

VIBRATION TYPE
LEVEL SWITCH
KVK/KVA/KVF
SERIES



**RELIABLY DETECT ANY MATERIALS WHOSE SPECIFIC
CONDUCTIVITY OR ELECTRICAL PROPERTIES MAY BE VARIED!!**

VIBRATION TYPE LEVEL SWITCH

Its capability of contamination resistance has remarkably been upgraded in such a way that, because vibrating forks are now replaced with a straight rod, the surface area is changed to smaller. This model is so unique that it may detect the low-density powders over the specific gravity of 0.03.



Model KVK



HIGHLY SENSITIVE TO DETECT POWDERS OVER 0.03 SPECIFIC GRAVITY

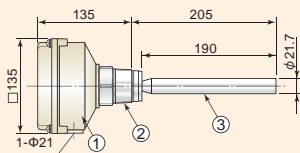
- KVK is a High Sensitivity Type detecting low-density powders (over 0.03 Specific Gravity)
- In the pursuit of turning-fork vibration accuracy, it becomes contamination-resistant.

STANDARD SPECIFICATION

- Power Source : 105/210VAC ±10% 50/60Hz
- Sensitivity : over 0.03 Specific Gravity
- Frequency : about 165Hz
- Output contact : SPDT 250VAC 5A
30VDC 5A(Resistance load)
- Delay timer : about 10sec max. variable
- Amplifier temperature : -20~+60°C
(No condensation/no freezing)
- Probe temperature : -20~+80°C
(No condensation/no freezing)
-20~+150°C(Separate type)
- Detector pressure : 980kPa
- Detector material : SUS304
- Mounting : R1-1/2 or flange over 50A

*DC Power (Option)
[24VDC±1V, Ripple (p-p) below 1%, negative earth]

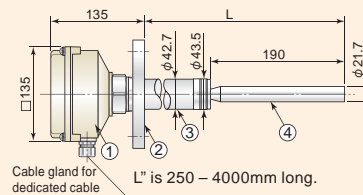
KVK-□11



KVK Standard

No.	Part	Material
1	Case	ADC
2	Screw	SUS304
3	Rod	SUS304

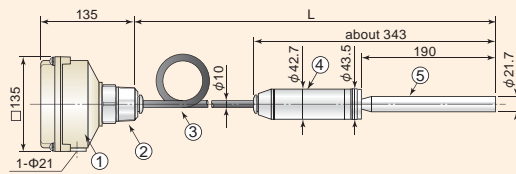
KVK-□3□



Accommodate any length

No.	Part	Material
1	Case	ADC
2	Flange	SUS304
3	Protective-tube	SUS304
4	Rod	SUS304

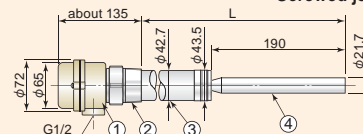
KVK-□7□



Vertical mounting for Upper - limit detection
"L" is 6000mm long(max).

No.	Part	Material	No.	Part	Material
1	Case	ADC	4	Prot-tube	SUS304
2	Screw	SUS304	5	Rod	SUS304
3	Cable	Polyurethane			

Compact & Separate Model KVK-36□ Extension Protective-tube · Screwed joint Type

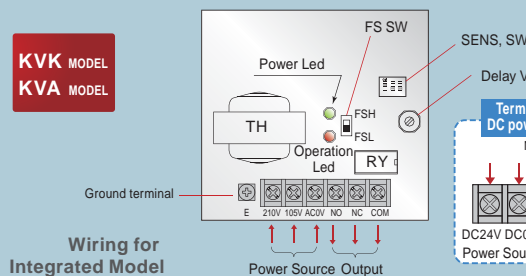


Accommodate any length

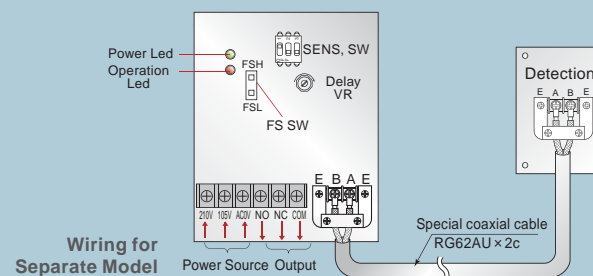
No.	Part	Material
1	Case	ADC
2	Screw	SUS304
3	Protective-tube	SUS304
4	Rod	SUS304

Use a socket of G1 1/2 screw (40A) for mounting on a tank-side.
"L" is 250 - 4000mm long.

KVK MODEL
KVA MODEL



Wiring for Integrated Model



Wiring for Separate Model



FEATURES

- It can detect the substance having the physical variations of such as dielectric constant and moisture percentage.
- It consists of a single detection probe and is uniformly structured of stainless steel, which provide the following features; Low Contamination & Withstand High Pressure.
- It is so highly sensitive that it may detect the substance having over the specific gravity of 0.03.

