

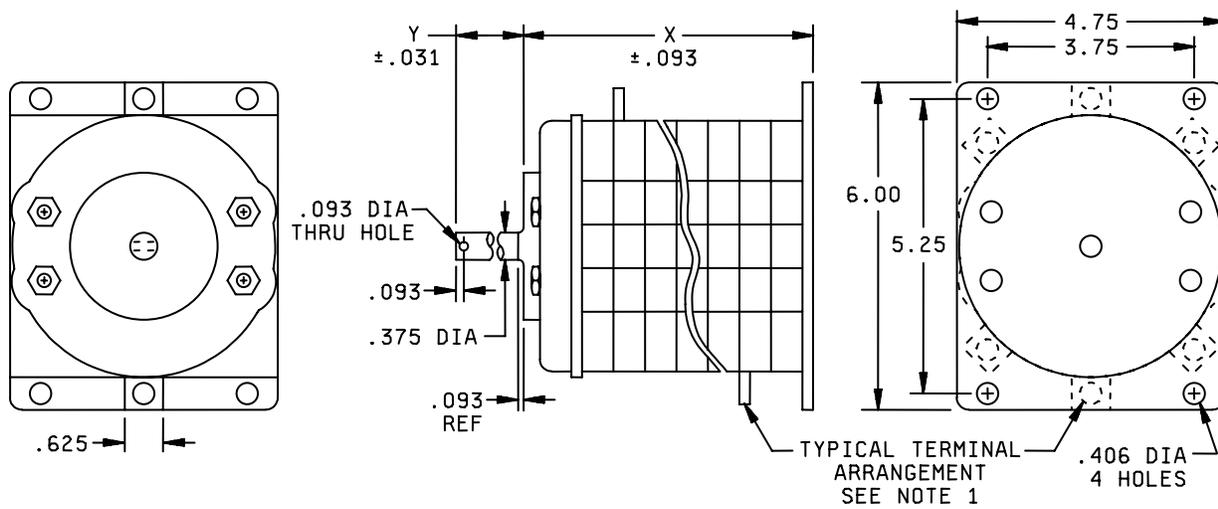
INCH POUND
MIL-DTL-15291/10B
6 February 2006
SUPERSEDING
MIL-S-15291/10A(SH)
22 July 1991

DETAIL SPECIFICATION SHEET

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

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

The complete requirements for acquiring the switch described herein shall consist of this specification and the latest issue of MIL-DTL-15291.



NOTES:

1. Dimensions are in inches.
2. Unless otherwise specified, tolerance is ± 0.015 .

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

MIL-DTL-15291/10B

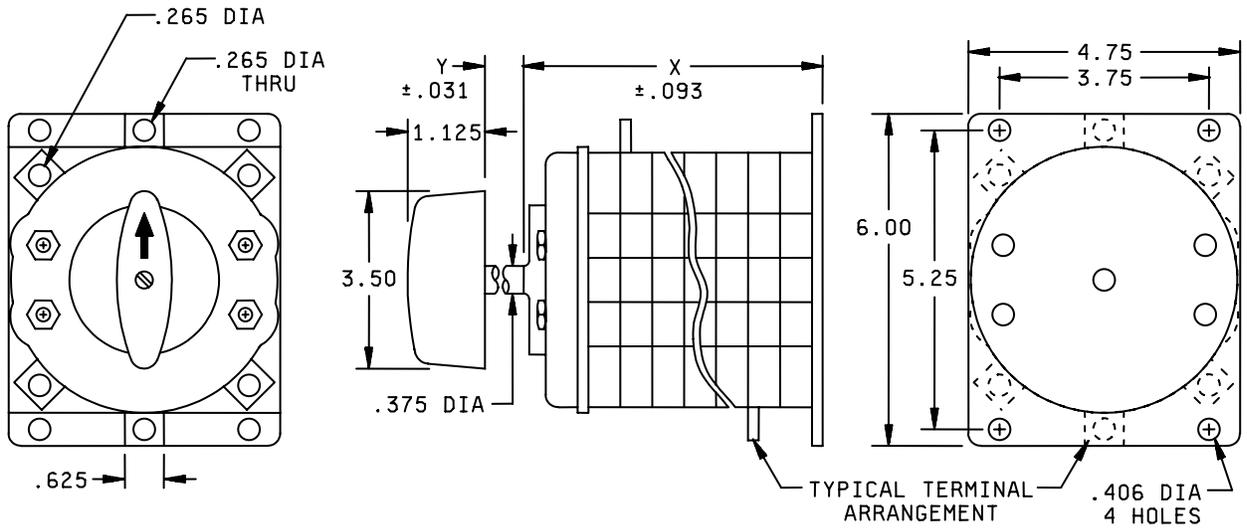


TABLE I. Type and switching characteristics.

