

Dry All

Full Range of HVAC&R Line Products



Cartridge Pressure Switches

Introduction

Dry All Cartridge Pressure switches is a compact, precision engineered device used to monitor and control pressure levels in various fluid and gas systems. These switches are designed to detect changes in pressure and trigger a response, such as activating an alarm or shutting down equipment, to maintain safe and efficient operations. They are commonly used in industrial applications, including hydraulic and pneumatic systems, refrigeration, and HVAC&R (heating, ventilation, and air conditioning & Refrigeration) systems. Features of Dry All cartridge pressure switches include their small size, which allows for easy integration into tight spaces, and their robustness, making them suitable for harsh environments. These switches typically consist of a pressure sensing element, such as a diaphragm or piston, and an electrical contact mechanism that reacts when a preset pressure threshold is reached. The versatility of Dry All Cartridge Pressure Switches lies in their enabling customization for specific application requirements.

Key Features

- Compact Design
- High Precision
- Robust Construction
- Wide Pressure Range
- Reliable Performance
- Electrical Contact Mechanism
- Versatile Applications
- Ease of Installation
- Fail-Safe Operation
- Faster Response Time
- Ingress Protection : IP54

Advantages

Durability and Reliability: Dry All Cartridge Pressure switches can withstand harsh conditions, including high pressures, extreme temperatures, and corrosive environments, leading to long-lasting performance.

Easy Installation and Maintenance: The straightforward design and ease of access make Installation and replacement simple, reducing downtime and maintenance efforts.

Cost-Effective: Their durability and reliability reduce the need for frequent replacements and maintenance, resulting in lower overall operational costs.

Sealing and Protection: Many models include sealing features to protect internal components from dust, moisture, and other contaminants, ensuring consistent performance in various environments.

Energy Efficiency: By precisely controlling system pressures, Dry All Cartridge Pressure Switches can contribute to more efficient operation of equipment, potentially reducing energy consumption.

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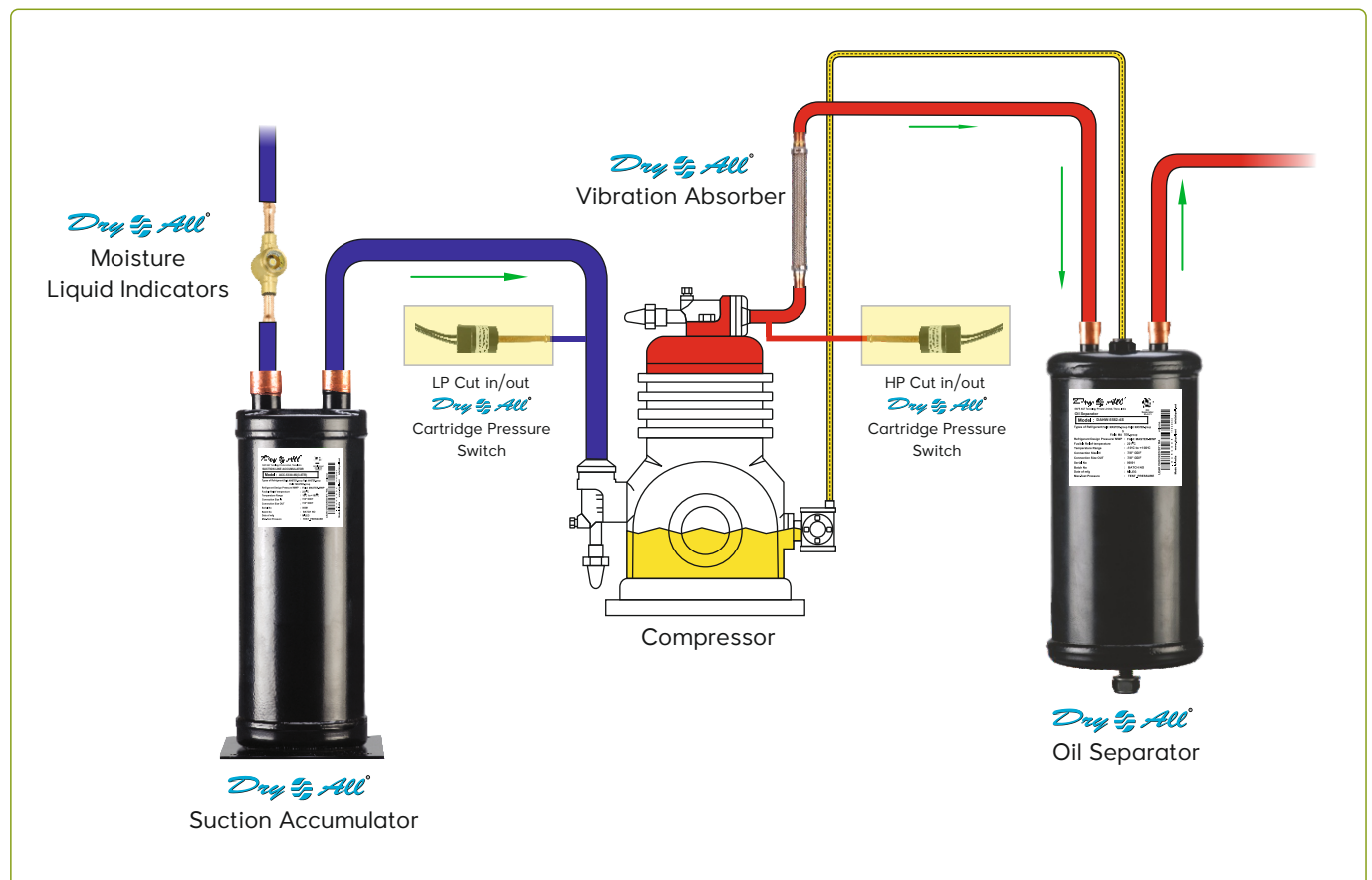
Space-Saving: The small, cylindrical design allows for easy integration into equipment with limited space, making them ideal for applications where space is a premium.

