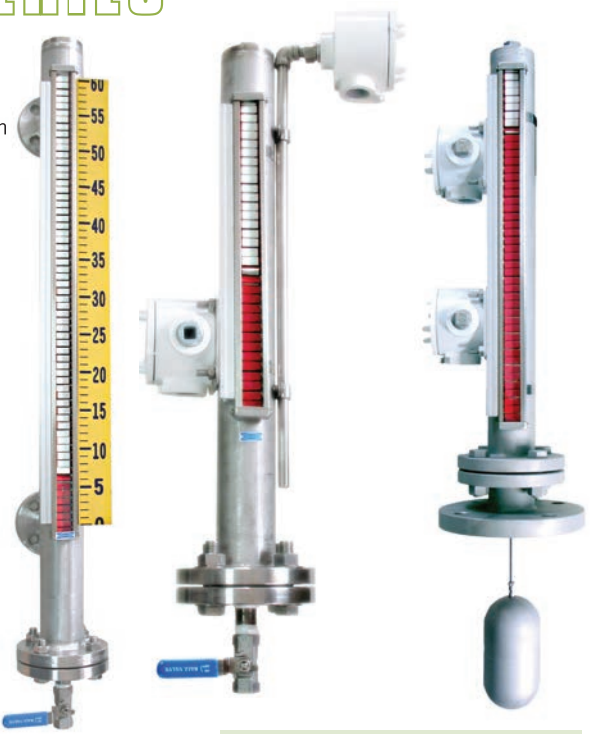
MAGNETIC LEVEL GAUGE M-SERIES

The M series magnetic level gauge, level swtich consists of an un-magnetic chamber, magnetic float and with a built-in magnet strips, a vertical chamber connected a tank with two end. The float rised or falls in the chamber. It turns to the indicative strips to provide a indication of the tank level. This series also provide accessories such as switch and measuring sensor with converter turn to a 4~20mA (2-wires) DC output signal. To provide a liquid level control function.



Technical Data

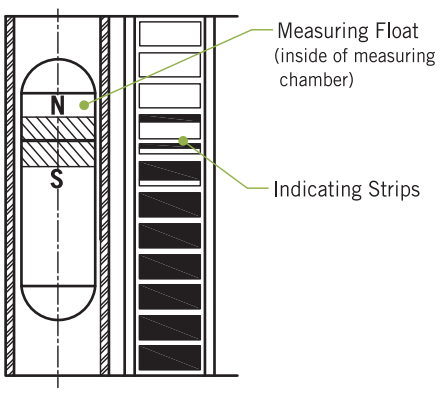
Application for Chemical and Petrol Chemical process, Boilers and other industries.
Connection: From ½" to 3" flange type, JIS, ANSI, DIN rating available; special size on request
Pressure Limited:
5 kg/cm² for Plastic chamber type (PVC, PP);
7 kg/cm² for Plastic chamber type (PVDF);
20 kg/cm² for Metal chamber type (Stainless Steel), and up to 50 kg/cm² on request;
Special option: up to 100 kg/cm² for Titanium float
Temperature Limited:
0~50°C for Plastic chamber type (PVC, PP);
-30~100°C for Plastic chamber type (PVDF);
-20~150°C for Metal chamber type (Stainless Steel);
-20~300°C for Metal chamber type (Stainless Steel) on request (for this special type, if your operating temperature is ≥250°C, the Sp.Gr. must be ≥0.8)
Center to Center Length: maximum 5500mm
Accuracy: ±4mm (Transmitter type: standard ±12mm; and ±6mm on request)
Indicating Case Material: SS304 standard;
or SS304+PC (Hermetically Sealed) for protection class IP68 on request
Indicating Strips Material: Plastic (PBT); Brass w/painting available;
the colors are Red & White (standard), and other colors option available
Switch Track Material: Aluminum
Indicating Float Material: Aluminum
Specific Gravity: for standard type: 500~2900 kg/m³ (for special type with high temp.≥250°C, the Sp.Gr. must be ≥800kg/m³)
Indicating Gauge Orientation Adjustable
Chamber Size: ø50 or ø60mm
HART® Communication: Available
Two Wire Transmitter with HART® Protocol:
–Galvanic Isolation
–Suitable for application in SIL 2 installations

