

INCH-POUND

MIL-DTL-9395/27J

12 August 2024

SUPERSEDING

MIL-DTL-9395/27H

24 September 2018

DETAIL SPECIFICATION SHEET

SWITCHES, PRESSURE, GAUGE (TYPE II), 3 AMPERES

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

The requirements for acquiring the switches described herein shall consist of this document and [MIL-DTL-9395](#).

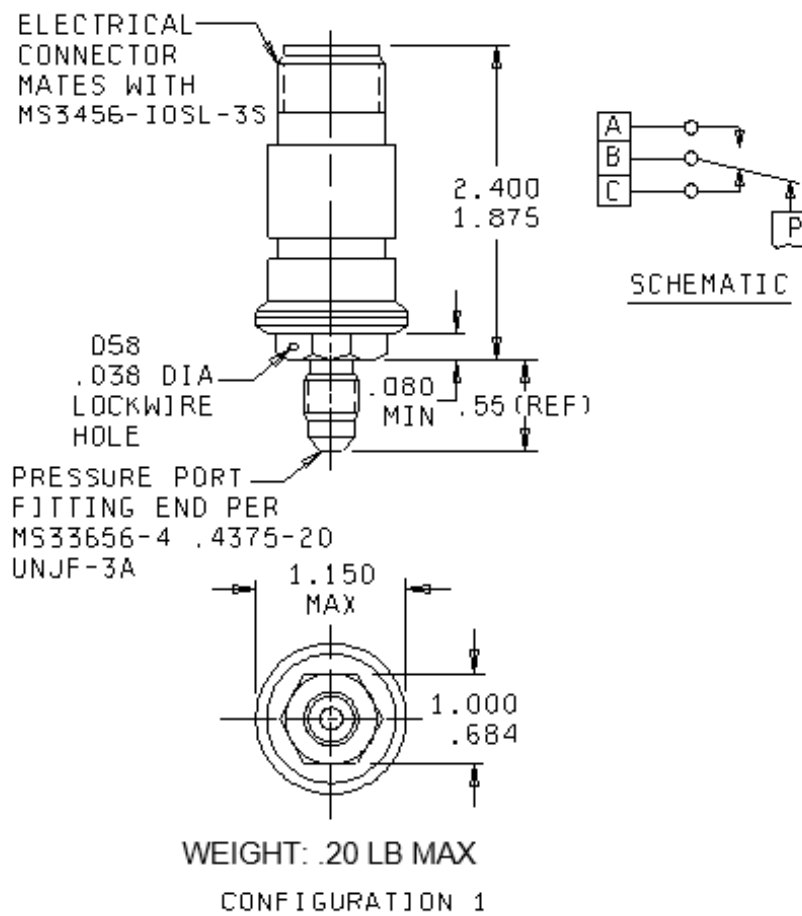


FIGURE 1. Dimensions and configurations.

AMSC N/A

DISTRIBUTION STATEMENT A. Approved for public release. Distribution is unlimited.

