



Contact Teltherm for technical assistance when you require to measure the level of a process. www.teltherm.co.nz or sales@teltherm.co.nz their technical team will guide you through the process and the many options available.

For example the The Penberthy Series 12B five probe and alarm system represents the latest advancement in electronic level indication. The Series 12B has upgraded internal diagnostics for monitor clock faults, power supply faults and level fault. Based on the conductivity probe technology now widely accepted in the industry, it was specially designed to meet increasing demand for a reliable, cost effective means of sensing water in various applications.



The probes can be mounted directly to the pressure vessel or column. The probes are welded stainless steel HP and IP electrode with zirconia insulator (207 barg @ saturation, up to 649°C) or threaded stainless steel LP electrode with Teflon insulator (58 barg @ 274°C).

The Series 12B consists of three major components: the column with probes, the detection and verification unit and the remote display. The number of probes can be selected and space to indicate liquid level through a desired range. The column is custom manufactured to provide the most accurate indication for any application.

Independent detection circuitry for each probe allows selecting relay output for alarms or trips. Local indication is standard within the Type 4X/IP65 D&V enclosure. Bright red and green indicator for the control room is standard.

Typical Applications

- Boiler Drum Level
- Equipment Drains (Desuperheaters, Control Valves, Sootblower Systems)
- Receiver Tanks (Condenser, Water Tank, Deaerator)
- Flash Tanks, Feedwater Heaters

Specifications

- Up to twelve level switch/indication applications per pcb, cascable to accept unlimited add-on probes
- Independent detection circuit for each probe
- Failure of any channel or probe does not disable system
- Standard Green LED internal D&V display, yellow LED for faults
- Every level has a relay output for alarms and trips with remote Red/Green LED indication (flash programmable)
- Low voltage mixed dual frequency sine wave used for water detection (<12 Vac RMS nominal)
- Net integral zero current waveform. No DC = no possibility of electrolysis of water or plating
- D&V accepts up to three additional Red/Green LED remote displays
- Redundant internal power supply
- Relay outputs for level and electronic faults
- Internal diagnostics for monitor clock faults, power supply faults and level fault
- Patent Pending
- Enclosure: Type 4X/IP65
- Maximum sensitivity:
 - 1 microsiemens/1 megohms - cm water
- Input Voltage:
 - 120 Vac / 240 Vac nominal
 - 50-60 Hz 45VA nominal
 - Unit incorporates MOV protection
- Relay contacts:
 - Form C, SPDT
 - 10A @ 120 Vac
 - 5A @ 240 Vac
 - 8A @ 28 VDC
- Operating Temperature:
 - 0 - 160° F
 - [-17°C/+71°C]

Standard Assembly

- Type 4X/IP65 Enclosure
- One Remote Red/Green LED Display with programmable flash water conductivity
- Meets requirements of ANSI/ISA S84-01-96 "Safety Instrumented Systems" with optional dual primary level power supplies and short/open detection specified

Optional

- 4-20mA loop output
- Dual primary level power supplies
- Door mounted Red/Green LED display for local viewing
- Trip By-pass Key switch
- Continuity check for short/open probe/wire detection. Short based on less than 1/10 nominal water conductivity

Meets requirements of ANSI/ISA S84-01-96 "Safety Instrumented Systems" with optional dual primary level power supplies and short/open detection specified.
Contact Teltherm for technical assistance: +64 9 633 0040.