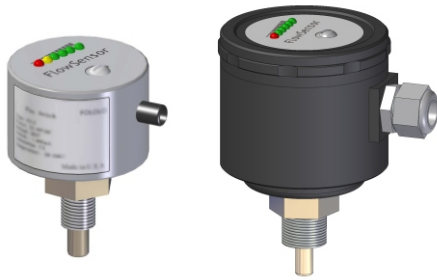


FS-T THERMAL CONDUCTIVITY FLOW SENSOR



FEATURES

Applicable for wide range of diameters pipe

Max pressure withstand up to 100 bar

Optional analogue output or relay output

Set point adjustable freely

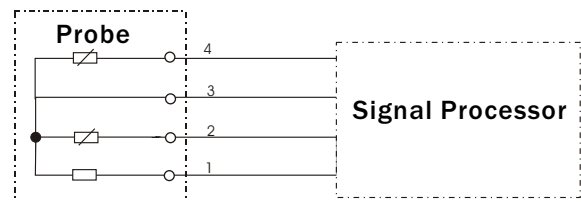
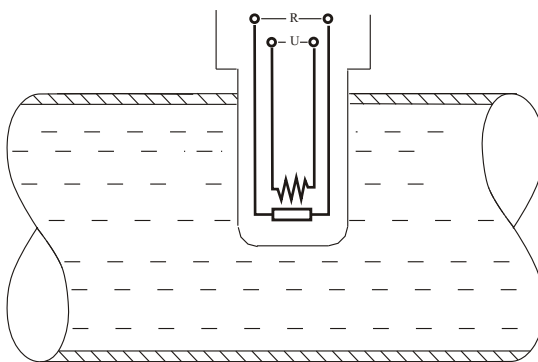
6 LED for visual flow indication

The anti-limescale sensing probe applicable even for poor quality water

PRINCIPLE

This device is based on the theory of heat exchange. Heat and thermal module is built inside the probe. The heat conductivity rate of the device is closely related to the flow rate of media. If no media flows through the pipe, the thermal module gets the fixed heat quantity from the heat module. While there is flowing through the probe, the thermal module gets the heat quantity which varies with the flow speed. The thermal module converts the differential temperature signal into electric signal. Then the signal processor exports 4-20mA current signal or the signal of the switching point.

The sensor and signal processor are fully encapsulated in a single housing.



SPECIFICATION

Operating range:

water: 0-5m/s
oil: 0-10m/s
gas :0-50m/s

Operating voltage:

U1=24V DC
U2=110V DC
U3=110V AC
U4=220VDC
U5=220VAC

Output::

P:PNP
N:NPN
R:Relay output
C:4-20mA output

Operating temp :-25 to 80°C

Responsetime to temp change:Less than or equal to 12s

Maxpressure:100bar

Current consumption:Less than or equal

Switch-on time:typical 2s(1-13s)

Switch-offtime:typical 2s(1-15s)

