

Model 1602A/1602A-01*

Propulsion Monitoring System

DESCRIPTION

The 1602A propulsion monitoring system fits shafts sized from 381 mm to 762 mm [15 in to 30 in] in diameter. The system is enclosed in a strong outer cover and has an electronics read-out assembly in a water tight enclosure. These units together provide the means for measuring shaft torque and RPM. Digital readouts are available to display torque, RPM and computed horsepower. Built-in calibration check circuitry can be activated

at any time to verify that all local displays and outputs are functional. Enhanced stability and reduced maintenance are the payback for selecting this system. The model 1602A/01 systems can be used in a variety of potential applications including fuel conservation programs, hull and propeller fouling, load and balancing on twin screw vessels, power plant monitors and sea trial torsion meters.

FEATURES

- Enhanced stability
- Converts any shaft into a torque transducer
- Ideal for short-term and long-term testing and monitoring
- Shaft sizes from 381 mm to 762 mm [15 in to 30 in]
- Suitable for harsh environments and high vibration

* 1602A and 1602A-01 are identical except that 1602A-01 is for torque measurement only.

Model 1602A/1602A-01

PERFORMANCE SPECIFICATIONS

Characteristic	Measure
Torque ranges	Varies on application; consult factory
Frequency response	dc to 1000 Hz
Sensitivity (transmitter)	300 microstrain
Number of channels	1 to 3 (Torque, RPM, HP)
Sampling rate	5 kHz
Receiver readout display type	3.5 digit 7 segment LED

ENVIRONMENTAL SPECIFICATIONS

Characteristic	Measure
Temperature, operating (transmitter)	-15 °C to 75 °C [5 °F to 167 °F]
Temperature, operating (receiver/IPS/PSU)	10 °C to 50 °C [50 °F to 122 °F]
Temperature, compensated (transmitter)	5 °C to 60 °C [40 °F to 140 °F]
Temperature, compensated (receiver)	10 °C to 50 °C [50 °F to 122 °F]
Static G force (rotating components)	100 G
RPM limits (rotating components)	See graph - depends on shaft diameter
Vibration (rotating components)	10 G to 1 kHz
Collar weight	Varies with shaft diameter
Electronics weight (not including cables)	Receiver and PTU 14,69 kg [33 lb]

ELECTRICAL SPECIFICATIONS

Characteristic	Measure
Induction power source	160 kHz \pm 6 %
Cable length (PTU to receiver)	Cables NOT included
Max. cable length (PTU to receiver)	100 ft
Power supply voltage (receiver)	115 Vac to 230 Vac (user-selectable)
Power consumption (receiver)	100 VA max.
RF operating frequency	16 MHz
RF modulation type	FSK
Max. analog output (receiver)	\pm 10 Vdc @ 1 mA max.
Output impedance (receiver)	< 1 Ohm
Electrical termination (receiver output)	Screw terminal

Propulsion Monitoring System

OPTION CODES

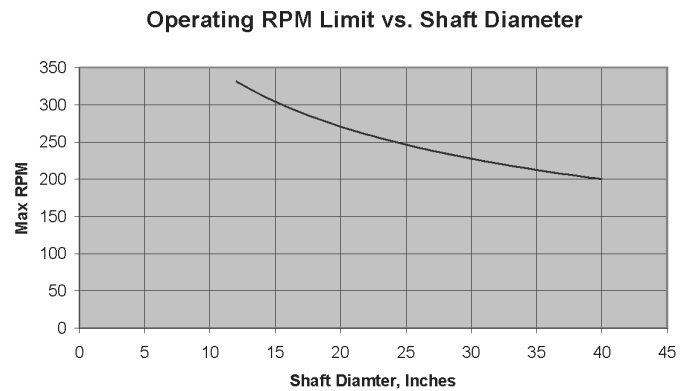
Range Code	Many range/option combinations are available in our quick-ship and fast-track manufacture programs. Please see http://sensing.honeywell.com/TMsensor-ship for updated listings.
Totalizer	62a. Horsepower-hour totalizer 62b. Revolutions totalizer
RF operating frequency	16 MHz ¹
Display (receiver)	62c. Remote display
Analog output (receiver)	62e. 1 Channel 4 mA to 20 mA isolated output 62f. 2 Channel 4 mA to 20 mA isolated output
Filter (receiver)	62d. EMI filter for analog outputs
Collar material	Zinc-plated steel ²
Shock and vibration	62g. Heavy duty shield and receiver

1. Other frequencies available. Consult factory.
2. Other collar materials available. Consult factory.

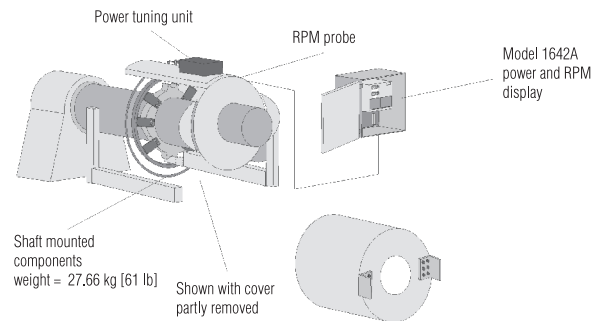
MECHANICAL SPECIFICATIONS

Characteristic	Measure
Dimensions (collar cross section)	Varies with shaft diameter
Dimensions (receiver) (L x W x H)	406,4 mm x 508 mm x 254 mm [16 in x 20 in x 10 in]
Dimensions (PSU)	Not applicable (built into shield assembly)
Rotational clearance (collar)	Varies with shaft diameter
Shaft diameter limits (collar)	381 mm to 762 mm [15 in to 30 in]
Collar material	Zinc-plated steel

RPM LIMITS GRAPH²



TYPICAL SYSTEM DIAGRAM



Warranty. Honeywell warrants goods of its manufacture as being free of defective materials and faulty workmanship. Honeywell's standard product warranty applies unless agreed to otherwise by Honeywell in writing; please refer to your order acknowledgement or consult your local sales office for specific warranty details. If warranted goods are returned to Honeywell during the period of coverage, Honeywell will repair or replace, at its option, without charge those items it finds defective. **The foregoing is buyer's sole remedy and is in lieu of all warranties, expressed or implied, including those of merchantability and fitness for a particular purpose. In no event shall Honeywell be liable for consequential, special, or indirect damages.**

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Email inquiries to info.sc@honeywell.com

⚠ WARNING
PERSONAL INJURY

- DO NOT USE these products as safety or emergency stop devices or in any other application where failure of the product could result in personal injury.

Failure to comply with these instructions could result in death or serious injury.

⚠ WARNING
MISUSE OF DOCUMENTATION

- The information presented in this catalogue is for reference only. DO NOT USE this document as product installation information.
- Complete installation, operation and maintenance information is provided in the instructions supplied with each product.

Failure to comply with these instructions could result in death or serious injury.