

R&S®ESPI
To receive

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EMI Test Receiver Specifications

Test & Measurement

Data Sheet | 06.00



75 Years of Driving Innovation



ROHDE & SCHWARZ

NIST, ISO, IEC, ANSI, NCSL, MIL-STD by www.raeservices.com

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Specifications apply under the following conditions: 15 minutes warm-up time at ambient temperature, specified environmental conditions met, calibration cycle adhered to, and all internal automatic adjustments performed. Data without tolerances: typical values only. Data designated 'nominal' applies to design parameters and is not assured by Rohde & Schwarz.

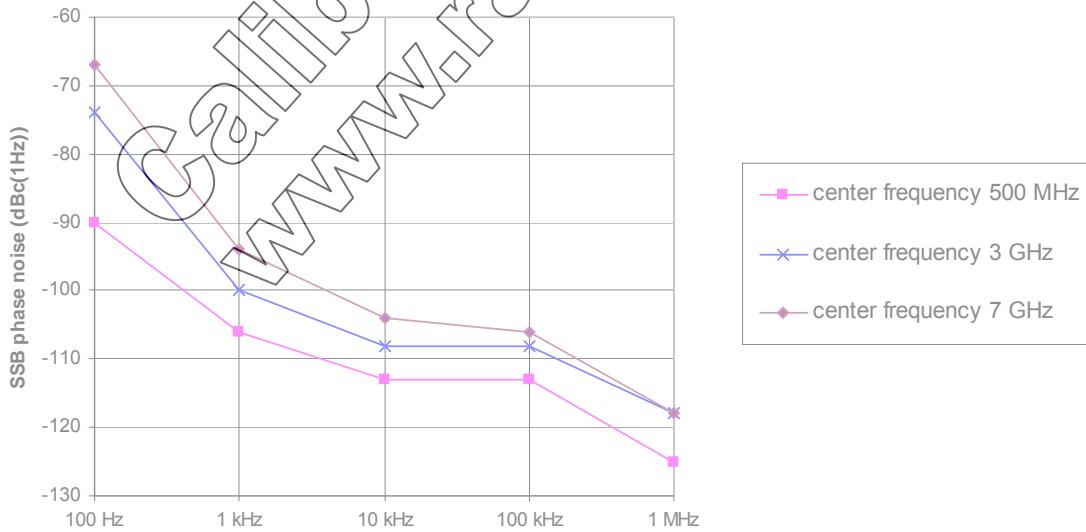
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Specifications

Frequency

| | | |
|--|---|---|
| Frequency range | R&S®ESPI3 | 9 kHz to 3 GHz |
| | R&S®ESPI7 | 9 kHz to 7 GHz |
| Frequency resolution | | 0.01 Hz |
| Internal reference frequency (nominal) | standard | |
| Aging per year | after 30 days of continuous operation | 1×10^{-6} |
| Temperature drift | +5 °C to +45 °C | 1×10^{-6} |
| Internal reference frequency (nominal) | R&S®FSP-B4 option (OCXO) | |
| Aging per year | after 30 days of continuous operation | 1×10^{-7} |
| Temperature drift | +5 °C to +45 °C | 1×10^{-8} |
| External reference frequency | | 10 MHz |
| Frequency display (receiver mode) | | numeric display |
| Resolution | | 0.1 Hz |
| Frequency display (analyzer mode) | | with marker or frequency counter |
| Marker resolution | | span/500 |
| Max. deviation | sweep time > 3 × auto sweep time | $\pm (\text{marker frequency} \times \text{reference frequency error} + 0.5\% \times \text{span} + 10\% \times \text{resolution bandwidth} + 1\% \text{ (last digit)})$ |
| Frequency counter resolution | selectable | 0.1 Hz to 10 kHz |
| Count accuracy | S/N > 25 dB | $\pm (\text{marker frequency} \times \text{reference frequency error} + 1\% \text{ (last digit)})$ |
| Display range of frequency axis | R&S®ESPI3 R&S®ESPI7 | 0 Hz - 10 Hz to 3 GHz 0 Hz - 10 Hz to 7 GHz |
| Max. deviation of display range | | ± 0.1% |
| Spectral purity, SSB phase noise | f = 500 MHz, for f > 500 MHz see diagram 100 Hz 1 kHz 10 kHz 100 kHz, span > 100 kHz 1 MHz, span > 100 kHz 10 MHz | <-84 dBc (1 Hz), typ. -90 dBc (1 Hz) <-100 dBc (1 Hz), typ. -108 dBc (1 Hz) <-106 dBc (1 Hz), typ. -113 dBc (1 Hz) <-110 dBc (1 Hz), typ. -113 dBc (1 Hz) <-120 dBc (1 Hz), typ. -125 dBc (1 Hz) typ. -145 dBc (1 Hz) typ. 3 Hz |
| Residual FM | f = 500 MHz, RBW = 1 kHz sweep time = 100 ms | |



