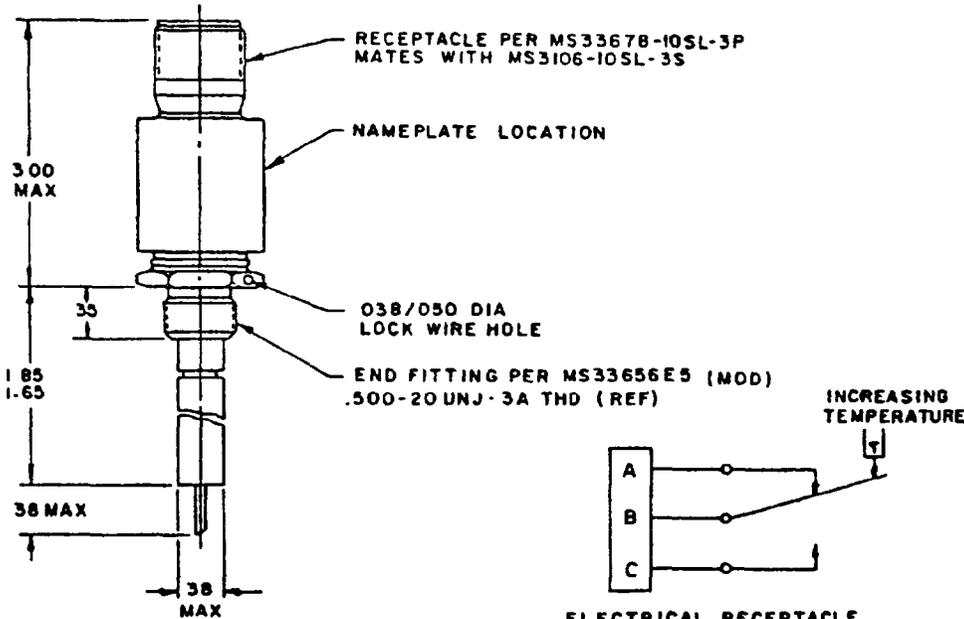
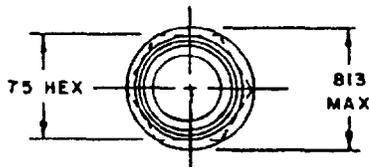


MILITARY SPECIFICATION SHEET

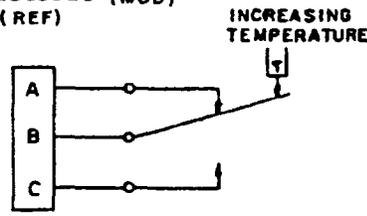
SWITCH, THERMOSTATIC (VOLATILE LIQUID), HERMETIC SEALED,
SINGLE POLE DOUBLE THROW (SPDT), MEDIUM RESPONSE TIME

This specification is approved for use by Space and Naval Warfare Command, Department of the Navy, and is available for use by all Departments and Agencies of the Department of Defense.

The requirements for acquiring the product described herein shall consist of this specification sheet and the issue of the following specification listed in that issue of the Department of Defense Index of Specifications and Standards (DODISS) specified in the solicitation: MIL-S-28827.



Inches	mm
.038	0.96
.050	1.27
.35	8.9
.38	9.7
.4375	11.110
.500	12.70
.68	17.3
.75	19.1
.813	20.65
1.65	41.9
1.85	47.0
3.00	76.2



