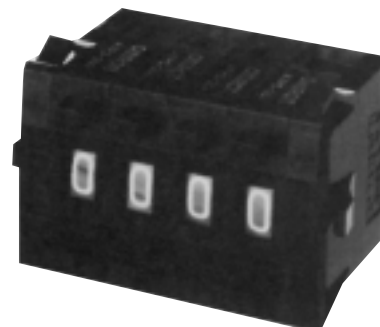


## Thumbwheel Switch

## A7P

### Easy-to-Assemble Thumbwheel Switch with Forward and Reverse Rotation

- 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
- Switch units can be assembled simply by fitting the integral hook coupler of each unit into the mating unit, thus eliminating need of nuts and bolts for assembly



### Ordering Information

#### ■ SWITCH UNITS

Output Code	Part Number			
	High-grade front mounting solder terminals		Popular front mounting solder terminals	
	Light gray case	Black case	Light gray case	Black case
03 (decimal code)	<b>A7PH-203</b>	<b>A7PH-203-1</b>	<b>A7PS-203</b>	<b>A7PS-203-1</b>
06 (binary code) (binary code w/+, – display)	<b>A7PH-206</b>	<b>A7PH-206-1</b>	<b>A7PS-206</b>	<b>A7PS-206-1</b>
	<b>A7PH-206-PM</b>	<b>A7PH-206-PM-1</b>	<b>A7PS-206-PM</b>	<b>A7PS-206-PM-1</b>
07 (binary code w/diode provision)	<b>A7PH-207</b>	<b>A7PH-207-1</b>	<b>A7PS-207</b>	<b>A7PS-207-1</b>
19 (decimal code w/diode provision)	<b>A7PH-219</b>	<b>A7PH-219-1</b>	<b>A7PS-219</b>	<b>A7PS-219-1</b>
54 (binary code hexadecimal)	<b>A7PH-254</b>	<b>A7PH-254-1</b>	<b>A7PS-254</b>	<b>A7PS-254-1</b>
55 (binary code hexadecimal, w/component adding provision)	–	–	<b>A7PS-255</b>	<b>A7PS-255-1</b>

#### ■ ACCESSORIES

Accessory	Part Number	
	For front mounting type switch assembly	
	Light gray	Black
End Cap	<b>A7P-M</b>	<b>A7P-M-1</b>
Spacer	<b>A7P-P□</b>	<b>A7P-P□-1</b>
Connector	Solder terminals	<b>NRT-C</b>
	PC terminals	<b>NRT-CP</b>

- 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	U	Decimal Point

## Characteristics

	A7PH	A7PS
Switching capacity	10μA to 0.15 A 125 VAC/28 VDC (resistive load)	1 mA to 0.1 A 50 VAC/28 VDC (resistive load)
Carry current	3 A max.	1 A max.
Contact resistance	200 mΩ max.	
Insulation resistance	100 MΩ min. (at 500 VDC) between nonconnected terminals 1,000 MΩ min. (at 500 VDC) between each terminal and noncurrent-carrying part	10 MΩ min. (at 500 VDC) between nonconnected terminals
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	650 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	85% RH max. (at 40°C)	
Service life	Mechanical	2,000,000 operations (steps) min.
	Electrical	1,000,000 operations (steps) min.
Weight (per unit)	Approx. 9.2 g	Approx. 8.6 g

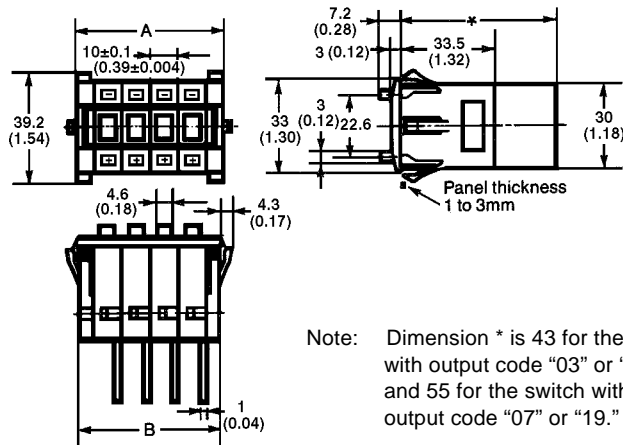
Note: Data shown are of initial value.

