Model: I-87089W

I-87089W

1-channel Vibrating Wire Input Module

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.

Specifications

Vibrating Wire Input	
Input Channels	8
Input Type	Vibrating Wire Sensor (2 VW wire + 2 Temperature wire +1 shield wire)
Measuring Range	Wire:450 ~ 6000 Hz
	Temperature:-20 °C ~ +50 °C
Excitation mode	Enhanced square wave
Resolution	Wire: ±0.1Hz % of FSR
	Temperature: ±0.1°C % of FSR
Channel to channel isolation	Yes, 1 kV
System	
Dual Watchdog	Yes
Isolation	3000 VDC
Connector	D-Sub 37
Communication Interface	
RS-485 (Data+, Data-)	D-sub 37-pin connector with 3000VDC isolation
Protocol	115200, 8, N, 1
LED Display	
2 LED as Power Indicator	
8 LEDs as 8-channel relay Indicator @ DN-1618UB	
Power	
Power Consumption	3.6 W
Environment	
Operating Temperature	-25 ~ 75 °C
Storage Temperature	-30 ~ 75 °C
Humidity	5 ~ 95% RH, non-condensing

Dimensions
30mm x 102mm x 115mm(W x L x H) Detail @ I-87089W
165mm x 112mm x 52mm(W x L x H) @ DN-1618UB

Ordering Information

I-87089W-G	1-channel Vibrating Wire Input Module
I-87089W-G/S	8-channel Vibrating Wire Input Module Includes the I-87089W Module, a DN-1618UB Daughter Board and a DB-37 Male-Male D-sub cable 1M
DN-1618UB	8-channel Vibrating Wire extended board (RoHS)