or 50 years, Fairchild Industrial Products Company has maintained an excellent reputation as a manufacturer of precision, high quality, pneumatic, and electro-pneumatic controls. Our line of industrial control products offers one of the largest varieties of precision pneumatic and electro-pneumatic control devices available for process, machine tool, robotic and OEM applications.

Our developing technology in main product groups - pneumatic pressure regulators, volume boosters, relays and electro-pneumatic transducers and transmitters has been the basis for our growth and leadership.

Fairchild is ISO 9001 certified and we are authorized to display the CE mark on our electro-pneumatic products. Many of our electro-pneumatic products are also approved for intrinsically safe, explosion-proof, and NEMA 4X (IP65) ratings by FM, CSA, ATEX and SAA.

Our worldwide network of stocking distributors can assist you with application support at the local level. At the factory, our applications engineering staff can solve your problems with new or existing applications. We can work with your plant and design engineers to develop a custom product to suit a specific application.

At Fairchild Industrial Products Company, we have built our reputation on providing quality products, excellent customer service, quick delivery, and immediate response to customer emergencies.

VISIT www.normanequipment.com Distributed by Norman Equipment 800-250-8891

**Fairchild Products By Industry**

**Oil & Gas**

Brake Control, Compressor Control, Compressor Starting System, Choke Control, Damper Control, Drilling, Pneumatic Mud Monitoring System, Fuel Supply Louver Control, Process Control and Valve Control.

**Chemical**

Constant Voltage Control, Controlled Air Pressure, Corrosive Material, Heat Exchanger Control, Nitrogen Tank Blanketing, Pneumatic Pressure Switch, Pressure Valve Control, Process Control, and Waste Water Flow Control.

**Pharmaceutical**

Constant Voltage Control, Corrosive Material, Distillation Process, Mixing Speed Control, Multi-pen Recorder Ink, Nitrogen Tank Blanketing, Pneumatic Pump Control, Tank Blanketing, Tank Level Gage, Valve Control, and Ventilation (Damper).
### Industrial Automation


### Medical/Biotech


### Food & Beverage


### Power Generation

Absorption Distillation, Air Purification/Treatment Analyzer Sampling Systems, Damper Control, Condition Monitoring, Emission Control, Feed Pump Control, Pneumatic Pump Control, Purification Process Control, Steam Process Control, Tank Level Gage and Valve Control.

### Pulp & Paper


### Automotive


### Textile Manufacturing

When the job requires heavy hauling, you better be able to run efficiently, turn easily and stop quickly. Fairchild’s P/I transmitters, such as the TD8500, enable customers to do all three by measuring the payload, providing continuous data to the steering mechanism and controlling the hydraulic braking system.

This TD8500 series is a cost effective OEM solution that meets the market need in a durable and rugged package.

Call or email Fairchild to find a pressure solution for your application requirements.

When Oil or Gas is extracted from the earth, the application calls for a high pressure, rugged P/I transmitter. Fairchild’s TA8800 series is designed for pressures up to 100,000 psi. Its hermetically sealed enclosure provides dependable operation in even the harshest drilling environments.

The TA8800 series offers a compact size transmitter with a variety of output ranges and options, making it ideal for any application.

When your application depends on accurate pressure sensing, you can depend on Fairchild. Call or email us for more details.

Fairchild has a long history of supplying pressure control products for automotive testing and factory automation. The new Fairchild TD8600 series is the latest product designed to meet the testing and development needs of this industry. Whether you are measuring air, fuel or oil pressure, exhaust, vacuum or even fuel economy, Fairchild has the products for your pressure measurement needs. In addition to basic models, our standard options allow you to custom design a P/I transmitter to best suit your application.

Call or email us to put our experience to the test for your future development.
### APPROVALS


### APPLICATIONS

<table>
<thead>
<tr>
<th>TD8500</th>
<th>TD8600</th>
<th>TA8700</th>
<th>TA8800</th>
<th>TA8900</th>
</tr>
</thead>
<tbody>
<tr>
<td>General industrial <strong>Hydraulics</strong>, <strong>Pneumatics</strong>, <strong>Compressors</strong>, <strong>Off-road vehicle</strong>, <strong>Water treatment</strong></td>
<td><strong>Fuel tank level</strong>, <strong>Chemical tank level</strong>, <strong>Chemical processing</strong>, <strong>Coating / Painting / Spraying</strong></td>
<td><strong>Rig safety systems</strong>, <strong>Well head</strong>, <strong>Oil pumping</strong>, <strong>Natural gas pipelines</strong>, <strong>Hazardous locations</strong></td>
<td><strong>Pipe fitting and valves</strong>, <strong>Gas compressors</strong>, <strong>Hazardous locations</strong></td>
<td></td>
</tr>
</tbody>
</table>

### FEATURES

**Low cost**, **Small size**, **Environmentally sealed**, **High cycle life (1,000,000 cycles)**, **Shock resistant**, **Stainless steel construction**.

