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



1000 Series

5000 Series

**LE Series** 

**LP Series** 

ME Series MH Series HE Series

**HP Series** 

#### **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 status<sup>6</sup>
- Pressure port snubber suppresses pressure spikes<sup>2</sup>
- 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 rating<sup>1</sup>
- 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 rating<sup>4</sup>
- Operating temperature: -40°C to 120°C [-40°F to 248°F]
- Hysteresis option<sup>5</sup>
- More than 15 pressure port options and over 30 electrical terminations
- Plated steel, brass or stainless steel
- Switching point accuracy up to ±2 %

#### POTENTIAL APPLICATIONS





- 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.

- <sup>1</sup> HP, HE, MH, ME, LP, LE Series
- <sup>2</sup> HP, HE Series
- <sup>3</sup> ME, LP, LE Series
- <sup>4</sup> HP, HE, LP, LE, ME Series
- <sup>5</sup> HP, HE, LP Series
- <sup>6</sup> HP, HE, ME, LP, LE Series



## HP, HE, MH, ME, LP, LE, 5000, 1000 SERIES

TABLE 1. SP	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 <sup>1</sup> 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	0 psi (±1 psi); 0 psi (±3 psi); 10 psi (±7 psi); 50 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 <sup>2</sup>	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 <sup>3</sup>	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 <sup>4</sup>	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 Rasa Styla B: swi	n/a	1 A at 28 Vdc	n/a	1 A, 120 Vac 0.5 A, 240 Vac	n/a

<sup>&</sup>lt;sup>8</sup>Port 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.

## HP, HE, MH, ME, LP, LE, 5000, 1000 SERIES

TABLE 1. SP	ECIFICATION	S	-					
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 Conditional	C	Class J fuse (10 A, 600	V)	n/a	Class J fuse	(10 A, 600 V)	n/a	n/a
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			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 BSPT	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 BSPT 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 = M12 × 1.5 F = M14 × 1.5 G = 9/16-18 UNF H = 3/4-16 UNF J = 61/8 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=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	1/8-27 NPT	M10 x 1.25 double banjo; M10 x 1; 1/8-27 NPT
Circuit forms <sup>5</sup>	SPDT, SPS	ST - NO/NC	SPDT, SPST - NO/NC	SPST - NO/NC	SPDT, SPST - NO/NC	SPDT, SPST - NO/NC	SPST-NO; SPST-NC	SPNO
Smart pressure	9	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 approvals (special use switches)	-	-	-	-	-	-	UL Custom (select models)	-
Agency approvals (other)	CE, UKCA	CE, UKCA	CE, UKCA	CE, UKCA	CE, UKCA	CE, UKCA	-	-
Field adjustability <sup>6</sup>	no	no	yes	yes	yes	yes	yes	no
Spike dampening	yes	yes	no	no	no	no	no	no
Ingress protection <sup>7</sup>	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 <sup>2</sup> , 11 mS	EC, 100 shocks / axis		500 m/sec	2, 11 mSEC			15 G @ 5 mSEC
Wetted part (diaphragm)	n	/a	Kapton* (Teflon* coated)	Nitrile/EPDM/LTNB	Kapton <sup>®</sup> (Teflon <sup>®</sup> coated)	Tefzel <sup>®</sup>	Polymide film	EPDM
Wetted part (piston)	nitrile o-ring	յ, 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		] (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)

<sup>&</sup>lt;sup>1</sup>Set point: Point at which switch actuates or de-actuates <sup>2</sup>Operating pressure: Maximum normal system operating pressure <sup>3</sup>Proof pressure: Maximum pressure that the switch can handle while it maintains set point accuracy. Intermittent spikes to this level are acceptable.

<sup>\*\*</sup>Floor pressure: Point of complete switch failure

\*\*SPST: Single pole, single throw. SPDT: Single pole, double throw. NO: Normally open. NC: Normally closed.

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

\*\*IPO0 for AA and BA terminations.

