

# WRG-S Active Wide Range Gauge



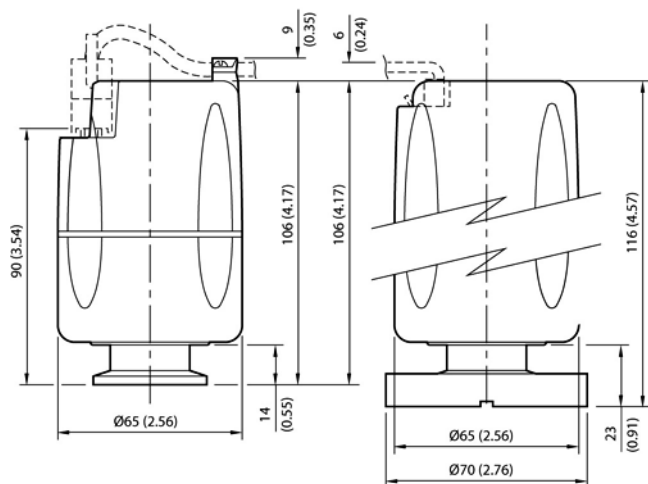
The Wide Range Gauge (WRG) family offers the capability of single port pressure measurement in the range atmosphere to  $10^{-9}$  mbar with a linear output. Its a compact solution, halving the space and connectivity hardware requirement, which can be all important in many applications. The WRG has many novel features, including a new patented striker, pushbutton calibration and set point controls and comprehensive diagnostics. The WRG is a cost-effective vacuum management solution when used either with a Edwards controller or directly integrated into the system controls.

## 4 Features & Benefits

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- Microprocessor signal processing gives seamless transition between Pirani and magnetron outputs as well as linear output (log pressure scale)
- D-type version including cable strain relief and enhanced ingress protection - IP44
- Low magnetic field version (SL) available for sensitive applications e.g. mass spectrometry and electron microscopy
- Easily programmed set point covering entire measuring range
- Magnetron uses an advanced patented technique for highly reliable striking, even at high vacuum or in relatively contaminated conditions

## Dimensions



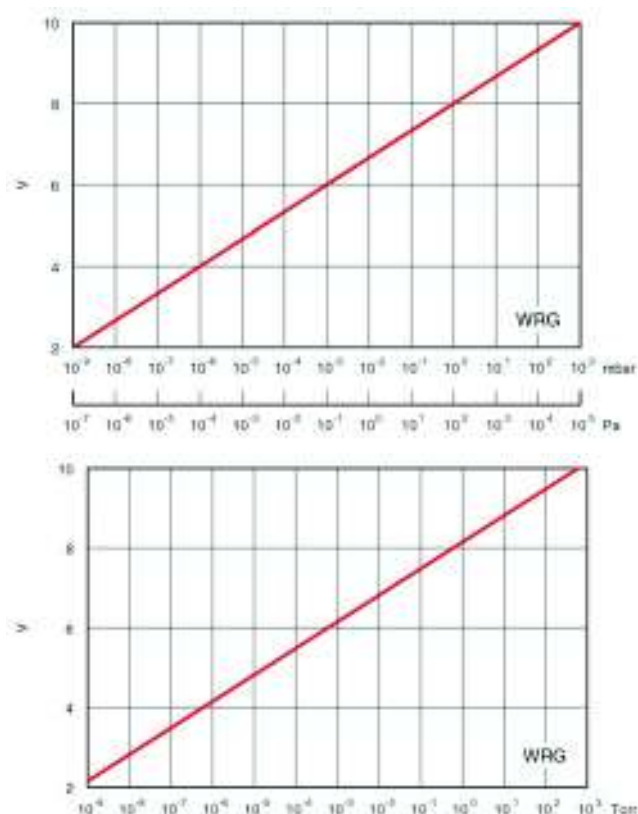
## Applications

Any vacuum system where there is a need to measure pressure over a wide range. The WRG with an AGD represents a very simple and cost effective means of achieving this.

The linear output and equation make WRG's an attractive option for industrial OEM's where the gauge may be directly integrated into the process controller.

The WRG is suitable for a wide range of HV and UHV applications, however if your process will spend a significant amount of time between  $5 \times 10^{-4}$  and  $5 \times 10^{-3}$  mbar then Edwards recommend using independent APG100 Pirani and AIM Penning gauges, as this will improve gauge reliability for your application.

## Performance Curves



## Technical Data

Pressure range	Atmosphere to $10^{-9}$ mbar/Torr
Accuracy *	Typically $\pm 15\%$ <100 mbar and $\pm 30\%$ < $10^{-3}$ mbar
Maximum over pressure	6 bar absolute (87 psia)
Power supply	+14.5 to +36 V d.c.
Power consumption	2 W maximum
Output signal	1.8 to 10.2 V d.c.
Adjustments	Atmosphere and setpoint
Set point	Open collector transistor
Maximum voltage	40 V d.c.
Current	100 mA maximum
Temperature range	
Operating	+5 to +60 °C
Storage	0 to +70 °C
Materials exposed to vacuum (Both NW and CF versions)	Stainless steel (AISI 304, 316, 321, 347), Fluoroelastomer, soda lime glass, Tungsten, trace of Nickel and Nickel Iron
Internal volume	26 cm <sup>3</sup>
Weight	0.8 kg
External interface connector	8-way FCC68 / RJ45 Socket
Interface cables	Use range of active gauge cables
Standards	
Electronic design	EN 61010-1
Electromagnetic compatibility	EN 61326 Industrial Location, Class B emissions
Flame retardant casing	UL94 (V0)
Enclosure rating	IP40
Pin allocation **	
1. Power supply positive	5. Signal common
2. Power supply common	6. Set-point output
3. Gauge output	7. Atmosphere calibration
4. Gauge identification	8. Not connected

\* Accuracy is reduced at the limits of the measuring range.

\*\* Not shown on diagram

## Ordering Information

Product Description	Order No.
WRG-S-NW25	D14701000
WRG-S-DN40CF	D14703000
WRG-S-NW25, Certificated	D1470100C
WRG-S-DN40CF, Certificated	D1470300C
WRG-D-NW25	D14702000
WRG-SL-NW25	D14711000
WRG-SL-NW25, Certificated	D1471100C
Accessories & Spares	Order No.
0.5M Active Gauge Cable	D40001005
100M Active Gauge Cable Assembly	D40001999
10M Active Gauge Cable	D40001100
15M Active Gauge Cable	D40001150
1M Active Gauge Cable	D40001010
25M Active Gauge Cable	D40001250
3M Active Gauge Cable	D40001030
50M Active Gauge Cable	D40001500
5M Active Gauge Cable	D40001050
NW25 Centering Ring 3D Baffle Viton	D02110000
Spares Kit WRG Electrode Assy	D14701802
Spares Kit WRG Full Body Tube	D14701804
Spares Kit WRG Pirani Tube	D14701803
Surge Protector Box	D40006000
WRG Body Tube Assy DN40CF	D14703801
WRG Body Tube Assy NW25	D14701801
WRG D Adapter Cable 9-Way D/Fcc68	D40003100
WRG-D Elect & Mag Housing NW25	D14702800
WRG-S Elect & Mag Housing NW25	D14701800
WRG-SL Elect & Mag Housing NW25	D14711800