# WM120C Submersible Liquid Level Transmitter

Based on piezeresistive technology, WM120C Submersible Liquid Level Transmitter is designed for gauge (relative) pressure application in liquid level measurement. These level transmitters are made from 316L stainless steel with rigid and robust construction, cable with vent hose for submersible applications. WM120C liquid level transmitters provide amplified output signals such as 0~5 V or 4~20mA with an option of HART protocol. These transmitters can also be equipped with a 4½ digits LCD field display. WM120C is compact and easy installed. It can be applied directly into the water. The protection cap with a small hole not only protects the diaphragm, but also let the liquids contact the diaphragm freely. The exquisite sealing technology as well as good assembly techniques guarantee WM120C´s outstanding quality and performance. The product has a waterproof cable with vent hose which is designed for submersible applications. WM120C is designed with IP68 protection which is widely applied in petroleum, chemical industry, medicine, metallurgy, hydrology exploration etc.

## SPECIFICATIONS

Measuring range: 0~0.5mH2O...200mH2O
Overload pressure: 200%FS
Output signal: 4~20mA (HART protocol optional), 0~5V, 0~10V, 1~5V etc.
Accuracy: 0.25%FS
Load resistance: RL = (U-12V)/0.02A (4~20mA current output) U-loop voltage (V)
Long term stability: <0.2%FS/year
Power: 12~36V
Compensated temperature range: -10~80°C
Material of pressure membrane: 316L SS
Electrical connection: M20 × 1.5
Environment protection: IP68 (probe and cable); IP65 (housing)

## ORDERING CODES

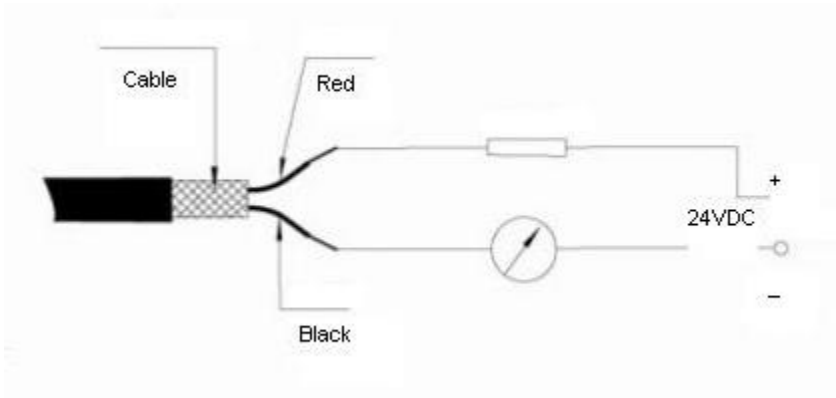
| | | |
|---|---|---|
| WM120C | Pressure Transmitter | |

| | | |
|---|---|---|
| | Style | 1: Integrated<br>2: Split<br>D: Air conduct style for high temperature (-35~250℃) |
| - | Housing type | B：WM120B Housing<br>BE：WM120BE Housing<br>H3：WM1351 Housing |
| - | Level range | e.g. 0-1000 mmH2O etc. |
| -LC | Length of cable | e.g. 0-1500 mm etc. |
| - | Probe material | -S4: 304 Stainless Steel<br>-S6: 316 Stainless Steel<br>-US: specified |
| -O | Signal Output | 1：4-20 mA 2-wires<br>2：4-20 mA 4-wires<br>3：4-20mA + HART<br>4：0-5V<br>5：0-10V<br>6：1-5V<br>7：1-10V<br>8：0-10mA<br>9：0-20mA<br>11：RS485<br>0: specified |
| -D | Display | 1：Without<br>2：LED<br>3：LCD |
| -E | Ex-proof | 1：Nope<br>2：Ex-proof |
| -A | Installment type | 1: thread<br>2: flange<br>3: bracket<br>4: customer specified |
| - | Size of installment | e.g. for A1, 1’BSP etc.;<br>for A3, -2” or 3” etc. |

