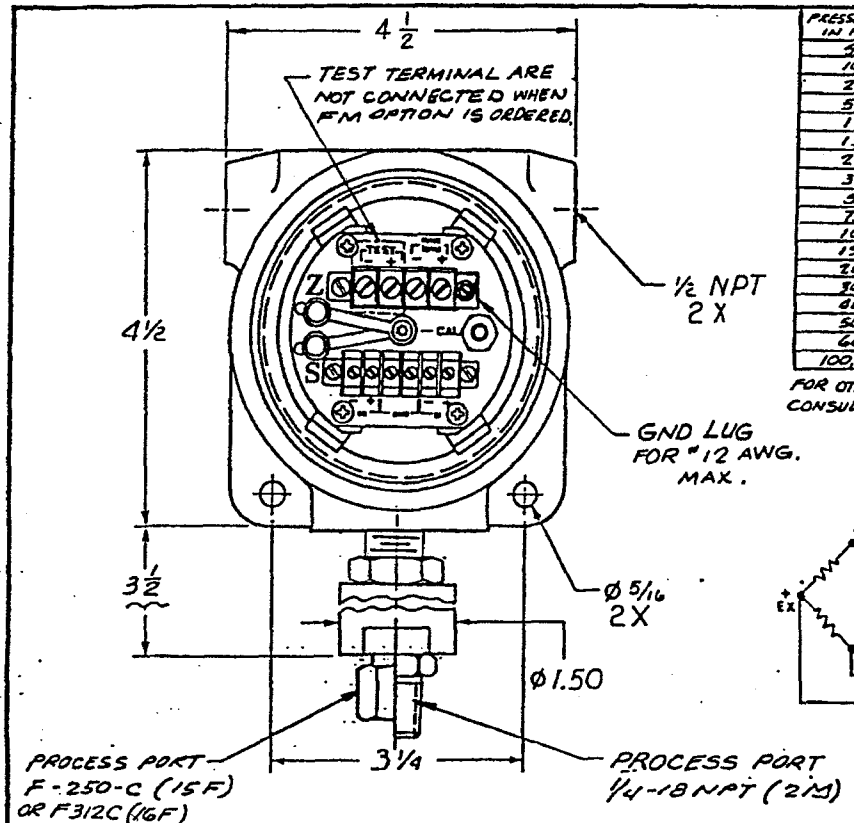
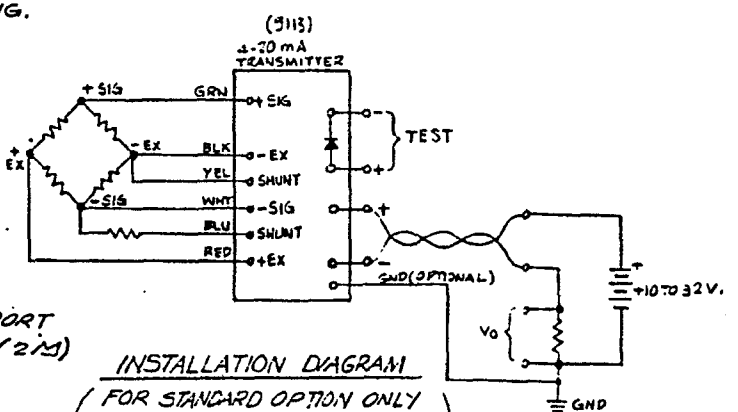



| PRESSURE RANGE IN PSI | PROCESS CONNECTIONS |
|---|---|
| 50 | 2M |
| 100 | 2M |
| 250 | 2M |
| 500 | 2M |
| 1000 | 2M |
| 1500 | 2M |
| 2000 | 2M |
| 3000 | 15F |
| 5000 | 15F |
| 7500 | 15F |
| 10000 | 15F |
| 15000 | 15F |
| 20000 | 15F |
| 30000 | 15F |
| 40000 | 15F |
| 50000 | 15F |
| 60000 | 15F |
| 100,000 | 16F |

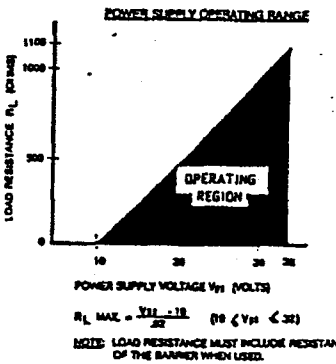
FOR OTHER RANGES AND PROCESS CONNECTIONS CONSULT FACTORY.

