Conveyor Peripherals EQUIPMENT FOR CONVEYOR LINES



Conveyor Peripherals KP Series; Wide range of Products

LEVEL SENSORS



CONVEYOR PERIPHERALS SWITCH

Ensuring Safety of Conveyor Lines with Reliable Operation

Emergency Pull-wire Switch Two-Direction Operation and Manual Reversion (KP-850-1 · KP-860 · KP-870)

Here are the switches to have a belt-conveyor stop. These are the best for the emergency stop

- •You can use it as a conveyor emergency-stop device because it is simply structured with the reliable operation. Tow-direction operating system
- •It is of drip-proof structure, being IP67 (*KP-860, KP-870: equivalent to IP54)
- •The pulling rope is 50m at the maximum. (Refer to the Mounting Instructions)



KP-850-1 (Standard)

Standard Specifications

Action : Manual-reset Power Source : No need Output Contact : SPDTx1 Contact Capacity : AC250V 15A DC30V 6A (Resistance load) Contact Range : C1-A1 is closed depending on the tilt of wire lever. Process Connection : 2 xФ10 Hole, Pitch 110 Enclosure Rating : IP67 Weight : KP-850-1: 2.2kg KP-850-2: 2.5kg *Optionally available is KP-850-2 having 2 contacts and being used for both Alarm and control.

Terminal C1 A1 B1

Wiring Diagram

\bigcirc C1 \rightarrow \bigcirc A1 \rightarrow B1 \rightarrow	250VAC 15A SPDT
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Figures in parentheses show ones for KP-850-2.

No.	Parts Name	Material
1	Housing	ADC
2	Cover	SPCC
3	Wire Lever	ADC
4	Wire Fastener	SPCE
5	Reversion Lever	BC
6	Cable Gland	Φ8–12indiameter

KP-860 (with Operation lamp)

Standard Specifications Action : Manual-reset Indication : Operation Lamp (Red) Power Source : 100VAC or 200VAC Output Contact : SPDTx2 *One For Operation lamp Contact Capacity : AC250V 15A DC30V 6A (Resistance load) Contact Range : Depending on the tilt of wire lever, C1-A1, C2-A2 are closed and the lamp turns on/off. Operating angle can be adjusted by the cam inside housing. Process Connection : 2 x 010 Hole, Pitch 110 Enclosure Rating : Equivalent to IP54 Weight: 2.2kg *Specify the pawer voltage (DC can be available)



Wiring Diagram





No.	Parts Name	Material
1	Housing	AC
2	Cover	SPCC
3	Wire Lever	ADC
4	Wire Fastener	SPCE
5	Reversion Lever	BC
6	Cable Gland	Φ8–12indiameter
7	Indication Lamp	Red

KP-870 (with Operation plate)

Standard Specifications Action : Manual-reset Indication : Operation plate (Red) Power Source : No need Output Contact : SPDTx2 Contact Capacity : AC250V 15A DC30V 6A (Resistance load) Contact Range : C1-A1, C2-A2 are closed and the lamp turns on/off. Operating angle can be adjusted by the cam inside housing. Process Connection : 2 x 0 10 Hole, Pitch 110 Enclosure Rating : Equivalent to IP54 Weight : 2.2kg



Wiring Diagram



No.	Parts Name	Material
1	Housing	ADC
2	Cover	SPCC
3	Wire Lever	ADC
4	Wire Fastener	SPCE
5	Reversion Lever	BC
6	Cable Gland	Φ8-12indiameter
7	Indication board	SPCC (Red)



Conveyor-belt Alarm Switch detecting the belt-moving-off-to-one-side

It can detect operational exceptions such as belt moving-off-to-one-side or meandering and protect the belt from break and prevent the conveyor line



and of light/robust build.(Weight: 3.5kg)

•It is of drip-proof structure, being IP67.

•It is two-contact system to be used for both alarm and control. AC250V 15A/DC30V 6A (Resistance load)

Contact operating angle

- 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)

A1 – C1 ON B1 – C1 OFF

A2 – C2 ON B2 – C2 OFF

- 3. Respective contact reversion-angle is 2 3°
- 4. The above being a standard setting, you can change the operating angle at the field by changing the position of the cam.

Terminal Diagram	©1)	(A1)	B1
	(A2)	(B2)	C2)

Rangs of Contact- point close



Outline Drawing 40 G1/2 2-Φ10 30 20

No.	Parts Name	Material
1	Housing	AC
2	Cover	SPCC
3	Roller	SGP
4	Roller lever	SS
5	Cable gland	Φ8 –12 in diameter

MOUNTING NOTES KP-850-1 · 860 · 870

- •Use a rope, Φ 3-6.5, of JISG3525. Actually a SUS304 rope, Φ4, is often used.
- •Fix mounting holes (2×Φ10) on the switch horizontally to the mounting surface.
- •When it comes to connecting a rope to the switch, put it on the wire clip to fix.
- •A cab tyre cable of 1.25 2sq best fits.
- •Because it is for an emergency purpose, the number of usage is extremely low. You should include the operation test into maintenance items to ensure a reliable operation in a possible emergency.







