

R&S® AMN6500

TWO-LINE V-NETWORK

For disturbance voltage measurements
on single-phase EUTs



Data Sheet
Version 01.00

ROHDE & SCHWARZ

Make ideas real



AT A GLANCE

The R&S®AMN6500 two-line V-network has a simulated impedance of $(50 \mu\text{H} + 5 \Omega) \parallel 50 \Omega$ in the frequency range from 9 kHz to 30 MHz. A socket with protective earth contacts is provided for connecting the EUT. Rohde & Schwarz offers various R&S®AMN6500 models with country-specific connectors.

Owing to its compact design and low weight, the R&S®AMN6500 is ideal for frequently varying applications, in particular for disturbance voltage measurements on single-phase EUTs both in the lab and on site. Please note that V-networks of this type produce high leakage currents due to their standard-compliant design. It is therefore essential that they be connected to a low-impedance protective earth system. In case of doubt, an isolating transformer should be used.

If the EUT is operated with AC supply voltages between 90 V and 240 V and AC supply frequencies between 50 Hz and 60 Hz, the operating voltage for the V-network's internal logic circuit is obtained directly from the AC supply. This applies to all standard applications. If the EUT is operated with AC supply voltages up to 90 V or DC voltages up to 28 V, the logic circuit is powered via an external plug-in power supply which comes with the unit as standard.

Key facts

- ▶ Frequency range from 9 kHz to 30 MHz
- ▶ Maximum continuous current: 16 A (country-specific)
- ▶ Simulated impedance: $(50 \mu\text{H} + 5 \Omega) \parallel 50 \Omega$
- ▶ Measurements in line with CISPR, EN, VDE, ANSI, FCC Part 15 and MIL-STD-461 standards
- ▶ Voltage division factor: 10 dB calibrated, in line with CISPR 16-1-2



BENEFITS AND KEY FEATURES

Air-core design and artificial hand

The R&S®AMN6500 two-line V-network uses air-core inductors and contains an artificial hand.

150 kHz switch-selected highpass filter

To prevent the measuring receiver from being overdriven by high-level low-frequency spectra, a 150 kHz highpass filter can be activated.

Built-in 10 dB attenuator pad

To ensure standard-compliant impedance irrespective of the receiver input attenuation, the R&S®AMN6500 includes a 10 dB attenuator pad.

Built-in pulse limiter (can be switched off)

A built-in pulse limiter that can be switched off protects the measuring receiver input.

Remote control with TTL levels (compatible with Rohde & Schwarz measuring receivers)

The R&S®AMN6500 comes with TTL control inputs for remote control in automatic test systems (phase selection and activation of highpass filter). The inputs can be driven by controllers or Rohde & Schwarz measuring receivers. Optocouplers prevent pick-up of external disturbance.



SPECIFICATIONS

Specifications		
Frequency range		9 kHz to 30 MHz
Simulated impedance		(50 μ H + 5 Ω) 50 Ω (nom.)
Power supply path to EUT		
AC supply voltage	If the EUT is operated with AC supply voltages up to 90 V or DC voltages up to 28 V, the V-network's internal logic circuit has to be powered via the external plug-in power supply supplied as standard.	0 V to 240 V AC + 10%
AC supply frequency		50 Hz to 60 Hz \pm 5%
DC voltage		0 V to 28 V DC
Maximum permissible continuous current	country-specific	
Model .12		16 A
Model .13		13 A
Model .16		15 A
Test path to measuring receiver		
Maximum permissible RF disturbance power from EUT		1 W
Highpass filter	integrated, switch-selected	150 kHz
Voltage division factor between EUT and measuring receiver port	built-in attenuator pad, calibration data supplied with V-network	10 dB
Response threshold of built-in pulse limiter	pulse limiter can be switched off	140 dB (μ V)
Connectors		
AC supply input	country-specific	connector, male, with protective earth contact(s) and 1.8 m cable
AC supply voltage input for EUT	country-specific	socket with protective earth contact(s)
RF output to measuring receiver		N female, 50 Ω
Remote control input		25-contact, D-Sub, female
Output for artificial hand		4 mm connector, female, with knurled screw
Reference ground	on side panel	ground bar with three M4 threads
Protective earth	on rear panel	M6 threaded bolt
Input for external power supply	on rear panel; external plug-in power supply supplied as standard	DC connector, \varnothing outer conductor: 5.5 mm, \varnothing inner conductor: 2.1 mm, 10 V to 18 V DC, 250 mA
General data		
Operating temperature range		+5 °C to +45 °C
Storage temperature range		-40 °C to +70 °C
Dimensions	W x H x D	219 mm x 147 mm x 350 mm (8.6 in x 5.8 in x 13.8 in)
Weight		5.5 kg (12.1 lb)
Electrical safety	observe safety instructions in manual	in line with EN61010-1
EMC		in line with IEC/EN61326
Emissions		class B, in line with residential environment requirements
Immunity		in line with industrial environment requirements