<table>
<thead>
<tr>
<th>DIN connector standard</th>
<th>All welded construction</th>
<th>Hermetically sealed enclosure</th>
<th>Magnetically coupled external controls</th>
</tr>
</thead>
</table>

### BENEFITS

**High cycle life (1,000,000 cycles)**, **Shock resistant**, **Stainless steel construction**.

### STANDARDS

<table>
<thead>
<tr>
<th><strong>TD8500</strong></th>
<th><strong>TD8600</strong></th>
<th><strong>TA8700</strong></th>
<th><strong>TA8800</strong></th>
<th><strong>TA8900</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>STANDARD PSI RANGES</strong></td>
<td><strong>STANDARD BAR RANGES</strong></td>
<td><strong>FULL SCALE OUTPUT (FSO)</strong></td>
<td><strong>STANDARD BAR RANGES</strong></td>
<td><strong>STANDARD PSI RANGES</strong></td>
</tr>
<tr>
<td>0-100 thru 0-15,000 psig</td>
<td>0-10 thru 0-1,400 barg</td>
<td>0-5 (0-10) Vdc 4-20 mA</td>
<td>Available in: MPa, kgf/cm², et al</td>
<td></td>
</tr>
<tr>
<td>0-5 thru 0-15,000 psig</td>
<td>0-0.35 thru 0-1,000 barg</td>
<td>0-5 (0-10) Vdc 4-20 mA</td>
<td>0-5 (0-10) Vdc 4-20 mA</td>
<td></td>
</tr>
<tr>
<td>0-3 thru 0-250 psig/s 0-15 psig</td>
<td>0-0.2 thru 0-30 bar 0-1 thru 0-30 bara</td>
<td>0-5 (0-10) Vdc 4-20 mA</td>
<td>0-5 (0-10) Vdc 4-20 mA</td>
<td></td>
</tr>
<tr>
<td>0-100 thru 0-1,000,000 psig/a</td>
<td>0-7 thru 0-7,000 bars/a</td>
<td>4-20 mA</td>
<td>4-20 mA</td>
<td></td>
</tr>
</tbody>
</table>

### FULL SCALE OUTPUT (FSO)

<table>
<thead>
<tr>
<th><strong>STANDARD PSI RANGES</strong></th>
<th><strong>STANDARD BAR RANGES</strong></th>
<th><strong>FULL SCALE OUTPUT (FSO)</strong></th>
<th><strong>STANDARD PSI RANGES</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>0-5 thru 0-15,000 psig</td>
<td>0-0.35 thru 0-1,000 barg</td>
<td>0-5 (0-10) Vdc 4-20 mA</td>
<td>0-5 thru 0-15,000 psig</td>
</tr>
<tr>
<td>0-15 thru 0-100,000 psig/a</td>
<td>0-0.7 thru 0-7,000 bars/a</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### WEIGHT

<table>
<thead>
<tr>
<th><strong>TD8500</strong></th>
<th><strong>TD8600</strong></th>
<th><strong>TA8700</strong></th>
<th><strong>TA8800</strong></th>
<th><strong>TA8900</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>10 oz (284 g)</td>
<td>10 oz (284 g)</td>
<td>10 oz (284 g)</td>
<td>24 oz (680 g)</td>
<td>24 oz (680 g)</td>
</tr>
</tbody>
</table>

---

Stocked & Distributed by NORMAN EQUIPMENT COMPANY 800-250-8891
Model TD8500 P/I Pressure Transmitter

A High Pressure OEM Solution

LONG LIFE OPERATION
Designed to exceed 100,000 cycles, the TD8500 is shock and vibration resistant for rough duty.

OUTPUTS THAT YOU NEED
Available with either 0 to 5 VDC (10VDC option) or 4 to 20 mA output.

SMALL SIZE, BIG PERFORMANCE
The small size makes it ideal for tight spots. All-welded stainless construction for demanding industrial and heavy-duty applications. The TD8500 is environmentally sealed and factory preset for no field adjustment, to provide a sealed transmitter impervious to contamination from the environment.

ENHANCED DURABILITY
The diaphragm, machined from corrosion resistant billet steel, is free from oil fills, isolation diaphragms or silicon sensing chips, enhancing its durability.

Features:
- Compact Size
- Long service life (100K cycles)
- Shock and Vibration resistant
- All-Welded Design
- Environmentally sealed

Typical Applications:
- Off Road Vehicles
- Hydraulic Systems
- Pumps and Compressors
- Heavy Machinery
- General Industrial

Shown with Standard 4 pin DIN Connector

Stocked & Distributed by NORMAN EQUIPMENT COMPANY 800-250-8891
SPECIFICATIONS

**Performance**
- Full Scale Pressure Range (FSPR): See Ordering Information
- Non-linearity (Best Fit Straight Line): ≤ ± 0.5% FSO
- Hysteresis and repeatability: ≤ ± 0.3% FSO
- Full Scale Output (FSO)
  - TD8501: 16 mA ± 3% @ 70 °F
  - TD8502: 16 mA ± 3% @ 70 °F
- Long Term Stability: ≤ ± 0.5% FSO per 6 months
- Maximum Operating Temperature Range: 200 °F Process
- Compensated Temperature Range: 70 °F to 170 °F
- Thermal Effect on Zero: ≤ ± 3% FSO per 100 °F typical
- Thermal Effect on Span: ≤ ± 2% FSO per 100 °F typical
- Extreme Operating Temperature Range: -60 °F to +250 °F

