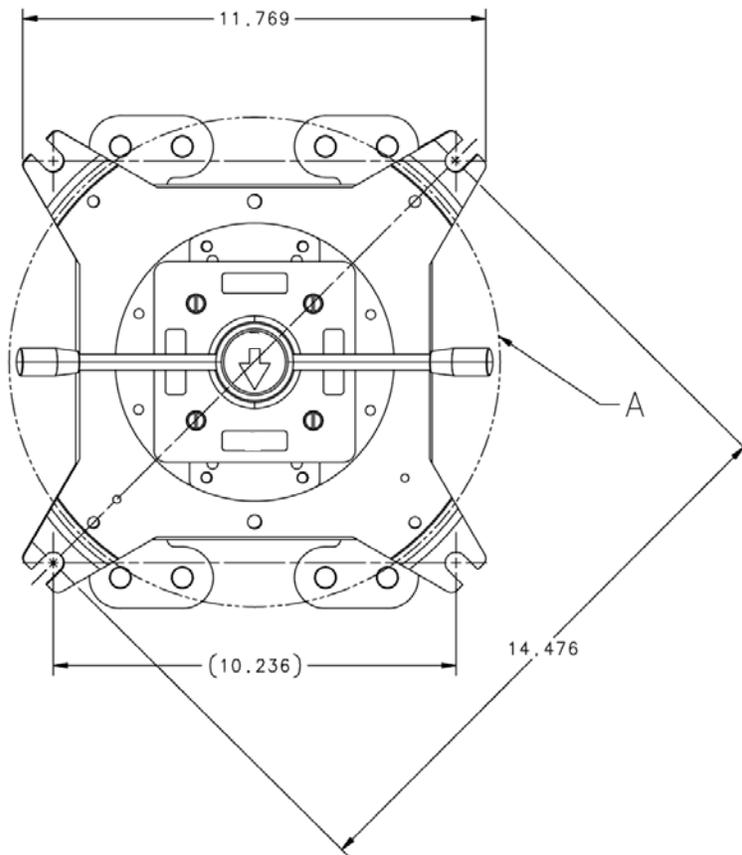


DETAIL SPECIFICATION SHEET

SWITCHES, ROTARY, SNAP ACTION CLASS 80SR FRONT & REAR MOUNTED, SIDE CONNECTED

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

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



NOTES

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

FIGURE 1 Class 80SR Switch Front View

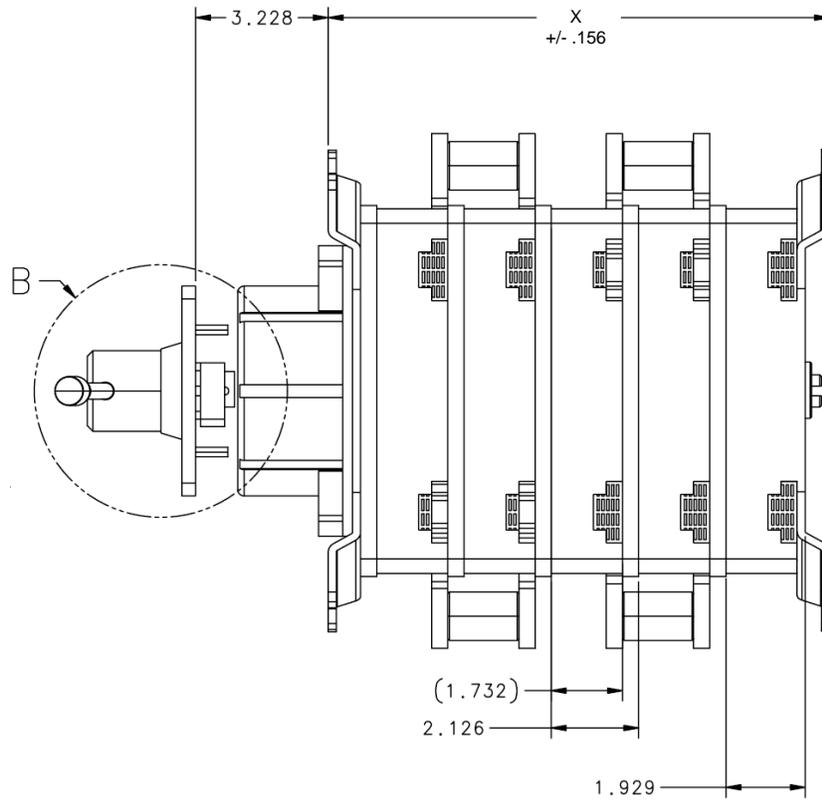


FIGURE 2 Class 80SR Switch Side View

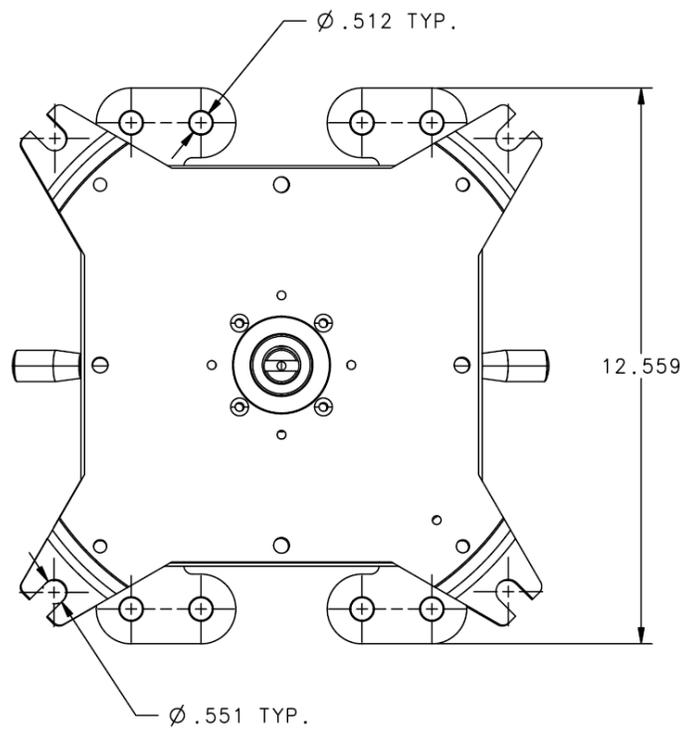


FIGURE 3 Class 80SR Switch Rear View

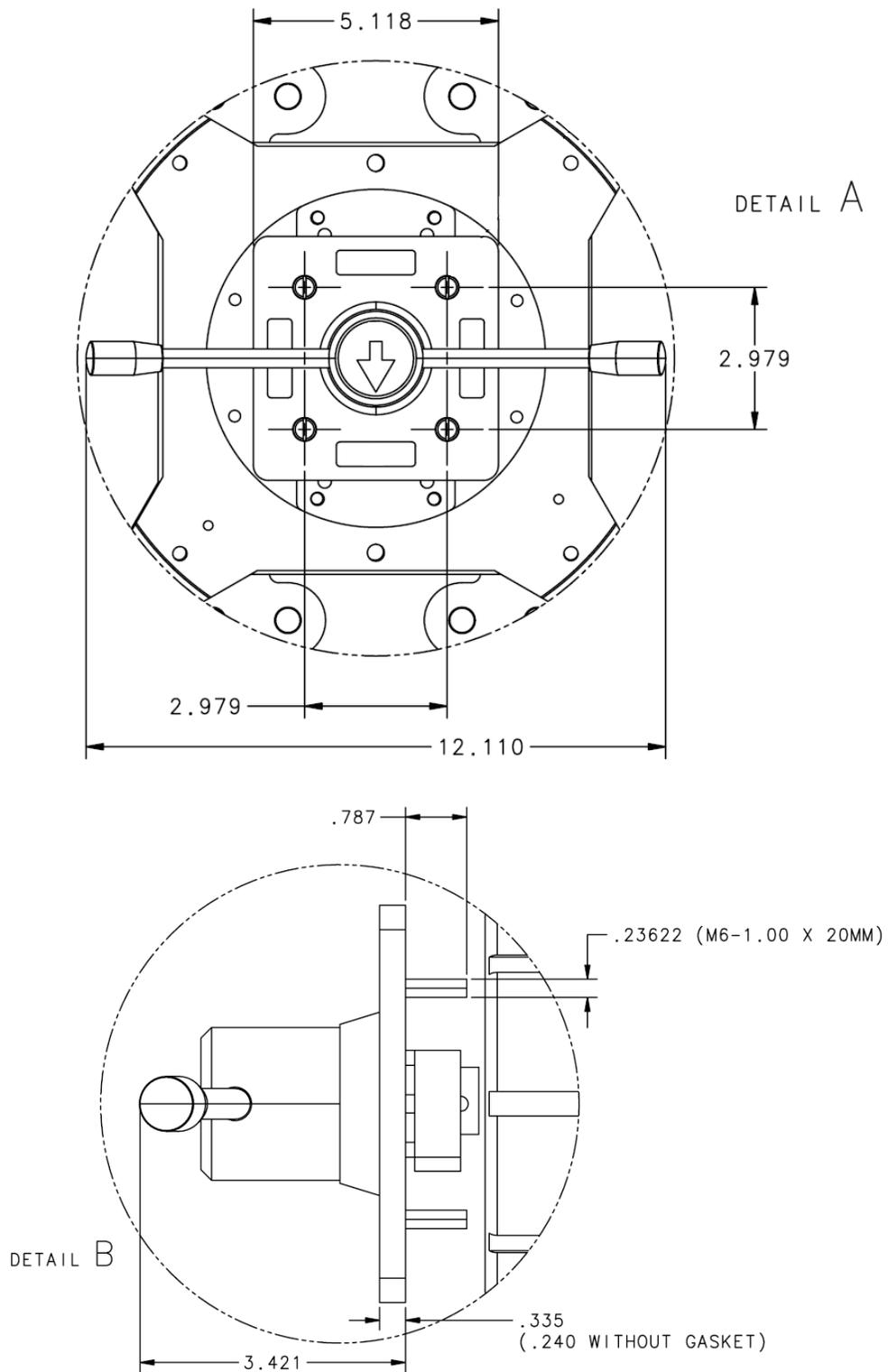


FIGURE 4 Class 80SR Standard Handle

