RF installation tester FIT set for GSM 900 and DCS 1800

- **RF inline measuring probes for 400 ... 1000 MHz and 1700 ... 2000 MHz**
- **Measurement of the emitted and the** reflected power
- **VSWR measurement**
- **Measurement contin.** power or bursts
- **Storage of min./max. values**
- **Mobile phone measuring probes for 890 ... 915 MHz and 1710 ... 1780 MHz**
- **Measurement of the radiated power**
- **Fast DC voltmeter**
- **Ohmmeter for troubleshooting**

Schomandl Distributor:

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The RF installation tester set for GSM 900 and DCS 1800 provides all the instruments and accessories necessary for checking a mobile phone in one practical case.

Along with the base unit for the RF installation tester FIT, the case contains two inline measuring probes as well as two mobile phone measuring probes.

An RF adapter set and measuring leads with test probes and crocodile clips for DC voltage and resistance measurement make the connection between the instrument and the test specimen.

The set was designed especially for measurements on analogue and digital mobile telephones and radio systems.

The inline measuring probes measure the power output by the transmitter and the reflected power in the related frequency range. The measuring probes are inserted directly between the mobile telephone and the antenna cable.

The power can be indicated in either Watt or dBm. It is also possible to indicate VSWR instead of reflected power.

The feature for saving maximum and minimum values enables even brief problems to be demonstrated. A red LED is activated if the DC resistance to ground is less than 50 W. The activated LED indicates a possible short-circuit without affecting the power or VSWR measurement.

Along with checks on mobile phones, the mobile phone measuring probes are a valuable aid for checking the power radiated by mobile phones that are installed in a vehicle.

By comparing the RF power radiated by the antenna with the power output from the transmitter to the antenna, one can for instance demonstrate excessively high losses in the pane of glass used for a bonded antenna.

The power radiated by the antenna is measured at a defined distance (7 cm) from the transmitter antenna. Templates for checking this distance are included in the set.

The base unit also includes a digital voltmeter function. The conversion time for this digital voltmeter is so short that even dips in the supply voltage during the transmitted pulses are detected. The maximum and minimum values during the measurement are saved. The values saved are only overwritten by higher maxima or lower minima.

Ohmic resistances are measured using the Ohmmeter function. The resistance measurement is made using DC.

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Technical data FIT set for GSM 900 and DCS 1800

Inline measuring probe GSM 900:
Frequency range: 400 MHz ... 1000 MHz
RF power measurement (contin. or bursts):
Measurement range: 20 mW ... 50 W
Resolution: 0.1 dB
Tolerance (P = 1 W): ≤ ± 1.0 dB
Offset adjustment (0.1 dB steps): ± 12.7 dB
Display: Numeric W or dBm, Min./Max.
VSWR measurement:
Measurement range: 1.2 ... 10; > 10
Resolution VSWR 1.0 ... 3.0: 0.1
VSWR 3.0 ... 5.0: 0.2
VSWR 5.0 .....10: 0.5
Display: Numeric, Min./Max.; bar graph
Antenna short-circuit indication: Red LE

Inline measuring probe DCS 1800
Frequency range: 1700 MHz ... 2000 MHz
RF power measurement (contin. or bursts):
Measurement range: 2 mW ... 5 W
Resolution: 0.1 dB
Tolerance (P = 1 W): ≤ ± 1.0 dB
Offset adjustment (0.1 dB steps): ± 12.7 dB
Display: Numeric W or dBm, Min./Max.
VSWR measurement:
Measurement range: 1.2 ... 10; > 10
Resolution VSWR 1.0 ... 3.0: 0.1
VSWR 3.0 ... 5.0: 0.2
VSWR 5.0 .....10: 0.5
Display: Numeric, Min./Max.; bar graph
Antenna short-circuit indication: Red LED

Mobile phone measuring probe for GSM 900:
Frequency range: 890 MHz ... 915 MHz
RF power measurement (contin. or bursts):
Measurement range: 5 mW ... 5 W
Resolution: 0.1 dB
Tolerance (P = 1 W): ≤ ± 2.0 dB
referred to/4-reference radiator
at a distance of 7 cm
Offset adjustment (0.1 dB steps): ± 12.7 dB
Measuring antenna: l /4 antenna
Display: Numeric W or dBm, bar graph

Mobile phone measuring probe for DCS 1800:
Frequency range: 1710 MHz ... 1780 MHz
Technical data FIT set for GSM 900 and DCS 1800
RF power measurement (contin. or bursts):
Measurement range: 2 mW ... 2 W
Resolution: 0.1 dB
Tolerance (P = 1 W): ≤ ± 2.0 dB

Mobile phone measuring probe for DCS 1800:
Frequency range: 1710 MHz ... 1780 MHz
RF power measurement (contin. or bursts):
Measurement range: 2 mW ... 2 W
Resolution: 0.1 dB
Tolerance (P = 1 W): ≤ ± 2.0 dB
referred to /4 reference radiator at a distance of 7 cm
Offset adjustment (0.1 dB steps): ± 12.7 dB
Measuring antenna: Planar antenna
Display: Numeric W or dBm, bar graph

Base unit:
DC voltage measurement:
Measurement range: 0 ... 30 V
Resolution: 30 mV
Display: Numeric, Min./Max., bar graph
Resistance measurement:
Measurement range: 0.3 W 1 kW
Resolution: 0.1 W/1 W
Display: Numeric, bar graph
Beeper: Active ≤ 8 W

General:
Connections: N sockets on the inline measuring probe
safety sockets for 4 mm banana plugs
V=, W, GND
Display: 2-line LCD with illumination
Power supply: 4 x mignon batteries or 4 x AA
rechargeable batteries
Power consumption (without illumination): ≤ 95 mA
Operating temperature: + 5 °C ... + 45 °C
Electrical safety: EN 61010
EMC: CE marking

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Dimensions base unit:	197 mm x 97 mm x 40 mm
Dimensions inline measuring probes:	
GSM 900:	120 mm x 75 mm x 30 mm
GSM 1700:	120 mm x 75 mm x 30 mm
Dimensions mobile phone measuring probes:	
GSM 900:	83 mm x 97 mm x 40 mm
GSM 1700:	83 mm x 97 mm x 40 mm
Transport case:	440 mm x 350 mm x 200 mm
Weight base unit incl. batteries:	Approx. 0.55 kg
Inline measuring probe GSM 900:	Approx. 0.6 kg
Inline measuring probe DCS 1800:	Approx. 0.6 kg
Mobile phone measuring probe GSM 900:	Approx. 0.3 kg
Mobile phone measuring probe DCS 1800:	Approx. 0.3 kg
Transport case complete:	Approx. 4.6 kg

Items supplied:
Base unit, 2 inline measuring probes, 2 mobile phone measuring probes, 2 distance templates, 1 RF adapter set (BNC, TNC, Mini-UHF, Mini-Crimp, WICLIC, FAKRA), 2 measuring leads, 2 test probes, 2 crocodile clips, 1 operating manual, 1 transport case for the GSM set.

Order code:

RF installation tester FIT set for GSM 900 and DCS 1800	Order no. 86820.003

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