



85VU

Vacuum Gage, Uncompensated

SPECIFICATIONS

- 316L SS Pressure Sensor
- Small Profile
- 0 - 100mV Output
- Vacuum Gage

Model 85VU is an uncompensated, micro-machined, piezoresistive silicon pressure sensor designed for vacuum gage applications, packaged in a 316L Stainless Steel housing. The pressure sensor is offered in a weldable package or with a variety of threaded fittings such as 1/4NPT, 1/8NPT and 1/4BSP. Custom fittings can be manufactured upon request.

This product is designed for OEM applications where compatibility with corrosive media is required. The sensing package utilizes silicon oil to transfer pressure from the 316L Stainless Steel diaphragm to the sensing element.

For additional Model 85 products designed for vacuum gage applications, datasheets for Compensated and Constant Voltage configurations are available.

FEATURES

- Weldable and Threaded Process Fittings
- -40°C to +125°C Operating Temperature
- Up to ±0.1% Pressure Non-Linearity
- Solid State Reliability

APPLICATIONS

- Medical Instruments
- Process Control
- Fresh & Waste Water Measurements
- Partial Vacuum Gas Measurement
- Pressure Transmitters
- Tank Level Systems (RV & Industrial)

STANDARD RANGES

Range	psi
0 to 15	•
0 to 30	•
0 to 50	•
0 to 100	•
0 to 300	•
0 to 500	•

PERFORMANCE SPECIFICATIONS

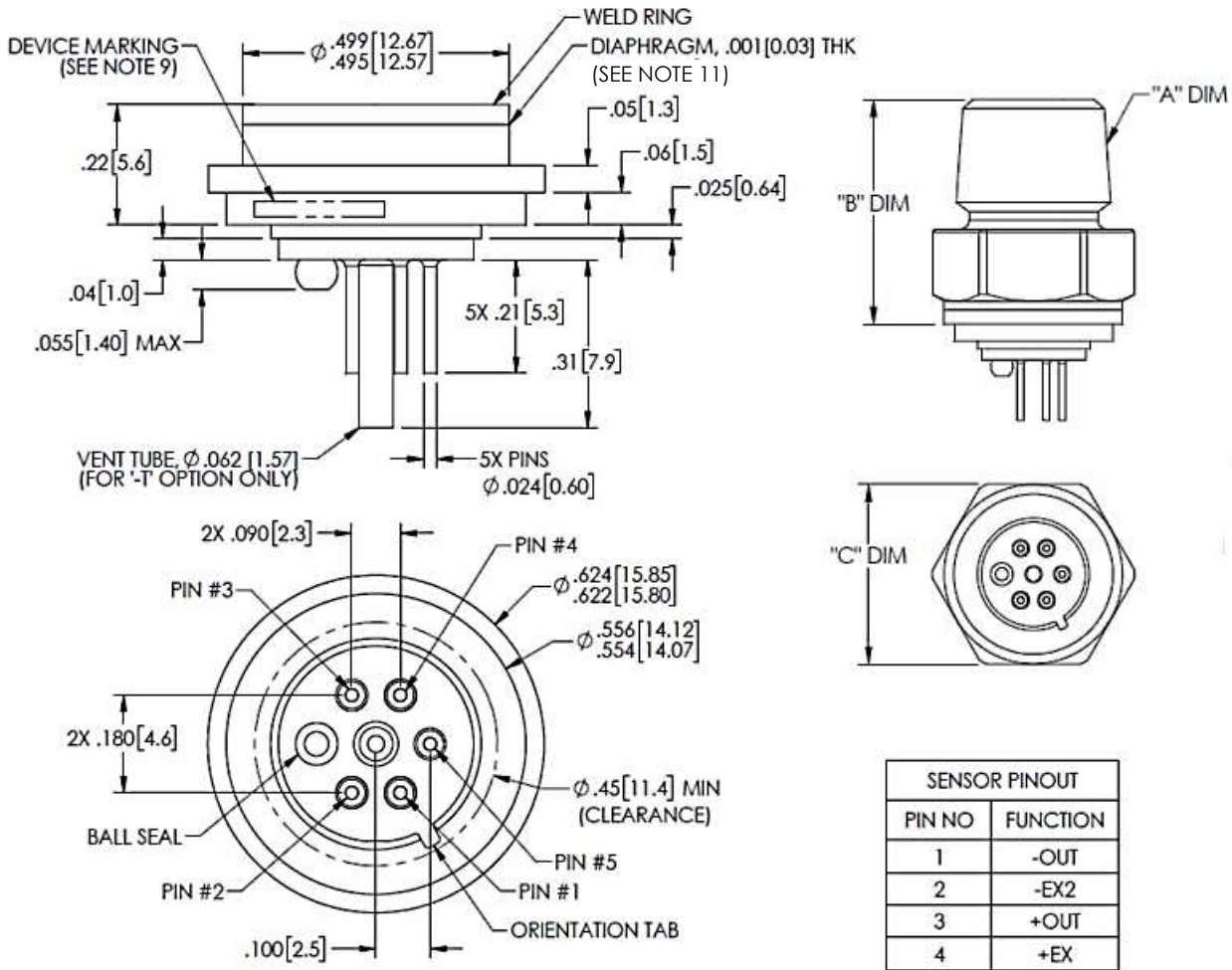
Unless otherwise specified: Supply Current: 1.5mA, Ambient Temperature: 25°C (unless otherwise specified)