FSC 5930



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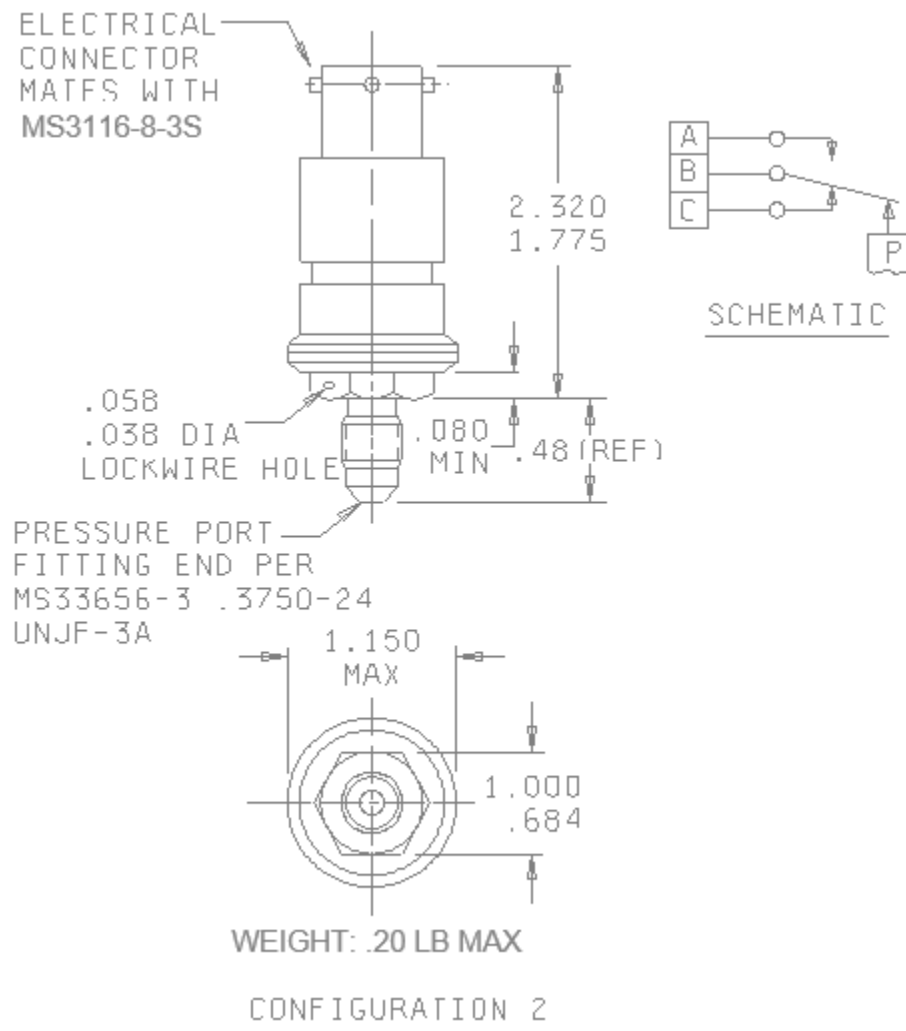


FIGURE 1. Dimensions and configurations - Continued.