**Electrical**
- Supply Voltage: 10 to 30 VDC
- Power Supply Regulation
  - TD8501: ≤ ± 0.05% FSO per volt
  - TD8502: ≤ ± 0.08% FSO per volt
- Output Signal
  - TD8501: 0-5 VDC (0-10VDC optional)
  - TD8502: 4-20 mA
- Circuit Protection: Reverse polarity protected, Varistor protected
- Insulation Resistance: ≥ 1000 MegOhms at 50 VDC
- Response Time: ≤ 5 mSec
- Electrical Connection: DIN plug 43650

**Mechanical**
- Pressure Connection: 1/4" NPT Female
- Proof Pressure: 1.5X FSPR or 25K psi, whichever is less
- Burst Pressure: 5X FSPR or 30K psi, whichever is less
- Pressure Cavity Volume: 0.07 cubic inches
- Mounting: May be supported by process piping
- Wetted Parts: 15-5PH Stainless Steel
- Housing: 304 Stainless Steel
- Weight: 10 oz.

**Accessories**
- Adapters Available for:
  - G1/2" male thread
  - G1/4" male thread
  - 1/4" NPT male thread
  - Mating connector sold separately

**ORDERING INFORMATION**

<table>
<thead>
<tr>
<th>Output</th>
<th>0-5 VDC</th>
<th>4-20 mA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Input Range * (gage format standard)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0-10 BAR</td>
<td>22</td>
<td></td>
</tr>
<tr>
<td>0-25 BAR</td>
<td>23</td>
<td></td>
</tr>
<tr>
<td>0-40 BAR</td>
<td>24</td>
<td></td>
</tr>
<tr>
<td>0-75 BAR</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td>0-100 BAR</td>
<td>26</td>
<td></td>
</tr>
<tr>
<td>0-150 BAR</td>
<td>27</td>
<td></td>
</tr>
<tr>
<td>0-350 BAR</td>
<td>28</td>
<td></td>
</tr>
<tr>
<td>0-1000 BAR</td>
<td>29</td>
<td></td>
</tr>
</tbody>
</table>

*SPECIAL RANGE*

<table>
<thead>
<tr>
<th>Pressure Format</th>
</tr>
</thead>
<tbody>
<tr>
<td>Absolute</td>
</tr>
<tr>
<td>Gage</td>
</tr>
</tbody>
</table>

Performance Options
- Mating Electrical Connector: I

*Custom calibrated pressure ranges available

**Components**

- Mating connector: Case Ground

- Pin 1: +Power (TD8501), +Power / +Signal (TD8502)
- Pin 2: +Signal (TD8501), -Power / -Signal (TD8502)
- Pin 3: Common (TD8501), No connection (TD8502)
- Ground Spade: Case Ground

**Connections**

- UNIT INFORMATION ON HOUSING

**Dimensions**

- Ø1/2
- 2.4" x 7/16

Stocked & Distributed by NORMAN EQUIPMENT COMPANY 800-250-8891
A Low Cost, High Performance Solution

DESIGNED FOR HARSH CONDITIONS
Fairchild’s Model TD8600 uses bonded foil sensing technology to offer a rugged but inexpensive solution that is small and fits into hard-to-access areas.

INSPIRED BY DIVERSE NEEDS
Hydraulic systems in test and control applications generate severe “spikes” that overpressure many sensors. To combat spikes, Fairchild employs a bonded foil strain gage on a hardened stainless steel diaphragm. This higher mass diaphragm withstands short-term overpressure conditions inherent in hydraulic applications. For measuring low pressures (5 to 200 PSI), Fairchild uses a corrosion resistant ceramic diaphragm sensor.

EASILY ADAPTABLE
The TD8600 series utilizes several features to fit the widest possible applications. The standard DIN 43650 connector is an industrial standard with excellent weather resistance.

The TD8600 can be fitted with a 6-pin bayonet or a direct coupled cable. The TD8600 has no oil fill or isolation diaphragms and has a 1/4" NPT or SAE female pressure port. A standard zero adjustment control makes setup simple.