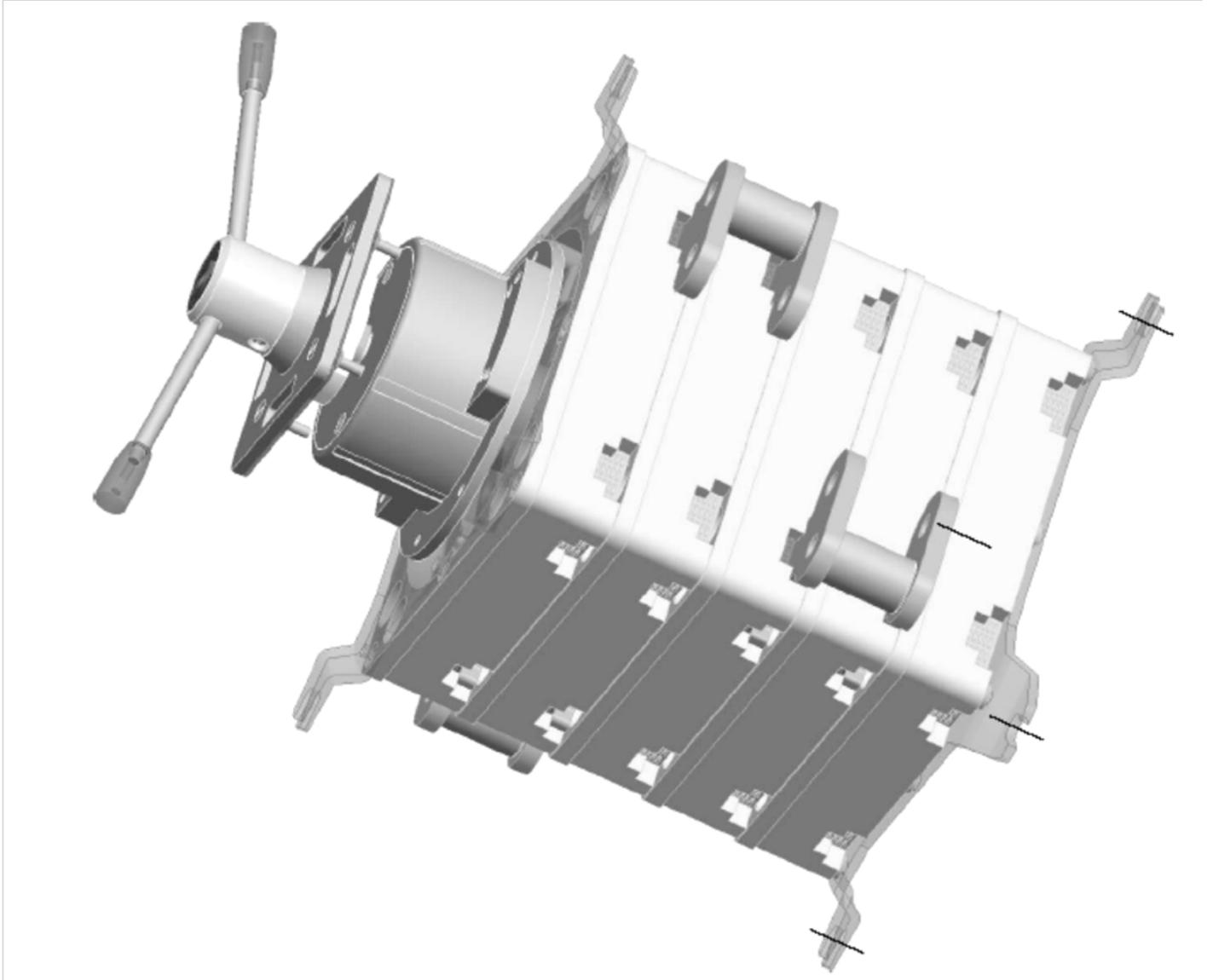


FIGURE 5 Class 80SR Three Dimensional View (Four Contacts)

TABLE I. Type and switching characteristics.

M15291/14 DASH NO. TYPE DESIGNATION	DETAIL REF TORQUE IN-LBS	DIM "X"	HANDLE OR SHAFT POSITION	CIRCUIT AND SPACER CONFIGURATION ROTOR POSITIONS, 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 80SR2A1	FIG 1	10.079	NO OFF												
	80 Ft-Lbs		NO OFF												
-002 80SR3A1	FIG 1	12.205	NO OFF												
	80 Ft-Lbs		NO OFF												
-003 80SR2A1A	FIG 1	10.079	NO OFF												
	80 Ft-Lbs		NO OFF												
-004 80SR3A1A	FIG 1	12.205	NO OFF												
