

# MAG470

## Inverted Magnetron Gauge

The INFICON Inverted Magnetron Gauge, MAG470, measure from  $5 \times 10^{-11}$  mbar to  $1 \times 10^{-2}$  mbar ( $3.8 \times 10^{-11}$  Torr to  $7.5 \times 10^{-3}$  Torr).

### ADVANTAGES

- No filament to burn out
- Extended version, sensor bakeout up to 250°C
- Excellent ignition properties
- Easy to clean
- Metal-sealed feedthrough
- LED indicator for high voltage on
- Logarithmic analog output signal

### APPLICATIONS

- Ultra high vacuum pressure monitoring
- Base pressure for evaporation and sputtering systems
- General vacuum measurement and control in the medium and high vacuum range



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### ORDERING INFORMATION

Type	MAG470	MAG470 extended
DN 40 CF-F	399-360	399-361

Spare parts	MAG470	MAG470 extended
Maintenance kit includes: support/centering ring seals ignition aid	351-997	351-997
Repair kit includes: anode Cu seal screw fitting support/centering ring seals ignition aid	351-990	351-990
Ignition aid kit includes: ignition aid	351-995	351-995
Mounting tool for ignition aid	351-994	351-994

Accessories	MAG470	MAG470 extended
Magnetic shield	351-023	351-023

### SPECIFICATIONS

		MAG470	MAG470 extended
Measurement range (air, N <sub>2</sub> )	mbar (Torr)	5 × 10 <sup>-11</sup> ... 1 × 10 <sup>-2</sup>	(3.8 × 10 <sup>-11</sup> ... 7.5 × 10 <sup>-3</sup> )
Accuracy (N <sub>2</sub> ) 1 × 10 <sup>-9</sup> ... 1 × 10 <sup>-3</sup> mbar	% of reading		≈±30%
Repeatability 1 × 10 <sup>-9</sup> ... 1 × 10 <sup>-3</sup> mbar	% of reading		≈±5%
Mounting orientation			any
Admissible pressure	bar (absolute)		≤10 (limited to inert gases)
Admissible temperature			
Operation (ambient)	°C		+5 ... +55
Storage	°C		-40 ... +65
Bake-out	°C		250 <sup>1)</sup> (extended version <sup>2)</sup> )

<sup>1)</sup> Without electronics and magnetic shielding

<sup>2)</sup> 250°C in defined area, see dimensions

<sup>3)</sup> The minimum voltage of the supply unit must be increased proportionally to the length of the sensor cable

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		MAG470	MAG470 extended
Supply voltage			
At gauge	V (dc)	+15 ... +30	
At supply unit with max. cable length <sup>3)</sup>	V (dc)	+16 ... +30	
Ripple	V <sub>pp</sub>	≤1	
Power consumption	W	≤2	
Fuse to be connected	AT	≤1	
Output signal (measurement signal)			
Voltage range	V	0 ... +10.5	
Measurement range	V	+1.96 ... +8.6	
Voltage vs. pressure		Logarithmic, 0.8 V/decade	
Error signal	V	<0.5 (no supply)	
Output impedance	Ω	2 × 10	
Minimum loaded impedance	kΩ	10, short-circuit proof	
Response time			
p > 10 <sup>-6</sup> mbar	ms	<10	
p = 10 <sup>-8</sup> mbar	ms	≈1000	
Identification gauge	kΩ	7.15, referenced to supply common	
Electrical connection		FCC 68 appliance connector, 8 poles, female	
Sensor cable		8 poles plus shielding	
Cable length	m	≤50 (8 × 0.14 mm <sup>2</sup> )	
Operating voltage	kV	≤3.3	
Operating current	μA	≤100	
Materials exposed to vacuum		Stainless steel, Al <sub>2</sub> O <sub>3</sub> , Ag,	
Internal volume	cm <sup>3</sup>	≈20	
Weight			
DN 40 CF-F	g	≈950	≈1100
Protection category		IP 40	
Standards		EN 61000-6-2, EN 61000-6-3, EN 61010-1	

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## DIMENSIONS

[mm]

