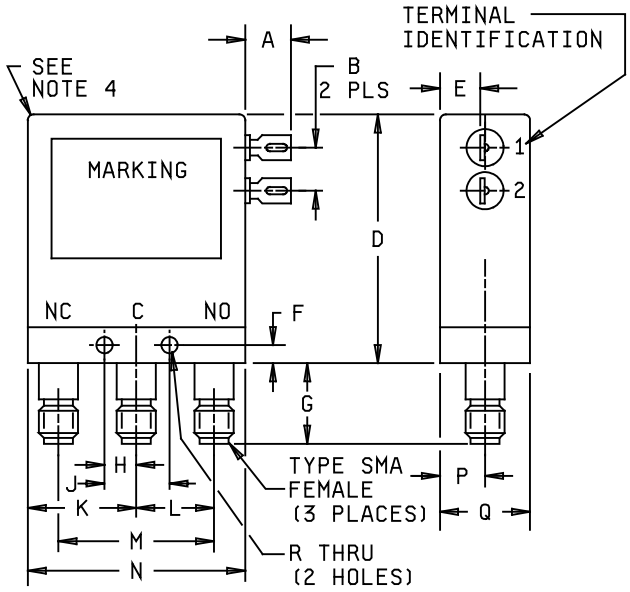
Position 1. (De-energized or failsafe position),
C connects to NC connector.
NO is open circuit

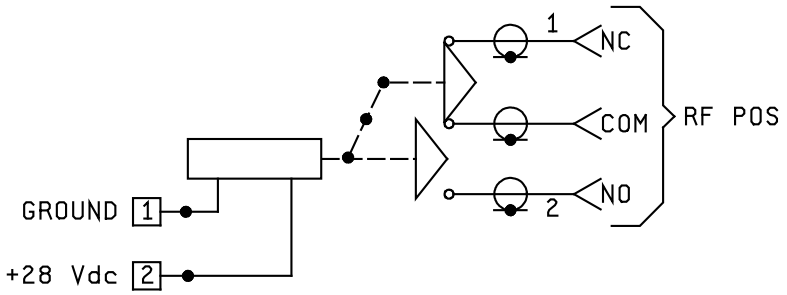
Position 2. (Energized position).
C connects to NO connector.
NC is open circuit

Dimensions									
Letter	Inches		Millimeters		Letter	Inches		Millimeters	
	Max	Min	Max	Min		Max	Min	Max	Min
A	1.15	1.09	29.2	27.7	J	.450	.430	11.43	10.92
B	.28	.22	7.1	5.6	K	.890	.870	22.61	22.10
C	.19	.13	4.8	3.3	L	1.37	1.31	34.8	33.3
D	.20	.14	5.1	3.6	M	.35	---	8.9	---
E	.103	.083	2.62	2.11	N	1.43	1.37	36.3	34.8
F	.230	.210	5.84	5.33	P	.31	---	7.9	---
G	.450	.430	11.43	10.92	Q	.28	.22	7.1	5.6
H	.680	.660	17.27	16.76	R	.53	.47	13.5	11.9

NOTES:
1. Dimensions are in inches.
2. Metric equivalents are given for general information only (1.00 inch = 25.4 mm).
3. Unless otherwise specified, tolerances are ± .010 (± 0.25 mm) for three place decimals and ± .03 (± 0.8 mm) for two place decimals.
4. Round corners of case may be squared.

FIGURE 7. Switch configuration and schematic, PINs M3928/15-10 and M3928/15-13 - Continued.





Shown in fail-safe position (position 1). Energize to connect COM to NO (position 2).

SCHEMATIC

Dimensions									
Letter	Inches		Millimeters		Letter	Inches		Millimeters	
	Max	Min	Max	Min		Max	Min	Max	Min
A	.35	---	8.9	---	J	.450	.430	11.43	10.92
B	.28	.22	7.1	5.6	K	.680	.660	17.27	16.76
C	.53	.47	13.5	11.9	L	.450	.430	11.43	10.92
D	1.18	1.12	30.0	28.4	M	.890	.870	22.61	22.10
E	.23	.17	5.8	5.3	N	1.37	1.31	34.8	33.3
F	.103	.083	2.62	2.11	P	.28	.22	7.1	5.6
G	.50	---	12.7	---	Q	.57	---	14.5	---
H	.230	.210	5.84	5.33					

NOTES:
1. Dimensions are in inches.
2. Metric equivalents are given for general information only (1.00 inch = 25.4 mm).
3. Unless otherwise specified, tolerances are ± .010 (± 0.25 mm) for three place decimals and ± .03 (± 0.8 mm) for two place decimals.
4. Round corners of case may be squared.

FIGURE 8. Switch configuration and schematic, PIN M3928/15-11.

