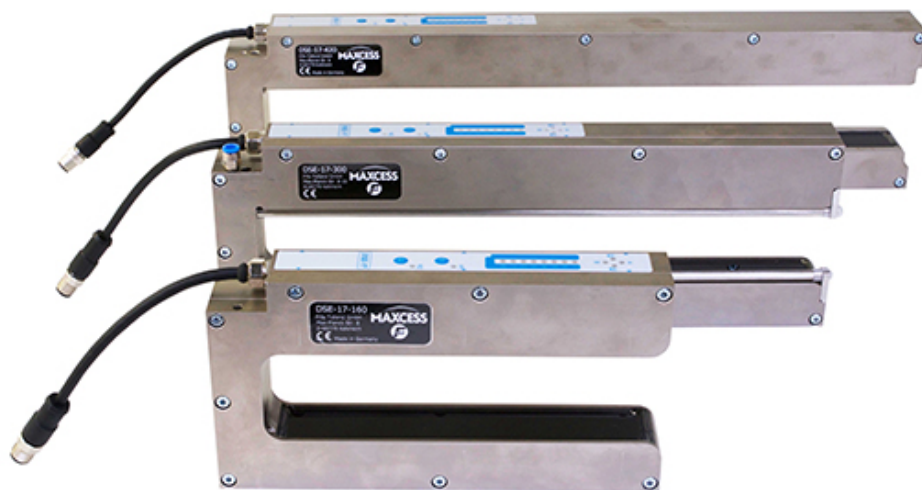


# 紅外線感應器

*Maxcess (Fife)*

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## DIGITAL INFRARED LIGHT SENSOR



The DSE-11 digital infrared sensor is the smallest infrared sensor available from Fife. Because of its compact size, light weight, and insensitivity to ambient light, it is ideal for many applications where accurate web guiding is required and space is limited.

The DSE-11 Infrared Sensor measures the lateral position of the guided material photo electrically. The control range (proportional band) allows significant guide point adjustment. The DSE-11 is often used in pairs for centre guiding when web width variations are limited. Its excellent technical specifications allow it to also be used with a Fife processor to guide clear film. Normally the DSE-11 is used for guiding opaque materials.

It is possible to operate the DSE-11 with either a supply voltage of 12V or 24V. The output signal would automatically be switched over in that case.

In 12V 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-11 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-11 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**

10 mm

**Light source**

Modulated infrared light  
Wavelength: 875 nm

**Weight**

200 g

**Operating temperature**

5° - 60°C

**Protection class**

IP54

**Power supply**

10 - 28V

**Output signal**

0 - 10 mA  
4 - 20 mA optional  
digital data exchange RS-485

**Linearity**

5% maximum error (at 20% to 80% of signal)

