

Thumbwheel Switch

A7DP/BL

Reliable Thumbwheel Switch with Dustproof Construction and Easy Front Mounting

- Pen-push switches are designed especially for use in portable equipment
- Locking switches cut down operating errors in control panels
- Internal contacts boost reliability



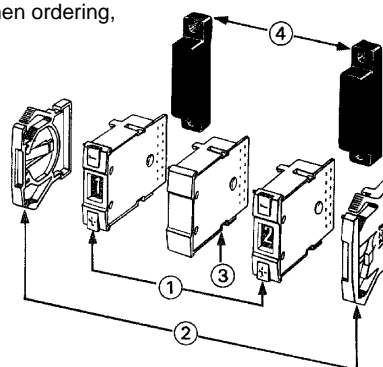
Ordering Information

Note: A7DP and A7BL switch units can be ordered with limited setting ranges. When ordering, include the range in the model number as shown in the following examples:

A7DP-206-S06 (Light gray A7DP with a range of 0 to 6)

A7DP-206-S18-1 (Black A7DP with a range of 1 to 8)

1. Switch units
2. End caps
3. Spacer
4. Connectors



SWITCH UNITS

Output code	Type	Part Number			
		PCB terminal		Solder terminal	
		Light gray case	Black case	Light gray case	Black case
06 (binary code)	Pen-push	A7DP-206	A7DP-206-1	—	—
06 (binary code)	Locking	—	—	A7BL-206	A7BL-206-1
07 (binary code w/diode provision)	Locking	—	—	A7BL-207	A7BL-207-1

Note: Switch units, end caps, spacers, and connectors must be ordered separately and are not factory-assembled for shipment.

ACCESSORIES

Accessory		Part Number			
		For A7DP		For A7BL	
		Light gray	Black	Light gray	Black
End cap		A7D-2M	A7D-2M-1	A7B-M	A7B-M-1
Spacer		A7D-2PA	A7D-2PA-1	A7B-PA	A7B-PA-1
Connector	Solder terminal	—	—	A7B-C	A7B-C
	PCB 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. End caps come as a set, left and right.

To order spacers marked with measurement units or symbols, select the unit or symbol from the table below and put its code letter in place of the final letter A in the model number.

Example: A7D-2PK (light gray spacer with °C mark for A7DP)

Code letter	A	B	C	D	E	F	G	H	J	K	L	Q	T	U
Marking	Blank	SEC	MIN	H	g	kg	mm	cm	m	°C	PCS	x10 SEC	0	•

Characteristics

	A7DP	A7BL
Switching capacity (resistive load)	1 mA to 0.1 A, 5 to 30 VDC	50 VAC/28 VDC, 1 mA to 0.1A
Carry current	100 mA	1 A max.
Contact resistance	200 mΩ max.	
Insulation resistance	10 MΩ min. (at 250 VDC) between nonconnected terminals 100 MΩ min. (at 500 VDC) between each terminal and noncurrent carrying part	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	250 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	600 VAC, 50/60 Hz for 1 minute between nonconnected terminals
Operating force	350 g max.	550 g max.
Vibration resistance	10 to 55 Hz, 1.5 mm double amplitude	
Shock resistance	500 m/s ² (approx. 50 G) min.	
Ambient temperature	-10° to 70°C (no condensation)	-10° to 65°C (no condensation)
Storage temperature	-20° to 80°C	
Humidity	35% to 85%	45% to 85%
Service life	Mechanical 30,000 steps min. Electrical 20,000 steps min.	100,000 steps min. 50,000 steps min.
Weight (per unit)	Approx. 1.2 g	Approx. 4.1 g

