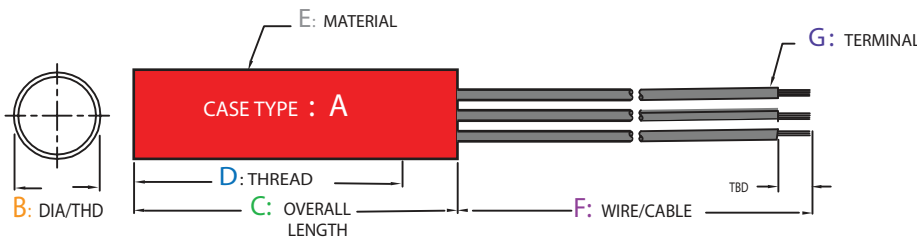


# HP Part Number Nomenclature

The standard part number includes the sensor type, case type, case diameter, terminal type as well as any special modifications.

Please contact Sensoronix if you need more detailed information.



| CASE TYPES | DESCRIPTION      | A |
|------------|------------------|---|
|            | SMOOTH           | 0 |
|            | ALL THREAD       | 1 |
|            | HEX HEAD         | 2 |
|            | KNURL HEAD       | 3 |
|            | CONNECTOR HEAD   | 4 |
|            | WRENCH FLAT HEAD | 5 |
|            | SMOOTH / THREAD  | 6 |
|            | WITH FLANGE      | 7 |

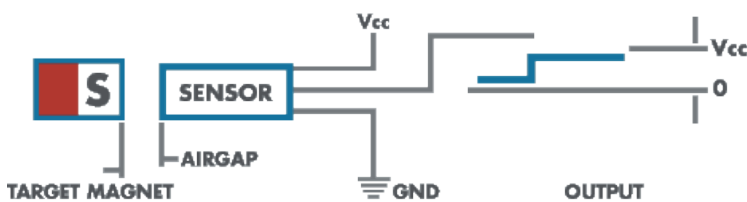
|                         |    |               |    |   |   |   |   |   |                                 |   |
|-------------------------|----|---------------|----|---|---|---|---|---|---------------------------------|---|
|                         |    | HP            | X  | X | X | - | X | X | 0                               |   |
| Proximity Switch Sensor |    |               |    |   |   |   |   |   | Fixed Number (0)                |   |
| Case Type               |    |               |    |   |   |   |   |   | Vary With Special Modifications |   |
| Case Diameter "B"       |    |               |    |   |   |   |   |   | Terminal "G"                    |   |
| 1/4" (0.250")           | 2X | <b>METRIC</b> |    |   |   |   |   |   | Connector                       | 0 |
| 3/8" (0.375")           | 3X | M-8           | 08 |   |   |   |   |   | Conn. & Wire                    | 1 |
| 15/32" (0.468")         | 4X | M-12          | 12 |   |   |   |   |   | Conn. & Cable                   | 2 |
| 1/2" (0.500")           | 5X | M-16          | 16 |   |   |   |   |   | Lead Wires                      | 3 |
| 5/8" (0.625")           | 6X | M-18          | 18 |   |   |   |   |   | Cables                          | 4 |
| 3/4" (0.750")           | 7X | M-20          | 20 |   |   |   |   |   |                                 |   |
| 7/8" (0.875")           | 8X | M-22          | 22 |   |   |   |   |   |                                 |   |
| Others                  | 9X |               |    |   |   |   |   |   |                                 |   |



# Hall Effect Proximity Switch Sensor (HP)



Non-contact magnetic sensor proximity switch produces a digital output. The output produced by Hall-Effect Proximity Switch sensor switches between logic low (operate point) and logic high (release point) with presence and absence of a magnet as a target. The built-in hysteresis circuitry allows clean switching of the output even in the presence of external mechanical vibration and electrical noise.



