

Flow Switch System



Product information

The Flow Switch System is designed for monitoring and ensuring adequate airflow passing through the outer piping of double-wall piping systems.

The Flow Switch System is made of 316L stainless steel and consists of a number of separate flow switch units mounted in one or several pipes depending on system type. Each unit is a single instrument set up to detect air flow. The instrument is equipped with two field adjustable alarm set points and relay outputs. One relay output is used to monitor the flow, the second is used to monitor a second flow or the temperature level. The flow switch is a fixed position, single-point flow, level, and temperature switch. The operation of the sensing element is based on the thermal dispersion principle:

A low-powered heater is used to produce a temperature differential between two Resistance Temperature Detectors (RTDs). The RTD temperature differential varies as a function of forced convection for flow measurement and as a function of fluid thermal conductivity for level and interface measurement.

| Description | FSS |
|---|--|
| Piping | |
| Compressed Air Intake Pipe / Double Wall Pipe | Ranges from ½" to 6" depending on type |
| Piping Length, Compressed Air Intake and Double Wall Pipe | Depending on type |
| Material | Stainless Steel, 316L / 1.4404 |
| Installation | Vertical or horizontal |
| Assembly | Welding (flanges on request) |
| Operating Pressure | 1.013 mbara |
| Weight | Depending on type |
| Flow Monitoring (Flow Switch) | |
| Number of Flow Switch | 1, 2 or 3 (depending on type) |
| Media | Atmospheric air |
| Operating Principle | Thermal dispersion (RTD) |
| Flow Direction | Forward or reverse |
| Range | 0.1 to 37 m/s |
| Alarm Level (Factory Setting) | 0.3 m/s |
| Accuracy (Factory Setting) | +/- 0.1 m/s |
| Material | Stainless Steel, 316L / 1.4404 |
| Design Pressure, Sensing Element @ 60°C | 240 barg |
| Junction Box | |
| No. of Channels | 3 |
| Power Supply Input | 18-32 V DC |
| Power Supply Output | 24 V DC |
| Max Current | 5 A DC |
| No. of Cable Glands / Cable Gland Size | 6 / M20 (6-13 mm) |
| Connection Cable | |
| Type | XTCuZ1-K |
| Cable Dia. | 10.9 mm |
| Supplied Length Per System | Optional |
| Environment | |
| Operating Temperature: Flow Switch Control Circuit | -40°C to +60°C |
| Operating Temperature: Flow Switch Sensing Element | -40°C to +177°C |
| Operating Temperature: Juncting box | -20°C to +60°C |
| Relative Humidity | 0-100% |
| Protection Degree (IEC 60529) | IP66 |
| Ex Classification | |
| Flow Switch (IECEX) | Ex d IIC T5/T2 // IECEx CSA 07.0011 |
| Flow Switch (ATEX) | II 2 G Ex d IIC T6...T2 // KEMA 02ATEX2166 |
| Junction Box | None (To be installed in safe area) |