	80 Ft-Lbs		NO OFF												
-005 80SR4F1	FIG 1	14.331	1&2 OFF												
	80 Ft-Lbs		1&2 OFF												
-006 80SR6F1	FIG 1	18.583	1&2 OFF												
	120 Ft-Lbs		1&2 OFF												
-007 80SR2S1	FIG 1	14.331	NO OFF												
	80 Ft-Lbs		NO OFF												
-008 80SR2B1	FIG 1	14.331	NO OFF												
	80 Ft-Lbs		NO OFF												
-009 80SR2S1A	FIG 1	14.331	NO OFF												
	80 Ft-Lbs		NO OFF												
-010 80SR2S1B	FIG 1	18.583	NO OFF												
	120 Ft-Lbs		NO OFF												
-011 80SR2S2	FIG 1	22.835	NO OFF												
	120 Ft-Lbs		NO OFF												
-012 80SR2E1	FIG 1	18.583	NO OFF												
	120 Ft-Lbs		NO OFF												

REQUIREMENTS:

Applicable specification: MIL-DTL-15291

Dimensions and mounting: See figure 1

Switching characteristics: See table I

Angle of throw: 90 degrees

Switching action: Snap action, reciprocating

Transfer time: ≤ 30ms

Electrical and endurance ratings: See table II

Stop strength (applicable to switches with stops): 15 ft-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: 3,500 Vrms

Insulation resistance: 100 megohms minimum

Mounting bolts: (8) ½ inch diameter, length, and headstyle to suit application. Bolts not furnished.

