

PRESSURE TRANSMITTERS

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Honeywell was a pioneer in smart transmitter technology more than 20 years ago. Now, the SmartLine transmitters are even better: faster, more accurate, with a display that helps you diagnose problems and implement predictive maintenance programs.

Lesman is your authorized representative for Siemens, Honeywell, and WIKA transmitters in the Midwest U.S., so we can provide you with the exact transmitter that fits your application.



| | Prices Start at | See Page |
|--|--------------------|-------------|
| Absolute Pressure | | |
| Siemens SITRANS P300 Sanitary Pressure Transmitters | \$1021.00 | 81 |
| Honeywell STA800 SmartLine Absolute Pressure Smart Transmitters | \$2847.00 | 90 |
| Differential Pressure | | |
| Honeywell STD700 SmartLine Differential Pressure Smart Transmitters | \$1597.00 | 86 |
| Honeywell STD800 SmartLine Differential Pressure Smart Transmitters | \$2287.00 | 88 |
| Siemens SITRANS P DS III Differential Pressure Transmitter | \$1811.00 | 84 |
| Gauge Pressure | | |
| Honeywell STG700 SmartLine Gauge Pressure Smart Transmitters | \$1442.00 | 92 |
| Siemens SITRANS P DS III Gauge Pressure Transmitter | \$1340.00 | 82 |
| UE TX200 Stainless Steel Pressure Transmitter for Harsh Environments | \$400.00 | 81 |
| WIKA A-10 Stainless Steel Pressure Transmitters for OEM Service | \$135.78 | 78 |
| WIKA C-10 Pressure Transmitter for OEM Service | Call | 78 |
| WIKA F-20 Stainless Steel Transmitter with Integral Junction Box | \$665.31 | 80 |
| WIKA IS-20 Intrinsically Safe Gauge Pressure Transmitter | \$576.83 | 79 |
| WIKA S-20 General Service Gauge Pressure Transmitters | \$353.85 | 79 |
| Sanitary Pressure Transmitters | | |
| WIKA S10.3A Gauge Pressure Sanitary Transmitters | \$848.26 | 80 |
| Siemens SITRANS P300 Sanitary Pressure Transmitters | \$1021.00 | 81 |
| Accessories | | |
| Honeywell SCT3000 SmartLine Configuration Toolkit | \$4732.00 | 95 |
| Honeywell MC Toolkit Pocket PC-Based DE/HART® Configurator | \$8099.00 | 95 |
| Meriam MFC5150 HART® Handheld Communicator | \$5300.00 | 96 |
| PACTware Configuration Software | FREE | 94 |
| Siemens Simatic PDM Configuration/Diagnostics Software | \$101.00 | 96 |
| WIKA Loop-Powered Digital Indicator | \$332.17 | 79 |



SIEMENS



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WIKAL



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Need for a submersible transmitter for liquid level? See pages 16 and 17.
Looking for Honeywell's smart multivariable transmitter for flow? See page 63.

Looking for wireless transmitters? See page 123!

Low-Cost All-Stainless Pressure Transmitters

Features

- Ranges from 0-15 to 0-10000 PSIG, 0-15 to 0-300 PSIA
- $\leq \pm 0.5\%$ span accuracy
- 4-20 mA or 0-10 V output
- 316L stainless body, silicone oil internal fill (pressures to 0-100 PSIG, 0-300 PSIA)
- 10-30 VDC power supply
- Pressure connections: 1/4" NPT (standard), 1/2" NPT, SAE #4
- Operating range: 32° to 176° F
- UL, CSA, and GOST approved, ROHS and CE conformity



Model Selection Guide

| Range | 4-20 mA 2-Wire Model | Price | 0-10V 3-Wire Model | Price |
|---|----------------------|----------|--------------------|----------|
| A-10 Pressure Transmitter: 1/4" NPTM Process Connection | | | | |
| 0-15 PSIA | 50426354 | \$168.37 | 50426737 | \$168.37 |
| 0-100 PSIA | 50426389 | 168.37 | 50426761 | 168.37 |
| 0-15 PSI | 50426397 | 135.78 | 50426770 | 135.78 |
| 0-25 PSI | 50426401 | 135.78 | 50426788 | 135.78 |
| 0-50 PSI | 50426427 | 135.78 | 50426800 | 135.78 |
| 0-100 PSI | 50372475 | 135.78 | 50426818 | 135.78 |
| 0-200 PSI | 50398083 | 135.78 | 50426834 | 135.78 |
| 0-300 PSI | 50426460 | 135.78 | 50426842 | 135.78 |
| 0-500 PSI | 50426478 | 135.78 | 50426851 | 135.78 |
| 0-1000 PSI | 50426486 | 135.78 | 50426869 | 135.78 |
| 0-1500 PSI | 50426494 | 135.78 | 50426877 | 135.78 |
| 0-2000 PSI | 50426508 | 135.78 | 50426885 | 135.78 |
| 0-3000 PSI | 50426516 | 135.78 | 50426893 | 135.78 |
| 0-5000 PSI | 50372483 | 135.78 | 50426907 | 135.78 |
| 0-10000 PSI | 50426532 | 135.78 | 50426915 | 135.78 |

Need a different connector? Large quantity requirement? Call for pricing and availability.

Pressure Transmitters for OEM Applications

Features

- $\pm 0.5\%$ accuracy
- Two-wire 4-20 mA output standard
- CE Mark option available

These OEM-application pressure transmitters feature a highly stable, temperature compensated, conditioned output signal. With a stainless steel case and compact design, they provide a high-performance sensor package with excellent vibration resistance and long service life.



Specifications

Accuracy: $\pm 0.5\%$ full span; **Linearity:** $\leq 0.5\%$; **Hysteresis:** $\leq 0.1\%$ span; **Repeatability:** $\leq 0.05\%$ span; **One-Year Stability:** $\leq 0.2\%$ span

Operating Temperature: 14° to 176° F (ambient); -22° to 212° F (media)

Power Supply: 12-30 VDC

Output: 2-wire 4-20 mA DC. 3-wire 0-20 mA, 0-5V or 0-10V output optional.

Process Connection Size: 1/4" NPTM standard.

Materials: **Body:** 304 Stainless steel; **Wetted Parts:** 316 or 17-4PH and 316 stainless steel; **Transmitting Liquid:** Silicone oil; **Electrical Connection:** Mini DIN plug (NEMA 5/IP65)

Electrical Protection: Protected against reverse polarity, short circuit output, and suppressor diode for high-voltage protection. 3-wire voltage and current outputs are EMI protected per IEC 801.

Model Selection Guide

| Pressure Range | Maximum Pressure | Burst Pressure | Catalog Number | Price Each |
|--|------------------|----------------|----------------|------------|
| C-10 Transmitter: 316 SS Wetted Parts, Piezo-Resistive Sensing Element and 1/4" NPT Male Pressure Connection, Two-Wire 4-20 mA Output | | | | |
| 0-100" WC | 30 PSI | 30 PSI | 4204883 | \$312.66 |
| 0-5 PSIG | 30 PSI | 30 PSI | — | — |
| 0-15 PSIG | 70 PSI | 70 PSI | 8363442 | 312.66 |
| 0-25 PSIG | 145 PSI | 145 PSI | 8363450 | 312.66 |
| 0-50 PSIG | 245 PSI | 245 PSI | 8363468 | 312.66 |
| 0-60 PSIG | 245 PSI | 245 PSI | 8363476 | 312.66 |
| 0-100 PSIG | 500 PSI | 500 PSI | 8363515 | 312.66 |
| 0-150 PSIG | 500 PSI | 500 PSI | 8363485 | 312.66 |
| 0-200 PSIG | 500 PSI | 500 PSI | 8363493 | 312.66 |
| C-10 Transmitter: 316 and 17-4pH SS Wetted Parts, Thin Film Sensing Element and 1/4" NPT Male Pressure Connection, Two-Wire 4-20 mA Output | | | | |
| 0-300 PSIG | 725 PSI | 3625 PSI | 8363506 | 312.66 |
| 0-500 PSI | 1160 PSI | 5800 PSI | 9697688 | 312.66 |
| 0-600 PSI | 1160 PSI | 5800 PSI | 8357247 | 312.66 |
| 0-1000 PSI | 1740 PSI | 7975 PSI | 8357255 | 312.66 |
| 0-1500 PSI | 2900 PSI | 11,600 PSI | 8357264 | 312.66 |
| 0-2000 PSI | 2900 PSI | 11,600 PSI | 8357272 | 312.66 |
| 0-3000 PSI | 7250 PSI | 17,400 PSI | 8354753 | 312.66 |
| 0-5000 PSI | 11,600 PSI | 24,650 PSI | 8347390 | 312.66 |
| 0-7500 PSI | 17,400 PSI | 34,800 PSI | 8357280 | 392.83 |
| 0-10,000 PSI | 17,400 PSI | 34,800 PSI | 8357298 | 312.66 |
| 0-15,000 PSI | 21,750 PSI | 43,500 PSI | 8359576 | 312.66 |

Loop-Powered Digital Indicator

- 0.4" high LCD, programmable display range -1999 to 9999
- Accuracy: $\pm 0.2\%$ span
- 4-20 mA output can be assigned any value within measuring range
- ABS plastic case, polycarbonate window

- Scaling points are individually adjustable using push-buttons inside the case



Indicator available for WIKA transmitters on 78 and 79



Industrial Pressure Transmitters

High Performance Pressure Transmitters for General Service Applications



Features

- All stainless steel construction
- 1 mSec response time
- Up to 5 times overpressure
- Measuring ranges from 0–10 PSI to 0–20,000 PSI, plus compound ranges
- Non-linearity up to 0.125% BFSL
- Long-term drift $\leq \pm 0.1\%$ span
- DIN, remote cable, and M12 connections
- For use in ambient temperatures to 257° F, media temperatures to 392° F
- Service life rated to 100 million load cycles

**Need flange-mount transmitters for general service?
Call or visit Lesman.com**

Model Selection Guide

| Range | 0.5% Non-Linearity 1/4" NPTM MiniDIN | | 0.25% Non-Linearity 1/2" NPTM DIN | |
|---|---|----------|--------------------------------------|----------|
| | Catalog Number | Price | Catalog Number | Price |
| S-20 General Service Transmitter | | | | |
| 30" HgVac-0 PSI | 52377199 | \$365.45 | 52375595 | \$510.46 |
| 0-10 PSI | 52377563 | 353.85 | 52376460 | 498.85 |
| 0-30 PSI | 52376541 | 284.24 | 52376486 | 429.25 |
| 0-60 PSI | 52376567 | 284.24 | 52375293 | 429.25 |
| 0-100 PSI | 52374319 | 284.24 | 52374301 | 429.25 |
| 0-200 PSI | 52376591 | 284.24 | 52375323 | 429.25 |
| 0-300 PSI | 52376613 | 284.24 | 52375340 | 429.25 |
| 0-500 PSI | 52376648 | 284.24 | 52375366 | 429.25 |
| 0-1000 PSI | 52376672 | 284.24 | 52375391 | 429.25 |
| 0-3000 PSI | 52376770 | 284.24 | 52375421 | 429.25 |
| 0-5000 PSI | 52376800 | 284.24 | 52375455 | 429.25 |
| 0-10000 PSI | 52376834 | 284.24 | 52375471 | 429.25 |
| Attachable Loop-Powered Indicator | | | 7082534 | 332.17 |



Intrinsically Safe Hazardous Area Transmitters

Features

- FM/CSA approved intrinsically safe for Class I, II, and III, Div 1, Groups A-G, dust class II, III, Div 1, Groups E-G, Class I, Zone 0, ATx ia II C
- ATEX approvals for gases, vapors, and mists in Zone 0, 1, and 2; For dust Zone 20, 21, and 22; and mining categories M1 and M2
- Suitable for SIL2 per IEC 61508/IEC 61511
- Rugged NEMA 6 stainless steel case, all stainless wetted parts with all-welded measuring cell for improved media compatibility
- Accuracy to $\leq 0.25\%$ span BFSL, non-linearity/one-year stability to $\leq 0.2\%$ span, non-repeatability to $\leq 0.1\%$ span
- For ambient and media temperatures of -4° to 176° F
- Call for flush diaphragm mount or models with integral junction boxes

Model Selection Guide

| Range | Catalog Number | Price |
|---|----------------|----------|
| IS-20-S Intrinsically Safe Transmitter | | |
| 0-5 PSI | 12127851 | \$576.83 |
| 0-15 PSI | — | — |
| 0-60 PSI | 12127914 | 576.83 |
| 0-100 PSI | 12127922 | 576.83 |



Pressure Transmitters for 3A Sanitary Applications

WIKA Type S-10.3A sanitary transmitters meet 3A standards for pressure and level measurement. A 316 stainless steel flush diaphragm minimizes product buildup. The food-grade liquid-filled, sealed sensing system is designed for Clean-In-Place and Sterilize-In-Place maintenance.

