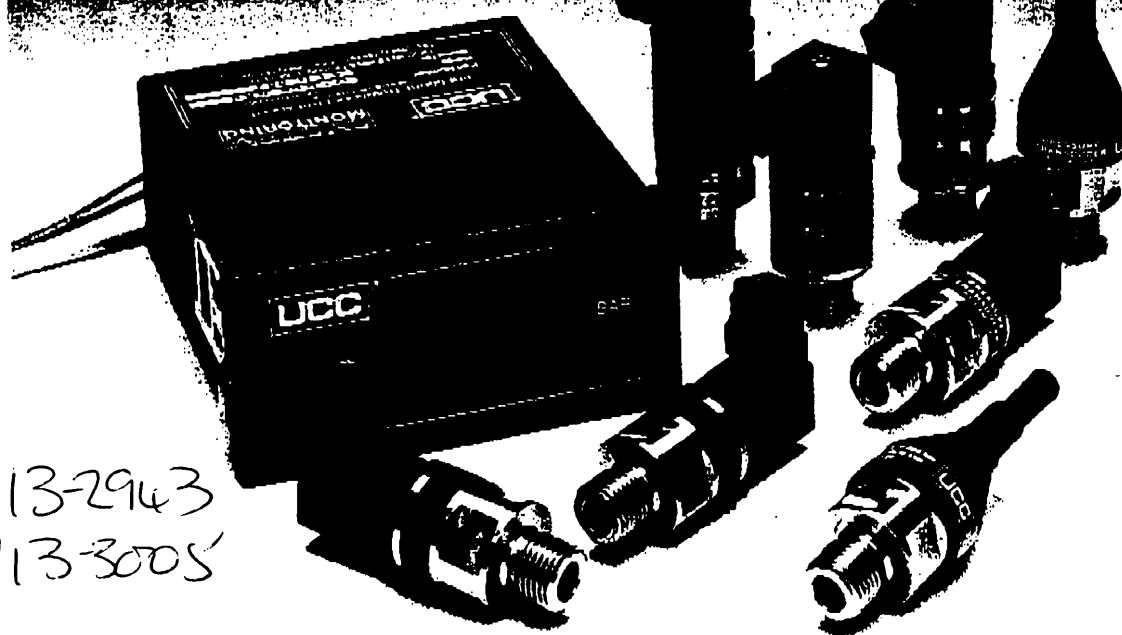


713-2943  
713-3005



- Uses the latest strain gauge technology.
- One-piece body and diaphragm machining ensures long-term product stability
- All stainless steel construction.
- Rugged, robust and simple to install Micro DIN electrical connection.
- **Range now available with flying leads.**
- 20mV and 5V output options.
- 6 pressure ratings.
- Accepts 10-30V dc unregulated supply.
- Can be specified as matched pair with LED display.



# PRESSURE TRANSDUCERS

## SPECIFICATIONS

<b>Construction:</b>	Body and diaphragm: 17-4 PH stainless steel Electrical connection: ABS Micro DIN Plug and socket
<b>Pressure Ranges:</b>	Pressure reference: Vented gauge Ranges available: 0-10 bar g, 0-20 bar g, 0-50 bar g, 0-100 bar g, 0-250 bar g and 0-400 bar g All above models available with 0-5V dc or 0-20 mV output
<b>Temperature Range:</b>	Storage temp: $-40^{\circ}\text{C}$ to $+120^{\circ}\text{C}$ Operating temp: $-25^{\circ}\text{C}$ to $+85^{\circ}\text{C}$ (compensated)
<b>Thermal Characteristics:</b>	Span: $\pm 0.02\%$ / $^{\circ}\text{C}$ of reading Zero: $\pm 0.02\%$ / $^{\circ}\text{C}$ of F.S.O.
<b>Overpressure Characteristics:</b>	1.5 x without calibration change 4 x without permanent damage 6 x burst pressure
<b>Electrical Characteristics:</b>	Supply Voltage: 10-30 V dc unregulated (standard) Output Voltage: 5 Vdc (Nom)-amplified version Output Voltage: 20mV (Nom)-non-amplified version Zero Balance: $\pm 2\%$ F.S.O. Span: $\pm 0.5\%$ F.S.O. Typical, $\pm 1\%$ F.S.O. Max
<b>Accuracy:</b>	Combined non-linearity, hysteresis and repeatability Typical: $\pm 0.25\%$ B.S.L. (deviation from best fit straight line) Maximum: $\pm 0.50\%$ B.S.L. (deviation from best fit straight line)
<b>Sealing:</b>	IP65 (DIN 40050)
<b>Thread:</b>	see ordering information
<b>Weight:</b>	0-10 bar range: 0.092 kg Other ranges: 0.055 kg
<b>Calibration:</b>	Calibration certificates are available. See page 82
<b>Flying Lead:</b>	1 metre cable (2 metre available. Consult UCC)
<b>Rating:</b>	IP67
<b>Max. Temp:</b>	$+70^{\circ}\text{C}$

