

Technical data

Table 1: Technical data

Component	Remark
Frequency range	10 kHz to 1 GHz (resolution 1 Hz)
Measurement result <i>Single Frequency</i>	SWR, scattering parameter S11, magnitude and phase S11, return loss, mismatch loss, impedance Z by real and imaginary part, magnitude and phase of the impedance, resistance, capacitance, inductance and quality for series and parallel equivalent circuit model of the impedance
Measurement result <i>Multi-frequency</i>	SWR, impedance Z by real and imaginary part, scattering parameter S11 as Smith chart, scattering parameter S11 in dB, all values from single frequency at the position of the marker
Measurement result <i>5-band</i>	SWR
Length ranges <i>Time Domain (TDR)</i>	6.3 m, 12.6 m, 25.3 m, 50.6 m, 101.3 m, 202.7 m (with velocity factor 0.66)
Measurement result <i>Time Domain (TDR)</i>	Impulse response over length, impulse response in dB over length, step response over length, step response magnitude of impedance over length
<i>Time Domain resolution (TDR)</i>	Adjacent interference points: 0.5 ns, corresponds to 0.1 m at VF = 0.66 Individual interference points: < 0.05 ns, corresponds to 0.01 m at VF = 0.66
Current applications	Cable length according to known velocity factor Velocity factor according to known cable length Characteristic impedance of the cable (characteristic impedance) Cable attenuation at 10 MHz, 30 MHz, 50 MHz, 100 MHz, 200 MHz
Display	320 × 240 2.8" IPS TFT color display with 1000 cd/m ² brightness, refresh rate (depending on application) 60 - 120 Hz
Dynamic range measuring chain	In each case up to 200 MHz, 200 MHz to 600 MHz, 600 MHz to 1 GHz Precise mode:> 80 dB / 69 dB / 57 dB Balanced mode: 80 dB / 64 dB / 54 dB Fast mode: 80 dB / 60 dB / 51 dB
Frequency stability	0.5 ppm
Signal processing	24-bit ADC, 32-bit DSP, 64-bit calculations
Measurement input	BNC socket 50 Ω

Component	Remark
Output signal	rectangular $f = 1 \text{ MHz}$, R load = 50Ω $P_1 = 3.2 \text{ dBm}$ (1st harmonic, fundamental) $P_2 = -6.4 \text{ dBm}$ (3rd harmonic) $P_3 = -10.9 \text{ dBm}$ (5th harmonic) $f = 200 \text{ MHz}$, R load = 50Ω $P_1 = 2.1 \text{ dBm}$ (1st harmonic, fundamental) $P_2 = -10.0 \text{ dBm}$ (3rd harmonic) $P_3 = -17.6 \text{ dBm}$ (5th harmonic)
Firmware	New versions free of charge, update via USB
Operating current and times	260 mA, approx. 12 h, 100 % brightness 165 mA, approx. 19 h, 50 % brightness 130 mA, approx. 24 h, 30 % brightness approx. 42 μA , switched off state incl. real-time clock
Currently supported languages	German, English
Power supply	Lithium-Ion industrial cell 18650
Accumulator type	Panasonic NCR18650BD 3.6 V 3180 mAh
Accumulator protection	Against reverse polarity, overcharging, deep discharge, short circuit, charging outside the operating temperature range
Accumulator charge	Via USB and built-in CI-CV charge controller with load balancing, simultaneous operation of the device possible
Operating and storage temperature	-20 °C to 60 °C
Dimensions	135 mm \times 85 mm \times 28 mm (L \times W \times H), without keypad and BNC socket
Weight	270 g incl. battery

We reserve the right to make technical changes to the device and the resulting changes to the technical data.