S-10.3A transmitters are temperature compensated to ensure long-term stability under extreme temperature changes. The gel-potted circuit board is protected against vibration, shock, and moisture.

Condensed Specifications

Accuracy: $\pm 0.5\%$ span; **Hysteresis:** $\pm 0.1\%$ span; **Repeatability:** $\pm 0.05\%$ span; **One-Year Stability:** $\pm 0.2\%$ span; **Zero/Span Adjustment:** Approx. $\pm 0.5\%$ full scale

Temperature: **Compensated:** 32° to 175° F; **Media:** 14° to 248° F; **Ambient:** 14° to 175° F; **Temperature Error:** Percent of span per 18° F

Construction: **Body:** 304SS; **Diaphragm:** 316SS; **Connection:** DIN 43560 solderless screw terminal, 316SS IP65/NEMA 5; **Transmitting Liquid:** Vegetable oil



Model Selection Guide

| Description | | 1.5" Tri-Clamp | | 2" Tri-Clamp | |
|---|------------|----------------|----------|--------------|----------|
| | | Catalog | Price | Catalog | Price |
| S-10.3A Sanitary Pressure Transmitters | | | | | |
| Pressure Range | 0-15 PSI | 9748202 | \$848.26 | 9748210 | \$848.26 |
| | 0-30 PSI | 9748075 | 848.26 | 4225007 | 848.26 |
| | 0-60 PSI | 9744703 | 848.26 | 9748199 | 848.26 |
| | 0-100 PSI | 9748237 | 848.26 | 9747931 | 848.26 |
| | 0-160 PSI | 9748245 | 848.26 | 9748253 | 848.26 |
| | 0-200 PSI | 9749408 | 848.26 | 4213246 | 848.26 |
| | 0-250 PSI | 9776227 | 848.26 | 4268831 | 848.26 |
| | 0-500 PSI | 50961667 | 848.26 | 9745828 | 848.26 |
| | 0-1000 PSI | 8993470 | 848.26 | 4281737 | 848.26 |

Call Lesman for 3-wire and 4-wire output models (0-5 or 0-10V, 0-100 mV, 0-20 mA), or for vacuum and compound range transmitters.

Stainless Steel Pressure Transmitters

Pressure Transmitter with NEMA 4X Junction Box

Features

- 4-20 mA output with internal test circuit connection
- Junction box cover unscrews for access to internal terminal block
- All stainless steel design meets NEMA 4X standard for washdown and corrosion resistance, IP67 Ingress protection

WIKA's F-2X pressure transmitters are designed for use in difficult, corrosive environments. The smooth surface reduces areas where contaminants may collect and makes it ideal for use in food and pharmaceutical industries.

The F-20 features an all-welded stainless steel measuring cell for improved media compatibility. There are no internal soft sealing materials that can react with the media or deteriorate over time.

F-21's flat sensing surface is designed for measuring viscous fluids or media containing solids that may clog the NPT process connection.



Model Selection Guide

| Pressure Range | Maximum Pressure | Burst Pressure | Catalog Number | Price Each |
|----------------------------------|------------------|----------------|----------------|------------|
| F-20: Standard NPT Connection | | | | |
| 0-50" WC | 30 PSI | 30 PSI | 12127469 | \$665.31 |
| 0-5 PSI | 72 PSI | 87 PSI | — | —! |
| 0-10 PSI | 72 PSI | 87 PSI | 12127507 | 665.31 |
| 0-15 PSI | 72 PSI | 87 PSI | 12127523 | 665.31 |
| 0-25 PSI | 72 PSI | 87 PSI | 12127531 | 665.31 |
| 0-30 PSI | 72 PSI | 87 PSI | 12127540 | 665.31 |
| 0-60 PSI | 240 PSI | 290 PSI | 12127566 | 665.31 |
| 0-100 PSI | 240 PSI | 290 PSI | 12128873 | 665.31 |
| 0-160 PSI | 500 PSI | 600 PSI | 12127574 | 665.31 |
| 0-200 PSI | 500 PSI | 600 PSI | 12127582 | 665.31 |
| 0-300 PSI | 500 PSI | 600 PSI | 12127591 | 665.31 |
| 0-500 PSI | 1160 PSI | 5800 PSI | 12127639 | 665.31 |
| F-21: Flush Diaphragm Connection | | | | |
| 0-50" WC | 30 PSI | 30 PSI | 12126331 | 745.52 |
| 0-5 PSI | 72 PSI | 87 PSI | 12127728 | 745.52 |
| 0-10 PSI | 72 PSI | 87 PSI | 12127736 | 745.52 |
| 0-100 PSI | 240 PSI | 290 PSI | 12127744 | 745.52 |

Ranges to 15000 PSI available. Call for pricing.

FM-Approved Explosion-Proof Transmitters for Hazardous Areas

Features

- FM-approved explosion-proof for Class I Division 1 hazardous locations
- Available with 4-20 mA, two-wire or 1-5 V, three-wire low power output signals
- Engineered to withstand harsh environments
- NACE MR0175 compliant wetted parts
- Retrofits many existing oil and gas applications

Specifications

Materials: *Wetted parts:* NACE compliant; *Model E-10:* Stainless steel (≥300 psi stainless steel and Elgiloy); *Case:* Stainless steel

Internal transmission fluid: Synthetic oil (only for pressure ranges up to 300 psi or flush diaphragm units)

Power supply U_B: 10 to 30 VDC

Response time (10 to 90%): ≤ 1 (≤ 10 ms for media temperatures < -22° F (-30° C) for pressure ranges up to 300 psi or with flush diaphragm)

Accuracy: ≤ 0.25 (BFSL) % of span; ≤ 0.5 (limit point calibration) % span

Stability: ≤ 0.2 (at reference conditions) % span, one year

Temperature limits: *Ambient:* -22 to 212° F (-30 to 100° C)

Approval: *FM / CSA explosion-proof:* Class I, Div 1, Groups A-D; *Dust ignition-proof:* Class II / III, Div 1, Groups E-G; FM Standards according to class number 3600, 3615, and 3810

Ingress protection: NEMA 4X / IP 67



WIKA E-10 explosion-proof pressure transmitters are specifically designed to meet the durability and performance requirements of oil and gas pressure monitoring applications.

These pressure transmitters feature an industry standard 4-20 mA two-wire or 1-5V three-wire low power signal output and NEMA 4X (IP67) ingress protection. They are extremely resistant to pressure spikes, vibration and moisture intrusion.

NACE MR-01-75 compliant wetted parts provides extra resistance against sulfide stress cracking when exposed to media containing sulphur. Both are available with a factory sealed epoxy flying lead assembly for easier installation.

Model Selection Guide

| E-10 Series 4-20 mA Transmitter | Pressure Range | With 6 Ft Cable | | With 6 Ft Leads | |
|---|-------------------|-------------------|----------|-------------------|--------|
| | | Catalog Number | Price | Catalog Number | Price |
| 1/4" NPT Male Process Connection | 30"-0" HgVac | 52131793 | \$517.40 | 52811896 | 590.27 |
| | 0-15 PSI | 52734130 | 473.70 | 50989333 | 546.60 |
| | 0-60 PSI | 4363082 | 473.70 | 50989341 | 546.60 |
| | 0-100 PSI | 4363090 | 473.70 | 4363189 | 546.60 |
| | 0-200 PSI | 4364844 | 473.70 | 50139061 | 546.60 |
| | 0-300 PSI | 4363103 | 473.70 | 4363197 | 546.60 |
| | 0-500 PSI | 4363111 | 473.70 | 4363200 | 546.60 |
| | 0-1000 PSI | 4363129 | 473.70 | 4363218 | 546.60 |
| | 0-3000 PSI | 4202506 | 473.70 | 4363244 | 546.60 |
| | 0-5000 PSI | 4363155 | 473.70 | 4363252 | 546.60 |
| 1/2" NPT Male Process Connection | 30"-0" HgVac | 4371130 | 517.40 | 14023700 | 590.27 |
| | 0-15 PSI | 4365034 | 473.70 | 4365157 | 546.60 |
| | 0-60 PSI | 4365042 | 473.70 | 4365166 | 546.60 |
| | 0-100 PSI | 4365050 | 473.70 | 4365174 | 546.60 |
| | 0-200 PSI | 4369633 | 473.70 | 50033948 | 546.60 |
| | 0-300 PSI | 4365068 | 473.70 | 4365182 | 546.60 |
| | 0-500 PSI | 4365076 | 473.70 | 4365190 | 546.60 |
| | 0-1000 PSI | 4365085 | 473.70 | 4365204 | 546.60 |
| | 0-3000 PSI | 4365106 | 473.70 | 4365220 | 546.60 |
| | 0-5000 PSI | 4365115 | 473.70 | 4365238 | 546.60 |

Illinois, Indiana, Missouri, and Iowa
Phone: 800-953-7626 • 630-595-8400
Fax: 630-595-2386

Lesman Instrument Company
www.lesman.com
sales@lesman.com

Wisconsin, and Upper Peninsula Michigan
Phone: 800-837-1700 • 262-923-1790
Fax: 262-923-1797

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**PRESSURE
TRANSMITTERS**

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SITRANS P300 All-Stainless Pressure Transmitters



SIEMENS

Ordering Instructions

Make one choice from each section below. Follow the availability column down to be sure the unit you need is available. A finished catalog number looks like this: 7MF8023-1DB24-1AB6-ZA02

Model Selection Guide

Issue all orders to Siemens Industry, Inc
c/o Lesman Instrument Company.

| Description | Catalog Number | Availability | Price |
|---|--|--------------|------------|
| P300 for Gage/Absolute Pressure, Threaded Conn. | 7MF8023- | ↓ | \$1021.00 |
| P300 for Gage/Absolute Pressure, Flanged Conn. | 7MF8123- | ↓ | 1021.00 |
| Fill | Silicone Oil Fill, Standard Cleaning | 1 | • • 0.00 |
| Range | 0-14.5 PSIG | B | • • 21.00 |
| | 0-58 PSIG | C | • • 0.00 |
| | 0-232 PSIG | D | • • 0.00 |
| | 0-914 PSIG | E | • • 21.00 |
| | 0-72.5 PSIA | T | • • 120.00 |
| Wetted Parts | Stainless Steel Seal Diaphragm and Cell | A | • • 0.00 |
| | Diaphragm Seal (Add 141 Process Conn.) | Y | • • 0.00 |
| Process Conn. | 1/2-14 NPT (Select with Y above) | 14 | • • 0.00 |
| | Flange Version (Add a Z _ Option) | 74 | • • 350.00 |
| Approval Rating | None | 1A | • • 0.00 |
| | ATEX Intrinsic Safety (EEx ia) | 1B | • • 25.00 |
| | FM/CSA Intrinsic Safety | 1M | • • 25.00 |
| Cable | 1/2"-14 NPT, Stainless Steel | J | • • 7.00 |
| Display | No Display, With Keys, Closed Lid | 1 | • • 0.00 |
| | Display and Keys, Closed Lid | 2 | • • 146.00 |
| | Display and Keys, Lid, Plastic Pane | 4 | • • 210.00 |
| | 4-20 mA Display, Keys, Lid, Glass Pane | 6 | • • 217.00 |
| | Specified Display, Keys, Lid, Glass Pane | 7 | • • 217.00 |
| Options | Stainless Steel A2-70 Mounting Bracket | Z-A02 | • • 58.00 |
| | Pressure Rating Plate (English) | Z-B21 | • • 0.00 |
| | ASME Class 150 2" Flange | Z-M42 | • • 263.00 |

Need a different range? Hastelloy diaphragm? Larger ASME flange or TriClamp? Call for pricing.

Features

- Reliable under extreme chemical and mechanical loads
- High measuring accuracy with minimum conformity error and small long-term drift ($\leq 0.25\%$ over 5 years)
- Programmable with local control keys and LCD display or by HART® communication tools
- Diagnosis and simulation functions

Specifications

Accuracy: Linear characteristic curve, span ratio ≤ 10 : Gage pressure: ≤ 0.0029 span ratio + 0.071%; Absolute pressure: $\leq 0.1\%$; Span ratio between 10 and 30: Gage pressure: ≤ 0.0045 span ratio + 0.071%; Absolute pressure: $\leq 0.2\%$; Span ratio between 30 and 100: Gage pressure: ≤ 0.005 span ratio + 0.05%

Temperature (for measuring cell with silicone oil): Ambient Temperature: -40° to 185° F; **Digital display:** -22° to 185° F; **Process Media:** -40° to 212° F

Wetted Materials: 316L stainless steel or Hastelloy C; **Measuring cell filling:** Silicone oil or inert filling liquid

Degree of Protection to EN 60529: IP65, IP68, NEMA X, enclosure cleaning, resistant to lyes, steam to 302° F (150° C)

Electromagnetic Compatibility: Emitted interference and noise immunity to EN 61326 and NAMUR NE 21

Power Supply: 10.5-42 VDC terminal voltage on transmitter; 10.5-30 VDC for intrinsically safe operation

Certificate and Approvals: Intrinsic Safety to PTB 05 ATEX 2048, Ex II 1/2 G EEx ia/ib IIB/IIC T4, T5, T6.

