3301 Type - WiSen® 4-Channel Vibrating Wire Interface Unit	
Basics	
Primary Battery Power (Internal)	Qty. x 3 (3.6V Lithium primary D-Cell ER34615)
Battery Connection	Standard Aluminium Battery Holder
Secondary DC Power (External)	7- 32VDC @ Min. 2A
Tertiary Power (External)	10.8V Battery Unit or Solar Unit
Mobile Network Stop Voltage	≥ 2.65VDC
Working Current	Max. 395mA (Typ.200mA)
Local Storage	Min. 10 Yrs Storage @ T=1min
Dimension (L x W x H)	180 x 140 x 60mm
Weight	≤ 1.6kg
Cable Gland	Qty. 1 x EMC-CMA12 for external RS232 connection (through cable diameter, 3-6mm); Qty. 1 x EMC-CMA14 for external DC input power connection (through cable diameter, 4-8mm); Qty. 4 x EMC-CMA14 for external sensors (through cable diameter, 4-8mm).
Wire Connection	DC In- Spring type wiring terminal
External Interface	
Wireless Module	Compatible with 2G/2.5G/3G/4G of Micro SIM card
Wired Port	RS232
WSN Interface	
Mesh Wireless Interface	WiSen® Protocol
Low Power Mode	T ≥ 3min and Server Connection Ratio DTU_T = [1,99]T
Externally Connected VW Sensor	
Sensor Type	Vibrating Wire Typed
No. of Inputs	4 Channels
Sensor Connection	VW Type of 5 wires: VW+, VW-, T+, T-, GND. Note: Temperature wires (or a 3kΩ resistor) must be connected to the T+ & T- terminals so VW node can work properly; Ground wire between a node and a sensor must be connected.
Parameter	Resonant Frequency (Hz)
Range	400 to 6000Hz
Accuracy	0.015% at Any Reading
Sensitivity	0.002Hz@400Hz or 0.05Hz@6000Hz
External Thermistor Sensor	
Parameter	Thermistor Resistor of 3kΩ @25°C
Range	0.052kΩ to 113.096 kΩ
Accuracy	0.12kΩ or 2°C
Standard System Parameter	
Temperature	Measurement Range:-40 to 85°C; Accuracy: ±1°C, typical 0.5°C; Resolution: 0.1°C
Voltage	Accuracy: ±0.1V
Industrial Standard	
Casing and Painting Materials	Aluminium-Alloy Die Castings 12 (Epoxy Polyester Powder Coating)

IP Rating	≥ IP66
Operating Temperature	-40 to 85°C
Fire Proof	Approved

Applications

A. The unit, as a completely stand-alone device, can be directly connected with 4 Vibrating Wire typed sensors while also capable of connecting with a remote server via 4G daughter board;

B. It is designed for a scattered VW typed monitoring over a large area. And it has been a significant extension in Wisen Mesh family;

C. It is compatible with all different brands & types of high quality Vibrating Wire sensors, therefore it can be applied in all different related monitoring projects;

D. Examples of VW sensors: Strain Gauge, Displacement Transducers, Piezometers, Settlement Sensors, Pressure Cells, Load Cells;

E. Suggested VW sensor supplier: http://www.soilinstrument.com/ ; http://www.geokon.com/Strain-Gages

Non-Standard Accessory

A. RS232 to USB connection cable from a gateway to a PC for local parameter configuration;

B. TTL to USB 1m cable to read the mesh data from a gateway in parallel to the mobile network data transmission;

C. Daughter board: 2/3/4G GSM interface board (by default), or Wi-Fi/Ethernet/RS-485 interface daughter board;

D. Outdoor adaptor, IP68: 110-240VAC to 12VDC@3.3A.

Highlights

When connected to a remote server, “NET” LED will be constantly on.

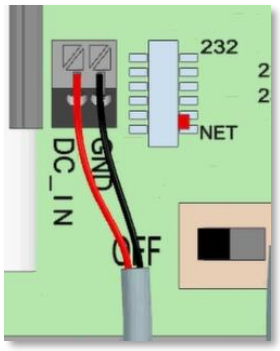

Figure. 12VDC@5A Adapter Connection

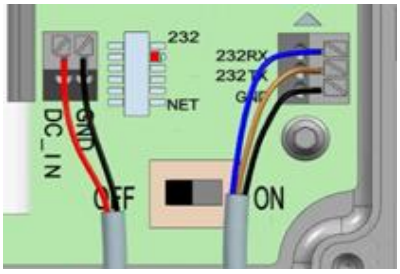

Figure. RS232 to USB Connection

Figure. TTL to USB Connection.

Installation Guidance

Figure. Product Photos.

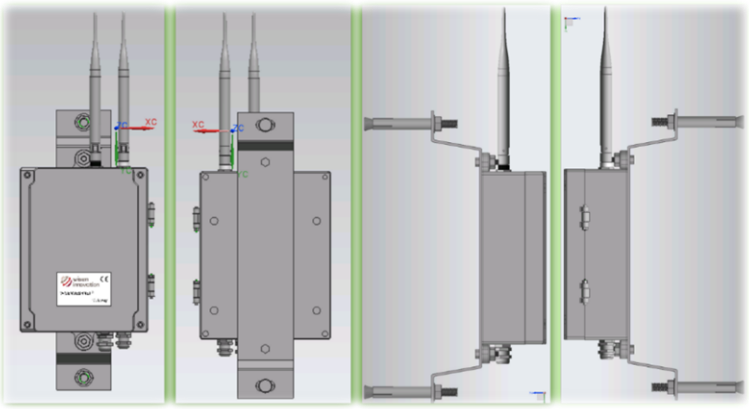

Figure. 4-Channel Vibrating Wire Interface Unit Fixing Bracket.

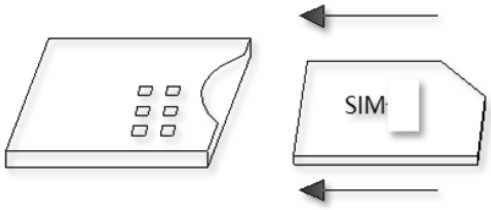

Figure. SIM Card Orientation.

Battery life (with internal batteries).

T/min	Month
1	0.2
5	1.3
15	4.0
30	7.9
60	15.8