Features:
- Low Cost
- Adjustable zero
- Resistant to pressure spikes
- Cost effective DIN connector
- Welded stainless steel construction

Typical Applications:
- Hydraulic systems
- Injection molding
- Die casting
- Off road vehicles
- Compressors and pumps
- High volume usage

Stocked & Distributed by NORMAN EQUIPMENT COMPANY 800-250-8891
SPECIFICATIONS

PERFORMANCE

Full Scale Pressure Range .......... 0 - 20K PSIG (See Ordering Information)
Non-Linearity (Best Fit Straight Line) .......... ± 0.5% FSO
Hysteresis & Repeatability .......... < 0.25% FSO
Full Scale Output (FSO)
Model TD8601 .......... 4 VDC ± 2% at 70° F
Model TD8602 .......... 16 mA ± 2% at 70° F
Resolution .......... Infinite
Long Term Stability .......... ± 0.5% FSO per 6 months
Compensated Temperature Range .......... 70° F to 170° F
Maximum Operating Temperature .......... 200° F
Minimum Operating Temperature .......... -20° F
Non-Operating Temperature Range .......... -60° F to +250° F
Thermal Effect on Span .......... ± 3% FSO per 100° F Typical
Thermal Effect on Zero .......... ± 3% FSO per 100° F Typical

ELECTRICAL

Supply Voltage .......... 9 to 30 VDC
Power Supply Regulation
Model TD8601 .......... ± 0.05% FSO per Volt
Model TD8602 .......... ± 0.08% FSO per Volt
Current consumption .......... ≤ 1.1mA
Output Signal
Model TD8601 .......... 0.25 - 4.25 VDC
Model TD8601 w/ DM option .......... 0 to 10 VDC (requires 15 VDC supply minimum)
Model TD8602 .......... 4 to 20 mA
Load Resistance (Model TD8602 only) .......... 1500 Ohms maximum at 40 VDC
Circuit Protection .......... Reverse polarity protected. Varistor protected
                              across input leads for surges above 40 VDC and
t                              currents to 8 A peak with a pulse width of 10 x
t                              1000 μSec
Insulation Resistance .......... < 5MΩ
Response Time .......... ≤ 5 mSec for 90% change in output
Electrical Connections .......... DIN plug 43650

MECHANICAL

Pressure Connections .......... 1/4" NPT Female
Proof Pressure .......... 1.5 times FSPR or 25K PSI, whichever is less
 Burst Pressure .......... 5 times FSPR or 30K PSI, whichever is less
Pressure Cavity Volume .......... 0.07 cubic inches
Mounting .......... May be supported by process piping
Materials of Construction
Wetted Parts
0-15 thru 200 PSI .......... 316 stainless steel, Buna-N O-Ring,
                          Alumina ceramic
0-300 PSI and above .......... 15-5PH stainless steel
Housing .......... 304 stainless steel
Weight .......... 10 oz
Identification .......... Label attached onto body

ACCESSORIES

Digital indicator
Protective cover
Adapters Available for:
G1/2" male thread
G1/4" male thread
1/4" NPT male thread

ORDERING INFORMATION

T D 8 6 0

Output
0-5 VDC .......... 1
4-20 mA .......... 2

Input Range *
(gage format standard)
0-5 psi .......... 11
0-30 psi .......... 12
0-100 psi .......... 13
0-300 psi .......... 14
0-750 psi .......... 15
0-1500 psi .......... 16
0-5000 psi .......... 17
0-10 kpsi .......... 18
0-20 kpsi .......... 19

[0-1 BAR] .......... 21
[0-10 BAR] .......... 22
[0-50 BAR] .......... 23
[0-100 BAR] .......... 24
[0-250 BAR] .......... 25
[0-500 BAR] .......... 26
[0-750 BAR] .......... 27
[0-1000 BAR] .......... 28
[0-1300 BAR] .......... 29

SPECIAL RANGE*
(Please specify desired range)

Pressure Format
Absolute .......... A
Gage .......... G
Vacuum (≤ 15 Psi) .......... V

Performance Options
Mating Electrical Connector .......... I
6 Pin Bayonet Connector .......... BY
Modified Output (0-10 VDC, TD8601 only) .......... DM
Modified Output (< 5 VDC, TD8601 only) .......... DX
Special Calibration .......... EA
Viton O-Ring .......... GA
Ethylene Propylene O-Ring .......... GD
CE Approval .......... NJ

*Custom calibrated pressure ranges available

Note: Vented gage units should only be installed in environments that allow the breather to remain dry and free from contamination. Application of some available options may affect standard performance.

FOR REFERENCE PURPOSES ONLY
ALL DIMENSIONS ARE NOMINAL, IN INCHES AND FOR REFERENCE PURPOSES ONLY.

Stocked & Distributed by NORMAN EQUIPMENT COMPANY 800-250-8891
Model TA8700 P/I Pressure Transmitter

Rugged Industrial Pressure Transmitter

HIGH ACCURACY
Combined accuracy is 0.25% or better with an optional improved accuracy of better than 0.1%. Standard ranges are from 3 PSI to 250 PSI with outputs of mV/V, 4-20 mA and 0-5 VDC. Also available is an optional zero and span adjustment.

FOR SPECIAL OR CORROSIVE ENVIRONMENTS
The TA8700 Series features all welded stainless steel construction with 316L stainless steel wetted parts. In addition, Special cleaning for Oxygen service is available on the TA8700 series.

A VARIETY OF OPTIONS
The TA8700 Series has offers a variety of standard options and our ability to modify our products provides flexibility to meet your specific application needs. Options include alternate pressure ports, electrical connectors and various electrical outputs.

