



New

*Digital
RMC-Sensor-Telemetry
with 16 Bit resolution
and direct
PC-Interface*

New

What is RMC-Sensor-Telemetry ?

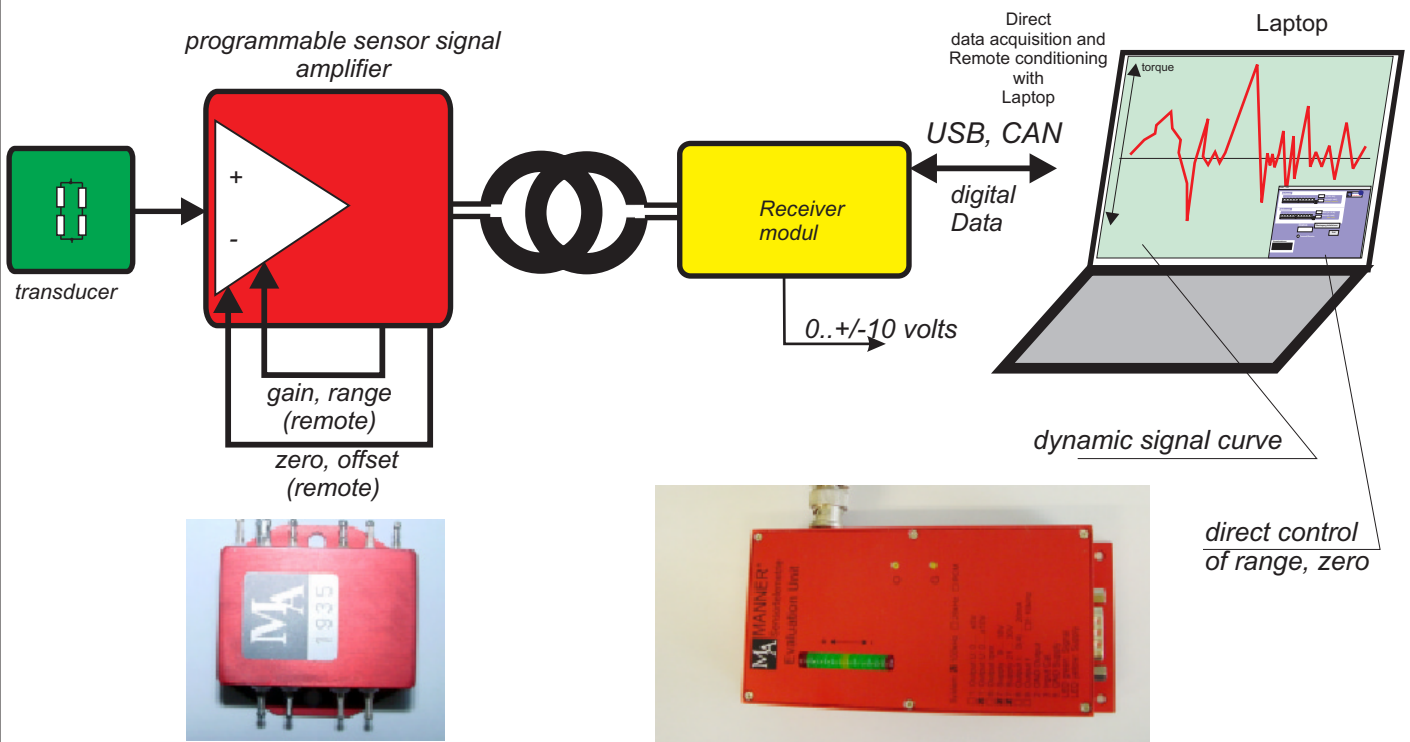
Telemetry System with

- * contactless transmitting of sensor signals of rotating parts
- * integrated inductive power supply for rotating parts (transducer and amplifier)
- * **direct interface to Laptop or PDA**

and

integrated remote online controlled sensor signal amplifier

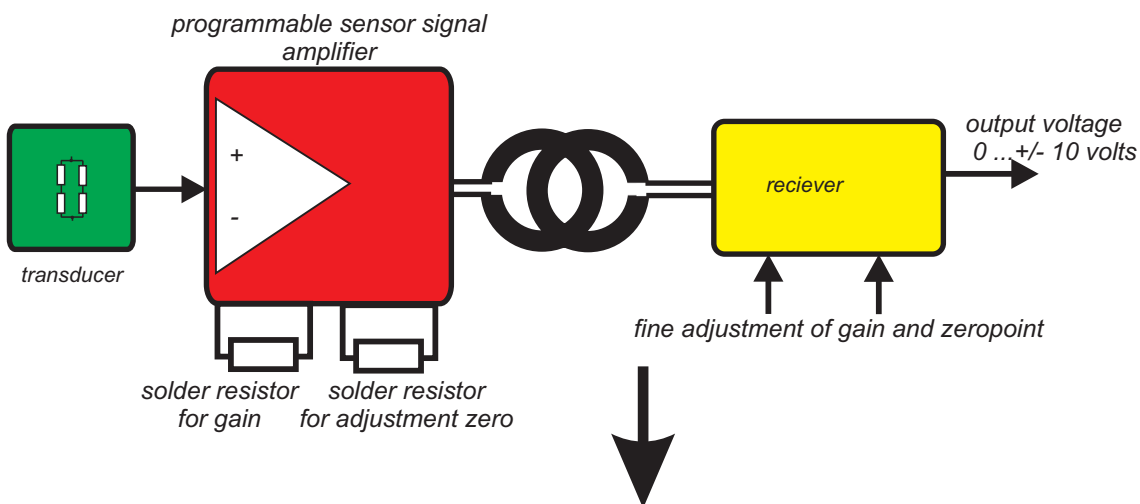
- * **gain, range control (high resolution adjustment of 16 bits)**
- * **Zeropoint, offset (high resolution adjustment of 16 bits)**
- * **remote Shunt Calibration**



