

# **UNIK 5000**

## Pressure sensing platform

The new UNIK 5000 is a high performance configurable solution to pressure measurement. The use of micromachined silicon technology and analogue circuitry enables best in class performance for stability, low power and frequency response. The new platform enables you to easily build up your own sensor to match your own precise needs. This high performance, configurable solution to pressure measurement employs modular design and lean manufacturing techniques.

#### **High quality**

The combination of a high technology sensor, together with advanced signal conditioning and packaging techniques, provides an ideal long term solution for reliable, accurate and economical measurements.

#### Bespoke as standard

Custom-built from standard components, manufacturing sensors to your requirement is fast and simple; each UNIK 5000 is a "bespoke" pressure sensing solution, but with the short lead times and competitive pricing you would expect from standard products.

#### **Expertise**

We have the people and the knowledge to support your needs for accurate and reliable product performance; our team of experts can help you make the right sensor selection, guiding you and providing the help and tools you need. It is important to ensure that the sensor material and performance selected are suitable for your application.

#### **Features**

- Ranges from 70 mbar (1 psi) to 700 bar (10000 psi)
- Accuracy to ±0.04% Full Scale (FS) Best Straight Line (BSL)
- · Stainless steel construction
- Frequency response to 3.5 kHz
- High over pressure capability
- · Hazardous area certifications
- mV, mA, voltage and configurable voltage outputs
- · Multiple electrical and pressure connector options
- Operating temperature ranges from -55 to +125°C (-67 to +257°F)
- · Online configuration tool



### **UNIK 5000 specifications**

## **Measurement**Operating pressure ranges:

#### **Gauge ranges**

Any zero based range 70 mbar to 70 bar (1 to 1000 psi) Note: All psi values are approximate.

#### Sealed gauge ranges

Any zero based range 10 to 700 bar (145 to 10000 psi)

#### **Absolute ranges**

Any zero based range 100 mbar to 700 bar (1.5 to 10000 psi)

#### Differential ranges

Wet/Dry

Uni-directional or bi-directional 70 mbar to 35 bar (1 to 500 psi)

Wet/Wet

Uni-directional or bi-directional 350 mbar to 35 bar (5 to 500 psi)

Line pressure: 70 bar (1000 psi) maximum

#### **Barometric ranges**

Barometric ranges are available with a minimum span of 350 mbar (5.1 psi)

#### Non-zero based ranges

Non-zero based ranges are available. For non-zero based gauge ranges, please contact Druck to discuss your requirements.

#### Over pressure

- 10 × FS for ranges up to 150 mbar (2 psi)
- 4 × FS for ranges <350 mbar (5 psi)</li>
- 6 × FS for ranges up to 700 mbar (10 psi)
- 2 × FS for barometric ranges
- 4 × FS for all other ranges (up to 200 bar for ranges ≤70 bar and up to 1200 bar for ranges >70 bar)\*

For differential versions the negative side must not exceed the positive side by more than:

- 6 × FS for ranges up to 150 mbar (2 psi)
- 4 × FS for ranges up to 700 mbar (10 psi)
- 2 × FS for all other ranges up to a maximum of 15 bar (200 psi)

#### Containment pressure

- Ranges up to 150 mbar (2 psi) gauge 10 x FS Ranges up to 70 bar (1000 psi) gauge 6 x FS (200 bar (2900 psi) max)
- Ranges up to 70 bar (1000 psi) absolute 200 bar (2900 psi)
- Ranges above 70 bar (1000 psi)
- 1200 bar (17400 psi)\*

Differential (-ve port) must not exceed positive port by more than  $6 \times FS$  (15 bar (200 psi) maximum.

