

**General**

Rod electrodes are used in dosing systems to monitor and control filling levels.

**2-rod electrode**

2-rod electrodes are used to monitor a single filling level. Typical applications include minimum-level shut-off for centrifugal pumps (MinMin alarm) and overflow protection for tanks (MaxMax alarm).

**3-rod electrode**

The filling height can be adjusted between two levels with the aid of 3-rod electrodes. Typical applications include control of the level in a receiving tank using a solenoid valve or transfer pump.

**Service conditions**

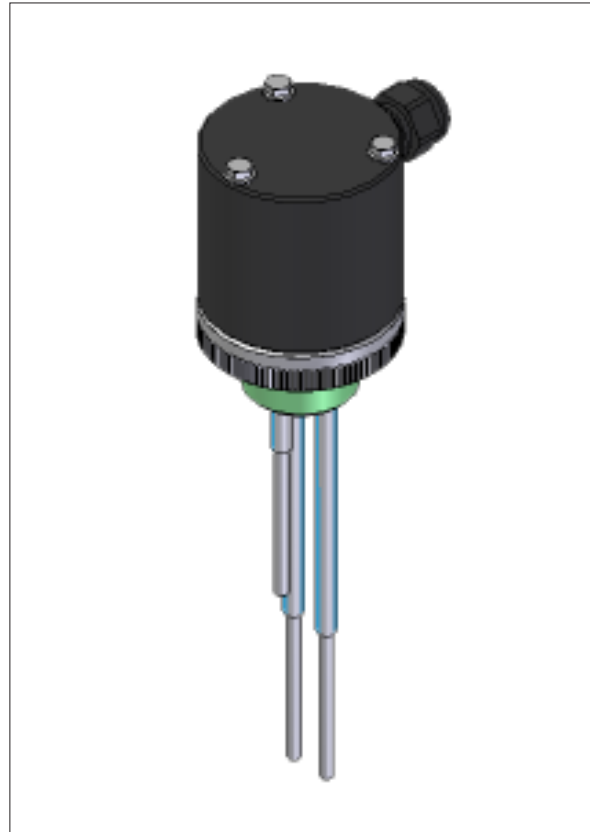
Rod electrodes are dependent on the conductivity of the liquid. They cannot be used in non-conductive liquids ( $<10 \mu\text{S/cm}$ ).

Rod electrodes similarly cannot be used if the gaseous phase above the liquid has the same electrical conductivity as the liquid itself.

When used in moving liquids, e.g. liquids with agitator, the metal rods must be secured to the tank wall in order to prevent being entrained by the flow of liquid.

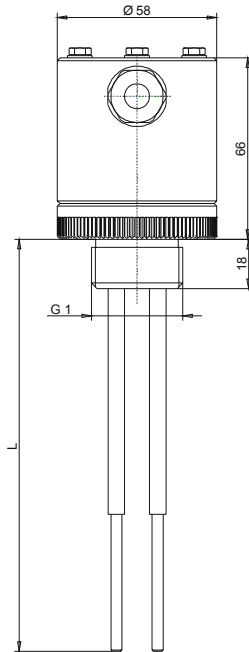
**Level relays**

Rod electrodes must be operated with AC power in order to prevent electrolytic processes at the ends of the rods. The voltage must not exceed 24 V AC. A level relay meeting the specifications in data sheet MB 44300 is normally used. It provides a switching output for electrical devices (pumps, solenoid valves, alarm generators).

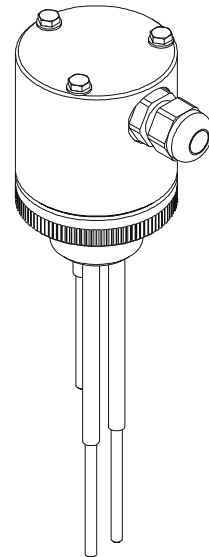
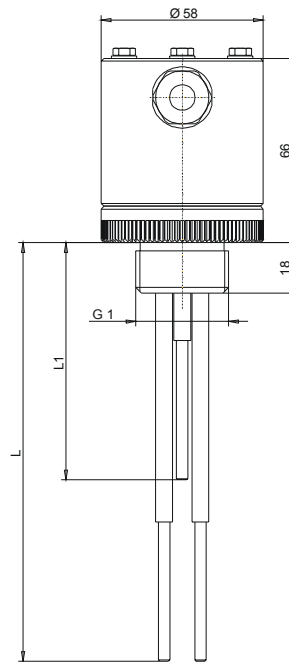


**Dimensions**

2-rod electrode



3-rod electrode



**Part numbers**

In making the selection it must be remembered that the lowest level switching point lies approx. 20 mm above the inlet opening of the suction connection in order to ensure protection of the pump against dry running. In the case of agitators, the level must not drop below the agitating mechanism (propeller).

If necessary, the electrodes can be shortened, in which case the electrode ends must be insulated up to approx. 15 mm.

Length		2-rod electrode		3-rod electrode	
L	L 1	Hastelloy	1.4571	Hastelloy	1.4571
135	-	41000105	41000109	-	-
150	150	41000106	41000104	41000114	41000118
293	-	-	41000110	-	-
300	-	-	41000123	-	-
325	300	-	-	-	41000125
350	-	-	41000124	-	-
835	150	41037085	41000111	41000103	41037084
900	150	-	-	41000115	41000119
1000	150	-	-	-	41000120
1185	150	41000107	41000112	41000116	41000121
1350	150	41000108	41000113	41000117	41000122