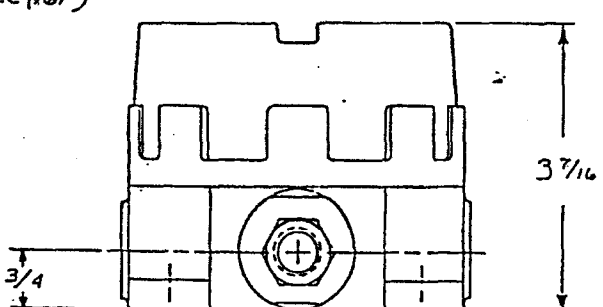
| REVISIONS | | | | |
|---|---|---|---|---|
| ECN | LTR | DESCRIPTION | DATE | APPROVED |
| — | G | REVISED & REDRAWN RM | 6-25-87 | |
| — | H | REVISED & REDRAWN RM | 6-3-88 | |
| — | J | REVISED PER ECR# 242 RM | 4-27-89 | |
| — | K | REVISED PER ECR# 388 RM | 3-12-90 | |
| — | L | REVISED PER ECR# 426 | 7-2-90 | |
| — | M | REVISED PER ECR# 476 | 10-9-90 | |
| — | N | REVISED PER ECR# 506 | 1-9-91 | |
| — | P | REVISED PER ECR# 525 | 2-6-91 | |




INSTALLATION DIAGRAM

(FOR STANDARD OPTION ONLY FOR FM OPTION, REFER TO NOTE 3 △3)




△3. FOR FM OPTION, REFER TO CONTROL DWG. 10990 FOR INSTALLATION

2. HOW TO ORDER SEE SHT. 2 OF 3.

1. FOR TECHNICAL SPECIFICATION SEE SHEET 3 & 4 (TS65072) OF THIS DRAWING.

NOTES

**NOTICE**

ANY REVISION TO THIS DOCUMENT REQUIRES PRIOR APPROVAL BY "FACTORY MUTUAL".

| ITEM NO. | QTY REQD | PART OR IDENTIFYING NO. | MATERIAL SIZE, DESCRIPTION AND SPECIFICATION |
|---|---|---|---|

LIST OF MATERIALS

| NEXT ASSY | USED ON |
|---|---|
| APPLICATION | |

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCE ON DIMENSIONS:
DECIMAL: 2 PLACE ± .01; 3 PLACE ± .005; 4 PLACE ± .0005
SURFACE FINISH 63/
ANGULAR ± 1/2°
MATERIAL
FINISH

CONTRACT NO.

| | | DATE |
|---|---|---|
| APPROVED | | |
| CHECKED | Y.L. | 4-24-89 |
| DRAWN | R.N. | 4-25-89 |
| APPROVED | | 5-9-89 |
| APPROVED | | 5-16-89 |

PRECISE SENSORS INC.
235 W CHESTNUT AVE. MONROVIA, CALIF. 91016

PRESSURE TRANSMITTER, EXPLOSION PROOF HOUSING 4-20 mA.

| SIZE | CODE IDENT NO. | NUMBER | REV. |
|---|---|---|---|
| B | 52573 | 9113 | P |

SCALE 1/2 SHEET 1 of 4

# HOW TO ORDER

**9113 - XXX - X - X - X - X**

**MODEL NUMBER**

9113 Basic Model Number

**ENTER PRESSURE RANGE**

(See table)

**ENTER ENGINEERING UNITS**

01 . . . . . PSI
or customer specified

**ENTER ZERO REFERENCE**

G . . . . . Gage (PSIG) (gage calibration with sensor sealed from moisture)
S . . . . . Sealed (PSIS)
A . . . . . Absolute (PSIA)

**ENTER PROCESS CONNECTION**

2M . . . . . 1/4–18 NPT Male (50 thru 10,000 psi)
15F . . . . . F250C, A.E. (250 thru 60,000 psi)
16F . . . . . F312C, A.E. (100,000 psi) Note: Not available with Option "FM".