PRINCIPLE OF OPERATION

When a substance touches on the rod vibrating at an inherent frequency due to vibration device, the amplitude of the rod is reduced, which is electrically detected to be relay-output.

Model KVA



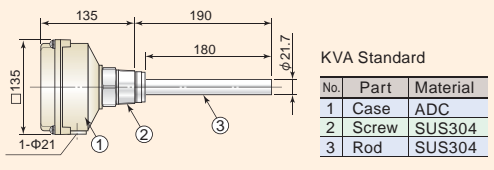
WITHSTAND LOAD TYPE THAT CAN WITHSTAND THE LOAD UP TO 500N BY POWDERS

- Withstand load Type that can withstand the 500N load by powders
- It can come up with the stable vibration of turning fork without changing the outer diameter of the vibrating rod.
- It can detect powders over 0.1 in the specific gravity.

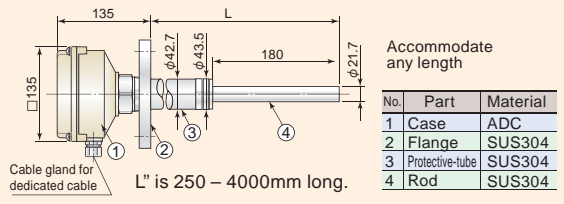
STANDARD SPECIFICATION

- Power Source : 105/210VAC ±10% 50/60Hz
- Sensitivity : over 0.1 Specific Gravity
- Frequency : about 280Hz
- Output contact : SPDT 250VAC 5A
30VDC 5A(Resistance load)
- Delay timer : about 10sec max. variable
- Amplifier temperature : -20~+60°C
- temperature (No condensation/no freezing)
- Probe temperature : -20~+80°C
(No condensation/no freezing)
-20~+150°C(Separate type)
- Detector pressure : 980kPa
- Detector material : SUS304
- Mounting : R1 · 1/2 or flange over 50A
- Withstand load : 500N
- *DC Power(Optional)
[24VDC±1V, Ripple (p-p) below 1%, negative earth]

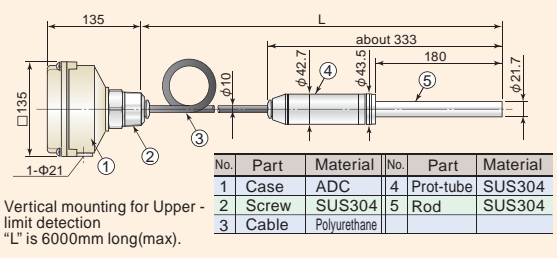
KVA-□11 Screwed joint Type



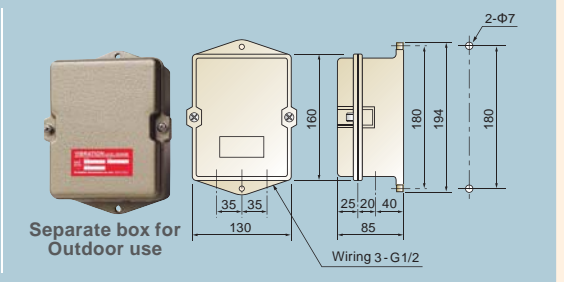
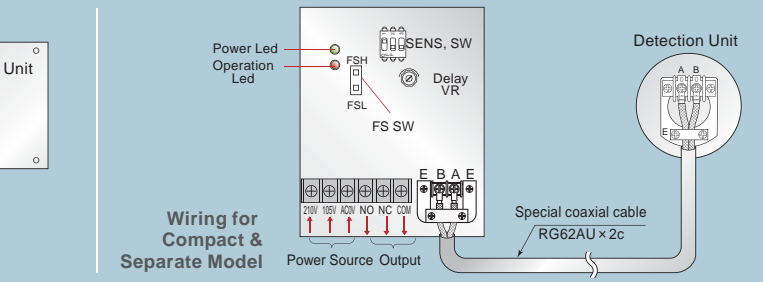
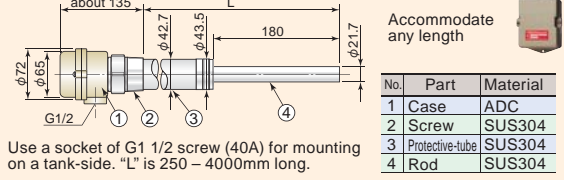
KVA-□3 Extension Protective-tube · Flange Type



KVA-□7 Flexible-cable, Screwed joint Type



Compact & Separate Model KVA-36 Extension Protective-tube · Screwed joint Type

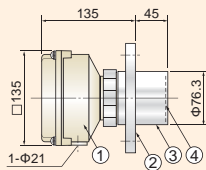




PRINCIPLE OF OPERATION

A built-in electromagnet vibrates a diaphragm and has it touch on an object to be measured, thus reducing the vibration amplitude, which is electrically detected and is relay-output.