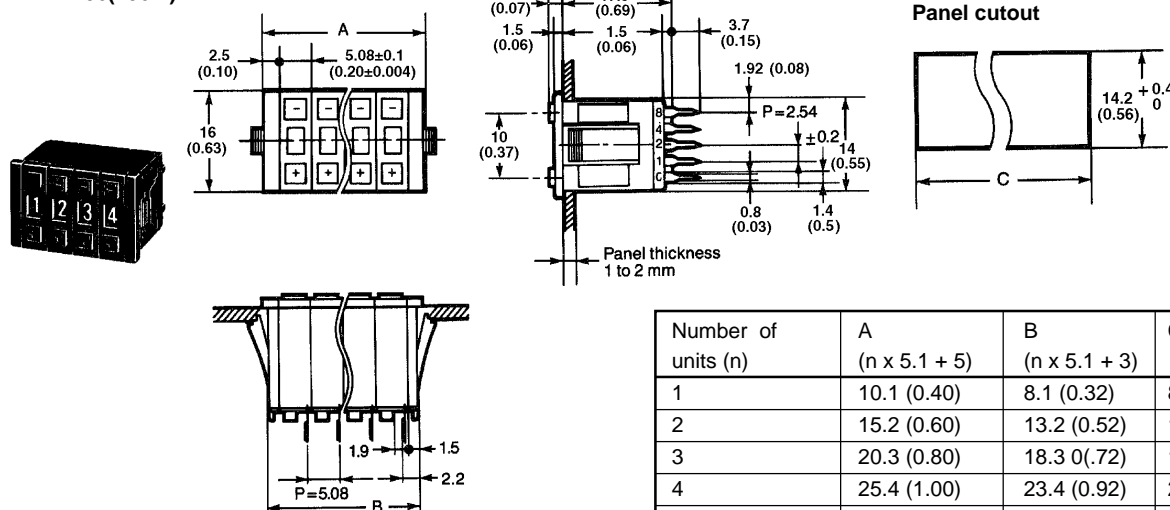
Note: Data shown are of initial value

Dimensions

Unit: mm (inch)

■ PEN-PUSH SWITCHES

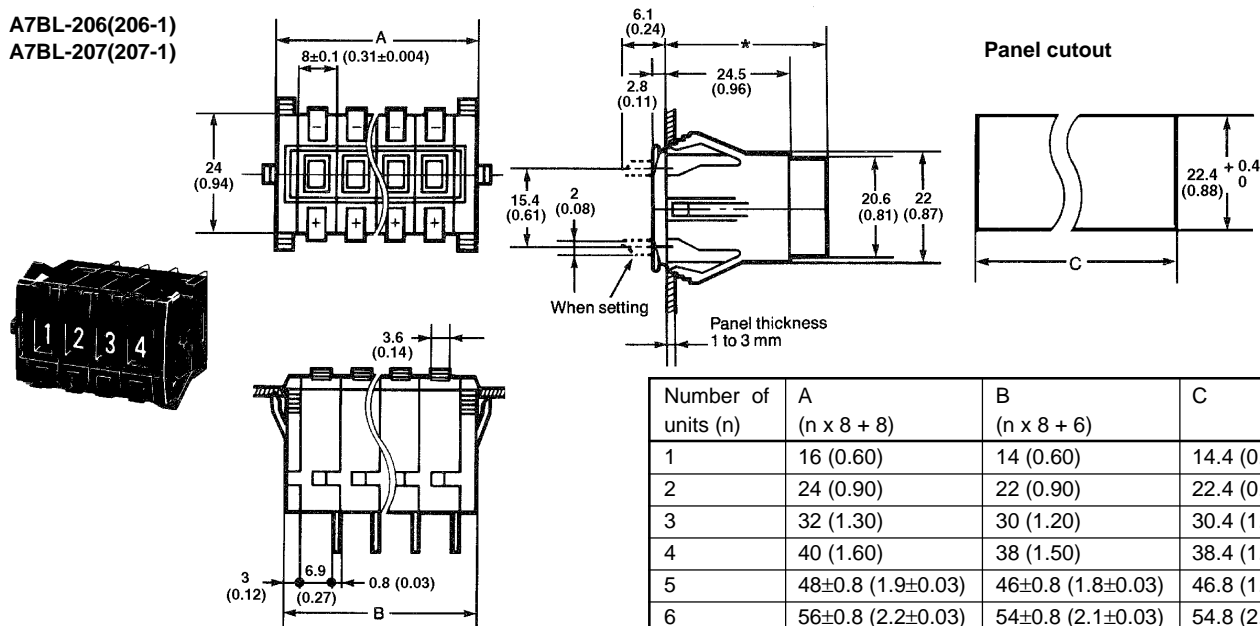
A7DP-206(206-1)



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.
 3. Common terminal "C" is at the bottom when the switch is viewed from the front.
 4. The asterisk "*" indicates the distance to the terminal position.

