

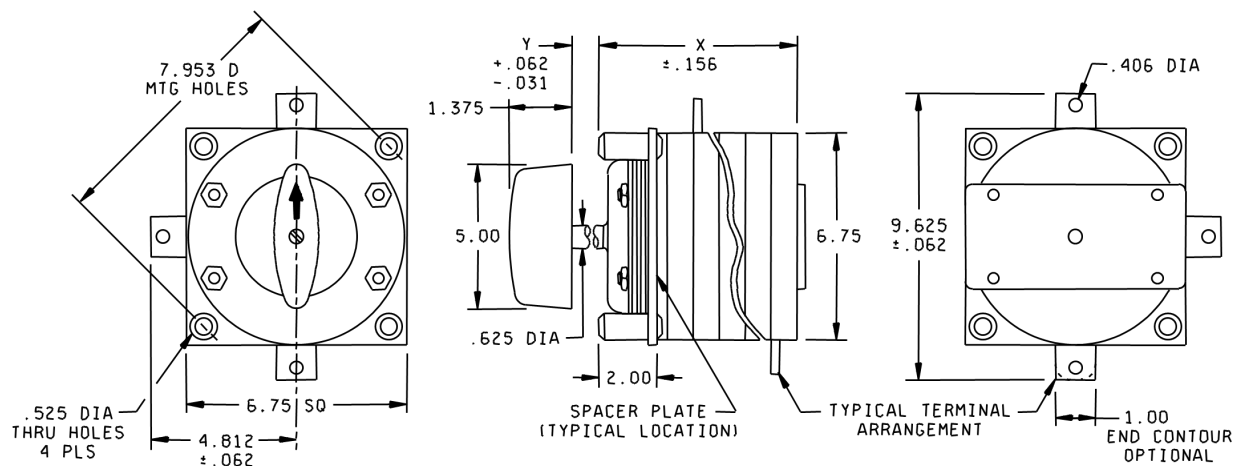
INCH-POUND
MIL-DTL-15291/12D
21 January 2022
SUPERSEDING
MIL-DTL-15291/12C
6 February 2006

DETAIL SPECIFICATION SHEET

SWITCHES, ROTARY, SNAP ACTION CLASS 20SR FRONT 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

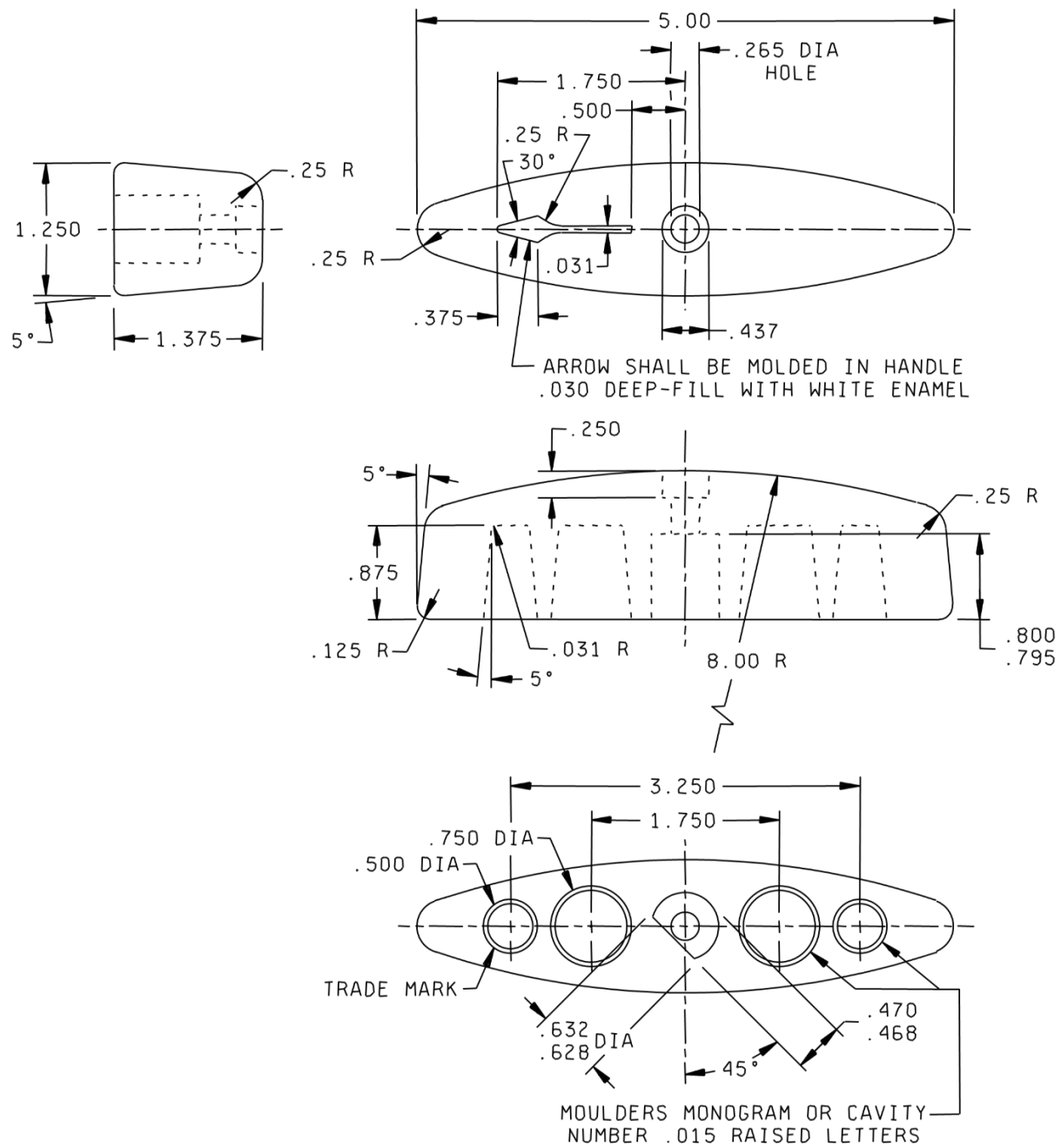
1. Dimensions are in inches.
2. Unless otherwise specified, tolerance is plus or minus 0.015.