Approvals:

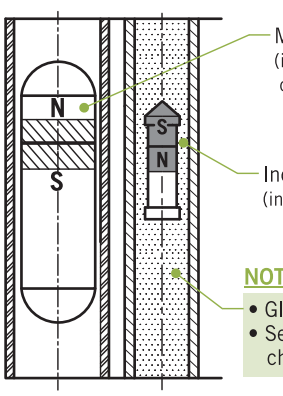
Switches with UL & CSA Recognized and File No. E41515.

Principle

■ Indicating Strips Type ■



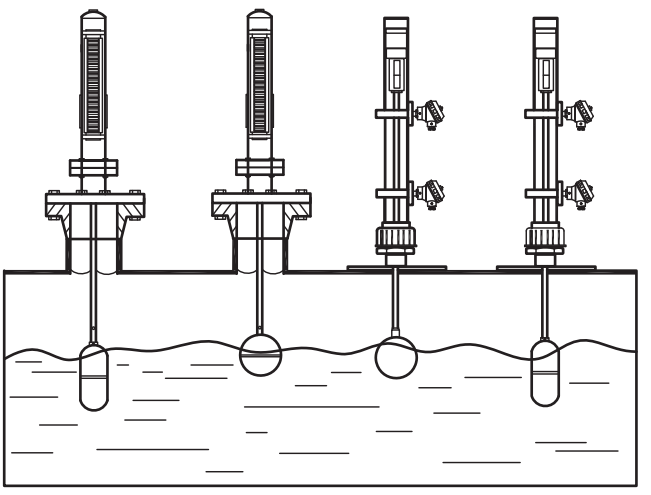
■ Indicating Float Type ■



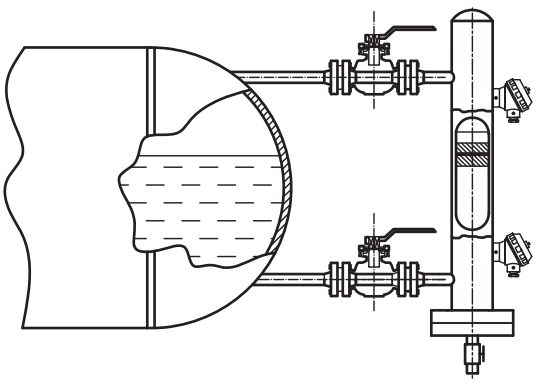
NOTE.
- Glass Tube Filled Oil.
- Separate to measuring chamber.

Installation

(A) Top Mounting



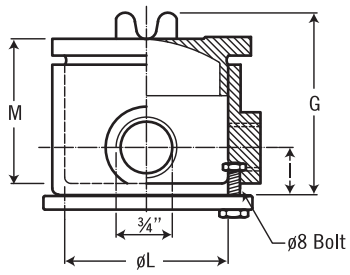
(B) Side Mounting

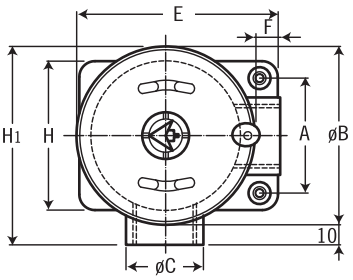


Switch Function

Micro Switch Type

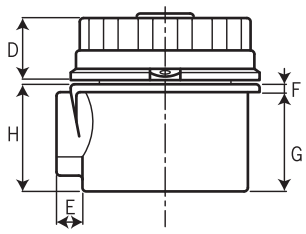
Type: MS-1: Weather Proof Type, IP66
MWS: Explosion Proof Type, *(Taiwan Explosion Proof Certification)*: Ex d IIB + H_2 T6 Gb
Case Housing Material: Aluminum alloy for MS-1 & MWS. (SS316 for MWS available)
Micro Switch: 1 x SPDT ; 2 x SPDT (one setting point) available
Rating: 3A/250VAC, 5A/125VAC, 4A/30VDC

