

## PSG5xx ATM bis Medium Vakuum Sensor

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Die Pirani-Standard-Messgeräte, PSG500, PSG502-S, PSG510-S und PSG512-S von INFICON bedienen sich der fortschrittlichsten digitalen Technologie, welche am Markt erhältlich ist. Die robuste und unempfindliche Edelstahlsensorzelle und der kompakte Aufbau qualifizieren sie für die Verwendung in Halbleiterapplikationen, sowie für viele Standard-Vakuumanwendungen, wie etwa in Vorvakuumleitungen.



### LEISTUNGEN

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- Taster für ATM- und HV-Abgleich
- Platzsparendes und robustes Design
- Aluminiumgehäuse
- Freie Einbaulage
- Messkammer aus Edelstahl mit metallgedichteter Durchführung
- Logarithmisches Ausgangssignal für einfache Systemintegration
- 10 bar (abs.) Überdruck bei Schraubverbindungen
- 250 °C ausheizbare Version
- Optional mit Nickelfilament für korrosive Anwendungen
- Keramikdurchführung für extrem korrosive Anwendungen (PSG510 & PSG512)
- Optionale Schaltpunkte
- RoHS-Konformität

### BESTELLINFORMATIONEN

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Typ	PSG500 tungsten	PSG500-S tungsten, setpoints	PSG502-S nickel, setpoints	PSG510-S tungsten, setpoints, ceramic feedthroughs	PSG512-S nickel, setpoints, ceramic feedthroughs
PSG500 1/2" Tube	350-063				
PSG500 1/8" NPT	350-061				
PSG500 4-VCR (1/4")	350-065				
PSG500 7/16-20 UNF	350-066				
PSG500 8-VCR (1/2")	350-064				
PSG500 DN 16 CF-R	350-062				
PSG500 DN 16 CF-R, ext. body	350-068				
PSG500 DN 16 ISO-KF	350-060				
PSG500 DN 16 ISO-KF, ext. body	350-067				
PSG500-S 1/2" Tube		350-083			
PSG500-S 1/8" NPT		350-081			
PSG500-S 4-VCR (1/4")		350-085			
PSG500-S 7/16-20 UNF		350-086			
PSG500-S 8-VCR (1/2")		350-084			
PSG500-S DN 16 CF-R		350-082			
PSG500-S DN 16 CF-R, ext. body		350-088			
PSG500-S DN 16 ISO-KF		350-080			
PSG500-S DN 16 ISO-KF, ext. body		350-087			
PSG502-S 1/2" Tube			350-143		
PSG502-S 1/8" NPT			350-141		
PSG502-S 4-VCR (1/4")			350-145		
PSG502-S 7/16-20 UNF			350-146		
PSG502-S 8-VCR (1/2")			350-144		
PSG502-S DN 16 CF-R			350-142		
PSG502-S DN 16 CF-R, ext. body			350-148		
PSG502-S DN 16 ISO-KF			350-140		
PSG502-S DN 16 ISO-KF, ext. body			350-147		
PSG510-S DN 16 ISO-KF				350-200	
PSG512-S DN 16 ISO-KF					350-300

## TECHNISCHE DATEN

Typ		PSG500 tungsten	PSG500-S tungsten, setpoints	PSG502-S nickel, setpoints	PSG510-S tungsten, setpoints, ceramic feedthroughs	PSG512-S nickel, setpoints, ceramic feedthroughs
Messprinzip		thermal conductance according to Pirani	thermal conductance according to Pirani	thermal conductance according to Pirani	thermal conductance according to Pirani	thermal conductance according to Pirani
Genauigkeit (N <sub>2</sub> )						
1 x 10 <sup>-3</sup> ... 100 mbar	% of reading	±15%	±15%	±15%	±15%	±15%
5 x 10 <sup>-4</sup> ... 1 x 10 <sup>-3</sup> mbar	% of reading	±50%	±50%	±50%	±50%	±50%
100 ... 1000 mbar	% of reading	±50%	±50%	±50%	±50%	±50%
Wiederholbarkeit (Luft)						
1 x 10 <sup>-3</sup> ... 100 mbar	% of reading	2%	2%	2%	2%	2%
Ausgangssignal (Messsignal)						
Spannungsbereich	V	0 ... +10.3	0 ... +10.3	0 ... +10.3	0 ... +10.3	0 ... +10.3
Messbereich	V	+1.9 ... +10.0	+1.9 ... +10.0	+1.9 ... +10.0	+1.9 ... +10.0	+1.9 ... +10.0
Messbereich (Luft, O <sub>2</sub> , CO, N <sub>2</sub> )	mbar	5 x 10 <sup>-4</sup> to 1000	5 x 10 <sup>-4</sup> to 1000	5 x 10 <sup>-4</sup> to 1000	5 x 10 <sup>-4</sup> to 1000	5 x 10 <sup>-4</sup> to 1000
Schaltpunkt						
Einstellungsbereich	mbar	–	2 x 10 <sup>-3</sup> ... 500	2 x 10 <sup>-3</sup> ... 500	2 x 10 <sup>-3</sup> ... 500	2 x 10 <sup>-3</sup> ... 500
Schaltpunkt						
Anzahl Schaltpunkte		none	2	2	2	2
Schaltpunkt						
Hysterese	% of reading	–	10% above lower threshold	10% above lower threshold	10% above lower threshold	10% above lower threshold
Schaltpunkt						
Relaiskontakt	V (dc)	–	30	30	30	30
Schaltpunkt						
Relaiskontakt	A (dc)	–	0.5 floating	0.5 floating	0.5 floating	0.5 floating
Schaltpunkt						
Relaiskontakt: Schaltzeit	ms	–	<20	<20	<20	<20
Versorgungsspannung						
An der Messröhre	V (dc)	+14 ...+30	+14 ...+30	+14 ...+30	+14 ...+30	+14 ...+30
Versorgungsspannung						