(including wire tension and weight) is 4.8 kg.



 Prepare the mounting stand to suit the conveyor dimensions.

Occupational Safety and Health Regulations Article 151-78

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 ! PreventingMotor a

Directly Connected to Shaft 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 Source : 105/210VAC ±10% 50/60Hz Power Consumption : 2.5VA Output Contact : SPDT×1 Contact Capacity : 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(No condensation) Enclosure Rating : IP54 or equivalent Cable Gland : G3/4 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.
- •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

KPS-21

(Proximity Sensor)

Power Source : 105/210VAC ±10% 50/60Hz
Power Consumption : 2.5VA
Output Contact : SPDT×1
Contact Capacity 250VAC 5A, 30VDC 5A
Allowable Speed : below 2000rpm
Setup Range : 3~1999rpm
Measurement Error : 2rpm
Start-up Compensation Timer : 0~99 seconds
nstrument Allowable Temperature : -10°C~60°C(No condensation)
Enclosure Rating : IP54 or equivalent
Cable Gland : G3/4



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nd other Components from being Damaged or Burnt out



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



Best suitable for detecting level in a chute or chute-clogging



 It houses steel ball inside, and, when the body gets upright, the steel ball centers itself on a microswitch. •When the body is tilted at

rolls off to deactivate the

contact.

microswitch and switch the

■ SPECIFICATION

Body Weight : about 1.3kg (cast aluminum) 2 or 3 wire system Output contact : SPDTx1 17° or more, the steel ball Contact Capacity : 250VAC (10A) Temperature : -10 ~+80°C (No freezing,

No condensation) Enclosure Rating : IP56

Cable Gland : 3/8B (Gland attached)



•It can be used for all products including sand as building materials, gravel, crushed rocks and so on as long as they contain some moisture. It is easy to set the sensitivity

Specification

Power Source : 105/210VAC ±10% 50/60Hz
Output contact : SPDT×1
Contact Capacity : 250VAC (5A)
Detecting Sensitivity : Max about 10MΩ~min about 30kΩ
Setting Sensitivity : 16 Steps variable between Max & Min
Ambient Temperature : 0~+50°C(No freezing,No condensation)
Indication Light : Actuation Indicating Light(light on detection)



Specification

adhesion or scale on the sensor surface.

 Adoption of the high frequency at 24GHz enables its detectability stable even under the dust environment.

Power : Transmitter 4VA consumption Receiver 5VA Frequency : 24GHz Output contact : SPDTx1 Contact Capacity : 250VAC 5A

Delay Function : ON Delay, variable about 10 sec. at the maximum Ambient Temperature : -20°C~+60°C

Power Source : 105/210 VAC ±10% 50/60Hz

Enclosure Rating : IP67 Flange : JIS5K50A(AC)



Cover	SPCC
Housing	SPCC
Mounting Platform	SS400
Stopper	SS400
Torque Adjusting Spring	SWP
Sensing Plate	SPCC
Cable Gland	Adaptable Cable Φ8~Φ12

Housing	AC
Lid	SPCVC
Spindle Rod	SS400
Sensing Plate	SUS304
Cable Gland	Adaptable Cable Φ8~Φ12

Housing/Flange	AC
Paddle	SUS304
Shaft	SUS304
Seal Coupling	C3604
Torque Adjusting Hole	3/8 plug
Cable Gland	G 1/2

*Please specify the operating direction.

Install the sensing plate so that it may feel products that are being carried on a conveyer 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)



Conveyor



Conveyor



As illustrated on the left, the sensing plate

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

A: Not-detecting point B: Detection point a°: Sensing angle





Sensing plate	Urethane Rubber
Cable gland	Adaptabie cable Ø6~Ø12

Seal bellows NBR Sensing plate Urethane rubber Cable gland G 1/2

ON delay : Adjustable 10 sec at the max. OFF delay : Adjustable 10 sec at the max.

Enclosure Rating : IP67



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.

Torque Adjustment (3/8 plug)



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



Line of business

- Rotary Paddle Type Level Switch
 Conductance 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
 · Zirconia Oxygen Analyzer
- Diaphragm Type Level Switch • Tilt Switch
- Leak Type Level Switch
- Microwave Switch
- Sounding Bob Type Level Indicator
- Flow Switch

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

KANSAI Automation Co., Ltd. Headquarters : 口袋器口 2-14, Togano-cho, Kita-ku, Osaka 530-0056, Japan Ultrasonic Type Level Indicator TEL. 81-6-6312-2071 FAX. 81-6-6314-0848 Ī • Equipments For Conveyor Lines e-mail: info@kansai-automation.co.jp UK SGS 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 RADAR Type Level Indicator 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



Instructions before using the instrument. *The specifications herein may be subject to change without advance notice

*Please be sure to read USER'S GUIDE. Installation & Operation

Float Switch

Float Type Level Indicator

• Laser Type Level Indicator

Ultrasonic Flow meter

Dust Monitor System