PRODUCT DATA SHEET

ACTIVE WIDE RANGE GAUGE WRG200

edwardsvacuum.com

The Active Wide Range Gauge WRG200 offers the capability of single port pressure measurement in the range atmosphere to 10^{-9} mbar with a linear output.

The WRG200 is a compact and efficient solution that significantly reduces the required space and hardware for connectivity. Its compact design makes it ideal for various applications. This gauge has undergone numerous technical improvements such as its innovative striker design, a 360^{0} LED light ring, easy push-button calibration, integrated set-point controls, and comprehensive diagnostics. The WRG200 offers cost-effectiveness as a vacuum management solution, either when used with an Edwards controller or directly integrated into the system controls. This gauge is perfect for monitoring pressure in systems that are rapidly pumped down from atmospheric pressure to high vacuum levels.

Benefits

1. Our advanced wide range gauge uses a two key principle to achieve its wide measuring range, inverted magnetron and pirani. Not only has the core of the gauge been redesigned, the features on board the gauge have too! With requirements for set-points, digital interfaces, adaptive visual aids and faster ignition rates. Our new WRG200 pushes the boundaries further than ever before in a compact package meeting all your needs.
2. Everyone desires a reliable vacuum process that operates effectively regardless of usage frequency, be it constant or occasional. Our advanced wide range gauge WRG200 offers exactly that. The WRG200, with its filament pirani and inverted magnetron measuring cell, enables us to measure more widely and accurately while maintaining consistent performance throughout the gauges lifetime. This is a crucial aspect of the gauges effectiveness.
3. As standardisation gains prominence in the vacuum industry, having replacement parts that can be easily swapped with minimal impact is a crucial advantage. This is achieved through the modular design of our WRG200 gauge. Our digital gauges have the same dimensions as their analogue counterparts, providing hassle-free future upgrades.
4. The end of a gauges lifetime is a critical aspect to consider. To minimise downtime and ensure low cost of ownership, we have a straightforward model for replacing the electronics and measuring cells. This makes it easy to make changes when necessary, ensuring minimal disruption to your operations.

Applications

Analytical instruments

By constantly exploring the limits of what can be achieved with vacuum technology, ensuring that the process is optimised and consistent is critical in the pursuit of excellence.

Semiconductor

Renowned for their challenging duties, it is crucial to ensure that your Fab operates nonstop, even in harsh environments. Regular monitoring of all components can guarantee maximum uptime.

Medical

In medical and medical-related procedures, vacuum levels play a crucial role at various stages of the process. To guarantee consistent results, it is crucial to measure these levels precisely and dependably.

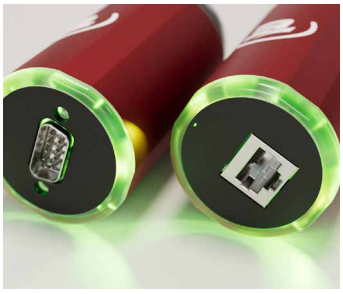
Features

1 360° LED light ring visual pressure indicator
The LED light ring not only displays basic adaptive "working/not working" information, it also gives the user precise pressure feedback via the light rings pulsing patterns. The indicator is also used to help guide you through the menu setup.

2 Reduced footprint
The WRG200 is compact in size, therefore making it a perfect choice of gauge in those applications where real-estate is at a premium.

3 Filament technology
Our new cold cathode filament technology will provide you reliable solution no matter your environment or application. The additional striker allows the gauge to strike in heavily contaminated environments therefore making this gauge the perfect choice for dirty processes.

4 Analogue/digital
A choice of D-Sub or RJ45/ FCC68 for our analogue variants for processes that prefer a "lockable" connector to our digital gauges that sit in the same footprint, making it easy for you to upgrade at a later date should more data collection/control be required.



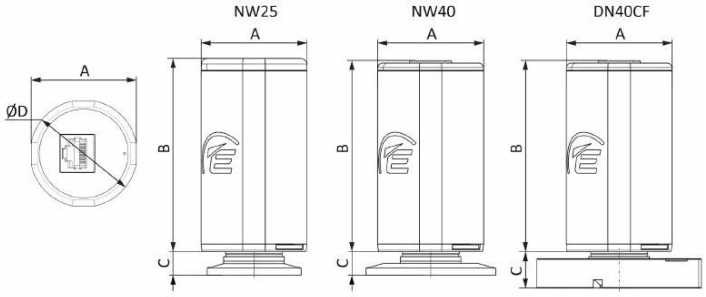
5 Wide range power supply
This gauge boasts a broad power input range of 15-48Vdc, making it one of the most versatile options in the market. Integration into your systems is made effortless and stress-free, as there is no need for an additional power supply unit

6 Drop in compatible
We know the last thing you want to do is change software/carry out lengthy qualification or have to start changing your set-ups. Therefore we have made sure that we provide variants to cover the most commonly used outputs so upgrading is even easier.

