



Guidelines when using the radio unit FRF905 in Fronius products

- Range of validity: These guidelines have to be applied, when the concerning product is used in countries, in which a certification of a radio unit as prescribed by FCC 47 C.F.R. § 15.247, is accepted for its use. All mentioned points have to be fulfilled.
- Only the layouts with the belonging equipments, used in the radio device certification, may be used.
- Usable frequencies: 902,4-927,6 MHz in the 0,4 MHz-scheme. At least 50 different frequencies must be used here, after a pseudo random principle, whereby each frequency may be used within any 20s-intervals for maximum 0,4s.
- useable antennas:
 - internal antenna *ANT-916-JJB-ST*
 - external antennas over SMA-plugs: *ANT-DB1-RMT-SMA-2mRG174* or *PSKN3-890S*
- The following transmitting powers with the corresponding time on air and antennas have to be kept:

Antenna	maximum transmitting power [dBm]	TOA each 100ms [%] ¹
PSKN3-890S	10	50
	6	100
ANT-DB1-RMT-SMA-2mRG174	10	100
ANT-916-JJB-ST	10	100

- The supply voltage must be within the range of 1,9 – 3,6 V (at minimum 30mA load capacity)
- In the case of the use of an external antenna, the antenna plug may not be accessible from the outside (plug rises up from the equipment). If this is nevertheless absolutely necessary, an RP-SMA antenna plug (“unique antenna connector”) must be used. Accordingly the plug of the antenna, which can be attached (*ANT-DB1-RMT-SMA-2mRG174* and/or *PSKN3-890S*), has also to be changed.
- The inscription „Contains FCC ID: QKWFRF905“ has to be attached readably from the outside (and/or in a general manner) on the product

Reference:

- [1] Data sheet of transceiver *nRF905* V1.2 (download: <http://www.nordicsemi.no>)

¹ The TOA (time on air) is to be calculated as prescribed by [1] page 25. Measurement: Low-Hi-transition of the signal *TX_EN* to the Hi-Low-transition of the signal *DR* of the *nRF905*.