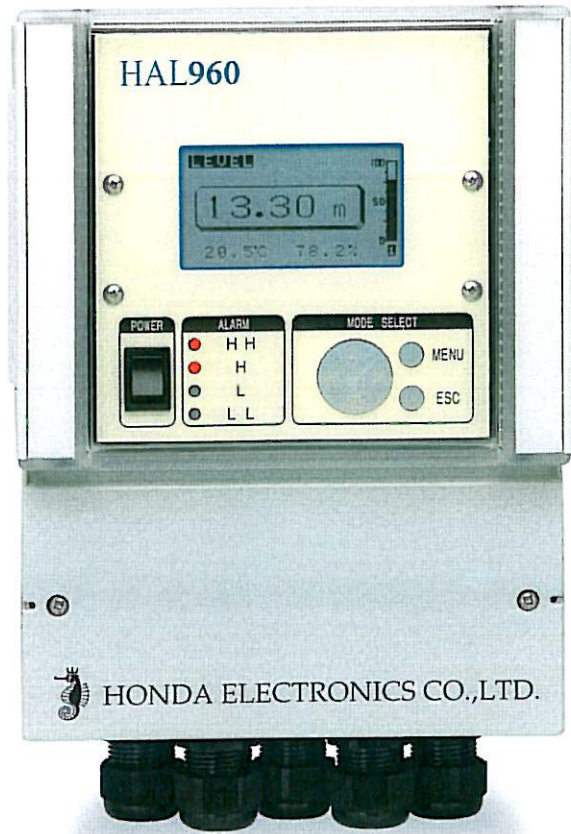




Ultrasonic Level Meter HAL960

ULTRASONIC
Level Meter

Possible to measure
the long distance up to 60m.



Product overview and features

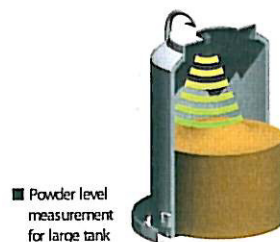
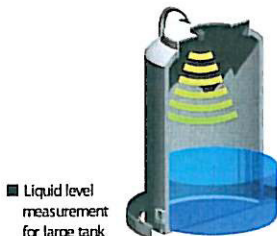
High resolution 1.5 mm/60

The sensor transmits ultrasonic signals to an object or material (liquid/powder) and receives the reflected signals. The meter then measures the elapsed time and calculates the distance.

- Wide measurement range
Measures a wide range of distances: from 1.5 to 60 m.
Ensures reliable measurements using the conical sensor.
- Four alarm output lines
Four alarm output lines are provided to enable various controls.
- The standard equipment configuration includes RS-485
The RS-485 is provided as part of the standard configuration to enable remote control at a distance of up to 1,200 m.
The MODBUS protocol is provided as part of the standard configuration, enabling communications with a PLC.
- Signal processing to reduce noise
The ultrasonic signals received are processed to reduce the effects of external noise and external ultrasonic waves.
- Compact and lightweight
Uses a conical sensor for compact dimensions and low weight.

Applications and examples

- Liquid/powder level management for a tank inside a machine
- Water level measurement for lakes, ponds, or rivers



Option

- PROFIBUS communication converter

Standard specification

Model No.	HAL960
Number of channels	1 CH
Frequency	12 kHz
Object to be measured	Liquid/powder
Measurement distance range (1/2 for powder)	1.5 to 60 m
Resolution	Measurement: 5 mm Display: 5 mm
Accuracy	±0.25%F.S. (±15cm)
Data update cycle	1.5 sec.
Sensor directivity angle (beam angle)	14°
Power supply	Voltage: AC85 to 264 V Power consumption: 15 VA
Display	LCD (with backlight) 4 lines
Output	Alarm output: AC250V, DC30V 5 A (Relay contact) 4-20 mA current output: 16 bit (maximum load resistance): RL (MAX) = 600 Ω
Interface	RS-485 (Max. transmission range: 1,200 m)

	Main unit	S sensor
Operating ambient temperatures	-20 to 60 C	
Material	ABS	PVC and other
Protection standard	IP66	IP53
Dimensions (W x D x H)	185 x 85 x 235 mm	φ264 x 181 mm
Sensor cable length	—	5 m
Maximum sensor cable length	—	200 m
Distribution cable length	Not supplied	—
Weight	1.8 kg	1k g
Sensor attachment screw (old JIS)	—	R1 (PT1)



Note

- The information in this catalog is valid as of February 2009.
- Specifications and appearances are subject to change without notice.
- The colors of products as printed in this catalog may differ somewhat from actual colors.