

Honeywell Pressure Switches

HP, HE, MH, ME, LP, LE, 5000, and 1000 Series

50094081

Issue 5

Datasheet



DESCRIPTION

The Honeywell Pressure Switch portfolio consists of:

- High Pressure (HE/HP Series)
- Medium Pressure (ME/MH Series)
- Low Pressure (LE/LP Series)
- 5000 Series, 1000 Series

These pressure switches are durable, reliable electromechanical gauge pressure on/off switches that are available with either single pole single throw (SPST) normally open or normally closed circuitry, or single pole double throw (SPDT) circuitry. Their high proof pressure and burst pressure ratings can allow for use in many rugged applications that require the making or breaking of an electrical connection in response to a pressure change of the system media.

DIFFERENTIATION

- Through optional smart diagnostic technology, Honeywell pressure switches are able to detect failures such as open circuits, cut wires, worn insulation, and more⁶
- Optional smart diagnostic technology allows up to four segregated signal amplitudes to perform diagnostics and status⁶
- Pressure port snubber suppresses pressure spikes²
- IP67 sealing provides enhanced durability in harsh environmental and washing applications¹

VALUE TO CUSTOMERS

- Designed to provide resistance to corrosion and enhances equipment life with available two million life cycle rating and IP67 rating¹
- Can expedite design and product cycle due to ability to receive samples in two weeks and production units in four weeks
- Can reduce tooling, service, and manufacturing labor costs due to standard connections, extended product life, and expedited design and production cycle

FEATURES

- Pressure switching set point range: 3.5 psi to 4500 psi
- Proof pressure: from 500 psi up to 10,000 psi
- Burst pressure: from 1250 psi up to 20,000 psi
- Life cycle rating up to 2 million
- IP67 sealing rating⁴
- Operating temperature: -40 °C to 120 °C [-40 °F to 248 °F]
- Hysteresis option⁵
- More than 15 pressure port options and over 30 electrical terminations
- Plated steel, brass or stainless steel options³
- Switching point accuracy up to ±2 %

POTENTIAL APPLICATIONS



- Agricultural machinery
- Heavy duty construction machinery and trucks
- Lawn & garden machinery
- Marine vessels
- Material handling machinery
- Railway



- CNC machines
- Compressors/boilers
- Fracking equipment
- Food & beverage equipment
- Generators
- HVAC/R equipment
- Mud pumps
- Pneumatic equipment
- Presses/punches
- Pressure washers
- Trash compactors
- Water pumps & jet cutting machines

PORTFOLIO

Honeywell also offers the PBN1 Series and PBN3 Series Pressure Sensor.

- 1 HP, HE, MH, ME, LP, LE Series
- ² HP, HE Series
- ³ ME, MH, LP, LE Series
- ⁴ HP, HE, LP, LE, ME Series
- ⁵ HP, HE, LP Series
- ⁶ HP, HE, ME, LP, LE Series

Table 1. Specifications

| Character- istic | HP Series | HE Series | ME Series | MH Series | LP Series | LE Series | 5000 Series | 1000 Series |
|---|--|---|--|--|--|---|--|---|
| Product length (various terminations) | see pages 5 and 6 | see page 5 | see page 8 | see page 7 | see page 9 | see page 9 | see page 10 | - |
| Product length (blade) | see pages 5 and 6 | see page 5 | see page 8 | see page 7 | see page 9 | see page 9 | 58,42 mm [2.3 in] | 65,6 mm [2.583 in] |
| Product length (#8-32 screws) | see pages 5 and 6 | see page 5 | see page 8 | see page 7 | see page 9 | see page 9 | 60,96 mm [2.4 in] | - |
| Product length (Metripack) | see pages 5 and 6 | see page 5 | see page 8 | see page 7 | see page 9 | see page 9 | 73,66 mm [2.9 in] | - |
| Hex size | 27 mm | 27 mm | 27 mm | 27 mm | 27 mm | 27 mm | 0.50 in (steel) 0.437 in (brass) | M10 x 1.25 banjo fitting |
| Ease of installation | box spanner | box spanner | box spanner | box spanner | box spanner | box spanner | 1/2 in open spanner | 18 mm open spanner |
| Snap-action switch | yes | yes | no | no | yes | no | no | no |
| Set point ¹ range | 100 psi to 4500 psi | 150 psi to 4500 psi | 25 psi to 350 psi | 40 psi to 500 psi | 3.5 psi to 150 psi | 3.5 psi to 150 psi | 75 psi to 150 psi | 10 psi to 60 psi [0,69 bar to 2,7 bar] |
| Set point ranges | 6 (Base Style A) 7 (Base Style B) | 6 | 4 | 4 | 4 | 4 | 8 | - |
| Set point accuracy @ 25 °C (before test) | 100 psi to 150 psi (±10 %); 150 psi to 500 psi (±6 %); 501 psi to 4000 psi (±3.5 %); 4000 psi to 4500 psi (±2 %) | 150 psi to 1000 psi (±14%); 1000 psi to 2000 psi (±12 %); 2000 psi to 4000 psi (±11 %); >4000 psi (±10 %) | 25 psi to 50 psi (±3 psi); >50 psi to 100 psi (±7 psi); >100 psi to 150 psi (±10 psi); >150 psi to 250 psi (±13 psi); >250 psi to 350 psi (±16 psi) | 40 psi to 70 psi (±7 psi); >70 psi to 130 psi (±10 psi); >130 psi to 200 psi (±15 psi); >200 psi to 280 psi (±20 psi); >280 psi to 350 psi (±30 psi); >350 psi to 500 psi (±40 psi) | >10 psi to 5 >50 psi to 10 | D psi (±1 psi); O psi (±3 psi); IO psi (±7 psi); O psi (±10 psi) | 0.5 psi to 1 psi (±0.3 psi); 1.1 psi to 3 psi (±0.5 psi); 3.1 psi to 7 psi (±1 psi); 8 psi to 13 psi (±2 psi); 14 psi to 24 psi (±3 psi); 25 psi to 50 psi (±5 psi); 51 psi to 90 psi (±7 psi); 91 psi to 150 psi (±10 psi) | 20 psi ±10 psi; 58 psi ±20 psi |
| Average dead- band max. | n/a | n/a | 25 psi to 50 psi (20 psi); >50 psi to 100 psi (30 psi); >100 psi to 150 psi (40 psi); >150 psi to 250 psi (50 psi); >250 psi to 350 psi (60 psi) | 40 psi to 70 psi (±6 psi); >70 psi to 130 psi (±10 psi); >130 psi to 200 psi (±15 psi); >200 psi to 280 psi (±20 psi); >280 psi to 350 psi (±30 psi); >350 psi to 500 psi (±40 psi) | n/a | 3.5 psi to 10 psi (±2.8 psi); >10 psi to 50 psi (±14 psi); >50 psi to 100 psi (±38 psi); >100 psi to 150 psi (±40 psi) | 0.5 psi to 3 psi (±1.5 psi); 4 psi to 7 psi (±2.5 psi); 8 psi to 13 psi (±3.5 psi); 14 psi to 24 psi (±8 psi); 25 psi to 50 psi (±15 psi); 51 psi to 90 psi (±23 psi); 91 psi to 150 psi (±40 psi) | n/a |
| Operating pressure ² | 5,000 psi max. | 5,000 psi max. | 500 psi max. | 600 psi max. | 250 psi max. | 250 psi max. | 150 psi, 250 psi | 1400 psi [96,5 bar] max. |
| Proof pressure ³ | 10,000 psi (Base Style A) 6,500 psi (Base Style B) | 10,000 psi | 4,000 psi | 6,000 psi | 500 psi | 500 psi | 500 psi | 2973 psi [205 bar] |
| Hysteresis | 5 % to 55 % (based on set point range) | 3 % to 65 % (based on set point range) | n/a | n/a | 5 % to 55 % (based on set point range) | n/a | n/a | n/a |
| Burst pressure ⁴ | 20,000 psi (Base Style A); 9,000 psi (Base Style B) | 20,000 psi | 8,000 psi | 9,000 psi | 1250 psi | 1250 psi | 4000 psi | 3500 psi [241 bar] |
| Current rating (resistive) | 5 A at 250 Vac 5 A at 24 Vdc | 3 A at 250 Vac 3 A at 24 Vdc | 7.5 mA to 3 A, 24 Vdc and 250 Vac | 100 mA to 3 A max. | 7.5 mA to 5 A, 24 Vdc and 250 Vac | 7.5 mA to 3 A, 24 Vdc and 250 Vac | 15 A, 6 Vdc; 8 A, 12 Vdc; 4 A, 24 Vdc | 12 Vdc with two- 1157 bulbs (4.4 A) |
| Current rating (inductive) | 5 A at 115 Vac (SX rating); 3 A at 28 Vdc | n/a | n/a | n/a | 1 A at 28 Vdc | n/a | 1 A, 120 Vac 0.5 A, 240 Vac | n/a |