PARAMETERS	MIN	TYP	MAX	UNITS	NOTES
Sensitivity	12		27	mV/V @Span	
Zero Pressure Output	-6.0		8.0	mV/V	1
Pressure Non-Linearity	-0.1		0.1	%Span	2
Pressure Hysteresis	-0.05		0.05	%Span	
Repeatability		±0.02		%Span	
Bridge Resistance	3.8K		5.8K	Ω	3
Thermal Hysteresis – Span	-0.25	±0.05	0.25	%Span	4
Thermal Hysteresis – Offset	-0.25	±0.05	0.25	%Span	4
Temperature Coefficient – Resistance	1.30K	1.51K	1.75K	PPM/°C	4
Temperature Coefficient – Span	-1.65K	-1.25K	-1.0K	PPM/°C	4
Temperature Coefficient – Offset	-30		30	μV/V/°C	4
Long Term Stability – Span		±0.10		%Span/Year	
Long Term Stability – Offset		±0.10		%Span/Year	
Supply Current	0.5	1.5	2.0	mA	
Supply Voltage		5	9.5	V	
Output Noise (10Hz to 1kHz)		1.0		μV p-p	
Response Time (10% to 90%)		0.1		ms	
Insulation Resistance (50Vdc)	50M			Ω	5
Pressure Overload			3X	Rated	6
Pressure Burst			4X	Rated	7
Operating Temperature	-40		+125	°C	
Storage Temperature	-50		+125	°C	
Media – Pressure Port	Liquids and Gases compatible with 316/316L Stainless Steel				

Notes

1. Measured at Ambient Pressure.
2. Best fit straight line.
3. Bridge resistance is measured with both –E pins shorted together.
4. TC values are first order coefficients to a quadratic fit over a temperature range of -20 to +85°C.
5. Between case and sensing element.
6. The maximum pressure that can be applied without changing the transducer's performance or accuracy.
7. The maximum pressure that can be applied to a transducer without rupture of either the sensing element or transducer.
8. Testing:
 - 8.1 Units are not tested over temperature or pressure
 - 8.2 A final electrical test (@ 1.5mA) is performed to verify parts are electrically alive.
 - 8.3 All units are subjected to 100% drift test.
9. Device Marking
Each part is identified with Model Number, Pressure Range, Type, Lot Number, Serial Number and Date Code.
10. Shipping/Packaging
The diaphragm is protected by a static dissipative cap (no fitting option only). Each unit is packaged individually in a plastic vial with anti-static foam
11. Direct Mechanical contact with diaphragm is prohibited. Diaphragm surface must remain free of defects (scratches, punctures, dents, fingerprints, etc) for device to operate properly. Caution is advised when handling parts with exposed diaphragms. Use protective cap whenever devices are not in use.

