

# SMP3

## Electromagnetic field meter

3X1

3 INSTRUMENTS IN 1:  
Static field measurement, Spectrum  
analysis & Broadband field meter



FFT-BASED TIME-DOMAIN  
SPECTRUM ANALYSIS  
from 1 Hz to 10 MHz

101

DIGITAL OUTPUT  
For real time external  
measurements



EMF WORKER'S SAFETY  
ICNIRP, EU Directive, FCC,  
SC6 (2015),...



BROADBAND MEASUREMENT  
(0 Hz - 90 GHz)

**5G  
READY**

Ready for 5G  
measurements

Field probe range  
from 0 Hz to 90 GHz

Spectrum analysis [FFT]  
(up to 10 MHz)

Broadband measurements  
(0 Hz - 90 GHz)

Field values:  
X, Y, Z and Total

Graphical display  
in real time

Dynamic menu

Weighted Peak  
Method (WPM)  
Real time comparison  
with limits

> 1 million registers  
SQL data base

Screenshot function

Fibre optics (optional)

USB-C  
Digital Output



Available field probes

**E**

100 kHz - 90 GHz



WPF3  
WPF6  
WPF8  
WPF18  
WPF40  
WPF60/60s  
WPF90

**E H**

1 Hz - 10 MHz



WP400  
WP400c  
WP400-3  
WP50  
WP10M

**H**

DC - 1 GHz



WPH-DC  
WPH60  
WPH1000

**WAVECONTROL**

Safety, Quality, Service

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Product specifications and  
descriptions in this document  
subject to change without notice

# SMP3 Applications



INDUSTRY



TELECOMMUNICATIONS



ENERGY



RAILWAY



MEDICAL



LABS



AERONAUTICAL



WORKER'S  
SAFETY



DEFENSE



AUTOMOTIVE



## Technical specifications

|                             | Broadband                                                                                                                             | Selective                                                                                             | Dual                                                   |
|-----------------------------|---------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|--------------------------------------------------------|
| <b>Part Number</b>          | WSL0001                                                                                                                               | WSL0003                                                                                               | WSL0002                                                |
| <b>Applications</b>         | For broadband measurements using the following probes: WPF3, WPF6, WPF8, WPF18, WPF40, WPF60, WPF60S, WPF90, WP50, WPH60 and WPH1000. | For frequency selective measurements from 0 to 10 MHz using WP400, WP400c, WP400-3, WP10M and WPH-DC. | For both kinds of measurements using all field probes. |
| <b>Field probes</b>         | Automatic detection and recognition                                                                                                   |                                                                                                       |                                                        |
| <b>Broadband</b>            | 0 Hz – 90 GHz (depending on field probe)                                                                                              |                                                                                                       |                                                        |
| <b>Spectrum analysis</b>    | up to 10 MHz                                                                                                                          |                                                                                                       |                                                        |
| <b>Weighted Peak Method</b> | 1 Hz – 10 MHz (Real time WPM for direct comparison with limits)                                                                       |                                                                                                       |                                                        |
| <b>Readout values</b>       | Total field (instantaneous, max., min. and average)<br>Field components (X, Y, Z)                                                     |                                                                                                       |                                                        |
| <b>E Field units</b>        | V/m, kV/m, $\mu\text{W}/\text{cm}^2$ , $\text{mW}/\text{cm}^2$ , $\text{W}/\text{m}^2$ , %                                            |                                                                                                       |                                                        |
| <b>H Field units</b>        | nT, $\mu\text{T}$ , mT, T, A/m, %, mG, G                                                                                              |                                                                                                       |                                                        |
| <b>Log time</b>             | Configurable (from 0.5 s to 6 min)                                                                                                    |                                                                                                       |                                                        |
| <b>Average modes</b>        | Fixed or Sliding, according to international standards                                                                                |                                                                                                       |                                                        |
| <b>Average intervals</b>    | 10 s, 15 s, 30 s, 1 min, 2 min, 5 min, 6 min, 10 min, 15 min, 30 min                                                                  |                                                                                                       |                                                        |
| <b>Schedule measurement</b> | Customized (up to 24 hours)                                                                                                           |                                                                                                       |                                                        |
| <b>Memory capacity</b>      | More than 1 million samples                                                                                                           |                                                                                                       |                                                        |
| <b>Data downloading</b>     | USB-C and fibre optics                                                                                                                |                                                                                                       |                                                        |
| <b>Firmware updating</b>    | USB-C                                                                                                                                 |                                                                                                       |                                                        |
| <b>Alarm</b>                | 2400 Hz audible signal (adjustable threshold)                                                                                         |                                                                                                       |                                                        |
| <b>Display type</b>         | Color transmissive TFT (480 x 272 pixels)                                                                                             |                                                                                                       |                                                        |
| <b>GPS (optional)</b>       | Built-in u-blox 8 (56 independent tracking channels)                                                                                  |                                                                                                       |                                                        |
| <b>Digital Output</b>       | Probe direct output // Digital output through USB-C for WP400 family probes                                                           |                                                                                                       |                                                        |
| <b>Battery</b>              | Internal rechargeable Li-ion                                                                                                          |                                                                                                       |                                                        |
| <b>Autonomy</b>             | > 24 hours                                                                                                                            |                                                                                                       |                                                        |
| <b>Temperature range</b>    | -10 °C to +50 °C                                                                                                                      |                                                                                                       |                                                        |
| <b>Humidity</b>             | 5 % to 95 %, non-condensing                                                                                                           |                                                                                                       |                                                        |
| <b>Size</b>                 | 100 x 215 x 40 mm (3.9 x 8.4 x 1.5 ")                                                                                                 |                                                                                                       |                                                        |
| <b>Weight</b>               | 560 g (19.7 oz.)                                                                                                                      | 635 g (22.4 oz.)                                                                                      | 635 g (22.4 oz.)                                       |