## TECHNISCHE DATEN

Typ		PSG500 tungsten	PSG500-S tungsten, setpoints	PSG502-S nickel, setpoints	PSG510-S tungsten, setpoints, ceramic feedthroughs	PSG512-S nickel, setpoints, ceramic feedthroughs
Ripple	V (p-p)	≤1	≤1	≤1	≤1	≤1
Leistungsaufnahme	mA		<500 (max. starting current)			
Spannung vs. Druck		logarithmic 1.286 Volts per decade	logarithmic 1.286 Volts per decade	logarithmic 1.286 Volts per decade	logarithmic 1.286 Volts per decade	logarithmic 1.286 Volts per decade
Inneres Volumen						
DN 16 ISO-KF & DN 16 CF-R langes Rohr	cm <sup>3</sup> (in. <sup>3</sup> )			10 (0.61)		
DN 16 ISO-KF, DN 16 CF-R, 7/16-20 UNF	cm <sup>3</sup> (in. <sup>3</sup> )	1.5 (0.092)	1.5 (0.092)	1.5 (0.092)	1.5 (0.092)	1.5 (0.092)
DN 16 ISO-KF & DN 16 CF-R langes Rohr	cm <sup>3</sup> (in. <sup>3</sup> )	10 (0.61)	10 (0.61)		10 (0.61)	10 (0.61)
1/8" NPT, 4 VCR, 8 VCR, 1/2"-Rohr	cm <sup>3</sup> (in. <sup>3</sup> )	2 (0.122)	2 (0.122)	2 (0.122)	2 (0.122)	2 (0.122)
Zulässige Temperatur						
Betrieb	°C	+5 ... +60	+5 ... +60	+5 ... +60	+5 ... +60	+5 ... +60
Vakuumschluss (1)	°C	80 / 250 <sup>(2)</sup>	80 / 250 <sup>(2)</sup>	80 / 250 <sup>(2)</sup>	80 / 250 <sup>(2)</sup>	80 / 250 <sup>(2)</sup>
Lagerung	°C	-20 ... +65	-20 ... +65	-20 ... +65	-20 ... +65	-20 ... +65
Gewicht						
DN 16 ISO-KF, 7/16-20 UNF	g	80	80	80	80	80
DN 16 CF-R, 4 VCR	g	100	100	100	100	100
1/8" NPT, 1/2"-Rohr	g	70	70	70	70	70
8 VCR, DN 16 ISO-KF langes Rohr	g	130	130	130	130	130
DN 16 CF-R langes Rohr	g	140	140	140	140	140
Fehlersignal	V	0 ... +0.5 (filament rupture)	0 ... +0.5 (filament rupture)	0 ... +0.5 (filament rupture)	0 ... +0.5 (filament rupture)	0 ... +0.5 (filament rupture)
Ausgangsimpedanz	Ω	2 x 4.7	2 x 4.7	2 x 4.7	2 x 4.7	2 x 4.7
Minimale Lastimpedanz	kΩ	10, short-circuit proof	10, short-circuit proof	10, short-circuit proof	10, short-circuit proof	10, short-circuit proof
Ansprechzeit	ms	80	80	80	80	80