## Dimensions

Unit: mm (inch)

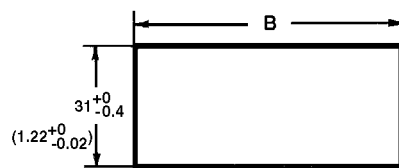
### SWITCH UNITS

A7PH-□, A7PS-□



Note: Dimension \* is 43 for the switch with output code "03" or "06," and 55 for the switch with output code "07" or "19."

### Panel cutout



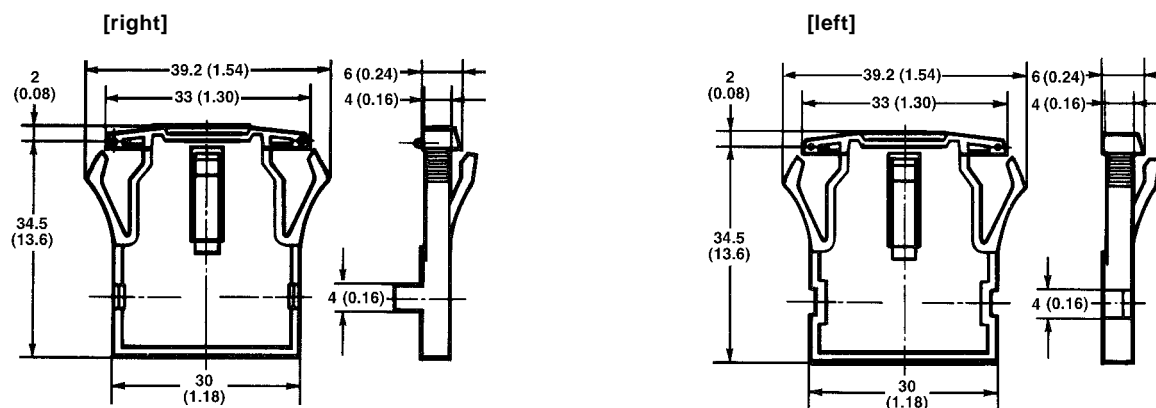
No. of units (n)	A (10n + 12)	B (10n + 9)
1	22 (0.87)	20 (0.79)
2	32 (1.26)	30 (1.18)
3	42 (1.65)	40 (1.57)
4	52 (2.05)	50 (1.97)
5	62 (2.44)	60 (2.36)
6	72 ± 0.8 (2.83 ± 0.03)	70 ± 0.8 (2.76 ± 0.03)
7	82 ± 0.8 (3.23 ± 0.03)	80 ± 0.8 (3.15 ± 0.03)
8	92 ± 0.8 (3.62 ± 0.03)	90 ± 0.8 (3.54 ± 0.03)
9	102 ± 0.8 (4.02 ± 0.03)	100 ± 0.8 (3.94 ± 0.03)
10	112 ± 0.8 (4.41 ± 0.03)	110 ± 0.8 (4.33 ± 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.

## ■ END CAPS

A7P-M, A7P-M-1

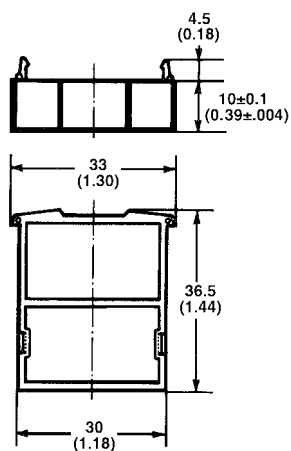


Note: 1. Unless otherwise specified, a tolerance of  $\pm 0.4$  mm applies to all dimensions.

