

IGHEM - Montreal 96

Current Meter Bus

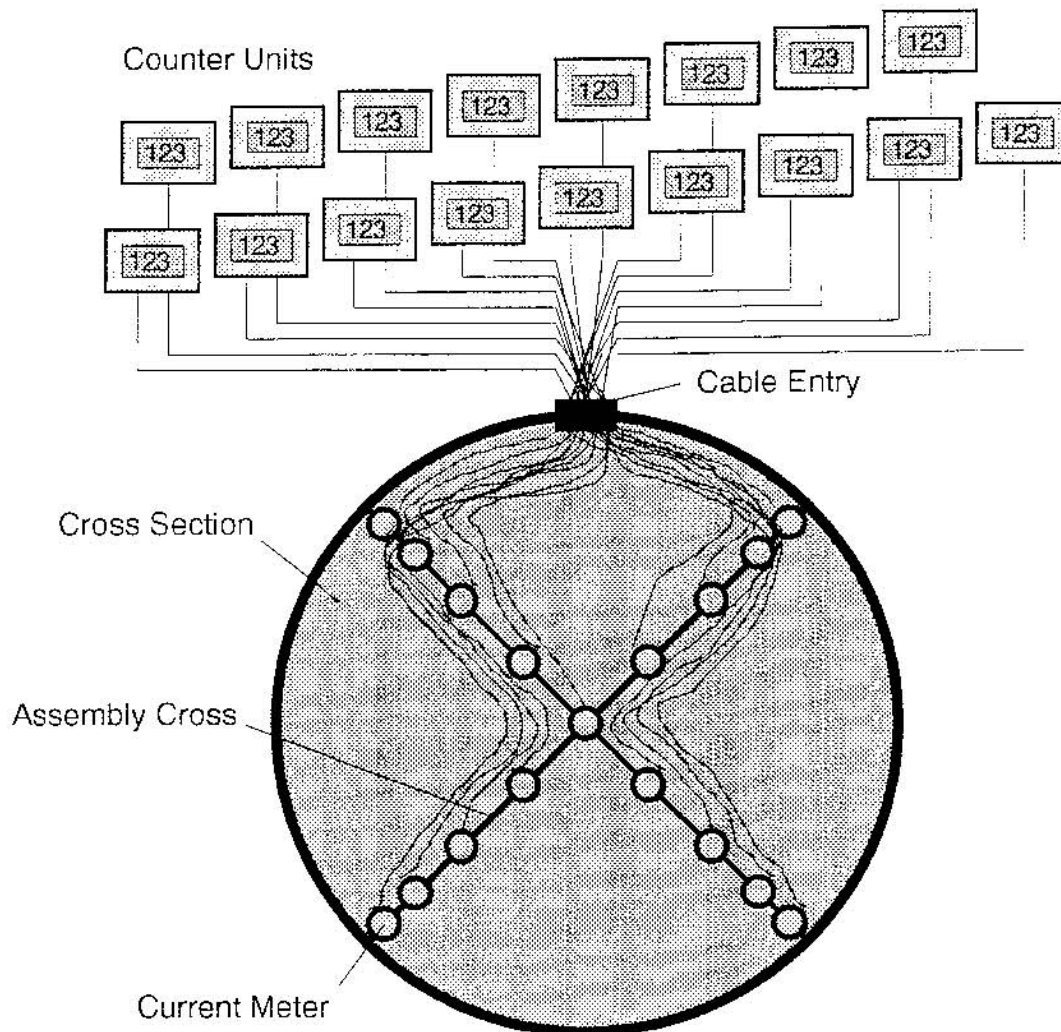
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Current Meter Bus

