

INCH-POUND
MIL-DTL-15291/13B
6 February 2006
SUPERCEDING
MIL-S-15291/13A(SH)
22 July 1991

DETAIL SPECIFICATION SHEET

SWITCHES, ROTARY, SNAP ACTION CLASS 20SR 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.

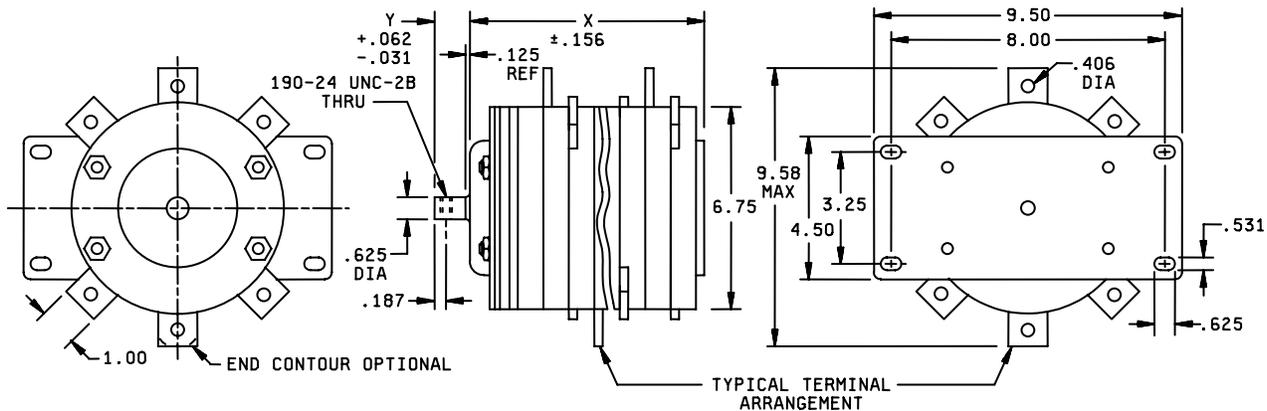
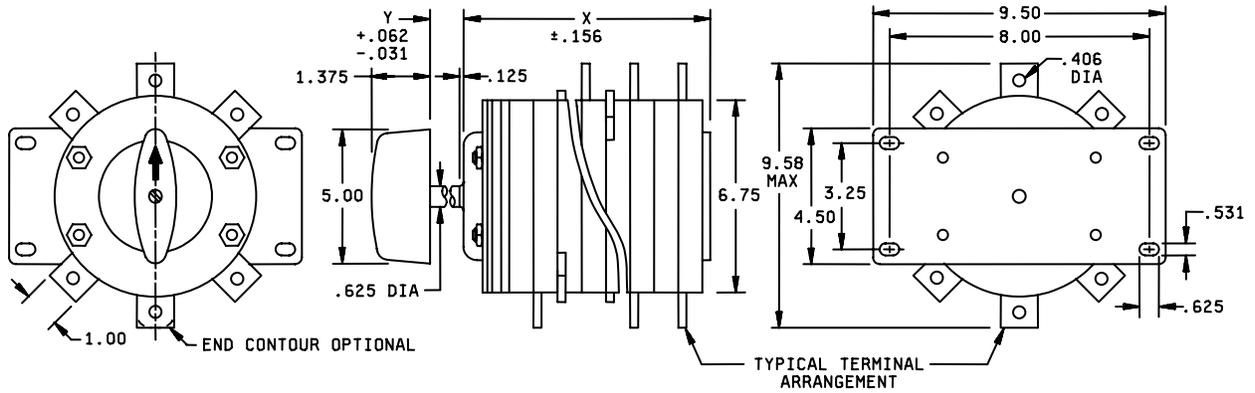


