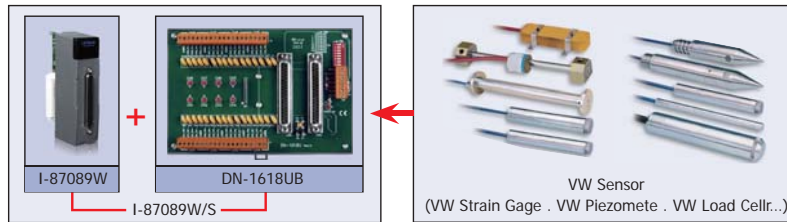


## 6.5. Vibrating Wire Input Modules

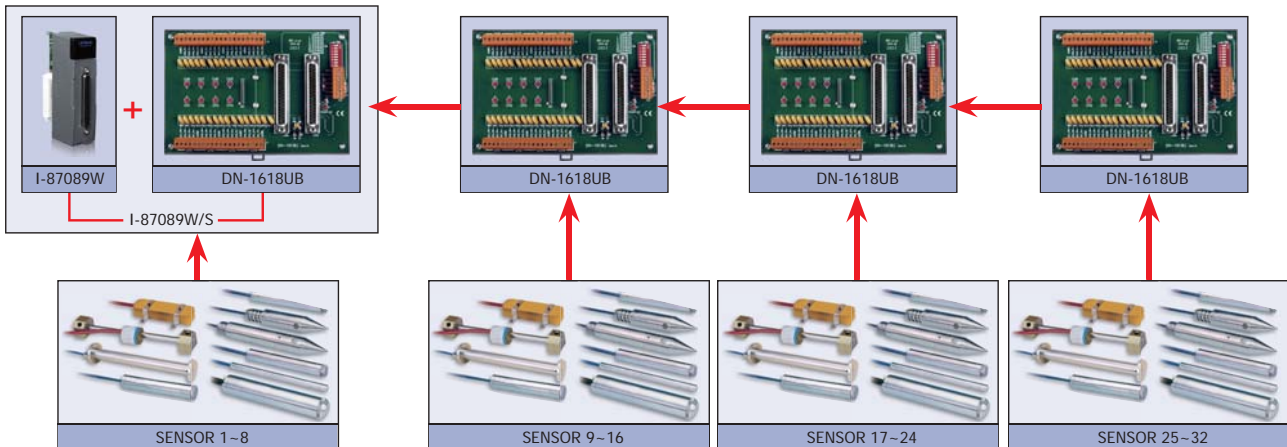
### Introduction


The vibrating wire sensor has a wire which is initially plucked by a series of electrical magnetic forces from a coil. The conductive wire after plucking is vibrating in a magnetic field. The wire will disturb the field, and then the coil can pick up the induced voltage change. The signal is amplified and detected by a VW readout device, or called VW reader. After plucking, there is no other force acting on this wire. When the transient response dies out, the reader can read a stable resonant frequency. The resonant frequency is function of the tension of this wire.



### Applications

The I-87089W/S can be extended to 32 channels by connecting 3 extra DN-1618UB.



| VW Input Module              |  |
|------------------------------|--|
| Models                       | I-87089W/S   |
| Pictures                     |  |
| Vibrating Wire Input         |  |
| Channel                      | 8  |
| Input Type                   | Vibrating Wire Sensor ( 2 VW wire + 2 Temperature wire + 1 shield wire)              |
| Measurement Range            | Wire: 450 ~ 6000 Hz  |
| Excitation mode              | Enhanced square wave   |
| Resolution                   | Wire: 0.01Hz / Temperature: 0.01 °C  |
| Accuracy                     | Wire: ±0.01 % of FSR / Temperature: ±0.1 % of FSR                                    |
| Channel to channel isolation | Yes, 1 kV  |
| System                       |  |
| Dual Watchdog                | Yes  |
| Isolation                    | 3000 Vdc   |
| Power Consumption            | 3.6 W  |
| Connector                    | D-Sub 37   |
| Optional Accessories         | DN-1618UB  |