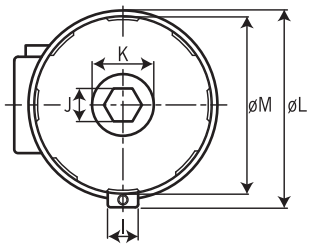




MS-1

Type	Dimensions unit:mm											Terminal Block (on request)
	A	øB	øC	E	F	G	H	H1	I	øL	M	
MS-1	68	100	38	110	13	80	92	100	24	88	68	4x4 mm²



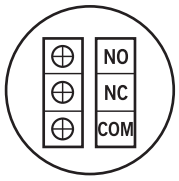


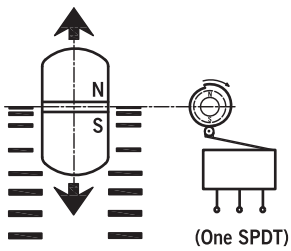
Type	Dimensions unit:mm									
	D	E	F	G	H	I	J	K	øL	øM
MWS	33	13.8	4.2	52.8	57	13.5	17.5	32.8	102.8	94.5

MWS

TD0400TJ
工電(2016)第00114號
(ITRI)2017第07-00105號

Wire Drawing





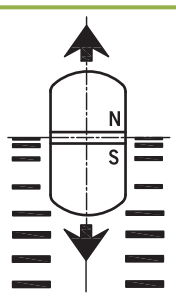
(Two SPDT)

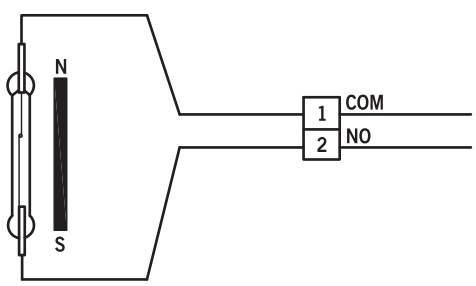
NC	6
NO	5
COM	4
NC	3
NO	2
COM	1

Option: 2 SPDT switch on request

Reed Switch Type (SPST)

Alarm Switch: Form A N.O. Type Bistable Switch
Rating: AC 125V 0.5A / DC 100V 10W /
Max. DC 250V < 40mA

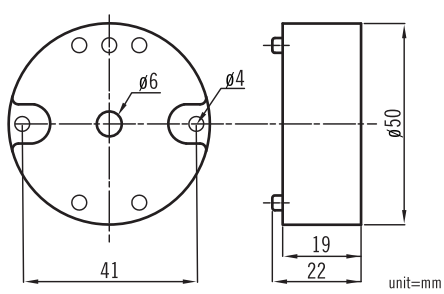




Transmitter Type

Potentiometer I/P
Output Signals: 4~20mA DC,
Load resistance R_L (max)=(Vs-10) x 50Ω (2-wire)
Input Range: 100Ω to 45KΩ (3-wire)
Output Adjustment Range: Zero adjustment 0~15%
Accuracy: ±0.1% F.S (at 23°C)
Linearity: ±0.1% F.S
Supply Voltage: 10~30V DC
Temp. Coefficient: ±0.02% / °C
Operating Temp.: -5~+70 / °C
Operating Humidity: 0~90% RH
Terminal: DIN Type
Installation: Head and Wall Mounting
Case Material: Nylon 6 resin (Black)
Weight: about 50 grams

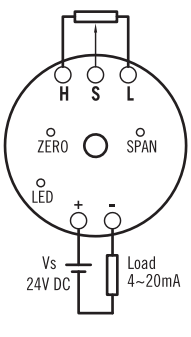
Dimensions

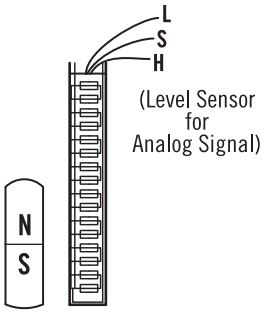


GL-T

*HART® Communication: Available
Two Wire Transmitter with HART® Protocol
– Galvanic Isolation
– Suitable for application in SIL 2 installations

