

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/EN 61326 |
| 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.

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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

Rohde & Schwarz training

www.training.rohde-schwarz.com

Rohde & Schwarz customer support

www.rohde-schwarz.com/support



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