LOCKING SWITCHES

A7BL-206(206-1)
A7BL-207(207-1)

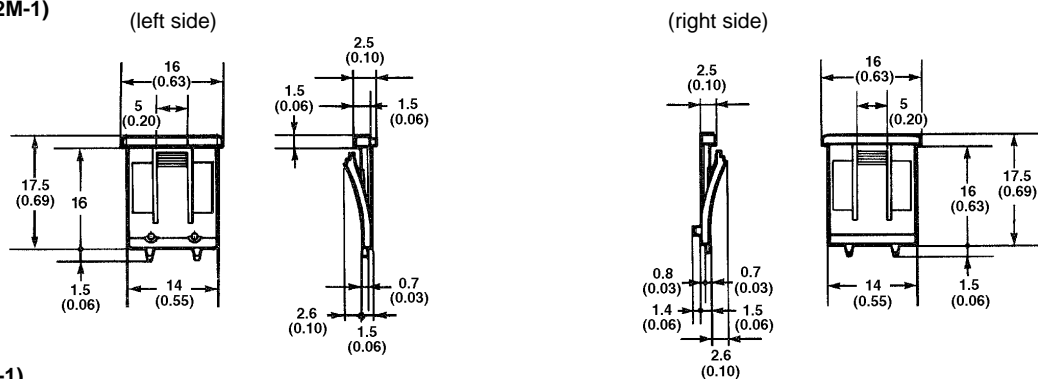


Number of units (n)	A (n x 8 + 8)	B (n x 8 + 6)	C
1	16 (0.60)	14 (0.60)	14.4 (0.57)
2	24 (0.90)	22 (0.90)	22.4 (0.88)
3	32 (1.30)	30 (1.20)	30.4 (1.20)
4	40 (1.60)	38 (1.50)	38.4 (1.50)
5	48±0.8 (1.9±0.03)	46±0.8 (1.8±0.03)	46.8 (1.80)
6	56±0.8 (2.2±0.03)	54±0.8 (2.1±0.03)	54.8 (2.20)
7	64±0.8 (2.5±0.03)	62±0.8 (2.4±0.03)	62.8 (2.50)
8	72±0.8 (2.8±0.03)	70±0.8 (2.7±0.03)	70.8 (2.80)
9	80±0.8 (3.1±0.03)	78±0.8 (3.0±0.03)	78.8 (3.10)
10	88±0.8 (3.5±0.03)	86±0.8 (3.4±0.03)	86.8 (3.40)

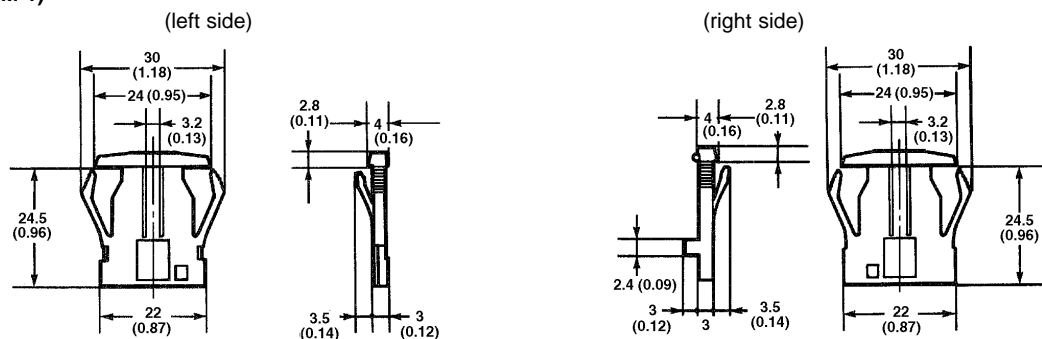
- Note: 1. Unless otherwise specified, a tolerance of ± 0.4 mm applies to all dimensions.
 2. Each model number applies to a single switch unit and not to the switch assembly as shown in the drawings.
 3. Common terminal "C" is at the bottom when the switch is viewed from the front.
 4. Model A7BL: The dimension indicated by the asterisk "*" is 32.5 mm for a switch unit with an output code of 06 and 43.5 mm for one with an output of 07.

