

FEATURES

- ❑ Input Device Ideal For Tuning, Menu Scrolling, And Selecting Functions
- ❑ Push-button Feature Allows Dual Function And Reduced Input Panel Part Count
- ❑ Vibration And Mechanical Shock Approved Per MIL-STD 202
- ❑ Exceeds Performance For Humidity And Thermal Shock Per MIL-STD 202

The OE2 Series Optical Encoder has been developed for customers who require switches that are more reliable and longer lasting than conventional rotary switches. Advanced optical technology uses no mechanical contacts, which reduces noise and eliminates contact bounce.

An important advantage of the OE2 Series is its complete compliance to MIL-STD 202 for humidity, vibration, thermal and mechanical shock and performance, which is unique for the switch industry. This provides a great fit for products involving critical functions, such as medical devices and industrial process controls.

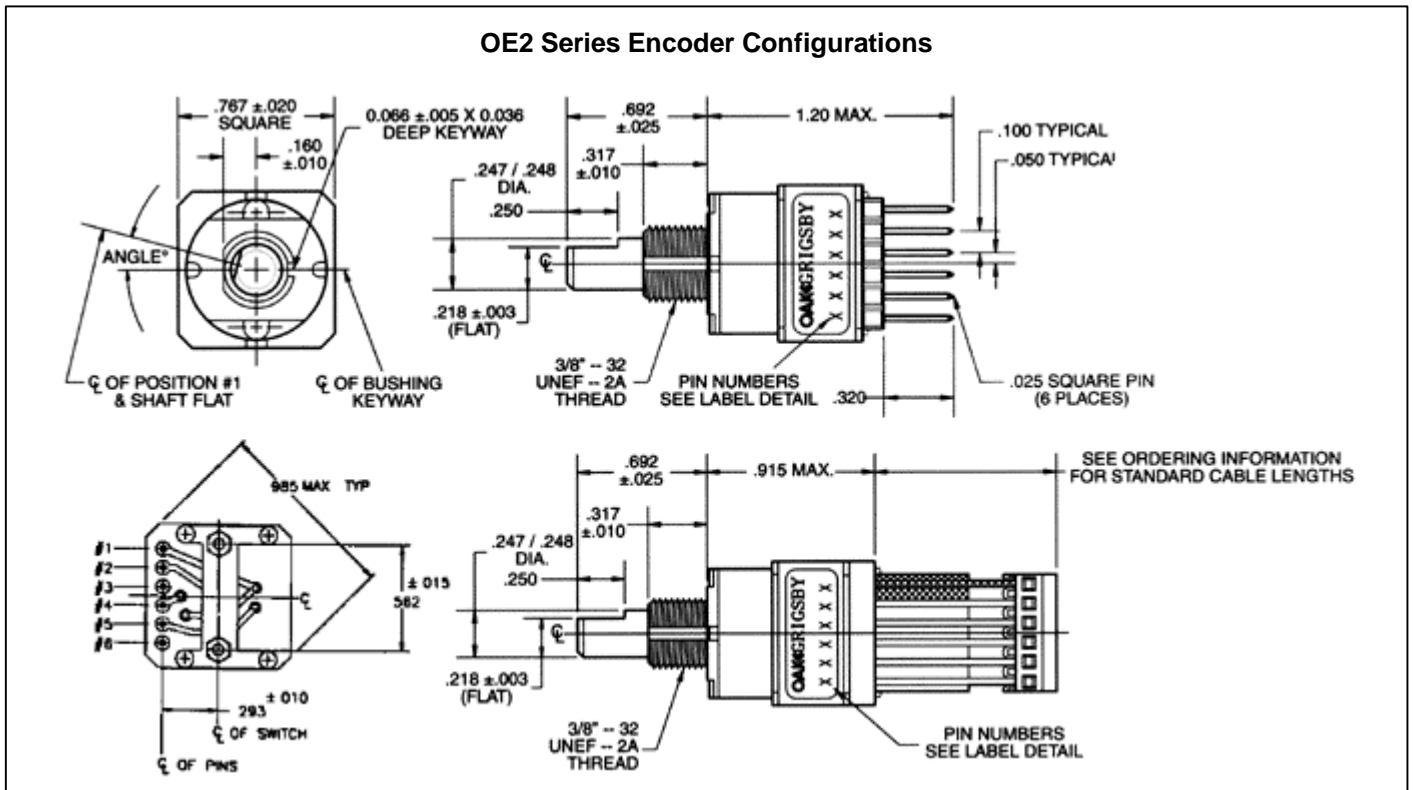
The OE2 features rotary action, with or without a push-button option. This allows dual modes to be performed by a single switch. A popular application of the switch uses this dual mode feature to produce a "scroll and select" function for many different types of display screens, including LCD and CRT.

