

INCH-POUND

MIL-DTL-9395/32E

18 September 2018

SUPERSEDING

MIL-DTL-9395/32D

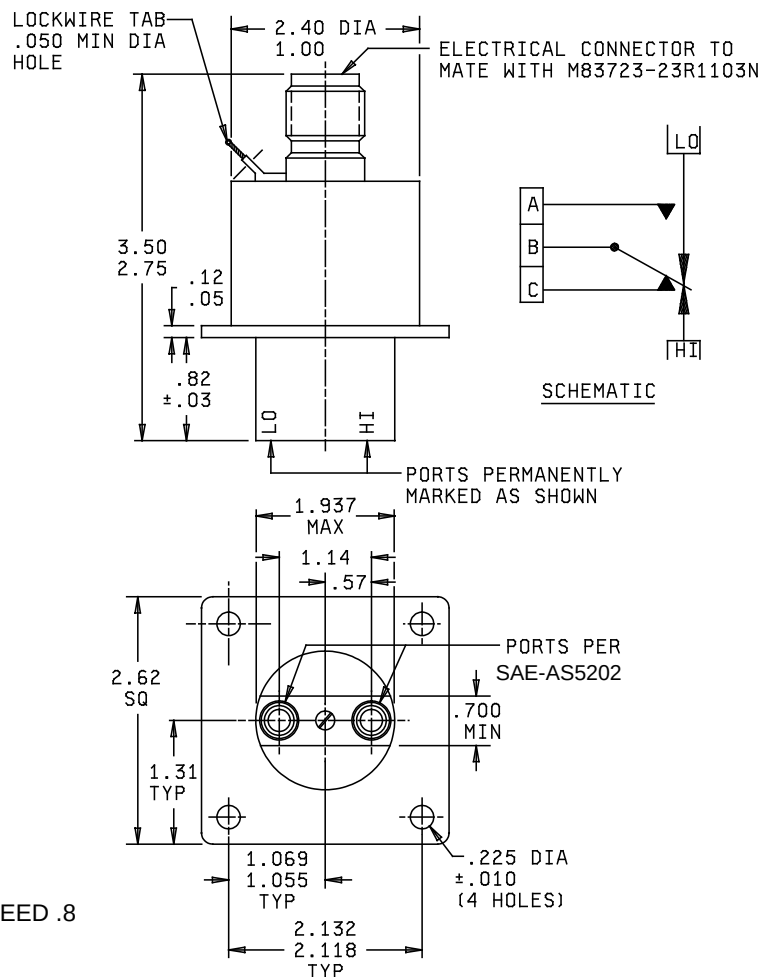
3 October 2006

DETAIL SPECIFICATION SHEET
SWITCHES, PRESSURE, DIFFERENTIAL (TYPE III), 4 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.

