Specifications Sheet

December 2024

Electrodynamic Velocity Sensor

Mechanical velocity sensor for absolute vibration measurement of critical turbomachinery applications such as steam, gas and hydro turbines, compressors, pumps and fans to measure case vibration.

Sensor Orientation	
PR9268/01x-x00	Omni Directional
PR9268/20x-x00 PR9268/60x-000	Vertical, $\pm 30^{\circ}$ (without sinking current) Vertical, $\pm 60^{\circ}$ (with sinking current)
PR9268/30x-x00 PR9268/70x-000	Horizontal, ± 10° (without lifting/sinking current) Horizontal, ± 30° (with lifting/sinking current)
Dynamic Performance (PR9268/01	x-x00)
Sensitivity	17.5 mV/mm/s
Frequency Range	14 to 1000Hz
Natural Frequency	14Hz ± 7% @ 20°C (68°F)
Transverse Sensitivity	< 0.1 @ 80Hz
Vibration Amplitude	500µm peak-peak
Amplitude Linearity	< 2%
Maximum Acceleration	10g (98.1 m/s2) peak-peak continuous 20g (196.2 m/s2) peak-peak intermittent
Maximum Transverse Acceleration	2g (19.62 m/s2)
Damping Factor	~0.6% @ 20°C (68°F)
Resistance	1723Ω ± 2%
Inductance	≤ 90 mH
Active Capacity	< 1.2 nF









Dynamic Performance (PR9268/20)	-x00 & PR9268/30x-x00)
Sensitivity	28.5 mV/mm/s (723.9 mV/in/s)
Frequency Range	4 to 1000Hz
Natural Frequency	4.5Hz ± 0.75Hz @ 20°C (68°F)
Transverse Sensitivity	0.13 (PR9268/20x-x00) @ 110Hz 0.27 (PR9268/30x-x00) @ 110Hz
Vibration Amplitude (Mechanical Limit)	3000µm (4000µm) peak-peak
Amplitude Linearity	< 2%
Maximum Acceleration	10g (98.1 m/s2) peak-peak continuous 20g (196.2 m/s2) peak-peak intermittent
Maximum Transverse Acceleration	2g (19.62 m/s2)
Damping Factor	~0.56 @ 20°C (68°F) ~0.42 @ 100°C (212°F)
Resistance	1875Ω ± 10%
Inductance	≤ 90 mH
Active Capacity	< 1.2 nF
Dynamic Performance (PR9268/60)	-000 & PR9268/70x-000)
Sensitivity	22.0 mV/mm/s ± 5% @ Pin 3, 100Ω load
	16.7 mV/mm/s ± 5% @ Pin 1, 50Ω load 16.7 mV/mm/s ± 5% @ Pin 4, 20Ω load
Frequency Range	16.7 mV/mm/s ± 5% @ Pin 1, 50Ω load
	16.7 mV/mm/s ± 5% @ Pin 1, 50Ω load 16.7 mV/mm/s ± 5% @ Pin 4, 20Ω load
Frequency Range	16.7 mV/mm/s ± 5% @ Pin 1, 50Ω load 16.7 mV/mm/s ± 5% @ Pin 4, 20Ω load 10 to 1000Hz
Frequency Range Natural Frequency	 16.7 mV/mm/s ± 5% @ Pin 1, 50Ω load 16.7 mV/mm/s ± 5% @ Pin 4, 20Ω load 10 to 1000Hz 8Hz ± 1.5Hz @ 20°C (68°F)
Frequency Range Natural Frequency Transverse Sensitivity Vibration Amplitude	 16.7 mV/mm/s ± 5% @ Pin 1, 50Ω load 16.7 mV/mm/s ± 5% @ Pin 4, 20Ω load 10 to 1000Hz 8Hz ± 1.5Hz @ 20°C (68°F) 0.10 @ 80Hz
Frequency Range Natural Frequency Transverse Sensitivity Vibration Amplitude (Mechanical Limit)	 16.7 mV/mm/s ± 5% @ Pin 1, 50Ω load 16.7 mV/mm/s ± 5% @ Pin 4, 20Ω load 10 to 1000Hz 8Hz ± 1.5Hz @ 20°C (68°F) 0.10 @ 80Hz 3000µm (4000µm) peak-peak
Frequency Range Natural Frequency Transverse Sensitivity Vibration Amplitude (Mechanical Limit) Amplitude Linearity	16.7 mV/mm/s ± 5% @ Pin 1, 50Ω load 16.7 mV/mm/s ± 5% @ Pin 4, 20Ω load 10 to 1000Hz 8Hz ± 1.5Hz @ 20°C (68°F) 0.10 @ 80Hz 3000µm (4000µm) peak-peak < 2%
Frequency Range Natural Frequency Transverse Sensitivity Vibration Amplitude (Mechanical Limit) Amplitude Linearity Maximum Acceleration	 16.7 mV/mm/s ± 5% @ Pin 1, 50Ω load 16.7 mV/mm/s ± 5% @ Pin 4, 20Ω load 10 to 1000Hz 8Hz ± 1.5Hz @ 20°C (68°F) 0.10 @ 80Hz 3000µm (4000µm) peak-peak < 2% 10g (98.1 m/s2) peak-peak continuous 20g (196.2 m/s2) peak-peak intermittent
Frequency RangeNatural FrequencyTransverse SensitivityVibration Amplitude (Mechanical Limit)Amplitude LinearityMaximum AccelerationMaximum Transverse Acceleration	16.7 mV/mm/s ± 5% @ Pin 1, 50Ω load 16.7 mV/mm/s ± 5% @ Pin 4, 20Ω load 10 to 1000Hz 8Hz ± 1.5Hz @ 20°C (68°F) 0.10 @ 80Hz 3000µm (4000µm) peak-peak < 2% 10g (98.1 m/s2) peak-peak continuous 20g (196.2 m/s2) peak-peak intermittent 2g (19.62 m/s2) ~0.7 @ 20°C (68°F)
Frequency Range Natural Frequency Transverse Sensitivity Vibration Amplitude (Mechanical Limit) Amplitude Linearity Maximum Acceleration Maximum Transverse Acceleration Damping Factor	 16.7 mV/mm/s ± 5% @ Pin 1, 50Ω load 16.7 mV/mm/s ± 5% @ Pin 4, 20Ω load 10 to 1000Hz 8Hz ± 1.5Hz @ 20°C (68°F) 0.10 @ 80Hz 3000µm (4000µm) peak-peak < 2% 10g (98.1 m/s2) peak-peak continuous 20g (196.2 m/s2) peak-peak intermittent 2g (19.62 m/s2) ~0.7 @ 20°C (68°F) ~0.5 @ 200°C (392°F) 3270Ω ± 10% @ Pin 3