## HP, HE, MH, ME, LP, LE, 5000, 1000 SERIES

TABLE 2. TE	RMINATIONS
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, 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/Deutsch DT04-3P-E005 (3-Pin Connector) (18 AWG)* HA = 10-inch Cable w/Metripack 280 Delpin 15300002 (2-Pin Connector) (18 AWG)* JA = 10-inch Cable w/Metripack 280 Delpin 15300002 (2-Pin Connector) (18 AWG)* JA = 10-inch Cable w/Metripack 280 Delpin 15300002 (2-Pin Connector) (18 AWG)* JA = 10-inch Cable w/Matta (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/Packard Weatherpack Male Terminal - 12020827 (3-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) (18 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 - SS2R-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 DT06-3S-EP06 (3-Socket Connector) (16 AWG)* VA = 4.5-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/Amp Super Seal 1.5 - 282208-1 (2-Pin Connector) (18 AWG) B = 10-inch Cable w/Metripack 150 Delphi 12129615 (3-Pin Connector) (18 AWG) B = 10-inch Cable w/Amp Super Seal 1.5 - 282208-1 (2-Pin Connector) (18 AWG) B = 10-inch Cable w/Amp Super Seal 1.5 - 282208-1 (2-Pin Connector) (18 AWG) B
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/Amp Super Seal 1.5 - 282104-1 (2-Pin Connector) (18 AWG) YA = 6-inch Cable w/Amp Super Seal 1.5 - 282104-1 (2-Pin Connector) (18 AWG) B = Doutsch 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 Super Seal 1.5 - 282080-1 (2-Pin Connector) (18 AWG) FB = 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)

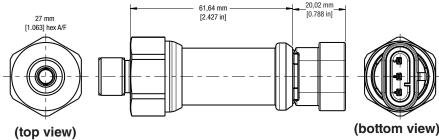
<sup>\*</sup>These connectors are designed for dual circuit (SPDT) by default. They can be used for single-circuit applications (SPNC/SPNO) by making suitable connections. Refer to wiring diagram.

## HP, HE, MH, ME, LP, LE, 5000, 1000 SERIES

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

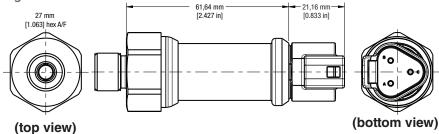
 $Base \ Style \ A \ key \ specifications \ \bullet \ Life: 2 \ million \ (HP), 1 \ million \ (HE); Burst \ pressure: 20,000 \ psing \ (HP), 1 \ million \ (HP), 2 \ million \ (HP), 3 \ million \ (HP), 4 \ million \ (HP), 5 \ million \ (HP), 6 \ million \ (HP), 7 \ million \ (HP), 9 \ millio$ 

#### Figure 1. AMP Superseal 1.5



Female Connector Part Number (included): C-282105 Male Mating Connector (customer provided): C-282087 IP Rating:  $\mbox{IP}67$ 

Figure 2. Deutsch



Female Connector Part Number (included): DT04-3P Male Mating Connector (customer provided): DT06-3S IP Rating:  $\mbox{IP}67$ 

Figure 3. Spade Terminal

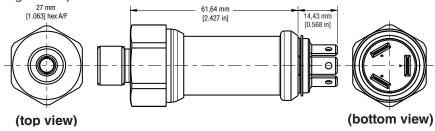


Figure 4. Screw Terminal

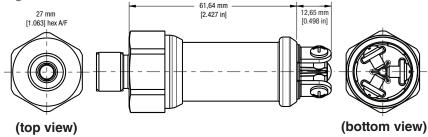
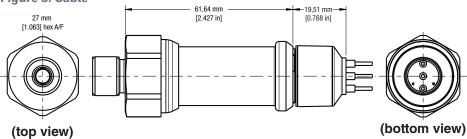


