



Single Axis Magnetic Field Transducer

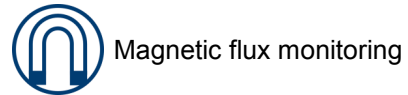
MFT-100

FEATURES

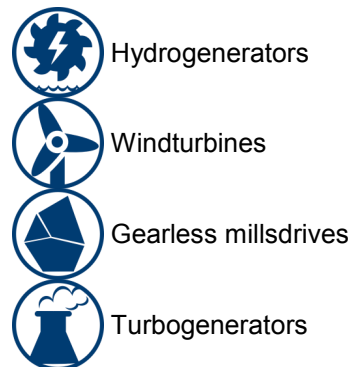
- Single axis magnetic field measurement system
- Measuring range up to +/-2 Tesla
- Easy to install on stator wall without removing the rotor poles
- Immune to deposits and vibrations
- Small size and flat design for electrical machines air gap installation
- Interchangeability of the sensor head
- Single +24V_{DC} power supply



Monitoring solution



Typical applications



DESCRIPTION

The MFT-100 is a single-axis high accuracy, linearity and stability magnetic field to analogue current transducer. It is particularly appropriate for mapping the magnetic field in the range to ± 2 Tesla. The sensor's head contains a high quality Hall element. The very thin sensor's head design allows mounting in the air gap of generators and electrical motors.

A novel sensor chip in the probe entirely eliminates influences from DC magnetic field components other than the one measured (Y-axis), so that even for strong no uniform fields no planar Hall effect leads to errors in the output voltage.

The transducer consists of a sensor's head with integral flexible cable of 10 meters connected to a conditioning unit.

GLOBAL SPECIFICATIONS

OPERATION

Linear magnetic field range	±2T (full scale)
Current output signal	4 to 20mA \pm -2T...+2T
Output bias current	12mA (\pm 0.5mA)
Sensitivity to magnetic field	4mA/T
Tolerance of sensitivity (B= 1Td.c.)	<i>Not available yet</i>
Linearity error of output	< 2%
Long term instability of sensitivity	< 1% over 10 years
Probe temp. coefficient of sensitivity (T= 25°C to 125°C)	≤ -0.06%/°C
Conditioning unit temp. coefficient of sensitivity (T=25°C to 80°C)	≤ ±200ppm/°C
Temp. coefficient of offset	<i>Not available yet</i>
Output noise and ripple (peak)	<i>Not available yet</i>
Load resistor	Max 750Ω
Frequency range of the magnetic field	20Hz to 1kHz (-3dB)
Power supply	
voltage	+24V nominal, ±10%
current consumption	80mA typ.

ENVIRONMENTAL

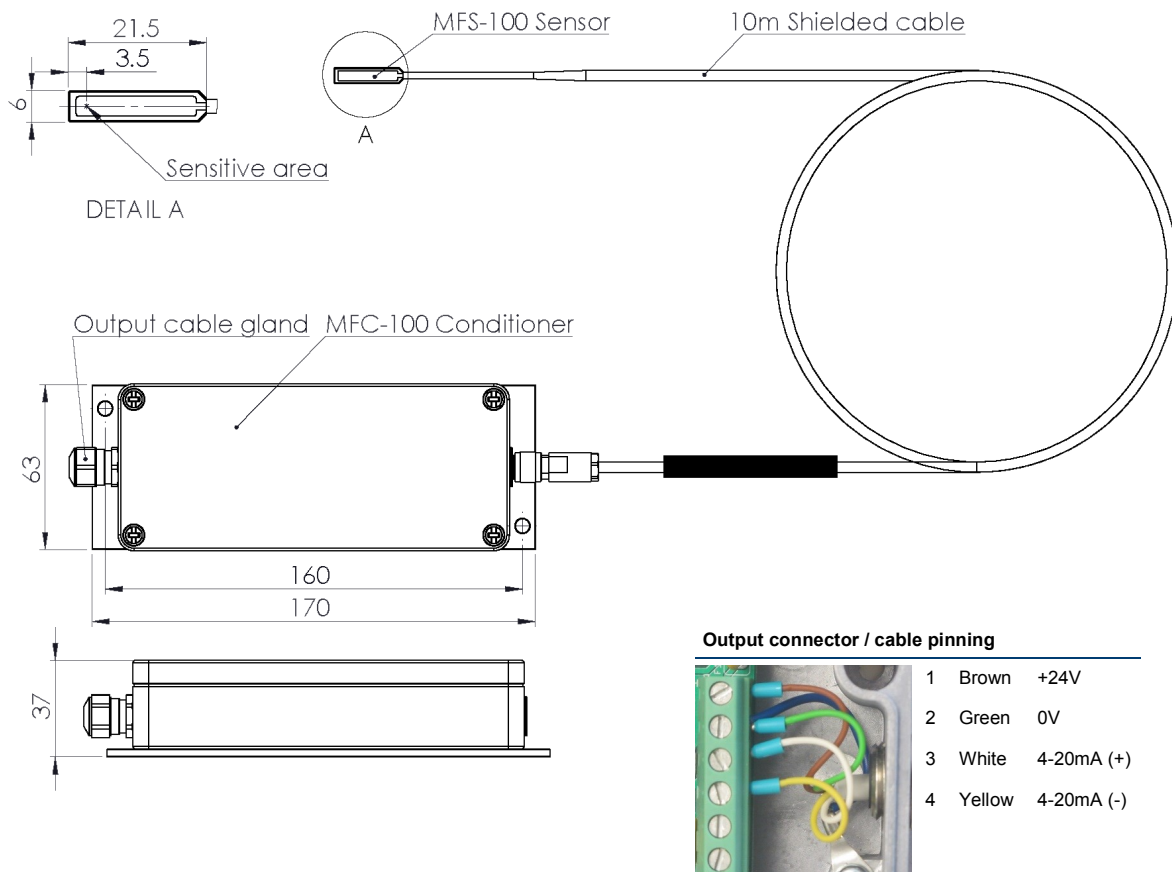
Temperature range	
MFS-100 probe - head only	
Operation	-25°C to +125°C
Storage	-25°C to +125°C
MFS-100 probe - cable	
Operation	-25°C to +80°C
Storage	-25°C to +80°C
MFC-100 Conditioning unit	
Operation	-25°C to +80°C
Storage	-25°C to +100°C
RF conducted disturbances	IEC 801-6
EMC	acc. To EN 61326-2-3:2006
Electrical fast transient burst	IEC 1000-4 4, EN 61000-4-4
Surge	EC 1000-4-5

PHYSICAL

Sensitive surface [mm]	∅ 0.3
Angular accuracy of the axes	±0.5° to the reference surface
Probe only outside dimensions [mm]	6 x 3 x 21.5
Probe-to-conditioning unit cable	Connected though a 4-pole connector; 10m length
Conditioning electronics	High mechanical strength, electrically shielded
aluminium case dimensions [mm]	63 x 149 x 35 WxLxH
with mounting plate dimensions [mm]	63 x 170 x 38 WxLxH

ORDERING INFORMATION

Part type Single axis magnetic field transducer MFT-100
 Ordering code 03.100.000

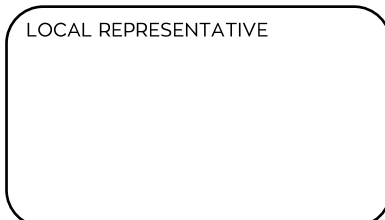
MECHANICAL DRAWING


Due to the continual development of our products we reserve the right to modify the specifications without notification

MC-monitoring Quality certifications



LOCAL REPRESENTATIVE



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