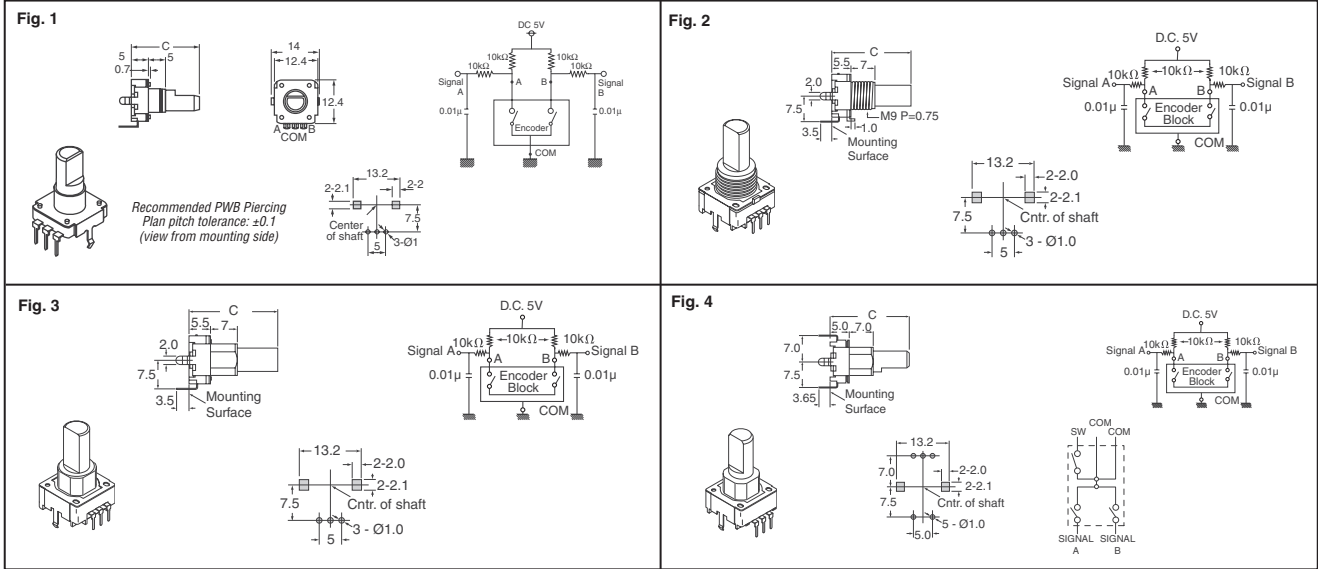


Panasonic® Mechanical Rotary Encoders



Specifications:
Mechanical: • Rotation Angle: 360° (endless) • Shaft Inclination: 0.7 x H/30 mm p-p max. • Rotation Torque: Standard type: 3mN-m to 20mN-m; EVE-K type: 10mN-m to 50mN-m
Electrical: • Output Signals: Phase A and B • Resolution: 12, 20, 24 pulses/360° • Rating: DC 5V/10V 1mA • Contact Resistance: 1Ω max. • Insulation Resistance: DC 50V 10MΩ min. • Dielectric Withstanding Voltage: 1 minute at 50VAC • Bouncing: 3/5 ms max.
Physical, Environment Life: • Operating Life: Standard life: 30,000 cycles min.
Operating Temperature: -10°C - 60°C
Storage Temperature: -40°C - 85°C

Fig.	Description	Dim. C	Detent/Pulse	Digi-Key Part No.	Price Each			Panasonic Part No.
					1	10	100	
1	12(mm)	17.5	24/24	P10859-ND	1.52	1.35	.97	EVE-GA1F1724B
		20	24/24	P10860-ND	1.52	1.35	.97	EVE-GA1F2024B
		20	12/12	P12331-ND	.77	.65	.55	EVE-GA1F2012B
2	12(mm)	20	12/12	P12332-ND	.86	.72	.60	EVE-GC1F2012B
		20	-/24	P12334-ND	.86	.72	.60	EVE-KC2F2024B
3	12(mm)	20	12/12	P12333-ND	.72	.61	.51	EVE-GE1F2012B
		20	-/24	P12335-ND	.72	.61	.51	EVE-KE2F2024B
4	12(mm)	20	20/20	P12336-ND	1.77	1.48	1.24	EVE-JBBF2020B

