

# MAGNETOSTRICTION TYPE LEVEL METER

## EX-GYds Flame-Proof Exd II CT6

# KF-900/KF600/KP600



Absolute type level meter boasting high resolution

# KF-900/KF600/KP600

## MAGNETOSTRICTION TYPE LEVEL METER

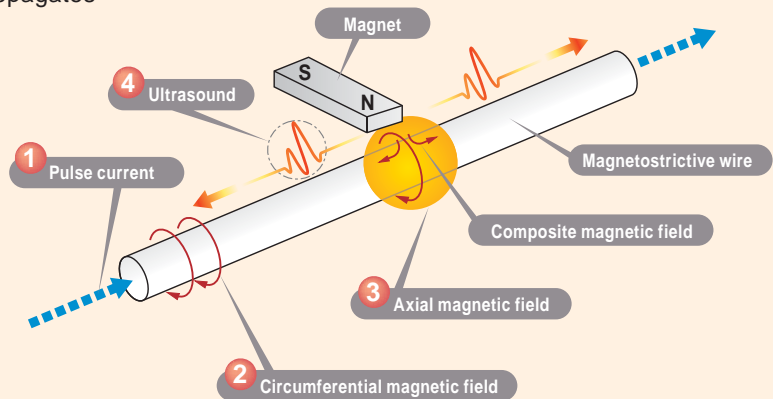
This is a level meter that applies the magnetostriction phenomenon by the Wedemann effect. The magnet in the float which moves along the stem causes torsional strain on the magnetostrictive wire. And the meter detects the liquid level by measuring the propagation time of the strain.

### ■ Operating principle

When a pulse signal is given on the magnetostrictive wire, a circumferential magnetic field is generated in the entire axial direction of the magnetostrictive wire.

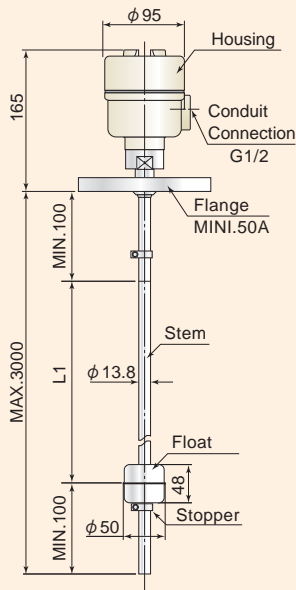
This phenomenon is called as the Wedemann effect. Since this torsion is a kind of mechanical vibration, it propagates

on the magnetostrictive wire made of metal by ultrasonic waves. This magnetostrictive level meter measures the propagation time of this ultrasonic wave and converts the absolute position of the magnet into an analog output.

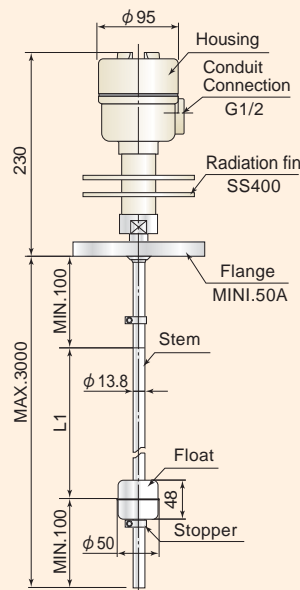


### ■ General Drawings

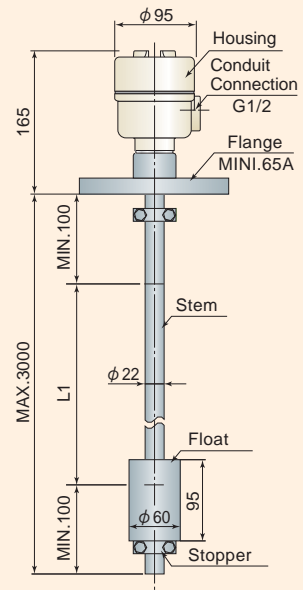
**KF-900**  
SUS316



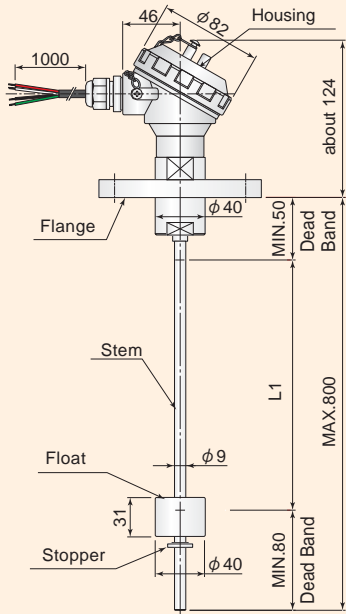
**KF-900H**  
SUS316 · Heat Resistant Type



