

Resolver Electronic Unit

Model RESSC-2-12V

- Provides continuous Sine/Cosine analog outputs
- Designed for use with Michigan Scientific's SR/ERT Series or compatible resolvers*
- Powers up to 10 strain gage amplifiers†
- Input power (9-36 VDC) for vehicle based use
- Remote bridge excitation On/Off for spinning strain gage amplifiers
- Remote electronic shunt calibration capability
- Rugged aluminum enclosure



Description

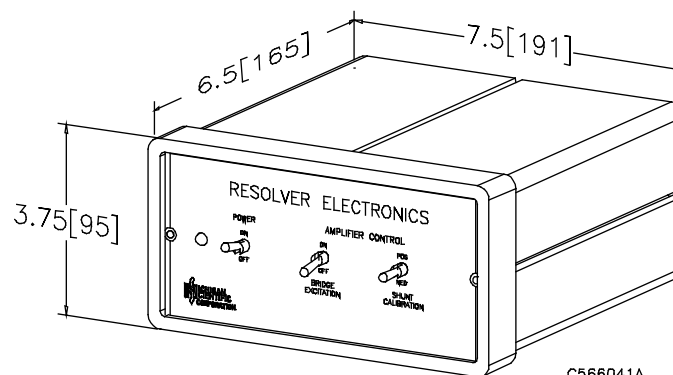
The model *RESSC Resolver Electronic Unit* provides signal demodulation for Michigan Scientific slip ring/resolver units. It can be used to transform measurements from rotating coordinates into stationary coordinates (e.g., forces from a rotating wheel transducer to a vehicle chassis coordinate system). Resolver signals from the resolver slip ring are converted into continuous sine/cosine analog outputs. These outputs provide the sine/cosine functions of the angle of rotation which are necessary for calculating stationary force components of rotating force measurements. Calculations can be done in the user's data acquisition software or in post processing.

The *RESSC Resolver Electronic Unit* includes an oscillator for resolver excitation, and a 1.0 Ampere power supply for powering strain gage and/or thermocouple amplifiers. When used with Michigan Scientific's strain gage amplifiers, the *RESSC resolver unit* can control the strain gage electronic shunt calibration and bridge excitation on/off features incorporated into the amplifier.

The *RESSC resolver* is available in single or dual channel configurations.

*50 Ohm Impedance

†Michigan Scientific AMP-SG Series, or AMP-TC Series



C566041A
RESSC-2-12V
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DIMENSIONS ARE INCH[mm]

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Specifications

PARAMETER	SPECIFICATION
Resolver Excitation	
Type	Sinusoidal Voltage
Frequency	10 KHz
Magnitude	16 V p-p
Load (stator impedance)	50 Ω or greater
Amplifier Power Output	
Type	DC Constant Voltage (Bipolar)
Magnitude	± 15 V
Load	max 10 Strain Amplifiers @ 350 W bridge suggested use: Amplifier Models AMP-SG-U2 and AMP-SG-U3
Resolver Output	
Voltage Output (Nominal)	Voltages related to Resolver angle (ϕ): $[5 * \sin(\phi)]$ V $[5 * \cos(\phi)]$ V
Frequency Response	Determined by 8-pole Bessel 3.2 kHz low pass filter
Rise Time	100 μ s
Noise	Noise ≤ 8.0 mV p-p
Power Requirements	
Voltage	9-36 VDC
Maximum Current	1.5 A
ENVIRONMENT	
Operation Temperature	0 to +70°C (+32 to +158°F)

Ordering Options

Dual or single channel models are available. Model RESSC-1-12V is the single channel unit. Model RESSC-2-12V is the dual channel unit.