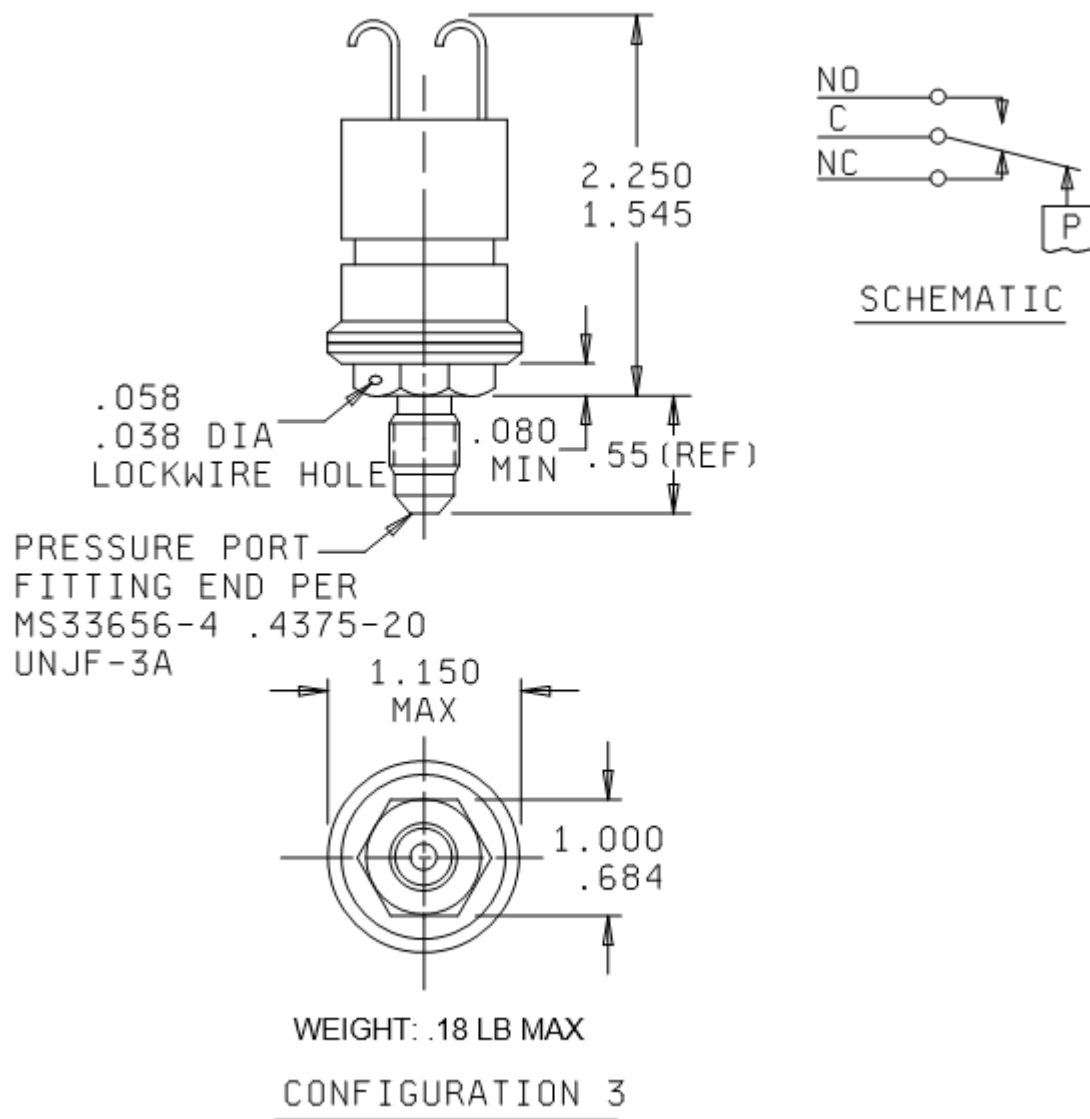
