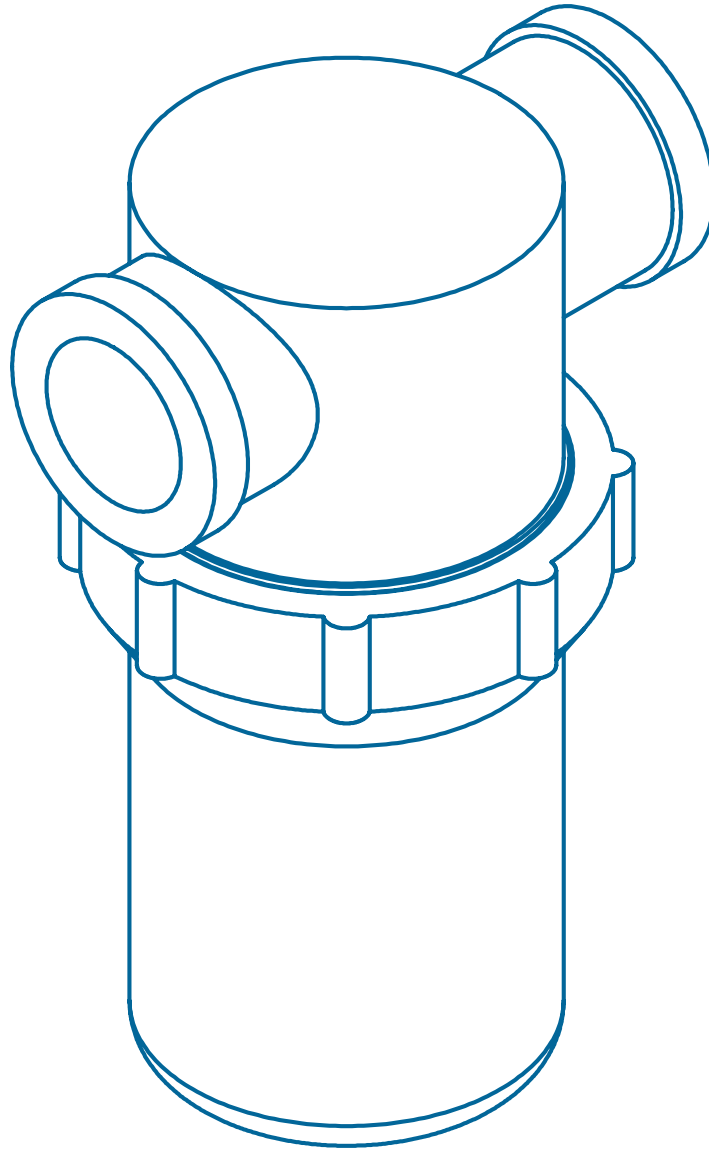
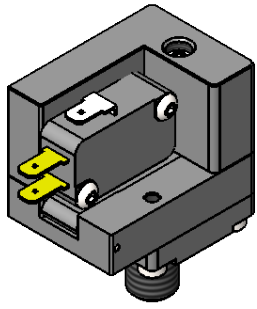


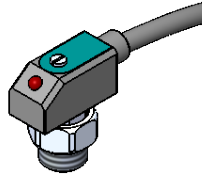
# System Accessories

## Section 5

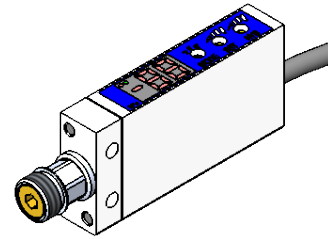




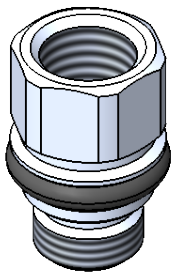
**Mechanical Switches**



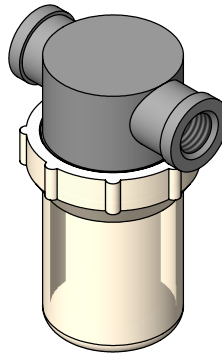
**Electronic Sensors**



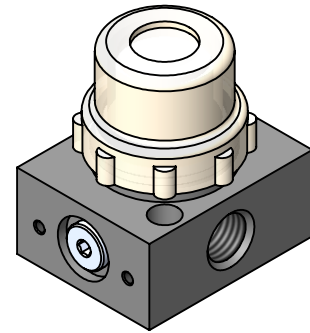
**Digital Sensors**



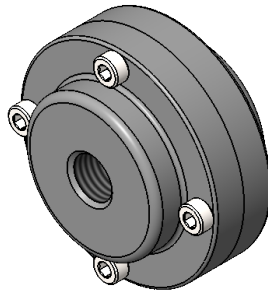
**Vacuum Switch Protector**



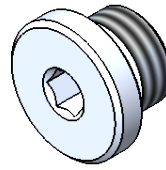
**T-Style Filters**



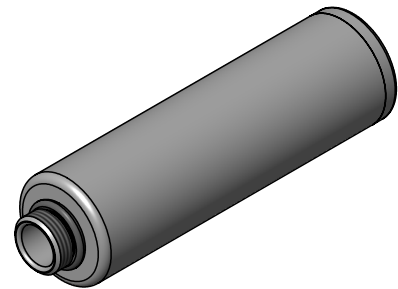
**Aluminum Base Filters**



**Inline Filter**



**Pipe Plugs**



**Silencers**

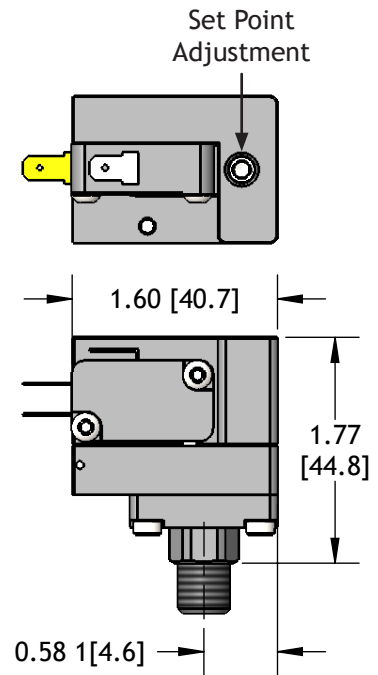
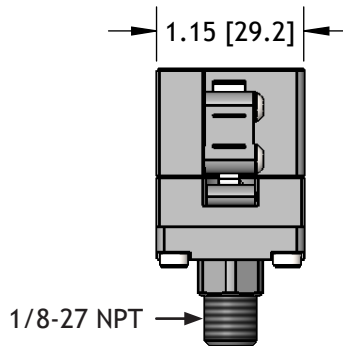
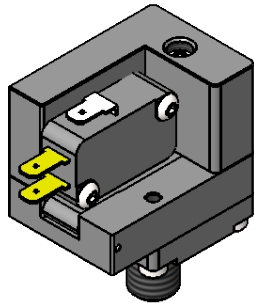
Mechanical Switches	3
Electronic Sensors	5
Digital Sensors	6
Vacuum Switch Protector	9
T-Style Filters	9
Alumium Base Filters	10
Inline Filter	12
Pipe Plugs	12
Silencers	13

## Mechanical Pressure Switches

### PSA18-E: Electrical Output

Electrical Pressure Sensors come with UL and CSA snap action, silver contact, SPDT (Single Pole Double Throw) switch with 0.187 in (4.75 mm) spade terminals. Triple terminal electrical connector and insulator kit for attaching wires is included.