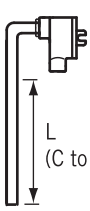
Sketch Terminal & Level Indicating Strip





Level Sensor Unit

Model: LTG



TD0400TJ
工電(2016)第00298號
(ITRI)2017第07-00184號

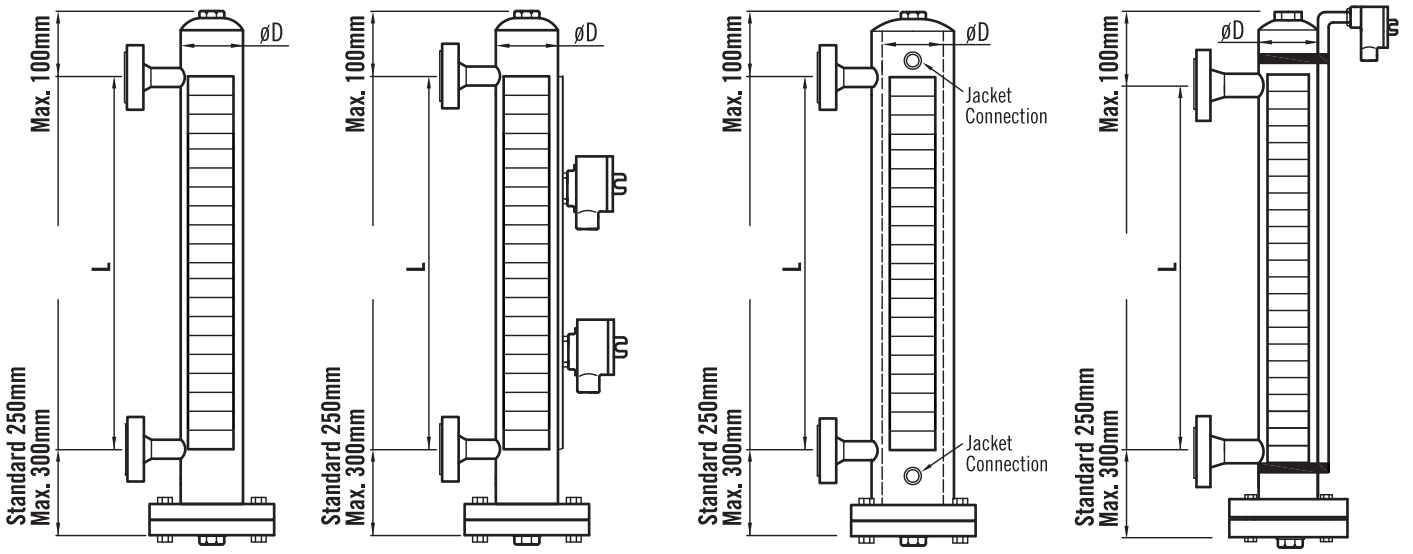
Features

– ISO 9001 and CE certificate
– High immunity to external noise
– LED indication and DC power polarity protection
– High reliability, lasting durability and low cost

Application

– Position of valve, damper and other devices

M Standard Type–Side Mounting Series (*D=ø50 or ø60mm available*)



