

# Absolute Shaft Encoder

Water Level | Surface Water | Groundwater | Water Storage

## General Description

The AD375MA is a **rugged, microprocessor-based, power-efficient shaft encoder** for reliable and accurate water level measurement. The built-in **digital technology** determines the **absolute water** level from the reference level and the relative rotational movements at level increase or decrease. This eliminates any further calculation or conversion in downstream data acquisition devices.

Display and keypad allow **user interaction without the need of an additional device.**

Device settings include user adjustable resolution (375, 150 or 100 pulses per revolution) and adaptation to 3rd party pulleys/chains and sprockets. Furthermore, current system status and measurement data can be read directly from the display (water level, battery voltage, ...). Measured values are available simultaneously on 4-20 mA and SDI-12 outputs.

The encoder can be float operated or connected to mechanical sensors, chart recorders and weir gates, utilising drive gears or chain and sprocket assemblies.

## Applications

The AD375MA is suitable for capturing the water level in surface waters, groundwater, float shafts, measuring shafts, gauge pipes, etc.

## Features

- High-resolution measurement 1 mm
- Absolute water level
- Parallel data output via 4-20 mA and SDI-12 (or RS232) to connect to up to two data loggers (redundancy)
- Controls
  - LCD display and two buttons (OLED display for -40 °C operation available on request)
  - Display: measuring range, water level and battery voltage
  - Sensor configuration
- Slippage reduction via beaded line and matching perforated disc
- Robust construction
- Battery backup

## Tailored Solutions

Are you looking for a tailor-made, ready-to-use solution? Our experienced engineers develop individual solutions on the basis of your requirements. Please contact us.



## Technical Specifications

<b>Resolution</b>	<ul style="list-style-type: none"> <li>- 1 mm (maximum error +/-1 mm)</li> <li>- 375, 150 or 100 pulses per revolution (user adjustable)</li> </ul>
<b>Accuracy</b>	+/-0.01 % FS
<b>Range</b>	Typical up to +/-30 m (+/-98 ft) water head; endless wire set-up available for water level ranges exceeding 30 m (98 ft)
<b>LCD Type</b>	16x2 character LCD (or OLED on request for -40 °C (-40 °F) operation)
<b>Shaft Load</b>	Max 2 kg (4.4 lb) (adaption to higher loads available on request)
<b>Power Supply</b>	<ul style="list-style-type: none"> <li>- Operating: 9.0 -16 V DC</li> <li>- Current Drain: 5 mA @ 12 V DC</li> <li>- Battery back-up: Internal lithium</li> </ul>
<b>Enclosure</b>	IP65 powder-coated aluminium
<b>Connectors</b>	Available in 'push-in' spring loaded terminal or gland cable entry
<b>Operating Conditions</b>	Temperature Range <ul style="list-style-type: none"> <li>- -40 °C to +60 °C (-40 °F to 140 °F) (encoder only)</li> <li>- -10 °C to +60 °C (14 °F to 140 °F) (standard LCD; -40 °C (-40 °F) OLED version available on request)</li> </ul> Humidity: 95 % non-condensing
<b>Dimensions (L x W x D)</b>	245 x 125 x 150 mm (9,6" x 5" x 6")
<b>Mass</b>	1.5 kg (3.3 lb)

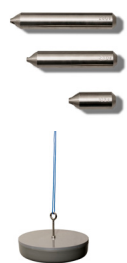
## Accessories



### Pulley and line:

The drive pulley can be used with both straight and beaded lines alike. Equispaced holes in the drive pulley accommodate the beads on the

beaded line exclusive produced by KISTERS from 316 stainless steel wire and copper beads. The effect is reduced slippage and therefore better accuracy.



### Floats and counterweights:

Floats with various diameters and matching counterweights made of stainless steel. Also available for boreholes and spring sockets.



**Pulleys and end hooks:** Pulleys and end hooks suitably dimensioned for float line.

### iRIS dataloggers and data modems:

- Robust housing
- IP over one or two channels of your choice: xG / GPRS, satellite, IoT
- I/O: analog, digital, SDI-12, Modbus
- iLink software
- Telemetry or cloud app

[Please ask for details.](#)

Reseller

**KISTERS Australia** | sales@kisters.com.au | kisters.com.au  
**KISTERS Europe** | hydromet.sales@kisters.eu | kisters.eu  
**KISTERS New Zealand** | sales@kisters.co.nz | kisters.co.nz  
**KISTERS North America** | kna@kisters.net | kisters.net

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