V-образный эквивалент сети питания ENV216

R&S®ENV216 Two-Line V-Network

At a glance

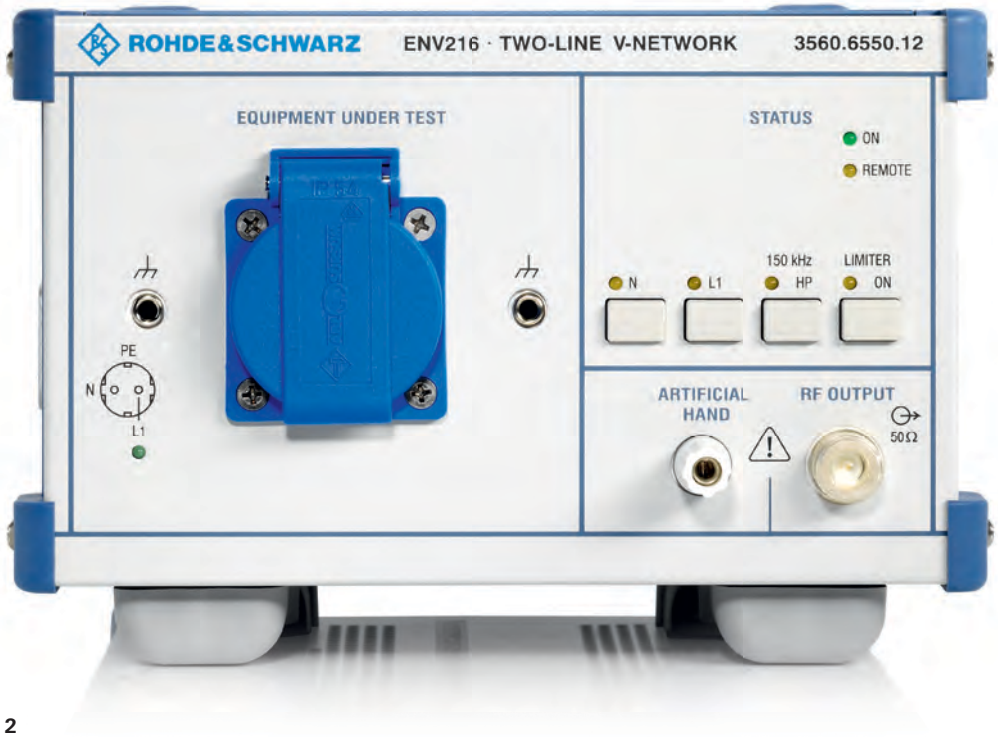
The R&S®ENV216 two-line V-network meets the requirements of CISPR 16-1-2 and EN 55016-1-2 for V-networks with a simulated impedance of (50 µH + 5 Ω)||50 Ω in the frequency range from 9 kHz to 30 MHz as well as the ANSI C63.4 in the frequency range from 150 kHz to 30 MHz. A female connector with protective earth contacts is provided for connecting the EUT. Various models with country-specific connector systems are available.

Owing to its compact design and low weight, the R&S®ENV216 is ideal for frequently varying applications and especially for on-site disturbance voltage measurements on single-phase EUTs. Note that high leakage currents are produced because of the standard design of these V-networks. The networks should therefore be connected to a low-impedance protective earth system. In uncertain cases, an isolating transformer should be used.

In the case of AC supply operation in a range from 90 V to 240 V and 50 Hz to 60 Hz, the operating voltage for the built-in logic circuit is obtained from the AC supply direct. This covers all standard applications. If the EUT is operated with low AC voltages or DC voltages up to 50 V, the logic circuit is powered via an external plug-in power supply that is supplied as standard.

Key facts

- Frequency range 9 kHz to 30 MHz
- Power-handling capacity up to 16 A, constant current (country-specific)
- Simulated impedance (50 µH + 5 Ω)||50 Ω in line with CISPR 16-1-2 Amd. 2:2006
- V-network in line with CISPR, EN, VDE, ANSI, FCC Part 15 and MIL-STD-461D, E and F
- Calibrated in line with CISPR 16-1-2



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Benefits and key features

Air-core design and artificial hand

The R&S®ENV216 two-line V-network is based on air-core inductances and contains an artificial hand.

