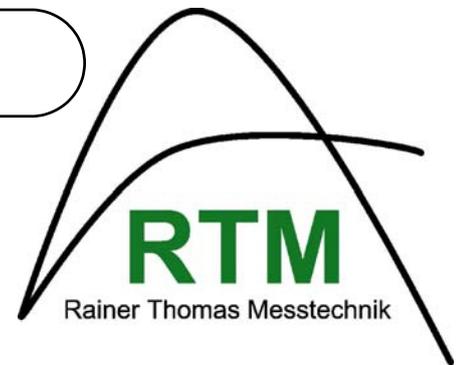
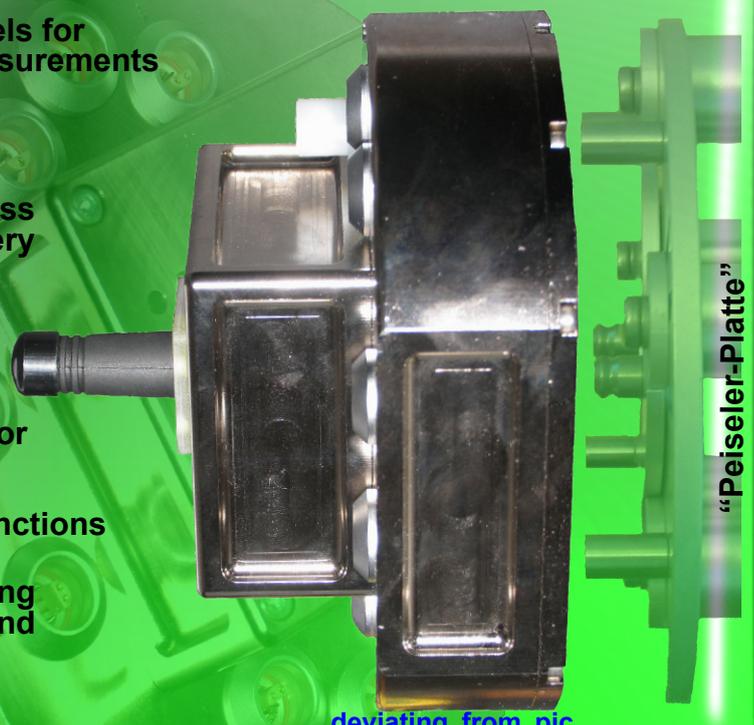


Multichannel-Telemetrysystems

Universal-Telemetry, protected W16

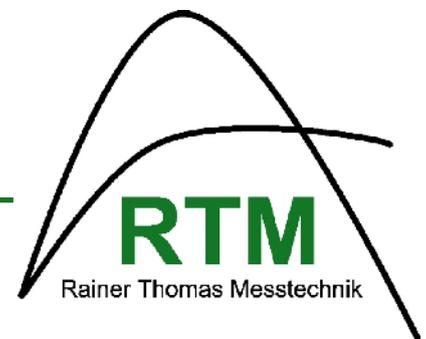


- Extremely robustly, dust- and water-protected
- 16 selectively programmable channels for thermocouple and strain gauge measurements
- Data output - voltage, CAN or USB
- Maintenance-free work, by touchless data transfer and integrated battery supply
- Easy flange assembly or connection by means of "Peiseler-Platte"
- Comfortable programming by PDA or notebook with BlueTooth-Link
- Automatical adjustment- and test-functions
- Applications primarily in real driving attempt and in braking-, wheel- and rim-test benches
- With up to 2,500 RPM



