

# WATERPROOF STRAIN GAUGES series WF



Operating temperature range  
0°C +80°C

Temperature compensation range  
+10°C +80°C

Suffix code for temperature compensation materials  
-11: Mild steel (ferritic)    -17: Stainless steel    -23: Aluminium

For ordering, the above suffix code should be specified after basic gauge type.

Applicable adhesives

CN	0 ~ +80°C
P-2	0 ~ +80°C
EB-2	0 ~ +80°C

## WATERPROOF STRAIN GAUGES

Gauge pattern	Basic type	Gauge size		Backing			Resistance $\Omega$																																																																																																																		
		L	W	L	W	T																																																																																																																			
<p>These gauges eliminate the need for a moisture-proofing coating, which is sometimes troublesome in a field test. They have an integral vinyl leadwire, and whole area of the strain gauges and the leadwire junction are coated with epoxy resin. The coating is transparent and flexible, so the positioning and bonding works are very easy. By merely bonding the gauges with CN or P-2 adhesive, outdoor or underwater measurement for a short-term becomes possible. These gauges are also effective in eliminating the primary coating in case of applying a multi-layer coating.</p> <p><b>Single element : WFLA</b> 0.08mm<sup>2</sup> integral vinyl leadwire Total leadwire resistance per meter : 0.44<math>\Omega</math></p> <p>2-wire system</p> <p>WFLA-3-11-1L (Red)</p> <p>WFLA-3-350-11-1L (Red)</p> <p>3-wire system</p> <p>WFLA-6-11-3LT (Red stripe independent)</p> <p><b>0°/90° 2-element Rosette Stacked: WFCA</b></p> <p>3-wire system</p> <p>WFCA-6-11-3LT (Red stripe 1st axis, Black stripe 2nd axis)</p> <p><b>0°/45°/90° 3-element Rosette Stacked: WFRA</b></p> <p>2-wire system</p> <p>WFRA-3-11-1L (Red 1st axis, Green 3rd axis, White 3rd axis)</p> <p>3-wire system</p> <p>WFRA-6-11-3LT (Red stripe 1st axis, Blue stripe 3rd axis, Black stripe 2nd axis)</p>	<p><b>2-wire system</b></p> <p>Single element</p> <table border="1"> <tr> <td>WFLA-3</td> <td>-1L</td> <td>3</td> <td>1.7</td> <td>17.0</td> <td>8.0</td> <td>1.5</td> <td>120</td> </tr> <tr> <td>WFLA-3-350</td> <td>-3L</td> <td>3</td> <td>3.2</td> <td>17.0</td> <td>8.0</td> <td>1.5</td> <td>350</td> </tr> <tr> <td>WFLA-6</td> <td>-5L</td> <td>6</td> <td>2.2</td> <td>25.0</td> <td>11.0</td> <td>1.5</td> <td>120</td> </tr> </table> <p><b>0°/90° 2-element Rosette Stacked</b></p> <table border="1"> <tr> <td>WFCA-3</td> <td>-1L</td> <td>3</td> <td>1.7</td> <td>19.0</td> <td>16.0</td> <td>1.5</td> <td>120</td> </tr> <tr> <td>WFCA-6</td> <td>-3L</td> <td>6</td> <td>2.3</td> <td>25.0</td> <td>21.0</td> <td>1.5</td> <td>120</td> </tr> <tr> <td></td> <td>-5L</td> <td>6</td> <td>2.3</td> <td>25.0</td> <td>21.0</td> <td>1.5</td> <td>120</td> </tr> </table> <p><b>0°/45°/90° 3-element Rosette Stacked</b></p> <table border="1"> <tr> <td>WFRA-3</td> <td>-1L</td> <td>3</td> <td>1.7</td> <td>19.0</td> <td>16.0</td> <td>1.5</td> <td>120</td> </tr> <tr> <td>WFRA-6</td> <td>-3L</td> <td>6</td> <td>2.3</td> <td>25.0</td> <td>21.0</td> <td>1.5</td> <td>120</td> </tr> <tr> <td></td> <td>-5L</td> <td>6</td> <td>2.3</td> <td>25.0</td> <td>21.0</td> <td>1.5</td> <td>120</td> </tr> </table> <p>Minimum order is 10 gauges or more.</p> <p><b>3-wire system</b></p> <p>Quarter bridge 3-wire system is usable to avoid an unexpected effect of resistance change with temperature.</p> <p>Single element</p> <table border="1"> <tr> <td>WFLA-3</td> <td>-3LT</td> <td>3</td> <td>1.7</td> <td>17.0</td> <td>8.0</td> <td>1.5</td> <td>120</td> </tr> <tr> <td>WFLA-6</td> <td>-5LT</td> <td>6</td> <td>2.2</td> <td>25.0</td> <td>11.0</td> <td>1.5</td> <td>120</td> </tr> </table> <p><b>0°/90° 2-element Stacked</b></p> <table border="1"> <tr> <td>WFCA-3</td> <td>-3LT</td> <td>3</td> <td>1.7</td> <td>19.0</td> <td>16.0</td> <td>1.5</td> <td>120</td> </tr> <tr> <td>WFCA-6</td> <td>-5LT</td> <td>6</td> <td>2.3</td> <td>25.0</td> <td>21.0</td> <td>1.5</td> <td>120</td> </tr> </table> <p><b>0°/45°/90° 3-element Rosette Stacked</b></p> <table border="1"> <tr> <td>WFRA-3</td> <td>-3LT</td> <td>3</td> <td>1.7</td> <td>19.0</td> <td>16.0</td> <td>1.5</td> <td>120</td> </tr> <tr> <td>WFRA-6</td> <td>-5LT</td> <td>6</td> <td>2.3</td> <td>25.0</td> <td>21.0</td> <td>1.5</td> <td>120</td> </tr> </table> <p>Minimum order is 10 gauges or more.</p>	WFLA-3	-1L	3	1.7	17.0	8.0	1.5	120	WFLA-3-350	-3L	3	3.2	17.0	8.0	1.5	350	WFLA-6	-5L	6	2.2	25.0	11.0	1.5	120	WFCA-3	-1L	3	1.7	19.0	16.0	1.5	120	WFCA-6	-3L	6	2.3	25.0	21.0	1.5	120		-5L	6	2.3	25.0	21.0	1.5	120	WFRA-3	-1L	3	1.7	19.0	16.0	1.5	120	WFRA-6	-3L	6	2.3	25.0	21.0	1.5	120		-5L	6	2.3	25.0	21.0	1.5	120	WFLA-3	-3LT	3	1.7	17.0	8.0	1.5	120	WFLA-6	-5LT	6	2.2	25.0	11.0	1.5	120	WFCA-3	-3LT	3	1.7	19.0	16.0	1.5	120	WFCA-6	-5LT	6	2.3	25.0	21.0	1.5	120	WFRA-3	-3LT	3	1.7	19.0	16.0	1.5	120	WFRA-6	-5LT	6	2.3	25.0	21.0	1.5	120
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