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EIA-520FAAB

EIA SPECIFICATION

**Detail Specification for Rotary
Switches of Certified Quality
(Low Current Rating) 16 Positions
Maximum**

EIA-520FAAB

DECEMBER 1995

**ELECTRONIC INDUSTRIES ASSOCIATION
ENGINEERING DEPARTMENT**



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(From Standards Proposal No. 3091-B, formulated under the cognizance of EIA P-13.1 Subcommittee on Thumbwheel Switches.)

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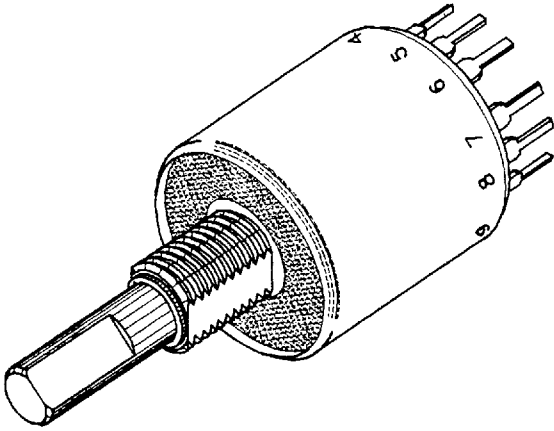
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National Standards Organization ELECTRONIC INDUSTRIES ASSOCIATION 2001 Pennsylvania Avenue N.W. Washington D.C. 20006-1813	DETAIL SPECIFICATION NUMBER E1A 520FAAB	
GENERIC SPECIFICATION NUMBER Electronic Components of Assessed Quality in Accordance with E1A 5200000	BLANK DETAIL SPECIFICATION NUMBER E1A 520FA00	
	PRODUCT DESCRIPTION Rotary switch (low current rating) 16 positions maximum. Central mounting. 15 mm maximum width. 22.5°, 30°, 36°, 45°, 60°, 90° angles of throw.	
	ELECTRICAL CIRCUIT See figure 2	
	TYPICAL CONSTRUCTION Shaft and Panel Seals. Process Sealed terminals.	
INFORMATION ON THE AVAILABILITY OF COMPONENTS QUALIFIED TO THIS SPECIFICATION IS GIVEN IN THE QUALIFIED PRODUCTS LIST		

INTRODUCTION

The complete requirements for the switches described herein shall consist of this detail specification and the current issue of EIA 5200000, "Generic Specification for Special Use Electromechanical Switches of Certified Quality" and EIA 520F000, "Sectional Specification for Rotary Switches of Certified Quality." This detail specification is intended for use with a Supplier Declaration of Conformity provided by the switch manufacturer to the rating level specified by the user/customer with reference to the ordering information in 1.6.

SECTION ONE-GENERAL DATA

1 General

1.1 Scope

The rotary switches of certified quality covered by this detail specification shall:

- a) have an indexing angle of 22.5°, 30°, 36°, 45°, 60°, and 90°.
- b) have maximum switch body dimensions as shown herein.
- c) have actuator and mounting dimensions as shown herein.
- d) have a maximum rated voltage of 115 V_{ac} or 50 V_{dc} (resistive circuit).
- e) have a maximum rated current of 100 mA.
- f) have shaft and panel seals
- g) have process-sealed terminals.

1.2 Dimensional parameters:

See figure 1. Original dimensions are in inches. Configuration is optional within the limits of the specified dimensions.

1.3 Ratings and characteristics:

1.3.1 Electrical ratings:

power	115 V _{ac} , 100 mA resistive, or 50 V _{dc} 100 mA resistive.
logic level	5 V, 10 mA.
low level	30 mV, 10 mA.



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1.3.2 Environmental ratings:

Altitude	not applicable.
Fungus	not applicable
Moisture resistance	applicable
Random vibration	not applicable.
Salt spray	applicable.
Shock	490 m/s, 11 ms, 3 shocks (15 g)
Temperature	-25°C to +85°C
Thermal shock	-25°C to +85°C
Vibration	147 m/s , 10-2000 Hz, 3 h, 12 cycles
Acceleration	not applicable
High/low temperature	-25°C to +85°C

1.3.3 Mechanical characteristics:

Flammability	applicable
Sealing	panel seal
Mechanical endurance with electrical load	10,000 cycles
Immersion in solvents	not applicable
Mass	8.9 grams max.
Operating characteristics	22.5°, 30°, 36°, 45°, 60°, 90° angles of throw, 0.113 Nm maximum rotational torque.
Strength of:	
end stops	0.8 Nm torque minimum
mounting bushing	1.5 Nm torque applied to mounting nut
screw mounting	not applicable
termination	6.7 N tensile strength

