Explosion-proof, velocity loop powered sensor

PC420V-EX series





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

Table 1: PC420Vx-yy-EX model selection guide

yy (4-20 mA full scale)
05 = 0.5 ips
10 = 1.0 ips
20 = 2.0 ips
30 = 3.0 ips
50 = 5.0 ips

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, ±5%		see Table 1 on page 1
Frequency response:	±10%	10 Hz - 1.0 kHz
	±3 dB	4.0 Hz - 2.0 kHz
Repeatability		±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	K	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)



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



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



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

R _L =	$V_{ m DC \ power} - 12 m V$
	20 mA

	DC supply	R _L (max	R _L (minimum
l	voltage	resistance)2	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

 $^{\rm 2}$ Lower resistance is allowed, greater than 10 Ω recommended.

 $^{\rm 3}$ Minimum R $_{\rm L}$ wattage determined by: (0.0004 x R $_{\rm L}).$