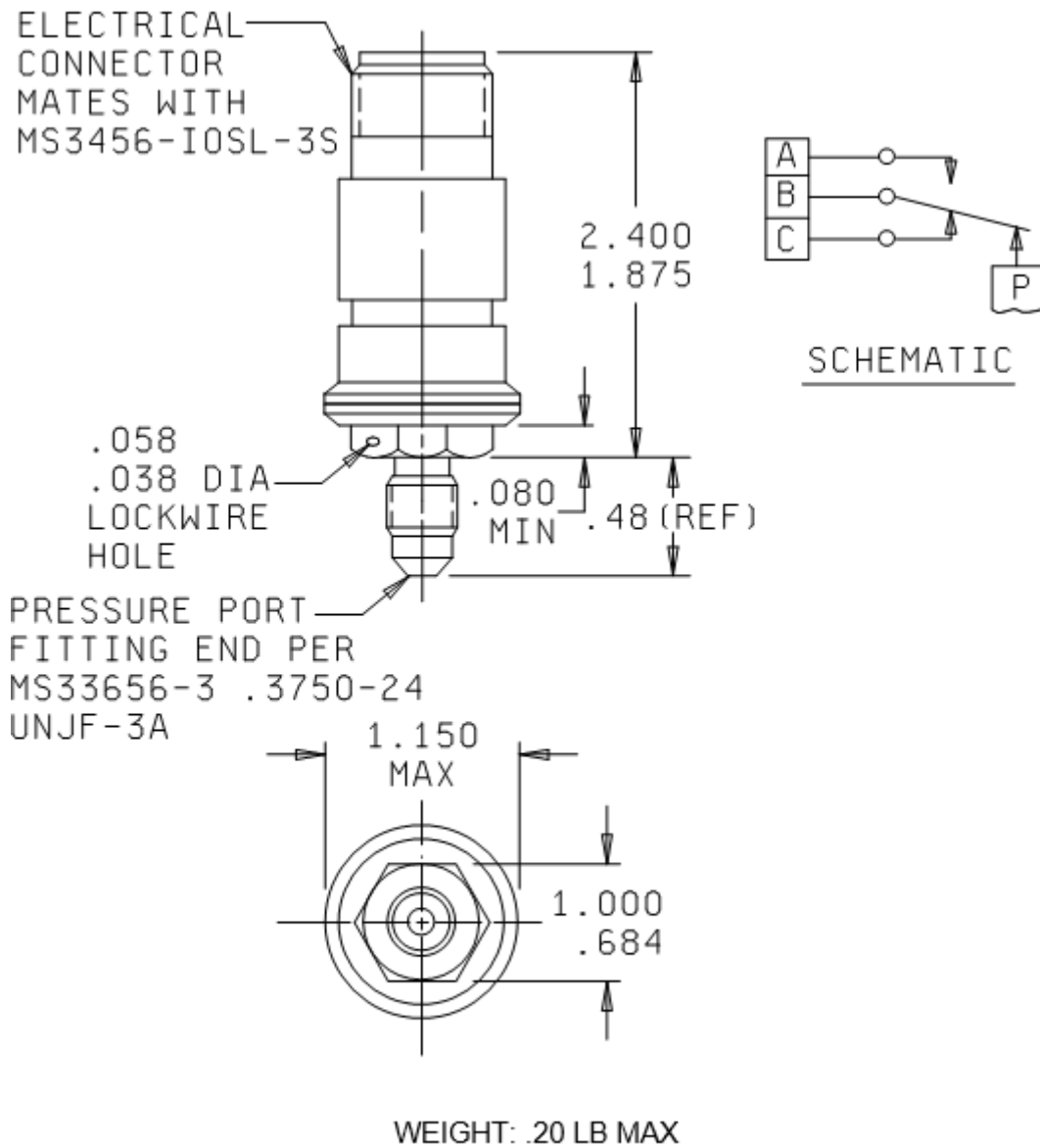