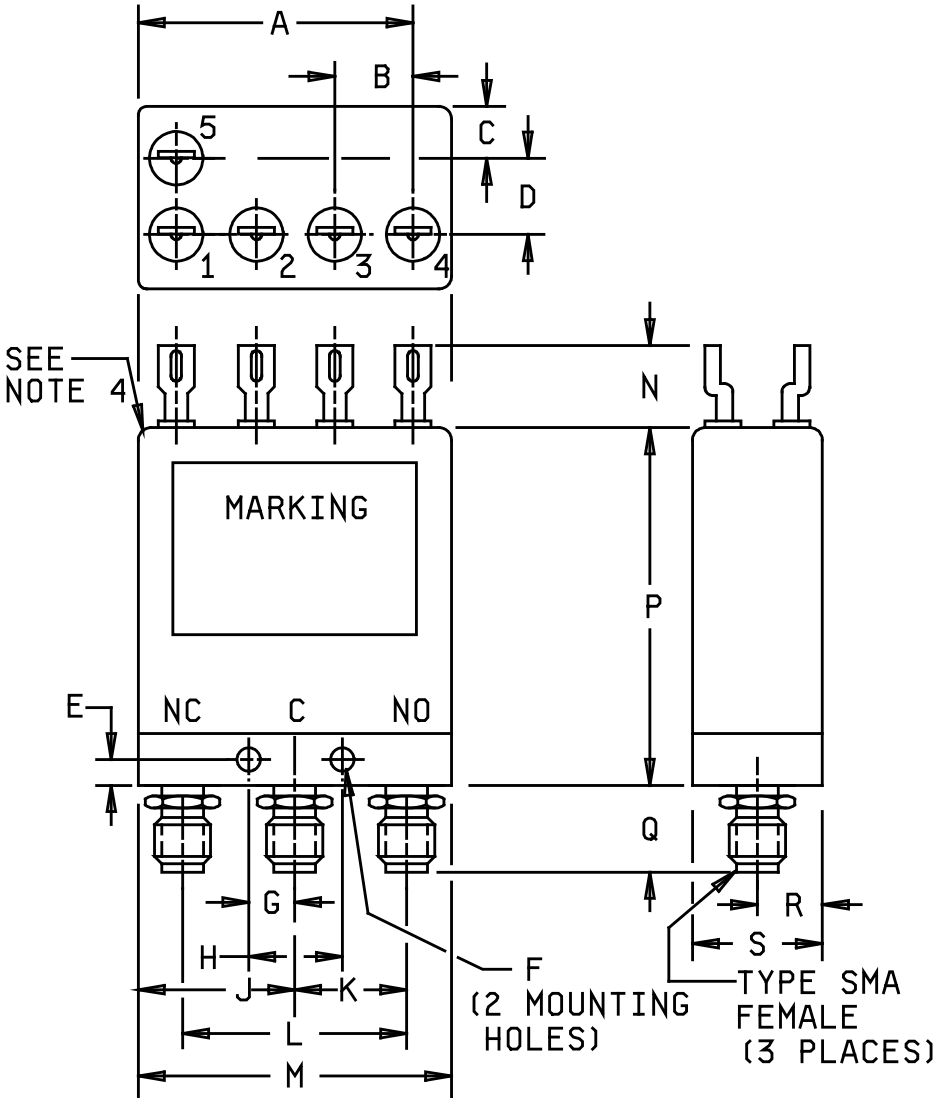
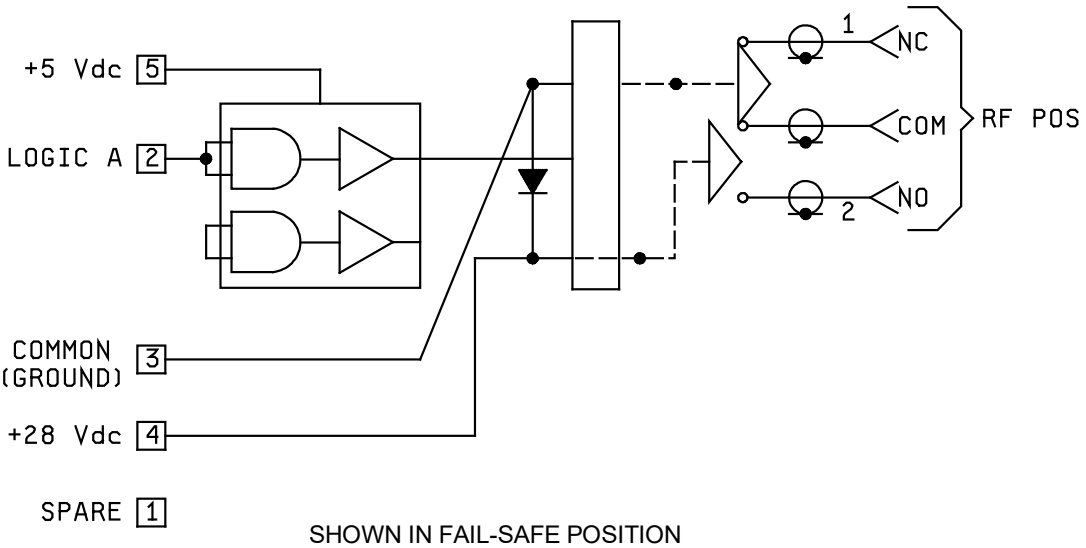


FIGURE 9. Switch configuration and schematic, PIN M3928/15-14.



SHOWN IN FAIL-SAFE POSITION
ENERGIZE TO CONNECT COMMON TO NO

SCHEMATIC

Logic truth table	
RF path	Logic signal
	A
C-NC	0
C-NO	1

Dimensions									
Letter	Inches		Millimeters		Letter	Inches		Millimeters	
	Max	Min	Max	Min		Max	Min	Max	Min
A	1.15	1.09	29.2	27.7	K	.450	.430	11.43	10.92
B	.28	.22	7.1	5.6	L	.890	.870	22.61	22.10
C	.19	.13	4.8	3.3	M	1.37	1.31	34.8	33.3
D	.20	.14	5.1	3.6	N	.35	---	8.9	---
E	.12	.06	3.0	1.5	P	1.80	---	45.7	---
F	.130 dia	.110 dia	3.30 dia	2.79 dia	Q	.34	.28	8.6	7.1
G	.230	.210	5.84	5.33	R	.28	.22	7.1	5.6
H	.450	.430	11.43	10.92	S	.53	.47	13.5	11.9
J	.680	.660	17.27	16.76					

NOTES:
1. Dimensions are in inches.
2. Metric equivalents are given for general information only (1.00 inch = 25.4 mm).
3. Unless otherwise specified, tolerances are ± .010 (± 0.25 mm) for three place decimals and ± .03 (± 0.8 mm) for two place decimals.
4. Round corners of case may be squared.

FIGURE 9. Switch configuration and schematic, PIN M3928/15-14 - Continued.