Inactive for new design after 23 April 2013



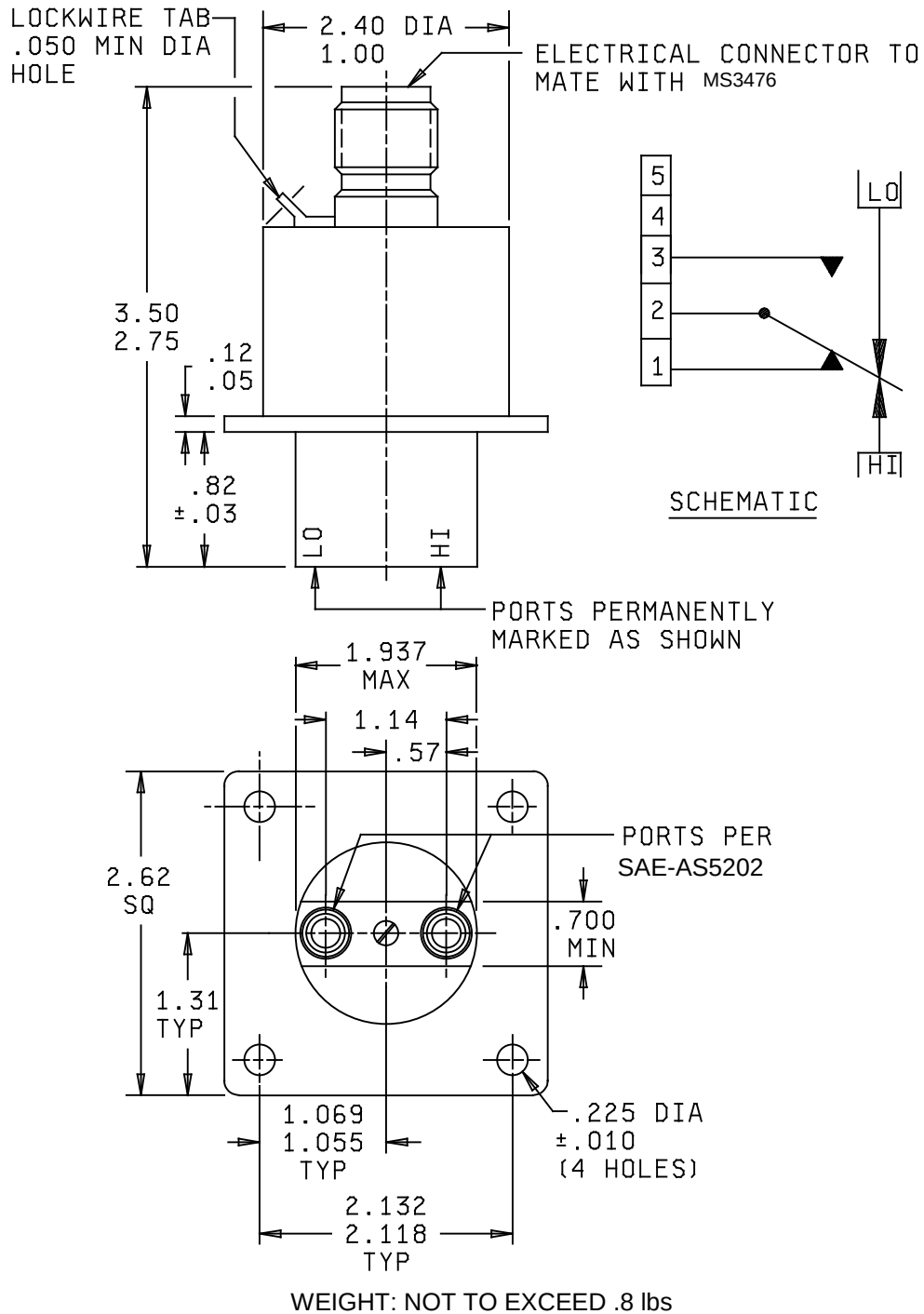
WEIGHT: NOT TO EXCEED .8

Configuration 1
FIGURE 1. Switches, pressure, differential, type III.

