

# OPTIPOWER TORQUEMETERS

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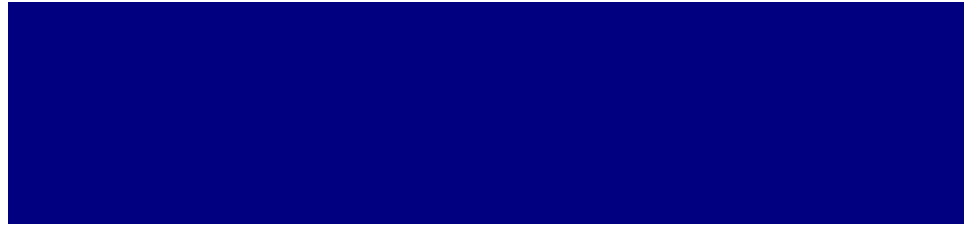
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**SHAFT TORQUE, THRUST,  
SPEED & POWER FOR  
PROPULSION PLANT  
PERFORMANCE !**

## OPTIPOWER SYSTEM SPECIFICATIONS

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**Sensor Input:**

Full Bridge strain gage (4 active arms (Full compensation). 350U standard;

**Bridge Excitation:**

5 VDC, Regulated

**Sensor Range:**

±500 microstrain (Full Bridge, 4 active arms - Torque)

±769 microstrain (Full Bridge, 4 active arms - Thrust)

Other microstrain ranges are available

**Temp Coefficient - Gain:**

≤ 0.005% FS/°C (50 ppm/°C) +20°+70°C

≤ 0.010% FS/°C (100 ppm/°C) -40°+85°C

**Temp Coefficient - Zero:**

≤ 0.005% FS/°C (50 ppm/°C) +20°+70°C

≤ 0.010% FS/°C (100 ppm/°C) -40°+85°C

**Linearity:**

≤ 0.05% FS

**G-force Rating:**

Bigger than 3000 g's. For example, 5700 rpm on 102 mm shaft.

**Sensor Connection:**

4-conductor cable

## Rotating Collar (shaft diameter to be specified by customer)

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**Material:**

Cast nylon standard

**Assembly:**

Split collar bolts together onto shaft.

## Master Control Unit & Power Coil

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**Receiver Output Signal:**

Four independent current output signals:

1. Torque: 12 ± 8 mA, scalable
2. Power: 12 ± 8 mA, scalable
3. Shaft Speed/RPM: Pulse Indicator, 5-19 mA
4. Shaft Direction: Binary Indicator, 5 or 19 mA
5. NEMA protocol
6. RS 485

**Receiver Input Power:**

11-16 VDC standard; 2A max, 0.5A nominal

(115VAC or 230VAC or 24 VDC option available)

**Dimensions:**

Master Control Unit: 152 x 152 x 102 mm

Power Coil - Outer Diameter: same as Rotating Collar OD

Width: 3 mm

## Optipower System

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**Resolution:**

14 bits (16384 points of resolution)

**Noise Level:**

< 0.10% RMS FS

**Frequency Response: (Torque and Power)**

Switch selectable:

1000 Hz, 12 Hz, 1.5 Hz or 0.1 Hz

(-3dB frequency, typical)

**Sampling Rate:**

4800 Hz

**Operating Temperature:**

-40°+85°C

0% to 90% relative humidity, noncondensing

*Specifications are subject to change without notice.*