High Precision and Accuracy: These switches provide accurate monitoring and control of pressure levels, ensuring systems operate within safe and efficient parameters.

Applications

- Air conditioning system
- Heat pump
- Refrigeration systems
- Boilers
- Process Chillers
- Dehumidifiers
- Hydronic system

Product installed in Refrigeration System



Working Principle

The working principle of a Dry All Cartridge Pressure Switches involves detecting changes in pressure within a system and triggering an electrical response when the pressure reaches a preset threshold.

The switch contains a diaphragm, piston, or bellows that reacts to pressure changes in the system. The pressure sensing element is linked to a calibrated spring mechanism that defines the pressure set point. When the system pressure changes, the diaphragm or piston moves in response to the pressure differential. This mechanical movement activates or deactivates electrical contacts within the switch.

When the pressure reaches the preset threshold, the contacts either close or open the electrical circuit. The change in the electrical state can trigger various responses, such as turning on an alarm, shutting down machinery, or activating other safety or control mechanisms. Once the pressure returns to normal levels, the switch resets, and the electrical contacts return to their default state, ready to respond to future pressure changes.

This mechanism allows Cartridge Pressure Switches to provide reliable and precise control over pressure dependent systems, ensuring safety and efficiency.

Dimensional Drawings

Solder Connection

<p align="center">Drawing - 1</p>	<p align="center">Drawing - 2</p>
<p align="center">Drawing - 3</p>	<p align="center">1/4" Solder</p>

Flare Connection

<p align="center">Drawing - 4</p>	<p align="center">Drawing - 5</p>
<p align="center">Drawing - 6</p>	<p align="center">1/4" Female Flare Fitting W/core depressor</p>