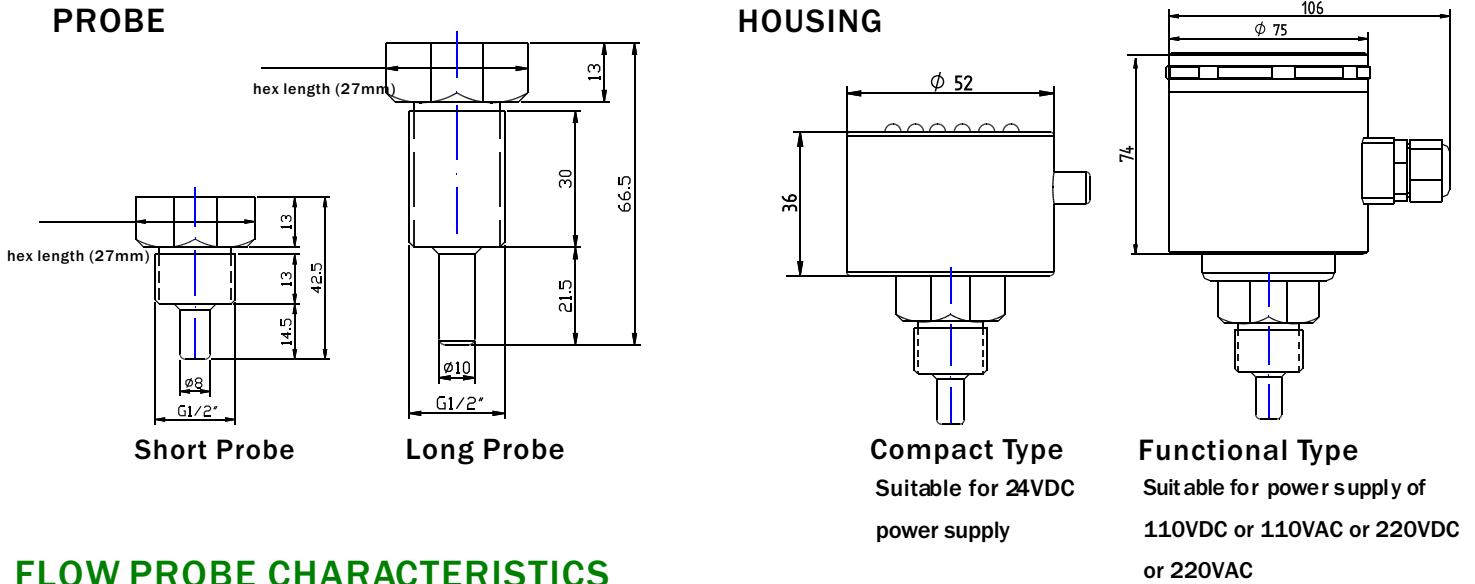
Temperature range:max 250k/min

Probes material:SUS316L

Threaded type:G1/2 (special type on request)

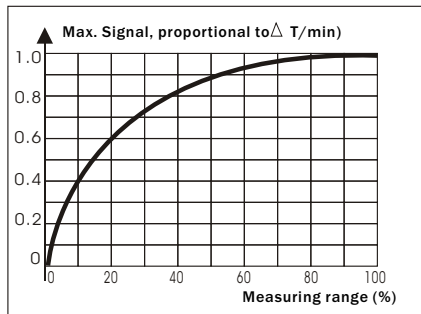
Enclosure class:IP67

STRUCTURE DRAWING



FLOW PROBE CHARACTERISTICS

(Housing material: stainless steel, Medium: water)



Note: Temperature gradient shows the change velocity of the medium temperature in specific time (T/min).

FLOW MONITORING, INDICATION

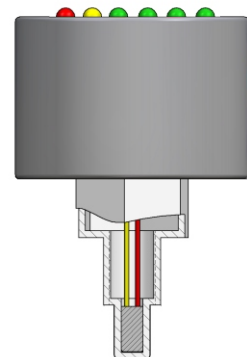
All units are equipped with 6 LEDs for visual flow indication.

A. For PNP or NPN or Relay output, LEDs give visual indication of flow status as below

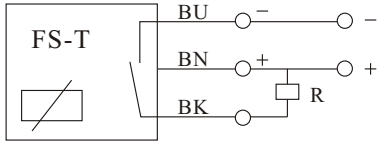
- 1 x red LED: set-point underrange
- 1 x yellow LED: set-point reached/overrange
- 4 x green LED: degree of set-point overrange

B. For Analogue output, LEDs give visual indication of flow status as below

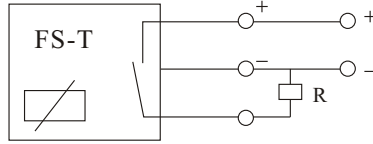
- 1 x red LED: output current $I = 4mA$
- 1 x green LED: output current $I > 4mA$
- 2 x green LED: output current $I > 8mA$
- 3 x green LED: output current $I > 12mA$
- 4 x green LED: output current $I > 16mA$
- 5 x green LED: output current $I \geq 16mA$