**Plane change**

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

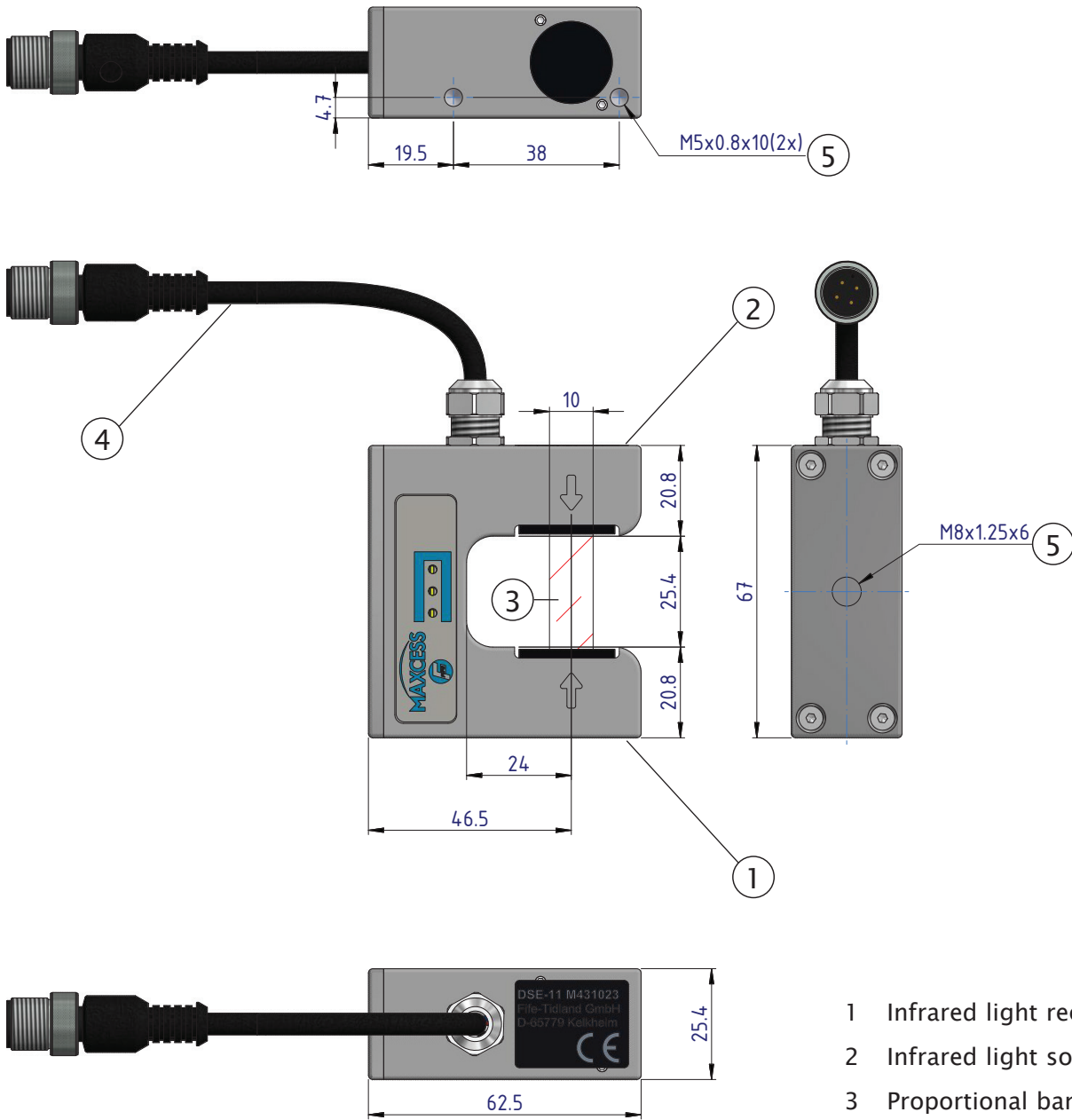
**Temperature drift**

5% maximum error (at 10°C to 50°C)

## KEY FEATURES

- Insensitive to ambient light
- Insensitive to electrostatic discharge
- Temperature stabilized
- Low power consumption
- 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

### DIMENSIONS



- 1 Infrared light receiver
- 2 Infrared light source
- 3 Proportional band
- 4 Connection cable
- 5 Threading for sensor bracket

Dimension shown in mm.

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## WIDE BAND INFRARED SENSOR



The DSE-17 is a digital wide proportional band infrared sensor. The sensor is most suitable for applications where opacity or density variations may occur, such as tissue, non-woven, textile, paper, foil, and for many opaque films. It can track up to 4 independent web edges simultaneously.

When web width variations exist, the wide proportional band of the DSE-17 sensor eliminates the need for the manual repositioning of the sensor.

Thanks to its IP65 rating, the DSE-17 can be installed even in the presence of water spray or condensation. The digital technique is immune to higher levels of contamination, compared with traditional analog sensors. The contamination of the sensor acrylic window can be monitored via a proportional analog output signal. An air sweep system is available as an option. In addition the DSE-17 sensor is protected against the influence of ambient light.