Figure 5. Cable



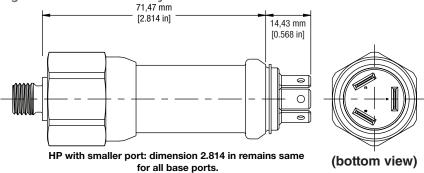
IP Rating: IP67

## HP, HE, MH, ME, LP, LE, 5000, 1000 SERIES

## **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** 

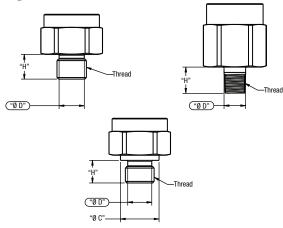


TABLE 3. HP/HE SER	IES PRESSURI	E PORT DIAMETERS	AND HEIGHTS		
Nomenclature Code	Thread	Height "A"	Diameter "ØD"	Diameter "ØC"	Height "H"
М	7/16-20 UNF	-	9,25 mm [0.364 in]	-	11 mm [0.433 in]
<b>C</b> <sup>1</sup>	1/2-20 UNF	-	10,85 mm [0.427 in]	-	11 mm [0.433 in]
G <sup>2</sup>	9/16-18 UNF	-	12,24 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 <sup>2</sup>	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]
Α	1/4-18 NPT	-	13,72 mm [0.540 in]	-	17,63 mm [0.694 in]

<sup>&</sup>lt;sup>1</sup>Port Style C: Switches less than 975 psi will use Base Style B; switches greater than 975 psi will use Base Style A.

<sup>&</sup>lt;sup>2</sup>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. Switches less than 150 psi will use only Base Style B.

## HP, HE, MH, ME, LP, LE, 5000, 1000 SERIES

## **DIMENSIONS - MEDIUM PRESSURE: MH SERIES**

Figure 8. AMP Superseal 1.5

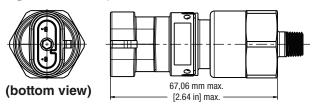


Figure 9. Deutsch 2-pin

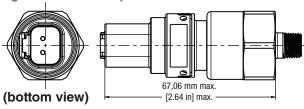


Figure 10. Wire out

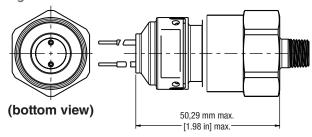


Figure 11. Blade terminal

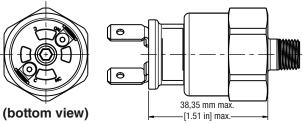


Figure 12. Screw terminal

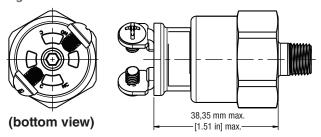


Figure 13. MH Series Pressure Port Dimensions

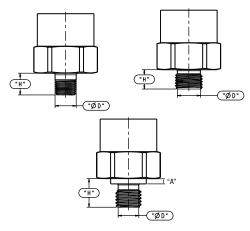


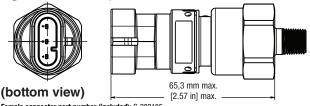
	TABLE 4. MH SERIES PRESSURE PORT DIAMETERS AND HEIGHTS					
Port	Diameter "ØD"	Height "H"				
R 1/2 BSPT	21,34 mm [0.840 in]	17,09 mm [0.673 in]				
R 1/4 BSPT	13,46 mm [0.530 in]	13,74 mm [0.541 in]				
R 1/8 BSPT	9,96 mm [0.392 in]	10,24 mm [0.403 in]				
1/8-27 PTF	10,34 mm [0.407 in]	9,24 mm [0.364 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]

## HP, HE, MH, ME, LP, LE, 5000, 1000 SERIES

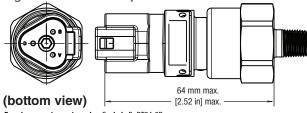
## **DIMENSIONS - MEDIUM PRESSURE: ME SERIES**

Figure 14. AMP Superseal 1.5



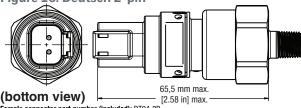
Female connector part number (included): C-282105 Male mating connector (customer provided): C-282087 IP rating: IP67

