

MPCFN

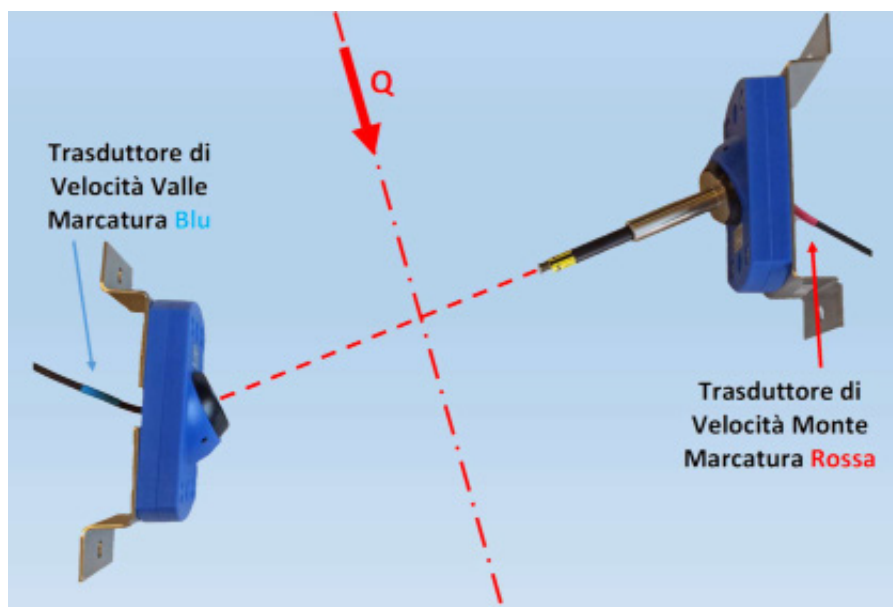
Flow meter

Velocity area for open channels, tunnels or full/partially full pipes with ultrasonic sensors



The MPCFN system is an area-flow meter that is used in combination with an optional level transmitter to measure flow in open channels. The MPCFN consists of an advanced digital signal processing (DSP) computer and up to eight speed transducers. The flow meter uses the transit time difference of ultrasonic sound pulses to measure the flow velocity in the open channel. Ultrasonic pulses are transmitted from upstream to downstream, and vice versa, through the channel at an angle α between the direction of flow and the path of the sound wave. The difference between the transit times of the sonic waves is directly proportional to the speed of the liquid.

The MPCFN can be used in rectangular, circular, trapezoidal or other shaped channels. Since the transducers generate almost no restriction, virtually no pressure drop is generated. The meter's computer-based DSP with Cross Correlation and Fast Fourier Transform (FFT) technology allows the system to operate in the most demanding applications, including those involving liquids with high concentrations of suspended solids and air or components that generate a lot of noise. The MPCFN is also able to provide two independent measurements with a total maximum limit of 4 chord planes (example: 2 sizes each with 2 chord levels).



