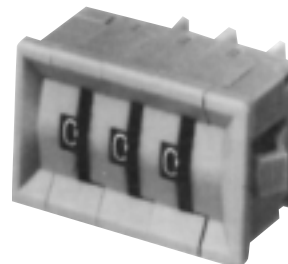


Thumbwheel Switch

A7MA

Economical and Reliable Thumbwheel Switch in Ultra-Small Size

- Gold contacts are employed to provide maximum contact reliability
- Printed circuit board employs epoxy paper as the base material, with gold plating over nickel plate for circuit pattern
- Switch units can be assembled simply by fitting the integral hook coupler of each unit into the mating unit, thus eliminating the need of nuts and bolts for assembly



Ordering Information

■ SWITCH UNITS

Output Code	Part Number			
	Front mounting solder terminals		Front mounting PC board terminals	
	Light gray case	Black case	Light gray case	Black case
06 (binary code)	A7MA-206	A7MA-206-1	A7MA-206-P2	A7MA-206-P2-1
(binary code w/+, – display)	A7MA-206-PM	A7MA-206-PM-1	A7MA-206-P2-PM	A7MA-206-P2-PM-1
07 (binary code w/diode provision)	A7MA-207	A7MA-207-1	A7MA-207-P2	A7MA-207-P2-1

Output Code	Back mounting solder terminals		Back mounting PC board terminals	
	Light gray case	Black case	Light gray case	Black case
06 (binary code)	–	A7MA-106	–	A7MA-106-P2
(binary code w/+, – display)	–	A7MA-106-PM	–	A7MA-106-P2-PM
07 (binary code w/diode provision)	–	A7MA-107	–	A7MA-107-P2

■ ACCESSORIES

Accessory	Part Number			
	For front mounting type switch assembly		For back mounting type switch assembly	
	Light gray	Black	Light gray	Black
End Cap	A7M-2M	A7M-2M-1	–	A7M-1M
Spacer	A7M-2P□	A7M-2P□-1	–	A7M-1P□

- Note: 1. When placing your order, please specify the model numbers and quantities of required switch units, end caps, and spacers, respectively. (Note that switch units and accessories are not factory-assembled for shipment.)
2. Switch case, end cap, and spacer are made of polyacetal resin.
3. One of the following alphabetic codes must be filled into the boxed part of the model number to specify a legend to be hot stamped on the required spacer.
4. End caps come as a set -- left and right.

Code	Legend	Code	Legend
A	Hot stamp not required	H	cm
B	SEC	J	m
C	MIN	K	°C
D	H	L	PCS
E	g	Q	x10 SEC
F	kg	T	0
G	mm		

Characteristics

Switching capacity		1 mA to 0.1 A 5 to 28 VDC (resistive load)
Carry current		1 A max.
Contact resistance		200 mΩ max.
Insulation resistance		10 MΩ min. (at 500 VDC) between nonconnected terminals 1,000 MΩ min. (at 500 VDC) between each terminal and noncurrent-carrying part
Dielectric strength		200 VAC, 50/60 Hz for 1 minute between nonconnected terminals 1,000 VAC, 50/60 Hz for 1 minute between each terminal and noncurrent-carrying part
Operating force		300 g max.
Vibration		10 to 55 Hz, 1.5 mm double amplitude
Shock		200 m/s ² (approx. 20 G)
Ambient temperature	Operating	-10° to 65°C
	Storage	-20° to 80°C
Humidity		85% RH max. (at 40°C)
Service life	Mechanical	30,000 operations (steps) min.
	Electrical	20,000 operations (steps) min.
Weight (per unit)		Approx. 1.1 g to 1.2 g

Note: Data shown are of initial value.

