

## Impulse magnetizer T-Series

### • Outstanding features

- 1000 Volt Maximum
- 350 Joules Energy
- 20,000 Ampere impulse current
- Cycle time 5 seconds
- Siemens PLC controls
- Digital operator panel
- Digital voltage setting
- 24 V, RS 485 interface
- Analog voltage monitor
- Fixture temperature monitor
- Built-in current monitor
- Small foot print
- 12 months warranty for single shift operation



### • Description

Our small and precise magnetizer for sensor manufacture.

The ability to produce precision magnetic poles is a key aspect of modern magnetizing technology. Particularly in the manufacture of multipole sensor magnets. Pole widths down to 0.7 mm on ferrite rings are common in position sensing. The pole count can exceed 200+ poles on a single magnet rotor.

Although fixtures for such magnets require extremely accurate construction they need surprisingly little energy from the magnetizer.

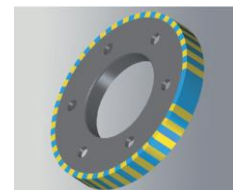
While magnetic impulses may rise up to 20,000 amperes peak current, the required energy is in the low hundreds of joules. The remaining energy turns to heat and slows the manufacturing process. The magnetizer needs to limit the wasted energy and speed manufacturing. Short cycle times are the result. This allows the production of more parts per hour than with larger, non-specialized machines.

The magnetizers can be operated via display and push buttons or be controlled externally via a built-in 24 V interface.

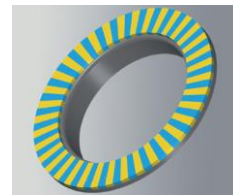
All models have special integrated operational features, including a current comparator for continuous monitoring of the magnetizing process, and a temperature measuring unit which monitors the temperature of the connected fixture and protects it from damage due to overheating.

• **Applications**

In combination with magnetizing fixtures of the **Rs-Series** encoders can be magnetized on the outer circumference with very high precision.

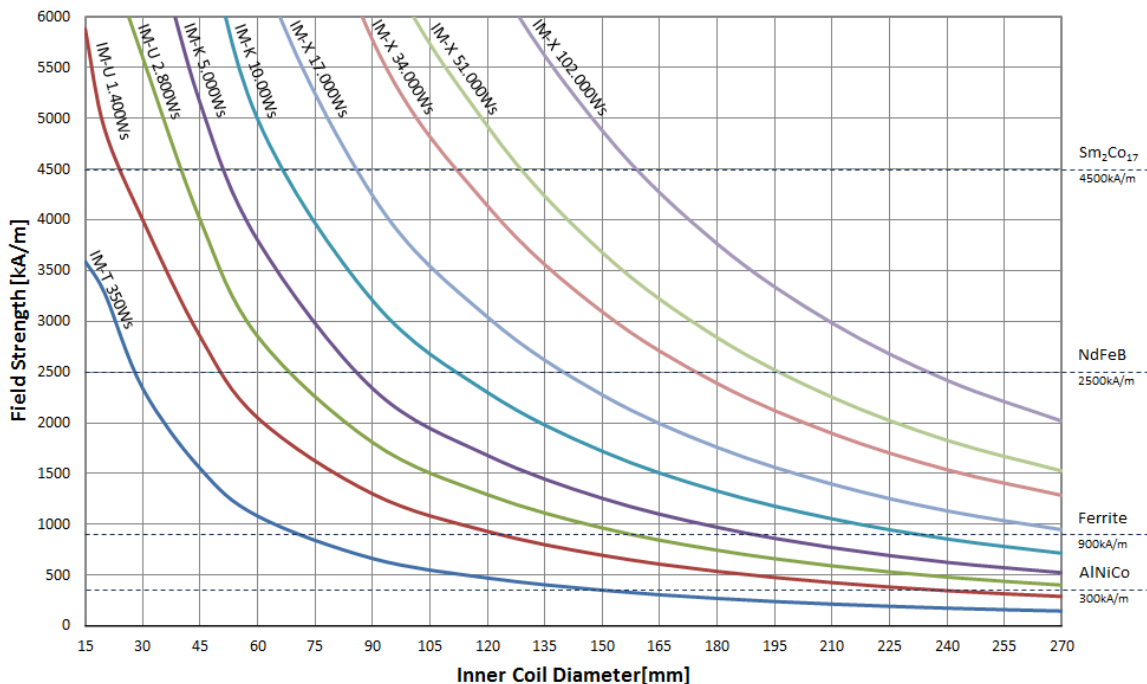


With magnetizing fixtures of the **Ks-Series**, precise multi-pole magnetization on the axial face of the encoder can be achieved.



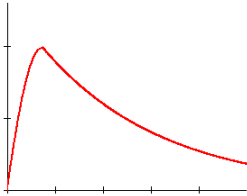
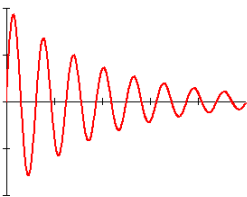
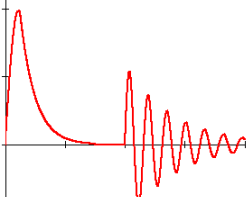
In the diagram below the first blue curve on the bottom shows the field strengths that can be produced with the T-Series in axial coils of different diameters.

For comparison the field strengths produced by magnetizers of various energy levels and the saturation field strengths required for the different magnet materials are also shown.



The diagram shows values for a typical coil design. We will optimize the coil according to your requirements and provide precise values with the quote.

• **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>

• **View**



Front side



Rear side



## • Technical data

The table below gives an overview of the different models and options available.

	NC
Energy (1 Ws = 1 Joule)	350 Ws
Voltage	1000 V
Voltage setting	Digital 1 V Resolution
Function	A / D / AD
Max. Current	20,000 A
Cycle time	5 s
Peak current measurement	Accuracy 1%
Interface	24 V / RS485 or RS232
2nd output	---
Mains	1-phase: 230 V AC $\pm$ 10 %, 50/60 Hz, 16 A (other mains possible)
Dimensions mm (inch)	
Width	250 ( 9.8)
Depth	500 (19.6)
Height	700 (27.6)
Weight kg (lb)	48 ( 106)

Subject to change without notice.

### 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