

### Thumbwheel Switch

A7BS

# Reliable Thumbwheel with Easy-to-Mount Assembly

- Dustproof construction ensures highly reliable performance at low voltage and very small current even under adverse environmental conditions
- Plus (+) and minus (–) pushbuttons for positive forward and reverse rotation of each digital wheel



### Ordering Information\_\_\_\_\_

#### **■ SWITCH UNITS**

	Part number			
	Front mounting solder terminals			
	Stopper pin provided		Stopper pin not provided	
Output Code	Light gray case	Black case	Light gray case	Black case
03 (decimal code)	_	_	A7BS-203	A7BS-203-1
06 (binary code)	A7BS-206-S	A7BS-206-S-1	A7BS-206	A7BS-206-1
(binary code w/+, - display)	-	_	A7BS-206-PM	A7BS-206-PM-1
07 (binary code w/diode provision)	A7BS-207-S	A7BS-207-S-1	A7BS-207	A7BS-207-1
19 (decimal code w/component adding provision)	_	_	A7BS-219	A7BS-219-1
54 (binary code hexadecimal)	-	_	A7BS-254	A7BS-254-1
55 (binary code hexadecimal, w/component adding provision)	_	_	A7BS-255	A7BS-255-1

#### **■** ACCESSORIES

		Part number		
			For front mounting type switch assembly terminals	
Accessory		Light gray	Black	
End Cap		A7B-M	A7B-M-1	
Spacer		A7B-P□	A7B-P□-1	
Connector	Solder terminal	A7B-C	A7B-C	
	PC terminal	A7B-CP	A7B-CP	

- 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. Type with a suffix -S in their type number are provided with two stopper pins (Type A7BS-S: used in pairs) as standard accessories.
  - 3. Switch case, end cap, and spacer are made of polyacetal resin; however, the window plate is polycarbonate resin.
  - 4. 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.
  - 5. End caps come as a set -- left and right.

Code	Legend	Code	Legend	Code	Legend
Α	Hot stamp	E	g	K	°C
	not required	F	kg	L	PCS
В	SEC	G	mm	Q	x 10 SEC
С	MIN	Н	cm	+	
D	Н	J	m	ı	U

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# Specifications \_\_\_\_\_

#### **■ CHARACTERISTICS**

Switching capacity		1 mA to 0.1 A, 50 VAC/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		600 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		550 g max.	
Vibration		10 to 55 Hz, 1.5 mm double amplitude	
Shock		500 m/s <sup>2</sup> (approx. 50 G)	
Ambient temperature	Operating	-10° to 65°C	
	Storage	-20° to 80°C	
Humidity		45% to 85% RH max.	
Service life	Mechanical	100,000 operations (steps) min.	
	Electrical	50,000 operations (steps) min.	
Weight (per unit)		Approx. 4.1 g	

Note: Data shown are of initial value.

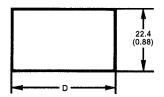
Dimensions \_\_\_\_\_

Unit: mm (inch)

■ SWITCH UNITS A7BS-206(-1) A7BS-207(-1)

A7BS-20□-S(-1)

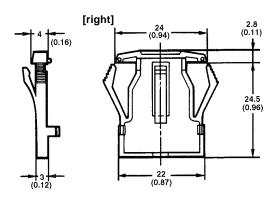
#### **■ PANEL CUTOUT**

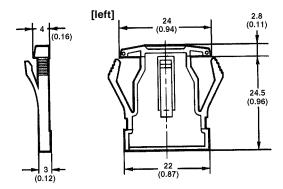


No. of units (n)	A (8n + 8)	B (8n + 6)	D
1	16 (0.63)	14 (0.55)	14.4 (0.57)
2	24 (0.94)	22 (0.87)	22.4 (0.88)
3	32 (1.26)	30 (1.18)	30.4 (1.20)
4	40 (1.57)	38 (1.50)	38.4 (1.51)
5	$48 \pm 0.8 \ (1.89 \pm 0.03)$	$46 \pm 0.8 \; (1.81 \pm 0.03)$	46.8 (1.84)
6	$56 \pm 0.8 \ (2.20 \pm 0.03)$	54 ± 0.8 (2.13 ± 0.03)	54.8 (2.16)
7	$64 \pm 0.8 \ (2.52 \pm 0.03)$	$62 \pm 0.8 \; (2.44 \pm 0.03)$	62.8 (2.47)
8	$72 \pm 0.8 \ (2.83 \pm 0.03)$	$70 \pm 0.8 \; (2.76 \pm 0.03)$	70.8 (2.79)
9	$80 \pm 0.8 \; (3.15 \pm 0.03)$	$78 \pm 0.8 \; (3.07 \pm 0.03)$	78.8 (3.10)
10	$88 \pm 0.8 \; (3.46 \pm 0.03)$	$86 \pm 0.8 \ (3.39 \pm 0.03)$	86.8 (3.42)

- 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.

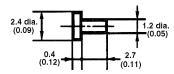
#### ■ END CAPS A7B-M(-1)





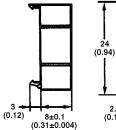
Note: End caps are attached to each end of the switch assembly and used to secure the switch assembly to a mounting panel.

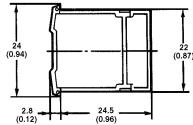
### ■ STOPPER PINS A7BS-S



Note: Types with Suffix -S in their type numbers are provided with two stopper pins as standard accessories.

#### ■ SPACERS A7B-P□(-1)



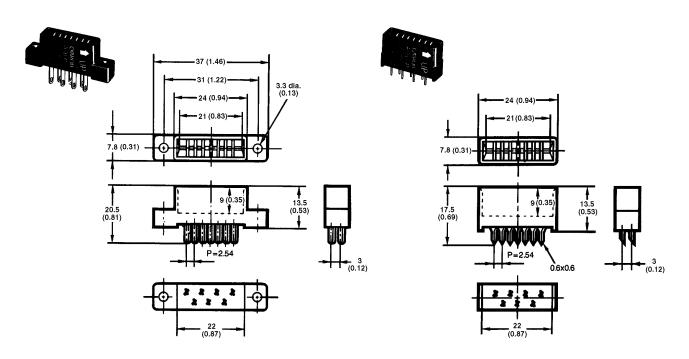


Unit: mm (inch)

#### **■** CONNECTORS

A7B-C

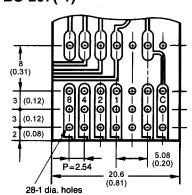
A7B-CP



#### **■ TERMINALS**

A7BS-206(-1)

A7BS-207(-1)



Hints on Correct Use

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

NOTE: DIMENSIONS ARE SHOWN IN MILLIMETERS. To convert millimeters to inches divide by 25.4.

# OMRON

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