⁸Port Style C: Switches less than 975 psi will use Base Style B; switches greater than 975 psi will use Base Style A. Port Styles F and G: Switches less than 350 psi will use Base Style B; switches greater than 350 psi will use Base Style A. Port Styles A, B, E, M, P, T, and Y will use Base Style B. Switches less than 150 psi will only use Base Style B.

| Character- istic | HP Series | HE Series | ME Series | MH Series | LP Series | LE Series | 5000 Series | 1000 Series |
|---|---|---|--|--|--|--|---|---|
| Rated thermal current | 5 A | 3 A | 3 A | n/a | 5 A | 3 A | n/a | n/a |
| Rated insula- tion voltage | 28 V | 28 V | 28 V | n/a | 28 V | 28 V | n/a | n/a |
| Short-circuit protective device c-type max. rating | (| Class J fuse (10 A, 600 | V) | n/a | Class J fuse | (10 A, 600 V) | n/a | n/a |
| Conditional short circuit current | | 1000 A | | n/a | 1000 A | 1000 A | n/a | n/a |
| Pollution degree | | 3 (macro environment |) | n/a | 3 (macro e | nvironment) | n/a | n/a |
| Temperature rating | -40 °C to 120 °C [-40 °F to 248 °F] | -40 °C to 85 °C [-40 °F to 185 °F] | | -40 °C to 120 °C | [-40 °F to 248 °F] | | -40 °C to 121 °C [-40 °F to 250 °F] | -20 °C to 74 °C [-4 °F to 165 °F] |
| Media connection | multiple ports available | multiple ports available | | multiple po | rts available | | 1/8-27 NPT male thread | multiple ports available |
| Pressure ports | Refer to product nomenclature for pressure port types. | C = 1/2-20 UNF F = M14 × 1.5 G = 9/16-18 UNF H = 3/4-16 UNF K = M18 × 1.5 N = 7/8-14 UNF | A=1/4-18 NPT B=1/8-27 NPT C=1/2-20 UNF D=1/8-27 PTF E=M12×1.5 F=M14×1.5 G=9/16-18 UNF H=3/4-16 UNF J=G1/8 BSPP M=7/16-20 UNF R=R1/8 BSPT T=M10×1.0 V=R1/2 BSPT Y=G1/4 BSPP Z=R1/4 BSPP | A=1/4-18 NPT B=1/8-27 NPT C=1/2-20 UNF D=1/8-27 PTF E=M12×1.5 F=M14×1.5 G=9/16-18 UNF H=3/4-16 UNF J=G1/8 BSPP L=3/8-24 UNF M=7/16-20 UNF P=1/2-14 NPT R=R1/8 BSPT T=M10×1.0 V=R1/2 BSPT Y=G1/4 BSPP Z=R1/4 BSPP | A=1/4-18 NPT B=1/8-27 NPT C=1/2-20 UNF D=1/8-27 PTF E=M12×1.5 F=M14×1.5 G=9/16-18 UNF H=3/4-16 UNF J=G1/8 BSPP M=7/16-20 UNF R=R1/8 BSPT T=M10×1.0 V=R1/2 BSPT Y=G1/4 BSPP Z=R1/4 BSPT | A = 1/4-18 NPT B = 1/8-27 NPT C = 1/2-20 UNF D = 1/8-27 PTF E = M.12 × 1.5 F = M14 × 1.5 G = 9/16-18 UNF H = 3/4-16 UNF J = G1/8 BSPP M = 7/16-20 UNF R = R1/8 BSPT T = M.10 × 1.0 V = R1/2 BSPT Y = G1/4 BSPP Z = R1/4 BSPT | 1/8-27 NPT | M10 x 1.25 double banjo; M10 x 1; 1/8-27 NPT |
| Circuit forms ⁵ | SPDT, SPS | ST - NO/NC | SPDT, SPST - NO/NC | | SPDT, SPST - NO/NC | SPDT, SPST - NO/NC | SPST-NO; SPST-NC | SPNO |
| Smart pressure | | or dual-resistor topology | available | - | single- or dual-resis | tor topology available | - | _ |
| Life | 2 million (Base A) 1 million (Base B) | 1 million | 1 million | 1 million | 2 million | 1 million | 100,000 cycles | 100,000 cycles |
| Agency approv- als (special use switches) | - | - | - | - | - | - | UL Custom (select models) | - |
| Agency approvals (other) | CE | CE | CE | CE | CE | CE | - | - |
| Field adjustability ⁶ | no | no | yes | yes | yes | yes | yes | no |
| Spike dampening | yes | yes | no | no | no | no | no | no |
| Ingress protection ⁷ | IP67 (connecetors) IP67 (wire/Base A) IP69K (wire/Base B) IP00 (blade/screw) | IP67 (connectors) IP00 (blade/screw) | IP67 (connectors) IP67 (wire out) IP00 (blade/screw) | IP67 (connectors) IP00 (blade/screw) | IP67 (connectors) IP67 (wire out) IP00 (blade/screw) | IP67 (connectors) IP67 (wire out) IP00 (blade/screw) | IP00 | IP65 |
| Vibration resistance | | | | g, 20 min/sweep; 8 ho urs/axis; 14,88 g-RMS | | | - | - |
| Shock resistance | 500 m/sec ² , 11 mS | EC, 100 shocks / axis | | 500 m/sec | c², 11 mSEC | | | 15 G @ 5 mSEC |
| Wetted part (diaphragm) | r | ı/a | Kapton* (Teflon* coated) | Nitrile/EPDM/LTNB | Kapton (Teflon coated) | Tefzel* | Polymide film | EPDM |
| Wetted part (piston) | nitrile o-ring | g, steel piston | nitrile or EPDM o-ring | nitrile or EPDM o-ring | nitrile or EPDM o-ring | nitrile or EPDM o-ring | nitrile or EPDM o-ring | EPDM |
| Weight | | r] (Base Style A) z] (Base Style B) | 53 g [1.9 oz] | 53 g [1.9 oz] | 58 g [2.0 oz] | 53 g [1.9 oz] | 65 g [2.3 oz] | 40 g [1.4 oz] |
| Contacts | silver / gold inlay | silver | gold plated | gold plated | gold plated | gold plated | silver-plated copper | silver-plated copper |
| Product finish | zinc plating | zinc plating | zinc plating | zinc plating | zinc plating | zinc plating | glass reinforced polyester (housing); plated steel (base) | Rynite 545 glass filled (housing); Travalent plated steel (base) |