Model: M Standard Type

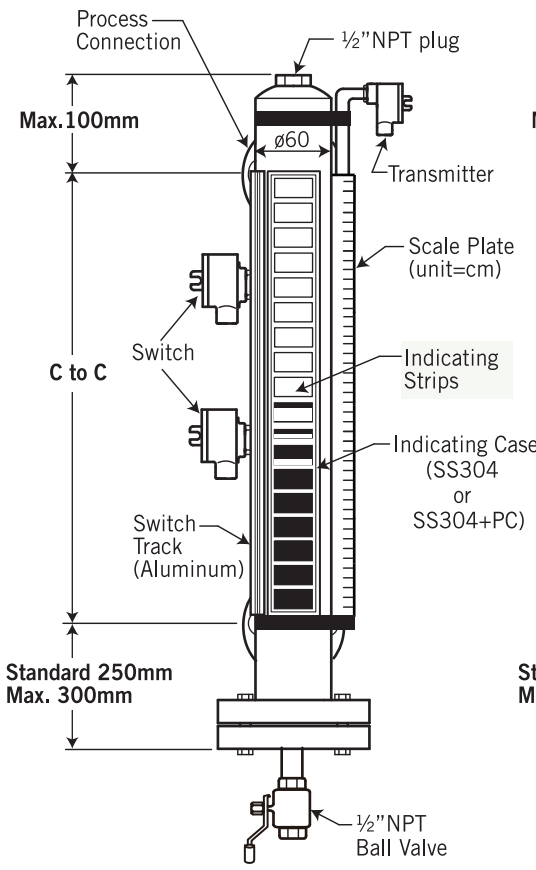
Model: MS Switch Type

Model: MJ Heater Jacket Type

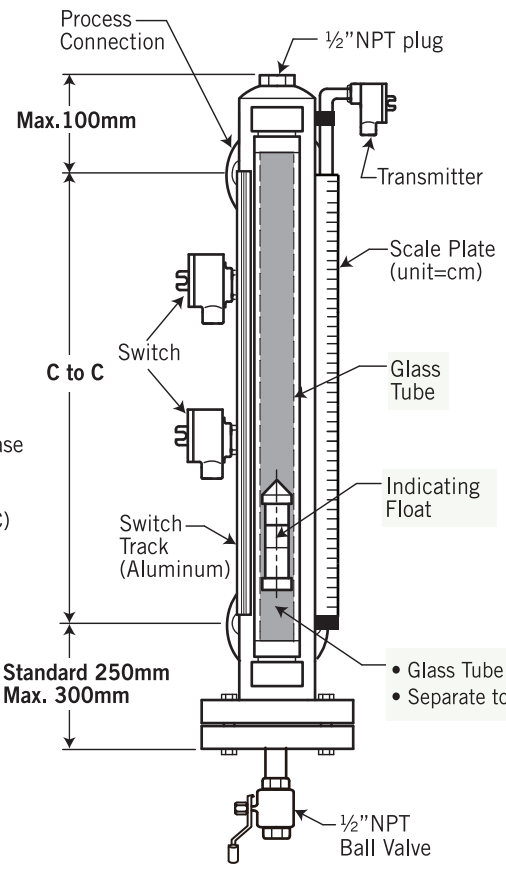
Model: MT Transmitter Type

Assembly Parts Drawing

■ Strips Indicating Type ■

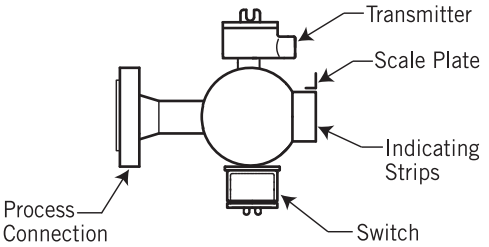


■ Float Indicating Type ■

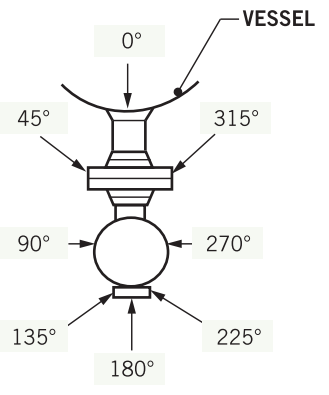


- The indicating float is sealed in the inside of the glass tube, and the inner filled with silicon oil.
- The indicating float is following with the measuring float to rise up or fall down which is based on the principle of magnetic coupling.
- This type has the advantage of a good isolation dust function.
  (Ex.: The level gauge installed at the chemical field, the indicating strips will be easily dirty by air dusts or erosion by corrosion fluid to damage. And, the float indicating type can be avoid this situation.)

