



ultrasonic sensing



■ Description

The DCU series sensors use ultrasonic technology to provide a non-contact method of determining distance or level measurements. This versatility makes the DCU series ideal for a variety of applications. The color, translucency, dielectric constant, specific gravity or viscosity of the target does not affect an ultrasonic sensor. Ultrasonic sensors function extremely well in harsh environments, are reliable, and require little or no maintenance.

■ Operational Description

Ultrasonic sensing is very similar to radar. The sensor transmits ultrasonic sound waves. If the sound waves meet a solid or reflective object, such as a liquid, they are reflected back and detected by the sensor. The time of flight is measured, and since the speed of sound is a well-known variable, the distance to the object can be calculated.

Until recently, the many variables in the speed of sound created inaccurate readings. With the advent of microprocessor technology, these variables can now be factored into the equation and eliminated. One such variable is ambient temperature. The DCU series incorporates internal temperature compensation to adjust for

DCU

Ultrasonic Level Sensors

- Variety of operating ranges:
 - DCU-1100 series: 2 to 50 ft. (0.6 to 15.3 m)
 - DCU-1600 series: 4 to 72 in. (0.1 to 1.83 m)
 - DCU-7000 series:
 - 7110 & 7210: 1 to 16 ft. (0.3 to 4.88 m)
 - 7070: 1 to 32 ft. (0.3 to 9.75 m)
- Internal temperature compensation
- Programmable response time
- Maintenance free
- Programmable filtering