AMSC N/A

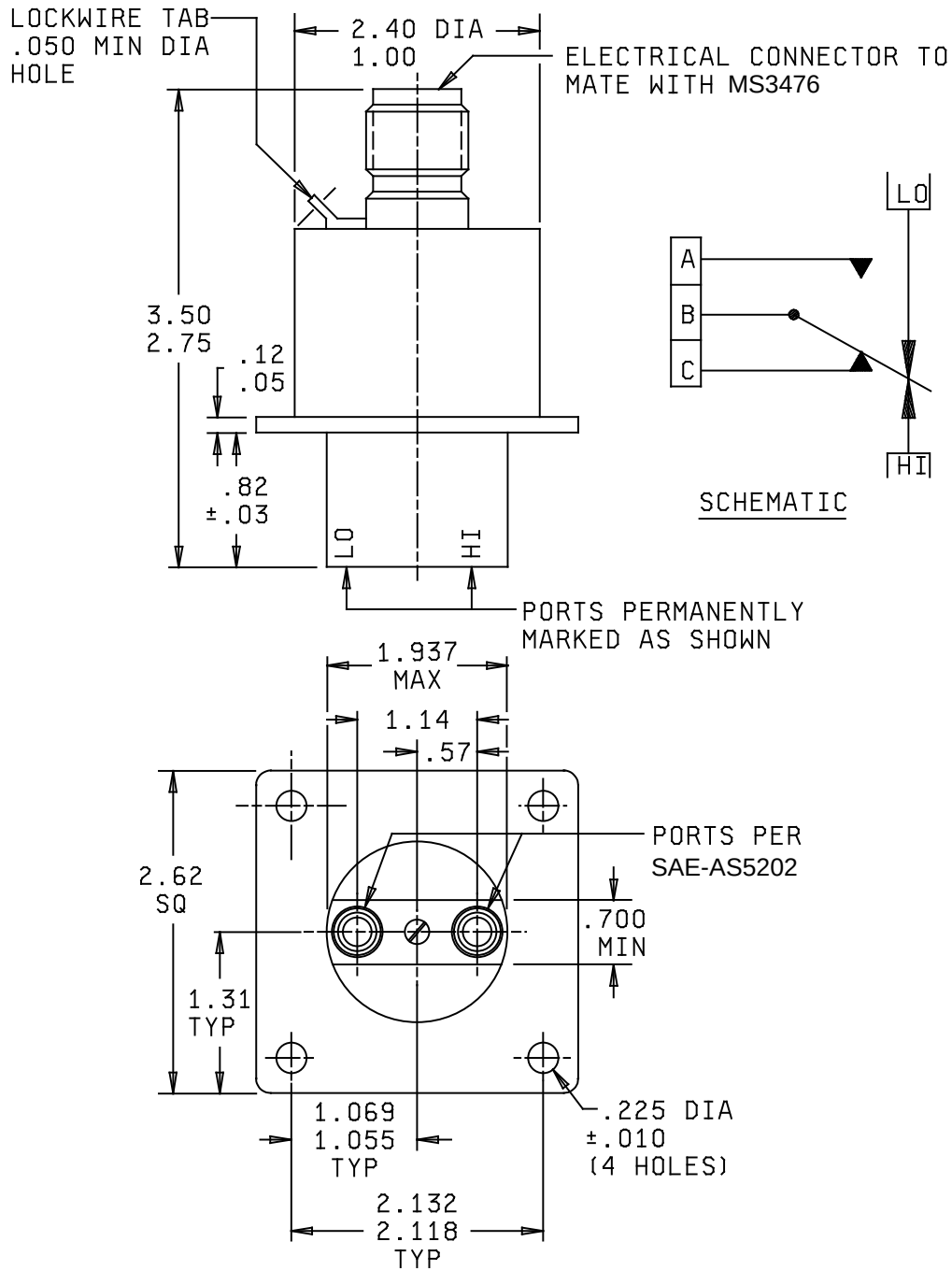
FSC 5930





Configuration 2

FIGURE 1. Switches, pressure, differential, type III - Continued.

