

Explosion-proof, velocity loop powered sensor

PC420V-EX series



Table 1: PC420Vx-yy-EX model selection guide

x (4-20 mA output type)	yy (4-20 mA full scale)
	05 = 0.5 ips
	10 = 1.0 ips
R = velocity, RMS output	20 = 2.0 ips
P = velocity, equivalent peak output	30 = 3.0 ips
	50 = 5.0 ips

Key features

- Choice of RMS or peak equivalent output
- Explosion-proof certified
- Provides continuous trending of overall machine vibration
- Manufactured in an approved ISO 9001 facility

Certifications



Class I, Div 1, 2 Groups A, B, C, D
Class II, Div 1, 2 Groups E, F, G
Class III
T3C Ta = 85°C max



II 2 G
Ex d IIC T3
II 3 G
Ex nA II T3
-40°C ≤ Ta ≤ +85°C

For hazardous area locations, sensor must be installed in accordance with installation instructions or local code requirements.

Special conditions for safe use:

- Conduit seal must be installed within 18 inches (450 mm) of the enclosure.
- Use supply wires with spreading suitable for at least 70°C.



Note: Due to continuous process improvement, specifications are subject to change without notice.
This document is cleared for public release.

Wilcoxon Sensing Technologies
An Amphenol Company

8435 Progress Drive
Frederick, MD 21701
USA

Tel: +1 (301) 330-8811
Fax: +1 (301) 330-8873
info@wilcoxon.com

buy.wilcoxon.com
www.wilcoxon.com

Explosion-proof, velocity loop powered sensor

PC420V-EX series



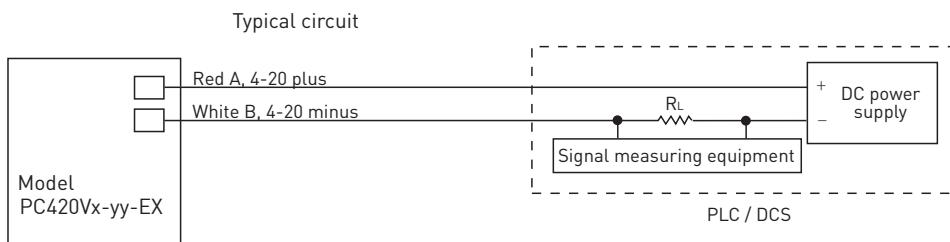
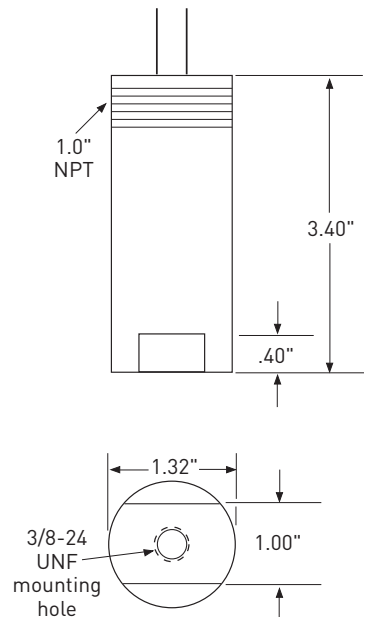
SPECIFICATIONS

Full scale, 20 mA, $\pm 5\%$	see Table 1 on page 1	
Frequency response:	$\pm 10\%$	10 Hz - 1.0 kHz
	± 3 dB	4.0 Hz - 2.0 kHz
Repeatability	$\pm 2\%$	
Transverse sensitivity, max	5%	
Power requirements, 2-wire loop power:		
Voltage at sensor terminals	14 - 30 VDC	
Loop resistance ¹ at 24 VDC, max	700 Ω	
Turn on time, 4-20 mA loop	<10 sec	
Grounding	case isolated, internally shielded	
Temperature range	-40° to +85° C	
Vibration limit	250 g peak	
Shock limit	2,500 g peak	
Sealing	epoxy sealed	
Sensing element design	PZT, shear	
Weight	380 grams	
Case material	303 stainless steel	
Mounting	3/8-24 x 3/8 depth tapped hole	
Output leads, 18 AWG	13 ft.	

Accessories supplied: SF20-2 mounting stud; calibration data (level 2)

Optional accessories: SF20-1 mounting stud (1/4-28 to 3/8-24)

Connections	
Function	Cable color
loop positive (+)	red
loop negative (-)	white



Notes: ¹ Maximum loop resistance (R_L) can be calculated by:

$$R_L = \frac{V_{DC \text{ power}} - 12 \text{ V}}{20 \text{ mA}}$$

DC supply voltage	R_L (max resistance) ²	R_L (minimum wattage capability) ³
12 VDC	100 Ω	1/8 watt
20 VDC	500 Ω	1/4 watt
24 VDC	700 Ω	1/2 watt
26 VDC	800 Ω	1/2 watt
30 VDC	1,000 Ω	1/2 watt

² Lower resistance is allowed, greater than 10 Ω recommended.

³ Minimum R_L wattage determined by: $(0.0004 \times R_L)$.

Note: Due to continuous process improvement, specifications are subject to change without notice. This document is cleared for public release.

Wilcoxon Sensing Technologies
An Amphenol Company

8435 Progress Drive
Frederick, MD 21701
USA

Tel: +1 (301) 330-8811
Fax: +1 (301) 330-8873
info@wilcoxon.com

buy.wilcoxon.com
www.wilcoxon.com