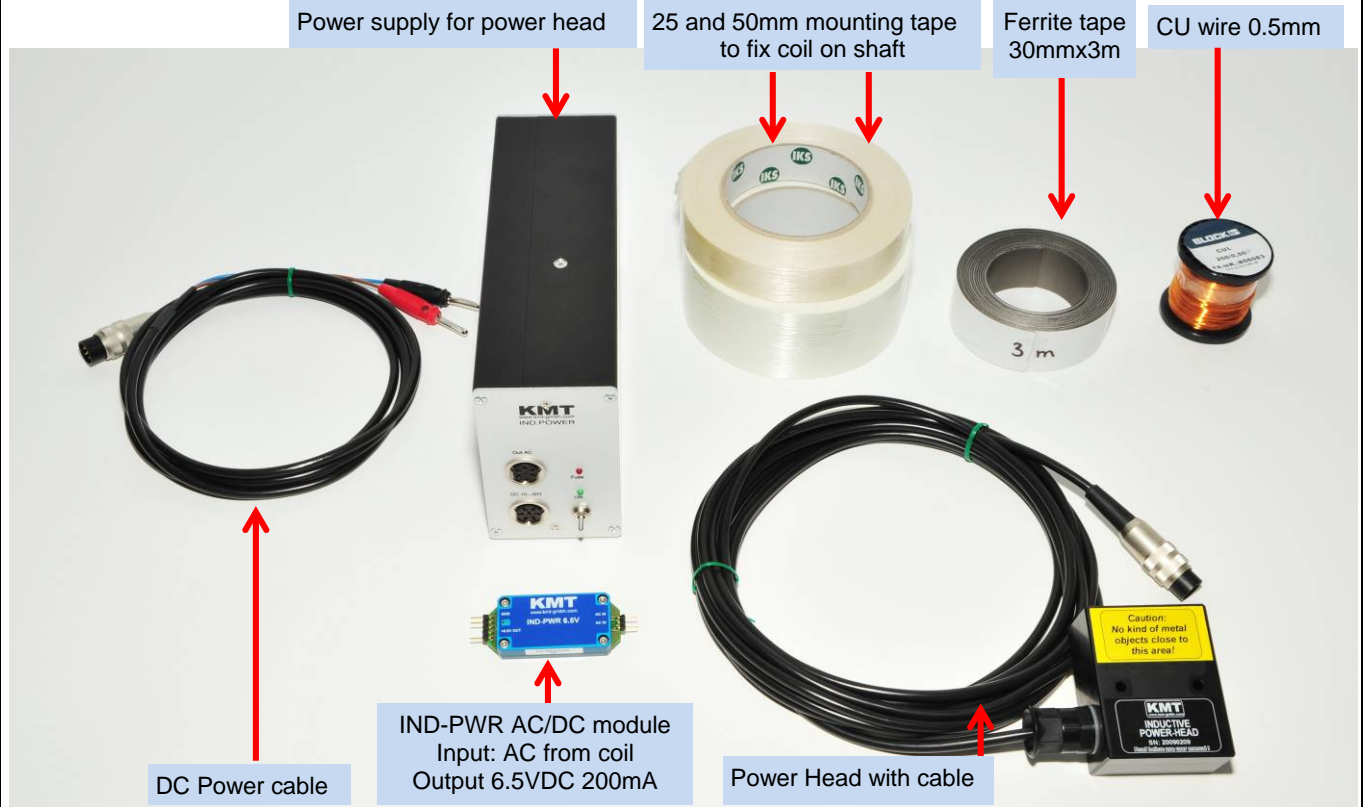


Safety notes

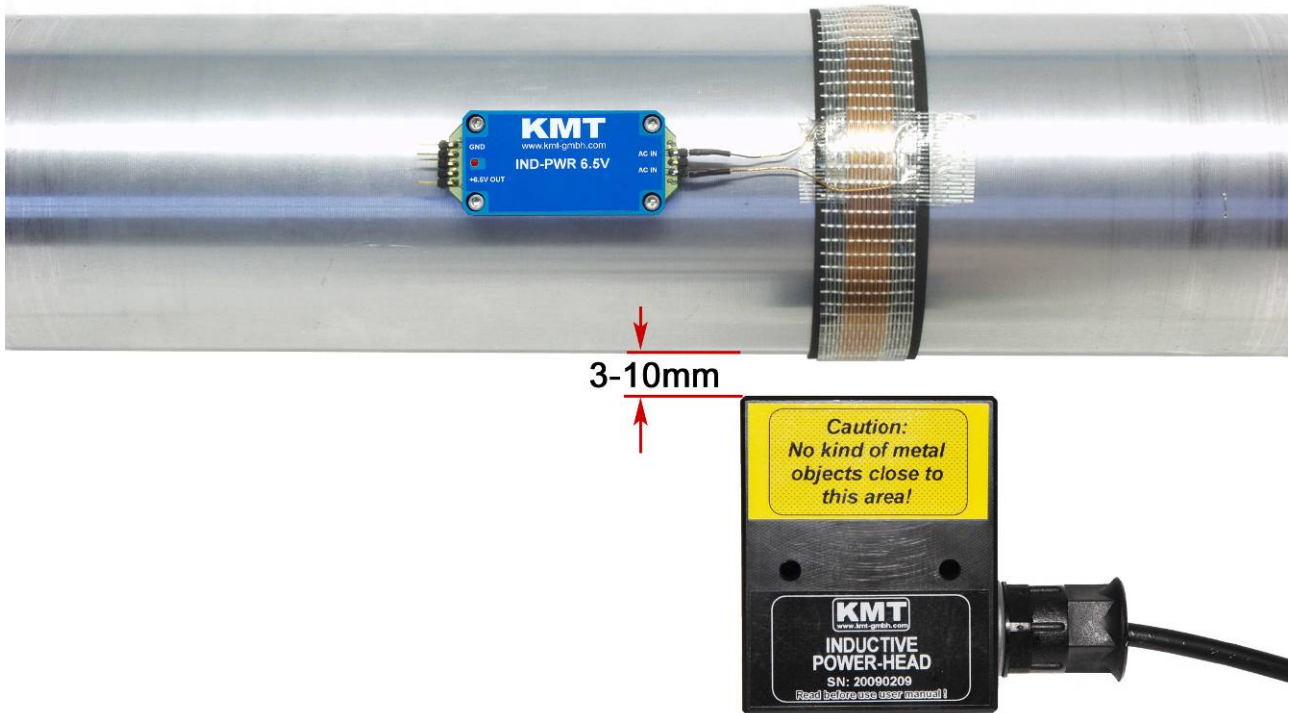
- The device should only be applied by instructed personnel.
- The power head emits strong magnetic radiation at 30-60 kHz to a distance of 300 mm. Therefore persons with cardiac **pacemakers** should **not work** with this device!
- Magnetic data storage media should be kept in a distance of at least 3m from the power head to avoid data loss. The same is valid for electromagnetic sensitive parts, devices and systems.
- Do **not place** the power head in the switched-on state **on metallic objects**, because this results in eddy currents which could overload the device and strongly heat up small objects. Also the probe could be destroyed!
- No metallic objects, other than the disc-type coil, should be located in the air gap of the power head. The same applies to metallic parts within a radius of up to 50 mm in all directions.
- Do not use damaged or faulty cables!
- Never touch in the area between shaft and inductive head, the rotating shaft itself or rotor electronic contacts during operation!
- This is a "Class A" system suitable for operation in a laboratory or industrial environment. The system can cause electromagnetic interferences when used in residential areas or environments. In this case the operator is responsible for establishing protective procedures.

