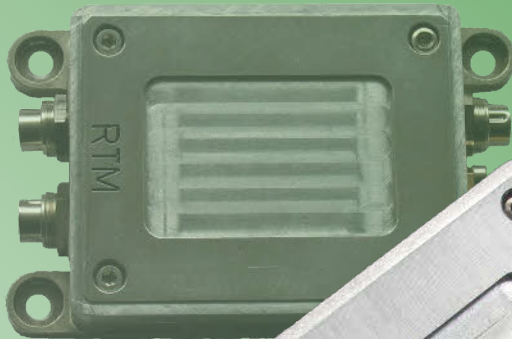


Multi Channel Telemetry

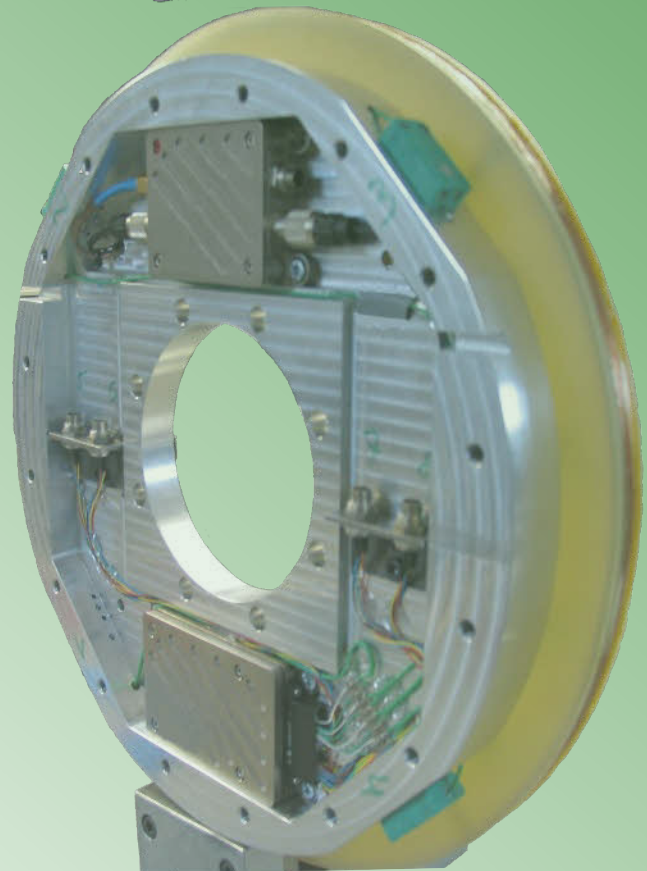
Automotive, Aerospace, Defense, Lab, Wind Energy, Marine, and Industrial Applications



M8



- Extremely robust, small, dust and water tight measurement system
- Selectively programmable channels for thermocouple or strain Gage measurement
- Maintenance- free operation
- Non - contact data transmission and optional inductive power supply
- Easy mounting and installation
- Straightforward programming via Bluetooth or cable
- Automatic calibration and test functions
- Application areas include driving test, on brake, wheel, rim, test stands and industrial plants
- Speeds up to 6,000 RPM with appropriate mounting and installation



Multi Channel Telemetry



Automotive, Aerospace, Defense, Lab, Wind Energy,
Marine, and Industrial Applications