## CLOSE SET TOLERANCES ENSURE INTERCHANGEABILITY

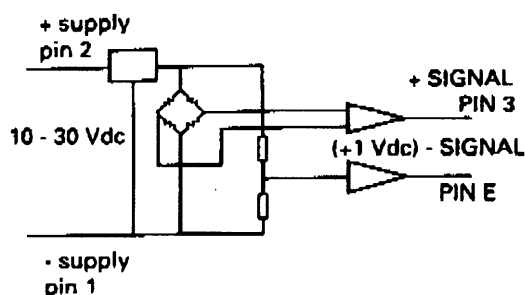
• **Closely controlled span tolerance**  
Typical span variations are held to within  $\pm 0.5\%$  F.S.O. ensuring sensor interchangeability or in some cases eliminating the need to calibrate.

• **Closely controlled zero tolerance.**  
Typical zero offsets are held to a maximum  $\pm 2\%$  F.S.O. considerably reducing installation times.

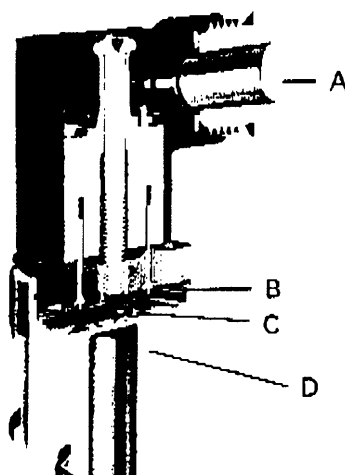
Colour coded label identification	
0-10 bar	
0-20 bar	
0-50 bar	
0-100 bar	
0-250 bar	
0-400 bar	

## ELECTRICAL SPECIFICATIONS

### Electrical Schematic 5V Output

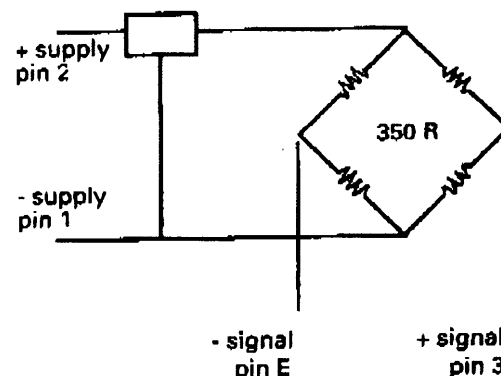


Note: For 3 wire operation, ignore Pin E.  
Signal is now +1 to +6V dc



## INSTALLATION DETAILS

### Electrical Schematic 20mV Output



In determining sensor suitability with liquids or gases and abilities to withstand corrosion, UCC Transducers are designed to provide millions of service free cycles with most pressure mediums. Lubrication and hydraulic oils, corrosive chemicals and gases at the extremes of temperature.

This sectional illustration of a UCC Transducer highlights 4 of the important design features.

A **Electrical connection** is via an ABS Micro DIN plug and socket or sealed cable connection. Compactness of all UCC sensors ensures easy and flexible installation.

B **The circuit board** is securely contained in electronic grade resin, sealed permanently in the one-piece stainless steel body.