Construction: aluminum housing, stainless steel spring and fasteners, Kapton® type HN film diaphragm

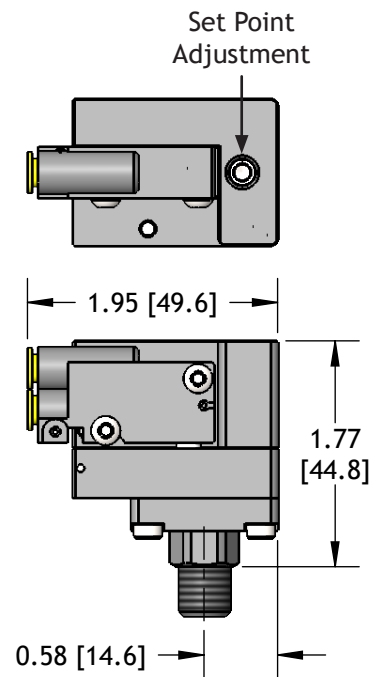
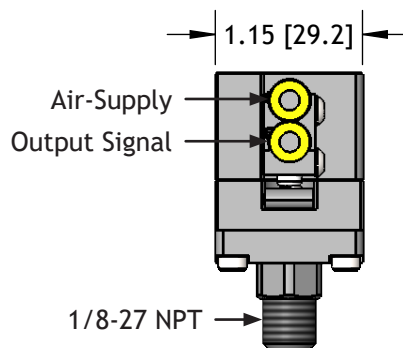
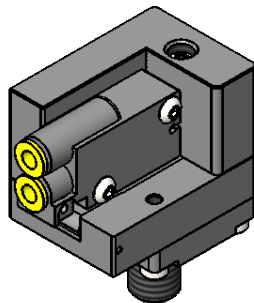


### PSA18-NOP / PSA18-NCL: Pneumatic Output

Pneumatic Pressure Sensors are available in normally-closed (NCL) and normally-open (NOP) versions. Normally-closed (NCL) sensors open to pass air when the desired set point is achieved. Normally-open (NOP) sensors close to block air when the desired set point is achieved. Both versions have integral 5/32 in (4 mm) tube connectors.

Construction: aluminum housing, stainless steel spring and fasteners, Kapton® type HN film diaphragm

Port 1- Air Supply  
Port 2 - Output Signal



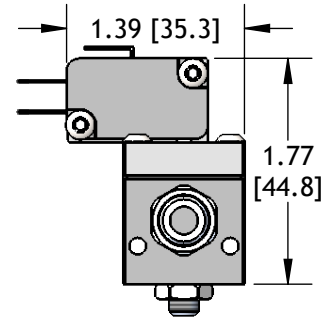
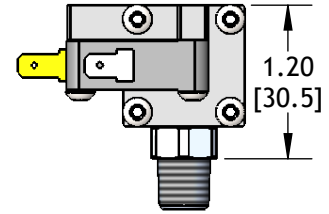
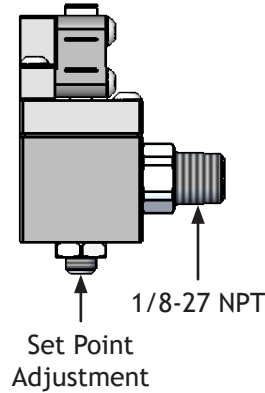
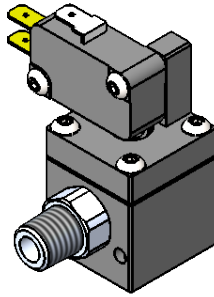
Pressure Adjustment Range:	22 to 110 psi [1.5 to 8.0 bar]
Temperature Range:	14°F to 140°F [-10°C to 60°C]
Electrical:	5 Amp @ 125 V AC, 250 V AC Max
Air Valve:	20 to 115 psi [1.4 to 7.9 bar]; Cv = 0.06; 2.5 SCFM [71 NI/m]
Weight:	3.20 oz [90.7 g]

## Mechanical Vacuum Switches

### VSA18-E: Electrical Output

Electrical Pressure Sensors come with UL and CSA snap action, silver contact, SPDT (Single Pole Double Throw) switch with 0.187 in (4.75 mm) spade terminals. Triple terminal electrical connector and insulator kit for attaching wires is included.

Construction: aluminum housing, stainless steel spring and fasteners, nylon reinforced Nitrile diaphragm

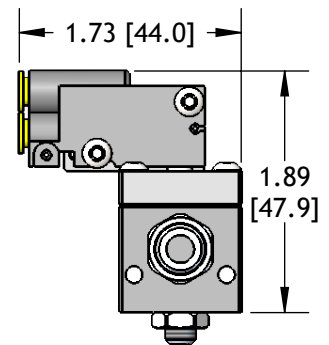
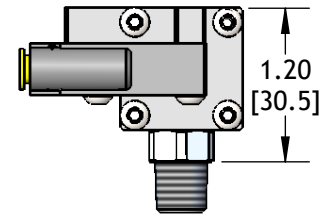
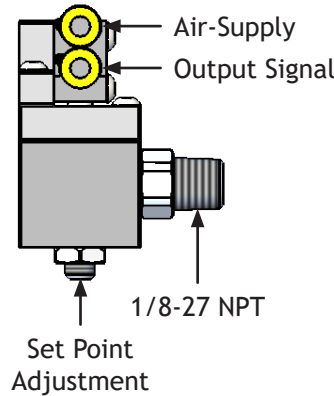
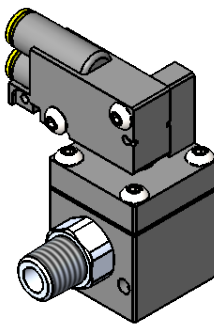


### VSA18-NOP / VSA18-NCL: Pneumatic Output

Pneumatic Vacuum Sensors are available in normally-closed (NCL) and normally-open (NOP) versions. Normally-closed (NCL) sensors open to pass air when the desired set point is achieved. Normally-open (NOP) sensors close to block air when the desired set point is achieved. Both versions have integral 5/32 in (4 mm) tube connectors.

