

# 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	Vertical, $\pm 60^\circ$
PR9268/30x-x00	Horizontal, $\pm 30^\circ$
PR9268/60x-000	Vertical, $\pm 30^\circ$ (without lifting current) Vertical, $\pm 60^\circ$ (with lifting current)
PR9268/70x-000	Horizontal, $\pm 10^\circ$ (without lifting current) Horizontal, $\pm 30^\circ$ (with lifting current)
Dynamic Performance (PR9268/01x-x00)	
Sensitivity	17.5 mV/mm/s
Frequency Range	14 to 1000Hz
Natural Frequency	4.5Hz $\pm$ 0.75Hz @ 20°C (68°F)
Transverse Sensitivity	< 0.1g @ 80Hz
Vibration Amplitude	$\pm 500\mu\text{m}$
Amplitude Linearity	< 2%
Maximum Acceleration	10g (98.1 m/s <sup>2</sup> ) continuous, 20g (196.2 m/s <sup>2</sup> ) intermittent
Maximum Transverse Acceleration	2g (19.62 m/s <sup>2</sup> )
Damping Factor	$\sim 0.6\%$ @ 20°C (68°F)
Resistance	1723 $\Omega$ $\pm$ 2%
Inductance	$\leq 90$ mH
Active Capacity	< 1.2 nF



<b>Dynamic Performance (PR9268/20x-x00 &amp; PR9268/30x-x00)</b>	
Sensitivity	28.5 mV/mm/s (723.9 mV/in/s)
Frequency Range	4 to 1000Hz
Natural Frequency	4.5Hz $\pm$ 0.75Hz @ 20°C (68°F)
Transverse Sensitivity	0.13 mV/mm/s (PR9268/20x-x00) @ 110Hz  0.27 mV/mm/s (PR9268/30x-x00) @ 110Hz
Vibration Amplitude (mechanical Limit)	$\pm$ 1500 $\mu$ m ( $\pm$ 2000 $\mu$ m)
Amplitude Linearity	< 2%
Maximum Acceleration	10g (98.1 m/s <sup>2</sup> ) continuous, 20g (196.2 m/s <sup>2</sup> ) intermittent
Maximum Transverse Acceleration	2g (19.62 m/s <sup>2</sup> )
Damping Factor	$\sim$ 0.56 @ 20°C (68°F)  $\sim$ 0.42 @ 100°C (212°F)
Resistance	1875 $\Omega$ $\pm$ 10%
Inductance	$\leq$ 90 mH
Active Capacity	< 1.2 nF
<b>Dynamic Performance (PR9268/60x-000 &amp; PR9268/70x-000)</b>	
Sensitivity	22.0 mV/mm/s $\pm$ 5% @ Pin 3, 100 $\Omega$ load  16.7 mV/mm/s $\pm$ 5% @ Pin 1, 50 $\Omega$ load  16.7 mV/mm/s $\pm$ 5% @ Pin 4, 20 $\Omega$ load
Frequency Range	10 to 1000Hz
Natural Frequency	8Hz $\pm$ 1.5Hz @ 20°C (68°F)
Transverse Sensitivity	0.10 mV/mm/s @ 80Hz
Vibration Amplitude (mechanical Limit)	$\pm$ 1500 $\mu$ m ( $\pm$ 2000 $\mu$ m)
Amplitude Linearity	< 2%
Maximum Acceleration	10g (98.1 m/s <sup>2</sup> ) continuous, 20g (196.2 m/s <sup>2</sup> ) intermittent
Maximum Transverse Acceleration	2g (19.62 m/s <sup>2</sup> )
Damping Factor	$\sim$ 0.7 @ 20°C (68°F)  $\sim$ 0.5 @ 200°C (392°F)
Resistance	3270 $\Omega$ $\pm$ 10% @ Pin 3  3770 $\Omega$ $\pm$ 10% @ Pin 1
Inductance	$\leq$ 160 mH
Active Capacity	Insignificant

Environmental, General		
Power	Self-Powered	
Operating Temperature Range	PR9268/01x-x00	-20 to +100°C (-4 to 212°F)
	PR9268/20x-x00	
	PR9268/30x-x00	
	PR9268/60x-000	-20 to +200°C (-4 to 392°F)
PR9268/70x-000		
Protection Class	PR9268/20x-x00	IP55
	PR9268/30x-x00	
	PR9268/01x-x00	IP65
	PR9268/60x-000	
PR9268/70x-000		
Relative Humidity	0 to 100%, Non Condensing	
Material	PR9268/20x-x00	Al Mg Si Pb F 28
	PR9268/30x-x00	
	PR9268/01x-x00	Stainless Steel
	PR9268/60x-000	
	PR9268/70x-000	
	Cable	PTFE, 3x 0.5mm <sup>2</sup>
Armor	Stainless Steel	
Harting Plug	Die Cast Aluminium	
Weight	PR9268/01x-x00	280g (without cable)
	PR9268/20x-x00	930g
	PR9268/30x-x00	
	PR9268/60x-000	1050g
PR9268/70x-000		

Compliance and Certifications		
CE	2014/30/EU 2014/34/EU 2011/65/EU EN61326-1 DIN EN 50581	
ATEX	EN 50014 EN 50020	
CSA	CAN/CSA-C22.2 NO. 61010-1-12 UL 61010-1	
Hazardous Area Approvals		
Intrinsic Safety (iA)		
ATEX	PR9268/20x-x00 PR9268/30x-x00	II 1 G EEx ia IIC T6, Ta ≤ 60°C  II 2 G EEx ib IIC T6, Ta ≤ 68°C  II 2 G EEx ib IIC T4, Ta ≤ 108°C
	PR9268/60x-x00 PR9268/70x-x00	II 2 G EEx ib IIC T4, Ta ≤ 125°C  II 2 G EEx ib IIC T3, Ta ≤ 190°C  (Harting Plug 100°C max.)