Stainless Steel Pressure Transmitter for Hazardous Areas



Features

- 0.25% accuracy
- 5:1 turndown
- Compact 316 stainless steel hermetically sealed enclosure, welded stainless steel wetted materials
- UL approved explosion-proof for hazardous locations: Class I, Div 1 Groups A-D; Class II, Div 1, Groups E-G; Class III; ATEX certified for Equipment Category 2, Gas Zone 1, Dust Zone 21

United Electric's TX200 is a rugged pressure transmitter that's ideal for petrochemical applications. All welded stainless steel construction provides airtight and watertight protection in the harshest environments. A bonded foil strain gage sensor provides reliability and durability.

TX200A is field adjustable for zero and span using external 316 stainless steel control buttons. It doesn't require a calibrated pressure source, and can be calibrated in place. TX200B is a cost-effective solution for applications where the process is consistent and adjustability isn't required.

See Lesman.com for full specifications.

Ordering Instructions

Make one choice from each table section below. A finished catalog number looks like this: TX200-A-09-S-1

Model Selection Guide

| Description | Catalog Number | Price |
|---|------------------------------|--------|
| Hazardous Area Transmitter, 1/4" NPTF Conn. | TX200 | \$0.00 |
| Enclosure Designation | Field-Adjustable Transmitter | A |
| | Fixed Range Transmitter | B |
| | HART® Transmitter | H |
| Pressure Range | 0-100 PSI | 06-S-1 |
| | 0-250 PSI | 07-S-1 |
| | 0-500 PSI | 08-S-1 |
| | 0-1000 PSI | 09-S-1 |
| | 0-2000 PSI | 18-S-1 |
| | 0-2500 PSI | 10-S-1 |
| | 0-3000 PSI | 19-S-1 |
| | 0-5000 PSI | 11-S-1 |
| Outputs | 4-20 mA | T |
| | 1-5 VDC (Was Option M204) | D |
| | 0-10 VDC | P |

Call for Autoclave pressure connection and other options.

Level Measurement Instruments

Flow Measurement Instruments

Pressure Transmitter

Temperature Sensors and Transmitters

Wireless Sensing and Communications

Analytical Instruments and Systems

What Makes Siemens' Transmitters Different?

1. Local Setup Without Handheld or Screwdriver

Tired of the need for a HART communicator every time you want to do something on a transmitter?

- Has a tech ever gone out into the field and been unable to do anything because he forgot his handheld, or had the wrong one?
- How many HART communicators do you have? What happens when you want to configure or reconfigure a transmitter and a HART communicator isn't readily available?

- Wouldn't it be nice if you could configure a transmitter or change the configuration without carrying a HART communicator?

The cost of a new HART handheld is \$5,000 to 7,000! Siemens has Simatic PDM software \$805 that does everything a handheld does, including allow you to store transmitter configurations on your PC.

Here are the "big deal" things you can do without a handheld:

- Set up Zero and Span** without applying pressure.
- Loop Function Check.** Use the transmitter as a current source, so the tech doesn't need another device to check out a loop. We don't know of any other transmitters that can do this!
- Zero Adjustment.** Transmitters mounted in non-vertical positions have zero shift. This can be corrected using the pushbuttons. *All other manufacturers require a HART communicator to make this correction.*
- Failure Current:** Set the transmitter to send a failure current 3.6 or 22.8 mA in the event that hardware or firmware fails. It works like thermocouple burnout. The failure current drives the valve to a user-selected safe (open or closed) position.
 - Have you ever had a transmitter fail and cause an unsafe condition in your plant?
 - What does the transmitter you are currently using do if it has a hardware or firmware failure?

2. Advanced Diagnostics with a HART Communicator

You can activate and evaluate a number of diagnostics functions:

- Operating Hours Meter:** Logs the number of hours the unit has been powered, to track the 5-year "on power" warranty.
- Dual Elapsed Timers:** The first timer stage can be set to make the indicator flash, and advise that it's time to calibrate the transmitter. A second timer stage can send a fault current, (3.6 or 22.8 mA), to remind you to do the calibration or service.

- Do you have transmitters that you deem so important that they must be serviced or calibrated on a routine basis? How do you keep track of that requirement?

- Data Storage:** The transmitter has six registers that store high/low input pressures, and high/low sensor and electronics temperatures. Values can be recalled with the HART communicator.

- During troubleshooting, these values can help determine if the unit has been exposed to pressure spikes or temperatures outside of spec.
- These values can diagnose if the transmitter failure is an application problem or a hardware problem.
- How do you sort out application problems from hardware problems now?

- Output Current Saturation Alarms:** Timers can drive the output to alarm status if the output saturates or stays at 3.8 or 20.5 mA for a preset time.

- What alarm functions are available on the product you are currently using?
- If there are no alarms available on your transmitter, how are alarms accomplished?
- Do you use pressure switches or additional transmitters?



3. Electronics and Pressure Capsule Are Independent

Siemens electronics are encapsulated and are a modular unit. Process media can't get into the electronics. The electronics can be replaced easily, because the transmitter data is stored in the measuring capsule and automatically uploaded to the new electronics.

4. Isolated Electronics and Electrical Connections.

The electronics and their connections are isolated from one another. Moisture in the conduit will not get into the electronics.

5. Five Year (5) "Powered Up" Warranty.

Time without power is not counted in the warranty. No other manufacturer offers a run-time warranty!



Siemens transmitters available for gauge pressure, differential pressure, and level.

Protect your transmitters! Welded metal seals, welded diaphragms for low pressure, saddle flange welded diaphragms — all these and more! Call 800-953-7626.

Order your transmitter with a chemical seal or diaphragm — any material or configuration you need, we'll build it! See pages 434 and 435 for chemical seals, fill fluids, and calibration services.

Call Inside Sales in our Bensenville office for full details. (800)953-7626



Illinois, Indiana, Missouri, and Iowa
Phone: 800-953-7626 • 630-595-8400
Fax: 630-595-2386

Lesman Instrument Company
www.lesman.com
sales@lesman.com

Wisconsin, and Upper Peninsula Michigan
Phone: 800-837-1700 • 262-923-1790
Fax: 262-923-1797

V 01/2019

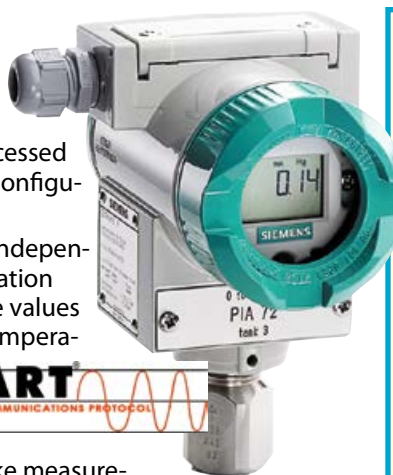
**GAUGE
PRESSURE**

83 L

SITRANS P, DS III Gauge Pressure Transmitters

Features

- Micro-machined silicon sensor technology means no span shift and zero stability better than 0.25% for up to 5 years
- Nine field-selectable parameter values can be accessed via magnetically coupled reed switches for field configuration without a handheld programmer
- Diagnostics include operating hours meter, two independent elapsed time counters for monitoring calibration and maintenance internals, and six registers store values for ambient temperature (electronics), capsule temperature (process), and capsule pressure data
- Program with three local input keys or with external HART® communications link
- Remote seals available for special applications, like measurement of highly viscous substances



Ever go out to the field with a handheld configurator — only to find out you brought the wrong one? Or that it was out of batteries? With Siemens transmitters, you'll never have that problem again!

SITRANS P has three pushbuttons for configuration and diagnostics. You can set or adjust measuring ranges to 100:1, adjust output damping and failsafe, and check the current loop — all without opening the cover, maintaining the hazardous area rating.

With a five-year runtime warranty, 0.75% full scale accuracy, and 99% measurement precision after 10 years, why look elsewhere?

Learn more at www.Lesman.com. Click on Instruments by Type>Transmitters.



Visit our website for full specifications.

Specifications

Output Signal: 4 to 20 mA; *Lower Limit:* 3.55 mA, factory-set to 3.84 mA; *Upper Limit:* 23.0 mA, factory-set to 20.5 mA or optional 22.0 mA

Ripple (without HART): 1 pp 0.5% of max. output current

Electric Damping: Adjustable time constant (T_{63}): 0 to 100 s in steps of 0.1 s, factory-set to 0.1 s

Current Transmitter/Signal on Alarm: Adjustable from 3.55 to 23 mA

Load: *Without HART:* R_B (UH - 10.5 V) / 0.023 A in Ω , UH: power supply in V; *With HART:* R_B = 230 to 500 Ω (modem)/230 to 1100 Ω (communicator)

Temperature: *Measuring cell with silicone oil filling:* -40 to 185° F; *30-bar measuring cell:* -4 to 185° F; *Digital display:* -22 to 185° F; *Measuring cell with inert filling liquid:* -4 to 185° F

Displays and Controls: *Input keys:* 3 for local programming directly on transmitter; *Digital display:* Built-in, cover with window (option)

Power Supply: *Terminal voltage on transmitter:* DC 10.5 to 45 V and DC 10.5 to 30 V in intrinsically-safe mode; *Ripple:* Upp 0.2 V (47 to 125 Hz); *Noise:* U rms 1.2 mV (0.5 to 10 kHz)

Communication

HART: *Communicator:* 230 to 1100 Ω ; *Modem:* 230 to 500 Ω

Cable: *2-wire screened:* - 3.0 km; *Multi-core screened:* 1.5 km

PC/Laptop Requirements: IBM-compatible, main memory >32 MB, hard disk >70 MB, RS232 interface, VGA graphics; *Operating system:* Windows® 95/98/NT 4.0 and SIMATIC PDM

Approvals

CENELEC: DIN EN 50 014: 1997, EN 50 020: 1994 and EN 50 284: 1999

FM: Intrinsic safety and explosion-proof: 3008490 (3610, 3615); *Explosion-proof:* Class I, Div. 1, Groups A-D; *Dust-ignition proof:* Class II, Div. 1, Groups E-G, indoor and outdoor (NEMA 4X) hazardous (classified) locations; *Intrinsically safe:* With entity, for use in Class I, Div. 1, Group A-G, indoor and outdoor, NEMA 4X hazardous (classified) locations

CSA: No. 1153651 (LR104225); Class 2258 02, Class 2258 03



Ordering Instructions

Select one option from each table section below. A complete catalog number looks like this: 7MF4033 - _____ - Z B11

Model Selection Guide

Issue all orders to Siemens Industry, Inc
c/o Lesman Instrument Company.

| Description | | Catalog Number | Price |
|--|--|---------------------------|-----------|
| SITRANS P DS III Programmable Smart Pressure Transmitter with HART | | 7MF4033- | \$1340.00 |
| Fill Fluid | Silicon Oil | 1 | 0.00 |
| | Fluorolube (Grease Free) | 3 | 129.00 |
| Pressure (PSI) | Span | Overload Limit | |
| | 0.15 to 15 | -14.5 to 87 | B 27.00 |
| | 0.6 to 60 | -14.5 to 145 | C 0.00 |
| | 2.3 to 232 | -14.5 to 465 | D 0.00 |
| | 9.1 to 924 | -14.5 to 1450 | E 27.00 |
| | 2.3 to 2320 | -14.5 to 3625 | F 75.00 |
| | 58.0 to 5800 | -14.5 to 8700 | G 141.00 |
| Wetted Parts | Diaphragm | Process Connection | |
| | Stainless Steel | Stainless Steel | A 0.00 |
| | Hastelloy | Stainless Steel | B 76.00 |
| | Hastelloy | Hastelloy | C 417.00 |
| Model with Remote Seal | | Y | 0.00 |
| 1/2" - 14 NPTF Process Connection for Manifold | | 1 | 0.00 |
| Electronics Housing | Diecast Aluminum | 0 | 0.00 |
| | Stainless Steel | 3 | 854.00 |
| Approvals | None | 1A | 0.00 |
| | FM/CSA Intrinsic Safety, Explosion Proof | 1N | 81.00 |
| Conduit | M20 x 1.5 (Not Available with FM, CSA) | B | 0.00 |
| | 1/2" - 14 NPT (*Select with approval 1N) | C | 0.00 |
| Built-in Indicator | None | 0 | 0.00 |
| | Digital LCD (Set to mA) | 6 | 129.00 |
| | Digital LCD (Set per Option Y21) | 7 | 129.00 |
| Accessories (For all accessories, add -Z and accessory code to model number.) | | | |
| Transmitter with Carbon Steel Mounting Bracket | | A01 | 42.00 |
| Transmitter with Stainless Steel Mounting Bracket | | A02 | 66.00 |
| Rating Plate, Pressure Units in H2O Respective to PSI | | B21 | 0.00 |
| Manufacturer's Test/Calibration Certificate (ISO 8402) | | C11 | 26.00 |
| Acceptance Test/Material Certificate (EN 10204) | | C12 | 33.00 |
| Test Report (EN 10204-2.2) | | C14 | 0.00 |
| Calibrated Measuring Range (Please Specify) | | Y01 | 16.00 |
| Tag Number (16 Characters Maximum) | | Y15 | 16.00 |
| Measuring Point Description (27 Characters Max) | | Y16 | 16.00 |
| Set LCD (Specify Units: PSI, InH2O, Fth2O) | | Y21 (units) | 16.00 |

Looking for differential pressure transmitters? See page 84. Need a level transmitter? Turn to page 16.

