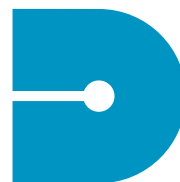


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P D C R / P M P 4 3 0 0 S e r i e s

Druck

Motorsport / Automotive Pressure Transducers

- Race proven technology
- -30 to 175°C operation
- Amplified or millivolt output
- Stainless steel or titanium construction
- Fully EMI protected
- Compact and rugged design



P D C R / P M P 4 3 0 0 S e r i e s

Motorsport / Automotive Pressure Transducers

Success in Motorsport depends on hundreds of components working together under extreme conditions and GE Druck continues to develop Pressure Transducers that give the ultimate performance. Established in 1972, GE Druck has become the world-leading manufacturer for Pressure Transducers to the Formula 1, World Rally Championship and the Indy Racing League.

The PDCR/ PMP 4300 is the latest in the range of products that for many years has been "fine tuned" in design to suit all chassis and engine pressure measurement requirements. Dedicated support teams provide the focussed effort required to successfully respond to the demands of this dynamic and competitive market.

Race Proven Technology

Since 1990 GE Druck has been involved in Motorsport and the PDCR/ PMP 4300 series is the latest high performance pressure sensor for this harsh environment application.

Reliability remains at the forefront of our design and build philosophy. The combination of high technology sensing element together with advanced signal conditioning and packaging techniques provide reliable and accurate pressure measurements.

High Performance

GE Druck has one of the most advanced and comprehensive silicon processing facilities and is one of a few companies turning raw silicon into finished pressure sensing products.

Each pressure module is fully temperature cycled to enhance long-term measurement stability. All metal work is Electron Beam Welded to form a rugged housing. Upon completion of the electrical connections the units are again thermally cycled to eliminate any possible defects in application.

This rugged construction enables the 4300 Series to operate under extreme temperature and vibration conditions.

Flexible Design

The pressure sensing module and the electronics form a completely flexible core. Various configurations of electrical terminations and pressure connectors are available in stainless steel and titanium.

GE Druck has considerable experience in solving specific application problems by developing our standard designs to suit customer specific applications.

Technical Support

GE Druck quality systems meet the requirements of ISO 9001 and we are totally committed to pressure measurement excellence and the dedicated support required in such a demanding world. In the unlikely event of a sensors defect, GE Druck would undertake an immediate and complete investigation of the failure mode and report back to customer with the fault diagnosis and the resulting corrective action.



STANDARD SPECIFICATION

The PDCR 4300 Series (millivolt output) and PMP 4300 Series (amplified output) offer the following as standard:

INPUT PARAMETER	PDCR 4300	PMP 4300
Pressure range <i>Any engineering pressure unit can be specified</i> <i>Custom pressure ranges available - refer to GE Druck</i>	1.6, 3, 10, 15, 30, 80, 125 and 250 bar absolute.	700-1100mbar (Barometric reference) 1.6, 3, 10, 15, 30, 80, 125, 250 bar absolute
Overpressure	2 x rated pressure or 375 bar max for Stainless Steel 2 x rated pressure for titanium	
Pressure Containment	500 bar max for stainless steel or titanium 750 bar max for titanium units	
Media compatibility	Fluids or gases compatible with stainless steel 316L or titanium IMI 160	
Excitation voltage	10 Vd.c. nominally <i>(other regulated d.c. excitation levels can be specified)</i>	12V \pm 4 Vd.c. unregulated
Supply current	<2mA	<5mA
Resolution	Infinite	

OUTPUT PARAMETER	PDCR 4300	PMP 4300
Output limit	50mV \pm 3mV @ 10V 100mV (20V d.c. supply)	4.95V d.c.
Zero offset	0mVd.c. \pm 3mVd.c.	0.2 Vd.c. \pm 50mVd.c.
Span setting <i>Alternatives available - refer to GE Druck</i>	50mV d.c. \pm 3mV	4.5 Vd.c. \pm 50mV
Accuracy <i>Includes the effects of non-linearity, hysteresis, repeatability</i>	\pm 0.10% F.S. BSL for ranges up to (and including) 60 bar \pm 0.2% F.S. BSL for ranges above 60 bar	\pm 0.10% F.S. BSL for ranges up to (and including) 60 bar \pm 0.2% F.S. BSL for ranges above 60 bar
Long term stability	<0.10% F.S./year (typically <0.05% F.S./year)	
Operating temperature range	-30 to 175°C	
Compensated temperature range <i>Alternative temperature ranges available - refer to Druck</i>	-30° to 175°C	
Thermal Performance	TBC	Thermal Zero/Span shift: < \pm 1% F.S./100°C
Temperature signal output (optional)	2.8 Vd.c. \pm 1.4 Vd.c. at 20°C	2.9 Vd.c. \pm 0.5 Vd.c. at 20°C
Temperature signal sensitivity (optional)	3mVd.c./°C \pm 2mVd.c./°C	7mVd.c./°C \pm 1mVd.c./°C
Insulation resistance	>100 M Ω at 50 Vd.c.	
Output impedance	5k Ω nominal	<100 Ω

