

KWS VAROS 306

Some of the improvements of the new unit are a faster processor, more userfriendly interface, better display resolution as well as copy and storage functions. The new housing concept permits better integration of modules, higher power capacity. Special attention in its design was drawn on electromagnetic compliance.



ANTENNA MEASUREMENT RECEIVER

- 5,5" colour TFT display (640 x 480 pixel)
- Frequency range from 5-2,150 MHz
- Level measurement with picture/sound reproduction for analog signals: FM, TV and SAT
- Level measurement, Bit Error Rate, MER and MPEG-2-picture display, 2x Common Interface (CI) for DVB-C, DVB-T and DVB-S
- Spectrum display for all ranges;
- Constellation diagram in realtime for all digital norms
- Return channel measurement
- EURO /US-DOCSIS measurement in downstream
- TV stereo and dual channel indication
- Printer for measurement values
- Interface: Ethernet (RJ45), USB-A, USB-B, SCART
- Leather case with carrying strip
- Possible options: S/N measurement module with Hum; DVB-S2 front end; MPEG 2/4 combi decoder with ASI in/out and DVI-out; Docsis analyzer



The balanced weight distribution and optimum impact protection are ideal for outdoor use.



The DataLogger function copies all measurement series directly on to a USB stick.



DVB-T2 measuring module
DVB-T2 differs greatly from the DVB-T standard. It is possible with DVB-T2 to transmit HDTV services.



DAB/DAB+ measuring module
Digital radio for both the DAB and DAB+ standards is becoming increasingly important. The measuring evaluation is possible with VAROS 306.

FREQUENCY RANGE		DVB-T
SAT	910–2150 MHz	COFDM-Demodulator (acc. ETS 300744): Modulation scheme QPSK, 16QAM, 64QAM Guard-Intervall 1/4, 1/8, 1/16, 1/32 Measurement Parameter (acc. ETR 290): VBER 10-2 bis 10-8 (Bitrate error before Viterbi) CBER 10-2 bis 10-6 (Bitrate error after Viterbi) MER 3–24 dB resolution 0.1 dB
TV	44.75–867.25 MHz	
FM (UKW)	87.5–108.3 MHz	
Rückkanal / Return path	5–65 MHz	
OPERATING TYPES		
SAT analog, DVBS, DVBS2, TV analog, DVBC, DVBT, FM (VHF), RC (return channel), Analyzer in all ranges		
RF INPUT		MPEG2 DECODER
IEC Plug 75 Ohm (DIN 45 325)		Video and Audio Decoding: MPEG-2 (ISO/IEC 13818) – NIT evaluation – 1 CI Slot – Display of card menu
USER INTERFACE		
OSD (On Screen Display) German/English/French		
INPUT ATTENUATOR		
0–60 dB in 2 dB-increments		
MEASUREMENT RANGES		INTERFACES
SAT	30–110 dBμV	SCART: FBAS Input, Input Impedance 75 Ohm
TV	25–110 dBμV	FBAS Output, Output Impedance 75 Ohm, 1 VSS at 75 Ohm
FM	25–110 dBμV	RS232: 9- Sub-D; Software Updates
RK / Return path	25–110 dBμV	
MEASUREMENT ACCURACY		MEMORY
±1,5 dB-20° C		99 memory locations
±2,0 dB-0° C-40° C		Memory protection
ACOUSTIC LEVEL TENDANCY		REMOTE POWERING
can be switched on/off		SAT: max. Current 500 mA Voltage 14 V/18 V Current measurement: Range 0–500 mA; Res. 1 mA Tolerance +/- 5%
ANALYZER		TV/FM/RK: max. Current 100 mA Voltage 5 V, 14V, 18 V Current measurement: Range 0–100 mA; Res. 1 mA Tolerance +/- 5%
SAT ANALOG		CURRENT MEASUREMENT
Video: Video bandwidth: 5 MHz Video inverting C-band Audio: Audio subcarrier: 5.00–9.75 MHz		SAT: 0–500 mA TV/FM/RK: 0–100 mA
DVB-S		POWER SUPPLY
QPSK-Demodulator (acc. ETS 300421) Symbol Rates 2–45 MSym/s Measurement Parameters (acc. ETR 290): VBER 10-2-10-8 (after Viterbi) CBER 10-2-10-8 (before Viterbi) MER 2 – 20 dB resolution 0.1 dB		100-120V AC, 200-240V AC; 50–60 Hz 12 V external: 11–15 V DC max. 3 A Socket acc. DIN 45323 Ni-Mh battery pack 12 V/4.5 Ah Operating time: ca. 2 h Protection for deep discharge Battery chargeable over
TV ANALOG		PROTECTION
TV standards: B/G-D/K-L-I-M/N Audio Demodulator: Audio carrier 1&2 Decoding of MONO, STEREO & Dual Audio Audio Carrier Measurement: Resolution 0.5 dB		Acc. EN 61010-1
DVB-C		ELECTROMAGNETIC COMPLIANCE
QAM-Demodulator (acc. ETS 300429) Symbol Rates 0.5–7.2 MSym/s Modulation Scheme: 16, 32, 64, 128, 256 QAM Measurement Parameters (acc. ETR 290): BER 10-2-10-8 (after Viterbi)		Acc. EN 61000-6-2 & EN 61000-6-3
		DIMENSIONS
MER 10–35 dB Resolution 0.1 dB		252 mm x 135 mm x 272 mm
		WEIGHT
		ca. 4,8 kg with integrated battery and bag

BASIC CONFIGURATION VAROS 306

- Antenna measuring receiver with 5" colour TFT
- Frequency range 5-2,150 MHz
- RF level measurement and picture display for analogue TV signals
- RF levelBER/MER/Packet loss measurement DVB-S/DVB-S2/DVB-C/DVB-T
- MPEG-4 decoder with 1 × Common Interface (CI) and DVI out/NIT evaluation
- Spectrum analyser for all ranges
- Scan function for satellite and transponder
- USB interface for data transfer /SCART/DVI out
- DiSEqC/UNICABLE/JESS
- Programmable functions for addressable outlets
- Li-Ion battery pack 7.2 V/6.6 Ah
- Protection bag/measurement cable/power cable /USB stick