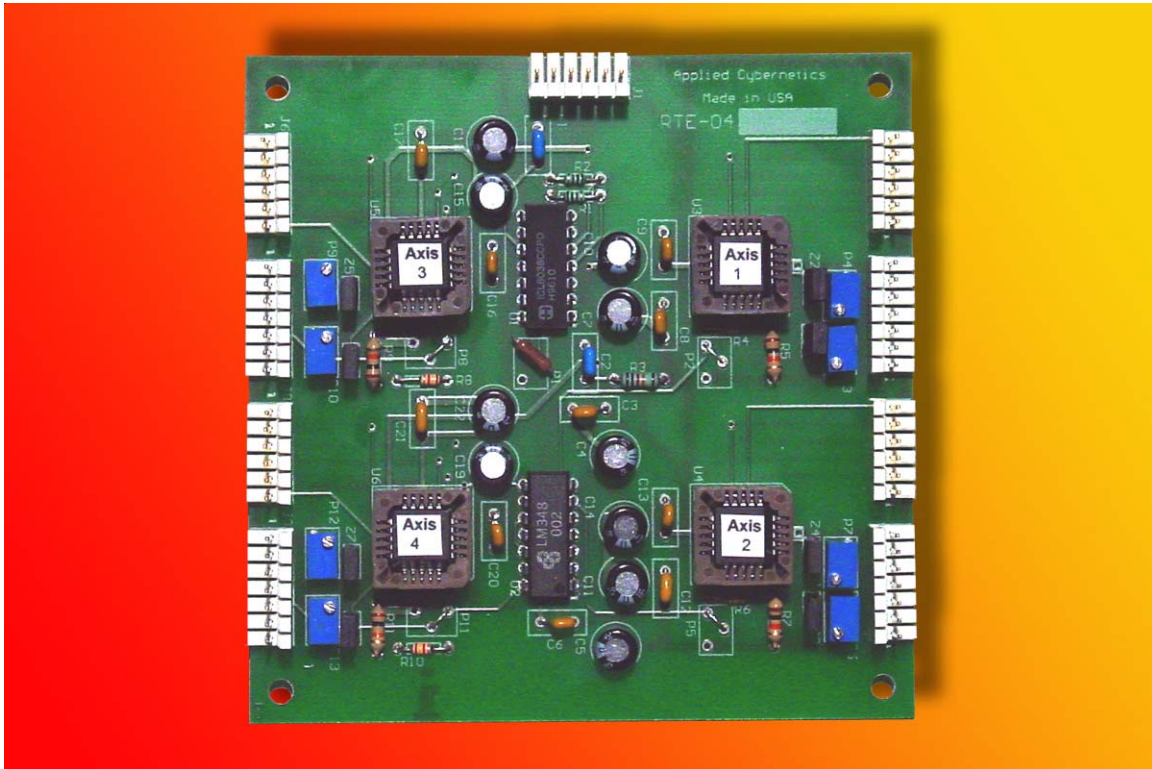


RTE-0x



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 bandwidth 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
01	V _{DD}	Digital positive power supply, +5V dc +/- 5%
02	DGND	Digital ground
03	V _{SS}	Digital negative power supply, -5V dc +/- 5%
04	V _{ASS}	Analog negative power supply, -12V dc +/- 2V
05	V _{ADD}	Analog positive power supply, +12V dc +/- 2V
06	AGND	Analog ground

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

Pin	Signal Name	Signal Description
01	AGND	Analog ground, REF ground
02	REF	Converter reference input connected to resolver primary excitation. Phase shift with reference to COS and SIN +/-10° max.
03	COS	COS channel non-inverting input connected to resolver COS HI.
04	COS LO	COS channel inverting input connected to resolver COS LO.
05	SIN LO	SIN channel inverting input connected to resolver SIN LO.
06	SIN	SIN channel non-inverting input connected to resolver SIN HI.

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

Pin	Signal Name	Signal Description
01	DGND	Digital ground
02	CH. A	Encoder A output. A leads B for increasing angular rotation.
03	CH. B	Encoder B output.
04	INDEX	Index signal – 90° wide (one per revolution)

Environmental and Electrical Ratings

Dimensions	4" x 4" (10mm x 10mm)
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