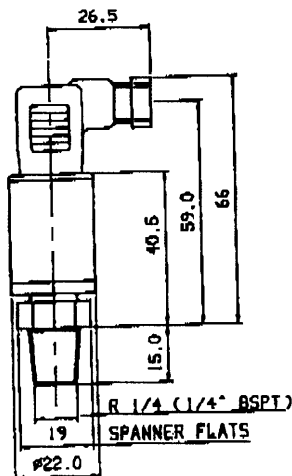
C **The strain gauge** is seated on the one-piece body and diaphragm. In use and under pressure, the diaphragm will not stress relieve but will return to its original profile, even after  $1.5 \times$  its full range pressure.

D **The diaphragm**, being precision machined from the highest grade 17-4 PH stainless steel, contains no weld or heat induced stresses ensuring perfect repeatability on every service cycle.

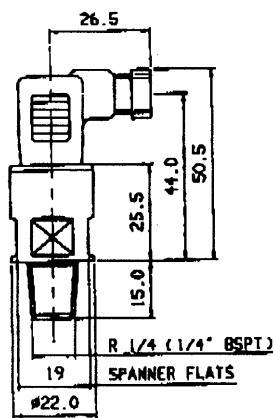
## INSTALLATION DETAILS

### Micro DIN Plug

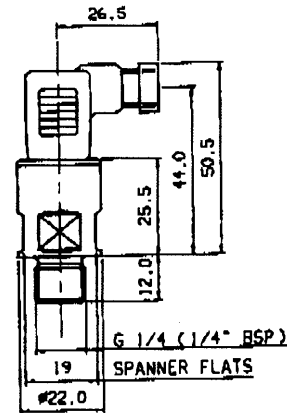
0-10 bar option



0-20 and 0-50 bar option

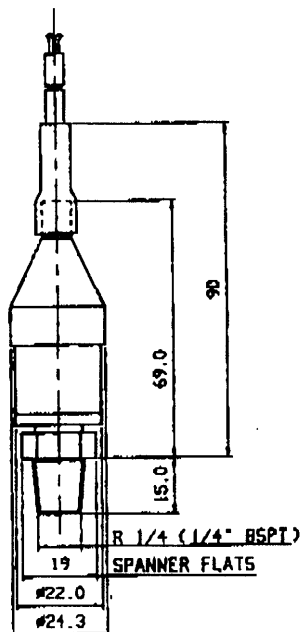


0-100, 0-250 and 0-400 bar option

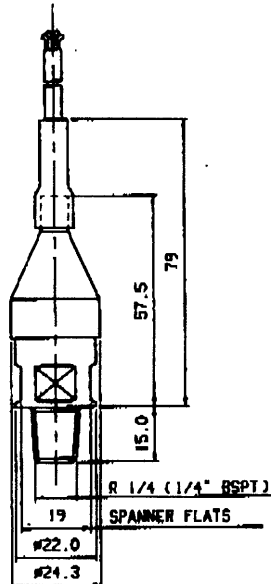


### Flying Lead

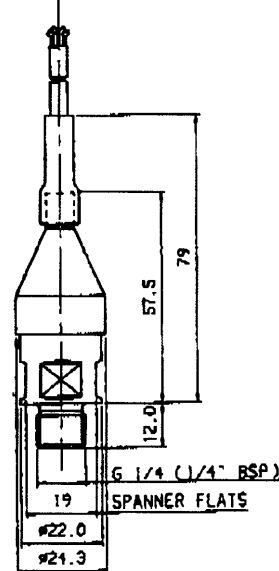
0-10 bar option



0-20 and 0-50 bar option



0-100, 0-250 and 0-400 bar option



## ORDERING INFORMATION

Part Number	Part Number	Part Number	Description
Micro DIN Option	Flying Lead Option 1	Flying Lead Option 2	
PTD.010111	PTD.010711	PTD.010811	0-10 bar g transducer, R 1/4 (1/4" BSPT) 0-5V dc output
PTD.010121	PTD.010721	PTD.010821	0-10 bar g transducer, R 1/4 (1/4" BSPT) 0-20mV output
PTD.020111	PTD.020711	PTD.020811	0-20 bar g transducer, R 1/4 (1/4" BSPT) 0-5V dc output
PTD.020121	PTD.020721	PTD.020821	0-20 bar g transducer, R 1/4 (1/4" BSPT) 0-20mV output
PTD.050111	PTD.050711	PTD.050811	0-50 bar g transducer, R 1/4 (1/4" BSPT) 0-5V dc output
PTD.050121	PTD.050721	PTD.050821	0-50 bar g transducer, R 1/4 (1/4" BSPT) 0-20mV output
PTD.100111	PTD.100711	PTD.100811	0-100 bar g transducer, G 1/4 (1/4" BSP) 0-5V dc output
PTD.100121	PTD.100721	PTD.100821	0-100 bar g transducer, G 1/4 (1/4" BSP) 0-20mV output
PTD.250111	PTD.250711	PTD.250811	0-250 bar g transducer, G 1/4 (1/4" BSP) 0-5V dc output
PTD.250121	PTD.250721	PTD.250821	0-250 bar g transducer, G 1/4 (1/4" BSP) 0-20mV output
PTD.400111	PTD.400711	PTD.400811	0-400 bar g transducer, G 1/4 (1/4" BSP) 0-5V dc output
PTD.400121	PTD.400721	PTD.400821	0-400 bar g transducer, G 1/4 (1/4" BSP) 0-20mV output

NOTE 1: Alternative threads are available. Consult UCC for calibration certificates see page 82.

For matched transducers and readout information see page 82

NOTE 2: Option 1 = 1 metre cable

Option 2 = 2 metre cable

# PRESSURE READOUTS

## SPECIFICATIONS\*

<b>Power Supply:</b>	105 to 125V ac or 210 to 250V ac at 50 to 60 Hz 12 to 26V dc
<b>Meter Outputs to Transducer:</b>	12V Nominal
<b>Analogue input:</b>	0 to 5V