Numerous design options are available to meet individual specifications and application requirements. Standard output is incremental two-bit quadrature. Both straight pin out or a ribbon cable with connector are available as termination options.

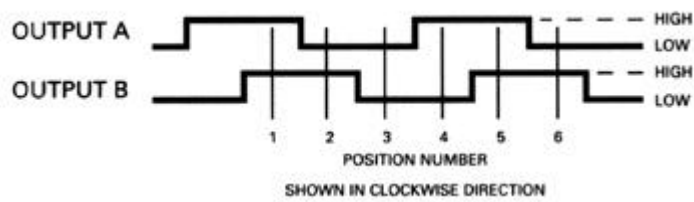
In addition to extended life, the OE2 Series offers the advantages of low power consumption, pin or cable termination, small size, and digital output compatible with TTL and CMOS circuitry.

See Page 2 for Configurations
See Page 3 for Specifications
See Page 4 for Ordering

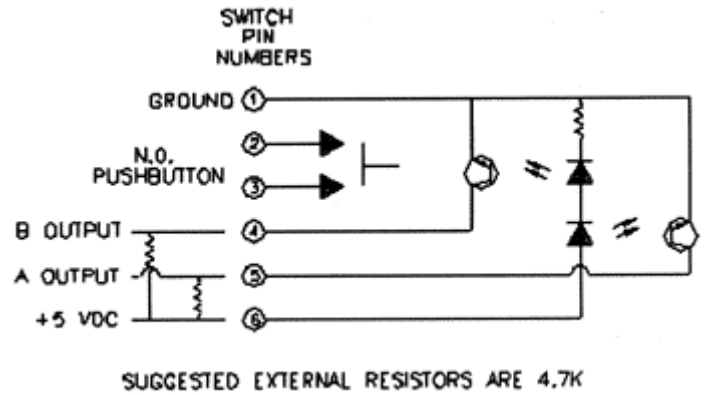
CONFIGURATIONS



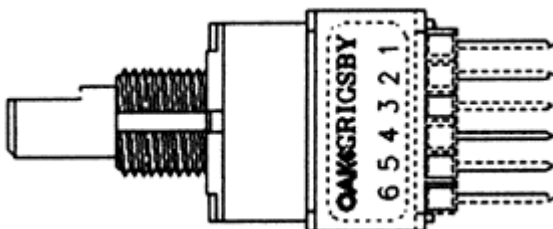
Output Waveforms Quadrature Versions



Electrical Schematic



Pin Out



SPECIFICATIONS

Electrical Specifications

Parameter	Minimum	Typical	Maximum	Units
Vcc Range	4.5		5.5	V
Suggested Pull-Up Resistor		4.7k		Ohm
Push-button Contact Resistance (end of life)			1	Ohm
Push-button Contact Bounce		5 ms @ close / 10 ms @ open		ms

Environmental Specifications

Parameter	Minimum	Maximum	Units
Operating Temperature	-40	85	°C
Storage Temperature	-55	105	°C
Humidity: 95% R.H. per MIL-STD 202, Method 103B, Test Condition B			

Mechanical Specifications

Parameter	Minimum	Typical	Maximum	Units
Rotational Life Rated with less than 8 oz. side load applied at end of shaft				
Detented		3,000,000 rotations		
Non-Detented		10,000,000 rotations		
Rotational Torque @ 20 °C				
Detented	1.0		2.5	in.-oz.
Non-Detented	0.10		0.70	in.-oz.
Push-button Life		1,000,000 Actuations		
Pull-button Actuation Force (Where Applicable)	375		625	gram
Pull-button Travel		0.035 ± 0.020		in.
Bushing Mounting Torque		7.5		in.-lb.
Shaft Push-In Force		50		lbs.
Shaft Pull-Out Force		25		lbs.
Shock		100 (g) for 6 ms half sine wave		
Vibration		15 (g) Amplitude 10-2000 (Hz) for 12 (hr)		
Terminal Strength		3 lbs. (applied perpendicular to the terminals)		

ORDERING

Ordering the OE2 Series Encoder