Inductive power supply set

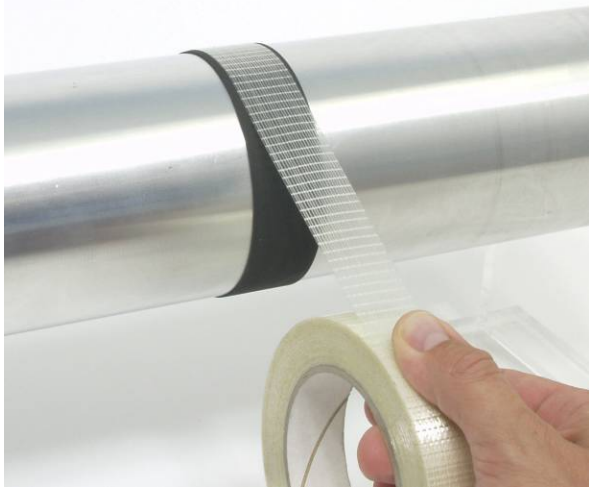
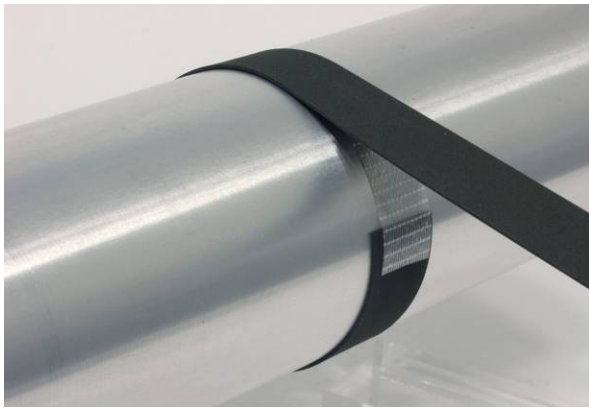
Picture shows standard Inductive Power Supply for diameter up to 300mm



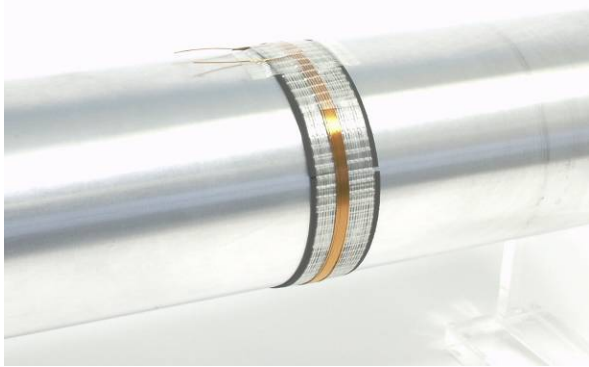
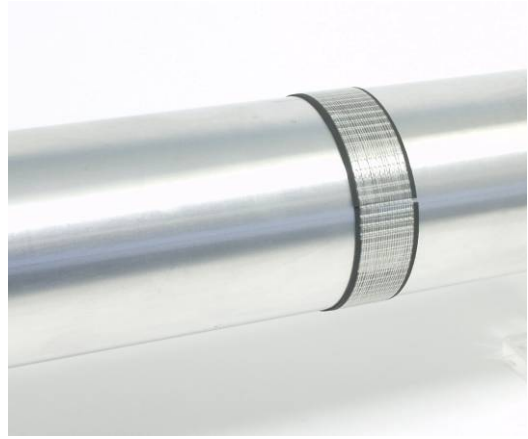
Mounted on shaft



Installation of coil for inductive powering on shaft



Attach for electromagnetic insulation "Ferrite Tape"
- **2 x layers Ferrite-Tape** around the shaft
- Fixed with 2 layers mounting tape



Wind the 0.5 mm enameled copper wire around the shaft:

- 4-25 windings for 500-20mm diameter

Other diameter on request!

***Note:** "The inductive load of the IND-PWR AC/DC module and the capacitor in the Power Head must be in resonance to get the optimal transmission. The inductive load of the shaft depends of diameters, material and number of windings. "*

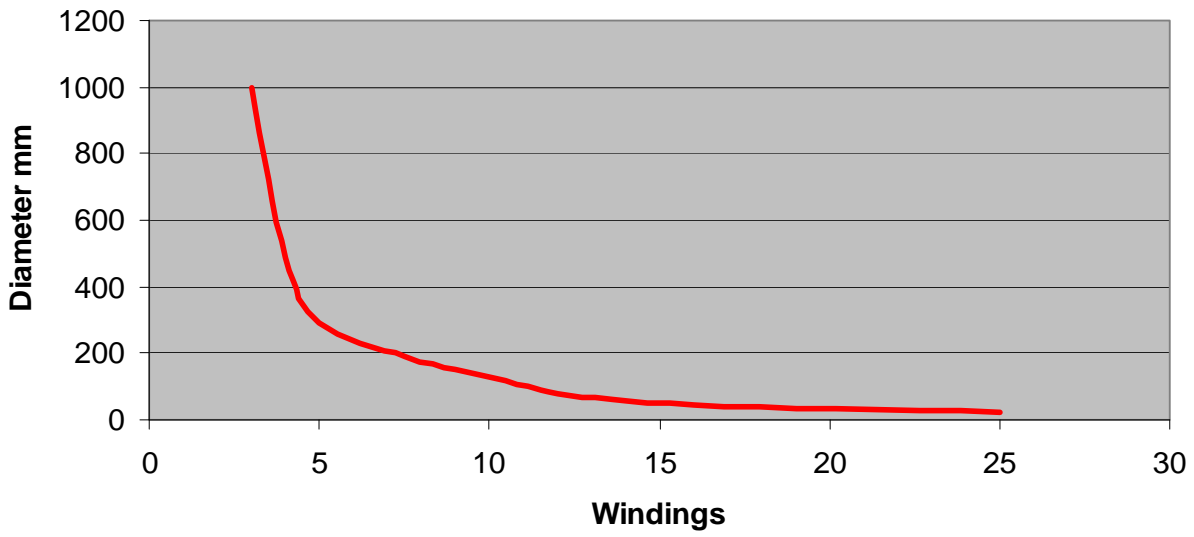
To find the optimal transmission try one winding more ore less. The LED on the Inductive Power module will help to find the best configuration. The distance between powerhead and the coil is 3-10mm.