\*600 bar (8700 psi) for pressure connector options PX, RA and RF

#### Supply and outputs

Electronics option	Description	Supply voltage (V)	Output	Current consumption (mA)
0	mV Passive	2.5 to 12	10 mV/V^	<2 at 10 V
1	mV Linearised	7 to 12	10 mV/V^	<3
2	mA	7 to 28**	4-20 mA	<30
3	0 to 5 V 4-wire	7 to 16**	0 to 5 V	<3
4	0 to 5 V 3-wire	7 to 16**	0 to 5 V*	<3
5	Basic Configurable (3-wire)	See below	See below	<3
6	0 to 10 V 4-wire	12 to 16**	0 to 10 V	<3
7	0.5 V to 4.5 V Ratiometric	5.0 ± 0.5	0.5 to 4.5 V	<3
8	Configurable (4-wire)	7 to 36	See below	See below
9	Configurable (3-wire)	7 to 36	See below	See below

 $^{\wedge}$  with a 10 V supply mV output sensors give 100 mV over the full scale pressure.

- · Output is ratiometric to the supply voltage
- Output reduces pro-rata for pressure ranges below 350 mbar (5 psi)

 $^{*}0$  to 5 V 3-wire output is non true zero. At pressures below 1% of span the output will be fixed at approximately 50 mV

~ Supply voltage is between [Maximum output + 1 V] (7 V minimum) to 16 V (32 V in non-hazardous area operation)

## Basic configurable (option 5), configurable 4-wire (option 8), configurable 3-wire (option 9)

Any pressure signal output configurations will be available, subject to the following limitations:

Output specification	Basic configurable (option 5)	Configurable (options 8, 9)		
Minimum span:	4 V	2 V		
Maximum span:	10 V	20 V		
Maximum output limit:	11 V	±10 V		
Maximum zero offset:	Span / 2	±Span		
Current consumption:	< 3 mA	< 20 mA @ 7 Vdc decreasing to < 5 mA @ 32 Vdc		
Reverse output response:	No	Yes		
Maximum operating temperature:	+125°C	+80°C		

Output voltage range can be specified to a resolution of 0.1 V.

The output will continue to respond to 110% FS. i.e. if a 0 to 10 V output is specified, the output will continue to increase proportionally to applied pressure until at least 11 V.

Option 5: Not true zero, the output will saturate at < 50 mV.

Options 8, 9: On startup <100 mA drawn for 10 ms typically.

Options 8, 9: Shunt calibration: not available with reverse output.

<sup>\*\*32</sup> V in non-hazardous area operation

#### **Examples**

Configuration	Allowed	Not Allowed
Basic Configurable	0 to 5 V	1 to 4 V (span too small)
(Option 5)	0.5 to 4.5 V	4 to 11 V (offset too big)
	1 to 6 V	
	1 to 11 V	
Configurable (Options 8, 9)	-10 to 0 V	0 to 12 V (outside ±10 V limits)
	0 to 5 V	6 to 10 V (offset too big)
	-5 to 5 V	0 to 0.5 V (span too small)
	-2 to 10 V	
	1 to 6 V	
	10 to 0 V	

#### Power-up time

- mV, Voltage and current versions: 10 ms
- Configurable 3-wire and 4-wire versions: 500 ms

#### Insulation

- 500 Vdc: 100 MΩ
- 500 Vac: < 5 mA leakage current (mV and mA versions only)

#### **Shunt calibration**

Shunt calibration provides a customer accessible connection which, when applied, causes a shift in output of 80% FS in order to simulate applied pressure. It is fitted to the mV, configurable 4-wire and configurable 3-wire versions as standard. It is not available with DIN, M12 x 1 or M20 x 1.5 electrical connectors (options 7, D, G and R).

Shunt calibration is activated in different ways depending on the electrical connector and version:

- mV versions: connect shunt cal to -ve supply or where available, connect both shunt cal connections together.
- Configurable 4-wire and configurable 3-wire versions: connect Shunt cal to -ve output or, where available, connect both shunt cal connections together.

Note: Not available with reverse output.

### Performance specifications

There are three grades of performance specification: Industrial, Improved and Premium.