Top View



Orientations: Reference for Element (Indicator Strips, Transmitter, Switch)



WWW.NEW-FLOW.COM • TEL: 886-7-8135500 • FAX: 886-7-8225588 • Email: info@new-flow.com

Ordering Information

M Type	Code	Model					
	M	Standard Type	MS	Switch Type	MJ	Heater Jacket Type	
	MT	Transmitter Type Indicating + 4~20mA			MTH	Indicating + HART (4~20mA)	

Code	Connection															
A	½"	B	¾"	C	1"	D	1½"	E	2"	F	3"	G	Option			

Code	Connection Rating
	(1) PTM (2) NPTM (3) JIS 10K (4) JIS 20K (5) ANSI 150# (6) ANSI 300# (7) PN16 (8) PN40 (9) Option

Code	Material of Wetted Parts
	(A) SS304 (B) SS316 (C) SS316L (D) PVC (E) PP (F) PE (G) PVDF (H) Option

Code	Material of Indicating Case
	(2) SS304 (3) Borosilicate Glass (only for indicating float type) (4) SS304+PC [Hermetically Sealed], Class IP68

Code	Material of Indicating Strips (or Float)		
A	Plastic (PBT)	C	Brass w/painting
F	Aluminum Float (only for indicating float type)		

Code	Switch Type						
1	Reed Switch	2	Micro Switch	3	Option	0	Without Switch

Code	Switch Point
	(A) 1 (B) 2 (C) 3 (D) 4 (O) Without

Code	Transmitter Type
1A	4~20mA Transmitter, Resolution Accuracy: ±12mm (standard)
1B	4~20mA Transmitter, Resolution Accuracy: ±6mm
2	Without

Code	Scale Plate		
A	Yes	B	Without

Code	Protection Class for Switch or Transmitter Type
0	Without
1	Weather Proof, IP66
2	Explosion Proof (**Ex. Certificate on Housing only**)
2M	Explosion Proof: Ex d IIB + H_2 T6 Gb (Model: MWS–**Type Examination Certificate of Qualification**)
2T	Explosion Proof: Ex d IIB + H_2 T6 Gb (Model: LTG–**Type Examination Certificate of Qualification**)

Code	Specific Gravity
	Please directly fill out the Sp.Gr. in the of liquid order code.

Code	Center to Center Length (L)
	Please directly fill out the length you required.

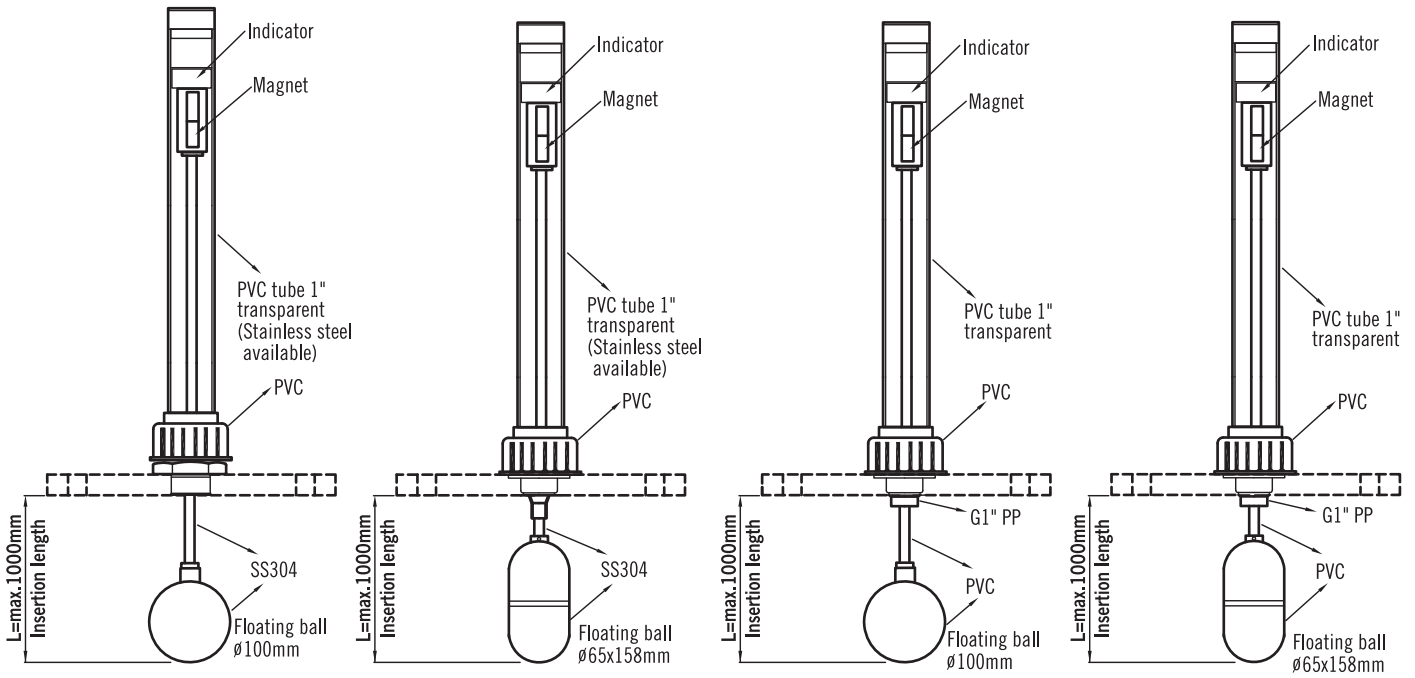
Code	LCD Display (for MT and MTH)
D	With (D-1000, Ex. Type)
N	Without

