

SOUNDING BOB TYPE LEVEL INDICATOR **KSL SERIES**

Measuring Level Correctly & Reliably !!
Ultimate Solution for Stock Management



**With its robust housing, it has an excellent durability in harsh environments.
Applicable to many different processes!**

KSL SERIES

SOUNDING BOB TYPE LEVEL INDICATOR

Ultimate Solution for Stock Management Reliably Catching Level for Powder, Granules & Lumps

This is the general-purpose level meter having a good market share as a level meter for powder, granules and lumps stored in a tank, a silo or the like. It can be used for versatile purposes as a level meter for all sorts of powder, granules, and lumps.



KSL-T8
CPU Built-in

■ PRINCIPLE OF OPERATION

- 1 When a start signal is input, the motor starts up and then the metering tape comes out, followed by the weight descending.
- 2 When the weight touches the measuring materials, the motor stops and makes output of the measurement value.
- 3 When the motor reversely rotates to get the weight back to the roll-up-complete position, it stops.
- 4 The unit stands by awaiting the next start signal

Just push a measuring button on any tanks, and, with only this touch, you can select the tank to measure and start measuring !



KSL-DS4



KSL-MT
CPU Built-in



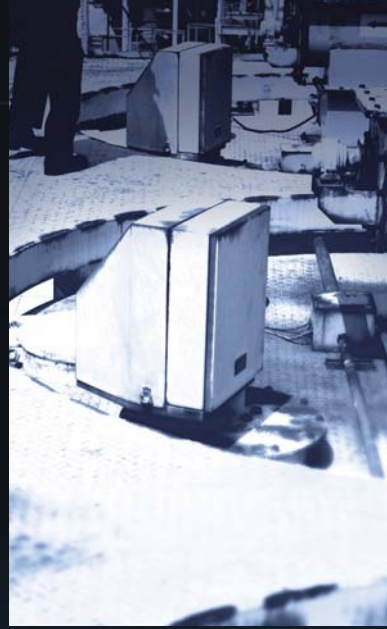
KSL-W2B
Standard



KSL-T2
Standard



KSL-W3T
Standard



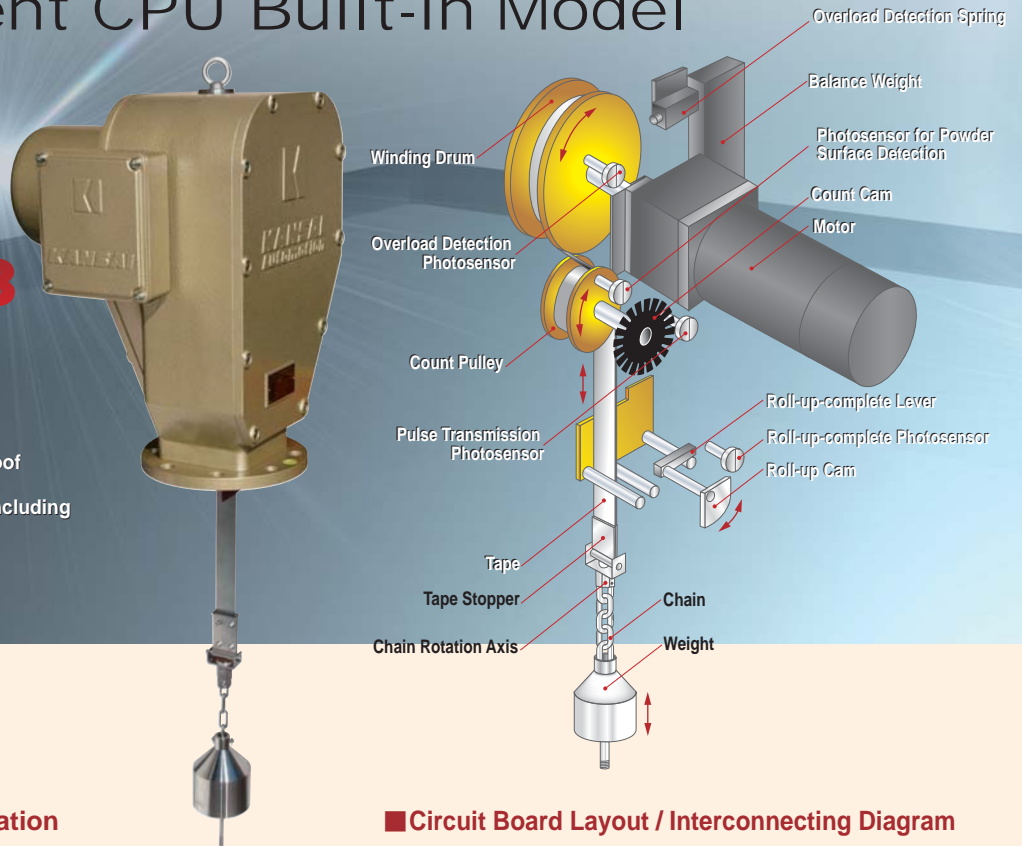
Intelligent CPU Built-in Model

KSL-T8

CPU Built-in

Ultimate Solution for Stock Management !!

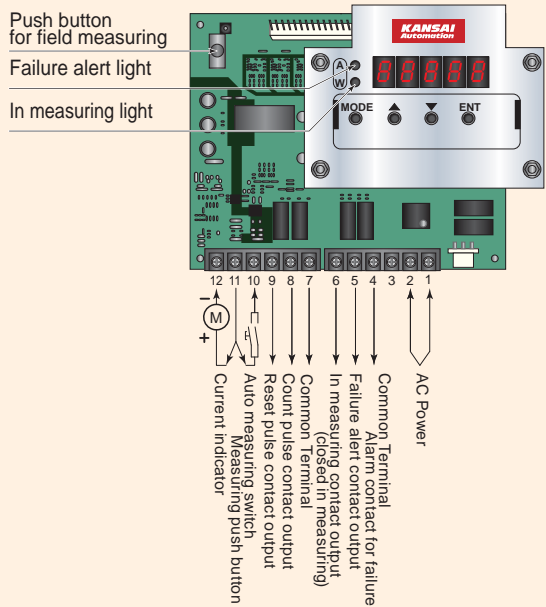
CPU being built in a rugged body, the unit is weatherproof and can effectively operate under any circumstances including a pressured tank.



