

Pressure

Compact Pressure Switch

Series 8000

Features

- ▶ Proven design in stationary and mobile hydraulic applications
- ▶ Wide setpoint pressure range
- ▶ Available in wide range of configurations
- ▶ Precise setpoint adjustment
- ▶ Factory preset or field adjustable
- ▶ UL Type 4
- ▶ Modular concept
- ▶ Manifold mount
- ▶ Additional process connections

Applications

- ▶ Hydraulic power packs
- ▶ Machine tools
- ▶ Overload controls
- ▶ Railways
- ▶ Factory automation
- ▶ Balers and compactors



General Specifications*

| | |
|---------------------------------------|--|
| Repeatability: | ±2% typical, diaphragm models ±1% typical, piston models |
| Microswitch: | SPDT contact |
| Type: | |
| Rating: | Silver contacts: 3A @ 250 VAC 5A @ 125 VAC 3A @ 30 VDC Gold contacts: 0.1A @ 125 VAC 0.1A @ 30 VDC |
| Switching Frequency: | Max. 60 /min piston switch Max. 30/ min diaphragm switch |
| Wetted Parts: | |
| Process Fitting: | 300 series stainless steel |
| Housing: | Aluminum die-cast 230 |
| Seals & Diaphragms: | Buna-N (NBR) standard; FKM, EPDM (EPR) optional |
| Adjustment Screw: | 300 stainless steel (HEX 5 mm) |
| Electrical Connection/ Rating: | For IP rating and electrical connections see page 2 |
| Enclosure Ratings*: | NEMA 4 |

| | |
|-----------------------------------|--|
| Pressure Connection: | Standard manifold (Additional options available; see product configurator) |
| Approvals: | |
| Standard: | UL / cULus (CSA) |
| Ambient Temperature Range: | |
| Piston Switch: | -40°F to +167°F (-40°C to +75°C) |
| Diaphragm Switch: | -4°F to +167°F (-20°C to +75°C) |
| Adjustment Instructions: | |
| Setpoint Adjustment: | Turn adjustment screw clockwise to increase pressure setpoint; counterclockwise to decrease pressure setpoint. |
| Shipping Weight: | |
| Manifold Version: | 0.77 lbs. (350 g) |
| Adaptor Version Straight: | 1.36 lbs. (620 g) |
| Adaptor Version 90° Angle: | 1.48 lbs. (675 g) |

* See product configurator for additional options.

Wiring Code

(contact status at atmospheric pressure)



| | DIN 43650 Plug (T/B) | M12 Plug (M) | Cable Gland (P) | 1/2" NPT Conduit w/ Free Leads (C) |
|------------------------|----------------------|--------------|-----------------|------------------------------------|
| Common | 1 | 1 | White | Violet |
| Normally Closed | 2 | 2 | Black | Blue |
| Normally Open | 3 | 4 | Red | Red |
| Ground | GRD | 3 | Green | Green |

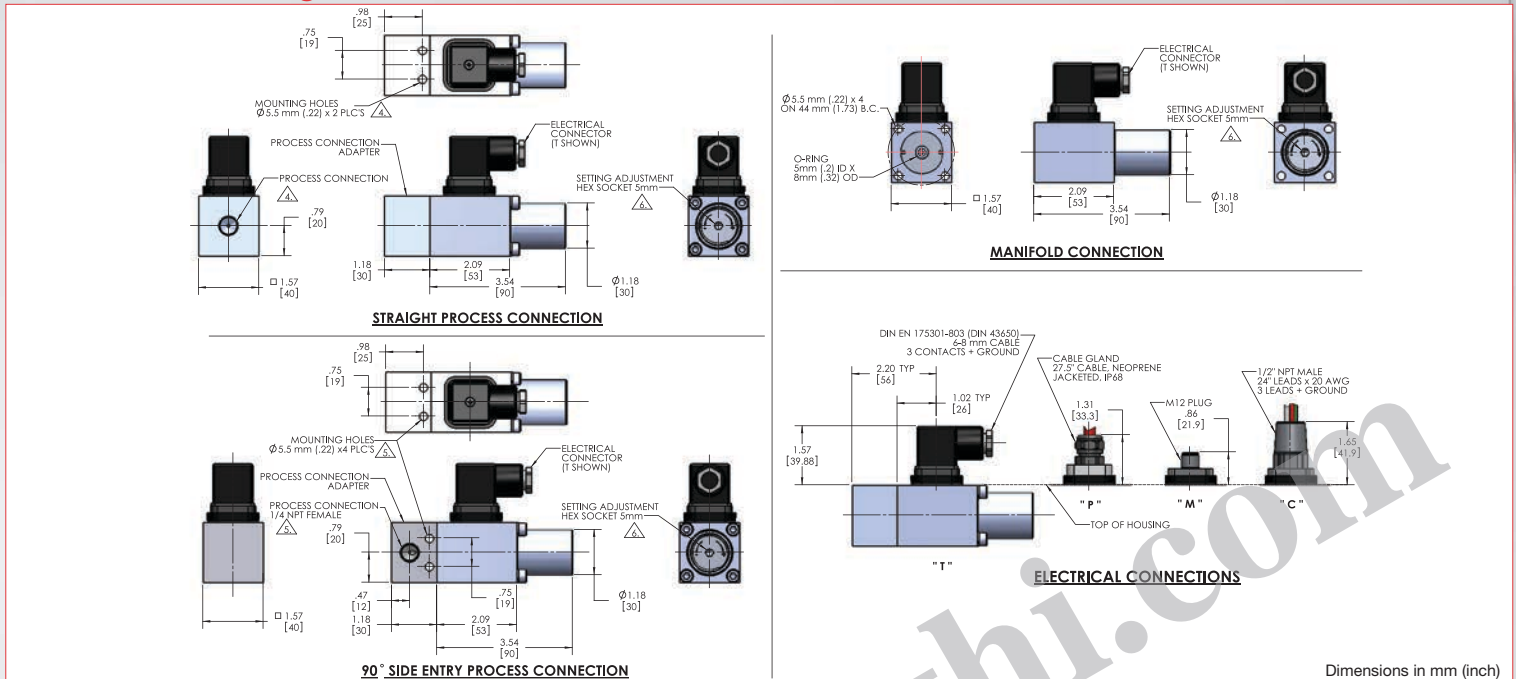
Barksdale®
CONTROL PRODUCTS

Barksdale, Inc./Barksdale GmbH
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Technical Drawings