# SMP3

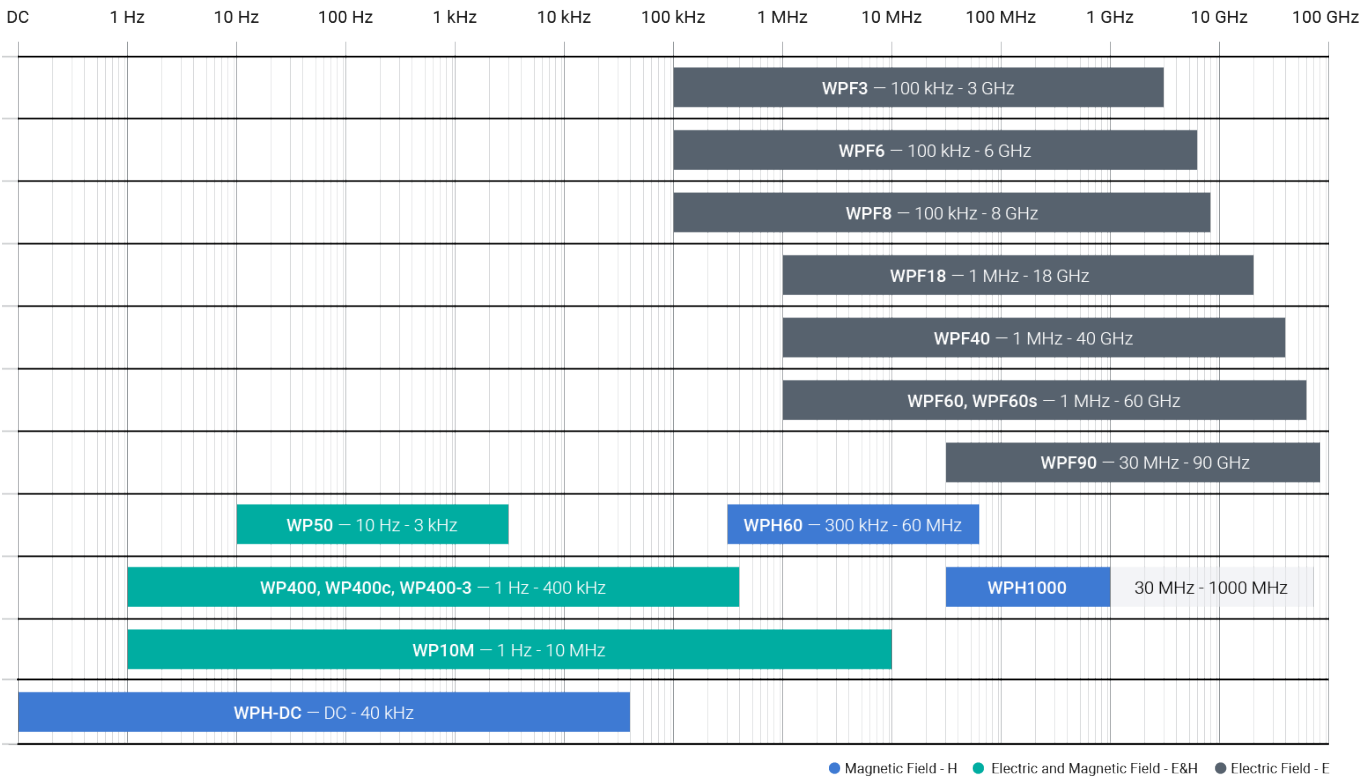
## Electromagnetic field meter. Compatible field probes

Wavecontrol provides a full range of E-Field, H-Field and E&H Field probes covering different frequency ranges starting at 0 Hz and up to 90 GHz.