FIGURE 1 Class 20SR switch

AMSC N/A
DISTRIBUTION STATEMENT A. Approved for public release. Distribution is unlimited.

FSC 5930





PIN M15291/12-100

FIGURE 2 Handle.

TABLE I. Type and switching characteristics.

M15291/11 DASH NO. TYPE DESIGNATION	DETAIL REF	DIM "X"	HANDLE OR SHAFT POSITION	CIRCUIT AND SPACER CONFIGURATION 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	
-001 20SR2A2	FIG 1	4.812											
	72	.437											
-002 20SR3A2	FIG 1	5.687											
	72	.437											
-003 20SR2B2	FIG 1	6.562											
	72	.437											
-004 20SR3B2	FIG 1	8.312											
	72	.437											
-005 20SR2E2	FIG 1	6.562											
	72	.437											
-006 20SR3E2	FIG 1	8.312											
	72	.437											
-007 20SR4F2	FIG 1	7.437											
	72	.437											
-008 20SR6F2	FIG 1	9.187											
	80	.437											
-009 20SR2S2	FIG 1	4.812											
	72	.312											
-010 20SR3S2	FIG 1	5.687											
	72	.312											

MIL-DTL-15291/12D

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

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-DTL-901](#)

Contact resistance: 1.5 milliohms maximum

Dielectric withstanding voltage: 2,000 Vrms

Insulation resistance: 200 megohms minimum

Mounting bolts: (4) ½ 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)	200	500	6,000	8	4,000
Direct current	200	250	4,000	3	--

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.

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 character- istics	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	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 ¹		Resistive or Lamp load		Inductive load ¹		Resistive or Lamp load		Inductive load ¹	
	Amp.	Operations	Amp.	Operations	Amp.	Operations	Amp.	Operations	Amp.	Operations	Amp.	Operations
All	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 replacement	Circuit Configuration
-001	20SR2A2	X		A (off-on-off-on)
-002	20SR3A2	X		A (off-on-off-on)
-003	20SR2B2	X		B (off-on-1-off-on 2)
-004	20SR3B2	X		B (off-on-1-off-on 2)
-005	20SR2E2	X		E (off-on-1-on 2-on 3)
-006	20SR3E2	X		E (off-on-1-on 2-on 3)
-007	20SR4F2	X		F (off-on 1-on 1 & 2-on 2)
-008	20SR6F2	X		F (off-on 1-on 1 & 2-on 2)
-009	20SR2S2	X		S (on 1-on 2-off-off)
-010	20SR3S2	X		S (on 1-on 2-off-off)

Referenced Documents:

[MIL-DTL-15291](#)

[MIL-DTL-901](#)

[MIL-STD-167-1](#)

Changes from previous issue. The margins of this specification are marked with vertical lines to indicate where changes from the previous issue were made. This was done as a convenience only and the Government assumes no liability whatsoever for any inaccuracies in these notations. Bidders and contractors are cautioned to evaluate the requirements of this document based on the entire content irrespective of the marginal notations and relationship to the previous issue.

Custodians:

Navy - SH

DLA - CC

Preparing activity:

DLA - CC

(Project 5930-2022-021)

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/>.