¹Set point: Point at which switch actuates or de-actuates

²Operating pressure: Maximum normal system operating pressure

³Proof pressure: Maximum pressure that the switch can handle while it maintains set point accuracy. Intermittent spikes to this level are acceptable.

⁴Burst pressure: Point of complete switch failure

 $^{^5}$ SPST: Single pole, single throw. SPDT: Single pole, double throw. NO: Normally open. NC: Normally closed.

⁶Field adjustability only available with AA, BA, CA, and DA (SPST only) terminations.

⁷IPOO for AA and BA terminations.

Table 2. Terminations

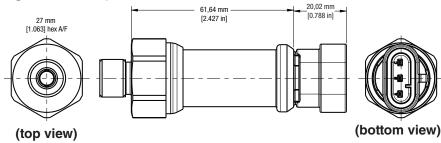
| Series | Available Terminations |
|-----------------------|--|
| HP, HE, ME, LP, LE | AA = Spade Terminals BA = Screw Terminals CA = Deutsch DT04-3P-E005 (3-Pin Connector) DA = Amp Super Seal 1.5 - 282105-1 (3-Pin Connector) EA = 10-inch Cable, 18 AWG (Wire Out, No Connector) FA = 10-inch Cable w/Deutsch DT04-3P-E005 (3-Pin Connector) (16 AWG)* GA = 10-inch Cable w/Amp Super Seal 1.5 - 282105-1 (3-Pin Connector) (18 AWG)* HA = 10-inch Cable w/Mary Super Seal 1.5 - 282105-1 (3-Pin Connector) (18 AWG)* JA = 10-inch Cable w/Mary Super Seal 1.5 - 282105-1 (3-Pin Connector) (18 AWG)* JA = 10-inch Cable w/Minay Super Seal 1.5 - 282105-1 (3-Pin Connector) (18 AWG)* KA = 10-inch Cable w/Minay Super Seal 1.5 - 212105-1 (3-Pin Connector) (18 AWG)* KA = 10-inch Cable w/Minay Super Seal Micro) - 21032121306 Harting P/N (3-Pin Connector) (18 AWG)* LA = 10-inch Cable w/Packard Weatherpack Male Terminal - 12020827 (3-Pin Connector) (18 AWG)* MA = 10-inch Cable w/Packard Weatherpack Male Terminal - 12020827 (3-Pin Connector) (18 AWG)* MA = 3-inch Cable w/Packard 2P Tower Connector - 12015792 (2-Pin Connector) (18 AWG) NA = 3-inch Cable w/Packard 2P Shroud Connector - 12010973 (2-Pin Connector) (18 AWG) PA = 2.75-inch Cable w/Packard 2P Shroud Connector - 12010973 (2-Pin Connector) (18 AWG) SA = 5.5-inch Cable w/Packard 2P Shroud Connector - 12010973 (2-Pin Connector) (18 AWG) SA = 5.5-inch Cable w/Packard 2P Shroud Connector - 12010973 (2-Pin Connector) (18 AWG) SA = 5.5-inch Cable w/Packard 3P Shroud Connector - 12010973 (2-Pin Connector) (18 AWG) SA = 5.5-inch Cable w/Ta Cannon 3P Sure-Seal Circular Connector - SS2R-120-1804-000 (2-Pin Connector) (18 AWG) VA = 10-inch Cable w/Ta Cannon 3P Sure-Seal Circular Connector - SS2R-120-1804-000 (2-Pin Connector) (18 AWG) VA = 10-inch Cable w/ Neutripack 2-Pin Shroud Connector 153000027 (18 AWG) VA = 10-inch Cable w/Metripack 2-Pin Shroud Connector 153000027 (18 AWG) VA = 6-inch Cable w/Metripack 2-Pin Shroud Connector 153000027 (18 AWG) VA = 10-inch Cable w/Metripack 150 Delphi 12129615 (3-Pin Connector) (18 AWG) BB = 10-inch Cable w/Metripack 150 Delphi 12052641 (2- |
| МН | AA = Spade Terminals BA = Screw Terminals DA = Amp Super Seal 1.5 - 282105-1 (3-Pin Connector) EA = 10-inch Cable, 18 AWG (Wire Out, No Connector) HA = 10-inch Cable w/Metripack 280 Delphi 15300002 (2-Pin Connector) (18 AWG)* MA = 10-inch Cable w/Deutsch DT04+2P-E005 (2-Pin Connector) (18 AWG) NA = 3-inch Cable w/Packard 2P Tower Connector - 12015792 (2-Pin Connector) (18 AWG) PA = 2.75-inch Cable w/Packard 2P Shroud Connector - 12010973 (2-Pin Connector) (18 AWG) RA = 4-inch Cable w/Packard 2P Shroud Connector - 12010973 (2-Pin Connector) (16 AWG) SA = 5.5-inch Cable w/ITT Cannon 2P Sure-Seal Circular Connector - SS2R-120-1804-000 (2-Pin Connector) (18 AWG) WA = 4.5-inch Cable w/Blade Terminals 6,3 mm x 0,8 mm (16 AWG)* XA = 10-inch Cable w/ Metripack 2-Pin Shroud Connector 153000027 (18 AWG) YA = 6-inch Cable w/Amp Super Seal 1.5 - 282104-1 (2-Pin Connector) (18 AWG) AB = Deutsch DT04-2P-E005 (2-Pin Connector) CB = 6-inch Cable w/ AMP Super Seal 1.5 - 282080-1 (2-Pin Connector) (18 AWG) DB = 10-inch Cable w/AMP 2,5 mm System Series Connector 1-967402-1 (18 AWG) EB = 4.5-inch Cable w/Packard Shroud Connector 12015792 (2-Pin Connector) (18 AWG) FB = 10-inch Cable w/Metripack 150 Delphi 12052641 (2-Pin Connector) (18 AWG) |

^{*}These connectors are designed for dual circuit (SPDT) by default. They can be used for single-circuit applications (SPNC/SPNO) by making suitable connections. Refer to wiring diagram.