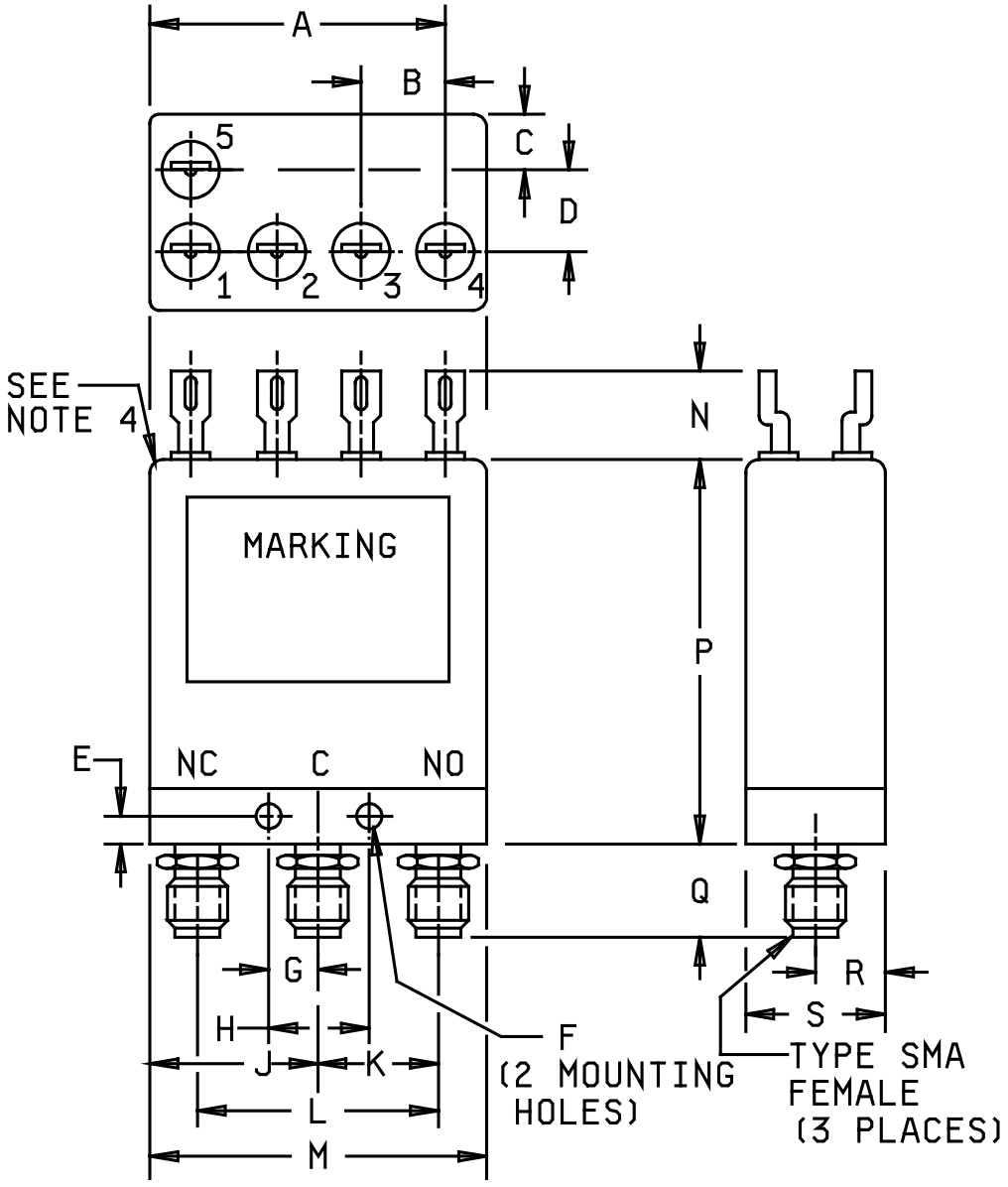
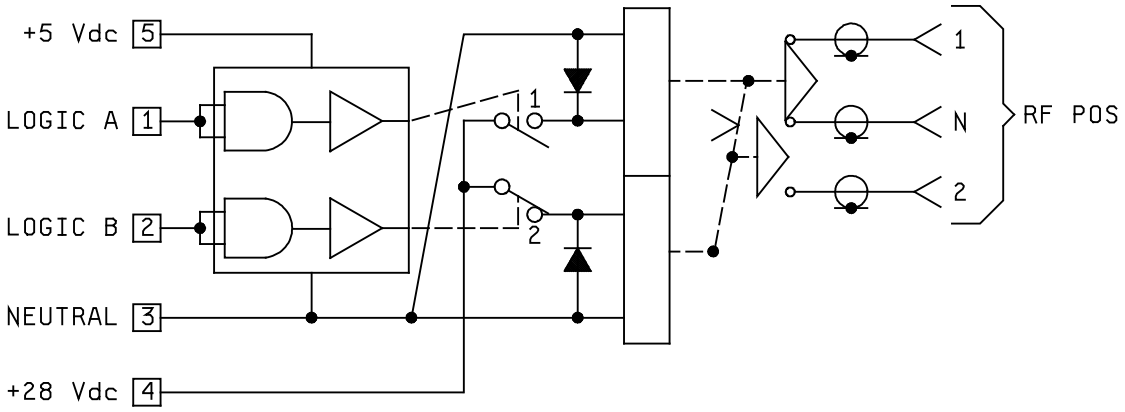


FIGURE 10. Switch configuration and schematic, PIN M3928/15-15.



POSITION 1. ENERGIZE TERMINAL 1. N CONNECT TO 1,
2 IS OPEN CIRCUIT
POSITION 2. ENERGIZE TERMINAL 2. N CONNECT TO 2,
1 IS OPEN CIRCUIT

SCHEMATIC

Logic truth table		
RF path	Logic signal	
	A	B
N-1	1	0
N-2	0	1

Dimensions									
Letter	Inches		Millimeters		Letter	Inches		Millimeters	
	Max	Min	Max	Min		Max	Min	Max	Min
A	1.15	1.09	29.2	27.7	K	.450	.430	11.43	10.92
B	.28	.22	7.1	5.6	L	.890	.870	22.61	22.10
C	.19	.13	4.8	3.3	M	1.37	1.31	34.8	33.3
D	.20	.14	5.1	3.6	N	.35	---	8.9	---
E	.12	.06	3.0	1.5	P	1.80	---	45.7	---
F	.130 dia	.110 dia	3.30 dia	2.79 dia	Q	.34	.28	8.6	7.1
G	.230	.210	5.84	5.33	R	.28	.22	7.1	5.6
H	.450	.430	11.43	10.92	S	.53	.47	13.5	11.9
J	.680	.660	17.27	16.76					

NOTES:
1. Dimensions are in inches.
2. Metric equivalents are given for general information only (1.00 inch = 25.4 mm).
3. Unless otherwise specified, tolerances are ± .010 (± 0.25 mm) for three place decimals and ± .03 (± 0.8 mm) for two place decimals.
4. Round corners of case may be squared.

FIGURE 10. Switch configuration and schematic, PIN M3928/15-15 - Continued.

