

# DATA SHEET

## PRESSURE SWITCHES



**Stainless Steel  
NPT Models:**

**31615, 31625, 31640**



Model 31615 (Blue Nut) Shown

### FEATURES

- These pressure switches feature an IP55 electrical insulation rating.
- A stainless steel contact pin enhances durability and extends the switch lifespan.
- 3-wire construction allows for either normally open (NO) or normally closed (NC) operation.
- The non-adjustable, preset pressure setting ensures consistent switch operation.
- Switches easily connect to control systems and other pressure-activated devices to shut off burners or other low-amp components.
- A threaded stainless steel male NPT fitting prevents corrosion and guarantees a long service life.

### COMMON SPECIFICATIONS

	U.S.	Metric
Maximum System Pressure	3650 psi	250 bar
Switch Engaging Pressure:		
31615 (Blue Nut)	215 psi	15 bar
31625 (Red Nut)	360 psi	25 bar
31640 (Black Nut)	580 psi	40 bar
Maximum Voltage	250 Volts	250 Volts
Maximum Amperage	6 Amps	6 Amps
Maximum Temperature	140° F	60° C
Inlet Fitting	¼" NPT(M)	¼" NPT(M)
Weight	9.17 oz	0.26 kg
Dimensions	3.13 x 3.26 x 1.04"	79.5 x 82.8 x 26.4 mm
Cable Length	47.2"	1200 mm

**Note:** Use only at above specifications to ensure proper pressure switch life and performance.

### SELECTION

These electromechanical devices open or close an electrical control contact when they detect a pre-set pressure. They are used to control the on-off operation of various low-amp system components. Choose a pressure switch that matches your system's rated pressure and the required activation pressure for the electrical commutation. Additionally, ensure that the machine's pressure does not exceed the maximum allowable pressure indicated on the pressure switch.

### MAINTENANCE

Check and lubricate the seals with water-resistant grease every 400 working hours (approximately 10,000 cycles).

**The manufacturer is not responsible for damage resulting from improper installation or maintenance.**

Technical data, descriptions, and illustrations are for informational purposes only and may be subject to change without notice.

## PARTS LIST

ITEM	P/N	MATL	DESCRIPTION	QTY
1	—	SS	Fitting, Inlet (¼" NPT[M])	1
2	—	PTFE	Backup Ring, Piston	2
3	—	NBR	O-Ring, Piston	1
4	—	BB	Piston	1
5	—	BB	Washer, Piston	1
6	—	SS	Spring (31615 – 215 psi, 15 bar)	1
	—	SS	Spring (31625 – 360 psi, 25 bar)	1
	—	SS	Spring (31640 – 580 psi, 40 bar)	1
7	—	BB	Washer, Spring	1
8	—	S	U-Clip, Fitting	1
9	—	NY	Cover	1
10	—	STZP	Screw (M2.6 x 11.5)	4
11	—	NBR	O-Ring, Square Cover	1
12	32861	—	Switch, Micro	1
13	—	NY	Case	1
14	—	NBR	O-Ring, Nut	1
15	—	NY	Nut, Blue (31615 – 215 psi, 15 bar)	1
	—	NY	Nut, Red (31625 – 360 psi, 25 bar)	1
	—	NY	Nut, Black (31640 – 580 psi, 40 bar)	1
16	—	—	Cable*, 3-Wire, M1200	1
—	31530	NBR	Kit, O-Ring (Includes: 2, 3, 11, 14)	1

\*Normally closed: red and blue. Normally open: red and tan.