Level Measurement
Instruments

Flow Measurement
Instruments

Pressure Transmitter

Temperature Sensors
and Transmitters

Wireless Sensing and
Communications

Analytical Instruments
and Systems

SITRANS P, DS III Differential Pressure Transmitters

SIEMENS



Features

- Capsule stability is ensured because micro-machined silicon sensor technology means no span shift and zero stability better than 0.25% for up to 5 years
- 9 field-selectable parameter values can be accessed via magnetically coupled reed switches for field configuration without a handheld programmer
- Diagnostics include operating hours meter, 2 independent elapsed time counters for monitoring calibration and maintenance intervals, and 6 registers store values for ambient temperature (electronics), capsule temperature (process), and capsule pressure data
- Program with three local input keys or with external HART® communications link
- Variety of remote seals for special applications, such as measurement of highly viscous substances



Search www.lesman.com for
DS-III

Visit our website for full specifications.

Looking for a submersible transmitter for liquid level? Turn to page 17.

Reliability for the process, reduced downtime for your plant, higher quality for the produced goods — Can a transmitter make a big difference? Yes, once it makes the step from a simple “value indicator” to a “value analyzer” like the SITRANS P. It's the first transmitter with integrated diagnostic functions, so it can monitor itself and other process conditions at regular intervals.

Advanced transmitter diagnostics with SITRANS P means...

- Dual elapsed time registers — These can be set up to signal when preventative maintenance or calibration is required
- Three freely adjustable limits — So you can implement pre-alarms or monitor temperature
- Record of limit violations — Based on maximum pointers from min/max values for input pressure, sensor temperature, and electronic temperature. The record provides information on the status of the transmitter, on the process, and on the ambient temperature
- Simulation functions — Enabling the transmitter electronics and the entire loop to be checked directly after the sensor (e.g., for system startup). This provides important information on whether the transmitter electronics are in proper order, at what pressure the limits respond, and whether the controller loop is working properly and all displays are functioning.
- Easy exchange of defective parts — If the device signals an error in the electronics or measuring cell, no recalibration is required.

Just a matter of adjustment

Leave the screwdriver in your toolbox. Three pushbuttons and a high-contrast LCD are all you need to set parameters on-site — and they'll yield the high level of accuracy you desire.

You can set minimum and maximum measurement range, adjust the damping of the output and the failsafe direction (high or low) — all without having to open the cover on the transmitter, maintaining the hazardous area rating.

You can also change from linear to square root, or adjust the measurement range up to a ratio of 100:1 at the push of a button. Electronic damping of up to 100 seconds can be selected, as are up to 17 different pressure engineering units.

And, if you're looking for the most convenient way to check a current loop, the SITRANS P can be put into a current source mode to make loop checkout easy.

No hard work with HART®

If you prefer, you can also use the HART protocol to set all the transmitter parameters, using a HART communicator, laptop PC, or any HART-compatible process control system. Using HART, all parameters and diagnostic information can be viewed at any point in the signal loop. Siemens' SIMATIC PDM software makes this even easier for the user.

Convenient replacements

Since sensor-specific data is stored in the SITRANS P's measuring cell, the potted electronics module can be replaced without any problems. And, in the event of any trouble, the 100:1 turndown allows a single transmitter to serve as a backup to many different ranges, reducing your inventory quantity and the cost of spares.

Sound and certified durability

Extreme pressures and temperatures and generally aggressive ambient conditions — the SITRANS P can take it all. It's certified and approved by organizations all over the world, CENELEC, FM, CSA, and more.

Safety standards with a single device

The SITRANS P DS III features a special safety standard for pressure, differential pressure, absolute pressure, and level. Advanced diagnostic functions and software were developed in compliance with IEC standards. Safety-related functions include automatic error diagnostics, defined error handling, and calculation of error rates.

You only need one SITRANS P DS III to set up the same safety level that you'd normally get with two conventional transmitters.

That means you save the cost of an additional transmitter, including installation and maintenance costs, extra wiring, and extra isolating power supplies. Not to mention the cabinet space you save.

Field tests in a number of applications has proven how well the DS III is suited for real-life practice. If you want a high level of safety and reliability, put the SITRANS P DS III at the top of your list.

**For HART® communicators and
SIMATIC PDM software
see pages 95 and 96.**



Illinois, Indiana, Missouri, and Iowa
Phone: 800-953-7626 • 630-595-8400
Fax: 630-595-2386

Lesman Instrument Company
www.lesman.com
sales@lesman.com

Wisconsin, and Upper Peninsula Michigan
Phone: 800-837-1700 • 262-923-1790
Fax: 262-923-1797

V 01.2019

**DIFFERENTIAL
PRESSURE**

85 L

Specifications

Output Signal: 4 to 20 mA; *Lower Limit:* 3.55 mA, factory-set to 3.84 mA; *Upper Limit:* 23.0 mA, factory-set to 20.5 mA or optional 22.0 mA

Electric Damping: Adjustable time constant (T₆₃): 0 to 100 s in steps of 0.1 s, factory-set to 0.1 s

Current Transmitter/Signal on Alarm: Adjustable from 3.55 to 23 mA

Temperature: *Measuring cell with silicone oil filling:* -40 to 185° F; *30-bar measuring cell:* -4 to 185° F; *Digital display:* -22 to 185° F; *Measuring cell with inert filling liquid:* -4 to 185° F

Displays and Controls: *Input keys:* 3 for local programming directly on transmitter; *Digital display:* Built-in, cover with window (option)

Power Supply: *Terminal voltage on transmitter:* DC 10.5 to 45 V and DC 10.5 to 30 V in intrinsically-safe mode; *Ripple:* Upp 0.2 V (47 to 125 Hz); *Noise:* U rms 1.2 mV (0.5 to 10 kHz)

Ripple (without HART): I pp 0.5% of max. output current

HART: *Communicator:* 230 to 1100Ω; *Modem:* 230 to 500Ω

Load: *Without HART:* R_B (U_H - 10.5 V) / 0.023 A in Ω; U_H: power supply in V; *With HART:* R_B = 230 to 500Ω (modem)/230 to 1100Ω (communicator)

Communication Cable: *2-wire:* -3.0 km; *Multi-core:* 1.5 km

PC/Laptop Requirements: IBM-compatible, RAM>32 MB, file space>70 MB, RS232 interface, VGA graphics; Windows® OS and SIMATIC PDM

FM Approval: *Intrinsic safety and explosion-proof:* 3008490 (3610,3615); *Explosion-proof:* Class I, Div. 1, Groups A-D; *Dust-ignition proof:* Class II, Div. 1, Groups E-G, indoor and outdoor (NEMA 4X) hazardous (classified) locations; *Intrinsically safe:* With entity, for use in Class I, Div. 1, Group A-G, indoor and outdoor, NEMA 4X hazardous (classified) locations

CSA Approval: No. 1153651 (LR104225); Class 2258 02, Class 2258 03

CENELEC: DIN EN 50 014: 1997, EN 50 020: 1994 and EN 50 284: 1999



Differential Pressure — Ordering Instructions

Select one option from each table section below. A complete catalog number looks like this: 7MF4433 - _____ - Z B21

Model Selection Guide

Issue all orders to Siemens Industry, Inc.
c/o Lesman Instrument Company.

| Description | | | Catalog Number | Price |
|---|--|-----------------|----------------|-----------|
| SITRANS P DS III Differential Pressure Transmitter | | | 7MF4433- | \$1811.00 |
| Fill Fluid | Silicon Oil | | 1 | 0.00 |
| | Inert Fill | | 3 | 129.00 |
| Pressure | Span | Static Pressure | | |
| | 0.4" to 8" H2O | 465 PSI | B | 212.00 |
| | 0.4" to 24" H2O | 2320 PSI | C | 108.00 |
| | 1.0" to 100" H2O | 2320 PSI | D | 0.00 |
| | 2.4" to 241" H2O | 2320 PSI | E | 0.00 |
| | 6.4" to 643" H2O | 2320 PSI | F | 27.00 |
| | 20.0" to 2000" H2O | 2320 PSI | G | 122.00 |
| | 4.3" to 435" PSI | 2320 PSI | H | 122.00 |
| Wetted Parts | Diaphragm | Meas. Cell | | |
| | Stainless Steel | Stainless Steel | A | 0.00 |
| | Hastelloy | Stainless Steel | B | 76.00 |
| | Hastelloy | Hastelloy | C | 417.00 |
| | Tantalum | Tantalum | E | 515.00 |
| | Monel | Monel | H | 239.00 |
| | Gold | Gold | L | 1336.00 |
| | 1/4" - 18 NPT Process, 7/16" - 20 UNF Manifold | | | 2 |
| 1/4" - 18 NPT, Side Drain/Vent, 7/16" - 20 UNF | | | 6 | 89.00 |
| Electronics Housing | Diecast Aluminum, SS Flange Bolts | | 2 | 0.00 |
| | Stainless Steel, SS Flange Bolts | | 3 | 854.00 |
| Approvals | None | | 1A | 0.00 |
| | FM/CSA Intrinsic Safety, Explosion Proof | | 1N | 81.00 |
| Conduit | M20 x 1.5 (Not Available with FM, CSA) | | B | 0.00 |
| | 1/2" - 14 NPT (*Select with Approval 1N) | | C | 0.00 |
| Built-in Indicator | None | | 0 | 0.00 |
| | Hidden Digital Display | | 1 | 81.00 |
| | Digital LCD (Set to mA) | | 6 | 129.00 |
| | Digital LCD (Set as Specified) | | 7 | 129.00 |
| Accessories (For all accessories, add -Z and accessory code to model number.) | | | | |
| Transmitter with Carbon Steel Mounting Bracket | | | A01 | 42.00 |
| Transmitter with Stainless Steel Mounting Bracket | | | A02 | 68.00 |
| Rating Plate (Pressure Units in H2O Respective to PSI) | | | B21 | 0.00 |
| Manufacturer's Test/Calibration Certificate (ISO 8402) | | | C11 | 26.00 |
| Calibrated Measuring Range (Please Specify) | | | Y01 | 16.00 |
| Tag Number (16 Characters Maximum) | | | Y15 | 16.00 |
| Measuring Point Description (27 Characters Max) | | | Y16 | 16.00 |
| Set LCD (Specify Units: PSI, InH2O, FtH2O) | | | Y21 (units) | 16.00 |

Level Transmitters — Ordering Instructions

Select one option from each table section below. A complete catalog number includes transmitter and flange, and looks like this: 7MF4633 - _____ - ZB11 with 7MF4812- _____

Model Selection Guide

Issue all orders to Siemens Industry, Inc.
c/o Lesman Instrument Company.

