

Transducers for Harsh Environments

For applications under especially humid and wet conditions, FLEXIM has developed transducers with IP68 degree of protection. IP68 means that the transducers can operate continuously and without fault under water.

IP68 is not the same as IP68

When ordering IP68 transducers, specifications need to be agreed upon regarding the requirements (immersion depth, duration, media, etc.) the transducers have to meet. The impermeability requirements are not tightly defined in the DIN EN 60529 standard, which regulates the IP68 degree of protection with regard to duration and immersion depth. The standard states that manufacturer and user agree upon the requirements.

The standard requires though that the conditions have to be stricter than with protection degree IP67. Thus, 30 minutes of fault-free operation of the instrument at an immersion depth of between 0.15m and 1.0m is required. The degrees of protection are usually declared by the manufacturer themselves and do not need to be certified by an independent body.

Solid manufacture

All FLEXIM clamp-on transducers are watertight and suited for use in harsh industrial environments. The transducer housing is made of stainless steel. On transducers with the IP68 protection degree, a longitudinally watertight cable with a special plastic sheath is used. Even if there is slight damage to the cable, no liquid will leak into the transducer body. The durable impermeability has been proven by tests.

The standard sample test procedure for IP68 transducers simulates a water depth of 20m for a period of one week. If necessary, FLEXIM is ready to carry out tests using other parameters agreed upon with the user.

Technical Data

Clamp-on transducers, type M3L8

Rated (possible) diameter range*:	(50) 100...6 500mm
Operating temperature:	Process: -30°C...75°C Ambient: -30°C...75°C
Dimensions:	(60 x 30 x 33.5)mm
Material:	Body: Stainless steel Contact surface: PEEK Cable sheath: Polyurethane
Degree of protection:	IP68 as per EN60529
Use in explosive atmosphere	
- Hazard zone:	Zone 2
- Marking:	⊕ IICG T6 T _a -30°C...75°C
- Explosion protection temperature:	
Temp. class T6:	-30°C...75°C

* The range specified in the brackets is possible under good conditions, but is not specified.

Dimensions (in mm)

Connection

The cables of the transducer pair lead to a junction box. Normally, an IP67 junction box is used; optionally, an IP68 box may be used.

Maximum length L of the connection cable between transducers and junction box: 300 m

The usual connection types are possible between junction box and transmitter.