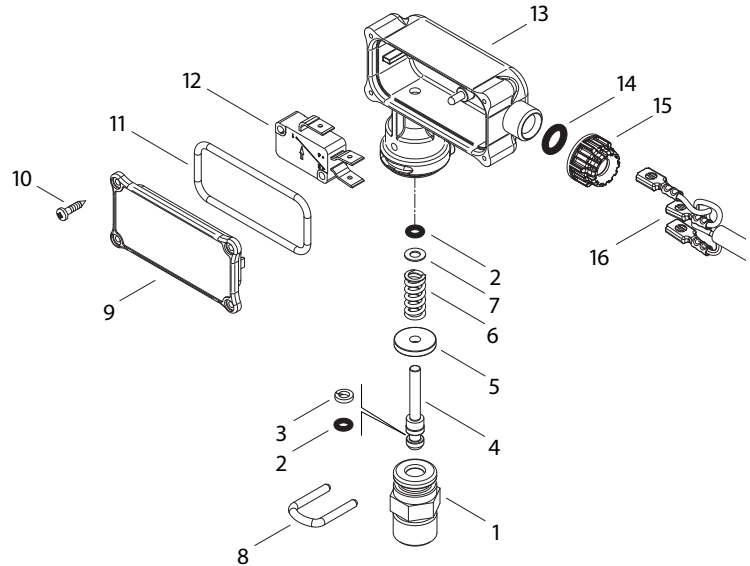
*Italics are optional items.*

MATERIAL CODES (Not Part of Part Number): BB=Brass

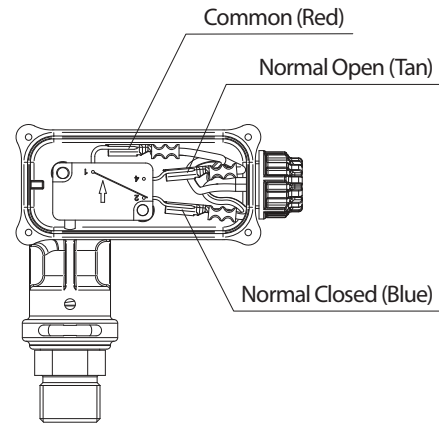
NBR=Medium Nitrile (Buna-N) NY=Nylon PTFE=Pure Polytetrafluoroethylene

S=304SS SS=316SS STZP=Steel/Zinc Plated

## EXPLODED VIEW



## WIRING DIAGRAM



## TROUBLESHOOTING

Problems	Probable Cause	Solution
Pressure switch does not function	<ul style="list-style-type: none"> <li>Electric connection faulty or loose</li> <li>Rupture of microlever</li> <li>Rupture of piston spring</li> <li>Rupture of microcontacts</li> <li>Jammed piston</li> </ul>	<ul style="list-style-type: none"> <li>Check and/or replace</li> <li>Replace microswitch</li> <li>Replace spring</li> <li>Replace microswitch</li> <li>Check and/or replace</li> </ul>
Fluid in the casing	<ul style="list-style-type: none"> <li>Damaged piston seals</li> <li>Damaged nut seal</li> </ul>	<ul style="list-style-type: none"> <li>Check and/or replace</li> <li>Check and/or replace</li> </ul>

### ⚠ WARNING

#### ELECTRICAL SHOCK HAZARD

Do not service pump or electrical equipment while energized. Electricity can cause personal injury, death or property damage.

- Adhere to "Lock Out" and "Tag Out" procedures for electrical equipment.
- Before commencing pump service, turn power supply off.
- Keep water away from electrical outlets and electrical devices.
- Electrical components must be installed by a qualified electrician to avoid risk of electrocution.

### ⚠ CAUTIONS AND WARNINGS

All high-pressure systems require a primary pressure regulating device (e.g. regulator, unloader) and a secondary pressure relief device (e.g. pop-off valve, relief valve). Failure to install such relief devices could result in personal injury or damage to pump or property. Cat Pumps does not assume any liability or responsibility for the operation of a customer's high-pressure system.

Read all CAUTIONS and WARNINGS before commencing service or operation of any high-pressure system. The CAUTIONS and WARNINGS are included in each Service Manual and with each Accessory Data sheet. CAUTIONS and WARNINGS can also be viewed online at [www.catpumps.com/dynamic-literature/cautions-and-warnings](http://www.catpumps.com/dynamic-literature/cautions-and-warnings) or can be requested directly from Cat Pumps.

### WARRANTY

View the Limited Warranty online at [www.catpumps.com/literature/cat-pumps-limited-warranty](http://www.catpumps.com/literature/cat-pumps-limited-warranty)