

# VERTICAL FLOAT TYPE LEVEL INDICATOR

## KF-100



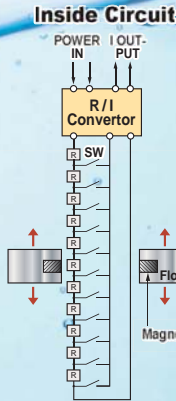
Reliable Liquid Level Indicator in  
Versatile Applications.  
Insusceptible to measurement conditions  
such as gas or change of material properties.

# KF-100

## VERTICAL FLOAT TYPE LEVEL INDICATOR

### Principle of Operation

The model KF-100 is a float type level indicator. A float with a built-in magnet on a stem floats on the surface and goes up and down as the level increases or decreases. Reed Switches (SW) and Resistor (R), built in the stem as described in the right figure, can detect the resistance changes in the changing liquid level. These can be transmitted through the R/I Converter in the form of 4 – 20mA DC signals.



KF-1□□

### Instrument Construction

- 0 : Built-in construction
- 1 : Remote construction (Amplifier for indoor use)
- 2 : Remote construction (Amplifier for outdoor use)

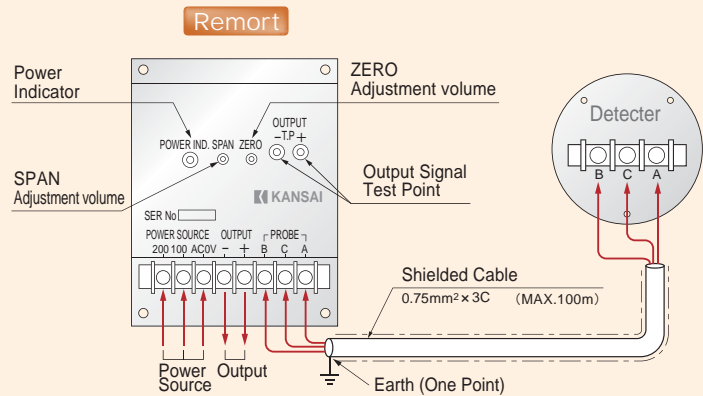
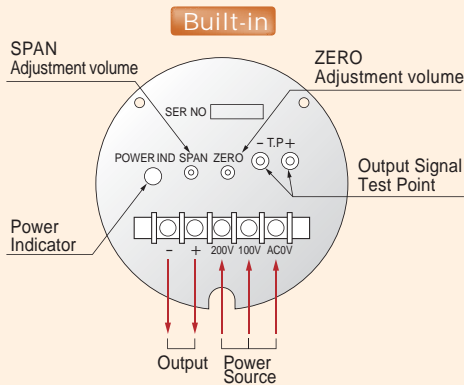
### Float, Stem

	Float Dim	Float Material	Stem Dim	Stem Material	Acceptable Liquid Specific Gravity	Min. Size
0	Φ60×95×23	SUS304	Φ22	SUS304	0.90	65A
1	Φ90×120×23	SUS304	Φ22	SUS304	0.61	100A
2	Φ90×120×30	SUS304 (With Rib)	Φ22	SUS304	0.77	100A
3	Φ60×95×25	PVC	Φ22	PVC	0.66	65A
4	Φ90×120×25	PVC	Φ22	PVC	0.50	100A
5	Not In Use					
6	Φ60×95×25	HTPVC	Φ22	HTPVC	0.67	65A
7	Φ90×120×25	HTPVC	Φ22	HTPVC	0.50	100A
8	Φ90×120×30	PVC (With Rib)	Φ22	PVC	0.55	100A
9	Φ90×120×25	Teflon	Φ22	SUS304, Teflon coating	1.00	100A
a	Φ90×120×30	SUS304 (High-Viscosity)	Φ22	SUS304	0.76	100A
b	Φ90×120×30	PVC (High-Viscosity)	Φ22	PVC	0.55	100A

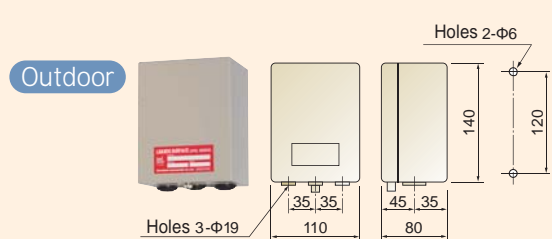
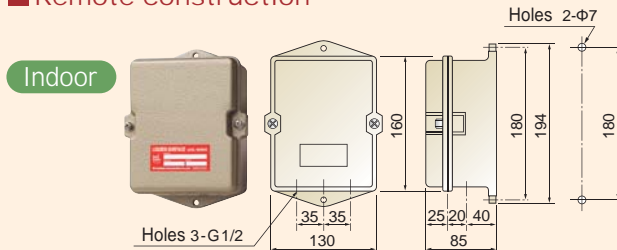
Vertical Float Type Level Indicator  
Generic Designation of Float Gages

Note: Float-code a and b having larger clearance dimensions between float and stem are effective to prevent the float from being stuck in the high viscosity liquid as well as liquids containing slurry and solid particles.