| Description | | Catalog Number | Price |
|--|--|----------------|-----------|
| (1) SITRANS P DS III Level Transmitter | | 7MF4633- | \$1913.00 |
| Pressure | 10" to 100" H ₂ O | 1DY | 24.00 |
| | 10" to 240" H ₂ O | 1EY | 24.00 |
| | 20" to 640" H ₂ O | 1FY | 51.00 |
| | 64" to 2000" H ₂ O | 1GY | 146.00 |
| 1/4" - 18 NPT Process, 7/16" - 20 UNF Manifold | | 2 | 0.00 |
| Electronics Housing | Diecast Aluminum, SS Flange Bolts | 2 | 0.00 |
| | Stainless Steel, SS Flange Bolts | 3 | 854.00 |
| Approvals | None | 1A | 81.00 |
| | FM/CSA Intrinsic Safety, Explosion Prf | 1N | 81.00 |
| Conduit | M20 x 1.5 (Not Available with FM, CSA) | B | 0.00 |
| | 1/2" - 14 NPT (Select with Approval 1N) | C | 0.00 |
| Built-in Indicator | Hidden Digital Display | 1 | 81.00 |
| | Digital LCD (Set to mA) | 6 | 129.00 |
| | Digital LCD (Set per Option Y21) | 7 | 129.00 |
| Accessories (For all accessories, add -Z and accessory code to model number.) | | | |
| O-Ring PTFE (Teflon, Approved for Food) | | A20 | 33.00 |
| Sealing Screw, 1/2" - 18 NPT, with Vent Valve | | A40 | 45.00 |
| English Rating Plate | | B11 | 0.00 |
| Rating Plate (Pressure Units in H ₂ O to PSI) | | B21 | 0.00 |
| ISO 8402 Test/Calibration Certificate ISO 8402 | | C11 | 26.00 |
| Calibrated Measuring Range (Please Specify) | | Y01 | 16.00 |
| Tag Number (16 Characters Maximum) | | Y15 | 16.00 |
| Measuring Point Description (27 Characters Max) | | Y16 | 16.00 |
| Set LCD (Specify Units: PSI, InH ₂ O, FtH ₂ O) | | Y21 (units) | 16.00 |
| (2) Mounting Flange for SITRANS P Level Transmitter | | | |
| Size | 3", Class 150 | 3Q ____ | 97.00 |
| | 4", Class 150 | 3T ____ | 892.00 |
| Material | 316L Stainless Steel | __ A __ | 0.00 |
| | Hastelloy C276 | __ J __ | 266.00 |
| Tube | No Tube, Silicone System Fill (DC200-10) | __ __ 01 | 85.00 |
| | 2" Tube, Silicone System Fill (DC200-10) | __ __ 11 | 641.00 |
| | 6" Tube, Silicone System Fill (DC200-10) | __ __ 31 | 1098.00 |

HART® Handheld Communicator

Fast startup, long battery life on standard batteries. Holds hundreds of device files and configurations! Download new DOF and firmware updates from www.Meriam.com. See page 95.

Level Measurement
Instruments

Flow Measurement
Instruments

Pressure Transmitter

Temperature Sensors
and Transmitters

Wireless Sensing and
Communications

Analytical Instruments
and Systems

STD700 SmartLine Differential Pressure Transmitter

Features

- Accuracies to 0.05% of span
- Stability up to 0.02% URL per year for 5 years
- Automatic static pressure & temperature compensation
- Maximum turndown ratio to 100:1
- Response times as fast as 100ms
- Alphanumeric display can be added or removed in the field
- External zero, span, and configuration capability
- On-board diagnostic capabilities
- World class overpressure protection
- Polarity-insensitive electrical connections
- Integral dual seal design for highest safety based on ANSI/NFPA 70-202 and ANSI/ISA 12.27.0
- Compliant to SIL 2/3 requirements
- Honeywell DE, HART v7.0 and Foundation Fieldbus communications options



Replaces ST3000 models STD904, STD924, STD930, and STD974

How does the STD700 stack up?

| Model | SmartLine ST700 | ST3000 Series 900 |
|-------------------|---------------------------|--|
| Accuracy | ±0.05% | ±0.0625 digital mode ±0.075% analog |
| Speed of response | 100 ms | 330 ms |
| Stability | ±0.02% URL/year for 5 yrs | ±0.01% URL per year |

Specifications

Reference Accuracy: 0.05% span

Stability (%URL/year for five years): STD720: 0.020%; STD730: 0.040%; STD770: 0.030%

Temperature: Ambient: -40° to 185° F; Meter Body: -40° to 257° F; LCD: -4° to 158° F

Humidity: 0 to 100% RH

Vacuum Region Pressure: 1"WC min. absolute @ 2 hours at 158° F

Maximum Allowable Working Pressure (MAWP): 4500 PSI for temperatures -40° to 257° F. Static Pressure Limit derated to 3000 PSI for -15° to -40° F. Using graphite o-rings derates transmitter to 3625 PSI. Using 1/2" process adaptors and graphite o-rings derates transmitter to 3000 PSI.

Analog Output: Two-wire, 4 to 20 mA (HART & DE Transmitters only)

Output Failure: Normal Limits: 3.8 to 20.8 mA Honeywell standard, or 3.8 to 20.5 mA NAMUR NE 43 Compliant; Failure Mode: ≤3.6 mA and ≥21.0 mA

Supply Voltage: 10.8 to 42.4 VDC at terminals (IS versions limited to 30 VDC); Voltage Effect: 0.005% span per volt

Transmitter Turn-On Time: HART or DE: 2.5 seconds; Foundation Fieldbus: Host-dependent. Includes power up and test algorithms

Response Time (Delay + Time Constant): HART or DE: 100 mS; Foundation Fieldbus: 150 mS host-dependent

Damping Time Constant: HART: Adjustable from 0 to 32 seconds in 0.1 increments. Default: 0.50 seconds; DE: Discrete values 0, 0.16, 0.32, 0.48, 1, 2, 4, 8, 16, 32 seconds. Default: 0.48 seconds

Vibration Effect: Less than ±0.1% URL without damping. Per IEC60770-1 field or pipeline, high vibration level

Electromagnetic Compatibility: IEC 61326-3-1

Lightning Protection (Option): Leakage Current: 10uA max @ 42.4VDC 93C

Materials: Barrier Diaphragms: 316L SS, Hastelloy® C-276, Monel® 400, Tantalum; Process Head: 316 SS, Carbon Steel (Zinc-plated), Hastelloy C-276; Vent/Drain Valves and Plugs: 316 SS, Hastelloy C-276; Head Gaskets: Glass-filled PTFE standard. Viton®, graphite optional; Meter Body Bolting: Zinc-Plated Carbon Steel standard. 316 SS, NACE A286 SS bolts, Monel K500, Super Duplex and B7M optional; Mounting Bracket: 2" Pipe, Carbon Steel (Zinc-plated) or 304 Stainless Steel; Fill Fluid: Silicone DC® 200 oil or CTFE; Electronic Housing: Pure polyester powder-coated low copper aluminum. Meets NEMA 4X, IP66, IP67. All stainless steel housing is optional.

Mounting: Can be mounted in virtually any position using a standard mounting bracket. Bracket is designed to mount on 2" vertical or horizontal pipe.

Process Connections: 1/4" NPT or 1/2" NPT with DIN adapter

Wiring: Accepts up to 16 AWG (1.5 mm diameter)

Enclosure: Type 4X, IP66, IP67

Digital Communications/Diagnostics: Honeywell DE, HART 7 protocol or FOUNDATION Fieldbus ITK 6.0.1 compliant



Agency Approvals: FM/CSA: Explosion-Proof: Class I, Div 1, Groups A-D; Dust-Ignition Proof: Class II, III, Div 1, Groups E-G T4; Intrinsically Safe: Class I, II, III, Div 1, Groups A-G T4; Non-Incendive: Class I, Div 2, Groups A-D; ATEX: Flameproof: II 1/2 G Ex d IIC T4; Intrinsically Safe: II 1 G Ex ia IIC T4; Non-Incendive: II 3 G Ex nA IIC T4; Enclosure: IP66/IP67

SIL 2/3 Certification: IEC 61508 SIL 2 for non-redundant use and SIL 3 for redundant use according to EXIDA and TÜV Nord Sys

Honeywell's new SmartLine® STD700 differential pressure transmitters feature piezoresistive sensor technology combining pressure sensing with on-chip temperature compensation, for high accuracy, stability and performance over a wide range of application pressures and temperatures. The SmartLine family is also fully tested and compliant with Experion® PKS automation and control software platform, providing the highest level of compatibility assurance and integration capabilities.

The ST700 modular features a basic alphanumeric LCD display that can be added or removed in the field. For easier access and visibility, the display can be mounted and adjusted to 0, 90, 180, and 270 degree positions. The two-line, 16-character LCD can display any one of 16 standard engineering units plus square root output indication.

Suitable for all electrical and environmental requirements, SmartLine offers the ability to zero and span the transmitter from three externally accessible buttons. With the display option, these buttons also let you configure the transmitter and display.

Using a handheld Honeywell MCT202 configurator and Smartline transmitter two-way communications, you can field configure DE and HART devices. Or, if you prefer, you can use Honeywell's SCT3000 configuration toolkit and a PC to configure Honeywell Digitally Enhanced (DE) instruments. Field Device Manager (FDM) software and FDM Express are available for managing HART and Fieldbus device configurations. ST700 transmitters integrate with Honeywell's Experion PKS control software platform for tamper-reporting, FDM plant area views, and health summaries.

To help control maintenance and inventory costs, Honeywell ST700 transmitters are modular, giving you the ability to replace meter bodies, add indicators, or change electronics modules without affecting overall performance or approval certification. Each meter body is uniquely characterized to provide in-tolerance performance over a range of varying temperatures and pressures. Due to the Honeywell advanced interface, electronic modules may be swapped with any electronics module without losing in-tolerance performance characteristics.

Illinois, Indiana, Missouri, and Iowa
Phone: 800-953-7626 • 630-595-8400
Fax: 630-595-2386

Lesman Instrument Company
www.lesman.com
sales@lesman.com

Wisconsin, and Upper Peninsula Michigan
Phone: 800-837-1700 • 262-923-1790
Fax: 262-923-1797

V01.2019

**PRESSURE
TRANSMITTERS**

87

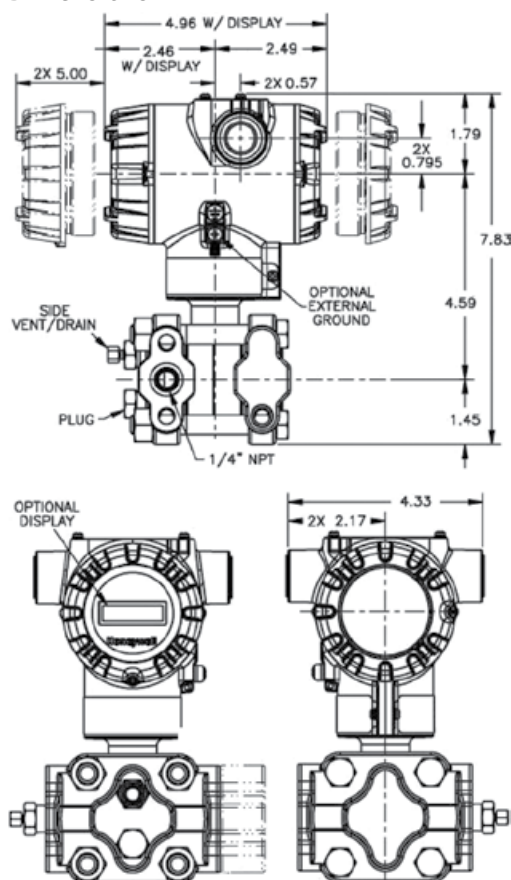
L

Honeywell



Check me out!
Accuracy improved to $\pm 0.05\%$
Speed of response three times
faster than before: 100 mSec
Stability to $\pm 0.02\%$ URL/year for
five years!
Display for PV, alarms, and
operation or diagnostic messages!

Dimensions



Restrictions

j Available only with HART® digital output; Requires write protection enabled.

