

# 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.

It is 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 striker, push-button calibration and set point controls and comprehensive diagnostics. The WRG is a cost-effective vacuum management solution when used either with an Edwards controller or directly integrated into the system controls.

This gauge is particularly suited to monitoring the pressure on systems that are rapidly pumped down from atmosphere pressure to high vacuum levels.

For applications that require extended pressure monitoring in the  $10^{-2}$  to  $10^{-4}$  mbar range Edwards recommends using separate Active Pirani (APG100) and Active Inverted Magnetron (AIMX) gauges.



## Features and Benefits

- Microprocessor signal processing gives seamless transition between Pirani and magnetron outputs as well as linear output (log pressure scale)
- Automatic vacuum setting of Pirani gauge element
- Single push-button atmosphere setting
- Easily programmed set point covering entire measuring range
- Magnetron uses an advanced technique for highly reliable striking, even at high vacuum or in relatively contaminated conditions
- Extended service intervals and gauge lifetime, through reduction of HT voltage after ignition and low discharge current
- D-type version including cable strain relief and enhanced ingress protection (IP44)
- Low magnetic field version (SL) available for particularly sensitive applications e.g. mass spectrometry and microscopy
- Ultra compact, featuring recessed electrical connector
- Easy service; both Pirani and magnetron elements are individually replaceable
- Comprehensive failure mode diagnostics facility
- Compatible with Edwards TIC, TAG and ADC controllers

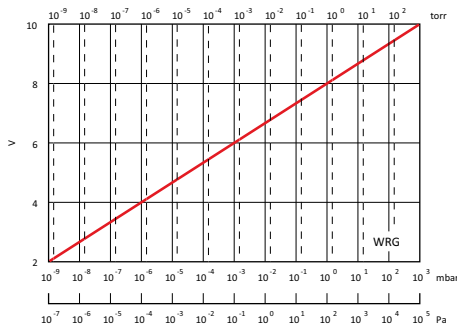
## Technical data

Pressure range	Atmosphere to $10^{-9}$ mbar/Torr
Accuracy*	Typically $\pm 15\%$ <100 mbar and $\pm 30\%$ < $10^{-3}$ mbar
Maximum overpressure	6 bar absolute (87 psia)
Power supply	+ 14.5 to + 36 V dc
Power consumption	2 W maximum
Output signal	1.8 to 10.2 V dc
Adjustments	Atmosphere and setpoint
Set point	Open collector transistor
Maximum voltage	40 V dc
Current	100 mA max
Temperature range	
Operating	+ 5 to + 60 °C
Storage temperature	+ 0 to + 70 °C
Materials exposed to vacuum - all models	Stainless steel (AISI 304, 316, 321, 347), Fluoroelastomer, soda lime glass, Tungsten
Internal volume	26 cm <sup>3</sup>
Weight	0.8 kg

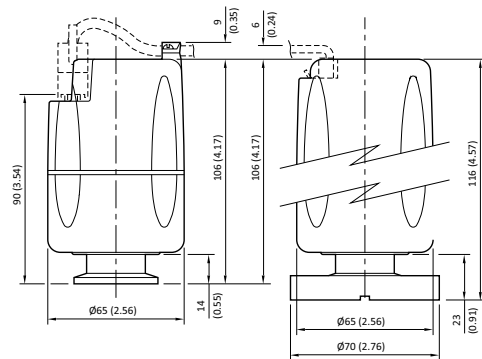
\* Accuracy is reduced at the limits of the measuring range

External interface connectors	
'S', 'SL' and 'CF' versions	8 way FCC68/RJ45 socket
'D' version	9 way D-type plug (pins)
Interface cables	
'S', 'SL' and 'CF' versions	Use range of active gauge cables
'D' version	To be supplied by customer (special adaptor cable available)
Vacuum fitting	NW25 and DN40CF
Standards	
Electromagnetic compatibility	EN 61326 Industrial Location, Class B Emissions
Enclosure rating	
'S' and 'SL' versions	IP 40
'D' version	IP 44

### Gauge output



### Dimensions - mm (inch)



### Ordering information

Product description	Order no.	Product description	Order no.	Product description	Order no.
WRG-S-NW25	D14701000	Electronics and magnet housing		Replacement body tube assembly	
WRG-S-DN40CF	D14703000	WRG-S	D14701800	NW25	D14701801
WRG-SL-NW25	D14711000	WRG-SL	D14711800	DN40CF	D14703801
WRG-D-NW25	D14702000	WRG-D	D14702800	Electrode assembly kit	D14701802
				Pirani tube replacement kit	D14701803
				Full body tube service kit	D14701804

Gauges can be supplied with a calibration certificate traceable to national standards.  
For accessories, supporting products and kits please contact Edwards or visit our website.

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