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# Lowell Instruments TCM-4 Shallow Water Tilt Current Meter

### **Product Images**





### **Short Description**

#### Affordable & Easy-to-Use Affordable & Easy-to-Use Current Meter for Shallow Water

The Lowell Instruments TCM-4 Tilt Current Meter is designed for use in shallow water locations such as coastal ponds, rivers and streams and tidal flats. The TCM-4 needs only 28 cm of water depth to operate and is easy to deploy by hand or from a small boat.

## **Description**

### **Key Features**

**Low Cost** Water velocity measurements for a fraction

of the cost of an acoustic meter

**Rugged Design** Carbon fibre housing with O-ring seals

**Small Size** Operate in as little as 28 cm of water

**Long Battery Life** 1-minute velocity sampling for more than 1

year

**Large Memory** microSD memory card virtually eliminates

memory concerns

Temperature

Sensor

Internal thermistor accurate to <0.1 °C

**USB 2.0 Interface** Connect with standard USB cables

## **Additional Information**

| Country of Manufacture | United States  |  |   |   |  |
|------------------------|--|--|---|---|--|
|                        | Tilt Current Meters mea simple; the meter is but tripod. Moving water til and 3-axis magnetomet thermistor for recording The meter's electronics sensors. The floatation i logger includes a USB of long-life lithium battery, deployment and to proof The TCM-4 is available a and deploy. The low tol locations simultaneousl uncertainty.  Specifications | oyant and is secured by<br>its the logger in the dire<br>er determine tilt and b<br>bg temperature.<br>are housed in a titaniu<br>is derived from toughe<br>ommunication interface<br>. Windows software is u-<br>tess data.<br>It a fraction of the cost<br>tal cost permits multipli | ra flexible tether to a fig-<br>critexible the meter also<br>my pressure case with n<br>ned syntactic foam. The, a microSD flash men<br>used to configure the T<br>of acoustic meters and<br>e current meters to be | xed anchor or<br>accelerometer<br>contains a<br>o external<br>e built-in data<br>oory card, and a<br>CM-4 for<br>is simple to setup<br>deployed in many |  |
|                        | .,   | Range  | Accuracy  | Resolution  |  |
|                        | Speed<br>(Low Range)   | 0-50 cm/s  | 3 cm/s + 3% of<br>reading   | 0.1 cm/s  |  |
|                        | Speed (High Range)   | 0-75 cm/s  | Not specified   | 0.1 cm/s  |  |
|                        | Direction  | 0-360°   | 5° (for speed >5<br>cm/s)   | 0.1°  |  |
|                        |  | -5 to 30 °C  | 0.1 °C  | <0.005 °C   |  |
|                        | Temperature  | -20 to -5, 30 to<br>50°C   | 0.2 °C  | <0.01 °C  |  |
|                        | Electronics  |  |   |   |  |
|                        | Memory   | 8 GB microSDHC flash card (standard)   |   |   |  |
|                        | Communications   | Full speed USB micro-B port  |   |   |  |
|                        | Battery Type   | 3.6 V, size A, user replaceable lithium (from Lowell Instruments)  |   |   |  |
| Explanation            | Battery Life   | Months to years depending on recording rates   |   |   |  |
|                        | Internal Clock   | k < 1 minute of per month  |   |   |  |
|                        | Operating Modes  |  |   |   |  |
|                        | Start and Stop   | Start and Stop at user defined times   |   |   |  |
|                        | Burst Mode   | Variable rate logging at user defined<br>interval  |   |   |  |
|                        | Recording Rate   | Current: 64 Hz to 1 sample per hour<br>with typical settings of one 20 second<br>burst @ 8 Hz per minute (12-month<br>battery life)<br>Temperature: 1 Hz to 1 sample per<br>hour   |   |   |  |
|                        | Mechanical   |  |   |   |  |
|                        | Depth Rating   | 30 m (100 ft)  |   |   |  |
|                        | Dimensions   | Diameter: 2.54 cm (1.00"))<br>Length: 25.4 cm (10.0")  |   |   |  |
|                        | Weight   | 1.29 kg (2.84 lb)  |   |   |  |
|                        | Construction   | Housing: Carbon Fibre and Epoxy<br>Laminate with PVC & PETG fittings,<br>316 Stainless Steel Screw and Buna<br>and EPDM O-rings.   |   |   |  |
|                        | Software   |  |   |   |  |
|                        | User Interface   | Windows® Compatible Software<br>Download   |   |   |  |
|                        | USB  | USB 2.0 compliant MSC and CDC<br>Classes   |   |   |  |
|                        | Firmware   | Field upgradable via   | USB cable   |   |  |
| Contents               | MAT-1 Data Logger (in     Lithium battery (install     8 GB microSD card (in     microSD-to-SD card Ac     1 m (3 ft) USB A to mic   | TCM-4 Shallow Water Current Meter MAT-1 Data Logger (installed in meter) Lithium battery (installed in logger) 8 GB microSD card (installed in data logger) microSD-to-SD card Adaptor 1 m (3 ft) USB A to micro-B Cable Spare Endcap O-ring (pre-lubricated) 30 cm (12") lanyard      |   |   |  |
| Brand                  | Lowell Instruments   | Lowell Instruments   |   |   |  |
| Typical applications   | Datalogging  | Datalogging  |   |   |  |
| Measurements           | Water Flow   |  |   |   |  |