TAKUWA

TSV TYPE

Vibration Sensor for Debris Flow Detection

- Non-contact measurement with Debris Flow.Unbreakable, Continuous Detection is Possible
- Can Estimate a Flow Discharge by Amplitude of Ground Vibration
- Easy Installation and Maintenance

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http://www.takuwa.co.jp/english/

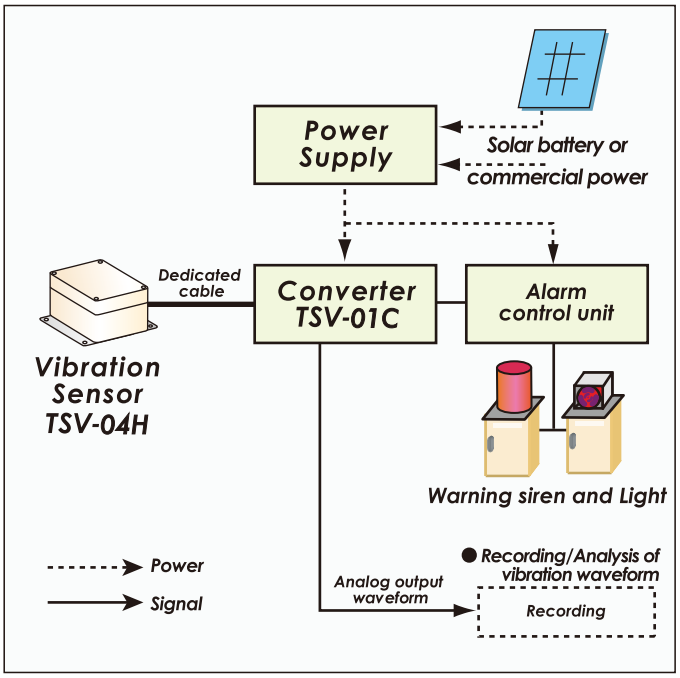
Summary

This device with acceleration sensor is to detect the vibration caused by debris flow and volcanic mud flow.
It is designed to provide the alert when the vibration detected by acceleration sensor is greater than a certain definite value(arbitrarily-settable alert level) and continued during a certain definite time (arbitrarily-settable continuous detection time)
In addition, alarm output can be set up in 5 steps and it allows an estimate of scale of debris flow in real-time at great distances by transmitting Individual alarm output.

Vibration sensor (underground installation using hand hall)

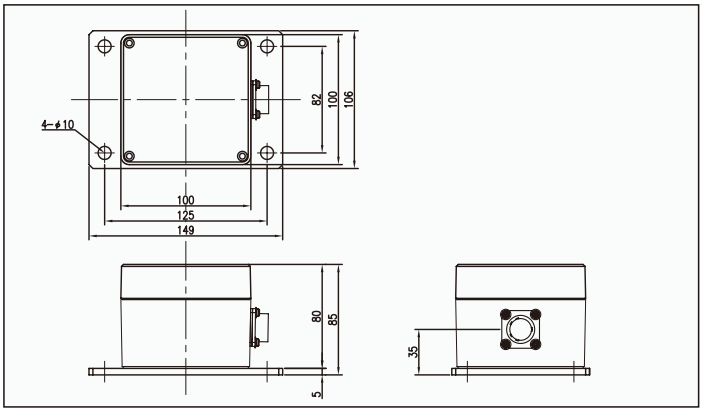
Converter Communication device(Solar battery)

System block diagram

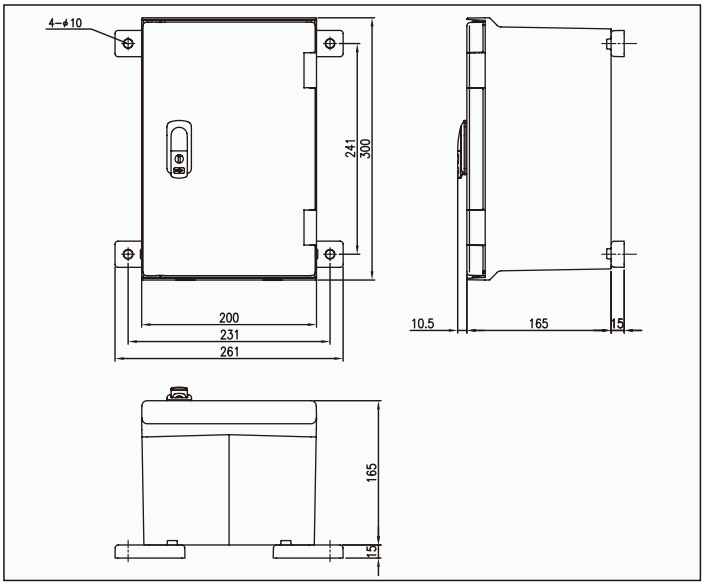


Outline drawing

Vibration Sensor



Converter



Specifications

Vibration Sensor

Model	TSV-04H
Function	1) Acceleration sensor
	(Sensor type: Capacitance type
	Detection method: Horizontal uniaxial)
	2) measuring range: 0.05～2m/s² (5～200gal)
	3) Frequency band: 0～100Hz
Power supply	DC12V (supply from converter)
Environmental condition	-20℃–+50℃(non-freezing)
Structure	water-proof・Edust-proof construction (IP65)
Dimension	149W×85H×106Dmm (not including projection)
Weight	2.0kg or less

Converter

Model	TSV-01C
Function	1) Frequency characteristic: Low-pass filter (Choose from 10 or 50 or 100Hz) DC component cut filter (1Hz)
	2) Measuring range : 0.05–2m/s² (5–200gal)
	3) Alarm setting (Level): Acceleration level (5 steps)
	4) Alarm setting (Duration time) : 1–10 sec
	5) Condition of alarm output: Alarm setting (Level) and Alarm setting (Duration time)
	6) Contact output: Alarm contact 5 points ×2CH Parity or Alarm contact (OR) 1 point×2CH Abnormal voltage 1 point×2CH Start pulse 1 point×2CH
	7) Contact output form:Non-voltage A contact (Photo MOS relay output) Max. 200V (AC/DC) 200mA
	8) Analog output: ±5V 1CH
	9) Event log recording: Max 500 recording (LCD)
Power supply	DC12V (10.5–16.5V)
Environmental condition	Ambient temperature: -10℃–+50℃(not including LCD) Ambient humidity: 30%–90%(non condensing)
Structure	Outdoor, wall-mounted type (Protection code IP65)
Dimension	200W×300H×165Dmm (not including projection portion as mounting bracket, etc.)
Weight	3.0kg or less

※*Information in this document is subject to change without notice*

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