Standard Specification

- Power Voltage : 100VAC or 200VAC, Single-phase 50/60Hz
- Consumption : Max. 150VA
- Allowable Temperature : ambient - 10°C ~ + 50°C (No freezing /condensation)
Inside tank - 10°C ~ + 80°C (No freezing/ condensation)
- Measuring Span : Standard 20m (Max. 40m Option)
- Measuring Method : Pulse Counting
- Measuring Unit : 1 pulse/10cm, or 1 pulse/1cm
- Measuring Accuracy : ±10cm / ±1cm
- Motor : Single-phase, Reversible, Output 40W
30 minutes rating, with brake
- Elevating Speed : 8.8m/min(50Hz), 11.0m/min(60Hz),
- Measure : SUS304, CSP tape W32 x Thick 0.3mm
- Cutoff Load : 9kN
- Output Signal : Current signal DC4 ~ 20mA (indicate remains).
DC20 ~ 4mA(indicate vacated portion) — User can set up either one
- Pulse contact signal 1 pulse / 1cm — User can set up either one
(No-volt signal) 1 pulse / 10cm
- Built-in Timer : Measuring stand-by time can be adjusted via a set-up..
- Output Contact : Reset Contact / for Remote Indication Counter, ON at the time of reset
Failure Alarm Contact/ Flickers when the measuring tape is cut off.
The contact is closed when the weight is buried.
- Body material : Aluminum casting
- Mounting Method : JIS 5K 125A
- Protection Rank : IP67
- Weight : 45kg

Circuit Board Layout / Interconnecting Diagram



Output

Pulse Contact for Counter

(The setup of 1 pulse/1cm and 1 pulse/ 10cm can arbitrarily be made by the jumper)

Reset Contact for Counter

: Setting commencement 0.1sec ON 1a.
Load Resistance max. 400Ω
Current Output DC4-20mA

Failure Alarm Contact

: Flickers when the measuring tape is cut off.
The contact is closed when the weight is buried.