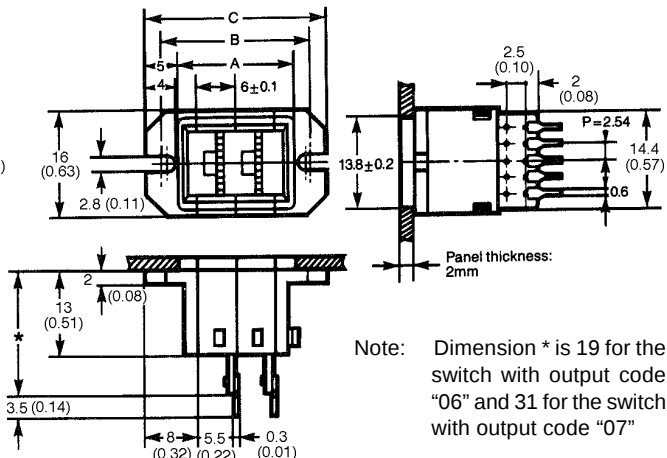
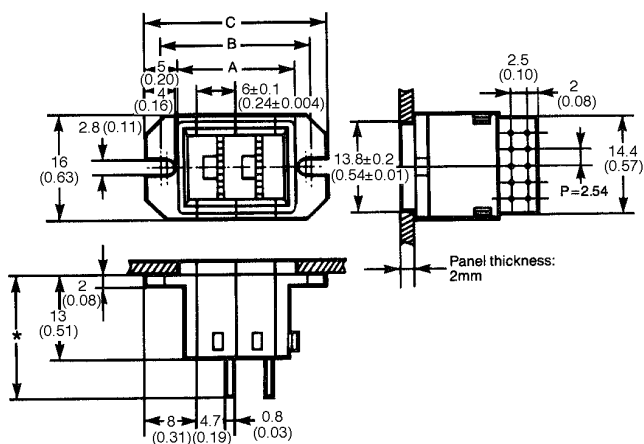
Dimensions

Unit: mm (inch)

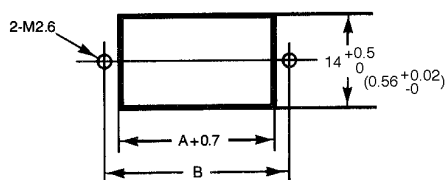
SWITCH UNITS

A7MA-1□□

A7MA-1□□P2



Panel cutout

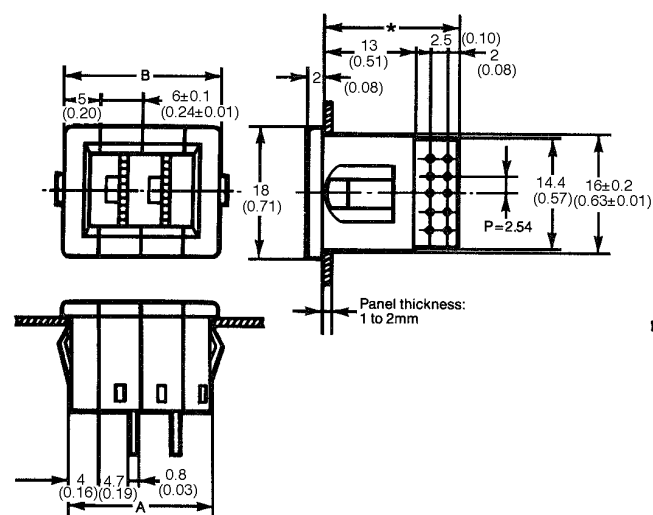


No. of units (n)	A (6n + 6)	B (6n + 11)	C (6n + 16)
1	12 (0.47)	17 (0.67)	22 (0.87)
2	18 (0.71)	23 (0.91)	28 (1.10)
3	24 (0.94)	29 (1.14)	34 (1.34)
4	30 (1.18)	35 (1.38)	40 (1.57)
5	36 ± 0.8 (1.42±0.03)	41 (1.61)	46 ± 0.8 (1.81±0.03)
6	42 ± 0.8 (1.65±0.03)	47 (1.85)	52 ± 0.8 (2.05±0.03)
7	48 ± 0.8 (1.89±0.03)	53 (2.09)	58 ± 0.8 (2.28±0.03)
8	54 ± 0.8 (2.13±0.03)	59 (2.32)	64 ± 0.8 (2.52±0.03)
9	60 ± 0.8 (2.36±0.03)	65 (2.56)	70 ± 0.8 (2.76±0.03)
10	66 ± 0.8 (2.60±0.03)	71 (2.80)	76 ± 0.8 (3.00±0.03)