END CAPS

A7D-2M(-2M-1)



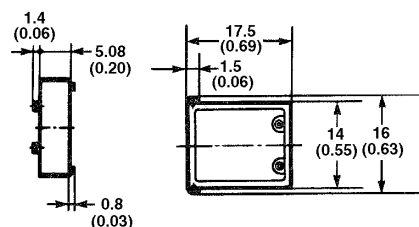
A7B-M(-M-1)



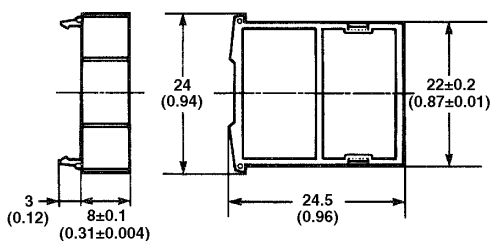
Note: Unless otherwise specified, a tolerance of ± 0.4 mm applies to all dimensions

SPACERS

A7D-2PA(-2PA-1)

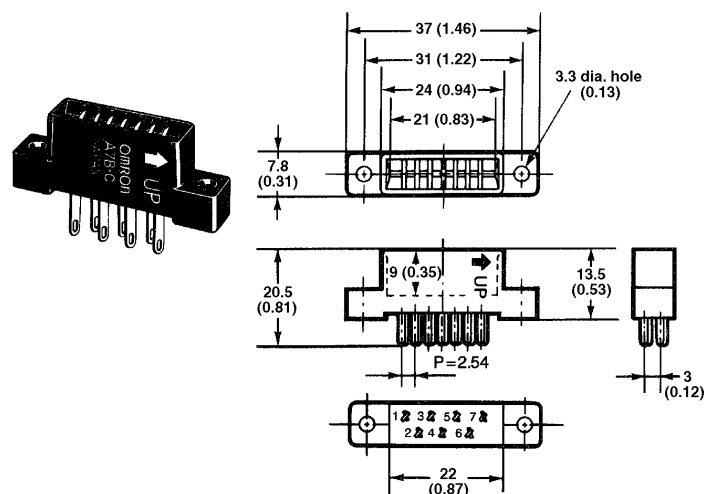


A7B-PA(-PA-1)

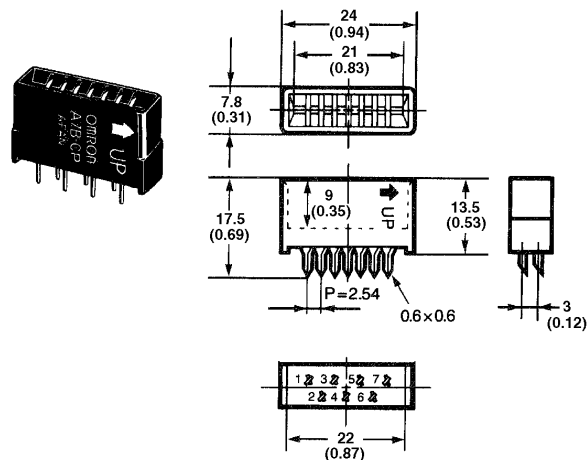


CONNECTORS

A7B-C (for solder terminals)



A7B-C (for PCB terminals)



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

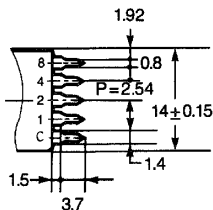
TERMINALS

Type

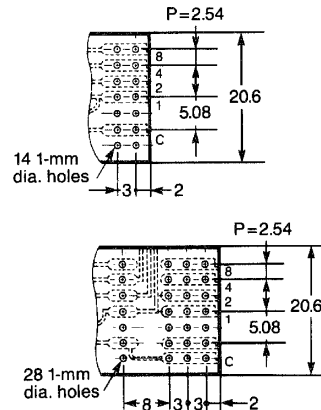
Pen-push
A7DP
PCB terminals

Locking
A7BL
Solder terminals

Output code 06



Output code 07



Hints on Correct Use

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



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