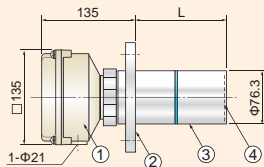
KVF-121 Flat Type



Standard KVF model for lower limit

No.	Part	Material
1	Case	ADC
2	Flange	304SS
3	Protective-tube	304SS
4	Oscillatory board	304SS

KVF-132 Extension Protective-tube · Flat Type



Can accommodate a certain limit of length.

No.	Part	Material
1	Case	ADC
2	Flange	304SS
3	Protective-tube	304SS
4	Oscillatory board	304SS

STANDARD SPECIFICATION

- Power Source** : 105/210VAC ±10%
- Sensitivity** : Specific Gravity over 0.3
- Frequency** : about 500Hz
- Output contact** : SPDT 250VAC 10A (Resistance load)
- Delay timer** : about 10 sec. max. variable
- AMP temperature** : -20~+60°C (No condensation/ no freezing)
- Detector temperature** : -20~+80°C (No condensation/ no freezing)
- Detector pressure** : 49KPa
- Detector material** : SUS304
- Mounting** : Flange over JIS5K65A

DESIGNATION OF MODEL

KVK-□□□□ — **Vibration - proof**
 Blank : standard
 M : Amprifer, molding resin

Probe Length
 1 : 205mm (standard) 6 : 2001 ~ 2500mm
 2 : 250 ~ 500mm 7 : 2501 ~ 3000mm
 3 : 501 ~ 1000mm 8 : 3001 ~ 3500mm
 4 : 1001 ~ 1500mm 9 : 3501 ~ 4000mm
 5 : 1501 ~ 2000mm 0 : special

Installation Form
 1 : Screw R1-1/2 (standard)
 2 : Standard probe with flange
 3 : Extension probe with protection tube and flange
 4 : Standard probe with cover and flange
 5 : Extension probe with protection tube, cover and flange
 6 : Extension probe with screw R1-1/2
 7 : Flexible cable probe with screw
 8 : Flexible cable probe with flange
 0 : Special

Instrument Construction
 1 : Built-in construction
 2 : Remote construction
 3 : Small head remote type construction

Structure
 K : Non hazardous & standard

KVA-□□□□ — **Vibration proof**
 Blank. Standard
 M : Amprifer, molding resin

Probe Length
 1 : 190mm (standard) 6 : 2001 ~ 2500mm
 2 : 250 ~ 500mm 7 : 2501 ~ 3000mm
 3 : 501 ~ 1000mm 8 : 3001 ~ 3500mm
 4 : 1001 ~ 1500mm 9 : 3501 ~ 4000mm
 5 : 1501 ~ 2000mm 0 : special

Installation form
 1 : Screw R1-1/2 (standard)
 2 : Standard probe with flange
 3 : Extension probe with protection tube and flange
 4 : Standard probe with cover and flange
 5 : Extension probe with protection tube, cover and flange
 6 : Extension probe with screw R1-1/2
 7 : Flexible cable probe with screw
 8 : Flexible cable probe with flange
 0 : Special

Instrument construction
 1 : Built-in construction
 2 : Remote construction
 3 : Small head remote type construction

Structure
 A : Non hazardous & withstand load

KVF-□□□□ — **Vibration proof**
 Blank. Standard
 M : Amprifer, molding resin

Probe Length
 1 Standard Length (L=45mm)
 2 Extended Length (72mm ≤ L ≤ 200mm)

Installation form
 1 Standard probe with flange
 2 Extension probe with protection tube and flange

Instrument construction
 1 Built-in construction
 2 Remote construction

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

KANSAI Automation Co., Ltd.

Headquarters :
 2-14, Togano-cho, Kita-ku, Osaka 530-0056, Japan
 TEL. 81-6-6312-2071 FAX. 81-6-6314-0848
 e-mail: info@kansai-automation.co.jp



<http://www.kansai-automation.co.jp>

Tokyo Branch: 1-29-6, Hamamatsu-cho, Minato-ku, Tokyo 105-0013, Japan
 TEL. 81-3-5777-6931 FAX. 81-3-5777-6933

Nagoya Office: 3-10-17, Uchiyama, Chigusa-ku, Nagoya 464-0075, Japan
 TEL. 81-52-741-2432 FAX. 81-52-741-1588

Hiroshima Office: 13-11, Noborimachi, Naka-ku, Hiroshima 730-0016, Japan
 TEL. 81-82-222-1555 FAX. 81-82-222-1556

Kyushu Office: 1-1-21, Komemachi, Kokura Kita-ku, Kitakyushu 802-0003, Japan
 TEL. 81-93-511-4741 FAX. 81-93-511-4580

Agent

*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.