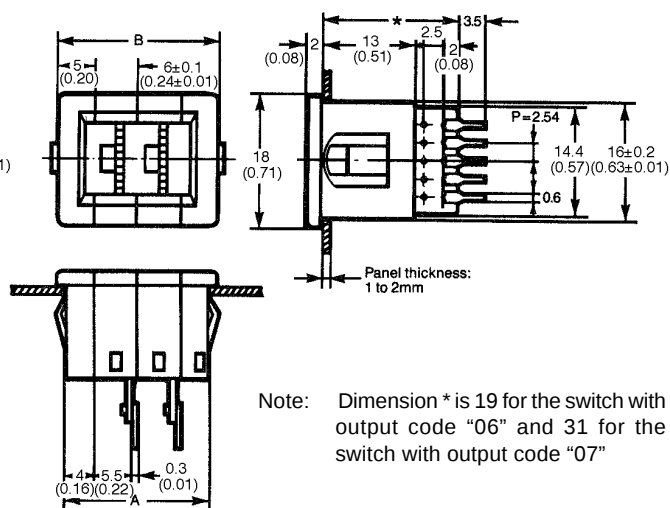
Note: 1. Unless otherwise specified, a tolerance of ± 0.4 mm applies to all dimensions.

2. Each model number applies to a single switch unit and not to the switch assembly as shown in the drawings.

A7MA-2□□(-1)

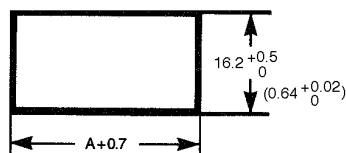


A7MA-2□□-P2(-1)



Note: Dimension * is 19 for the switch with output code "06" and 31 for the switch with output code "07"

Panel cutout



No. of units (n)	A (6n + 8)	B (6n + 10)
1	14 (0.55)	16 (0.63)
2	20 (0.79)	22 (0.87)
3	26 (1.02)	28 (1.10)
4	32 (1.26)	34 (1.34)
5	38 (1.50)	40 (1.57)
6	44 (1.73)	46 (1.81)
7	50 (1.97)	52 (2.05)
8	56 (2.20)	58 (2.28)
9	62 (2.44)	64 (2.52)
10	68 (2.68)	70 (2.76)

Note: 1. Unless otherwise specified, a tolerance of ± 0.4 mm applies to all dimensions.

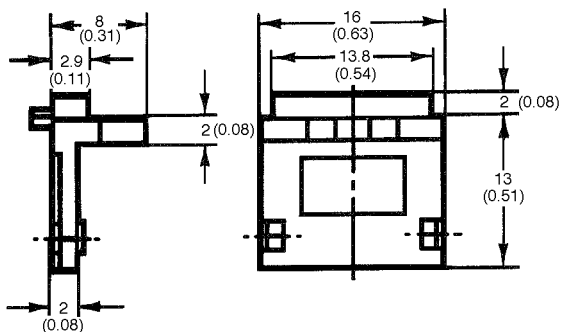
2. Each model number applies to a single switch unit and not to the switch assembly as shown in the drawings.

