

ifm electronic



Operating instructions
(Ex protection related part) for inductive sensors
according to EU directive 94/9/EC Annex VIII (ATEX)
group II, equipment category 3D

UK

ecomat200[®]

**DI003A, DI004A
DI504A, DI505A, DI506A**

706177 / 00 04 / 2014

Operating instructions (safety-related part ATEX)

Remarks for safe use in hazardous areas

Functions and features

- Use in hazardous areas according to the classification **II 3D** (group II, category 3D, apparatus for dust atmosphere). The requirements of the standards EN60079-0 and EN60079-31 are met.
- Marking (see unit or technical data sheet)

 **II 3D Ex tc IIIC T80°C Dc IP67 U**

- Permissible operating temperature of the application (proper usage):

Ta: -20°C...+50°C

Installation / set-up

The units must only be installed, connected and set up by qualified staff. The qualified staff must have knowledge of protection classes, regulations and provisions for apparatus in hazardous areas.

Check whether the classification (see "Marking" above and marking on the unit) is suitable for the application.

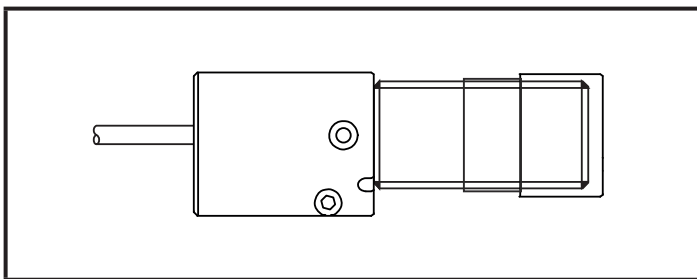
Installation remarks / installation

- Adhere to the respective national regulations and provisions as well as the relevant installation regulations.
- Avoid electrostatic charging on plastic units and cables.
- To avoid electrostatic charging clean the unit with a damp cloth only. Rubbing with non-conductive materials must be strictly avoided.
- To avoid electrostatic charging steps must be taken to ensure the equalisation of potential of metal parts (plug housing, fixing elements, protective housing, etc.).
- Do not mount the unit in the dust flow.
- Avoid dust deposits on the units.
- Protect the units and the cables efficiently against damage.
- For the connections and the electrical characteristics please see the unit marking or the technical data sheet.
- Avoid soiling of the connector area. Attach the socket in a clean environment.
- Avoid direct radiation with high UV components (sunlight). Mount the unit in a protected place.
- M12 plugs may only be opened or closed in a sufficiently clean environment.

Special conditions for safe operation

- The units were tested in combination with the supplied impact protection housing in accordance with table 8 of EN 60079-0 for group II and for a low mechanical risk with an impact energy of 4 joules.
- Only operate the units with the supplied impact protection housing.
- Position the impact protection housing (1) so that the operating and display elements of the unit can be seen through the sight (2) and operating holes (3).
- In case of flush installation ensure that only the sensor face is directly exposed to impacts up to 4 joules. In case of impacts on the edge (e.g. non-flush installation), mount the impact protection housing for the sensor (5).
- Tightening torque of the clamp screws (4): 3 Nm \pm 10%
- Tightening torque of the threaded flange (5): 2.5 Nm \pm 10%

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- 1: Impact protection housing
- 2: Sight hole (LED)
- 3: Operating hole (potentiometer)
- 4: Clamp screw M4
- 5: Threaded flange
- 6: Impact protection housing for the sensor

- Use sockets which are suited for hazardous areas, e.g. ifm sockets EVC**A with Ex certificate (certificate number BVS 08 ATEX E 109 U).
As an alternative you can also use the ifm sockets EVC490 or EVC491.
- Secure the sockets by tightening the hexagon coupling nut sufficiently according to the requirements of the Ex protection related operating instructions of the socket.
- Do not separate the connector when energized.
- For cable units ensure a sufficient strain relief or lay the cable securely.
- Only use the operating elements of the units in a dry environment.
- Where units require an additional fuse, this must be located outside the hazardous areas.

Maintenance / repair

The unit must not be modified nor can it be repaired. In case of a fault please contact the manufacturer.

If required, the technical data sheets and EC declarations of conformity can be obtained from the manufacturer. Indicate the article number.