

Air Differential Pressure Transmitter

0-10VDC or 0-5VDC with 4-20mA outputs

Features

- 4 ranges available:
 - High Accuracy (0-25Pa to 0-100Pa - switch selectable)
 - Low (0-100Pa to 0-500Pa - switch selectable)
 - Standard (0-50Pa to 0-2500Pa - switch selectable)
 - High (0-5000Pa to 0-10000Pa - switch selectable)
- Accuracy typically $\leq \pm 0.5\%$ FSS
- Pressure Hysteresis typically $\pm 0.5\%$ FSO
- Fully calibrated
- Operating temperature -20°C to 70°C
- 24VAC or 24VDC supply
- Output 0-5VDC or 0-10VDC (selectable) with 4-20mA

Description

The WS-TPDPT7 range of air differential pressure transducers is designed for applications in ventilation/air conditioning systems, filter monitoring, building pressurisation and air leak detection systems.

The transmitters employ a solid state compensated pressure cell with microprocessor to provide superior linearity, measurement accuracy and sensitivity.

The WS-TPDPT7 incorporates zero pressure calibration at the touch of a button and provide multiple ranges with a \pm option defined by user selection switches.

The three main models have outputs of 0-5VDC or 0-10VDC with 4-20mA. The output voltage range is switch selectable. An optional LCD display is available. The standard models are rated at IP51 and an optional IP65 enclosure is available. Each transmitter is provided with 2 metres of tubing and 2 duct pilot fittings.

These transducers are ideal for direct connection to AIC's extensive range of DC analog input instrumentation or can be used with a PLC, Building Management System etc.

Visit [AIC's website \(http://www.aicpl.com.au\)](http://www.aicpl.com.au) for information about Amalgamated Instrument Co (AIC) instrumentation products.

Specifications

| | |
|-------------------|--|
| Ranges | High Accuracy 4 ranges 0-25Pa to 0-100Pa Low Range 5 ranges 0-100Pa to 0-500Pa Standard Range 8 ranges 0-50Pa to 0-2500Pa High Range 5 ranges 0-5000Pa to 0-10000Pa (switch selectable) |
| Supply Output | 24 Volts AC or DC ($\pm 15\%$) 0-5VDC or 0-10VDC (selectable) with 4-20mA |
| Power Cons. | 10mA plus mA output load (max 35mA) |
| Accuracy | High accuracy $\pm 0.5\%$ FSO Low range $\pm 0.5\%$ FSO Standard Range $\pm 0.25\%$ FSO High range $\pm 0.5\%$ FSO |
| Non-Linear/Hyst. | High accuracy $\pm 0.5\%$ FSO Low range $\pm 0.5\%$ FSO Standard $\pm 0.25\%$ FSO High range $\pm 0.5\%$ FSO |
| Operating temps | -20°C to $+70^{\circ}\text{C}$ |
| Pressure Overload | All ranges 50kPa |
| Enclosure | Flame retardant ABS |
| Tube connections | 2 x 6mm connections |



WSTPDPT7-3.1-10

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| Type | WS-TPDPT7/100 (High Accuracy) | WS-TPDPT7/500 (Low range) | WS-TPDPT7/2500 | WS-TPFPT7/10000 |
|---------------------|---|---|---|---|
| Selectable Ranges | 0-25Pa, 0-50Pa, 0-75Pa, 0-100Pa | 0-100Pa, 0-200Pa, 0-300Pa, 0-400Pa, 0-500Pa | 0-50Pa, 0-125Pa, 0-250Pa, 0-500Pa, 0-1000Pa, 0-1500Pa, 0-2000Pa, 0-2500Pa | 0-5000Pa, 0-6000Pa, 0-7000Pa, 0-8000Pa, 0-9000Pa, 0-10000Pa |
| ± ranges selection | Switch SW4 on | Switch SW4 on | Switch SW4 on | ± not available |
| Supply Power Req. | 24VDC/24VAC (±15%) - max 35mA | 24VDC/24VAC (±15%) - max 35mA | 24VDC/24VAC (±15%) - max 35mA | 24VDC/24VAC (±15%) - max 35mA |
| Outputs | 0-5VDC or 0-10VDC with 4-20mA | 0-5VDC or 0-10VDC with 4-20mA | 0-5VDC or 0-10VDC with 4-20mA | 0-5VDC or 0-10VDC with 4-20mA |
| Accuracy | ±0.5% FSS typical | ±0.5% FSS typical | ±0.25% FSS typical | ±0.5% FSS typical |
| Non-lin./hysteresis | ±0.5% FSS typical | ±0.5% FSS typical | ±0.25% FSS typical | ±0.5% FSS typical |
| Operating temp. | -20 to +70°C | -20 to +70°C | -20 to +70°C | -20 to +70°C |
| Operating humidity | 0-80% non-cond. | 0-80% non-cond. | 0-80% non-cond. | 0-80% non-cond. |
| Pressure overload | 50kPa | 50kPa | 50kPa | 50kPa |
| Enclosure | Flame retardant ABS IP51 (opt. IP65) | Flame retardant ABS IP51 (opt. IP65) | Flame retardant ABS IP51 (opt. IP65) | Flame retardant ABS IP51 (opt. IP65) |

