

PRESSURE TRANSMITTER

54VCR Series

High-Purity Pressure Transmitter

A high-purity pressure transmitter for semiconductor, photovoltaic, specialty-gas, and ultra-clean process systems, with 316L/Hastelloy wetted materials and helium leak testing.



PRESSURE RANGE	OUTPUT	PROTECTION
-14.7 to 5,000 psi options	4-20 mA / 0-5 V / 1-5 V / 0-10 V / 0.5-4.5 V	IP67; Ex ec IIC T6 Gc option

PRODUCT OVERVIEW

The 54VCR Series is engineered for precise pressure measurement in ultra-clean gas delivery and process equipment. Its all-stainless construction, fine-finish wetted surfaces, 48-hour full-scale pressure hold, and helium leak verification support demanding high-purity installations. Adjustable zero and span simplify system commissioning.

KEY FEATURES

- All-stainless construction for high-purity gas and process service
- Each unit receives a 48-hour full-scale pressure hold and helium leak test
- Typical wetted-surface finish Ra $\leq$ 0.13 μ m; maximum Ra $\leq$ 0.18 μ m
- Accuracy of $\pm$ 0.3% FS, including nonlinearity, hysteresis, and repeatability
- Field-adjustable zero and span
- Male or female 1/4 VCR connections with M12 or direct-cable electrical options

TYPICAL APPLICATIONS

- Semiconductor process equipment
- Flat-panel and photovoltaic production
- Ultra-high-purity gas delivery
- Specialty-gas cabinets and distribution systems

TECHNICAL SPECIFICATIONS

PARAMETER	SPECIFICATION
Pressure ranges	-14.7 to 80, 100, 150, 200, 250, 350, 500, 1,000, 1,500, 2,000, 3,000, or 5,000 psi
Pressure reference	Gauge or absolute
Overpressure / burst pressure	2 x rated pressure / 5 x rated pressure
Accuracy	+/-0.3% FS, including nonlinearity, hysteresis, and repeatability
Output signals	4-20 mA, 0-5 V, 1-5 V, 0-10 V, or 0.5-4.5 V ratiometric
Supply voltage	10-30 VDC
Response time	<1.5 ms
Current-output load	$R \leq (U_s - 10 \text{ V}) / 0.02 \text{ A}$
Temperature coefficient	$\leq \pm 0.25\% \text{ FS per } 10 \text{ deg C from } -20 \text{ to } +85 \text{ deg C}$
Operating temperature	Ambient and media: -20 to +85 deg C; storage: -30 to +85 deg C
Insulation resistance	>100 Mohm at 250 VDC
Helium leak rate	$<1 \times 10^{-9} \text{ mbar L/s (atmospheric standard cc/s)}$
Wetted materials	316L stainless steel and Hastelloy
Housing	304 stainless steel
Process connection	1/4 VCR male or female; fixed or movable nut options
Electrical connection	M12 x 1, 4-pin, or direct cable
Ingress protection	IP67
Hazardous-area option	Ex ec IIC T6 Gc

Configuration note: Specifications and approvals can vary by pressure range, output, connection, and material selection. Confirm the exact ordering code and controlled specification with CASCED US before design release.

[View the current product page and request a quote at cascaded-us.com](https://www.cascaded-us.com)

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