Target: Magnet

Frequency: 0-100 kHz Max

Output Type: Digital (Square Wave) TTL compatible

## Magnetic Characteristics

| Parameters               | TYP<br>"Gauss" |
|--------------------------|----------------|
| Magnetic Operating Point | 25 -180        |
| Magnetic Release Point   | 5 - 140        |
| Magnetic Hysteresis      | 7 - 40         |

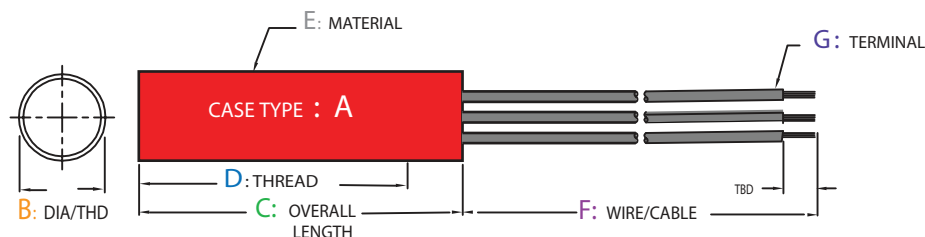
## Example of Common Applications

### Robotics, Automotive, Aerospace, Oil & Gas

**Applications:** Cars Door Limit Switch, Boats, Airplanes Door Lock, Helicopter Propeller Speed Measurement, Wheel Speed, Robotic Position, Exercise Equipment Limit Switch, Off Highway Vehicle, Presses Limit Switch, Printers, Steering Mirror, Tilt Switch, Traction Control, Valve Actuator Limit Switch, Valve Position Switch, Turbine Meters, Motion Control Systems.



# Standard (HP) Products Available



Please contact Sensoronix for more detailed information on the standard sensors listed below.  
All products are custom designed to meet your exact specification requirements.