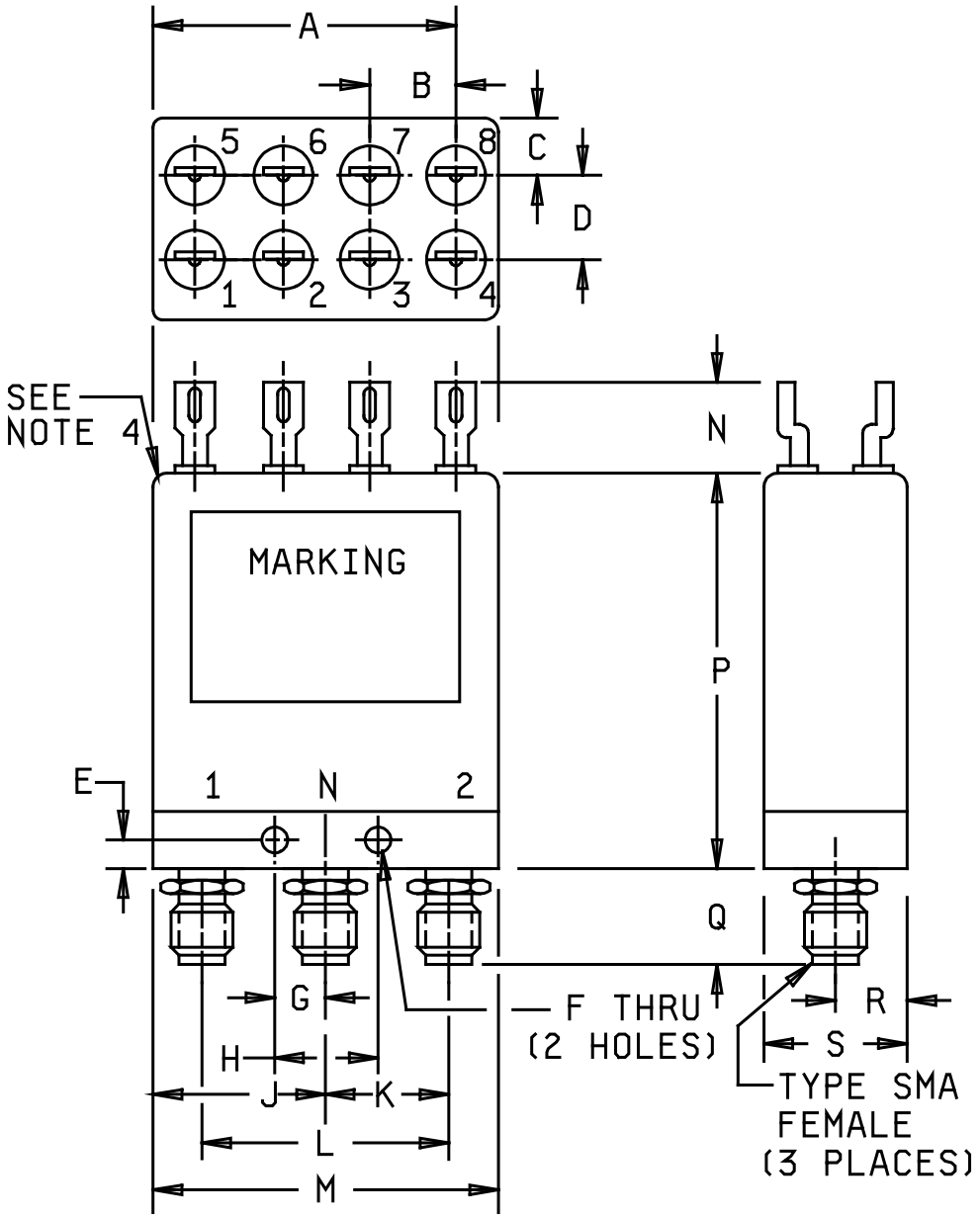
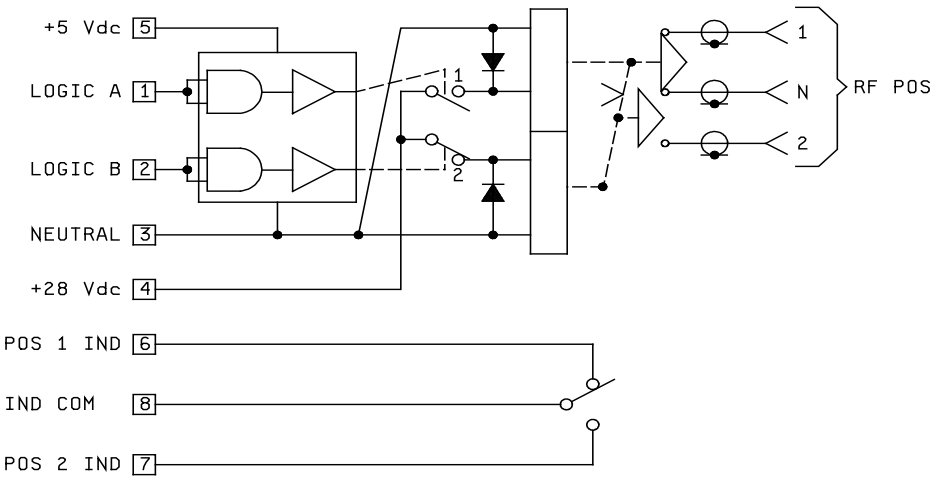


FIGURE 11. Switch configuration and schematic, PIN M3928/15-16.



POSITION 1. ENERGIZE TERMINAL 1. N CONNECT TO 1,
2 IS OPEN CIRCUIT
POSITION 2. ENERGIZE TERMINAL 2. N CONNECT TO 2,
1 IS OPEN CIRCUIT

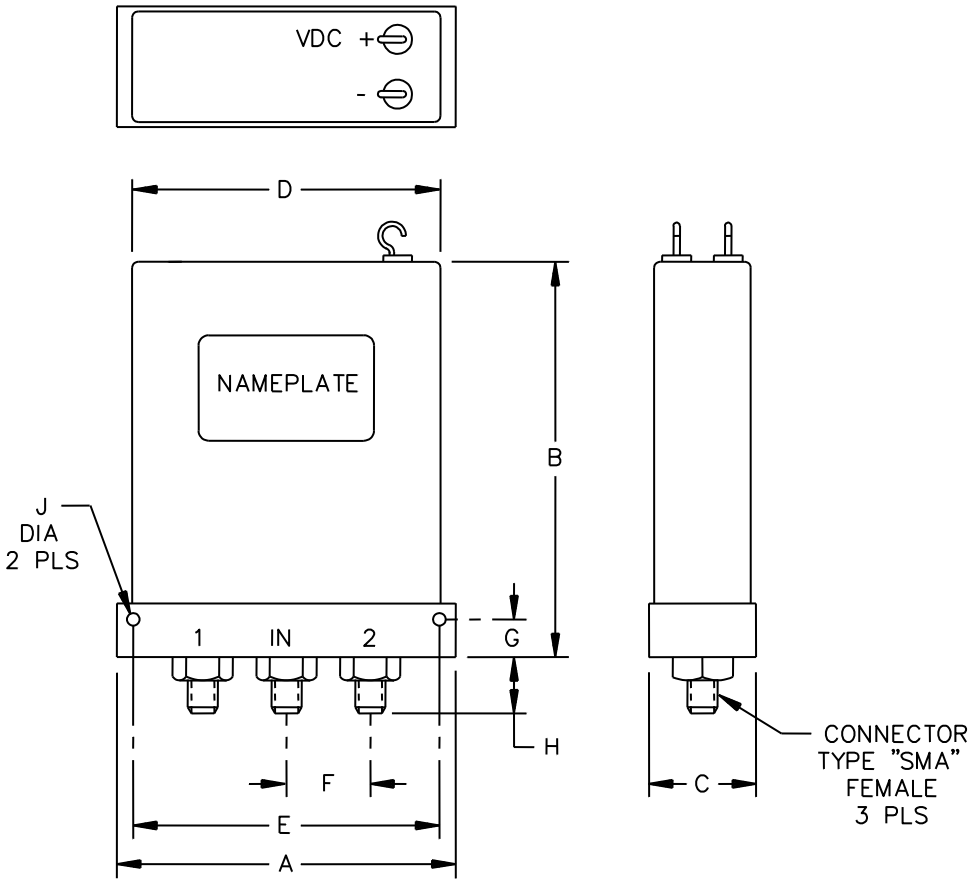
SCHEMATIC

Logic truth table		
RF path	Logic signal	
	A	B
N-1	1	0
N-2	0	1

Dimensions									
Letter	Inches		Millimeters		Letter	Inches		Millimeters	
	Max	Min	Max	Min		Max	Min	Max	Min
A	1.15	1.09	29.2	27.7	K	.450	.430	11.43	10.92
B	.28	.22	7.1	5.6	L	.890	.870	22.61	22.10
C	.19	.13	4.8	3.3	M	1.37	1.31	34.8	33.3
D	.20	.14	5.1	3.6	N	.35	---	8.9	---
E	.12	.06	3.0	1.5	P	1.80	---	45.7	---
F	.130 dia	.110 dia	3.30 dia	2.79 dia	Q	.34	.28	8.6	7.1
G	.230	.210	5.84	5.33	R	.28	.22	7.1	5.6
H	.450	.430	11.43	10.92	S	.53	.47	13.5	11.9
J	.680	.660	17.27	16.76					

