

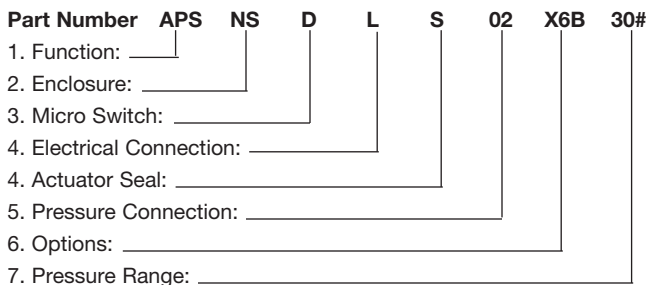
**Ashcroft® Switches**
**PIP #: SW-PI-77A**

Applicable to:

**CONVERTING OLD A-SERIES PART NUMBERS TO THE NEW A-SERIES PART NUMBERS**

With the release of the New A-series product family, Ashcroft will be discontinuing the old A-series product family and part numbers. This guide is intended to easily convert the old part numbers to the new part numbers. The new A-series has more configurations and ranges available than the old A-series. There now may be more than one possible conversion or there is a feature that could be added to make the switch better for its intended application. It is best practice to break down the old part number to its specifications and then build a new part number based on the application requirements.

1. Break down the old part number to its function, enclosure, micro switch, electrical connection, actuator seal, pressure connection, options and range.
2. Review the application and electrical requirements.
3. Review Old A-series to New A-series conversion table and build a new A-series part number.

**OLD A-SERIES PRODUCT CODING:**

**1. Function:**

- APS – A-series pressure switch, single setpoint, fixed deadband, factory set only, not field adjustable
- APA – A-series pressure switch, single setpoint, fixed deadband, field adjustable

**2. Enclosure:**

- RB – Watertight Brass body with polycarbonate switch seal
- RS – Watertight 304 Stainless Steel Body with polycarbonate switch seal
- NS – Watertight 304 Stainless Steel Body with glass to metal switch seal
- N7 – Explosion Proof 304 Stainless Steel Body with glass to metal switch seal

**3. Micro Switch:**

- D – General Purpose 5A @ 125/250 VAC, 5A @ 28 VDC resistive, 3A @ 28 VDC inductive
- M – Gold Contacts 1A @125 VAC, 1A @ 28 VDC resistive, 0.5A @ 28 VDC inductive

**4. Electrical Connection:**

- L – Wire leads, 3-18 AWG PVC insulated wires 12” length
- S – Screw terminals, 3 - #6 binding head screws
- T – Spade terminals, 3 - 0.187” male spade
- C – ½” NPT male conduit connection with 3-18 AWG PVC insulated wires 12” length
- H – Micro DIN Connector – Watertight DIN 43650 cable socket

**5. Actuator Seal:**

- B – Buna Diaphragm and O-ring
- V – Viton Diaphragm and O-ring
- T – Teflon Diaphragm and O-ring
- S – 316 Stainless steel welded Diaphragm
- H – 304 Stainless steel piston with Viton O-ring

**6. Pressure Connection:**

- 01 – ¼ NPT Male
- 02 – ¼ NPT Male
- 03 – ⅜ NPT Female
- 04 – ¼ NPT Female
- 05 – 7/16-20 SAE Male
- 06 – VCR – Fixed
- 07 – VCO – Fixed
- 09 – 0.75” Tri-clamp connection

**7. Options:**

- XC4 – Individual certified calibration chart
- XFS – Factory Set (APA models only)
- XFP – Fungus proofing
- XLE – Long Leads – 6’ standard, other lengths can be called out
- XMD – Metric range on Label
- XMQ – Positive Material Identification
- XNC – 2 wire leads - wired for normally closed operation
- XNO – 2 wire leads - wired for normally open operation
- XNH – Stainless Steel Tag
- XNN – Paper Tag
- X3A – 3A approval for 1.5” or 2.0” Tri-clover connection

