

INCH-POUND

MIL-S-15291/10A(SH)
22 July 1991
SUPERCEDING
MIL-S-15291/10(SH)
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MILITARY SPECIFICATION SHEET

SWITCHES, ROTARY, SNAP ACTION CLASS 6SR BASE MOUNTED, SIDE CONNECTED

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

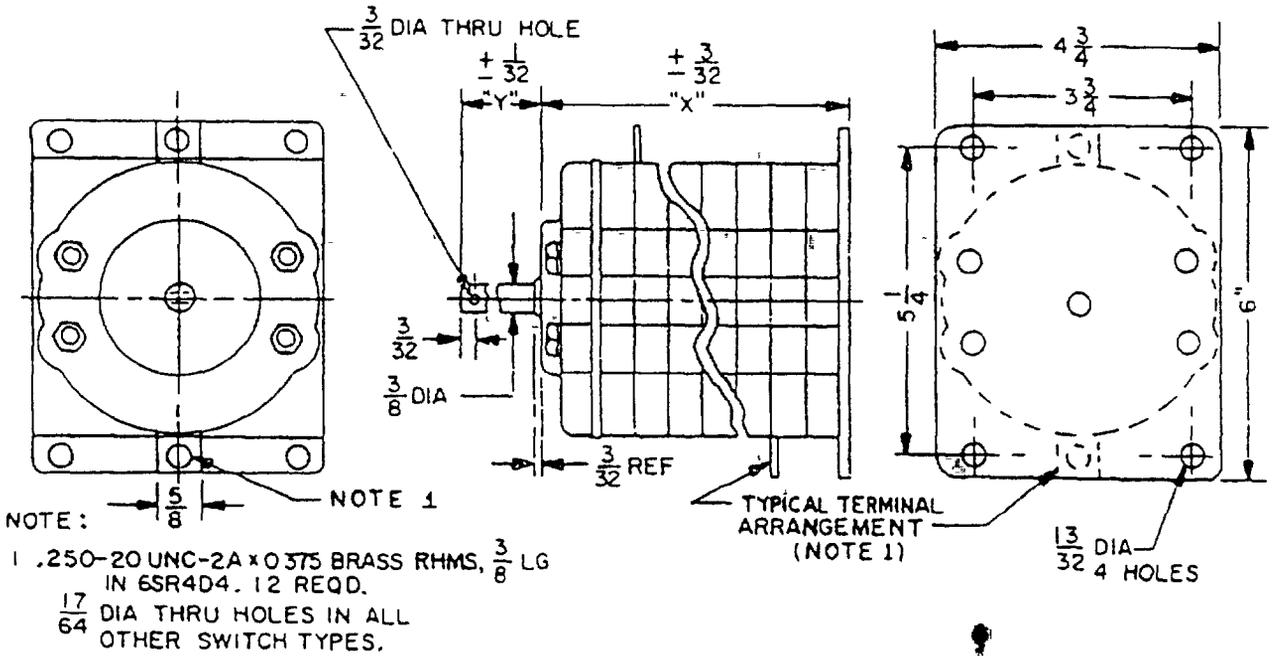
The requirements for acquiring the product described herein shall consist of this specification sheet and the issue of the following specification listed in that issue of the Department of Defense Index of Specifications and Standards (DODISS) specified in the solicitation: MIL-S-15291.

AMSC N/A

FSC 5930

DISTRIBUTION STATEMENT A. Approved for public release; distribution is unlimited.

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NOTES

- 1 Dimensions are in inches
- 2 Unless otherwise specified, tolerance is plus or minus 0.015

