

NEW-FLOW

**ISO 9001
REGISTERED**

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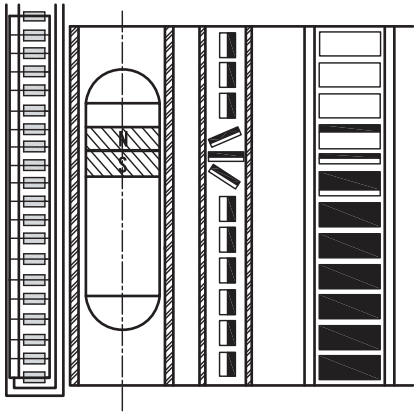
Instruction Manual

MAGNETIC LEVEL GAUGE M-SERIES



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INSTALLATION



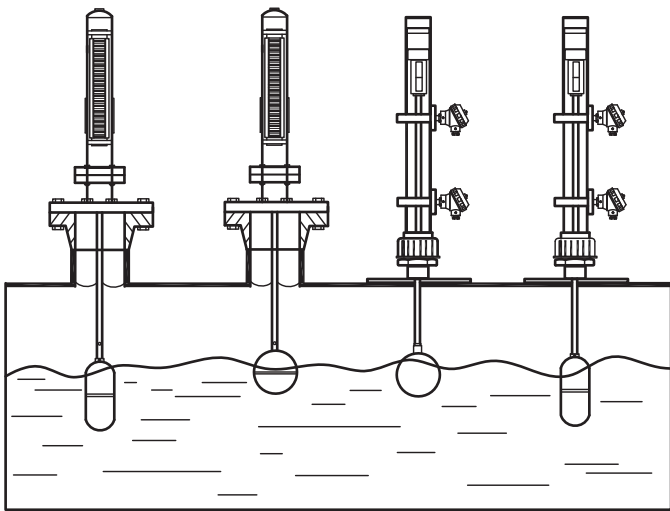
原理 Principle & Application

當液體具有危險性或腐蝕性，使用環境在高溫高壓的狀態下，可選擇使用此型式來偵測液位。其構造為液位計裡有一浮球並內裝磁鐵能隨著液位高低起伏，指示器是用鋁片或塑膠片組成安裝於液位計外，可自由旋轉360度隨著裝有磁鐵的浮標旋轉，若有浮標上升經過時旋轉180度，使紅色板向外，即液位高度；反之為白色。

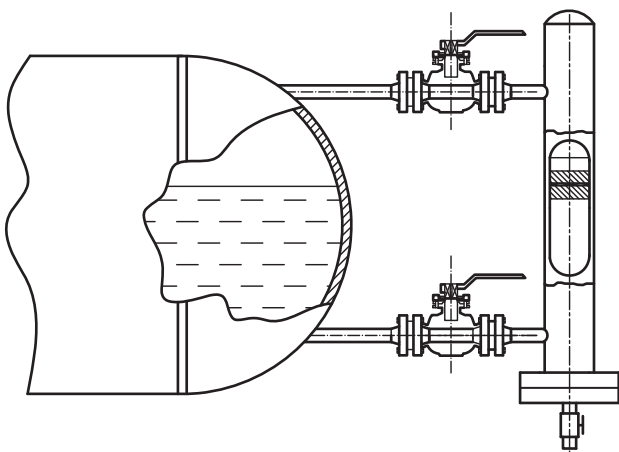
Magnetic level gauge is your choice to measure level under the high temperature and high pressure operating environment when corrosive or hazardous liquids are used. Magnetic level gauge measures liquid level by the movement of the magnetic float installed inside the gauge. The indicators can rotate 360 degrees accordingly to the position of the magnetic float. If the float rises, the indicators will turn 180 degrees to reveal the red sides to indicate the level of the operating liquid.

