Fast-Installations-Tester
FIT 70

The FIT Series are hand-held, low-cost instruments for quick tests of digital (cellular) and analog radio communications systems. They are service-testers and Point-of-Sale testers for mobile phones which allow fast Go/NoGo decisions at the first level of diagnosis before they are returned to the manufacturer's maintenance center. This reduces down times, handling costs and ensures that only defective units will be returned. Of course the FIT Series also improve the image of the retailers at the Point-of-Sale. Operation is such as simple that everyone can use the FIT after a few minutes of training.

SCHOMANDL offers different FIT models depending on the application and required frequency range. The FIT 400 is our best priced model and covers 400 MHz to 1000 MHz. This frequency band allows to check most of the international analog and cellular mobile networks such as GSM 900, AMPS, D-AMPS, TACS, NMT 450/900. The FIT 70 covers the same public mobile networks but already starts at 70 MHz. The lower frequency band is used for private mobile radio - PMR, at police and fire departments, taxis, customs etc. The FIT 1700 is designed to check mobile radios from 1700 MHz to 2000 MHz in GSM/DCS/PCS -1800/1900 networks. The separate RF-head is inserted without long interconnection cables between the transmitter output of the mobile radio and the antenna cable, thus avoiding additional measuring errors. Now just read-off the forward & reverse RF power in Watt or dBm and the VSWR from the high-contrast LCD. These are useful parameters to determine the quality of the systems components and the workmanship of the installation. The FIT Series identify automatically whether a continuous analog RF signal or bursts from a cellular system are applied. The storage of max. and min. values permits the detection of intermittent faults, for example during engine start. In case of a short-circuit in the antenna or in the antenna cable, a red LED on the RF-head gives a warning.

The FIT Handy-Tester is designed for GSM 900 MHz and GSM/DCS 1800 MHz digital cellular systems. The FIT Handy-Tester measures the emitted RF power of cellular mobile phones via integrated antennas on the RF-heads in a defined 7 cm distance. The instrument is supplied with two distance pieces to guarantee this distance. A simple

measurement allows to check very quickly the basic function of cellular mobile phones - transmitted RF power.

All FIT models have a built-in, fast converting DC voltmeter with minimum-/maximum-storage and a ohmmeter. There is no need for any extra instrument to locate further malfunctions in the vehicle's electrical system, in car installation kits or AC/DC chargers. The separate basic instrument permits easy use and read-out of test results in numerical or bargraph display. Useful accessories for the FIT testers are the transportation box (lined with dense foam to provide maximum protection) and the RF-adapter set (connects the FIT to the most common mobile phones).

- FIT 70: 70 MHz ... 1000 MHz
  FIT 400: 400 MHz ... 1000 MHz
  FIT 1700: 1700 MHz ... 2000 MHz
- Forward and reverse power
- Accurate VSWR
- Red LED for antenna short-circuits
- Auto detect of pulse transmission
- Emitted RF power measurements via antenna with FIT Handy-Tester for GSM 900 and GSM/DCS 1800
- Storage of min./ max. values
- Ohmmeter for fault finding
- Fast converting DC voltmeter
- Easy to use and to read

FIT 70 or FIT 400 or FIT 1700

Specifications FIT 70

Frequency range: ..... 70 MHz ... 1000 MHz

RF power measurement (CW or bursts):
Measuring range: 70 MHz ... 88 MHz: ... 500 mW ... 50 W
88 MHz ... 180 MHz: ... 250 mW ... 50 W
180 MHz ... 400 MHz: ... 100 mW ... 50 W
400 MHz ... 1000 MHz: ..... 20 mW ... 50 W
Resolution: ..... 0.1 dB
Accuracy: 70 MHz ... 88 MHz; P = 10 W: ..... ≤ ± 1.5 dB
88 MHz ... 180 MHz; P = 5 W: ..... ≤ ± 1.5 dB
180 MHz ... 400 MHz; P = 2.5 W: ..... ≤ ± 1.5 dB
400 MHz ... 1000 MHz; P = 1 W: ..... ≤ ± 1.0 dB
Power offset-setting (in 0.1 dB steps): ..... ± 12.7 dB
Display: ..... numeric in Watt or dBm, min./max.

VSWR measurement:
Measuring 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: 0.5
Display: ..... numeric, min./max., bargraph

Indication of antenna short-circuit: ..... red LED

Voltage measurement:
DC measuring range: ..... 0 ... 30 V
Resolution: ..... 30 mV
Display: ..... numeric, min./max., bargraph

Resistance measurement:
Measuring range: ..... 0.3 Ω ... 1 kΩ
Resolution: ..... 0.1 Ω /1 Ω
Display: ..... numeric, bargraph
Beeper: ..... active ≤ 8 Ω

General data:
Connectors: ..... N-sockets at RF-head, safety sockets for 4 mm banana plugs for DC, Ω, GND
Display: ..... 2-line LCD with backlight
Power requirements: 4 x Mignon batteries 1.5 V, size AA or 4 x rechargeable accus 1.5 V, size AA
Power consumption (without backlight): ..... ≤ 95 mA
Operating temperature: ..... + 5 °C ... + 45 °C
Electrical safety: ..... EN 61010
EMC: ..... CE-mark
Dimensions: Basic instrument:: 197 mm x 97 mm x 40 mm
RF-head: 120 mm x 75 mm x 30 mm
Weight: ..... Basic instrument incl. batt.: ... approx. 0.55 kg
RF-head: ... approx. 0.60 kg
Supplied accessories: ..... Basic instrument, RF-head, Operating manual

Ordering information:
Fast-Installations-Tester FIT 70 ..... BN 86814.000
Accessories:
Transportation box for FIT, adapters ..... BN 86813.101
Set of RF-adapters (BNC, TNC, Mini-UHF) BN 86813.102