

# Special Purpose Transmitters

## Type UT-10/UT-11

- **UNITRANS Universal Pressure Transmitter**
- **User Adjustable Turndown of up to 1:20**
- **Large, Easy-to-Read LCD includes Bar Graph and Trend Display**



The UniTrans pressure transmitter is designed for a variety of pressure measurement applications. Durable construction includes all stainless steel wetted parts for compatibility with a variety of media. The Type UT-10 is supplied with a 1/2" male NPT process connection. The Type UT-11 features a flat, non-clogging flush diaphragm process connection for use with highly viscous or crystallizing media, or media containing solids.

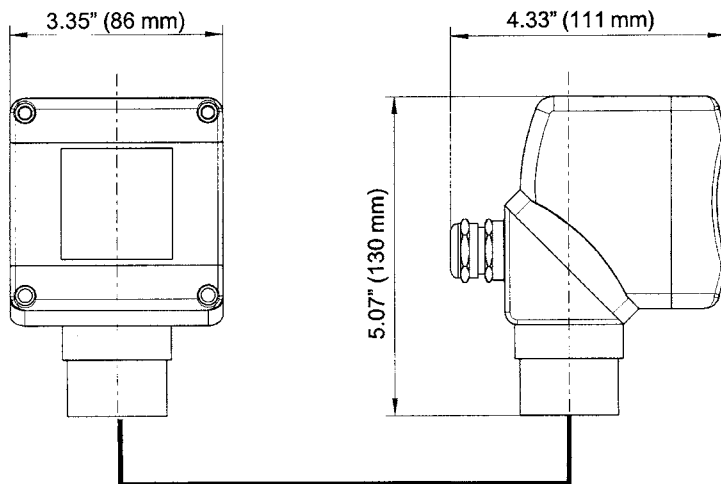
Specifications	Units	Type UT-10/UT-11
Pressure connection Type UT-10 Type UT-11		1/2 NPT male Flush diaphragm with O-ring (ranges 0-25 psi: G1B, 100-7500 psi G 1/2 B)
Material case UT-10 pressure connection UT-11 pressure connection transmitting liquid		Fiberglass reinforced PBT plastic (polybutene terephthalate) 316 and PH 17-4 stainless steel 316 stainless steel {Hastelloy C4} silicone oil {Halocarbon oil for oxygen applications};{vegetable oil}
Supply voltage $U_B$ Adjustability zero point span	DC Volts %	12 -36 0 to 99 Turn down of 1:20 (1:2 per pressure ranges > 15,000 psi)
Output and load limitations Output signal Maximum load Response time Display	milliseconds	4-20 mA 2-wire $R_A \leq (U_B - 12V) / 0.023 A$ , with $R_A$ in Ohms and $U_B$ in volts $\leq 10$ 1.75" square 4 digit liquid crystal display with bar graph, trend display, and 2 additional text display lines.
Damping (display and signal) Accuracy <sup>1</sup>	seconds % of span	user-adjustable from 0 to 40 $\leq 0.10$ ( $\leq 0.3$ for ranges > 15,000 psi)
Effect with turn down turn down up to 1 : 5 turn down 1 : 5 to 1 : 20		no change to accuracy multiply the accuracy by (turn down / 5) for example if turndown is 1 : 15 then accuracy = $0.10 \times (15 / 5) = 0.3$

Specifications	Units	Type UT-10/UT-11
1 year stability	% of span	≤ 0.1 (under reference conditions)
Temperature Media		-22°F to +221°F (-30°C to +105°C)
Ambient		-4°F to +158°F (-20°C to +70°C)
Storage		-31°F to +176°F (-35°C to +80°C)
Temperature error on zero point	% of span / 18°F (10°C) change	≤ 0.1 (NOTE: temperature error between +50°F and +104°F are already included in the above accuracy specification)
on span		≤ 0.1
Overall deviation (+50°F to +104°F)	%	≤ 0.15 for ranges ≥ 600 psi ≤ 0.20 for ranges < 600 psi
CE conformity		Interference emission per EN 50 081-1 (March 1993) and EN50 081-2 (March 1994), Interference immunity per EN 50 082-2 (February 1996)
Shock resistance	g	100 per IEC 770 for mechanical shock
Vibration resistance	g	5 per IEC 770 for vibration under resonance conditions
Electrical connection		locking plug M20 x 1.5 with internal terminal block accepts cable diameter from .25" to .5", diameter to .1"
Electrical protection		protected against reverse polarity, short circuit, and overvoltage
Environmental protection		IP 65 {IP 67 (NEMA 4)}
Weight	lb	1.5 (.7 kg)

