

## Product Data Sheet

PDS FPD.A01

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# Flame Photometric Detector (FPD) Module

## For Rosemount Analytical Model 500 and 700 Process Gas Chromatographs

The **Flame Photometric Detector (FPD) Module** enables the measurement of trace sulfur compounds when integrated with Rosemount Analytical Model 700 or Model 500 Process Gas Chromatographs. The Flame Photometric Detector and associated electronic boards are installed in temperature controlled flame-proof enclosures and mounted on a stand complete with flame air and hydrogen controls. This design eliminates the need for instrument air and ambient temperature control - greatly reducing installation cost of the process gas chromatograph. The FPD Module comes fully integrated into a Rosemount Analytical Model 500 or Model 700 Process Gas Chromatograph. The FPD Module is ATEX approved for Zone 1 & 2 locations and suitable for installation in Class I, Groups B, C & D, Division 1 locations.

### FEATURES

- Temperature-controlled Flame Photometric Detector (FPD) for stable sub-ppm level sulfur component measurement
- Sulfur component analysis per ISO 19739 available
- Auto ignition of FPD with automatic hydrogen purge. Makes 10 attempts to light before raising a "flame out" alarm
- Requires no instrument air for purge or oven
- Field-mountable without elaborate shelters for lower installation costs
- Can be combined with other Model 500 or Model 700 process applications



**Model 500 Process Gas Chromatograph with FPD Module**



**Model 700 Process Gas Chromatograph with FPD Module**

Temperature Controlled Flame Photometric Detector

Detector Electronics

Flame Hydrogen and Air Controls



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Process Management

## Flame Photometric Detector (FPD) Module

### Specifications

**Power:** 115 VAC ±15%, 220 VAC ±15%, 50/60 HZ

**Environment:** +10° - 40°C (50° - 104°F)

**Dimensions:** (without sample system):

1585mm H x 960 mm W x 645 mm D

62.5" H x 37.8" W x 25.4" D

with Model 500 Process Gas Chromatograph

1650mm H x 960 mm W x 645 mm D

65" H x 37.8" W x 25.4" D

with Model 700 Process Gas Chromatograph

65" H x 37.8" W x 25.4" D

**Approximate Weight:** (without sample system):

85 kg (187 lbs.)

**Safety Certification:** ATEX certified, certificate number SIRA 05ATEX1055X coding EEx d IIC T3 CE marked per ATEX Directive (94/9/EC)

**Carrier Gas:** Nitrogen 99.995% minimum

**FPD Fuel:** Hydrogen, approximately 120 mL/min

**FPD Air:** Clean, dry, hydrocarbon-free and sulfur-free air, approximately 200mL/min

**Requires no instrument air**

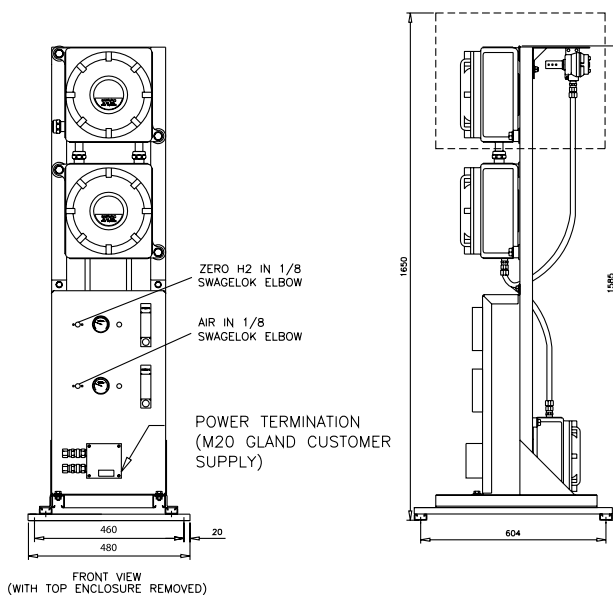
**Detector:** Flame Photometric Detector (FPD);

Auto ignition with automatic Hydrogen purge. Ten attempts before raising a "flame out" alarm.

For gas chromatograph specifications please see the Rosemount Analytical Model 500 or Model 700 data sheets

### Typical Measurement Ranges for Components per ISO 19739

Component	Minimum (mg/m <sup>3</sup> )	ppmv	Maximum (mg/m <sup>3</sup> )	ppmv
H <sub>2</sub> S	0.1	0.07	10	6.6
COS	0.1	0.04	10	3.7
Methyl Mercaptan	0.1	0.05	20	9.3
Ethyl Mercaptan	0.1	0.04	20	7.2
t-Butyl Mercaptan	0.1	0.04	20	7.2
Diethyl Sulfide	0.1	0.02	20	5.0
Tetrahydrothiophene	0.1	0.03	20	5.1



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