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With the principle of "Quality Parts, Customers Priority, Honest Operation, and Considerate Service", our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip, ALPS, ROHM, Xilinx, Pulse, ON, Everlight and Freescale. Main products comprise IC, Modules, Potentiometer, IC Socket, Relay, Connector. Our parts cover such applications as commercial, industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



## Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China









## 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**

	Part Number			
	Front mounting solder terminals		Front mounting PC board terminals	
Output Code	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

	Back mounting solder terminals		Back mounting PC board terminals	
Output Code	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**

Part Number				
	For front mounting type switch assembly		For back mounting type switch assembly	
Accessory	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.
- 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	
А	Hot stamp not required	Н	cm	
В	SEC	J	m	
С	MIN	K	°C	
D	Н	L	PCS	
E	g	Q	x10 SEC	
F	kg	_	0	
G	mm	ı	0	

## Characteristics \_

Switching capacity	<u> </u>	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 M $\Omega$ min. (at 500 VDC) between nonconnected terminals 1,000 M $\Omega$ 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/s² (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	

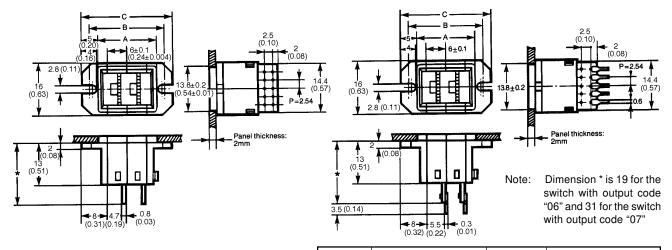
Note: Data shown are of initial value.

### Dimensions \_\_\_\_\_

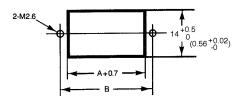
Unit: mm (inch)

#### **■ SWITCH UNITS**





#### Panel cutout



No. of	Α	В	С
units (n)	(6n + 6)	(6n + 11)	(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	$36 \pm 0.8 \; (1.42 \pm 0.03)$	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  $\pm$  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.

64 (2.52)

70 (2.76)

62 (2.44)

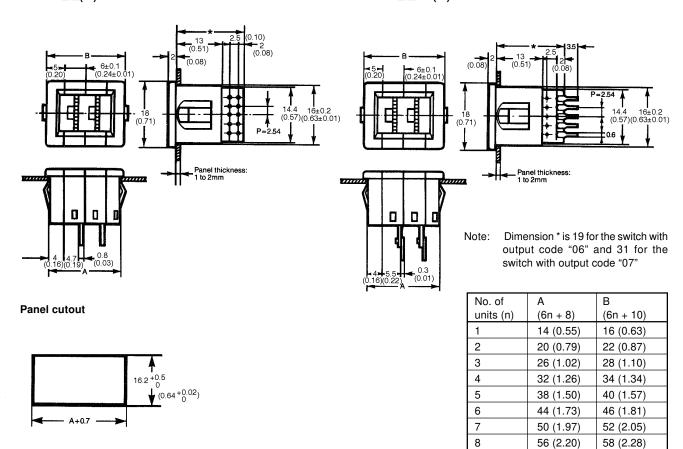
68 (2.68)



#### A7MA-2□ □-P2(-1)

9

10

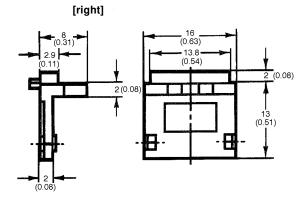


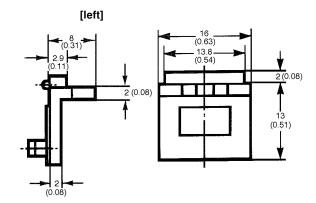
- Note: 1. Unless otherwise specified, a tolerance of  $\pm$  0.4 mm applies to all dimensions.
  - 2. Each model number applies to a single switch unit and not to the switch assembly as shown in the drawings.

Unit: mm (inch)

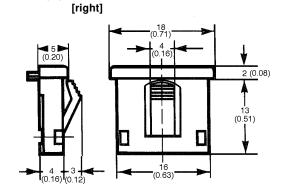
#### **■ END CAPS**

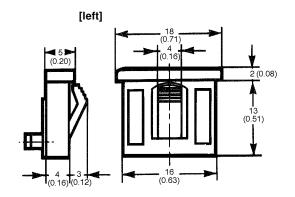
#### A7M-1M





A7M-2M(-1)



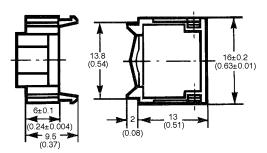


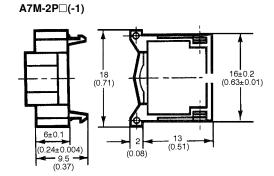
Note: End caps are attached to each end of the switch assembly and used to secure the switch assembly to a mounting panel.

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#### **■ SPACERS**

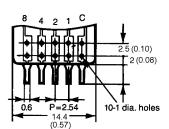






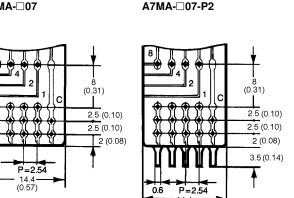
#### **■ TERMINALS**

**A7MA-**□06



A7MA-□06-P2

**A7MA-**□07



Hints on Correct Use

2.5 (0.10)

10-1 dia. holes

2 (0.08)

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



**OMRON ELECTRONICS, INC.** One East Commerce Drive Schaumburg, IL 60173 1-800-55-OMRON

**OMRON CANADA, INC.** 

885 Milner Avenue Scarborough, Ontario M1B 5V8 416-286-6465