

# R16-PCM

**16 Channel Telemetry for rotating applications  
incl. signal conditioning for strain gages  
signal bandwidth 16x 3000Hz  
with inductive powering**



- Full- and half bridge
- Auto Zero Offset calibration
- 4V bridge Excitation
- 16 bit resolution
- Simultaneous sampling
- Sampling rate 16x 9500Hz
- Signal bandwidth: 16 x 0-3000Hz
- Software programmable
- Gain 125-250-500-1000-2000
- Inductive power transfer
- Wireless digital data transmission
- Output analog +/- 10V
- Digital data interface to PC (option)
- Waterproofed housing (IP65)

## R16-PCM - Technical Data:



Front side

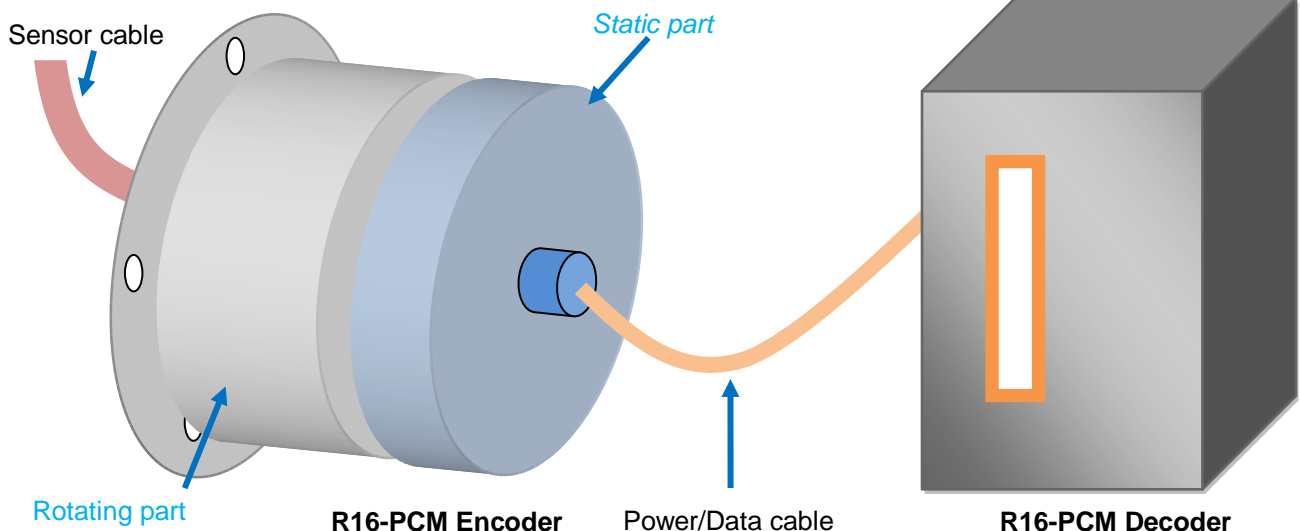


Rear side

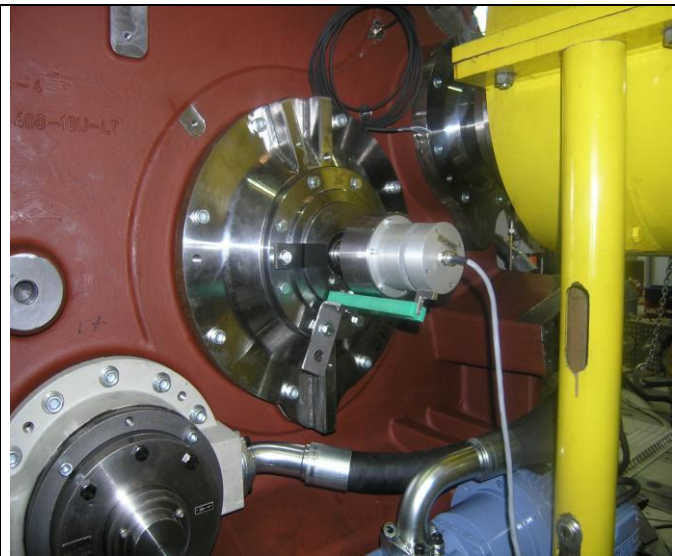
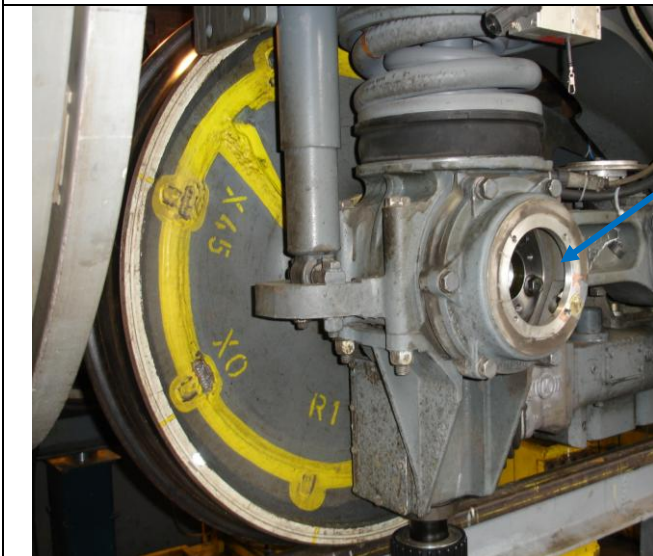
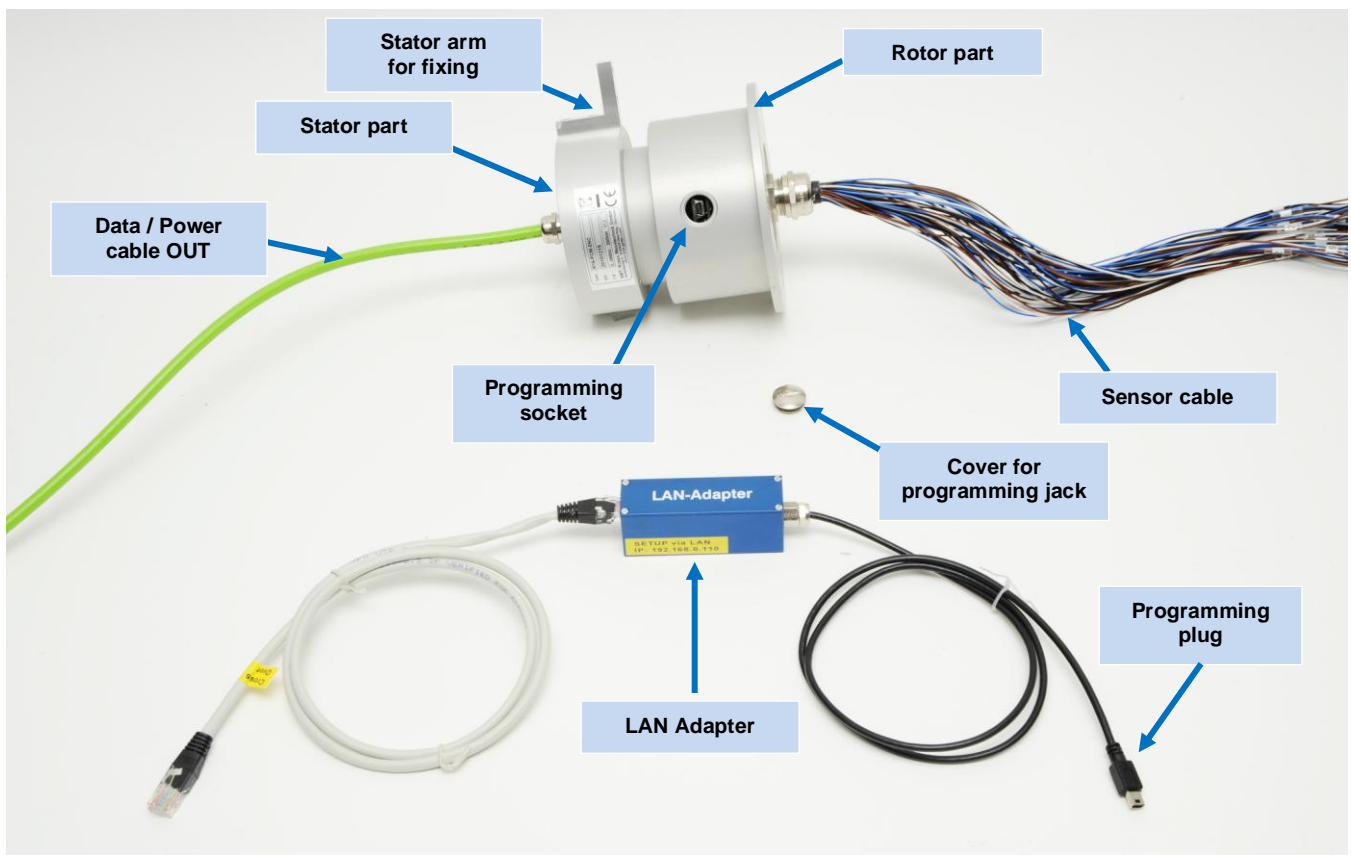
### Encoder (Rotor Electronic)