deviating from pic.
housing 14 mm higher

W16



Technical Data

Universal-Telemetry, protected, programmable, battery powered		W16-s slow	W16-f fast	W16-v very fast
Mobile unit				
mechanical data				
	housing	extremely robust, nickel-plated aluminium case, dust- and waterprotected		
	mechanical adaptation	4 holes for M5 fixing bolts, drilling picture in conformist with Peiseler Platte *) additional drilling Ø 5H7 for centring		
	weight; main dimensions	1.3kg; Ø144mm x 85mm , with antenna 124mm		
	maximum rotations	2,500 RPM with concentric, axial mounting		
protection		dust-protected and squirt-waterprotected, IP54		
operating temperature		0°C...85°C, Option -t -20°C...100°C, not condensed		
powersupply		integrated accumulator with loading state display, capacity 2.4Ah		
operating time, charge time		according to connected sensors 6... 15h / approx. 1.5h for full load		
sensor connection		8 Lemo sockets, type ERA.2S.308, 2 sensors per connector		
data transfer		integrated RF-transmitter, 433MHz ISM-band, 10mW		
transmitting antenna		provided stump antennas alternatively screwable on		
signal inputs		16 differential amplifiers for direct connection of sensors		
	configuration	programmable		
	sensors	strain gauge full- and halfbridge >=350 Ohm thermocouples type K (also non-isolated)		
	Excitation of strain gauge	5VDC, integrated, per channel separately, Short circuit saved		
	measurement range	+/-1mV/V, +/-2mV/V,... +/-16mV/V -100°C ... 250°C / ... 1,000°C, linearised, cold junction compensated		
	measuring exactness	+/-0.1% of full scale or +/-1°C		
	signal bandwidth	-strain gauge -thermocouple	37,5Hz / channel 150Hz / channel 10Hz / channel	300Hz / channel
	sampling rate	-strain gauge -thermocouple	187Hz / channel 750Hz / channel 100Hz / channel	1,500Hz / channel
	antialiasing filter	butterworth, 6 pole		
	adjustment functions	automatically zero adjustment over more than 4 strain gauge ranges		
	control functions	shunt calibration with 80%-detuning in the 2mV/V range negative full scale value (-1,000°C) thermocouple break		
Reproducer unit				
	signal output	-analogously -digitally	25 pole SubD-socket at frontplate, +/-10V, single ended 25 pole D-Sub socket at rear panel, bitparallel; optional CAN or USB	
	monitor, display	3½ digit LED-display with switch; synchronisation-LED		
	RF-receiver / receiving antenna	integrated 433Mhz / magnet foot antenna with 1.5m cable		
	powersupply	8... 32VDC, 3W		
	dimensions (l x w x h); weight	robust compact housing 200mm x 105mm x 85mm; 1.2kg optional 19" / 3HE plugin module, 21TE (105mm); 1.2kg		
	operating temperature	0°C...60°C		
System programming				
	programming	wireless; BlueTooth-PC/Notebook and BlueTooth-PDA		
	functions	kind of sensor, sensitivity, zero adjustment, shunt calibration		
	software	workable driver for PC/Notebook and PDA		
Accessories				
	cable; adapter; antenna	charger; 2m DC-supply cable; 8 Lemo sensor plugs; magnet foot receiving antenna, screwable transmitting antenna		
	programming accessories	Palm-PDA; software		
	Options /Special accessories	extended temperature range W16-t ; CAN-interface -C ; USB-interface -U ; Peiseler-Platte -PP ; adjustment software -AS ; factory calibration -WK		
*) Peiseler-Platte - comfortable mounting plate for measurement of car wheels, Info at www.Peiseler-gmbh.de				

RTM GmbH, Ludwig-Erhard-Platz2, D-83703 Gmund am Tegernsee, TF ++49-8022-665 295, RT@RT-M.de, www.RT-M.de

Installation/Introduction

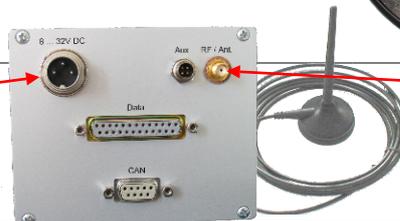
Use 4 screws M5 to fix the mobile part on an assembly flange or a Peiseler Platte *)



Complement the sensors with Lemo connectors and plug into sockets 1 to 8



Connect the power cable with the socket " 8... 32VDC " of the reproducer and connect the colored plugs with a DC source
red is "+"
black is "-"



receiving antenna to connector "RF/Ant."

