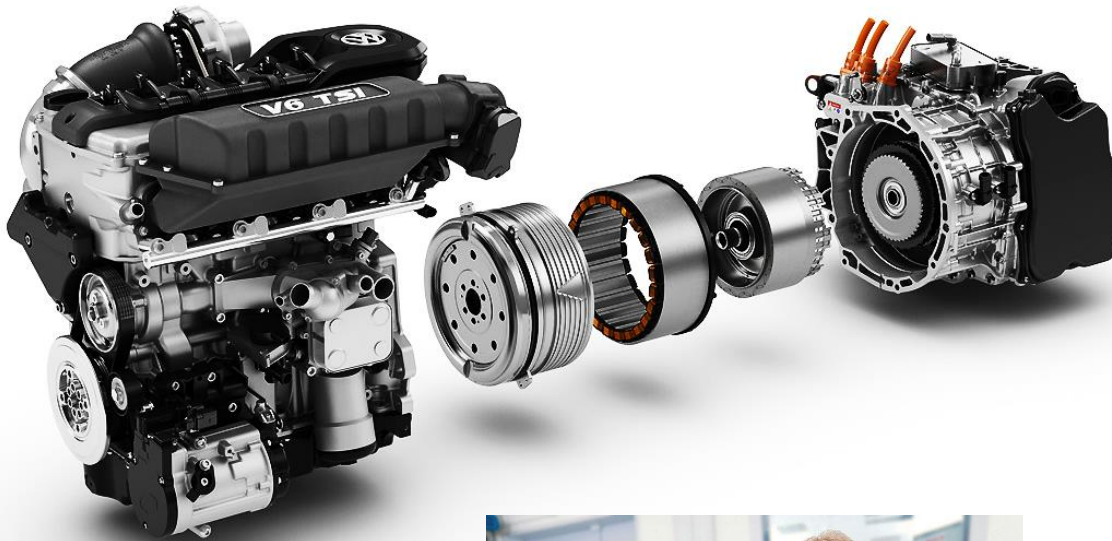


eDrive Rotor Temperature Testing

Temperature Measurement
in Permanent Magnets of Hybrid Electric Motors



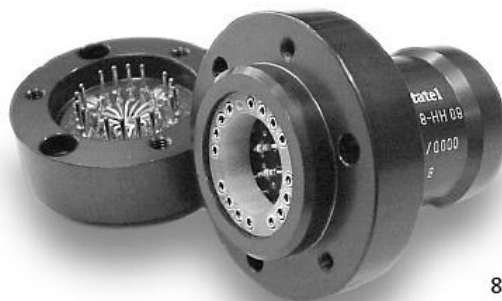
8ch. Telemetry Transmitter
(Customized, Ring Shaped)



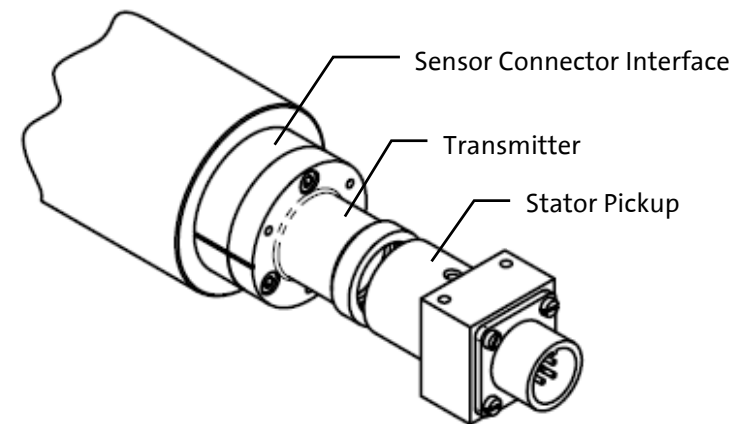
8ch. Telemetry Transmitter
(Shaft End Installation)

