

Flat sensor with spatial resolution

Type: MESEP® FS3



APPLICATION

Like all sensors of the series MESEP FS also the third generation provides high-sensitive and location-specific detection of very small metal particles. Thanks to the integrated Ethernet interface the sensor data could be sent

to a PC or PLC the first time in real time and be evaluated there. This technology allows the combination of the sensor data with the measured values of other devices – such as spectrometers, cameras and X-ray equipment.

Thereby open up completely new applications in a wide range of industries such as mining, textiles, recycling, paper, films and many others.

SPECIFIC CHARACTERISTICS

- ☑ Ethernet interface; RS485
- ☑ CAN; EtherCAT on request
- ☑ data output in real time (sampling rate 1kHz)¹
- ☑ no metal-free zones necessary
- ☑ stable and torsion-free aluminium housing
- ☑ web server for easy start
- ☑ easy mounting
- ☑ protection class IP65
- ☑ sensors with up to 124 channels
- ☑ available Demo software for PC
- ☑ available customised resolutions (12 mm – 100 mm)

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FUNCTION

The sensor has a dynamic working principle which means it only detects moving metallic pieces in the sensor range. If a non-moving metal piece is situated in the detection range, it does not excite a signal and therefore is not de-

tected. Contrary to sensors with a static working principle this system allows operation with a much higher sensitivity. The sensor provides several channels which are arranged parallelly. Each of them is equipped with an

own sensor coil and evaluation unit. By this the position of the metallic object can also be detected. All the functions and values of the sensor can conveniently be accessed via web browser or Ethernet.

TECHNICAL DATA

Type	MESEP® FS3
Mechanical data	
Dimensions ¹	L x W x H: Length x 210 x 60,5 mm Option: L x W x H: Length x 120 x 60,5 mm
Number of channels ¹	4 – 124 pieces
Resolution (Width of each channel)	12 – 100 mm
Length	ca (number of channels +1) x resolution (max. 2,000 mm)
Housing/Active surface	Aluminium / PA 6.6 GF30
Minimum distance	1200 mm (to next sensor)
Electrical data	
Supply voltage	20 – 25 VDC
Power consumption	200 mA + (4 mA/channel)
Interface	Ethernet RJ45; 10/100 MBit RS485; 57.600 – 6.000.000 Baud CAN; EtherCAT ²
Transmission protocol	UDP; HTTP (Ethernet) ASCII (RS485)
Connector	Ethernet: Harting HAN3A with use of RJ45 RS485: female M12 (b-coded) power supply: socket M12
Conditions of use	
Storage temperature	-10°C – 70°C
Operating temperature	-10°C – 60°C
Protection class	IP65
Speed	6 – 300 m/min (0,1 – 5 m/s)

ACCESSORIES

Designation	Article number
Ethernet cable	on request
RS485 cable	on request
Demo software for PC	on request

Ordering code³: Type Resolution [mm] Number of channels (+ specify interface)
 MESEP® FS3 35 12 (e.g.: MESEP® FS3 35-12)

1) Housing variations for sandwich combination of several sensors on request.

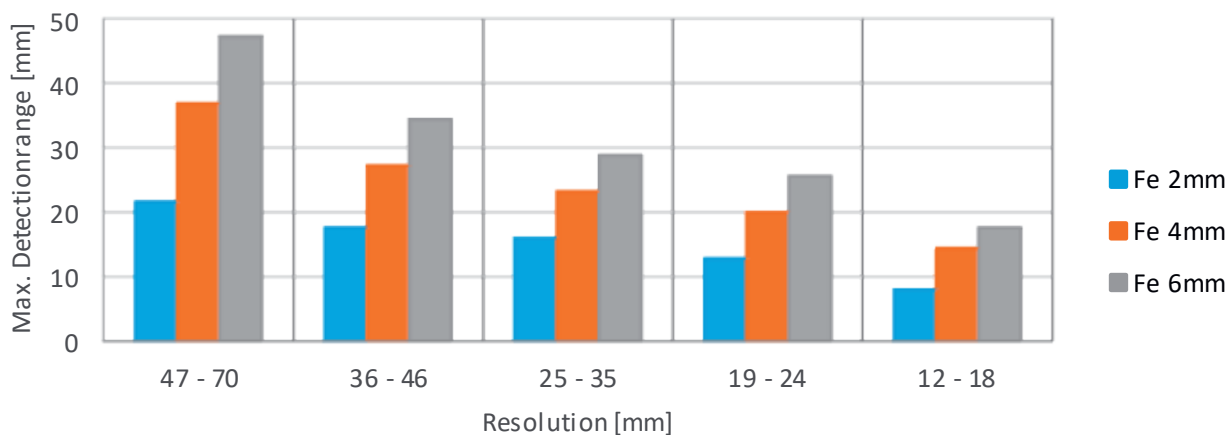
2) On request

3) When selecting the resolution and the number of channels please do not exceed the maximum sensor length of 2 m.