LED at front plate lights **red** and goes to **green** switching on the mobile unit. data are synchronised.



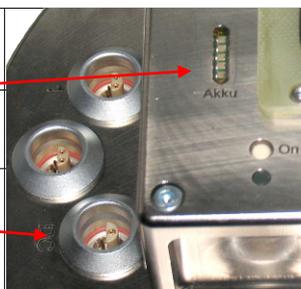
power on the mobile unit is done by pressing the key "On" and is showed by the green LED

Battery unit

The mobile unit is powered by an integrated NiMH-Accumulator.

LED charge display gives an information of filling state in steps of 20%

To charge the battery, switch off the mobile unit and connect the socket "DC" with the charger. Red LED signalized running charging.



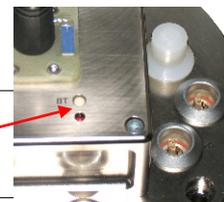
Charge electronics allows connection to the charger at any time. Unused Batteries are buffered.

Attention!
Do not store mobile unit with empty batteries, connect it to charger at any time.

Configuration - Software RTM-Config

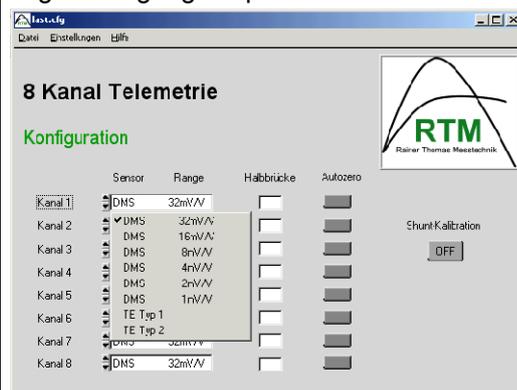
In the mobile unit integrated BlueTooth transceiver allows the bidirectional communication to configure the parameters of telemetry system. For that a Palm-PDA and a BlueTooth-USB-Stick for use with PC/Notebook, are part of the delivery volume.

In the mobile unit the BlueTooth transceiver will be activated pressing the key "BT" (red LED lights). After configuration it is advisable to switch off the BlueTooth-Modul to save battery energie. Parameters will be stored.



Installation PC-Software

Run successively **cvirte.msi** and **setup.exe** from CD. Installation goes automaticaly. Changing the german language to the english language is possible.



Installation PDA-Software

On PDA the Software is already configured. All files are on CD.



Parametres setting

The selfexplicatory surface of the software **RTM-Config** allows a channel-selective setting of the parametres.

Parametres

Sensor:
Strain gauge -Fullbridge
Strain gauge -Halfbridge
Thermocouple -K

Sensitivity:
1mV/V...32mV/V
250°C or 1,000°C

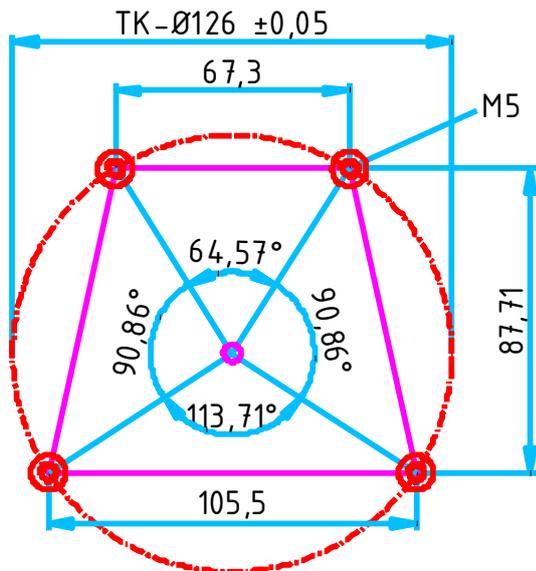
Functions

Zero adjustment
Shunt-calibration

For the installation of the BlueTooth components the manufacturer's formations are to be followed. Use and service of the PDA according to his documentation. The PDA is usable in his full functional circumference. The configuration software **RTM-Config** is executable under Windows 98 / 2000 / XP and Vista.