## GENERAL SPECIFICATIONS

**Sensor Field of View**

160mm/300mm /420 mm

**Light Source**

Infrared light

Wave length: 850nm

**Window Material**

Acrylic (PMMA)

**Operating Temperature**

10° - 60° C (50° - 140° F)

**Protection Class**

IP65

**Weight**

900g/1480g/ 2900 g

**Power Supply**

+10V - +28V

**Output Signal**0 - 10 mA,  
4 - 20 mA optional**Linearity**

Error less than 1%

**Plane Change**

0.5% maximum error

**Temperature Drift**0.5% maximum error  
(between 10° C - 50° C,  
50° - 140° F)**Cable Length**Standard: up to 15 m (49 ft)  
Optional: up to 40 m (131 ft)

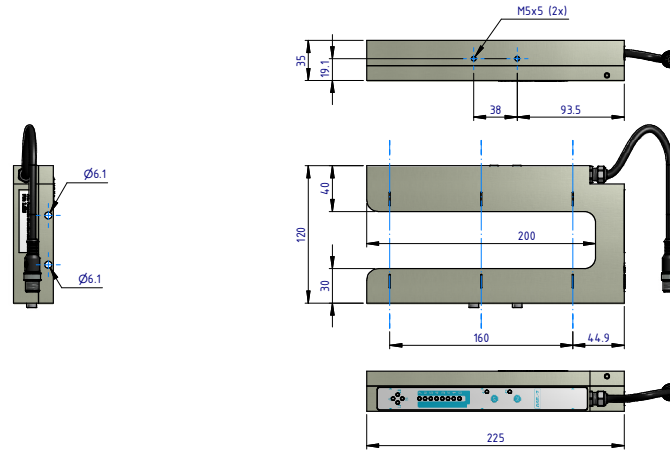
## KEY FEATURES

- Wide proportional band reduces manual sensor repositioning
- Tracks up to 4 independent web edges simultaneously
- Features a contamination monitoring analog signal
- Optional air sweep available
- No opacity set-up required
- Immune to web plane changes
- Protected against ambient light
- Displays the edge position and the self- diagnostic results through the built-in LED display
- Allows small distance to machine frame
- Can be connected to all available Fife web guide controllers

## WIDE BAND INFRARED SENSOR

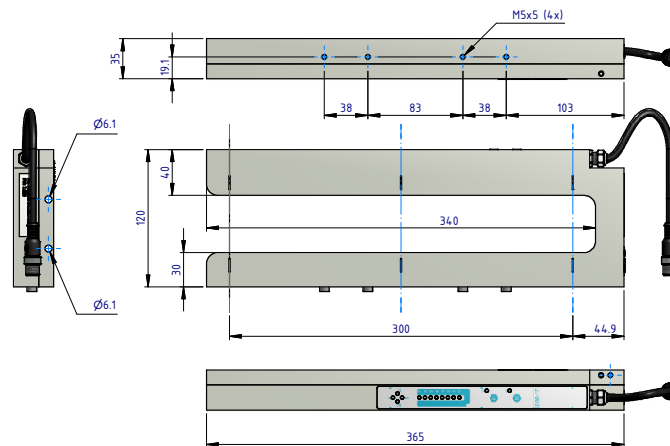
### DSE-17-160 DIMENSIONS

Dimension shown in mm



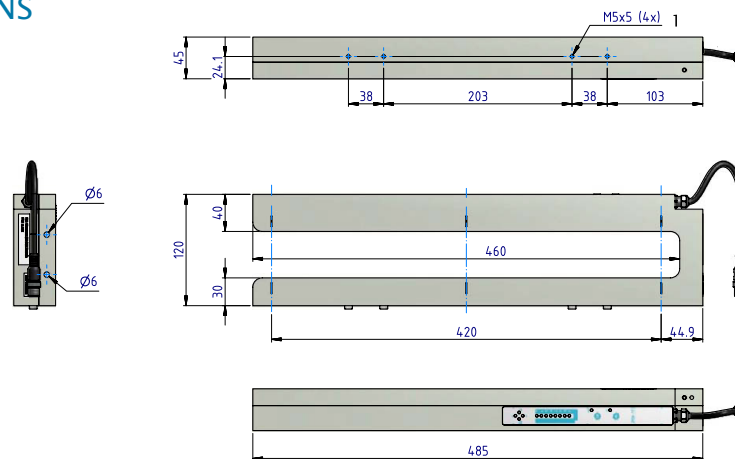
### DSE-17-300 DIMENSIONS

Dimension shown in mm



### DSE-17-420 DIMENSIONS

Dimension shown in mm



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M374961/A

# FIFE SE-38 FIRSTEDGE SENSOR

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The SE-38 First\*Edge Sensor is an all-digital web sensor specifically designed for materials with varying opacities. Such voids, common with spun bond and loose nonwoven materials, are often difficult to detect with typical Infrared sensors, and nearly impossible to detect with air or ultrasound.

