



## Magnetic Permeability $\mu_r$ / Electrical Conductivity $\sigma$ Measurement Probe



*Can be used on any type of eddy current device*

- Two types of measurements with a single probe**
- Magnetic permeability  $\mu_r$  measurement by magnetic measurement**
- Possibility of measurement on ferromagnetic steels ( $\mu_r > 100$ ) and very weakly magnetic stainless steels ( $1.001 < \mu_r < 2$ )
- Electrical conductivity  $\sigma$  measurement by eddy currents**
- Possibility of measurement on steels and highly conductive materials ( $1 < \sigma < 70$  MS / m), on ceramics ( $1 < \sigma < 10$  S / m) and on loaded composites and concrete ( $0.1 < \sigma < 0.4$  S / m)
- Calibration with reference materials provided**
  
- Compatible materials:**
- Magnetic permeability measurement: All ferromagnetic materials (iron, steels, cast iron, nickel, etc.)
- Electrical conductivity measurement: All conductive materials (Metals and alloys, graphite, ceramics, charged composites, etc.)



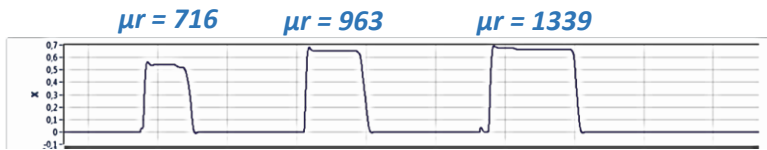
**Quick measurements on parts of all sizes**

**→ Supplied as a kit**





## Magnetic Permeability $\mu_r$ measurement



Comparison of three pieces of cast iron with different magnetic permeability



Shims of different steels and cast irons with known magnetic permeability

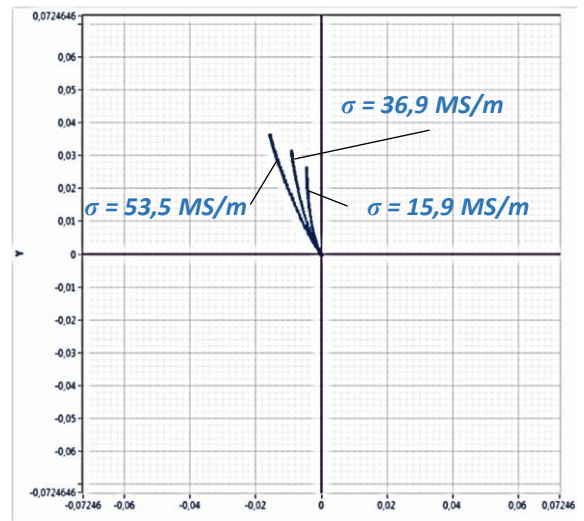
To take a measurement, simply place the probe on the workpiece and observe the signal. The difference in magnetic permeability between the three parts is clearly visible on this oscillogram

Different shims with known magnetic properties **are supplied with the probe to calibrate**

## Electrical Conductivity $\sigma$ measurement

The probe is placed on the material and the signal is immediately visible on the impedance plane.

The variation in electrical conductivity between the different parts is observed on the device impedance level



Comparison between three conductive materials: copper, aluminum and brass

Different shims with known electrical properties **are also supplied with the probe for calibration**



Shims of different conductive materials with known electrical conductivity