M15291/10 DASH NO. TYPE DESIGNATION	DETAIL REF	DIM "X"	HANDLE OR SHAFT POSITION	CIRCUIT AND SPACER CONFIGURATIONS ROTOR POSITION, SPACER LOCATIONS, TERMINAL MARKING AND LOCATIONS										NOTES	
	TORQUE IN-LBS	DIM "Y"		NO 1	NO 2	NO 3	NO 4	NO 5	NO 6	NO 7	NO 8	NO 9	NO 10		
-001 6SR2A4	FIG 1	3.812													
	32	.562													
-002 6SR3A4	FIG 1	4.437													
	32	.562													
-003 6SR3A3A	FIG 2	4.531													
	32	.500													
-004 6SR3B4	FIG 1	6.375													
	32	.562													
-005 6SR4D4	FIG 1	7.687													
	32	.468													

3

MIL-DTL-15291/10B

MIL-DTL-15291/10B

REQUIREMENTS:

Applicable specification: MIL-DTL-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.

Contact resistance: 0.005 ohms maximum

Dielectric withstanding voltage: 2,000 V rms.

Insulation resistance: 200 megohms minimum.

Temperature rise: 50°C maximum.

Mounting screws: .250-20UNC-2A (4) length and head style to suit application. Screws 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)	30	500	20,000	30	10,000
Direct current	30	250	15,000	15	---

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, clear of the screw heads.

MIL-DTL-15291/10B

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 rating 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 III 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.

Switching characteristics	AC - 60 or 400 Hertz											
	125 volts				250 volts				500 volts			
	Resistive or lamp load		Inductive load 0.75 pF		Resistive or lamp load		Inductive load 0.75 pF		Resistive or lamp load		Inductive load 0.75 pF	
	Amp	Operations	Amp	Operations	Amp	Operations	Amp	Operations	Amp	Operations	Amp	Operations
All	30	20,000	30	20,000	30	20,000	30	20,000	30	20,000	30	20,000
C, D	40	6,000	40	6,000	---	---	---	---	---	---	---	---
A, B <u>1/</u>	40	6,000	40	6,000	30	6,000	30	6,000	30	6,000	30	6,000
	DC											
	120 volts				250 volts				350 volts			
	Resistive or lamp load		Inductive, load <u>4/</u>		Resistive or lamp load		Inductive, load <u>4/</u>		Resistive or lamp load		Inductive, load <u>4/</u>	
	Amp	Operations	Amp	Operations	Amp	Operations	Amp	Operations	Amp	Operations	Amp	Operations
All	30	13,000	25	6,000	15	13,000	---	---	---	---	---	---
A, B	30	15,000	25	6,000	25	6,000	25	6,000	15	6,000	15	6,000
A, B <u>3/</u>	---	---	---	---	30	15,000	---	---	---	---	---	---

6

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-DTL-15291.

2/ 0.08 henry for inductive current.

3/ Switch with special arc snuffers.

MIL-DTL-15291/10B

MIL-DTL-15291/10B

APPLICATION AND ACQUISITION GUIDE: PIN and type designation cross reference shall be as shown on table IV.

TABLE IV. Application and acquisition guide.

M15291/3 dash no.	Type designation	For new or existing design	For replacement	Circuit configuration
-001	6SR2A3		X	A (on-off-on-off)
-002	6SR2A4	X		A (on-off-on-off)
-003	6SR2A4A	X		A (on-off-on-off)
-004	6SR3A3		X	A (on-off-on-off)
-005	6SR4A4	X		A (on-off-on-off)
-006	---	X		A (on-off-on-off)
-007	6SR2B4	X		A (off-on1-off-on 2)
-008	6SR3B3		X	A (off-on1-off-on 2)
-009	6SR3B4	X		A (off-on1-off-on 2)
-010	6SR4B4	X		A (off-on1-off-on 2)
-011	6SR2C3		X	C (on 1-on 2-on 1-on 2)
-012	6SR2C4	X		C (on 1-on 2-on 1-on 2)
-013	6SRSC4A	X		C (on 1-on 2-on 1-on 2)
-014	6SR3C3		X	C (on 1-on 2-on 1-on 2)
-015	6SR4C4	X		C (on 1-on 2-on 1-on 2)
-016	6SR5C4	X		C (on 1-on 2-on 1-on 2)
-017	6SR4D4	X		D (on 1-on 2-off-off)
-018	6SR7S4	X		S (see table I)

Referenced Documents:

- MIL-DTL-15291
- MIL-S-901
- MIL-STD-167-1

Changes from previous issue: Marginal notations are not used in this revision to identify changes with respect to the previous issue due to the extent of the changes.

Custodians:
Navy - SH
DLA - CC

Preparing activity:
DLA - CC

(Project 5930-1907)

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 <http://assist.daps.dla.mil/> .