配合設備的安裝方式 Installation

A. Application For MB & MP Series



B. Application For M Series



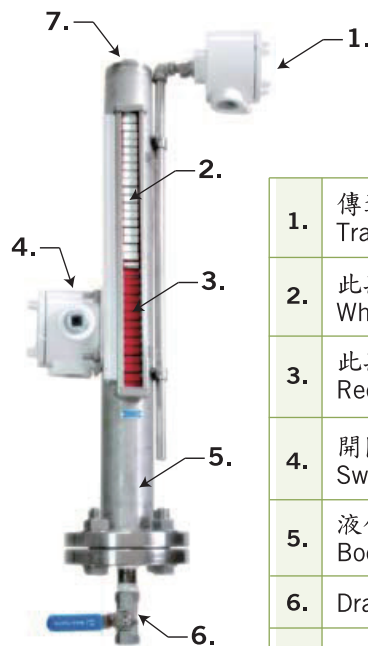
安裝及使用說明

Installation & Operation Instruction

1. 須加裝關斷閥以利維修，使用時2只關斷閥需打開。
Install shutoff valves for easy maintenance. Open two shutoff valves before operating the level gauge.
2. 拆解時，排放閥需打開，使液位計內之流體全部洩放。
Before uninstalling the level gauge, open the relief valve to release liquid inside the gauge.
3. 可加裝指示板，其顏色要鮮明，以利目視。
A scale can be installed for additional charge.
4. 如長度太長可分二段式或多段式安裝。
If the length is too long, installation can be done in two or multiple stages.