Construction: aluminum housing, stainless steel spring and fasteners, nylon reinforced Nitrile diaphragm

Port 1- Air Supply  
Port 2 - Output Signal

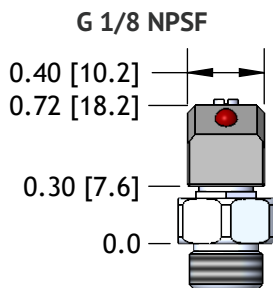
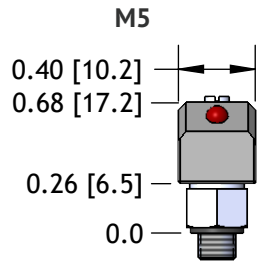
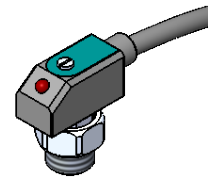


Vacuum Adjustment Range:	-8 to -28 inHG [-27.1 to 94.8 kPa]
Temperature Range:	-20°F to 140°F [-29°C to 60°C]
Electrical:	5 Amp @ 125 V AC, 250 V AC Max
Air Valve:	20 to 100 psi [1.4 to 6.9 bar]; Cv = 0.06; 2.5 SCFM [71 NI/m]
Weight:	2.10 oz [59.0 g]

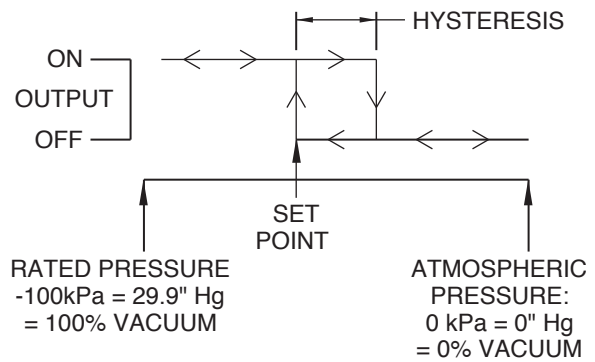
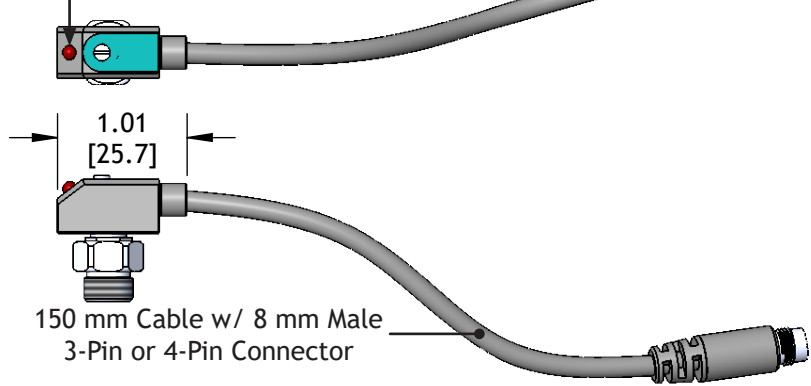
### V-Style Electronic Sensors

Output		Connector		Mounting Thread	
V	P	-	4	-18M	
A <sup>1</sup>	Analog	3	3-Pin	(Blank)	M5X0.8 Male (10-32)
N	NPN	4	4-Pin	-18M	G 1/8-27 NPSF Male
P	PNP				

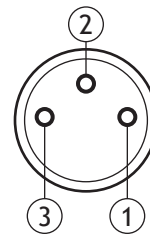
<sup>1</sup>3-Pin Only



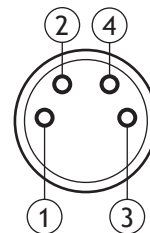
Output LED



Media:	Non-Lubricated Air, Non-Corrosive Gas
Maximum Pressure:	29 psi [200 kPa]
Rated Pressure Range:	0 to -29.5 inHG [0 to 100 kPa]
Operating Pressure:	14°F to 122°F [-10°C to 60°C]
Storage Temperature:	-4°F to 158°F [-20°C to 70°C]
Humidity:	35% to 85% RH
Electrical Connection:	-3 = 3-Pin Pico 8 mm Connector -4 = 4-Pin Pico 8 mm Connector
Operating Voltage:	10.8 to 30 V DC (including ripple)
Current Consumption:	20 mA Max
Display:	Red LED
Circuit:	Analog, NPN, PNP
Setting Accuracy:	±3% F.S. Max
Hysteresis:	Fixed, 2% F.S. Max
Switching Capacity:	30 V DC, 80 mA Max
Response Time:	Approximately 1 ms
Vibration:	10 to 55 Hz 1.5 mm Max, XYZ for 2 hours
Shock:	1,000 m/s <sup>2</sup> , XYZ
Insulation Resistance:	100 M Ω Min
Dielectric Strength:	500 V AC for 1 Minute
Analog Output Voltage:	0 inHG [0 kPa] = 1 ± 0.04 V DC -29.5 inHG [-100 kPa] = 5 ± 0.04 V DC
NPN Output Voltage	0.8 V DC Max
PNP Output Voltage:	1.8 V DC Max



- 1. Brown (+)
- 2. Black (OUT)
- 3. Blue (-)



- 1. Brown (+)
- 2. White (not used)
- 3. Blue (-)
- 4. Black (OUT)

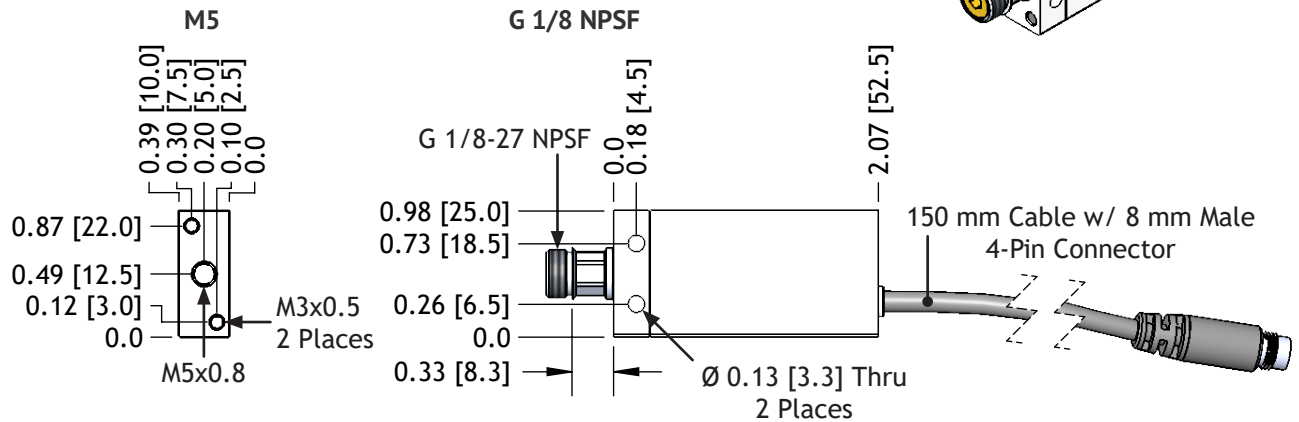
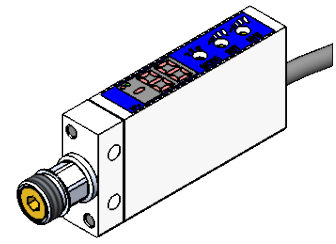
#### Order Cables Separately

Part Number	Description
3QD2	3-Pin Quick Disconnect, 2 M
3QD5	3-Pin Quick Disconnect, 5 M
4QD2	4-Pin Quick Disconnect, 2 M
4QD5	4-Pin Quick Disconnect, 5 M

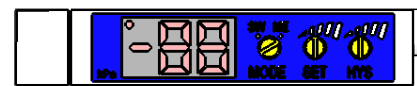
Full data sheet with specs, wiring diagram, and operation procedures available at [www.edcousa.net](http://www.edcousa.net).