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

## ■ SPACERS

A7P-P□, A7P-P□-1

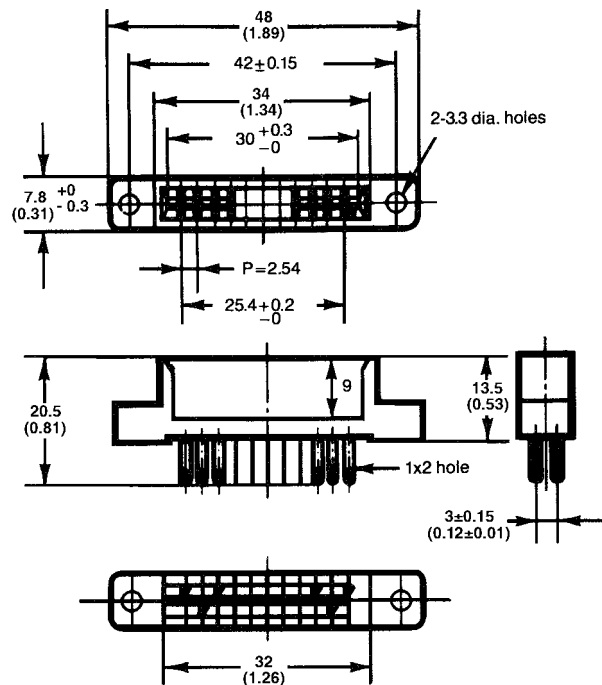


Note: Unless otherwise specified, a tolerance of  $\pm 0.4$  mm applies to all dimensions.

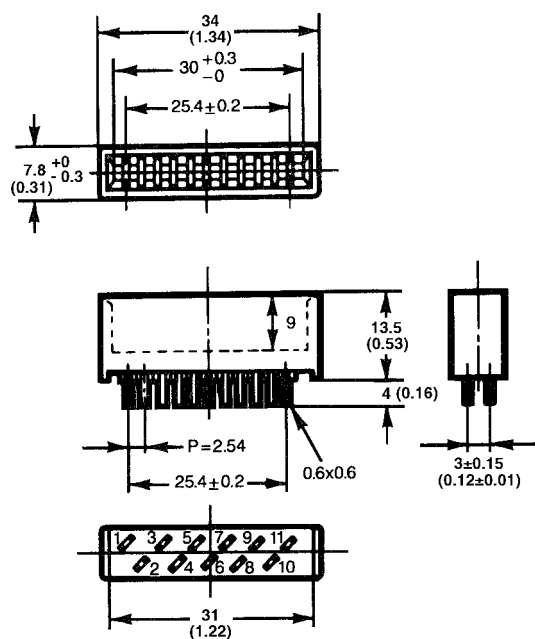
Unit: mm

## CONNECTORS

### NRT-C



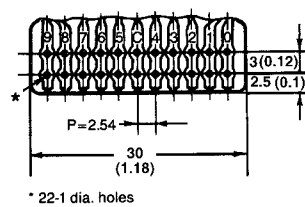
### NRT-CP



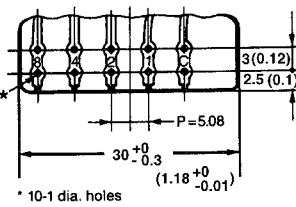
Note: Unless otherwise specified, a tolerance of  $\pm 0.4$  mm applies to all dimensions.

## TERMINALS

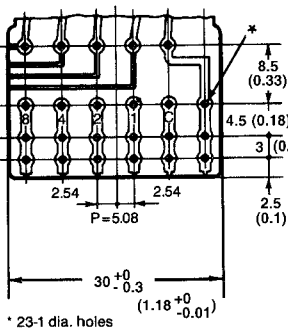
### A7P□-203-□



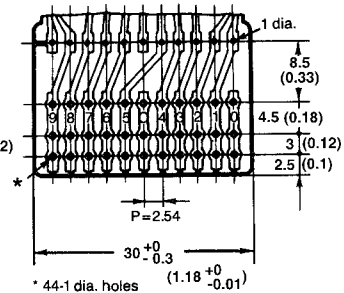
### A7P□-206-□



### A7P□-207-□



### A7P□-219-□



## Hints on Correct Use

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

# OMRON

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