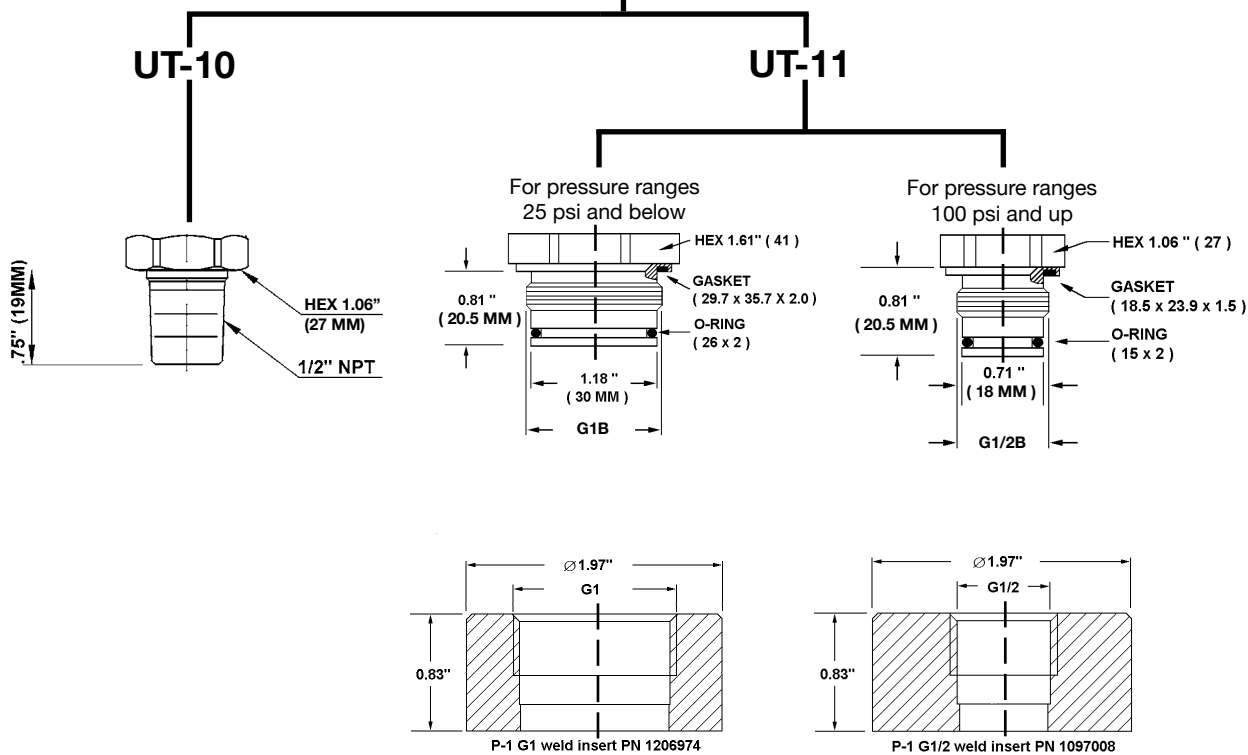
Notes: Items in curved brackets { } are available as special order options

<sup>1</sup> Transmitter is calibrated in vertical mounting position with the process connection facing down

## Dimensions



## Process connections



## Alternative mounting options

UniTrans mounted to 3A sanitary Tri-Clamp seal



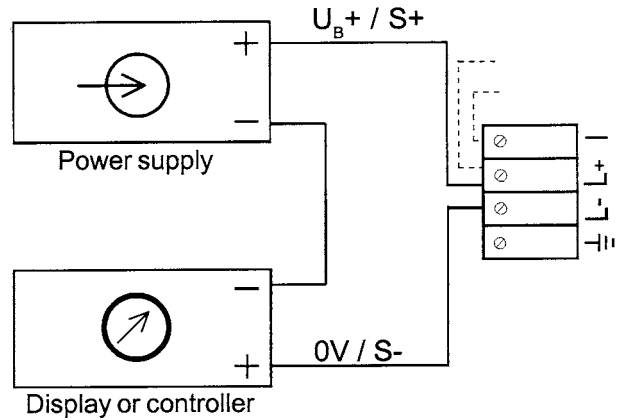
UniTrans mounted to 3A sanitary INLINE SEAL™



## Wiring

### 2-Wire System

Wire	Coding	Terminal Block
Supply+	$U_B+ / S+$	L+
Signal-	$0V / S-$	L-



## LCD display



## Sample programming steps

To manually set the pressure range use the following steps:

-Press the [ESC] and [OK] keys at the same time for about 2 seconds to enter the programming mode.

#### LCD display shows:

“DISPLAY OPTIONS”  
 “CALIBRATE RANGE”  
 “CALIBRATE WITH PRESSURE”  
 “CALIBRATE WITHOUT PRESSURE”  
 “CALIBRATE - DEFINE ZERO”  
 “CALIBRATE - DEFINE SPAN”  
 “SPAN DEFINE 20MA = ???”

#### User Action:

Press [Zero] key to continue  
 Press [OK] to select  
 Press [Zero] to continue  
 Press [OK] to select  
 Press [Zero] to continue  
 Press [OK] to select  
 Press the up and down arrow keys to set the span to the desired level. Then press [ESC] to return to the normal operation mode.