### Decoder / IND-PWR

Number of channels:	16	Number of channels:	16
Sensor support	Strain gages full and half bridge $\geq 350\Omega$	Analog Output	+/-10V via 37-Sub-D connector
Excitation	4V for all channels	Digital Output	PCM serial (optional PCM interface for PC)
Gain	125-250-500-1000-2000 (selectable by software)		
Offset calibration	Automatically (Auto Zero)		
Anti-aliasing filter	5-pole Butterworth and 2-stages digital down sampling filter		
Band width	3000 Hz per channel	Band width	3000 Hz per channel
Sampling rate	9500 Hz per channel		<i>6000 Hz on request!</i>
Resolution	16 bit ADC	DAC (digital to analog converting)	16 bit
Powering	Inductive	Powering	10-30V, 50 Watt (e.g. 24V 2A)
Data transmission	PCM digital infrared link	Data receiving	PCM
Operating temperatures	-30 ... 80°C	Operating temperatures	-20 ... 70°C
RPM	Max. 3600		
Dimensions	100 diameter, 110 Lengths (mm)	Dimensions	205 x 105 x 120 (mm)
Weight	1250 gram	Weight	1050 gram
Housing protection type	IP65	Housing protection type	IP54
Housing material	Aluminum anodized	Housing material	Aluminum anodized
Humidity	20...100%	Humidity	20 ... 80% (not condensing)
Shock	1000g	Shock	100g
Vibration	+/- 10g	Vibration	5g
Power/Data cable	Length up to 25m, <b>5m is standard</b> (between Encoder /Decoder)	System accuracy	$\pm 0.25\%$ (without sensor)



