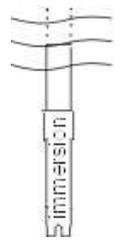




# AN68 Series pH & ORP Sensors



1" NPT threaded industrial electrodes  
Featuring continuous operation at up to 120°C  
Superb performance in severe conditions

- ◆ **Polaris** high porosity polymer reference junction provides a superior amount of surface area that will not plug or clog quickly from process particulates.
- ◆ **Dynagen** self pressurising reference gel resists contamination in severe applications.
- ◆ **Triplex** triple junction reference provides superior resistance to reference junction poisoning.
- ◆ **TuffTip** rugged, high strength glass bulb is typically 10 to 12 times thicker than conventional glass bulbs.
- ◆ Kynar and glass wetted materials ensure greater process compatibility.
- ◆ Highly responsive inbuilt Pt1000 (1000Ω RTD) temperature sensor. Pt100 (100Ω RTD) or custom sensor to order.
- ◆ 1" NPT thread at each end allows a variety of installation methods.
- ◆ Optional "Quick-disconnect" adaptor for easy removal and variety of installation configurations.



BNC to pin adapter - P-BNC/BP-100

The AN68 series pH sensor features the revolutionary *Polaris* reference junction with *Dynagen* gel and a *Triplex* triple junction reference. This reference junction combination fights contamination in even the toughest of applications. Housed in a Kynar plastic body, the model AN68 resists chemical corrosion and heat stress breakdown. Standard 1" NPT threads on front and rear of housing allows for a greater variety of process mounting configurations.

The *TuffTip* glass bulb provides a glass sensing membrane that has incredibly tough resistance to process etching, abrasion and breakage.

### What is TuffTip ?

*TuffTip* is a rugged, high strength, low impedance pH glass that when formed is 10 to 12 times thicker than conventional blown pH bulbs. *TuffTip* pH glass bulbs are not blown, they are hand shaped from an extruded glass rod made of *TuffTip* glass. The electrode body is placed in a glass lathe after which the pH glass bulb is welded to the body in a bullet shaped configuration. The combination of shape, glass chemistry and the thickness provides pH electrodes that are extremely tough.

Process applications that are abrasive or contain acids that may etch conventional pH membranes are perfect for the *TuffTip* pH bulb. In addition bulb breakage is reduced in applications that require intensive maintenance due to process coating and frequent cleaning. Electrode life is increased which provides lower replacement costs and reduced user downtime.

### What is Triplex ?

The *Triplex* triple junction reference provides the ultimate resistance to reference junction contamination, resulting in prolonged electrode life. The *Triplex* junction also provides a stable and consistent reference potential.

### What is Polaris ?

*Polaris* is a high porosity polymer material which when used as a pH electrode reference junction, provides a superior amount of surface area that will not plug or clog quickly from process particulates.

The high porosity of the *Polaris* junction allows ion diffusion to be very constant in processes containing high particle concentrations. The honeycomb configuration of this material combined with the tortuous path throughout *Polaris* allows for normal migration of ions but not process contaminants.

Processes with hydrocarbons or organics become less challenging and these electrodes last longer, requiring less maintenance and replacement costs.

### What is Dynagen ?

*Dynagen* (dynamic generated reference) self pressurising gel combines a unique "cross link gel base" that allows a constant ion transfer. This enables the electrolyte to provide fresh ions within the electrode reference chamber when and where most needed.

Upon insertion into your process, *Dynagen* will begin to expand within the reference chamber, thus creating its own internal pressure. This unique feature provides immediate results, significantly increasing the reference electrode's life.

PHAN68-2.4-0

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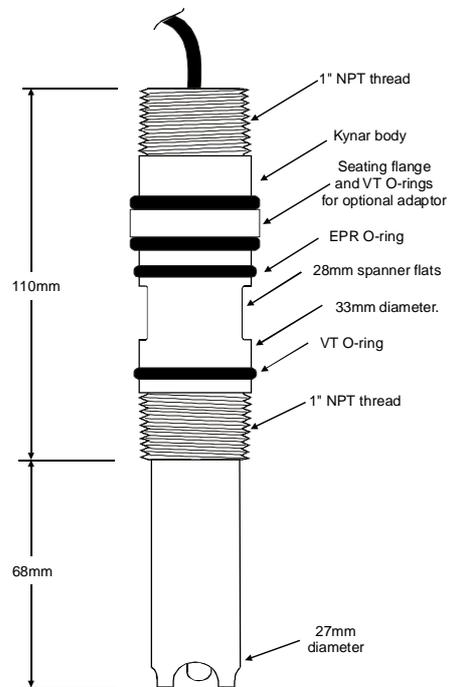
AS/NZS ISO 9001  
Lic.No. QEC 6187  
Standards Australia

