

# BAG302

## Bayard-Alpert Hot Ion Gauge

The INFICON single Bayard-Alpert Hot Ion Gauge BAG402 covers a wide measurement range from  $1.3 \times 10^{-9}$  to  $6.7 \times 10^{-2}$  mbar ( $1 \times 10^{-9}$  to  $5 \times 10^{-2}$  Torr). The compact All in one Hot Ion gauge BAG302 offers an easy to exchange dual filament sensor, a built in OLED display, set-point relay and a log-linear analog output as well as an integrated RS485 digital interface for increased integration flexibility.

These features combined with the rugged design makes the BAG302 an affordable and repeatable process to base pressure measurement instrument of its own and provides a high value/ low cost of ownership choice.



### ADVANTAGES

- Wide measurement range from  $1.3 \times 10^{-9}$  to  $6.7 \times 10^{-2}$  mbar ( $1 \times 10^{-9}$  to  $5 \times 10^{-2}$  Torr)
- Two long-life yttrium oxide coated iridium filaments
- Tungsten filaments on special order
- All-in-One active gauge with built-in display, set-point, analog output and standard integrated RS485 digital interface
- Bright digital OLED display with keypad for simple setup, operation and programming
- User programmable set point relay
- User programmable display units in mbar, Torr or Pa
- User selectable Auto-ranging of emission current
- Mechanical strength and ruggedness
- Choice of various flange options
- Easy to exchange sensing element
- Compliance & standards: CE, RoHS
- Direct drop in replaces Granville-Phillips® 354 Micro-Ion® Module – identical control functions including software commands (RS485)

### APPLICATIONS

- Pressure measurement in semiconductor process and transfer chambers
- Industrial coating
- General vacuum measurement and control in the low to ultra high vacuum range

## ORDERING INFORMATION

Type	BAG302 Gauge	Replacement Sensor
(Yt <sub>2</sub> O <sub>2</sub> coated iridium filaments)	OLED, SP, analog output, RS485	
DN 16 ISO-KF	352-050	352-060
DN 25 ISO-KF	352-051	352-061
DN 40 ISO-KF	352-052	352-062
DN 16 CF-R	352-053	352-063
DN 40 CF-R	352-054	352-064
3/4" tube	352-055	352-065
8 VCR female	352-056	352-066

## SPECIFICATIONS

			BAG302
Measurement range	mbar Torr Pa		1.3 × 10 <sup>-9</sup> ... 6.7 × 10 <sup>-2</sup> 1 × 10 <sup>-9</sup> ... 5 × 10 <sup>-2</sup> 1.3 × 10 <sup>-7</sup> ... 6.7
Accuracy (N <sub>2</sub> ) <sup>1)</sup>	1.3×10 <sup>-8</sup> ... 6.7×10 <sup>-2</sup> mbar 1×10 <sup>-8</sup> ... 5×10 <sup>-2</sup> Torr	% of reading % of reading	±15 ±15
Repeatability <sup>1)</sup>		% of reading	±5
Degas <sup>2)</sup>	p < 6.7 × 10 <sup>-5</sup> p < 5.00 × 10 <sup>-5</sup>	mbar Torr	electron bombardment, 2 min (default) (programmable between 2 ... 10 min)
Temperature			
Operation (ambient)		°C	0 ... +40
Storage		°C	-40 ... +70
Bakeout at flange (sensor only, electronics removed)		°C	200
Supply voltage		V (dc)	+20 ... +28 <sup>3)</sup>
Output signal analog		V	0 ... +9 (log-linear)
Voltage vs. pressure		V / Decade	1
Setpoint relay			1 (single-pole double-throw relay (SPDT) 1 A at 30 V (dc) resistive, or V (ac) non-inductive
Digital functions			degas, filament on/off and emission control
Interface (digital)			RS485
Emission control			manual
Filament			two Yt <sub>2</sub> O <sub>2</sub> coated Ir
Filament status			display / digital output
Electrical connection			D-Sub, 9-pin, male for analog D-Sub, 9-pin, female for RS485
Materials exposed to vacuum			Yt <sub>2</sub> O <sub>3</sub> , Ir, W, Ta, stainless steel, glass, Ni
Mounting orientation			any
Internal volume		cm <sup>3</sup> (inch <sup>3</sup> )	16.4 (1.0)
Weight KF / CF		g (lb)	270 (0.6)

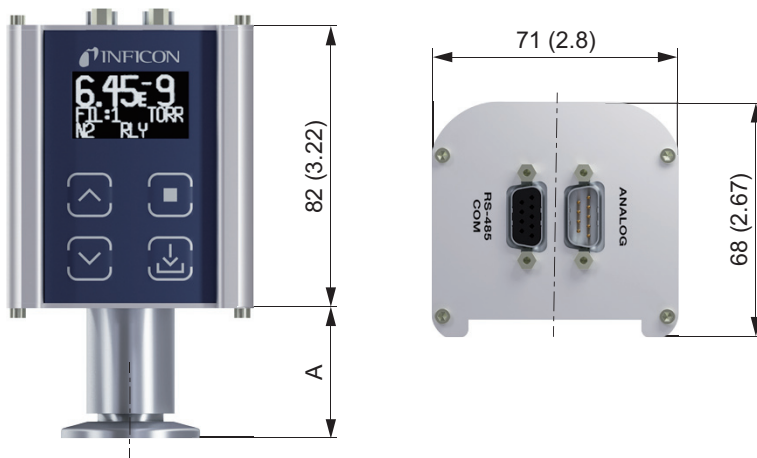
<sup>1)</sup> typically

<sup>2)</sup> Reduced accuracy during degas

<sup>3)</sup> 30 W protected against power reversal and transient over-voltages

## DIMENSIONS

mm (inch)



Dimension A	mm	(in)
DN 16 ISO-KF	37	(1.45)
DN 25 ISO-KF	37	(1.45)
DN 40 ISO-KF	37	(1.45)
DN 16 CF-R	59	(2.32)
DN 40 CF-R	33	(1.7)
8 VCR female	65	(2.58)
3/4" tube	55	(2.16)

## ACCESSORIES

Power supply for BAG302 <sup>1)</sup>

352-075



Input power:  
Output power:  
Cable length:

V (ac)	100 ... 240
V (dc)	+24 @ 2.5 A (60 W)
m (ft)	2 (6)

<sup>1)</sup> The IEC 60320 AC power entry receptacle allows use with any user supplied AC mains cord set available worldwide