Impulse magnetizer M-Series

Outstanding features

- 3000 V Maximum voltage
- Energy up to 5000 Ws
- Impulse current up to 60000 A
- Short circuit proof
- Siemens PLC control
- Operation via touch panel
- Various remote interfaces available
- Real-time analog capacitor voltage monitor with display
- Real-time impulse current monitor and display
- Fixture temperature monitor
- Modular design
- Many options available
- Integrable emergency stop circuit
- Configured to customer's requirements
- 12 months warranty for single shift operation

Description

The new M-Series with a maximum energy of 5000 Ws perfectly completes our magnetizer program. It offers the functionality and configurability of the X-series in a smaller mobile cabinet.

Highly efficient charging units can achieve very short cycle times.

Therefore the M-Series is particularly suitable for special applications, such as fast calibration processes together with calibration software CAL-13.

All models have a current comparator for continuous monitoring of the magnetizing process. An integrated measuring unit monitors the temperature of the connected magnetizing fixture.

• Safety functions

Continuous monitoring

All basic functions are controlled continuously by the PLC. The voltage at the capacitors is monitored by the PLC and additionally by a separate circuit. In case of a fault or interruption of the mains power the capacitors are discharged automatically. Each magnetizer is equipped with at least two of these circuits.

Temperature control of magnetizing fixture

Magnet-Physik magnetizing fixtures are equipped with thermocouples that allow monitoring of the fixture temperature. A second internal snap-switch also will open should excessive heat build -up. The magnetizer continuously monitors these interlocks. It will disable the output and generate a fault warning when an overtemperature condition exists. Operation can continue only when the fixture has cooled to a safe level.

• Options

Interfaces:

Standard: 24 V I/O
Optional: RS232 or Profibus

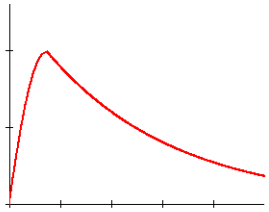
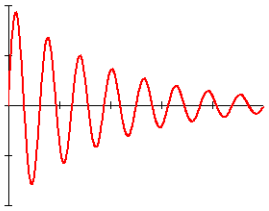
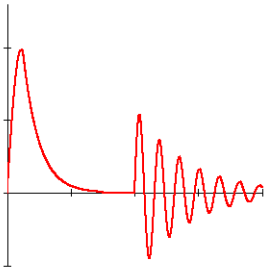
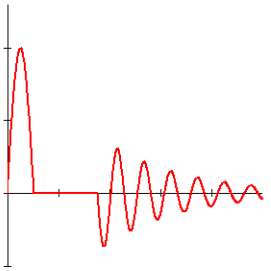
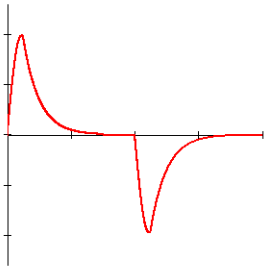
Control Panel:
Touch panel 4” or 7”

The standard model is supplied with 4” touch panel and fully integrable emergency stop circuit.

2. High current output to connect magnetizing fixture:

The M-Series can be upgraded to have two current outputs, configured to fire synchronously or individually, depending on the system configuration. The selection of the active output is implemented electronically..

• Functions / waveforms

A Aperiodically damped		Magnetization
D Damped oscillation		Demagnetization Stabilization
AD Aperiodically damped with subsequent damped oscillation (Functions A and D can also be used separately)		Magnetization and Demagnetization (Weakening, stabilization and adjustment of magnets)
SD Sine half wave and damped oscillation (Functions S and D can also be used separately)		Special calibration processes
AK Aperiodically damped, commutated (Functions A and K can also be used separately)		Magnetization with polarity change

• Technical data

Energy (1 Ws = 1 Joule)	max. 5000 Ws
Voltage	2000 V / 3000 V
Voltage setting	20 V - 2000 V / 3000 V Resolution: ± 1 V
Function	A / D / AD / SD / AK
Max. Current	25 kA / 60 kA
Short circuit protection	yes
Cycle time	1 – 6 s (depending on fixture connected)
Peak current measurement	Accuracy 1%
Interface	24 V / RS232 or PB
2nd output	Yes (optionally)
Mains	1-phase: 230 V AC ± 10 %, 50/60 Hz, 16 A 3-phase: 400 V AC ± 10 %, 50/60 Hz, 32 A (other mains possible)
Dimensions mm (inch) Width Depth Height	 710 (28.0) 800 (38.5) 1100 (43.3)
Weight kg (lb)	approx. 200 (441)

Subject to change without notice.

Front view

Rear view

MAGNET-PHYSIK Dr. Steingroever GmbH
Emil-Hoffmann-Straße 3, 50996 Köln, Germany
Telefon: +49 2236 3919-0 ▪ Fax: +49 2236 3919-19
info@magnet-physik.de
www.magnet-physik.de

MAGNET-PHYSICS Inc.
6330 East 75th Street, Suite 224, Indianapolis, IN 46250, USA
Telefon: +1 317 577 8700 ▪ Fax: +1 317 578 2510
info@magnet-physics.com
www.magnet-physics.com