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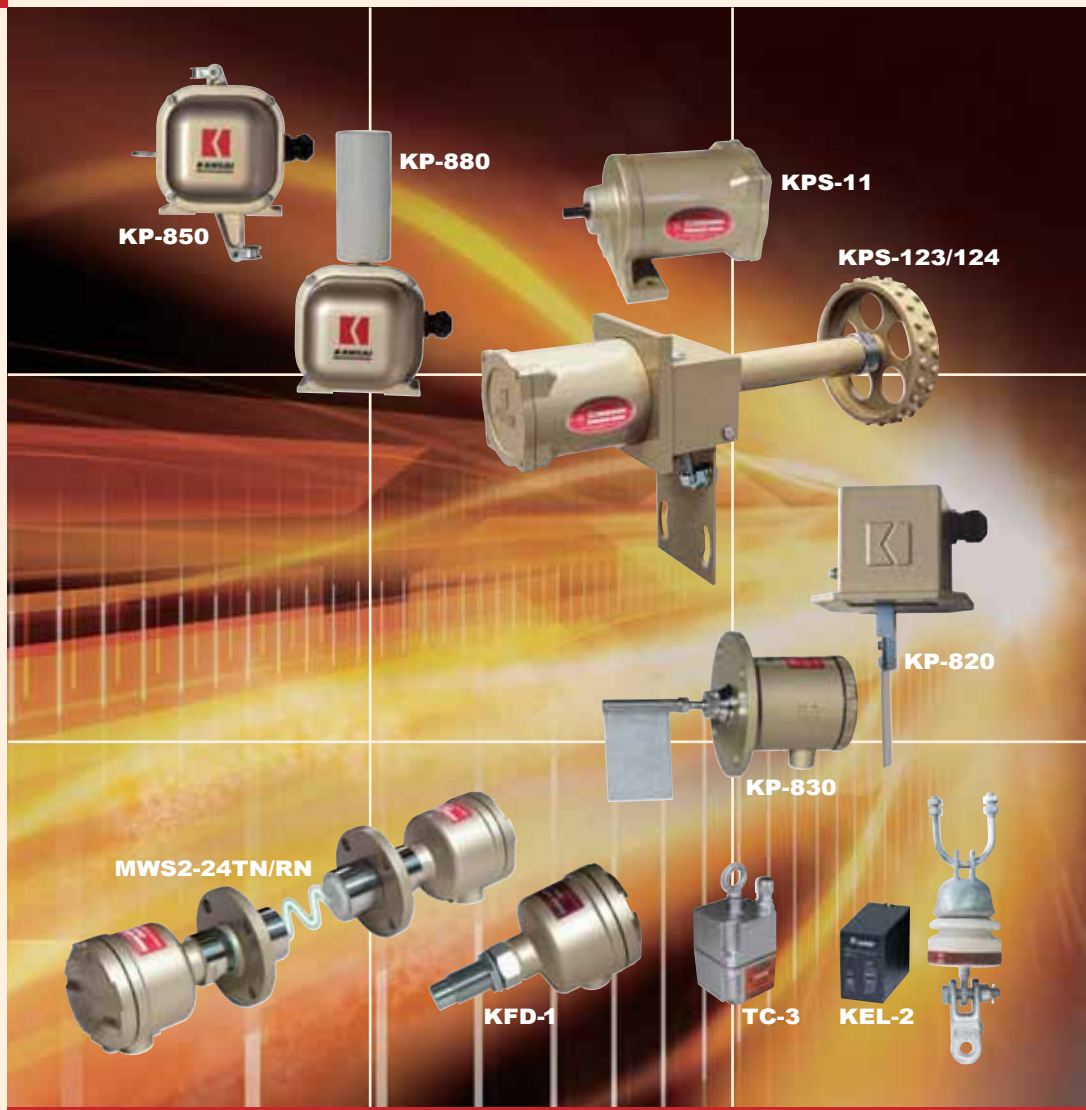
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# EQUIPMENT FOR CONVEYOR LINES

## Conveyor Peripherals



**Conveyor Peripherals KP Series;  
Wide range of Products**



detecting the belt-moving-off-to-one-side

**KP-880**



The image shows the Kansai KP-880 ultrasonic level gauge. It features a silver-colored, square-shaped main body with rounded corners. On the front face, there is a red square logo with a white stylized 'K' inside. Below the logo, the word 'KANSAI' is printed in red, and 'ULTRASONIC' is printed in smaller black letters. A black, cylindrical probe extends vertically from the top of the unit. A black adjustment knob is visible on the right side of the main body. The device is set against a background of soft, out-of-focus orange and yellow light.