Ordering Instructions

Make one selection from each table section below. Follow the availability column down and check any restriction letters or notes to be sure the unit is available. A finished catalog number looks like this: STD7- - - - - S- - - - - A- - - - - 0000

Model Selection Guide

| Description | Catalog Number | Availability | Price |
|-------------------------------|---|--------------|-----------|
| Model | - 400 to 400 "H2O (4.0 to 400 "H2O) | ↓ | \$1597.00 |
| Range Limits | -100 to 100 PSI (1 to 100 PSI) | ↓ | 1797.00 |
| (Span) | -100 to 3000 PSI (30 to 3000 PSI) | ↓ | 1834.00 |
| Meter Body | Plated CS Head, 316L SS Diaphragm | A- - - - - | 0.00 |
| | 316 SS Head, 316L SS Diaphragm | E- - - - - | 91.00 |
| Fill Fluid | Silicone Oil (DC 200) | - 1- - - - - | 0.00 |
| | Fluorinated Oil CTFE | - 2- - - - - | 66.00 |
| Process Connection | None | - - A- - - - | 0.00 |
| | 1/2" NPT Female | - - H- - - - | 55.00 |
| Bolt/Nut Materials | Carbon Steel | - - - C- - - | 0.00 |
| | 316 SS | - - - S- - - | 55.00 |
| | Grade 660 (NACE A286), NACE 304 SS Nuts | - - - N- - - | 210.00 |
| Head Type/Vent/Drain Position | Single Ended | - - - - 1- - | 0.00 |
| | Single Ended, Side Drain and Vent | - - - - 2- - | 45.00 |
| | Single Ended, Side Drain, Center SS Vent | - - - - 3- - | 142.00 |
| | Dual Ended, End Drain and Vent | - - - - 4- - | 45.00 |
| | Dual Ended, End Drain, Center SS Vent | - - - - 5- - | 1428.00 |
| | Dual Ended | - - - - 6- - | 45.00 |
| Gasket | Teflon® or PTFE (Glass Filled) | - - - - AS- | 0.00 |
| | Viton® or Fluorocarbon Elastomer | - - - - BS- | 27.00 |
| | Graphite | - - - - CS- | 81.00 |
| Head/Connect Orientation | High Side Left, Low Side Right | 1- - - - | 0.00 |
| | Low Side Left, High Side Right | 2- - - - | 29.00 |
| | High Side Left, Low Side Right, 90° Head Rotation | 3- - - - | 29.00 |
| Approvals | No Approvals Required | 0- - - - | 0.00 |
| | FM Approved | A- - - - | 29.00 |
| | CSA Approved | B- - - - | 29.00 |
| | ATEX Approved | C- - - - | 29.00 |
| Electronic Housing | 1/2" NPT Aluminum | A- - - - | 0.00 |
| | 1/2" NPT Aluminum with Lightning Protection | C- - - - | 81.00 |
| Outputs | 4-20mA DC and HART® | - H- - - - | 77.00 |
| | 4-20mA DC and Honeywell DE | - D- - - - | 330.00 |
| Indicator and Interface | No Indicator or Buttons | - - 0- - - | 0.00 |
| | No Indicator, External Zero/Span Buttons | - - A- - - | 65.00 |
| | Indicator | - - B- - - | 225.00 |
| | Indicator, External Zero/Span/Config Buttons | - - C- - - | 350.00 |
| Failsafe/Write Protect | Fail Mode High | 11S-A- - | 0.00 |
| | Fail Mode Low | 12S-A- - | 27.00 |
| | Fail Mode High, Write Protect Enabled | 13S-A- - | 27.00 |
| | Fail Mode Low, Write Protect Enabled | 14S-A- - | 27.00 |
| Mounting Bracket | None | 0- - - - | 0.00 |
| | Angle Bracket, Carbon Steel | 1- - - - | 40.00 |
| | Angle Bracket, 304SS | 2- - - - | 94.00 |
| | Flat Bracket, Carbon Steel | 5- - - - | 40.00 |
| | Flat Bracket, 304SS | 6- - - - | 94.00 |
| Tagging | None | - 0- - - | 0.00 |
| | One Wired SS Tag (4 lines x 26 char/line) | - 1- - - | 29.00 |
| | Two Wired SS Tag (4 lines x 26 char/line) | - 2- - - | 40.00 |
| Conduit Plugs/Adapters | None | - - A0- | 0.00 |
| | 1/2" NPTM to 3/4" NPTF 316 SS Conduit Adapter | - - A2- | 245.00 |
| | 1/2" NPT 316 SS Certified Conduit Plug | - - A6- | 77.00 |
| | Minifast® 4 Pin (1/2" NPT) (not for X-Proof use) | - - A8- | 125.00 |
| Certificates | Calibration Test & Cert of Conformance (F3399) | F1- - - - | 40.00 |
| | Certificate of Origin (F0195) | F5- - - - | 29.00 |
| | FMEDA (SIL 2/3) Certification (FC3337) | FE- - - - | 29.00 |
| Documentation | Printed English User Manual | 34-ST-25-44 | 35.00 |
| | HART/DE Communications Manual | 34-ST-25-47 | 35.00 |
| | Safety Manual | 34-ST-25-37 | 35.00 |
| | Function Block Manual | 34-ST-25-49 | 35.00 |

Level Measurement Instruments

Flow Measurement Instruments

Pressure Transmitter

Temperature Sensors and Transmitters

Wireless Sensing and Communications

Analytical Instruments and Systems

STD800 SmartLine Differential Pressure Transmitter

Features

- Accuracies to 0.0375% of span
- Stability up to 0.01% URL per year for ten years
- Automatic static pressure & temperature compensation
- Maximum turndown ratio to 400:1
- Response times as fast as 90ms
- Alphanumeric display can be added or removed in the field
- External zero, span, and configuration capability
- On-board diagnostic capabilities
- World class overpressure protection
- Polarity-insensitive electrical connections
- Integral dual seal design for highest safety based on ANSI/NFPA 70-202 and ANSI/ISA 12.27.0
- Compliant to SIL 2/3 requirements
- Honeywell DE, HART v7.0 and Foundation Fieldbus communications options



**Replaces Retired
STD110, STD120,
STD130, and
STD170**

New!

Faster response, better accuracy and better stability than old ST3000 transmitters!

Specifications

Reference Accuracy: STD810: 0.0750% span; STD820: 0.0375% span; STD830/870: 0.05% span;

Stability (%URL/year for ten years): STD820: 0.010%; STD830: 0.040%; STD870: 0.030%

Temperature: Ambient: -40° to 185° F; Meter Body: -40° to 257° F; LCD: -4° to 158° F

Humidity: 0 to 100% RH

Vacuum Region Pressure: 1"WC min. absolute @ 2 hours at 158° F

Maximum Allowable Working Pressure (MAWP): 4500 PSI for temperatures -40° to 257° F. Static Pressure Limit is derated to 3000 PSI for -15° to -40° F. for all models. Use of graphite o-rings derates transmitter to 3625 PSI. Use of 1/2" process adaptors with graphite o-rings derates transmitter to 3000 PSI.

Analog Output: Two-wire, 4 to 20 mA (HART & DE Transmitters only)

Digital Communications: Honeywell DE, HART 7 protocol or FOUNDATION Fieldbus ITK 6.0.1 compliant

Output Failure: Normal Limits: 3.8 to 20.8 mA Honeywell standard, or 3.8 to 20.5 mA NAMUR NE 43 Compliant; Failure Mode: ≤3.6 mA and ≥21.0 mA

Supply Voltage: 10.8 to 42.4 VDC at terminals (IS versions limited to 30 VDC); Voltage Effect: 0.005% span per volt

Transmitter Turn-On Time: HART or DE: 2.5 seconds; Foundation Fieldbus: Host-dependent. Includes power up and test algorithms

Response Time (Delay + Time Constant): HART or DE: 90 ms; Foundation Fieldbus: 150 ms host-dependent

Damping Time Constant: HART: Adjustable from 0 to 32 seconds in 0.1 increments. Default: 0.50 seconds; DE: Discrete values 0, 0.16, 0.32, 0.48, 1, 2, 4, 8, 16, 32 seconds. Default: 0.48 seconds

Vibration Effect: Less than ±0.1% URL without damping. Per IEC60770-1 field or pipeline, high vibration level

Electromagnetic Compatibility: IEC 61326-3-1

Lightning Protection (Option): Leakage Current: 10uA max @ 42.4 VDC 93C

Materials: Barrier Diaphragms: 316L SS, Hastelloy® C-276, Monel® 400, Tantalum; Process Head: 316 SS, Carbon Steel (Zinc-plated), Hastelloy C-276; Vent/Drain Valves and Plugs: 316 SS, Hastelloy C-276; Head Gaskets: Glass-filled PTFE standard. Viton®, graphite optional; Meter Body Bolting: Zinc-Plated Carbon Steel standard. 316 SS, NACE A286 SS bolts, Monel K500, Super Duplex and B7M optional; Mounting Bracket: 2" Pipe, Carbon Steel (Zinc-plated) or 304 Stainless Steel; Fill Fluid: Silicone DC® 200 oil or CTFE; Electronic Housing: Pure polyester powder-coated low copper aluminum. Meets NEMA 4X, IP66, IP67. All stainless steel housing is optional.

Mounting: Can be mounted in virtually any position using a standard mounting bracket. Bracket is designed to mount on 2" vertical or horizontal pipe.

Process Connections: 1/4" NPT or 1/2" NPT with DIN adapter

Wiring: Accepts up to 16 AWG (1.5 mm diameter)

Enclosure: Type 4X, IP66, IP67

Communication/Diagnostics: HART 7, Foundation Fieldbus, Honeywell DE

Agency Approvals: FM/CSA: Explosion-Proof: Class I, Div 1, Groups A-D; Dust-Ignition Proof: Class II, III, Div 1, Groups E-G T4; Intrinsically Safe: Class I, II, III, Div 1, Groups A-G T4; Non-Incendive: Class I, Div 2, Groups A-D; ATEX: Flameproof: II 1/2 G Ex d IIC T4; Intrinsically Safe: II 1 G Ex ia IIC T4; Non-Incendive: II 3 G Ex na IIC T4; Enclosure: IP66/IP67

SIL 2/3 Certification: IEC 61508 SIL 2 for non-redundant use and SIL 3 for redundant use according to EXIDA and TÜV Nord Sys



STA800 SmartLine Absolute Pressure Transmitter

Features

- Accuracies to 0.055% of span
- Automatic temperature compensation
- Maximum turndown ratio to 100:1
- Response times as fast as 80ms
- Alphanumeric display can be added or removed in the field
- External zero, span, and configuration capability
- On-board diagnostic capabilities
- World class overpressure protection
- Integral dual seal design for highest safety based on ANSI/NFPA 70-202 and ANSI/ISA 12.27.0
- Polarity-insensitive electrical connections
- Compliant to SIL 2/3 requirements
- Honeywell DE, HART v7.0 and Foundation Fieldbus communications options



Replaces ST3000 models STA122, and STA140

Honeywell's new SmartLine® STA800 absolute pressure transmitters feature piezoresistive sensor technology combining pressure sensing with on-chip temperature compensation, for high accuracy, stability and performance over a wide range of application pressures and temperatures. The SmartLine family is also fully tested and compliant with Experion® PKS automation and control software platform, providing the highest level of compatibility assurance and integration capabilities.

The ST800 modular features a basic alphanumeric LCD display that can be added or removed in the field. For easier access and visibility, the display can be mounted and adjusted to 0, 90, 180, and 270 degree positions. The two-line, 16-character LCD can display any one of 16 standard engineering units plus square root output indication.

Suitable for all electrical and environmental requirements, SmartLine offers the ability to zero and span the transmitter from three externally accessible buttons. With the display option, these buttons also let you configure the transmitter and display.

Using a handheld Honeywell MCT202 configurator and Smartline transmitter two-way communications, you can field configure DE and HART devices. If you prefer, you can use Honeywell's SCT3000 configuration toolkit and a PC to configure Honeywell Digitally Enhanced (DE) instruments.

Field Device Manager (FDM) software and FDM Express are available for managing HART and Fieldbus device configurations. ST800 transmitters integrate with Honeywell's Experion PKS control software platform for tamper-reporting, FDM plant area views, and health summaries.

To help control maintenance and inventory costs, Honeywell ST800 transmitters are modular, giving you the ability to replace meter bodies, add indicators, or change electronics modules without affecting overall performance or approval certification.

Each meter body is uniquely characterized to provide in-tolerance performance over a range of varying temperatures and pressures. Because of Honeywell's advanced interface, electronic modules can be swapped without losing in-tolerance performance characteristics.

Specifications

Reference Accuracy: 0.055% span

Temperature: Ambient: -40° to 185° F; Meter Body: -40° to 257° F; LCD: -4° to 158° F

Humidity: 0 to 100% RH

Vacuum Region Pressure: 1" WC min. absolute @; 2 hours at 158° F

Maximum Allowable Working Pressure (MAWP): Units can withstand overpressure of 1.5 x MAWP without damage

Analog Output: Two-wire, 4 to 20 mA (HART & DE Transmitters only)

Digital Communications: Honeywell DE, HART 7 protocol or FOUNDATION Fieldbus ITK 6.0.1 compliant

Output Failure: Normal Limits: 3.8 to 20.8 mA Honeywell standard, or 3.8 to 20.5 mA NAMUR NE 43 Compliant; Failure Mode: ≤3.6 mA and ≥21.0 mA

Supply Voltage: 10.8 to 42.4 VDC at terminals (IS versions limited to 30 VDC); Voltage Effect: 0.005% span per volt

Transmitter Turn-On Time: HART or DE: 2.5 seconds; Foundation Fieldbus: Host-dependent. Includes power up and test algorithms

Response Time (Delay + Time Constant): HART or DE: 80 ms; Foundation Fieldbus: 150 ms host-dependent

Damping Time Constant: HART: Adjustable from 0 to 32 seconds in 0.1 increments. Default: 0.50 seconds; DE: Discrete values 0, 0.16, 0.32, 0.48, 1, 2, 4, 8, 16, 32 seconds. Default: 0.48 seconds

Vibration Effect: Less than ±0.1% URL without damping. Per IEC60770-1 field or pipeline, high vibration level

Electromagnetic Compatibility: IEC 61326-3-1

Lightning Protection (Option): Leakage Current: 10uA max @ 42.4 VDC 93C

Materials: Barrier Diaphragms: 316L SS, Hastelloy® C-276, Monel® 400, Tantalum; Process Head: 316 SS, Carbon Steel (Zinc-plated), Hastelloy C-276; Vent/Drain Valves and Plugs: 316 SS, Hastelloy C-276; Head Gaskets: Glass-filled PTFE standard. Viton®, graphite optional; Meter Body Bolting: Zinc-Plated Carbon Steel standard. 316 SS, NACE A286 SS bolts; Mounting Bracket: 2" Pipe, Carbon Steel (Zinc-plated) or 304 Stainless Steel; Fill Fluid: Silicone DC® 200 oil or CTFE; Electronic Housing: Pure polyester powder-coated low copper aluminum. Meets NEMA 4X, IP66, IP67. All stainless steel housing is optional.

