

INCH-POUND

MIL-DTL-9395/43D

24 September 2018

SUPERSEDING

MIL-DTL-9395/43C

3 October 2006

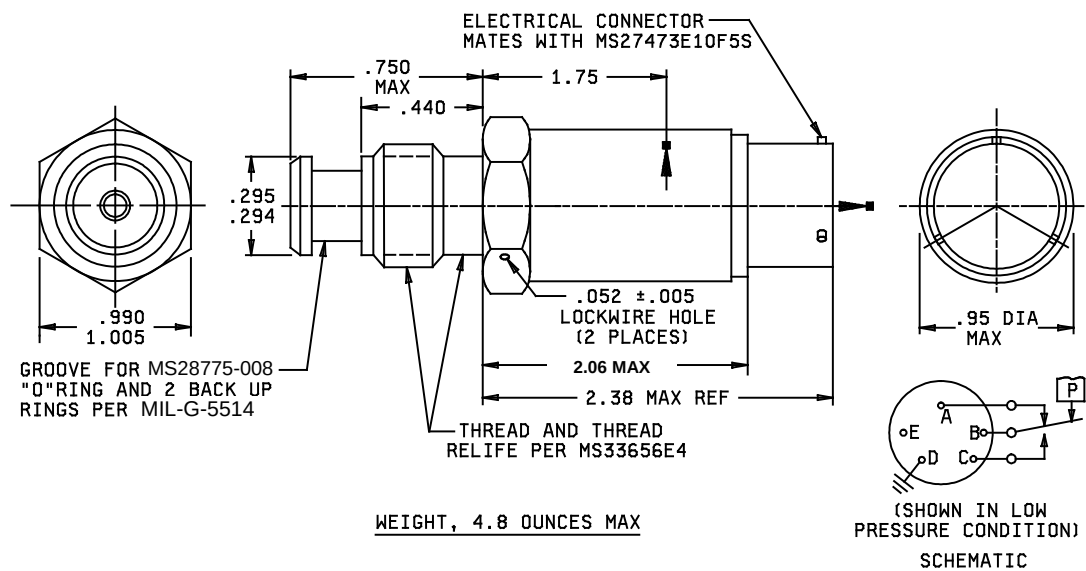
DETAIL SPECIFICATION SHEET

SWITCHES, PRESSURE, GAGE (TYPE II), LOW LEVEL TO 1 AMPERE

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.

Inactive for new design after 25 April 2013.



NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Unless otherwise specified, tolerance is $\pm .02$ (.51 mm).
4. MS27473E10F5S details are found in MS27473. MS28775-008 details are found in SAE-AS28775. MS33656E4 details are found in SAE-AS4395

FIGURE 1. Switches, pressure, gage type II.



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.

System pressure: 3000 lb_f/in².

Proof pressure: 6000 lb_f/in².

Burst pressure: 12,000 lb_f/in².

Electrical ratings:

Resistive: .010 ampere at 5 V dc, 1 ampere at 28 V dc.

Minimum current: 25,000 cycles.

Low level: 50,000 cycles.

NOTE: Switches shall be subjected only to low level loads prior to delivery.

Seal:

Electrical chamber: Hermetic.

Pressure chamber: Hermetic.

Reference chamber: Unsealed.

Electrical connector: See figure 1.

Pressure port: See figure 1.

Media: Nitrogen (A-A-59503).

High temperature (operating and nonoperating): B (+275°F), 345°F for 10 minutes, 420°F for 1 minute.

Low temperature: Operating -65°F, nonoperating -80°F.

Altitude: C (70,000 feet).

Shock: A (except peak value shall be 15 G).

Vibration: S (test condition C of MIL-STD-202-204) except:

Supplemental nonoperating sinusoidal vibration:

Sweep time: 15 minutes.

Frequency range and amplitude: 5-11 Hz, .28 inch D.A.; 11-18 Hz, ± 1 G; 18-58 Hz, .06 inch D.A.; 58-2000 Hz, ± 10 g.

Test duration: 15 minutes in each of three mutually perpendicular planes.

Life (mechanical): A (100,000 cycles).

Life (electrical): C (50,000 cycles).

Acceleration: C (except 10 G).

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Pulsation amplitude: A (0 percent).

Pulsation frequency: A (0 Hz).

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

Dielectric withstanding voltage (at reduced barometric pressure): Applicable at 350 V rms.

Connector torque:

Electrical connector: Applicable.

Pressure port mounting torque: 100 inch-pounds maximum.

Flame test: Applicable.

Explosion: Applicable.

