



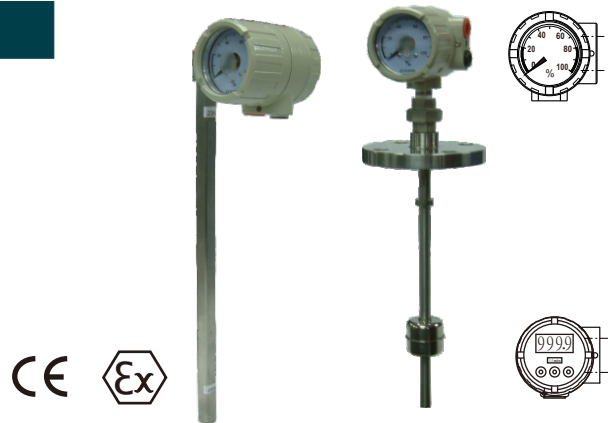
# LEVEL TRANSMITTERS

## MAGNET SENSITIVITY TYPE

# 531

### FEATURES

- ECONOMICAL & PRACTICAL
- HIGH RELIABILITY
- ANTICORROSIVE MATERIALS
- CAPABLE OF HIGH OPERATING PRESSURE
- COMPACT STRUCTURE TO LAST OPERATION
- SENSING ELEMENTS MOULDING ENCLOSED FOR EASY MAINTENANCE
- HIGH SAFETY AND THE ELECTRICAL / LIQUID IS COMPLETELY INSULATED
- RESOLUTION  $\pm 5\text{mm}$  (at Sp.Gr. 1.0)
- ANALOG POINTER / LED DIGITAL INDICATOR CAN BE PROVIDED



### CONNECTION SIZING FOR 531A

### TABLE 1

CODE	CONNECTION	FLOAT	AVAILABLE NOZZLE SIZE	STEM DIA.	SP. GR.	MAX. OPERATING TEMP. / PRESSURE	MATERIALS
0	2" (50A)	$\varnothing 50 \times H48$	$\geq 52\text{mm}$	$\varnothing 14\text{mm}$	$\geq 0.53$	$\leq 100^\circ\text{C} / 3\text{MPa}$	304SS / 316SS (1.4301 / 1.4571)
	2" (50A)	$\varnothing 47 \times H50$	$\geq 52\text{mm}$	$\varnothing 21\text{mm}$	$\geq 0.5$	$\leq 80^\circ\text{C} / 0.5\text{MPa}$	PVC / PP
1	3" (80A)	$\varnothing 60 \times H115$	$\geq 62\text{mm}$	$\varnothing 22\text{mm}$	$\geq 0.5$	$\leq 80^\circ\text{C} / 0.5\text{MPa}$	PVC / PP / PVDF
	3" (80A)	$\varnothing 74 \times H105$	$\geq 78\text{mm}$	$\varnothing 22\text{mm}$	$\geq 0.5$	$\leq 100^\circ\text{C} / 3\text{MPa}$	316SS (1.4571)
2	4" (100A)	$\varnothing 86 \times H115$	$\geq 102\text{mm}$	$\varnothing 22\text{mm}$	$\geq 0.5$	$\leq 80^\circ\text{C} / 0.5\text{MPa}$	PVC / PP / PVDF
3	SPECIFIED	According to the difference of float diameter and materials					

### HOUSING SELECTION

### TABLE 2

No indicator version		With indicator	
Water proof IP68		Water proof IP67	
■ CODE : 0 (ADC made) 	■ CODE : 2 (PP made) 	■ CODE : 5A (ADC made) IP67 ■ CODE : 5S (316SS made) IP67 	■ CODE : 7A (ADC made) ■ CODE : 7S (316SS made) 
Water proof IP68		Explosion proof for Class I, Div. I, Gr. B/C/D : Class II / III, Div I, Gr. E/F/G	
■ CODE : 1 (316SS made) 	■ CODE : 3 (ADC made) ■ CODE : 4 (316SS made) 	■ CODE : 6A (ADC made) ■ CODE : 6S (316SS made) 	■ CODE : 8A (ADC made) ■ CODE : 8S (316SS made) 