| PART #                 | MECHANICAL SPECIFICATIONS |            |      |      |          |            |                                                                     | ELECTRICAL SPECIFICATIONS |                    |                 |                |                     |                          | ENVIROMENT   |                 |
|------------------------|---------------------------|------------|------|------|----------|------------|---------------------------------------------------------------------|---------------------------|--------------------|-----------------|----------------|---------------------|--------------------------|--------------|-----------------|
|                        | A                         | B          | C    | D    | E        | F          | G                                                                   | INPUT VOLTAGE (VDC)       | INPUT CURRENT (mA) | VOUT HIGH (VDC) | VOUT LOW (VDC) | OUTPUT CURRENT (mA) | PULL UP RESISTOR (K Ohm) | FRONT SEALED | TEMP RANGE (°C) |
| 1/4" Diameter Series   |                           |            |      |      |          |            |                                                                     |                           |                    |                 |                |                     |                          |              |                 |
| HP620-300              | 6                         | 1/4 - 28   | 1.00 | 0.85 | 303 S.S. | 48 ± .5    | 20 AWG, LEAD WIRES W/ TEFF. INS.                                    | 4.5 to 24                 | 5                  | V Input         | 0.4            | 25 Sink             | Open                     | 303 S.S.     | -40 to 150      |
| HP620-400              | 6                         | 1/4 - 28   | 1.00 | 0.85 | 303 S.S. | 120 ± 3    | 22 AWG, 3 CON. CBL. W/ SHLD, PVC INS.                               | 4.5 to 24                 | 5                  | V Input         | 0.4            | 25 Sink             | Open                     | 303 S.S.     | -40 to 150      |
| 5/16" Diameter Series  |                           |            |      |      |          |            |                                                                     |                           |                    |                 |                |                     |                          |              |                 |
| HP130-400              | 1                         | 5/16 - 24  | 1.50 | 1.50 | 303 S.S. | 12 ± 1     | 22 AWG, 3 CON. CBL. W/ SHLD, PVC INS.                               | 4.5 to 24                 | 10                 | V Input         | 0.4            | 20 Sink             | 4.7                      | Epoxy        | -20 to 105      |
| *** HP130-420          | 1                         | 5/16 - 24  | 1.50 | 1.50 | 303 S.S. | 12 ± 1     | 22 AWG, 3 CON. CBL. W/ SHLD, PVC INS.                               | 6 to 24                   | 13                 | V Input         | 0.4            | 20 Sink             | 4.7                      | Epoxy        | -20 to 85       |
| 3/8" Diameter Series   |                           |            |      |      |          |            |                                                                     |                           |                    |                 |                |                     |                          |              |                 |
| HP230-300              | 2                         | 3/8 - 24   | 1.00 | 0.75 | 303 S.S. | 36 ± 1     | 24 AWG, WIRE W/ TEFF. INS.                                          | 4.5 to 24                 | 14                 | V Input         | 0.4            | 20 Sink             | 4.7                      | 303 S.S.     | 20 to 150       |
| HP230-400              | 2                         | 3/8 - 24   | 1.50 | 1.25 | 303 S.S. | 48 ± 3     | 22 AWG, 3 CON. CBL. W/ SHLD, PVC INS.                               | 4.5 to 24                 | 14                 | V Input         | 0.4            | 20 Sink             | 4.7                      | 303 S.S.     | -40 to 125      |
| HP230-410              | 2                         | 3/8 - 24   | 1.50 | 1.25 | 303 S.S. | 12 ± .5    | 22 AWG, 3 CON. CBL. W/ SHLD, PVC INS.                               | 4.5 to 24                 | 14                 | V Input         | 0.4            | 20 Sink             | 4.7                      | 303 S.S.     | -20 to 100      |
| HP230-420              | 2                         | 3/8 - 24   | 1.50 | 1.25 | 303 S.S. | 36         | 22 AWG, 3 CON. CBL. W/ SHLD, TEFF. INS.                             | 4.5 to 24                 | 14                 | V Input         | 0.4            | 20 Sink             | 4.7                      | 303 S.S.     | -40 to 150      |
| 15/32" Diameter Series |                           |            |      |      |          |            |                                                                     |                           |                    |                 |                |                     |                          |              |                 |
| * HP140-400            | 1                         | 15/32 - 32 | 1.00 | 1.00 | 303 S.S. | 6 ± .25    | 22 AWG, 3 CON. CBL W/ PVC INS.                                      | 5.5 to 36                 | 9                  | 5.0             | 0.4            | 20 Sink             | 4.7                      | Epoxy        | -40 to 125      |
| HP142-400              | 1                         | 15/32 - 32 | 1.00 | 1.00 | 303 S.S. | 39.5 ± .25 | 22 AWG, 3 CON. CBL W/ PVC INS.                                      | 4.5 to 24                 | 9                  | V Input         | 0.4            | 25 Sink             | Open                     | Epoxy        | -40 to 125      |
| 7/16" Diameter Series  |                           |            |      |      |          |            |                                                                     |                           |                    |                 |                |                     |                          |              |                 |
| HP140-410              | 1                         | 7/16 - 20  | 1.75 | 1.75 | 303 S.S. | 24 ± 1     | 22 AWG, 3 CON. CBL. W/ SHLD, TEFF. INS.                             | 4.5 to 24                 | 14                 | V Input         | 0.4            | 20 Sink             | 4.7                      | 303 S.S.     | -40 to 150      |
| 1/2" Diameter Series   |                           |            |      |      |          |            |                                                                     |                           |                    |                 |                |                     |                          |              |                 |
| *(**)(*** HP050-400    | 0                         | 1/2        | 1.10 | -    | 303 S.S. | 12 ± 1     | 22 AWG, 3 CON. CBL. W/ SHLD, PVC INS.                               | 6 to 30                   | 13                 | V Input         | 0.4            | 20 Sink             | 4.7                      | Epoxy        | -55 to 85       |
| ** HP150-100           | 1                         | 1/2 - 20   | 1.00 | 1.00 | 303 S.S. | 12 ± .5    | 18 AWG, 3 SXL LEAD. WIRE. W/ CONN. DEUTCH DT04-3P                   | 4.5 to 25                 | 9                  | V Input         | 0.4            | 30 Source           | 4.7                      | Epoxy        | -20 to 100      |
|                        | 1                         | 1/2 - 20   | 8.00 | 8.00 | 303 S.S. | 12 ± .5    | 18 AWG, 3 SXL LEAD. WIRE. W/ CONN. DEUTCH DT04-3P                   | 4.5 to 25                 | 9                  | V Input         | 0.4            | 30 Source           | 4.7                      | Epoxy        | -20 to 100      |
| HP150-110              | 1                         | 1/2 - 20   | 8.00 | 8.00 | 303 S.S. | 12 ± .5    | 22 AWG, 3 CON. CBL. W/ CONN. DEUTCH DT04-3P                         | 4.5 to 24                 | 9                  | V Input         | 0.4            | 25 Sink             | Open                     | Epoxy        | -20 to 100      |
| HP150-200              | 1                         | 1/2 - 20   | 1.00 | 1.00 | 303 S.S. | 40 ± 2     | 22 AWG, 3 CON. CBL. W/ SHLD, PVC INS.                               | 4.5 to 24                 | 9                  | V Input         | 0.4            | 25 Sink             | Open                     | Epoxy        | -40 to 125      |
| HP150-400              | 1                         | 1/2 - 20   | 1.00 | 1.00 | 303 S.S. | 40 ± 2     | 22 AWG, 3 CON. CBL. W/ SHLD, PVC INS.                               | 4.5 to 24                 | 9                  | V Input         | 0.4            | 25 Sink             | Open                     | Epoxy        | -40 to 125      |
| 5/8" Diameter Series   |                           |            |      |      |          |            |                                                                     |                           |                    |                 |                |                     |                          |              |                 |
| * HP260-400            | 2                         | 5/8 - 18   | 3.31 | 3.00 | 303 S.S. | 25 ± 1     | 22 AWG, 3 CON. CBL. W/ SHLD PVC INS.                                | 6 to 36                   | 13                 | V Input         | 0.4            | 20 Sink             | 4.7                      | Epoxy        | -20 to 85       |
| HP360-200              | 3                         | 5/8 - 18   | 2.50 | 2.00 | 303 S.S. | 3 ± .25    | 22 AWG, 3 CON. CBL. W/ SHLD, PVC INS. AND DEUTCH CONN. P/N: DT04-3P | 4.5 to 24                 | 10                 | V Input         | 0.4            | 13 Sink             | 2                        | Epoxy        | -25 to 125      |
| HP360-400              | 3                         | 5/8 - 18   | 2.72 | 2.14 | 303 S.S. | 72 ± 2     | 22 AWG, 3 CON. CBL. W/ SHLD, PVC INS.                               | 4.5 to 24                 | 10                 | V Input         | 0.4            | 13 Sink             | 2                        | Epoxy        | -25 to 125      |
| HP360-410              | 3                         | 5/8 - 18   | 2.50 | 2.00 | 303 S.S. | 36 ± 2     | 22 AWG, 3 CON. CBL. W/ SHLD, TEFF. INS.                             | 4.5 to 24                 | 10                 | V Input         | 0.4            | 20 Sink             | 4.7                      | Epoxy        | -25 to 125      |