### 61 Series Electronic Sensors

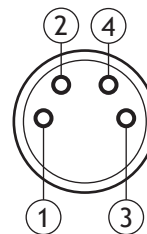
Output		Output		Mounting Thread	
DV	P	61		18M	
N	NPN	61	1 Output + Analog	5F	M5x0.8 Female (10-32)
P	PNP			18M	G 1/8-27 NPSF Male



Media:	non-lubricated air, non-corrosive gas
Maximum Pressure:	29 psi [200 kPa]
Rated Pressure Range:	0 to -29.5 inHG [0 to 100 kPa]
Operating Pressure:	14°F to 140°F [-10°C to 60°C]
Storage Temperature:	-4°F to 158°F [-20°C to 70°C]
Humidity:	35% to 85% RH
Electrical Connection:	4-Pin Pico 8 mm Male Connector
Operating Voltage:	10.8 to 26.4 V DC (including ripple)
Current Consumption:	35 mA Max
Display:	2 Digit, 7 Segment Red LED
Rated Display:	0 to 99
Units:	Percent Vacuum [kPa]
Output Display:	Set (1) - Red LED; Set 2 - Green LED
Display Cycle:	4 Hz
Resolution:	±1 Count
Setting Accuracy:	±3% F.S. Max
Hysteresis:	61 - Adjustable Approx 0% to 15% F.S. 62 - Fixed 2% F.S. Max
Switching Capacity:	30 V DC, 80 mA Max
Response Time:	Approximately 2 ms
Vibration:	10 to 55 Hz 1.5 mm Max, XYZ for 2 hours
Shock:	196 m/s <sup>2</sup> , XYZ
Insulation Resistance:	100 M Ω Min
Dielectric Strength:	500 V AC for 1 Minute
Analog Output Voltage:	0 inHG [0 kPa] = 1 ± 0.1 V DC -29.5 inHG [-100 kPa] = 5 ± 0.2 V DC
Analog Output Current:	1 mA Max
Analog Hysteresis / Linearity:	±0.5% F.S.
NPN Output Voltage	0.8 V DC Max
PNP Output Voltage:	1.2 V DC Max
Thermal Error:	±0.1% F.S. / °C Max in range of 32°F to 122°F [0°C to 50°C]



Red LED Output



1. Brown (+)
2. White (OUT ANALOG)
3. Blue (-)
4. Black (OUT1)

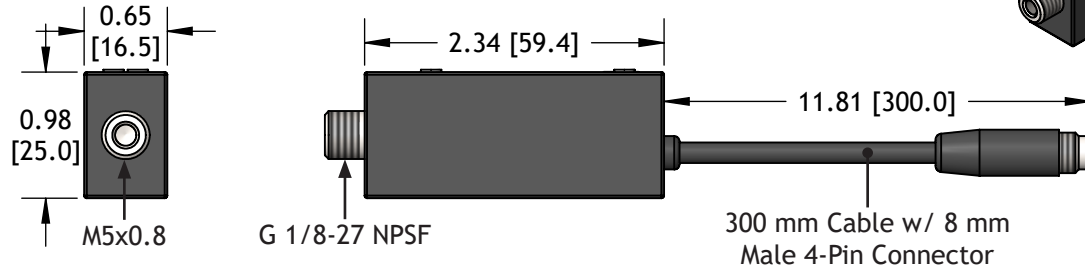
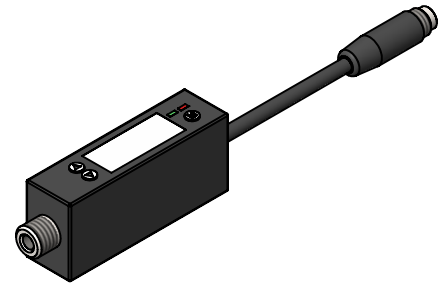
**Order Cables Separately**

Part Number	Description
4QD2	4-Pin Quick Disconnect, 2 M
4QD5	4-Pin Quick Disconnect, 5 M

Full data sheet with specs, wiring diagram, and operation procedures available at [www.edcousa.net](http://www.edcousa.net).

# 100 Series Digital Sensors

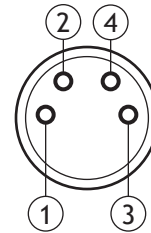
Output		
DV	N	-100
N	NPN	
P	PNP	



	DVN-100	DVP-100
Rated Pressure Range:	-29.5 ~ 29.5 inHG	
Setting Pressure Range:	-29.5 ~ 29.5 inHG	
Withstand Pressure:	88.6 inHG	
Fluid:	filtered air, non-corrosive / non-flammable gases	
Set Pressure Resolution:	kPa	0.1
	kgf/cm <sup>2</sup>	0.001
	bar	0.001
	psi	0.01
	inHg	0.1
	mmHg	1
	mmH <sub>2</sub> O	0.1
Power Supply Voltage:	12 to 24 V DC ± 10%, ripple (P-P) 10% or less	
Current Consumption:	≤ 55mA	
Switch Output:	NPN: open collector 2 outputs max. load current: 100mA max. supply voltage: 30 V DC residual voltage: ≤ 1V	PNP: open collector 2 outputs max. load current: 100mA max. supply voltage: 24 V DC residual voltage: ≤ 1V
Repeatability (Switch Output):	± 0.2% F.S. ± 1 digit	
Hysteresis:	Hysteresis Mode:	adjustable
	Window Comparator Mode:	fixed (3 digits)
Response Time:	≤ 2.5 ms (chattering-proof function: 24 ms, 192 ms and 768ms selections)	
Output Short Circuit Protection:	yes	
7 Segment LED Display:	3 1/2 digit LED display (sampling rate: 5 times / 1 sec)	
Indicator Accuracy:	± 2% F.S. ± 1 digit (ambient temperature 25 ± 3° C)	
Indicator:	OUT 1 = green, OUT 2 = red	
Environment:	Enclosure:	IP40
	Ambient Temp. Range:	operation: 0 ~ 50° C, storage: -20 ~ 60° C (no condensation or freezing)
	Ambient Humidity Range:	operation / storage: 35 ~ 85% RH (no condensation)
	Withstand Voltage:	1,000 V AC in 1-min (between case and lead wire)
	Insulation Resistance:	50 MΩ (at 500 v DC, between case and lead wire)
	Vibration:	total amplitude 1.5mm, 10 Hz scan for 1 minute, 2 hours each direction of x, y, and z
Shock:	980m/s <sup>2</sup> (100 G), 3 times each in direction of x, y, and z	
Temperature Characteristic:	± 2% F.S. of detected pressure (25°C) at temp. rang of 0 ~ 50°C	
Port Size:	G 1/8-27 NPS male, M5 female	
Lead Wire:	oil-resistant cable (0.15mm <sup>2</sup> )	
Weight:	approximately 35g (with M8, 4-pin male connector)	



Switch OUT1 (Green LED)  
Switch OUT2 (Red LED)



- 1. Brown (+)
- 2. White (OUT2)
- 3. Blue (-)
- 4. Black (OUT1)