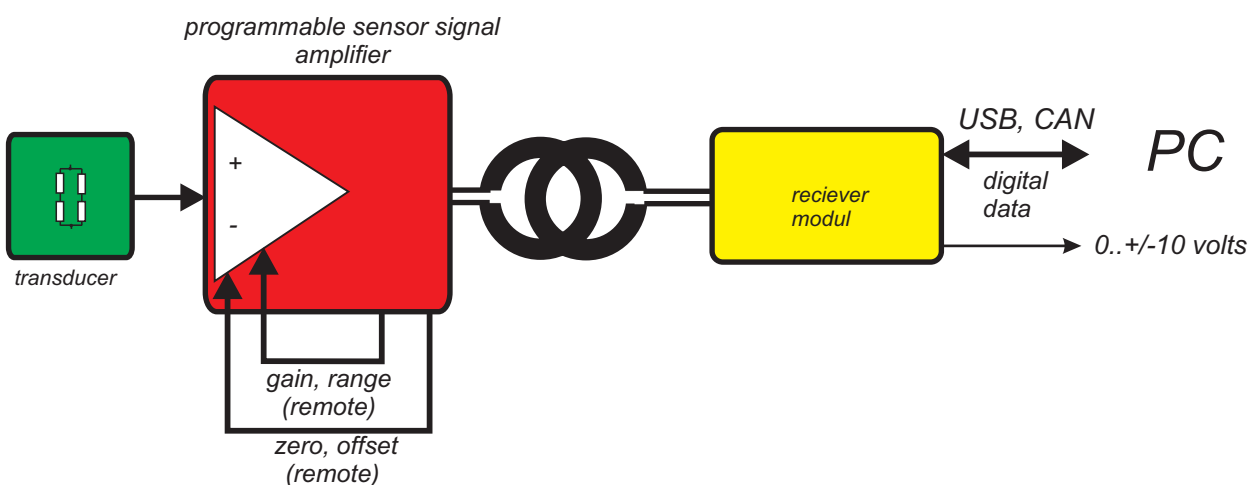
New

What the difference between classic sensor telemetry and RMC-sensortelemetry ?

classic sensortelemetry uses soldered resistors for control of gain (range) and offset of the input amplifier

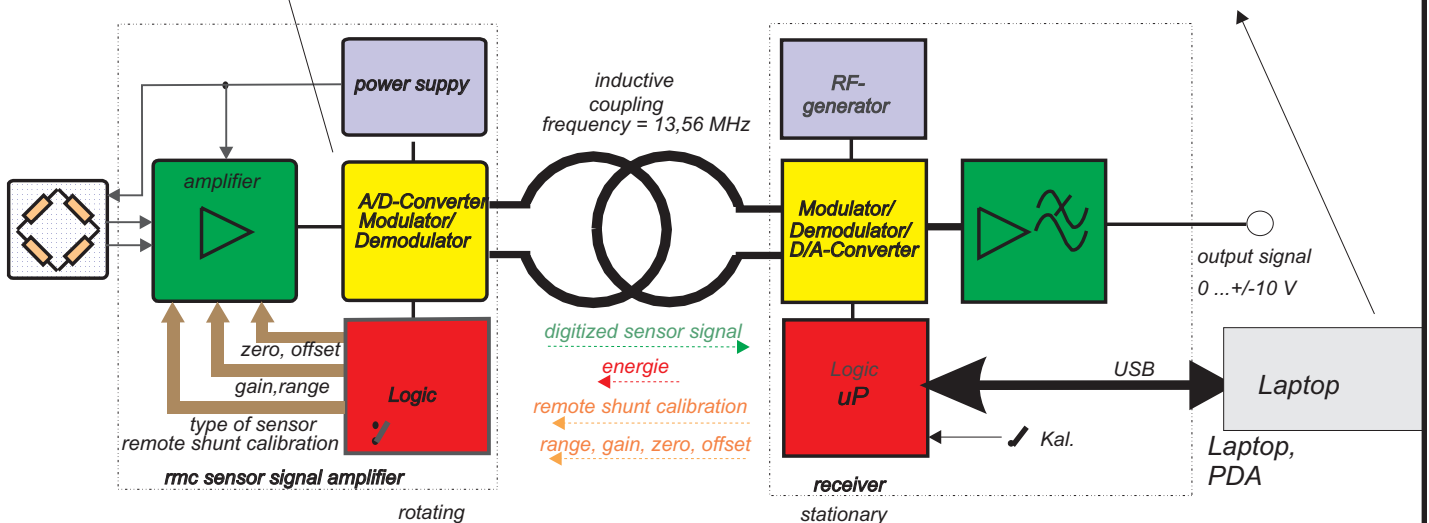
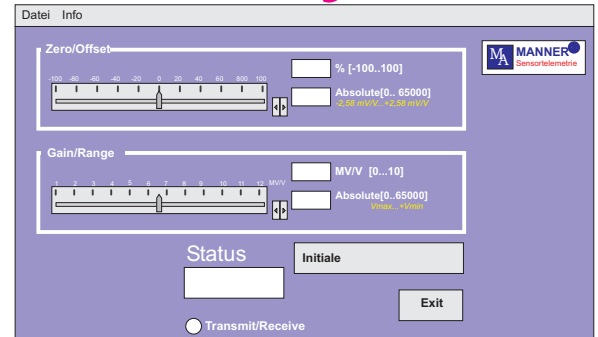
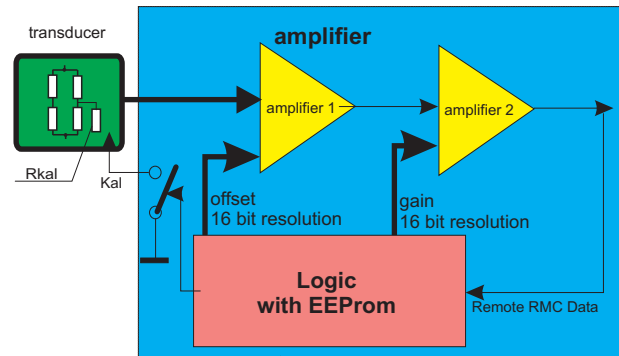


RMC sensortelemetry uses remote controlled electronically adjustment of gain (range) and offset of the input amplifier



New

How works the RMC-Sensor-Telemetry ?



The control data for gain and zero will be online transferred via the telemetry channel

Features:

- * Remote high resolution adjustment (16 bit) of gain, range (0,05 mV/V ... 10 mV/V)
- * Auto zero
- * Remote high resolution adjustment (16 bit) zero, offset (+/- 500 % from the adjusted range)
- * digitalizing of sensor signal with 16 bit resolution inside sensorsignal amplifier
- * integrated sensor signal amplifier for direct interface of strain gauge:
 - standard: strain gauge, PT100,
 - Option: thermo couple, piezoelectric transducer, ICP, LVDT)
- * remote shunt calibration (option)
- * integrated power supply for transducer and amplifier
- * very small zero/gain drift: 0,003 %/° Centigrade
- * very good linearity : < 0,003 %
- * environment temperature range: -25° ... 125° Centigrade (-45..+160° C, Option)
- * Schutzart: IP67
- * integrated Speedsensor (option)
- * serial Interface USB, direct control of gain and zero by Laptop, PDA