FIGURE 1 Class 20SR base mounted, side connected, with coupler shaft

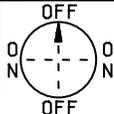
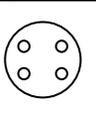
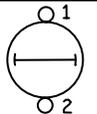
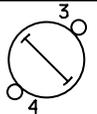
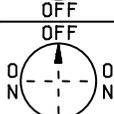
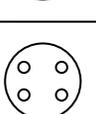
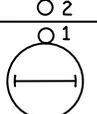
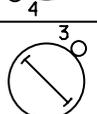
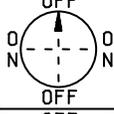
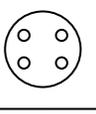
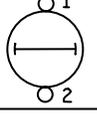
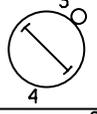
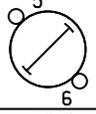
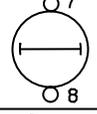
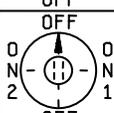
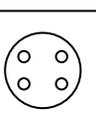
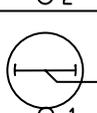
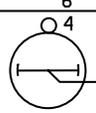
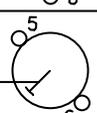
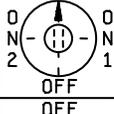
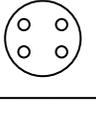
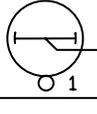
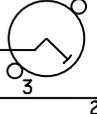
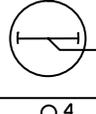
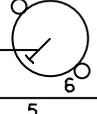
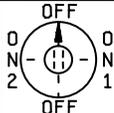
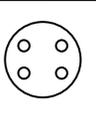
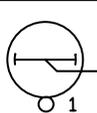
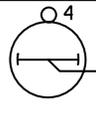
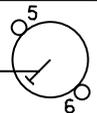
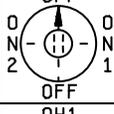
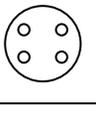
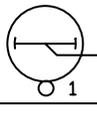
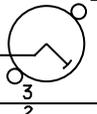
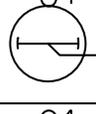
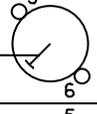
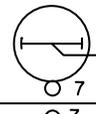
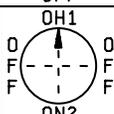
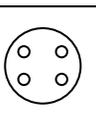
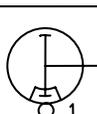
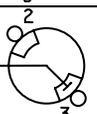
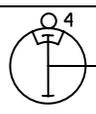
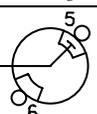
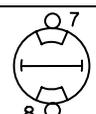
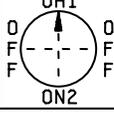
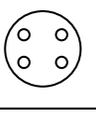
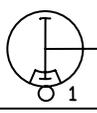
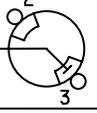
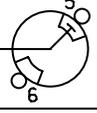
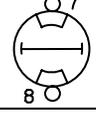
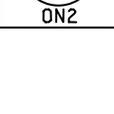
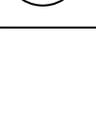
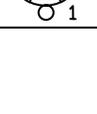
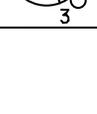
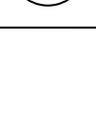
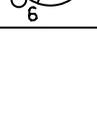
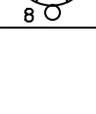


NOTES

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

FIGURE 2 Class 20SR base mounted, side connected with handle.

TABLE I Type and switching characteristics.

M15291/13 DASH NO. TYPE DESIGNATION	DETAIL REF	DIM "X" DIM "Y"	HANDLE OR SHAFT POSITION	CIRCUIT AND SPACER CONFIGURATIONS 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	
-001	FIG 2	4.812	OFF 										
	72	.437	OFF 										
-002	FIG 2	6.343	OFF 										
	72	.437	OFF 										
-003 20SR284	FIG 1	6.343	OFF 										
	72	.750	OFF 										
-004 20SR384	FIG 1	8.093	OFF 										
	72	.750	OFF 										
-005 20SR4S3	FIG 2	8.968	OH1 OFF 										
	80	2	OFF 										

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): High impact, MIL-S-901

Contact resistance: 1.5 milliohms maximum

Dielectric withstanding voltage: 2,000 Vrms

Insulation resistance: 200 megohms minimum

Temperature rise: 50°C maximum

Mounting bolts: (4) ½ diameter, length, and headstyle to suit application. Bolts not furnished.

Handle: M15291/12-100.

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 rear surfaces of terminals.

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)	200	500	6,000	8	4,000
Direct current	200	250	4,000	3	--

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 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 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
A B	200	6,000	200	6,000	200	6,000	200	6,000	200	6,000	200	6,000
	DC											
	120 volts				250 volts				350 volts			
	Resistive or Lamp load		Inductive load		Resistive or Lamp load		Inductive load ¹		Resistive or Lamp load		Inductive load	
	Amp.	Operations	Amp.	Operations	Amp.	Operations	Amp.	Operations	Amp.	Operations	Amp.	Operations
A B	200	4,000	--	--	200	4,000	200	4,000	--	--	--	--

¹0.025 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.

M15291/12 Dash No.	Type Designation	For new or existing design	For re-Placement	Circuit Configuration
-001	--	X		A (off-on-off-on)
-002	--	X		A (off-on-off-on)
-003	20SR2B4	X		B (off-on-1-off-on 2)
-004	20SR3B4	X		B (off-on-1-off-on 2)
-005	20SR4S3	X		S (on 1-on 2-off-off)

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 5930-1910)

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/> .