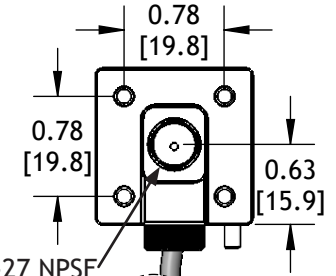
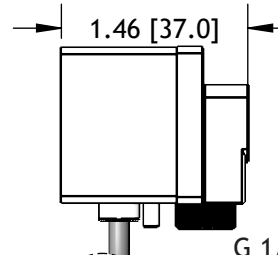
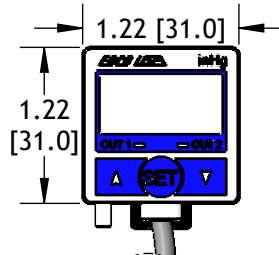
### Order Cables Separately

Part Number	Description
4QD2	4-Pin Quick Disconnect, 2 M
4QD5	4-Pin Quick Disconnect, 5 M

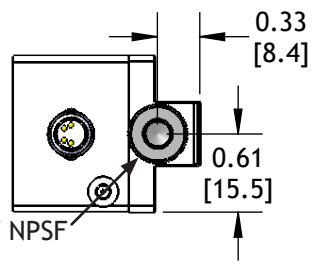
Full data sheet with specs, wiring diagram, and operation procedures available at [www.edcousa.net](http://www.edcousa.net).

## 200 Series Digital Sensors

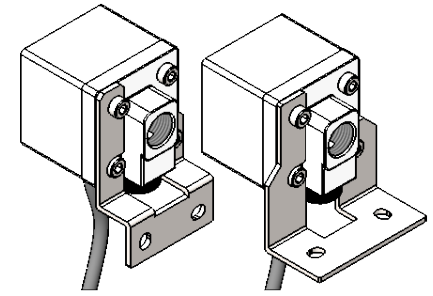
Style		Output	
D	V	N	-200
V	Vacuum	N	NPN
P	Pressure	P	PNP



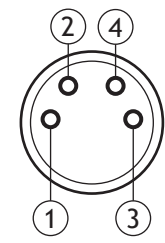
150 mm Cable w/ 8 mm Male 4-Pin Connector



	DV_-200	DP_-200
Rated Pressure Range:	0 ~ 29.5 inHg	0 ~ 145.0 psi
Setting Pressure Range:	3.0 ~ 29.9 inHg	-14.5 ~ 145.0 psi
Withstand Pressure:	29.0 psi	200.0 psi
Fluid:	filtered air, non-corrosive / non-flammable gases	
Set Pressure Resolution:	kPa	0.1
	mPa	-
	kgf/cm <sup>2</sup>	0.001
	bar	0.001
	psi	0.01
	inHg	0.1
	mmHg	1
	mmH <sub>2</sub> O	0.1
Power Supply Voltage:	12 to 24 V DC ± 10%, ripple (P-P) 10% or less	
Current Consumption:	≤ 55mA	
Switch Output:	NPN: open collector 2 outputs max. load current: 80mA max. supply voltage: 30 V DC residual voltage: ≤ 1V	PNP: open collector 2 outputs max. load current: 80mA max. supply voltage: 24 V DC residual voltage: ≤ 1V
Repeatability (Switch Output):	± 0.2% F.S. ± 1 digit	
Hysteresis:	Hysteresis Mode:	adjustable
	Window Comparator Mode:	fixed (3 digits)
Response Time:	≤ 2.5 ms (chattering-proof function: 24 ms, 192 ms and 768ms selections)	
Output Short Circuit Protection:	yes	
7 Segment LED Display:	3 1/2 digit LED display (sampling rate: 5 times / 1 sec)	
Indicator Accuracy:	± 2% F.S. ± 1 digit (ambient temperature 25 ± 3° C)	
Indicator:	OUT 1 = green, OUT 2 = red	
Environment:	Enclosure:	IP65
	Ambient Temp. Range:	operation: 0 ~ 50°C, storage: -20 ~ 60°C (no condensation or freezing)
	Ambient Humidity Range:	operation / storage: 35 ~ 85% RH (no condensation)
	Withstand Voltage:	1,000 V AC in 1-min (between case and lead wire)
	Insulation Resistance:	50 MΩ (at 500 V DC, between case and lead wire)
	Vibration:	total amplitude 1.5mm, 10 Hz - 55 Hz - 10 Hz scan for 1 minute, 2 hours each direction of x, y, and z
Shock:	980m/s <sup>2</sup> (100 G), 3 times each in direction of x, y, and z	
Temperature Characteristic:	± 2% F.S. of detected pressure (25°C) at temp. rang of 0 ~ 50°C	
Port Size:	G 1/8-27 NPS female	
Lead Wire:	oil-resistant cable (0.15mm <sup>2</sup> )	
Weight:	approximately 71 g (with M8, 4-pin male connector)	



BT200-A  
Optional Mounting Brackets



- 1. Brown (+)
- 2. White (OUT2)
- 3. Blue (-)
- 4. Black (OUT1)

### Order Cables Separately

Part Number	Description
4QD2	4-Pin Quick Disconnect, 2 M
4QD5	4-Pin Quick Disconnect, 5 M

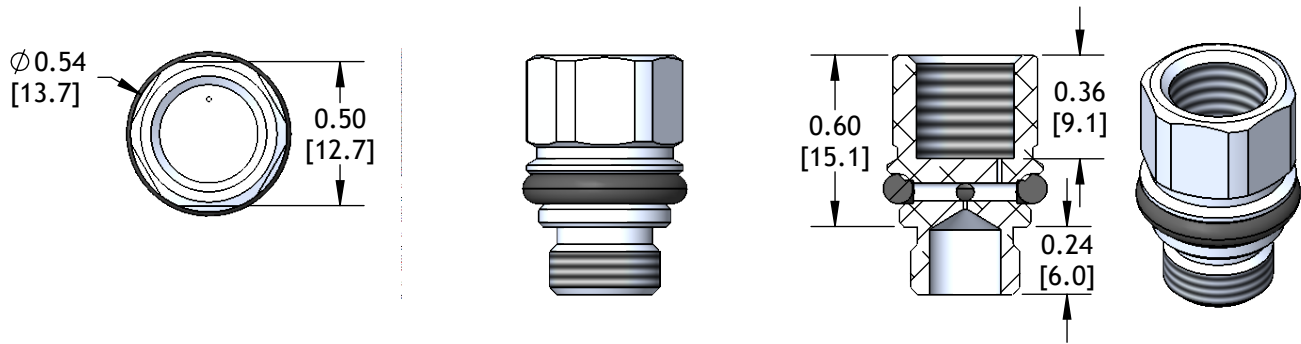
Full data sheet with specs, wiring diagram, and operation procedures available at [www.edcousa.net](http://www.edcousa.net).