液位計配件的位置圖

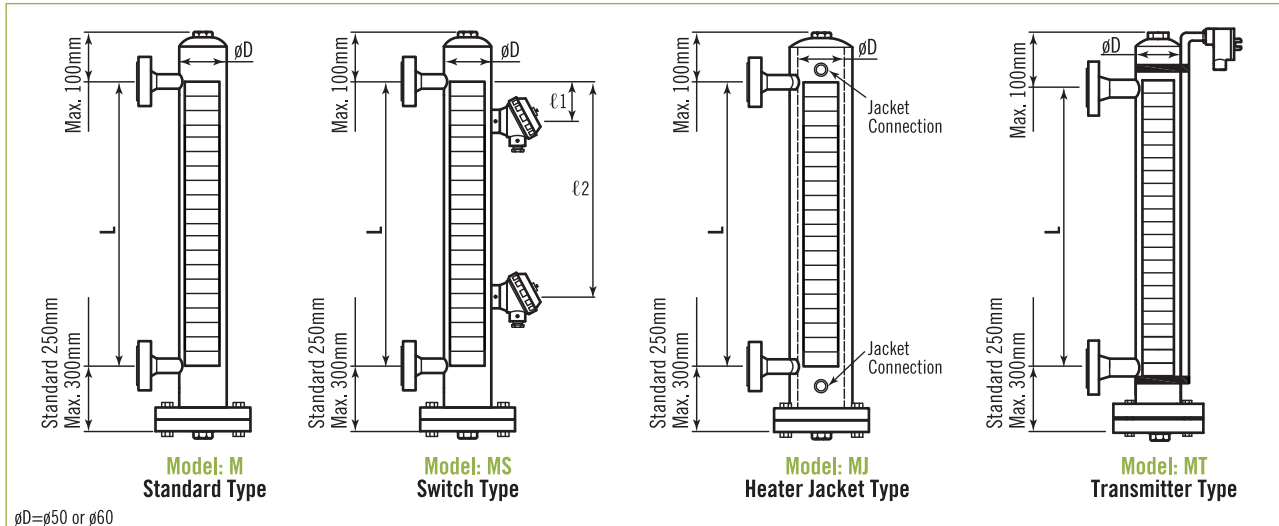
Parts List for Magnetic Level Gauge



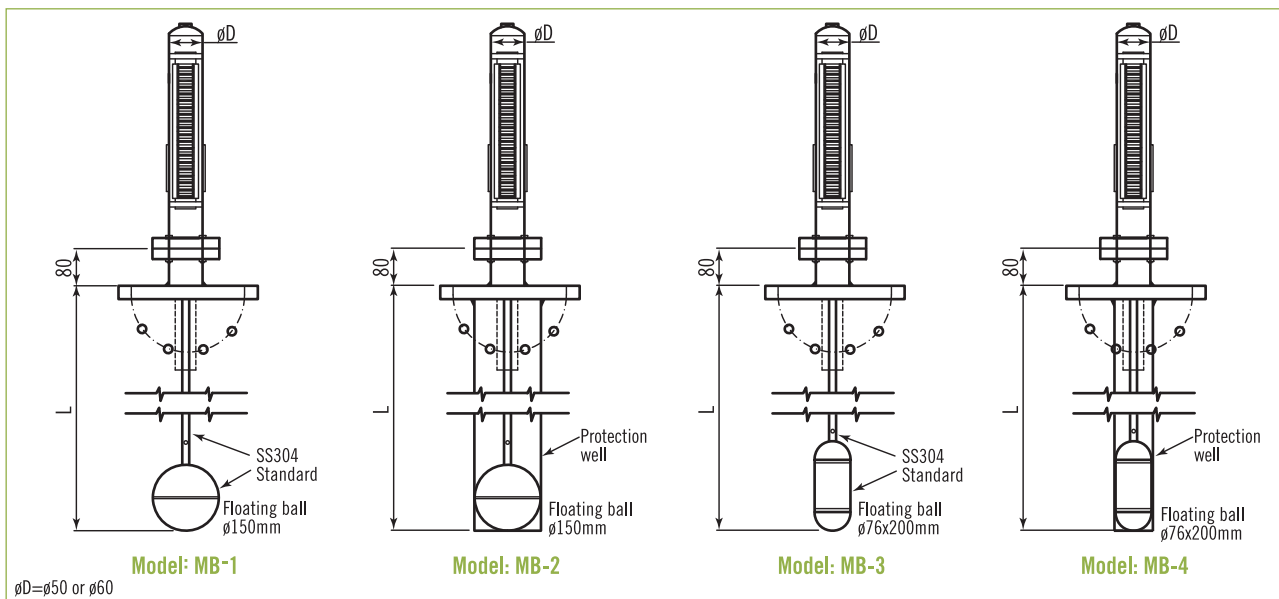
1.	傳送器 Transmitter Housing
2.	此段顯示沒有液位 White Strips- No Liquid
3.	此段顯示有液位 Red Strips- Level of operating liquid
4.	開關在左側 Switch Housing
5.	液位計本體 Body of Level Gauge
6.	Drain Valve, ½" NPT ball valve
7.	Vent, ½" NPT plug

INSTALLATION

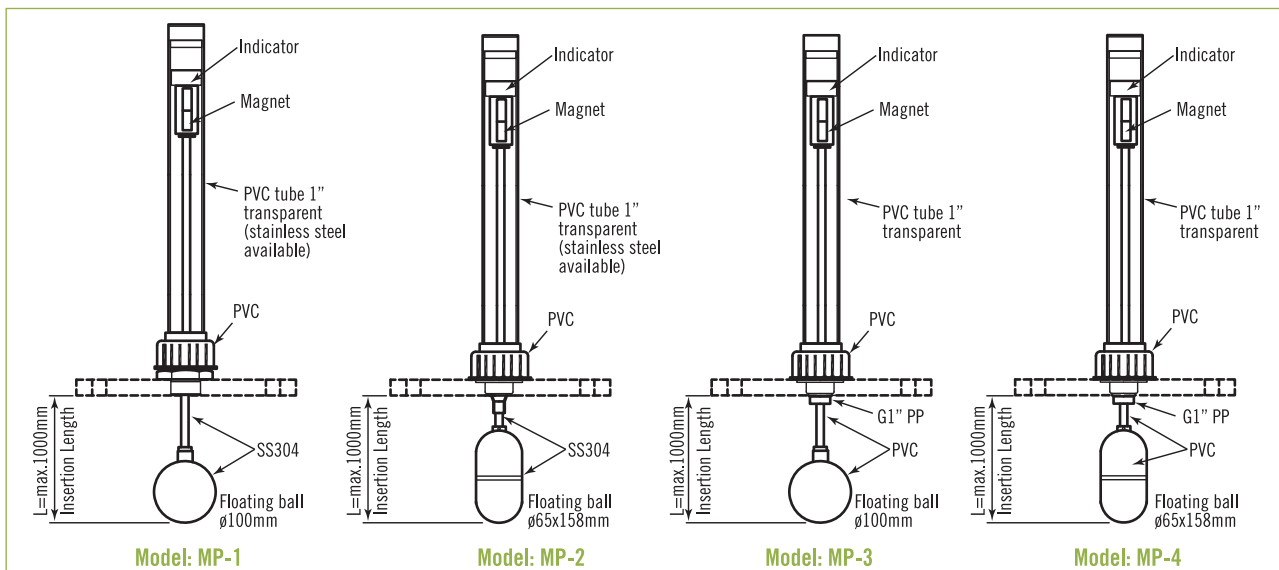
M系列之基本型號 M Series Basic Models



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MP系列之基本型號 MP Series Basic Models