Code	Setting Point & Switch Acting Functions
	Please fill in the requested length and float rised ↑ON or fall down ↓ON. ℓ1=____mm☐ON ℓ2=____mm☐ON ℓ3=____mm☐ON ℓ4=____mm☐ON

M Type																Complete Ordering Code

WWW.NEW-FLOW.COM • TEL: 886-7-8135500 • FAX: 886-7-8225588 • Email: info@new-flow.com

MP Type–Top Mounting Transparent Series



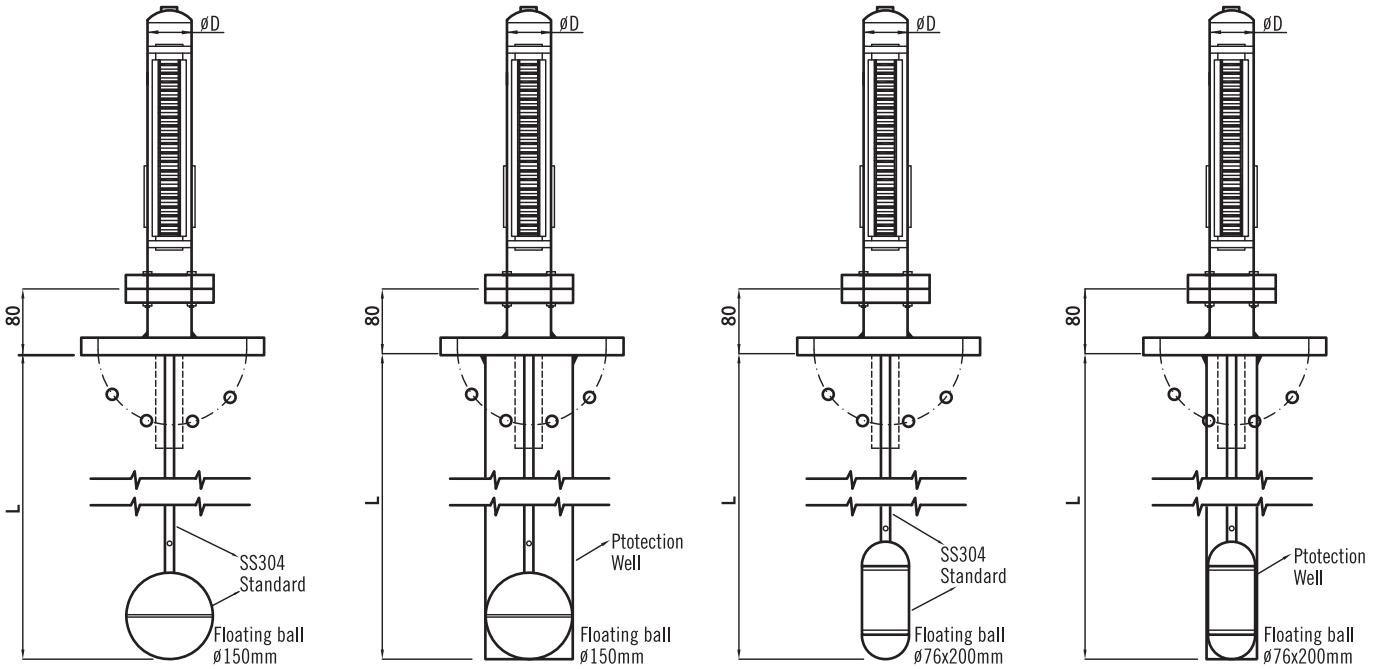
Ordering Information

MP Type	Code	Model							
		MP-1	MP-2	MP-3	MP-4				
	Code	Connection							
	A	3"	B	4"	C	Option			
	Code	Connection Rating							
		(1) PTM (2) NPTM (3) JIS 10K (4) ANSI 150# (5) PN16							
	Code	Material of Wetted Parts							
	A	SS304	B	SS316	C	SS316L	D	PVC	E	PP	F	PE	G	PVDF	H	Option
	Code	Material of Indicating Case							
	1	PVC Tube Transparent	2	Blind SS304	3	Blind SS316			
	Code	Switch Type							
	1	Reed Switch	2	Micro Switch	3	Option	0	Without Switch	
	Code	Switch Point							
		(A) 1 (B) 2 (C) 3 (D) 4 (O) Without							
	Code	Transmitter Type							
	1A	4~20mA Transmitter, Resolution Accuracy: ±12mm (standard)							
	1B	4~20mA Transmitter, Resolution Accuracy: ±6mm							
	2	Without							
	Code	Scale Plate							
	A	Yes	B	Without					
	Code	Switch or Transmitter Housing							
		(0) Without (1) Weather Proof, IP66 (2) Explosion Proof							
	Code	Specific Gravity							
		Please directly fill out the Sp.Gr. in the of liquid order code.							
	Code	Setting Point & Switch Acting Functions							
		Please fill in the requested length and float rised ↑ON or fall down ↓ON. ℓ1=____mm☐ON ℓ2=____mm☐ON ℓ3=____mm☐ON ℓ4=____mm☐ON							