### VSP-18: Vacuum Switch Protector

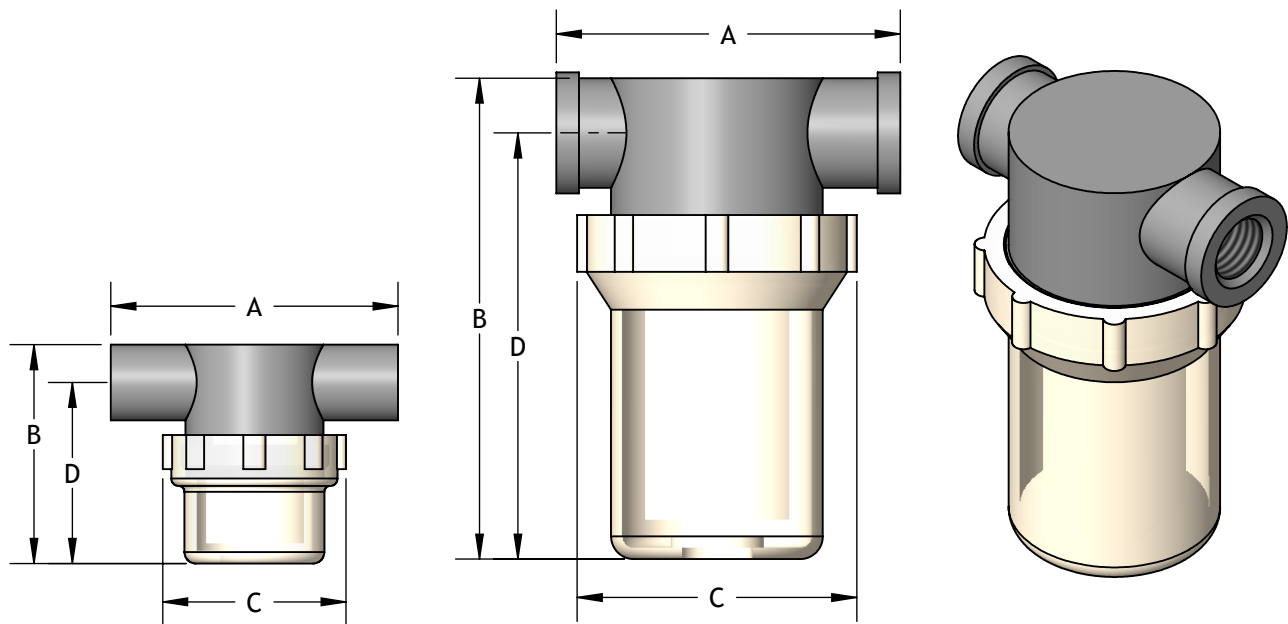
Bi-directional VSP-18 protects vacuum switches or gauges from positive pressure spikes by relieving pressure in excess of 10 psi [0.7 bar] to atmosphere.

Connects to 1/8-27 NPSF or G 1/8-28 threads.



### T-Style Vacuum Filters

Our T-Style Vacuum Filters are made of rugged nylon body with a transparent nylon bowl for checking the condition of the filter at a glance. HDPE filter elements can be easily and quickly replaced without disturbing the system plumbing. T-Style Vacuum Filters are rated for full vacuum or pressure up to 150 psi.



Part Number	Ports	A in [mm]	B in [mm]	C in [mm]	D in [mm]	Weight lb [g]	Filter Element (3 Pack)
PPSF125X10	1/8 NPT Female	3.06 [77.7]	2.42 [61.5]	1.86 [47.2]	1.98 [50.3]	0.13 [59.0]	PPX10RE3
PPSF250X10	1/4 NPT Female	3.06 [77.7]	2.42 [61.5]	1.86 [47.2]	1.98 [50.3]	0.11 [49.9]	PPX10RE3
PPSF250MX10	1/4 NPT Male	3.06 [77.7]	2.42 [61.5]	1.86 [47.2]	1.98 [50.3]	0.11 [49.9]	PPX10RE3
PPSF375X10	3/8 NPT Female	3.06 [77.7]	2.42 [61.5]	1.86 [47.2]	1.98 [50.3]	0.16 [72.6]	PPX10RE3
PPSF500X35	1/2 NPT Female	3.64 [92.5]	5.35 [136.0]	2.95 [74.9]	4.80 [122.0]	0.37 [168.0]	PPX35RE3
PPSF750X35 <sup>1</sup>	3/4 NPT Female	3.60 [91.4]	5.40 [137.2]	2.93 [74.4]	4.68 [118.7]	0.40 [181.0]	PPX35RE3
PPSF100X50 <sup>1</sup>	1 NPT Female	4.62 [117.0]	6.36 [162.0]	4.00 [102.0]	5.60 [146.0]	0.94 [426.0]	PPX50RE3
PPSF150X75	1-1/2 NPT Female	5.16 [131.0]	8.10 [206.0]	4.00 [102.0]	6.93 [176.0]	1.18 [535.0]	PPX75RE3

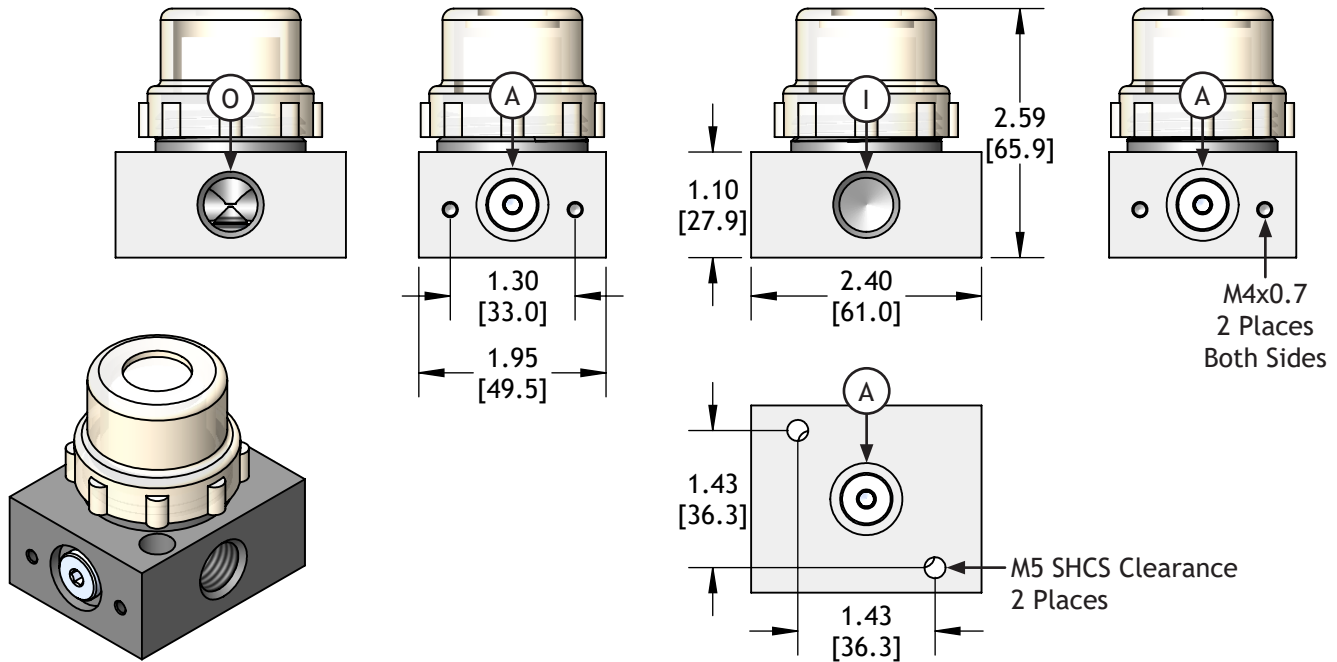
<sup>1</sup>These sizes are available in polypropylene. Add suffix -PP for polypropylene body and bowl. Bowl will be opaque, NOT transparent.