LEVEL

## SIGNAL CONVERTER

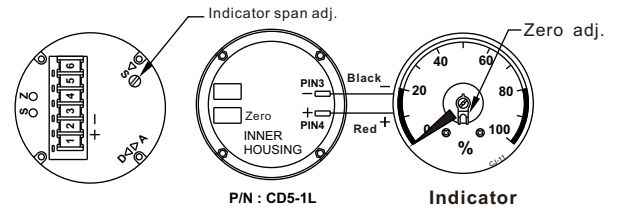
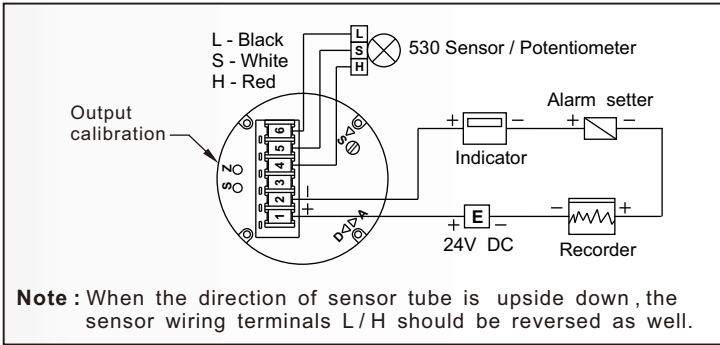
Detecting portion : Level detector / Potentiometer	Accuracy of converter : $\pm 0.1\%$ F.S. at 20°C
Input signal : 0 to 0.5K $\Omega$ / 0 to 50K $\Omega$	Linearity of converter : $\pm 0.1\%$ F.S.
Output signal : 4~20mA DC , 2-wire system	Temp. Coefficient : $\pm 0.02\%$ / °C
Power supply : 10~30V DC	Electric protection : EEx ia II C T6
Resistance load : 700 $\Omega$ at 24V DC	Enclosure : Moulding enclosed
0 $\Omega$ at 10V DC	Ambient temp. : 0~70°C / 90% RH max.
Zero adjustment : 0~25% adjustable by VR	Terminal blocks : 6 Poles , 6.3mm <sup>w</sup> barrier with M3 screws
Span adjustment : 30~100% adjustable by VR	Indicator : For optional versions

## MODEL SELECTIONS

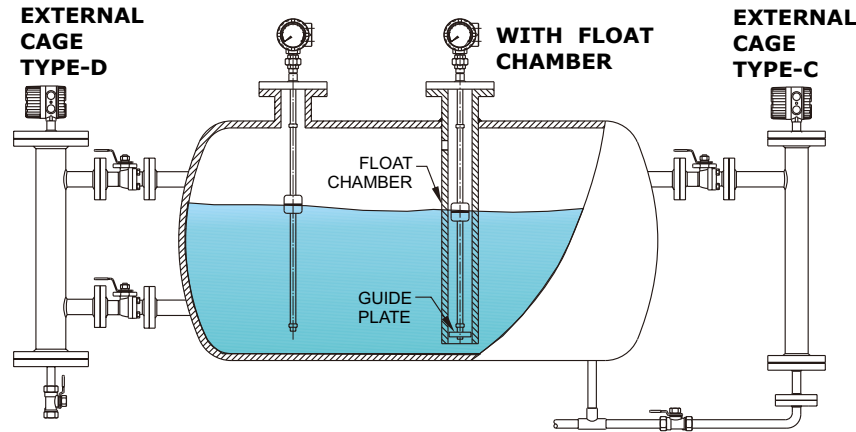
AVAILABLE USAGE		ROOF MOUNTING FOR PROCESS TANKS		ASSEMBLED IN MAGNETIC LEVEL GAUGES	
EXTERNAL VIEW & DIMENSIONS (IN m/m)					
ITEMS	CODE	531A		531B	531C
① CONNECTION (See table 1) OR LINKAGE (See Fig.1/2)	—0	2" ANSI 150lb Flange		Not any accessories	
	—1	3" ANSI 150lb Flange		With 2 clamps on the float chamber	
	—2	4" ANSI 150lb Flange		With screws mount the flag indicator	
	—3	To be specified		To be specified	
② OUTPUT SIGNAL	0	Linear output / 4~20mA DC , 2-wire system			
	1	Nonlinear output / 4~20mA DC , 2-wire system			
	2	To be specified			
③ INDICATOR (OPTIONAL)	0	Not required			
	1	240° dial , 0~100% , 1% divided			
	2	LED Display ( -1999 to 9999 ) , 3 Decimal point ( max. )			
	3	To be specified			
④ ELECTRIC HOUSING	0~8	See table 2 ( Page 1 )			
	X	To be specified			
⑤ CABLE ENTRY	—A	1/2" NPT (St'd)			
	—B	3/4" NPT			
	—C	To be specified			
⑥ MATERIAL	CODE	CONN.	STEM ( Size )	FLOAT ( Size )	STEM
	A	304SS	304SS ( $\phi 14$ )	316SS ( $\phi 49 \times H 50$ )	Square pipe (304SS x $\square 18$ )
	B	316SS	316SS ( $\phi 14$ )	316SS ( $\phi 49 \times H 50$ )	Round pipe (316SS x $\phi 17$ )
	C	316SS	316SS ( $\phi 17 / \phi 21$ )	316SS ( $\phi 70$ )	Square pipe with PVC sleeve
	D	PP / PVC	PP / PVC ( $\phi 21$ ) with SS inner pipe	PP ( $\phi 47 \times H 50$ )	Round pipe with PVC sleeve
	E	PVDF	PVDF ( $\phi 20$ ) with SS inner pipe	PVDF ( $\phi 63 \times H 70$ )	Square pipe with PE sleeve
F	To be specified				
⑦ OPERATING TEMP. / PRESSURE OR HEAT INSULATION	A	Less than 80°C / 10kg/cm <sup>2</sup> G			Not required (Less than 120°C)
	B	Less than 80°C / 20kg/cm <sup>2</sup> G			With insulation blankets (for $\leq 150^\circ\text{C}$ )
	C	Less than 80°C / 30kg/cm <sup>2</sup> G			With insulation blankets (for $\leq 250^\circ\text{C}$ )
	D	Less than 80°C / 40kg/cm <sup>2</sup> G			With insulation blankets (for $\leq 350^\circ\text{C}$ )
	E	To be specified			To be specified
⑧ S—LENGTH (FOR MEASURING)	—010	100 mm		—010	100 mm
	—580	5800 mm		—600	6000 mm
⑨ E—LENGTH (DEAD BAND)	A	Standard length 50mm (Standard)			
	B	To be specified			
⑩ EXTRA TREATMENT	/A	Not required			
	/B	Special finished			
	/C	To be specified			

