

Magnetic field sensor A-Test LT



Field of application and technical specifications

Production technology

- > Detection and tracking of magnetism in the production process
- > Detection of magnetized parts at a distance
- > Monitoring of magnetization processes for duration, intensity and outcome

Automation and metrology

- > Measurement of magnetic noise and stray flux
- > Identifying sources of interference in the low frequency range
- > Monitoring of demagnetization processes
- > Monitoring of mechanical positions and movements

Quality and safety

- > Contactless detection of parts interspersed with residual magnetism
- > Independent monitoring of magnetic sources
- > Passive, non-detectable registration of vehicles and ferromagnetic materials

Exterior dimensions	L x B x H = 137 x 63 x 31 mm
Power supply / connection	24VDC / M12 normalized sensor plug with 5 pins
Measuring range	Magnetic field DC (far below magnetic field of earth) Magnetic field AC (in the entire low frequency range) Preferred direction of sensor parallel to the housing length side
Adjustable sensitivity via potentiometer (with respect to 6V reference voltage)	Minimum: ~1.155 mT / V; measuring range ~ -5.50...+5.50 mT Maximum: ~0.016 mT / V; measuring range ~ -0.08...+0.08 mT Maximum resolution ~10 mV (0.16 µT)
Analog output	Bipolar output with reference voltage for connection of different detection devices (oscilloscope etc.) 0...12V at 1kOhm, reference voltage at 6V
Output NPN 24VDC (threshold)	Configurable threshold with output type NPN, 24VDC, for connection of detection devices
Settings and parameters	3 potentiometers (sensitivity, threshold, offset) and solder bridge for configuration of 24VDC NPN output

Magnetizing & Demagnetizing Technology



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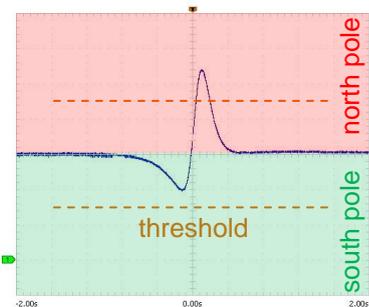
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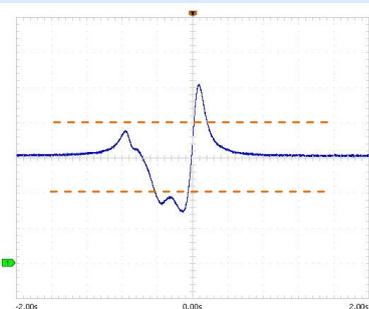
Three typical uses for A-Test LT in automated production

1.) Automatic detection of magnetic parts in production

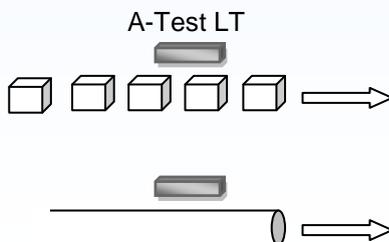
- Configurable threshold. Output type NPN 24VDC
- Output of an analog signal for tracing the exact magnetic stray flux (illustrations below)
- Typical mounting distance to the object around 20...100mm



Magnetic single part

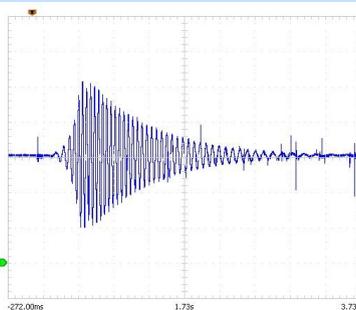


Magnetic pipe

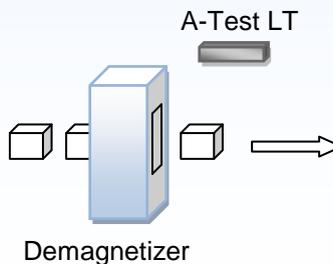


2.) Automated monitoring of demagnetization processes

- Accurate process monitoring by evaluating the characteristics of the demagnetization (eg by an envelope curve)
- Typical mounting distance to the object around 50...500mm

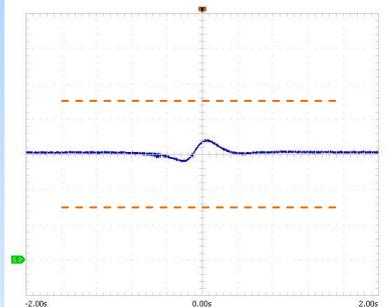


Demagnetization process

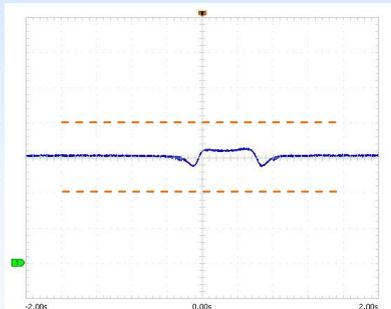


3.) Automatic stray field testing of parts after demagnetization

- Configurable threshold. Output type NPN 24VDC
- Output of an analog signal for tracing the exact magnetic stray flux (illustrations below)
- Typical mounting distance to the object around 10...50mm



demagnetized single part



demagnetized pipe

