

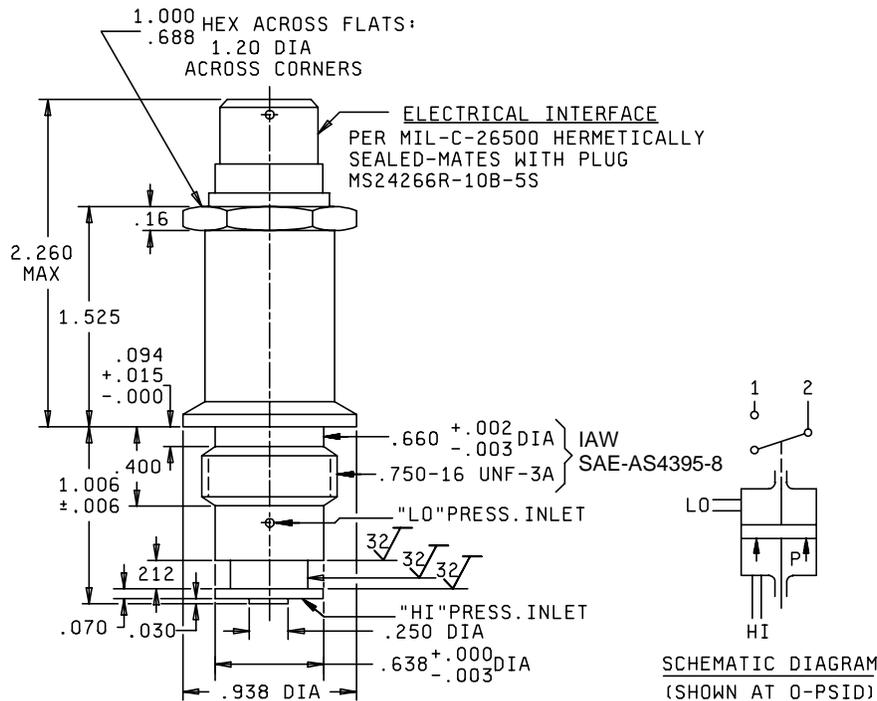
INCH POUND

MIL-DTL-9395/33B  
 30 May 2001  
 SUPERSEDING  
 MIL-DTL-9395/33A(USAF)  
 18 September 1979

DETAIL SPECIFICATION SHEET  
 SWITCHES, PRESSURE, (DIFFERENTIAL),  
 TYPE III, 5 AMPERES

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

The complete requirements for procuring the pressure switches described herein shall consist of this document and the latest issue of Specification MIL-S-9395.



NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only and are based upon 1.00 inch = 25.4 mm.
3. Unless otherwise specified, tolerances are  $\pm .005$  (.13 mm) for three place decimals and .03 (.76 mm) for two place decimals.

FIGURE 1. Switch.

REQUIREMENTS:

Dimensions, configuration, and electrical schematic: See figure.

Weight: 0.14 pound, maximum.

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

Proof pressure: 3,000 lb<sub>f</sub>/in<sup>2</sup> high over low and simultaneously.

System pressure: 1,500 lb<sub>f</sub>/in<sup>2</sup> high over low and simultaneously.

Burst pressure: 7,500 lb<sub>f</sub>/in<sup>2</sup> high over low and simultaneously.

Electrical ratings:

Operating voltage: - 28 Vdc.

Current rating - 5 amperes resistive  
3 amperes inductive.

Seal:

High pressure chamber: Media proof. Subject switches to proof pressure for 2 minutes using hydraulic fluid per MIL-H-5606 with chamber pressure continuously being monitored. Isolate the chamber at proof pressure with the chamber disconnected from the pressure source. Under that condition, the pressure shall not drop more than 1 lb<sub>f</sub>/in<sup>2</sup> for the first 30 seconds to allow stabilization of test equipment; no pressure loss is allowed thereafter.

Low pressure chamber: Media proof. Tested as above except low pressure port is connected to high pressure port.

Electrical chamber: Unsealed.

Electrical connector: See figure.

Pressure ports: See figure.

Media: Hydraulic fluid per MIL-H-5606 or MIL-PRF-83282.

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

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

Altitude: C (70,000 feet).

Shock: C (100 G).

Vibration: S (test condition D, method 204 of MIL-STD-202).

Life mechanical: A (100,000 cycles).

Life electrical: C (50,000 cycles).

Acceleration: C (8 G).