# Type UT-10 Unitrans® Universal Pressure Transmitter

## Standard Features

- **Signal Output:** 4-20 mA 2-wire
- **Supply Voltage:** 12-36 VDC
- **Process Connection:** 1/2" NPT male
- **Electrical Connection:** M20 x 1.5 cable gland with internal terminal block



Gauge Ranges	
Description	
Range	Part #
0-5 psi	4292333
0-25 psi	<b>4292341</b>
0-100 psi	<b>4292350</b>
0-250 psi	<b>4292368</b>
0-500 psi	<b>4292376</b>
0-1500 psi	<b>4292384</b>
0-3000 psi	<b>4292392</b>
0-7500 psi	<b>4292406</b>
0-15,000 psi	4292414

NOTE: Ready-to-ship part numbers shown in **bold, blue** print.

Ready-to-ship part numbers are available from stock (subject to prior sale). Items without part numbers are available on special order.

[Datasheet: UT-10](#)

# Type IUT-10 Intrinsically Safe Unitrans®

Contact factory for pricing information

## UT-10 Option List

Feature
Unit
psi
Other - please specify
Pressure Range
0 psi ... 5 psi
0 psi ... 25 psi
0 psi ... 100 psi
0 psi ... 250 psi
0 psi ... 500 psi
0 psi ... 1500 psi
0 psi ... 3000 psi
0 psi ... 7500 psi
0 psi ... 15000 psi
Other - Please specify
Process Connection
G 1/2 B
1/2" NPT
Other - please specify
Special Design Features
Without
Suitable for food
Oxygen, oil and grease free
Other - please specify
Case Material
Fiberglass reinforced ABS plastic (PBT)
Aluminum with 3/4" NPT female conduit
Electrical Connection
Cable gland M20x1.5 with internal terminal block
4-pin locking plug M12 x 1
3/4" NPT female conduit (only with aluminum case)
Other - please specify
Digital Display
With integrated 4 Digit LCD-display
With integrated 4 Digit LCD-display & plastic window
Without
Approvals
Without
Other - please specify
Quality Certificates
Without
NIST Certificate of Calibration
Additional Order Details
Without
Additional order details

# Type UT-11 Unitrans® Flush Diaphragm Universal Pressure Transmitter

## Standard Features

- **Signal Output:** 4-20 mA 2-wire
- **Supply Voltage:** 12-36 VDC
- **Process Connection:** G1B, G1/2B<sup>1</sup>
- **Electrical Connection:** M20 x 1.5 cable gland with internal terminal block



Gauge Ranges	
Description	
Range	Part #
0-5 psi <sup>1</sup>	<b>4292006</b>
0-25 psi	<b>4292014</b>
0-100 psi	<b>4292022</b>
0-250 psi	<b>4292031</b>
0-500 psi	<b>4292040</b>
0-1500 psi	<b>4292058</b>
0-3000 psi	<b>4292066</b>
0-7500 psi	<b>4292074</b>

NOTE <sup>1</sup>) G1B for 5 psi range, G1/2B for ranges ≥ 25 psi.

NOTE: Ready-to-ship part numbers shown in **bold, blue** print.

Ready-to-ship part numbers are available from stock (subject to prior sale). Items without part numbers are available on special order.

[Datasheet: UT-10](#)

# Type IUT-11 Intrinsically Safe Unitrans®

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## UT-11 Option List

<b>Feature</b>
<b>Unit</b>
psi
psi absolute
Other - Please specify
<b>Pressure Range</b>
0 psi ... 5 psi
0 psi ... 25 psi (0 psi ... 25 psi absolute)
0 psi ... 100 psi (0 psi ... 100 psi absolute)
0 psi ... 250 psi (0 psi ... 250 psi absolute)
0 psi ... 500 psi
0 psi ... 1500 psi
0 psi ... 3000 psi
0 psi ... 7500 psi
Other - please specify
<b>Process Connection</b>
G 1 B, flush diaphragm with O-ring (up to 25 psi)
G 1/2 B, flush diaphragm with O-ring (> than 25 psi)
Other - please specify
<b>Material of Wetted Parts</b>
Stainless steel, NBR O-Ring
Hastelloy C4, Viton® O-Ring
Other- please specify
<b>Special Design Features</b>
Oxygen, oil and grease free
Suitable for food
Without
<b>Case Material</b>
Fiberglass reinforced ABS Plastic (PBT)
Aluminum with 3/4" NPT female conduit
<b>Electrical Connection</b>
Cable gland M20x1.5 with internal terminal block
4-pin locking plug M12 x 1
3/4" NPT female conduit (only with aluminum case)
Other - please specify
<b>Digital Display</b>
With integrated 4 digit LCD-display
With integrated 4 digit LCD-display & plastic window
Without
<b>Approvals</b>
Without
Other - please specify
<b>Quality Certificates</b>
Without
NIST Certificate of Calibration
<b>Additional Order Details</b>
Without
Additional order details