#### **Accuracy**

#### Voltage, current and mV linearized

Combined effects of non-linearity, hysteresis and repeatability:

• Industrial: ±0.2% FS BSL

• Improved: ±0.1% FS BSL

• Premium: ±0.04% FS BSL

#### mV passive

≤ 70 bar

Industrial/Improved: ±0.25% FS BSL

Premium not available

> 70 bar

Industrial/Improved: ±0.5% FS BSL

Premium not available

Note 1: For the barometric pressure range, accuracy is of span, not full scale.

Note 2: For bi-directional ranges, accuracy is specified for each direction separately.

#### Zero offset and span setting

Demountable electrical connector options allow access to potentiometers that give at least ±5% FS adjustment (see electrical connector section).

#### Factory set to:

Product Description	Industrial	Improved and Premium		
Current and voltage versions (Demountable electrical connections and cable gland)	±0.5% FS	±0.2% FS		
Current and voltage versions (All other electrical connections)	±1.0% FS	±1.0% FS		
mV versions	±3.0 mV	±3.0 mV		

#### Long term stability

±0.05% FS typical (±0.1% FS maximum) per year increasing pro-rata for pressure ranges below 350 mbar

#### Temperature effects

Four compensated temperature ranges can be chosen.

Industrial accuracy performance:

• -10 to +50°C (+14 to +122°F): ±0.75% FS TEB\*

• -20 to +80°C (-4 to +176°F): ±1.5% FS TEB

• -40 to +80°C (-40 to +176°F): ±2.25% FS TEB

• -40 to +125°C (-40 to +257°F): ±2.25% FS TEB

\*TEB = Temperature Error Band

Improved and premium accuracy performance:

• -10 to +50°C (+14 to +122°F): ±0.5% FS TEB

• -20 to +80°C (-4 to +176°F): ±1.0% FS TEB

• -40 to +80°C (-40 to +176°F): ±1.5% FS TEB

• -40 to +125°C (-40 to +257°F): ±1.5% FS TEB

Temperature effects increase pro-rata for pressure ranges below 350 mbar (5 psi) and are doubled for barometric ranges.

#### Line pressure effects (differential version only)

Zero shift: <±0.03% span/bar of line pressure Span shift: <±0.03% span/bar of line pressure

Effects increase pro-rata for differential pressure ranges below 700 mbar (10 psi).

### **Physical specifications**

#### **Environmental protection**

- · See electrical connector section
- · Hyperbaric pressure: 20 bar (300 psi) maximum

#### Operating temperature range

See Electrical Connector section

#### Pressure media

Fluids compatible with stainless steel 316L and Hastelloy C276.

For the wet/dry differential version, negative pressure port: Fluids compatible with stainless steel 316L, stainless steel 304, Pyrex, silicon and structural adhesive.

#### **Enclosure materials**

Stainless steel (body), nitrile- or silicone-rubber (o-rings, gaskets), EPDM (gaskets), PVDF (depth cone), PTFE (vent filter), nickel plated brass (lock rings), glass filled nylon (electrical connector assemblies), delrin (depth cone). Cable sheaths as specified (see Electrical Connector).

#### **Pressure connector**

Available options are:

- · G1/4 female\*
- G1/4 male flat
- G1/4 male 60° internal cone
- G1/4 male flat long
- G1/4 male flat with snubber
- G1/4 male flat with cross bore protection
- G1/4 male with nipple
- G1/4 quick connect
- G1/8 male 60° internal cone
- G1/2 male via adaptor\*
- 1/4 NPT female\*
- 1/4 NPT male
- 1/8 NPT male
- 1/8-27 NPT female
- 1/2 NPT male via adaptor
- 7/16-20 UNJF female\*
- 7/16-20 UNF male short flat\*
- 7/16 UNF long 37° flare tip\*
- 7/16-20 UNJF male 74° external cone
- 3/8-24 UNJF
- 1/4 swagelok bulkhead
- M10 X 1 80° internal cone
- M12 X 1 60° internal cone
- M14 X 1.5 60° internal cone
- M20 X 1.5 male (3 mm bore)

- M20 X 1.5 male (8 mm bore)
- Depth cone (G1/4 female open face)
- M12 x 1.0 74° external cone
- · Quick release male
- VCR female\*
- VCR male\*
- · NW16 flange
- R3/8 male
- R1/4 male

Choose connectors marked \* for pressure ranges over 70 bar. Other pressure connectors may be available, contact Druck to discuss your requirement.