Typical phase noise at different center frequencies

Scan (receiver mode)

| | | |
|--------------------------------|------------|--|
| Scan | | scan of max. 10 subranges with different, independent settings |
| Measurement time per frequency | selectable | 100 µs to 100 s |

Sweep (analyzer mode)

| | | |
|------------------------------|---|---|
| Sweep time | in time domain, span = 0 Hz in frequency domain, span \geq 10 Hz | 1 µs to 16000 s, resolution 125 ns 2.5 ms to 16000 s |
| Max. deviation of sweep time | | 1 % |

Resolution bandwidths

| Sweep filters | | |
|---------------------------|------------------------------------|------------------------------------|
| 3 dB bandwidths | | 10 Hz to 3 MHz, in steps of 1/3/10 |
| Bandwidth accuracy | \leq 100 kHz 300 kHz to 3 MHz | <3 % <10 % |
| Shape factor 60 dB : 3 dB | \leq 100 kHz 300 kHz to 3 MHz | <5 <15 |
| EMI bandwidths | 6 dB bandwidths pulse bandwidth | 200 Hz, 9 kHz, 120 kHz 1 MHz |
| Bandwidth accuracy | \leq 120 kHz 1 MHz | <3 % <10 % |
| Shape factor 60 dB : 6 dB | \leq 120 kHz 1 MHz | <5 <15 |

| | | |
|------------------|---------------|------------------------------------|
| Video bandwidths | analyzer mode | 1 Hz to 10 MHz, in steps of 1/3/10 |
|------------------|---------------|------------------------------------|

| FFT filters | | |
|---------------------------|---------------|------------------------------------|
| 3 dB bandwidths | analyzer mode | 1 Hz to 30 kHz, in steps of 1/3/10 |
| Bandwidth accuracy | | 5 %, nominal |
| Shape factor 60 dB : 3 dB | | 2.5, nominal |

| Channel filters | | |
|-----------------|----------------------------|--|
| Bandwidths | (RRC = raised root cosine) | 100, 200, 300, 500 Hz; 1, 1.5, 2, 2.4, 2.7, 3, 3.4, 4, 4.5, 5, 6, 8.5, 9, 10, 12.5, 14, 15, 16, 18 (RRC), 20, 21, 24.3 (RRC), 25, 30, 50, 100, 150, 192, 200, 300, 500 kHz 1, 1.228, 1.28 (RRC), 1.5, 2, 3, 3.84 (RRC), 4.096 (RRC), 5 MHz |

Preselection (R&S®ESPI-B2 option)

| | | |
|-------------------------------|--|--------------------------------------|
| Preselection | can be switched off in analyzer mode | 11 preselection filters |
| Bandwidths (-6 dB), nominal | <150 kHz | 230 kHz, fixed-tuned lowpass filter |
| | 150 kHz to 2 MHz | 2.6 MHz, fixed-tuned bandpass filter |
| | 2 MHz to 8 MHz | 2 MHz, tracking bandpass filter |
| | 8 MHz to 30 MHz | 6 MHz, tracking bandpass filter |
| | 30 MHz to 70 MHz | 15 MHz, tracking bandpass filter |
| | 70 MHz to 150 MHz | 30 MHz, tracking bandpass filter |
| | 150 MHz to 300 MHz | 60 MHz, tracking bandpass filter |
| | 300 MHz to 600 MHz | 80 MHz, tracking bandpass filter |
| | 600 MHz to 1 GHz | 100 MHz, tracking bandpass filter |
| | 1 GHz to 2 GHz | tracking highpass filter |
| Preamplifier (9 kHz to 3 GHz) | switchable, between preselection and 1st mixer | fixed-tuned highpass filter 20 dB |

