SI PROCE

FEX

RF Frequency Range Extension 2.3 GHz

Hardware Option 248 295

Operating Instructions

Doc. Version: 9703-100-A

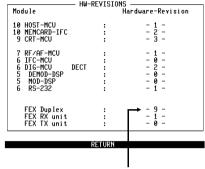
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Hardware/Software Requirements

Modification of a STABILOCK 4031 or STABILOCK 4032 must be made at the plant together with all necessary hardware and software updates.

Fig. 9.1:
The HW-REVISIONS mask shows the version numbers of the FEX hardware option.



An entry of -8- means, that the Communication Test Set is equipped with an updated older hardware. An entry of -9-shows, that the Communication Test Set is equipped with a new hardware. Both the updated and the new hardware have the same functions.

Note: The FEX hardware option will not work together with the 2nd RF generator hardware option (ordering code: 248 292/248 293).

Testing FEX Hardware Option

The FEX hardware option is tested automatically in the SELF-CHECK.

Call up the SELF-CHECK mask from one of the basic masks (RX, TX or DUPLEX) by

```
[AUX] + (DEF.PAR.) + (STATUS) + (HW-REVISIONS) + (SELF-CHECK).
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Fig. 9.2:
In the Duplex + FEX entry of the SELF-CHECK mask you can check whether the

FEX hardware option works correctly.

START SELF-CHECK START LED-TEST RETURN

ok Stage has responded correctly to all tests.

failed Stage has responded negatively to at least one test.

not installed No FEX installed in this Communication Test Set.

related test failed FEX cannot be tested because another stage is

defective.

Differences from Standard Set

The FEX hardware option expands the range of the Communication Test Set for RX and TX measurements by the frequency range 1 through 2.3 GHz. This means that systems like DCS 1800/1900, DECT, etc can be tested (if the Communication Test Set is equipped with the corresponding hardware).

All functions of the Communication Test Set remain unaltered. The specifications of the FEX hardware option apply in the frequency range between 1 and 2.3 GHz, otherwise those of the Communication Test Set continue to apply.

Technical Data

Receiver test

Carrier frequency

RF frequency range 1.0 to 2.3 GHz

Resolution 1 kHz

Accuracy like reference oscillator

Output level

RF socket –20 to –115 dBm

RF DIRECT socket 0 to -122 dBm

Resolution 0.1 dBm

Level error into 50 Ω

(1.0 to 2.0 GHz)

VSWR (50 Ω) RF socket < 1.1

Transmitter test

RF frequency range 1.0 to 2.0 GHz

Resolution 10 Hz

Input level 0.1 mW to 125 W

RF socket

Measurement error like reference oscillator +10 Hz

1.5 dB

Frequency measurement 1.0 to 2.0 GHz

min. level -5 dBm

RF power measurement (broadband)

RF frequency range 1.0 to 2.0 GHz

Input level 1 mW to 125 W

Resolution

P < 1 W 1 mW P < 10 W 10 mW P ≥ 10 W 100 mW

Measurement error

P > 200 mW < 14 % + 1 digit

Selective power < 3 dB

FEX

FEX Technical Data

Synthesizer

Spectral purity

Phase noise (25 kHz offset)

 $\label{eq:free_form} \begin{array}{ll} f < 2 \text{ GHz} & < -105 \text{ dBc/Hz} \\ f \ge 2 \text{ GHz} & < -100 \text{ dBc/Hz} \\ \end{array}$

Residual FM

f < 2.0 GHz 16 Hz (rms, CCITT weighted) $f \ge 2.0$ GHz 20 Hz (rms, CCITT weighted)

Spurious

 $\begin{array}{ll} \text{f} < 2.0 \text{ GHz} & -49 \text{ dBc} \\ \text{f} \geq 2.0 \text{ GHz} & -43 \text{ dBc} \end{array}$

Lifeline

The chronological lifeline tells you what modifications have been made to the software (SW) and the operating instructions. After a software update the lifeline helps you to find out quickly about all major changes (see code) in the updated operating instructions that are supplied.

are supplied.					
Code: C = Correction, IN = Important Note, NF = New Feature					
Doc. Version	$_{\Delta}$ pages	Code	Changes		
9703-100-A	no		First edition		
	1				

FEX Technical Data