#### **General certifications**

CRN Certified 0F13650.517890YTN ADD1/REV1, 0F13828.2 (sensor types K and O) and CSA 0F13650.56 ADD1 for pressure ranges up to and including 350 bar (5000 psi).

#### **Electrical connector**

Various electrical connector options are available offering different features:

Code No.	Description	Maximum o temperature		IP rating	Zero/ span adjust	
		°C	°F			
0	No connector	-55 to +125	-67 to +257	-	Υ	
1	Cable Gland	-40 to +80	-40 to +176	65	N	
2	Raychem Cable	-55 to +125	-67 to +257	65	N	
3	Polyurethane Depth	-40 to +80	-40 to +176	68	N	
4	Hytrel Depth	-40 to +80	-40 to +176	68	N	
6/E	Bayonet MIL-C-26482	-55 to +125	-67 to +257	67	N	
7	DIN 43650 Form A Demountable	-40 to +80	-40 to +176	65	Y	
A/F	Bayonet MIL-C-26482 Demountable	-55 to +125	-67 to +257	65	Y	
С	1/2 NPT Conduit	-40 to +80	-40 to +176	65	N	
D	Micro DIN (9.4 mm pitch)	-40 to +80	-40 to +176	65	N	
G	M12x1 4pin	-55 to +125	-67 to +257	67	N	
К	Zero Halogen Cable Demountable	-40 to +80	-40 to +176	65	Y	
N	Kynar Depth	-40 to +80	-40 to +176	68	N	
R	M20 x 1.5 Inline	-40 to +80	-40 to +176	65	Υ	

Note 1: Electronics output options 8 and 9 are restricted to a maximum operating temperature of 80°C (176°F).

Note 2: Hazardous area approved versions are restricted to a maximum operating temperature range of  $-40^{\circ}$ C to  $+80^{\circ}$ C ( $-40^{\circ}$ F to  $+176^{\circ}$ F).

Note 3: Electrical connector option R IP65 rating only with suitable conduit/cable fitting.

#### **CE** conformity

- RoHS 2011/65/EU
- Pressure equipment directive 2014/68/EU sound engineering practice
- ATEX 2014/34/EU (Optional)
- EMC directive 2014/30/EU
- BS EN 61000-6-1: 2007: Susceptibility light industrial
- BS EN 61000-6-2: 2005: Susceptibility heavy industrial\*
- BS EN 61000-6-3: 2007+A1:2011: Emissions light industrial
- BS EN 61000-6-4: 2007+A1:2011: Emissions heavy industrial
- BS EN 61326-1: 2013: Electrical equipment for measurement, control and laboratory use
- BS EN 61326-2-3: 2013: Particular requirements for pressure transducers

\*PMP/PTX models with electrical connector options 6, A, C, E, F, G, N and R with cable screen connected to case.

#### Hazardous area approvals (optional)

General applications:

- IECEX/ATEX intrinsically safe 'ia' group IIC
- · INMETRO intrinsically safe 'ia' group IIC
- NEPSI intrinsically safe 'ia' group IIC
- FM approved (Canada & US) intrinsically safe Exia Class I, Division 1, Groups A, B, C & D and Class I, Zone 0 AEx/Ex ia Group IIC; Single Seal

#### Mining applications:

- IECEX/ATEX intrinsically safe 'ia' group I
- INMETRO intrinsically safe 'ia' group I

For full certification details, refer to the type-examination certificates (or approval listings) and supplied hazardous area installation instructions.