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Level

| | | |
|------------------------|---|--|
| Display range | | displayed average noise level (DANL) to 30 dBm |
| Maximum input level | | |
| DC voltage | | 50 V |
| CW RF power | RF attenuation 0 dB | 20 dBm |
| | RF attenuation ≥ 10 dB | 30 dBm |
| Pulse spectral density | RF attenuation 0 dB | 97 dB μ V/MHz |
| Max. pulse voltage | RF attenuation ≥ 10 dB, 10 μ s | 150 V |
| Max. pulse energy | RF attenuation ≥ 10 dB, 10 μ s | 1 mWs |

| Intermodulation | | |
|---------------------------------|--|---|
| 1 dB compression of input mixer | f > 200 MHz, RF attenuation 0 dB, preselection and preamplifier OFF | 0 dBm, nominal |
| Third-order intercept (TOI) | RF attenuation 0 dB, level 2×-30 dBm, $\Delta f > 5 \times RBW$ or 10 kHz, whichever value is larger without preselection 20 MHz to 200 MHz 200 MHz to 3 GHz 3 GHz to 7 GHz with R&S®ESPI-B2 option, preselection = ON, preamplifier = OFF 20 MHz to 200 MHz 200 MHz to 3 GHz with R&S®ESPI-B2 option, preselection = ON, preamplifier = ON 20 MHz to 200 MHz 200 MHz to 3 GHz | >5 dBm >10 dBm, typ. 10 dBm 10 dBm, typ. 15 dBm >0 dBm >2 dBm, typ. 5 dBm >20 dBm >10 dBm, typ. -15 dBm |
| Second harmonic intercept (SHI) | RF attenuation 0 dB, level -10 dBm, without preselection <100 MHz 100 MHz to 1.5 GHz 1.5 GHz to 3.5 GHz with R&S®ESPI-B2 option, preselection = ON, preamplifier = OFF, RF attenuation 0 dB, level <-5 dBm 1 MHz to 100 MHz 100 MHz to 1.5 GHz with R&S®ESPI-B2 option, preselection = ON, preamplifier = ON, RF attenuation 0 dB, level >-35 dBm 1 MHz to 100 MHz 100 MHz to 1.5 GHz | typ. 25 dBm typ. 35 dBm typ. 45 dBm >40 dBm >50 dBm >25 dBm >35 dBm |

| | | |
|--|--|--------------------------|
| Displayed average noise level (DANL) (analyzer mode) | RF attenuation 0 dB, RBW = 10 Hz, VBW = 1 Hz, span = 0 Hz, trace average function over 20 sweeps, 50 Ω termination without preselection | |
| R&S®ESPI3 | 9 kHz | <-95 dBm |
| | 100 kHz | <-100 dBm |
| | 1 MHz | <-120 dBm, typ. -125 dBm |
| R&S®ESPI7 | 10 MHz to 1 GHz | <-142 dBm, typ. -145 dBm |
| | 1 GHz to 3 GHz | <-140 dBm, typ. -145 dBm |
| | 3 GHz to 7 GHz | <-138 dBm, typ. -143 dBm |
| with R&S®ESPI-B2 option, preselection = ON, preamplifier = OFF | | |
| | 9 kHz | <-95 dBm |
| | 100 kHz | <-100 dBm |
| | 1 MHz | <-120 dBm, typ. -125 dBm |
| R&S®ESPI3 | 10 MHz to 1 GHz | <-142 dBm, typ. -145 dBm |
| | 1 GHz to 3 GHz | <-140 dBm, typ. -145 dBm |
| R&S®ESPI7 | 10 MHz to 1 GHz | <-140 dBm, typ. -145 dBm |
| | 1 GHz to 3 GHz | <-138 dBm, typ. -143 dBm |
| | 3 GHz to 7 GHz | <-138 dBm, typ. -143 dBm |

