



## PRODUCT DATA

# Wide Range Gauge

Range: Atmosphere to  $10^{-9}$  mbar



The new 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's 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 BOCE controller or directly integrated into the system controls.

### Features & 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 patented 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

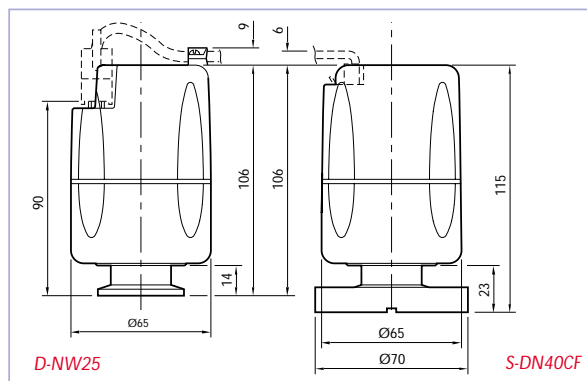
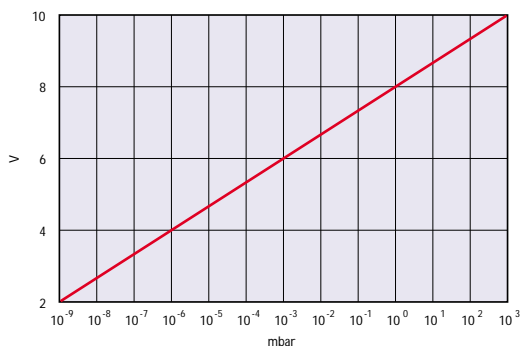
# TECHNICAL DATA

## SPECIFICATIONS

• Pressure range	Atmosphere to $10^{-9}$ mbar	• Internal volume	26 cm <sup>3</sup>
• Accuracy*	Typically $\pm 15\% < 100$ mbar and $\pm 30\% < 10^{-3}$ mbar	• Weight	0.8 kg
• Maximum overpressure	6 bar absolute (87psia)	• External interface connectors	8 way FCC68/RJ45 socket 9 way D-type plug (pins)
• Power supply	+14.5 to +36V dc	• Interface cables	Use range of active gauge cables To be supplied by customer (special adaptor cable available)
• Power consumption	2 W maximum	• Vacuum fitting	NW25 & DN40CF
• Output signal	1.8 to 10.2V dc	• Standards	Electronic design EN 61010-1 Electromagnetic compatibility EN 61326 (Industrial Location Class B Emissions) UL 94
• Adjustments	Atmosphere and setpoint	Flame-retardant casing	IP 40 IP44
• Set point	Open collector transistor	Enclosure rating	
Maximum voltage	40V dc	'S', 'SL' & 'CF' versions	
Current	100 mA max	'D' version	
• Temperature range			
Operating	+5 to +60°C		
Storage Temperature	+0 to +70°C		
• Materials exposed to vacuum	Stainless steel (AISI 304, 316, 321, 347) Fluoroelastomer, soda lime glass, Tungsten Trace of Nickel and Nickel Iron		

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

## OUTPUT CHARACTERISTICS / DIMENSIONS (mm)



## PIN ALLOCATION

1 Power supply positive	3 Gauge output	5 Signal common	7 Atmosphere calibration
2 Power supply common	4 Gauge identification	6 Set point output	8 Not connected

## ORDERING INFORMATION

PRODUCT DESCRIPTION	ORDERING INFORMATION	PRODUCT DESCRIPTION	ORDERING INFORMATION
WRG-S-NW25	D147-01-000	<b>Other accessories and supporting products</b>	
WRG-S-DN40CF	D147-03-000	NW25 centring 3D baffle StSt Viton	D021-10-000
WRG-SL-NW25	D147-11-000	AGD for WRG with control relays	D395-80-000
WRG-D-NW25	D147-02-000	AGD for WRG	D395-85-000
<b>Electronics and magnet housing</b>		Surge protector	D400-06-000
WRG-S	D147-01-800	<b>Cables</b>	
WRG-SL	D147-11-800	WRG-D Adaptor Cable (0.5m)	D400-03-100
WRG-D	D147-02-800	Cable assemblies (include FCC68 compatible connectors at both ends)	
<b>Replacement body tube assembly</b>		0.5m	D400-01-005
NW25	D147-01-801	1 m	D400-01-010
DN40CF	D147-03-801	3m	D400-01-030
Electrode assembly kit	D147-01-802	5m	D400-01-050
Pirani tube replacement kit	D147-01-803	10m	D400-01-100
Full body tube service kit	D147-01-804	15m	D400-01-150
		25m	D400-01-250
		50m	D400-01-500
		100m	D400-01-999
		Non standard lengths and screened cables available on request	

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