



FD-ECH10
Sensor head ø10



*Please note that accessories depicted in the image are for illustrative purposes only and may not be included with the product.

Specifications

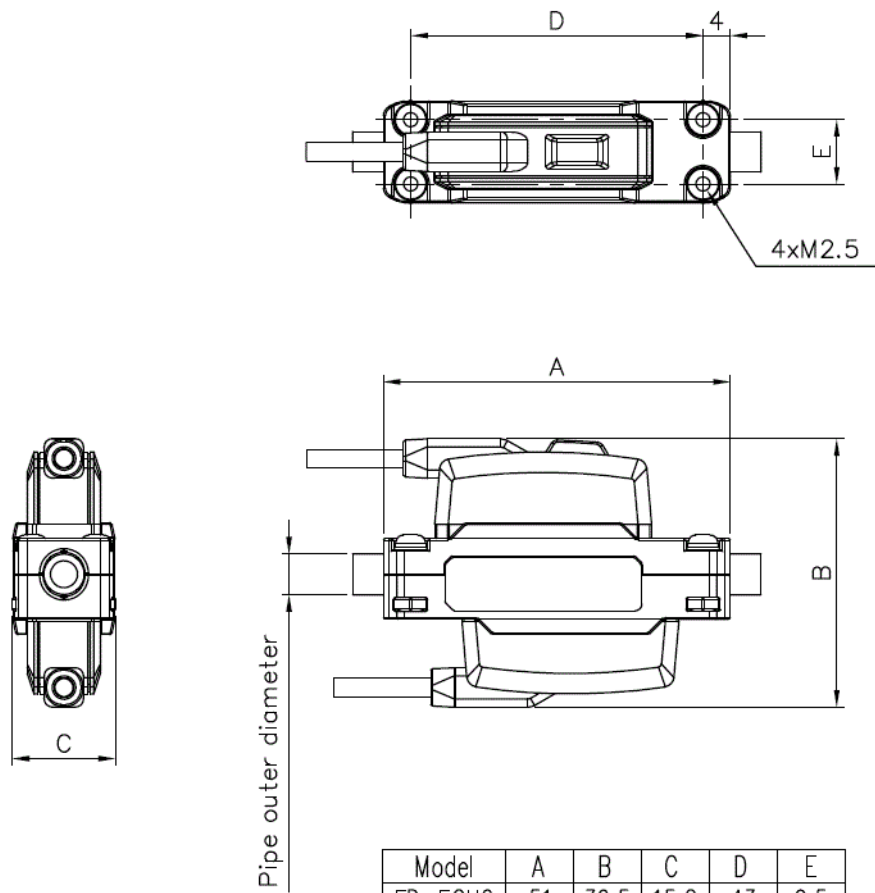
| | | | |
|-------------------------------|--|------------------------------|--|
| Model | | | FD-ECH10 |
| Pipe size | Outer diameter of pipe | | ø10 0.39" |
| | Installable range | | 10.0 0.39" ± 0.15 mm 0.01" |
| | Pipe materials | | Polyurethane, nylon, PFA,*1 other*2 |
| Supported gases | | | Air, nitrogen, argon, and other gases*3 |
| Supported gas temperature | | | −10°C to +60°C 14 to 140°F |
| Operating pressure range | | | 0 to 0.75 MPa (upper limit depends on pipe specifications) |
| Flow rate detection principle | | | Ultrasonic transmission time difference method |
| Rated flow rate | (volume flow rate) | | 120 L/min 4.24 CFM * Initial display |
| | (20°C 68°F, atmospheric pressure conversion) | Gas at 20°C 68°F, 0.2 MPa | 360 L/min 12.7 CFM |
| | | Gas at 20°C 68°F, 0.4 MPa | 600 L/min 21.2 CFM |
| | | Gas at 20°C 68°F, 0.6 MPa | 840 L/min 29.7 CFM |
| Repeatability | | | Response time 250 ms: ±2.5% of F.S.*4*5 |
| Display resolution | Instantaneous flow | | 0.1/1 L/min |
| | Accumulated flow | | 0.1/1/10/100/1000 L |
| Display method | | | Output indicator |
| Environmental resistance | Enclosure rating | | IP65 (IEC60529) |
| | Ambient temperature | | −10°C to +60°C 14 to 140°F (no freezing) |
| | Relative humidity | | 35%RH to 85%RH (no condensation) |
| | Vibration resistance | | 10 to 500 Hz, power spectral concentration: 0.816 G ² /Hz, XYZ axes |
| | Shock resistance | | 100 m/s ² , 16 ms pulse, XYZ axes, 1000 times for each axis |
| Material | Sensor unit | | PBT/PAR/iron |
| | Sensor surface | | Special rubber |
| Weight | | | Approx. 114 g 4.02 oz |

*1 Use PFA tubes in an environment with a temperature of 40°C 104°F or less.
*2 Resin tubes that transmit ultrasonic waves.
*3 Gases that transmit ultrasonic waves. Measurement may be unstable due to the pressure inside of the pipe and the type of gas.
*4 Accuracy improves with longer response times. As a rule, this is by a proportion of √(250 ms/response time)x.
*5 This value is guaranteed by KEYENCE inspection facilities. Errors will be introduced by factors such as the condition and type of pipes as well as the temperature and type of gas.

Dimensions

* Download CAD file or product manual for larger image/text and more detail.

FD-ECH6/ECH7/ECH8/ECH9/ECH10/ECH12/ECH13



| Model | A | B | C | D | E |
|----------|------|------|------|------|------|
| FD-ECH6 | 51 | 39.5 | 15.2 | 43 | 9.5 |
| FD-ECH7 | 51.2 | 40 | 15 | 43.2 | 9.5 |
| FD-ECH8 | 52.2 | 41.5 | 17 | 44.2 | 11.5 |
| FD-ECH9 | 58.2 | 48.2 | 19.7 | 50.2 | 14.2 |
| FD-ECH10 | 58.6 | 48.6 | 19.7 | 50.6 | 14.2 |
| FD-ECH12 | 58.4 | 50.6 | 21.7 | 50.4 | 16.2 |
| FD-ECH13 | 58.6 | 51.3 | 21.7 | 50.6 | 16.2 |