



Technical Information

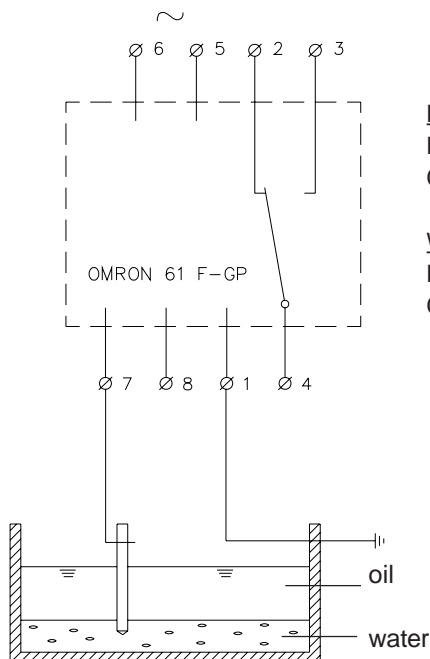
waterdetector

As a safeguard against water ingress into the motor, most of the Robot submersible pumps can, upon request, be equipped with a waterdetector in the oilhousing between pump and motor. The waterdetector switches off the pump in case of seal failure, before damage to the motor is done.

Enclosed drawings show the arrangement of the actual probe in the oilhousing. The probe itself is a non-active electrode. It is used in conjunction with a relay that measures the resistance between the probe and the frame. If only oil or air is present, the resistance is very high (over 5000 ohm). If water enters, depending on the amount of water, the resistance will gradually decrease to as low as 300 to 500 ohm.

We recommend to use an electronic level control unit like Omron type 61 F-GP, Endress&Hauser type EMR4-N500-2B, Telemecanique type RM4-LG01 or equivalent as detection unit. These relays uses low voltage AC as measuring voltage and switches at 500-5000 ohm. Any relay that uses low voltage AC supply and switches between 500 and 5000 ohm can be used. A connection diagram for the OMRON relay is given below.

Connection diagram for OMRON 61 F-GP relay.



No water in oilhousing:

High resistance between terminals 1 and 7.

Contacts between terminals 2-4 closed and between 3-4 open.

Water present in oilhousing:

Low resistance between terminals 1 and 7.

Contacts between terminals 2-4 open and between 3-4 closed.



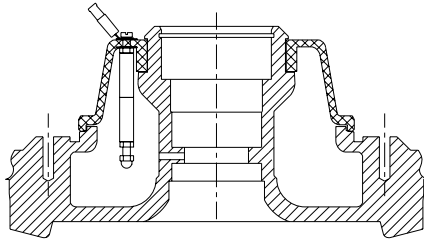
ITT

ROBOT PUMPS

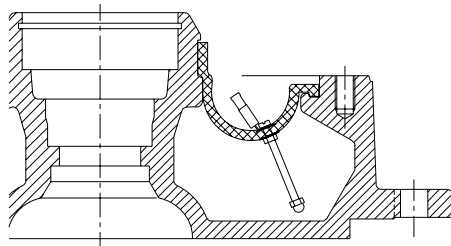
Technical Information

waterdetector

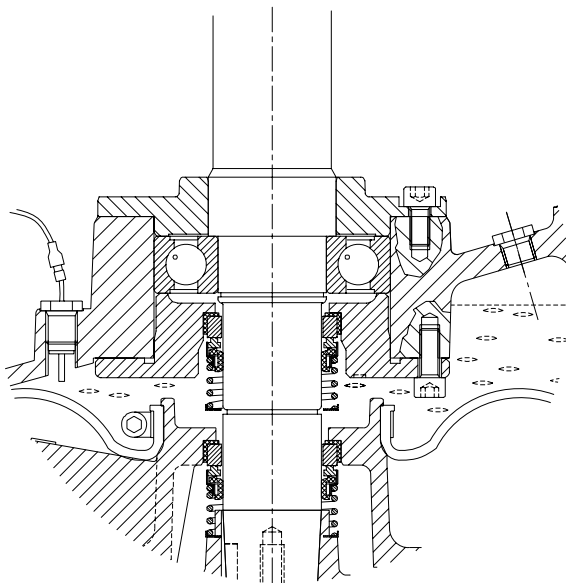
Water detector arrangement for submersible pumps



pumps 1 - 6 hp



pumps 7 - 20 hp



pumps 25 - 75 hp