DIMENSIONS - HIGH PRESSURE: HP SERIES (BASE STYLE A), HE SERIES

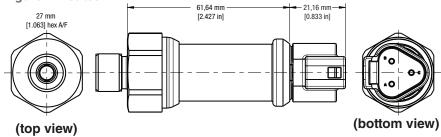
Base Style A key specifications • Life: 2 million (HP), 1 million (HE); Burst pressure: 20,000 psi

Figure 1. AMP Superseal 1.5



Female Connector Part Number (included): C-282105 Male Mating Connector (customer provided): C-282087 IP Rating: IP67

Figure 2. Deutsch



Female Connector Part Number (included): DT04-3P Male Mating Connector (customer provided): DT06-3S IP Rating: IP67

Figure 3. Spade Terminal

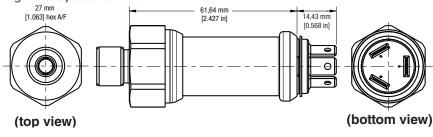


Figure 4. Screw Terminal

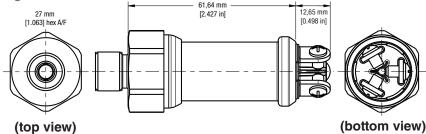
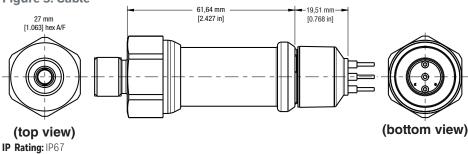


Figure 5. Cable



DIMENSIONS - HIGH PRESSURE: HP SERIES (BASE STYLE B)

Base Style B key specifications • Life: 1 million; Burst pressure: 9,000 psi

Figure 6. HP Series Base Style B

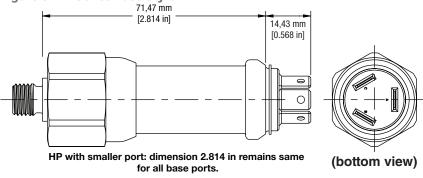


Figure 7. HP Series Pressure Port Dimensions

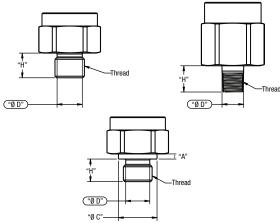


Table 3. HP/HE Series Pressure Port Diameters and Heights

| Nomenclature Code | Thread | Height "A" | Diameter "ØD" | Diameter "ØC" | Height "H" |
|-------------------|-------------|--------------------|---------------------|---------------------|----------------------|
| М | 7/16-20 UNF | _ | 9,25 mm [0.364 in] | _ | 11 mm [0.433 in] |
| C¹ | 1/2-20 UNF | - | 10,85 mm [0.427 in] | _ | 11 mm [0.433 in] |
| G ² | 9/16-18 UNF | _ | 12,24 mm [0.482 in] | _ | 12 mm [0.472 in] |
| Н | 3/4-16 UNF | - | 16,74 mm [0.66 in] | _ | 14 mm [0.551 in] |
| N | 7/8-14 UNF | _ | 19,6 mm [0.773 in] | - | 16 mm [0.630 in] |
| Т | M10 x 1.0 | 1,60 mm [0.063 in] | 9,25 mm [0.364 in] | 13,79 mm [0.543 in] | 11 mm [0.433 in] |
| E | M12 x 1.5 | 2,48 mm [0.098 in] | 10,85 mm [0.427 in] | 16,79 mm [0.661 in] | 11 mm [0.433 in] |
| F ² | M14 x 1.5 | 2,48 mm [0.098 in] | 12,24 mm [0.482 in] | 18,8 mm [0.74 in] | 12 mm [0.472 in] |
| K | M18 x 1.5 | 2,48 mm [0.098 in] | 16,74 mm [0.66 in] | 23,8 mm [0.937 in] | 14 mm [0.551 in] |
| В | 1/8-27 NPT | _ | 10,29 mm [0.405 in] | _ | 12,497 mm [0.492 in] |
| A | 1/4-18 NPT | _ | 13,72 mm [0.540 in] | _ | 17,63 mm [0.694 in] |

¹Port Style C: Switches less than 975 psi will use Base Style B; switches greater than 975 psi will use Base Style A. ²Port Styles F and G: Switches less than 350 psi will use Base Style B; switches greater than 350 psi will use Base Style A. Switches less than 150 psi will use only Base Style B.

DIMENSIONS - MEDIUM PRESSURE: MH SERIES

Figure 8. AMP Superseal 1.5

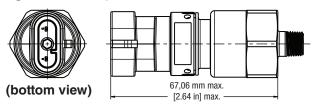


Figure 9. Deutsch 2-pin

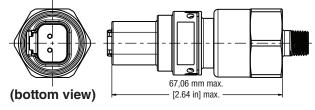


Figure 10. Wire out

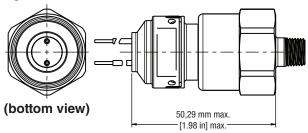


Figure 11. Blade terminal

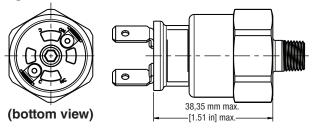


Figure 12. Screw terminal

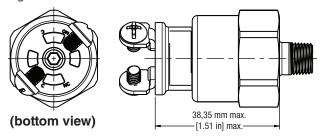


Figure 13. MH Series Pressure Port Dimensions

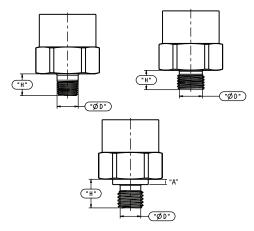


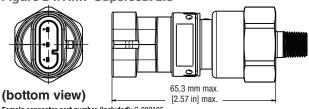
Table 4. MH Series Pressure Port Diameters and Heights

| Port | Diameter "ØD" | Height "H" |
|-------------|---------------------|----------------------|
| R 1/2 BSPT | 21,34 mm [0.840 in] | 17,09 mm [0.673 in] |
| R 1/4 BSPT | 13,46 mm [0.530 in] | 13,74 mm [0.541 in] |
| R 1/8 BSPT | 9,96 mm [0.392 in] | 10,24 mm [0.403 in] |
| 1/8-27 PTF | 10,34 mm [0.407 in] | 9,24 mm [0.364 in] |
| 1/4-18 NPT | 13,72 mm [0.540 in] | 17,63 mm [0.694 in] |
| 1/8-27 NPT | 10,29 mm [0.405 in] | 12,497 mm [0.492 in] |
| G 1/4 BSPP | 11,1 mm [0.437 in] | 11,20 mm [0.441 in] |
| G 1/8 BSPP | 8,28 mm [0.326 in] | 7,59 mm [0.299 in] |
| 3/4-16 UNF | 16,74 mm [0.659 in] | 11,1 mm [0.437 in] |
| 7/16-20 UNF | 9,25 mm [0.364 in] | 9,09 mm [0.358 in] |
| 9/16-18 UNF | 12,24 mm [0.482 in] | 10,00 mm[0.394 in] |
| 1/2-20 UNF | 10,85 mm [0.427 in] | 9,09 mm [0.358 in] |

| Port | Height "A" | Diameter "ØC" | Diameter "ØD" | Height "H" |
|-----------|---------------|---------------|------------------|------------|
| M14 × 1.5 | 2,49 mm | 18,8 mm | 11,71 mm | 10,998 mm |
| | [0.098 in] | [0.74 in] | [0.461 in] | [0.433 in] |
| M12 × 1.5 | 2,49 mm | 16,79 mm | 9,70 mm | 10,998 mm |
| | [0.098 in] | [0.661 in] | [0.382 in] | [0.433 in] |
| M10 × 1.0 | 1,6 mm | 13,79 mm | 8,41 mm | 8,51 mm |
| | [0.063 in] | [0.543 in] | [0.331 in] | [0.335 in] |