With its unique 180° foldback prism, the SE-38 is capable of detecting the first edge of a web and then ignoring any and all subsequent variations. It has a standard sensing gap of 50.8 mm (2 inches) and a control range of 43.2 mm (1.7 inches) delivering precise, versatile control for single-edge or center guiding applications.



## GENERAL SPECIFICATIONS

### Part Number

SE-38 First\*Edge Sensor

### Sensor Resolution

1 pixel (0.063 mm / 0.0025 inch)

### Light Source

880 to 990 nm infrared light

### Detection Device

CMOS linear photodiode array

### Update Rate

6 ms

### Supply Voltage

+10 to 15 VDC

### Supply Current

<80 mA (<55 mA average)

### Output Signal

0 to 10 mA

### Weight

856 grams (30 ounces)

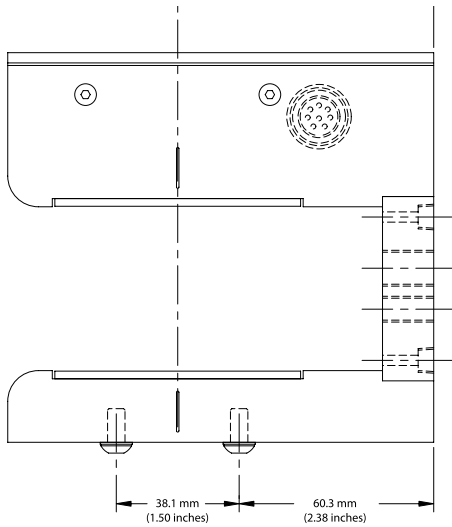
### Temperature Range:

0° to 60° C (32° to 140° F)

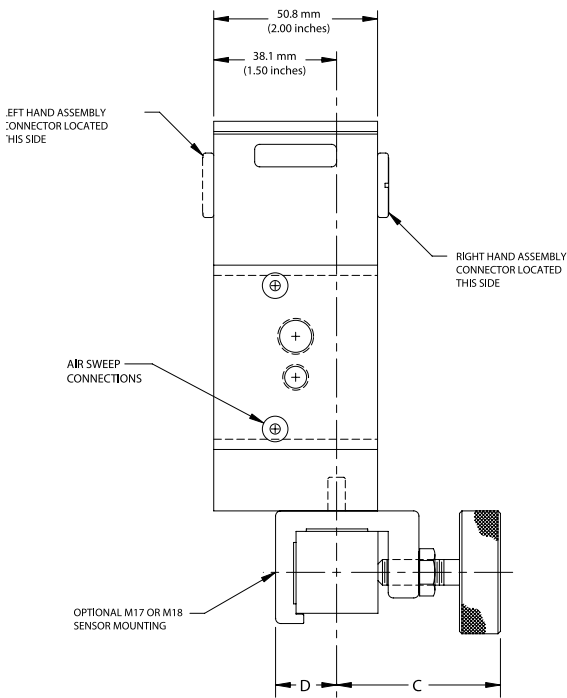
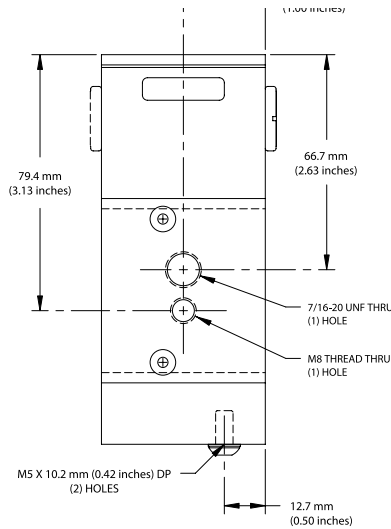
## KEY FEATURES

- All-digital sensor eliminates effects of opacity variations in non-woven materials
- Unique 180° foldback prism detects materials that are nearly impossible to sense with infrared-only, air or ultrasound
- Immune to web plane changes and unaffected by ambient light, including sunlight
- Compatible with all Fife controllers
- Standard sensing gap of 50.8 mm (2.0 inches) with a control range of 43.18 mm (1.7 inches)
- Flexible mounting and positioning assemblies ensure quick and easy installation
- Electrostatic discharge protected