Technical Specifications

Programmable Miniature Telemetry		M8s / M4s Standard	M8f / M4f Fast	M8v / M4v Very Fast	M24
Mobile Unit (Encoder, Transmitter Modules)					
Mechanical characteristics					
	Case	2 robust, nickelplated aluminum housing			
	Mechanical mounting	4 M4 mounting screws each, additional mounting lugs can be attached at the side			
	Mass; Main dimensions	Encoder module: 87x50x17mm, 90g; Transmitter module: 72x50x17mm, 80g			
	Maximum operating speed	6,000 RPM with appropriate mounting and installation			
Protection class		Suitable for dust and splash water protection			
Operating temperature		0 ° C ... 85 ° C, optional 20 ° C ... 100 ° C, noncondensing			
Power supply		6 ... 18V DC / 1.5W with 8 strain gages			
Operating time		Depending on the connected sensors min. 4 hours with 9V Li battery			
Sensor connection		37 pin miniature connector, type Binder series 910			
Data transmission		Integrated RF transmitter, 433MHz ISM band, 10mW			
Transmit antenna		Antenna connection cable can be screwed on			
Signal inputs		8 or 4 differential amplifiers for direct connection of sensors			
	Configuration	programmable			
	Sensors	Strain gage full / halfbridge \geq 350 Ohm Thermocouple Type K (also noninsulated)			
	Bridge supply for strain gages	5VDC, integrated, per channel separately, shortcircuit proof			
	Measurement ranges	+1mV/V, +2mV/V,...+32mV/V 100 ° C ... 250 ° C or ... 1000 ° C, linearized, cold junction compensation			
	Measurement accuracy	+/- 0.1% of full scale or +/- 1 ° C			
	Signal bandwidth	75Hz / Channel	300Hz / Channel	600Hz / Channel	50Hz / Channel
	Strain gage	10Hz / Channel			
	Thermocouple	100Hz / Channel			
	Sample rate	375Hz / Channel	1.500Hz / Channel	3.000Hz / Channel	250Hz / Channel
	Strain gage	100Hz / Channel			
	Thermocouple	100Hz / Channel			
	Anti aliasing filter	Butterworth, 6 pole			
	Adjustment functions	Automatic zero adjustment over at least 4 strain gage measuring ranges			
	Control functions	Shunt calibration 80% in the 2mV/V strain gage range Negative fullscale (1.000 ° C) during thermocouple open			

Multi Channel Telemetry



Automotive, Aerospace, Defense, Lab, Wind Energy, Marine, and Industrial Applications

Technical Specifications

Programmable Miniature Telemetry	M8s / M4s Standard	M8f / M4f Fast	M8v / M4v Very Fast	M24
Receiver Module				
Signal output	Per channel BNC socket on front panel, +/- 10V, single ended 25pol.DSub Socket on rear panel, bit parallel, optional CAN (C) or USB (U)			
Monitor, displays	3½digit LED display with selector switch; Synchronization LED			
RF receiver / receiver antenna	Integrated, 433MHz / magnetic base antenna with 4m connection cable			
Supply voltage	9... 32VDC, 3W			
Dimension (LxWxH); mass	Robust compact housing 200mm x 105mm x 85mm; 1.2kg Optional 19" / 3U plugin module, 21TE (105mm); 1.2kg			
Operating temperature	0°C...60°C			
System programming				
Programming	Serial USB; BlueToothPC / Notebook			
Programming functions	Sensor type, sensitivity, zero calibration, shunt calibration			
Programming software	Drivers for PC / Notebook			
Equipment				
Electric wire; Adapter; Antenna	2m DC power cable; 37pin miniature connector; All connectors, Magnetic base receiving antenna			
Programming accessories	USB Stick; Software			
Options / special accessories	Extended temperature range T ; CAN interface C ; USB interface U ; Software for adjustment AS ; Factory calibration WK			