**ENTER OPTION**

S2 . . . . . Hydrogen and sour gas compatible (meets NACE MR-01-75)
S4 . . . . . Hastelloy C276, sour gas compatible (meets NACE MR-01-75)
250 to 12,500 psi. (Available with 15F only).
S10 . . . . . Improved accuracy ± 0.10% of span (100 to 20,000 psi)
FM . . . . . Intrinsically safe approval for Class I, II and III, DIV 1,
Groups A, B, C, D, E, F and G.
S3 . . . . . NIST traceable 13 point calibration certification

| SIZE | FSCM NO. | DWG. NO. | REV. |
|---|---|---|---|
| A | 52573 | 9113 | P |
| SCALE | | SHEET 2 OF 4 | |

BISHOP GRAPHICS/ACCUPRESS
REORDER NO. A44893

# SPECIFICATIONS 4-20 mA TRANSMITTER

## PERFORMANCE SPECIFICATIONS

| | |
|---|---|
| Linearity & Hysteresis (Terminal Base Linearity) | Less than ± 0.25% of span<br>Less than ± 0.10% of span, specify Option S10 (100 thru 20,000 psi) |
| Repeatability | Within ± 0.08% of calibrated span |
| Resolution | Infinite |
| Compensated Temperature Range | 0°F (−17°) to 160°F (71.1°C) |
| Operating Temperature Range | −13°F (−25°C) to +185°F (85°C) |
| Thermal Effect | All ranges will have a combined zero and span thermal error (an algebraic sum) of less than ± 0.50% reference to 72°F (22°C) over CTR. |
| Response Time | Less than 3 milliseconds from 10 to 90% step change |
| Stability | Better than ± 0.25%, 6 months. |

## ELECTRICAL SPECIFICATIONS

| | |
|---|---|
| Transducer Type | 4 Active Arm Bonded Strain Gage |
| Current Output | 4 to 20 mA |
| Current Limiting | 28 mA (typical) |
| Supply Voltage | +10 to +32 VDC, unregulated |
| Power Supply Effect | Less than ± 0.005% per volt change @ 100% of calibrated span |
| Insulation Resistance | 1000 Megohms min. @ 50 VDC to transmitter case |
| Zero Adjustable | ± 3% of span |
| Span Adjustable | ± 10% of span |
| Shunt Calibration | 80% ± 5% of span<br>NOTE: Specific value noted on Calibration Sheet. |

| | |
|---|---|
| Loop Resistance | 0 Ohms @ 10 VDC to 1100 Ohms @ 32 VDC |
| Circuit Protection | Reversed polarity protection |
| Hazardous Classification (Option FM) | "FM" intrinsically safe with entity approval for Class I, II and III, DIV 1, Groups A, B, C, D, E, F and G. "FM" File No. 3R5A9.AX (3610). **Transmitter Output Parameter:** Vmax. = 32V, Imax. = 28 mA, Ci = 0.052 µF, Li = 0.00µH. (Note: The interconnection cable capacitance and inductance added to the transmitter parameter must not exceed the values specified for the barrier in use). |

## MECHANICAL SPECIFICATIONS

| | |
|---|---|
| Pressure Range | See Pressure Table |
| Proof Pressure | 150% F.S. without exceeding specified tolerances |
| Burst Pressure (Standard) | Greater than 3 times F.S. or 150,000 psi, which ever is less. |
| Option S4 | 2 times<br><br>NOTE: Burst Pressure limited to process connection and not inclusive of customer interface connection. |
| Wetted Material (Standard) | A286 body and 316 process connection, hydrogen compatible. |
| Option S2 | A286 body and 316 process connection. Hydrogen and sour gas compatible (meets NACE MR-01-75). |
| Option S4 | Hastelloy C276 body and process connection, sour gas compatible (meets NACE MR-01-75). |
| Weight | 50 oz. (approx.) |
| Explosion-proof Classification | Suitable for use in hazardous locations Class I, Groups B, C and D, Class II, Groups E, F and G, Class III, NEMA 4, NEMA 7. |

## OPTIONS

| | |
|---|---|
| S3 | NIST traceable 13 point calibration certification. |

NOTE: Transmitter supplied with NIST traceable Certificate of Conformance.

| SIZE | FSCM NO. | DWG. NO. | REV. |
|---|---|---|---|
| A | 52573 | 9113 | P |
| SCALE | TS65072 | SHEET 4 OF 4 | |