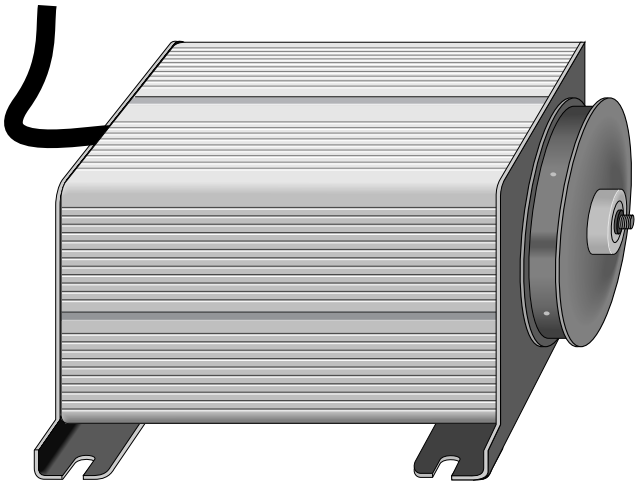
# Shaft Encoder

## Model CS410

The CS410 is a shaft encoder designed for water level measurements by Campbell Scientific. A pulley attached to a float and counter-weight rotates as water level rises or falls, and the encoder sends two pulse strings to the datalogger. The datalogger records the pulse strings, and water level is calculated by adding and subtracting the clockwise or counter clockwise movement to a running total. The encoder resolution is 100 counts per shaft revolution, so a 1-foot circumference pulley has a resolution of 0.01 feet. Compatible dataloggers include our CR200-series, CR800-series, CR510, CR10X, CR1000, and CR3000.

A complete measurement system requires a float, pulley, float tape or beaded float line, end hooks, appropriate-sized counter weight, and datalogger. See supporting equipment below for offerings from Campbell Scientific.



### Ordering Information

CS410-L Orders an encoder and interface cable. Enter lead length for signal cable in feet after the L.

### Specifications

| | |
|---|---|
| Temperature: (Note: Not responsive if water surface freezes) | -25° to +50°C |
| Dimensions (L x W x D): | 7″ x 4.875″ x 4″ (18 x 12.4 x 10 cm) |
| Weight: | 1.8 lbs (0.82 kg) |
| Shaft size: | 5/16" (0.8 cm) OD |
| Thread count: | 24 per inch |
| Resolution: | 100 counts/revolution |
| Maximum cable length: | 100 ft (30 m) |
| Starting torque: | Less than 0.125 inch-ounces |
| Power Supply: | 4 to 5.6 V |
| Current Drain: | 0.5 mA |
| Minimum time between input transitions: | 0.75 ms |
| Output Pulse Width: | 0.25 ms at 25°C |
| Signal Magnitude (Volts): | 0 (low), supply voltage (high) |

### Supporting equipment available from Campbell Scientific

| | |
|---|---|
| 12221 | Polyethylene float, 6" diameter |
| 10801 | Float tape, punched on 2.4" center |
| 12222 | End hooks for punched tape (2 required) |
| 10803 | Counter weight, 4 oz |
| 12225 | Counter weight, 8 oz (0.01 ft resolution) |
| 10799 | Plastic pulley, 1 ft circumference |

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