Augent™ OPG550

Optical Plasma Gauge

The INFICON Augent™ Optical Plasma Gauge OPG550 is an intelligent solution for vacuum monitoring. Augent™ OPG550 combines two sensor technologies into one compact device for gas type monitoring from 1×10^{-7} to 5 mbar and to measure total pressure from atmosphere to 1×10^{-7} mbar at the same time. Augent™ OPG550 is protected by an integrated Pirani sensor to switch off plasma above 20 mbar.

In the measurement range between 1×10^{-7} and 5 mbar the gauge allows the detection of gas composition.

ADVANTAGES

- High speed chamber leak tests
- Increase of productivity and yield
- Long life time, no filament burns, air inrush protection
- Withstand process chemistry
- Smart algorithm for easy integration
- Compact design and small footprint
- Reliable and fast start up

APPLICATIONS

- Chamber leak check, faster RoR (rate of rise) test
- Leak check to find internal leaks from gas supply lines
- Real time end point control
- Gas type and gas concentration control

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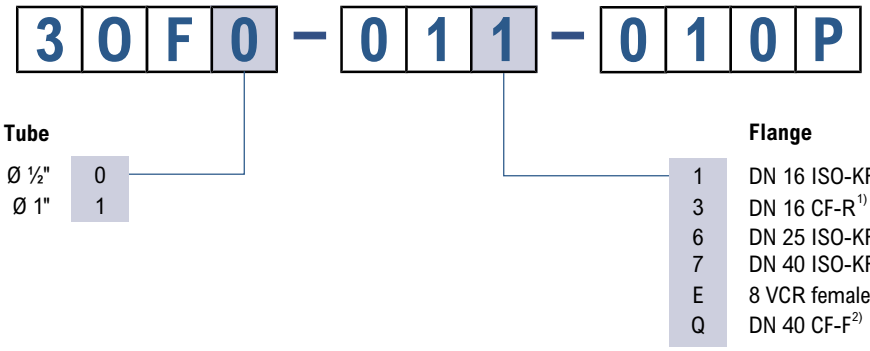
ORDERING INFORMATION



1) With option 1/2" tube only
2) With option 1" tube only

Replacement sensor	OPG550 1/2" tube
DN 16 ISO-KF	351-594
DN 16 CF-R	351-595
8VCR, female	351-596

Replacement sensor	OPG550 1" tube
DN 25 ISO-KF	351-597
DN 40 ISO-KF	351-598
DN 40 CF-F	351-599

Accessories	
Power Supply, OPG550, RS232 / Analog Out	351-051
Cleaning kit	351-052
Ionisation chamber TI	351-055
Diagnostic cable RS232C; 9p-Dsub - phone jack 2.5mm (2m)	303-333
MxG40x/50x,OPG550 Spare ignition aid (set of 10 pcs)	351-995
Centering ring DN 16 ISO-KF, Inox / FPM	211-066
Centering ring DN 25 ISO-KF, SS / FPM	211-068
Clamping ring DN 20 – 16 ISO-KF	211-001
Clamping ring DN 20 – 25 ISO-KF	211-002
Copper seal DN 16 CF (set of 10 pcs)	213-451

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SPECIFICATIONS

Total pressure measurement	OPG550
Measurement system	Cold cathode according inverted magnetron principle and thermal conductivity according pirani principle
Measurement range (N_2)	1×10^{-7} ... 1000 mbar
	0.75×10^{-7} ... 750 Torr
Accuracy total pressure reading (N_2)	
1×10^{-7} ... 100 mbar	30% of reading
100 … 1000 mbar	50% of reading
Repeatability total pressure reading (N_2)	
1×10^{-7} ... 100 mbar	5 % of reading

Gas analysis	OPG550
Measurement system	Optical emission spectroscopy with integrated DC discharge plasma, spectrometer and intelligent electronics
Measurement range (N_2)	1×10^{-7} ... 5 mbar
	7.6×10^{-8} ... 3.8 Torr
Detection limit 25 liter chamber	
O_2 leaks in pressure rise method	≥0.3 mTorr / min
O_2 leaks during pump down from atmosphere with N_2 backfill	≥1 mTorr / min
Sampling frequency	<10 Hz
Typical exposure time	5 … 1000 ms
Spectral range	313 … 870 nm

General	OPG550
Pressure	
Limited to inert gases <50°C	≤10 bar (absolute)
Temperature	
Operation (ambient)	+5 ... +50 °C
Storage	-20 ... +70 °C
Bakeout at flange with electronic unit	≤80 °C
Bakeout at flange w/o electronic unit	≤120 °C
Relative humidity for 30 days a year	≤95% (non-condensing)
Supply voltage	
At gauge	+14.5 ... +30 V (dc)
Ripple	≤1 V (p-p)
Power consumption	≤5 W
Fuse to be connected	≤1 AT
Output signal	
Analog	0 ... +10 V (dc)
Digital	RS232C
Electrical connection	D-Sub, 9-pin, male

