

## Description of the status/error flags in the solar flux data

**Overview:** The status/error code is divided into 2 blocks of 8 characters each. One block shows primarily the status of the system, while the other block refers to the status of the current measurement. In general, only 3 different statuses are possible:

CODE	Meaning
0 = OK	Measurement ok
1 = <b>WARNING</b>	Measurement may be incorrect (incorrect data is possible)
2 = <b>ERROR</b>	Measurement invalid (incorrect data is probable)

ERROR has a higher priority than WARNING → If both messages are active, ERROR is issued.

### Block 1, Columns 1-8, status of the system

Column	1 = WARNING	2 = ERROR	active
1	<b>Antenna:</b> General device warning (e.g. failure NTP, SW limits violated, faulty definition files)	<b>Antenna:</b> General device error (e.g. emergency stop active, drives error, mechanical end position reached)	yes
2	<b>Antenna:</b> Deviation between target and actual position, as the source is below the horizon.	<b>Antenna:</b> Deviation between target and actual position (e.g. manual intervention by personnel, automatic approach to the stow position, abort tracking after error)	yes
3	<b>Not used.</b>	<b>Frontend control:</b> DC supply failure of front end or receiver (5 V, 12 V, 48 V)	yes
4	<b>Feedbox:</b> Deviation setpoint/actual temperature > 2° C	<b>Feedbox:</b> Deviation setpoint/actual temperature > 5° C	yes
5	<b>Receiver (NRQ6):</b> General device warning (e.g. input overload)	<b>Receiver (NRQ6):</b> General device error (measurement not possible)	yes
6	<b>Receiver (NRP18):</b> General device warning (e.g. input overload)	<b>Receiver (NRP18):</b> General device error (measurement not possible)	yes
7	<b>Self-test:</b> At least 1 self-test has not been performed since the system was initialized.	<b>Self-test:</b> Error Frontend Test, Error Signal Test, or Error Pointing Test	yes
8	<b>Not used.</b>	<b>Not used.</b>	no

**Block 2, Columns 9-16, status of the current measurement**

Column	1 = WARNING	2 = ERROR	active
9	<b>Environmental conditions:</b> Wind average 5 min > 60 km/h, or Wind maximum 5 min > 80 km/h	<b>Environmental conditions:</b> Wind average 5 min > 80 km/h, or Wind maximum 5 min > 100 km/h	yes
10	<b>Environmental conditions:</b> Rain rate > 30 mm/h	<b>Environmental conditions:</b> Rain rate > 60 mm/h	yes
11	<b>Radio horizon:</b> Source is located under 10° elevation (possible increase in measurement error due to increased diffraction and attenuation effects).	<b>Radio horizon:</b> Source is located below the visible radio horizon (possibly even shaded, measurement not possible).	yes
12	<b>Gain calibration:</b> Available calibration data could not be verified. (possibly increased measurement error)	<b>Gain calibration:</b> No calibration data available. Use of default values (possibly enormous measurement errors)	yes
13	<b>Noise calibration:</b> Calibration data from basic calibration unprecise (possibly increased measurement error)	<b>Noise calibration:</b> No calibration data available. Use of default values (possibly enormous measurement errors).	yes
14	<b>RFI detection:</b> Minor interference detected (influence on measurement data unlikely).	<b>RFI detection:</b> Significant interference detected (interference with measurement data after designing the receive chain likely).	yes
15	Indication of snow or ice on the reflector impairing the measurement	Indication of snow or ice on the reflector severely impairing the measurement	yes
16	<b>Not used.</b>	<b>Not used.</b>	no