

GENERAL INFORMATION

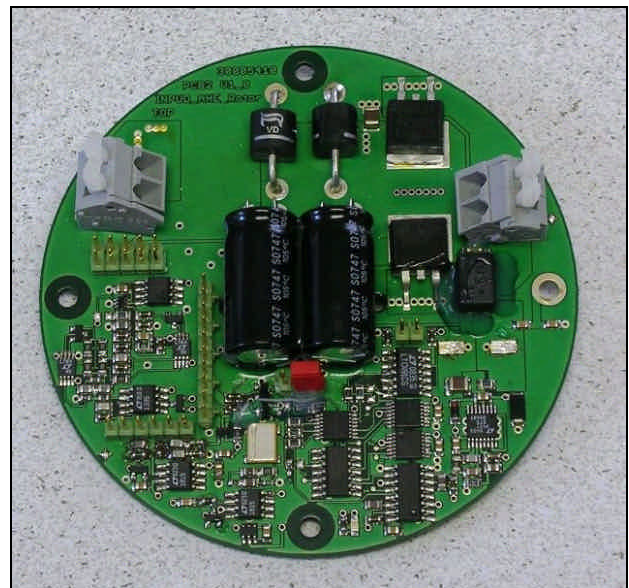
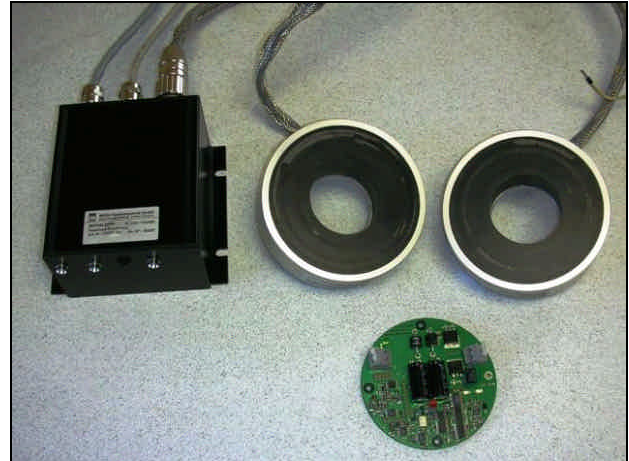
The DON 100 HE30 Inductive Power and Data Transmission System is a highly integrated system for non-contact transmission of power and data across a small air gap. When mounted directly across for one another, power is transferred and the data is coupled. Power, up to 100 Watt, at 24 V DC is transferred at a high rate of efficiency. Equipped with our proprietary load sensing feedback electronics the DON 100 keeps the primary load in balance with the secondary's load demand, from 0 to 100 Watt. Standard communications is RS 485 serial interface, at 256 K baud. The active coupling area comprises of two facing rings. There is a 45 mm center hole in each ring suitable for a shaft of fluid coupling.

The DON 100 HE 30 has a simplified configuration with limited housing and an exposed secondary PCB. Customization of the housing, method of fixating the rings or other hardware for OEM customers should be discussed with our engineers. Both the stationary and rotation electronics are separated from the core/coils with a short length of cable. The secondary ring and PCB have been tested to 2500 rpm. For other possible configurations of the DON 100 system, please contact MESA.

The HE30 version of the DON 100 is suitable for underwater operation, at high pressures (see specs).

APPLICATIONS

- AUV and ROV
- Blade pitch control



DON 100 HE30 TECHNICAL DATA (Item number: 03001300)

Electrical

Power supply	24VDC ($\pm 5\%$), I = 6A
Secondary power	24VDC ($\pm 10\%$), 100W
Secondary load	0...100% (controlled dynamically by feedback)
Data interface	RS485 interface, 256 k Baud
Status	via LED at stationary electronics unit
Power on/off	Remotely controlled to switch on/off the power transmission

Mechanics Stator (non-rotating parts)

Stationary electronic dimensions	120 x 100 Shielded cable tails for power supply and data interface, each 50-cm long
Stationary coupling ring	$\varnothing = 110\text{mm}$ x h = 25mm x ID 25mm, HE30 Aluminum, Potting: Electrolube Polyurethane Resin (suitable for high pressure environments)
Air gap	0.7mm, $\pm 0.2\text{mm}$

Mechanics Rotor (rotating parts)

Rotating coupling ring	$\varnothing = 110\text{mm}$ x h = 25mm x ID 25mm, HE30 Aluminum, Potting: Electrolube Polyurethane Resin (suitable for high pressure environments)
Rotating electronics	OEM version: PCB dimensions: $\varnothing 92\text{mm}$ diameter x 25mm high,
Connections	Rotary coil: SUB D 7W2 female with interface connector to rotating electronics Rotating electronics provided with male connectors for output voltage and data
Rotational speed	0 to 2500 rpm (higher available)

FEATURES

- 24 V DC power supply
- Power transmission up to 100 Watt
- 45-mm ID center hole
- RS 485 serial data communications
- Core/coils fully potted
- Rotation to 2500 rpm

BENIFITS

- Standard power
- Load controlled power
- Fits up to 45-mm shaft
- Standard data communications
- Environmentally protected
- Maintenance free operation

YOUR LOCAL REPRESENTATIVE

Mesa Systems Co.

MESA Systems Co.

20 Cove Road, Unit 3
Stonington, CT 06378
Phone: 508-359-5322
fax: 508-359-5339

support@mesasystemsco.com
www.mesasystemsco.com

Technical Data is subject to change
Version: DON 100 Watt Power & Data Coupler, 6/2009