

VacTest

Digital Transmitter Piezoresistive – Pirani DPP 400



The Digital Transmitter DPP 400 is the latest generation of micro-controller-based vacuum gauges combining a piezoresistive sensor with a robust spiral coil filament Pirani sensor to provide a full and accurate range of pressure measurement from 1200 to $1 \cdot 10^{-4}$ mbar.

- Gas type independent measurement in high pressure range
- Protected and robust spiral coil filament Pirani
- Fully customizable parameters and output signal for easy integration
- Optional display version (DPP 400 D)
- 0–10 V signal and RS485 interface
- Bake-out up to 150°C without electronics removal
- 2 setpoint relays as standard
- Plug and play sensor replacement



VacTest DPP 400

VacTest DPP 400 D

Technical data		DPP 400, DPP 400 D
Measurement principle		Piezoresistive / Pirani
Materials exposed to vacuum		Stainless steel 1.4307, nickel, gold, silicon oxide, tungsten, glass
Filament material		Tungsten
Measurement range	mbar	1200– $1 \cdot 10^{-4}$
Overpressure limit	bar abs.	4
Measurement uncertainty	% full scale	< 0.3% (1200–40 mbar)
	% of reading	< 10% ($40-2 \cdot 10^{-3}$ mbar)
Repeatability of measurement	% full scale	$\pm 0.1\%$ (1200–40 mbar)
	% of reading	$\pm 2\%$ ($40-2 \cdot 10^{-3}$ mbar)
Leakage rate	mbar · l/s	$< 5 \cdot 10^{-10}$
Reaction time	ms	< 40
Serial interface		RS485
Electrical connection		D-Sub, 15 poles, male
Supply voltage	V	20–30
Max. power consumption	W	2.5 / 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	150
Protection class		IP40 (IP54 with appropriate D-Sub connector)
Weight approx.	g	195
Dimensions (L x W x H)	mm	45 x 66 x 99
Vacuum connection		DN 16 ISO-KF

Vacuum gauges	Part number
DPP 400, DN 16 ISO-KF	0656202930
DPP 400 D, with display, DN 16 ISO-KF	0656202931

Spare parts	Part number
Spare sensor, DN 16 ISO-KF	0680204595

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

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 VACTESTDPP400 Len 05/2018 8Ba