

Type 300 Electronic Unit Specification

4 Point Steam / Water Level Detection

- Alarm & Trip Initiation applied to:
- Cold Reheat & Extraction Steam Lines.
- Boiler & Feedwater Heater Levels.
- Drains Flash & Deaerator Levels.
- Loss of Hydrogen Coolant etc.



The principle of resistance probe discrimination between water and steam is well established and accepted by the Power Plant industry as the most reliable, convenient and maintenance free method of detecting alarm levels and initiating protective actions. By including 4 detection channels in one electronic enclosure the installed cost per detection point can be appreciably lower than traditional float level switches. For high integrity Tripping Functions integral Dual Probe output interconnections are provided where each probe channel is supplied from a different Mains Source. A comprehensive Fault Detection System is included which caters for any configuration of probe channel interconnections.

The Probe Insert Assembly is welded into pipework or vessels at the selected detection points. This provides internal shrouding of the probe for defined water conductivities and a robust housing for external protection of the probe.

Multiple Probe Pipework Assemblies can be supplied to suit particular applications. Advice always available and special applications considered.

Pressure Parts

Type 801 Probe, rating 150 bar @ 340 °C, requires Insert Assembly Type 701.

Type 802 Probe, rating 207 bar @ 370 °C, requires

Insert Assembly Type 702.

Versions of the above Probes with non-wetting PTFE insulators are available for low and high water conductivity. Rating 50 bar @ 220 °C.

Electronic Unit Specification:

Enclosure: Wall mounted glass-fibre reinforced polyester. Protection IP65/NEMA 4X.

Dims: 220H x 200W x 120D.

Inputs:

Discrimination between water and steam for 4 independent isolated channels. Switching threshold selected for water conductivities of 0.3, 0.5, 1 or 2mS/cm. Probe cable monitoring to suit water or steam normal condition for each channel.

Outputs:

Selection for Relays energised in the Safe plant condition.

Two pole changeover contacts per channel.

Single pole Changeover contact for System Fault.

Contact Rating: Max Voltage - 250Vac, 220Vdc

Max Current - 2 Amps

Load Switching - 50 Watts. 120VA

Display: LED indication on each channel, illuminated Red for abnormal (alarm) state. Yellow LED indication for equipment Fault.

The selection of horizontal, vertical or combination configurations of probe channel validations, or Mains Supply failure initiates the System Fault

indication. Green LED illuminated when both Mains Supplies are healthy.

Supply Requirements:

Two independent AC sources

92 - 127V @ 15VA, 48 - 63Hz

184 - 254V @ 15VA, 48 - 63Hz

Temperature Rating: -10 to 65 °C Amb.

-50 to 100 °C Storage.