- The housing main body is of aluminum casting and of light/robust build.
- It is of drip-proof structure, being IP-54 or equivalent.
- It is two-contact system to be used for both alarm and control. (250VAC, 15A)

1. A2~C2 are closed at the tilt angle of 20° (B2~C2 opened)
2. A1~C1 are closed at the tilt angle of 35° (B1~C1 opened)
3. Respective contact reversion-angle is 2- 3°
4. The above being a standard setting, you can change the operating angle

(C1)	(A1)	(B1)
(A2)	(B2)	(C2)

When a roller is tilted at over 35 degrees:

A1-C1 ON  
B1-C1 OFF

When a roller is tilted at over 20 degrees:

A2-C2 ON  
B2-C2 OFF

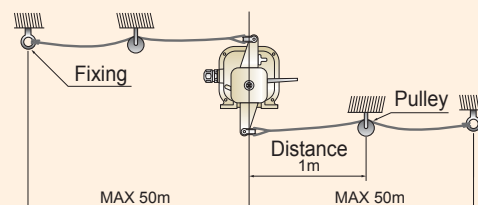
**Outline Drawing**

Technical drawing of a mechanical part, showing a side view and a top view. The side view shows a cylindrical component with a diameter of  $\Phi 60$  and a height of 140. The top view shows a circular base with a diameter of 130 and a central hole with a diameter of 110. The drawing includes various dimensions and callouts:

- Side view dimensions: 134 (total height), 30 (base thickness), 20 (flange thickness), 36 (flange diameter), 140 (cylinder height),  $\Phi 60$  (cylinder diameter).
- Top view dimensions: 130 (outer diameter), 110 (inner diameter), 70 (radius), 50 (radius), 2- $\Phi 10$  (two holes),  $G1/2$  (threaded hole).
- Callouts: 1 (cylinder), 2 (flange), 3 (top flange), 4 (top flange hole), 5 (top flange hole).
- Angles:  $35^\circ$ ,  $20^\circ$ ,  $70^\circ$ .

**MOUNTING NOTES** KP-850-1 · 860 · 870

- 
- A diagram illustrating the components of a wire fastener assembly. The assembly consists of a central wire passing through a wire fastener, which is secured by a lever. A wire clip is attached to the end of the wire. Labels with leader lines identify the following parts:
  - Lever**: The component that secures the wire fastener.
  - Wire**: The main fastening element.
  - Wire Fastener**: The component through which the wire passes.
  - Wire Clip**: The component attached to the end of the wire.



- The official gazette dated December 27, 1977, rules stipulating that, from the standpoint of laborers safety, conveyors may be quipped with Emergency Stop Device such as Emergency Pull-wire Switch. An employer must provide with a device with which the employee can stop the operation of conveyors (called as Emergency Stop Device by Article 151-82) in a possible emergency case where laborers may be exposed to some danger including a part of their body caught in conveyors.

**SPEED DETECTOR** Reliably Catching Changes of Conveyor Speed ! Preventing Motor

**Directly Connected to Shaft**  
**Reliably Monitoring Rotating Speed**

**Non-contact Type, Easy to Handle,**  
**Reliably Monitoring Rotating Speed**



■ FEATURES

- It can detect to the high accuracy with a digital control system adopted.
- You can arbitrarily set up the operating speed in the range of 3~1999rpm. Accordingly it can widely be applied.
- The response is fast, and the time lag of output signal is about 5 seconds.
- The built-in startup compensation timer makes it possible to set up the startup compensation of about 99 seconds at the maximum.

