

UNITED ELECTRIC**Model J21K, Differential Pressure Switch****316L SS, Brass or Phosphor Bronze Bellows, Adjustable Ranges 30" Hg to 90 PSID****DESCRIPTION**

The J21K differential pressure switch monitors the difference between two system pressures or vacuums and senses excessive flow deviation, or verifies that a filter is clogged.

The J21K's rugged design, with epoxy coated enclosure and sealed metal bellows, lends itself to exacting applications. Widely used in refrigeration (chiller) and compressor applications, the J21K can be used for filter status monitoring and proof of flow.

Features:

- Designed to meet Enclosure Type 4X (with watertight conduit fitting)
- UL listed and cUL certified
- Optional ATEX and Rostechnadzor (GOST-R) intrinsic safety compliance
- Optional adjustable deadband
- Single switch output
- Opposing bellows design

**SPECIFICATIONS****GENERAL**

Storage Temperature: -65 ° to 160 °F (-54 ° to 71 °C)

Ambient Temperature: -40 ° to 160 °F (-40 ° to 71 °C). Set point typically shifts less than 1% of range for a 50°F (28°C) ambient temperature change

Set Point Repeatability: Typically ± 1% of full scale range

Shock: Set point repeats after 15G, 10 millisecond duration.

Vibration: Set point repeats after 2.5 G, 5-500 Hz.

Enclosure: Die cast aluminum, epoxy powder coated, gasketed

Enclosure Classification: Designed to meet enclosure type 4X requirements with M900 option (watertight conduit fitting)

Switch Output: One SPDT snap action switch; switch may be wired "normally open" or "normally closed"

Electrical Rating: 15 A 125/250/480 VAC resistive. Electrical switches have limited DC capabilities. Consult factory for additional information.

Weight: Approximately 2 lbs (0.90 kg)

Table 1

Model	Adjustable Set Point Range Low end of range on fall; High end of range on rise		Deadband		**Differential Proof Pressure		*Working Pressure	
	psid (unless noted)	bar	psid (unless noted)	bar (unless noted)	psi	bar	psi (unless noted)	bar
Welded 316L stainless steel bellows with 1/2" NPT (female) pressure connections								
S127B	30" Hg to 0	-1 to 0	0.4 to 0.6" Hg	13.5 to 20.3 mbar	15	1.0	30" Hg to 0	-1 to 0
S140B	0 to 6	0 to 0.4	0.1 to 0.4	6.0 to 27.6 mbar	6	0.4	30" Hg to 3.0	-1 to 2.1
S150B	0 to 40	0 to 2.8	0.3 to 0.7	20.7 to 48.3 mbar	300	20.7	30" Hg to 300	-1 to 20.7
16021	1 to 15	0.07 to 1.0	0.1 to 0.6	6.9 to 41.4 mbar	125	8.6	30" Hg to 125	-1 to 8.6
316L welded stainless steel bellows with 1/4" NPT (female) pressure connections								
357	0 to 70	0 to 4.8	2 to 4	0.1 to 0.3	70	4.8	30" Hg to 350	-1 to 24.1
Brass bellows with 1/4" NPT (female) pressure connections								
127	30" Hg to 0	-1 to 0	0.4 to 0.6" HG	13.5 to 20.3 mbar	15	1.0	30" Hg to 0	-1 to 0
140	0 to 6	0 to 0.4	0.1 to 0.4	6.9 to 27.6 mbar	6	0.4	30" Hg to 30	-1 to 2.1
150	0 to 40	0 to 2.8	0.3 to 0.7	20.7 to 48.3 mbar	40	2.8	30" Hg to 180	-1 to 12.4
16020	1 to 15	0.07 to 1.0	0.1 to 0.6	6.9 to 41.4 mbar	125	8.6	30" Hg to 125	-1 to 8.6
Phosphor bronze bellows with 1/4" NPT (female) pressure connections								
232	0 to 25	0 to 1.7	0.6 to 1	41.4 to 68.9 mbar	25	1.7	30" Hg to 110	-1 to 7.6
254	0 to 90	0 to 6.2	2 to 4	0.1 to 0.3	90	6.2	30" Hg to 200	-1 to 13.8

*Working Pressure Range: The pressure range within which two opposing sensors can be safely operated and still maintain set point adjustability.

** Differential Proof Range: The maximum differential pressure to which a pressure sensor may be occasionally subjected, which causes no permanent damage. The unit may require calibration (e.g. start up, testing)

Electrical Connection: 7/8" diameter conduit hole

Pressure Connection: Models 127-150, 232-254, 357, 16020: 1/4" NPT (female); models S127B-S150B, 16021: 1/2" NPT (female)



U.S. & Canada

UL Listed, cUL Certified

Pressure: UL 508; CSA C22.2 No.14, File #E42272



Europe

Low Voltage Directive (LVD) 73/23/EC & 93/68/EEC Compliant to LVD

Pressure Equipment Directive (PED) 97/23/EC

Compliant to PED



ATEX Directive (94/9/EC) II 1G Ex ia IIC T6 Ga

(Optional - code M405)