Note: Use a shielded cable for Terminal 3 - 5 and 8 - 10

The level indications are directed from the remote. That requires no site measurement, and you can expect much improvement in terms of the working and safety environment.



KSL-MT

CPU Built-in

CPU Built-in Model of Compact Size

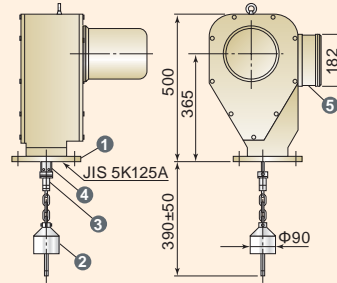
Suitable for level control of Hopper Bin or the like in smaller capacity

Standard Specification

- Power Voltage : 100VAC or 200VAC, Single-phase 50/60Hz
- Consumption : Max. 90VA
- Allowable Temperature : Ambient: -10°C~+50°C
Inside tank: -10°C~80°C
(No freezing/No condensation)
- Measuring Span : 0 ~ 20m
- Measuring Method : Pulse Counting
- Measuring Unit : 1 pulse/10cm or 1 pulse/1cm
- Measuring Accuracy : ±10cm / ±1cm
- Motor : Single-phase, Reversible, Output 25W
30 minutes rating, with brake
- Elevating Speed : 7.2m/min (50Hz), 8.5m/min (60Hz)
- Measure : SUS304, CSP tape W10 x Thick 0.2mm
- Cutoff Load : 1kN
- Output Signal : Current signal DC4 ~ 20mA (indicate remains) — User can set up either one
DC20 ~ 4mA(indicate vacated portion) — User can set up either one
Pulse contact signal 1 pulse / 1cm — User can set up either one
(No-volt signal) 1pulse / 10cm — User can set up either one
- Built-in Timer : Measuring standby time can be adjusted by a set-up.
- Output Contact : Reset Contact / for Remote Indication Counter, ON at the time of reset
Failure Alarm Contact/ Flickers when the measuring tape is cut off.
The contact is closed when the weight is buried.
- Body material : Aluminum casting
- Mounting Method : JIS 5K 100A
- Protection Rank : IP67
- Weight : 20kg

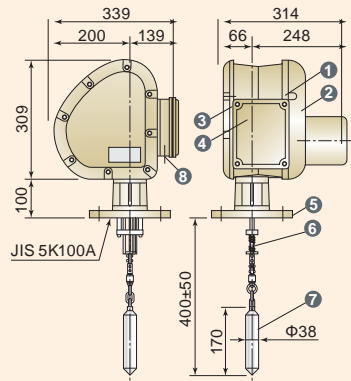
Outline Drawing

KSL-T8



- | | | |
|---|----------------------------|---------|
| 1 | Main Frame | AC |
| 2 | Motor Cover | AC |
| 3 | Drum Cover | AC |
| 4 | Control Board Terminal Box | AC |
| 5 | Mounting Flange | SS400 |
| 6 | Weight | SUS304 |
| 7 | Chain Rotation Axis | SUS304 |
| 8 | Tape Stopper | SUS304 |
| 9 | Conduit Connection | 2-G 1/2 |

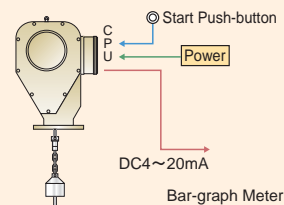
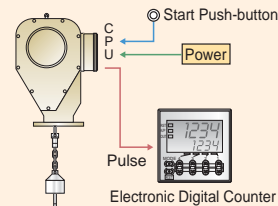
KSL-MT



- | | | |
|---|----------------------------|---------|
| 1 | Main Frame | AC |
| 2 | Motor Cover | AC |
| 3 | Pulley Cover | AC |
| 4 | Control Board Terminal Box | AC |
| 5 | Mounting Flange | SS400 |
| 6 | Measuring Tape | SUS304 |
| 7 | Weight | SUS304 |
| 8 | Conduit Connection | 2-G 1/2 |

Example of Equipment Configuration

The transmitted pulses are displayed directly on an electric counter.
Or the output current signal is displayed on a bar graph meter.

