

TPR280, TPR281

Compact Pirani Gauge

The INFICON Compact Pirani Gauges, TPR280 and TPR281, employ the most advanced digital Pirani technology available in the marketplace. The rugged stainless steel sensor cell and compact design qualify them for use on semiconductor systems and for standard applications, such as fore vacuum lines.

ADVANTAGES

- Easy push button ATM and HV adjustment
- Space saving rugged design
- Aluminium housing
- Mounts in any orientation
- Stainless steel measuring cell with metal-sealed feedthrough
- Logarithmic signal output for easy integration
- 10 bar absolute overpressure with threaded connections
- 250 °C bakeable version
- Nickel filament option for corrosive applications



APPLICATIONS

- Controlling high vacuum ionization gauges
- Fore vacuum pressure monitoring
- Safety circuits in vacuum systems
- General vacuum measurement and control in the fine and rough vacuum range

ORDERING INFORMATION

Type Filament	TPR280 tungsten	TPR281 nickel
DN 16 ISO-KF	IGG26950	IGG21950
DN 16 CF-R	IGG26951	IGG21951
1/8" NPT	IGG26952	IGG21952
8 VCR®	IGG26953	IGG21953
DN 16 ISO-KF long tube	IGG26960	IGG21960
DN 16 CF-R long tube	IGG26961	IGG21961
Replacement sensor Filament	tungsten	nickel
DN 16 ISO-KF	IG120133-T	IG120141-T
DN 16 CF-R	IG120135-T	IG120143-T
1/8" NPT	IG120138-T	IG120146-T
8 VCR®	IG120137-T	IG120145-T
DN 16 ISO-KF long tube	IG120134-T	IG120142-T
DN 16 CF-R long tube	IG120136-T	IG120144-T

SPECIFICATIONS

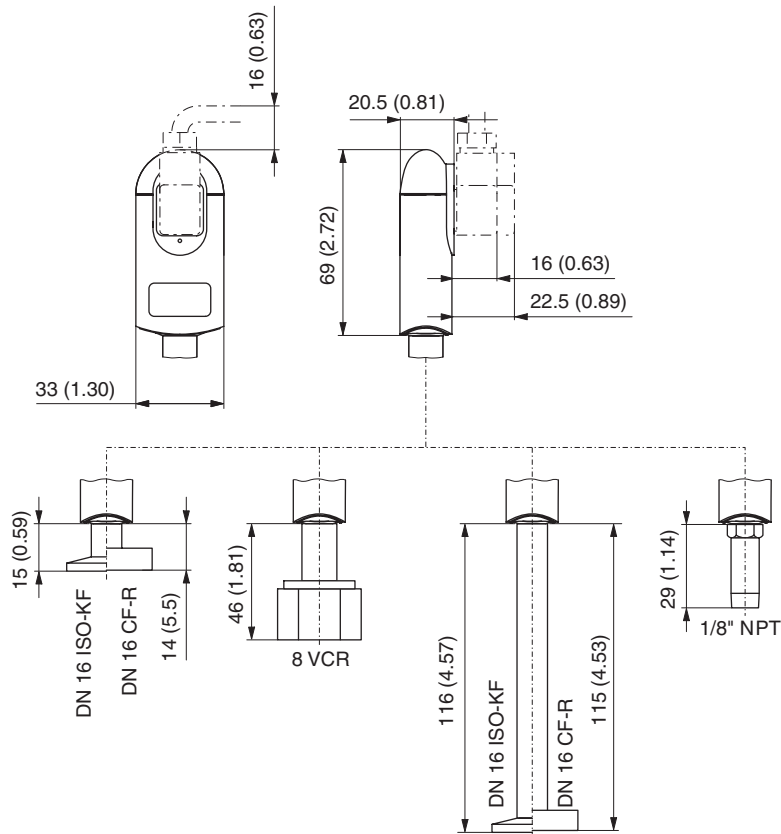
Type			TPR280 tungsten	TPR281 nickel
Filament				
Measurement principle			thermal conductance according to Pirani	
Measurement range (air, O ₂ , CO, N ₂)	mbar		5 x 10 ⁻⁴ ... 1000	
Accuracy (N ₂)	1 x 10 ⁻³ ... 100 mbar	% of reading	±15%	
	5 x 10 ⁻⁴ ... 1 x 10 ⁻³ mbar	% of reading	±50%	
	100 ... 1000 mbar	% of reading	±50%	
Resolution		% of reading	1%	
Repeatability (air)	1 x 10 ⁻³ ... 100 mbar	% of reading	2%	
Output signal (measurement signal)				
Voltage range	V		0 ... +9.0	
Measurement range	V		+2.2 ... +8.5	
Voltage vs. pressure			logarithmic 1.0 V/decade	
Error signal	V		0 ... +0.5 (filament rupture)	
Output impedance	Ω		2 x 4.7	
Minimum loaded impedance	kΩ		10, short-circuit proof	
Response time	ms		80	
Gauge identification	kΩ		3.0, referenced to supply common	
Adjustment			one tactile switch for ATM and HV adjustment	
Supply voltage				
At gauge	V DC		+14 ... +30	
Ripple	V _{pp}		≤1	
Current consumption	mA		<500 (max. starting current)	
Power consumption	W		≤1	
Electrical connection			Hirschmann appliance connector, type GO 6, 6 poles	
Sensor cable			5 poles plus shielding	
Cable length	m		≤150 (5 x 0.25 mm ²)	
	m		≤200 (5 x 0.34 mm ²)	
Materials exposed to vacuum			DIN 1.4301, DIN 1.4305, DIN 1.4435, glass, Ni, NiFe	
Filament			W	Ni
Internal volume				
DN 16 ISO-KF, DN 16 CF-R	cm ³		1.5	
DN 16 ISO-KF & DN 16 CF-R long tube	cm ³		10	
1/8" NPT, 8 VCR	cm ³		2	
Admissible pressure	bar (absolute)		10, limited to inert gases	
Admissible temperature				
Operation	°C		+5 ... +60	
Vacuum connection ¹⁾	°C		80 / 250 ²⁾	
Storage	°C		-20 ... +65	
Mounting orientation			any	
Degree of protection			IP40	
Weight				
DN 16 ISO-KF	g		80	
DN 16 CF-R	g		100	
1/8" NPT	g		70	
8 VCR, DN 16 ISO-KF long tube	g		130	
DN 16 CF-R long tube	g		140	

¹⁾ In horizontal mounting orientation

²⁾ Long tube

DIMENSIONS

mm (inches)



GLOBAL HEADQUARTERS:

Two Technology Place, East Syracuse, NY 13057 USA
 Tel: +1.315.434.1100 Fax: +1.315.437.3803 E-mail: reachus@inficon.com

UNITED STATES FRANCE GERMANY LIECHTENSTEIN SWITZERLAND UNITED KINGDOM CHINA JAPAN KOREA SINGAPORE TAIWAN

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