

# VIBRATION TYPE LEVEL SWITCH

## Model **KVX/XV2**

Highly sensitive & compact vibration level switch meeting demanding processes as well as hard requirements.

Detecting low density powder;  
Standard type detects the materials of specific gravity over 0.1.  
Optionally, over 0.03 is possible.



Reliably detect any materials whose dielectric constant or electrical properties may vary. Because the sensitivity is at the tip of the sensing plate, it may not be affected by adhesion or build-up at the plate-root. With the development of new mechanism and new circuitry, sensitivity and reliability has significantly upgraded.

Applicable to powder whose detection is difficult due to the low specific gravity, and yet it is user-friendly.

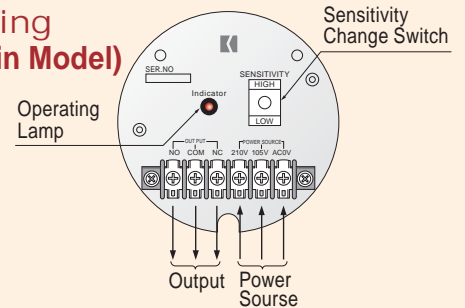


## K VX Series

### ■ Features

- Well suited to detection of low density powder that other instruments can not measure.
- Applicable to an object whose conductivity or specific gravity varies.
- Simple operation without complex sensitivity adjustment.
- Easy maintenance with few driving parts.
- Pressure resistant with no sealing part.
- Highly sensitive to detect fine and light powders. (Specific gravity : more than 0.1) (Specific gravity : 0.03, available as option)
- Applicable to liquids.
- Separate amplifier is available for vibration application.
- With operating lamp.
- 2 types of L dimension = 180mm, 250mm

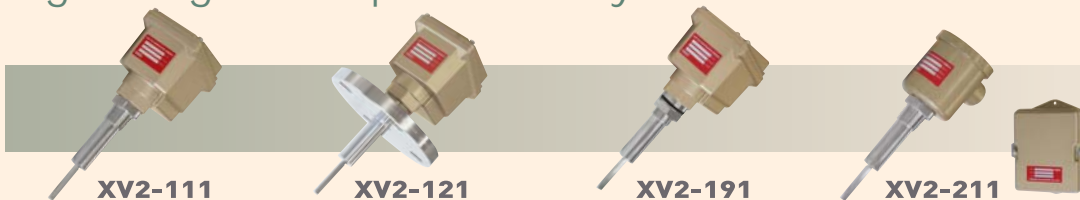
### ■ Wiring (Built-in Model)



### Principle of Operation

The detection rod vibrates by the piezoelectricity. When the material to be measured touches the rod, the vibration will attenuate. The attenuation will be transmitted to relay output.

Lightweight/Compact/Quality Level Switch!!

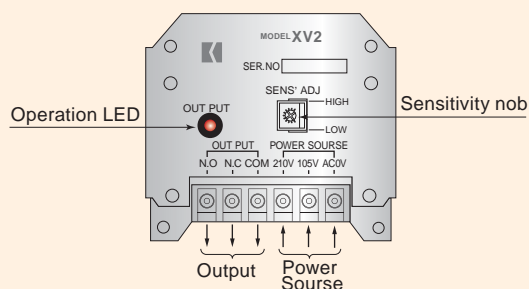


## XV2 Series

### ■ Features

Compact and lightweight while having the same performance as KVX series. It is suitable for the application where a very small level switch is required.

