FS 710E

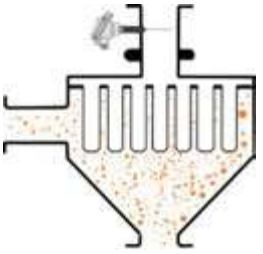
Dust monitoring for filter break

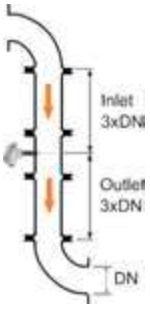
Application

The dust indicator FS710E is for the use on the clean air side to detect dust behind a filter. In this way, filter cracks, fractures or assembly errors are reported automatically and reliably.

Scope of Use

FlowSwitch 710E can be put in metallic pipes and channels which shall be monitored on dust





บริษัท แฟ็คโต คอมโพเนนส์ จำกัด | FACTO COMPONENTS CO., LTD.
845/3-4 ชั้น 3 ถ.เทพารักษ์ ต.เทพารักษ์ อ.เมือง จ.สมุทรปราการ 10270
TEL. 02-384-5701, 02-753-3652 | LINE OA: @134ovdbx | Website : www.factocomponents.co.th | Email : info@factocomponents.co.th

Function

The measurement system is based on the triboelectric effect: Particles collide permanently with each other or with other materials, e.g. the wall. Because of this process the particles will be charged in a natural way. If these electrically charged particles are flying next to the sensor rod of FS710E or even touch it, the particles are detected via the charge transfer. Resting particles, such as deposits etc., do not affect the measurement. Therefore a subsequent installation into existing exhaust ducts is possible without any problems.

Installation is quick and easy by welding a threaded socket. The sensor rod is inserted into the pipe and fixed by the thread. The sensor rod length should be at least 1/3 of the pipe diameter and must not touch the opposite side.

During operation, the emerging particle load is continuously gathered and classified in three different categories.

	Particle load	Status	LED	Switch output1	Switch output2
Load category I	low	good	green	closed	closed
Load category II	medium	prealarm	yellow	opened	closed
Load category III	high	main	red	closed	opened

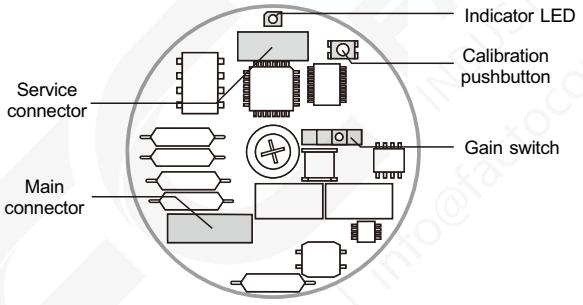


Figure 1 - Vew of board

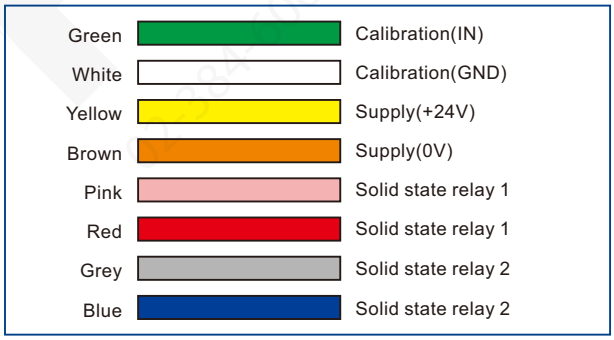


Figure 3 - Wiring

Main Benefits

- Automatic calibration
- Maintenance free
- Three-condition monitoring
- Two switching points via switching output
- Condition indication by different LED colors
- Compact form
- Protection class IP65
- Easy installation

Technical Data

Material	Housing	Aluminium
	Sensor rod (standard)	316
	Protection class	IP 65 (EN 60529)
	Isolation (standard)	PPS
Process cond.	Temperature	-20°C to +150°C
	Pressure	0 to 2 bar
Power supply	Voltage	24 VDC
	Power consumption	max. 50 mA
	Power	< 2 W
	Storage	-20°C to +60°C
	EMC	According to EN 61326-1
Output	Switch1 and switch2	
	Switch output	Normally energized
	Switching voltage	60 VAC/DC
	Switching current	Max. 100 mA
	Switching capacity	6 W
Calibration	Precalibration and automatical recalibration	
Other	Ambient Temp.	-20°C to +50°C*
	Storage Temp.	-20°C to +70°C
	Cable	assembled

Dimensions

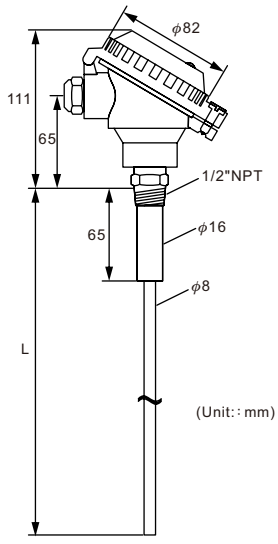


Figure 2 - Dimensions of sensor