### **Electrical connector**

Connector type			Electronics option								
	Opti	ion code	4 to 20 mA	Voltage (3- wire) and basic configurable	Voltage (4-wire)	Configurable voltage (4-wire)	Configurable voltage (3-wire)	mV			
Molex	0	1 Red	+ve Supply	+ve Supply	+ve Supply	+ve Supply	+ve Supply	+ve Supply			
		2 Yellow	-	+ve Output	+ve Output	+ve Output	+ve Output	+ve Output			
		3 Green	_	-	-ve Output	-ve Output	0V Common	-ve Output			
		4 Blue	-ve Supply	0V Common	-ve Supply	-ve Supply	0V Common	-ve Supply			
		5 Orange	-	_	-	Shunt Cal	Shunt Cal	Shunt Cal			
		6 Black	Case	Case	Case	Case	Case	-			
able	1, 3, 4,	Red	+ve Supply	+ve Supply	+ve Supply	+ve Supply	+ve Supply	+ve Supply			
Not Raychem)	C, N	Yellow	-	+ve Output	+ve Output	+ve Output	+ve Output	+ve Output			
		Blue	_	-	-ve Output	-ve Output	0V Common	-ve Output			
		White	-ve Supply	0V Common	-ve Supply	-ve Supply	0V Common	-ve Supply			
		Orange	-	-	-	Shunt Cal	Shunt Cal	Shunt Cal			
					-						
		Black	-			-	-	-			
an rahama Caritata	0	Screen	-	-	-	- Cumple	- Committee	-			
aychem Cable	2	Red	+ve Supply	+ve Supply	+ve Supply	+ve Supply	+ve Supply	+ve Supply			
		White	_	+ve Output	+ve Output	+ve Output	+ve Output	+ve Output			
		Green	-	-	-ve Output	-ve Output	0V Common	-ve Output			
		Blue	-ve Supply	0V Common	-ve Supply	-ve Supply	0V Common	-ve Supply			
		Black	-	-	-	Shunt Cal	Shunt Cal	Shunt Cal			
		Screen	-	-	-	-	-	-			
Bayonet	6, A	Α	+ve Supply	+ve Supply	+ve Supply	+ve Supply	+ve Supply	+ve Supply			
		В	-ve Supply	+ve Output	+ve Output	+ve Output	+ve Output	+ve Output			
		С	-	-	-ve Output	-ve Output	0V Common	-ve Output			
		D	-	0V Common	-ve Supply	-ve Supply	0V Common	-ve Supply			
		E	-	-	-	Shunt Cal	Shunt Cal	Shunt Cal			
		F	-	-	-	-	-	Shunt Cal			
IN A	7	1	+ve Supply	+ve Supply	+ve Supply	+ve Supply	+ve Supply	+ve Supply			
licro DIN	D	2	-ve Supply	0V Common	-ve Supply	-ve Supply	0V Common	-ve Supply			
		3	-	+ve Output	+ve Output	+ve Output	+ve Output	+ve Output			
		E	Case	Case	-ve Output	-ve Output	0V Common	-ve Output			
ayonet	E, F	Α	+ve Supply	+ve Supply	+ve Supply	+ve Supply	+ve Supply	+ve Supply			
Iternative Wiring		В	_	0V Common	-ve Supply	-ve Supply	0V Common	-ve Supply			
ptions		С	-	+ve Output	+ve Output	+ve Output	+ve Output	+ve Output			
		D	-ve Supply	-	-ve Output	-ve Output	0V Common	-ve Output			
		E	-	-	-	Shunt Cal	Shunt Cal	Shunt Cal			
		F	-	-	-	Shunt Cal	Shunt Cal	-			
12 X 1	G	1	+ve Supply	+ve Supply	+ve Supply	+ve Supply	+ve Supply	+ve Supply			
-Pin		2	,	+ve Output	+ve Output	+ve Output	+ve Output	+ve Output			
		3	-ve Supply	0V Common	-ve Supply	-ve Supply	0V Common	-ve Supply			
		4	Case	Case	-ve Output	-ve Output	0V Common	-ve Output			
ero Halogen	K	Pink	+ve Supply	+ve Supply	+ve Supply	+ve Supply	+ve Supply	+ve Supply			
able		White	-	+ve Output	+ve Output	+ve Output	+ve Output	+ve Output			
)emountable)		Green	_	-	-ve Output	-ve Output	0V Common	-ve Output			
		Blue	-ve Supply	0V Common	-ve Supply	-ve Supply	0V Common	-ve Supply			
		Grey	-	-	-	Shunt Cal	Shunt Cal	Shunt Cal			
		Brown	_	_	_	-	-	-			
		Yellow	_		_	_	_	_			
		Screen	_	-	_	-	-	_			
		SCIEETI		-				-			
120 x 1.5 Female	R	+ve	+ve Supply	_	_	_	_	_			