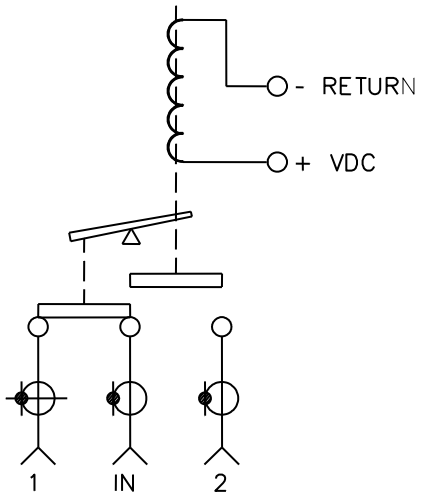
NOTES:
1. Dimensions are in inches.
2. Metric equivalents are given for general information only (1.00 inch = 25.4 mm).
3. Unless otherwise specified, tolerances are ± .010 (± 0.25 mm) for three place decimals and ± .03 (± 0.8 mm) for two place decimals.
4. Round corners of case may be squared.

FIGURE 11. Switch configuration and schematic, PIN M3928/15-16 - Continued.



Letter	Inches		Millimeters		Letter	Inches		Millimeters	
	Max	Min	Max	Min		Max	Min	Max	Min
A	2.78	-----	70.61	---	F	.890	.870	22.606	22.098
B	2.40	-----	60.96	---	G	.41	.35	10.41	8.89
C	1.02	-----	25.91	---	H	.63	----	16.00	-----
D	2.51	-----	63.75		J	.181 dia	----	4.597 dia	-----
E	2.510	-----	63.754						

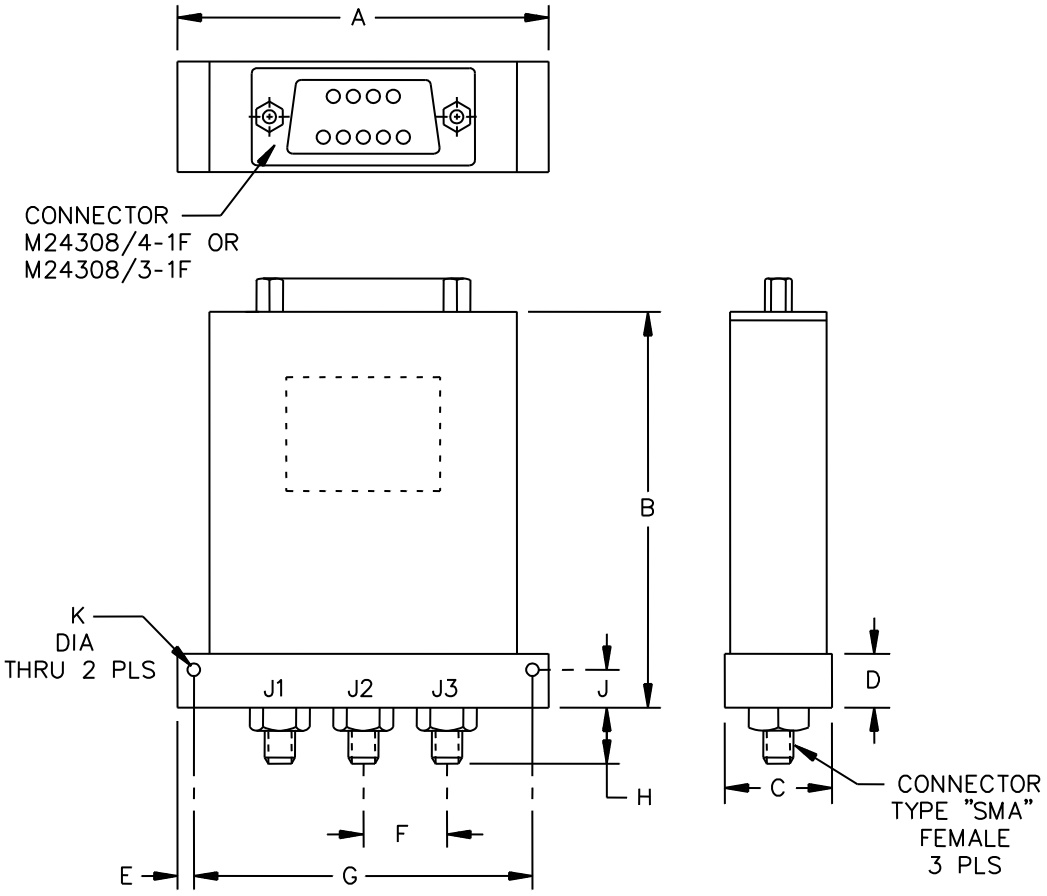
FIGURE 12. Switch configuration and schematic, PIN M3928/15-17.



SCHEMATIC DIAGRAM SHOWN IN
FAILSAFE POSITION 1

NOTES:
1. Dimensions are in inches. Metric equivalents may be determined using 1.00 inch = 25.4 mm.
2. Unless otherwise specified, tolerances are ± .010 for three place decimals; ± .030 for two place decimals.

