

MULTI-ELECTRODE PROBE FOGRod Installation Guide V2.8

Introduction

Designed as an alternative to ball floats, ultrasonics, rods etc. for water and wastewater applications. FOGRod is a simple device that electrically connects level controller electrode inputs to earth via effluent using ALN6X stainless steel corrosion resistant electrodes. FOGRod was originally developed to deliver simplicity & high reliability in water & wastewater level detection applications.

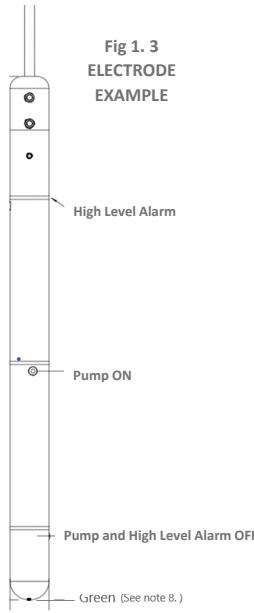
Installation Guidelines

1. Hang FOGRod using the stainless steel S hook from the cleaning bracket directly into the effluent with a minimum of 150mm radius clearance from objects such as pumps, walls, guide rails, ladders etc.
2. Position the mounting/cleaning bracket to allow ease of access for inspection and cleaning of FOGRod.
3. In wastewater ideally position the FOGRod in a turbulent area of the wet well, next to (not directly under) the inflow. Turbulence helps keep FOGRod clean, use longer FOGRods in very turbulent wells as the weight keeps it stabilised.
4. In fatty sums such as restaurant pump stations always use a 10 electrode FOGRod to allow for redundant start electrodes. In large pump stations with lots of fat and/or rags use the Liquid Indicator Transmitter.
5. In wastewater use the bottom side mount electrode (black wire) as the duty pump off point, this has the additional benefit of keeping wet well rag accumulation down.
6. In pumping applications position the very bottom of the FOGRod a minimum of 75mm above the snore point of the pump.
7. Leave enough spare cable coiled by the cleaning bracket to allow the FOGRod to be pulled up through FOR cleaning.
8. When using a 3 or 5 electrode the earth electrode on the very bottom tip of the FOGRod (green wire on 3 electrode version, blue wire on 5 electrode version) is **NOT FOR WASTEWATER APPLICATIONS** but water applications or with plastic tanks where no metal earthing is present.
9. Notwithstanding the exception in note 7. above an earth terminal in the panel must be connected to an earth point in the wet well, this can be existing metal in constant contact with the effluent ie. guiderails etc (if site has existing earth bonding then no further action required). This earth return conductor should be a minimum 1mm in size, importantly this **ISN'T FOR ELECTRICAL MAINS EARTH BONDING** but simply a guaranteed low conductivity return path for the liquid level controller used with FOGRod. Where no metal exists in the chamber or well install a 6mm 316 stainless steel rod permanently in contact with the liquid as earth return connected directly to the electrical panel earth point.
10. In wastewater DO NOT install in a stilling tube always hang free in effluent (stilling tube fine in debris free effluent such as water, greywater etc).

Maintenance Guidelines

1. In wastewater applications FOGRod should be cleaned on service visits, easily achieved from outside the well by pulling it up through the cleaning bracket. The frequency of cleaning can go from zero in water to regular in very fatty stations. Each site should be observed post-installation to determine the required frequency.

Wiring Connections & Colours for FOGRods



SHORT FOGRod CABLE WIRING	
3 ELECTRODE	5 ELECTRODE
5. N/A	Brown Top electrode
4. N/A	Green Between
3. White Upper electrode	White Middle electrode
2. Red Middle electrode	Red Between
1. Black Lower electrode	Black Lower electrode
Green Earth stud electrode	Blue Earth stud electrode

NOTES:

1. USE WHATEVER ELECTRODES ARE MOST SUITABLE FOR THE INSTALLATION. HOWEVER IN SEWAGE DUTY PUMP OFF SHOULD ALWAYS BE THE LOWEST SIDE ELECTRODE (BLACK WIRE). ALWAYS USE A 10 ELECTRODE FOGRod IN FATTY SUMPS
2. THE PINK WIRE ON THE 10 ELECTRODE FOGRod IS FOR CONNECTION TO THE LIT ONLY FOR THE 'CABLE CUT' ALARM.
3. THE 10 ELECTRODE FOGRod HAS EITHER A GREEN WIRE OR A NAKED DRAIN WIRE CONNECTED TO THE SCREEN, THIS WIRE MUST BE CONNECTED TO EARTH
4. THE TEN ELECTRODE FOGRod GIVES A GREAT CHOICE OF ELECTRODES AND ALSO THE POTENTIAL TO USE SPARE ELECTRODES AS REDUNDANCY. Eg in FIG 2. ORANGE ELECTRODE WIRE COULD BE CONNECTED IN WITH AQUA GREEN TO GIVE A 2ND DUTY START ELECTRODE

