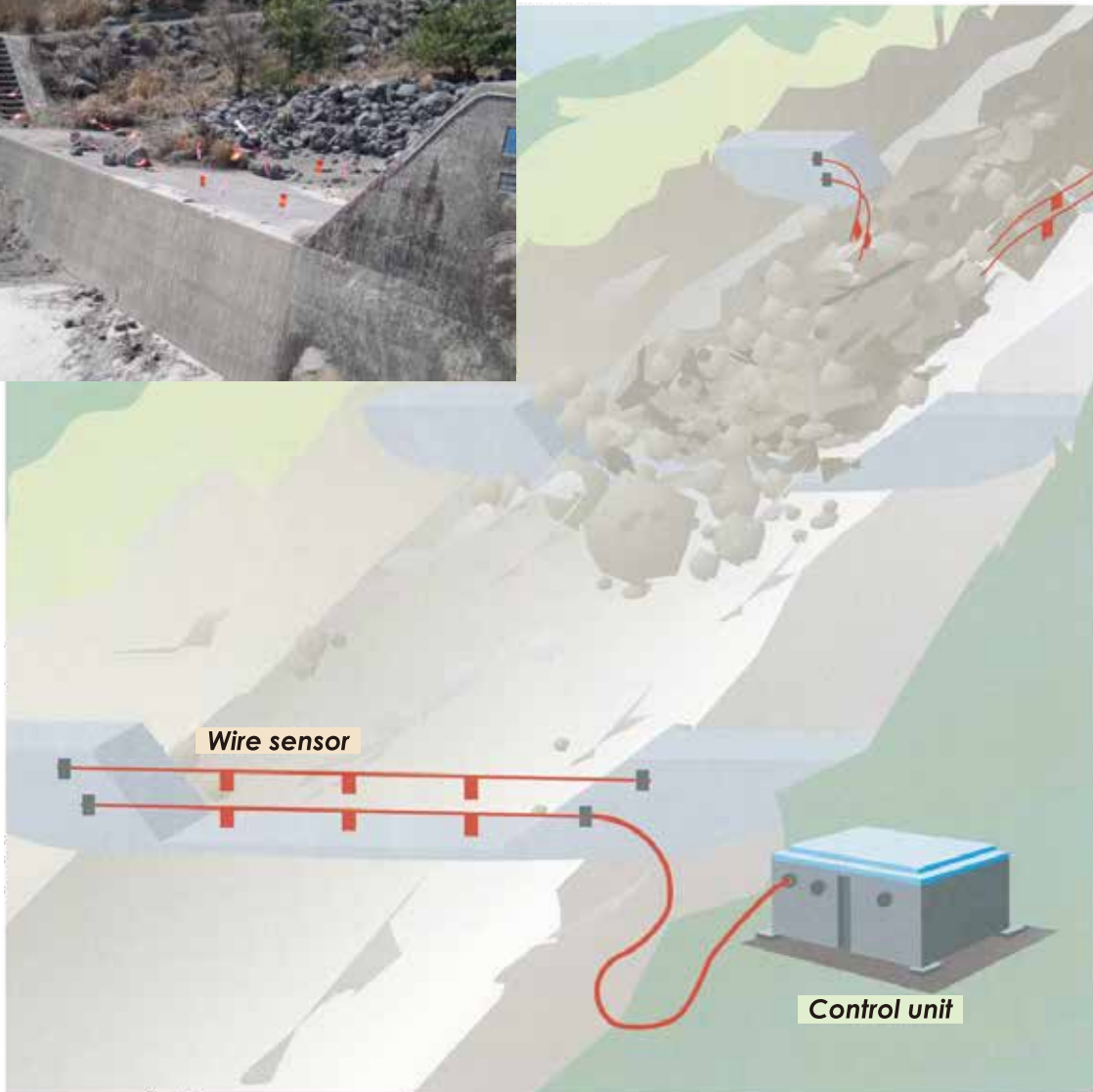
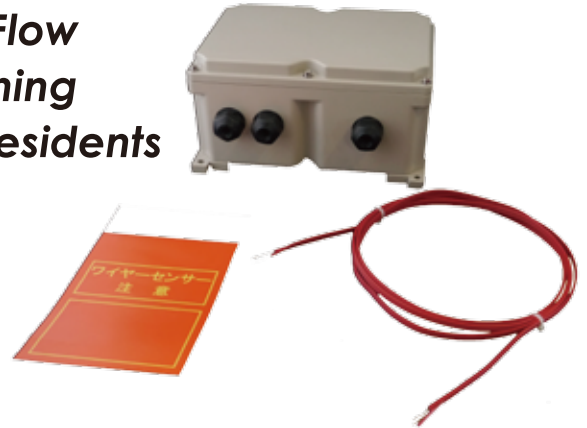


**GWD TYPE**

# Wire Sensor for Debris Flow Detection

- **Direct and Secure Detection of Debris Flow**
- **Detected Signal can be Output to Warning Device for Evacuation of Downstream Residents**
- **Simple Structure and High Durability**
- **Easy Installation and Maintenance**



## Summary

In recent years, debris flow disaster is occurred frequently by heavy rain, large earthquake, volcanic eruption and etc. in various regions. Debris flow is made from mixed soil, stones, water and woods, and its speed is 3m ~20m/s (approx. 80km/h).