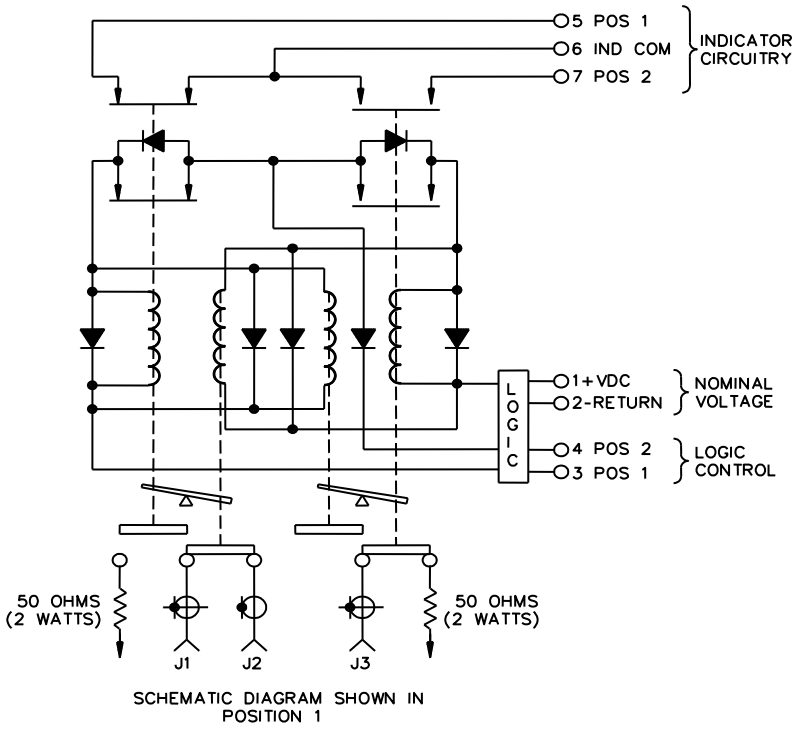
FIGURE 12. Switch configuration and schematic, PIN M3928/15-17- Continued.



Letter	Inches		Millimeters		Letter	Inches		Millimeters	
	Max	Min	Max	Min		Max	Min	Max	Min
A	2.44	---	61.98	---	F	.450	.430	11.430	10.922
B	2.45	---	62.23	---	G	2.198	----	55.829	---
C	.59	---	14.99	---	H	.33	.27	8.38	6.86
D	.25	----	6.35	---	J	.181	---	4.597	---
E	.123	----	3.124		K	.130 dia	----	3.302 dia	---

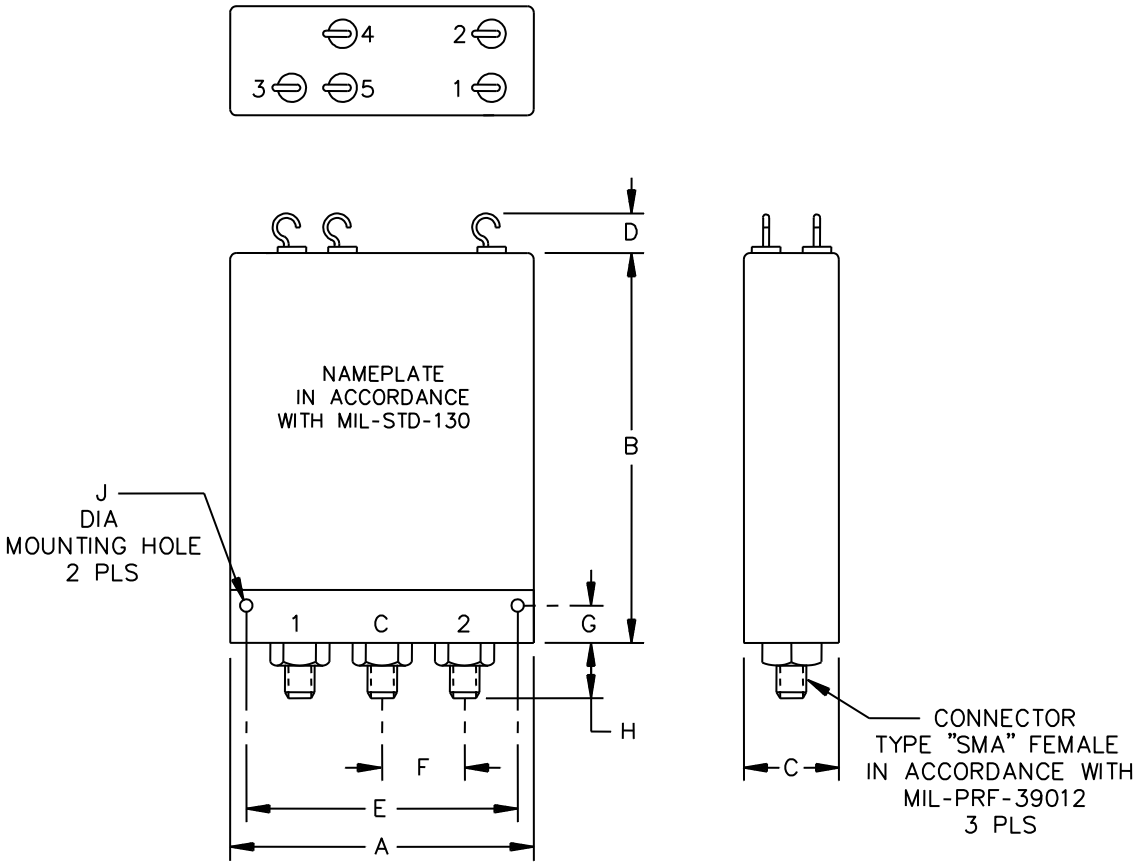
NOTE:
1. M24308/4-1F and M24308/3-1F can be found in MIL-DTL-24308/4 and MIL-DTL-24308/3.

FIGURE 13. Switch configuration and schematic PIN M3828/15-18.



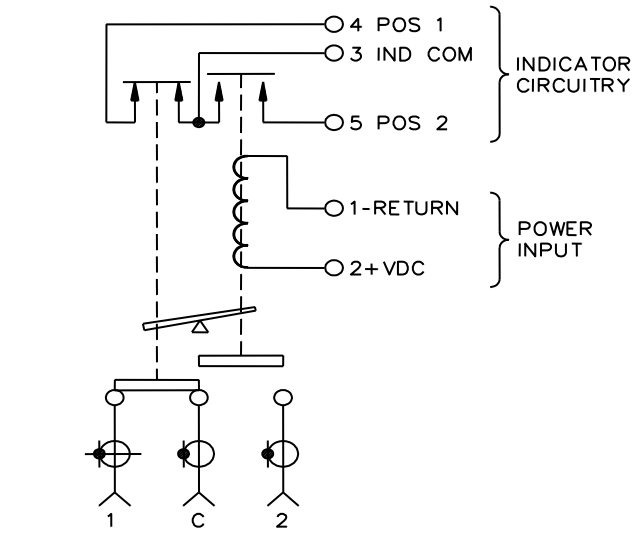
NOTES:
1. Dimensions are in inches. Metric equivalents may be determined using 1.00 inch = 25.4 mm.
2. Unless otherwise specified, tolerances are ± .010 for three place decimals; ± .030 for two place decimals.

FIGURE 13. Switch configuration and schematic PIN M3828/15-18- Continued.