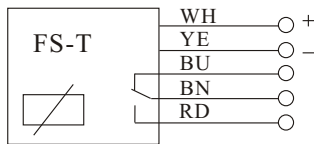
CIRCUIT DIAGRAM



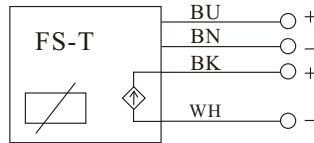
N: NPN



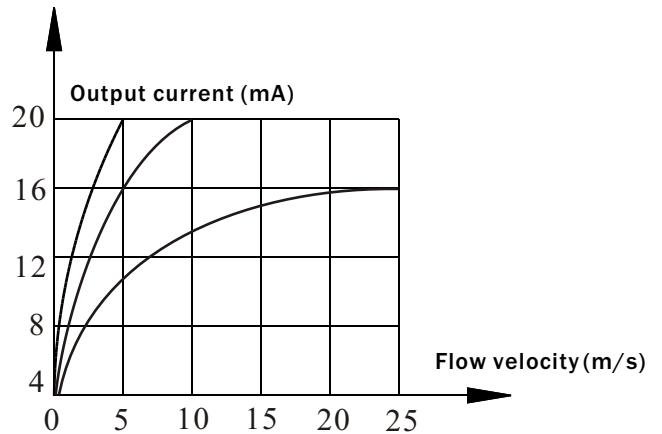
P: PNP



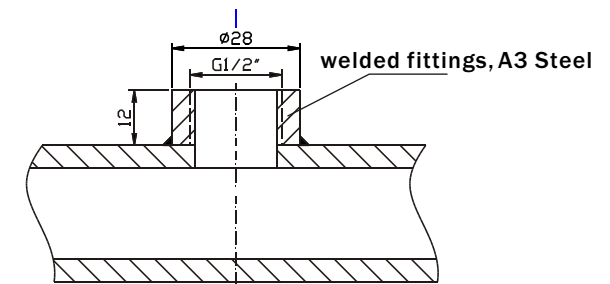
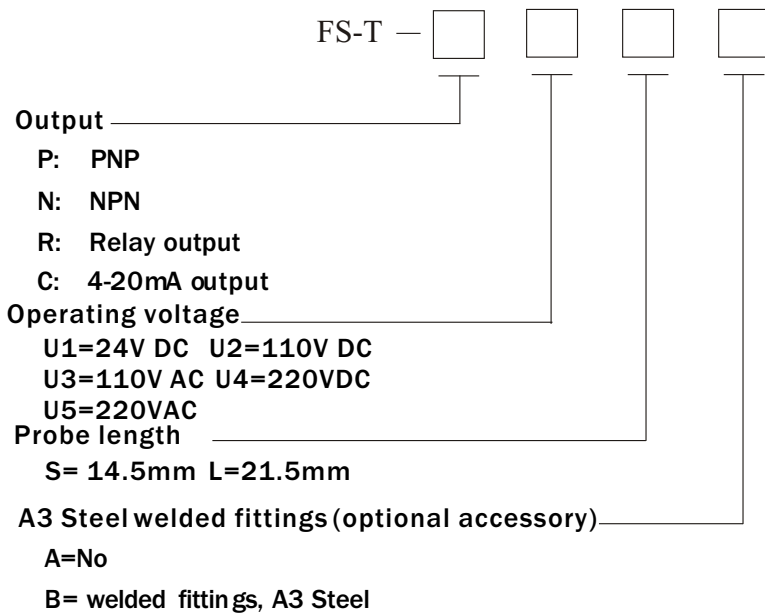
R: RELAY



C: CURENT



SELECTION CHART



Dimension drawing of welded fittings, A3 Steel