FIGURE 1 Class 6SR switch, base mounted, side connected, with coupler shaft

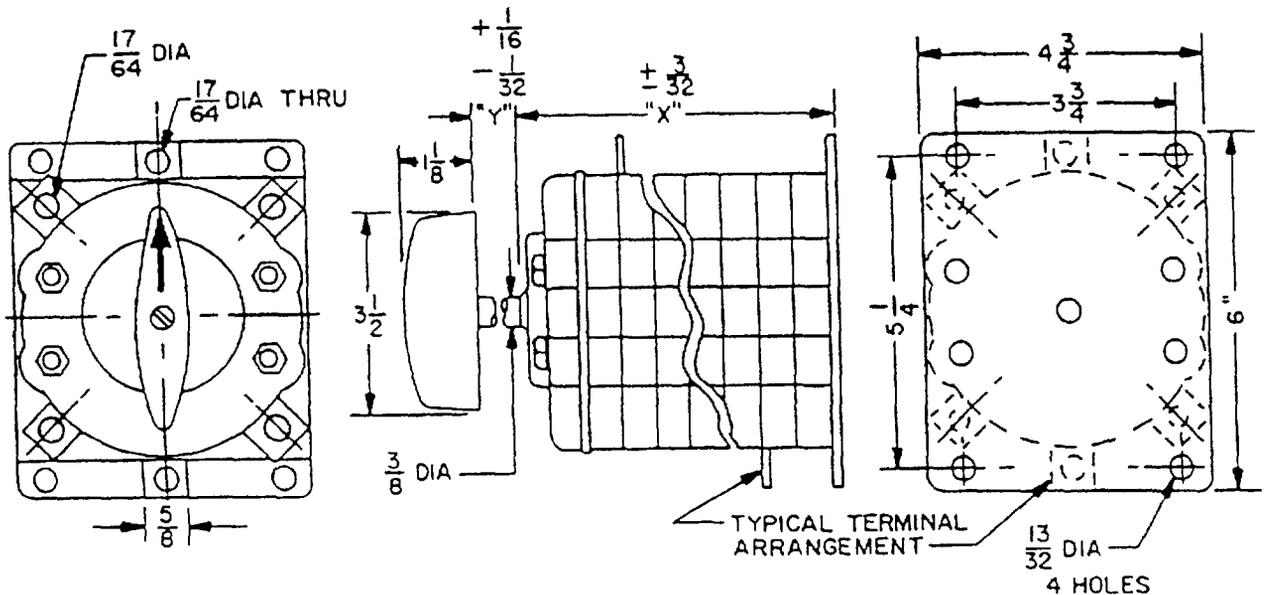


FIGURE 2. Class 6SR switch, base mounted, side connected, with handle

TABLE I Type and switching characteristics

MIL-S-15291/10 Dash No. Type designation	Detail ref Torque in-lbs	Dim "x" "y"	Handle or shaft position	Circuit and spacer configuration rotor position, spacer locations, terminal marking and locations												Notes		
				No 1	No 2	No 3	No 4	No 5	No 6	No 7	No 8	No 9	No 10	No 11	No 12		No 13	
-001 6SR2A4	Fig 1	3 13	ON															
	32	9 16	ON															
-002 6SR3A4	Fig 1	4 7	ON															
	32	9 16	ON															
-003 6SR3A3A	Fig 2	4 17	ON															
	32	1 2	ON															
-004 6SR3B4	Fig 1	6 10	ON 1															
	32	9 16	ON 2															
-005 6SR4D4	Fig 1	7 11	ON 3															
	32	15 32	ON 4															

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REQUIREMENTS:

Applicable specification:	MIL-S-15291
Dimensions and mounting:	See figures 1 and 2
Switching characteristics:	See table I
Angle of throw:	90 degrees
Switching action	Snap action, reciprocating
Electrical and endurance ratings	See table II
Stop strength (applicable to switches with stops).	100 inch-pounds
Vibration	50 Hz, MIL-STD-167-1
Shock:	High impact, MIL-S-901
Insulation (spacers and decks):	Glass alkyd, MAI-60 (or MAI-30) in accordance with MIL-M-14
Contact resistance	0.005 ohms maximum
Dielectric withstanding voltage	2,000 Vrms
Insulation resistance:	200 megohms minimum
Temperature rise	50 °C maximum
Contact material:	Rotor, phosphor bronze – Stationary contact, copper
Mounting bolts:	(4) 3/8 diameter, length and headstyle to suit application Bolts not furnished

TABLE II *Electrical and endurance ratings*

Tests	Current (amperes)	Voltage (volts)	Electrical operations (number of operations)	Test rate (operations per minute)	De-energized operations (number of operations)
Alternating current (rms)	60	500	6,000	10	4,000
Direct current	60	250	4,000	5	-

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Terminal marking:

Terminal markings shown in table I locate terminals as viewed from the front of the switch (handle end) Markings shall be stamped in front surfaces of terminals

GENERAL INFORMATION:

Switches not covered by specification sheets:

Switches which are fabricated from standard parts, as used in qualified switches, but which do not comply with switches detailed herein with respect to circuit characteristics, switching action, mounting arrangement, and handle details may be acquired under this specification from contractors having qualification approval under this specification

Extended ratings:

Switches detailed herein have been tested and found satisfactory at the extended ratings listed in table III. Reduced life expectancy must be anticipated for switches used at these increased voltage or current levels. Tests under the conditions of table IV are not required for qualification acceptance and they are not repeated routinely as for maintenance of qualification. Supplemental evaluations and tests applicable to particular circuit requirements are recommended.

TABLE III. Extended ratings

		AC - 60 or 400 Hz											
		125 volts				250 volts				500 volts			
		Resistive or lamp load		Inductive load 0.75 p f		Resistive or lamp load		Inductive load 0.75 p f		Resistive or lamp load		Inductive load 0.75 p f	
		Amp	Operations	Amp	Operations	Amp	Operations	Amp	Operations	Amp	Operations	Amp	Operations
All D A, B &	60	6,000	60	6,000	60	6,000	60	6,000	60	6,000	60	6,000	60
	75	3,000	75	3,000	---	---	---	---	---	---	---	---	---
	75	3,000	75	3,000	60	3,000	60	3,000	60	3,000	60	3,000	60
DC													
		120 volts				250 volts				350 volts			
		Resistive or lamp load		Inductive load 2		Resistive or lamp load		Inductive load 2		Resistive or lamp load		Inductive load 2	
		Amp	Operations	Amp	Operations	Amp	Operations	Amp	Operations	Amp	Operations	Amp	Operations
All A B	60	3,000	50	1,500	30	3,000	---	---	---	---	---	---	---
	60	4,000	60	4,000	60	4,000	50	3,000	30	3,000	30	3,000	30

1 Single pole break - all other ratings are based on breaking both sides of the line in accordance with figures 1 and 2 of MIL-S-15291
 2 0.04 henry for inductive circuit

APPLICATION AND
ACQUISITION GUIDE:

PIN and type designation cross reference shall be as shown in table IV.

TABLE IV. *Application and acquisition guide*

M15291/10 dash No	Type designation	For new or existing design	For re-placement	Circuit configuration
-001	6SR2A4	X		A (off-on-off-on)
-002	6SR3A4	X		A (off-on-off-on)
-003	6SR3A3A	X		A (off-on-off-on)
-004	6SR3B4	X		B (off-on 1-off-on 2)
-005	6SR4D4	X		D (on 2-on 1-off-off)

Revision letters are not used to denote changes due to the extensiveness of the changes

Preparing activity.
Navy - SH
(Project 5930-N663-11)