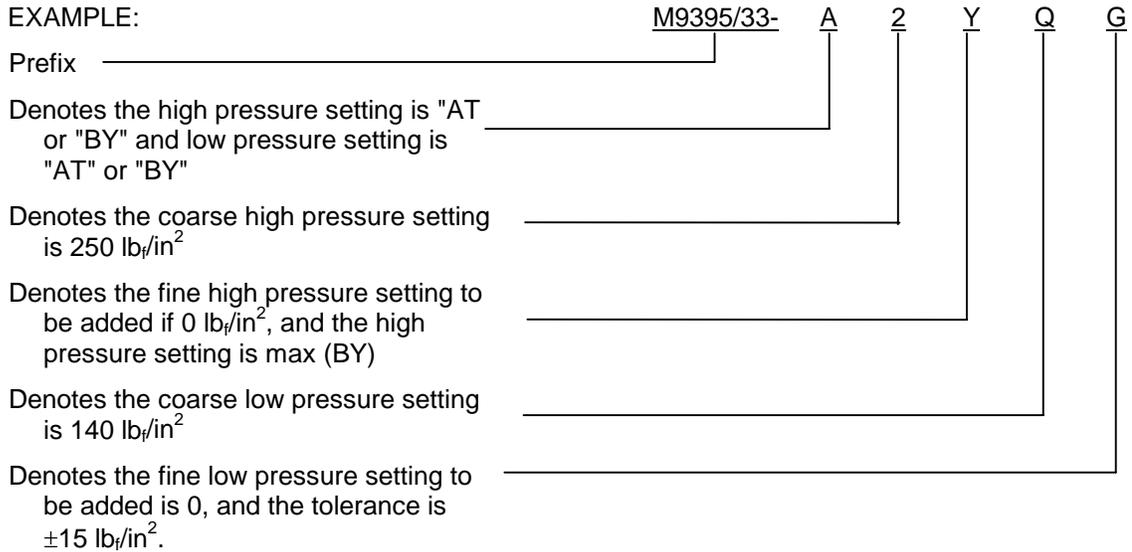
Pulsation amplitude: A (0%).

Pulsation frequency: A (0 Hz).

Pressure surge: B (more than 1,000 lb<sub>f</sub>/in<sup>2</sup>/sec).

MIL-DTL-9395/33B

PART NUMBER: The part number consists of the prefix M9395/33- followed by five code characters, the first from table I (denoting setting mode), the second from table II, the third from table III (denoting high pressure setting), the fourth from table II, and the fifth from table III (denoting the low pressure setting). The following example illustrates the method used in generating a coded part number:



M9395/33-A2YQG is the part number for a switch that is actuated on increasing pressure by 250 lb<sub>f</sub>/in<sup>2</sup> and that is deactivated on decreasing pressure at 140 ±15 lb<sub>f</sub>/in<sup>2</sup>.

Supersession data: M9395/33-01 is superseded by M9395/33-A2YQG.

TABLE I. Code for pressure setting modes.

Code character	Setting modes	
	High pressure	Low pressure
A	AT (or BY)	AT (or BY)
B	AT (or BY)	Differential
C	Differential	AT (or BY)

MIL-DTL-9395/33B

TABLE II. Codes for coarse pressure setting (within lb<sub>f</sub>/in<sup>2</sup>).

Code	Coarse pressure setting (lb <sub>f</sub> /in <sup>2</sup> )	Code	Coarse pressure setting (lb <sub>f</sub> /in <sup>2</sup> )	Code	Coarse pressure setting (lb <sub>f</sub> /in <sup>2</sup> )
A	0	N	120	1	240
B	10	P	130	2	250
C	20	Q	140	3	260
D	30	R	150	4	270
E	40	S	160	5	280
F	50	T	170	6	290
G	60	U	180	7	300
H	70	V	190	8	310
J	80	W	200	9	320
K	90	X	210	0	340
L	100	Y	220		
M	110	Z	230		

TABLE III. Code for combination of fine pressure setting and tolerance.  
(This quantity should be added to coarse setting selected from table II).

