# FT-210 Series – TurboFlow®
# Low Flow Turbine Sensor

▶ Low Flow Rates .1 to 2.5 LPM and High Accuracy ±3% of Reading
▶ Lightweight Turbine Ensures Fast Startup
▶ Mounts In Any Orientation

Gems FT-210 features proven turbine technology in a small package for low flow applications. The turbine technology provides a highly repeatable sensor ideally suited for measurement of either volume dispensing and/or flow rate applications. The small turbine reacts quickly to on/off dispensing applications. Each sensor is 100% tested, ensuring years of service life.

## Specifications

| Wetted Materials | |
|---|---|
| Body | Nylon 12 (Grilamid TR55) or Grivory |
| Turbine | Nylon 12 Composite |
| Bearings | PTFE/15% Graphite |
| Operating Pressure | 350 PSI (24 bar) |
| Burst Pressure | 1400 PSI (97 bar) |
| Flow Range | .026-.65 gallons/minute<br>0.1-2.5 liters/minute<br>3.4-84.5 ounces/minute |
| Pulses | 83,200 per gallon<br>22,000 per liter<br>650 per ounce |
| Frequency Output | 36.6-917 Hz |
| Operating Temperature | -4°F to 212°F (-20°C to 100°C) |
| Viscosity | 32 to 70 SSU (.8 to 16 Centistokes) |
| Filter | <50 Microns |
| Input Power | 5 to 24 VDC |
| Output (Hz) | NPN Sinking Open Collector @ 20mA Maximum Leakage Current 10µA (3K-30K Pull up resistor required) |
| Accuracy | ±3% of Reading |
| Repeatability | 0.5% of Full Scale |
| Electrical Connection | 9.4mm Spacing 3-pole DIN Connector (1″ high) |
| Inlet/Outlet Ports | 1/4″ NPT (1/4″ G Male also available) |

## How To Order

Specify a Part Number for the Port Connection AND a Part Number for the DIN Electrical Connection. Two Part Numbers are required for a complete part assembly.
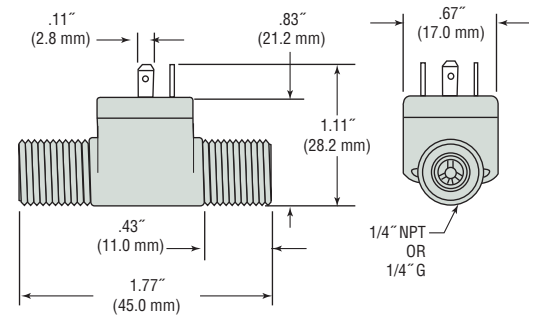
### FT-210 Sensor

| Body Material | Port Size | Part Number |
|---|---|---|
| Nylon 12 | 1/4″ NPT | 212465 |
| | 1/4″ G | 212460 |
| Grivory® | 1/4″ NPT | 223910 |
| | 1/4″ G | 223190 |

### Electrical Connection

| Description | Part Number |
|---|---|
| 1 meter DIN PVC Cable Assembly with 10K pull-up resistor | 218572 |
| Mating DIN Connector | 212404 |

## Dimensions



.11″ (2.8 mm)  .83″ (21.2 mm)  .67″ (17.0 mm)  1.11″ (28.2 mm)  .43″ (11.0 mm)  1.77″ (45.0 mm)  1/4″ NPT OR 1/4″ G

## Wiring



(+) 5-24Vdc
(-) 0 Vdc
2k-10k Ohms CUSTOMER SUPPLIED
OUTPUT
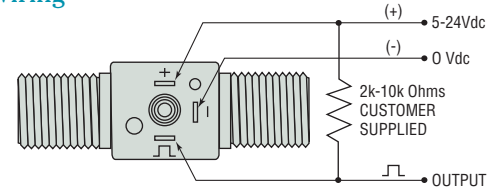
Pin Code:  1 = Output
2 = Supply
4 = Common

For Mating DIN Connector – P/N 212404

| Function | DIN Termination |
|---|---|
| V+ | 1 |
| − | ⏚ |
| Output | 2 |

## Pressure Drop—Typical



GPM: 0.13, 0.26, 0.40, 0.53, 0.66
Δ P MBAR: 0, 50, 100, 150, 200, 250, 300, 350, 400
PSI: 0.7, 1.5, 2.2, 2.9, 3.6, 4.4, 5.0
FLOW RATE - L/MIN: 0, 0.5, 1, 1.5, 2, 2.5, 3