■ STANDARD SPECIFICATION

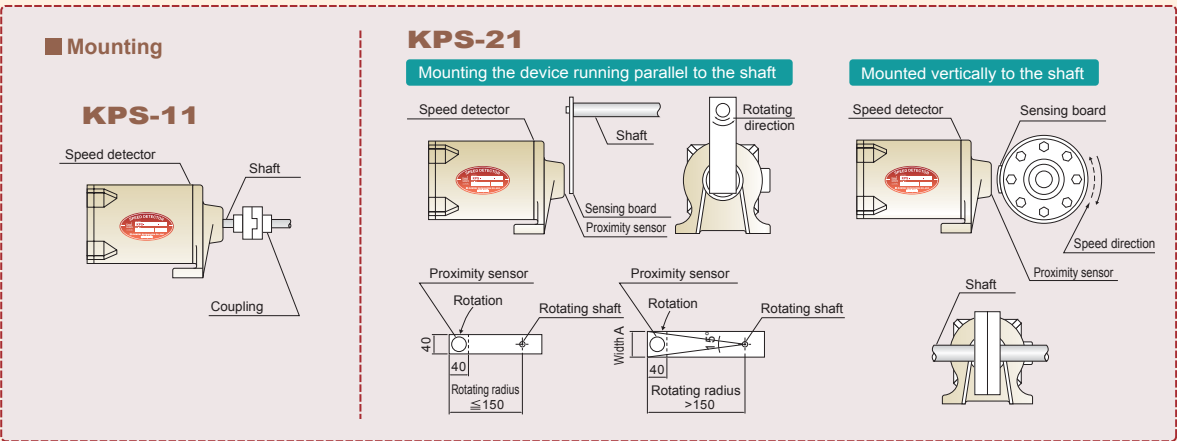
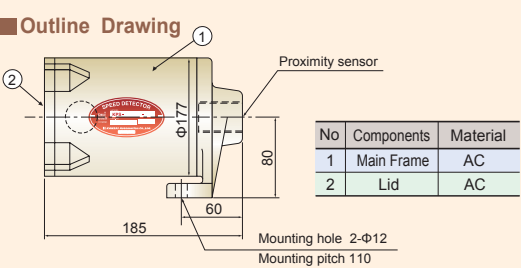
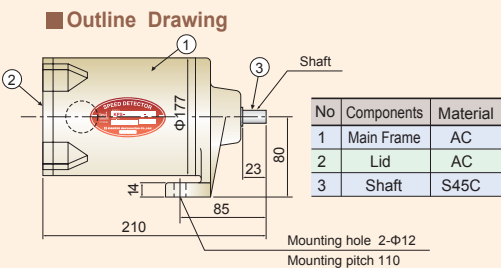
Power : 105/210VAC  $\pm 10\%$  50/60Hz  
Power Consumption : 2.5VA  
Output Contact : SPDT 250VAC 5A, 30VDC 5A  
Allowable Speed : below 2000rpm  
Setup Range : 3~1999rpm  
Measurement Error : 2rpm  
Start-up Compensation Timer : 0~99 seconds  
Instrument Allowable Temperature :  $-10^{\circ}\text{C}\sim 60^{\circ}\text{C}$ (No condensation)  
Housing : IP54 or equivalent  
Conduit Connection : G3/4

■ FEATURES

- It can detect to the high accuracy with a digital control system adopted.
- You can arbitrarily set up the operating speed in the range of 3 - 1999rpm. Accordingly it can widely be applied.
- Because a proximity sensor is used as a sensing element, it can certainly operate in the discretionary detecting-distance less than 8mm. Its operating life is longer because it, being non-contact, has no moving part.
- The built-in startup compensation timer makes it possible to set up the startup compensation of about 99 seconds at the maximum.

■ STANDARD SPECIFICATION

Power : 105/210VAC  $\pm 10\%$  50/60Hz  
Power Consumption : 2.5VA  
Output Contact : SPDT 250VAC 5A, 30VDC 5A  
Allowable Speed : below 2000rpm  
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Measurement Error : 2rpm  
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Housing : IP54 or equivalent  
Conduit Connection : G3/4