### Connection Drawings



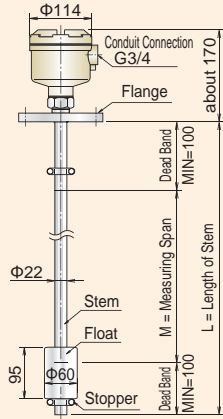
### Remote construction



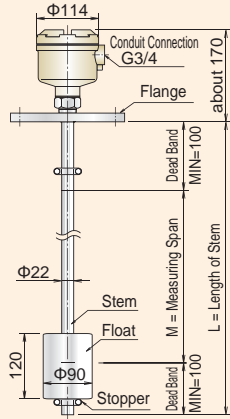
Standard Specifications & General Drawings

SUS Type

KF-10□

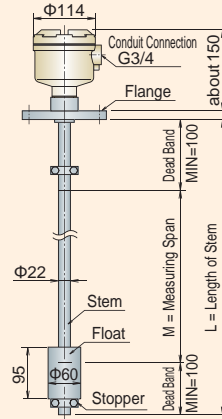


KF-11□  
KF-12□ (With Rib)  
KF-1a□ (High-Viscosity)

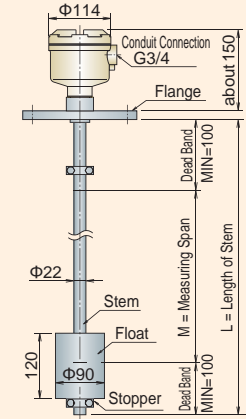


PVC Type

KF-13□



KF-14□  
KF-18□ (With Rib)  
KF-1b□ (High-Viscosity)

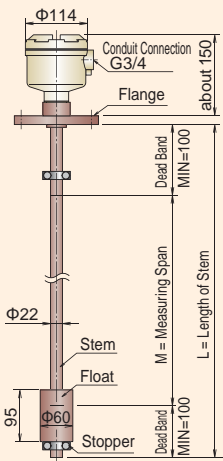


Spec	Model	KF-10□	KF-11□/-12□/-1a□	KF-13□	KF-14□/-18□/-1b□
Application		Water, oil, General Liquid	High-viscosity or Low Spec.Gravity Liquid	Anti-corrosive, Water, oil, General Liquid	High-viscosity or Low Spec.Gravity Liquid
Pressure		490kPa	490kPa	196kPa	196kPa
Temperature		100°C	100°C	50°C	50°C
Process Connection		over JIS5K65A	over JIS5K100A	Equivalent to JIS5K65A or over	over JIS5K100A
Specific Gravity of Liquid		over 0.90	over 0.61	over 0.66	over 0.50
Float dimension		Φ60x95L	Φ90x120L	Φ60x95L	Φ90x120L
Float Material		SUS304 or SUS316	SUS304 or SUS316	PVC	PVC
Stem Material		SUS304 or SUS316	SUS304 or SUS316	PVC (Reinforced with Brass Pipe)	PVC (Reinforced with Brass Pipe)
Flange Material		SUS304 or SUS316, SS400	SUS304 or SUS316, SS400	PVC	PVC
Housing Material		ADC	ADC	ADC	ADC
Conduit Connection		G 3/4	G 3/4	G 3/4	G 3/4

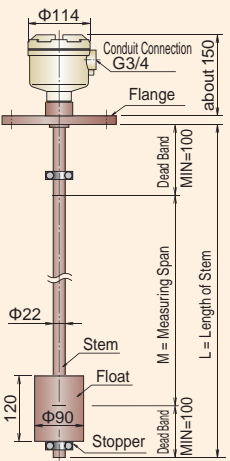
Standard Specifications & General Drawings

HT.PVC Type (Heat-resistant Type)

KF-16□

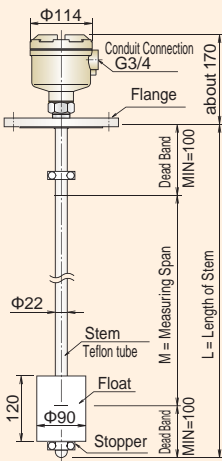


KF-17□



TEFLON Type

KF-19□



Spec	Model	KF-16□	KF-17□	KF-19□
Application		Anti-corrosive, Water, oil, General Liquid	Anti-corrosive, Low Spec.Gravity Liquid	Anti-corrosive, General Liquid
Pressure		196kPa	196kPa	ATM
Temperature		80°C	80°C	100°C
Process Connection		over JIS5K65A	over JIS5K100A	over JIS5K100A
Specific Gravity of Liquid		over 0.76	over 0.50	over 1.00
Float dimension		Φ60x95L	Φ90x120L	Φ90x120L
Float Material		HT.PVC	HT.PVC	Teflon
Stem Material		HT.PVC (Reinforced with Brass Pipe)	HT.PVC (Reinforced with Brass Pipe)	SUS304, Teflon tube
Flange Material		HT.PVC	HT.PVC	SUS304, Teflon cover
Housing Material		ADC	ADC	ADC
Conduit Connection		G 3/4	G 3/4	G 3/4

