



# Electromagnetic Free Field Sensors



Our range of derivative electromagnetic free field sensors is designed for the measurement of fast pulsed fields. Different models are available: for electric field (D-dot), for magnetic fields (B-dot). Because the sensors are passive, no external or internal power source is required. Baluns and passive integrators are proposed as accessories. Free field sensors might be connected through a fibre optic link to the measurement equipment.

## SPECIFICATIONS

### Sensors:

Reference	SFE1G	SFE3-5G	SFE10G	SFM8-5G
Type	D-Dot (electric)	D-Dot (electric)	D-Dot (electric)	B-Dot (magnetic)
Equ. area $A_{eq}$ (m <sup>2</sup> )	$1 \times 10^{-2}$	$1 \times 10^{-3}$	$1 \times 10^{-4}$	$9 \times 10^{-6}$
Frequency response (-3 dB)	1 GHz	3.5 GHz	10 GHz	8.5 GHz
Risetime (10 – 90 %)	320 ps	110 ps	32 ps	41 ps
Peak max. output	0.3 kV	1 kV	3 kV	500 V
Connector type	SMA (m)	SMA (m)	SMA (m)	SMA (m)
Weight	800 gr	350 g	200 g	150 g
Dimensions (L x W x H)	39 x 8 x 10 cm	39 x 8 x 3.5 cm	39 x 8 x 1.8 cm	40 x 0.6 x 0.5 cm
Recommended balun	BL1G	BL3-5G	BL10G	BL10G

### Baluns:

Reference	BL1G	BL3-5G	BL10G
Insertion loss	6 dB	8 dB	8 dB
Bandwidth	22 kHz - 1.4 GHz	200 kHz - 3.5 GHz	250 kHz - 10 GHz
Impedance	50 $\Omega$	50 $\Omega$	50 $\Omega$
Peak maximum input	1 kV	1 kV	150 V
Connector type	SMA	SMA	SMA

*Other models are available on request.*