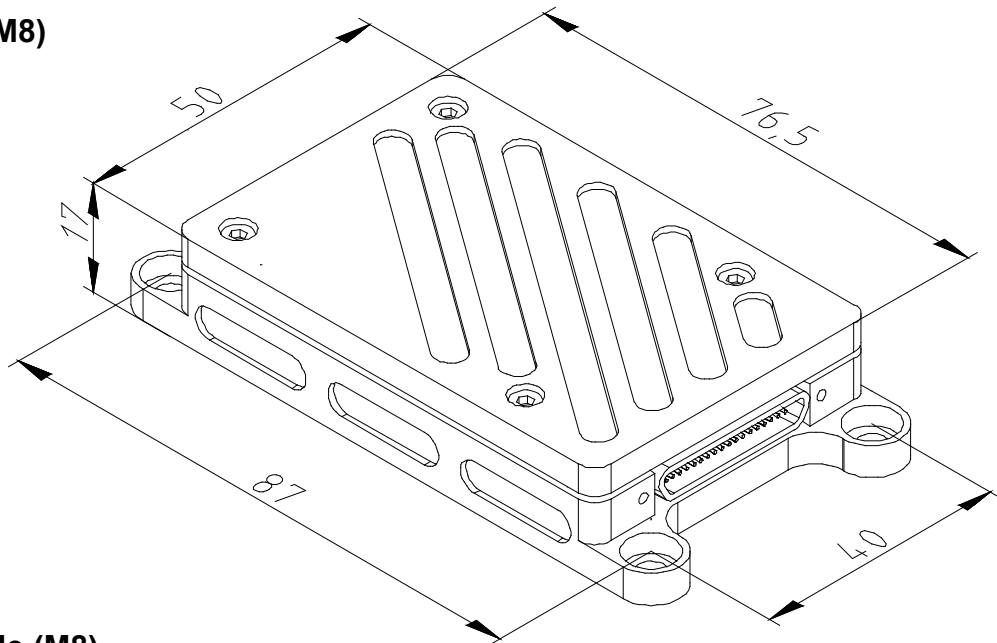
Multi Channel Telemetry

Automotive, Aerospace, Defense, Lab, Wind Energy,
Marine, and Industrial Applications