New

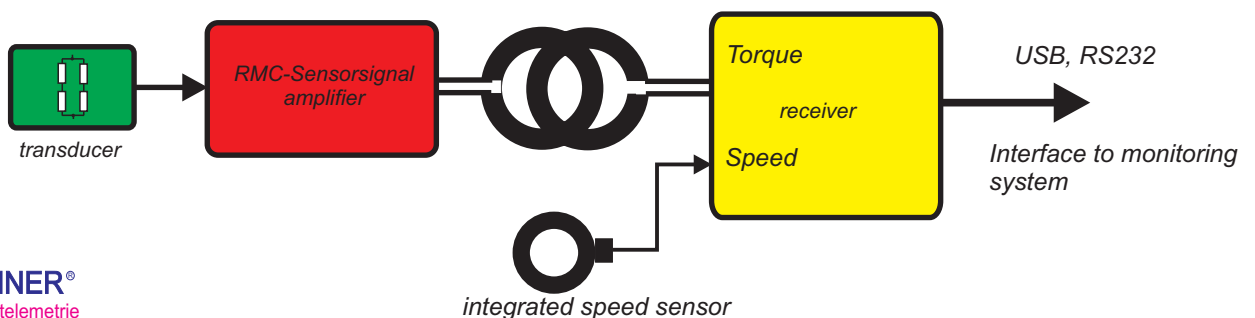
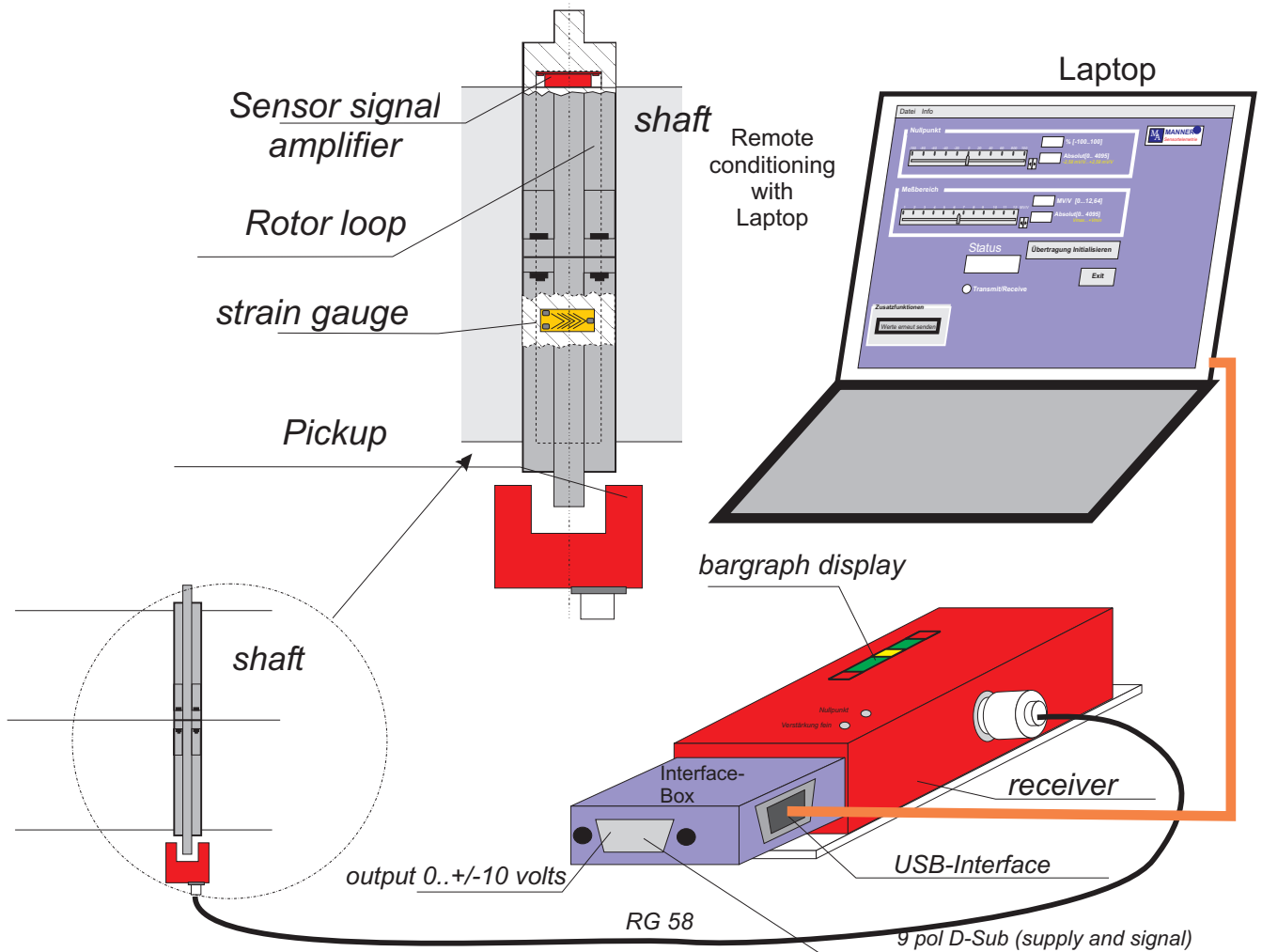
Why RMC-Sensor Telemetry?

RMC-Sensor-Telemetry

(power monitoring on ships)

advantages:

- * **easy mounting**
- * **initial remote setup of the torque sensor at installation**
- * **integrated speed pick up**
- * **direct display of torque on Laptop or PDA**
- * **remote online readjustment of torque (power) range**
- * **serial transmitting of digital data to monitoring system**

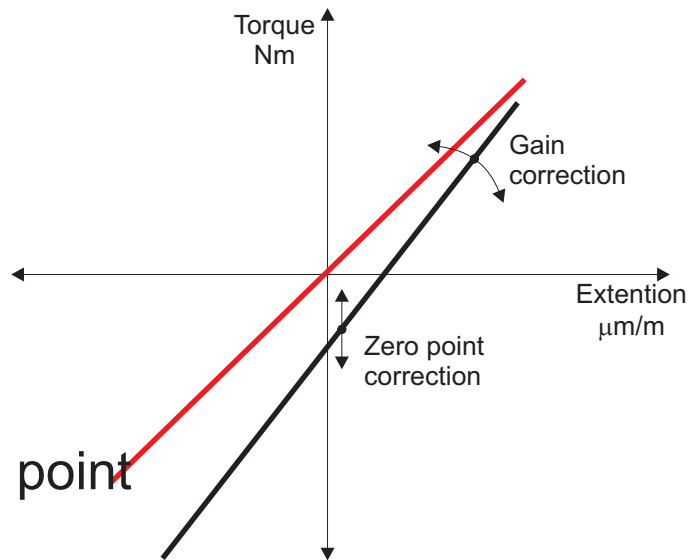


New

Why RMC-Sensor-Telemetry?