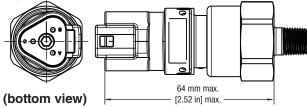
DIMENSIONS - MEDIUM PRESSURE: ME SERIES

Figure 14. AMP Superseal 1.5



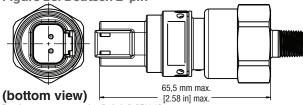
Female connector part number (included): C-282105 Male mating connector (customer provided): C-282087 IP rating: IP67

Figure 15. Deutsch 3-pin



Female connector part number (included): DT04-3P Male mating connector (customer provided): DT06-3S IP rating: IP67

Figure 16. Deutsch 2-pin



Female connector part number (included): DT04-2P Male mating connector (customer provided): DT06-2S IP rating: IP67

Figure 17. Wire out

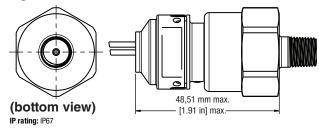


Figure 18. Blade terminal

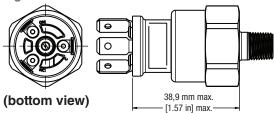


Figure 19. Screw terminal

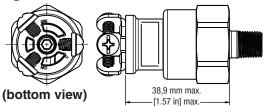
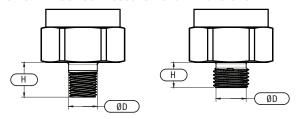


Figure 20. ME Series Pressure Port Dimensions



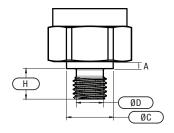


Table 5. ME Series Pressure Port Diameters and Heights

| Port | Diameter "ØD" | Height "H" |
|-------------|---------------------|----------------------|
| R 1/2 BSPT | 21,34 mm [0.840 in] | 17,09 mm [0.673 in] |
| R 1/4 BSPT | 13,46 mm [0.530 in] | 13,74 mm [0.541 in] |
| R 1/8 BSPT | 9,96 mm [0.392 in] | 10,24 mm [0.403 in] |
| 1/8-27 PTF | 10,34 mm [0.407 in] | 9,24 mm [0.364 in] |
| 1/4-18 NPT | 13,72 mm [0.540 in] | 17,63 mm [0.694 in] |
| 1/8-27 NPT | 10,29 mm [0.405 in] | 12,497 mm [0.492 in] |
| G 1/4 BSPP | 11,1 mm [0.437 in] | 11,20 mm [0.441 in] |
| G 1/8 BSPP | 8,28 mm [0.326 in] | 7,59 mm [0.299 in] |
| 3/4-16 UNF | 16,74 mm [0.659 in] | 11,1 mm [0.437 in] |
| 7/16-20 UNF | 9,25 mm [0.364 in] | 9,09 mm [0.358 in] |
| 9/16-18 UNF | 12,24 mm [0.482 in] | 10,00 mm[0.394 in] |
| 1/2-20 UNF | 10,85 mm [0.427 in] | 9,09 mm [0.358 in] |

| Port | Height "A" | Diameter "ØC" | Diameter "ØD" | Height "H" |
|-----------|---------------|---------------|------------------|------------|
| M14 × 1.5 | 2,49 mm | 18,8 mm | 11,71 mm | 10,998 mm |
| | [0.098 in] | [0.74 in] | [0.461 in] | [0.433 in] |
| M12 × 1.5 | 2,49 mm | 16,79 mm | 9,70 mm | 10,998 mm |
| | [0.098 in] | [0.661 in] | [0.382 in] | [0.433 in] |
| M10 × 1.0 | 1,6 mm | 13,79 mm | 8,41 mm | 8,51 mm |
| | [0.063 in] | [0.543 in] | [0.331 in] | [0.335 in] |

DIMENSIONS - LOW PRESSURE: LP SERIES, LE SERIES

Figure 21. AMP Superseal 1.5

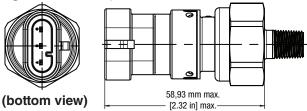


Figure 22. Deutsch 3-pin 57,66 mm max. (bottom view)

[2.27 in] max.

Figure 23. Deutsch 2-pin

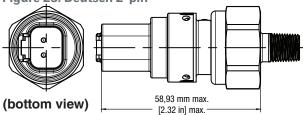


Figure 24. Wire out

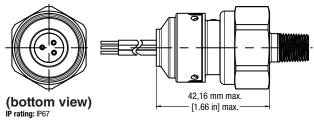


Figure 25. Spade terminal

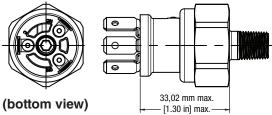


Figure 26. Screw terminal

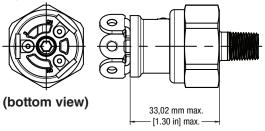
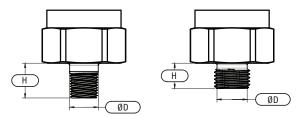


Figure 27. LP/LE Series Pressure Port Dimensions



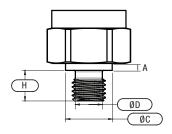


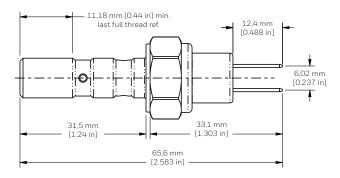
Table 6. LP/LE Series Pressure Port Diameters and Heights

| Port | Diameter "ØD" | Height "H" |
|-------------|---------------------|----------------------|
| R 1/2 BSPT | 21,34 mm [0.840 in] | 17,09 mm [0.673 in] |
| R 1/4 BSPT | 13,46 mm [0.530 in] | 13,74 mm [0.541 in] |
| R 1/8 BSPT | 9,96 mm [0.392 in] | 10,24 mm [0.403 in] |
| 1/8-27 PTF | 10,34 mm [0.407 in] | 9,24 mm [0.364 in] |
| 1/4-18 NPT | 13,72 mm [0.540 in] | 17,63 mm [0.694 in] |
| 1/8-27 NPT | 10,29 mm [0.405 in] | 12,497 mm [0.492 in] |
| G 1/4 BSPP | 11,1 mm [0.437 in] | 11,20 mm [0.441 in] |
| G 1/8 BSPP | 8,28 mm [0.326 in] | 7,59 mm [0.299 in] |
| 3/4-16 UNF | 16,74 mm [0.659 in] | 11,1 mm [0.437 in] |
| 7/16-20 UNF | 9,25 mm [0.364 in] | 9,09 mm [0.358 in] |
| 9/16-18 UNF | 12,24 mm [0.482 in] | 10,00 mm [0.394 in] |
| 1/2-20 UNF | 10,85 mm [0.427 in] | 9,09 mm [0.358 in] |

| Port | Height "A" | Diameter "ØC" | Diameter "ØD" | Height "H" |
|-----------|---------------|------------------|------------------|------------|
| M14 × 1.5 | 2,49 mm | 18,8 mm | 11,71 mm | 10,998 mm |
| | [0.098 in] | [0.74 in] | [0.461 in] | [0.433 in] |
| M12 × 1.5 | 2,49 mm | 16,79 mm | 9,70 mm | 10,998 mm |
| | [0.098 in] | [0.661 in] | [0.382 in] | [0.433 in] |
| M10 × 1.0 | 1,6 mm | 13,79 mm | 8,41 mm | 8,51 mm |
| | [0.063 in] | [0.543 in] | [0.331 in] | [0.335 in] |