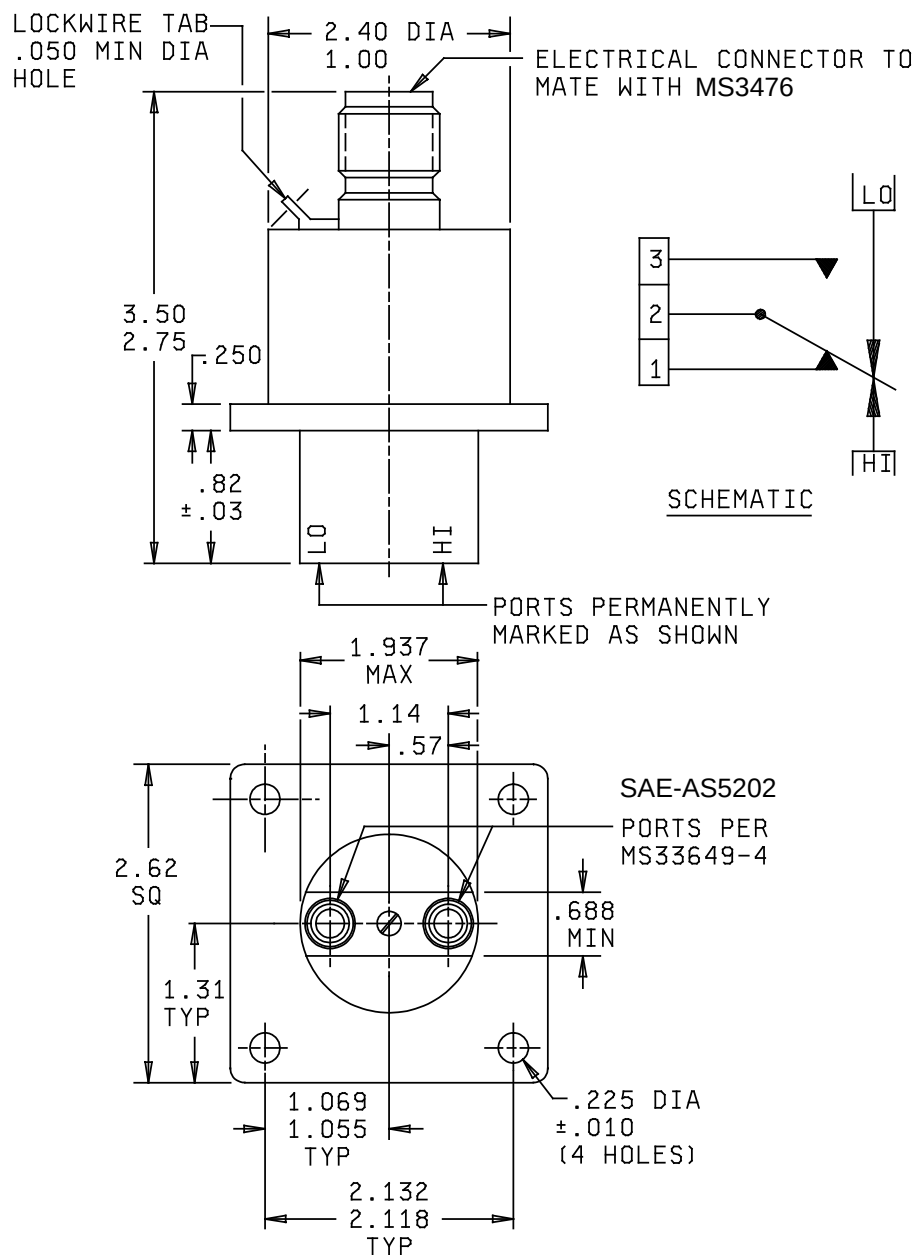


WEIGHT: NOT TO EXCEED .8 lbs

Configuration 3

FIGURE 1. Switches, pressure, differential, type III - Continued.

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Configuration 4

WEIGHT: NOT TO EXCEED .97 lbs

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only and are based upon 1 inch = 25.4 mm.
3. Unless otherwise specified, tolerance is $\pm .02$ (0.51 mm).
4. M83723-23R1103N details are found in MIL-DTL-83723/23.

FIGURE 1. Switches, pressure, differential, type III - Continued.

REQUIREMENTS:

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

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

Proof pressure: 250 lb_f/in²g high over low and simultaneously.

System pressure: 125 lb_f/in²g high over low and simultaneously.

Burst pressure: 500 lb_f/in²g high over low and simultaneously.

Electrical ratings: Operating voltage: 28 Vdc. Current rating: 4 amperes resistive, 2 amperes inductive.

Seal:

High pressure chamber: Media proof. During this test the low pressure chamber shall be open to atmosphere. Subject switches to proof pressure for 2 minutes using hydraulic fluid IAW MIL-PRF-6083 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_f/in²g for the first 30 seconds to allow stabilization of test equipment; no pressure loss is allowed thereafter.

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

Electrical chamber: See table I.

Electrical connector: See figure 1.

Pressure port: See figure 1.

Media: Dry air; nitrogen; fuel IAW MIL-DTL-5624; oil IAW MIL-PRF-7808; or hydraulic fluid IAW MIL-PRF-6083.

High temperature (operating and nonoperating): C (350°F).

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

Altitude: C (70,000 feet).

Shock: C (100 G).

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

Life mechanical: A (100,000 cycles).

Life electrical: C (50,000 cycles).

Acceleration: C (8 G).

Pulsation amplitude: A (0 percent).

Pulsation frequency: A (0 Hz).

Pressure rise: B (more than 1,000 lb_f/in²/s).

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

Connector torque: Applicable.

Flame test: Applicable.

Explosion: Applicable.

QUALIFICATION:

Single submission: Restricted to switch submitted.

Group submission: See table V.

