

This leaflet provides useful information for the risk analysis that employers must perform according to article 16 of the Royal Decree of 20 May 2016 on the protection of the health and safety of employees against the risks of electromagnetic fields at work.

1. Results of the “Radio Frequency Exposure Test” conducted conform to EN 62311 (evaluation of electrical and electronic equipment concerning the exposure restrictions of humans to electromagnetic fields (0 Hz-300 GHz), performed by Cetecom ICT Services GmbH and authorised on 8. June 2016

For considering worst-case conditions all measurements were performed at smallest possible distance from the device under test. Limits shown in the tables below are the lowest ones within the 5 wideband frequency ranges of the field probes applied.

Due to limitations of test equipment the frequency ranges of < 100 kHz and > 6 GHz for E-field have been omitted.

The tests have been performed in transmit mode and additionally in idle.

GSM 900 MHz E-field (V/m)						
test position	distance (cm)	Ch 975 / 880.2MHz	Ch 37 / 897.4 MHz	Ch 124 / 914.8MHz	Limit V/m	E-field probe
right	0	30.7	30.0	29.0	41	EF0691
front	0	18.5	--	--	41	EF0691
left	0	22.2	--	--	41	EF0691
top	0	22.6	--	--	41	EF0691
bottom	0	29.2	--	--	41	EF0691

Table 1: Test results E/field GSM 900 MHz

GSM 1800 MHz E-field (V/m)						
test position	distance (cm)	Ch 512 / 1710.2MHz	Ch 698 / 1747.4MHz	Ch 885 / 1784.8MHz	Limit V/m	E-field probe
right	0	18.9	18.8	20.1	58	EF0691
front	0	--	--	14.9	58	EF0691
left	0	--	--	15.3	58	EF0691
top	0	--	--	20.6	58	EF0691
bottom	0	--	--	18.8	58	EF0691

Table 2: Test results E/field GSM 1800 MHz

description	distance	E(V/m) 100 kHz – 6GHz	Limit V/m
worst case	0	0.3	28

The limits shown in above tables are reference values for the electrical fields, set forth by the Council recommendation No 1999/519/EC of 12 July 1999 on the limitation of exposure of the general public to electromagnetic fields.

2. Conclusion: No prevention measures needed

These results show that the electrical emissions measured at the outside of the Satellic OBUs do not exceed the reference level for general public exposure to electromagnetic fields. This means that exposure to Satellic OBUs does not cause any risk for the general public (including pregnant women and pace maker carriers).

Additionally, the results show that Satellic OBUs do not exceed the action levels described in annex 3, Table B1 of the Royal Decree of 20 May 2016 on the protection of the health and safety of employees against the risks of electromagnetic fields at work. According to the non-binding guide of the execution of the Directive 2013/35/EU a supplementary evaluation is not necessary. Thus, in sum, no prevention measures are needed.