DIMENSIONS - 1000 SERIES, 5000 SERIES

Figure 28. 1000 Series Dimensions



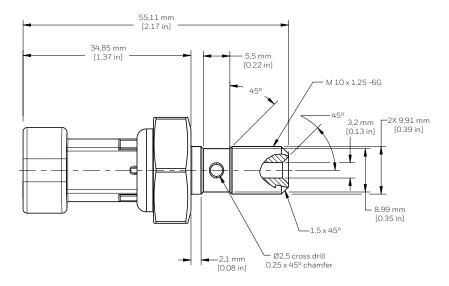
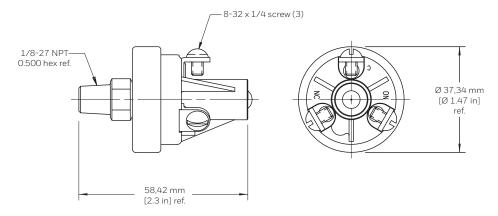
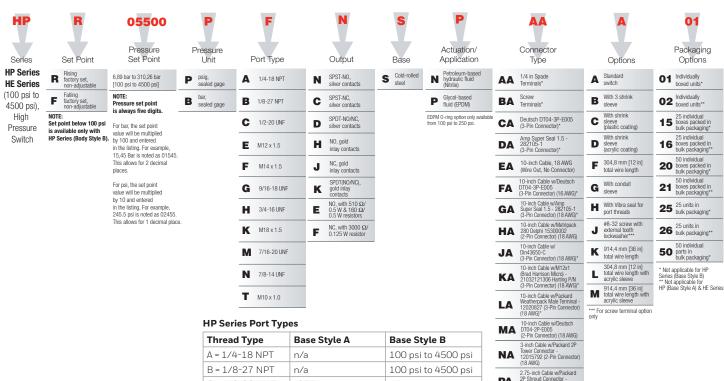


Figure 29. 5000 Series Dimensions



NOMENCLATURE: HIGH PRESSURE

For example, HPR05500PFNSPAAA01 defines a high pressure switch, rising factory set, non-adjustable set point, 550 psi set point, psig, sealed gage pressure unit, M14 x 1.5 port type, SPST-NO silver contacts output, cold-rolled steel base, glycol-based fluid (EPDM) actuation/application, spade terminal connectors, standard switch, individually boxed units.



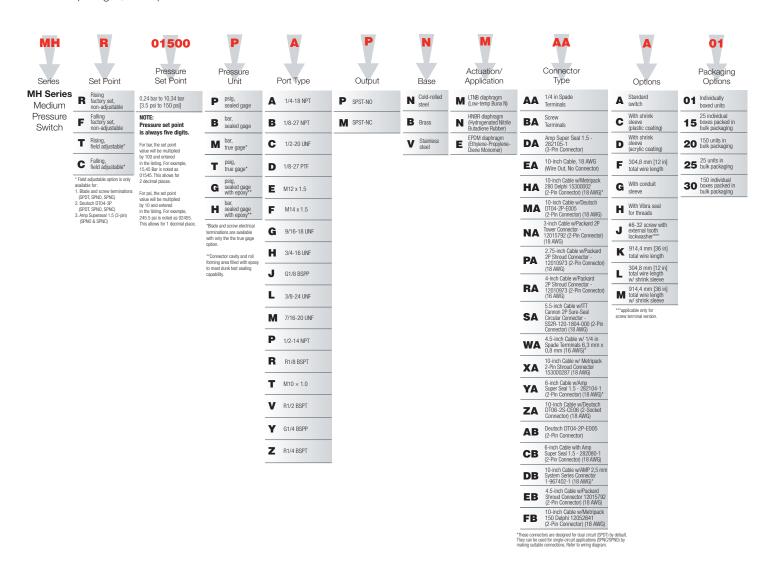
| Thread Type | Base Style A | Base Style B |
|-----------------|---------------------|---------------------|
| A = 1/4-18 NPT | n/a | 100 psi to 4500 psi |
| B = 1/8-27 NPT | n/a | 100 psi to 4500 psi |
| C = 1/2-20 UNF | >975 psi | n/a |
| E = M12 x 1.5 | n/a | 100 psi to 4500 psi |
| F = M14 x 1.5 | >350 psi | n/a |
| G = 9/16-18 UNF | >350 psi | <350 psi |
| H = 3/4-16 UNF | >150 psi | <150 psi |
| K = M18 x 1.5 | 150 psi to 4500 psi | n/a |
| M = 7/16-20 UNF | n/a | 100 psi to 4500 psi |
| N = 7/8-14 UNF | 150 psi to 4500 psi | n/a |
| T = M10 x 1.0 | n/a | 100 psi to 4500 psi |

Port Type A, B, E, M, and T will be available only with HP Series. Base Style B will be available only with HP Series

| JA | Din43650-C (3-Pin Connector) (18 AWG)* | |
|----|---|---|
| KA | 10-inch Cable w/M12x1 (Brad Harrison Micro) - 21032121306 Harting P/N (3-Pin Connector) (18 AWG)* | _ |
| LA | 10-inch Cable w/Packard Weatherpack Male Terminal - 12020827 (3-Pin Connector) (18 AWG)* | - |
| MA | 10-inch Cable w/Deutsch DT04-2P-E005 (2-Pin Connector) (18 AWG) | 0 |
| NA | 3-inch Cable w/Packard 2P Tower Connector - 12015792 (2-Pin Connector) (18 AWG) | |
| PA | 2.75-inch Cable w/Packard 2P Shroud Connector - 12010973 (2-Pin Connector) (18 AWG) | |
| RA | 4-inch Cable w/Packard 2P Shroud Connector - 12010973 (2-Pin Connector) (16 AWG) | |
| SA | 5.5-inch Cable w/ITT Cannon 2P Sure-Seal Circular Connector - SS2R-120-1804-000 (2-Pin Connector) (18 AWG) | |
| TA | 8.5-inch Cable w/ITT Cannon 3P Sure-Seal Circular Connector - SS3R-120-8551-001 (3-Pin Connector) (16 AWG)* | |
| UA | 10-inch Cable - Vacuum Impregnated w/Deutsch DT06-3S-EP06 (3-Socket Connector) (16 AWG)* | |
| VA | 10-inch Cable - Vacuum Impregnated w/Deutsch DT04-3P-E005 (3-Pin Connector) (16 AWG)* | |
| WA | 4.5-inch Cable w/ 1/4 in Spade Terminals 6,3 mm x 0,8 mm (16 AWG) | |
| XA | 10-inch Cable w/ Metripack 2-Pin Shroud Connector 153000027 (18 AWG) | |
| YA | 6-inch Cable w/Amp Super Seal 1.5 - 282104-1 (2-Pin Connector) (18 AWG) | |
| ZA | 10-inch Cable w/Deutsch DT06-2S-CE06 (2-Socket Connector) (18 AWG) | |
| ВВ | 10-inch Cable w/Metripack 150 Delphi 12129615 (3-Pin Connector) (18 AWG) | |
| СВ | 6-inch Cable w/ AMP Super Seal 1.5 - 282080-1 (2-Pin Connector) (18 AWG) | |
| DB | 10-inch Cable w/AMP 2,5 mm System Series Connector 1-967402-1 (18 AWG)* | |
| EB | 4.5-inch Cable w/Packard Shroud Connector 12015792 (2-Pin Connector) (18 AWG) | |
| FB | 10-inch Cable w/Metripack 150 Delphi 12052641 (2-Pin Connector) (18 AWG) | |
| GB | 8.5-inch Cable w/Deutsch Plug HD 16-3 96S (3-Pin Connector) (16 AWG)* | |