Control the output voltage and move the powerhead in the max distance to the coil.

The minimum Output voltage must be 6,5 V!

Fix all with 2-3 layers around the coil with mounting tape.

Optimum windings for steel shafts

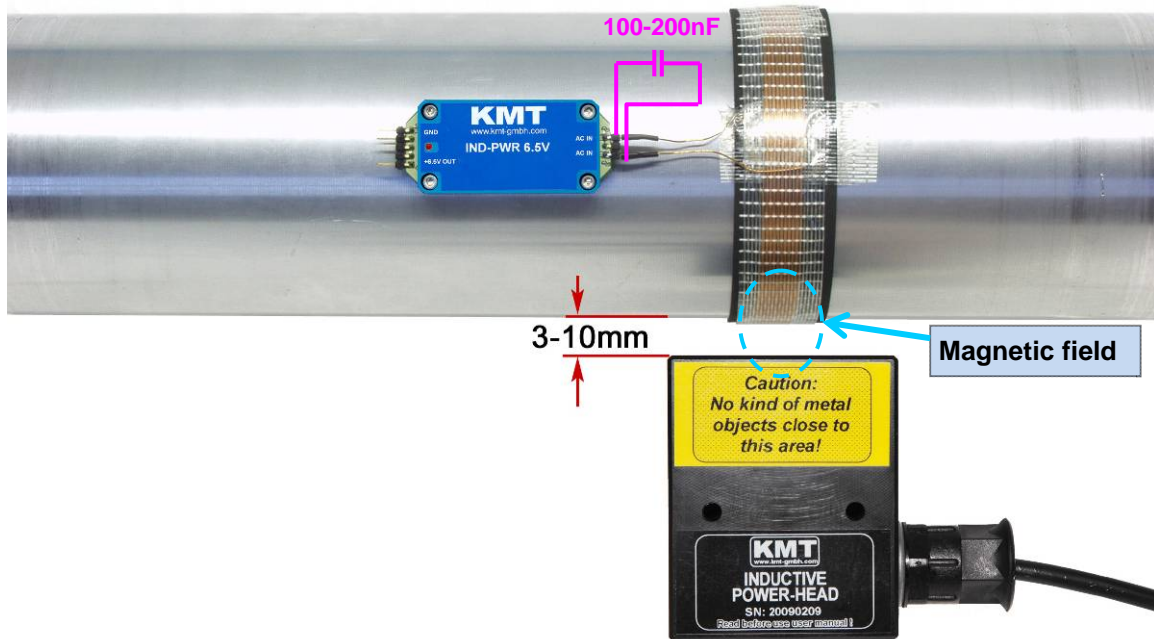


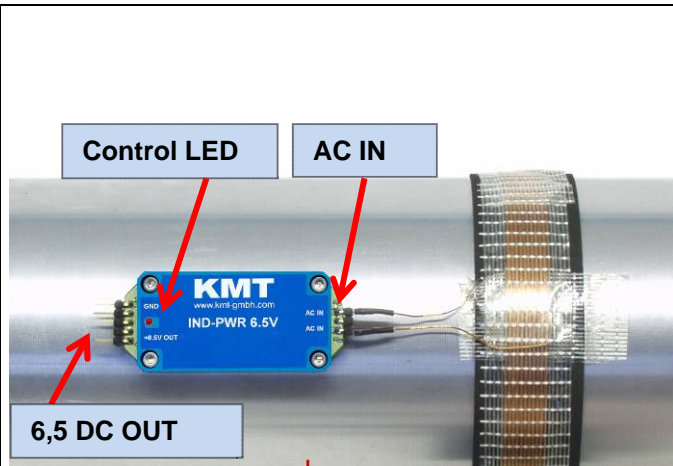
Diameter (mm)	Windings	Fine adjustment capacitor parallel to coil
1000	4-5	100-200nF (Type MKT or MKS 250V)
490	4-5	100-200nF (Type MKT or MKS 250V)
290	5	100-200nF (Type MKT or MKS 250V)
190	7	---
150	9	---
120	10	---
80	12	---
45	16	---
20	25	---

We recommend a capacitor decade e.g



100pF 11,111 μF



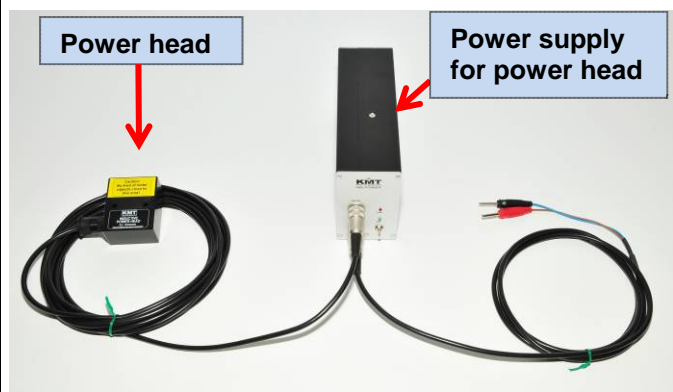


The pins "AC IN" are the AC power input from the coil. On the pins "+6.5" and "GND" you get a stabilized output voltage of 6.5V DC. The control LED will lights up, as soon as the power head is switched on and at the right position - close enough to the coil on the shaft. The max. load current on the DC output is 100mA. The AC/DC converter will use instead battery pack!

