HANIC HN-L Flow Switch incorporates thermal technology that operates on the law that fluids absorb heat. A reference RTD measures the fluid temperature. The active element is heated above the fluid temperature and the electronics measures the differential temperature. As flow increases, the molecules of the fluid cool the heated element resulting in a reduction of the temperature differential. An RTD contained in the active element measures this differential temperature reduction and the electronics translates this into a flow signal. A potentiometer is used to set the set-point.

**Areas of Application :**

Filters, dozing units, pump flow control, cooling water flow control, on flow control, air flow control,

# HN-L THERMAL FLOW SWITCH

**HN-L1** Display with 6 LED
**HN-L2** Display with Dijital
**HN-L3** Display with 2 LED

**Advantages:**

* LED indication
* Stainless steel
* No moving parts, easy to maintain
* Various length of sensors can be chose
* Easy to install
* The set-point can be adjust continuous
* No pressure loss

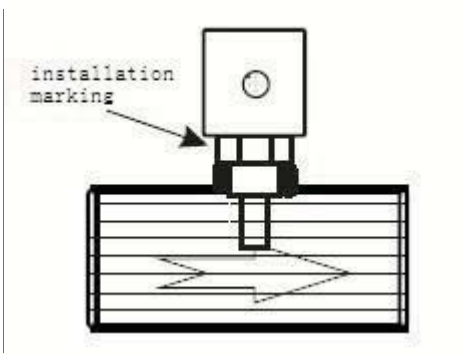
CE

**Technical Specification :**

| | |
|---|---|
| Measure range | Water:3--300cm/s; Air:200--3000cm/s; Oil:3--300cm/s |
| Accuracy | ±1~±10cm/s |
| Settling time | 3 minutes |
| Pressure | 100 Bar |
| Media temperature | -20 to 80℃ |
| Connection | G1/2, G1/4 Male thread / M18 Female thread |
| Output signal | PNP<br>NPN<br>Relay<br>4-20mA |
| Power | 24VDC, 110VAC, 220VAC |
| Sensor length | 15mm, 20mm, 30mm, 40mm, 60mm |
| Consumption current | <60mA |
| Setting | Potentiometer, 2 Keys |
| Response time | 2(2~10)s |
| Load | Current:250mA Relay:30VDC/5A,220VAC/5A |
| Max. temperature gradient of medium | 300K/min |
| Output protect | Reverse/Short/Overload |
| Protection | IP67 |
| Electrical Connection | M12 Connector, 5 pins or 8 pins |
| Material | Sensor:AISI316L Body:AISI316L |

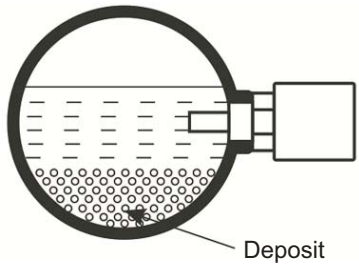
## Flow Switch Installation Diaghram :

### Horizontal installation



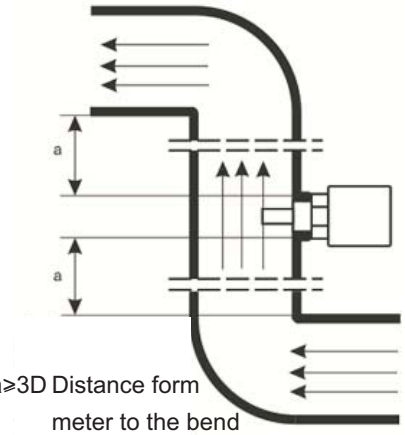

Anttention:installation marking of flow switch is opposite to running water

### Side installation



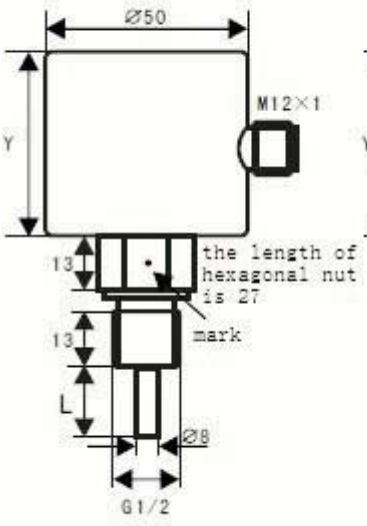

If there is deposit in the pipe, please use side mount

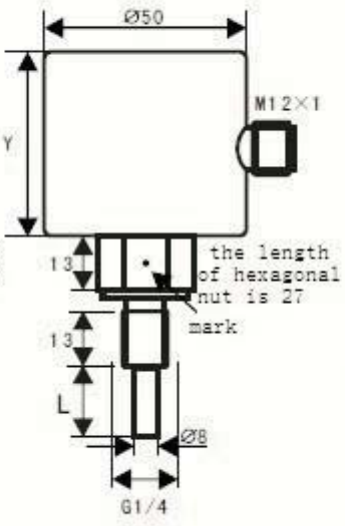
### Installation with bend pipe

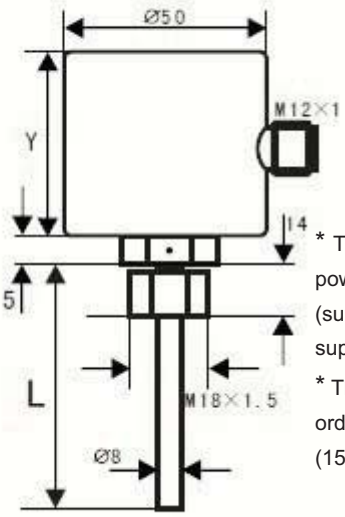



a≥3D Distance form meter to the bend
D Pipe diameters

## Measurements:



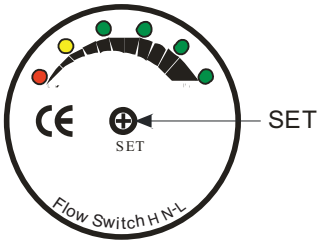



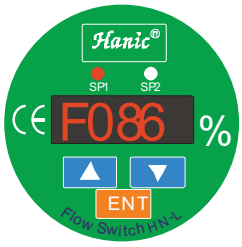

* The length of Y is decided by power supply mode.
(supply:24VDC, Y:45mm;
supply:24~265VAC, Y:60mm)