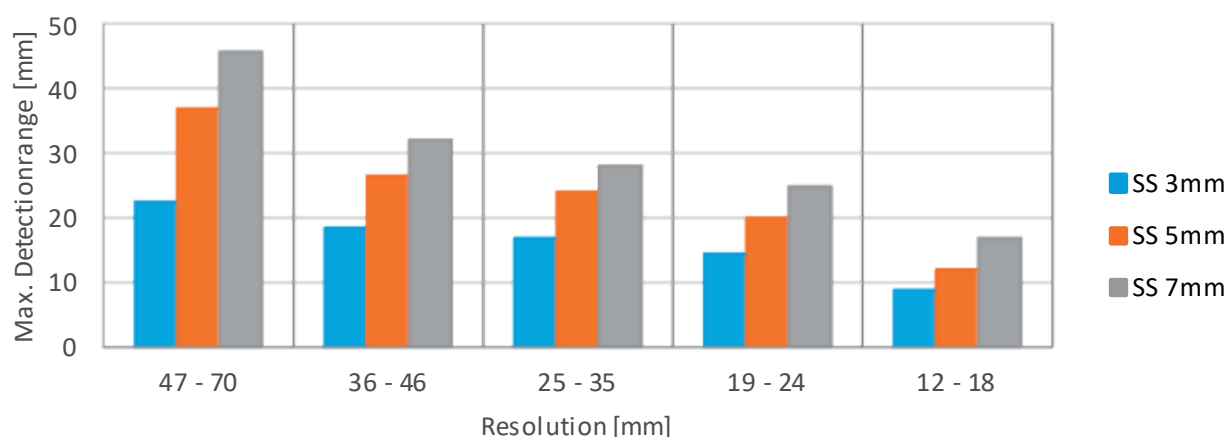
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SENSITIVITY¹

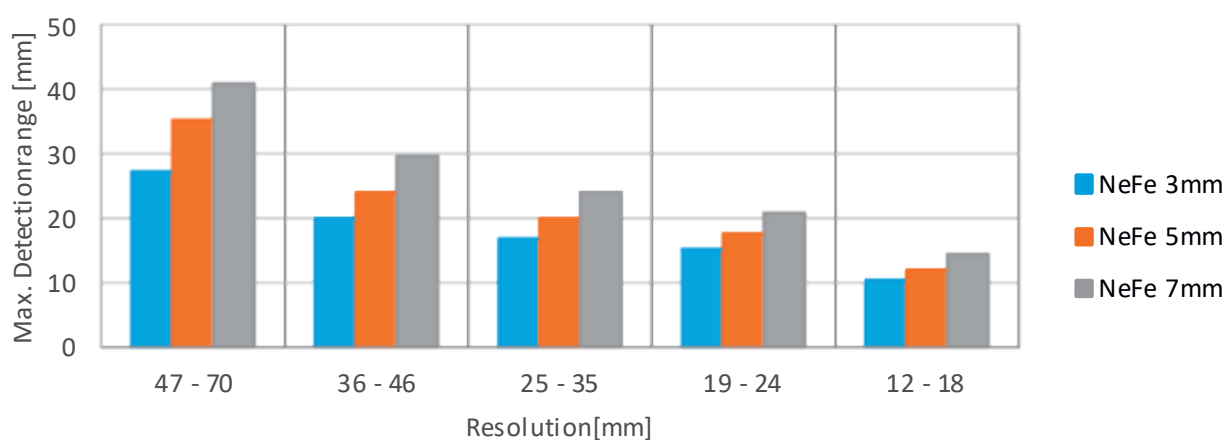
Maximum Detectionrange (Ferrous - Threshold typ. 20)



Maximum Detectionrange (Stainless - Threshold typ. 20)



Maximum Detectionrange (Non-Ferrous - Threshold typ. 20)



¹⁾ The data refers to the clear distance between test object and the upper edge of the sensor. The values are valid for the entire temperature range and for speeds from 6 to 300m/min.

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DIMENSIONS MESEP® FS3 (EXAMPLE)