FIGURE 1. Dimensions and configurations - Continued.



Configuration 4

FIGURE 1. Dimensions and configurations - Continued.

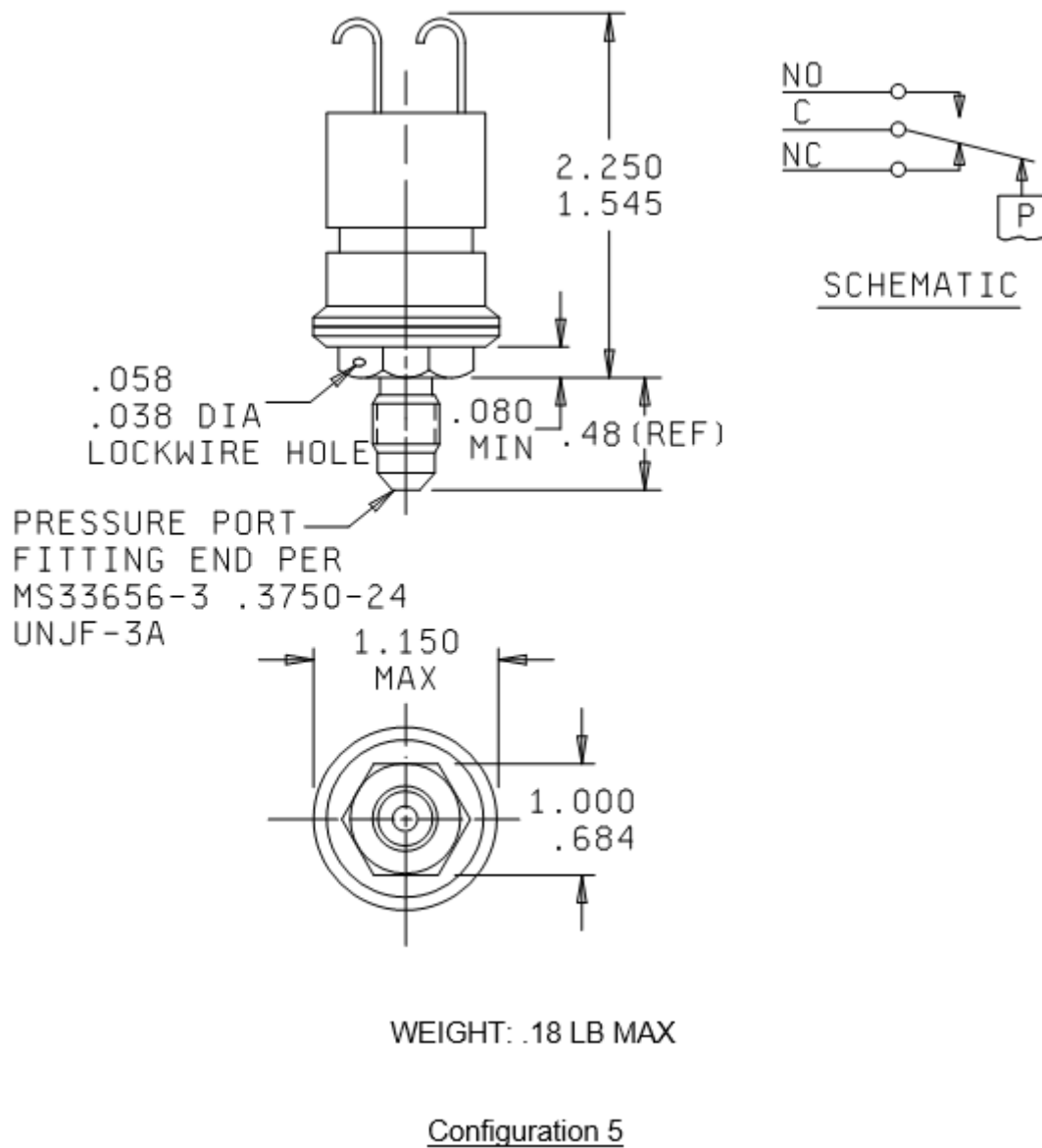
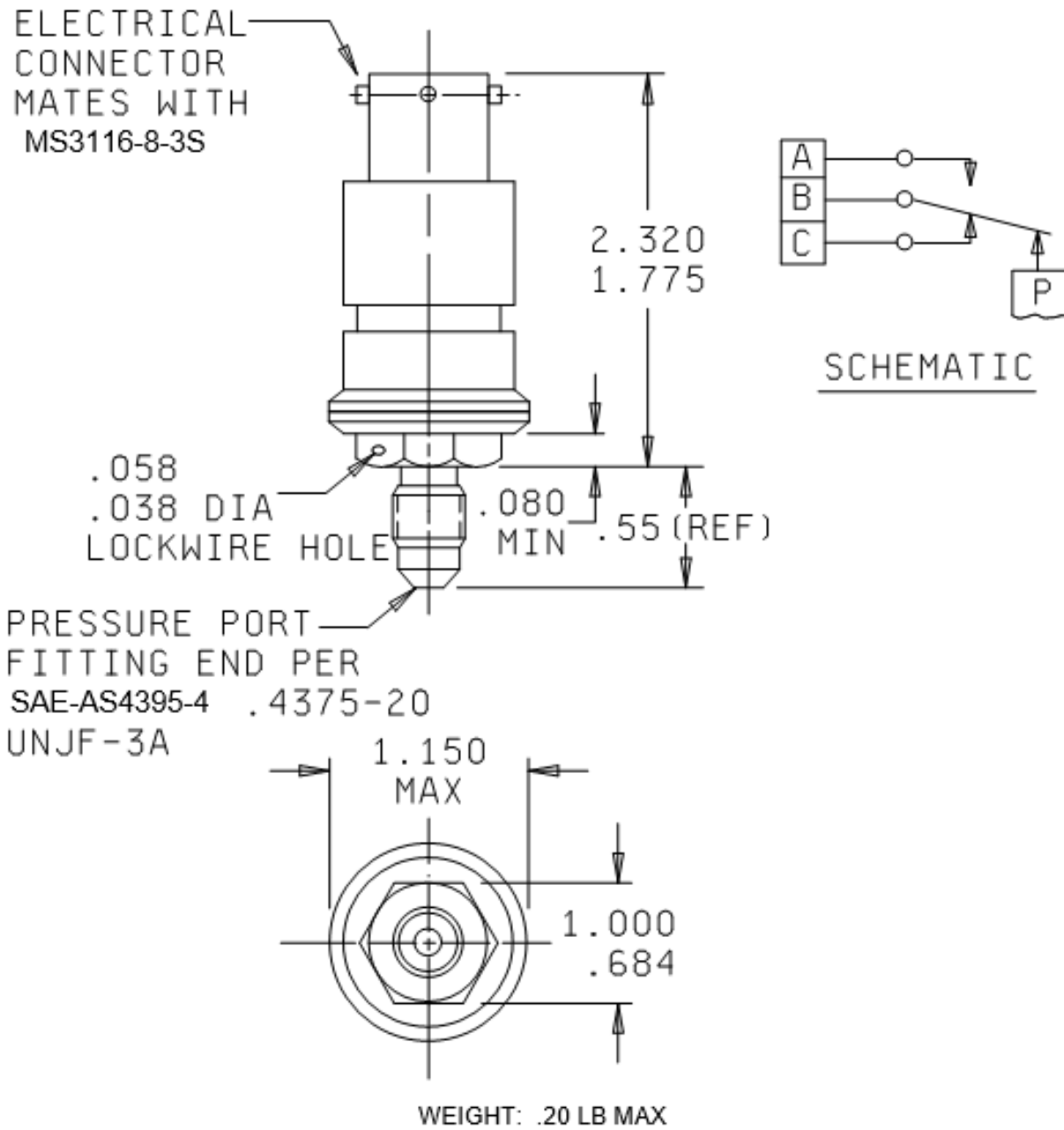
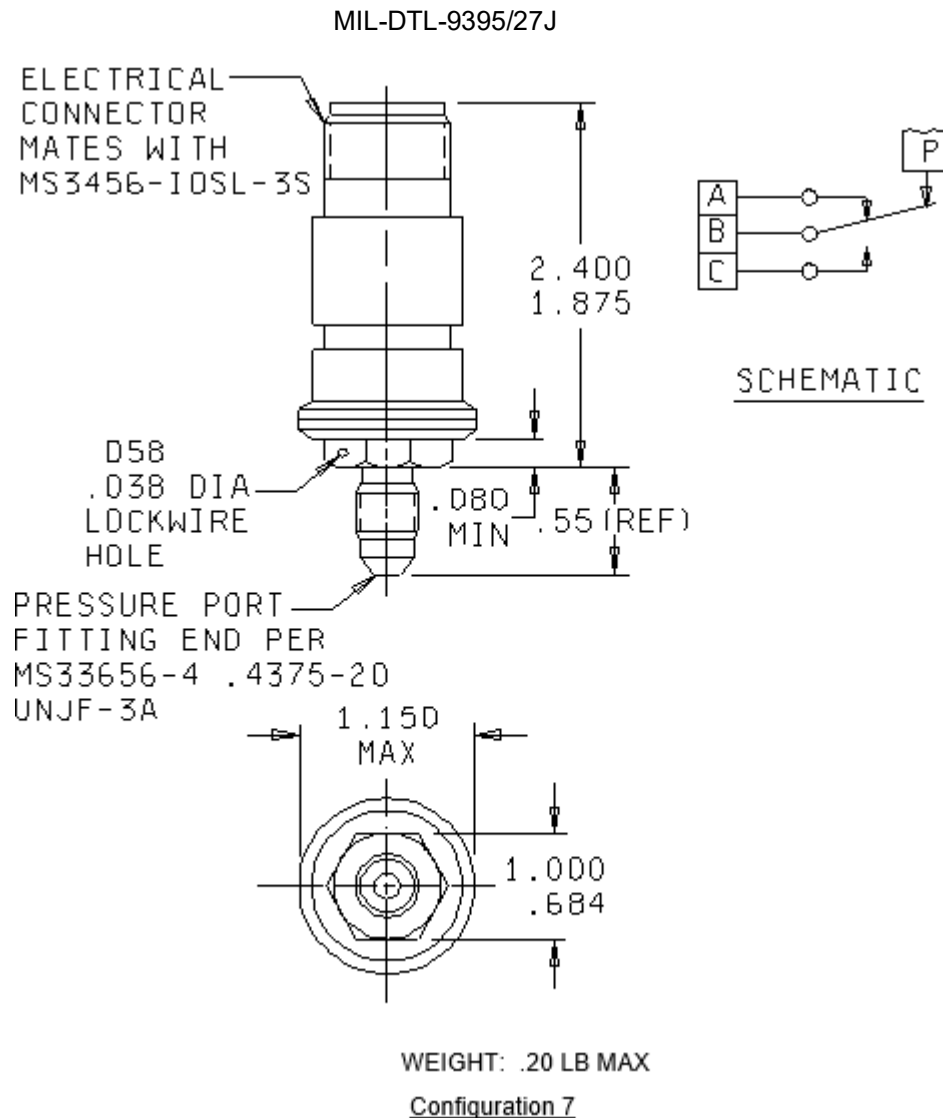