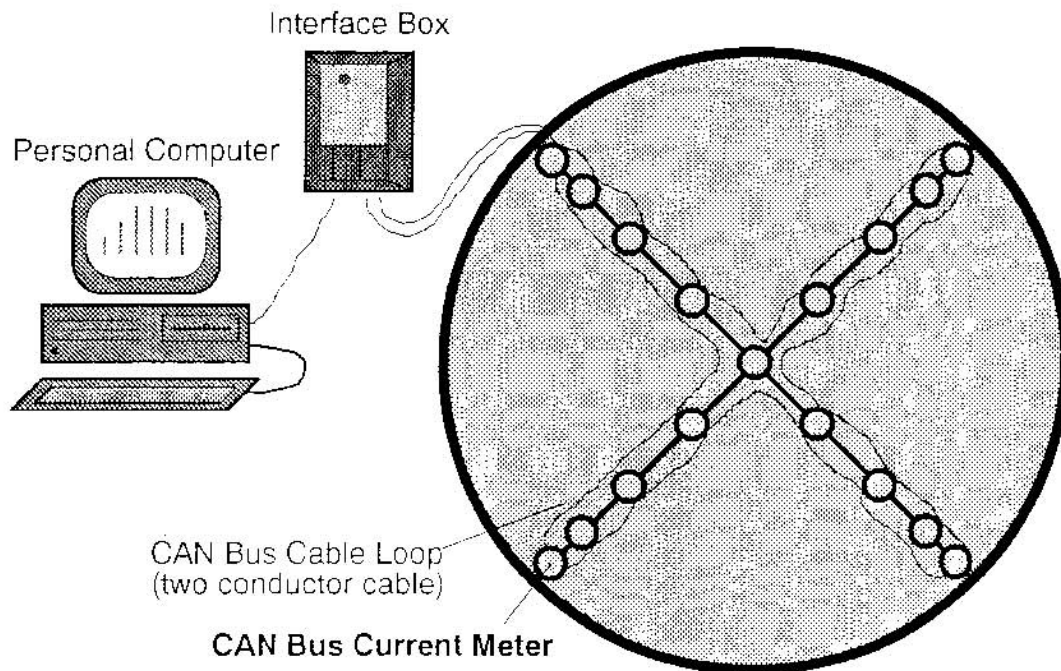
Previous Flow Measurement



- One cable and one counter were required with each current meter.
- There was a difficult cable assembly in the downspout, mainly with the cable entry.
- The probability to an error by linking the current meters to the counters was high.
- You needed long (expensive) assembly time.
- The cables had to be adapted with each new structure.
- Did you suppose the flow direction always to be forward?
- The observation of the flow velocities was not possible in real time.
- The evaluation of the variation in velocity was only subjective.

