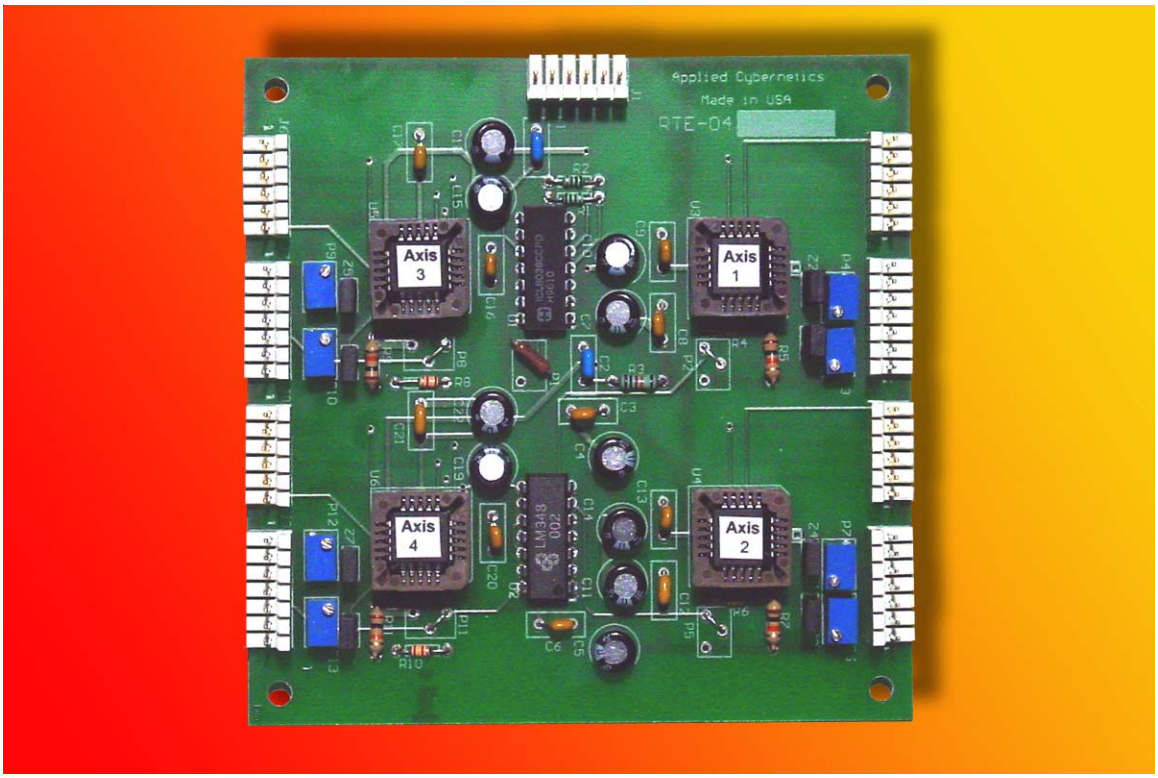
Cito
Systems

Resolver-to-Encoder Signal Converter

RTE-0x



Product Description

The converter accepts input signals in the range 3 kHz – 20 kHz on the SIN, COS and REF inputs. A Type II servo loop is employed to track the inputs and convert the input SIN and COS information into a digital representation of the input angle. The bandwith of the converter is set internally at 1 kHz. Maximum tracking rate is 500 rps at 12-bit resolution. The converters are available in configurations of 1, 2, 3 or 4 axes.

Angular position is available in a form of incremental A quad B. The encoder emulation outputs A, B and Index continuously produce signals equivalent to a 1024 line (4096 quadrature counts) encoder.

An analog velocity output signal provides an accurate representation of input angular velocity of the input signals, in either a clockwise or counterclockwise direction. The analog velocity output is scaled to produce 150 rps/V dc +/- 15% and its maximum value is equivalent to +/- 375 rps.

Features:

- Incremental 1024 line (4096 quadrature counts) encoder emulation
- Differential inputs
- 12-bit resolution
- Analog Velocity Output (optional)
- Configuration of 1, 2, 3 or 4 axes

Power Connector (J1)

Pin	Signal Name	Signal Description
1	V_{DD}	Digital positive power supply, +5V dc +/- 5%
2	DGND	Digital ground
3	V_{SS}	Digital negative power supply, -5V dc +/- 5%
4	V_{ASS}	Analog negative power supply, -12V dc +/- 2V
5	AGND	Analog ground
6	V_{ADD}	Analog positive power supply, +12V dc +/- 2V

Resolver Signals Connector (J3, J5, J7 and J9)

Pin	Signal Name	Signal Description
1	REF	Converter reference output connected to resolver primary excitation. Phase shift with reference to COS and SIN +/-10° max.
2	REF LO	Reference signal inverting output
3	AGND	Analog ground
4	COS	COS channel non-inverting input connected to resolver COS HI.
5	COS LO	COS channel inverting input connected to resolver COS LO.
6	SIN LO	SIN channel inverting input connected to resolver SIN LO.
7	SIN	SIN channel non-inverting input connected to resolver SIN HI.

Encoder Signals Connector (J2, J4, J6 and J8)

Pin	Signal Name	Signal Description
1	DGND	Digital ground
2	CH. A	Encoder A output. A leads B for increasing angular rotation.
3	CH. B	Encoder B output.
4	INDEX	Index signal – 90° wide (one per revolution).
5	DIR	TTL level output indicating direction of rotation.
6	VEL	Indicates angular velocity. Scaled 150 rps/V.

Environmental and Electrical Ratings

Dimensions	4.0” x 4.0” (102mm x 102mm)
Storage Temperature	-40 °C to 125 °C
Operating Temperature	0 °C to 70 °C
Power Consumption	max 40mA @ 5V; 15mA @ 12V
Supply Voltage Limits	-0.3V to +7.0V, +/-5.0V to +/-15V
Supply Voltage Operating Range	4.75V to 5.25V, +/-10V to +/-12V
Analog Output Range	-12.0V to 12.0V

Ordering information

RTE - 0 □

1 - 1 axis converter
2 - 2 axis converter
3 - 3 axis converter
4 - 4 axis converter

Contact information:
For additional information please visit **http://www.citosys.com** e-mail: **info@citosys.com**

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