7 New magnets
The advanced magnets have allowed us to reduce our stray field making the WRG200 reliable and safe to use in environments where the gauge is in close proximity to sensitive equipment, especially when measuring over a wider range.

8 Set-point relay
For the first time on an Edwards gauge we have a dedicated set-point relays available, enabling you to trigger a wide range of knock on actions.

DIMENSIONS



	Dimensions (mm)			
Flange	**A**	**B**	**C**	**D**
NW25	45	82	10	46
NW40	45	81.5*	10	46
DN40CF	45	81.5*	15.5	46

*The 9 pin D-SUB (female) connector is 0.5 mm shorter than the RJ45 variant.

TECHNICAL SPECIFICATIONS

	WRG200
Measurement type	Inverted Magnetron + Pirani
Measuring range (mbar)	$1x10^{-9}$ up to 1000mbar
Accuracy (N_2)	"<30% measured value from $1x10^{-8}$ to $1x10^{-2}$ <15% measured value from $1x10^{-2}$ to 50mbar"
Supply voltage	15-48V
Electrical connection	RJ45, and 9 pin D-Sub
Analogue ouput (D3G0**1***)	0-10V
Serial ouput (D3G0**5*** / D3G0**0***)	RS232 or RS485
Set-point	0 or 1
Range	$1x10^{-9}$ up to 1000mbar
Relay contact rating	48 V dc max, 500mA
Status indicator	360° Bright LED ring
Max cable length	100m
Operating temp	0 to 50°C
Bake out temp	150°C WITH ELECTRONICS REMOVED
Max relative humidity	80% RH up to 31°C decreasing linearly to 50% RH at 40°C and above
Materials exposed to vacuum	Stainless Steel 316L and 304L, Tungsten, Glass, Molybdenum, Trace of Nickel and Nickel iron
Dead volume	20cm^3
Weight (NW25)	350grams
IP rating	IP40
Certifications	UKCA, CE
Compatible controllers	TIC, ADC, TAG
Sealing	Glass/metal
Comms	Analogue or digital RS232/485 variants
Admisable pressure	10 Bar
Backwards compatibility	yes
Dimension (NW25)	92x45x45
Software	LABVIEW DRIVERS
Output matching	Yes
Flanges	NW25, NW40, DN40CF
Service	Replaceable measuring tube, replaceable electronics/magnet assembly

PART NUMBER MATRIX

Prefix	-	Set-point	Flange	Comms	Connector	Output	Other
D3G	0	0 = No Set point [2]	2 = NW25	0 = RS485 [1]	1 = RJ45 [3]	0=Edwards standard 2.00 to 10.00 V	0=standard
		1 = 1 Set point	3 = NW40	1 = 0-10V	2 = 9 Pin D-Sub	2 = 1.4 to 8.60 V	C=calibrated
			4 = DN40CF	5 = RS232 [1]		4 = 1.50 to 6.9375 V	
						5=2.00 to 10 V	

Tube							
	-	Set-point	Flange	Comms	Connector	Output	Other
ZD3G	0	A	2 = NW25	A	A	A	0
ZD3G	0	A	3 = NW40	A	A	A	0
ZD3G	0	A	4 = DN40CF	A	A	A	0

Electronic							
	-	Set-point	Flange	Comms	Connector	Output	Other
ZD3G	0	0 = No Set point [2]	A	0 = RS485 [1]	1 = RJ45 [3]	0=Edwards standard 2.00 to 10.00 V	0
ZD3G	0	1 = 1 Set point	A	1 = 0-10V	2 = 9 Pin D-Sub	2 = 1.4 to 8.60 V	0
ZD3G	0		A	5 = RS232 [1]		4 = 1.50 to 6.9375 V	0

[1] only available with 9 pin D-Sub
[2] select for backwards compatible transistor output
[3] only with analogue 0-10V

FREQUENTLY USED PART NUMBERS

Product description	Order no:
WRG200- NW25	D3G0021100
WRG200- NW25- RS485- 9Pin D-Sub	D3G0021200
WRG200- DN40CF	D3G0041100

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