## Aluminum Base Filters

EDCO aluminum base filters work in the same way as our t-style filters. An aluminum base allows for easy mounting of the filter. A clear, nylon bowl allows for quick inspection of the HDPE filter element. When it's time to change the element, the bowl can easily be removed to replace the filter very quickly. We stock standard replacement bowls, gaskets, and filter elements. Optional mounting plates are offered for applications where mounting via the bottom face is not desired.

### ASF375X10: Aluminum Base Filter, 3/8 NPTF

Replacement Filter Elements: PPX10RE3

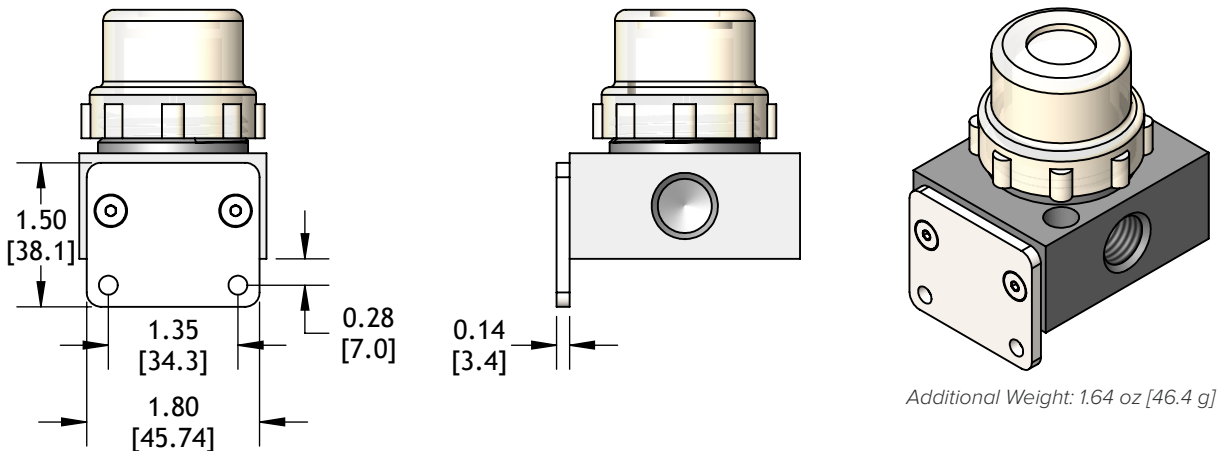


Weight: 8.22 oz [233.0 g]

Code	Function	Ports
I	Flow In	3/8 NPTF
O	Flow Out	3/8 NPTF
A	Auxiliary / Monitor	G 1/8 NPSF

### ASF-X10-K: Mounting Kit

Optional mounting kit includes a steel bracket and two flat head cap screws.

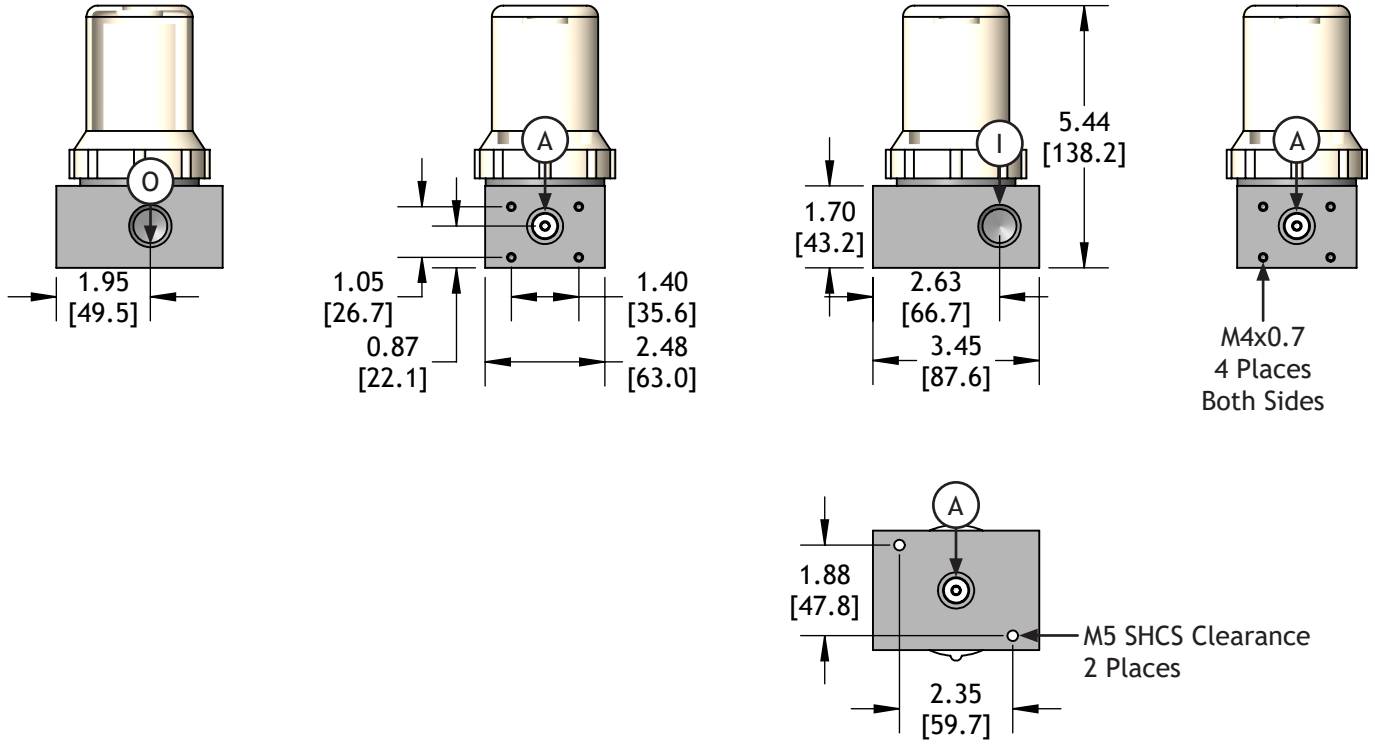


## Aluminum Base Filters

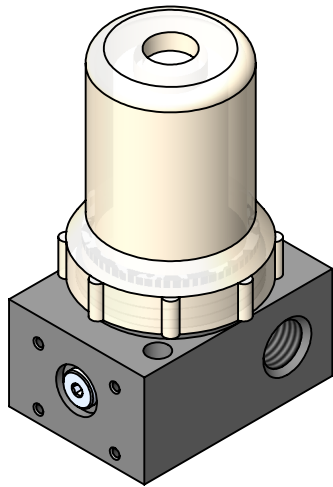
### Aluminum Base Filter w/ 1/2" & 3/4" Ports

Size		Threads	
ASF	500	X35	
500	1/2" Ports	(Blank)	NPT Threads
750	3/4" Ports	-G	G Threads