### ■ Wiring (Built-in Model)



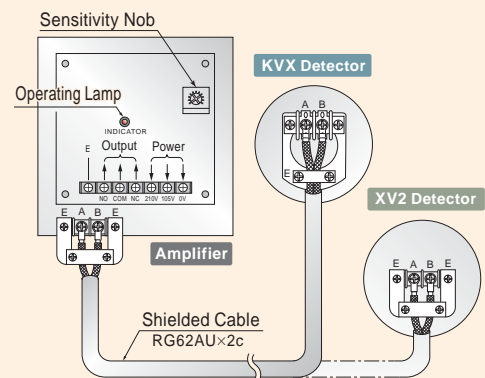
| KVX<br>Standard Model<br>&<br>Specification |  |                         |         |           |                  |                         |
|---|--|-------------------------|---------|-----------|------------------|-------------------------|
|   | Model  | KVX-111                 | KVX-211 | KVX-112   | KVX-121          | KVX-122                 |
| Installation                                | R1   | R1                      | R1      | JIS10K50A | JIS10K50A        | JIS10K50A               |
| Conduit                                     | G 3/4  | G 1/2                   | G 3/4   |           | G 1/2            |                         |
| Sensitivity                                 | Specific Gravity over 0.1 ( over 0.03 as option)                     |                         |         |           |                  |                         |
| Sens. Adjustment                            | 2 sensitivity Levels ( Switchable H & L *L level at factory setting) |                         |         |           |                  |                         |
| Contact Capacity                            | 250VAC 10A (30VDC 10A)   |                         |         |           |                  |                         |
| Power Source                                | 105 / 210VAC ±10% ( 24VDC as option )                                |                         |         |           |                  |                         |
| Consumption                                 | 4VA  |                         |         |           |                  |                         |
| Pressure (Probe)                            | 1MPa   |                         |         |           |                  |                         |
| Temperature (Probe)                         | -20°C to +80°C ( No condensation )                                   |                         |         |           |                  |                         |
| Temperature (Amplifier)                     | -20°C to +60°C ( No condensation )                                   |                         |         |           |                  |                         |
| Rod Material                                | SUS304 ( SUS316L as option)  |                         |         |           |                  |                         |
| Housing Material                            | ADC  |                         |         |           |                  |                         |
| Cable Length                                | —  | 4m (10m:option)*Inquiry | —       | —         | —                | 4m (10m:option)*Inquiry |
| Enclosure Rating                            | IP-67  | IP-67 equivalent        | IP-67   |           | IP-67 equivalent |                         |
| Angle Rod                                   | Available ( KVX-□□□-3 )  |                         |         |           |                  |                         |
| Sensitivity Volume                          | Available ( Optional )   |                         |         |           |                  |                         |
| Fouling Protection                          | Available ( Optional )   |                         |         |           |                  |                         |
| Detect sediments in water                   | Available ( depending on condition )                                 |                         |         |           |                  |                         |
| Weight                                      | 1.4Kg  | 1.0Kg                   | 1.5Kg   | 3.6Kg     | 3.7Kg            | 3.2Kg                   |

\*Note: Flange and Ferrule are not weldable.

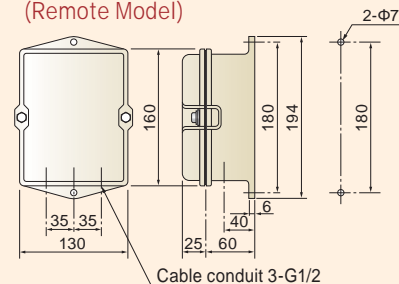
| XV2<br>Standard Model<br>&<br>Specification |  |         |                       |                 |
|---|--|---------|-----------------------|-----------------|
|   | Model  | XV2-111 | XV2-191               | XV2-121         |
| Installation                                | R 3/4  | G 3/4B  | JIS10K50A             | R 3/4           |
| Conduit                                     | G 1/2  |         |                       |                 |
| Sensitivity                                 | Specific Gravity over 0.1 ( over 0.03 as option )            |         |                       |                 |
| Sensitivity setting                         | Nob setting ( Switchable H & L *L level at factory setting ) |         |                       |                 |
| Contact Capacity                            | 250V AC 5A (30V DC 5A)                                       |         | 250VAC 10A (DC30V10A) |                 |
| Power Source                                | 105V/210V AC ±10% (24V DC as option)                         |         | 105V/210V AC ±10%     |                 |
| Consumption                                 | 4VA  |         |                       |                 |
| Pressure (Probe)                            | 1MPa   |         |                       |                 |
| Temperature (Probe)                         | -20°C to +80°C ( No condensation)                            |         |                       |                 |
| Temperature (Amplifier)                     | -20°C to +50°C ( No condensation)                            |         |                       |                 |
| Rod Material                                | SUS304( SUS316L as option)                                   |         |                       |                 |
| Housing Material                            | ADC  |         |                       |                 |
| Cable Length                                | —  | —       | —                     | 4m              |
| Enclosure Rating                            | IP-67 equivalent   |         |                       | IP55 equivalent |
| Angle Rod                                   | Available ( XV2-□□□-3 )                                      |         |                       |                 |
| Fouling Protection                          | Not available  |         |                       |                 |
| Detect sediments in water                   | Not available  |         |                       |                 |
| Weight                                      | 1.0Kg  |         | 0.8Kg                 |                 |

\*Note: Flange and Ferrule are not weldable.