INSTALLATION

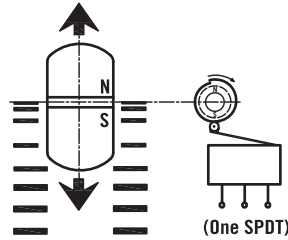
附屬配件說明 Accessories – Switch Function

Micro Switch Type

Model: MS-1: Weather Proof type
MXS: Explosion Proof type
Case Housing Material: Aluminum alloy
Protection: Weather Proof, IP66
Explosion proof, EEx d IIC-T6, II 2G, IP66;
Micro Switch: 1xSPDT;
2x SPDT (one setting point) available
Rating: 3A/250VAC, 5A/125VAC, 4A/30VDC



Wire Drawing

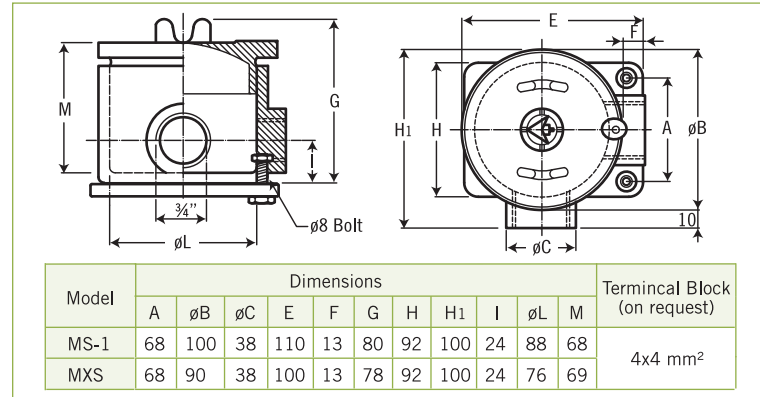


(Two SPDT)

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

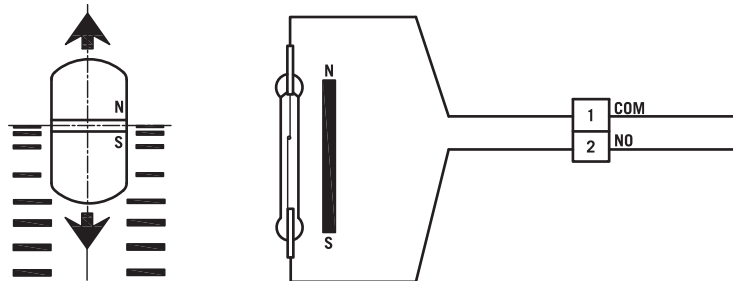
Option: 2 SPDT switch on request

Dimensions



Reed Switch Type (SPST)

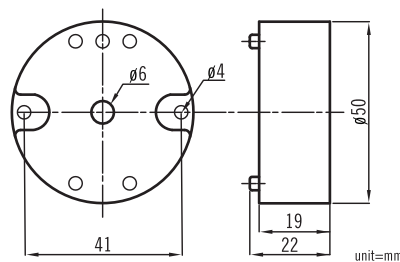
Alarm Switch: form A N.O. type bistable switch
Rating: AC 125V 0.5A /DC 100V 10W
/ Max. DC 250V < 10mA



Transmitter Type

Potentiometer I/P
Output Signals: 4~20mA DC,
Load resistance R_L (max)=(V_s-10)x50Ω (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

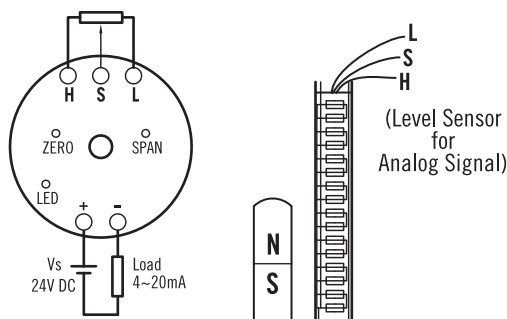
Dimensions



GL-T

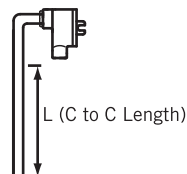
*Hart® communication: available
Two wire transmitter with Hart® protocol
– Galvanic isolation
– Suitable for application in SIL 2 installations

Sketch Terminal & Level Indicating Strip



Level Sensor Unit

Model: GL-T-S-T-R-L
(C to C Length)



