

## Impulse magnetizer K-Series

### • Features

- Energy up to 10,000 Ws
- Impulse currents up to 25,000 A
- Short-circuit-proof
- Short cycle times
- Touch panel
- Siemens PLC controls
- Various interfaces
- Continuous analog voltage monitor
- Fixture temperature monitor
- Built-in peak current monitor
- Internal + external emergency-stop with dropout protection
- Mobile, lockable caster rolls
- 12 months warranty for single shift operation



### • Description

The K-Series impulse magnetizers are suited for a wide scope of magnetizing and demagnetizing applications in laboratory and production settings. They are available in different energy classes and can be configured with various combinations of magnetize and demagnetize functions.

All models have special integrated operational features, including a current comparator for continuous monitoring of the magnetizing process, and a temperature measuring unit, which monitors the temperature of the connected fixture and protects it from damage due to overheating.

In combination with axial magnetizing coils of type **MF-As / MF-Am / MF-AI**, AlNiCo, ferrite and NdFeB magnets can be magnetized with coil diameters of up to  $\varnothing 105$  mm (4.1 inch). SmCo magnets can be magnetized with coil diameters of up to  $\varnothing 60$  mm (2.3 inch).

The K-Series stands between the bench-top U-Series and the heavy production X-Series. By focusing on the core functions the magnetizer can be attractively priced.

## • Safety functions

Safety is a key area for MAGNET-PHYSIK. Operation without interruption and protection of the operator are primary concerns. The connection box for the fixtures is monitored. If the cover is not locked correctly, the magnetizer shows fault and cannot be started. Integrated locking flaps make it impossible to get in contact with the connection area.

Moreover, all basic functions are controlled continuously by the PLC. The voltage at the capacitors is monitored by safety relays. In case of a fault or interruption of the mains power, the capacitors are discharged automatically in a controlled manner. The magnetizers have an emergency-stop switch with dropout protection. Connection to an external emergency-stop is possible.

MAGNET-PHYSIK fixtures dispose of internal thermocouples that allow fixture heating to be monitored. The magnetizer displays a warning message when a pre-determined temperature limit value is exceeded. A separate, independent switch in the fixture will open, should excessive heat build up. Further magnetizing impulses will only be possible when the fixture has cooled down.

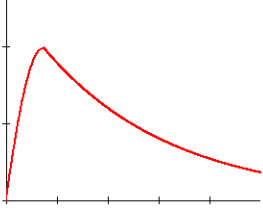
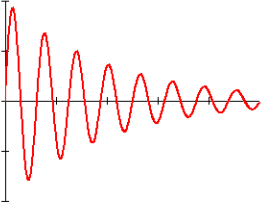
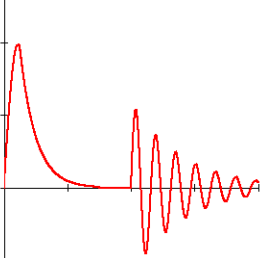
## • Technical data

The following table gives you an overview about the different models and their available options.

	5000 Ws	10000 Ws
Max. current	25 kA	
Voltage	2000 V	
Voltage setting	Resolution 1 V	
Function	A / D / AD / AA	
Short circuit protection	yes	
Cycle time	7 s	12 s
Peak current measurement	Accuracy 1 %	
Interface	PN / PB / RS-232 / 24 V I/O	
Mains	1-phase: 230 V AC $\pm$ 10 %, 50/60 Hz, 16 A <small>(other mains connections are possible)</small>	
Dimensions		
Width	510 mm (20.1 inch)	
Depth	760 mm (29.9 inch)	
Height	1360 mm (53.6 inch)	
Weight	190 kg (419 lb)	220 kg (485 lb)

Subject to change without notice.

• **Functions / waveforms**

<p><b>A</b> Aperiodically damped</p>		<p>Magnetization</p>
<p><b>D</b> Damped oscillation</p>		<p>Demagnetization Stabilization</p>
<p><b>AD</b> Aperiodically damped with subsequent damped oscillation  (Functions A and D can also be used separately)</p>		<p>Magnetization and demagnetization (Weakening, Stabilization and adjustment of magnets)</p>

• **Options**

Interfaces:

A 24 V I/O interface is standard.

Optionally RS232, Profibus or Profinet interfaces are also available.



Front view



Rear view

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