and other Components from being Damaged or Burnt out

Reliably catching Conveyor  
Performance via easy fixing



**KPS-123/124**  
(Touch-roll Type)

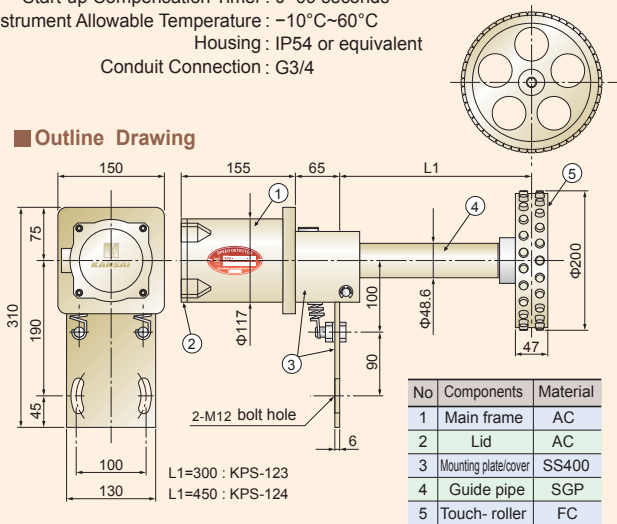
#### FEATURES

- It can detect to the high accuracy with a digital control system adopted.
- You can arbitrarily set up the operating speed in the range of 3~1999rpm. Accordingly it can widely be applied.
- The response is fast, and the time lag of output signal is about 5 seconds.
- The built-in startup compensation timer makes it possible to set up the startup compensation of about 99 seconds at the maximum.
- Detecting the belt speed in having the roller directly contact the belt, it can accurately catch the changes of its speed.

#### STANDARD SPECIFICATION

Instrument Power : 105VAC/210VAC  $\pm$ 10% 50/60Hz  
Power Consumption : 2.5VA  
Output Contact : SPDT 250VAC 5A, 30VDC 5A  
Allowable Speed : below 2000rpm  
Setup Range : 3~1999rpm  
Measurement Error : 2rpm  
Start-up Compensation Timer : 0~99 seconds  
Instrument Allowable Temperature : -10°C~60°C  
Housing : IP54 or equivalent  
Conduit Connection : G3/4

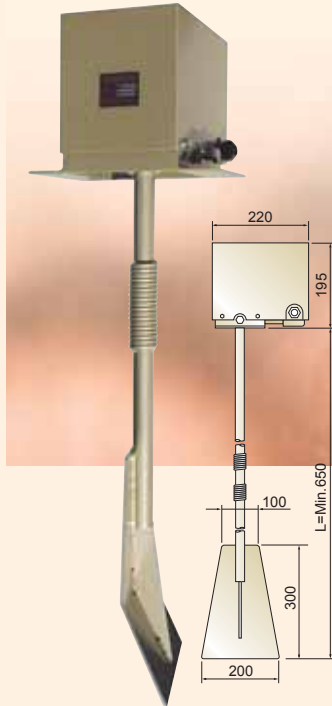
#### Outline Drawing



# **FLOW SWITCH/SENSOR** Flow detection for Powder / Granules / Lump !

## **LUMP FLOW / UPPER LIMIT DETECTION**

### **KP-810**

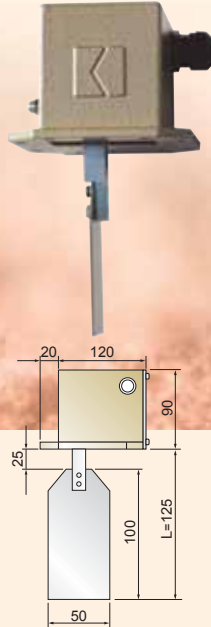


- Good for flow/level detection at the places requiring robustness, including but not limited to coal, crushed rock and mineral ore.
- Protected by a spring, the shaft is structurally robust to overload.
- Two contacts of Contact Capacity 250VAC 10A
- Standard Operating Angle about 10°, 15°
- Housing rating IPX3 or equivalent

Cover	SPCC
Terminal Box	SPCC
Mounting Platform	SS400
Stopper	SS400
Torque Adjusting Spring	SWP
Sensing Plate	SPCC
Cable Gland	Adaptable Cable Φ7~Φ12

## **FLOW DETECTION ON CONVEYOR**

### **KP-820**



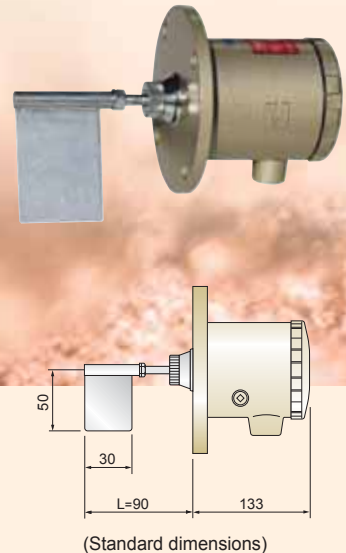
(Standard dimensions)