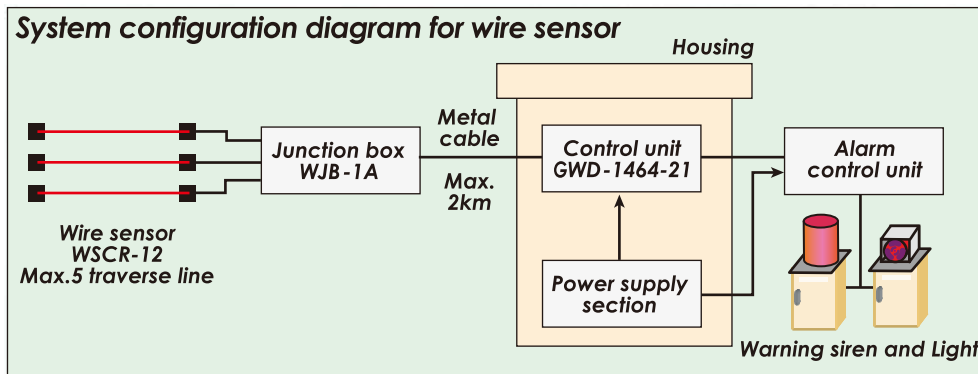
It is important to detect the occurrences of debris flow as quickly as possible to escape disaster safely and quickly.

Consequently, this sensor is installed in the area where is expected occurrence of debris flows such as mountain streams, and it can use for caution and evacuation by telling about sirens and revolving lights, simultaneously with occurrence (detection).

## Directions

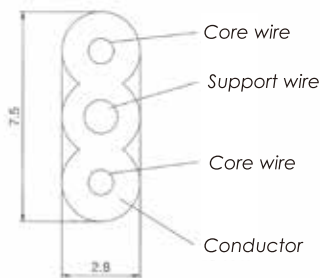
Stretch the wire sensor as across the mountain stream. Cut when debris flow passes through the wires, and perform detection of occurrences. Due to stretch some wires (Max. 5 lines) in the direction of river beds, it can measure the height of debris flow.

In addition, it is also possible to put out an alert to the site or the local residents by use of the Debris flow detection alarm device.

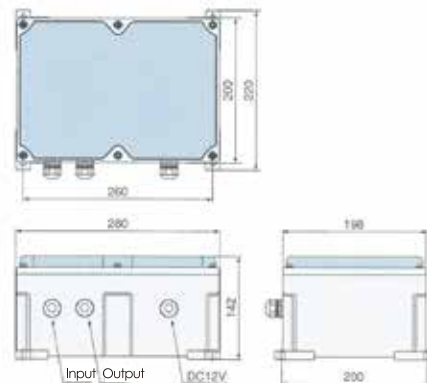


Sample : Warning siren and Light

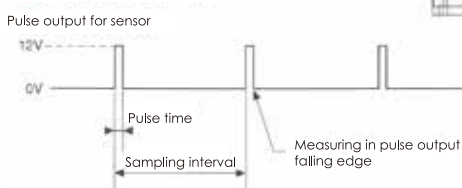
### Structure drawing : Wire sensor



### Outline drawing : Control unit



### Timing chart



Pulse time can make a choice from set-up 0.25msec, 0.5msec, 1msec, 2msec.  
Sampling interval can also make a choice from set-up 100msec, 200msec, 400msec, 800msec.

### Specification : Wire sensor

- Model : WSCR-12
- Component : Core wire x 2c, support wire x 1c
- Core wire : a) Material JIS C3102 (annealed copper wire for electric)
  - b) Diameter 0.9mm
  - c) Conductor resistance  $\leq 29.2\Omega/\text{km}$
  - d) Tension strength  $\leq 28\text{kg}/\text{mm}^2$
  - e) Elongation 20% and above
- Support wire : a) Material galvanized Coated Steel Wire
  - b) Diameter 1.2 mm
  - c) Tension strength  $\leq 141\text{kg}/\text{mm}^2$
- Conductor : a) Material Polyethylene (Red)
  - b) Thickness 0.95mm
- Dimension : 7.5W x 2.8D mm
- Weight : Approx 35kg/km

### Specification : Control unit

- Model : GWD-1464-21
- Input : Wire sensor : 5 ch
- Output : Data signal : 5 ch
- Parity signal : 1 ch
- Start signal : 1 ch
- Voltage reduction : 1 ch
- Function : Input signal check
- Monitor display (LED) for output signal check
- Anti-chattering function
- Power supply : DC12V (10.5-16.0V)
- Dimension : 280W x 220H x 142Dmm
- Weight : Approx. 2.5kg

※Information in this document is subject to change without notice



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