

R&S®ESH3-Z6

V-Network

For measuring disturbance voltage and susceptibility in low-impedance power supply networks



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At a glance

The R&S®ESH3-Z6 single-phase V-network with a simulating impedance of $5 \mu\text{H} \parallel 50 \Omega$ meets the requirements of EN 55025/CISPR 25 as well as MIL-STD-461¹⁾, DEF-STAN 59-411 and DO-160 in the frequency range from 100 kHz to 200 MHz.

The R&S®ESH3-Z6 is rated for a continuous current of up to 100 A and can handle surges of up to 500 A for a maximum of 30 s.

The R&S®ESH3-Z6 V-network comes with a calibration report for the voltage division factor.

Design

The R&S®ESH3-Z6 V-network has screw terminals with a large contact area for low-impedance connection to the equipment under test (EUT) and the power supply using cable lugs. Plastic covers on both connections protect against accidental contact.

Key facts

- 0.1 MHz to 200 MHz
- Continuous current of up to 100 A
- Calibration in line with CISPR 25: 2016 (Edition 4)

¹⁾ The current MIL-STD-461 standard requires an impedance of $50 \mu\text{H} \parallel 50 \Omega$. A possible alternative for CE101 and CE102 testing is $5 \mu\text{F} \parallel 50 \Omega$, e.g. for smaller platforms (power distribution less than 50 m) such as fighter aircraft.

Specifications

Specifications	
Frequency range	0.1 MHz to 200 MHz
Simulating impedance	5 μ H 50 Ω
Max. permissible error limits (in line with CISPR 25)	$\pm 20\%$ (magnitude)
Max. permissible continuous current	100 A
Max. permissible continuous current (up to $T_o = +35^\circ\text{C}$)	115 A
Max. permissible short-time current (up to 30 s)	500 A
Max. permissible operating voltage	
DC	600 V
AC	250 V
AC supply frequency range	0 Hz to 440 Hz
Connectors	
Power supply	M8 screw terminal
EUT	M8 screw terminal
Ground	2 x M8 screw terminals
Reference ground	uninsulated baseplate for screwing on ground plane
RF connector	N female
General data	
Operating temperature range	0°C to +50°C
Storage temperature range	-25°C to +70°C
Dimensions (W x H x D)	122 mm x 128 mm x 322 mm (4.8 in x 5.04 in x 12.7 in)
Weight	1.9 kg (4.19 lb)
Electrical safety	in line with EN 61010-1, see notes in manual

Ordering information

Designation	Type	Order number
V-network	R&S®ESH3-Z6	836.5016.52
Accessories supplied		
Cable lugs (4 x), calibration report for voltage division factor		

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Regional contact

- | Europe, Africa, Middle East | +49 89 4129 12345
customersupport@rohde-schwarz.com
- | North America | 1 888 TEST RSA (1 888 837 87 72)
customer.support@rsa.rohde-schwarz.com
- | Latin America | +1 410 910 79 88
customersupport.la@rohde-schwarz.com
- | Asia Pacific | +65 65 13 04 88
customersupport.asia@rohde-schwarz.com
- | China | +86 800 810 82 28 | +86 400 650 58 96
customersupport.china@rohde-schwarz.com

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