Letter	Inches		Millimeters		Letter	Inches		Millimeters	
	Max	Min	Max	Min		Max	Min	Max	Min
A	1.37	1.31	34.79	33.27	F	.450	.430	11.430	10.922
B	1.43	----	36.32	----	G	.20	.14	5.08	3.56
C	.510	.490	12.954	12.446	H	.34	.28	8.64	7.11
D	.35	----	8.89	----	J	.103	.083	2.616	2.108
E	1.22	1.16	30.99	29.46					

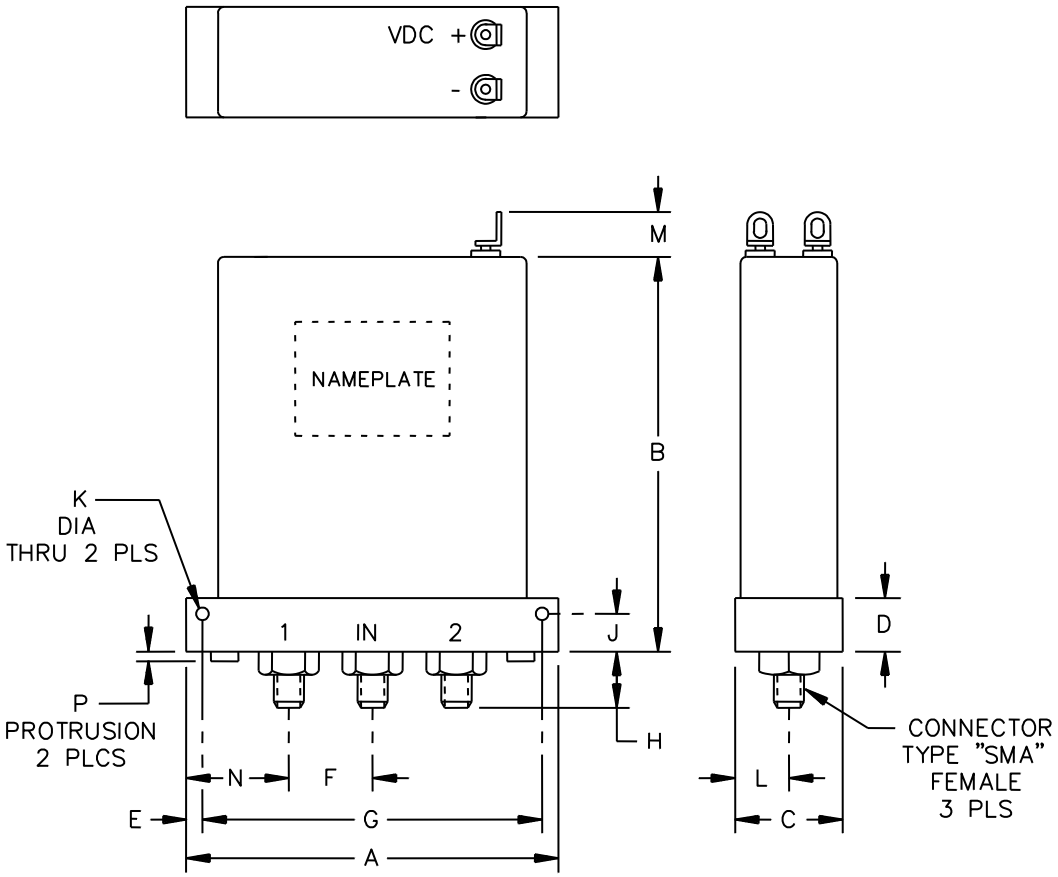
FIGURE 14. Switch configuration and schematic, PIN M3928/15-19.



SCHEMATIC DIAGRAM SHOWN IN FAILSAFE POSITION 1

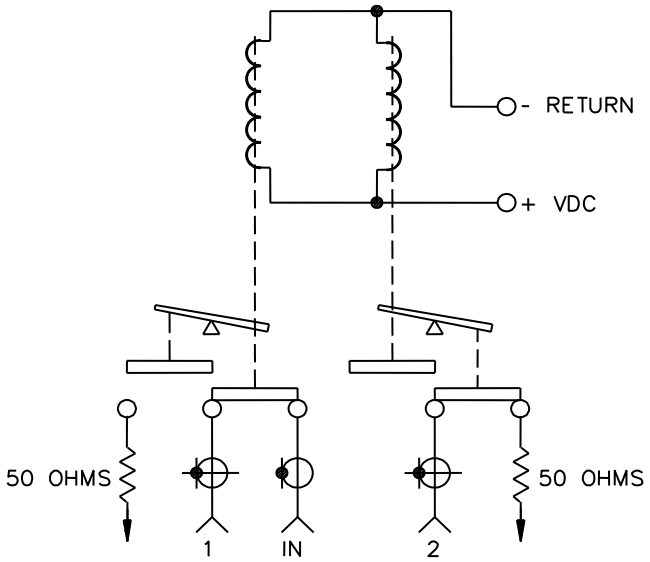
NOTES:
1. Dimensions are in inches. Metric equivalents may be determined using 1.00 inch = 25.4 mm.
2. Unless otherwise specified, tolerances are ± .010 for three place decimals; ± .030 for two place decimals.

FIGURE 14. Switch configuration and schematic, PIN M3928/15-19 – Continued.



Letter	Inches		Millimeters		Letter	Inches		Millimeters	
	Max	Min	Max	Min		Max	Min	Max	Min
A	2.27	2.23	57.66	56.64	H	.32	.28	8.13	7.11
B	2.12	2.08	53.85	52.83	J	.181	.161	4.597	4.089
C	.54	.50	13.72	12.70	K	.090 thru .096	---	2.286 thru 2.438	---
D	.250	.230	6.350	5.842	L	.28	.24	7.11	6.09
E	.10	.06	2.54	1.52	M	.35	---	8.89	---
F	.46	.42	11.68	10.67	N	.71	.67	18.03	17.02
G	2.100	2.080	53.340	52.832	P	.060	--	1.524	----

FIGURE 15. Switch configuration and schematic, PIN M3928/15-20.



SCHEMATIC DIAGRAM SHOWN IN
FAILSAFE POSITION 1

NOTES:
1. Dimensions are in inches. Metric equivalents may be determined using 1.00 inch = 25.4 mm.
2. Unless otherwise specified, tolerances are ± .010 for three place decimals; ± .020 for two place decimals.

FIGURE 15. Switch configuration and schematic, PIN M3928/15-20 - Continued.