Amplifier Common Specifications

**Power Source :**  
100V/200VAC±10%  
50/60Hz

**Power Consumption :**  
4VA

**Allowable Temperature :**  
0°C to +55°C

**Output Voltage :**  
2V DC

**Input Signal :**  
Resistance (3 wire type)

**Input Impedance :**  
Max.100KΩ  
(Detection impedance : 1 – 3KΩ)

**Output Signal :**  
4 – 20mA DC

**Resistance Load :**  
MAX.500Ω

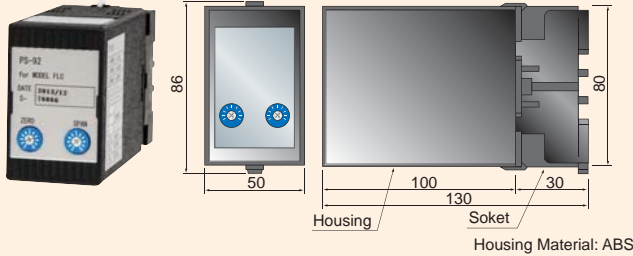
**Linearity :**  
FS 1 % (Electronics)



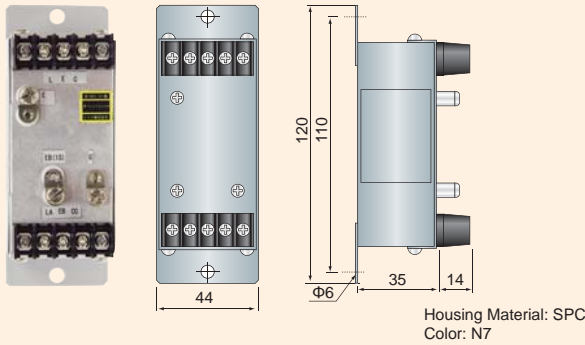
# FLC-d IEC Certified Explosion-proof (in conformity with the Technical Standard)

**Intrinsically Safe**  
Exia II CT5

Distributor • PS-92 Type



Safety barrier • MK-9Type



## Standard Specifications

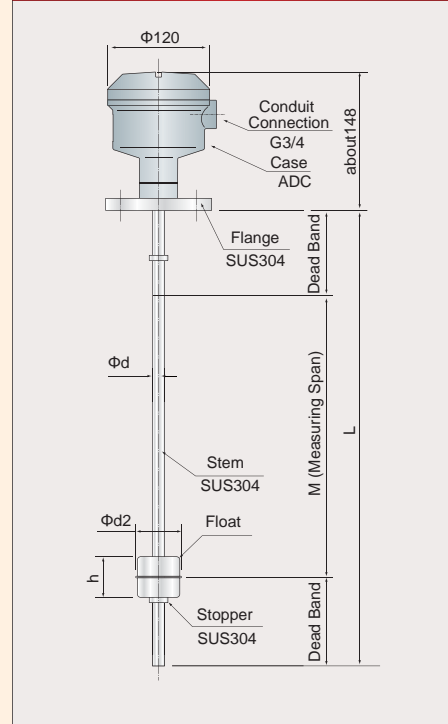
Power Source : AC100V/200V ±10% 50/60Hz  
 Power Consumption : 4VA  
 Output Signal : DC4 ~ 20mA  
 Allowable Temperature : 90°C  
 Allowable Pressure : 0.5MPa  
 Process Connection : over 40A

## Float • Stem

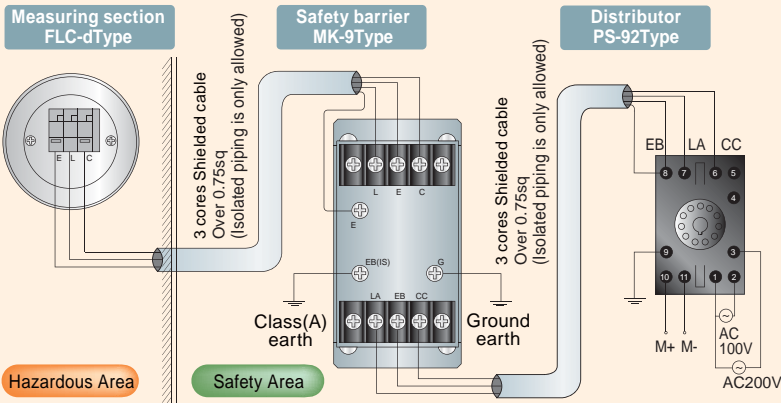
Float				Stem	
Φd2	h	Dead Band	Specific Gravity of Liquid	Material	Φd
40	50	≥50	0.43	SUS304	Φ13.8
51	62	≥50	0.45	SUS316L	Φ13.8
78	100	≥100	0.55	SUS304/316	Φ21.7

※ Watted parts material: Titanium, Hastelloy  
 Contact us for any inquiry.

## General Drawing



## Connection



## 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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\*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



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