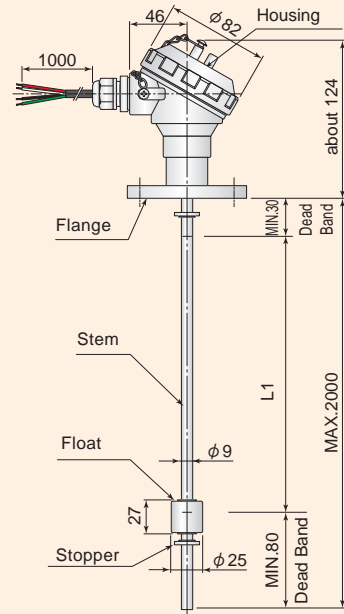
**KF-930/960**  
PVC/HT.PVC



**KF600**  
PTFE Type



**KP600**  
PP Type (Stopper : PTFE)



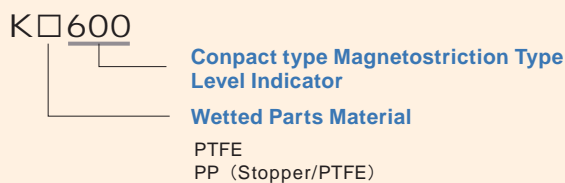
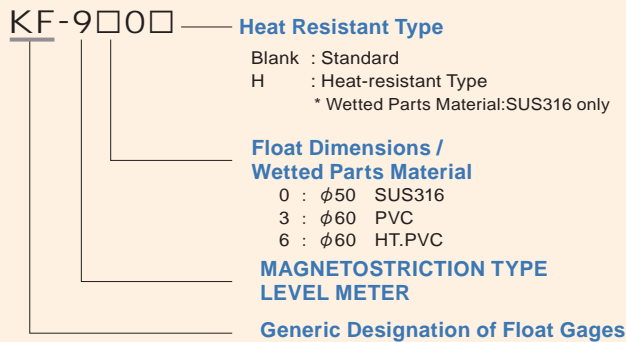
■ Standard Specifications

| Specifications             | Model | KF-900        | KF-900H | KF-930        | KF-960    | KF600         | KP600               |  |
|----------------------------|-------|---------------|---------|---------------|-----------|---------------|---------------------|--|
| Withstand Pressure         |       | 1MPa          |         | 196kPa        |           | 98kPa         | 2MPa                |  |
| Heat resistant Temperature |       | 100°C         | 150°C   | 50°C          | 80°C      | 100°C         |                     |  |
| Process Connection         |       | Over JIS5K50A |         | Over JIS5K65A |           | Over JIS5K50A | Over JIS5K25A       |  |
| Specific Gravity of Liquid |       | over 0.65     |         | Over 0.66     | Over 0.67 | Over 0.8      | Over 0.75           |  |
| Wetted Parts Material      |       | SUS316        |         | PVC           | HT.PVC    | PTFE          | PP (Stopper / PTFE) |  |
| Housing Material           |       | ADC           |         |               |           |               |                     |  |
| Cable conduit              |       | G1/2          |         |               |           |               |                     |  |

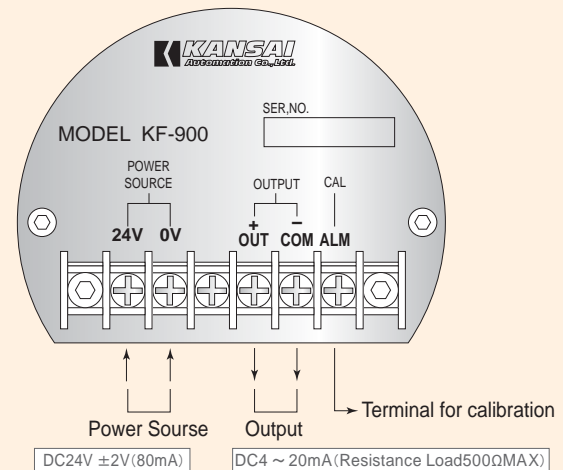
■ Common Specifications

|                           |                             | KF-900/900H/930/960                 | KF600/KP600 |
|---------------------------|-----------------------------|-------------------------------------|-------------|
| Accuracy                  | Linearity                   | Below ±0.05%FS TYP                  |             |
|                           | Resolution                  | Below 0.01% FS                      |             |
|                           | Temperature characteristics | Below ±40ppm FS                     |             |
| Input Output              | Power Consumption           | DC24V±2V 80mA                       |             |
|                           | Power Source                | DC4-20mA Resistance Load below 500Ω |             |
| Environmental performance | Temperature Range           | -20~+75°C                           | -20~+80°C   |
|                           | Enclosure Rating            | IP65 equivalent                     | IP67        |
|                           | Housing Material            | ADC                                 |             |