Mounting: Can be mounted in virtually any position using a standard mounting bracket. Bracket is designed to mount on 2" vertical or horizontal pipe.

Process Connections: 1/2" NPT with DIN adapter

Wiring: Accepts up to 16 AWG (1.5 mm diameter)

Enclosure: Type 4X, IP66, IP67

Communication/Diagnostics: HART 7, Foundation Fieldbus, Honeywell DE

Agency Approvals: FM/CSA: Explosion-Proof: Class I, Div 1, Groups A-D; Dust-Ignition Proof: Class II, III, Div 1, Groups E-G T4; Intrinsically Safe: Class I, II, III, Div 1, Groups A-G T4; Non-Incendive: Class I, Div 2, Groups A-D; ATEX: Flameproof: II 1/2 G Ex d IIC T4; Intrinsically Safe: II 1 G Ex ia IIC T4; Non-Incendive: II 3 G Ex nA IIC T4; Enclosure: IP66/IP67

SIL 2/3 Certification: IEC 61508 SIL 2 for non-redundant use and SIL 3 for redundant use according to EXIDA and TÜV Nord Sys



Fully modular!
Don't take the transmitter out of service to swap modules, add a digital interface, or replace parts.

STG700 SmartLine Gauge Pressure Transmitter

Features

- Accuracies to 0.065% of span
- Stability up to 0.02% URL per year for 5 years
- Maximum turndown ratio to 100:1
- Response times as fast as 100ms
- Alphanumeric display capabilities
- External zero, span, and configuration capability
- On-board diagnostic capabilities
- World class overpressure protection
- Compliant to SIL 2/3 requirements
- Polarity-insensitive electrical connections
- Automatic temperature compensation
- Integral dual seal design for highest safety based on ANSI/NFPA 70-202 and ANSI/ISA 12.27.0
- Honeywell DE, HART v7.0 and Foundation Fieldbus communications options



Replaces retired models
STG90L, STG94L,
STG974, and STG97L

Honeywell's new SmartLine® STG700 and STG670L are suitable for monitoring, control and data acquisition. STG70X products feature piezoresistive sensor technology combining pressure sensing with on chip temperature compensation capabilities providing high accuracy, stability and performance over a wide range of application pressures and temperatures. The SmartLine family is also fully tested and compliant with Experion® PKS automation and control software platform, providing the highest level of compatibility assurance and integration capabilities.

The ST700 modular features a basic alphanumeric LCD display that can be added or removed in the field. For easier access and visibility, the display can be mounted and adjusted to 0, 90, 180, and 270 degree positions. The two-line, 16-character LCD can display any one of 16 standard engineering units plus square root output indication.

Suitable for all electrical and environmental requirements, SmartLine offers the ability to zero and span the transmitter from three externally accessible buttons. With the display option, these buttons also let you configure the transmitter and display.

Using a handheld Honeywell MCT202 configurator and Smartline transmitter two-way communications, you can field configure DE and HART devices. Or, if you prefer, you can use Honeywell's SCT3000 configuration toolkit and a PC to configure Honeywell Digitally Enhanced (DE) instruments. Field Device Manager (FDM) software and FDM Express are available for managing HART and Fieldbus device configurations. ST700 transmitters integrate with Honeywell's Experion PKS control software platform for tamper-reporting, FDM plant area views, and health summaries.

To help control maintenance and inventory costs, Honeywell ST700 transmitters are modular, giving you the ability to replace meter bodies, add indicators, or change electronics modules without affecting overall performance or approval certification.

Each meter body is uniquely characterized to provide in-tolerance performance over a range of varying temperatures and pressures. Due to the Honeywell advanced interface, electronic modules may be swapped with any electronics module without losing in-tolerance performance characteristics.

Specifications

Reference Accuracy: 0.065% span

Stability (%URL/year for five years): 0.020%

Temperature: Ambient: -40° to 185° F; Meter Body: -40° to 257° F; LCD: -4° to 158° F

Humidity: 0 to 100% RH

Vacuum Region Pressure: 1"WC min. absolute @ 2 hours at 158° F

Maximum Allowable Working Pressure (MAWP): Units can withstand overpressure of 1.5 x MAWP without damage

Analog Output: Two-wire, 4 to 20 mA (HART & DE Transmitters only)

Digital Communications: Honeywell DE, HART 7 protocol or FOUNDATION Fieldbus ITK 6.0.1 compliant

Output Failure: Normal Limits: 3.8 to 20.8 mA Honeywell standard, or 3.8 to 20.5 mA NAMUR NE 43 Compliant; Failure Mode: ≤3.6 mA and ≥21.0 mA

Supply Voltage: 10.8 to 42.4 VDC at terminals (IS versions limited to 30VDC); Voltage Effect: 0.005% span per volt

Transmitter Turn-On Time: HART or DE: 2.5 seconds; Foundation Fieldbus: Host-dependent. Includes power up and test algorithms

Response Time (Delay + Time Constant): HART or DE: 100 ms; Foundation Fieldbus: 150 ms host-dependent

Damping Time Constant: HART: Adjustable from 0 to 32 seconds in 0.1 increments. Default: 0.50 seconds; DE: Discrete values 0, 0.16, 0.32, 0.48, 1, 2, 4, 8, 16, 32 seconds. Default: 0.48 seconds

Vibration Effect: Less than ±0.1% URL without damping. Per IEC60770-1 field or pipeline, high vibration level

Electromagnetic Compatibility: IEC 61326-3-1

Lightning Protection (Option): Leakage Current: 10uA max @ 42.4VDC 93C

Materials: Barrier Diaphragms: 316L SS, Hastelloy® C-276, Monel® 400, Titanium; Process Head: 316 SS, Carbon Steel (Zinc-plated), Hastelloy C-276; Vent/ Drain Valves and Plugs: 316 SS, Hastelloy C-276; Head Gaskets: Glass-filled PTFE standard. Viton®, graphite optional; Meter Body Bolting: Zinc-Plated Carbon Steel standard. 316 SS, NACE A286 SS bolts; Mounting Bracket: 2" Pipe, Carbon Steel (Zinc-plated) or 304 Stainless Steel; Fill Fluid: Silicone DC® 200 oil or CTFE; Electronic Housing: Pure polyester powder-coated low copper aluminum. Meets NEMA 4X, IP66, IP67, and NEMA 7. All stainless steel housing is optional.

Mounting: Can be mounted in virtually any position using a standard mounting bracket. Bracket is designed to mount on 2" vertical or horizontal pipe.

Process Connections: 1/2" NPT or 1/2" NPT with DIN adapter

Wiring: Accepts up to 16 AWG (1.5 mm diameter)

Enclosure: Type 4X, IP66, IP67

Communication/Diagnostics: HART 7, Foundation Fieldbus, Honeywell DE



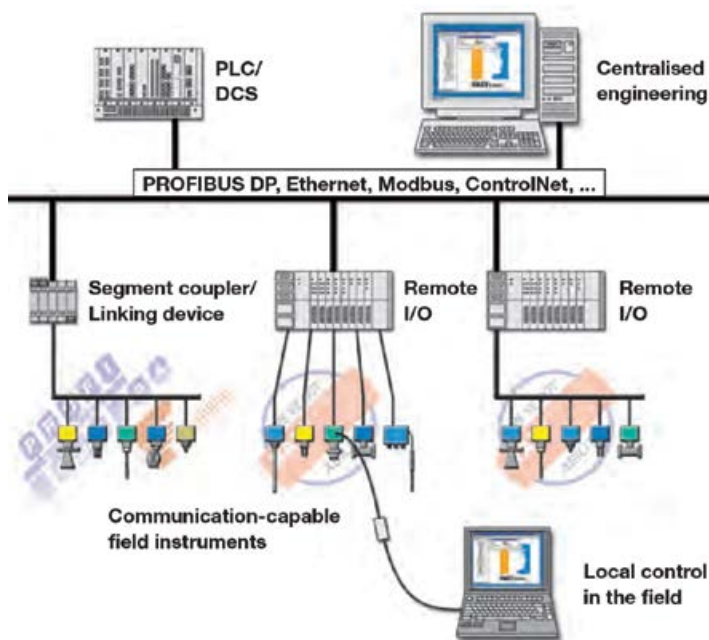
Agency Approvals: FM/CSA: Explosion-Proof: Class I, Div 1, Groups A-D; Dust-Ignition Proof: Class II, III, Div 1, Groups E-GT4; Intrinsically Safe: Class I, II, III, Div 1, Groups A-GT4; Non-Incendive: Class I, Div 2, Groups A-D; ATEX: Flameproof: II 1/2 G Ex d IIC T4; Intrinsically Safe: II 1 G Ex ia IIC T4; Non-Incendive: II 3 G Ex nA IIC T4; Enclosure: IP66/IP67

SIL 2/3 Certification: IEC 61508 SIL 2 for non-redundant use and SIL 3 for redundant use according to EXIDA and TÜV Nord Sys



Fully modular!
Don't take the transmitter out of service to swap modules, add a digital interface, or replace parts.

PACTware Configuration Software for Field Instruments



What is PACTware?

PACTware is a manufacturer and fieldbus-independent software for operating field instruments.

Up to now it was often necessary to use several different manufacturer-specific programs to operate different field instruments to the full extent. This is no longer necessary, because PACTware enables adjustment of any and all field instruments with only one software tool.

PACTware uses a standardised interface between the frame program and the individual software modules for instrument operation. This interface is known as FDT; the software modules for instrument adjustment are called DTM's. This configuration makes modern and user-friendly adjustment concepts possible because the interface for instrument adjustment is optimally adapted to each instrument.

Furthermore, you can communicate with PACTware not only via HART but also via any standard field bus system. To this end, different so-called "communication DTM's" are available. In PACTware, these instrument and communication DTM's are assembled individually according to the given requirements.

PACTware enables open, comprehensive adjustment of different field instruments via any bus system.

For which fieldbuses is PACTware suitable?

PACTware can be implemented in process as well as plant automation. The prerequisite is a bus system that can transmit, apart from actual values (process data), also parameter adjustment data. Communication DTM's are already available for the following fieldbuses and communication types:

- HART®
- Modbus standard communication (RS232)
- Ethernet
- PROFIBUS PA
- Foundation Fieldbus
- ControlNET
- DeviceNET/CIP
- AS-Interface
- Interbus
- Various proprietary networks



Download the software and drivers free. All you need to buy is a HART® modem!

HART communications without busting the budget



Dan Weise,
Product Specialist

The HART communication protocol has been firmly established as the standard means of configuring field instruments for some years. But talking to a field instrument needs a communicator.

There are the handheld communicators, Rosemount's x75s and the "budget-priced" Meriam MFC 4150, but at a cost that's more a capital appropriation than an MRO expense. Even the Meriam, with a 3-year field device description subscription starts at more than \$4000. People ask if there isn't a more budget conscious approach to HART configuration.

There is: Pactware, a Windows application software that can talk HART to field instruments. It's a free download with NO licensing fee.

Before you get started, here's what you need to make it work

- **Software:** I use the Krohne version. It runs in both XP and Windows 7 (32-bit). <http://www.pactware.com/en/products/pactware.html>
- **A HART modem, to connect your PC to the field device:** I use the Viator USB HART modem from MACTek. It runs about \$500.
- **Download two files:** The first is a basic HART driver (called a DTM) that enables and manages HART communications through a HART modem. <http://www.codewrights.biz/>
- **A driver (DTM) for each model field instrument:** Instrument manufacturers are responsible for providing DTM's. Ask the manufacturer whether a DTM is available, and where to download it.

HART needs at least 230 ohms of loop resistance to operate, when trying to connect with an instrument on the shop bench, be sure to put a resistor in the loop, it won't communicate with just an instrument and a power supply.

