



YARWAY SERIES 3000 ELECTRONIC LEVEL INDICATION

An advanced, multi-featured five probe and above electronic alarm system for sensing water level in a variety of high or low pressure applications



Shown with optional red/green LED door mounted display

FEATURES

- Upgraded internal diagnostics for monitor clock, power supply and level faults.
- Based on widely accepted conductivity probe technology.
- Reliable and cost-effective.
- Probes can be mounted directly to the pressure vessel or column.
- Independent detection circuit for each probe allows relay output selection for alarms or trips.
- HP probes feature brazed welded stainless steel electrode with zirconia insulator for high pressure, high temperature applications.
- LP probes feature threaded stainless steel electrode with PTFE insulator for lower pressure and temperature applications.
- Probes can be selected and spaced to indicate liquid level through a desired range.
- Custom manufactured column provides accurate indication.
- Local LED indication of water level in a Type 4X/IP66 D&V enclosure provides primary visual verification.

GENERAL APPLICATIONS

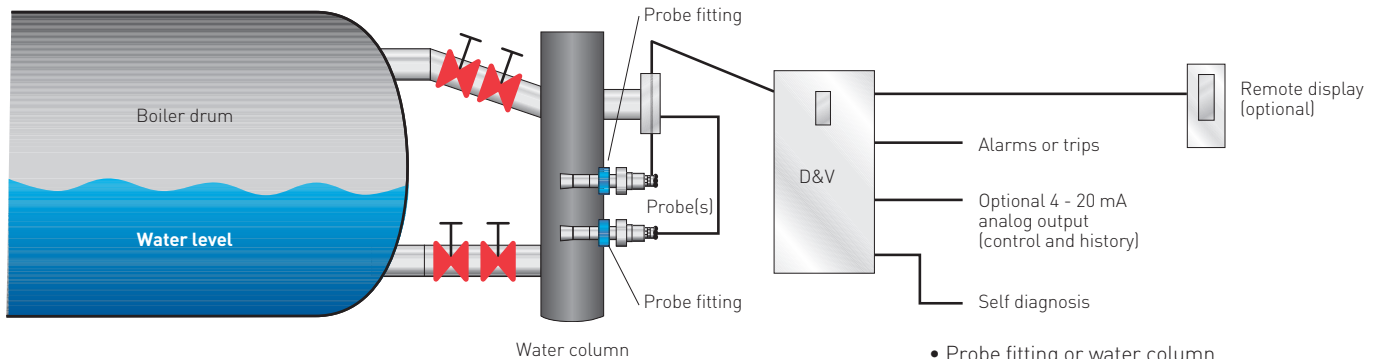
The Series 3000 is suitable for applications including boiler drum level, receiver tanks including condensers, water tanks and de-aerators, for flash tanks and feedwater heaters.

TECHNICAL DATA

Max. pressures	
HP probe:	3000 psig (207 barg) at saturation
LP probe:	850 psig (58 barg)
Max. probe temperatures	
HP probe:	1000°F (538°C)
LP probe:	525°F (274°C)
Operating temperature:	
	0 to 160°F (-17°C to 71°C)
Input voltage:	
	120 V AC/240 V AC max. (dual transformer) 50-60 Hz 80 VA nominal

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SYSTEM COMPONENTS



- Probe fitting or water column
- Probe(s)
- Detection and verification (D&V) module
- Remote display (optional)

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 V AC 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/IP66.
- Maximum sensitivity: $1\mu\text{S}/1\text{M}\Omega$ - cm water.
- Input power: 120 V AC/240 V AC maximum (dual transformer), 50-60 Hz 80 VA nominal unit incorporates MOV protection.
- 40 VA maximum single transformer.
- Relay contacts: Form C, SPDT
10A at 125 V AC
10A at 250 V AC
8A at 28 V DC
- Operating temperature (electronics): 0 to 160°F (-17°C to 71°C)

Typical configuration

- Type 4X/IP66 enclosure.
- One remote red/green LED display with programmable flash.
- Water column with probes (refer to data sheet VCTDS-02606 for water columns, probes and probe fittings).

Optional

- 4-20 mA loop output.
 - Dual primary level power supplies.
 - Type 4X/IP66 enclosure for remote displays.
 - Door mounted red/green LED display for local viewing (as shown on page 1).
 - Trip by-pass key switch/push button.
 - 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.

Hazardous area usage

Diode barrier sets for intrinsically safe protection are available for electrode/sense wire energy limiting if water column is used in an application classified as hazardous.