- Good for flow detection on conveyor.
- Torque adjusting being at your complete discretion, it can be used for low density as well.
- The materials of sensing plate(SS, Rubber, SUS) can arbitrarily be selected.
- Contact Capacity 250VAC 5A
- Standard Operating Angle about 15°
- Housing rating IP43 or equivalent

Body	AC
Cover	SPCVC
Spindle Rod	SS400
Sensing Plate	304SS
Cable Gland	Adaptable Cable Φ7~Φ12

## **FLOW DETECTION IN TILTED CHUTE**

### **KP-830**



(Standard dimensions)

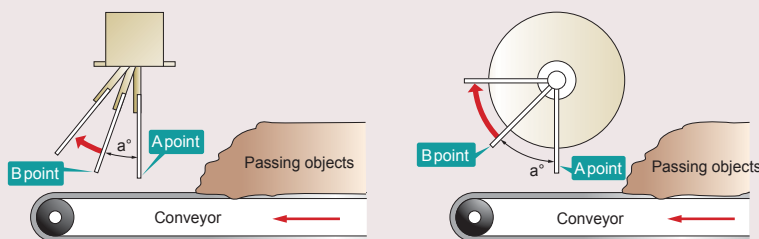
- Good for detection of falling objects inside a tilted chute.
- It can also be used to detect flow inside a pipe.
- Contact Capacity 250VAC 5A
- Flange 5K65A JIS or equivalent
- Standard Operating Angle about 20°
- L dimensions can arbitrarily be selected.
- Housing rating IP55 or equivalent

Paddle	304SS
Shaft	304SS
Seal Coupling	C3604
Housing/Flange	AC
Cable Gland	G 1/2
Torque Adjusting Hole	3/8 plug

\*Please specify the operating direction.

Install the sensing plate so that it may feel products that are being carried on a conveyor or that are being run out through the chute exit., and it will detect the presence of passing products. You can change the torque and sensing angle depending on their nature. (except KP-4 and KPG-840)

### **KP-810, KP-820, KP-4, KPG-840, KP-830**



A: Blind zone B: Detection point a°: Sensing angle

As illustrated on the left, the sensing plate is at A-point when there is no passing object on a conveyor.

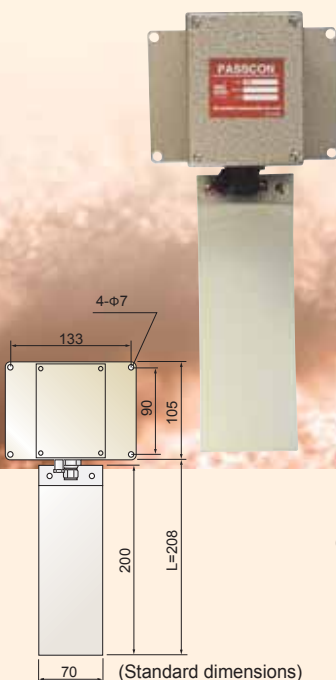
With a passing object drawing near, a signal turns on when the sensing plate comes to B-point .

When the passing object is gone, the sensing plate returns to A-point in consequence of the internal reversion spring and the tare of the sensing plate, and the signal turns off

\*The operating angle(a°)of the sensing plate is set to the standard value upon factory shipment

## FLOW DETECTION ON CONVEYOR

### KP-4

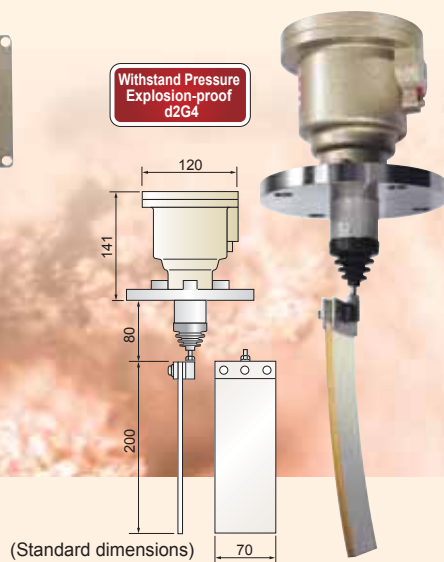


- Specially made for flow detection on conveyor.
- Simplified Dusttight Type
- Sensing Plate of urethane rubber is only available.
- Contact Capacity 250VAC 10A
- Wall-mounted only Type
- Operating Angle about 5°(fixed)
- Housing rating IP43 or equivalent.