Features:
- All welded construction
- 316L SS wetted parts
- Ranges down to 20" WC full scale
- High accuracy

Typical Applications:
- Fuel tank level
- Chemical tank level
- Pumps and Compressors
- Chemical processing

Wiring Connections

<table>
<thead>
<tr>
<th>Color</th>
<th>Connection</th>
<th>TA8701</th>
<th>TA8702</th>
<th>TA8703</th>
</tr>
</thead>
<tbody>
<tr>
<td>Red</td>
<td>+Power</td>
<td>+Power</td>
<td>+Power</td>
<td></td>
</tr>
<tr>
<td>Black</td>
<td>+Signal</td>
<td>+Power/Signal</td>
<td>-Power/Signal</td>
<td>+Signal</td>
</tr>
<tr>
<td>Green</td>
<td>Case Ground</td>
<td>Case Ground</td>
<td>Case Ground</td>
<td>-Power</td>
</tr>
<tr>
<td>White</td>
<td>-Power/Signal</td>
<td>NA</td>
<td>NA</td>
<td>-Signal</td>
</tr>
<tr>
<td>Brown</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>Case Ground</td>
</tr>
</tbody>
</table>
**SPECIFICATIONS**

**Performance**
- Full Scale Pressure Range: 0-3 thru 0-250 PSIG/PSI/S
- 0-15 thru 0-250 PSIA, 0-15 PSIV
- Accuracy (combined linearity, hysteresis and repeatability): <\pm 0.25%
- Hysteresis & Repeatability: <\pm 0.1% FSO

**Full Scale Output (FSO)**
- TA8701: 5 vdc
- TA8702: 16 mA
- TA8703: 5, 10mV/V

**Zero Balance**
- <\pm 1% FSO

**Long Term Stability**
- 0.25% FSO per 6 months

**Response Time**
- <1 mSec for 10% to 90% FSO

**Temperature Effect on Zero**
- <1.0% per 100°F

**Temperature Effect on Span**
- 1.0% per 100°F

**Compensated Temperature Range**
- 32°F to +180°F

**Operating Temperature Limits**
- -40°F to +185°F

**Storage Temperature Limits**
- -40°F to +250°F

**Electrical**
- **Supply/Voltage**
  - TA8701/TA8702: 9.0 to 30 VDC
  - TA8703: 15 VDC max

- **Power Supply Regulation Effect**
  - ±0.0001% FSO per Volt

- **Output Signal**
  - TA8701: 0 to 5 VDC
  - TA8702: 4 to 20 mA
  - TA8703: 3 to 5 PSI, 5 mV/V

- **Load Resistance: TA8702**
  - 12 VDC min with 150 ohms
  - 30 VDC max with 1050 ohms

- **Circuit Protection**
  - Output may be short-circuited indefinitely.
  - Input polarity may be reversed.
  - Over-voltage protected to 1000 volts, < 1 mSec duration.

**Electrical Connection**
- 1/2" NPT (M), 18 AWG wire (6 ft Standard)

**MECHANICAL**
- **Pressure Connection**
  - 1/4"-18 NPT female

- **Proof Pressure**
  - 3 times rated range or 10K PSI whichever is less

- **Burst Pressure**
  - 5 times rated range or 10K PSI whichever is less

- **Diameter**
  - 1.5 inches

- **Weight**
  - 10 oz.

**MATERIALS OF CONSTRUCTION**
- **Enclosure Housing**
  - 304 and 316 stainless steel

- **Pressure Connection**
  - 316 stainless steel

- **Sensor**
  - 316 stainless steel

- **Mounting**
  - May be supported by pressure connection

- **Identification**
  - Laser etched onto body

**ACCESSORIES**
- (Contact Factory)
- **Mounting Bracket**
- **Conduit Connection Box**
- **Loop Powered Digital Indicator**
- **Protective Cover**

---

**ORDERING INFORMATION**

<table>
<thead>
<tr>
<th>Output</th>
<th>0-5 VDC</th>
<th>4-20 mA</th>
<th>5, 10 mV/V</th>
</tr>
</thead>
<tbody>
<tr>
<td>Input Range *</td>
<td>0-3 psi</td>
<td>0-30 psi</td>
<td>0-100 psi</td>
</tr>
<tr>
<td>(gage/sealed format standard)</td>
<td>21</td>
<td>12</td>
<td>13</td>
</tr>
<tr>
<td><strong>SPECIAL RANGE</strong> *</td>
<td>0-0.5 BAR</td>
<td>0-1 BAR</td>
<td>0-10 BAR</td>
</tr>
<tr>
<td>(Please specify desired Range)</td>
<td>23</td>
<td>24</td>
<td>25</td>
</tr>
</tbody>
</table>

