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# Mechanical to Electric Converter

- Converts a mechanical 33C cable signal to an electric voltage or PWM signal
- Obtain all the benefits of an electric control or position indication by converting the following:
  - Mechanical Throttle Controls
  - LED Indications for Tabs or Drives
  - Jet Pumps or Bucket Position
  - Rudder Position
- The converter operates using non-contacting magnetic position sensors with two independent outputs, rated IP68. Can be submerged in water.
- Potentiometers may be calibrated to any voltage ranging from .5V to 4.5V or a PWM signal
- Easy installation: bolts to the inside of the transom with a short 33C cable to your device
- Choose the connector for your application Standard is 6 pin deutch - choose between single or dual potentiometer pott. Specify engine and calibration.
  - Steyr
  - Cummins
- Yanmar John Deere
- Caterpillar

lveco Fiat

- Bosch controllers
- Enjoy all the benefits of an electric control or position indicator.



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#### DUAL OUTPUT ANGULAR POSITION SENSOR

### Non-contacting magnetic position sensor with two independent outputs Ideal for high reliability sensing applications

#### **Features and Benefits**

- Angular position sensor with high tolerance for misalignment
- Dual (redundant) outputs assure very high reliability
- $\Box$  Non-contact sensing up to full 360° rotation
- □ No mechanical interface
  - Nothing to break or wear out
  - No possibility of jamming or resistance to motion
- Sealed design meets IEC529 IP68 for immersion
- Rugged design includes EMI/ESD protection to SAE J1113 standards
- □ Maximum operating temperature of 125°C

#### **Electrical Specifications**

### Typical Sensor Output Signal (Based on 5V Supply)



Sensing Range	0 to 360 degrees of rotation
Input Voltage	5.0 VDC ± 10%
Output Voltage	0.5 to 4.5 VDC (ratiometric)
Output Accuracy (with supplied magnet) (65°- 360° rotation)	± 2.5% Full Scale
Output Smoothness (with supplied magnet) (65°- 360° rotation)	± 0.75% Full Scale for any 2% interval
Output Linearity (with supplied magnet) (65°- 360° rotation)	± 2.0% Full Scale
Max Supply Voltage	20 VDC
Reverse Voltage	-10 VDC
Maximum Output Current Range	8mA
Minimum Output Current Range	-8mA
Resolution	Analog
Electrostatic Discharge	SAE J1113-13; +/- 8kV
Immunity to Radiated Electronic Magnetic Fields	SAE J1113-4; 1 MHz to 400 MHz
Conducted Transient Emissions	SAE J1113-42; ± 25V
Operating Temperature	-40 to 125°C

#### DEUTSCH CONNECTOR DTM04 - 6P





Pin Number	Wire Color	Description
1	Red	PPS1 (5V)
2	White	PPS2 (5V)
3	Blue	PPS1 Signal
4	Black	PPS1 Ground
5	Green	PPS2 Ground
6	Tan	PPS2 Signal

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