Replacement Filter Elements: PPX35RE3

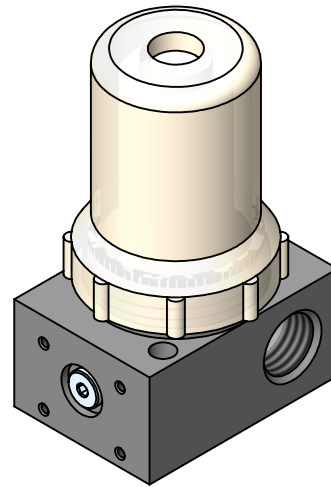


ASF500X35



Weight: 25.70 oz [728.6 g]

ASF750X35



Weight: 24.38 oz [691.1 g]

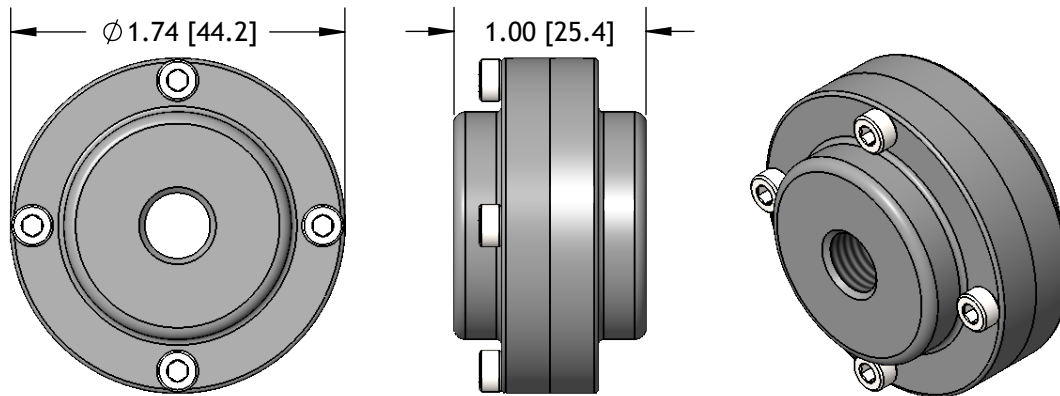
Code	Function	ASF500X35	ASF500X35-G	ASF75X35	ASF75X35-G
I	Flow In	1/2 NPTF	G 1/2	3/4 NPTF	G 3/4
O	Flow Out	1/2 NPTF	G 1/2	3/4 NPTF	G 3/4
A	Auxiliary / Monitor	G 1/8 NPSF			

## F10-18F: In-Line Filter

The rugged F10-18F in-line filter is designed to carry the full load of 50 mm and smaller vacuum cups. The in-line filter is ideal for use with Flow Sensor or Tri-Flow Valves in extremely dusty environments such as woodworking shops. The F10-18F provides more than 10 times the surface area of a standard FSV filter disk, providing a longer life. A quick-release (blow-off) may be used to momentarily back-flow the filters to help keep them clean.

Construction: anodized aluminum body, polyethylene element, and stainless steel fasteners

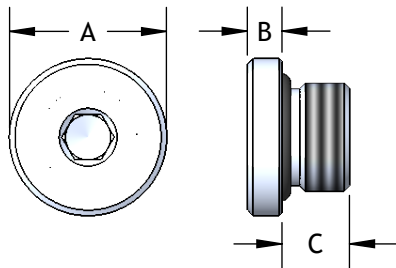
Replacement Filter Disk: FD-116



Weight: 0.14 lb [61.3 g]

## Pipe Plugs

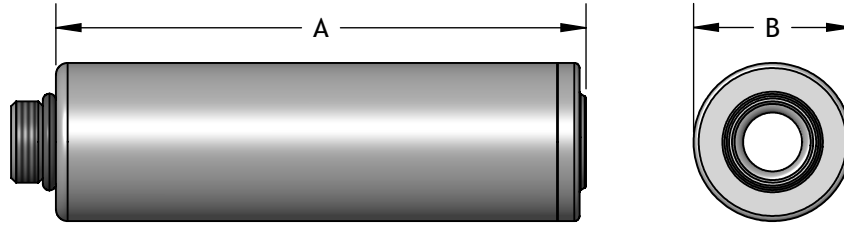
All pipe plugs are nickel plated aluminum with a Nitrile o-ring seal.



Part Number	Fits Threads	A in [mm]	B in [mm]	C in [mm]	Hex Wrench	Weight oz [g]
P10	M5x0.8 10-32 UNF	0.31 [7.9]	0.07 [1.8]	0.12 [3.0]	2 mm	0.01 [0.3]
P18	1/8-27 NPSF G 1/8-28	0.47 [12.0]	0.12 [3.0]	0.24 [6.0]	4 mm	0.07 [2.0]
P14	1/4-18 NPT G 1/4-19	0.56 [14.0]	0.08 [2.0]	0.26 [6.6]	6 mm	0.10 [2.9]
P38	3/8-18 NPSF G 3/8-19	0.71 [18.0]	0.12 [3.0]	0.27 [6.9]	5 mm	0.18 [5.2]
P12	1/2-14 NPSF G 1/2-14	0.95 [24.0]	0.12 [3.0]	0.43 [11.0]	10 mm	0.98 [28.0]

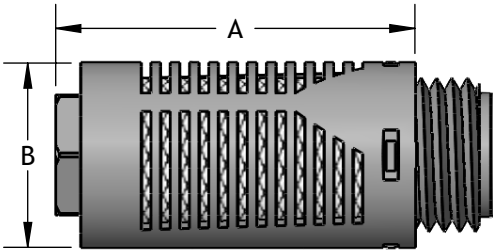
## Silencers

### Straight Thru Silencers (ST)



Part Number	Threads	A in [mm]	B in [mm]	Weight oz [g]
STA18M	G 1/8 NPS	2.65 [67.3]	0.74 [18.8]	0.25 [7.1]
STA14M	G 1/4 NPT	2.65 [67.3]	0.74 [18.8]	0.25 [7.1]
STB38M	G 3/8 NPT	4.14 [105.2]	1.24 [31.5]	0.74 [2.10]
STB12M	G 1/2 NPS	4.14 [105.2]	1.24 [31.5]	0.78 [22.1]
STC12M	G 1/2 NPS	4.12 [104.6]	1.48 [37.6]	1.09 [30.9]
STC34M	G 3/4 NPT	4.12 [104.6]	1.48 [37.6]	1.16 [32.9]
STC10M	G 1 NPT	4.12 [104.6]	1.48 [37.6]	1.31 [37.1]
STC12M-6	G 1/2 NPS	6.00 [152.4]	1.48 [37.6]	1.59 [45.1]
STC34M-6	G 3/4 NPT	6.00 [152.4]	1.48 [37.6]	1.66 [47.1]
STC10M-6	G 1 NPT	6.00 [152.4]	1.48 [37.6]	1.76 [49.9]

### Side Discharge Silencers (AA)



Part Number	Threads	A in [mm]	B in [mm]	Weight oz [g]
AA18M	1/8 NPT	1.18 [30.1]	0.60 [15.2]	0.11 [3.1]
AA14M	1/4 NPT	1.18 [30.1]	0.60 [15.2]	0.14 [4.0]
AA38M	3/8 NPT	1.87 [47.5]	0.96 [24.3]	0.21 [6.0]
AA12M	1/2 NPT	1.87 [47.5]	0.96 [24.3]	0.46 [13.0]