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

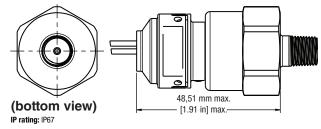


Figure 18. Blade terminal

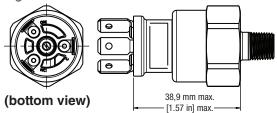


Figure 19. Screw terminal

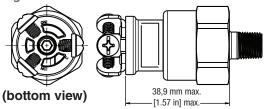
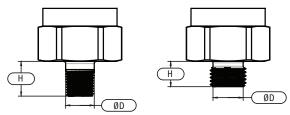
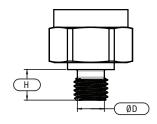


Figure 20. ME Series Pressure Port Dimensions





#### **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]

## HP, HE, MH, ME, LP, LE, 5000, 1000 SERIES

## **DIMENSIONS - LOW PRESSURE: LP SERIES, LE SERIES**

Figure 21. AMP Superseal 1.5

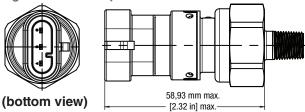


Figure 22. Deutsch 3-pin

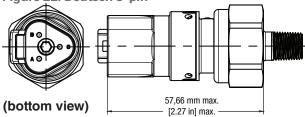


Figure 23. Deutsch 2-pin

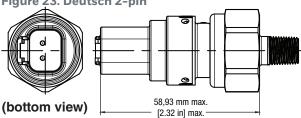


Figure 24. Wire out

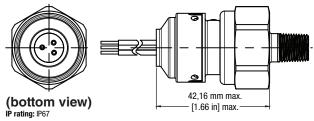


Figure 25. Spade terminal

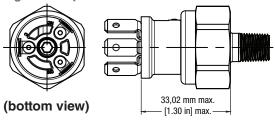


Figure 26. Screw terminal

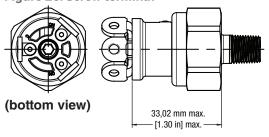
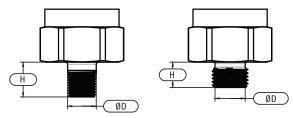
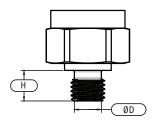


Figure 27. LP/LE Series Pressure Port Dimensions





## TABLE 6. LP/LE SERIES PRESSURE PORT DIAMETERS AND HEIGHTS

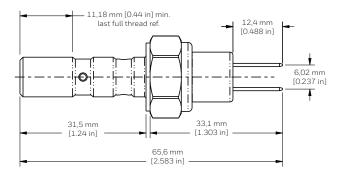
AITS HEIGHT	~	
Port	Diameter "ØD"	Height "H"
R 1/2 BSPT	21,34 mm [0.840 in]	17,09 mm [0.673 in]
R 1/4 BSPT	13,46 mm [0.530 in]	13,74 mm [0.541 in]
R 1/8 BSPT	9,96 mm [0.392 in]	10,24 mm [0.403 in]
1/8-27 PTF	10,34 mm [0.407 in]	9,24 mm [0.364 in]
1/4-18 NPT	13,72 mm [0.540 in]	17,63 mm [0.694 in]
1/8-27 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]

## HP, HE, MH, ME, LP, LE, 5000, 1000 SERIES

## **DIMENSIONS - 1000 SERIES, 5000 SERIES**

Figure 28. 1000 Series Dimensions



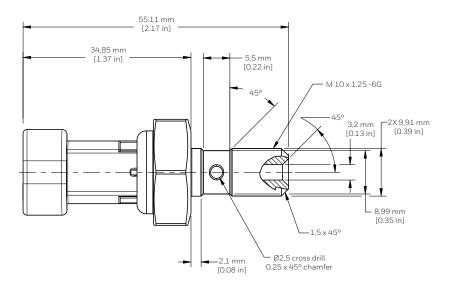
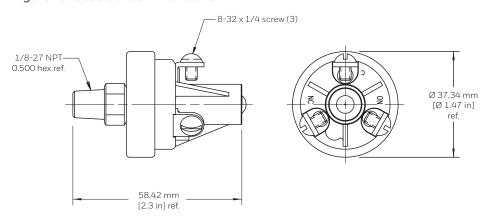