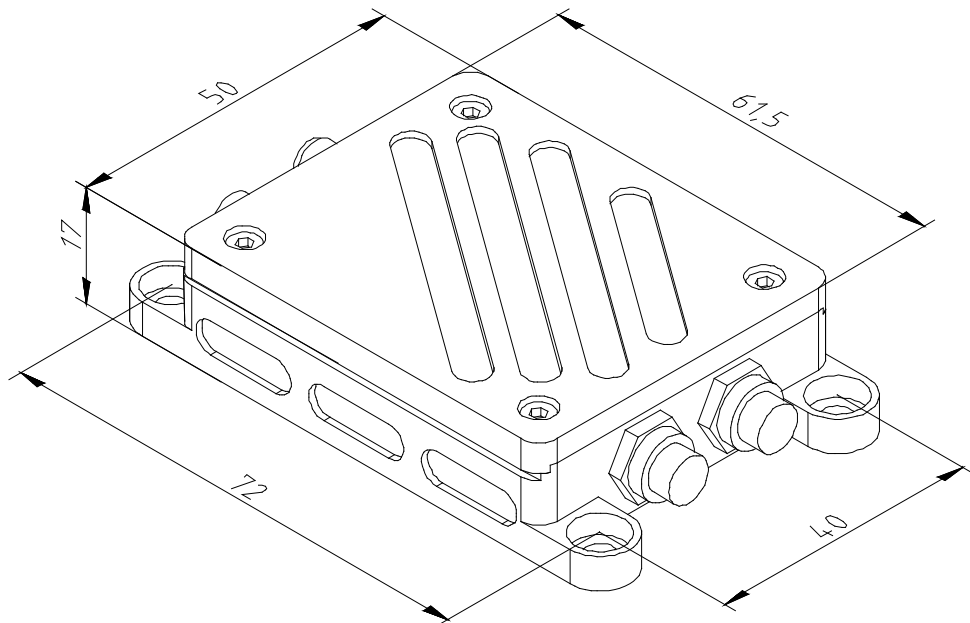


Mechanical Dimensions

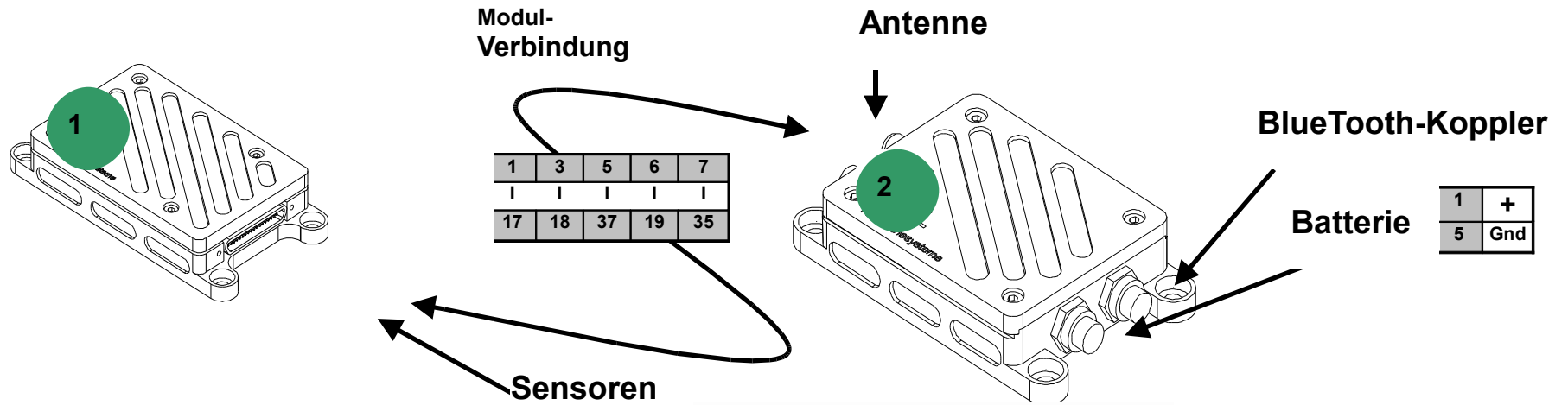
Encoder Module (M8)



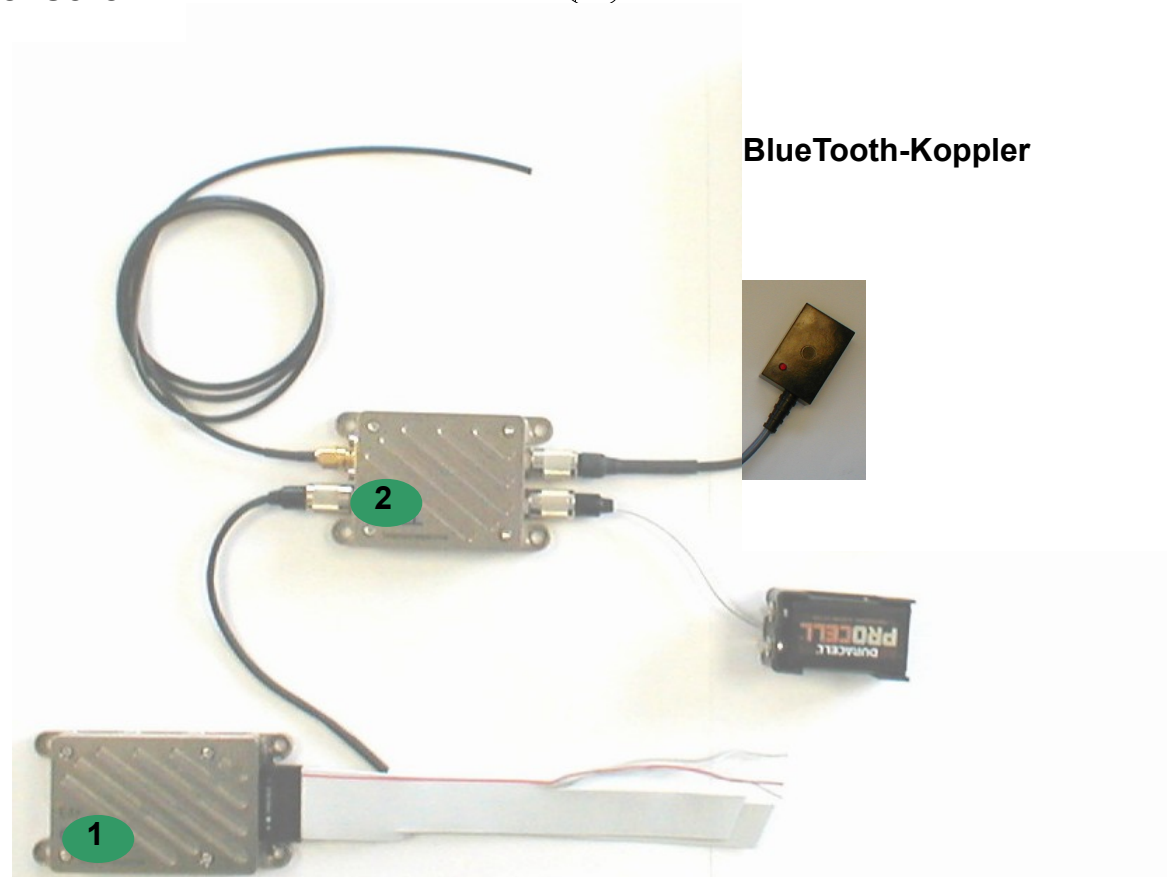
Transmitter Module (M8)