Sensing plate	Urethane Rubber
Case cover	SPCC
Cable gland	Adaptable cable $\Phi 6\sim\Phi 12$
Lever	SS400
Spindle	SPCC

## d2G4 Flame-proof EXPLOSION-PROOF

### KPG-840

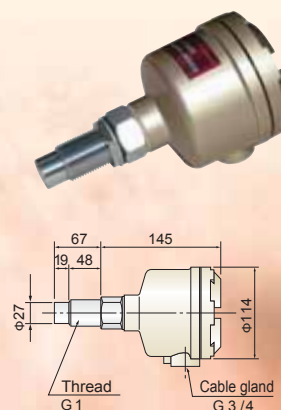


- Being of the structure of Flame-proof Explosion-proof, it can be used in the hazardous areas where flammable dust due to coal and so on comes into being or flammable gas exists.
- The switch part and sensing part being are completely by separated magnet coupling system Seal bellow assure a correct performance without being affected by dust and so on.
- The sensing plate is made of urethane rubber that is abrasion-resistant.
- Flange JIS5K65A
- Contact Capacity 250VAC 5A
- Operating Angle 15°(Fixed)
- Housing rating IP55 or equivalent

Case	AC
Cable gland	G 1/2
Mounting flange	SUS304
Seal bellows	NBR
Sensing plate	Urethane rubber
NIIS	No. 29432

## MICROWAVE TYPE FLOW SENSOR

### KFD-1



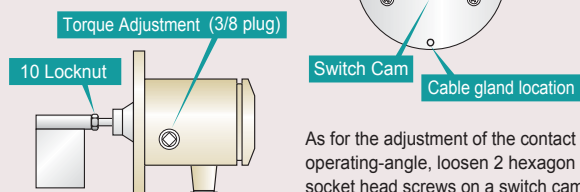
- Our unique circuit technology has been upgraded not to overlook even a grain.
- Our 24GHz technology has made it possible to sense through an intermediate barrier such as glass or synthetic resin.
- It may hardly be affected by smudges on the sensing surface or scale adhesion due to our 24GHz technology.
- It can detect flow in both small and large quantity if its sensitivity is property adjusted.

#### ■ SPECIFICATION

Supply voltage : 105/210VAC  $\pm 10\%$  50/60Hz  
Consumption : 5VA  
Sensing distance : Max. 1.5m (depend on object)  
Frequency : 24.2GHz  
Output contact : 1 $\times$ SPDT 250VAC 5A  
ON delay : Variable 10 sec at the max.  
OFF delay : Variable 10 sec at the max.  
Allowable temp :  $-10\sim+55^{\circ}\text{C}$   
Housing : IP66 or equivalent  
Allowable pressure : 490kPa

#### ■ KP-830 Torque Adjustment

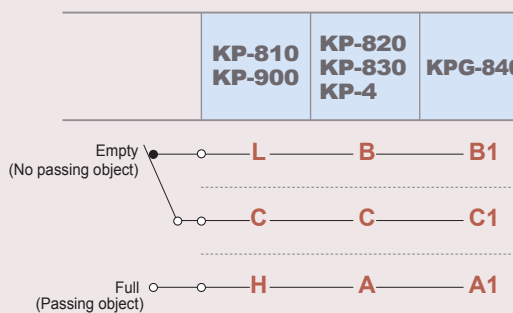
Regarding the torque adjustment, for reversion and detection, remove the 3/8 plug and turn the screw inside with a small minus screw driver.



You can adjust the position of the sensing plate by loosening the M10 lock nut.

As for the adjustment of the contact operating-angle, loosen 2 hexagon socket head screws on a switch cam and adjust the angle of the cam to tighten the 2 hexagon socket head screws again.