## Ordering information (see the online configuration tool at Druck.com)

#### (1) Select model number

```
Main Product Variant
                         Amplified Pressure Transducer
PDCR
                         mV Pressure Transducer
4-20 mA Pressure Transmitter
PTX
                         Product Series
5 UNIK 5000
                                                  Diameter and Material
                                                                            25mm Stainless Steel
Electrical Connector (Note 6)
No Electrical Connector (Note 7)
                                                                                                      Cable Gland (Polyurethane Cable)
                                                                                                     Raychem Cable
                                                                                                     Polyurethane Cable (Depth)
                                                                                                     Hytrel Cable (Depth)
MIL-C-26482 (6-pin Shell Size 10) (Mating connector not supplied)
DIN 43650 Form A Demountable (Mating connector supplied)
                                                                                                    DIN 43650 Form A Demountable (Mating connector supplied)
Demountable MIL-C-26482 (6-pin Shell Size 10) (Mating connector not supplied)
1/2" NPT Conduit (Polyurethane cable)
Micro DIN (9.4 mm Pitch) (Mating connector supplied)
MIL-C-26482 (6 pin Shell Size 10) Alternative Wiring (Mating connector not supplied)
Demountable MIL-C-26482 (6 pin Shell Size 10) Alternative Wiring (Mating connector not supplied)
MI2 x 14-pin male (Mating connector not supplied)
Zero Halogen Cable Demountable
Kynar Cable (Depth)
M20 x 15 blins Formula Conduit Demountable (Mata 9)
                                                                                                      M20 x 1.5 Inline Femále Conduit Demountable (Note 8)
                                                                                                     Electronics Option
0 mV Passive 4-wire (PDCR) (Note 1)
                                                                                                                              mV Linearised 4-wire (PDCR)
4 to 20 mA 2-wire (PTX)
0 to 5 V 4-wire (PMP)
0 to 5 V 3-wire (PMP)
                                                                                                                              Basic Configurable 3-wire (PMP) 0 to 10 V 4-wire (PMP)
                                                                                                                              0.5 to 4.5 V Ratiometric 3-wire (PMP) (Note 5)
Configurable 4-wire (PMP) (Note 4, 5)
Configurable 3-wire (PMP) (Note 4, 5)
                                                                                                                              Accuracy
                                                                                                                                                                                 Industrial
Improved
                                                                                                                                                                                 Calibration
                                                                                                                                                                                                           Zero/Span Data
Room Temperature
                                                                                                                                                                                 CA
                                                                                                                                                                                 CC
                                                                                                                                                                                                           Full Thermal
                                                                                                                                                                                                           Room Temperature/Measured Reading
                                                                                                                                                                                                           Hazardous Area Approval (Note 6)
HO None
                                                                                                                                                                                                           H0
                                                                                                                                                                                                                                  None
IECEX/ATEX Intrinsically Safe 'ia' Group IIC
IECEX/ATEX Intrinsically Safe 'ia' Group I
FM (C & US) Intrinsically Safe 'ia' Group IIC/ABCD
IECEX/ATEX Intrinsically Safe 'ia' Groups I/IIC [HI + H2]
IECEX/ATEX/FM (C & US) Intrinsically Safe 'ia' Groups
IIC/ABCD [HI + H6]
IECEX/ATEX/NEPSI Intrinsically Safe 'ia' Group IIC
INMETRO Intrinsically Safe 'ia' Group IIC
INMETRO Intrinsically Safe 'ia' Group I
INMETRO Intrinsically Safe 'ia' Group I
INMETRO Intrinsically Safe 'ia' Group I/IIC [JA + JB]
Pressure Connector
                                                                                                                                                                                                           Н6
                                                                                                                                                                                                           HS
                                                                                                                                                                                                           JA
JB
                                                                                                                                                                                                                                    Pressure Connector
PA G1/4 Female (Note 3)
                                                                                                                                                                                                                                    PB
