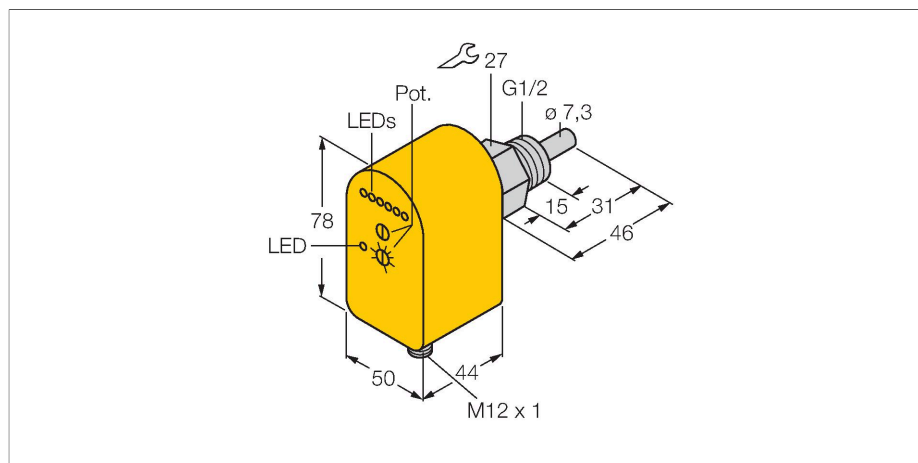


# FTCS-G1/2A4P-2AP8X-H1140

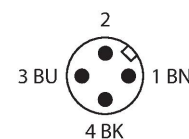
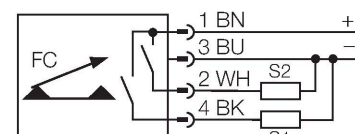
## Flow Monitoring – Immersion Sensor with Integrated Processor



### Features

- Sensor for liquid media
- Calorimetric principle
- Adjustment via potentiometer
- Status indicated via LED chain
- Temperature monitoring, 0...+80 °C
- 2 independent switching outputs: S1: Flow monitoring, S2: Temperature monitoring
- DC 4-wire, 21...26 VDC
- NO contact, PNP output
- Connector device, M12 × 1

### Wiring diagram



### Functional principle

The function of immersion flow sensors is based on the thermodynamic principle. The sensor is heated up by a few degrees Celsius compared to the flow medium. If the medium flows past the sensor, the heat generated in the sensor is dissipated. The resulting temperature is measured and compared with the temperature of the medium. The flow condition of each medium can be derived from the temperature difference obtained. Thus, TURCK flow sensors reliably and wear-free monitor the flow of liquid or gaseous media.

### Technical data

|                                       |                                      |
|---------------------------------------|--------------------------------------|
| ID                                    | 6870035                              |
| Type                                  | FTCS-G1/2A4P-2AP8X-H1140             |
| <b>Mounting conditions</b>            | Immersion sensor                     |
| Water Operating Range                 | 1...150 cm/s                         |
| Oil Operating Range                   | 3...300 cm/s                         |
| Stand-by time                         | typ. 8 s (2...15 s)                  |
| Switch-on time                        | typ. 2 s (1...15 s)                  |
| Switch-off time                       | typ. 2 s (1...15 s)                  |
| Temperature jump, response time       | max. 12 s                            |
| Temperature gradient                  | ≤ 250 K/min                          |
| Medium temperature                    | -20...+80 °C                         |
| Ambient temperature                   | -20...+80 °C                         |
| <b>Electrical data</b>                |                                      |
| Operating voltage                     | 19.2...28.8 VDC                      |
| Current consumption                   | ≤ 60 mA                              |
| Output function                       | PNP, 2 normally open contact         |
| Rated operational current             | 0.2 A                                |
| Voltage drop at I <sub>o</sub>        | ≤ 1.5 V                              |
| Short-circuit protection              | yes                                  |
| Reverse polarity protection           | yes                                  |
| Protection class                      | IP67                                 |
| <b>Mechanical data</b>                |                                      |
| Design                                | Immersion                            |
| Housing material                      | Plastic, PBT                         |
| Sensor material                       | Stainless steel, 1.4571 (AISI 316Ti) |
| Max. tightening torque of housing nut | 30 Nm                                |

## Technical data

|                                 |                             |
|---------------------------------|-----------------------------|
| Electrical connection           | Connector, M12 × 1          |
| Pressure resistance             | 100 bar                     |
| Process connection              | G 1/2"                      |
| Switching state                 | LED chain, Green/yellow/red |
| Flow state display              | LED chain                   |
| Indication: Drop below setpoint | LED Red                     |
| Indication: Setpoint reached    | LED Yellow                  |
| Indication: Setpoint exceeded   | LED Green                   |