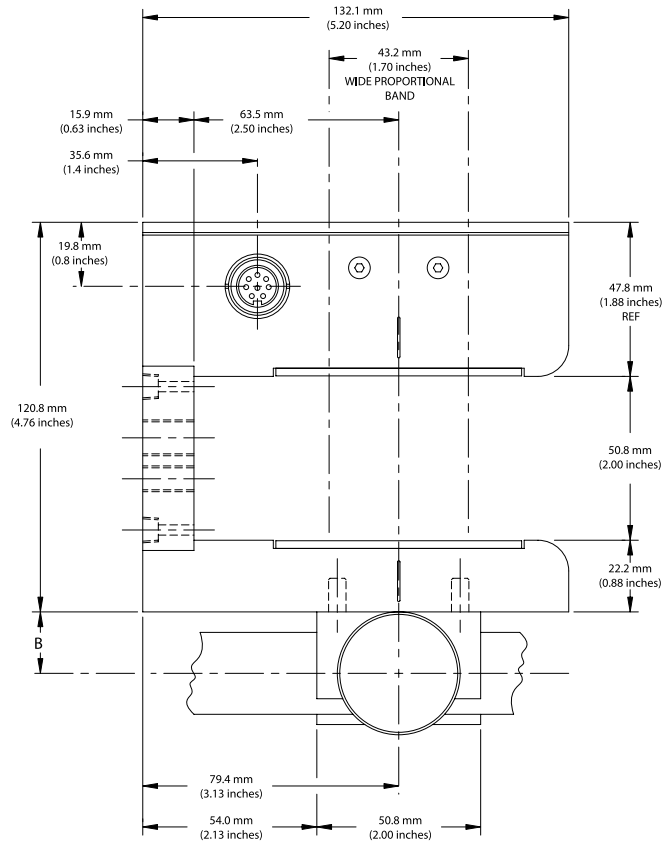
# FIFE SE-38 FIRSTEDGE SENSOR



SE-38 SENSOR ASSEMBLY SHOWN WITHOUT OPTIONAL MOUNTING BRACKET



SE-38 SENSOR ASSEMBLY SHOWN WITH OPTIONAL M18 MOUNTING BRACKET



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The sensor SE-42 uses modulated infrared light. Its light weight, small size, and insensitivity to ambient light make it ideal for most web guiding applications.

The SE-42 Infrared Sensor measures the lateral position of the guided material photoelectrically. The control range (proportional band) is 17 mm, allowing significant guide point adjustment. The SE-42 is often used in pairs for center guiding when web width variations are limited. The SE-42 sensor can be used to guide either opaque or transparent material.

Fife offers a wide variety of sensor mountings and positioning assemblies for use with the SE-42 infrared sensor. Depending on the application, standard or custom designed mounting brackets can be provided to ensure quick and easy installations.

The SE-42 can be used with any of our applicable guiding systems or as a retrofit / upgrade for existing systems.

The SE-42 can be connected to all available Fife web guide controllers.



## GENERAL SPECIFICATIONS

**Weight:**

130g

**Operating temperature:**

0° - 60°C

**Protection class:**

IP40

**Power supply:**

10 to 15V

**Output signal:**

0 to 10 mA

**Linearity:**

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

**Plane change:**

5% maximum error (at 10% to 90% of gap width)