* The length of L is decided the ordered type
(15mm/20mm/30mm/45mm/60mm)

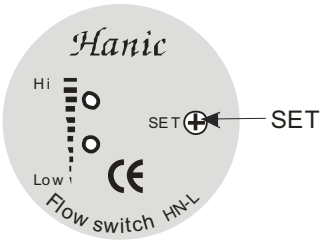
## Front Panel:




HN-L1



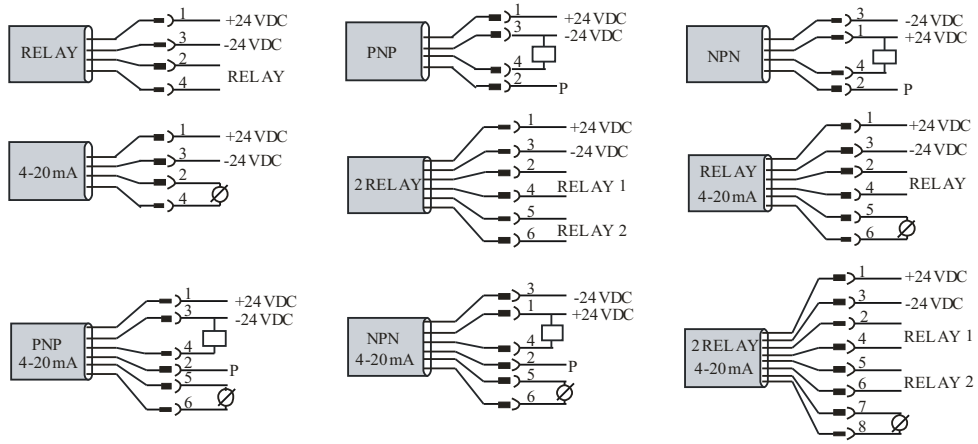

HN-L2

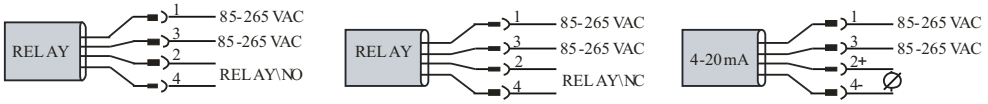



HN-L3

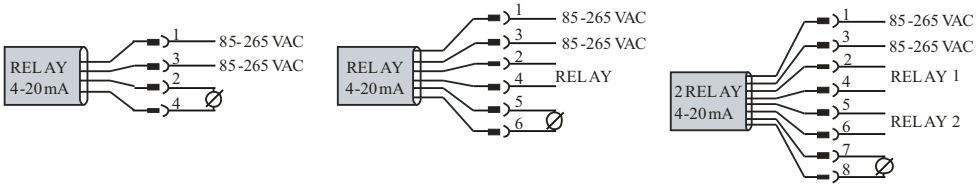
## Electrical Connection :

24 VDC

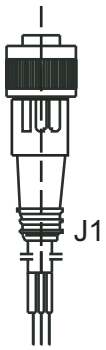


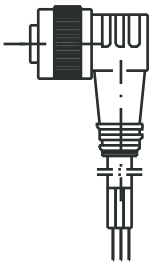




85-265 VAC




| M12 CONNECTOR | Pin | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|---|
| | Color | Brown | White | Blue | Black<br>Gray | Red | Yellow | Green | Pink |



## Order Form:

### 1 MODEL

HN-L1 Display with 6 LED | HN-L2 Display with Digital | HN-L3 Display with 2 LED

### 2 CONNECTION

| | |
|---|---|
| G 1/2” Male Thread | G1 |
| G 1/4” Male Thread | G2 |
| M18x1,5 Female Thread | G3 |
| | NA |

### 3 STEM LENGHT

| | | | |
|---|---|---|---|
| 15mm | 15 | 40mm | 40 |
| 20mm | 20 | 60mm | 60 |
| 30mm | 30 | Özel Boy | NA |

### 4 POWER SUPPLY

| | |
|---|---|
| 24 VDC ...F | 110 VAC - Y |
| 85 - 265 VAC - High Active - H | 220 VAC - T |
| 85 - 265 VAC - Low Active - L | |

### 5 OUTPUT

| | | | |
|---|---|---|---|
| PNP...P | | Relay | D |
| NPN...N | | 4-2mA | A |

### 6 ELECTRICAL CONNECTOR

| | | |
|---|---|---|
| M12x5 Pin | STRAIGHT TYPE | J1 |
| M12x5 Pin | VERTICAL TYPE | J2 |

**Std. Model:** HN-L1 - G3 - 30 - F - P - J2
HN-L2 - G3 - 30 - F - A - J2
HN-L3 - G2 - 20 - F - P - J2

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