



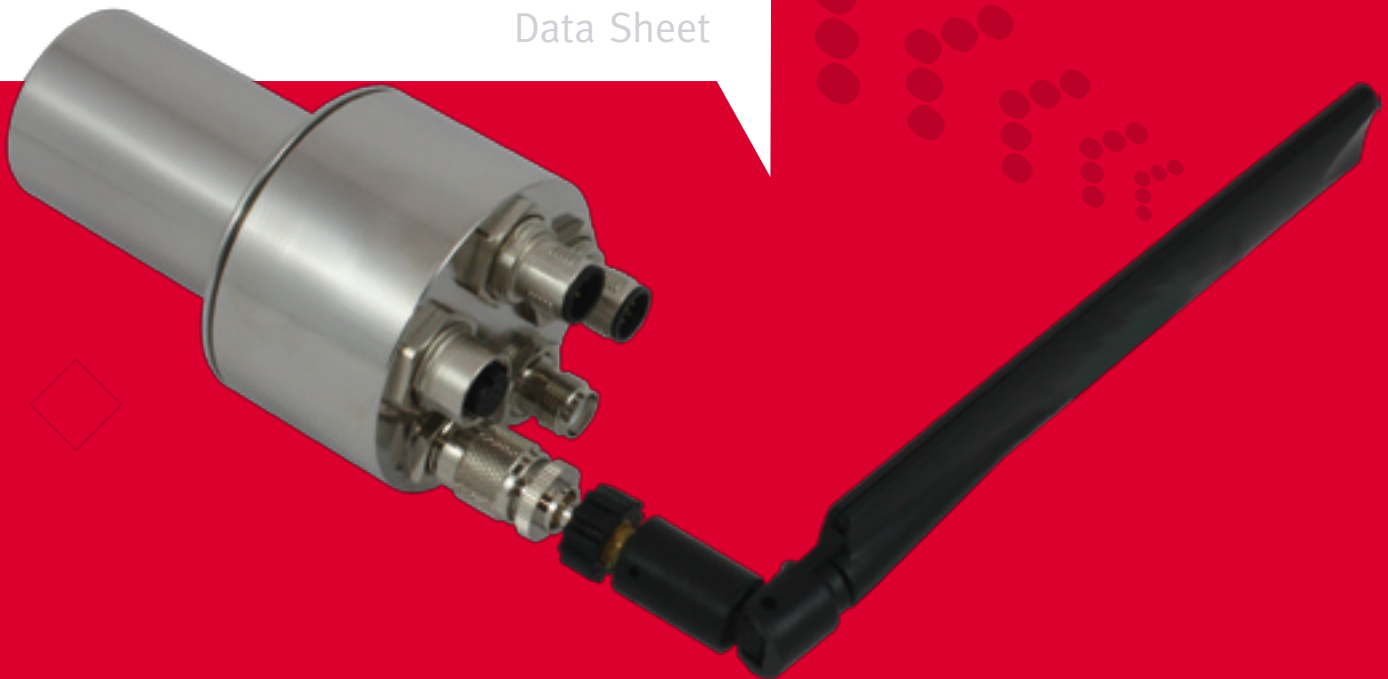
TELEFUNKEN
RACOMS

Train Communication

TELEFUNKEN RACOMS TReeBee® Field Unit

TRFU

Data Sheet



TRFU-B



TRFU-E

WE KEEP IN TOUCH

Wireless Network Solutions for Supervision, Monitoring, Measurement and Control

Technical Data and Characteristics:

The versatile ruggedized TReeBee® Field Unit (TRFU) can have three functionalities in a wireless sensor network. It can be used as a sensor device, due to its embedded sensor function, providing interfaces for external sensors.

Also it can be used as a wireless repeater or router to forward sensor information coming from other Field Units, preferably to extend the radio range within the sensor network.

But beside its typical wireless sensor functionality, a Field Unit can also be used as an actor to initiate user defined processes, even related with its sensor role. All TReeBee® Field Units have 2 embedded sensors, which can be used to provide information about the acceleration/3-axis attitude, the battery status and the temperature.

But also various external sensors can be connected to a wide variety of standard interfaces. Its enhanced power saving mechanisms enable autonomous long term operations with the attached battery (TRFU-B), but also an external power version (TRFU-E) for continuous operation and in combination with a routing functionality is available. Configuration of the Field Units can be done either by a serial device interface or over-the-air.

For remote access to isolated or mobile TReeBee® sensor units, options with GPS positioning and GSM data transmission are available.

TRFU-B

110 x 60 mm
470 gr.
IP 67
2x M12 (4 + 12 pin /male),
1x M12 (12 pin /female), 2 x RP-TNC

acc. EN 60068
acc. EN 50155 (-25 to +70 °C)
0 ~ 95 % (non-condensing)

acc. IEEE 802.15.4
3x ADC Inputs, 1x DAC Output, 3x GPIO,
RS-232/485*, I2C-Bus*

-40 - + 85 °C (accuracy ± 0,5 °C)
± 16g (accuracy ± 4 mg)
yes

Battery (lithium, size D)

acc. EN 61000

2.4 GHz
780/868/915 MHz

TRFU-E

60 x 60 mm
330 gr.
IP 67
2x M12 (4 + 12 pin /male),
1x M12 (12 pin /female), 2 x RP-TNC

acc. EN 60068
acc. EN 50155 (-25 to +70 °C)
0 ~ 95 % (non-condensing)

acc. IEEE 802.15.4
3x ADC Inputs, 1x DAC Output, 4/20mA
Interface, 3x GPIO, RS-232/485*, I2C-Bus*

-40 - + 85 °C (accuracy ± 0,5 °C)
± 16g (accuracy ± 4 mg)
no

9 - 40 VDC, other voltages optional

acc. EN 61000

2.4 GHz
780/868/915 MHz
GPS & GSM

Physical properties

Dimensions (HxD)
Weight
Protection Class
Connectors

Environmental Conditions

Shock and Vibration
Temperature
Humidity

Interfaces

RF-IF
Data and Sensor IF

Embedded Sensors

Temperature
Acceleration
Battery Status

Power Supply

EMC

Options

* with customer specific firmware