<b>Environmental Operating Temp:</b>	Range 0°C to 55°C
<b>Storage:</b>	-40°C to +85°C
<b>Relative Humidity:</b>	0 to 85% non-condensing
<b>Display:</b>	3½ digit LED
<b>Connection:</b>	Via screw terminals at rear
<b>Front fascia:</b>	48mm x 96mm
<b>Cut-out Size:</b>	92.0mm x 45.0mm
<b>Depth Protrusion:</b>	111.5mm from rear of bezel
<b>Weight:</b>	0.33 kg

## ORDERING INFORMATION (LED Display and matched transducers)

NOTE: The following part numbers offer an opportunity to purchase a matched pair (Transducer and LED display). These are calibrated together and supplied with a certificate of calibration. See below.

## ORDERING INFORMATION

Part Number	Description
Micro DIN Option	
<b>PTR.00051</b>	<b>3½ Digit LED Display</b>
<b>PTR.01051</b>	<b>LED Display with 10 bar g transducer</b>
<b>PTR.02051</b>	<b>LED Display with 20 bar g transducer</b>
<b>PTR.05051</b>	<b>LED Display with 50 bar g transducer</b>
<b>PTR.10051</b>	<b>LED Display with 100 bar g transducer</b>
<b>PTR.25051</b>	<b>LED Display with 250 bar g transducer</b>
<b>PTR.40051</b>	<b>LED Display with 400 bar g transducer</b>

NOTE 1: Alternative threads are available. Consult UCC for calibration certificates see below.

NOTE 2: For ordering information on 1 metre and 2 metre cable flying lead options consult UCC.

## TRANSDUCER CALIBRATION and RE-CALIBRATION

### Calibration Certificates

Where a high degree of accuracy and accountability is required a calibration certificate is available and should be requested at the time of purchase.

However, due to the closely maintained zero and span tolerances achieved in manufacture by UCC, a Transducer calibration certificate is normally not necessary.

### Re-Calibration Service

Where the maintenance of British and International standards makes re-calibration essential – although not normally required with UCC Transducers this service is available from UCC.

Consult UCC for recertification details. Returning a sensor to UCC will ensure a full and fast service to your requirements.

### THE STANDARD THAT CONFIRMS UCC's COMMITMENT TO QUALITY

- BS5750 (ISO 9002) approval confirms our customers' requirements are being met.
- Systems are controlled from start to finish and comprehensive records of every stage of production are maintained.
- Optimum product availability and after-sales services are maintained.
- Registration to National and International standards presents no problems with customer buyer assessments.
- The UCC reputation for quality products and service are re-inforced to all our customers worldwide.