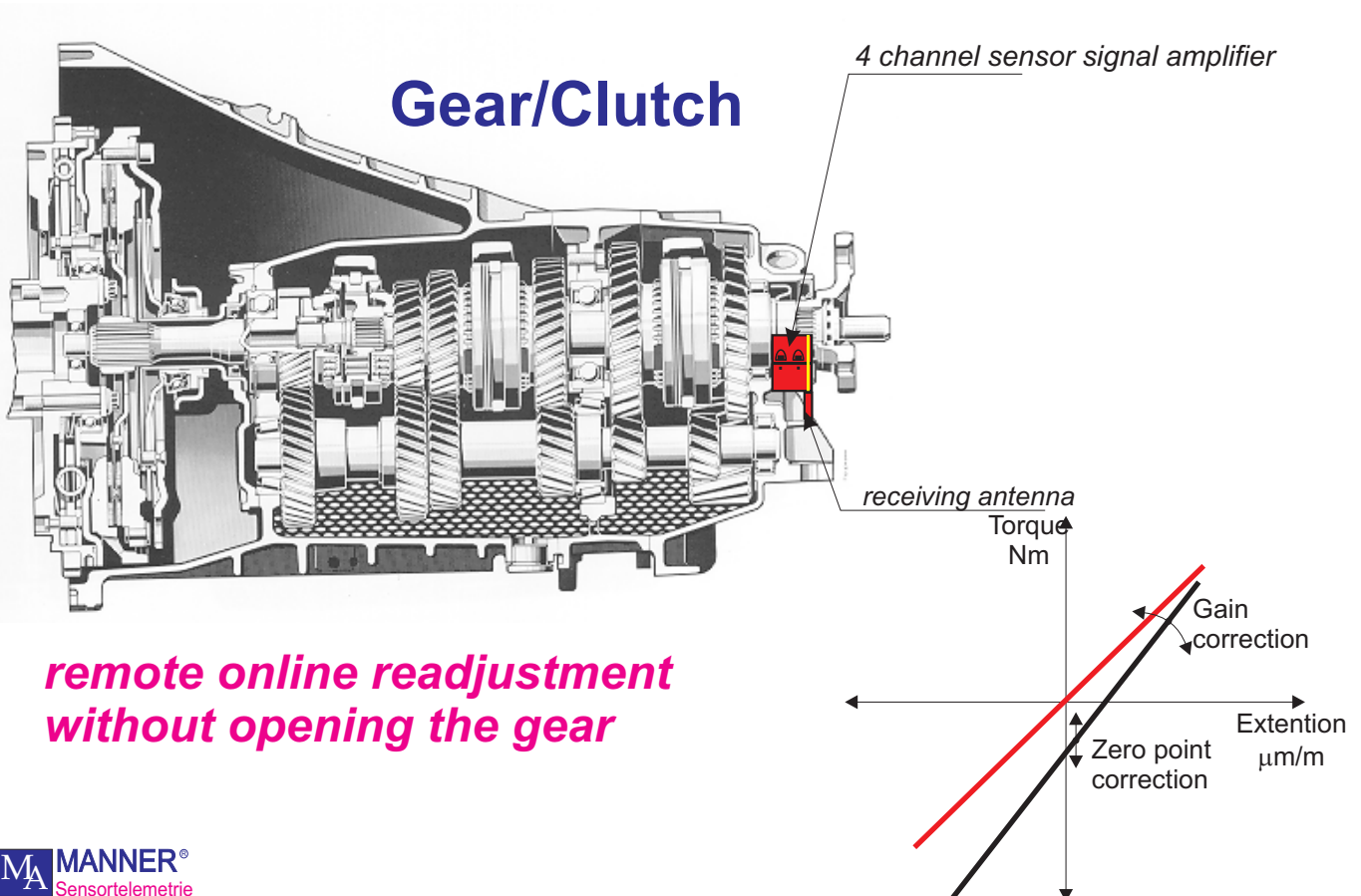
Application of strain gauges

initial remote setup of the torque sensor at installation



adjusting tolerances in zero point
adjusting tolerances in gain

No access to the rotor electronic



*remote online readjustment
without opening the gear*

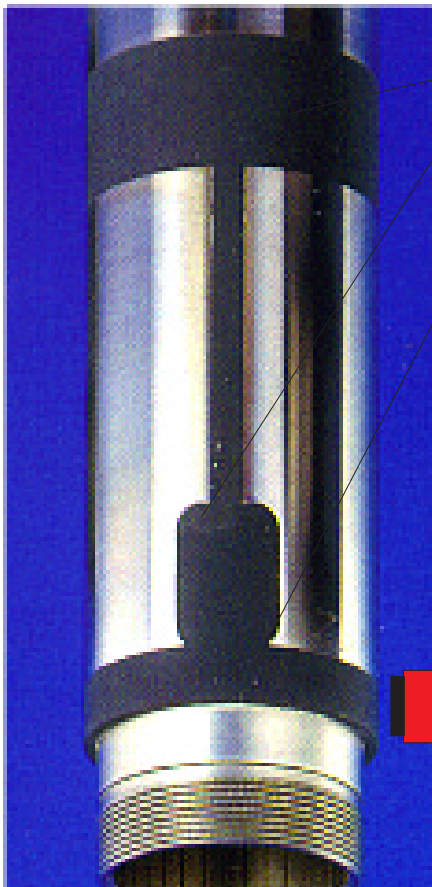
New

Why RMC-Sensor-Telemetry?

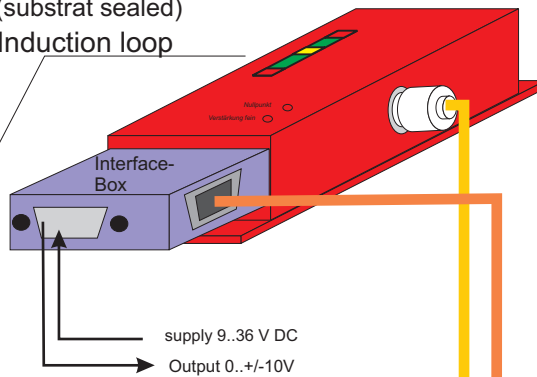
fully sealed torque transducer

initial remote setup of the torque sensor at installation and resetup at recalibration

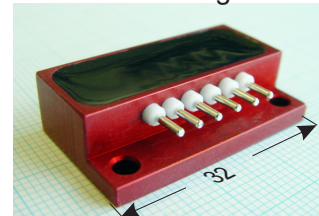
Custom spec. completely sealed torque transducer (water proof)



strain gauge encapsulated
RMC-Sensor signal amplifier (substrat sealed)
Induction loop