Environmental, General			
Power	Self-Powered		
Operating Temperature Range	PR9268/01x-x00 PR9268/20x-x00 PR9268/30x-x00	-20 to +100°C (-4 to 212°F)	
	PR9268/60x-000 PR9268/70x-000	-20 to +200°C (-4 to 392°F)	
Protection Class	PR9268/20x-x00 PR9268/30x-x00	IP55	
	PR9268/01x-x00 PR9268/60x-000 PR9268/70x-000	IP65	
Relative Humidity	0 to 100%, Non Condensing		
Material	PR9268/20x-x00 PR9268/30x-x00	Al Mg Si Pb F 28	
	PR9268/01x-x00 PR9268/60x-000 PR9268/70x-000	Stainless Steel	
	Cable	PTFE, 3x 0.5mm2	
	Armor	Stainless Steel	
	Harting Plug	Die Cast Aluminium	
Weight	PR9268/01x-x00	280g (without cable)	
	PR9268/20x-x00 PR9268/30x-x00	930g	
	PR9268/60x-000 PR9268/70x-000	1050g	

Compliance and Certifications

CE	2014/30/EU (EN 61326-1)
	2014/34/EU
	2011/65/EU (EN 63000)
ATEX	EN IEC 60079-0:2018
	EN IEC 60079-11:2023
IEC-Ex	IEC 60079-0:2017
	IEC 60079-11:2011
CSA	CAN/CSA-C22.2 NO. 61010-1-12
	UL 61010-1
UKCA	S.I. 2016 No. 1091
	S.I. 2016 No. 1107
	S.I. 2012 No. 3032

Hazardous Area Approvals

Intrinsic Safety (ia) PR9268/20x-x00, PR9268/30x-x00, PR9268/20x-100-OPR (x = 03), PR9268/30x-100-OPR (x = 03)				
ATEX	II 1G Ex ia IIC T6 Ga II 1G Ex ia IIC T4 Ga	Tamb: T6 (-20°C ≤ Tamb ≤ 68°C)		
IEC-Ex	Ex ia IIC T6 Ga Ex ia IIC T4 Ga	T4 (-20°C ≤ Tamb ≤ 108°C)		
Intrinsic Safety (ia) PR9268/60x-000 (x = 03) & PR9268/70x-000 (x = 03)				
ATEX	II 2G Ex ib IIC T4 Gb II 2G Ex ib IIC T3 Gb	Tamb: T4 (-20°C ≤ Tamb ≤ 125°C)		
IEC-Ex	Ex ib IIC T4 Gb Ex ib IIC T3 Gb	T3 (-20°C ≤ Tamb ≤ 190°C) Tamb Connector: -40°C ≤ Tamb ≤ 100°C for T3 / T4		

Ordering Information

Model No.	/	Measurement Type XX	Cable X	_	Cable End X	0	0
PR9268		01 Omni Directional	0 3m, Armored		0 Harting Plug		
		20 Vertical	1 5m, Armored		1 Open Cab. End**		
		30 Horizontal	2 8m, Armored		9 C-5015 Plug***		
		60 Vertical HT	3 10m, Armored				
		70 Horizontal HT	4 3m, Non-Armored				
			5 5m, Non-Armored				
			6 8m, Non-Armored				
			7 10m, Non-Armored				
			8 No Cable*				

*No Cable is only available, if "Omni Directional" Sensor is chosen.

**Open Cable End is not available for "HT" versions.

***C-5015 Plug is only available, if "No Cable" is chosen.

Special Versions

Part Number	Description
PR9268/20x-100-OPR PR9268/30x-100-OPR	Sensor option with FEP covered stainless steel armor.
PR9268/61x-100-CNSPEC PR9268/71x-100-CNSPEC	Sensor option with open cable end (Resistor Network to be installed separately).

Product Accessories

Product Description	Model Number
Extension Cable for PR9268/018-900 (see individual specsheet for details)	AC100

Dimensions





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