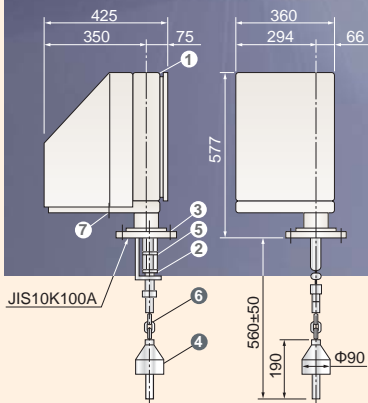


KSL-T2

Standard

This is the general-purpose level meter having a good market share as a level meter for powder & granules.

Measuring tape is stainless steel. It can be used for many different powder/ granules application as a multi-purpose level meter.



- 1 Main Frame SPCC
- 2 Measuring Tape 304SS
- 3 Mounting Flange SS400
- 4 Weight 304SS
- 5 Cleaner Polyacetal
- 6 Chain 304SS
- 7 Conduit Connection Φ27

VERSATILE MODEL HAVING CUSTOMERS' CONFIDENCE AND A GOOD MARKET SHARE

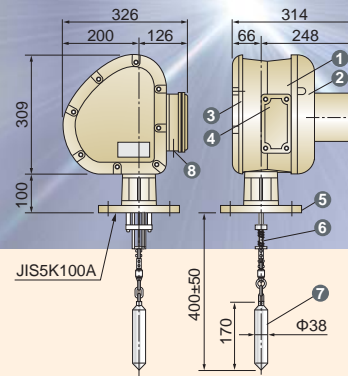
A Model of Medium size, suitable for Pressured Tank, Silo or the like.

With aluminum casting housing, it has improved sealing and excellent in dust-, pressure- and weather-proof.



KSL-W3T

Standard



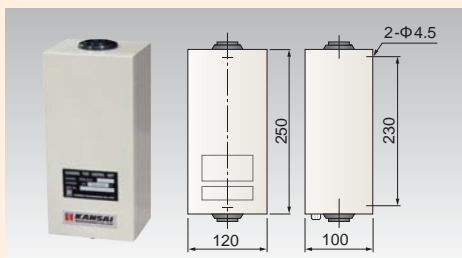
- 1 Main Frame AC
- 2 Motor Cover AC
- 3 Pulley Cover AC
- 4 Terminal Box AC
- 5 Mounting Flange SS400
- 6 Measuring Tape 304SS
- 7 Weight 304SS
- 8 Conduit Connection G 3/4

Standard Specification

Power Voltage : 100VAC or 200VAC 50/60Hz
 Consumption : 150VA
 Allowable Temperature : ambient -10°C to +50°C (No freezing / condensation)
 inside tank -10°C to +80°C (No freezing / condensation)
 Measuring Span : 0 - 20m (Max. 40m Option)
 Measuring Method : Pulse Counting
 Measuring Unit : 1 pulse/10cm
 Measuring Accuracy : ±10cm
 Motor : Single-phase, Reversible, Output 40W
 30 minutes rating, with brake
 Elevating Speed : 9.3m/min (50Hz), 11.0m/min (60Hz),
 Measure : Tape / 304SS W32 x Thick 0.3mm
 Cutoff Load : 9kN
 Body material : SPCC
 Mounting Method : JIS 10K 100A
 Protection Rank : IP33 or equivalent
 Weight : 53kg