**Pressure Format**
- Absolute
- Gage
- Sealed Gage
- Vacuum

**Performance Options**
- Bleed Port
- Improved Accuracy: ±0.1% FSO
- Modified Output (0 to 10 VDC, TA8701 Only)
- Cleaning for Oxygen Service
- Modified Output (0 to 4.5 VDC, TA8701 Only)
- Special Calibration Run
- Customer specified identification
- CE Design and label (consult factory)
- 1/8 DIN digital indicator (consult factory)
- External Zero and Span Adjustment
- Alternate Pressure Ports (consult factory)
- Direct Coupled Cable

**BREATHER ELEMENT FOR USE ON PSIG RANGES**
- 5/8 [3.8] HEX FLATS
- 1.25 [3.2] HEX FLATS

**CONDUIT CONNECTION:**
- 1/2-14 NPT FOR CUSTOMER SUPPLIED JUNCTION BOX OR CONDUIT

**ELECTRICAL CONNECTION:**
- #18 GAGE, VINYL WIRE LENGTH 6' STD

---

*Custom calibrated pressure ranges available

---

Note: For units equipped with a breather vent, consideration should be given to ensure that the breather element is kept clear and exposure to contamination is minimized. Application of some available options may affect standard performance.
RUGGED CONSTRUCTION
All welded construction and stainless steel surfaces makes the TA8800 ideal for corrosive environments. The transmitters O-Ring free design ensures reliability with corrosive media. Fairchild’s TA8800 FM approved labelled units are designed to meet NEC/API Dual Seal requirements. The Model TA8800 is hermetically sealed, to eliminate contamination from liquid or gas intrusion. For the most corrosive environments, Hastelloy, Inconel, and 316 SS wetted parts are available.

OVERPRESSURE PROTECTION
Model TA8800 features bonded foil strain gage sensors. The overpressure protection in this technology helps to eliminate damage to the sensors when they are exposed to transient pressure spikes. Fairchild also offers isolation diaphragms and oil fills for specific application requirements.

PRESSURE MEASUREMENT SOLUTION
You’ll find complete specifications on the facing page to help you select the right TA8800 transmitter for your application. Fairchild offers a full line of pressure measurement and control products for the process control industry including a “low power” version of the TA8800 which draws less than 1 mA of current.

AGENCY APPROVALS
AVAILABLE SPRING 2008

<table>
<thead>
<tr>
<th>CERTIFICATIONS</th>
<th>Consult factory for available Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>FM</td>
<td>Intrinsic Safety (TA8802 only): Class I, II, III, Division 1, Groups A-G; Class I, Zone 0; AEx ia IIC, T4 at Ta=80°C, T5 at Ta=40°C Entity, Type 4X hazardous locations Explosive Proof: Class I, II, III, Division 1, Groups A-G, AEx d IIC, T5 at Ta=88°C NEMA 4X hazardous locations Nonincombustible (TA8802 only): Class I, II, III Division 2, Groups A,B,C,D,F,G, Class I, Zone 2, Group IIC, T4 at Ta=80°C T5 at Ta=40°C, Type 4X hazardous locations Intrinsic Safety (TA8802 only): Ex ia IIC; Class I, Zone 0; Class I, II, III, Groups A-G; Type 4, T4 at Ta=80°C, T5 at Ta=40°C</td>
</tr>
<tr>
<td>ATEX</td>
<td>Explosion Proof: Class I, II, III, Groups A-G Hazardous Locations Intrinsic Safety (TA8802): II 1G Ex ia IIC, -20°C; Ta &lt;40°C Flammable, Intrinsic Safety (TA8802): II 1G Ex ia IIC, -20°C; Ta &lt;40°C Flammable</td>
</tr>
<tr>
<td>CE</td>
<td>Intrinsic Safety (TA8802): II 1G Ex ia IIC, -20°C; Ta &lt;40°C Flammable, Intrinsic Safety (TA8802): II 1G Ex ia IIC, -20°C; Ta &lt;40°C Flammable</td>
</tr>
</tbody>
</table>

Features:
- All stainless steel construction
- Small size - 1.5” diameter
- Exotic wetted materials available
- Watertight/submersible design
- 4 – 20 mA, 0 – 5 V, mV/volt output
- FM, ATEX, CSA, and CE approvals available

Typical Applications:
- Off shore rigs
- Gas compressors
- Paint spraying
- Water treatment
- Natural gas pipeline
- Polyethylene manufacture
- Rolling mills
- Stamping presses
### PERFORMANCE

<table>
<thead>
<tr>
<th>Full Scale Pressure Range (FSPR)</th>
<th>0-100 thru 0-100K PSI, PSIA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Linearity (Best Fit Straight Line)</td>
<td>±0.5%</td>
</tr>
<tr>
<td>0-100 PSI</td>
<td>±0.2%</td>
</tr>
<tr>
<td>15K-100K PSI</td>
<td>±1.25%</td>
</tr>
<tr>
<td>Hysteresis</td>
<td>±0.15% PSI</td>
</tr>
<tr>
<td>Repeatability</td>
<td>±0.15% PSI</td>
</tr>
</tbody>
</table>