X6B – Cleaned for Oxygen service

**Notes:**

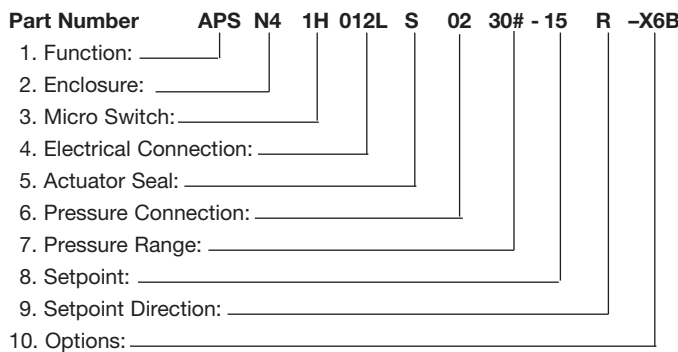
The X character will only appear before the first option, additional options will just be the two characters.

Example: XFSLENH. If the switch is mounted to a seal the seal fill fluid is also listed as an X option.

**8. Pressure Range:**

- 30 IMV (Brass body only)
- 30 IMV/15# (Stainless steel body only)
- 15# (Brass body only)
- 30#
- 60#
- 100#
- 200#
- 400#
- 600#
- 1000#
- 2000#

**NEW A-SERIES PRODUCT CODING:**



**1. Function:**

- APS – A-series pressure switch, single setpoint, fixed deadband, factory set only, not field adjustable
- APA – A-series pressure switch, single setpoint, fixed deadband, field adjustable

**2. Enclosure:**

- N4 – Watertight 316 Stainless Steel Body
- N7 – Explosion Proof 316 Stainless Steel Body, (requires electrical connection C)

**3. Micro Switch:**

**First Character:**

- 1 – Single switch – SPDT
- 2 – Dual switch - DPDT

**Second Character:**

- G – Gold Contact – 0.1 A @ 125 VAC. 0.1 A @ 30 VDC
- H – Higher Current - 5A @ 125/250 VAC, 5A @ 28 VDC resistive, 3A @ 28 VDC inductive
- L – Higher Current Gold Contacts - 1A @125 VAC, 1A @ 28 VDC resistive, 0.5A @ 28 VDC Inductive

- P – General Purpose – 3A @ 125 VAC, 2A @30 VDC

**4. Electrical Connection:**

- 012C – ½” NPT male conduit connection with 3-18 AWG PVC insulated wires 12” length
- 000H – Micro DIN Connector – Watertight DIN 43650 cable socket without mating connector.
- 00MH– Micro DIN Connector – Watertight DIN 43650 cable socket with mating connector.
- 012L – Wire leads, 3-18 AWG PVC insulated wires 12” length
- 000N – Nonstandard, customer specified see # Variation
- 000T – Spade terminals, 4 - 0.187” male spade

**Note:** The three numeric digits represent the length of wire in inches

**5. Actuator Seal:**

- B – 316 Stainless Steel piston and Buna O-ring
- V – 316 Stainless Steel piston and Viton O-ring
- S – 316 Stainless steel welded Diaphragm

**6 Pressure Connection:**

- 01 – 1/8 NPT Male
- 02 – ¼ NPT Male
- 03 – 1/8 NPT Female
- 05 – 7/16-20 SAE Male
- 06 – VCR – Fixed
- 07 – VCO – Fixed
- 12 – G ¼ A (Type E stud end)
- 13 – G ¼ B
- 15 – 1.5” Tri-clover connection (includes 3A Approval)
- 20 – 2.0” Tri-clover connection (includes 3A Approval)
- 75 – 0.75” Tri-clamp connection (includes 3A Approval)

**7. Pressure Range:**

Actuator	PSI	Bar	kPa	Kg/cm2
S	-15/15#	-1/1BR	-100/100KP	-1/1KSC
S	30#	2BR	200KP	2KSC
S	60#	4BR	400KP	4KSC
B, S, V	100#	7BR	700KP	7KSC
B, S, V	200#	14BR	1400KP	14KSC
B, V	500#	35BR	3500KP	35KSC
B, V	1000#	70BR	7000KP	70KSC
B, V	2000#	140BR	14000KP	140KSC
B, V	5000#	350BR	35000KP	350KSC
B, V	7500#	500BR	50000KP	500KSC

**8. Setpoint:**

5 characters maximum representing setpoint of the switch in the same units as the range of the switch. For setpoints in Vacuum specify as “-” pressure.