**Temperature drift:**

2% maximum error

**ESD protected:**

designed to IEC 801-2

**Ambient light compensated:**

Modulated light source

## KEY FEATURES

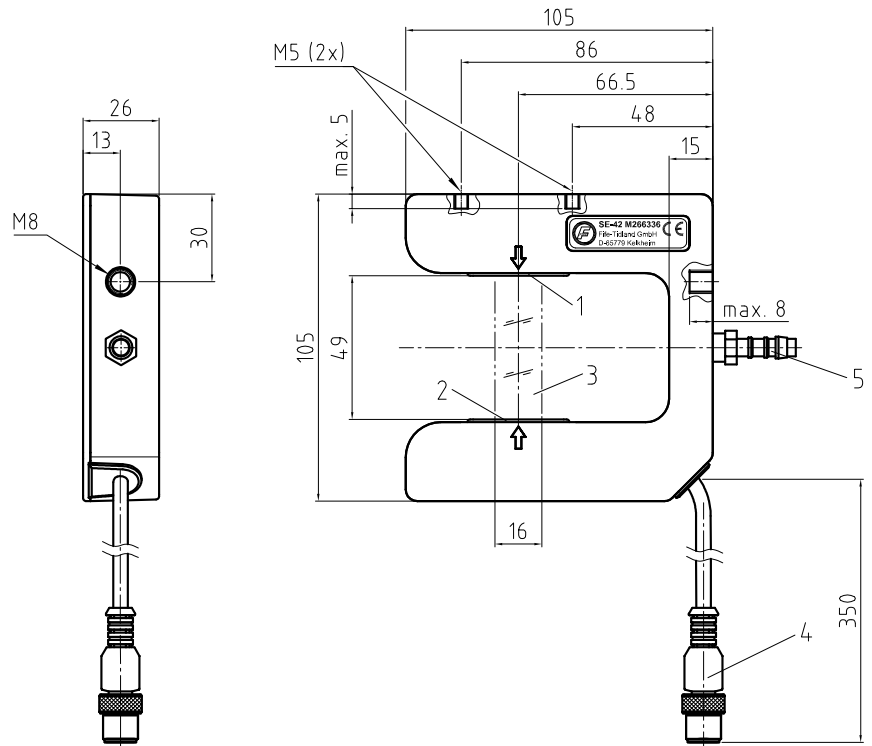
- 17 mm proportional band
- Insensitive to ambient light
- Insensitive to electrostatic discharge
- Temperature stabilized
- Low power consumption
- Small and lightweight
- Option: available with air sweep connection, to keep the sensor field of view clean in dusty environments



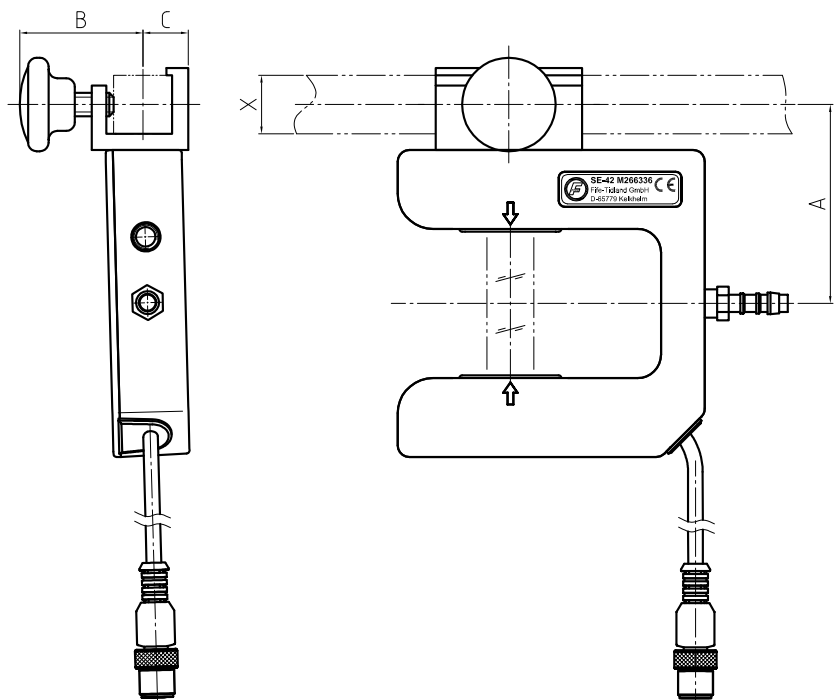
## INFRARED LIGHT SENSOR

### DIMENSIONS

- 1 Infrared light receiver
- 2 Infrared light source
- 3 Sensor field of view
- 4 Connection cable
- 5 Air supply (option)



### SENSOR MOUNTING



SENSOR MOUNTING	X SQUARE BAR	A	B	C
MB-20	□ 20	68	42,5	15,5
MB-25	□ 25	71	46,5	18,5
MB-32	□ 32	76	51,5	23,5

Dimension shown in mm.

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