### KVX/XV2 Wiring (Remote Model)

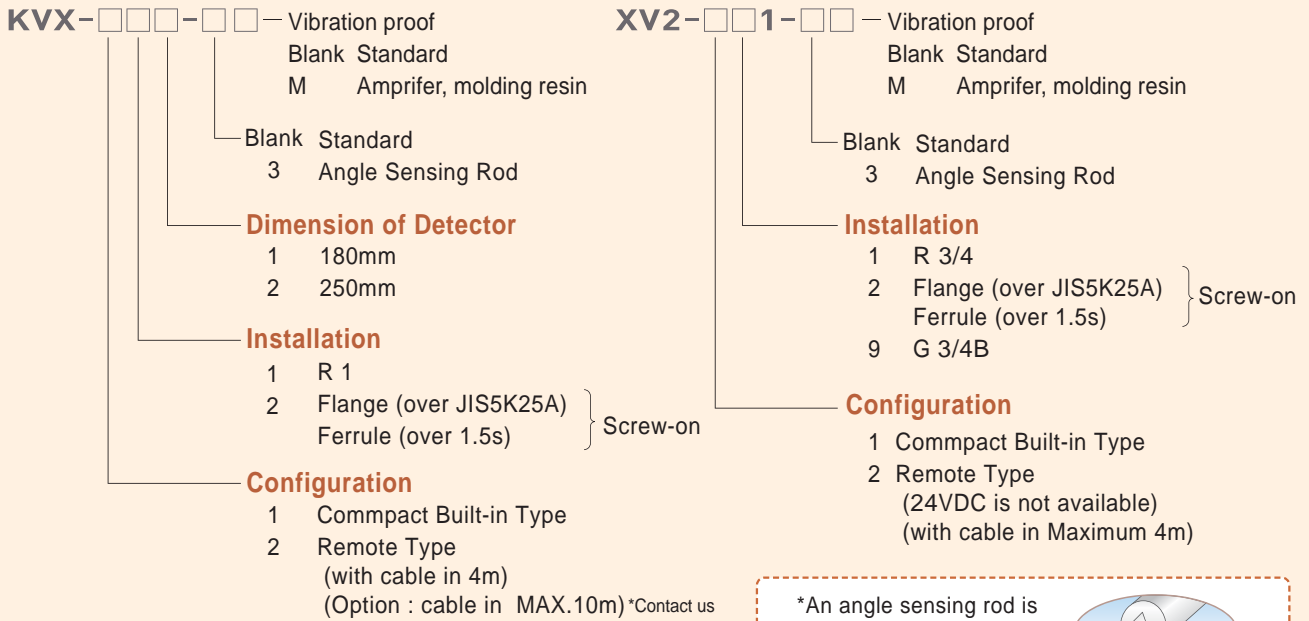


### KVX/XV2 Outdoor Wall Mounting (Remote Model)

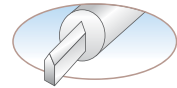


Color : Hammer-net gold  
Weight : 1.7kg

## Type Designation



\*An angle sensing rod is preferable for accumulating powder



### ●Notes for Installation

In case of horizontal mounting, make the cable conduit directly downward in both Flange and Screw mounting Types. An arrow on a hexagonal nut between the housing and the screw shows the mounting direction (KVX only). Make this arrow up on the hexagonal nut, while the conduit should face directly underneath. When screwing, so as to the correct direction, adjust the finishing angle with increasing or decreasing a thickness of sealant tape. When screwing, you should make the last angle adjustment within a 360 degree roll in rolling the seal tape up or down.

Apply an effective sealing material on the screw when you fix it. The detection rod must be completely protruded inside the tank. Do not rotate the level switch with housing but with the hexagonal nut by spanner or wrench when you screw in the instrument.

### Line of business

- Rotary Paddle Type Level Switch
- Vibration Type Level Switch
- Swing Type Level Switch
- Acoustic Level Switch
- Capacitance Type Level Switch
- Capacitive Proximity Sensor
- Capacitance Type Level Indicator
- Diaphragm Type Level Switch
- Tilt Switch
- Leak Type Level Switch
- Microwave Switch
- Sounding Bob Type Level Indicator
- Flow Switch
- Conductance Type Level Switch
- Float Switch
- Float Type Level Indicator
- Ultrasonic Type Level Indicator
- Equipments For Conveyor Lines
- Dust Monitor System
- Zirconia Oxygen Analyzer
- Laser Type Level Indicator
- RADAR Type Level Indicator
- Ultrasonic Flow meter

General Manufacturer of Level Controllers for Powder, Granules, and Liquid

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official site



\*Please be sure to read USER'S GUIDE, Installation & Operation Instructions before using the instrument.

\*The specifications herein may be subject to change without advance notice.

Agent