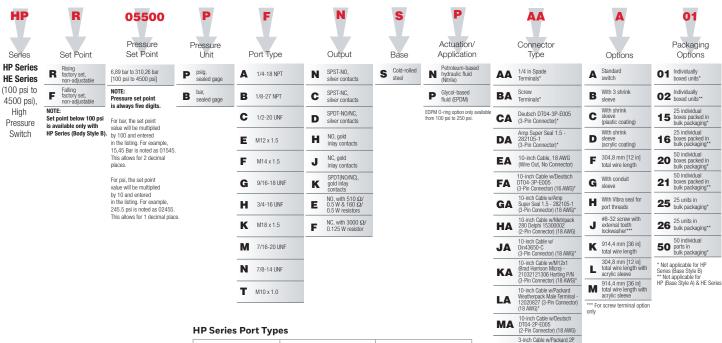
Figure 29. 5000 Series Dimensions



## HP, HE, MH, ME, LP, LE, 5000, 1000 SERIES

#### **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

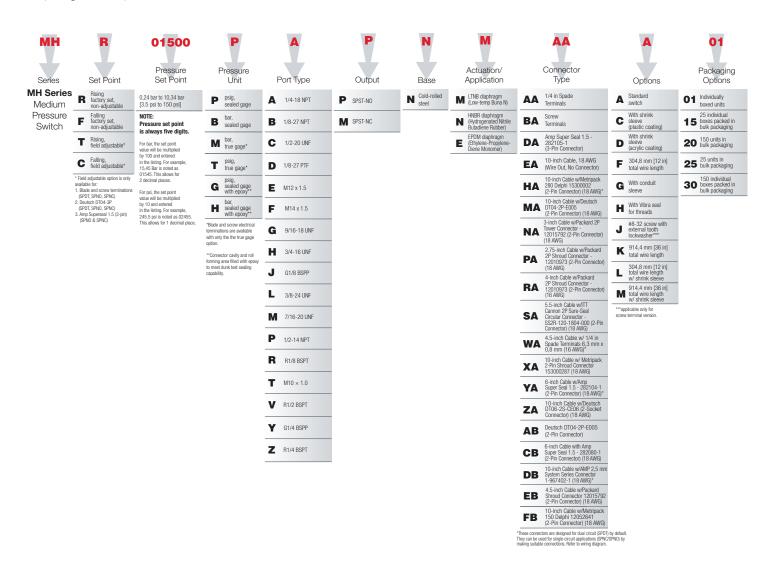
Port Type A, B, E, M, and T will be available only with HP Series. Base Style B will be available only with HP Series

GA	(3-Pin Connector) (18 AWG)*	
НА	10-inch Cable w/Metripack 280 Delphi 15300002 (2-Pin Connector) (18 AWG)	J
JA	10-inch Cable w/ Din43650-C (3-Pin Connector) (18 AWG)*	K
KA	10-inch Cable w/M12x1 (Brad Harrison Micro) - 21032121306 Harting P/N (3-Pin Connector) (18 AWG)*	L
LA	10-inch Cable w/Packard Weatherpack Male Terminal - 12020827 (3-Pin Connector) (18 AWG)*	onl
MA	10-inch Cable w/Deutsch DT04-2P-E005 (2-Pin Connector) (18 AWG)	OIII
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)	
ГВ	(2-1 III COIIIIECTOI) (10 AWG)	