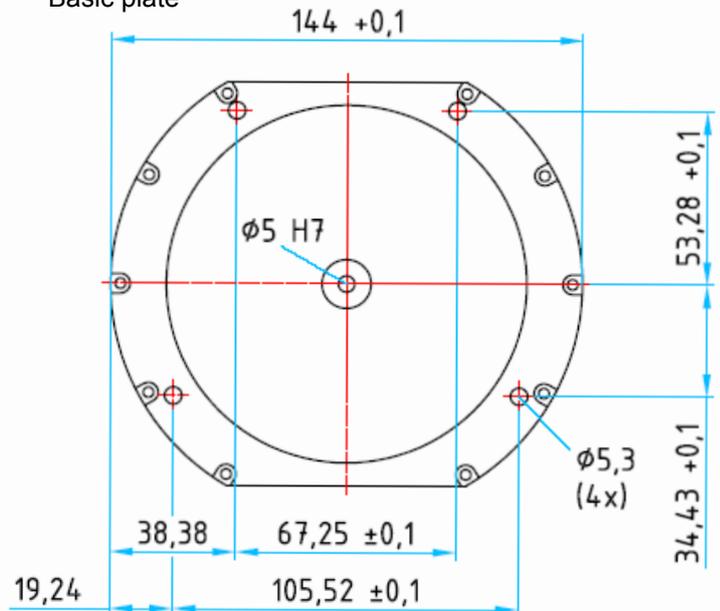
Fixation of mobile unit

Fixation drawing for assembling flange



*) according to Peiseler-Platte

Basic plate



Pinning connectors of mobile unit

Sensor-input connector		Lemo plug 8 pole, type FFA.2S.308 on sensor cable	
contact	Full- / Half-Bridge / Thermocouple	contact	Full- / Half-Bridge / Thermocouple
1 / 5	-In negatively input ● / nc. / ●	3 / 7	-GV negatively supply ● / ● / nc.
2 / 6	+GV positively supply ● / ● / nc.	4 / 8	+In positively input ● / ● / ●

Pinning connectors of reproducer unit

Data SubD-25 socket on rear plate			
contact	signal	contact	signal
1...12	DB15...DB04	16...19	AB07...AB04
13	PCM	20	WP
14	/SL	21	Gnd
15	FR	22...25	AB03...AB0

CAN SubD-9 socket on rear plate			
contact	signal	contact	signal
2	CAN-Low	7	CAN-High

8...32V DC	
socket 3 pole on cable type Binder 680 0306-00-03	
contact	Signal
1	+ power supply
3	- power supply

Analog Out SubD-25 socket on front			
contact	signal	contact	signal
1...16	output	17...25	Ground

Delivery volume, Accessories, Options

Universal-Telemetry W16 with reproducer unit

- Power cable
- Charger with Lemo plug FFA.0E.303
- 8 Lemo sensor plugs type FFA.2S.308 CLAC
- Receiving antenna with 1.5m cable
- Screwable transmitting antenna
- Palm-PDA,
- Software RTM-Config (CD)
- Documentation (CD)
- Transport suitcase



Pic. similar

optional

- Software CAN-Bus (Option -C)
- Software Adjustment (Option -AS)
- Factory calibration (Option -WK)
- Peiseler-Platte (Option -PP)

Servicing hints, Recalibration cycle, CE-Conformity

Devices W16 have no special service hints. Recalibration cycle is 2 years.

Design of devices W16 corresponds to EC guidelines: EN 300 220-3, EN 60 950, EN 301 489-01/-03

Devices were tested in typically situations.