DIMENSIONS

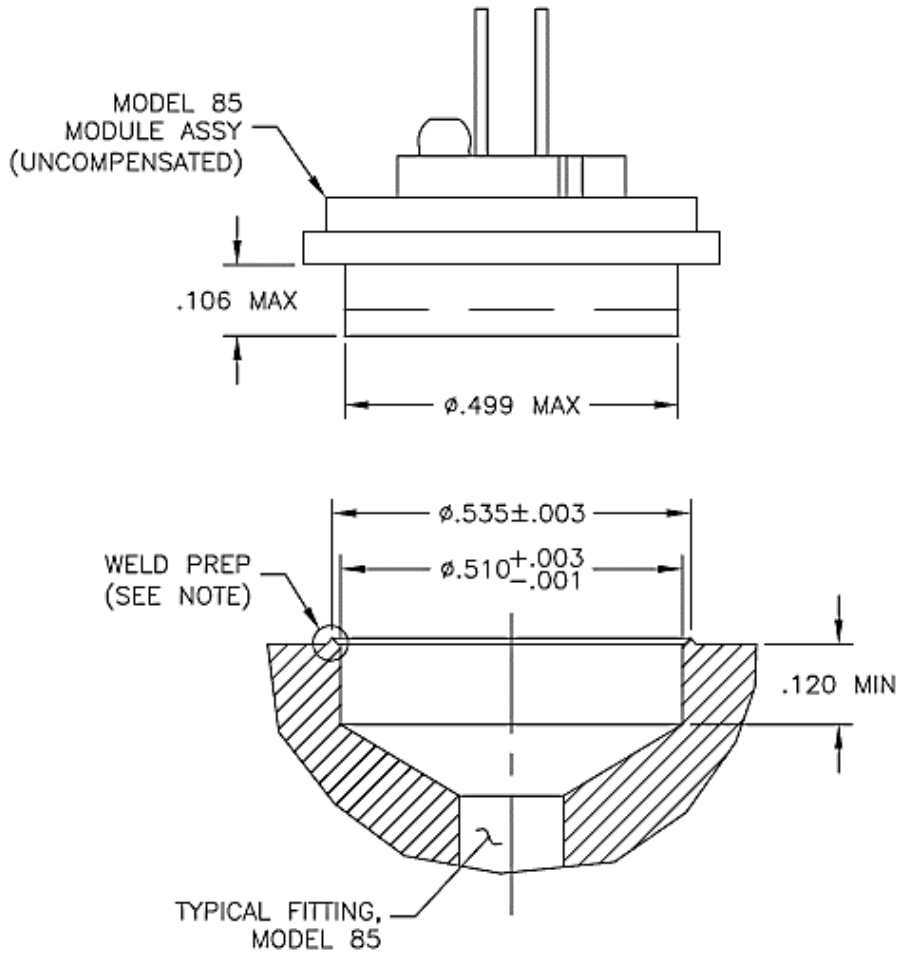


SENSOR PINOUT	
PIN NO	FUNCTION
1	-OUT
2	-EX2
3	+OUT
4	+EX
5	-EX1

PROCESS FITTING OPTIONS				
FITTING TYPE	MEAS PART NO.	"A" DIM	"B" DIM	"C" DIM
1	IC-7050	1/4-18 NPT	1.04[26.4]	7/8[22.2] HEX
2	IC-7049	1/8-27 NPT	1.01[25.7]	7/8[22.2] HEX
3	IC-7048	7/16-20 UNF	.86[21.8]	7/8[22.2] HEX
4	IC-6754	1/4-18 NPT	.78[19.8]	5/8[15.9] HEX
5	IC-5010	1/4-19 BSP	.81[20.6]	3/4[19.0] HEX
8	IC-6800	1/8-27 NPT	.65[16.5]	5/8[15.9] HEX
9	IC-7124	1/4-19 BSP	.99[25.1]	7/8[22.2] HEX

