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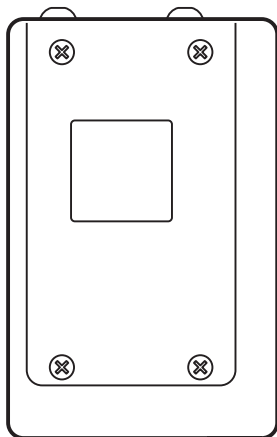
Installation instructions
O1D Cooling Box

UK

efector200

E21248

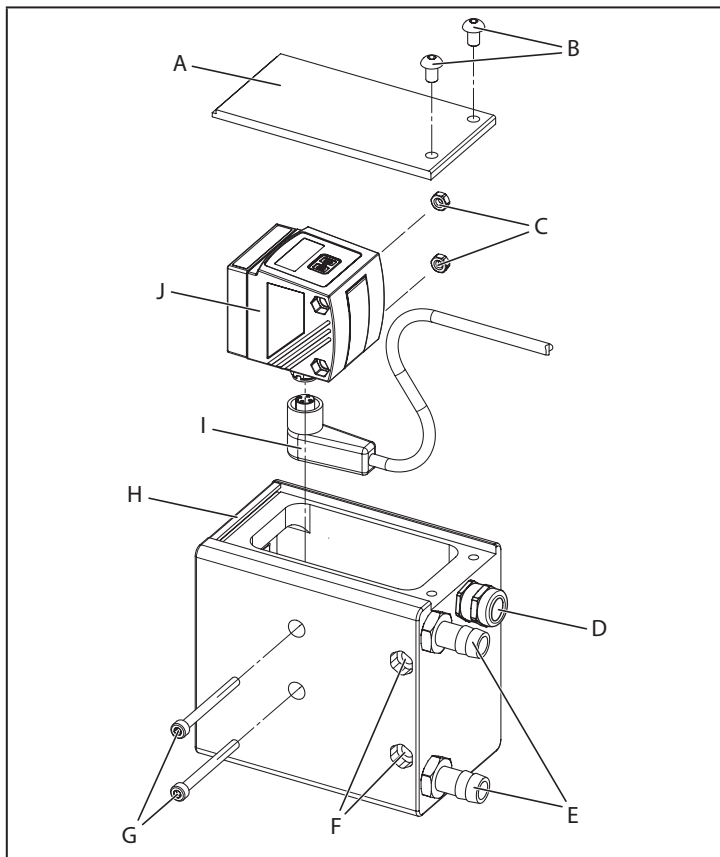
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1 Functions and features

The cooling box is a protective housing with an active cooling system for sensors of the O1D design. It enables sensor operation at high ambient temperatures.

2 Installation



2.1 Installation of the sensor

- ▶ Loosen the screws (B) and remove the cover (A)
- ▶ Feed the electrical connection cable through the cable gland (D).
- ▶ If using a wirable socket, attach this to the cable.

Refer to the sensor and socket data sheets for the correct wiring. Only angled sockets may be used.

- ▶ Connect the socket to the sensor (J)
- ▶ Insert the hexagon nuts (C) in the cut-outs on the sensor
- ▶ Insert the sensor in the cooling box and push it towards the front lens (H) until the end stop has been reached.
- ▶ Fix it using the screws (G)
- ▶ Tighten the cable gland (D)
- ▶ Position the cover again and tighten the screws (B)



Prewired connection cables must be fed through the cable gland from the inside.

You can find mating sockets at:

www.ifm.com → data sheet search → O1D100 → Accessories



The premounted cable gland (D) can be replaced by another fitting with M16 thread, e.g. for attaching a conduit.

2.2 Connection for cooling

- ▶ Connect the cooling circuit hoses to the nozzles (E). The direction of the cooling medium flow is not important.



Use jubilee clips to avoid the hoses coming loose.

2.3 Fixing the cooling box

Mounting set E3D103 is suited for the installation of the cooling box.

www.ifm.com → data sheet search → E3D103

The mounting holes (F) have an internal M8 thread.

3 Operation

3.1 Laser warning

WARNING

LASER RADIATION
DO NOT STARE INTO BEAM.
CLASS 1 OR CLASS 2 LASER PRODUCT INSIDE

The O1D sensors are class 1 or 2 laser units. The use of mounting systems or adjustments other than those specified here may result in hazardous radiation exposure. Damage to the retina is possible.

- ▶ Follow the caution and warning notes on the product label and in the operating instructions of the sensor.
- ▶ Apply the enclosed labels (laser warning) in the immediate vicinity of the cooling box so that they are clearly visible.

3.2 Cooling

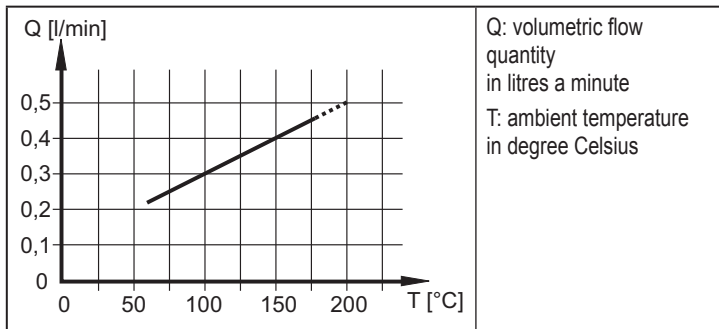


In case of additives in the cooling medium, verify the material compatibility with the cooling box. You can find information on the material in the data sheet: www.ifm.com → data sheet search → E21248

The required volumetric flow quantity for cooling the sensor depends on the cooling medium and the ambient temperature.

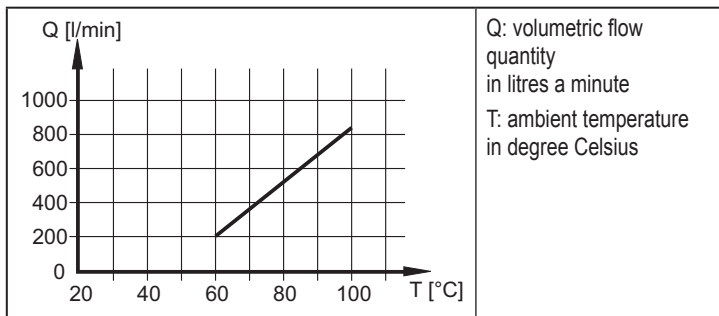
The following diagrams show the minimum flow quantity for the cooling media water and air. The values apply to a cooling medium temperature of 20°C.

Minimum volumetric flow quantity water (20 °C):



Example: For an ambient temperature of 150°C a minimum water flow of 0.4 l a minute is required.

Minimum volumetric flow quantity air (20 °C):



Example: For an ambient temperature of 70°C a minimum air flow of 350 l a minute is required.



The maximum operating temperature of the sensor must not be exceeded at any time. In case of residual heat after switching off the installation, a respective run-on time of the cooling system must be guaranteed.