ELECTRONIC
EQUIPMENT

ACOUSTIC

WEIGHING

ANTI-TILTING

VALVES

TEMPERATURE

DETECT
A FIRE®

FLOW/
RATE

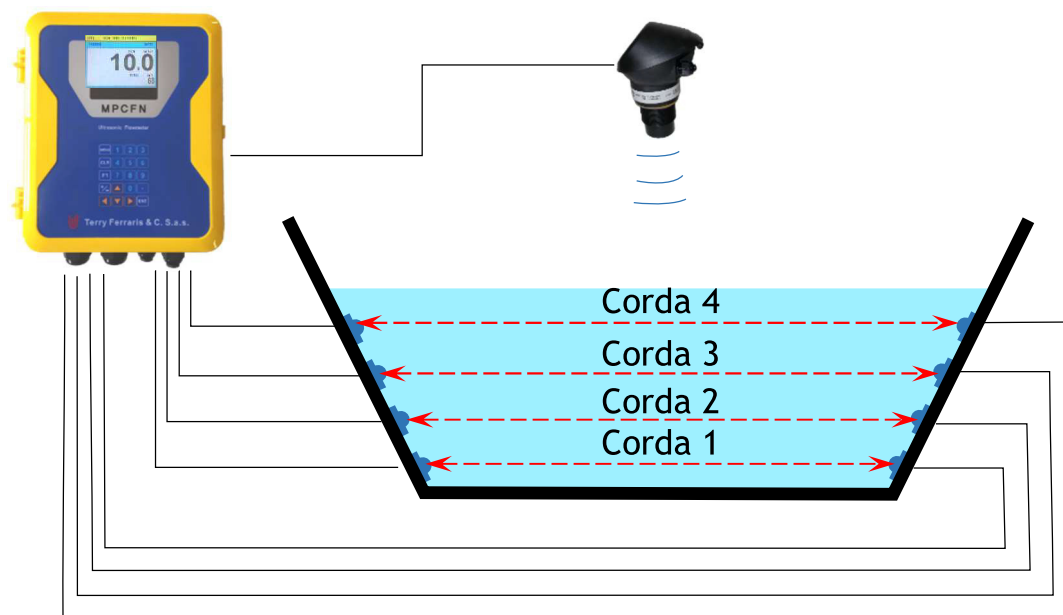
DENSITY

INTERFACE

PRESSURE

LEVEL

TF
54



TRANSDUCERS

LTI-M Insertion transducer

Mat.: AISI 304 (transducer body, ball valve)
Mat.: Carbon steel (weld sleeve)



TRSBC Transducer

Mat.: Polyurethane



LTR-L Transducer

Mat.: Nylon



LO Pipe Insert

Mat.: Polyethylene, AISI304



LTO-M Transducer with adjustable angle

Mat.: Nylon

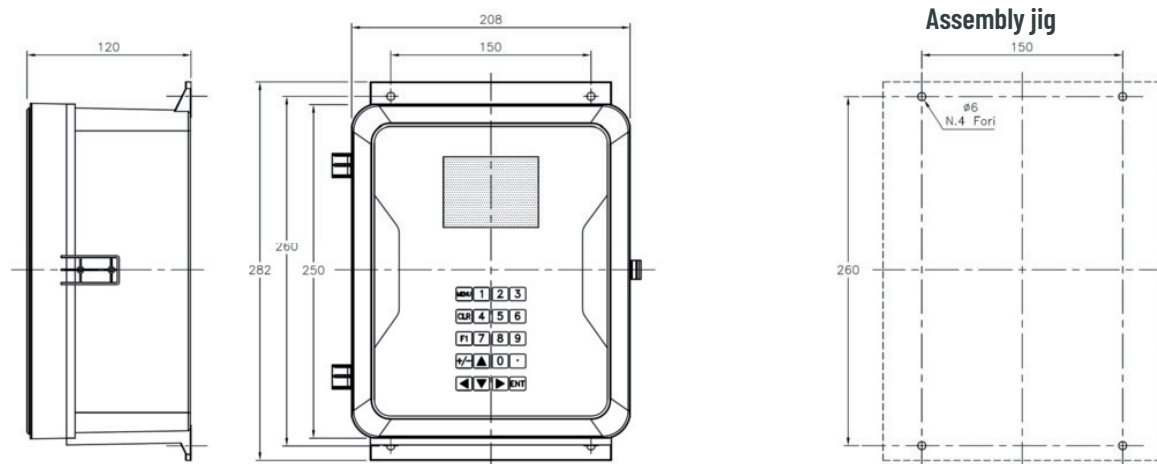


LTO-L Transducer with adjustable angle

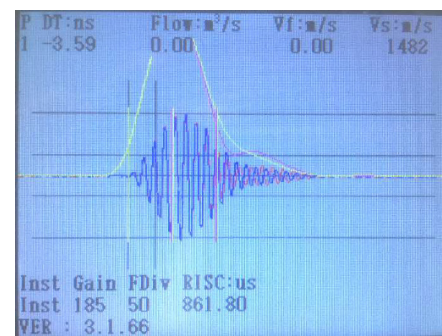
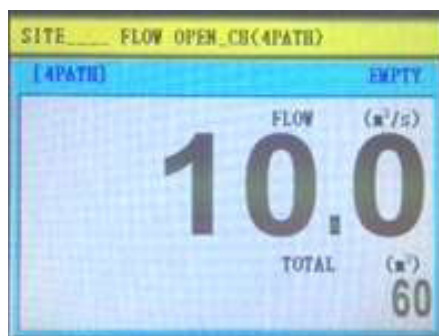
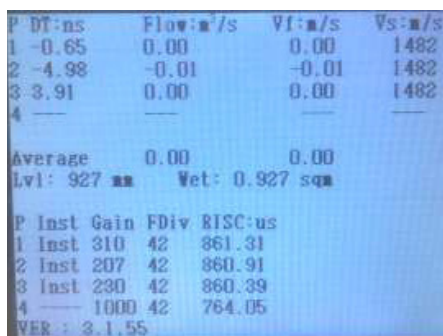
Mat.: Nylon



