

## BAG302

### Bayard-Alpert Hot Ion Gauge

The INFICON single Bayard-Alpert Hot Ion Gauge BAG302 covers a wide measurement range from  $1.3 \times 10^{-9}$  mbar to  $6.7 \times 10^{-2}$  mbar ( $1 \times 10^{-9}$  Torr 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 long-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. The BAG302 is considered as OEM gauge and direct connection to customers PLC. It is not supported by VGC50x controller series.



#### ADVANTANGES

- Wide measurement range from  $1.3 \times 10^{-9}$  mbar to  $6.7 \times 10^{-2}$  mbar ( $1 \times 10^{-9}$  Torr 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 and 355 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

## BAG302

### ORDERING INFORMATION

Type Sensor <sup>1)</sup>	BAG302 (OLED, SP, analog output, RS485)
DN 16 ISO-KF	352-050
DN 25 ISO-KF	352-051
DN 40 ISO-KF	352-052
DN 16 CF-R	352-053
DN 16 CF-R	352-054
3/4" tube	352-055
8 VCR female	352-056

<sup>1)</sup> Yt<sub>2</sub>O<sub>3</sub> coated iridium filaments

Replacement Sensor <sup>1)</sup>	BAG302
DN 16 ISO-KF	352-060
DN 25 ISO-KF	352-061
DN 40 ISO-KF	352-062
DN 16 CF-R	352-063
DN 16 CF-R	352-064
3/4" tube	352-065
8 VCR female	352-066

<sup>1)</sup> Yt<sub>2</sub>O<sub>3</sub> coated iridium filaments

Accessories	BAG302
Power supply for BAG302 <sup>1)</sup>	352-075

Input power: 100 ... 240 V (ac)

Output power: +24 V (ac) @2.5A (60W)

Cable length: 2 (6) m (ft.)

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



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### SPECIFICATIONS

Type	BAG302
Measurement range	$1.3 \times 10^{-9} \dots 6.7 \times 10^{-2}$ mbar $1 \times 10^{-9} \dots 5 \times 10^{-2}$ Torr $1.3 \times 10^{-7} \dots 6.7$ Pa
Accuracy (N <sub>2</sub> ) <sup>1)</sup>	
$1.3 \times 10^{-8} \dots 6.7 \times 10^{-2}$ mbar $1 \times 10^{-8} \dots 5 \times 10^{-2}$ Torr	±15% of reading
Repeatability <sup>1)</sup>	±5% of reading
Degas <sup>2)</sup>	
$p < 6.7 \times 10^{-5}$ $p < 5.00 \times 10^{-5}$	electron bombardment, 2 min (default) mbar (programmable between 2 ... 10 min) Torr
Temperature	
Operation (ambient)	0 ... +40°C
Storage	-40 ... +70°C
Bakeout at flange (sensor only, electronics removed)	200°C
Supply voltage	+20 ... +28 V (dc) <sup>3)</sup>
Output signal analog	0 ... +9 (log linear) V
Voltage vs. pressure	1 V / Decade
Set point 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>3</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	16.4 cm <sup>3</sup> (1.0 in. <sup>3</sup> )
Weight KF / CF	270 g (0.6 lb)

<sup>1)</sup> typically

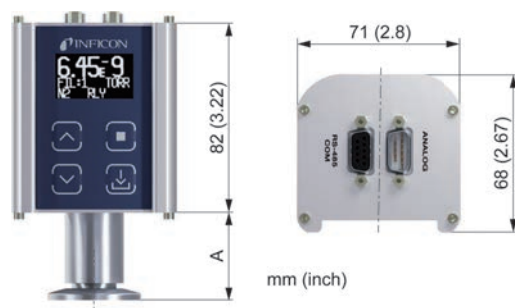
<sup>2)</sup> Reduced accuracy during degas

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

## BAG302

### DIMENSIONS

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	47	(1.85)
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:	V (ac) 100 ... 240
Output power:	V (DC) +24 @ 2.5A (60 W)
Cable length:	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