ORDERING INFORMATION

Designation	Type	Order No.
Base unit		
Two-line V-network	R&S®AMN6500	
Model for Germany (Schuko connector)		1352.1313.12
Model for United Kingdom		1352.1313.13
Model for USA		1352.1313.16
Accessories supplied		
User manual, calibration data, plug-in power supply		
Recommended extras		
Control cable ¹⁾ , length: 3 m	R&S®EZ-21	1107.2087.03
Control cable ¹⁾ , length: 10 m	R&S®EZ-21	1107.2087.10
Control cable ²⁾ , length: 3 m	R&S®EZ-29	1326.6470.03
Control cable ²⁾ , length: 10 m	R&S®EZ-29	1326.6470.10

¹⁾ 25-wire remote control cable: control by R&S®ESxS/R&S®ESIBx/R&S®ESPIx/R&S®ESCI/R&S®ESUx test receiver or R&S®FPL1000 signal and spectrum analyzer (male-to-male).

²⁾ 25-wire/9-wire remote control cable: control by R&S®ESL/R&S®ESRP/R&S®ESR/R&S®ESW test receiver or R&S®FSW/R&S®FSVx signal and spectrum analyzer (male-to-female).

Service options		
Extended warranty, one year	R&S®WE1	Please contact your local Rohde & Schwarz sales office.
Extended warranty, two years	R&S®WE2	
Extended warranty, three years	R&S®WE3	
Extended warranty, four years	R&S®WE4	
Extended warranty with calibration coverage, one year	R&S®CW1	
Extended warranty with calibration coverage, two years	R&S®CW2	
Extended warranty with calibration coverage, three years	R&S®CW3	
Extended warranty with calibration coverage, four years	R&S®CW4	
Extended warranty with accredited calibration coverage, one year	R&S®AW1	
Extended warranty with accredited calibration coverage, two years	R&S®AW2	
Extended warranty with accredited calibration coverage, three years	R&S®AW3	
Extended warranty with accredited calibration coverage, four years	R&S®AW4	

Models with country-specific connectors



Germany, Austria, Finland, the Netherlands, Norway, Russia, Sweden, Korea; occasionally: Portugal, Spain



UK, Ireland, Hong Kong, Malaysia, Singapore



USA, Canada, Japan, Taiwan, Mexico, Central America

Service that adds value

- ▶ Worldwide
- ▶ Local and personalized
- ▶ Customized and flexible
- ▶ Uncompromising quality
- ▶ Long-term dependability

Rohde & Schwarz

The Rohde & Schwarz technology group is among the trailblazers when it comes to paving the way for a safer and connected world with its leading solutions in test & measurement, technology systems and networks & cybersecurity. Founded more than 85 years ago, the group is a reliable partner for industry and government customers around the globe. The independent company is headquartered in Munich, Germany and has an extensive sales and service network with locations in more than 70 countries.

Sustainable product design

- ▶ Environmental compatibility and eco-footprint
- ▶ Energy efficiency and low emissions
- ▶ Longevity and optimized total cost of ownership

Certified Quality Management
ISO 9001

Certified Environmental Management
ISO 14001



绿测科技有限公司

广州总部：广州市番禺区陈边村金欧大道83号江潮创意园A栋208室
深圳分公司：深圳市龙华区龙华街道 油松社区东环一路1号耀丰通工业园1-2栋2栋
607 南宁分公司：广西自由贸易试验区南宁片区五象大道401号五象航洋城1号楼3519号
广州分公司：广州市南沙区凤凰大道89号中国铁建·凤凰广场B栋1201房
电话：020-2204 2442
传真：020-8067 2851
邮箱：Sales@greentest.com.cn
官网：www.greentest.com.cn



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