

Impulse Magnetizer X-Series

Description



Impulse magnetizers of X-series in a large cabinet with panel operation

The IMPULSE MAGNETIZERS of the X-SERIES are a development by MPS backed by decades of experience in the production of impulse magnetizers. Only the most reliable and always up-dated technology is incorporated in control cabinet design with high ease of servicing.

This series magnetizes, demagnetizes and calibrates magnets and magnet systems of AlNiCo, ferrite and rare earth alloys by allowing the magnets to be subjected to the strong, magnetic field of an electric current.

Due to their flexible construction the devices can be easily supplemented, modified or altered and this can be carried out in most cases on the spot.

True to our MPS motto «quality counts» this series of impulse magnetizers is equipped with a Siemens PLC and Siemens capacitors as well as constructional units of only the highest

quality.

In addition to the standard operation via instruments on the front panel the equipment can be operated via interfaces of all types and via display and keyboard.

The control cabinet design used enables the single units to be easily assembled - thus time and cost saving. Furthermore it facilitates all service and maintenance work as all components are easily accessible. In the development of this series the requirements of the «world» of a production plant - rough and sparingly equipped - were given priority. But this series is also suitable for application in the laboratory although MPS has a whole selection of devices offering a multitude of functions especially for this area available.

The following information is needed with your inquiries:

- Dimensions of magnets with tolerances
- Magnetic material
- Type of magnetization and pole configuration
- Operation (manual or automatic)
- Minimum value of flux or flux density
- Number of parts to be magnetized per hour

It is very helpful if you enclose drawings (sketches) and samples to your inquiries.

Magnetization

There are two operation modes for magnetization "aperiodically damped" (A) and "half sine wave" (S). These abbreviations "A" and "S" can also be found in our model names.

The impulse magnetizers are supplied in 3.000 V technique.

Demagnetization

For demagnetization there is the operation mode "damped oscillation" (D). This abbreviation can also be found in the model names.

The devices are available in the voltage sizes as given under "Magnetization".

Please contact us with your special requirements. We will be pleased to submit an adequate quotation.

Calibration of a magnet or magnet system to a defined value

Calibration* means weakening of a magnet or magnet system to a defined value. Therefore the magnet should (better: must) be saturated first. The calibration, which at the same time results in a stabilisation, is often advisable or required because it prevents the effects of the weakening to which the magnet is exposed later. Thus a high long-time stability of the magnet/magnet system is achieved.

***Note:** The term "Calibration" has been adopted in our usage. The correct term would be Adjustment or Justification. To avoid misunderstandings we continue using the term "Calibration".

To calibrate a magnet the magnetizer must be in the position to produce the high magnetic field to saturate the magnet and a fine-adjustable alternating or reverse magnetic field to calibrate* it.

Both requirements are fulfilled by the magnetizers of the X-series - preferably with interface, which enables a flexible programming via PC.



Typical examples of parts to be calibrated

The size of the magnetic field impulse is set by the loading voltage of the magnetizer because with constant circuit the magnetic field is directly proportional to the voltage set. The resolution of the loading voltage of a standard device is 2 Volt and can be improved to 0.1 Volt with a high-resolution voltage comparator.

Via interface the device can be controlled by a computer which is most suitable for the calculation of the loading voltage from a measuring value.

Measuring value can be every physically measurable unit which is suitable for the magnet or magnet system, i.e. for the magnet: field strength measured with a gaussmeter or flux density measured with a fluxmeter. For the magnet system this can be e.g. a current value for a ELCB, the braking moment of brake magnets for electricity meters or the travel of a pointer of a measuring device.