Cartridge Pressure Switches

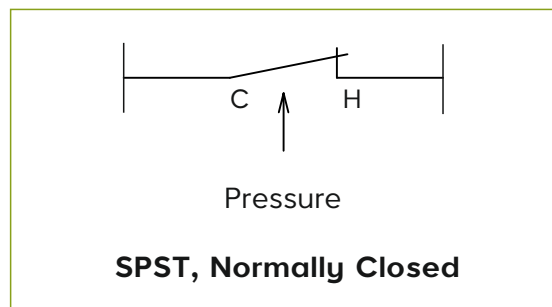
Standard Models Available

High Pressure Control

Sr. No	Model No.	Pressure (Cut out)		Pressure (Cut In)		Contact Switch	Connection Type & Size	Electrical Switch Configuration	Reset (Manual /Auto)	Refer Drawing
		Psi	Bar	Psi	Bar					
1	DA-PS-260-190-SAW	260 ± 10	18 ± 0.7	190 ± 17	13 ± 1.2	NC	1/4"Solder(ODM)	SPST	Auto	1
2	DA-PS-260-190-FAW	260 ± 10	18 ± 0.7	190 ± 17	13 ± 1.2		1/4"Flare(Female)			4
3	DA-PS-290-230-SAD	290 ± 14	20 ± 1	230 ± 21	16 ± 1.5		1/4"Solder(ODM)			2
4	DA-PS-290-230-FAD	290 ± 14	20 ± 1	230 ± 21	16 ± 1.5		1/4"Flare(Female)			5
5	DA-PS-335-275-SAD	335 ± 10	23 ± 0.7	275 ± 17	19 ± 1.2		1/4"Solder(ODM)			2
6	DA-PS-335-275-FAD	335 ± 10	23 ± 0.7	275 ± 17	19 ± 1.2		1/4"Flare(Female)			5
7	DA-PS-380-290-SAW	380 ± 15	26 ± 1	290 ± 22	20 ± 1.5		1/4"Solder(ODM)			1
8	DA-PS-380-290-FAW	380 ± 15	26 ± 1	290 ± 22	20 ± 1.5		1/4"Flare(Female)			4
9	DA-PS-380-290-SMW	380 ± 15	26 ± 1	290 ± 22	20 ± 1.5		1/4"Solder(ODM)		Manual	3
10	DA-PS-380-290-FMW	380 ± 15	26 ± 1	290 ± 22	20 ± 1.5		1/4"Flare(Female)			6
11	DA-PS-380-290-SAD	380 ± 15	26 ± 1	290 ± 22	20 ± 1.5		1/4"Solder(ODM)		Auto	2
12	DA-PS-380-290-FAD	380 ± 15	26 ± 1	290 ± 22	20 ± 1.5		1/4"Flare(Female)			5
13	DA-PS-405-305-SAW	405 ± 14	28 ± 1	305 ± 22	21 ± 1.5		1/4"Solder(ODM)			1
14	DA-PS-405-305-FAW	405 ± 14	28 ± 1	305 ± 22	21 ± 1.5		1/4"Flare(Female)			4
15	DA-PS-405-305-FMW	405 ± 14	28 ± 1	305 ± 22	21 ± 1.5		1/4"Flare(Female)		Manual	6
16	DA-PS-405-305-SAD	405 ± 14	28 ± 1	305 ± 22	21 ± 1.5		1/4"Solder(ODM)			2
17	DA-PS-405-305-FAD	405 ± 14	28 ± 1	305 ± 22	21 ± 1.5		1/4"Flare(Female)		Auto	5
18	DA-PS-405-350-SAD	405 ± 14	28 ± 1	350 ± 22	24 ± 1.5		1/4"Solder(ODM)			2
19	DA-PS-405-350-FAD	405 ± 14	28 ± 1	350 ± 22	24 ± 1.5		1/4"Flare(Female)			5
20	DA-PS-610-480-SAW	610 ± 17	42 ± 1.2	480 ± 29	33 ± 2		1/4"Solder(ODM)		Manual	1
21	DA-PS-610-480-FAW	610 ± 17	42 ± 1.2	480 ± 29	33 ± 2		1/4"Flare(Female)			4
22	DA-PS-610-480-FMW	610 ± 17	42 ± 1.2	480 ± 29	33 ± 2		1/4"Flare(Female)		Manual	6

***Note :** All HP switches with wired connection comes with black, 600mm (24") AWG 18 UL 1015 lead wires.

Ingress Protection Class : IP54 (IP65 can be provided on special request)