## HP, HE, MH, ME, LP, LE, 5000, 1000 SERIES

## NOMENCLATURE: MEDIUM PRESSURE, HIGH BURST

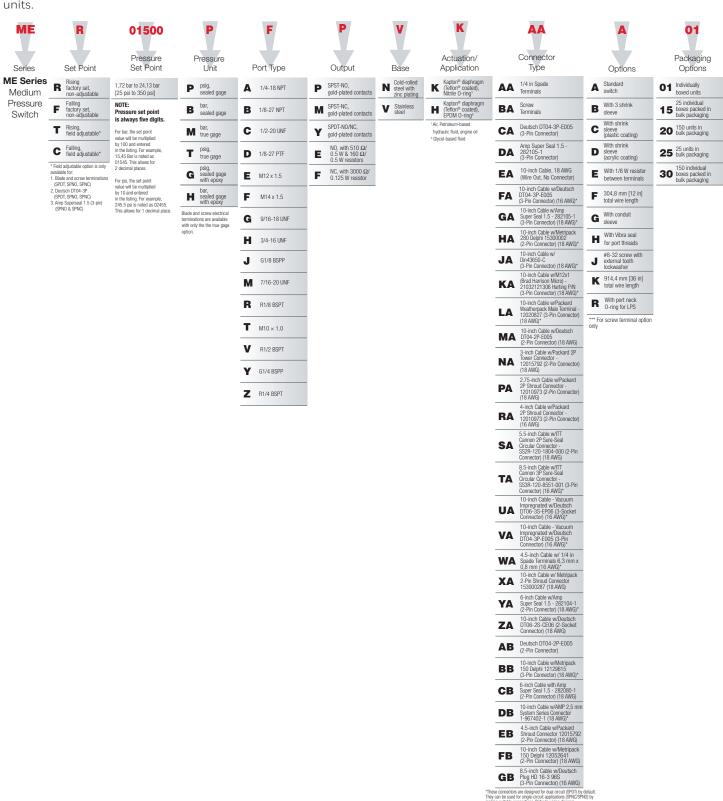
For example, MHR01500PFPNMAAA01 defines a medium pressure, high burst switch, rising factory set, non-adjustable set point, 150 psi set point, psig, sealed gage pressure unit, 1/4-18 NPT port type, SPST-NO contacts output, plated steel base, LTNB diaphragm, and spade terminal connectors.