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| | |
|--|---|
| Displayed average noise level (DANL) (analyzer mode) (continued) | with R&S®ESPI-B2 option, preselection = ON, preamplifier = ON |
| R&S®ESPI3 | <-105 dBm |
| 9 kHz | <-110 dBm |
| 100 kHz | <-130 dBm, typ. -137 dBm |
| 1 MHz | |
| R&S®ESPI7 | <-152 dBm, typ. -155 dBm |
| 10 MHz to 1 GHz | <-150 dBm, typ. -153 dBm |
| 1 GHz to 3 GHz | <-148 dBm, typ. -151 dBm |
| 10 MHz to 1 GHz | <-150 dBm, typ. -153 dBm |
| 1 GHz to 3 GHz | <-148 dBm, typ. -151 dBm |

| | |
|--|---|
| Noise indication (receiver mode) | nominal, calculated from DANL data, 0 dB RF attenuation, 50 Ω termination |
| Average (AV) display | without preselection |
| R&S®ESPI3 | <25 dBµV |
| 9 kHz, BW = 200 Hz | <20 dBµV |
| 150 kHz, BW = 200 Hz | <36 dBµV |
| 150 kHz, BW = 9 kHz | <17 dBµV |
| R&S®ESPI7 | <6 dBµV |
| 10 MHz to 30 MHz, BW = 9 kHz | <8 dBµV |
| 30 MHz to 1 GHz, BW = 120 kHz | <16 dBµV |
| 1 GHz to 3 GHz, BW = 1 MHz | |
| R&S®ESPI3 | <4 dBµV |
| 10 MHz to 30 MHz, BW = 9 kHz | <8 dBµV |
| 30 MHz to 1 GHz, BW = 120 kHz | <16 dBµV |
| 1 GHz to 7 GHz, BW = 1 MHz | <18 dBµV |
| R&S®ESPI7 | <25 dBµV |
| 9 kHz, BW = 200 Hz | <20 dBµV |
| 150 kHz, BW = 200 Hz | <36 dBµV |
| 150 kHz, BW = 9 kHz | <17 dBµV |
| R&S®ESPI3 | <6 dBµV |
| 10 MHz to 30 MHz, BW = 9 kHz | <-6 dBµV |
| 30 MHz to 1 GHz, BW = 120 kHz | <6 dBµV |
| 1 GHz to 3 GHz, BW = 1 MHz | <16 dBµV |
| R&S®ESPI7 | <4 dBµV |
| 10 MHz to 30 MHz, BW = 9 kHz | <8 dBµV |
| 30 MHz to 1 GHz, BW = 120 kHz | <16 dBµV |
| 1 GHz to 7 GHz, BW = 1 MHz | <18 dBµV |
| with R&S®ESPI-B2 option, preamplifier = ON | |
| R&S®ESPI3 | <15 dBµV |
| 9 kHz, BW = 200 Hz | <10 dBµV |
| 150 kHz, BW = 200 Hz | <26 dBµV |
| 150 kHz, BW = 9 kHz | <7 dBµV |
| R&S®ESPI7 | <16 dBµV |
| 10 MHz to 30 MHz, BW = 9 kHz | <4 dBµV |
| 30 MHz to 1 GHz, BW = 120 kHz | <6 dBµV |
| 1 GHz to 3 GHz, BW = 1 MHz | <16 dBµV |
| Increase of DANL relative to AV display | |
| Max peak | typ. +11 dB |
| RMS | typ. +1 dB |
| Quasi peak | |
| band A | typ. +3 dB |
| band B | typ. +4 dB |
| bands C and D | typ. +6 dB |

| Immunity to interference | | |
|---------------------------|---|-----------|
| Image frequency | | >70 dB |
| Intermediate frequency | | >70 dB |
| Spurious response | f > 1 MHz, 0 dB RF attenuation, without input signal | <-103 dBm |
| Other interfering signals | Δf > 100 kHz, mixer level < -10 dBm | <-70 dBc |

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| Level display (receiver mode) | | |
|-------------------------------|---|--|
| Level display | digital analog | numeric, resolution 0.01 dB bargraph display separate for each detector |
| Spectrum | level axis frequency axis | 10 dB to 200 dB in steps of 10 dB linear or logarithmic selectable |
| Detectors | three detectors can be switched on simultaneously | average (AV), RMS, Max Peak, Min Peak, Quasi Peak (QPK), CISPR AV, CISPR RMS |
| Units of level display | | dB μ V, dBm, dB μ A, dBpW, dBpT |
| Measurement time | selectable | 100 μ s to 100 s |