FIGURE 1. Dimensions and configurations - Continued.

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Configuration 6



NOTES:

1. Dimensions are in inches.
2. Exact shape of switching is optional provided outline dimensions specified are not exceeded and mounting holes and connector locations are as specified.
3. Schematics shown are for switches with pressure ports exposed to zero lb/in².
4. MS3456-IOSL-3S details are found in [SAE-AS34561](#). MS33656-3 and -4 details are found in [SAE-AS4395](#).

FIGURE 1. Dimensions and configurations - Continued.

REQUIREMENTS:

Dimensions, configuration, and electrical schematic: See figure 1.

Weight: See figure 1.

Calibration: See tables I, II, III, and IV.

Tolerance and maximum differential: See table I.

Proof pressure: 120 lb_f/in²

System pressure: 60 lb_f/in²

Burst pressure: 800 lb_f/in²

Electrical ratings:

Operating voltage: 28 Vdc.

Current rating: 3 amperes resistive.

1 ampere inductive.

Seal:

Electrical chamber: See table II.

Pressure chamber: Hermetic.

Reference chamber: Unsealed.

Electrical connector: See figure 1.

Pressure port: See figure 1.

Media: Dry air, nitrogen, fuel IAW [MIL-DTL-5624](#), or lube oil IAW [MIL-PRF-7808](#), or hydraulic fluid IAW [MIL-PRF-6083](#).

High temperature (operating and nonoperating): B (275°F).

Low temperature (operating and nonoperating): D (-65°F).

Altitude: C (except 80,000 ft).

Shock: C (100 G).

Vibration: S (test condition C, of [MIL-STD-202-204](#), except 10 - 2,000 Hz. 10 G).

Life mechanical: A (100,000 cycles).

Life electrical: C (50,000 cycles).

Acceleration: C (8 G).

Pulsation amplitude: A (0%).

Pulsation frequency: A (0 Hz).

Pressure surge: A (less than 100 lb_f/in²).

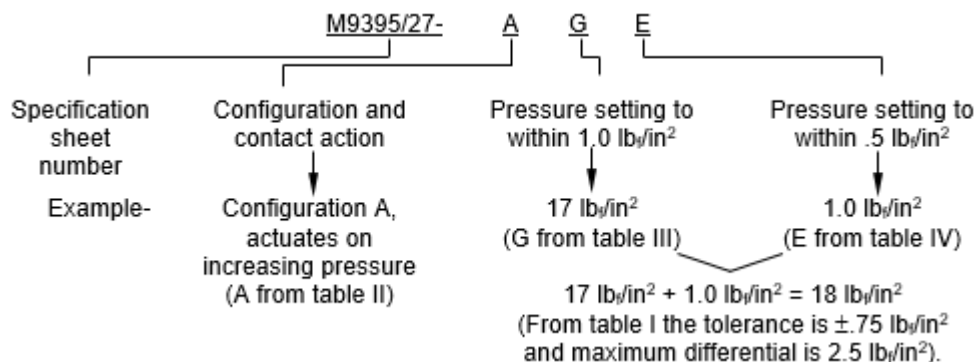
Dielectric withstanding voltage (at reduced barometric pressure): Applicable at 250 V rms.

Connector torque: Applicable.

Terminal strength: Applicable.

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Part number: Part numbers shall be assigned as illustrated below:



Part number M9395/27-AGE identifies a pressure switch of configuration A which actuates on increasing pressure at $18.0 \pm .75 \text{ lb/in}^2$ with a maximum differential of 2.5 lb/in^2 .

TABLE I. Tolerances and maximum differential values for each pressure setting.