## TECHNISCHE DATEN

Typ		PSG500 tungsten	PSG500-S tungsten, setpoints	PSG502-S nickel, setpoints	PSG510-S tungsten, setpoints, ceramic feedthroughs	PSG512-S nickel, setpoints, ceramic feedthroughs
Identifikation Messröhre	kΩ	27.0, referenced to supply common	27.0, referenced to supply common	27.0, referenced to supply common	27.0, referenced to supply common	27.0, referenced to supply common
Einstellung		one tactile switch for ATM and HV adjustment	one tactile switch for ATM and HV adjustment	one tactile switch for ATM and HV adjustment	one tactile switch for ATM and HV adjustment	one tactile switch for ATM and HV adjustment
Stromaufnahme	mA	<500 (max. starting current)	<500 (max. starting current)	<500 (max. starting current)	<500 (max. starting current)	<500 (max. starting current)
Leistungsaufnahme	W	≤1	≤1	≤1	≤1	≤1
Elektrischer Anschluss		FCC 68 / RJ45 appliance connector, 8 poles, male	FCC 68 / RJ45 appliance connector, 8 poles, male	FCC 68 / RJ45 appliance connector, 8 poles, male	FCC 68 / RJ45 appliance connector, 8 poles, male	FCC 68 / RJ45 appliance connector, 8 poles, male
Sensorkabel		8 poles plus shielding	8 poles plus shielding	8 poles plus shielding	8 poles plus shielding	8 poles plus shielding
Kabellänge	m	≤100 (8 x 0.14 mm <sup>2</sup> )	≤100 (8 x 0.14 mm <sup>2</sup> )	≤100 (8 x 0.14 mm <sup>2</sup> )	≤100 (8 x 0.14 mm <sup>2</sup> )	≤100 (8 x 0.14 mm <sup>2</sup> )
Werkstoffe gegen Vakuum		glass, Ni, NiFe, DIN 1.4301 / 1.4305 / 1.4435	glass, Ni, NiFe, DIN 1.4301 / 1.4305 / 1.4435	glass, Ni, NiFe, DIN 1.4301 / 1.4305 / 1.4435	Al <sub>2</sub> O <sub>3</sub> , Ni, DIN 1.3981 / 1.4305 / 1.4435	Al <sub>2</sub> O <sub>3</sub> , Ni, DIN 1.3981 / 1.4305 / 1.4435
Heizfaden		W	W	Ni	W	Ni
Zulässiger Druck	bar (absolute)	10, limited to inert gases	10, limited to inert gases	10, limited to inert gases	10, limited to inert gases	10, limited to inert gases
Einbaulage		any	any	any	any	any
Schutzart		IP40	IP40	IP40	IP40	IP40

(1) In horizontal mounting orientation

(2) Long tube

## ERSATZTEILE

	PSG500 tungsten	PSG500-S tungsten, setpoints	PSG502-S nickel, setpoints	PSG510-S tungsten, setpoints, ceramic feedthroughs	PSG512-S nickel, setpoints, ceramic feedthroughs
PSG500 Ersatz-Sensor 4-VCR (1/4")	350-926	350-926	-	-	-
PSG500 Ersatz-Sensor 1/2" Tube	350-923	350-923	-	-	-
PSG500 Ersatz-Sensor 1/8" NPT	350-921	350-921	-	-	-
PSG500 Ersatz-Sensor 7/16-20 UNF	350-925	350-925	-	-	-
PSG500 Ersatz-Sensor 8-VCR (1/2")	350-924	350-924	-	-	-
PSG500 Ersatz-Sensor DN 16 CF-R	350-922	350-922	-	-	-
PSG500 Ersatz-Sensor DN 16 CF-R,ext.body	350-928	350-928	-	-	-
PSG500 Ersatz-Sensor DN 16 KF	350-920	350-920	-	-	-
PSG500 Ersatz-Sensor DN 16 KF,ext.body	350-927	350-927	-	-	-
PSG502 Ersatz-Sensor 1/2" Tube	-	-	350-903	-	-
PSG502 Ersatz-Sensor 1/8" NPT	-	-	350-901	-	-
PSG502 Ersatz-Sensor 4-VCR (1/4")	-	-	350-906	-	-
PSG502 Ersatz-Sensor 7/16-20 UNF	-	-	350-905	-	-
PSG502 Ersatz-Sensor 8-VCR (1/2")	-	-	350-904	-	-
PSG502 Ersatz-Sensor DN 16 CF-R	-	-	350-902	-	-
PSG502 Ersatz-Sensor DN 16 CF-R,ext.body	-	-	350-908	-	-
PSG502 Ersatz-Sensor DN 16 KF	-	-	350-900	-	-
PSG502 Ersatz-Sensor DN 16 KF,ext.body	-	-	350-907	-	-
PSG510 Ersatz-Sensor DN 16 KF	-	-	-	350-930	-
PSG512 Ersatz-Sensor DN 16 KF	-	-	-	-	350-940

## ZUBEHÖR

	PSG500 tungsten	PSG500-S tungsten, setpoints	PSG502-S nickel, setpoints	PSG510-S tungsten, setpoints, ceramic feedthroughs	PSG512-S nickel, setpoints, ceramic feedthroughs
Spannring DN 10-16 ISO-KF	211-001	211-001	211-001	211-001	211-001

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