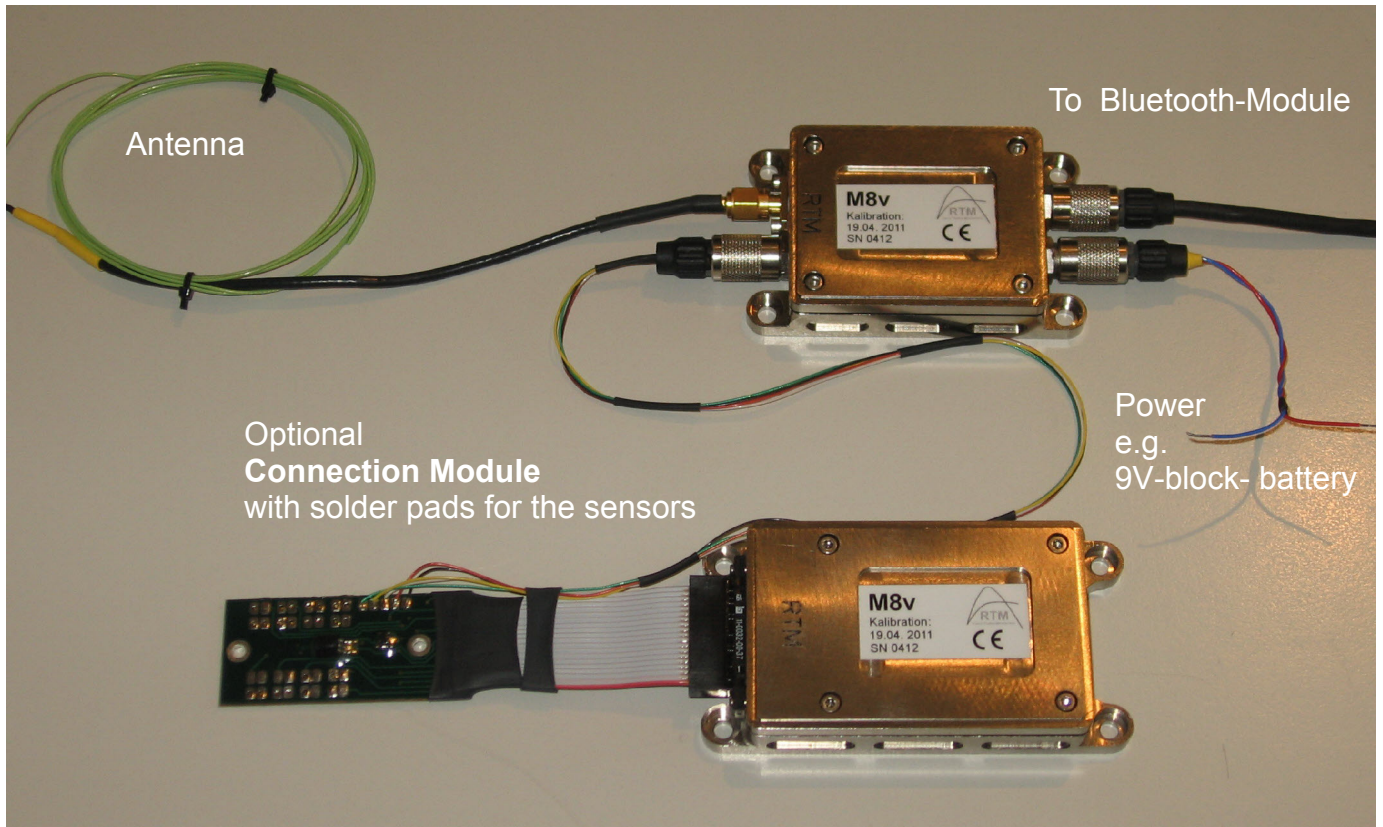
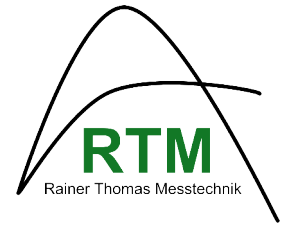
Übersicht M84 Anschaltung