INTERFACE PARAMETER	PDCR 4300	PMP 4300
Pressure connection <i>Alternatives available - refer to GE Druck</i>	Select from the following standard fittings (all male fittings):- M8 x 1, M10 x 1, $\frac{5}{16}$ "-24UNJF, $\frac{3}{8}$ "-24UNJF, $\frac{1}{8}$ " NPT, $\frac{1}{8}$ " BSP, M10 x 1 snubber	
Electrical connection 1 Metre of 5 core Raychem cable with DR25 Sleeving 5 Pin Deutsch Hermetic AS-Micro	Supply +ve = Red Core/Pin 1 Supply -ve = Black Core/Pin 2 Output +ve = Green Core/Pin 3 Output -ve = White Core/Pin 5 Temp Signal = Blue Core/Pin 4 Body = Cable screen/Pin 5*	Supply +ve = Red Core/Pin 1 0V common = Black Core/Pin 2 Output +ve = White Core/Pin 3 Temp Signal = Blue Core/Pin 4 Body = Cable screen/Pin 5
Installation torque	15NM	

* If specifying PDCR 4300 with temperature signal for connector version, pin to case connection is not available

ENVIRONMENTAL PARAMETER	PDCR 4300	PMP 4300
Weight	AS micro stainless steel: <40g AS micro titanium: <35g Cable stainless steel: <65g Cable titanium: <35g	AS micro stainless steel: <40g AS micro titanium: <35g Cable stainless steel: <70g Cable titanium: <50g
Note: Cable weight: <30g/metre Weight will vary according to cable length and pressure connection specified	Cable weight: <30g/metre Note: Weight will vary according to cable length and pressure connection specified	
Vibration	TBC 50 to 2500Hz @40g, 8 hours per axis, logarithmic sweep at a rate of 0.32	
Shock	1000g 1 mS half sine pulse in all 3 axis with no effect on calibration	

Motorsport/Automotive Pressure Transducers

Druck

ORDERING INFORMATION

(1) Specify model number e.g. PMP 4362

Code	Output																		
PMP43XX	Amplified																		
PDCR43XX	Millivolt																		
	<table><tr><th>Code</th><th>Electrical Connection</th></tr><tr><td>1</td><td>DR25 sleeved cable (1m as standard)</td></tr><tr><td>6</td><td>Autosport 5 pin connector</td></tr><tr><td><table><tr><th>Code</th><th>Material</th></tr><tr><td>1</td><td>Stainless steel</td></tr><tr><td>2</td><td>Titanium</td></tr></table></td><td></td></tr><tr><td>PMP43</td><td>6</td><td>2</td><td>Typical Model Number</td></tr></table>	Code	Electrical Connection	1	DR25 sleeved cable (1m as standard)	6	Autosport 5 pin connector	<table><tr><th>Code</th><th>Material</th></tr><tr><td>1</td><td>Stainless steel</td></tr><tr><td>2</td><td>Titanium</td></tr></table>	Code	Material	1	Stainless steel	2	Titanium		PMP43	6	2	Typical Model Number
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2	Titanium																		
PMP43	6	2	Typical Model Number																

- (2) Pressure range.
- (3) Pressure units.
- (4) Compensated temperature range.
- (5) Pressure connection.
- (6) Options if required.

OPTIONS

- (1) Mating electrical connector (supplied loose).
- (2) Temperature signal output.
- (3) Additional cable (state length).

CALIBRATION STANDARDS

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

RELATED PRODUCTS

Druck manufactures a comprehensive range of pressure sensors, indicators, calibrators, controllers and deadweight testers. The range of portable calibrators also covers temperature and electrical parameters.

Multifunction calibrator



Portable pressure calibrator



Precision handheld barometer



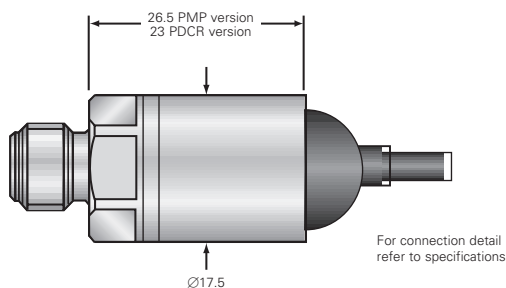
High speed pressure controller/calibrator



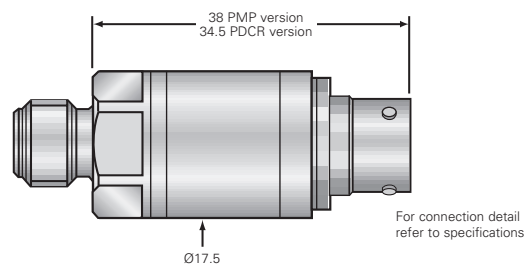
Continuing development sometimes necessitates specification changes without notice.

INSTALLATION DRAWINGS - Dimensions mm

Cable Version



Connector Version



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Agent: