

# WK SERIES

## 2-wire TRANSMITTER



**Monitors or signal converters are unnecessary.**

**Electric current output makes long wiring possible.**

**Direct connection to control instruments.**

**The ideal system for monitoring small compressor vibrations.**

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Published in Feb.2023

# SIMPLE WIRING - 2-WIRE TRANSMITTER

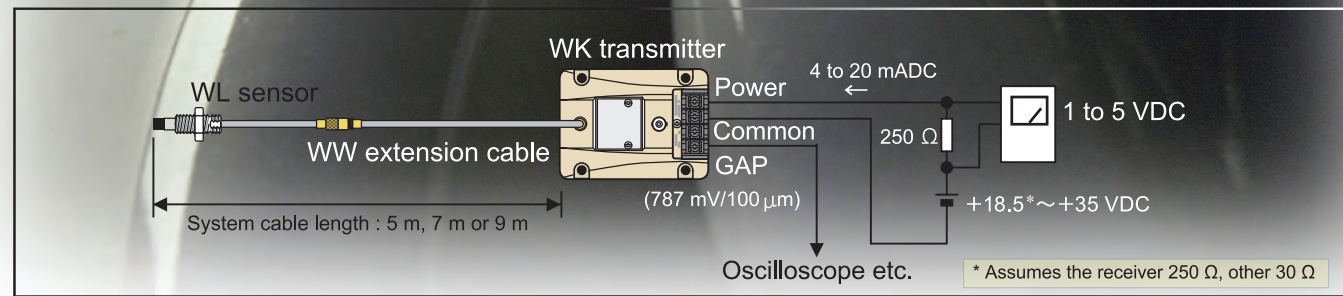
The WK series transmitter is an eddy-current type transmitter that incorporates vibration converter features, supplying the power and transmitting the signal with a 2-wire current loop. The WK system reduces equipment and wiring costs. Two kinds of transmitters are available - the WK-142K for shaft vibration, and the WK-142T for thrust position.

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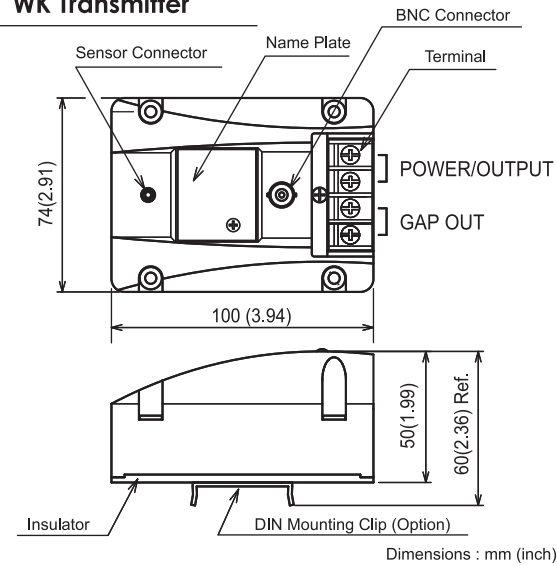
CE compliance

## Example of SYSTEM CONFIGURATION



## Outline Drawing

### WK Transmitter



## Specifications

	WK-142K	WK-142T
<b>Current Output</b>	<b>4 to 20mA Output Range</b> 0 to 100 μm pk-pk, 0 to 125 μm pk-pk, 0 to 200 μm pk-pk, 0 to 250 μm pk-pk, 0 to 400 μm pk-pk	-0.6 to 0 to +0.6 mm, -0.635 to 0 to +0.635 mm (-25 mils to 0 to +25 mils)
<b>4 to 20mA Output Conversion Accuracy</b>	± 1.5% of full scale range (from test signal input pin to current output)	± 1.0% of full scale range (from test signal input pin to current output)
<b>Max. Load Resistance</b>	43.5 × (Vps-12) Ω (Vps=Power supply voltage)	
<b>Calibration Material</b>	JIS SCM440 flat (AISI 4140 equivalent)	
<b>Gap Output</b>	<b>Linear Range*</b> 1.4 mm (Gap : 0.3 to 1.7 mm)	
<b>Scale Factor*</b>	7.87 mV/μm	
<b>Scale Factor Error*</b>	7.87mV/μm±6.5% typ. (including interchangeability errors) Step : 200μm, Target : 30 mm dia.	
<b>Output Impedance*</b>	10 kΩ (it is calibrated load impedance at 10 MΩ)	
<b>Frequency Response*</b>	5 Hz to 6,000 Hz (+0 dB, -3 dB) at 900 μm Gap	
<b>System</b>	<b>Operating Temperature Range</b> Transmitter : 0 to 70°C Sensor & Extension cable : -34 to +177°C (Connector : Max.125°C)	
<b>Relative Humidity</b>	95% RH (non-condensing)	
<b>Power Supply Voltage</b>	12 to 35 VDC	
<b>System Cable Length</b>	5 m, 7 m or 9 m	5 m, 7 m