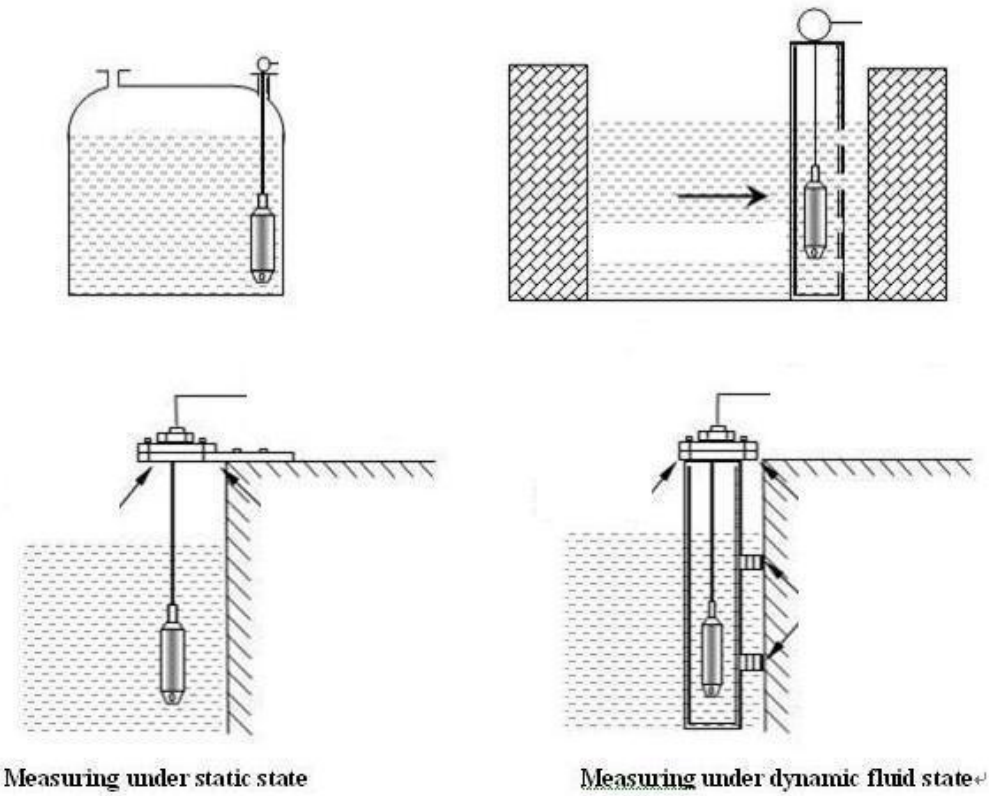
Notes:

- Please indicate the density and the measuring range of the liquid when ordering.
- If products are installed in more t thunderstorm areas, the order should be marked "anti-thunder". Recommend that users should install lightning protection in the field device, and make sure goods and power ground.
- The cable should be selected 1-2 meters longer than measuring range.

**WM120C-1:**




**MOUNTING:**

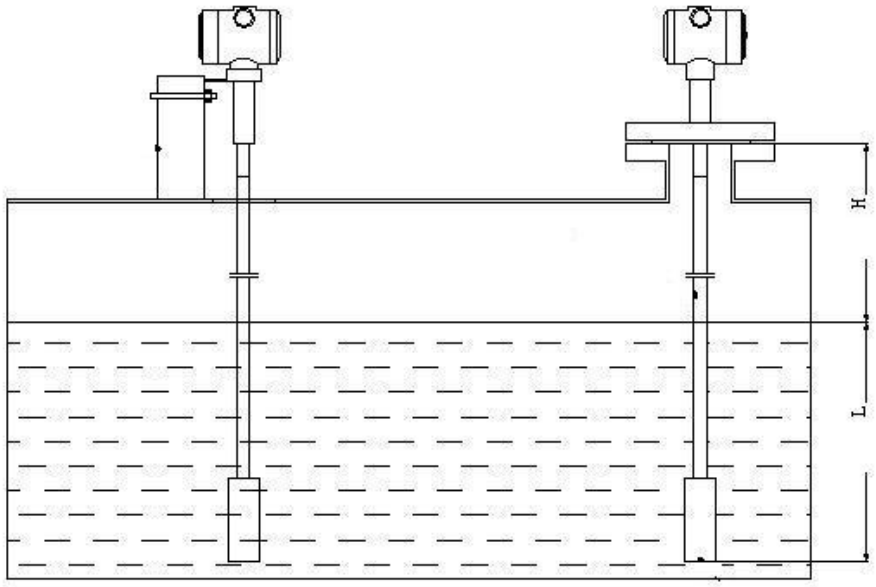


Measuring under static state

Measuring under dynamic fluid state

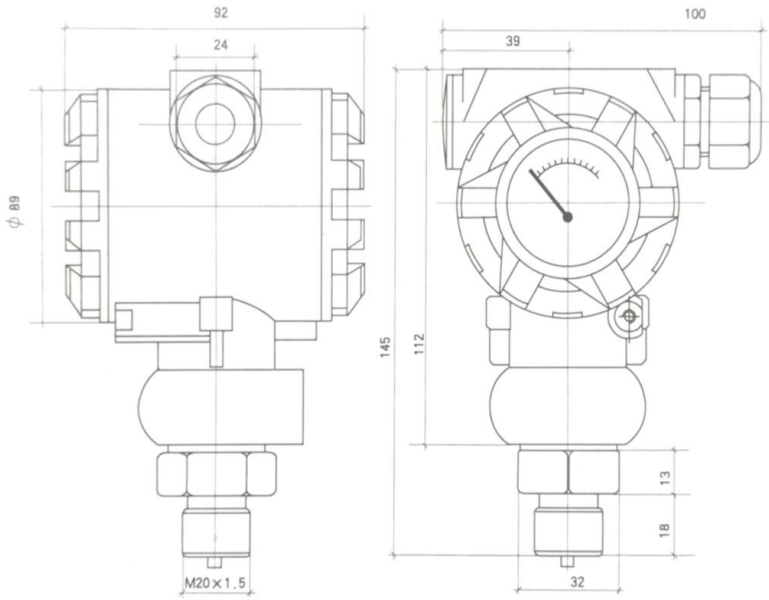
**WM120C-D Style for High Temperature Liquid:**