Product Configurator

Example: **8 A A 1 T B**

Series

8 Series 8000

Process Connections¹

- 1² Manifold connection flange 40 x 40
- 2 G1/4" female
- A 1/4" NPT female
- C 1/8" NPT female
- D 1/4" NPT female, 90° side entry
- E 7/16-20 UNF SAE-4 female
- F 9/16-18 UNF SAE-6 female

SPDT Contacts

- 1 Silver
- 2 Gold-plated

*Electrical Connectors

- T Plug DIN 43650 A, IP65 (UR only) (formerly PL1)
- B DIN 43650, without mating plug, IP65
- M Plug M12, 4-pol. without female plug, IP67 (UR only) (formerly PL2)
- P Cable gland, 27.5" (0.7 m) cable, neoprene jacketed, IP68 (formerly CA3)
- C 1/2" NPTM AWG 20 with 24" (60 cm) leads (3 leads + ground) (formerly CD1)

¹Electrical connectors listed meet NEMA 4 rating

Pressure Range

| | Adjustable Ranges | | | | Max. Hysteresis ³ (Dead-band) | Max. Operating Pressure | | Proof Pressure | |
|----------------|------------------------------|------------------------------|------------------------------|------------------------------|---|-------------------------|-------|-------------------|-------------------|
| | (decreasing pressure) psi | (decreasing pressure) bar | (increasing pressure) psi | (increasing pressure) bar | | psi | bar | psi | bar |
| Diaphragm | | | | | ≤15% of max adjustable range | | | | |
| A | 5.8 - 82 | 0.4 - 5.7 | 8.7 - 87 | 0.6 - 6 | | 725 | 50 | 1200 | 80 ⁽¹⁾ |
| B | 29 - 246 | 2.0 - 17 | 45 - 290 | 3.1 - 20 | | 725 | 50 | 1200 | 80 ⁽¹⁾ |
| C | 43 - 600 | 3.0 - 41 | 60 - 650 | 4.1 - 45 | 725 | 50 | 1200 | 80 ⁽¹⁾ | |
| Piston | | | | | ≤15% of max adjustable range | | | | |
| D ⁸ | 43 - 2320 | 3.0 - 160 | 75 - 2610 | 5.0 - 180 | | 3600 | 250 | 8700 | 600 |
| E ⁸ | 430 - 4300 | 30 - 300 | 750 - 5000 | 50 - 350 | | 6500 | 450 | 8700 | 600 |
| F ⁸ | 800 - 7550 | 55 - 520 | 1200 - 8700 | 80 - 600 | 8700 | 600 | 13050 | 900 | |

⁽¹⁾ Proof pressure 2900 psi (200 bar) on request (May shorten the lifetime of the switch).

Accessories

| | |
|----|---|
| /A | 4 pin M12 female right angle plug molded cable, 3.28 feet (1 meter) |
| /B | 4 pin M12 female right angle plug molded cable, 6.56 feet (2 meter) |
| /E | 4 pin M12 female right angle plug molded cable, 16.40 feet (5 meters) |
| /G | 4 pin M12 female straight plug molded cable, 3.28 feet (1 meter) |
| /H | 4 pin M12 female straight plug molded cable, 6.56 feet (2 meter) |
| /K | 4 pin M12 female straight plug molded cable, 16.40 feet (5 meters) |
| /M | 4 pin M12 female straight connector |
| /N | DIN 43650 type A connector with molded cable 6.56 feet (2 meters) |
| /O | DIN 43650 type A connector with molded cable, 16.40 feet (5 meters) |
| /P | 4 pin M12 female right angle connector |
| /Q | DIN 43650 type A connector |

Options

| | |
|--------------------|------------------------------------|
| L ^{4,5} | Small hysteresis (not UL) |
| S ⁶ | 300 series stainless steel housing |
| XXXXR ⁷ | Factory set rising |
| XXXXF ⁷ | Factory set falling |
| D ⁵ | Surge protection |

Seals

| | |
|---|---------------|
| B | Buna -N (NBR) |
| V | FKM |
| E | EPDM (EPR) |

Notes:

- ¹ Consult factory for other process connections, minimum quantities may apply.
- ² Model 81XX- at pressure ranges (A to E) is delivered with 2 spring washers and 2 mounting screws 5 x 60 mm, steel 10.9, galvanized (hex 4). Pressure range (F) is delivered with 4 mounting screws.
- ³ Consult sales drawing for dead-band chart.
- ⁴ UL not available for L option.
- ⁵ Only for piston version (D, E, F pressure range)
- ⁶ Stainless steel model is not UL approved if electrical connector option "P" is chosen.
- ⁷ Factory set examples: If set point is 2500 psi rising, order 2500R, if set point is 500 psi falling, order 0500F.
- ⁸ For water applications or pressure over 3,000 psi, D option, surge protection, is recommended