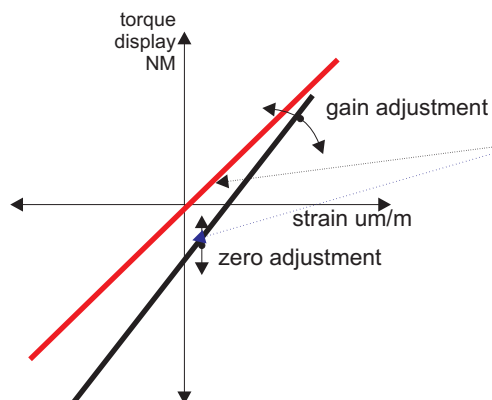


sensorsignal amplifier in metal housing

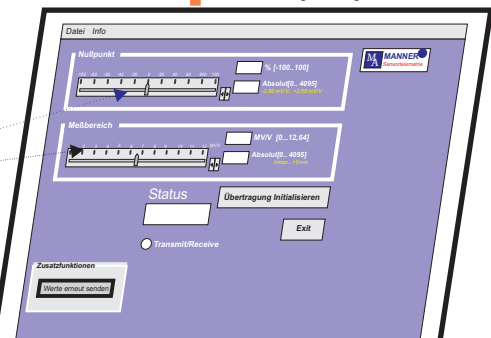


- * zero adjustment with 16 bits resolution
- * gain adjustment with 16 bits resolution
- * EE-storage inside rotor electronic

Laptop



Remote conditioning with Laptop

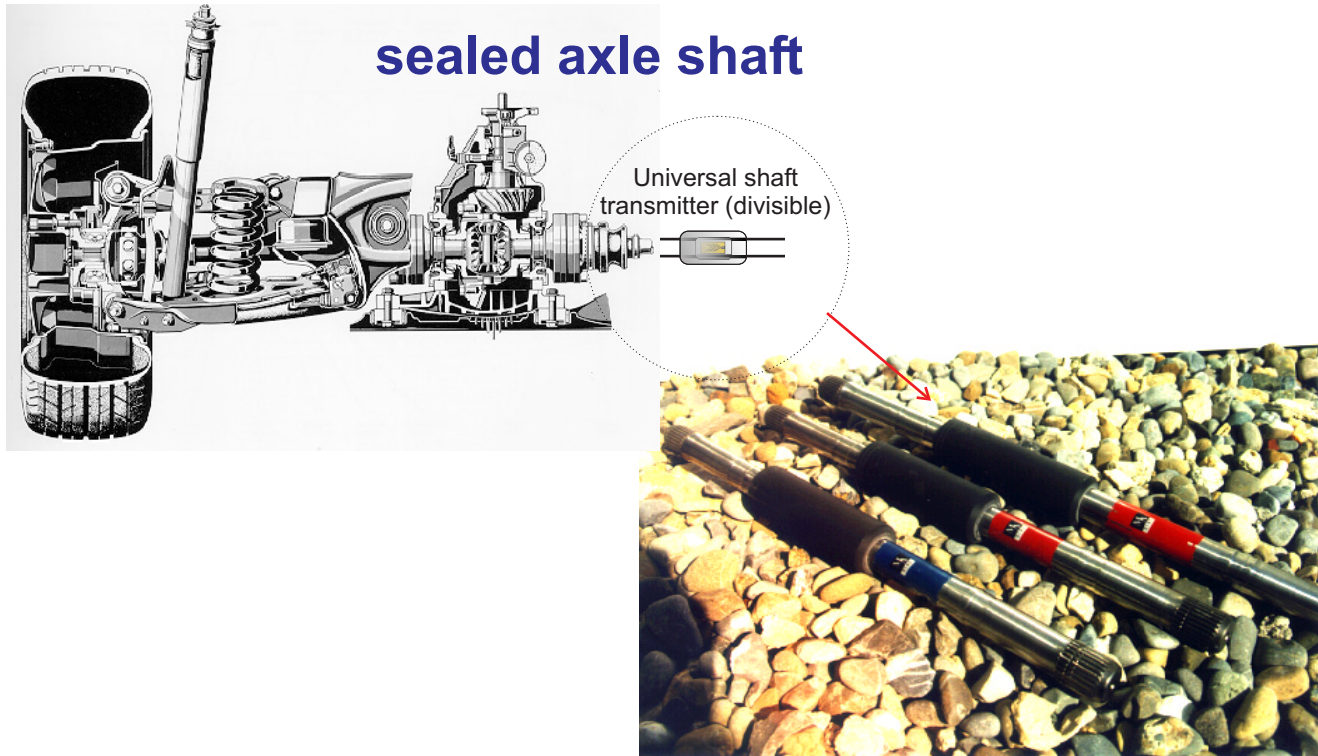


New

Why RMC-Sensor-Telemetry?

No access to the rotor electronic

sealed axle shaft



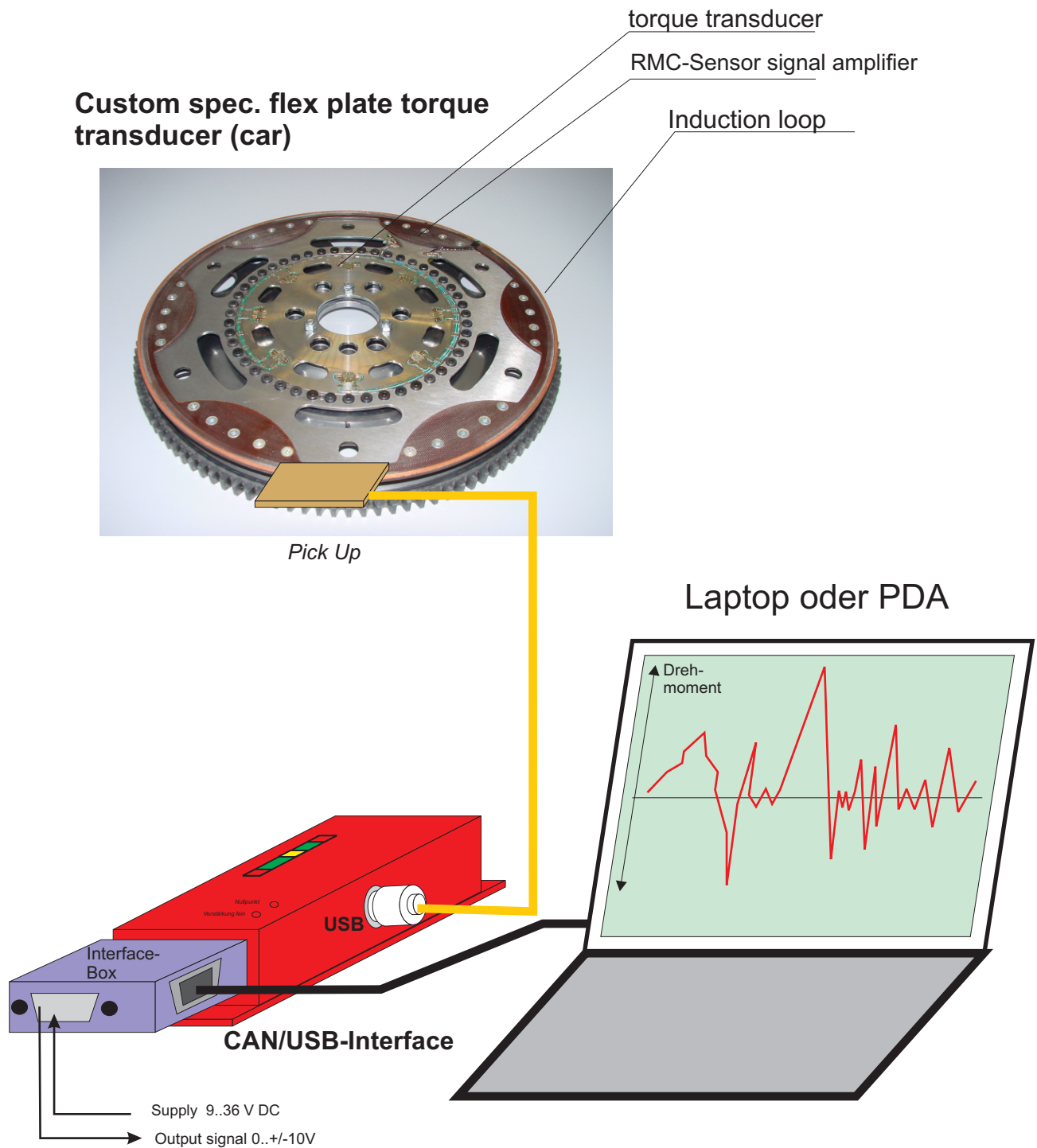
many channels (helicopters, turbines) >> big work load for conditioning



