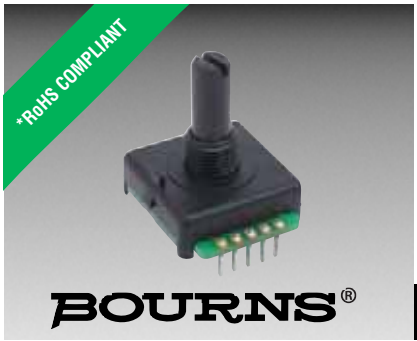


Features

- Absolute encoder / absolute code output
- Digital output
- Sturdy construction
- Bushing mount
- Available with PC board mounting bracket (optional)
- *RoHS compliant

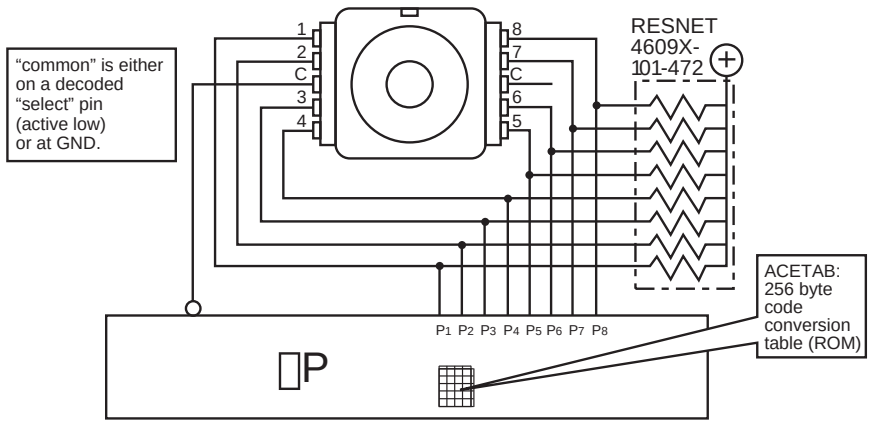
EAW - Absolute Contacting Encoder (ACE™)

General Information

Until now, the choice of an absolute encoder meant an expensive, and larger-sized product. Through the use of combinatorial mathematics, the absolute code pattern of the Bourns® Absolute Contacting Encoder (ACE™) is placed on a single track for a very economical, energy-efficient and compact product. Bourns® ACE™ provides an absolute digital output that will also retain its last position in the event of a power failure.

An intelligent alternative to incremental encoders and potentiometers, the Bourns® ACE™ is ideally suited for many industrial, medical and consumer product applications.

Recommended Control Diagram for ACE-128



Electrical Characteristics

Output	8-bit code with 128 absolute states
Closed Circuit Resistance	5 ohms maximum
Open Circuit Resistance	100 K ohms minimum
Contact Rating	10 milliamp @ 10 VDC or 0.1 watt maximum
Insulation Resistance (500 VDC)	1,000 megohms minimum
Dielectric Withstanding Voltage (MIL-STD-202 Method 301)	
Sea Level	1,000 VAC minimum
Electrical Travel	Continuous
Contact Bounce (60 RPM)	2.7 milliseconds maximum*
RPM (Operating)	120 maximum

Environmental Characteristics

Operating Temperature Range	-40 ºC to +85 ºC (-40 °F to +185 °F)
Storage Temperature Range	-40 ºC to +85 ºC (-40 °F to +185 °F)
Humidity	MIL-STD-202, Method 103B, Condition B
Vibration	15 G
Contact Bounce	0.1 millisecond maximum
Shock	50 G
Contact Bounce	0.1 millisecond maximum
Rotational Life	50,000 shaft revolutions minimum
IP Rating	IP 40

Mechanical Characteristics

Mechanical Angle	360 ° Continuous
Running Torque	0.5 to 1.5 N-cm (0.75 to 2.50 oz-in.)
Mounting Torque	79 N-cm (7 lb.-in.) maximum
Shaft Side Load (Static)	4.5 kg (10 lbs.) minimum
Weight	Approximately 14 gms. (0.50 oz.)
Terminals	Printed circuit board terminals
Soldering Condition	
Manual Soldering	96.5Sn/3.0Ag/0.5Cu solid wire or no-clean rosin cored wire 370 °C (700 °F) max. for 3 seconds
Wave Soldering	96.5Sn/3.0Ag/0.5Cu solder with no-clean ux 260 °C (500 °F) max. for 5 seconds
Wash processes	Not recommended
Marking	Manufacturer's name and trademark, part number, and date code.
Hardware	One lockwasher and one mounting nut are shipped with each encoder, except where noted in the part number.
Packaging	45 pcs./tray

*High probability of missing quadrature codes with maximum bounce.

WARNING Cancer and Reproductive Harm
www.P65Warnings.ca.gov

*RoHS Directive 2015/863, Mar 31, 2015 and Annex.