



# MFO 6502 AUTOMATIC POWER LINE FREQUENCY MAGNETIC FIELD



- Complies with IEC/EN 61000-4-8
- Integrated function unit to NSG 3000 series generators
- Magnetic field test with up to 130 A/m
- 50/60 Hz frequency selection

Electronic devices containing components sensitive to magnetic fields need to be tested for immunity to electromagnetic fields. Product standards define the applicability of such tests and specify the field strength. The basic standard IEC/EN 61000-4-8 describes the test methods for magnetic fields with powerline frequencies.

The MFO 6502 is an auxiliary device for the NSG 3000 series generators and enables fully automatic power line magnetic field testing. It is connected via the system cable to the NSG 3000 generator and is embedded in the configuration management, the software control and the automatic report mechanism.

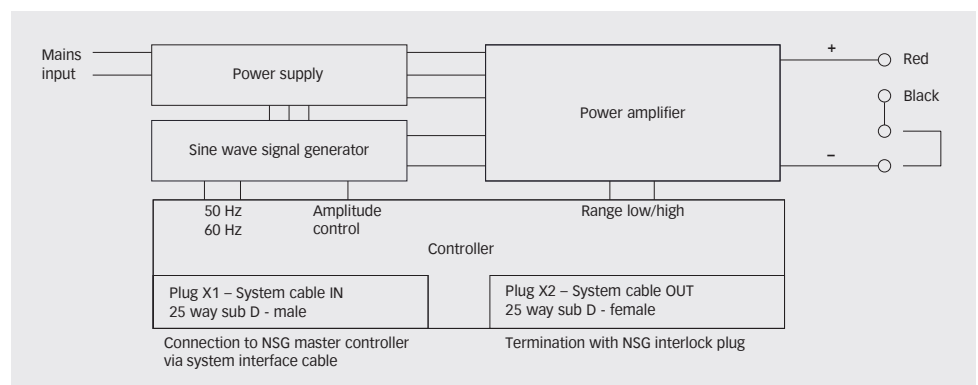
The MFO 6502 consists of a programmable low impedance power amplifier packaged in a robust aluminum housing fitted with convenient handles. It is used to drive magnetic loop antenna types INA 701, 702 and 703.

The maximum strength of the magnetic field depends of the magnetic loop used. The MFO 6502 is able to generate 50 and 60 Hz magnetic fields up to 130 A/m.

This power amplifier design has a number of advantages compared with arrangements using step-down transformers and variable transformers: reduced size, reduced weight, short-circuit proof, 50 and 60 Hz testing irrespective of the local power network, convenient one box solution and an excellent price/performance ratio.

All the required parameters to run an automatically controlled test can be set either by the touch screen user interface or by means of WIN 3000 remote control software. Once the individual antenna factor has been entered, the system calculates the necessary drive parameters to achieve the set field strength at the antenna loop.

### Block diagram



# MFO 6502

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### Technical specifications

With magnetic antenna loop INA 701:	
Field strength, low range:	0.08 to 0.4 A/m (80 to 400 mA drive current)
High range:	0.2 to 3.6 A/m (200 mA to 4.1 A drive current)
With magnetic antenna loop INA 702:	
Field strength, low range:	0.8 to 4 A/m (80 to 400 mA drive current)
High range:	2 to 40 A/m (200 mA to 4.1 A drive current)
With magnetic antenna loop INA 703:	
Field strength, low range:	2.7 to 13.6 A/m (80 to 400 mA drive current)
High range:	6.8 to 130 A/m (200 mA to 4.1 A drive current)
Total harmonic distortion (THD):	<8% for levels 1 to 4, <3.5% at max. output
Test frequency:	Selectable 50 and 60 Hz $\pm 3\%$
Magnetic field adjustment:	Software driven
Instrument supply:	Universal power supply 100 to 250 VAC, 47 to 63 Hz
Operating temperature	5 to 40°C
Overload protection:	Temperature sensor
Dimensions L x W x H:	380 x 195 x 180 mm (15 x 7.7 x 7.1")
Weight:	4.2 kg (9.3 lbs) approx.
Control cable:	NSG 3000 system interface cable, 2 m (79") (included in delivery)

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691-038B May 2015