

# VACTEST DPC 400 / DPC 400 D

Digital transmitter



**VACUUM SOLUTIONS**

Part of the **BUSCH** GROUP



## Intelligent

Extended measurement range (1000 to  $5 \cdot 10^{-9}$  mbar), state-of-the-art microcontroller technology, fully customizable parameters

## Reliable

High industrial standards, robust construction

## Efficient

Modular design, plug and play sensor for maximum uptime

Accessories, spare parts and options

- Replacement sensor
- Active Sensor Controller
- Connecting cable
- RS485 interface converter to Bluetooth
- RS485 interface converter to USB
- Electrical power supply
- Calibration certificate
- VACTEST Explorer Pro

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

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