## Specifications

|                    |   |
|--------------------|---|
| pH range:          | 1 to 12 pH  |
| Temp range:        | 0 to 120°C continuous.  |
| Response time:     | 95% <15 seconds (in buffers)                                    |
| Pressure:          | 7 bar (100 psi)   |
| Cable length:      | 10 metres (standard)  |
| Connections:       | BNC for pH electrode<br>(+ wire tails for temperature)          |
| Liquid Junction:   | <i>Polaris</i> polymer membrane                                 |
| Reference cell:    | <i>Dynagen</i> cross link gel<br><i>Triplex</i> triple Junction |
| Wetted materials:  | Kynar and glass   |
| Temp compensation: | Pt1000 RTD (standard)   |

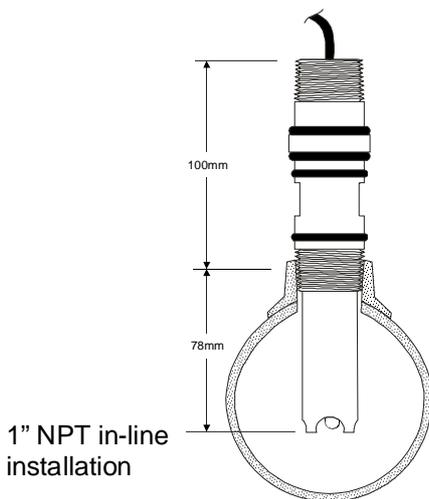
## Order codes

|   |                 |
|---|-----------------|
| PH sensor with inbuilt Pt1000 (standard for AIC products) |                 |
| Order code:   | P-PHAN681K10MBN |
| pH sensor with inbuilt Pt100                              |                 |
| Order code:   | P-PHAN68RT10MBN |
| ORP sensor (no temperature sensor)                        |                 |
| Order code:   | P-ORAN6810MBN   |
| Optional quick disconnect in-line adaptor 1½" NPT         |                 |
| Order code:   | P-PH/ORMD0068   |

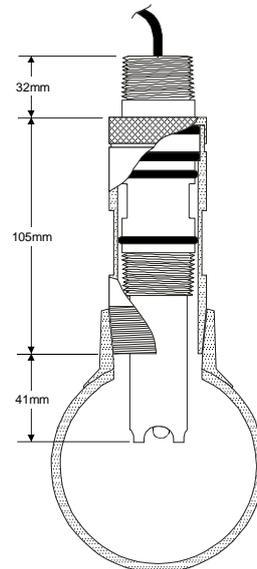


## In-line Installation:

The AN68 sensor can be mounted in an in-line installation using 1" NPT housing threads or by the optional PH/ORMD0068 Quick-Disconnect adaptor (1½" NPT Kynar adaptor).

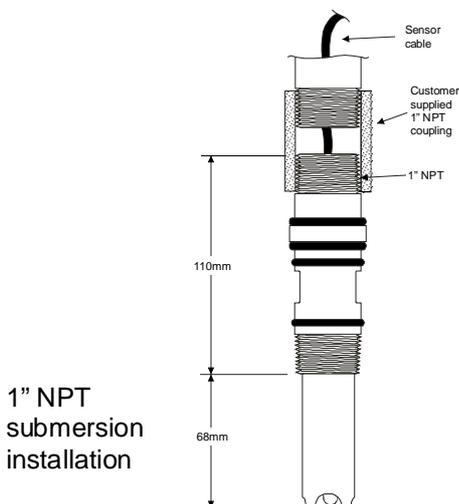


1½" NPT in-line installation  
using PH/ORMD0068  
Kynar Quick-Disconnect  
adaptor



## Submersible Installation:

The AN68 sensor can be mounted in a submersible application using the optional PH/ORMD0068 Quick-Disconnect adaptor (1½" NPT Kynar adaptor) or by customer supplied 1" NPT coupling.



1½" NPT submersion  
installation  
using PH/ORMD0068  
Kynar Quick-Disconnect  
adaptor