Settings	Programmable via web interface																																								
<p>Web interface address: <b>IP 192.168.0.110</b></p> <p><u>Settings:</u> Gain 125-250-500-1000-2000 Half- and full bridge Make Auto Zero YES/NO</p> <p><b>All selectable for each channel!</b></p>	<h3 style="text-align: center;">KMT R8-PCM Analog Channel Setup</h3> <table border="0"> <tr> <td>Channel 1</td> <td>Gain: <input type="text" value="125"/></td> <td>Type of Strain Gauge: <input type="text" value="HALF-BRIDGE"/></td> <td>Make Autozero: <input type="checkbox"/></td> <td>Channel 1</td> </tr> <tr> <td>Channel 2</td> <td>Gain: <input type="text" value="2000"/></td> <td>Type of Strain Gauge: <input type="text" value="HALF-BRIDGE"/></td> <td>Make Autozero: <input type="checkbox"/></td> <td>Channel 2</td> </tr> <tr> <td>Channel 3</td> <td>Gain: <input type="text" value="1000"/></td> <td>Type of Strain Gauge: <input type="text" value="HALF-BRIDGE"/></td> <td>Make Autozero: <input type="checkbox"/></td> <td>Channel 3</td> </tr> <tr> <td>Channel 4</td> <td>Gain: <input type="text" value="500"/></td> <td>Type of Strain Gauge: <input type="text" value="HALF-BRIDGE"/></td> <td>Make Autozero: <input type="checkbox"/></td> <td>Channel 4</td> </tr> <tr> <td>Channel 5</td> <td>Gain: <input type="text" value="250"/></td> <td>Type of Strain Gauge: <input type="text" value="HALF-BRIDGE"/></td> <td>Make Autozero: <input type="checkbox"/></td> <td>Channel 5</td> </tr> <tr> <td>Channel 6</td> <td>Gain: <input type="text" value="125"/></td> <td>Type of Strain Gauge: <input type="text" value="HALF-BRIDGE"/></td> <td>Make Autozero: <input type="checkbox"/></td> <td>Channel 6</td> </tr> <tr> <td>Channel 7</td> <td>Gain: <input type="text" value="125"/></td> <td>Type of Strain Gauge: <input type="text" value="HALF-BRIDGE"/></td> <td>Make Autozero: <input type="checkbox"/></td> <td>Channel 7</td> </tr> <tr> <td>Channel 8</td> <td>Gain: <input type="text" value="125"/></td> <td>Type of Strain Gauge: <input type="text" value="HALF-BRIDGE"/></td> <td>Make Autozero: <input type="checkbox"/></td> <td>Channel 8</td> </tr> </table> <p style="text-align: center;"> <input type="button" value="Upload Parameters to R8-PCM and perform Autozero"/> <span style="float: right; color: red;">*** Parameters saved ***</span> </p> <p style="text-align: center;"> <input type="button" value="Download Parameters from R8-PCM"/> </p>	Channel 1	Gain: <input type="text" value="125"/>	Type of Strain Gauge: <input type="text" value="HALF-BRIDGE"/>	Make Autozero: <input type="checkbox"/>	Channel 1	Channel 2	Gain: <input type="text" value="2000"/>	Type of Strain Gauge: <input type="text" value="HALF-BRIDGE"/>	Make Autozero: <input type="checkbox"/>	Channel 2	Channel 3	Gain: <input type="text" value="1000"/>	Type of Strain Gauge: <input type="text" value="HALF-BRIDGE"/>	Make Autozero: <input type="checkbox"/>	Channel 3	Channel 4	Gain: <input type="text" value="500"/>	Type of Strain Gauge: <input type="text" value="HALF-BRIDGE"/>	Make Autozero: <input type="checkbox"/>	Channel 4	Channel 5	Gain: <input type="text" value="250"/>	Type of Strain Gauge: <input type="text" value="HALF-BRIDGE"/>	Make Autozero: <input type="checkbox"/>	Channel 5	Channel 6	Gain: <input type="text" value="125"/>	Type of Strain Gauge: <input type="text" value="HALF-BRIDGE"/>	Make Autozero: <input type="checkbox"/>	Channel 6	Channel 7	Gain: <input type="text" value="125"/>	Type of Strain Gauge: <input type="text" value="HALF-BRIDGE"/>	Make Autozero: <input type="checkbox"/>	Channel 7	Channel 8	Gain: <input type="text" value="125"/>	Type of Strain Gauge: <input type="text" value="HALF-BRIDGE"/>	Make Autozero: <input type="checkbox"/>	Channel 8
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## SET and cable connection of R8/16-PCM-ENC