Switch-selectable highpass filter of 150 kHz

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

Built-in 10 dB attenuator pad

To ensure standard impedance irrespective of the receiver input attenuation, the R&S®ENV216 is equipped with a 10 dB attenuator pad.

Built-in pulse limiter (can be switched off)

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

Remote control with TTL levels (compatible with measuring receivers)

TTL control inputs that can be driven by controllers and measuring receivers are provided for
remote control in automatic test systems (phase selection and activation of highpass filter). Optocouplers prevent pick-up of external disturbance.

Specifications

Specifications		
Frequency range		9 kHz to 30 MHz
Simulated impedance	phase and magnitude	(50 µH + 5 Ω)||50 Ω
Error limits		±20% (magnitude), ±11.5° (phase), in line with CISPR 16-1-2
Isolation [1]	9 kHz to 50 kHz	> 0 dB to 40 dB (increases linearly with logarithm of frequency)
	50 kHz to 30 MHz	> 40 dB
Test path to EUT		
AC supply voltage	If the EUT is operated with AC voltages up to 90 V and DC voltages up to 50 V, the logic circuit has to be powered via the external plug-in power supply that is supplied as standard.	0 V to 240 V AC + 10%
AC supply frequency		50 Hz to 60 Hz ± 5%
DC voltage		0 V to 50 V DC
Maximum permissible continuous current	country-specific	
Model .12		16 A
Model .13		13 A
Model .14		16 A
Model .15		10 A
Model .16		15 A
Test path to measuring receiver		
Maximum permissible RF disturbance power from EUT		1 W
Highpass filter	integrated, switch-selectable	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	can be switched off	140 dB (µV)
Connectors		
AC supply input	country-specific	plug with protective earth contact and 1.8 m cable
AC supply voltage input for EUT	country-specific	socket with protective earth contact
RF output		N female, 50 Ω
Remote control input		25-contact, D-Sub, female
Input for artificial hand		4 mm connector, female, with knurled clamp
Reference ground		ground bar with three M4 threads
Protective earth		M6 threaded bolt
Connector for external power supply	on rear panel, by supplied plug-in power supply	DC hollow connector Ø 5.5 mm, 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 × H × D	219 mm × 147 mm × 350 mm (8.6 in × 5.8 in × 13.8 in)
Weight		5.5 kg (12.1 lb)
Electrical safety	observe notes in manual	in line with EN 61010
EMC		in line with IEC/EN 61326
Emission		class B, in line with residential environment requirements
Immunity		in line with industrial environment requirements

[1] Between AC supply and measuring receiver port.

Ordering information

Designation	Type	Order No.
Base unit		
Two-Line V-Network	R&S®ENV216	
Model for Germany (Schuko connector)		3560.6550.12
Model for United Kingdom		3560.6550.13
Model for France		3560.6550.14
Model for China/Australia		3560.6550.15
Model for USA		3560.6550.16
Accessories supplied		
Manual, calibration data, plug-in power supply		
Recommended extras		
Control Cable, length: 3 m [1]	R&S®EZ-21	1107.2087.03
Control Cable, length: 10 m [1]	R&S®EZ-21	1107.2087.10
150 kHz Highpass [2]	R&S®EZ-25	1026.7796.03

[1] 25-wire remote-control cable: control by test receivers of series R&S®ESxS, R&S®ESIBx, R&S®ESPIx, R&S®ESCI and R&S®ESUx (male-to-male, wired 1:1; two required for shielded chambers).

[2] Required for high disturbance voltages below 150 kHz, e.g. for disturbance voltage measurement in line with EN 50065, Part 1.

Service options		
Two-Year Calibration Service	R&S®CO2ENV216	Please contact your local sales office.
Three-Year Calibration Service	R&S®CO3ENV216	
Five-Year Calibration Service	R&S®CO5ENV216	
One-Year Repair Service following the warranty period	R&S®RO2ENV216	
Two-Year Repair Service following the warranty period	R&S®RO3ENV216	
Four-Year Repair Service following the warranty period	R&S®RO5ENV216	