Probes are plug and play and come with an individual ISO 17025 accredited calibration. All sensors are isotropic, RMS and highly accurate.



## Frequency range of compatible field probes





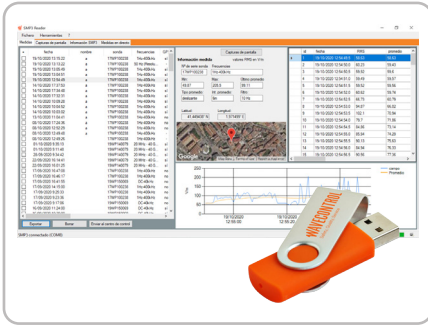
| Model      | Type                  | Part Number | Frequency Range   | Response                                | Measurement range |                                                               |
|------------|-----------------------|-------------|-------------------|-----------------------------------------|-------------------|---------------------------------------------------------------|
| WPH-DC     | Selective & Broadband | WWP1501     | 0 – 40 kHz        | Flat                                    | H-Field:          | 10 $\mu$ T – 10 T                                             |
| WP400      | Selective & Broadband | WWP1001     | 1 Hz – 400 kHz    | Flat / Shaped<br>(Weighted Peak Method) | E-Field:          | 1 V/m – 100 kV/m                                              |
|            |                       |             |                   |                                         | H-Field:          | 50 nT – 30 mT @50 Hz<br>50 nT – 10 mT<br>(100 Hz – 10 kHz)*   |
| WP400c     | Selective & Broadband | WWP1002     | 1 Hz – 400 kHz    | Flat / Shaped<br>(Weighted Peak Method) | E-Field:          | 1 V/m – 100 kV/m                                              |
|            |                       |             |                   |                                         | H-Field:          | 50 nT – 30 mT @50 Hz<br>50 nT – 1.5 mT<br>(820 Hz – 40 kHz)*  |
| WP400-3    | Selective & Broadband | WWP1201     | 1 Hz – 400 kHz    | Flat / Shaped<br>(Weighted Peak Method) | E-Field:          | 10 V/m – 400 kV/m                                             |
|            |                       |             |                   |                                         | H-Field:          | 200 nT – 50 mT<br>(100 Hz – 10 kHz)*                          |
| WP10M      | Selective & Broadband | WWP2401     | 1 Hz - 10 MHz     | Flat / Shaped<br>(Weighted Peak Method) | E-Field:          | 2 V/m - 100 kV/m<br>2 V/m - 47 kV/m<br>(160 kHz - 10 MHz)     |
|            |                       |             |                   |                                         | H-Field:          | 100 nT - 47 mT @50 Hz<br>400 nT - 4.7 mT<br>(500 Hz - 10 MHz) |
| WP50       | Broadband             | WWP0501     | 10 Hz – 3 kHz     | Flat / Shaped                           | E-Field:          | 2.5 V/m – 20,000 V/m                                          |
|            |                       |             |                   |                                         | H-Field:          | 0.05 $\mu$ T – 2,000 $\mu$ T                                  |
| WPH60      | Broadband             | WWP1101     | 300 kHz – 60 MHz  | Flat                                    | H-Field:          | 0.018 – 1 A/m (RMS)<br>0.018 – 20 A/m (CW)                    |
| WPH1000    | Broadband             | WWP1301     | 30 MHz – 1000 MHz | Flat                                    | H-Field:          | 0.018 – 20 A/m                                                |
| WPF3       | Broadband             | WWP0301     | 100 kHz – 3 GHz   | Flat                                    | E-Field:          | 0.2 – 20 V/m (RMS)<br>0.2 – 130 V/m (CW)                      |
| WPF3-HP    | Broadband             | WWP0302     |                   | Flat                                    | E-Field:          | 0.2 – 20 V/m (RMS)<br>0.2 – 1,000 V/m (CW)                    |
| WPF6       | Broadband             | WWP0601     | 100 kHz – 6 GHz   | Flat                                    | E-Field:          | 0.2 – 20 V/m (RMS)<br>0.2 – 130 V/m (CW)                      |
| WPF6-HP    | Broadband             | WWP0602     |                   | Flat                                    | E-Field:          | 0.2 – 20 V/m (RMS)<br>0.2 – 1,000 V/m (CW)                    |
| WPF8       | Broadband             | WWP0401     | 100 kHz – 8 GHz   | Flat                                    | E-Field:          | 0.2 – 20 V/m (RMS)<br>0.2 – 130 V/m (CW)                      |
| WPF8-HP    | Broadband             | WWP0402     |                   | Flat                                    | E-Field:          | 0.2 – 20 V/m (RMS)<br>0.2 – 1,000 V/m (CW)                    |
| WPF18      | Broadband             | WWP0903     | 1 MHz – 18 GHz    | Flat                                    | E-Field:          | 0.5 – 30 V/m (RMS)<br>0.5 – 250 V/m (CW)                      |
| WPF18 Fast | Broadband             | WWP0913     |                   | Flat                                    | E-Field:          | 0.5 – 30 V/m (RMS)<br>0.5 – 1,000 V/m (CW)                    |
| WPF40      | Broadband             | WWP1401     | 1 MHz – 40 GHz    | Flat                                    | E-Field:          | 1 – 55 V/m (RMS)<br>1 – 1,000 V/m (CW)                        |
| WPF40 Fast | Broadband             | WWP1402     |                   | Flat                                    |                   |                                                               |
| WPF60      | Broadband             | WWP2301     | 1 MHz – 60 GHz    | Flat                                    | E-Field:          | 1 – 55 V/m (RMS)<br>1 – 1,000 V/m (CW)                        |
| WPF60 Fast | Broadband             | WWP2311     |                   | Flat                                    |                   |                                                               |
| WPF60S     | Broadband             | WWP2201     | 1 MHz – 60 GHz    | Shaped FCC                              | E-Field:          | 0.1 % – 35 % (RMS)<br>0.1 % – 800 % (CW)                      |
|            |                       | WWP2202     |                   | Shaped ICNIRP<br>1998/2020              |                   |                                                               |
|            |                       | WWP2203     |                   | Shaped SC6                              |                   |                                                               |
| WPF90      | Broadband             | WWP2601     | 30 MHz - 90 GHz   | Flat                                    | E-Field:          | 1.2 – 70 V/m (RMS)<br>1.2 – 1000 V/m (CW)                     |