New

Acquisition of torque (flex plate) with RMC-Sensor-Telemetry?

change of range online possible



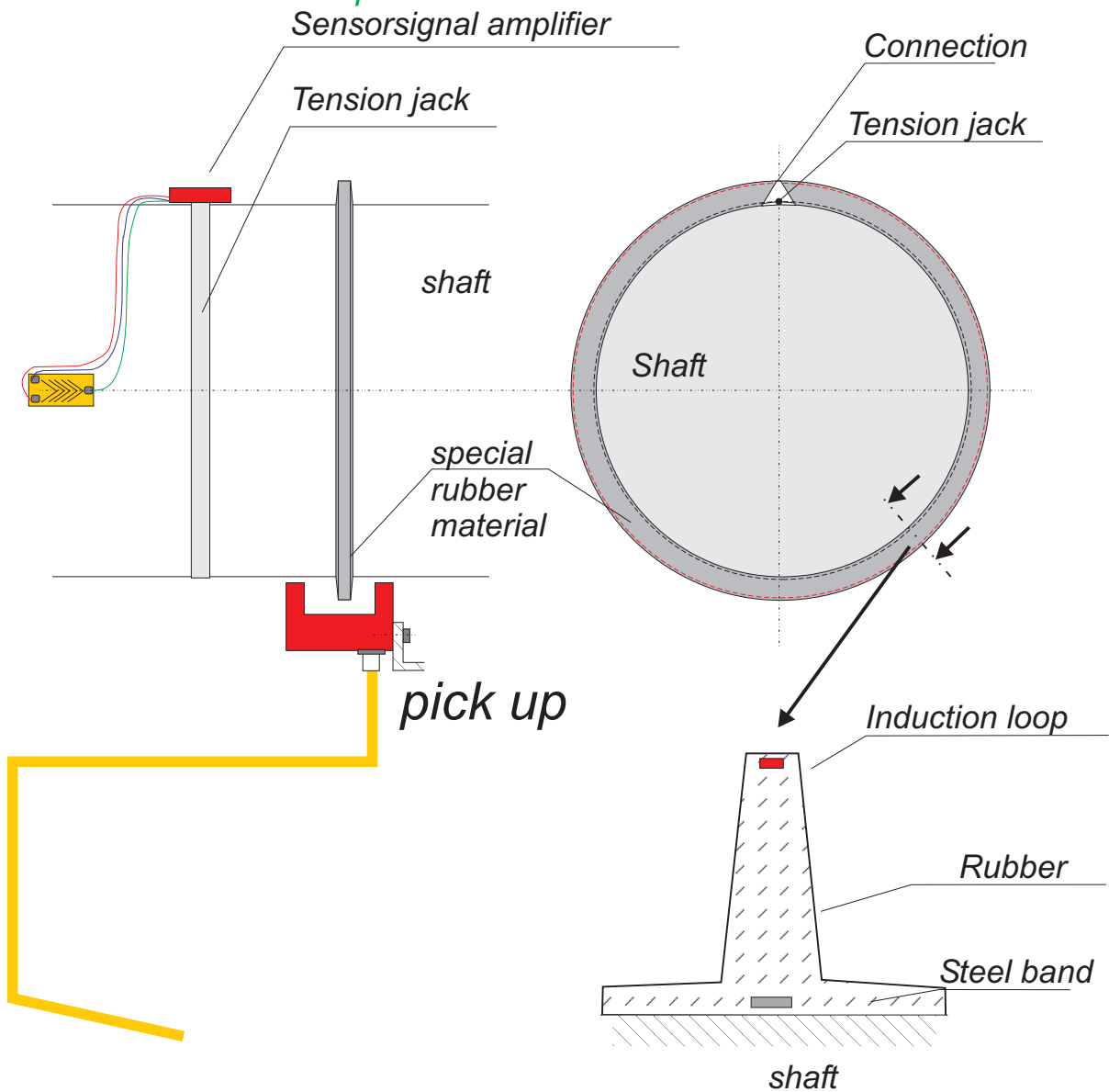
New

RMC - Sensor - Telemetry for mobile use in field

flexible rotor loop for easy mounting
on different diameters

by special rotor loop based on rubber band as meter ware

- * integrated rotor loop
- * integrated steel band for fixing on shaft
- * no gluing necessary
- * shaft diameters up to 2 m

