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Flow Control

**Environmental
Systems**

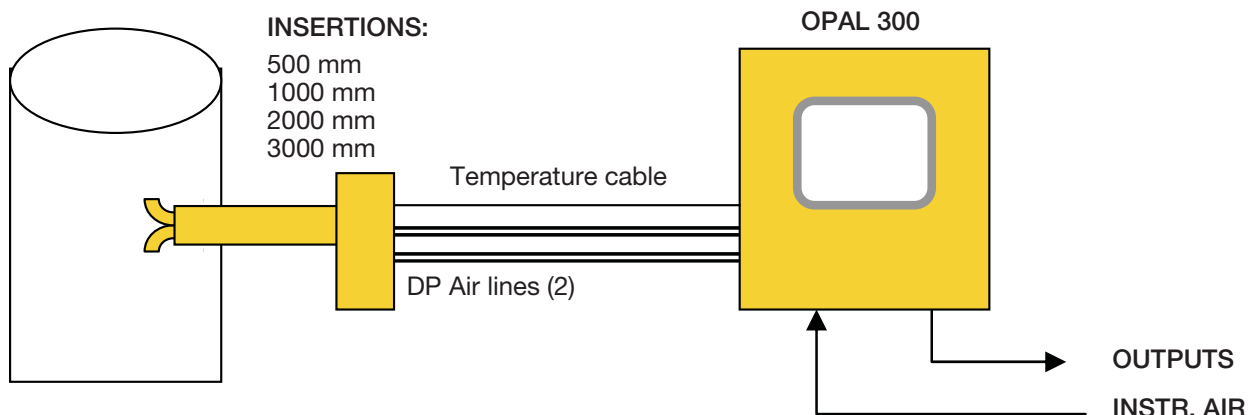
GOYEN



Stack Air Velocity Monitoring System

Features

- Volumetric Flow
- Air Velocity
- Static Pressure
- Dynamic Pressure
- Stack Temperature
- Dynamic pressure technology
- Automatic probe purge system
- Automatic zero calibration
- Integrated temperature sensor
- Keypad calibration and testing
- Programmable outputs and alarms



Description

The OPAL 300 stack flow and temperature monitoring systems are used to provide continuous drift free measurement of airflow conditions in industrial applications using highly reliable solid state differential pressure sensor measurement technology coupled with rugged RTD and thermocouple sensors. The key system design features include:

- Programmable, fully automatic pitot tube purge cleaning facilities to enable low maintenance operation in moist and dirty flue gas streams where other technologies often fail to perform.
- Automatic sensor zero testing to ensure continuous drift free operation across a wide variety of ambient conditions.
- Multiple programmable outputs, ensuring application versatility for end users.

300DP Technical Specification

CONTROL UNIT

Enclosure	IP65 weatherproof, wall mount
Dimensions	W400 x D200 x H500
Weight	9.5 Kg
Ambient Temperature	-20 to +50°C
Power Supply	110 or 240vac, (+/- 15%) 50/60Hz, 125va
Control Panel	Membrane keypad calibration and operational control
Display	Alphanumeric, four line x 20 character x 4mm LCD, backlit
Operator Indicating LED's	Power, Alarm active, Autocal, Auto purge, Setup mode
Measured components	Pd: Dynamic Pressure, Range 6 to 0 -150 mmH2O (+/- 0.5% FSD) - Continuous Ts: Stack temperature, Range -5 to 500 DegC (+/- 0.5% FSD) - Continuous Ps: Stack Pressure, Range +/- 40 mmHg (+/-2% FSD) - Cyclic sampling Patm: Atmospheric Pressure, Range 700-800 mmHg (+/-2% FSD) – Cyclic sampling Th: Ambient Temperature, Range -30 to 100 DegC (+/-2% FSD) - Continuous
Displayed Components (Calculated)	Qs: Flowrate m ³ /hr Vs: Velocity m/sec R: Density kg/m ³
Outputs – 4-20mA	Pd: Dynamic Pressure, Adjustable 0 -150 mmH2O (option Flowrate 0 – 99999 m ³ /hr) Vs: Stack Air Velocity, Adjustable 0 – 50m/sec Ps: Stack Temperature, Adjustable -50 to 500°C
Accuracy	+/- 0.5% FSD
Resolution	0.01 mmHg
Outputs - Relay	System Fault, Autocal in Progress, Autopurge in Progress, Setup Mode
Auto Purge	Solenoid operation – instrument air backflush of pitot tubes. Programmed start / duration
Auto Zero	Solenoid operation – cross connection of pitot tubes. Programmed start / duration
Auto Static Pressure	Solenoid operation – periodic static pressure sensing update.

SENSOR - PROBE

Enclosure	IP65 sensor head terminal box
Probe	Dual pitot tubes, SS316 material with integrated RTD or Type K thermocouple (option)
Installation	Via 90NB standard flange: 205mm diameter, 4 x 18 mm holes on 165mm pcd.
Insertion Length	Standard probe lengths 500, 1000, 2000 and 3000mm.
Connection	Dual pitot tube airlines, temperature sensor cable
Process Temperature	Up to 600°C standard

Contact your Goyen Sales Office:

Goyen Valve Corporation
1195 Airport Road
Lakewood
New Jersey 08701
USA

Telephone: 1 732 364 7800
Facsimile: 1 732 364 1356