\*Below and above the stated frequency range, upper limit of the measurement range changes (See datasheets for more information).

# SMP3

## Electromagnetic field meter. Accessories

### SMP3 included accessories



**'SMP3 Reader' PC software**  
Included / Downloadable from [wavecontrol.com](http://wavecontrol.com)

Compatible with Windows 7 or later versions



**SMP3 carrying case**  
Part # WSN0001-2-3

Robust case to fit the SMP3 and up to 5 probes



**USB cable**

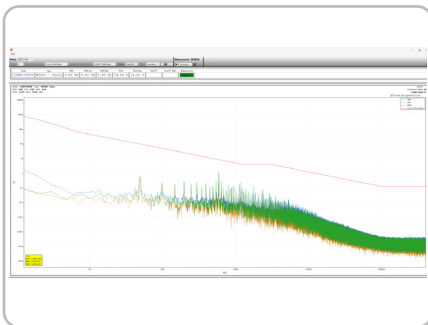
USB to USB-C cable



**AC/DC charger**

International plug types available

### SMP3 optional accessories



**SMP3-Streamer option**  
Part # W-SMP3-STREAMER

Advanced real time processing and multi-probe use



**Non-reflective wooden tripod**  
Part # WSN0001

Including transport cover



**Tripod extension**  
Part # WSN0002

Horizontal extension for LF vertical E-field measurements



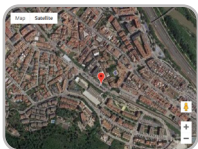
**Probe support for tripod**  
Part # WSN0013

Recommended with the probe extension cable



**Probe extension cable**  
Part # WSN0011 (5 m) and # WSN0014 (2 m)

Extension cable



**GPS**  
Part # WSN00001

Internal embedded GPS



**Fibre optics interface**  
Part # WSN0004 (10 m), WSN0010 (20 m), and WSN0015 (45 m)

Fibre optics + USB converter to PC



**Vehicle DC charger**  
Part # WSN0007

Charge SMP3 from a vehicle DC connector



**SMP3 protective pouch**  
Part # WSN0009

Easily portable protective soft sheath



**SMP3 backpack**  
Part # WSN0008

Soft backpack to fit up to 3 probes