Current Meter Bus

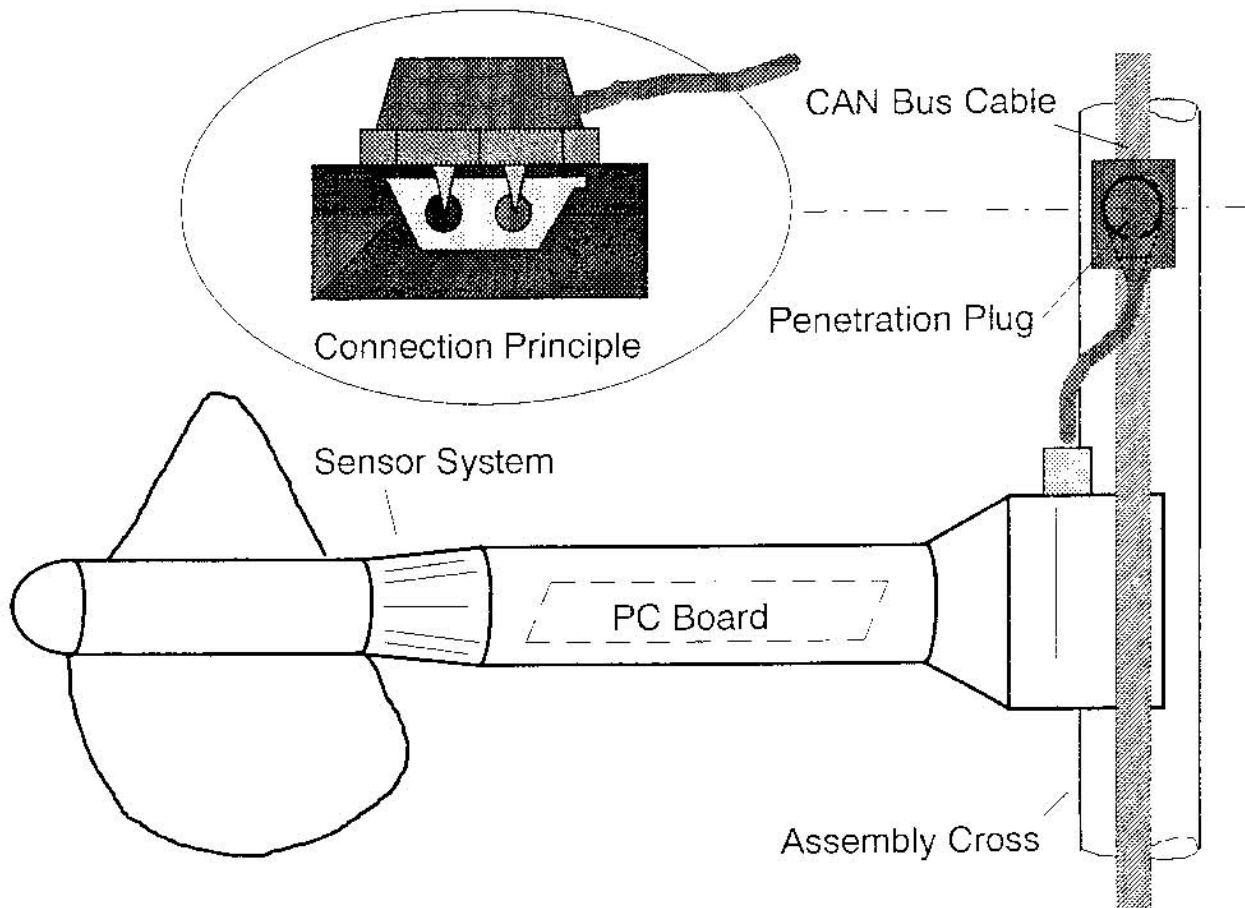
OTT Current Meter Bus



- The CAN Bus offers a very high interference immunity with a robust two conductor cable (1,5mm²).
- Up to 32 CAN Bus Current Meters can be connected in parallel to one PC via the Interface Box.
- One cable break is allowed without loss of data transmission due to the loop structure.
- There is an easy way to connect the current meters to the bus line at any point you need via penetration plugs (also used with the Actuator Sensor Interface ASI).
- You need no adaption of the cables to new structures; even you can use the CAN Bus cable a couple of times.
- The bus initialization is done by the system automatically in case of turn on or a wire break.
- There is little influence to the current caused by the cable.
- The susceptibility to a bad insulation between the conductors is very little (about 100 Ohms permitted).
- A complete system (CAN Bus cable + Interface Box + PC) is needed for each group of 32 current meters. The data is joined at evaluation time.

Current Meter Bus

CAN Bus Current Meter

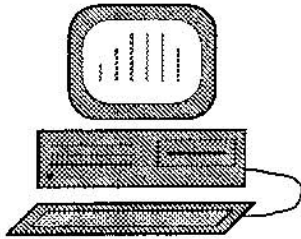


- The CAN Bus Current Meter includes a noncontact sensor system which offers 12 impulses per revolution.
- Each impulse is stored with its precise time of appearance (resolution 0.1ms).
- A data block is sent to the bus every 0.1s.
- You can recognize the sense of rotation.
- The connection to the bus is very easy due to a fixed cable with a penetration plug.
- The electronics is supplied via the CAN Bus (24V=, 50mA).
- The instrument number stored in the current meter is also transmitted to the bus, so there is no error possible by allocating the current meters to the data.

Current Meter Bus



Evaluation Computer



Pentium PC, 20" screen

- The CAN Bus is connected to the PC via a Interface Box which separates the power and data signals. Also a galvanic isolation is included.
- The visualization software is the very versatile DIAdem from GfS Germany.
- You can watch the velocity profile in real time.
- You can continuously see the conditions of the current.
- The real time data is stored on the harddisk without a gap.
- There is an interface to the data base software Access.
- You can choose statistics calculations e.g. standard deviation and histogram.
- The system is open to the connection of additional information e.g. the power of the generator.