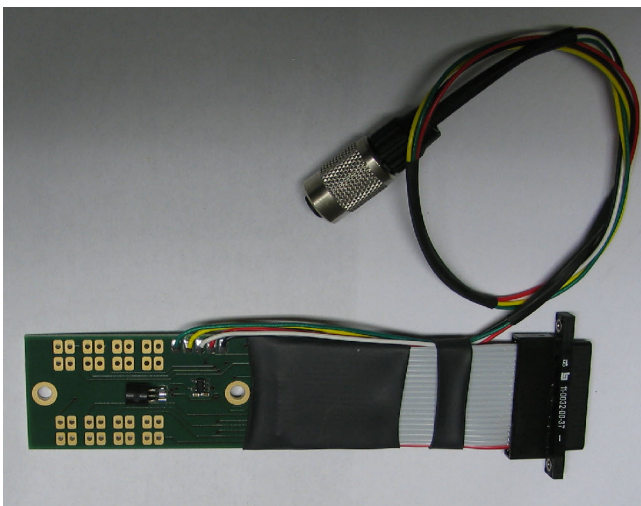
Kan.	1	2	3	4	5	6	7	8
In+	20	22	24	26	28	30	32	34
In-	2	4	6	8	10	12	14	16
GV+	1	3	5	7	9	11	13	15
Gnd	21	23	25	27	29	31	33	35



Modules Encoder Miniatur Telemetry M8



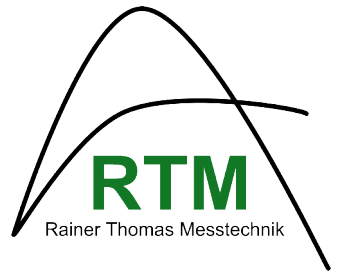
Connection Module



Version with circuit board and solder pads
Strain gage full bridge or Thermocouple
with Coldjunction compensation

In place of the printed circuit board would also be a connection to a custom part, e.g. a SubD socket conceivable.

Type M84



EC – Certificate of Conformity



The company

Rainer Thomas Messtechnik GmbH
Wiesseer Str.1
D-83703 Gmund / Germany

herewith explains, that the telemetry devices **Type M84**
in from it implementation brought in the traffic fulfils the regulations of the following
appropriate harmonisation regulations of the community:

EMV-Richtlinie 2014/30/EU
DIN EN 61326-1; VDE 0843-20-1:2013-07 Elektrische Mess-, Steuer-, Regel- und Laborgeräte -
EMV-Anforderungen - Teil 1:Allgemeine Anforderungen (IEC 61326-1:2012);
Deutsche Fassung EN 61326-1:2013

The protective aims of the low-voltage directive 2014 / 35 / EU are kept.

Commissioned person for the arrangement of the technical documents:


Rainer Thomas, company RTM GmbH, Wiesseer Str.1, D-83703 Gmund

Commissioned testing centre / accredited lab:
Schwille-Elektronik GmbH, Benzstr.1A, D-85551 Kirchheim, M.Schiedrich

The following basic norms were applied:

- IEC 61000-4-2
- IEC 61000-4-3

- IEC 61000-4-4
- IEC 61000-4-5
- IEC 61000-4-6
- IEC 61000-4-8
- CISPR 55011


Rainer Thomas, GF

Gmund, Apr. 9th. 2015