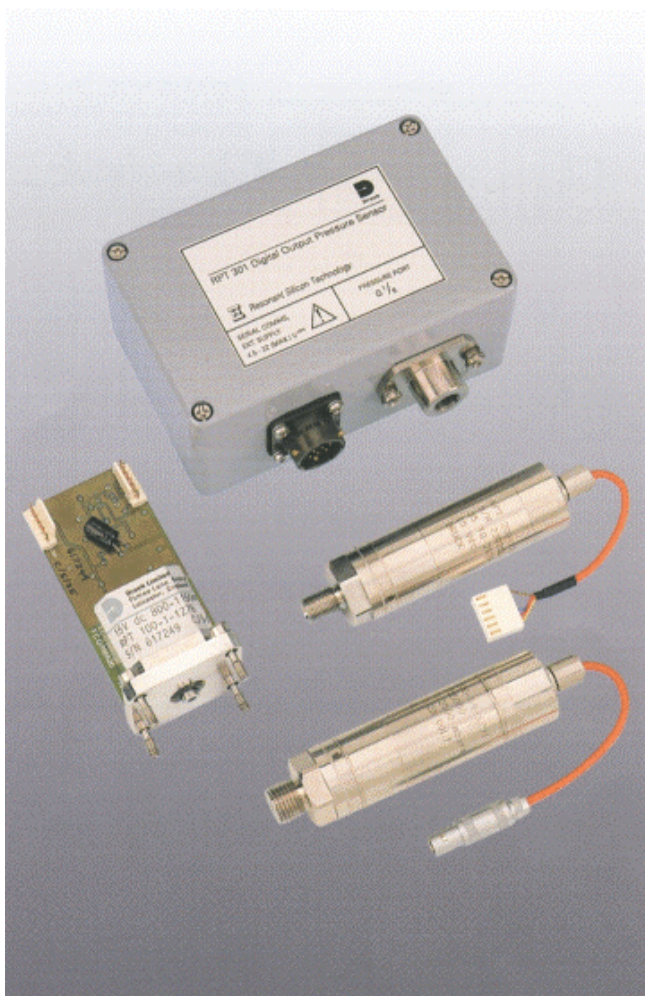


RPT SERIES

Resonant Pressure Transducers

- High accuracy $\pm 0.01\%$ F.S.
- High stability < 100 ppm/year
- Insensitive to media density
- Frequency, RS 232/485 outputs
- OEM or industrial formats



The use of resonant structures in pressure transducers has long been recognised as producing highly stable sensors. Druck have developed this technology to produce a series of Resonant Pressure Transducers (RPT) using silicon to give high accuracy and stability with low manufacturing costs.

The silicon structure, which is manufactured within Druck's own class 100 silicon processing facility, is a multi-layer construction with the resonator and pressure sensitive diaphragm micro-machined from one piece of silicon.

The resonator is bonded to a second silicon wafer containing the drive and pick-up system under vacuum. This isolates the resonator from the pressure media, thereby ensuring that the accuracy is maintained regardless of the pressure media density.

This transducer series can be used in many application areas with the RPT 100 configured for OEM use and the RPT 200 for direct mounting in aggressive environments. The RPT 200 is available with either a frequency output for conversion to pressure within the customer system or as a fully corrected digital output of pressure via an RS 485 interface.

The mechanical format of the RPT 200 makes it ideal for high accuracy industrial applications ranging from level measurement to gas volume correction and where stability is of paramount importance.

The digital output RPT 301 is ideally suited for weather stations monitoring atmospheric trends, engine test cells and as a highly stable pressure reference transfer standard.

STANDARD SPECIFICATION

Type Number	RPT 100	RPT 200	RPT 200 SMART	RPT 301
Pressure Range	750-1150 mbar a	Any span between 35 to 3500 mbar a		
Overpressure	1.25 x calibrated full scale			
Pressure Containment	5 bar a			
Pressure Media	Dry, non corrosive gas only	Any gasses compatible with silicon, glass, stainless steel (or titanium) and epoxy		
Excitation Voltage	14 to 16 V d.c.	11 to 13 V d.c.	11 to 28 V d.c.	4.5 to 32 V d.c.
Pressure Output	TTL square wave 5kHz nominal sensitivity: 0.25 to 0.35 Hz/mbar	TTL square wave 36kHz nominal sensitivity: 2 to 4 Hz/mbar	RS 485 half duplex	RS 485 full duplex or RS 232 user selectable
Temperature Output	Voltage across forward biased integral diode: 600 mV nominal @ 20°C Diode sensitivity: typically -2 mV/°C			
Accuracy	Using Algorithm and coefficients supplied, the applied pressure can be calculated to within: Standard: $\pm 0.02\%$ F.S. Option A: $\pm 0.01\%$ F.S. over +10° to +40°C		Non-linearity, hysteresis and repeatability:- Standard: $\pm 0.02\%$ F.S. Option A: $\pm 0.01\%$ F.S. Temperature effects:- $\pm 0.02\%$ F.S. over -20° to +60°C	
Stability	Standard: <150 ppm/year, Option A: <100 ppm/year			

ORDERING INFORMATION

Please state the following:
 (1) Type number
 (2) Pressure range
 (3) Accuracy, Option (A) if required.