| Level display (analyzer mode) | | |
|----------------------------------|---|---|
| Screen | | 501 \times 400 pixel (one measurement diagram); max. 2 measurement diagrams with independent settings |
| Logarithmic level display range | | 1 dB, 10 dB to 200 dB in steps of 10 dB |
| Linear level display range | | 10 % of reference level per level division, 10 divisions |
| Number of traces | 1 measurement diagram 2 measurement diagrams | 3 |
| Trace detectors | | Max Peak, Min Peak, Auto Peak, Sample, Quasi Peak, Average, RMS |
| Trace functions | | Clear/Write, Max Hold, Min Hold, Average |
| Number of measurement points | default value range | 501 125 to 8001 in steps of approx. a factor of 2 |
| Setting range of reference level | logarithmic level display linear level display | -180 dBm to +30 dBm in steps of 0.1 dB 70.71 nV to 7.07 V in steps of 1% |
| Units of level axis | logarithmic level display linear level display | dBm, dBmV, dB μ V, dB μ A, dBpW mV, μ V, mA, μ A, nW, pW |

| Max. uncertainty of level measurement | | |
|--|---|--|
| Reference level uncertainty at 128 MHz | level = -30 dBm, RF attenuation = 10 dB, RBW = 10 kHz, reference level = -20 dBm without preselection with R&S®ESPI-B2 option, preselection/preamplifier = ON | <0.2 dB ($\sigma = 0.07$ dB) <0.3 dB ($\sigma = 0.1$ dB) |
| Frequency response referenced to 128 MHz | without preselection -50 kHz 50 kHz to 3 GHz 3 GHz to 7 GHz with R&S®ESPI-B2 option, preselection/preamplifier = ON <50 kHz 50 kHz to 3 GHz | +0.5 dB/-1 dB, nominal <0.5 dB ($\sigma = 0.17$ dB) <2 dB ($\sigma = 0.7$ dB) +0.8 dB/-1.3 dB, nominal <0.8 dB ($\sigma = 0.27$ dB) |
| Uncertainty of attenuator setting | N = 128 MHz, 0 dB to 70 dB, referenced to 10 dB RF attenuation | <0.2 dB ($\sigma = 0.07$ dB) |
| Uncertainty of reference level setting | | <0.2 dB ($\sigma = 0.07$ dB) |
| Log/lin display nonlinearity | S/N > 16 dB RBW \leq 100 kHz 0 dB to -70 dB -70 dB to -90 dB RBW > 100 kHz 0 dB to -50 dB -50 dB to -70 dB | <0.2 dB ($\sigma = 0.07$ dB) <0.5 dB ($\sigma = 0.17$ dB) <0.2 dB ($\sigma = 0.07$ dB) <0.5 dB ($\sigma = 0.17$ dB) |
| Bandwidth switching uncertainty | referenced to RBW = 10 kHz 10 kHz to 100 kHz 300 kHz to 10 MHz FFT filter, 1 Hz to 3 kHz | <0.1 dB ($\sigma = 0.03$ dB) <0.2 dB ($\sigma = 0.07$ dB) <0.2 dB ($\sigma = 0.07$ dB) |
| Total measurement uncertainty | analyzer without preselection receiver/analyzer with preselection/preamplifier | 0.5 dB 1.5 dB |
| Quasi-peak indication | with R&S®ESPI-B2 option, pulse repetition frequency \leq 10 Hz | in line with CISPR 16-1, |

Trigger functions

| Trigger | |
|----------------------------------|---|
| Trigger source | free run, video, external, IF level |
| Trigger offset | span \geq 10 Hz |
| | 125 ns to 100 s, resolution min. 125 ns (or 1 % of offset) |
| Max. deviation of trigger offset | \pm (125 ns to 100 s), resolution min. 125 ns, dependent on sweep time \pm (125 ns + (0.1 % \times trigger offset)) |
| Gated sweep | |
| Gate source | video, external, IF level |
| Gate delay | 1 μ s to 100 s |
| Gate length | 125 ns to 100 s, resolution min. 125 ns (or 1 % of gate length) |
| Max. deviation of gate length | \pm (125 ns + (0.1 % \times gate length)) |

Audio demodulation

| | |
|-----------------------------------|-------------------------------|
| AF demodulation modes | AM and DM |
| Audio output | loudspeaker and earphone jack |
| Marker hold time in analyzer mode | selectable 100 ms to 60 s |