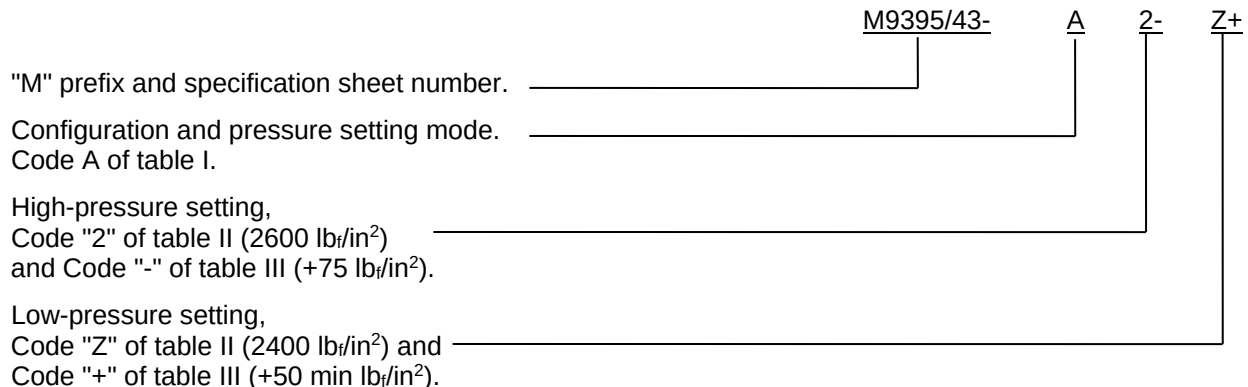
Qualification:

Single submission: Restricted to switch submitted.

Group submission: See table V.

Part number: Part numbers shall be assigned as follows:

Example :



Part number M9395/43-A2-Z+ describes a switch of configuration "A" which actuates on increasing pressure at 2675 lb_f/in² maximum and deactuates on 2450 lb_f/in².

Part number M9395/43-BVRST describes a switch of configuration "B" which actuates on increasing pressure at 2075 ±100 lb_f/in² and with a deadband value of 400 to 425 lb_f/in².

NOTE: Design limitations (actuation values and tolerances, deadband and deactuation values and tolerances) should be coordinated with manufacturer(s) listed on the QPL for this specification sheet before specifying a particular "M" number. The fact that operating characteristics can be coded does not necessarily mean that it can be manufactured or acquired.

TABLE I. Codes for combinations of configurations and pressure setting modes.

	Configuration 1	Pressure setting mode	
		High setting	Low setting
Code	A	At (or max) <u>1/</u>	At (or min) <u>1/</u>
Code	B	At (or max) <u>1/</u>	Differential <u>2/</u>
Code	C	Differential <u>2/</u>	At (or min) <u>1/</u>

1/ Setting values are designated by characters from tables II and III.

2/ Setting values are designated by characters from table IV.

TABLE II. Codes for pressure settings to within 100 lb_f/in².

Code	Pressure (lb _f /in ²)	Code	Pressure (lb _f /in ²)	Code	Pressure (lb _f /in ²)	Code	Pressure (lb _f /in ²)
A	100	J	900	S	1700	1	2500
B	200	K	1000	T	1800	2	2600
C	300	L	1100	U	1900	3	2700
D	400	M	1200	V	2000	4	2800
E	500	N	1300	W	2100	5	2900
F	600	P	1400	X	2200	6	3000
G	700	Q	1500	Y	2300		
H	800	R	1600	Z	2400		

TABLE III. Codes for pressure settings to within 25 lb_f/in² and tolerances.

	Unit				Tolerance (lb _f /in ²)
	0	+25	+50	+75	
Code	A	B	C	D	±25
Code	E	F	G	H	±50
Code	J	K	L	M	±75
Code	N	P	Q	R	±100
Code	S	T	U	V	±150
Code	W	X	Y	Z	±200
Code	1	2	3	4	±300
Code	5	6	7	8	±400
Code	9	0	+	-	Min or Max

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TABLE IV. Codes for deadband pressure settings.

Code	Differential value (lb _f /in ²)	Code	Differential value (lb _f /in ²)
A	0	M	275
B	25	N	300
C	50	P	325
D	75	Q	350
E	100	R	375
F	125	S	400
G	150	T	425
H	175	U	450
J	200	V	475
K	225	W	500
L	250	X	

TABLE V. Extent of qualification.

Part number M9395/43-	No. of samples required	Inspection	Qualifies
AADAA BADEA A4ZXV B4ZQ9	1 each inductive 1 each lamp 1 each inductive 1 each lamp	Complete IAW qualification inspection of MIL-DTL-9395	All

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.

Referenced Documents:

MIL-G-5514
MIL-DTL-9395
MIL-STD-202-204
MS27473
A-A-59503
SAE-AS4395
SAE-AS28775

Custodians:

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

Preparing activity:
DLA - CC

(Project 5930-2018-048)

Review activities:

Navy - 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/>.