# INSTRUCTIONS

## WIRING CONNECTION



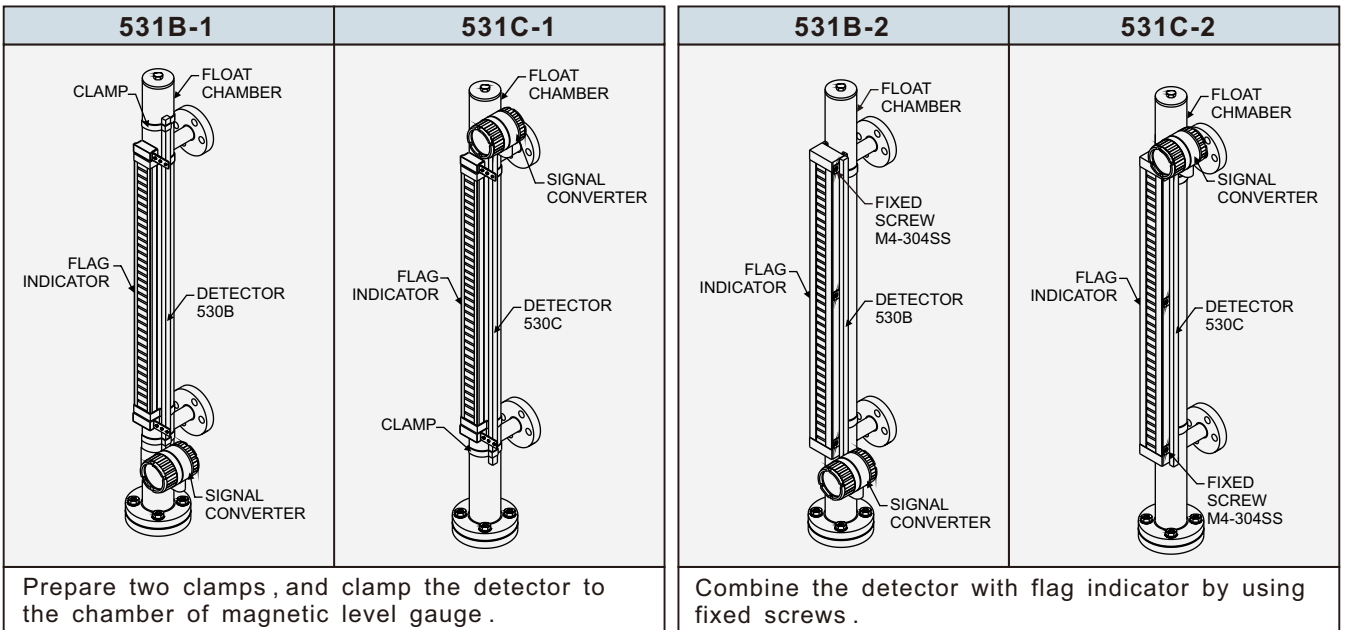
## INSTALLATION EXAMPLE FOR 531A



1. When moving the stem, avoid deforming or violently shaking.
2. Do not install the detector near the fluid inlet and outlet.
3. Avoid installing the level transmitter near either motor or solenoid valve.
4. When there are some intense flows or waves in the vessel, the float chamber must be installed or remove the level transmitter and install it in the external cage.
5. Cable entry must be a lot higher than the maximum height of conduit to avoid water flowing backwards.
6. The perpendicular angle of the stem should not be greater than  $\pm 5^\circ$ .

7. The detailed specifications of float chamber / external cage provided if necessary. Please offer your requirements or contact our department of sales.

## METHODS TO ASSEMBLE 531B / 531C TO GAUGE CHAMBER



The specifications are subject to change without prior notice.

2K907-A2

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