## HP, HE, MH, ME, LP, LE, 5000, 1000 SERIES

#### 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.



## HP, HE, MH, ME, LP, LE, 5000, 1000 SERIES

#### **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	4	4	Actuation/	Connector	4	Packaging
Series LP Series,	Set Point	Set Point 0,24 bar to 10,34 bar	Unit psig,	Port Type	Output  SPST-NO,	Base	Application  Kapton® diaphragm (Teflon® coated),	Type  1/4 in Spade	Options Standard	Options  O1 Individually haved units
<b>LE Series</b> Low	R factory set, non-adjustable Falling	[3.5 psi to 150 psi]	sealed gage	A 1/4-18 NPT	gold-plated contacts	B Brass  Cold-rolled	Nitrile O-ring¹  Kanton® dianhranm	AA Terminals	A switch	25 individual
Pressure Switch	f factory set, non-adjustable  Rising, field adjustable*	Pressure set point is always five digits.	B sealed gage	B 1/8-27 NPT	gold-plated contacts	N steel with zinc plating  V Stainless steel	(Teflon® coated), EPDM 0-ring² Tefzel® and Kapton®	BA Screw Terminals  Deutsch DT04-3P-E005	B will 3 stillik sleeve  With shrink sleeve	15 boxes packed in bulk packaging  20 150 units in bulk packaging
	field adjustable*	For bar, the set point value will be multiplied by 100 and entered in the listing. For example,	M bar, true gage	C 1/2-20 UNF	Y SPDT-NO/NC, gold-plated contacts  NO, with 510 Ω/	v steel	diaphragm, Nitrile 0-ring³ Tefzel® and Kapton®	CA Deutsch D104-39-E005 (3-Pin Connector)  Amp Super Seal 1.5 - 282105-1	(plastic coating)  With shrink	25 bulk packaging 25 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 psig,	1/8-27 PTF	E 1 W & 160 Ω/ 1 W resistors****  NC, with 3000 Ω/		diaphragm, EPDM 0-ring <sup>4</sup>	(3-Pin Connector)**  10-inch Cable, 18 AWG	(acrylic coating)	150 individual
	Blade and screw terminations (SPDT, SPNO, SPNC)     Deutsch DT04-3P (SPDT, SPNO, SPNC)	value will be multiplied by 10 and entered	with epoxy bar,	E M12 x 1.5	F 0.125 W resistor  NC with 510 Ω/ 0.5 W and 160 Ω/		hydraulic fluid, engine oil <sup>2</sup> Glycol-based fluid <sup>3</sup> For high temperature	(Wire Out, No Connector)*  10-inch Cable w/Deutsch DT04-3P-E005	total wire length	bulk packaging
	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.	With epoxy  Blade and screw electrical	-	G 0.5 W and 160 Ω/ 0.5 W resistors****  **** Available only on LP Series		fluid media (LE Series only) <sup>4</sup> For high temperature fluid media, glycol-based	(3-Pin Connector) (16 AWG)*  10-inch Cable w/Amp Super Seal 1.5 - 282105-1 (3-Pin Connector) (18 AWG)*	G With conduit sleeve  H With Vibra seal for port threads	
			terminations are available with only the the true gage option.	<b>G</b> 9/16-18 UNF			fluid (LE Series only)	10-inch Cable w/Metrinack	914,4 mm [36 in] total wire length	
			True gage option is available only up to 20 psig set point for integral connectors and wire out electrical	J G1/8 BSPP				10-inch Cable w/ Din43650-C	304,8 mm [12 in] total wire length with	
			terminations.	7/16-20 UNF				(3-Pin Connector) (18 AWG)*	914,4 mm [36 in] total wire length with	
				R R1/8 BSPT				Land Harrison Micro) - 21032121306 Harting P/N (3-Pin Connector) (18 AWG)*  10-inch Cable w/Packard	acrylic sleeve  *** For screw terminal option only	
				T M10 × 1.0				Weatherpack Male Terminal - 12020827 (3-Pin Connector) (18 AWG)*  10-inch Cable w/Deutsch		
				V R1/2 BSPT				DT04-2P-E005 (2-Pin Connector) (18 AWG)  3-inch Cable w/Packard 2P		
				Y G1/4 BSPP				Tower Connector - 12015792 (2-Pin Connector) (18 AWG)		
				Z R1/4 BSPT				2.75-inch Cable w/Packard 2P Shroud Connector - 12010973 (2-Pin Connector) (18 AWG)		
								4-inch Cable w/Packard 2P Shroud Connector - 12010973 (2-Pin Connector)		
								(16 AWG) 5.5-inch Cable w/ITT Cannon 2P Sure-Seal		
								SA Circular Connector - SS2R-120-1804-000 (2-Pin Connector) (18 AWG)		
								8.5-inch Cable w/ITT Cannon 3P Sure-Seal Circular Connector - SS3R-120-8551-001 (3-Pin Connector) (16 AWG)*		
								Connector) (16 AWG)*  10-inch Cable - Vacuum Impregnated w/Deutsch DT06-3S-EP06 (3-Socket		
								Connector) (16 AWG)* 10-inch Cable - Vacuum		
								Impregnated w/Deutsch DT04-3P-E005 (3-Pin Connector) (16 AWG)* 4.5-inch Cable w/ 1/4 in		
								Spade Terminals 6,3 mm x 0,8 mm (16 AWG)*		
								2-Pin Shroud Connector 153000287 (18 AWG) 6-inch Cable w/Amn		
								4-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)  Deutsch DT04-2P-E005		
								(2-Pin Connector)		
								BB 150 Delphi 12129615 (3-Pin Connector) (18 AWG)* 6-inch Cable with Amp		
								CB Super Seal 1.5 - 282080-1 (2-Pin Connector) (18 AWG) 10-inch Cable w/AMP 2.5 mm		
								DB System Series Connector 1-967402-1 (18 AWG)*		
								4.5-inch Cable w/Packard Shroud Connector 12015792 (2-Pin Connector) (18 AWG) 10-inch Cable w/Metripack 150 Delphi 12052641		
								FB 150 Delphi 12052641 (2-Pin Connector) (18 AWG) 8.5-inch Cable w/Deutsch Plug HD 16-3 96S		
							Th	(3-Pin Connector) (16 AWG)  hese connectors are designed for dual circuit (SPDT) by ev can be used for sinole-circuit applications (SPNC/SP)	default. NO) by	
							ma **F	aking suitable connections. Refer to wiring diagram. For electrical termination with SPST option, only SPNO		

making suitable connections. Refer to wiring diagram.

"For electrical termination with SPST option, only SPNO configuration is available. SPNC configuration cannot be provided.

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