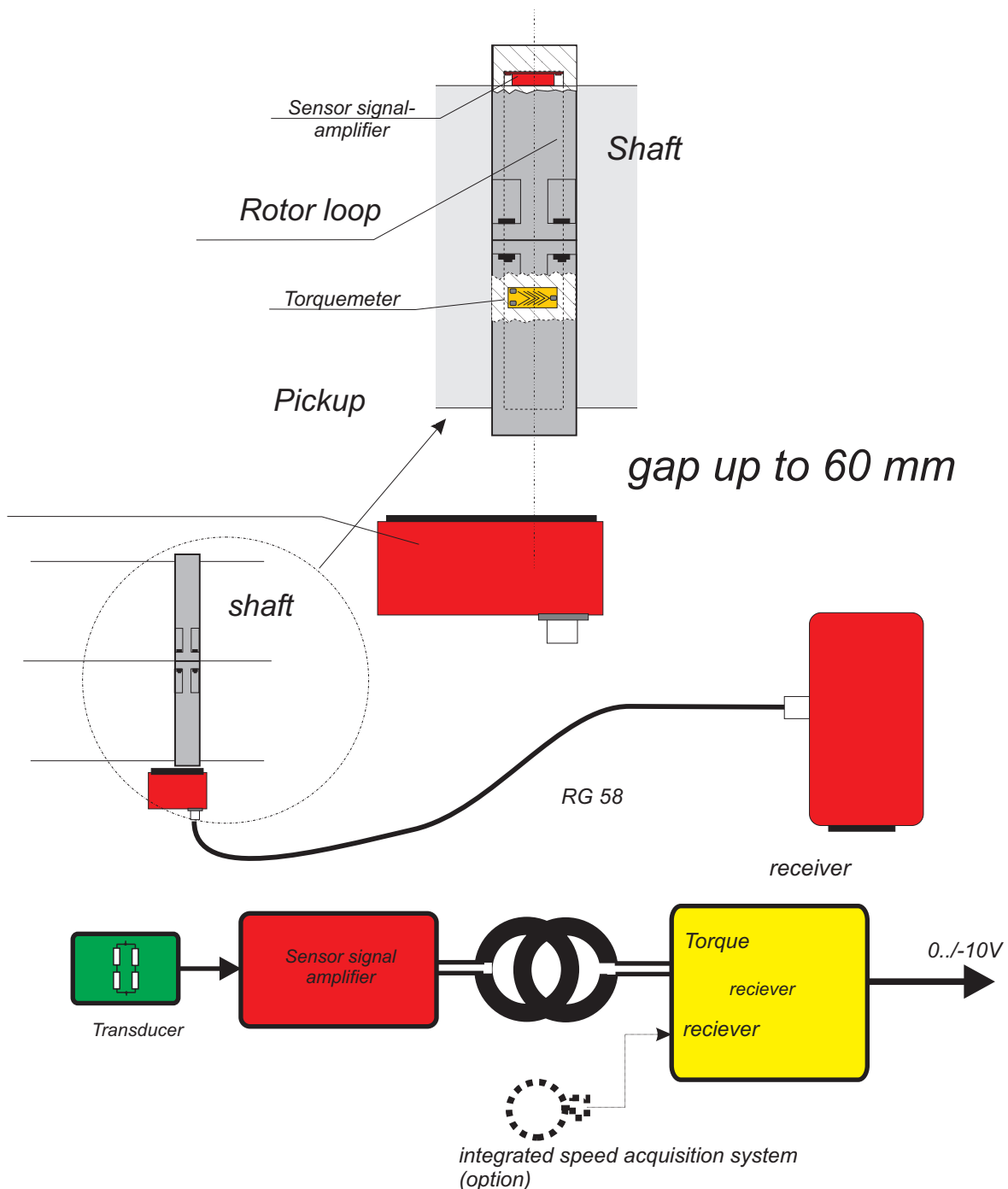


New

RMC-Sensor-Telemetry for universal use

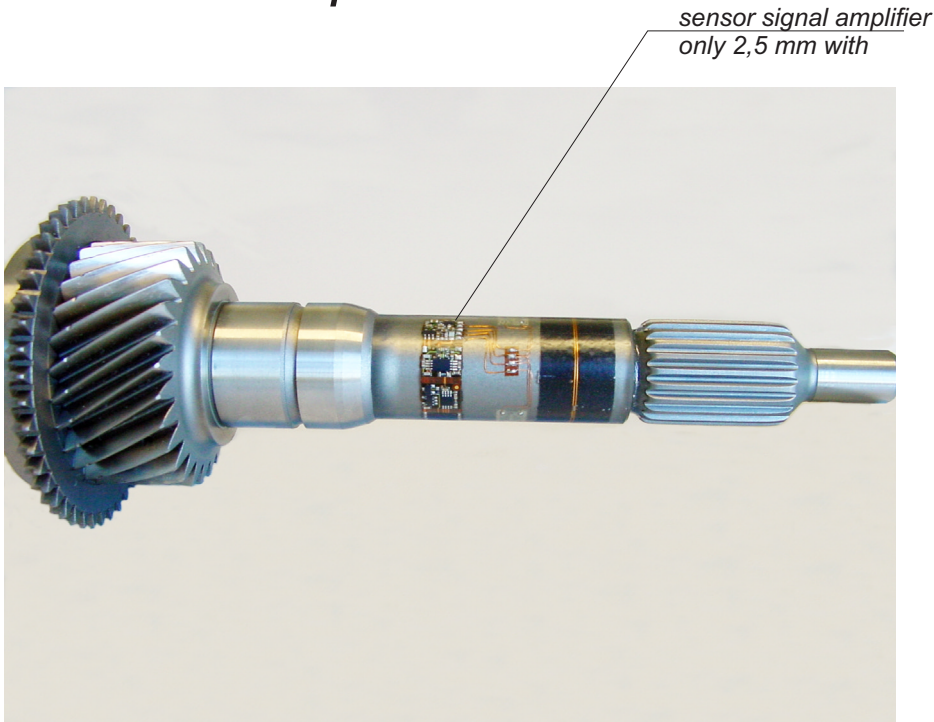
advantages:

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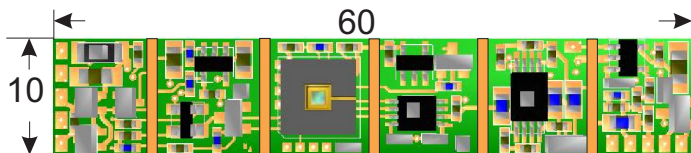


New

RMC-Telemetry with flex substrat for Inputshaft in cars *special use*



Flexible sensor signal amplifier



Features:

- channels: 1
- transmitting sensor telemetry inductive
- digital transmitting: 16 bit resolution
- geometrie: flex substrat
- with: 2,8 mm, size: 10 x 60 mm
- smallest circle: diameter 14 mm
- programmable amplifier
- range: 0,05 mV/V 10 mV/V
- tansducer: DMS (350/1000 Ohm), NiCr.-Ni,
- zero drift: 0,001 %/° Centigrade,
- environmental temperature: -40° 160° Centigrade

New

Data Sheet:

