



Hawker Electronics

**CONTINUOUS NON-CONTACT
LEVEL MEASUREMENT**

ULTRASONIC SYSTEMS

- Cost Effective
- Self Checking
- Maintenance Free
- Simple Calibration
- Low Powered
- Weatherproof
- Continuous Monitoring
- Optional Controllers

LOW COST *of* MAINTENANCE



APPLICATIONS

Any liquid without foam layers, having a good reflective surface and compatible with the materials of construction of the transmitter head

USES

The Ultrasonic head produces a mA signal proportional to depth or distance. This may be fed into a P.L.C., computer, **Flexilevel 2** controller or similar where the signal may be processed to give indication, control and alarm points, and other adjustments.

FAST RESPONSE TIME

The **Sondaloop** is a loop powered two wired unit giving low power consumption and long term economy. It emits a burst of energy from the sensor face to the liquid level twice a second. This means the display and transmission is updated twice every second.

ONE SOFTWARE PROGRAMME

Whether you are using the standard **Sondaloop** the PTFE faced versions or the split sensor versions, the setting up and the calibration are the same. It's quick and simple.

POWER SUPPLY OPTIONS

Many Engineers power the **Sondaloop** from the P.L.C. which processes the 4-20mA signal. Optionally you can use the **Flexilevel 2** Digital Indicator/Controller to give digital indication, 4 relays, full isolation, retransmission and cable break detection. The **PS2** offers a power supply for the Sondaloop with a lost echo/alarm feature and optional trip amp.

FITTINGS

The **Sondaloop** Remote has a sensor remote from the electronics connected by 15 metres of cable. This allows the customer to use the local display without the need to visit the control room.

A swing bracket is available which allows the user to commission both instruments in situ without having to lean over the vessel.

OPERATING PRINCIPLE

The ultrasonic head has an integral transmitter and receiver. It transmits a sound wave, which impinges on a target and is reflected back. The time taken to transmit and receive is measured. This is converted by digital technology into a useable 4-20mA signal proportional to the distance. The distance measured from the bottom of the vessel to the liquid surface is the depth and the distance from the sensor to the liquid surface is the distance. Because the speed of sound changes with temperature, temperature compensation is built into the ultrasonic head.



Sondaloop

Loop Powered
Transmitter
Range: 8m.
Output: 4-20mA
Lost Echo:
4,20, or 21mA
or hold last good
reading
IP68 Housing
Auto diagnostics
Data Sheet 283



Sondaloop

With cap
removed showing
4 Digital Display
4 Button Keypad.
To IP66 & can be
set up in the rain.
Multi fixing flange
Supply: 24-33vdc
Data Sheet 283



Sondaloop/PTFE

With PTFE faced
flange for aggressive
liquids
Range 7m.



Sondaloop Remote

Sensor separated
from controller &
display by 15m cable.
Also available:
**Hawkersonda
Remote**
Data Sheet 251



Flexilevel 2

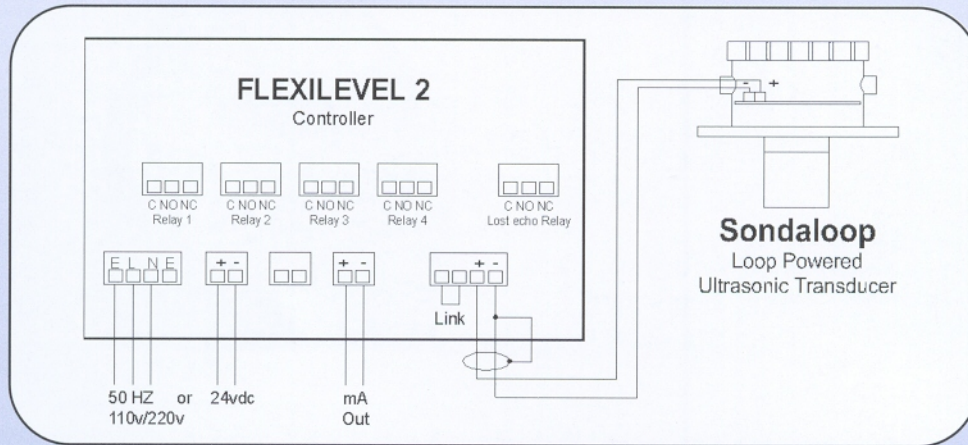
Indicator & controller
with
4 relays.
Digital display
Full isolation
Retransmission
Diagnostics
AC or DC powered.
Data Sheet 288



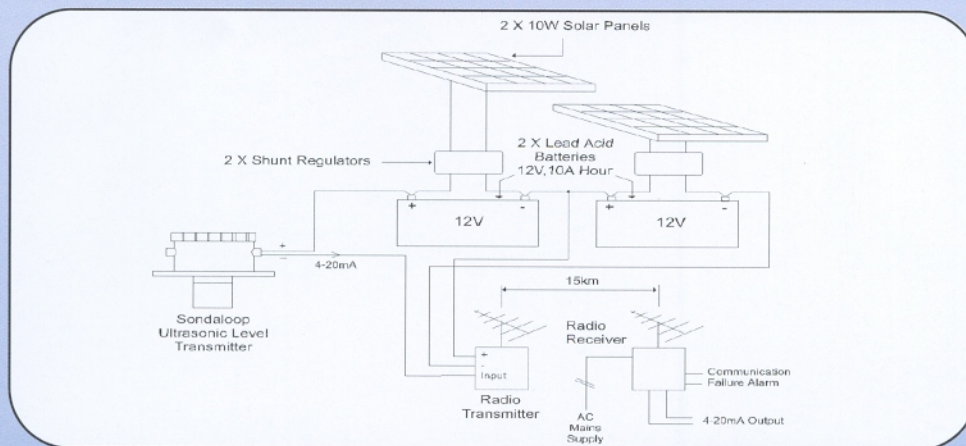
Power Supply Type PS2

Provides a DC supply
from an
AC input.
Either 24v or 33vdc
for powering the
Sondaloop. Optional
Adjustable Trip Amp.
Data Sheet 292

Example of Applications using the Sondaloop



The Sondaloop used in conjunction with a Flexilevel 2



Radio Transmission of Sondaloop signals. A Solar powered, battery driven system

Because of continuing development we reserve the right to change the specification without notice.

For a full list of HAWKER products and application notes visit our web site at www.hawker-electronics.co.uk

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