

VacTest

Digital Transmitter Pirani – Cold Cathode DPC 400



The Digital Transmitter DPC 400 is the latest generation of micro-controller-based vacuum gauges combining a cold cathode ionization sensor with a robust spiral coil filament Pirani to provide a full range of pressure measurement from atmosphere to $5 \cdot 10^{-9}$ mbar.

- Fast ignition of the cold cathode sensor
- Fully customizable parameters and output signal for easy integration
- Optional display version (DPC 400 D)
- 0–10 V signal and RS485 interface
- Bake-out up to 160°C without electronics removal
- 2 setpoint relays as standard
- Plug and play sensor replacement



VacTest DPC 400

VacTest DPC 400 D

Technical data		DPC 400, DPC 400 D
Measurement principle		Pirani / Inverted magnetron
Materials exposed to vacuum		Stainless steel 1.4307, nickel, tungsten, molybdenum, glass, ceramic
Filament material		Tungsten
Measurement range	mbar	1000– $5 \cdot 10^{-9}$
Overpressure limit	bar abs.	10
Measurement uncertainty	% of reading	< 30% (1000–10 mbar)
		< 10% (10^{-2} – 10^{-3} mbar)
		< 25% ($2 \cdot 10^{-3}$ – $1 \cdot 10^{-8}$ mbar)
Repeatability of measurement	% of reading	$\pm 2\%$ (10^{-1} – 10^{-2} mbar)
		$\pm 5\%$ ($1 \cdot 10^{-2}$ – $1 \cdot 10^{-8}$ mbar)
Leakage rate	mbar · l/s	< $5 \cdot 10^{-10}$
Reaction time	ms	< 50
Serial interface		RS485
Electrical connection		D-Sub, 15 poles, male
Supply voltage	V	20–30
Cathode voltage	kV	2.5
Max. power consumption	W	3/0.8 (relays/display)
Output signal		0–10 V, RS485
Setpoint relay		2 dry contacts
Relay contact rating		2A, 50VAC/2A, 30VDC, max. 60 VA
Operating temperature	°C	+5 ... +60
Max. bake-out temperature	°C	160
Protection class		IP40 (IP54 with appropriate D-Sub connector)
Weight approx.	g	555
Dimensions (L x W x H)	mm	45 x 66 x 139
Vacuum connection		DN 40 ISO-KF / DN 25 ISO-KF

Vacuum gauges	Part number
DPC 400, DN 25 ISO-KF	0656202936
DPC 400, DN 40 ISO-KF	0656202938
DPC 400 D, with display, DN 25 ISO-KF	0656202937
DPC 400 D, with display, DN 40 ISO-KF	0656202939

Spare parts	Part number
Spare sensor, DN 25 ISO-KF	0680204598
Spare sensor, DN 40 ISO-KF	0680204599

Controllers	Part number
Active Sensor Controller CTR 002, 2 channels	0656202928
Active Sensor Controller CTR 004, 4 channels	0656202929

Connection	Part number
Connecting cable 2 x D-Sub 15 poles, 2 m	0671204577
Connecting cable 2 x D-Sub 15 poles, 6 m	0671204578
Connecting cable 2 x D-Sub 15 poles, 10 m	0671204580
Connecting cable 2 x D-Sub 15 poles, 20 m	0671204581
RS485 Interface converter to Bluetooth	0680204592
RS485 Interface converter to USB	0671204593
Power supply 100–240 VAC / 50–60Hz, with EU/US/UK/AUS plugs	0671204594

Software	Part number
VacTest explorer, Pro version	0870203191

Calibration	Part number
Calibration certificate, 1000 to $1 \cdot 10^{-4}$ mbar	0656204608
Calibration certificate, 1000 to $1 \cdot 10^{-5}$ mbar	0656204609

For the entire product range please refer to the corresponding leaflets.

www.buschvacuum.com

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Technical data is subject to change. Created in Germany. MG SPAL VACTESTDPC400 Len 05/2018 8Ba