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General	OPG550
High voltage (in the measuring chamber)	
Ignition voltage	≤4.5 kV
Operating voltage	≤3.3 kV
Materials expose to vacuum	
General	Al_2O_3, stainless steel 1.4435
Anode	Molybdenum
Ionization chamber	Titanium, stainless steel 1.4016
Ignition aid	Stainless steel 1.4310
Vacuum flange	
1/2" tube (spiral baffle)	DN16 ISO-KF DN16 CF-R 8VCR, female
1" tube (standard baffle)	DN25 ISO-KF DN40 ISO-KF DN40 CF-F
Internal volume	≤46 m^3 (2.81 $inch^3$)
Weight	≤700 g
Dimensions	
Footprint	68 × 68 mm
Height	≤154 mm
Protection type	IP40
Standards	CE
Serviceability	Sensor cell is field replaceable, cleanable optical window

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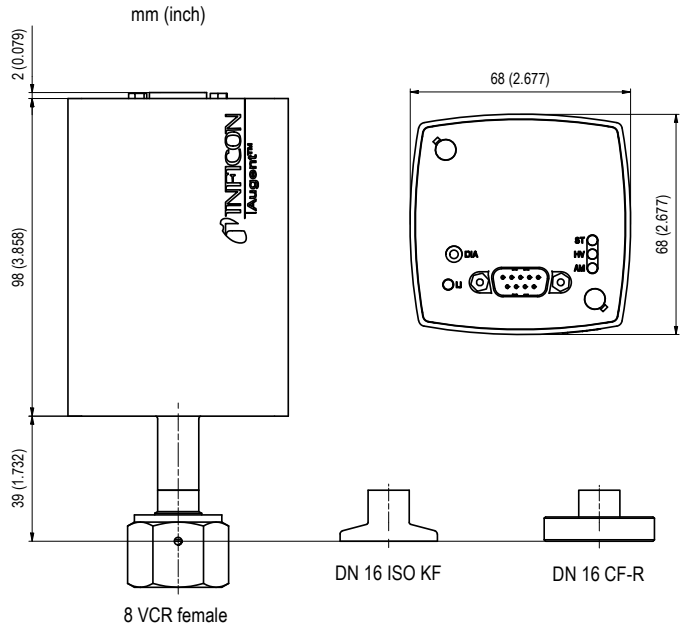
DIMENSIONS

1/2" tube (spiral baffle)

mm (inch)



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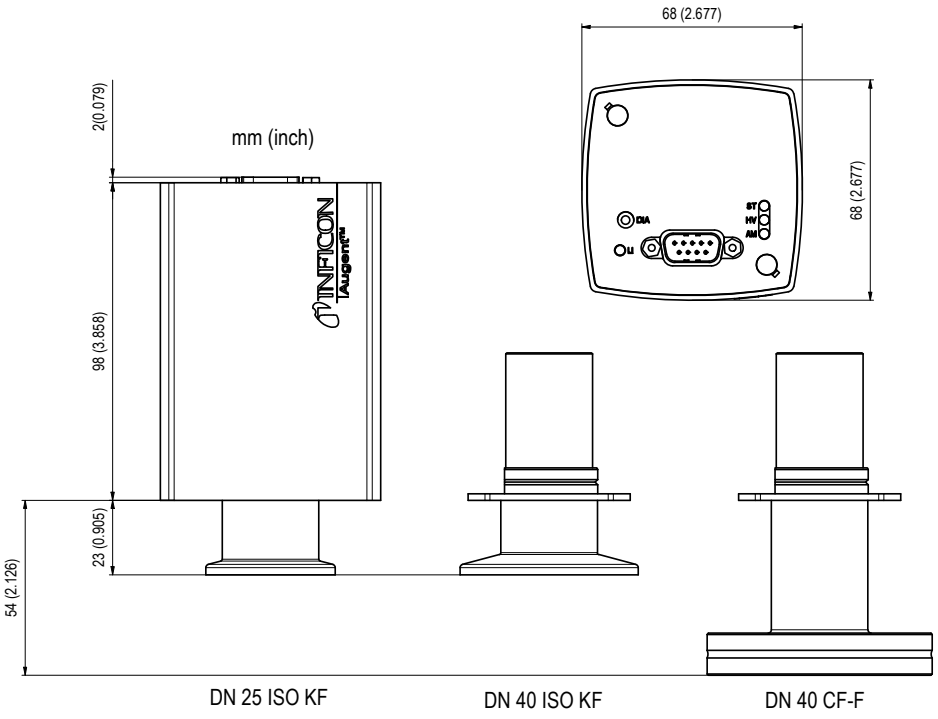

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