Center Space Encoders

EVQ Series:
Encoder with a center space, which meets the requirements of multiple operation controllers.
Recommended Applications:
• Car audio products (adjustment of volume, tone, tuners, etc.) • AV equipment (control of edit functions of VCRs, CD players, MD players, etc.) • Remote control of car navigation systems
Features:
• Multiple unit construction can be achieved by mounting switches, LEDs, etc. in the through hole at the center (center space) on the printed wiring board. • High reliability • Ready for transparent shafts (to enhance the light diffusion)
Specifications:
Mechanical: • Rotation Angle: 360° (endless) • Detents: EVQ-1WF: 20 points; EVQ-WFP: 30 points
Electrical: • Output Signal: Phase A and B • Resolution: EVW-1WF: 10 pulses/360°; EVQ-WFP: 15 pulses/360° • Rating: 1mA, 10Vdc • Contact Resistance: 1Ω max. • Bouncing: 5 ms max. • Insulation Resistance: 50MΩ min. (at 250Vdc) • Dielectric Withstanding Voltage: 300Vac for 1 min.
Endurance: • Rotation Life: EVW-1WF: 50,000 cycles min.; EVQ-WFP: 30,000 cycles min.
Operating Temperature: -40°C - 85°C

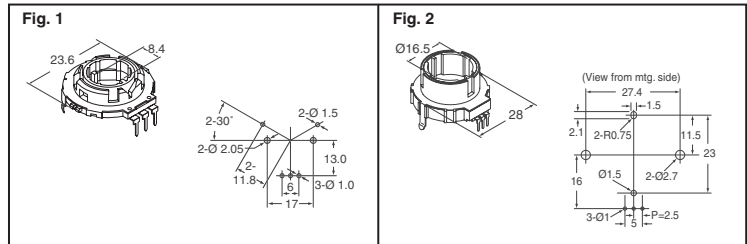


Fig.	Description	Detent/Pulse	Digi-Key Part No.	Price Each			Panasonic Part No.
				1	10	100	
1	22(mm)	20/10	P12337-ND	2.18	1.82	1.53	EVQ-1WF00210B
2	27(mm)	30/15	P12419-ND	5.61	4.68	3.93	EVQ-WFP00415B

11mm Square Encoders with Push-lock Feature

Recommended Applications:
• Volume control or mode switch selector for car audio • Signal input for selector monitors and AV equipment
Features:
• New type encoder with a push-lock feature • EVQ-WEB includes an SPST NC switch • Push-lock Travel: EVQ-WEB: 9mm max.; EVQ-WEH: 8.4mm max.
Specifications:
Mechanical: • Rotation Angle: 360° (endless) • Shaft Pull/Push Strength: 100N min. • OP Force Switch: 7n max. • Rotation Torque: EVQ-WEB: 3 mN-m to 20 mN-m; EVQ-WEH: 3 mN-m to 17 mN-m • Detents: 30 points
Electrical: • Resolution: 15 pulses/360° • Output Signal: A and B (2 Phases) • Rating: EVQ-WEB: 1mA, 10Vdc (encoder); 20mA, 16Vdc (switch); EVQ-WEH: 1mA, 5Vdc (encoder); 10mA, 5Vdc (switch) • Contact Resistance: 1mΩ max. • Insulation Resistance: EVQ-WEB: 50MΩ min. (at 250Vdc); EVQ-WEH: 100MΩ min. (at 250Vdc) • Dielectric Withstanding Voltage: 300Vac for 1 min.
Endurance: • Rotation Life (encoder): 15,000 cycles • Operating Life (Push-lock): 10,000 cycles
Operating Temperature:
EVQ-WEB: -20°C - 70°C; EVQ-WEH: -30°C - 85°C

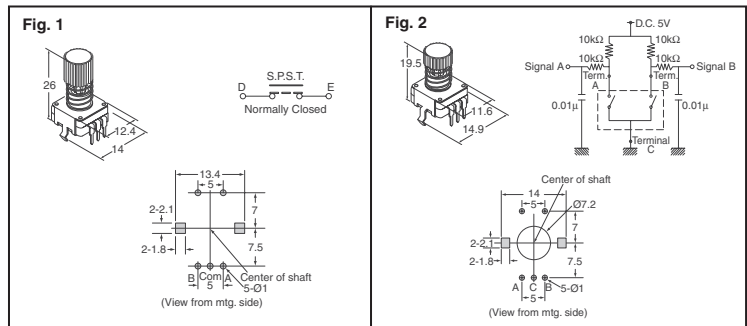


Fig.	Description	Digi-Key Part No.	Price Each			Panasonic Part No.
			1	10	100	
1	Rotary Encoder with SPST Switch	P12424-ND	11.96	9.97	8.37	EVQ-WEB00115B
2	Rotary Encoder, Vertical	P12425-ND	7.17	5.98	5.02	EVQ-WEH00115B

More Product Available Online: www.digikey.com

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