■ Type Designation



■ KF-900 Wiring



# EX-GYds

Flame-Proof  
Exd II CT6

The magnetostrictive level meter of IEC-compliant flameproof construction

## Standard Specifications

|                            |   |
|----------------------------|---|
| Withstand Pressure         | 1MPa                                    |
| Heat resistant Temperature | -20 ~ +60°C                             |
| Process Connection         | Over JIS5K50A                           |
| Specific Gravity of Liquid | Over 0.65                               |
| Wetted Parts Material      | SUS316                                  |
| Housing Material           | ADC                                     |
| Cable conduit              | G1/2 (for cable tube Connection Method) |

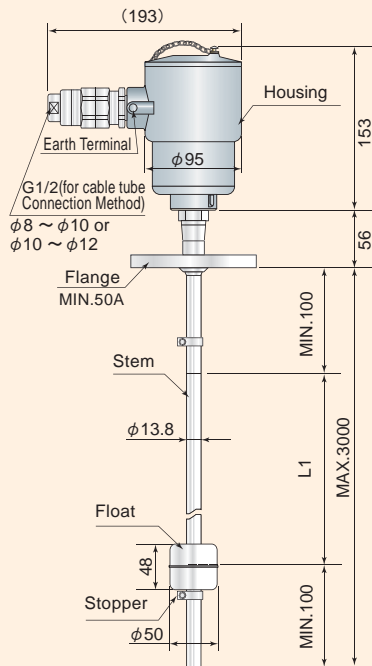
\*1 : Condition of environment range for IEC:80kPa~110kPa

## Common Specifications

|                           |                             |   |
|---------------------------|-----------------------------|---|
| Accuracy                  | Linearity                   | Below $\pm 0.05\%$ FS TYP                   |
|                           | Resolution                  | Below 0.01% FS                              |
| Input                     | Temperature characteristics | $\pm 40$ ppm FS / °C                        |
|                           | Power Consumption           | DC24V $\pm 2$ V 0.1A (*2)                   |
| Output                    | PowerSource                 | DC4-20mA (Resistance Load 500 $\Omega$ MAX) |
|                           | Temperature Range           | -20~+60°C<br>Controller : 0~+60°C           |
| Environmental Performance | Enclosure Rating            | IP65  |
|                           | Housing Material            | ADC   |

\*2 : Remote amplifier type:Below DC24V $\pm 5\%$  350mA

## General Drawings



## Type Designation

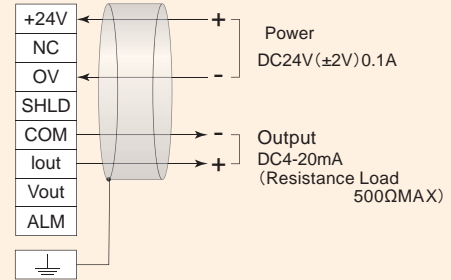
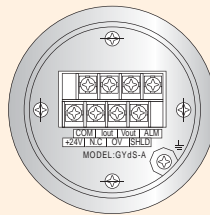
EX-GYds-□14

Dimensions of Stem  $\phi 13.8$

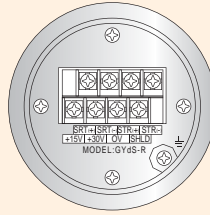
### Construction

A : Built-in amplifier type  
R : Remote amplifier type  
【GYFC2 Controller】

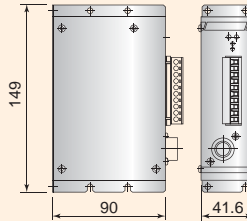
### Built-in amplifier type Connection diagram



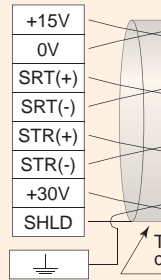
### Remote amplifier type Connection diagram



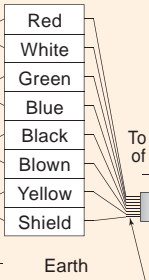
### GYFC2 Controller



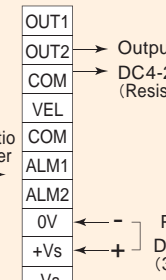
### Sensor terminal



### Terminal (Option)



### Controller terminal



## 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

\*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.

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



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