# DIGITAL ULTRASONIC SENSOR





Because of its compact size and temperature stability, the digital ultrasonic sensor DSE-41 is the ideal solution for guiding clear films and most opaque webs.

The DSE-41 uses ultrasonic waves to measure the lateral position of the web material. The proportional band allows significant guide point adjustment. The DSE-41 is often used in pairs for centre guiding when web width variations are limited. The DSE-41 is insensitive to ambient light and it's used to guide most of the opaque material and clear films. When used with acoustically permeable material a calibration between the sensor and the material is necessary.



It is possible to operate the DSE-41 with either a supply voltage of 12 V or 24 V. The output signal would automatically be switched over in that case.

In 12 V supply mode the sensor provides an output signal from 0 to 10 mA and can be connected to all available Fife web guide processors.

In 24V supply mode the sensor supplies an output signal between 4 and 20 mA and can be easily connected to a PLC as well.

The DSE-41 has a built-in LED display, visible from both sides, and shows directly on the sensor information about the operating status like for instance the existence of the supply voltage, position of the edge of the web inside the field of view or error messages.

An optional digital production data acquisition to Fife D-MAXE controller extends the range of

applications for the DSE-41 inside the digital network environment. Additional sensor data can be provided to other hardware equipment if the Fife D-MAXE is linked appropriately to the network.

## **GENERAL SPECIFICATIONS**

#### **Proportional band**

7,6 mm

#### Source

Ultrasonic 150 kHz

#### Weight

340 g

#### Operating temperature

5° - 60°C

#### **Protection class**

IP54

#### **Power supply**

10 - 28 V

#### Output signal

 $0 - 10 \, \text{mA}$ 

4 - 20 mA optional

digital data exchange RS-485

#### Linearity

5% maximum error (at 10% to 90% of signal)

#### Plane change

5% maximum error (at 20% to 80% of gap width)

#### Temperature drift

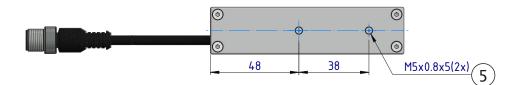
5% maximum error (at  $10^{\circ}$ C to  $40^{\circ}$ C)

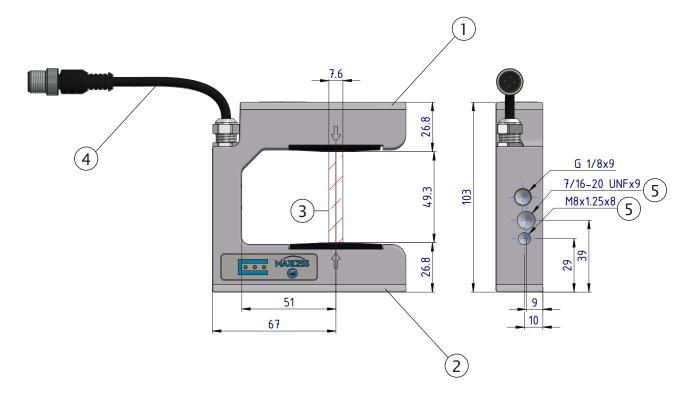
## **KEY FEATURES**

- · Insensitive to ambient light
- Insensitive to electrostatic discharge
- Temperature stabilized
- · Low power consumption
- It doesn't affect photosensitive paper or film
- · Suitable for thin and clear film or foil
- Can be used for new guiding systems as well as for an upgrade of existing systems
- Fast, easy and robust mounting due to multiple mounting brackets and sensor positioners
- Can be connected to all available Fife web guide processors

# **DIGITAL ULTRASONIC SENSOR**

## **DIMENSIONS**







- Receiver
- 2 Ultrasonic source
- 3 Proportional band
- Connection cable
- Threading for sensor bracket

Dimension shown in mm.



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