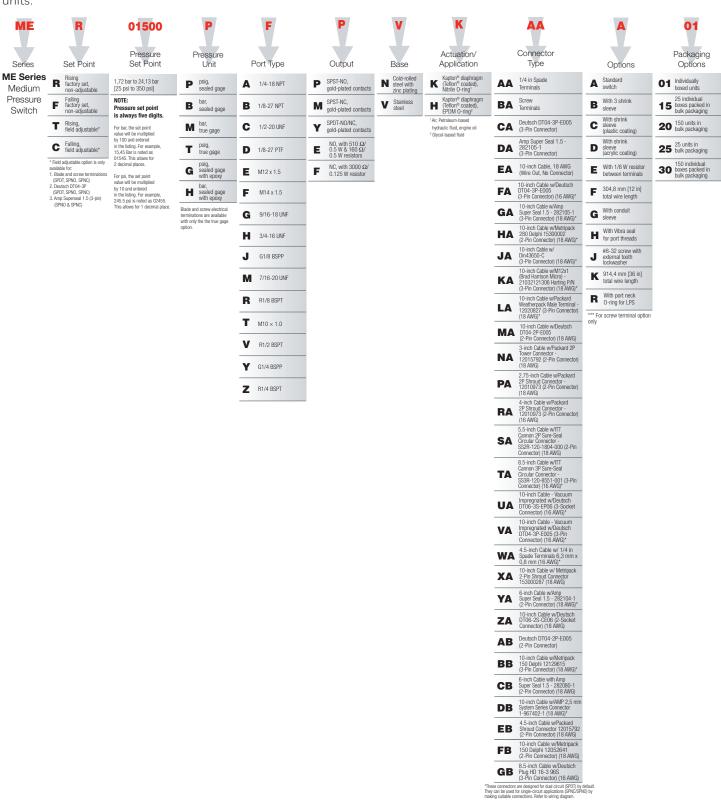
NOMENCLATURE: MEDIUM PRESSURE, HIGH BURST

For example, MHR01500PFPVMAAA01 defines a medium pressure, high burst switch, rising factory set, non-adjustable set point, 150 psi set point, psig, sealed gage pressure unit, 1/4-18 NPT port type, SPST-NO contacts output, stainless steel base, LTNB diaphragm, and spade terminal connectors.



NOMENCLATURE: MEDIUM PRESSURE

For example, **MER01500PFPVKAAA01** defines a medium pressure switch, rising factory set, non-adjustable set point, 55 psi set point, psig, sealed gage pressure unit, M14 x 1.5 port type, SPST-NO gold-plated contacts output, stainless steel base, Kapton diaphragm (Teflon coated), Nitrile O-ring actuation/application, spade terminal connectors, standard switch, individually boxed units.



NOMENCLATURE: LOW PRESSURE

For example, **LPR00550PFPVKAAA01** defines a low pressure switch, rising factory set, non-adjustable set point, 55 psi set point, psig, sealed gage pressure unit, M14 x 1.5 port type, SPST-NO gold-plated contacts output, stainless steel base, Kapton* diaphragm (Teflon® coated), Nitrile O-ring actuation/application, spade terminal connectors, standard switch, individually boxed