Fine pressure setting (lb <sub>f</sub> /in <sup>2</sup> )	Code characters (tolerance lb <sub>f</sub> /in <sup>2</sup> )											
	Min	±5	±10	±15	±20	±25	±30	±35	±40	±50	±60	Max
0	A	C	E	G	J	L	N	Q	S	U	W	Y
5	B	D	F	H	K	M	P	R	T	V	X	Z

Custodians:  
 Air Force - 11  
 DLA - CC

Preparing activity:  
 DLA - CC

Review activities:  
 Air Force - 99

(Project 5930-1730-13)

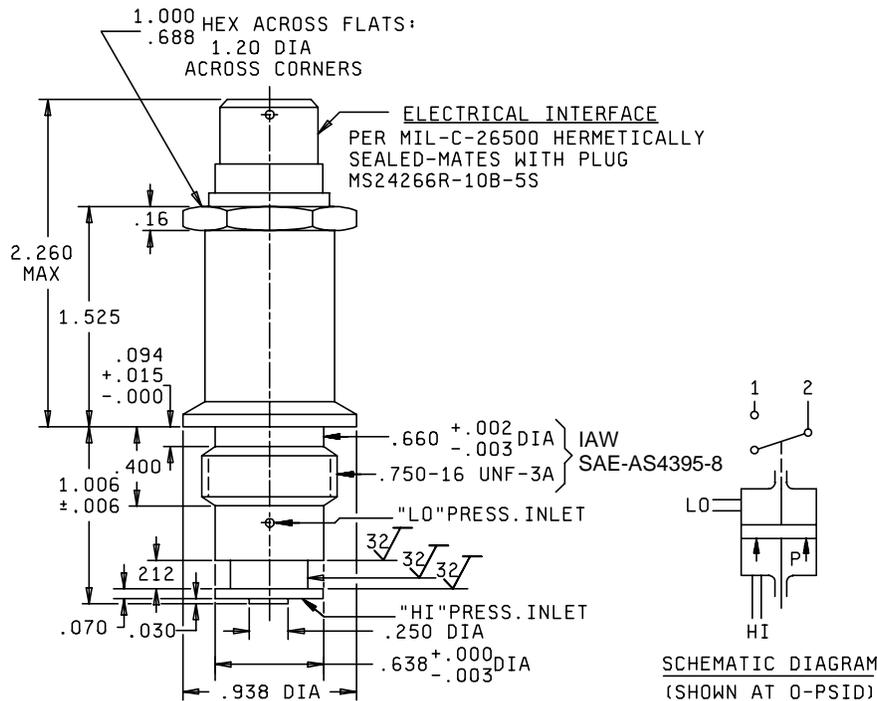
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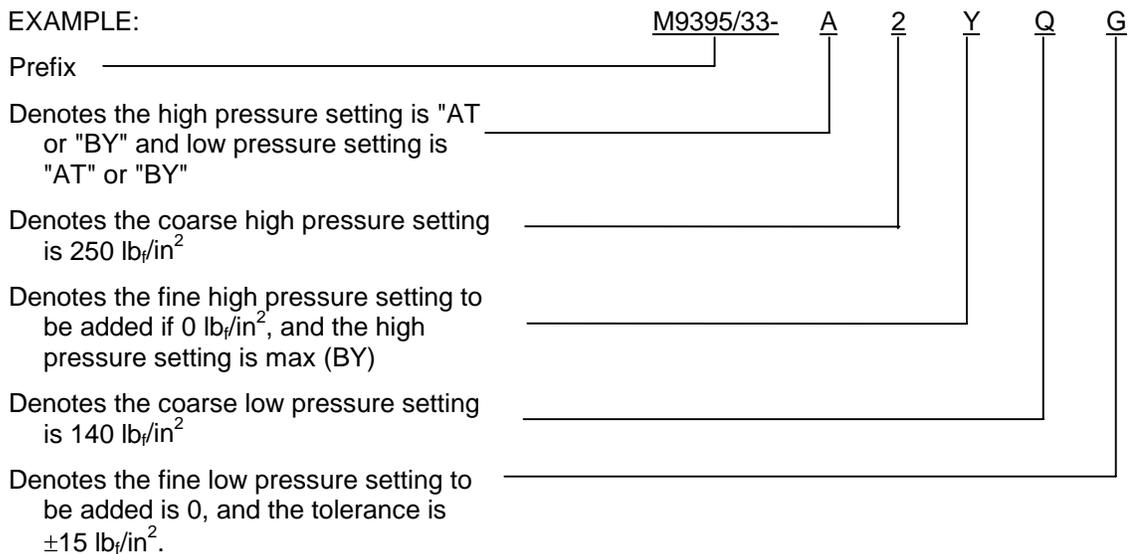
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