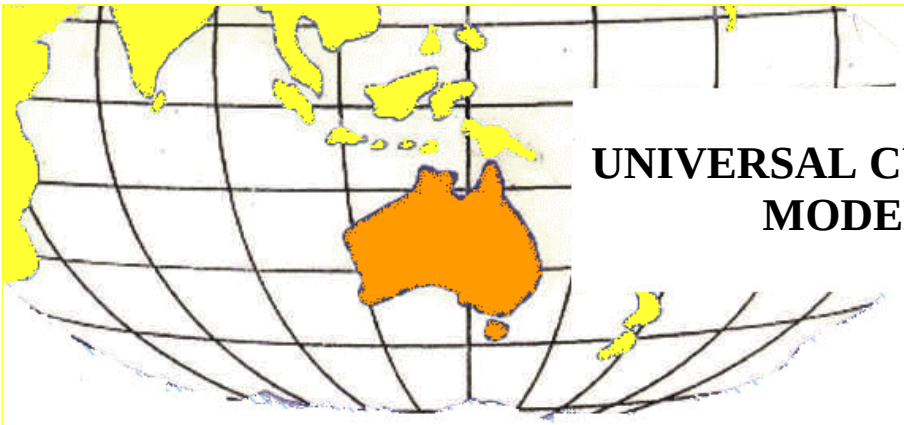


BULLETIN 4,
EDITION 7

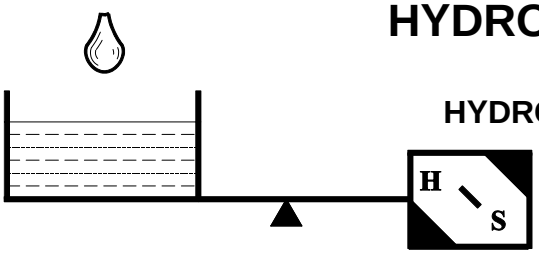
UNIVERSAL CURRENT METER MODEL OSS-B1

Universal Current Meter
Model OSS-B1

- **Streamline, Robust Stainless Steel Body and Axle**
- **Stainless Steel Propellers, 4 Sizes**
- **Non Contact Switching System-Permanent Magnet and Reed Switch**
- **Minimum Starting Velocity: 0.025m/sec**

ISO 9001

QUALITY SYSTEM CERTIFIED



HYDROLOGICAL SERVICES PTY.LTD

HYDROLOGICAL INSTRUMENTS & EQUIPMENTS
DESIGNED AND MANUFACTURED
BY HYDROLOGISTS

DESCRIPTION

The OSS B1 Universal current Meter is a world recognized designed instrument for measuring the velocity of water in streams, open canals, pressure pipes, lakes and seas. Made of Stainless Steel, the OSS-B1 is suitable for even the most extreme environments and ensures reliable field services for many years.

OPERATION

The OSS B1 current Meter consists of streamlined body which houses the sensing mechanism, an encapsulated reed switch, and the propeller shaft, which has a permanent magnet, mounted such that each rotation of the shaft produces a pulse from the reed switch. The pulses are conducted through a lead to the surface where they are counted by a current meter Counter. The velocity of the stream is proportional to the rotations of the propeller. The following equation is used to calculate the velocity.

$V = K \times N + \Delta$

Where: V ***Velocity***
K ***Hydraulic pitch of the propeller***
N ***Number of pulses counted***
Δ ***A constant determined by ration tests***

Each OSS B1 is provided with a calibration in accordance with AS 3778.6.3-1992/ISO 3455-1976. A calibration certificate and rating tables are provided.

FEATURES

The OSS-B1 superior design offers:

1. Stainless Steel construction to resist corrosion and damage.
2. Ease of replacement of the Reed Switch Assembly
3. Rubber encapsulation of the Reed Switch to resist damage from dropping or knocking.
4. Heavy Duty Pelican case with moulded foam.
5. Relocating Device for in stream adjustment of the current meter mounted on the wading rod.
6. 'Hockey Stick' style Sewer Rod to position meter in pipe for man hole.

OPTIONAL CONFIGURATIONS

Three options are available for locating the OSS-B1 in waterways ranging from low to very high flow rates.

Option 1. The standard configuration is supplied with 3x0.6m sections (1.8 m) of 20mm diameter Stainless Steel rod for locating in shallow to medium depth streams or rivers. The rod is graduated every 2cm and decimetre. A point and base plate is used to position the rod in the river or stream bed. A relocating device is available to allow the OSS-B1 to be relocated along the rod without having to withdraw the rod from the stream. This allows the user to continuously observe velocities at different depths of the stream.

Option 2. A Streamlined Suspension tube is available for suspending the OSS-B1 in a fast flowing stream up to 6 meters in depth. The Streamline Suspension Tube is shaped like a wing and provides greater support against the stream flow. A stand and Clamp are available for supporting the Streamlined Suspension Tube and OSS-B1 from bridges or other fixed structures.

Option 3. A Stabiliser tail fin (CMB09) is attached to the rear of the meter when it is mounted on a hanger bar attached to a Colombus weight; 7, 15, 23, 34, 45, 68, 90 or 135Kg. This assembly is suspended from a gauging winch with an armoured signal cable. Alternatively the OSS-B1 can be mounted on the nose of a 25Kg or 50Kg Nose Mounting Ground Feeler weight and suspended from a gauging winch.

CURRENT METER COUNTERS

The OSS-B1 provides a pulse to a Current Meter Counter. Hydrological Services offers two counters to suit all applications. All models records up to 40 pulses per second.

HydroMate: is the top of the range counter with direct velocity reading functionality, more details please refer to bulletin (5)

CMC20A: is a complete counter which can be set to count pulses for a specific time period (10-200 secs). The counter stops when the time period has elapsed and shows a digital reading for the number of pulses.

HydroMate

CMC20A

SPECIFICATIONS

The OSS-B1 is supplied in a basic kit as follows:
Propeller type A, 4 m Connecting Lead, Tools, Oil, Spare Bearings, Spare Reed Switch Assembly, 3x0.6m, 20 mm diameter rods (in canvas carry bag), point and base plate, Calibration table and Carry Case. Optional Items can be added.

Propeller Specifications:

Type	Size	Max Velocity m/s	Start Velocity m/s	Range of Component Effects
A	100mm x 0.125m	5.0	0.025	± 45°
1	125mm x 0.25m	10.0	0.025	± 5 °
2	125mm x 0.50m	10.0	0.040	± 5°
4	80mm x 0.125m	4.0	0.040	± 5°

Packing Dimensions: 22Kg, 0.05 m^3

Note: Specifications are subject to change at anytime without notice.

HYDROLOGICAL SERVICES PTY.LTD.

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