### ELECTRICAL

<table>
<thead>
<tr>
<th>Burst Pressure</th>
<th>1.2 times FSPR or 100K PSI, whichever is less</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-Operating Temperature</td>
<td>-65°F to +250°F</td>
</tr>
</tbody>
</table>

### ELECTRICAL CONNECTION:

- **TA8801**: #18 Direct Coupled Cable
- **TA8802**: 1/2" NPT (M), 18 AWG wire, 72"
- **TA8803**: Ratiometric

### MECHANICAL

- **Pressure Connection**
  - 0-100 thru 0-15K PSI
  - 0-20K thru 0-100K PSI
  - 0-600 thru 0-100K PSI
- **Proof Pressure**
  - 0-100 thru 0-15K PSI
  - 0-20K thru 0-100K PSI
- **Burst Pressure**
  - 0-100 thru 0-15K PSI
  - 0-20K thru 0-100K PSI
- **Shock Limitation**
  - 100 Gs

### MATERIALS OF CONSTRUCTION

- **Enclosure**
  - 0-100 thru 0-15K PSI: 15-5 PH and 316 stainless steel
  - 0-20K thru 0-100K PSI: 316 SST and PH 13-8 Mo SST
- **Wetted Parts**
  - 0-100 thru 0-15K PSI: 15-5 PH stainless steel
  - 0-20K thru 0-100K PSI: PH 13-8 Mo SST

### ORDERING INFORMATION

<table>
<thead>
<tr>
<th>Output</th>
<th>0-5 VDC</th>
<th>2mV/V</th>
</tr>
</thead>
<tbody>
<tr>
<td>Input Range</td>
<td>0-100 psi</td>
<td>0-250 psi</td>
</tr>
</tbody>
</table>

### SPECIAL RANGE

<table>
<thead>
<tr>
<th>Pressure Format</th>
<th>0-7 BAR</th>
<th>0-20 BAR</th>
<th>0-50 BAR</th>
<th>0-100 BAR</th>
<th>0-250 BAR</th>
<th>0-500 BAR</th>
<th>0-1000 BAR</th>
<th>0-3500 BAR</th>
<th>0-6600 BAR</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>21</td>
<td>22</td>
<td>23</td>
<td>24</td>
<td>25</td>
<td>26</td>
<td>27</td>
<td>28</td>
<td>29</td>
</tr>
</tbody>
</table>

*Custom calibrated pressure ranges available*
Model TA8900 P/I Pressure Transmitter

Adjustable High Pressure Transmitter

COMPACT AND COMPLETELY SEALED
The TA8900 is designed to withstand harsh atmospheres and submersion to 100 feet. All welded construction combined with 316 stainless steel makes the TA8900 airtight, watertight, and ideal for corrosive environments. An O-Ring free design ensures reliability.

APPROVAL OPTIONS
Model TA8900 qualifies for FM, CSA, and ATEX ratings. External zero, span, and calibration controls are hermetically sealed, yet easily adjusted by means of Fairchild’s unique magnetically coupled adjustments. The signal conditioner in the TA8900 allows for 5:1 ranging of the transmitter’s standard pressure range.

IN-FIELD SETUP AND RANGING
A calibration circuit permits ranging and setup without a calibrated pressure source. When the cal switch is activated, an electronic signal is sent through the unit, simulating the level or pressure. To speak to a member of the Fairchild process team, call us at (336) 659-3400 or email to CS@fairchildproducts.com.

Features:
- All stainless steel construction
- Small size - 1.5” diameter
- Exotic wetted materials available
- Watertight/submersible design
- 4 – 20 mA output
- FM, ATEX, CSA, and CE approvals available

Typical Applications:
- Off shore rigs
- Gas compressors
- Paint spraying
- Water treatment
- Natural gas pipeline
- Polyethylene manufacture
- Rolling mills
- Stamping presses

AGENCY APPROVALS
AVAILABLE SPRING 2008

CERTIFICATIONS Consult factory for available Options
FM Intrinsic Safety: Class I, II, III, Division 1, Groups A-G, and AEx ia IIC, T4 at Ta=80°C, T5 at Ta=40°C, Indoor and Outdoor NEMA/Type 4X Hazardous Locations
Intrinsic Safety: Explosion Proof: for use in Class I, Division 1, Groups A-D, Class II, Groups E,F,G, Class III, AEx d IIC, T5 at Ta=88°C, NEMA/Type 4X, Hazardous Locations
Nonincendive: Class I,II,III Div. 2, Groups A-G and Class I, Zone 2. Group IIC, T4 at Ta=80°C, T5 at Ta=40°C

CSA Intrinsic Safety: Class I, Div. 1, A-D Class II, E-G, Class III, Ex ia IIC T4 at Ta=80°C, T5 at Ta=40°C

ATEX Intrinsic Safety: II 1 G
II 2 G
Intrinsic Safety: EEx ia IIC, -20°C T4, Ta ≤ 50°C
Flameproof: EEx d IIC, T5 (-20°C ≤ Ta ≤ 80°C)