PC
PD
                                                                                                                                                                                                                                                             G1/4 Male Flat
G1/4 Male 60° Internal Cone
G1/8 Male 60° Internal Cone
                                                                                                                                                                                                                                                             1/4 NPT Female (Note 3)
1/4 NPT Male
                                                                                                                                                                                                                                                              1/8 NPT Male
                                                                                                                                                                                                                                                             M20x1.5 Male (3 mm bore)
M14x1.5 60° Internal Cone
                                                                                                                                                                                                                                                              M12x1 Internal Cone
                                                                                                                                                                                                                                                             7/16-20 UNJF Male 74° External Cone
G1/2 Male via Adaptor (Note 3)
G1/4 Quick Connect
                                                                                                                                                                                                                                    PQ
PR
PS
PT
PU
PV
PW
PX
PY
PZ
                                                                                                                                                                                                                                                            GI/4 Quick Connect
1/2 NPT Male via Adaptor (Note 3)
1/4 Swagelok Bulkhead
G1/4 Male Flat Long
7/16-20 UNF Long 37° Flare Tip (Note 3)
7/16-20 UNJF Female (Note 3)
Depth Cone (G1/4 Female Open Face)
7/16-20 UNF Male Short Flat (Note 3, 9)
3/8-24 UNJF
                                                                                                                                                                                                                                                              M10 x 1 80° Internal Cone
                                                                                                                                                                                                                                    RA
RB
                                                                                                                                                                                                                                                             VCR Female (Note 3, 9)
G1/4 Male Flat with Snubber
                                                                                                                                                                                                                                                             G1/4 Male Flat with Cross Bore Protection
M12 x 1.0 74° External Cone
Quick Release Mount
                                                                                                                                                                                                                                    RD
RE
                                                                                                                                                                                                                                                             VCR Male (Note 3, 9)
M20 x 1.5 Male (8 mm bore)
NW16 Flange
1/8-27 NPT Female
R3/8 Male
R1/4 Male
                                                                                                                                                                                                                                    RJ
RQ
                                                                                                                                                                                                                                    RU
                                                                                                                                                                                                                                    RV
                                                                                                                                                                                                                                    RW
                                                                                                                                                                                                                                                              G1/4 Male with Nipple
                                                                                                                                                         A2
                                                                                                                                                                                  СВ
                                                                                                                                                                                                           но
                                                                                                                                                                                                                                                              (Example Model Number)
                                                                                                                                TA
```