Inputs and outputs (front panel)

| RF input | |
|-----------------------------|---|
| Impedance | 50 Ω |
| Connector | N female |
| Setting range of attenuator | 0 dB to 70 dB in steps of 10 dB 1.5 2 |

| Probe power supply | |
|--------------------|--|
| Supply voltages | +15 V DC, -12.6 V DC and ground, max. 150 mA, nominal |

| Power supply for antennas, etc | |
|--------------------------------|---|
| Supply voltages | \pm 10 V DC and ground, max. 100 mA, nominal |

| USB interface | |
|---------------|-----------------------------------|
| | 2 ports, type A plug, version 2.0 |

| AF output | |
|----------------------|------------------------|
| Connector | 3.5 mm jack |
| Impedance | 10 Ω |
| Open-circuit voltage | adjustable up to 1.5 V |

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| IF 20.4 MHz | | | |
|-------------|-----------------------|----------------------------|--|
| Connector | | BNC female | |
| Impedance | | 50 Ω | |
| Level | | | |
| | mixer level > -60 dBm | | |
| | RBW ≤ 100 kHz or FFT | -10 dBm at reference level | |
| | RBW > 100 kHz | 0 dBm at reference level | |

| Reference frequency output | | | |
|----------------------------|--|----------------|--|
| Connector | | BNC female | |
| Impedance | | 50 Ω | |
| Output frequency | | 10 MHz | |
| Level | | 0 dBm, nominal | |

| Reference frequency input | | | |
|---------------------------|--|-----------------|--|
| Connector | | BNC female | |
| Input frequency | | 10 MHz | |
| Required level | | 0 dBm from 50 Ω | |

| Power supply for noise source | | | |
|-------------------------------|------------|---------------|--|
| Connector | | BNC female | |
| Output voltage | switchable | 28 V, nominal | |

| External trigger/gate input | | | |
|-----------------------------|--|-------------|--|
| Connector | | BNC female | |
| Impedance | | >10 kΩ | |
| Trigger voltage | | 1.4 V (TTL) | |

| IEC/IEEE bus remote control | | | |
|-----------------------------|--|---|--|
| Connector | | interface to IEC 625-2 (IEEE 488.2) | |
| Command set | | 24-pin Amphenol female | |
| Interface functions | | SCPI 1997.0 | |
| | | SH1, AH1, T6, SR1, RL1, PP1, DC1, DT1, C0 | |

| | |
|------------------|-----------------------------|
| Serial interface | RS-232-C (COM), 9-pin D-sub |
|------------------|-----------------------------|

| | |
|-------------------|-----------------------------------|
| Printer interface | parallel (Centronics compatible), |
|-------------------|-----------------------------------|

| | | |
|---------------|-----------------|--------------------------|
| USB interface | upper connector | type A plug, version 1.1 |
| | lower connector | type A plug, version 2.0 |

| | | |
|------------------------|--|------------------------------|
| External monitor (VGA) | | VGA-compatible, 15-pin D-sub |
| Connector | | |

| | |
|----------------|--------------|
| User interface | 25-pin D-sub |
|----------------|--------------|

General data

| | |
|------------------|-------------------------|
| Display | 21 cm TFT color display |
| Resolution | 640 × 480 pixel (VGA) |
| Pixel error rate | <2 × 10 ⁻⁵ |

| | |
|--------------|---|
| Mass memory | 1.44 Mbyte 3 1/2" disk drive, hard disk |
| Data storage | >500 instrument setups and traces |

| Temperature ranges | |
|-------------------------------|---|
| Nominal temperature range | +5 °C to +40 °C |
| | with R&S®ESPI-B20 option 0 °C to +50 °C |
| Permissible temperature range | +5 °C to +45 °C |
| | with R&S®ESPI-B20 option 0 °C to +55 °C |
| Storage temperature range | -40 °C to +70 °C |
| Climatic loading | +40 °C at 95 % relative humidity (IEC 60068-2-30: 2000-02) |

| Mechanical resistance | |
|-----------------------|---|
| Sinusoidal vibration | 0.5 g from 5 Hz to 150 Hz, max. 2 g at 55 Hz, in line with DIN EN 60068-2-6: 1996-05, DIN EN 60068-2-30: 2000-02, DIN EN 61010-1, MIL-T-28800D, class 5 |
| Random vibration | 0.1 Hz to 100 Hz, acceleration 1 g (RMS) 10 Hz to 300 Hz, acceleration 1.9 g (RMS) |
| Shock | 40 g shock spectrum, in line with MIL-STD-810C and MIL-T- 28800D, classes 3 and 5 |

| | | |
|----------------------------------|--|-------------------|
| Recommended calibration interval | operation with external reference operation with internal reference | 2 years 1 year |
|----------------------------------|--|-------------------|

| Power supply | |
|-------------------|---|
| AC supply | 100 V AC to 240 V AC, 50 Hz to 400 Hz, 3.1 A to 1.3 A, class of protection I to VDE 411 |
| Power consumption | R&S®ESPI3 R&S®ESPI7 typ. 70 VA typ. 120 VA |
| Safety | in line with EN 61010-1, UL 3111-1, CSA C22.2 No. 1010-1, IEC 1010-1 |
| EMC | EMC Directive 2004/108/EC including: EN 61326 class B (emission), CISPR 11/EN 55011/ group 1 class B (emission) EN 61326 table A.1 (immunity, industrial) |
| Test marks | VDE, GS, CSA, CSA-NRTL/C |

| Weight and dimensions | | |
|-------------------------------------|------------------------|---|
| Dimensions | W × H × D | 412 mm × 197 mm × 417 mm (16.22 in × 7.76 in × 16.42 in) |
| Net weight without options, nominal | R&S®ESPI3 R&S®ESPI7 | 10.5 kg (23.15 lb) 11.3 kg (24.91 lb) |

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Ordering information

| Order designation | Type | Order No. |
|---|-----------|--------------|
| Test Receiver 9 kHz to 3 GHz | R&S®ESPI3 | 1164.6407.03 |
| Test Receiver 9 kHz to 7 GHz | R&S®ESPI7 | 1164.6407.07 |
| Accessories supplied | | |
| Power cable, operating manual, service manual | | |

Options

| Order designation | Type | Order No. | Remarks |
|--|--------------|--------------|--|
| Preselector/Preamplifier for R&S®ESPI (factory-fitted) | R&S®ESPI-B2 | 1129.7498.03 | |
| Expanded Environmental Specifications | R&S®ESPI-B20 | 1155.1606.13 | |
| Rugged Case with Carrying Handle | R&S®FSP-B1 | 1129.7998.02 | |
| OCXO Reference Frequency | R&S®FSP-B4 | 1129.6740.02 | |
| TV Trigger/RF Power Trigger | R&S®FSP-B6 | 1129.8594.02 | |
| Internal Tracking Generator, I/Q Modulator | R&S®FSP-B9 | 1129.6991.02 | |
| External Generator Control | R&S®FSP-B10 | 1129.7246.03 | |
| LAN Interface 100BT | R&S®FSP-B16 | 1129.8042.03 | |
| DC Power Supply | R&S®FSP-B30 | 1155.0758.02 | |
| Battery Pack | R&S®FSP-B31 | 1155.1258.02 | requires R&S®FSP-B1 and R&S®FSP-B30 |
| Spare Battery Pack | R&S®FSP-B32 | 1155.1506.02 | requires R&S®FSP-B31 |
| Trigger for Coverage Measurements | R&S®ESPI-K50 | 1106.4386.02 | |
| AM/FM Measurement Demodulator | R&S®FSKY | 1141.1798.02 | |

Service you can rely on

- In 70 countries
- Person-to-person
- Customized and flexible
- Quality with a warranty
- No hidden terms

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About Rohde & Schwarz

Rohde & Schwarz is an independent group of companies specializing in electronics. It is a leading supplier of solutions in the fields of test and measurement, broadcasting, radiomonitoring and radiolocation, as well as secure communications. Established 75 years ago, Rohde & Schwarz has a global presence and a dedicated service network in over 70 countries. Company headquarters are in Munich, Germany.

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For product brochure,
see PD 0758.0745.12
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PD 0758.0745.22 | Version 06.00 | April 2009 | R&S®ESPI

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NIST, ISO, IEC, ANSI, NCSL, MIL-STD by www.raeservices.com

10.14 per minute on German wireless network; rates may vary in other networks (wireline and mobile) and countries.