Transmitting frequency: 13,56 MHz (ISM)
modulations: absorption modulation (Patent of Manner)
Coding: 16 Bit PCM with CRC
resolution: 16 Bit
bridge supply: 3,3 volts (5,0 volts optional)
strain gauge : ≥ 350 Ohm
sensitivity: 0,05 mV/V ... 10 mV/V
sample rate: 6,7 kHz
Filter Cut Off (-3 dB): 1kHz (2 kHz optional)
Filter type: 8 pol. Bessel
addition channel for monitoring sensor amplifier monitor
output voltage: 0..+/-10 Volt
digital output: USB, CAN, RS232
software control/monitoring operating system: XP, Windows
Environmental temperature range
(SV) : - 25..+ 85°C(160°C)
zero drift: $< 0,003$ %/°C at 1 mV/V
gain drift: $< 0,002$ %/°C at 1 mV/V
linearity: $< 0,01$ % at 1 mV/V
max. acceleration load: 40 000g
weight: depending on housing (min. 3g)
size: see different types
supply receiver: 9..36 volts DC/ 90..270 volts AC



New

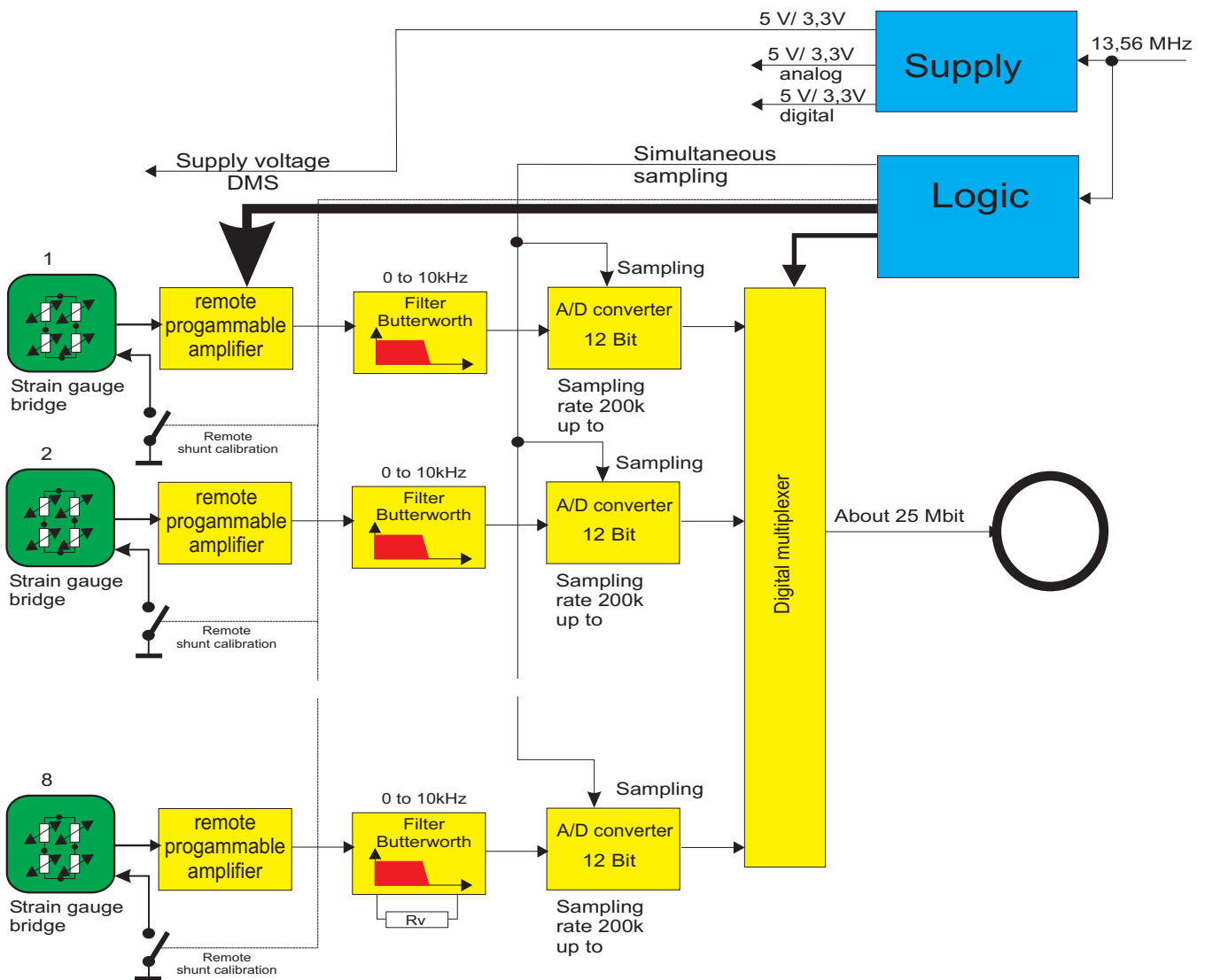
*RMC - multi channel -
Sensor - telemetry
with time multiplexing*

New

Overview

Multi channel sensortelemetry

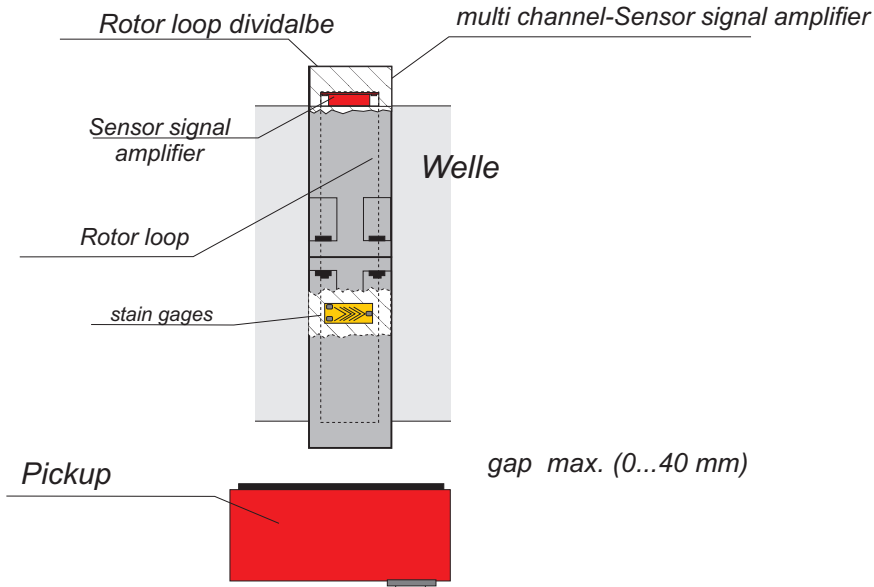
Principle of PCM Technique



New

Multi channel sensor telemetry drive shaft

(Without batteries)



Features:

- channel count: max. 64 (time multiplex)
- sample rate per channel: 40000 sample/sec (max. 200 000)
- Integrated sensor signal amplifier channel (remote controlled): 0,064 mV/V 10 mV/V
- Auto zero per channel (remote controlled)
- sensor: DMS, NiCr.-Ni, distance sensor (u-Epsilon)
- zero drift: 0,01 %/° Celsius
- Environmental temperature: -25° 125° Celsius (150° Celsius)