Pressure lb/in ²	Tolerance lb/in ² ±	Maximum differential lb/in ²
1.0 - 10.5	.5	2.0
11.0 - 20.0	.75	2.5
20.5 - 29.5	1.0	3.0
30.0 - 30.5	1.0	3.1
31.0	1.5	3.2
31.5 - 32.0	1.5	3.3
32.5 - 33.0	1.5	3.4
33.5 - 34.0	1.5	3.5
34.5 - 35.0	1.5	3.6
35.5 - 36.0	1.5	3.7
36.5 - 37.0	1.5	3.8
37.5 - 38.0	1.5	3.9
38.5 - 39.0	1.5	4.0
39.5 - 40.0	1.5	4.1
40.5 - 41.0	1.5	4.2
41.5 - 42.0	1.5	4.3
42.5 - 43.0	1.5	4.4
43.5 - 44.0	1.5	4.5
44.5	1.5	4.6
45.0 - 45.5	2.0	4.7
46.0 - 46.5	2.0	4.8
47.0 - 47.5	2.0	4.9
48.0 - 48.5	2.0	5.0
49.0 - 49.5	2.0	5.1
50.0 - 50.5	2.0	5.2
51.0 - 51.5	2.0	5.3
52.0 - 52.5	2.0	5.4
53.0 - 53.5	2.0	5.5
54.0 - 54.5	2.0	5.6
55.0 - 55.5	2.0	5.7
56.0 - 56.5	2.0	5.8
57.0 - 57.5	2.0	5.9
58.0 - 58.5	2.0	6.0
59.0 - 59.5	2.0	6.1
60.0	2.0	6.2

TABLE II. Configuration and contact action.

		Configuration 1		Configuration 2		Configuration 3	
		Electrical chamber		Electrical chamber		Electrical chamber	
		Hermetic	Unsealed	Hermetic	Unsealed	Hermetic	Unsealed
Actuates on increasing pressure		A	C	E	G	J	L
Actuates on decreasing pressure		B	D	F	H	K	M
Configuration 4		Configuration 5		Configuration 6		Configuration 7	
Electrical chamber		Electrical chamber		Electrical chamber		Electrical chamber	
Hermetic	Unsealed	Hermetic	Unsealed	Hermetic	Unsealed	Hermetic	Unsealed
N	Q	S	U	W	Y	1	3
P	R	T	V	X	Z	2	4

TABLE III. Pressure setting to within 1 lb_r/in².

Pressure	Code	Pressure	Code	Pressure	Code
2.0	A	22.0	J	42.0	S
4.5	B	24.5	K	44.5	T
7.0	C	27.0	L	47.0	U
9.5	D	29.5	M	49.5	V
12.0	E	32.0	N	52.0	W
14.5	F	34.5	P	54.5	X
17.0	G	37.0	Q	57.0	Y
19.5	H	39.5	R	59.5	Z

TABLE IV. Pressure setting to within .5 lb_r/in².

Unit	Code
-1.0	A
-0.5	B
0	C
0.5	D
1.0	E

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TABLE V. Extent of qualification.

Part number	No. of samples required	Tests	Qualifies
ELECTRICAL CHAMBERS EITHER HERMETICALLY SEALED OR UNSEALED			
M9395/27-BAE DAE NYB XYB	1 ea. resistive 1 ea. resistive 1 ea. inductive 1 ea. inductive	Complete IAW qualification Inspection of MIL-DTL-9395	All
M9395/27-BAA FAE XYB WZD	1 ea. inductive 1 ea. inductive 1 ea. resistive 1 ea. resistive	Group I and Group III	
ELECTRICAL CHAMBERS UNSEALED			
M9395/27-DAE CAA GYB YYB	1 ea. resistive 1 ea. resistive 1 ea. inductive 1 ea. inductive	Complete IAW qualification Inspection of MIL-DTL-9395	Configurations C, D, G, H, L M, Q, R, U, V, Y, Z, 3 and 4
M9395/27-DAE CAE YYB ZZD	1 ea. inductive 1 ea. inductive 1 ea. resistive 1 ea. resistive	Group I and Group III	

The margins of this specification are marked with vertical lines to indicate where changes from the previous issue were made. 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 and relationship to the previous issue.

Reference Documents:

[MIL-PRF-6083](#)

[MIL-PRF-7808](#)

[MIL-STD-202-204](#)

[SAE-AS4395](#)

[MIL-DTL-5624](#)

[MIL-DTL-9395](#)

[SAE-AS34561](#)

Custodians:

Army - CR

Navy - EC

Air Force - 85

DLA - CC

Preparing Activity:

DLA - CC

(Project 5930-2024-050)

Review Activities:

Navy -AS, MC, SH

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/> .