Features

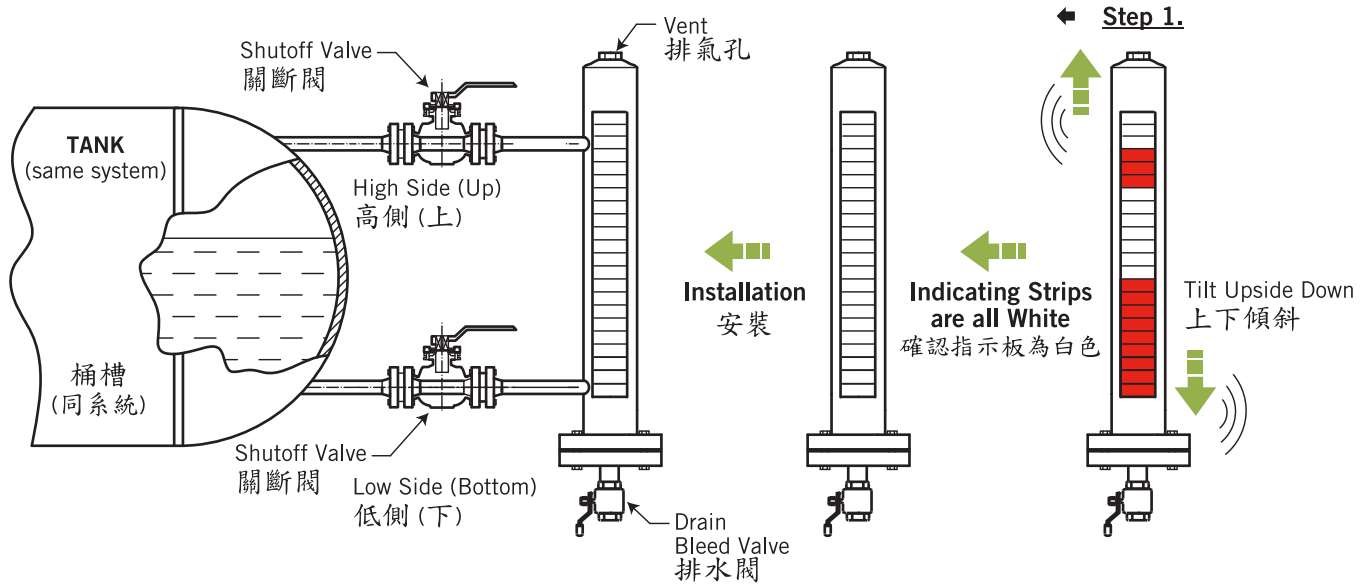
- ISO 9001 and CE certificate
- High immunity to external noise
- LED indication and DC power polarity protection
- High reliability, lasting durability and low cost

Application

- Position of valve, damper and other devices

INSTALLATION

安裝前注意事項 Notice Before Installation



1. 安裝液位計之前，請將液位計上下傾斜，使指示板旋轉為白色。
Tilt the level gauge upside down and back before the installation. It will help the indicating strips to rotate in right position (white color).
2. 請檢查排氣閥及關斷閥是關閉的。
Check the bleed valve and shutoff valve are closed.
3. 即可安裝液位計。
Then, install the level gauge.
4. 將2只關斷閥打開，即可操作液位計。
Open 2 shutoff valve before operating the level gauge.
5. 特別注意事項：安裝液位計時，請注意上下的取出口「務必」要在同一系統(指同一槽體)。內部靜壓力才會相同，且液位方可顯示。反之，若上下取出口的內部靜壓力不同；上>下: 液位上不去即無法顯示。下>上: 液位則會上升到另一系統。

Please NOTE.: Before install the level gauge, please notice that the High side and Low side "must" be installed on the same system (means the same tank). And, the inner static pressure is equivalent, and then the level will be raised normally. On the other hand, if the high side and low side are Not installed on the same system, which means the inner static pressure is different, then, High pressure > Low pressure: level unable to raise and not working ; Low pressure > High pressure: the level will raised over to another system.

移動開關設定步驟 Steps of Adjust Switch Position



1. 上圖為翻板式液位開關內部裝置圖，原理為利用浮球磁力帶動滾輪。
The terminal is installed inside of switch housing, and the liquid level is measured by movement of the magnetic float.
2. 利用板手將軌道上的開關螺帽放鬆。
Use a wrench to release the screw nuts which are fixed the switch on the track.
3. 螺帽放鬆之後，開關可沿著軌道上下移動，到達欲設定的高度後，使用三用電錶檢測COM, NC, NO端子，確認其是否正常運作。
The switch can move up and down along the track after release the screw nuts, please adjust it to the exact request position by yourself and then make the screw tightly. After the adjustable, use a multimeter to confirm the terminal of COM, NC, NO are working normally.