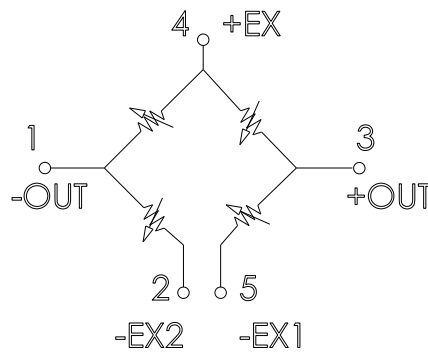
NOTE: FITTING TYPE '4' ASSEMBLY SHOWN
ALL DIMS ARE FOR REFERENCE

RECOMMENDED MOUNTING DIMENSIONS

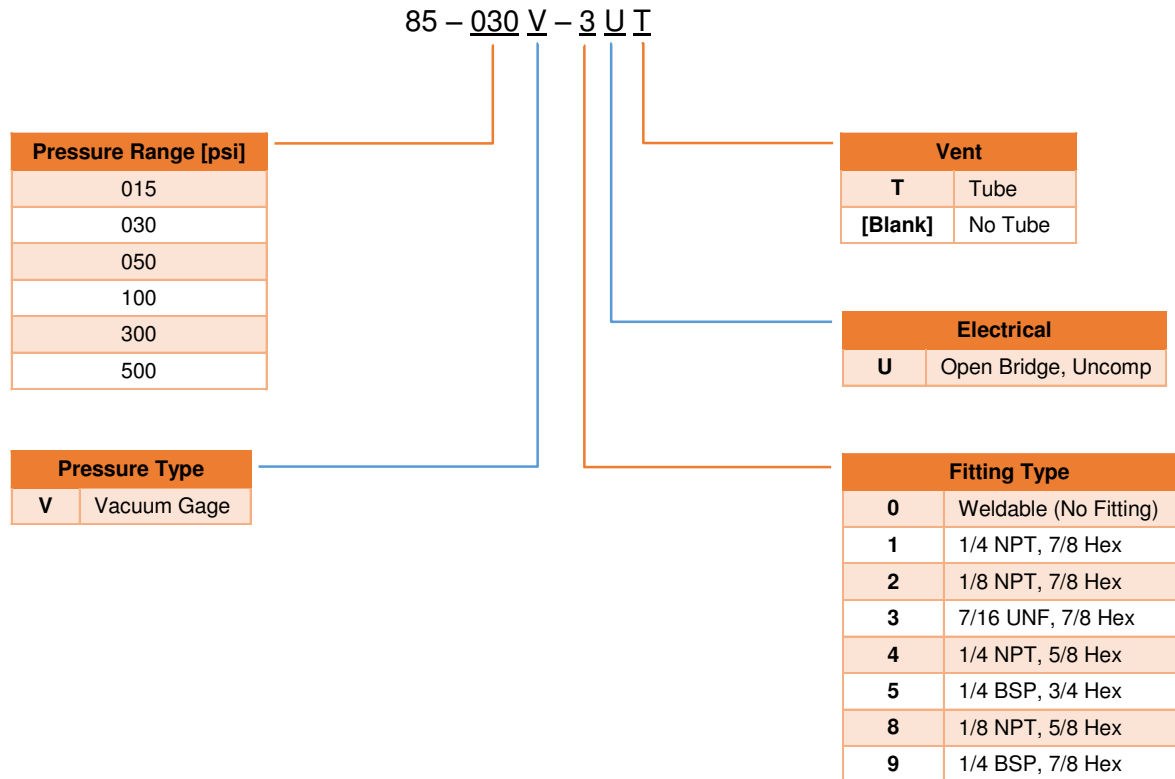


NOTE: WELD PREP SHOWN IS FOR RESISTANCE WELD. ACTUAL GEOMETRY VARIES PER CUSTOMER REQUIREMENTS.

CONNECTIONS



ORDERING INFORMATION



Refer to Fitting Table for more information



株式会社 クローネ

■ カタログに掲載してある製品の色は印刷インキの関係上、実際とは異なる場合があります。
 ■ 製品のデザイン、仕様等などは、予告なく変更する場合があります。

本社：〒124-0023 東京都葛飾区東新小岩3丁目9番6号 TEL: (03) 3695-5431 / FAX: (03) 3695-5698
 大阪支店：〒530-0054 大阪市北区南森町2-2-9(南森町八千代ビルF) TEL: (06) 6361-4831 / FAX: (06) 6361-9360
 e-mail: sales-tokyo@krone.co.jp URL: <https://www.krone.co.jp>

TE.com/sensorsolutions

Measurement Specialties, Inc., a TE Connectivity company.

Measurement Specialties, TE Connectivity, TE Connectivity (logo) and EVERY CONNECTION COUNTS are trademarks. All other logos, products and/or company names referred to herein might be trademarks of their respective owners.

The information given herein, including drawings, illustrations and schematics which are intended for illustration purposes only, is believed to be reliable. However, TE Connectivity makes no warranties as to its accuracy or completeness and disclaims any liability in connection with its use. TE Connectivity's obligations shall only be as set forth in TE Connectivity's Standard Terms and Conditions of Sale for this product and in no case will TE Connectivity be liable for any incidental, indirect or consequential damages arising out of the sale, resale, use or misuse of the product. Users of TE Connectivity products should make their own evaluation to determine the suitability of each such product for the specific application.

© 2018 TE Connectivity Ltd. family of companies All Rights Reserved.