For non standard requirements please refer to Druck Limited.

Continuing development sometimes necessitates specification changes without notice.

RELATED PRODUCTS

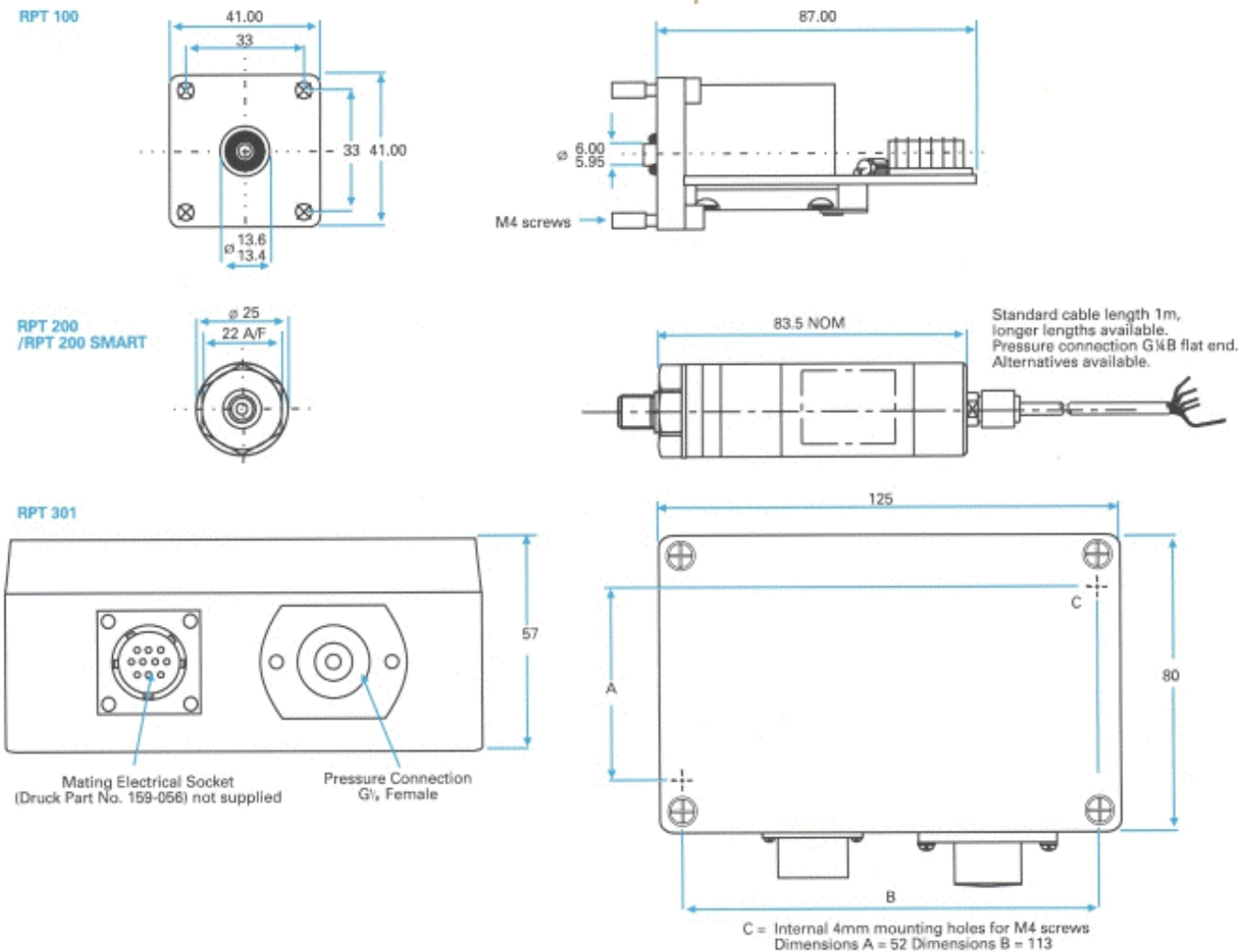
Druck manufacture a comprehensive range of pressure indicators, controllers, calibrators, transducers and transmitters. Please refer to Druck Limited for further information and datasheets.

CALIBRATION STANDARDS

Instruments manufactured by Druck Limited are calibrated against precision pressure calibration equipment which is traceable to International Standards.

INSTALLATION DRAWINGS

Dimensions: mm



Druck Limited

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