Enclosure and mounting template - Overall dimensions



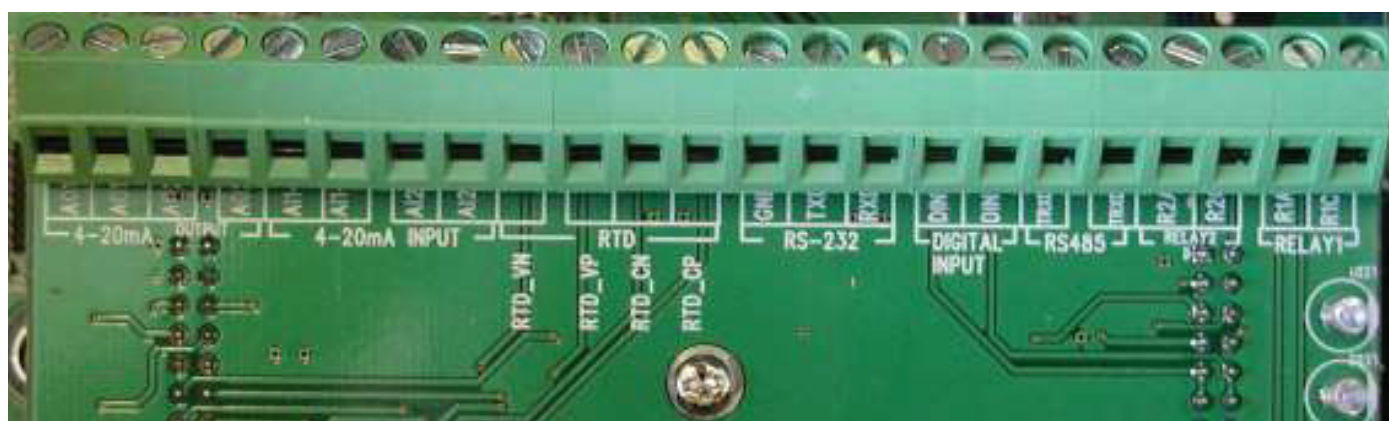
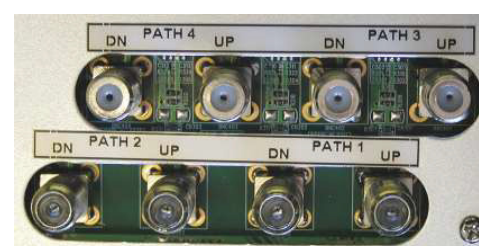
Graphical display for visualization, calibration and with oscilloscope function for diagnostics



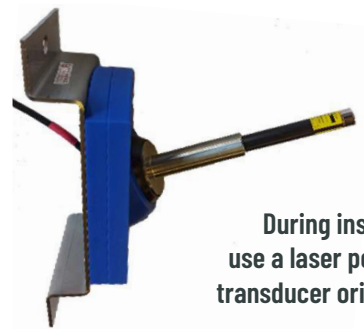
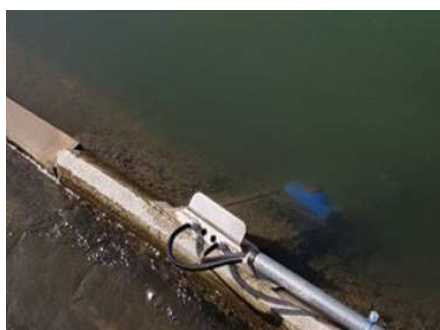
Wiring diagram

A maximum of 4 acoustic chords, 8 speed transducers can be connected to the MPCFN flow meter.

Upstream transducers must be connected to the **UP** connectors, and downstream transducers to the **DN** connectors.



Typical installations: mounting transducers by slides



During installation,
use a laser pointer for
transducer orientation.