Part number: Part numbers shall be as follows:

Example:

	M9395/32-	A	A D	A B
"M" prefix and specification sheet number	_____			
Configuration and pressure setting mode = Code "A" of table I.	_____			
High-pressure setting = Code "A" of table II (coarse value of 0 lb _f /in ² d) and code "D" of table III (fine value of 1 1/2 ± 1/2 lb _f /in ² d).	_____			
Low-pressure setting = Code "A" of table II (coarse value of 0 lb _f /in ² d) and code "B" of table III (fine value of 1/2 ± 1/2 lb _f /in ² d).	_____			

Note: Design limitations (actuation values and tolerances, deadband and deactuation values and tolerances) should be coordinated with the 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		Configuration 2		Pressure	
	Electrical chamber		Electrical chamber		High setting	High setting
	Hermetic	Unsealed	Hermetic	Unsealed		
Code	A	D	G	K	At (or max) <u>1</u> /	At (or min) <u>1</u> /
Code	B	E	H	L	At (or max) <u>1</u> /	Deadband <u>2</u> /
Code	C	F	J	M	Deadband <u>2</u> /	At (or min) <u>1</u> /
	Configuration 3		Configuration 4		Pressure setting mode	
	Electrical chamber		Electrical chamber		High setting	Low setting
	Hermetic	Unsealed	Hermetic	Unsealed		
Code	N	R	U	X	At (or max) <u>1</u> /	At (or min) <u>1</u> /
Code	P	S	V	Y	At (or max) <u>1</u> /	Deadband <u>2</u> /
Code	Q	T	W	Z	Deadband <u>2</u> /	At (or min) <u>1</u> /

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

2/ Setting values are designated by codes from tables II and IV.

TABLE II. Codes for coarse settings.

Code	Coarse value (lb _f /in ² d)	Code	Coarse value (lb _f /in ² d)	Code	Coarse value(lb _f /in ² d)
A	0	L	30	W	80
B	2.5	M	35	X	85
C	5	N	40	Y	90
D	7.5	P	45	Z	95
E	10	Q	50	1	100
F	12.5	R	55	2	105
G	15	S	60	3	110
H	17.5	T	65	4	115
J	20	U	70	5	120
K	25	V	75	6	125

TABLE III. Codes for combinations of fine settings and tolerances values.

	Fine value (lb _f /in ² d) for settings below 20 lb _f /in ² d					Tolerance (lb _f /in ²)
	0	.5	1	1.5	2	
Code	A	B	C	D	E	±.5lb _f /in ² d
Code	F	G	H	J	K	±1 lb _f /in ² d
Code	L	M	N	P	Q	±2 lb _f /in ² d
Code	R	S	T	U	V	±3 lb _f /in ² d
Code	W	X	Y	Z	1	±5 lb _f /in ² d
Code	2	3	4	5	6	±8 lb _f /in ² d
Code	7	8	9	0	+	Min or Max
	Fine value (lb _f /in ² d) for settings below 20 lb _f /in ² d and above					Tolerance (lb _f /in ²)
	0	.5	1	1.5	2	
Code	A	B	C	D	E	±1 lb _f /in ² d <u>1/</u>
Code	F	G	H	J	K	±2 lb _f /in ² d <u>2/</u>
Code	L	M	N	P	Q	±3 lb _f /in ² d <u>3/</u>
Code	R	S	T	U	V	±5 lb _f /in ² d
Code	W	X	Y	Z	1	±8 lb _f /in ² d
Code	2	3	4	5	6	±15 lb _f /in ² d
Code	7	8	9	0	+	Min or Max

1/ Not applicable for pressure settings above 33 lb_f/in²d.2/ Not applicable for pressure settings above 66 lb_f/in²d.3/ Not applicable for pressure settings above 100 lb_f/in²d.

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TABLE IV. Codes for deadband settings.

Code	Deadband value (lb _f /in ² d)	Code	Deadband value (lb _f /in ² d)
A	0	T	11
B	.5	U	12
C	1	V	13
D	1.5	W	14
E	2	X	15
F	2.5	Y	16
G	3	Z	18
H	3.5	1	20
J	4	2	22
K	4.5	3	24
L	5	4	26
M	5.5	5	28
N	6	6	30
P	7	7	35
Q	8	8	40
R	9	9	45
S	10	0	50

TABLE V. Extent of qualification.

Part number M9395/32-	Number of samples required	Tests	Qualifies
ABAAC GBAAC A6R3M N6R3M	2 each resistive 2 each resistive 2 each inductive 2 each inductive	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-PRF-6083
MIL-DTL-9395
MS3476

MIL-DTL-5624
MIL-DTL-83723/23
SAE-AS5202

MIL-PRF-7808
MIL-STD-202-204

Custodians:

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

Preparing activity:
DLA - CC

(Project 5930-2018-043)

Review activities:

Army - AT
Navy - AS, MC, SH
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/>.