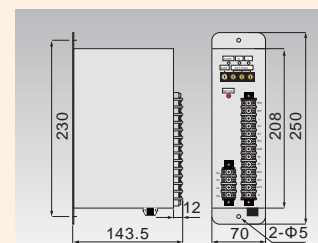
Standard Specification

Power Voltage : 100VAC or 200VAC 50/60Hz
 Consumption : 90VA
 Allowable Temperature : ambient -10°C to +50°C (No freezing / condensation)
 inside tank -10°C to +80°C (No freezing / condensation)
 Measuring Span : 0 - 20m
 Measuring Method : Pulse Counting
 Measuring Unit : 1 pulse/10cm
 Measuring Accuracy : ±10cm
 Motor : Single-phase, Reversible, Output 25W
 30 minutes rating, with brake
 Elevating Speed : 7.2m/min (50Hz), 8.5m/min (60Hz),
 Measure : 304SS - CSP tape W10 x Thick 0.2mm
 Cutoff Load : 1kN
 Body material : Aluminum Casting
 Mounting Method : JIS 5K 100A
 Protection Rank : IP67



Control Unit (KSLAU)

Supply Voltage : 100 / 110AC, 200 / 220V
 50/60Hz as specified (same voltage as detector)
 Output Contact Capacity : Rated load 250VAC 5A 30VDC 5A (resistance load)
 Minimum Applicable Resistance Load 5VDC 10mA
 Allowable Ambient Temperature : 0°C to +50°C
 Color : Munsell 5Y 7/1
 Housing Material : Steel Plate
 Weight : 1.7kg



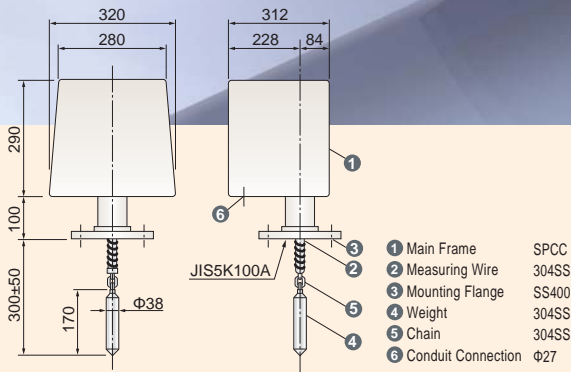


Compact model used for a hopper bin in smaller capacity.

This is a convenient type to be used for a less capacious storage tank which is placed in light-industry processing facilities including flour, feeding stuff, plastic and so on.

KSL-W2B

Standard



Standard Specification

Power Voltage : 100VAC or 200VAC 50/60Hz

Consumption : 70VA

Allowable Temperature : ambient -10°C to +50°C (No freezing / condensation)
 inside tank -10°C to +80°C (No freezing / condensation)

Measuring Span : 0 – 20m

Measuring Method : Pulse Counting

Measuring Unit : 1 pulse/10cm

Measuring Accuracy : ±10cm

Motor : Single-phase, Reversible, Output 15W
 30 minutes rating, with brake

Elevating Speed : 7.0m/min (50Hz), 8.6m/min (60Hz),

Measure : 304SS Wire Φ1.5mm 7 x 19 Z-Stranding

Cutoff Load : 1.7kN

Body material : SPCC

Mounting Method : JIS 5K 100A

Protection Rank : IP33 or equivalent

Weight : 20kg

Microprocessor-Control CONTROLLER

- Selecting a Tank with One-touch Operation
- Discretionary Detection by Application
- Intelligent Diagnosis, Equipped with Memory Function

System Outline

The descent distance of measuring tape/wire may be converted to the stock volume in a tank.

The detector detects in a mechanical manner.

The measuring findings can be shown by height(m), %, ton & m3. You can select an indication of either Remains or Vacated Portion.

