

Panasonic® Thumbwheel Potentiometers

Resistance Code Chart
Code (Resistance Value)

Code (Value)	Code (Value)
502 (5K)	203 (20K)
103 (10K)	503 (50K)

Specifications: • Resistance Range: 5K Ω through 50K Ω • Tolerance: $\pm 20\%$ • Power Rating: B taper - .03W, All others .01W • Voltage Rating: 50VAC/20VDC • Rotation Angle: 260° $\pm 10^\circ$ • Life: 10,000 turns minimum

Fig.	Taper	Center Detent	Digi-Key Part No.	Pricing				Panasonic* Part No.
				1	10	100	1,000	
1	A	N	P4A9□□□-ND	2.07	17.25	129.38	954.50	EVL-HFAA01A□□
	B	N	P4B0□□□-ND	2.07	17.25	129.38	954.50	EVL-HFAA01B□□
2	A	N	P4C1□□□-ND	2.07	17.26	129.42	954.83	EVL-HFAA06A□□
	B	N	P4D2□□□-ND	2.07	17.26	129.42	954.83	EVL-HFAA06B□□
1	A	Y	P4E3□□□-ND	2.32	19.32	144.90	1069.04	EVL-HFKA01A□□
	B	Y	P4F4□□□-ND	2.32	19.32	144.90	1069.04	EVL-HFKA01B□□
3	A	N	P4K9□□□-ND	2.07	17.25	129.38	954.50	EVL-HFAA05A□□
	B	N	P4L0□□□-ND	2.07	17.25	129.38	954.50	EVL-HFAA05B□□
3	A	Y	P4M1□□□-ND	2.32	19.32	144.90	1069.04	EVL-HFKA05A□□
	B	Y	P4N2□□□-ND	2.32	19.32	144.90	1069.04	EVL-HFKA05B□□

For complete number, substitute corresponding code (from chart above) for □□□.
* Call Digi-Key for help in assembling manufacturer part number. ♦ RoHS Compliant

Specifications: • Tolerance: $\pm 30\%$ • Power Rating: .01W • Rotation Angle: 270° $\pm 5^\circ$ • Life: P4G5102-ND 5,000 turns minimum, All others 10,000 turns minimum • No center detent

Fig.	Dual Taper	Rated Voltage	Resistance (Ω)	Digi-Key Part No.	Pricing			Tape & Reel † Qty.	Panasonic Part No.	
					1	10	100			
4	B/B	20VAC	50K	P4J8503CT-ND	1.37	11.40	104.83	800	547.20	EVU-TUAB16B54
5	C/C	22VAC	50K	P4I7503CT-ND	.98	8.15	74.96	1,200	489.00/M	EVU-TUHB07C54
6	A/A	0.5VAC	1K	P4G5102-ND	.96	8.00	60.01	—	—	EVU-TW1B24A13
7	C/C	10VAC	10K	P4H6103-ND	.96	8.00	60.01	—	—	EVU-TW7B45C14

† For Tape and Reel part number, change CT-ND to TR-ND. ♦ RoHS Compliant

Fig. 1

Fig. 2

Footprint Applies to both Fig. 1 and 2

Element Circuit Diagram

Fig. 3

Fig. 4

Fig. 5

Fig. 6

Fig. 7

16mm Shaftless Potentiometers with Detents

(View from mtg. side)

Recommended Applications: • Function switching and adjusting for control panels of car air conditioners
Features: • Small size • High click torque • External Dimensions: 16.7mm x 16.3mm x 6.0mm • Through hole for a shaft • Suitable for reflow soldering
Mechanical Specifications: • Rotation Torque: 40 mN-m ± 15 mN-m • Detent Pitch: (12, 7 active) 30° $\pm 3^\circ$ • Rotation Angle: 360° Endless
Electrical Specifications: • Power Rating: 0.05W • Nominal Total Resistance: 10k Ω $\pm 30\%$ • Taper: B • Rotation Life: 30,000 nominal
Operating Temperature: -40°C - 85°C

Detent Number	1	2	3	4	5	6	7
Angle	90°	120°	150°	180°	210°	240°	270°
Output/Initial	5% max.	16.7% $\pm 5\%$	33.3% $\pm 5\%$	50% $\pm 5\%$	66.7% $\pm 5\%$	83.3% $\pm 5\%$	95% min.

Description	Digi-Key Part No.	Cut Tape Pricing			Digi-Key Part No.	T & R Pricing 350	Panasonic Part No.
		1	10	100			
10K Ω , 12 Detents, SMD	P12427CT-ND	5.83	48.60	447.16	P12427TR-ND	1020.60	EWV-YC8B14

EVWAE 10mm GS Sensors

(View from parts side)

Low profile, long life sensor, which is suitable for detecting the angles of rotating axes, such as air conditioner dampers.
Recommended Applications: • Detection of air conditioner damper angles • Detection of various control unit angles
Features: • Low profile (H=2.2mm) • Long operation life: 1 million operation cycles assured, a wide electrical output angle of a maximum 347°
Specifications: • Rating: 0.05W, 5V • Operating Force: 3 mN.m maximum • Linearity: $\pm 3\%$ maximum • Operation Life: 1,000,000 cycles (operation angle $\pm 30^\circ$) • Total Resistance: 10k Ω $\pm 30\%$
Operating Temperature: -40°C - 85°C

Description	Digi-Key Part No.	Cut Tape Pricing			Digi-Key Part No.	T & R Pricing 1,500	Panasonic Part No.
		1	10	100			
10K Ω , 10mm, SMD	P12426CT-ND	1.72	14.31	131.65	P12426TR-ND	859.00/M	EVW-AE4001B14

5mm Square Single-Turn Cermet Potentiometers

MBG Series

P.C.B. piercing plan (pitch ± 0.1)

MSG Series

P.C.B. piercing plan

SPECIFICATIONS:

Mechanical Characteristics:

- Total rotation angle: Adjustment angle 200° nominal
- Soldering: Within 5 seconds maximum at 300°C

Electrical Characteristics:

- Resistance Range: 500 Ω to 2 M Ω
- Tolerance: $\pm 20\%$
- Power Rating: 0.5W at 70°C

Environmental Characteristics:

- Maximum Voltage: 200V
- Dielectric Withstanding Voltage: 600VAC for one minute
- Temperature Coefficient: ± 100 ppm/°C
- Insulation Resistance: 100M Ω
- Operating Temperature Range: -55°C - 125°C
- Vibration: 20G
- Shock: 180G
- Seal: MIL-R-22097 Immersion

Res. (Ω)	Digi-Key Part No. Side Adjust	Digi-Key Part No. Top Adjust	Pricing				Panasonic Part No. Side Adjust	Panasonic Part No. Top Adjust
			1	10	100	1,000		
500K	MBG52-ND	—	1.59	13.23	121.67	814.00	756.00/M	EVM-MBGA01B52
1K	—	MSG13-ND	1.59	13.23	121.67	814.00	756.00/M	EVM-MSGA01B13
500K	—	MSG55-ND	1.59	13.23	121.67	814.00	756.00/M	EVM-MSGA01B55
1M	MBG16-ND	—	1.59	13.23	121.67	814.00	756.00/M	EVM-MBGA01B16
2M	—	MSG26-ND	1.59	13.23	121.67	814.00	756.00/M	EVM-MSGA01B26

More Product Available Online: www.digkey.com

Toll-Free: 1-800-344-4539 • Phone 218-681-6674 • Fax: 218-681-3380

(T091) 1949