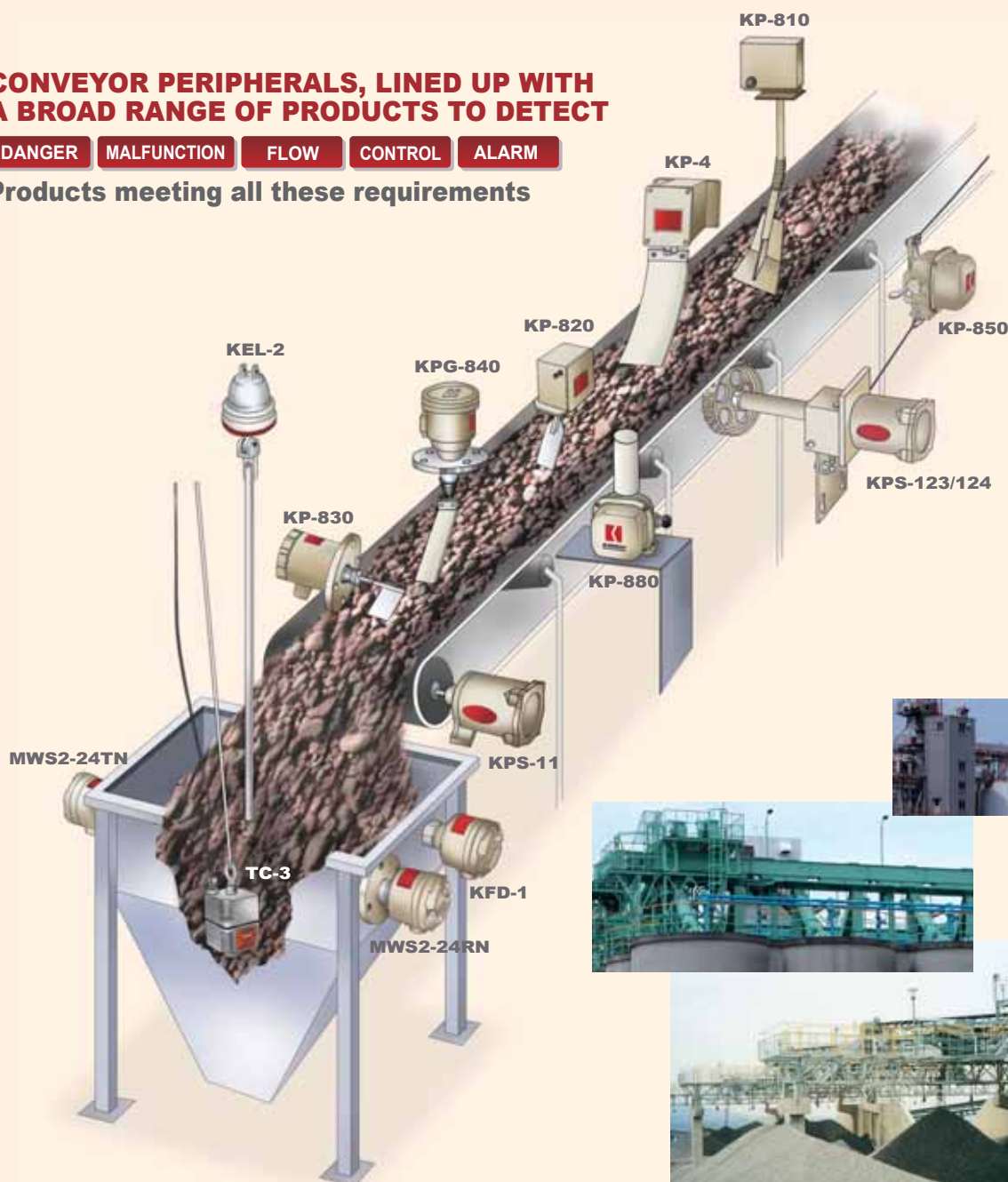
#### ■ Wiring Diagram



## CONVEYOR PERIPHERALS, LINED UP WITH A BROAD RANGE OF PRODUCTS TO DETECT

**DANGER MALFUNCTION FLOW CONTROL ALARM**

Products meeting all these requirements



### 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
- On-line Sensors for Accurate Liquid Analysis
- Ultrasonic Flow meter

\*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.

Nuclear Power Generation to Rice Milling  
All-round Manufacturer of Level Controllers for Powder, Granules and Liquid

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Design, development, and manufacture of level measuring sensors

Agent