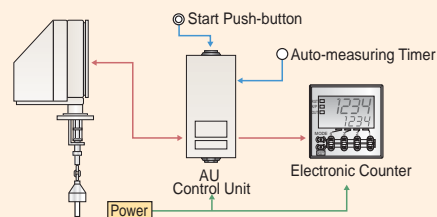
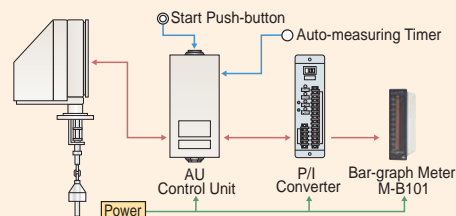
Applicable Models

KSL-T8(AU Model), KSL-T2, KSL-W3T, KSL-W2B



Example of Equipment Configuration

Transmitted pulses may be indicated directly on an electromagnetic counter or on an electronic counter via Control Unit, or may be displayed as analog outputs via P/I Converter from Control Unit.



Installed Equipment

● P/I Converter (PSC-222)

Supply Voltage : 100/200VAC ±10% 50/60Hz

Consumption : 4VA

Level Output : 4 – 20mADC Allowable load resistance 400Ω

Output Contact Capacity : Rated load 250VAC 3A 30VDC 3A (Resistance load)

*Contact output of Upper/Lower limit Minimum Applicable Load 1VDC 10mA

Allowable Ambient Temperature : 0°C to +50°C

Painted Color : Munsell 5Y 7/1

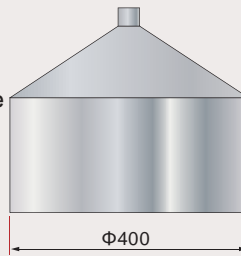
Setting Range : 0-99.9m

KSL-T8
KSL-GT
KSL-T2
Various Types
of Weight

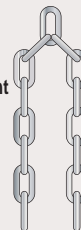
Standard Weight
SUS304



Opened/Float-type
Weight
SUS304
(Low Specific Gravity)

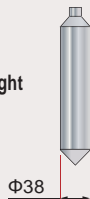


Chain-type Weight
SS400 or
SUS304
(for Lumps)

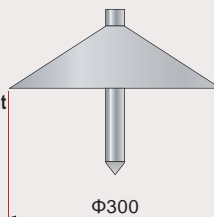


KSL-MT
KSL-W2B
KSL-W3T
Various Types
of Weight

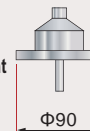
Standard Weight
SUS304



Umbrella-type Weight
SUS304
(Low Specific Gravity)

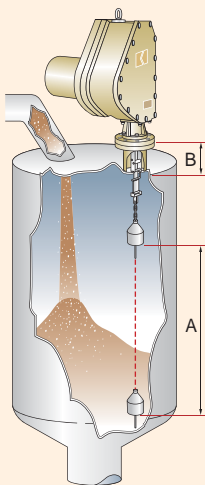


Disc-shaped Weight
SUS304
(Low Specific Gravity)



Please advise the following information for your inquiries and ordering.

1. Name of Measuring Substance []
 2. Specific Gravity of the Substance []
 3. Granularity of the Substance []
 4. Granularity of the Substance []
 5. Temperature in a Tank [°C]
 6. Pressure in a Tank [Pa]
 7. Ambient Temperature [°C]
 8. Power Voltage []
-
- A. Measuring Range []
 - B. Nozzle Height []



Installed Equipment

● Meter Relay LV1000-AI-A2



Power supply: AC85 to 264V
DC12 to 24V ±10%(Option)
Power consumption: Max 23VA (Option 10W)
Sensor supply voltage: DC24V Max.150mA
Analog Current Output: DC4 to 20mA
(Resistance load Max.500Ω)
Contact capacity: AC250V 0.3A / DC30V 2A
Linearization function: 21 points
Alarm contact output: 4c max.(Standard 2c)

● Electronic Digital Counter (H7CX-A114)



Size: DIN48 x 48mm
Power Voltage: 100 – 240VAC
50/60Hz (common)
Consumption: about 9.2VA
Display: 7 segment, Negative
Transmissive LCD in 4 digit
Input: Contact / Open the contact or
short circuit.
Features: Select either addition or
subtraction. A counter that
can operate the control output
when a set number is counted

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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TEL. 81-93-511-4741 FAX. 81-93-511-4580



*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