EN 61010-101993/A2:1995: Low Voltage Standard
EN 61326: EMC Conformity Standard
PED Directive 97/23/EC
PERFORMANCE
Full Scale Pressure Range (FSPR) 0-100 thru 0-10K PSI/PSI/PSIS
Non-linearity (Best fit straight line) 100-150 PSI typical at 0.2% FSO
300-10K PSI typical at 0.1% FSO
>10K PSI typical at 0.25% FSO
Hysteresis & Repeatability < ±0.05% FSO
Full Scale Output (FSO) 16 mA at 70°F
Resolution Infinite
Long Term Stability ≤0.2% FSO per 6 months
Response time (mechanical & electrical combined) 5mSec to reach 90% of FSO
Temperature effect on zero ≤±0.5% FSO per 100°F
Temperature effect on Span ≤±0.5% FSO per 100°F

TEMPERATURE EFFECT ON ZERO AND SPAN

Combined at 5:1 range down ≤±4.0% FSO per 100°F
Compensated Temperature Range 70°F to +170°F
Maximum operating temperature +190°F
Minimum operating temperature -40°F
Non-operating temperature range -65°F to 250°F

ELECTRICAL
Supply Voltage 12 to 40 VDC
Power Supply Regulation ±0.02% FSO per volt
Output Signal 4-20 mA
Load Impedance 1500 Ohms maximum at 40 VDC
Zero Adjustment
Elevation -100% of FSO
Suppression +50% of FSO
Span Adjustment Rangeable down 5:1 from standard range
Range Calibration Signal 20% of FSPR externally switched
Calibration Signal Accuracy ±1.0% FSO. The exact signal to pressure
correlation is provided with each unit.
Circuit Protection Varistor protected across the input leads for surges
above 40V and currents to 250A peak with a pulse
width of 20 μSec. Reverse polarity protected.
Bridge Resistance 5K Ohms nominal
Insulation Resistance >200 MegOhms to case ground
RFI/EMI Suppression Negligible to 500 MHz at 5 Watts direct contact
Electrical Connection 1/2" NPT Male, 18 AWG, 72*
Red +Signal
Black -Signal
Green Case Ground

MECHANICAL
PRESSURE CONNECTIONS
100 thru 15K PSI 1/4" NPT female
20K thru 50K PSI Autoclave Engineers F230-C
60K thru 100K PSI 1/4" High Pressure Tube
200K thru 1000K PSI Autoclave Engineers F312-C
5/16" High Pressure Tube

PROOF PRESSURE
100 thru 0-15K PSI 1.5 times FSPR or 20K PSI, whichever is less
20K thru 0-100K PSI 1.2 times FSPR

BURST PRESSURE
100 thru 0-3K PSI 25 times FSPR
Up to 5K PSI 4 times FSPR
7.5K thru 10K PSI 2.7 times FSPR
15K PSI 2.3 times FSPR
20K PSI 1.5 times FSPR or 125K PSI, whichever is less
Shock Limitation 100G's
Weight 24oz.

ENCLOSURE MATERIALS
100 thru 15K PSI 15-5 PH and 316 stainless steel
20K thru 100K PSI PH 13-8 Mo SST and 300 Series SST

WETTED MATERIALS
50 thru 15K PSI 15-5 PH stainless steel
20K thru 100K PSI PH 13-8 Mo SST

ENCLOSURE CLASSIFICATION
NEMA/Type 4x

ACCESSORIES
Mounting Bracket
Conduit Connection Box
Loop Peir Digital Indicator

ORDERING INFORMATION

Output
4-20 mA

Input Range *
(sealed gage format standard; contact factory for options)
0-100 psi
0-250 psi
0-500 psi
0-1000 psi
0-5000 psi
0-10000 psi
0-50000 psi
0-100000 psi
0-10 BAR
0-20,000 thru 0-50,000 psi
0-100 thru 0-3K PSI
0-20K thru 50K PSI
20K thru 0-100K PSI
60K thru 100K PSI
200K thru 0-1000K PSI

SPECIAL RANGE*

(Please specify desired range)

Pressure Format
Sealed Gage S
Absolute A

Performance Options
Mini change electrical connector (Consult factory) BB
Micro change electrical connector (Consult factory) BP
Bleed port (10K psi and below) DF
Improved temperature and compensation DG
Special Shunt calibration DK
Cleaning for oxygen service DQ
Special calibration run EA
CSA Explosion - proof label ME
ATEX Flameproof label NG
Customer specified indentification NH
CE label NJ
Secondary containment NT
CSA Intrinsic Safety label NX
FM Explosion Proof label NY
FM Non-intrusive label NZ
FM Intrinsic Safety label TF
Hastelloy, Inconel or 316 SST wetted parts Q(1)
Alternate pressure ports W(1), Y(1)
Direct coupled cable ZU

*Custom calibrated pressure ranges available

TA8902

Red +Signal
Black -Signal
Green Case Ground

NORMAN EQUIPMENT
800-250-8891

NORMAN EQUIPMENT
800-250-8891