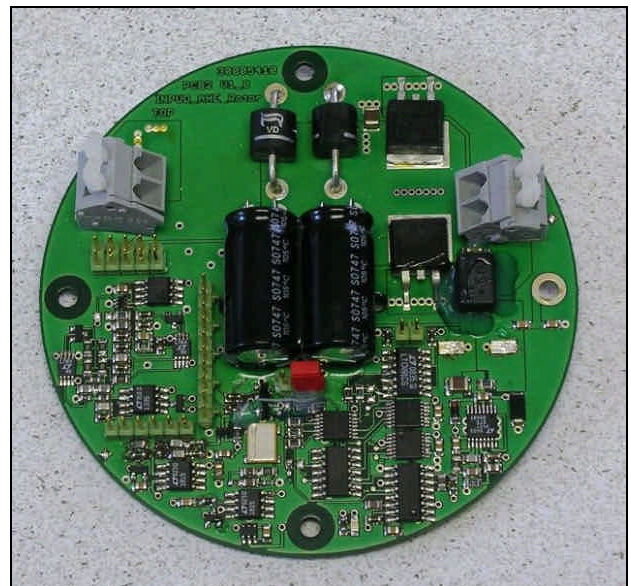
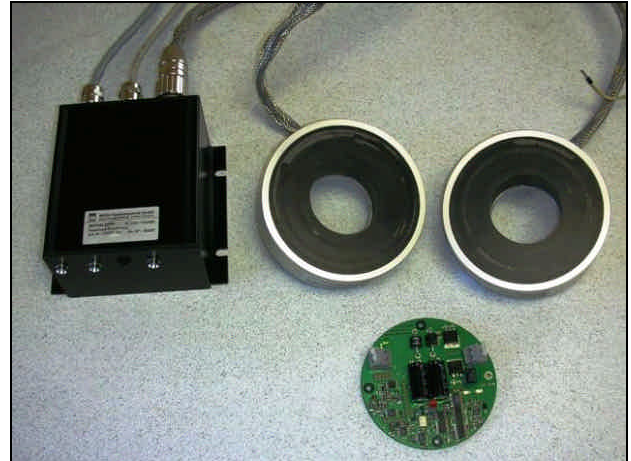


GENERAL INFORMATION

The DON 100 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 a bidirectional RS 485 serial interface at 56 K baud (high data rates are available). The active coupling area comprises of two facing rings. There is a 50 mm (2") center hole in each ring suitable for a shaft of fluid coupling.

The DON 100 is shown in 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 can be discussed with our engineers. Both the stationary and rotation electronics are remote for 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, please contact MESA.



APPLICATIONS

- Centrifuges
- AUV and ROV
- Robotics
- Blade pitch control

DON 100 TECHNICAL DATA (Item number: 03001300)

Electronics

Power supply	24VDC ($\pm 5\%$), I = 6A
Secondary power	24VDC ($\pm 10\%$), 100W
Secondary load	0...100% (controlled dynamically by feedback)
Data interface	RS485, bidirectional, 56k 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)

Housing Dimension	Fischer Box 120 x 105 x 65mm (aluminum) Shielded cable tails for power supply and data interface, each 50-cm long Receptacle for stationary coupling unit Fixations to be agreed upon
Stationary coupling	$\varnothing = 116.9\text{mm}$ h = 32.7mm
Air gap	0.7mm, $\pm 0.2\text{mm}$

Mechanics Rotor (rotating parts)

Rotating coupling	$\varnothing = 116.9\text{mm}$ h = 32.7mm, 20-cm shielded cable tail to the rotating electronics (see manual)
Rotating electronics	OEM version: PCB dimensions: 92mm 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
- 50-mm ID center hole
- RS 485 serial data communications
- Core/coils fully potted
- Rotation to 2500 rpm (without contact)

BENIFITS

- Standard power
- Load controlled power
- Fits up to 50mm shaft
- Standard data communications
- Environmentally protected
- Maintenance free operation

YOUR LOCAL REPRESENTATIVE

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

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