| Order Codes | | | | |
|-----------------------|-------------------|--------------------|--------------------|---------------------|
| Standard housing | WS-TPDPT7/100 | WS-TPDPT7/500 | WS-TPDPT7/2500 | WS-TPDPT7/10000 |
| Standard with display | WS-TPDPT7/100/D | WS-TPDPT7/500/D | WS-TPDPT7/2500/D | WS-TPDPT7/10000/D |
| IP65 housing | WS-TPDPT/100/IP65 | WS-TPDPT7/500/IP65 | WS-TPDPT/2500/IP65 | WS-TPDPT/10000/IP65 |



Range setting DIL switches

| TPDPT7/100 | | | |
|------------|-----|-----|-----|
| Range | SW1 | SW2 | SW3 |
| 0-25Pa | Off | Off | Off |
| 0-50Pa | On | Off | Off |
| 0-75Pa | Off | On | Off |
| 0-100Pa | Off | Off | On |

for ± ranges SW4 On

| TPDPT7/500 | | | |
|------------|-----|-----|-----|
| Range | SW1 | SW2 | SW3 |
| 0-100Pa | Off | Off | Off |
| 0-200Pa | On | Off | Off |
| 0-300Pa | Off | On | Off |
| 0-400Pa | Off | Off | On |
| 0-500Pa | Off | On | On |

for ± ranges SW4 On

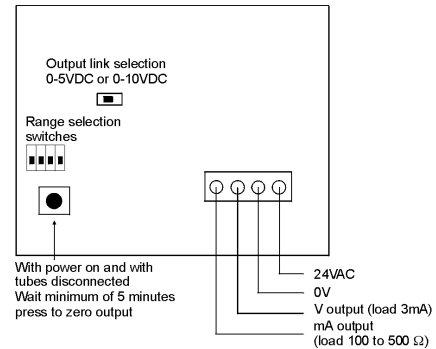
| TPDPT7/2500 | | | |
|-------------|-----|-----|-----|
| Range | SW1 | SW2 | SW3 |
| 0-50Pa | Off | Off | Off |
| 0-125Pa | On | Off | Off |
| 0-250Pa | Off | On | Off |
| 0-500Pa | On | On | Off |
| 0-1000Pa | Off | Off | On |
| 0-1500Pa | On | Off | On |
| 0-2000Pa | Off | On | On |
| 0-2500Pa | On | On | On |

for ± ranges SW4 On

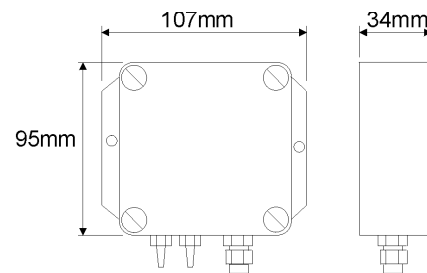
| TPDPT7/10000 | | | |
|--------------|-----|-----|-----|
| Range | SW1 | SW2 | SW3 |
| 0-5000Pa | Off | Off | Off |
| 0-6000Pa | On | Off | Off |
| 0-7000Pa | Off | On | Off |
| 0-8000Pa | On | On | Off |
| 0-9000Pa | On | Off | On |
| 0-10000Pa | Off | Off | On |

No ± selection on these ranges

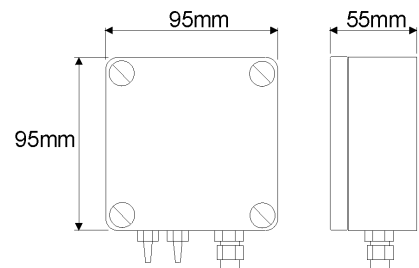
Connections & Controls



Dimensions



Standard housing



IP65 enclosure