**OLD A-SERIES TO NEW A-SERIES  
CONVERSION TABLE**

**9. Setpoint Direction:**

- R – Rising Pressure (increasing pressure or decreasing vacuum)
- D – Decreasing Pressure (or increasing vacuum)

**Note:** If no setpoint is required on an APA switch use either “NSR” or “NSD.” If direction is not known use “NSR” as the default.

**10. Options:**

- XC4 – Individual certified calibration chart
- XFP – Fungus proofing
- XMQ – Positive Material Identification (75, 15 & 20 process connections only)
- XNC – 2 wire leads – wired for normally closed operation
- XNO – 2 wire leads – wired for normally open operation
- XNH – Stainless Steel Tag
- XNN – Paper Tag
- X6B – Cleaned for Oxygen service
- XGO – Ground wire omitted
- XUV – Unvented, not dual seal rated (APA versions only)

**Notes:**

The X character will only appear before the first option, additional options will just be the two characters.  
Example: XFSLENH. If the switch is mounted to a diaphragm seal the seal fill fluid is also listed as an X option.

	Old A-series	New A-series	Comments
<b>Function</b>	APA	APA	
	APS	APS	
<b>Enclosure</b>	RB	N4	
	RS	N4	
	NS	N4	
	N7	N7	
<b>Switch</b>	D	1H or 1P	Check electrical requirement
	M	1L or 1G	Check electrical requirement
<b>Electrical Connection</b>	L	012L	
	T	000T	
	C	012C	
	H	00MH	
	S		No longer available
<b>Actuator Seal</b>	B	S	Range ≤100#
	B	B	Range ≥200#
	V	S	Range ≤100#
	V	V	Range ≥200#
	T	S	Range ≤100#
	T	B or V	Range ≥200#, check media compatability
	S	S	Range ≤200#
	S	B or V	Range ≥200#, check media compatability
	H	V	
<b>Process Connection</b>	01	01	
	02	02	
	03	03	
	04	25	
	05	05	
	06	06	
	07	07	
	09	75	
<b>Range</b>	30IMV	-15/15#	
	30IMV/15#	-15/15#	
	15#	-15/15#	
	30#	30#	
	60#	60#	
	100#	100#	
	200#	200#	
	400#	500#	
	600#	500# or 1000#	Depending setpoint
	1000#	1000#	
2000#	2000#		
<b>Options</b>	C4	C4	
	FS		Add setpoint to part number
	FP	FP	
	LE		Add long length to Electrical Connection (Ex. 072L)
	MD		Not required order in Metric Range
	MQ	MQ	
	NC	NCGO	Note, old A-Series does not have ground wire
	NO	NOGO	Note, old A-Series does not have ground wire
	NH	NH	
	NN	NN	
	3A		Not required order 75, 15, or 20 connection

**EXAMPLES OF OLD PART NUMBERS CONVERTED TO NEW PART NUMBERS**

Old A-series Part Number	New A-series Part Number
APSRBDLB0215# Set at 5 PSI Increasing	APSN41H012LS02-15/15#-5R or APSN41P012LS02-15/15#-5R
APARBMTT01XFS200# Set at 80 PSI Decreasing	APAN41L000TS01200#-80D or APAN41G000TS01200#-80D
APSRSDHS04100# Set at 75 PSI Increasing	APAN41H000MS25100#-75R or APAN41P000MS25100#-75R
APANSMLH05XFS6B1000# Set at 675 Decreasingr	APAN41L012LV051000#-675D-X6B or APAN41G012LV051000#-675D-X6B
APSN7DCS09XMQ60# Set at 40 PSI Increasing	APSN71H012CS7560#-40R-XMQ or APSN71P012CS7560#-40R-XMQ
APAN7MCH021000#	APAN71L012CV021000#-NSR or APAN71G012CV021000#-NSR

**Notes:**

1. Selection of the Micro switch should be based on the electrical requirements of the application. If they are not known use the H micro switch in place of a D micro switch or an L micro switch in place of a M micro switch.
2. Always verify the compatibility of the actuator seal material and the application media.
3. The electrical connection “S” screw terminal has been discontinued. Choose one of the other electrical connection choices. The micro DIN connector does have screw terminals for wire termination inside of the connector plug housing.
4. Make sure the setpoint is called out in the part number if using an APS switch.