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EIA SPECIFICATION

Detail Specification for Sensitive Switches, Single Break Contacts, Basic Size

EIA-520CAAA-A

MARCH 1992

ELECTRONIC INDUSTRIES ASSOCIATION
ENGINEERING DEPARTMENT



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(From Standards Proposal No. 2233-A formulated under the cognizance of P-13.3 Subcommittee on Sensitive, Pushbutton and Keyboard Switches)

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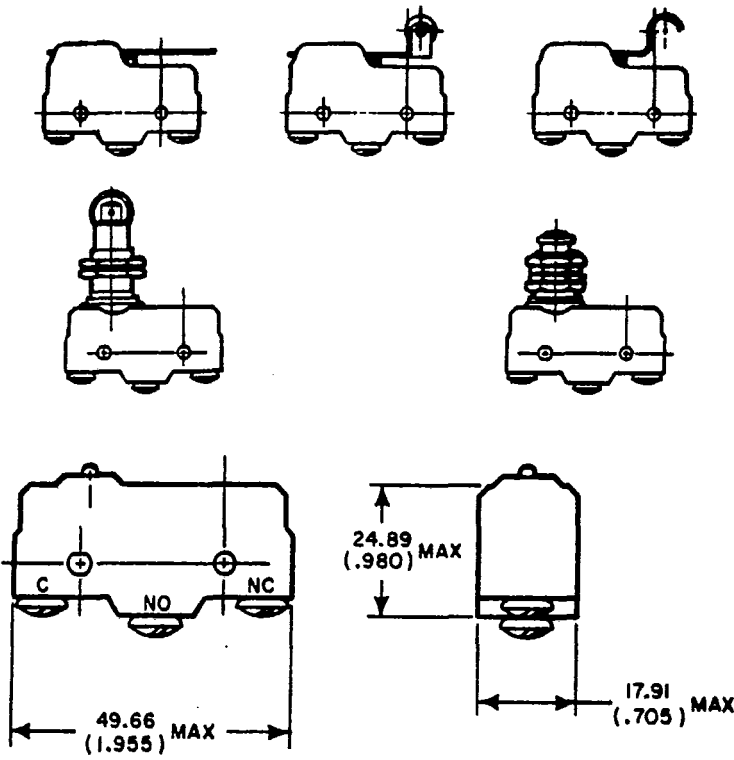
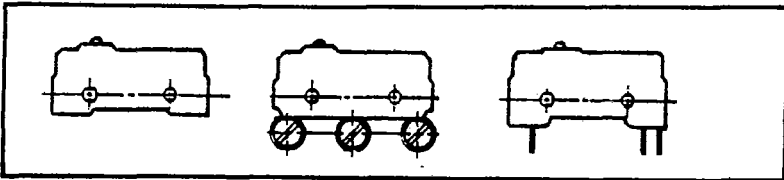
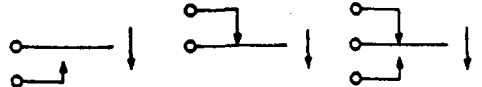
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National Standards Organization Electronic Industries Association 2001 Pennsylvania Avenue N.W. Washington, D.C. 20006	Detail Specification Number EIA-520CAAA-A
Generic Specification Number Electronic components of assessed quality in accordance with EIA-5200000	Blank Detail Specification EIA 520CA00
Outline Drawing - Maximum envelope Dimensions   SEE FIGURES 1 THRU 3 FOR DETAIL DIMENSIONS	Product Description - sensitive switches - single break contacts - basic size - single pole - 15 A max. current rating - 480 Vac Max. voltage rating - 10 types of actuators - 5 types of terminals Electrical Circuit - momentary action Form A: normally open Form B: normally closed Form C: double throw  Form A Form B Form C Typical Construction plastic housing plastic or metal actuator Application/Assessment Level Electrical or electronic equipment

Information on the availability of components qualified to this specification is given in the Qualified Products List

SECTION ONE - GENERAL DATA**1.0 General data****1.1 Dimensional Parameters****1.1.1 Mounting Dimensions**

The mounting dimensions shall be in accordance with Figure 1 and are common to all switches covered by this detail specification. The configuration is optional within the specified dimensions. The original dimensions are in inches.

1.1.2 Actuator Dimensions

The actuator dimensions shall be in accordance with Figure 1 for pin plunger actuators and Figure 2 for other integral actuator styles. The free position dimensions are based upon the switch being oriented such that the switch terminals are on the bottom side of the switch.

1.1.3 Terminal Dimensions

The terminal dimensions shall be in accordance with Figure 3. The dashed lines represent the maximum dimensions within which the terminals must be located. The terminal location within the specified envelope is optional.

1.2 Ratings and Characteristics**1.2.1 Electrical ratings**

Electrical - power	See Table I.
- logic level	Not applicable.
- low level	Not applicable.

TABLE I - ELECTRICAL RATING CODES

Rating Codes	Sea Level Ratings						50,000 feet	
	125 V ac 60 Hz	250 V ac 60 Hz	480 V ac 60 Hz	28 V dc	125 V dc	250 V dc	28 V dc	115 V ac 60 Hz
E	15 A 1/8 hp	15 A 1/4 hp	15 A	---	0.5 A	0.25 A	---	---
F	15 A 1/4 hp	15 A 1/2 hp	15 A	---	0.5 A	0.25 A	---	---
G	15 A 1/3 hp	15 A 1/2 hp	15 A	---	0.5 A	0.25 A	---	---
H	1 A	---	---	1.0 A	---	---	---	---
M	15 A	---	---	2.0 A	---	---	2.0 A	15 A

1.2.2 Environmental ratings

Altitude	50,000 feet
Corrosive gases	Not applicable.
Fluid resistance	Not applicable.
Fungus resistance	Not applicable.
Icing	Not applicable.
Moisture Resistance	Applicable.
Random vibration	Not applicable.
Salt spray	96 hours.
Sand and dust	Not applicable.
Shock	Not applicable.
Temperature	-55°C to +85°C (operating).
Thermal Shock	-55°C to +85°C
Vibration	Not applicable.

1.2.3 Mechanical characteristics

Flammability	Applicable.
Immersion in solvents	Not applicable.
Low temperature operation	Applicable.
Mass	.045 kg (0.1 lb) maximum.
Operating characteristics	See Table V.
Sealing	Not applicable.
Strength of	
- actuator	
Types 1 through 5	4.5 kg (10 lb).
Types 6 through 10	.23 kg (0.5 lb).
- mounting bushing	
Types 1, 2, and 6 through 10	Not applicable.
Types 3, 4 and 5	1.8 N-m (25 lb-in).
- screw mounting	0.8 N-m (7.1 lb-in).
- termination	
Types 1 through 4	4.0 kg (8.8 lb).
Type 5	2.0 kg (4.4 lb).
Solderability	Applicable to solder terminals (Type 3) only.

1.2.4 Electrical characteristics

Actuator grounding	Not applicable.
Altitude voltage proof	300 V rms
Capacitance	Not applicable.
Contact bounce	Not applicable.
Endurance	
- electrical rating code M only	100,000 cycles at either +85°C at 50,000 ft. with no sticks or misses.
- other electrical rating codes	100,000 cycles at atmospheric conditions with no sticks or misses.
- logic level	Not applicable.
- low level	Not applicable.
- mechanical	1,000,000 cycles.
Insulation resistance	1,000 megohms.

