

# BAG402 Medium to Ultra-High Vacuum Gauge

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The INFICON single Bayard-Alpert Hot Ion Gauge BAG402 covers a wide measurement range from  $5 \times 10^{-10}$  mbar to  $2.7 \times 10^{-2}$  mbar ( $3.75 \times 10^{-10}$  Torr to  $5 \times 10^{-2}$  Torr). Choose the INFICON BAG402 for affordable and repeatable process to base pressure measurements in a compact active gauge package. The unique, supported dual filaments offer superior accuracy, longterm stability and longevity.



## BENEFITS

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- Measurement range from  $5 \times 10^{-10}$  mbar to  $2.7 \times 10^{-2}$  mbar ( $3.75 \times 10^{-10}$  Torr to  $5 \times 10^{-2}$  Torr)
- Excellent repeatability in the process pressure range from  $10^{-8}$  ...  $10^{-2}$  mbar of 5%
- Overpressure detection protects the filament from premature burnout
- Two long-life yttrium oxide coated iridium filaments
- Automatic emission current selection reduces control complexity
- Easy to exchange sensing element with on-board calibration data guarantees high reproducibility
- RoHS compliance

## ORDER INFORMATION

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| Type              | BAG402  |
|-------------------|---------|
| BAG402 DSUB9 CF40 | 353-601 |
| BAG402 DSUB9 KF25 | 353-600 |

## SPECIFICATIONS

| Type                                                          | BAG402           |                                                                      |
|---------------------------------------------------------------|------------------|----------------------------------------------------------------------|
| Measurement range (air, O <sub>2</sub> , CO, N <sub>2</sub> ) | mbar             | 5×10 <sup>-10</sup> ... 2.7×10 <sup>-2</sup>                         |
| Measurement range (air, O <sub>2</sub> , CO, N <sub>2</sub> ) | Torr             | 3.75×10 <sup>-10</sup> 5×10 <sup>-2</sup>                            |
| Accuracy                                                      |                  |                                                                      |
| 10 <sup>-8</sup> ... 10 <sup>-2</sup> mbar                    | % of reading     | ±15                                                                  |
| Repeatability                                                 |                  |                                                                      |
| 10 <sup>-8</sup> ... 10 <sup>-2</sup> mbar                    | % of reading     | 5                                                                    |
| Degas (1)                                                     |                  |                                                                      |
| p < 7.2 × 10 <sup>-6</sup>                                    | mbar             | electron bombardment, max. 3 min                                     |
| Pressure, max.                                                | bar (absolute)   | 2                                                                    |
| Temperature                                                   |                  |                                                                      |
| Operation (ambient)                                           | °C               | 0 ... +50                                                            |
| Storage                                                       | °C               | -20 ... +70                                                          |
| Bakeout at flange without electronics BPG402-S                | °C               | 80                                                                   |
| Supply voltage                                                | V (dc)           | +20 ... +28                                                          |
| Supply voltage                                                | A (dc)           | ≤0.8                                                                 |
| Output signal analog (4)                                      |                  |                                                                      |
| Output signal                                                 | V                | 0 ... +10                                                            |
| Measurement range log / lin                                   | V                | 0 ... +9                                                             |
| Error signal                                                  | V                | > +10                                                                |
| Output signal analog (4)                                      |                  |                                                                      |
| Voltage vs. pressure                                          | volts per decade | 1                                                                    |
| Output signal analog (4)                                      |                  |                                                                      |
| Load impedance, min.                                          | kΩ               | 10                                                                   |
| Output signal analog (4)                                      |                  |                                                                      |
| Secondary analog output                                       |                  | none                                                                 |
| Setpoint relay                                                |                  |                                                                      |
| Number of setpoints                                           |                  | none                                                                 |
| Digital functions                                             |                  | degas and emission                                                   |
| Interface (digital) (2)                                       |                  | Diagnosis port                                                       |
| Emission control                                              |                  | manual                                                               |
| Filament                                                      |                  | two Yttriumoxid (Y <sub>2</sub> O <sub>3</sub> ) coated Iridium (Ir) |
| Filament status / relay                                       |                  | LED / relay                                                          |

## SPECIFICATIONS

| Type                        |                                     | BAG402                                                                         |
|-----------------------------|-------------------------------------|--------------------------------------------------------------------------------|
| Electrical connection       |                                     | D-Sub, 9-pin, male                                                             |
| Cable length, max.          | m (ft.)                             | 100 (330)                                                                      |
| Materials exposed to vacuum |                                     | Y <sub>2</sub> O <sub>3</sub> , Ir, Pt, Mo, NiFe, NiCr, stainless steel, glass |
| Internal volume KF / CF     | cm <sup>3</sup> (in. <sup>3</sup> ) | 24 (1.46) / 34 (2.1)                                                           |
| Weight KF / CF              | g                                   | 450 / 710                                                                      |
| Degree of protection        |                                     | IP30                                                                           |

1) Reduced accuracy during degas

2) Simultaneous use of RS232C or VGC40x series controllers and Fieldbus is not allowed

## SPAREPARTS

|                                       | BAG402  |
|---------------------------------------|---------|
| Spare sensor head BAG402 DN 25 ISO-KF | 354-484 |
| Spare sensor head BAG402 DN 40 CF-R   | 354-485 |

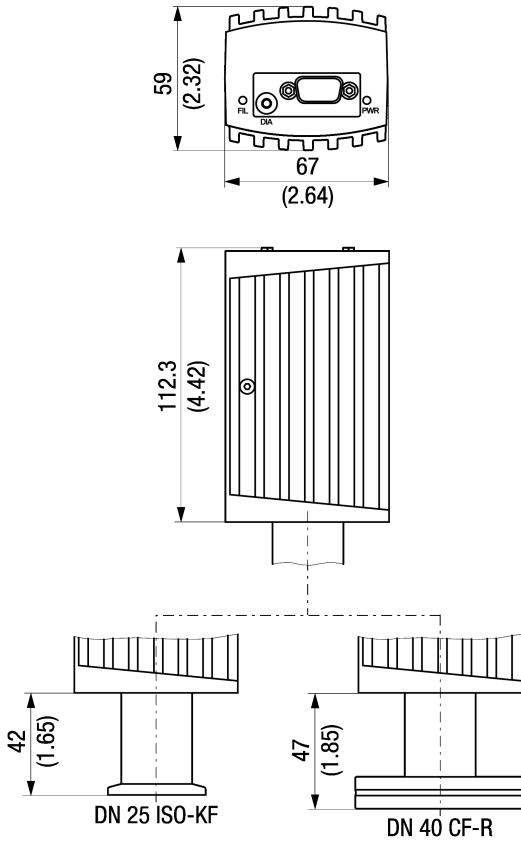
## ACCESSORIES

|                            | BAG402  |
|----------------------------|---------|
| Diagnostic cable 1.9m (P3) | 303-333 |

## DIMENSIONS

### BAG402 (D-Sub, 9-pin)

mm (inch)



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