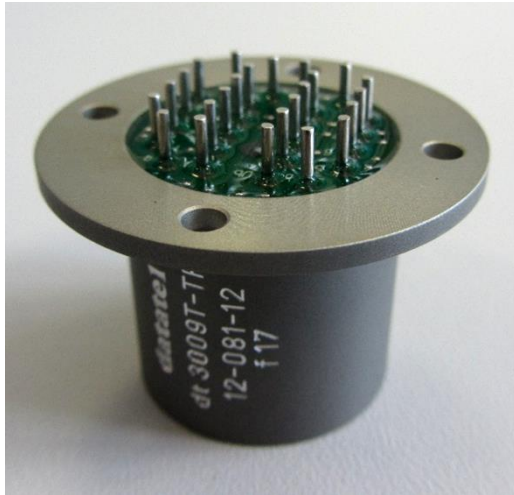
eDrive Rotor Temperature Testing

- Telemetry systems for accurate and reliable temperature measurement on high-speed rotating shafts are available from datatel.
- Typical applications are testing of permanent magnet rotor temperature in eDrive test rigs, bearing and seal test rigs, automotive crank shafts, electric motors or any other application with accessible rotor shaft end.
- The compact telemetry module is attached directly to the test stand's rotor and does not require any complicated bearing assembly or lubrication as usually needed for traditional sliprings.
- Due to the wireless data and power transmission the system is free of wear and makes it suitable for continuous long-term operation at very high speed.
- The multi-channel telemetry system reads signals from 8 thermocouples or RTDs and provides the measured temperature data to any external data acquisition system.
- Special signal conditioning accepts both grounded and ungrounded thermocouples. Open or shorted thermocouples are automatically detected. Programmable gain signal conditioning and optional transmitter temperature monitoring is on board.
- A special sensor connection interface makes the installation and hookup easy. This feature enables the system to be swapped in a few minutes from one instrumented test item to another.



8 channel telemetry transmitter for temperature measurement, sensor connector interface for end of shaft installation

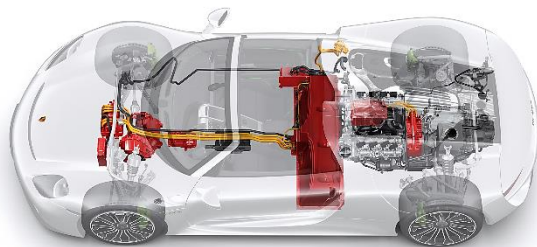


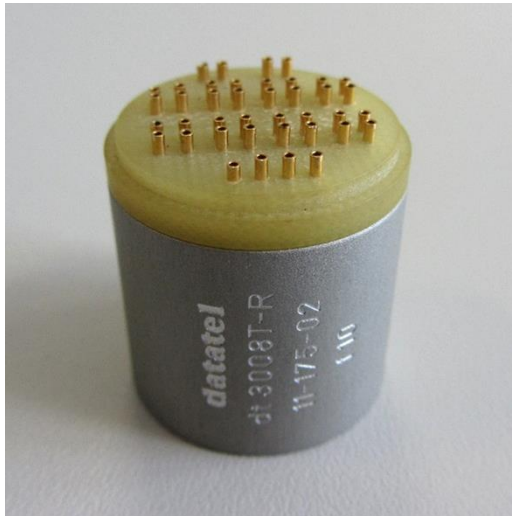


- 8ch. transmitter for temperature measurement
- Thermocouple type K input standard or optional any other type
- Additional RTD channel for external cold junction compensation option
- Grounded or isolated thermocouples can be used
- Programmable measuring range 200°C to 1200°C
- Signal bandwidth DC..10Hz (-3dB)
- Supply voltage range 5,6 .. 9V DC or inductive
- Watchdog function to monitor power supply status
- T/C open detection
- Operating temperature range -40..+125°C
- Solder pins or optional sensor connector interface
- Shaft end version available (high-speed applications up to 60.000rpm)
- Module size $\varnothing 25 \times 25$ mm, customized ring shaped versions available

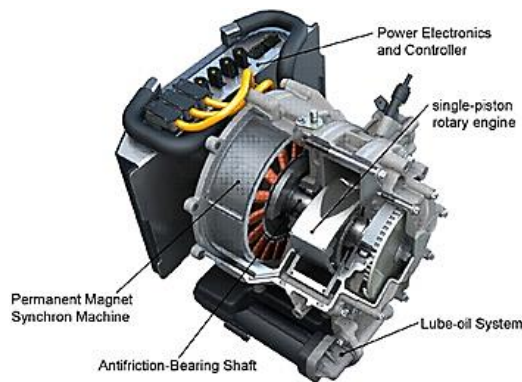
Typical Applications:

- Temperature measurement on electric motors/generators (e.g.. eDrive testing)
- Clutch and brake temperature testing
- Automotive crank shaft temperature measurement
- Bearing or seal test rigs
- High-speed spin test rigs
- Temperature surveys on turbine rotors, CF compressors or heavy-duty turbochargers





- 8ch. transmitter for temperature measurement
- RTD input (PT100)
- 4-, 3- or 2-wire hook-up
- Programmable measuring range 100°C to 700°C
- Signal bandwidth DC..10Hz (-3dB)
- Supply voltage range 5,6 .. 9V DC or inductive
- Watchdog function to monitor power supply status
- Operating temperature range -40..+125°C
- Solder pins or optional sensor connector interface
- Shaft end version available (high-speed applications up to 60.000rpm)
- Module size $\varnothing 25 \times 25 \text{mm}$



Typical Applications:

- Temperature measurement on electric motors/generators (eg. eDrive testing or rotor winding monitoring)
- Bearing or seal test rigs

Thank You for Your Attention !

datatel
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