Cartridge Pressure Switches

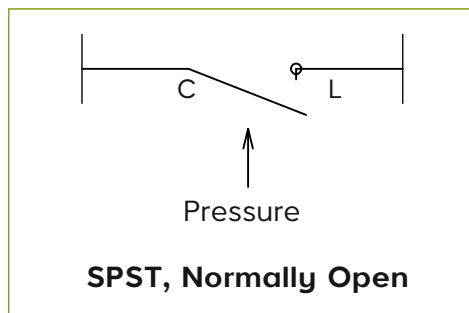
Standard Models Available

Low Pressure Control

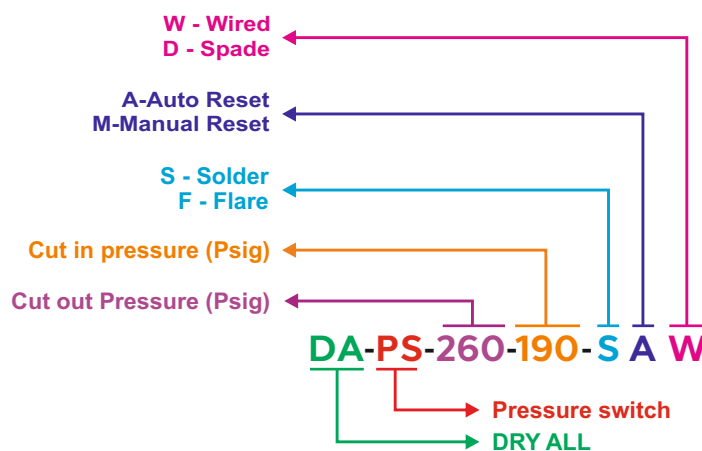
Sr. No	Model No.	Pressure (Cut out)		Pressure (Cut In)		Contact Switch	Connection Type & Size	Electrical Switch Configuration	Reset (Manual /Auto)
		Psi	Bar	Psi	Bar				
1	DA-PS-07-22-SAW	7 ± 6	0.5 ± 0.4	22 ± 4	1.5 ± 0.5	NO	1/4"Solder(ODM)	SPST	Auto
2	DA-PS-07-22-FAW	7 ± 6	0.5 ± 0.5	22 ± 4	1.5 ± 0.5		1/4"Flare(Female)		
3	DA-PS-07-22-SAD	7 ± 6	0.5 ± 0.4	22 ± 4	1.5 ± 0.5		1/4"Solder(ODM)		
4	DA-PS-07-22-FAD	7 ± 6	0.5 ± 0.4	22 ± 4	1.5 ± 0.5		1/4"Flare(Female)		
5	DA-PS-10-25-SAW	10 ± 7	0.7 ± 0.5	25 ± 6	1.7 ± 0.4		1/4"Solder(ODM)		
6	DA-PS-10-25-FAW	10 ± 7	0.7 ± 0.5	25 ± 6	1.7 ± 0.4		1/4"Flare(Female)		
7	DA-PS-25-39-SAW	25 ± 7	1.7 ± 0.5	39 ± 6	2.7 ± 0.4		1/4"Solder(ODM)		
8	DA-PS-25-39-FAW	25 ± 7	1.7 ± 0.5	39 ± 6	2.7 ± 0.4		1/4"Flare(Female)		

***Note :** All LP switches with wired connection comes with blue, 600mm (24") AWG 18 UL 1015 lead wires.

Ingress Protection Class : IP54 (IP65 can be provided on special request)



Nomenclature



Technical Details

Parameter	Values
Working pressure range	3-700 Psig
Burst Pressure	5000 Psig
Ambient Temperature	-30°C to +80°C
System medium temperature	-50°C to +120°C

Electrical Parameters

Dry All Cartridge Pressure Switches designed for AC voltage as well as DC voltage.

Current Type	AC/DC		AC	
Voltage Range	24V to 120V		208V to 240V	
Ampere Type	FLA	LRA	FLA	LRA
Current (Amp)	6	36	3	15
Life Cycles at rated electrical currents*	1,00,000			

Note: Exact numbers of cycles for any given applications is to be determined by appropriate testing.

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Genuine Product

Dry All®
Full Range of HVAC&R Line Products

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