

## ELMETA MD 1005

During the production of textiles, small metal particles find their way into the web due to the various processing steps. If these are not all detected, extremely costly damage may occur on the downstream calender rollers and shearing tools. Furthermore, there is also a risk of catalytic reactions in wet finishing. As a result, whole web sections are often converted into scrap.

The metal detector ELMETA MD 1005 reliably and accurately detects the smallest metal particles over the entire width of the web. Per segment (300 mm) a signal LED indicates the position of the metal particle in the web. The integrated segment-wise evaluation as well as the gain setting and a reset button ensure commissioning is straightforward by connecting the operating voltage of 24 V. As standard no other control or evaluation units are required. Fast or slow production speeds from 0.5 to 400 m/min are not a problem for the MD 1005. The special scanning surface and the aluminum housing prevent damp webs or electromagnetic interference affecting the detection result.



### Application

The metal detector ELMETA MD 1005 can be used for dry and damp web textiles, non-woven fabrics and carpets.

### Mounting

The metal detector can be installed in any orientation in any production machine. There must not be any moving parts, e.g. rollers, installed within an area of 500 mm.



LED lamps indicate in which segment of the web the metal particle is located

### Function

An alternating magnetic field of 200 kHz is generated by an AC current in a transmit coil. A web soiled with metal disrupts this alternating field and triggers a signal. Other effects such as moisture or contact have no effect on the detection result thanks to capacitive shielding. The result can be used as a continuous or pulsed signal to stop the machine, to output a visual or acoustic alarm, or to operate marking or counting systems. The LEDs indicate the position of the metal particle. Optionally it is possible to connect an external signal display or reset button.

### Special features

- Reliable detection of spherical metals at a distance of < 1 mm from the scanning surface:
  - 1 mg steel (Ø 0.6 mm)
  - 5 mg aluminum (Ø 1.5 mm)
  - 10 mg copper (Ø 1.2 mm)
  - 20 mg stainless steel (Ø 1.7 mm)
- One signal LED per segment (300 mm)
- Pulsed signal can be set from 0.3 to 3 s
- Compact design with integrated electronics
- Straightforward mounting at two points

### Technical data

Nominal width	600 – 6000 mm (300-mm steps)
Web type	Woven and knitted fabrics, non-woven fabrics, felt, carpet
Web condition	Dry, damp (squeezed)
Production speed	0.5 – 400 m/min
Ambient temperature	0 to 60 °C
Storage temperature	-20 to 80 °C
Protection class	IP 54
Operating voltage	24 V DC
Nominal value	20 – 30 V DC (rippled included)