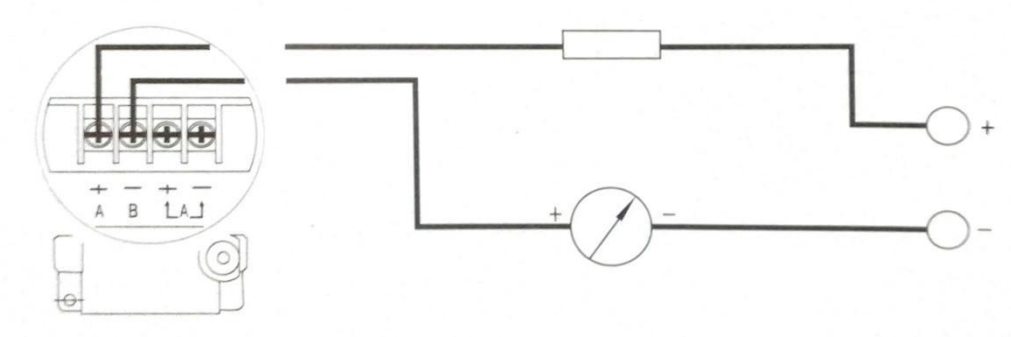
With the sensor and electronic circuit installed in connection housing, model WM120C-D Level Transmitter applies gas sealed in the pipe and tube to conduct liquid pressure to the pressure sensor. Avoiding direct contact between medium and pressure sensor, MC20CD can be widely used to measure high temperature, corrosive liquid or sewage etc.



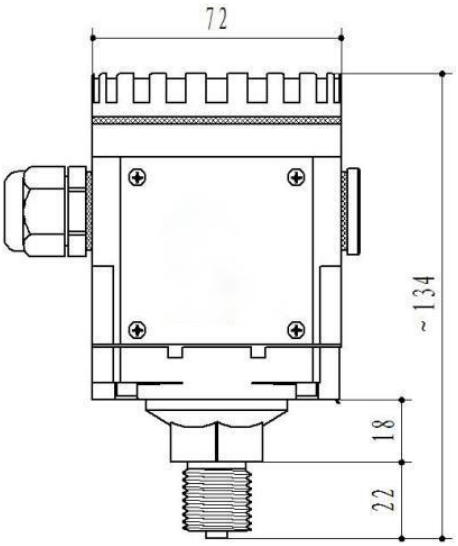

## HOUSING AND DIMENSION

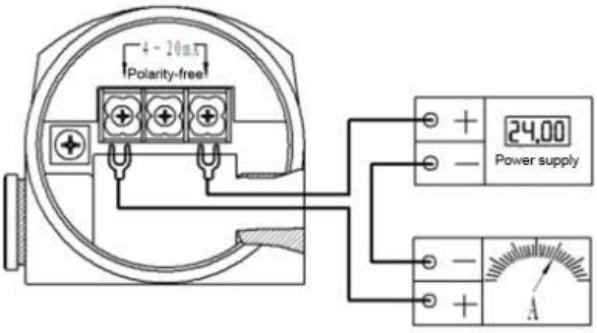
WM120B Housing：






WM120BE Housing：




## BREIF OPERATION OF PRESSURE TRANSMITTER DIGITAL DISPLAY METER

1), In field application, under zero pressure, you may press and hold the "Z" key for 3 seconds to reset zero automatically.

2), Changing transmitting range without calibrating pressure exerted:

Press "set" key → display "lock" → "△" → change to "0003 "→" set "→ DS-I →" set " → change to the lower limit value →" set "→ DS-H →" set "→ change to the upper limit value of measurement (through" Z △ "two keys) →" set "→ end → OK


3), Recalibrating transmitting range with standard pressure exerted (please note that this is the calibration of the transmitter at the factory. Generally, there is no need to operate on site to avoid any operation fault)

Press "set" → display "lock "→ "△" → change to" 0066 " (through" Z △ "two keys)→ "set" → Sn → "set" → 2 → "set" → AD-L →"set"→ lower limit pressure exerted at this time, until displaying value is stable (ignore whatever the value is)→ "set" → AD-H → "set" → upper limit pressure exerted at this time, until displaying value is stable (ignore whatever the value is) → "set" → SOIL → "set"→calibrate 4mA by standard ammeter zero ( through "Z △" two keys )→ "set" → SOIH → "set"→calibrate 20mA by standard ammeter zero ( through "Z △" two keys ) → "set" → DS-L → input the lower limit value of transmitter → "set" → DS-H → "set" → input the upper limit value of transmitter → "set" → DP → "set" → change the position of decimal point through "Z" → "set" → end → OK

Notes:

For example, if you cannot acquire -1bar for pressure exertion, you may recalibrate the range into 0~2 bar via above 3) step, then changing transmitting range to -1bar~1bar via above 2) step.

Generally, you may only use above 2) step to change transmitter range, and there's no need for 3) step.