MP Type													Complete Ordering Code

WWW.NEW-FLOW.COM • TEL: 886-7-8135500 • FAX: 886-7-8225588 • Email: info@new-flow.com

MB Type–Top Mounting Series



*D=ø50 or ø60

Ordering Information

MB Type	Code	Model				
		MB-1	MB-2	MB-3	MB-4	MBH (Indicating + HART (4~20mA), no alarm switch available)

Code	Connection				
A	3"	B	4"	C	Option

Code	Connection Rating
	(1) JIS10K (2) JIS 20K (3) ANSI 150# (4) ANSI 300# (5) PN16 (6) PN40 (7) Option

Code	Material of Wetted Parts														
A	SS304	B	SS316	C	SS316L	D	PVC	E	PP	F	PE	G	PVDF	H	Option

Code	Material of Indicating Case		
2	SS304	4	SS304+PC (class IP68)

Code	Material of Indicating Strips		
A	Plastic (PBT)	C	Brass w/painting

Code	Switch Type						
1	Reed Switch	2	Micro Switch	3	Option	0	Without Switch

Code	Switch Point
	(A) 1 (B) 2 (C) 3 (D) 4 (O) Without

Code	Transmitter Type
1A	4~20mA Transmitter, Resolution Accuracy: ±12mm (standard)
1B	4~20mA Transmitter, Resolution Accuracy: ±6mm
2	Without

Code	Scale Plate		
A	Yes	B	Without

Code	Switch or Transmitter Housing
	(0) Without (1) Weather Proof, IP66 (2) Explosion Proof

Code	Specific Gravity
	Please directly fill out the Sp.Gr. in the of liquid order code.

Code	LCD Display (for MBH)		
D	With	N	Without

Code	Setting Point & Switch Acting Functions
	Please fill in the requested length and float rised ↑ON or fall down ↓ON. ℓ1=____mm☐ON ℓ2=____mm☐ON ℓ3=____mm☐ON ℓ4=____mm☐ON

MB Type															Complete Ordering Code