TABLE I. Electrical and performance characteristics. 1/

PIN M3928/15-	Fig. No.	Housing	Frequency range dc to 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) 2/ Max	Holding current (A) 2/ Max	Nominal operating voltage	Pickup voltage	Dropout voltage	Power and indicator connector	Weight (oz) Max
01N, S 3/	1	I	18	1.5:1	0.5	60	20	None	1000	F	0.12	0.12	28 V dc	<20 V dc	<16 V dc	Solder terminal	2
02N, S 4/	1	E	18	1.5:1	0.5	60	20	None	1000	F	0.15	0.15	28 V dc	<20 V dc	<16 V dc	Solder terminal	2.5
03N, S 5/	2	E	18	1.5:1	0.5 6/	60	15	None	1000	F	0.12	0.12	28 V dc	<20 V dc	< 8 V dc 7/	Solder terminal	2.5
04N, S	2	E	18	1.5:1	0.5	60	15	.5 A at 10 W	1000	F	0.12	0.12	28 V dc	<20 V dc	<16 V dc	Solder terminal	2.5
05N, S 8/	3	E	18	1.5:1	0.5	60	20	.2 A at 40 V ac	1000	F	0.13	0.13	28 V dc	<24 V dc	<16 V dc	Solder terminal	2
07N, S 4/	4	E	18	1.5:1	0.5	60	20	None	1000	L	0.35	0	28 V dc	<20 V dc	---	Solder terminal	2
08N, S 4/	5, 5A	E	18	1.5:1	0.5	60	20	1A at 115 V ac	1000	L	0.35	0	28 V dc	<20 V dc	---	Solder terminal	2
09N, S	6	I	18 1.27-1.37	1.5:1 1.3:1	0.3	60	25	None	1000	F	0.13	0	28 V dc	9/	9/	Solder terminal	1.5
10N, S	7	I	18	1.5:1	0.5	60	20	1A at 115 V ac	1000	F	0.12	0.12	28 V dc	<20 V dc	<16 V dc	Solder terminal	2
11N, S	8	E	18	1.5:1	0.5	60	20	None	1000	F	0.06	0.06	48 V dc	<38 V dc	<30 V dc	Solder terminal	2
12 N, S	1	I	20 6	1.8:1 1.25:1	0.7 0.2	40 70	20	None	1000	F	0.12	0.12	28 V dc	<20 V dc	<16 V dc	Solder terminal	2
13 N, S	7	I	20	1.8:1	0.7	40	20	1A at 115 V ac	1000	F	0.12	0.12	28 V dc	<20 V dc	<16 V dc	Solder terminal	2
14N, S 10/	9	E	18	1.5:1	0.5	60	20	None	1000	F	0.21	0.12	28 V dc +5 V dc 11/	<20 V dc	<16 V dc	Solder terminal	3
15N, S 10/	10	E	18	1.5:1	0.5	60	20	None	1000	L	0.35	0	28 V dc +5 V dc 11/		<16 V dc	Solder terminal	3
16N, S 10/	11	E	18	1.5:1	0.5	60	20	1A at 115 V ac	1000	L	0.35	0	28 V dc +5 V dc 11/		<16 V dc	Solder terminal	3
17 N, S	12	I	12	1.5:1 12/	0.5 13/	60	20	None	1000	F	.23	.23	28 V dc	< 20 Vdc	<16 Vdc	Solder term.	10
18 N, S	13	I	18	1.5:1 14/	0.5 15/	70 16/	20	,2 A at 3 W	1000	L	.60	0	12 V dc	< 9 Vdc	---	9 pin D-sub	5
19 N, S	14	I	18	1.5:1 17/	0.5 18/	60 19/	20	.2 A at 3 W	1000	F	.12	.12	28 V dc	< 20 Vdc	< 16 Vdc	Solder term.	2
20 N,S	15	I	18	1.5:1	0.5	60	20	None	1000	F	.35	.35	28 V dc	<20 Vdc	< 16 Vdc	Solder term.	3.5

See footnote end of table I

1/ M3928/15-06 has been deleted.
2/ At nominal V dc and 20 deg C.
3/ Enclosure shall be explosion proof.
4/ Transient interface (RFI).
5/ The VSWR from dc to 7 GHz is 1.25:1 maximum.
6/ The insertion loss from dc to 7 GHz is 0.3 dB maximum.
7/ Switch must return to de-energized position at no less than 2 volts.
8/ Make before break sequence.
9/ Pulse operation: Switch shall change from open to closed position when +4 V dc min is applied Switch shall change from closed to open when voltage falls below +1.5 V dc.
10/ Logic voltage: Logic 0 - 0 to 0.4 V dc and Logic 1 - 2.4 to 5.5 V dc.
11/ +5 voltage deviation: ±0.5 V dc.
12/ VSWR max for 1 to 4 GHz is 1.4:1, for dc to 1 GHz is 1.3:1.
13/ Insertion loss max for 1 to 4 GHz is 0.4 dB, for dc to 1 GHz is 0.3 dB.
14/ VSWR max for 8 to 12 GHz is 1.4:1, 4 to 8 GHz is 1.3:1, 1 to 4 GHz is 1.2:1, dc to 1 GHz is 1.1:1.
15/ Insertion loss max for 8 to 12 GHz is 0.4 dB, 4 to 8 GHz is 0.3 dB, 1 to 4 GHz is 0.2 dB, dc to 1 GHz is 0.1 dB.
16/ Isolation min for 8 to 12 GHz is 80 dB, 1 to 8 GHz is 90 dB, dc to 1 GHz is 95 dB.
17/ VSWR max for 8 to 12.4 GHz is 1.4:1, 4 to 8 GHz is 1.25:1, dc to 4 GHz is 1.2:1.
18/ Insertion loss max for 8 to 12.4 GHz is 0.4 dB, 4 to 8 GHz is 0.3 dB, dc to 4 GHz is 0.2 dB.
19/ Isolation min for 8 to 12.4 GHz is 65 dB, 4 to 8 GHz is 70 dB, dc to 4 GHz is 75 dB.

TABLE I. Electrical and performance characteristics - Continued.

REQUIREMENTS:

Dimensions and configurations: See figures 1 through 15.

Housing: These switches shall be optionally available with venting (for space applications). See MIL-DTL-3928, and see the acquisition document for space application unique design and test requirements.

RF connectors: Female connectors (3 places) shall meet the requirements of MIL-PRF-39012 and shall mate with SMA type male connectors in accordance with MIL-PRF-39012/55.

Termination: Open, except for -18 and -20.

Nominal impedance: 50 ohms.

Electrical and performance characteristics: See table I.

RF power handling capability (average): 25 watts (minimum), except -18 and -20, (2 watts minimum) for the terminations.

Operating temperature: -55°C to +85°C, except for dash number 03 which is -55°C to +110°C, dash number 17 which is 0°C to +70°C, dash number 19 which is 0°C to +50°.

Vibration: MIL-DTL-3928, Method I, except dash number 19 which is MIL-STD-167-1, Type 1 (5 to 25 Hz).

Part or Identifying Number (PIN): M3928/15- (and dash number from table I).

Referenced documents: In addition to MIL-DTL-3928, this document references the following:
MIL-DTL-24308/3
MIL-DTL-24308/4
MIL-PRF-39012
MIL-PRF-39012/55
MIL-STD-130
MIL-STD-167-1

Amendment notations. The margins of this specification sheet are marked with vertical lines 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 5985-2021-038)

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

NOTE: The activities listed above were interested in this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of the information above using the ASSIST Online database at https://assist.dla.mil.

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