

## Ultrasonic Flowmeters

The esPRO® flow meters are designed for contact-free precision flow measurement of high purity fluids. The ultra-pure PFA body contains no moving parts, eliminating any possibility for particle generation.

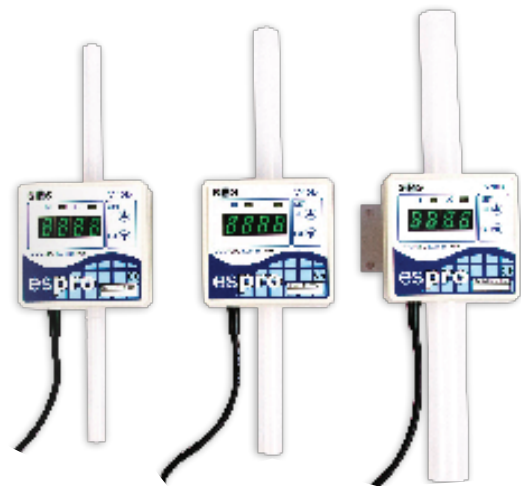
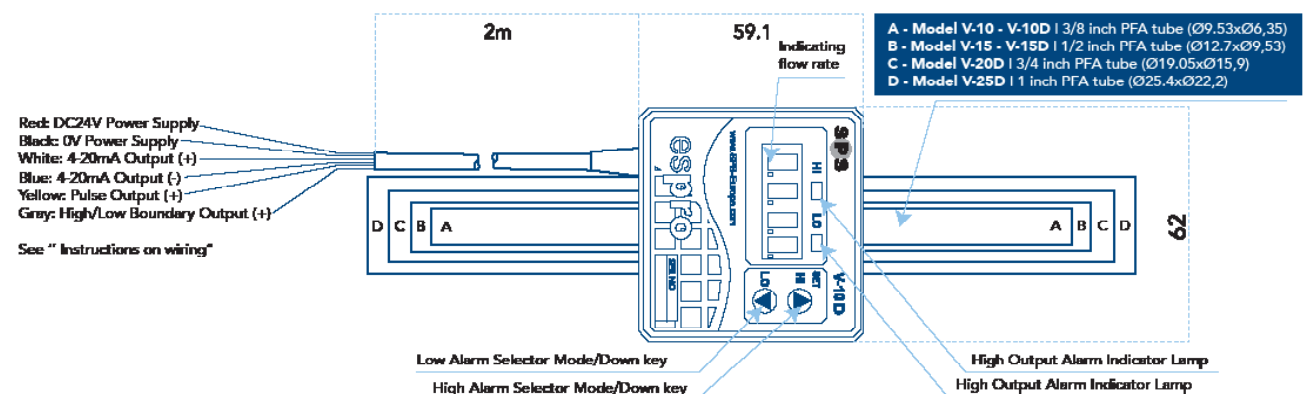
The esPRO® flowmeter uses a non-contact ultrasonic sensor method, that detects the Karman vortex in your fluid. Light weight and compact, the esPRO® flow meters compact design allows fitting on closely-spaced parallel piping. D-series are equipped with a small monitor and provide analog output, pulse output as well as high & low boundary output.

### Principal of Operation

If a fluid flows past a shedder body, a regular pattern of vortices called Karman Vortex street alternately trails aft in the wake. The ultrasonic wave oscillating time varies proportional to the vortex shedding frequency. We can obtain the measured flow by detecting any changes in ultrasonic wave oscillating time.

The number of generated vortices is depending on the flow speed only and independent on other parameters as viscosity or specific gravity of the fluid.

Dimensions:



### Benefits

- Because PFA Flowmeters measure Karman Vortices using a non contact ultrasonic sensor method, they contain no moving parts such as flippers & floats, thus eliminating particle generation.
- High and low alarm boundaries can be set to any level using selector keys.
- Lightweight and compact, esPRO® flowmeters are simple to install.
- Monitor attached series (V-xxD) and monitor unattached series (V-xx) are available depending on application.