| * HP460-000            | 4                         | 5/8 - 18   | 5.70 | 4.50 | 303 S.S. | -          | 3 PINS AMPHENOL CONN: MATE W/ MS3106A                               | 5 to 30                   | 10                 | V Input         | 0.4            | 20 Sink             | 4.7                      | Epoxy        | -40 to 125      |
| * HP460-010            | 4                         | 5/8 - 18   | 4.17 | 2.50 | 303 S.S. | -          | 3 PINS AMPHENOL CONN: MATE W/ MS3106A                               | 5 to 30                   | 10                 | V Input         | 0.4            | 20 Sink             | 4.7                      | Epoxy        | -40 to 125      |
| * HP460-020            | 4                         | 5/8 - 18   | 3.40 | 1.70 | 303 S.S. | -          | 3 PINS AMPHENOL CONN: MATE W/ MS3106A                               | 5 to 30                   | 10                 | V Input         | 0.4            | 20 Sink             | 4.7                      | Epoxy        | -40 to 125      |
| *(** HP460-030         | 4                         | 5/8 - 18   | 3.00 | 2.14 | 303 S.S. | -          | CONN. M12X1, 4 PINS                                                 | 5.5 to 36                 | 10                 | V Input         | 0.4            | 20 Sink             | 4.7                      | 303 S.S.     | -40 to 100      |
| * HP460-040            | 4                         | 5/8 - 18   | 3.00 | 2.14 | 303 S.S. | -          | CONN. M12X1, 4 PINS                                                 | 4 to 30                   | 13                 | V Input         | 0.4            | 50 Source           | 4.7                      | 303 S.S.     | -40 to 100      |
| **** HP460-050         | 4                         | 5/8 - 18   | 4.05 | 2.50 | 303 S.S. | -          | 3 PINS AMPHENOL CONN: MATE W/ MS3106A                               | 5 to 30                   | 10                 | V Input         | 0.4            | 20 Sink             | 4.7                      | Epoxy        | -40 to 125      |
| HP460-060              | 4                         | 5/8 - 18   | 3.00 | 2.14 | 303 S.S. | -          | CONN. M12X1, 4 PINS                                                 | 5.5 to 36                 | 10                 | 5.0             | 0.4            | 20 Sink             | 4.7                      | 303 S.S.     | -40 to 100      |
| 3/4" Diameter Series   |                           |            |      |      |          |            |                                                                     |                           |                    |                 |                |                     |                          |              |                 |
| HP270-400              | 2                         | 3/4 - 16   | 2.30 | 1.87 | Alum.    | 72 ± 3     | 22 AWG, 3 CON. CBL. W/ SHLD, TEFF. INS.                             | 4.5 to 24                 | 10                 | V Input         | 0.4            | 25 Sink             | Open                     | Epoxy        | -40 to 125      |
| * HP270-410            | 2                         | 3/4 - 16   | 2.30 | 1.87 | Alum.    | 40 ± 2     | 22 AWG, 3 CON. CBL. W/ SHLD, TEFF. INS.                             | 5.5 to 36                 | 10                 | 5.0             | 0.4            | 20 Sink             | 4.7                      | Epoxy        | -40 to 125      |
| **** HP270-420         | 2                         | 3/4 - 16   | 2.30 | 1.87 | Alum.    | 8 ± 1      | 22 AWG, 3 CON. CBL. W/ SHLD, PVC INS.                               | 4.5 to 24                 | 9                  | V Input         | 0.4            | 20 Sink             | 4.7                      | Epoxy        | -20 to 100      |
| HP270-430              | 2                         | 3/4 - 16   | 2.34 | 2.00 | Alum.    | 10 ± .5    | 22 AWG, 3 CON. CBL. W/ SHLD, PVC INS.                               | 4.8 to 24                 | 10                 | V Input         | 0.4            | 20 Sink             | 4.7                      | Epoxy        | -40 to 105      |
| M12 Diameter Series    |                           |            |      |      |          |            |                                                                     |                           |                    |                 |                |                     |                          |              |                 |
| HP112-400              | 1                         | M12 x .75  | 0.95 | 0.95 | Alum.    | 98 ± 3     | 22 AWG, 3 CON. CBL. W/ SHLD, PVC INS.                               | 4.5 to 24                 | 10                 | V Input         | 0.4            | 25 Sink             | Open                     | Epoxy        | -40 to 125      |
| HP312-400              | 3                         | M12 x 1.0  | 3.06 | 2.56 | 303 S.S. | 120 ± 1    | 22 AWG, 3 CON. CBL. W/ SHLD, TEFF. INS.                             | 4.5 to 25                 | 10                 | V Input         | 0.4            | 20 Sink             | 4.7                      | 303 S.S.     | -20 to 125      |

\*Electrical Protections

**Supply Voltage : 40VDC**

**Reverse Polarity : -50V Reverse Transient**

**Load Dump : 60V**

\*\* EMC Protection Included

\*\*\* Omnipolar (Magnetoresistive)

\*\*\*\*Northpole Sensing