Terminal marking: Terminal markings shown in table I locate terminals as viewed from the front of the switch (handle end). Markings shall be stamped on the switch body adjacent to the terminals.

TABLE II. Electrical and endurance ratings.

Tests	Current (amperes)	Voltage (volts)	Short Circuit Withstand (kA) (t ≤ 0.25sec)	Electrical Operations (number of operations)	Test rate (operations per minute)	De-energized operations (number of operations)
Alternating current (rms) ¹	800	500	100	4000	4	2000
Direct current ²	800	400	100	1000	2	500

1 - Rating based upon one contact per phase.

2 - Rating based upon one contact per polarity.

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

AC 60 or 400 Hz											
Switching Characteristics	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.		
	Amperes	Operations	Amp	Ops	Amp	Ops	Amp	Ops	Amp	Ops	
	800	4000	800	4000	800	4000	800	4000	800	4000	
DC (All ratings based upon two poles [positive and negative] per circuit.)											
All	24 volts			115 volts			440 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.	Ops	Amp.	Ops	Amp.	Ops	Amp.	Ops	
	800	4000	800	4000	800	4000	800	4000	800	1000	1000

Qualification inspection: Qualification inspection shall be performed at a laboratory acceptable to the Government on sample units produced with equipment and procedures normally used in production. Qualification shall consist of the examination and tests specified in table IV.

TABLE IV. Qualification Tests.

Inspection	Requirement per MIL-DTL-15291	Test Method per MIL-DTL-15291	Sample number		
			1	2	3
General Examination	3.5 and 3.7	4.6	1	1	1
Operation	3.6.1	4.7.1	2	2	2
Stop Strength	3.6.1.2	4.7.1.2		3	
Transfer Time	3.6.1.3	4.7.1.3	3	4	3
Salt Spray	3.6.2	4.7.2			4
Vibration Test	3.6.3	4.7.3			5
High-impact Shock	3.6.4	4.7.4			6
Dielectric Withstand	3.6.5	4.7.5	4	5	7
Contact Resistance	3.6.7	4.7.7	5	6	8
AC Endurance	3.6.9	4.7.9.1	6		
DC Endurance	3.6.9	4.7.9.2		7	
Temperature Rise	3.6.8	4.7.8	7		
Insulation Resistance	3.6.10	4.7.10	8	8	9
Operation	3.6.1	4.7.1	9	9	11
Transfer Time	3.6.1.3	4.7.1.3	10	10	12
General Examination	3.5	4.6	11	11	13

Sample:

1. Type 80SR3A1
2. Type 80SR2A1
3. Type 80SR2S2

APPLICATION AND ACQUISITION GUIDE: PIN and type designation cross reference shall be as shown in table V

TABLE V. Application and acquisition guide.

M15291/14 Dash No.	Type Designation	For new or Existing design	For replacement	Circuit Configuration
-001	80SR2A1	X		A (on-off-on-off)
-002	80SR3A1	X		A (on-off-on-off)
-003	80SR2A1A	X		A (on-off-off-off)
-004	80SR3A1A	X		A (on-off-off-off)
-005	80SR4F1	X		F (off-on 1-on 1 & 2-on 2)
-006	80SR6F1	X		F (off-on 1-on 1 & 2-on 2)
-007	80SR2S1	X		S (on-off-off-off)
-008	80SR2B1	X		B (off-on 1-off-on 2)
-009	80SR2S1A	X		S (on-off-off-off)
-010	80SR2S1B	X		S (on-off-off-off)
-011	80SR2S2	X		S (on-off-on-off)
-012	80SR2E1	X		E (off-on 1-on 2-on 3)

Referenced Documents:

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

Custodians:

Navy - SH
DLA - CC

Preparing activity:

DLA - CC

(Project 5930-2013-018)

Review Activities:

Navy - AS

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/>