Unit: mm (inch)

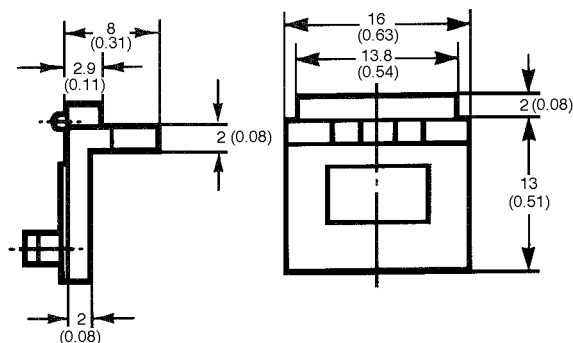
■ END CAPS

A7M-1M

[right]

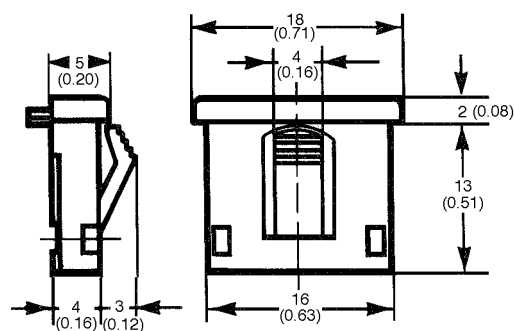


[left]

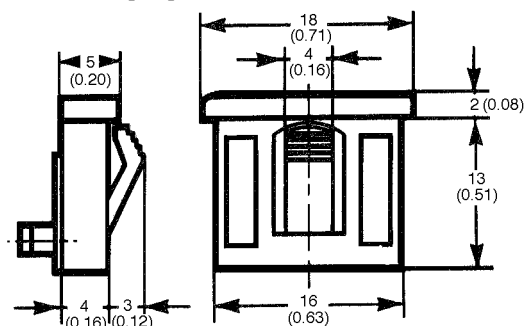


A7M-2M(-1)

[right]



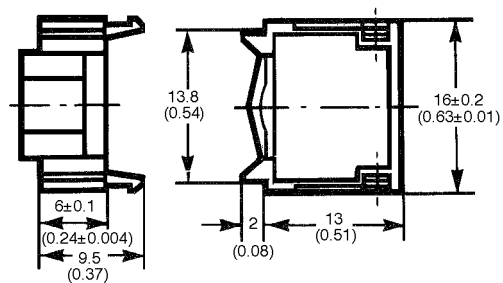
[left]



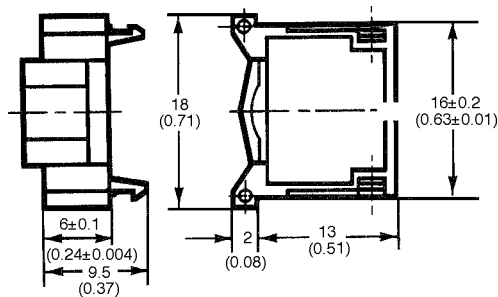
Note: End caps are attached to each end of the switch assembly and used to secure the switch assembly to a mounting panel.

■ SPACERS

A7M-1P□

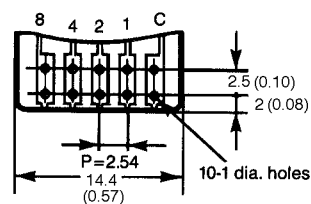


A7M-2P□(-1)

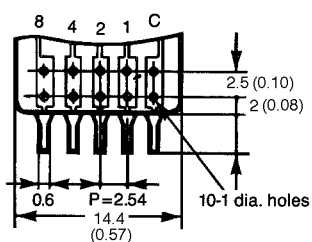


■ TERMINALS

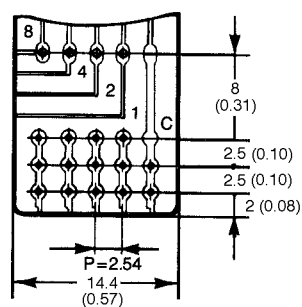
A7MA-□06



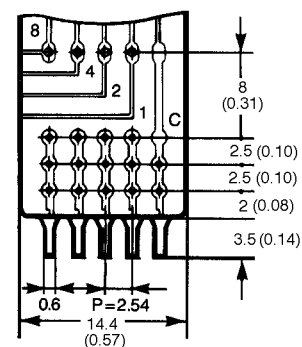
A7MA-□06-P2



A7MA-□07



A7MA-□07-P2



Hints on Correct Use

Refer to HINTS ON CORRECT USE under the General Information section.

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