| units. | | | | | | | | | | | | |
|----------------------|--|--|--|----------------------|---------------|---|--|---|-------------------------------------|--|---|---|
| LP | R | 00550 | P | F | | P | V | K | | AA | A | 01 |
| 4 | 4 | Pressure | Pressure | - | | - | 4 | Actuation/ | | Connector | 4 | Packaging |
| Series LP Series, | Set Point | Set Point | Unit | Port Type | oper i | tput | Base | Application Kapton® diaphragm | | Type 1/4 in Spade | Options Standard | Options |
| LE Series | factory set, non-adjustable | 0,24 bar to 10,34 bar [3.5 psi to 150 psi] | P psig, sealed gage | A 1/4-18 NPT | ерет | lated contacts | B Brass Cold-rolled | (Teflon® coated), Nitrile O-ring¹ Kapton® diaphragm | AA | Terminals Screw | A switch | 01 Individually boxed units 25 individual |
| Pressure Switch | factory set, non-adjustable | Pressure set point is always five digits. | B sealed gage | B 1/8-27 NPT | gold-p | lated contacts | N steel with zinc plating V Stainless steel | (Teflon® coated), EPDM 0-ring² Tefzel® and Kapton® | BA | Terminals Deutsch DT04-3P-E005 | Sleeve With shrink | 15 boxes packed in bulk packaging |
| | field adjustable* | For bar, the set point value will be multiplied by 100 and entered in the listing. For example, | true gage | C 1/2-20 UNF | gold-p | with 510 Q/ | V steel | diaphragm, Nitrile O-ring³ Tefzel® and Kapton® | | (3-Pin Connector) Amp Super Seal 1.5 - | (plastic coating) With shrink | 20 150 units in bulk packaging |
| | Falling, field adjustable* * Field adjustable option is only available for: | 15,45 Bar is noted as 01545. This allows for 2 decimal places. | true gage | 1/8-27 PTF | E 1 W 8 | & 160 Ω/ resistors**** with 3000 Ω/ | | diaphragm, EPDM 0-ring ⁴ | DA | 282105-1 (3-Pin Connector)** 10-inch Cable, 18 AWG | Sleeve (acrylic coating) 304,8 mm [12 in] | 25 units in bulk packaging |
| | Blade and screw terminations (SPDT, SPNO, SPNC) Deutsch DT04-3P | For psi, the set point value will be multiplied by 10 and entered | G sealed gage with epoxy bar, | M12 x 1.5 | 0.125 NC w | 5 W resistor | | hydraulic fluid, engine oil ² Glycol-based fluid ³ For high temperature | EA | (Wire Out, No Connector)* 10-inch Cable w/Deutsch DT04-3P-E005 | total wire length | 30 boxes packed in bulk packaging |
| | (SPDT, SPNO, SPNC) 3. Amp Superseal 1.5 (3-pin) (SPNO & SPNC) | in the listing. For example, 245.5 psi is noted as 02455. This allows for 1 decimal place. | H sealed gage with epoxy Blade and screw electrical | M14 x 1.5 | G 0.5 W 0.5 W | V and 160 Ω2/ V resistors**** | | fluid media (LE Series only) ⁴ For high temperature fluid media, glycol-based | | (3-Pin Connector) (16 AWG)* | sleeve With Vibra seal | |
| | | | terminations are available with only the the true gage option. | G 9/16-18 UNF | | | | fluid (LE Series only) | | (3-Pin Connector) (18 AWG)* 10-inch Cable w/Metripack | for port threads | |
| | | | True gage option is available only up to 20 psig set point for integral connectors | 3/4-16 UNF | | | | | HA | 280 Delphi 15300002 (2-Pin Connector) (18 AWG)* 10-inch Cable w/ | total wire length 304,8 mm [12 in] | |
| | | | and wire out electrical terminations. | J G1/8 BSPP | | | | | JA | Din43650-C (3-Pin Connector) (18 AWG)* 10-inch Cable w/M12x1 (Brad Harrison Micro) - | total wire length with acrylic sleeve 914,4 mm [36 in] total wire length with | |
| | | | | 7/16-20 UNF | - | | | | KA | 21032121306 Harting P/N (3-Pin Connector) (18 AWG)* | *** For screw terminal option | |
| | | | | R R1/8 BSPT | | | | | LA | Weatherpack Male Terminal - 12020827 (3-Pin Connector) (18 AWG)* | only | |
| | | | | T M10 × 1.0 | | | | | MA | 10-inch Cable w/Deutsch DT04-2P-E005 (2-Pin Connector) (18 AWG) | | |
| | | | | V R1/2 BSPT | | | | | NA | 3-inch Cable w/Packard 2P Tower Connector - 12015792 (2-Pin Connector) | | |
| | | | | Y G1/4 BSPP | | | | | PA | (18 AWG) 2.75-inch Cable w/Packard 2P Shroud Connector - 12010973 (2-Pin Connector) | | |
| | | | | Z R1/4 BSPT | | | | | | 4-inch Cable w/Packard | | |
| | | | | | | | | | RA | 2P Shroud Connector - 12010973 (2-Pin Connector) (16 AWG) | | |
| | | | | | | | | | SA | 5.5-inch Cable w/TT Cannon 2P Sure-Seal Circular Connector - SS2R-120-1804-000 (2-Pin | | |
| | | | | | | | | | | Connector) (18 AWG) 8.5-inch Cable w/ITT Cannon 3P Sure-Seal | | |
| | | | | | | | | | TA | Circular Connector - SS3R-120-8551-001 (3-Pin Connector) (16 AWG)* 10-inch Cable - Vacuum | | |
| | | | | | | | | | UA | Impregnated w/Deutsch DT06-3S-EP06 (3-Socket Connector) (16 AWG)* | | |
| | | | | | | | | | VA | 10-inch Cable - Vacuum Impregnated w/Deutsch DT04-3P-E005 (3-Pin | | |
| | | | | | | | | | WA | Connector) (16 ÅWG)* 4.5-inch Cable w/ 1/4 in Spade Terminals 6,3 mm x | | |
| | | | | | | | | | | 0,8 mm (16 AWG)* 10-inch Cable w/ Metripack 2-Pin Shroud Connector | | |
| | | | | | | | | | YA | 153000287 (18 AWG) 6-inch Cable w/Amp Super Seal 1.5 - 282104-1 (2-Pin Connector) (18 AWG)* | | |
| | | | | | | | | | ZA | 10-inch Cable w/Deutsch DT06-2S-CE06 (2-Socket Connector) (18 AWG) | | |
| | | | | | | | | | AB | Deutsch DT04-2P-E005 (2-Pin Connector) | | |
| | | | | | | | | | ВВ | 10-inch Cable w/Metripack 150 Delphi 12129615 | | |
| | | | | | | | | | СВ | (3-Pin Connector) (18 AWG)* 6-inch Cable with Amp Super Seal 1.5 - 282080-1 | | |
| | | | | | | | | | DB | (2-Pin Connector) (18 AWG) 10-inch Cable w/AMP 2,5 mm System Series Connector 1-967402-1 (18 AWG)* | | |
| | | | | | | | | | | 1-967402-1 (18 AWG)* 4.5-inch Cable w/Packard Shroud Connector 12015792 (2-Pin Connector) (18 AWG) | | |
| | | | | | | | | | FB | 10-inch Cable w/Metripack 150 Delphi 12052641 | | |
| | | | | | | | | | | (2-Pin Connector) (18 AWG) 8.5-inch Cable w/Deutsch Plug HD 16-3 96S | | |
| | | | | | | | | The ma | y can be used f king suitable co | (3-Pin Connector) (16 AWG) are designed for dual circuit (SPDT) by ofor single-circuit applications (SPNC/SPN nnections. Refer to wiring diagram. hination with SPST option, only SPNO | default. O) by | |

ADDITIONAL MATERIALS

The following associated literature is available at sensing.honeywell.com:

- Product range guide
- Product line guide
- Technical note: Smart Diagnostic Technology
- Product application-specific information
 - Application Note: Honeywell Pressure Switches
 - Sensors and switches in front loaders
 - Sensors and switches in mobile cranes
 - Sensors and switches in oil rig applications
 - Industrial product line card

Find out more

Honeywell serves its customers through a worldwide network of sales offices, representatives and distributors. For application assistance, current specifications, pricing or name of the nearest Authorized Distributor, contact your local sales office. To learn more about Honeywell's sensing and switching products,

call **+1-815-235-6847** or

1-800-537-6945

visit sensing.honeywell.com,

or e-mail inquiries to

info.sc@honeywell.com

⚠ WARNINGPERSONAL INJURY

DO NOT USE these products as safety or emergency stop devices or in any other application where failure of the product could result in personal injury.

Failure to comply with these instructions could result in death or serious injury.

△ WARNINGMISUSE OF DOCUMENTATION

- The information presented in this product sheet is for reference only. Do not use this document as a product installation guide.
- Complete installation, operation, and maintenance information is provided in the instructions supplied with each product.

Failure to comply with these instructions could result in death or serious injury.

Warranty/Remedy

Honeywell warrants goods of its manufacture as being free of defective materials and faulty workmanship during the applicable warranty period. Honeywell's standard product warranty applies unless agreed to otherwise by Honeywell in writing; please refer to your order acknowledgement or consult your local sales office for specific warranty details. If warranted goods are returned to Honeywell during the period of coverage, Honeywell will repair or replace, at its option, without charge those items that Honeywell, in its sole discretion, finds defective. **The foregoing is buyer's sole remedy and is in lieu of all**

other warranties, expressed or implied, including those of merchantability and fitness for a particular purpose. In no event shall Honeywell be liable for consequential, special, or indirect damages.

While Honeywell may provide application assistance personally, through our literature and the Honeywell web site, it is buyer's sole responsibility to determine the suitability of the product in the application.

Specifications may change without notice. The information we supply is believed to be accurate and reliable as of this writing. However, Honeywell assumes no responsibility for its use.

Honeywell Safety and Productivity Solutions

9680 Old Bailes Road Fort Mill, SC 29707 honeywell.com