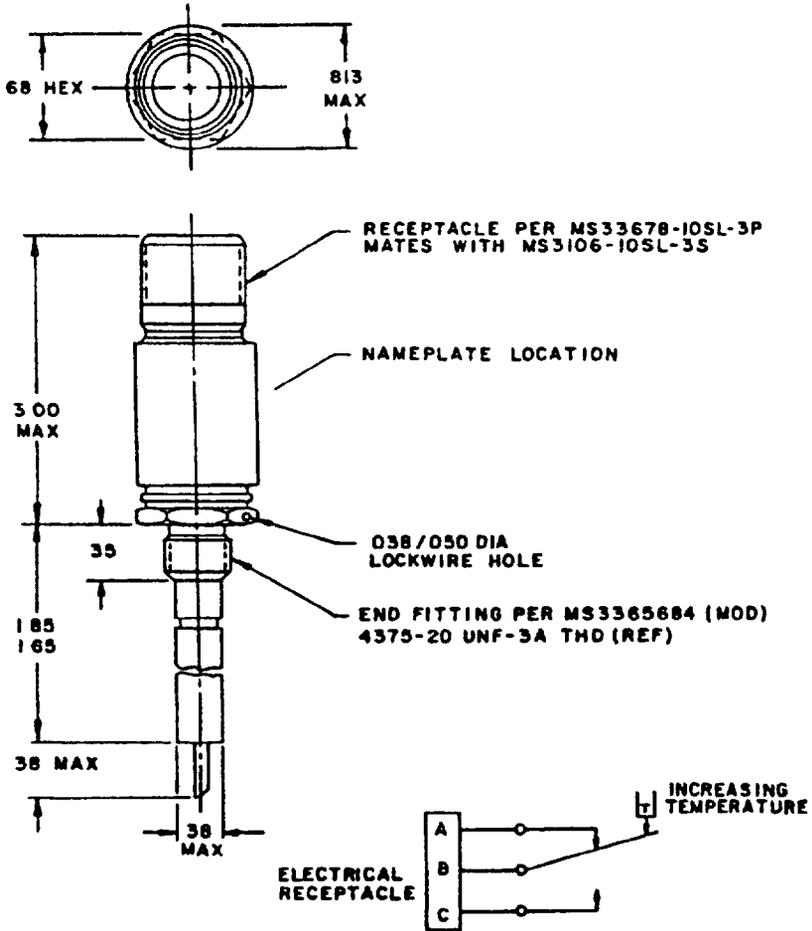
ELECTRICAL RECEPTACLE

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Unless otherwise specified, tolerance is ± 0.005 (0.13 mm).

FIGURE 1. Configuration I.

(A) denotes changes



NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Unless otherwise specified, tolerance is ± 0.005 (0.13 mm).

FIGURE 2. Configuration II.

REQUIREMENTS:

Dimensions, configurations, and electrical schematic See figures 1 and 2.

Weight: 2 ounces approximately

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

Proof pressure: 3,000 psig.

Proof temperature. 100°F above the maximum increasing set point.

Time constant: Not to exceed 10 seconds in 75 centistoke, oil at 150 ft/min.

Electrical ratings:

Operating voltage: 28 ±5 V dc.

Current rating: .080 to 1.0 amps resistive.

Seal: Electrical chamber hermetic.

Media: MIL-H-5606, air or any media compatible with the wetted materials.

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

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

Altitude: C(80,000 ft).

Shock: M(100 g's).

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

Endurance: B(25,000 cycles).

Materials: All wetted materials shall be 300 series stainless steel.
Nonwetted external parts shall be suitably protected against corrosion.

Part or Identifying Number (PIN)

NOTE: Design limitations (actuation values and tolerances, deadband and deactuation values and tolerances) should be coordinated with a manufacturer(s) listed on the QPL for this 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 procured.

Ⓐ PIN shall be assigned as illustrated below

<u>M28827/1-</u>	<u>A</u>	<u>C</u>	<u>D</u>	<u>A</u>	<u>B</u>
Specification sheet number	Configuration and setting code (see table I)	High temperature setting to within 20°F (see table II) or low end of differential setting (see table V)	High temperature setting to within 2°F and tolerance (see table III or table IV) or high end of differential setting (see table V)	Low temperature setting to within 20°F (see table II) or low end of differential setting (see table V)	Low temperature setting to within 2°F and tolerance (see table III or table IV) or high end of differential setting (see table V)

Example of PIN:

M28827/1-ACDAB identifies a switch of configuration 1 which actuates on increasing temperatures at 146°F ±5°F and deactuates at 102°F ±5°F.

M28827/1-PDBEH identifies a switch of configuration 2 which actuates by 162°F maximum with 20°F/35°F differential.

TABLE I. Code characters for combinations of configurations and temperature setting modes.

High setting	Low setting	Configurations	
		1	2
At <u>1</u> /	At <u>1</u> /	A	J
At <u>1</u> /	By <u>2</u> /	B	K
At <u>1</u> /	Differential <u>3</u> /	C	L
By <u>2</u> /	At <u>1</u> /	D	M
By <u>2</u> /	By <u>2</u> /	E	N
By <u>2</u> /	Differential <u>3</u> /	F	P
Differential <u>3</u> /	At <u>1</u> /	G	Q
Differential <u>3</u> /	By <u>2</u> /	H	R

- 1/ Setting values are designated by characters from tables II and III
2/ Setting values are designated by characters from tables II and IV.
3/ Setting values are designated by characters from table V.

TABLE II. Temperature setting to within 20°F.

Temperature	Code	Temperature	Code	Temperature	Code
100	A	260	J	420	S
120	B	280	K	440	T
140	C	300	L	460	U
160	D	320	M	480	V
180	E	340	N	500	W
200	F	360	P		
220	G	380	Q		
240	H	400	R		

TABLE III. Temperature setting within 2°F and tolerance.

Unit	Tolerance		
	±5	±10	±25
0	A	L	W
2	B	M	X
4	C	N	Y
6	D	P	Z
8	E	Q	1
10	F	R	2
12	G	S	3
14	H	T	4
16	J	U	5
18	K	V	6

TABLE IV. Temperature setting to within 2°F.

Unit	Maximum or minimum
0	A
2	B
4	C
6	D
8	E
10	F
12	G
14	H
16	J
18	K

TABLE V. Code letters for differential temperature settings.

Code letter	Differential temperature (°F)
A	0
B	5
C	10
D	15
E	20
F	25
G	30
H	35
J	40
K	45
L	50
M	60
N	75

MIL-S-28827/1A(EC)

CONCLUDING MATERIAL

Preparing activity
Navy - EC

Agent:
DLA - ES

(Project number 5930-N685)