

Loop powered, integral cable sensors

PCC423 series



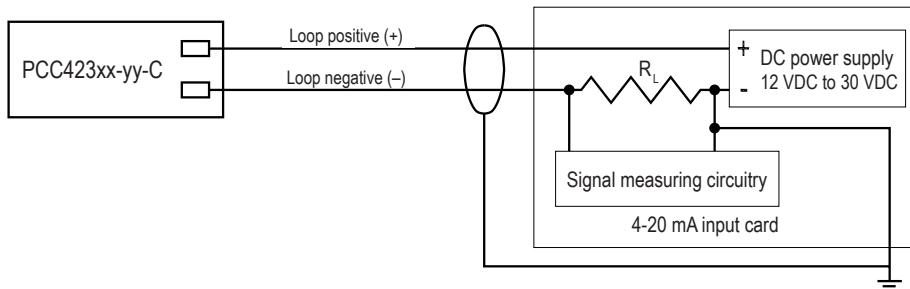
Table 1: PCC423xx-yy-C model selection guide

| xx (4-20 mA output type) | yy (4-20 mA full scale) | C (cable type) |
|---|---|---|
| AR = acceleration, RMS AP = acceleration, peak | 05 = 5 g (49 m/sec ²) 10 = 10 g (98 m/sec ²) 20 = 20 g (196 m/sec ²) | J9T2A = shielded, twisted pair cable, high temp |
| VR = velocity, RMS VP = velocity, peak | 05 = 0.5 ips (12.8 mm/sec) 10 = 1.0 ips (25.4 mm/sec) 20 = 2.0 ips (50.8 mm/sec) 50 = 5.0 ips (127 mm/sec) | J10 = shielded, twisted pair cable, general purpose |

Key features

- Choice of true RMS or calculated peak output (in acceleration or velocity units)
- Other connector options available (PCC421 models)
- Enables continuous trending of machine vibration
- Manufactured in an approved ISO 9001 facility

PCC423xx-yy-C wiring



Certifications



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

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SPECIFICATIONS

| | |
|---|------------------------------------|
| Output, 4-20 mA | see Table 1 on page 1 |
| Full scale, 4-20 mA, ±5% | selectable (see Table 1) |
| Frequency response, 4-20 mA | see Table 2, below |
| Repeatability | ±2% |
| Transverse sensitivity, max | 5% |
| Power requirements (2-wire loop power): | |
| Voltage at sensor terminals | 12 - 30 VDC |
| Loop resistance ¹ at 24 VDC, max | 700 Ω |
| Turn on time, 4-20 mA loop | <30 seconds |
| Grounding | case isolated, internally shielded |
| Temperature range | -40° to +105°C |
| Vibration limit | 250 g peak |
| Shock limit | 2,500 g peak |
| Sealing | hermetic |
| Sensing element design | PZT ceramic / shear |
| Weight | 145 grams (excluding cable) |
| Case material | stainless steel |
| Mounting ⁴ | 1/4-28 captive screw |
| Cabling | J9T2A or J10 (see Table 1) |

Accessories supplied: Mounting screw; calibration data (level 2)

| Connections | |
|-------------------|-------------|
| Function | Cable color |
| loop positive (+) | white |
| loop negative (-) | black |
| ground | shield |

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

$$R_L = \frac{V_{DC\ power} - 10\ V}{20\ mA}$$

| 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 |

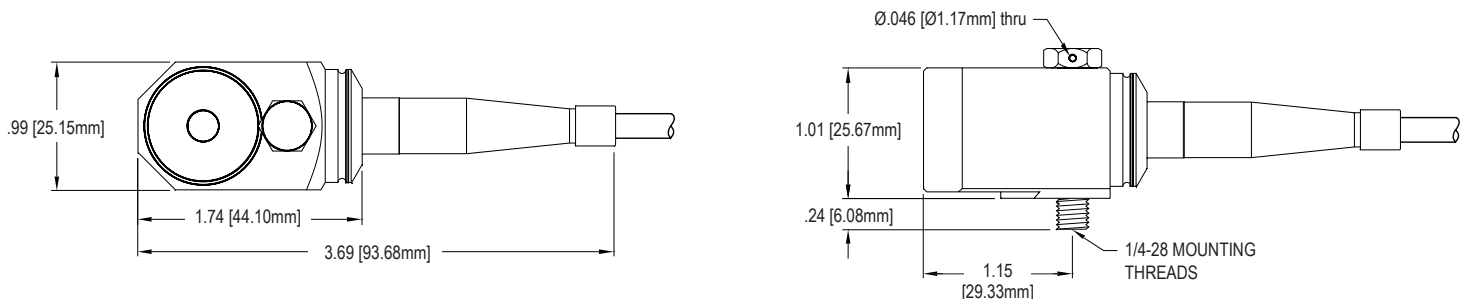
² Lower resistance is allowed, greater than 10 Ω recommended.

³ Minimum R_L wattage determined by: (0.0004 x R_L).

⁴ M6 mounting screw available by request.

Table 2: PCC423 frequency response

| | | |
|--------------|--------|----------------|
| Acceleration | ± 10% | 10 Hz - 1 kHz |
| | ± 3 dB | 1 Hz - 2 kHz |
| Velocity | ± 10% | 10 Hz - 1 kHz |
| | ± 3 dB | 3.5 Hz - 2 kHz |



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