A laptop with a HART modem is not usable in hazardous areas, but the nature of HART allows communication without being directly connected to the instrument. It works fine connected at the marshalling panel, control panel, or wherever wiring terminations for loop can be found.

The power of PC offers two key advantages over a handheld.

- The configuration parameters are listed in an overview form:
- On a PC, the graphics can offer more than a handheld, like echo profiles for non-contact radar or ultrasonic level instruments:

So, if you think a HART handheld is a budget-buster in your world, consider Pactware and a HART modem as your HART communications tool.

How is PACTware different from other engineering tools?

- A lean, efficient tool for parameter adjustment of field instruments
- Intuitive adjustment, diagnostics and asset management functionality
- Can be equipped with additional functionality via so called "add-ins"
- Supports the full range of functions of all field instruments
- Offers diagnostics and asset management functionality
- Simplifies setup in automation
- Software is free of charge — all you need is a HART® modem!

Connection Devices

| Description | | Catalog Number | Price |
|--------------|------------------------|----------------|----------|
| HART® Modems | Siemens USB HART Modem | 7MF4997-1DB | \$706.00 |

Illinois, Indiana, Missouri, and Iowa
Phone: 800-953-7626 • 630-595-8400
Fax: 630-595-2386

Lesman Instrument Company
www.lesman.com
sales@lesman.com

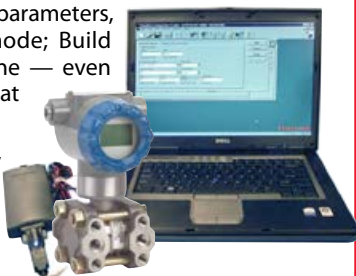
Wisconsin, and Upper Peninsula Michigan
Phone: 800-837-1700 • 262-923-1790
Fax: 262-923-1797

V01.2019 **PROGRAMMING TOOLS** 95 **L**

Honeywell Programming Tools for Smart Transmitters

SCT3000 Smart Configuration Toolkit

- For Honeywell smart pressure and smart temperature transmitters, SMV3000 multivariable transmitters, and MagneW flowmeters
- Use on-line mode for field configuration, device diagnostics, calibration, displaying device parameters, selecting communications mode; Build and store configurations offline — even before the transmitter arrives at your plant
- Kit includes DE/HART® modem, RS-232 cable (50032086-001), specified cable length, installation guide and software



Model Selection Guide

| Description | Catalog Number | Price |
|---------------------------------------|--------------------|-----------|
| Configuration Toolkit, 6-Ft Cable | SCT101-002-44-XXXX | \$4732.00 |
| Configuration Toolkit, 20-Ft Cable | SCT101-012-44-XXXX | 4785.00 |
| SCT3000 Cable Kit, Installation Guide | 50033453-501 | 294.00 |

Left to Right: Rugged field-hardened unit (no approvals), Zone 1/Div 1 version, Zone 2/Div 2 version.



MC Toolkit Handheld Configurator

- Configures any Honeywell DE device: ST3000 pressure and STT3000 temperature transmitters and configures any HART® device with a published HART Device Descriptions (DD), regardless of device manufacturer
- Comes fully loaded with complete set of HART® device descriptions. Download new device descriptions from the HART website, or get the latest DD releases from the manufacturer's website
- Intuitive user interface provides simple navigation, with detailed explanations
- Fully supports all HART 5.X commands and universal commands for HART 6, Uses DD-IDE/SDC 625 technology and Open Tools standard

Specifications

Pocket PC: i.roc 627 (HP iPAQ hx2490 or equivalent) with Intel PXA270 520 MHz processor, 128 MB ROM and 64 MB SDRAM, 1GB flash memory, MS Windows Mobile 5.0 OS, 3.5" TFT color touchscreen, LED backlight

Operating Conditions: Temperature: 14° to 122° F; Humidity: 10 to 90% RH

Power: Rechargeable Lithium-Ion battery. AC power options accept 90-264 VAC inputs.

Memory Requirements: Approx. 51MB (includes all HART registered DDs). MC Toolkit software, including SDC 625 and HART DD files, are loaded on flash memory card. Flash memory card in the MCT202 is not removable.

Approvals: European EMC Standards: EEC Directive 89/336 (EMC), CE Mark; FM C-US: Intrinsically Safe Class I, Div 1 Group A-D; Non-incendive Class I, Div 2 Group A-D; ATEX: Intrinsically Safe Ex II 2G EEx ia IIC T4, Type n; Ex II 3G EEx nL IIC T4, Dust ignition proof Ex II 2DT99oC IP65; Ex II 3DT55oC IP65

Kit includes Pocket PC hardware, two stylus pens, LGx10 charger, integrated HART/DE modem, USB interface kit with charger cable, 4-foot transmitter connector cable, clips, and user manual CD-ROM

Model Selection Guide

| Description | Catalog Number | Price |
|---|---|------------|
| MC Toolkit Rugged Communications Configurator | MCT404- | \$8099.00 |
| Zone 1 | None | ZZ 0.00 |
| Div 1 | FM Intrinsically Safe, Dust-Ignition-Proof | XF 1596.00 |
| Approvals | ATEX Intrinsically Safe, Dust-Ignition-Proof | XA 1644.00 |
| | IECEx Intrinsically Safe, Dust-Ignition-Proof | XI 1644.00 |
| Universal Power Adapter, Printed User Manual | 00-UM | 22.00 |

Note: Not suitable for programming the Honeywell SMV3000 smart multivariable mass flowmeter. Please see SCT3000 smart configuration toolkit.



Meriam MFC 5150 HART® Handheld Communicator

- Full QWERTY keyboard
- Just 15 seconds from power-up to use!
- General purpose and intrinsically safe models available
- No annual subscription required for firmware or DDF updates
- 8GB SD card holds DD files for more than 1200 compatible field instruments
- Replaces retired MFC 4150
- Rechargeable Lithium Ion batteries; Average 10 hour continuous use
- Document and store, clone, upload, and download; Offline mode for editing and reviewing configurations
- Update firmware and device files for free for HART devices from Meriam's website

Model Selection Guide

| Description | Catalog Number | Price |
|--|----------------|-----------|
| Communicator — No Download Subscription Required Ever! | | |
| General Service HART Communicator | MFC5150 | \$5300.00 |
| Intrinsically Safe HART Communicator | MFC5150X | 5750.00 |

All communicator kits include: Handheld communicator, charger/USB dock, PC utility software, USB cable, HART leads, carrying case, and wrist strap.

View the field device list at www.Meriam.com

Select Resources > Download Center > Available DOFs.

Level Measurement Instruments

Flow Measurement Instruments

Pressure Transmitter

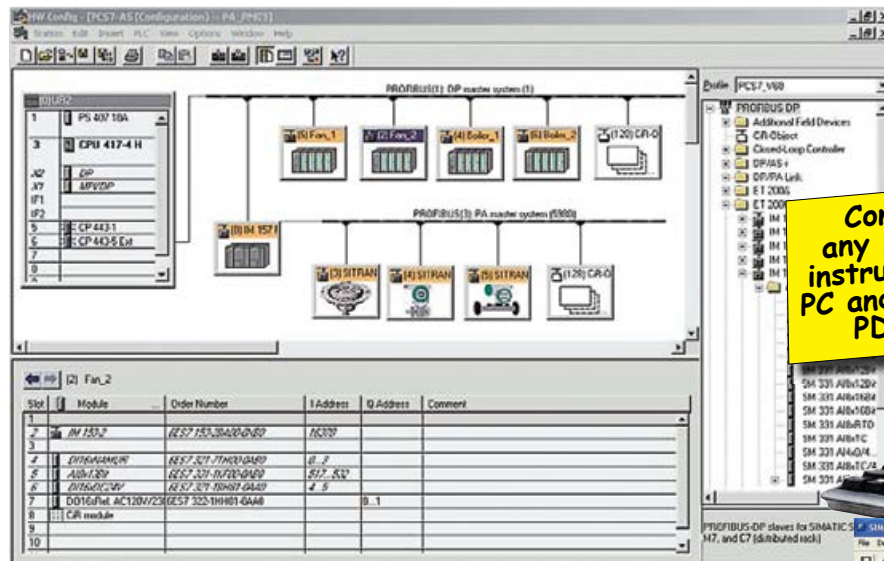
Temperature Sensors and Transmitters

Wireless Sensing and Communications

Analytical Instruments and Systems

SIMATIC PDM Configuration and Diagnostic Software

SIEMENS



Configure just about any HART®-compatible instrumentation with your PC and Siemens' SIMATIC PDM software tool!

SIMATIC PDM (Process Device Manager) is a universal tool for configuration, parameter assignment commissioning, diagnostics and maintenance of intelligent process devices and automation components.

With SIMATIC PDM, you can use one software program to configure a number of field devices by different manufacturers using a single user interface. Process device data can be easily set, changed, checked for plausibility, managed and simulated. In addition, you can monitor selected process values, alarms and status signals of devices online.

Major Advantages at a Glance

- Simple, operating system-independent integration of field devices based on device descriptions (e.g. HART DD)
- Similar visualization of all field devices
- Provides basic functions (e.g. export, data comparison, printing) for all field devices
- Communication with PROFIBUS DP/PA, HART, or Modbus
- No configuration knowledge required for parameter assignment and diagnostics of field devices via the LifeList.
- Type-independent and cross-manufacturer field device parameter assignment and diagnostics
- Support of comprehensive field device-specific functions (simulation, measuring circuit test, characteristics curve definitions, calibration functions, documentation etc.) which can form the overall characteristics of field device manufacturers

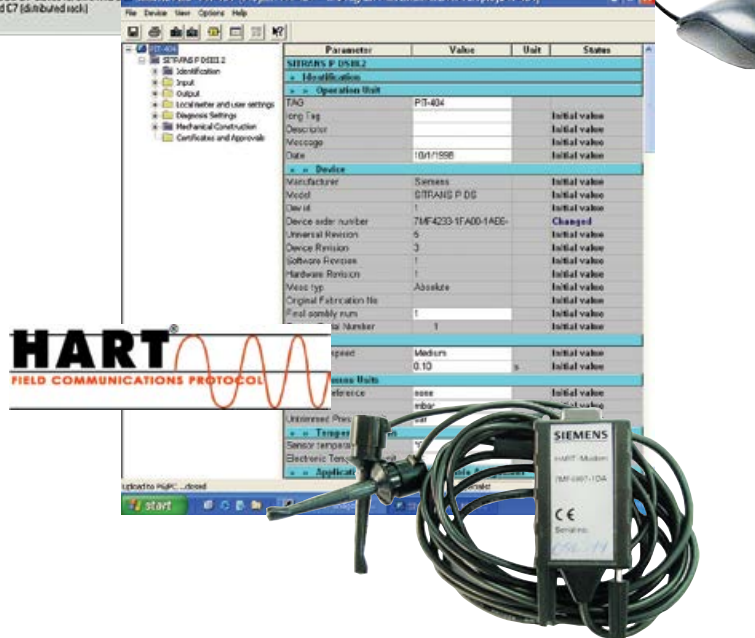
Device Integration

SIMATIC PDM is the most efficient process device manager on the world market. With SIMATIC PDM you can assign parameters to more than 1,000 different field devices by over 150 manufacturers worldwide and new field devices are constantly being added to the list.

The electronic device descriptions (EDD) are either on the supplied CD of SIMATIC PDM or can be obtained from the field device manufacturer on a diskette or via the Internet. Using import functions, you can easily integrate new field device descriptions or corrections into SIMATIC PDM anytime.

User Interface

The SIMATIC PDM user interface offers menu structures and toolbars as well as an Explorer view that makes navigation between parameter groups easier. You can easily navigate in highly complex stations, such as Remote I/Os, up to connected field devices.



Model Selection Guide

Issue all orders to Siemens Industry, Inc
c/o Lesman Instrument Company.

| Description | Catalog Number | Price |
|--|--------------------|----------|
| SIMATIC PDM v9.1 Software for Configuration, Commissioning, and Diagnostics of Intelligent Field Devices (Supports Profibus and HART®) | | |
| SIMATIC PDM with 1 Tag | 6ES7658-3HA58-0YA5 | \$101.00 |
| SIMATIC PDM with 4 Tags | 6ES7658-3AB68-0YA5 | 805.00 |
| 10 Additional SIMATIC PDM Tags | 6ES7658-3XC00-0YA5 | 182.00 |
| 100 Additional SIMATIC PDM Tags | 6ES7658-3XD00-0YA5 | 1700.00 |

Need to add tags and expand your capabilities? Looking for license upgrade packs? Call Lesman for pricing.

Connection Devices

| Description | | Catalog Number | Price |
|--------------|------------------------|----------------|----------|
| HART® Modems | Siemens USB HART Modem | ZMF4997-1DB | \$706.00 |