#### **Ordering notes**

Note 1: Premium accuracy is not available on this version

Note 2: Please ensure that the electrical connector selected is option 0, 2, 6, A. E. F or G.

Note 3: Select one of these pressure connectors for pressure ranges over 70 bar

Note 4: Maximum operating temperature is 80°C (176°F)

Note 5: Hazardous area certifications not available

Note 6: Hazardous area certifications are restricted by electrical connector options in line with the following table:

Connector														
Approval	0	1	2	3	4	6/E	7	A/F	С	D	G	к	N	R
H0	Υ	Υ	Υ	Υ	Υ	Υ	Υ	Υ	Υ	Υ	Υ	Υ	Υ	Υ
H1	Υ	Υ	Υ	Υ	Υ	Υ	Υ	Υ	Υ	Υ	Υ	-	-	Υ
H2	Υ	-	Υ	Υ	Υ	Υ	-	-	Υ	-	Υ	-	-	-
Н6	Υ	Υ	Υ	Υ	Υ	Υ	Υ	Υ	Υ	Υ	Υ	-	-	Υ
HA	Υ	-	Υ	Υ	Υ	Υ	-	-	Υ	-	Υ	-	-	-
HS	Υ	Υ	Υ	Υ	Υ	Υ	Υ	Υ	Υ	Υ	Υ	-	-	Υ
J1	Υ	Υ	Υ	Υ	Υ	Υ	Υ	Υ	Υ	Υ	Υ	-	-	Υ
JA	Υ	Υ	Υ	Υ	Υ	Υ	Υ	Υ	Υ	Υ	Υ	-	-	Υ
JB	Υ	-	Υ	Υ	Υ	Υ	-	-	Υ	-	Υ	-	-	-
JF	Υ	_	Υ	Υ	Υ	Υ	-	_	Υ	_	Υ	-	_	_

Note 7: Available with component certification, use of which requires incorporation into certified apparatus with an IP rated enclosure appropriate to the certification type supplied

Note 8: Electronics option 2 only

Note 9: Pressure ranges less than 500 bar

## 2) State pressure range and units (e.g., 0 to 10 bar, -5 to +5 bar)

#### Pressure unit options are:

Symbol	Description
bar	bar
mbar	millibar
psi	pounds/sq. inch
Pa	Pascal
hPa	hectoPascal
kPa	kiloPascal
MPa	MegaPascal
mmH <sub>2</sub> O	mm water
cmH <sub>2</sub> O	cm water
mH <sub>2</sub> O	metres water
inH <sub>2</sub> O	inches water
ftH <sub>2</sub> O	feet water
mmHg	mm mercury
inHg	inches mercury
kgf/cm <sub>2</sub>	kg force/sq. cm
atm	atmosphere
Torr	torr

#### 3) State pressure reference (e.g., gauge)

#### Reference options are:

- gauge
- absolute
- barometric
- sealed gauge
- wet/dry differential
- wet/wet differential

#### 4) State cable lengths and units

Integer values only, e.g. 1 m cable, 8 ft. Minimum length 1 m (3 ft) cable (only required with certain electrical connectors).

Maximum cable length 100 m (300 ft) for approval options not H0; 200 m (600 ft) for approval option H0.

#### 5) Output options 5, 8 and 9

State voltage output at minimum and maximum pressure (e.g., output −1 to 9 V)

#### **Typical order examples**

**PTX5012-TB-A2-CA-H0-PA:** 0 to 10 bar, gauge, 3 m cable

PMP5028-TC-A3-CC-H0-PE: -15 to 75 psi, gauge, 15 ft cable, output voltage -1 to 5 volts

PDCR5071-TB-A1-CB-H0-PA: 0 to 100 bar, sealed gauge

#### Accessories (order as separate line items)

P/N 202-034-05: Sensor termination enclosure

P/N 600-914: Desiccant gel pack for STE

P/N 222-117-01: Short sink weight (to fit G1/4 female)

P/N 222-179-01: Depth cone injection moulded for PW connection

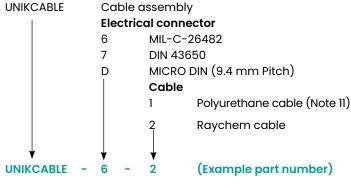
P/N 163-009: Mating connector for MIL-C-26482 (Electrical connector options 6, A, E, and F) (Note 10)

## Cable assemblies (Note 10)

A made up electrical connector with a length of cable.

#### 1) Select part number

#### Main product (Note 10)



#### 2) State cable length and units (Integer value only)

Minimum length 1 m (3 ft)

Maximum length 200 m (600 ft)

Example: UNIKCABLE-6-2 5 m

Note 10: Not considered suitable for use in hazardous areas.

Note 11: This cable is the same as that used in the electrical connector cable gland (Option 1 in the main product).

## **Mechanical drawings**