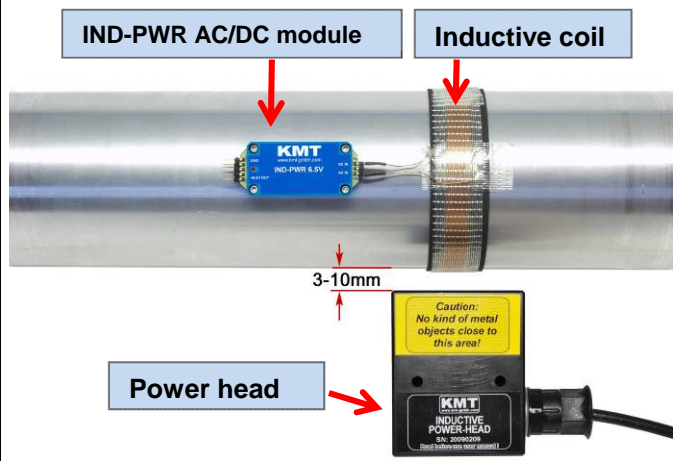
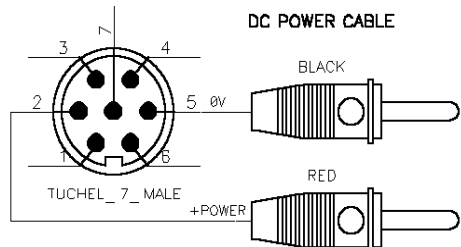


Never use any battery together with the IndPwr!

Installation of the power head for inductive powering



Connect the power head on the "AC Out" socket of the power box and then the DC power cable on the "DC In 10-30V" socket. The two banana plugs have to be connected to a DC power source with red on +10-30V DC and **black** on **0V**.



You should mount the power head at a fixed location that it's as free as possible from vibration influences. The center of the coil should be in the same horizontal position as the center of the power head. The distance is optimal in the range between 3 and 10mm. (depends of shaft and current consumption) If the red LED of the AC/DC converter lights up, the position of the power head is OK.

Block diagram TempTEL8 ENC with inductive power supply