-50°C ≤ Tamb ≤ +60°C

UL International DEMKO A/S (N.B.#0539)

Certificate # DEMKO II ATEX 1105261X

EN 60079-0, 60079-11, 60079-26

DIMENSIONS INCHES (MM)

Type J21K

INTERNAL SET POINT ADJUSTMENT

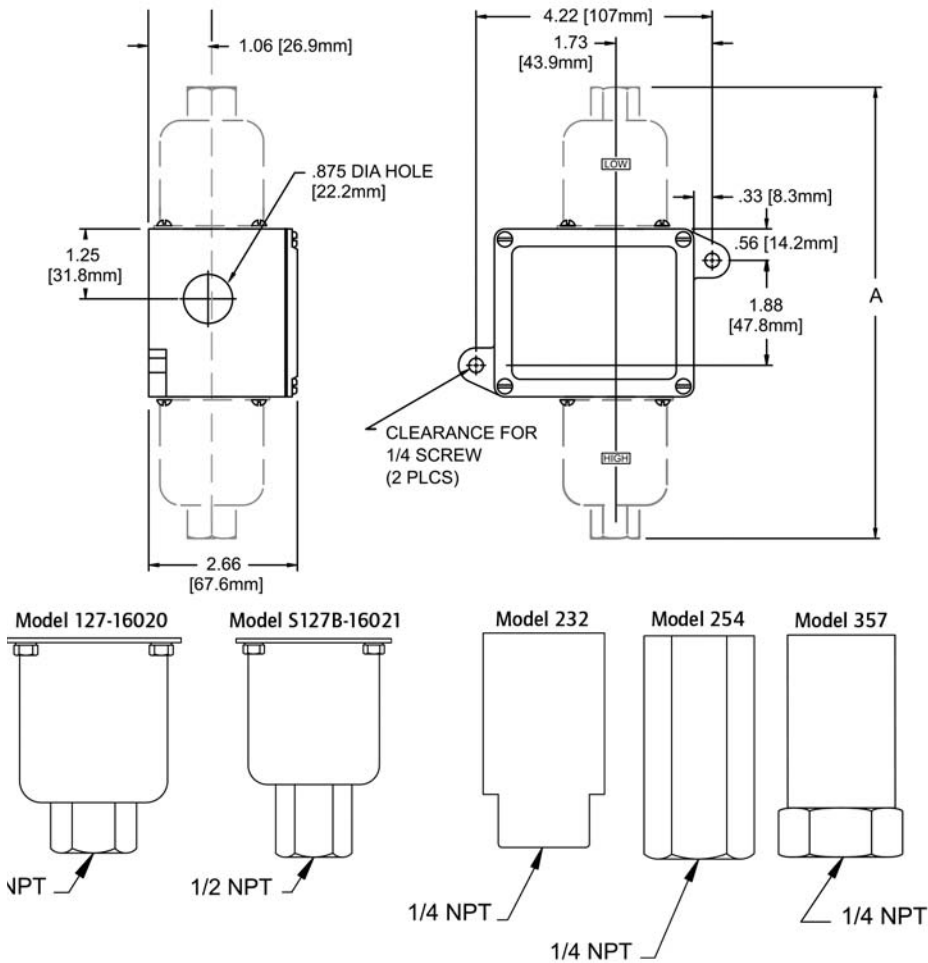


Table 2

Dimension A			
Model	inches	mm	Conn. NPT
127-16020	8.06	204.7	1/4
S127B-16021	8.86	225.0	1/2
232	6.53	165.9	1/4
254	6.50	165.1	1/4
357	6.88	174.8	1/4

ORDERING INFORMATION

1) SPECIFY MODEL TYPE

2) SELECT MODEL (FROM TABLE 3)

3) SELECT SWITCH OR OTHER OPTIONS IF REQUIRED

EXAMPLE: J21K-M201(10 PSI RISING)

Type

J21K- one SPDT output, internal adjustment with no reference dial.

Switch Options

0140- Gold contacts, 1A 125 VAC resistive.

0500- Close deadband, 5A 125/250 VAC resistive.

1520- Adjustable deadband, 15 A 125/250/277 VAC resistive; adjustment wheel changes rise setting only. If adjustment on fall setting is required use primary adjustment

1535- High ambient, 15 A 125/250 VAC resistive; temperatures up to 250°F (121°C)

1537- Vapor sealed switch, 15A 125/250 VAC resistive

Other Options

M201- Factory set one switch; specify increasing or decreasing pressure and setpoint

M276- Range indicated on nameplate in bars/mbars. NOT AVAILABLE ON TEMPERATURE VERSIONS

M277- Range indicated on nameplate in kPa or MPa, factory selected

M278- Range indicated on nameplate in Kg/cm²

M405- Intrinsic safety compliance for European Union per ATEX standards

M444- Paper ID tag

M446- Stainless steel ID tag & wire attachment

M550- Oxygen service cleaning, alcohol cleaning to remove residue from the process connection; not available model 254

M900- Watertight conduit fitting; converts 7/8" hole to 1/2" NPT fitting. Required for product to meet Enclosure Type 4X