## Ordering Information

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

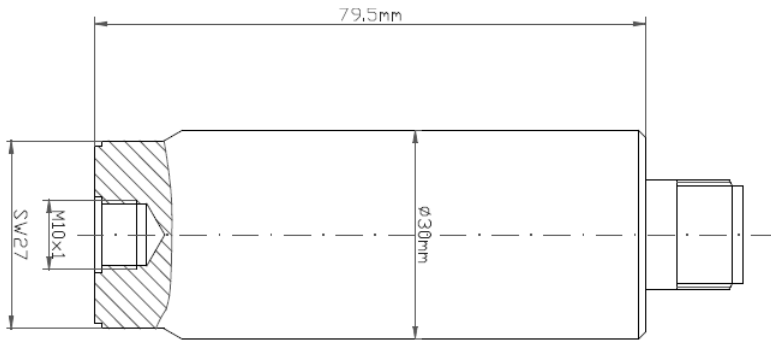
Product Description	Model Number
Cable 3x0.22mm <sup>2</sup> (AWG 24), up to 8x10 <sup>5</sup> Gy radiation resistant	PR9268/x0x-100-RAD

## Product Accessories

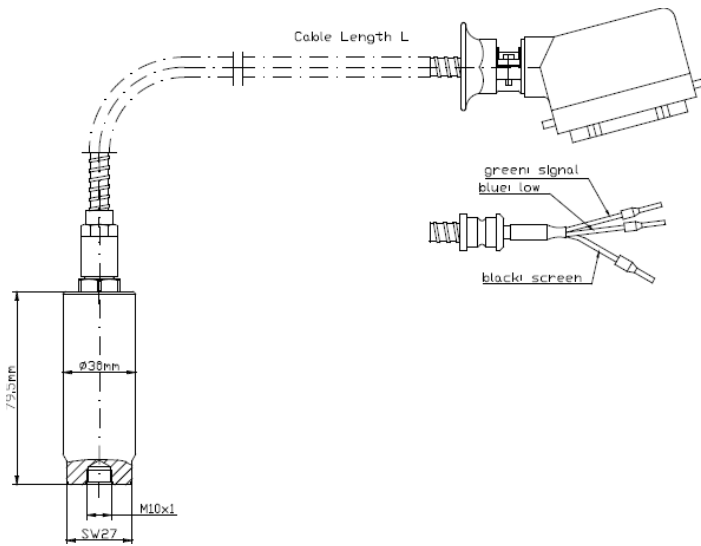
Product Description	Model Number
Extension Cable for PR9268/018-900 (see individual specsheet for details)	PR9670

### Dimensions

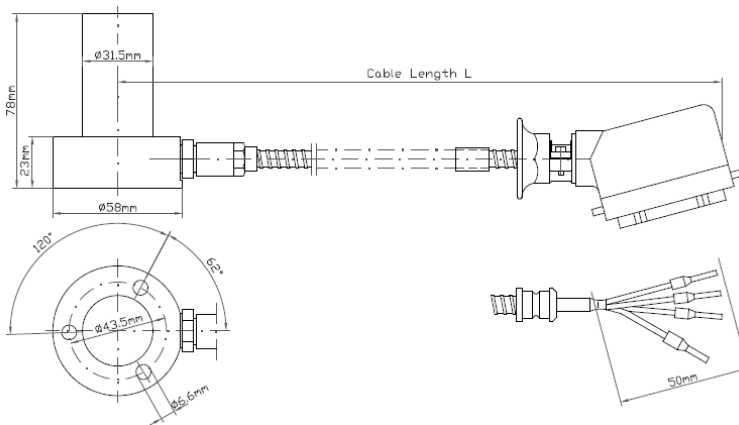
#### PR9268/018-900



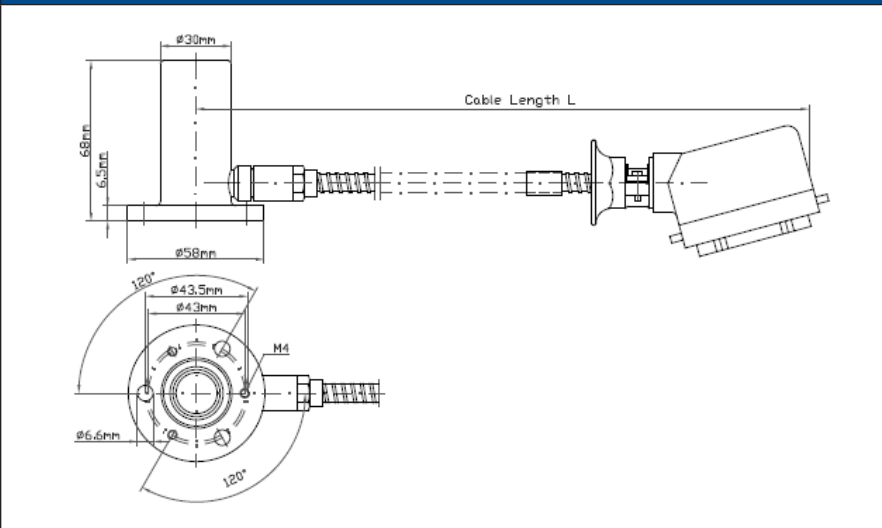
#### PR9268/01x-x00



#### PR9268/20x-x00 & PR9268/30x-x00



PR9268/60x-000 & PR9268/70x-000



**Emerson**  
**Reliability Solutions**  
835 Innovation Drive  
Knoxville, TN 37932 USA  
☎ +1 865 675 2400

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