\* The above specifications apply at 25°C with 24 VDC power supply and SCM440 (AISI 4140 equivalent) steel flat target.

## Model Code

### For Shaft Vibration

WK-142K □ - □ /NB □ /DNC

System Cable Length	Output Range	Non-incendive	With DIN Mounting Clips
1 5 m	1 0 to 100 μm pk-pk	1 CSA : Class I Div.2 Gr. A,B,C,D ATEX : Ex nA II T4 Gc	
2 7 m	2 0 to 125 μm pk-pk	8 KTL : Ex nA II T4	
5 9 m	3 0 to 200 μm pk-pk	C TR-CU : 2Ex nA II T4 Gc X	
	4 0 to 250 μm pk-pk		
	5 0 to 400 μm pk-pk		

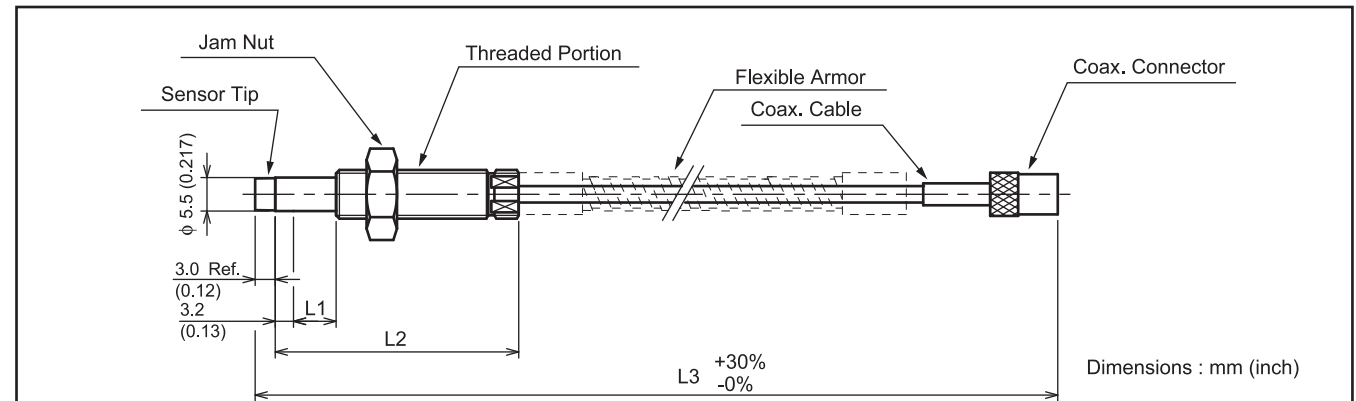
### For Thrust Position

WK-142T □ - □ /NB □ /DNC

System Cable Length	Output Range	Non-incendive	With DIN Mounting Clips
1 5m	1 -0.6 to 0 to +0.6 mm	1 CSA : Class I Div.2 Gr. A,B,C,D ATEX : Ex nA II T4 Gc	
2 7m	2 -0.635 to 0 to +0.635 mm (-25 to 0 to +25 mils)	8 KTL : Ex nA II T4	
		C TR-CU : 2Ex nA II T4 Gc X	

## Outline Drawing and Model Code

### WL Sensor

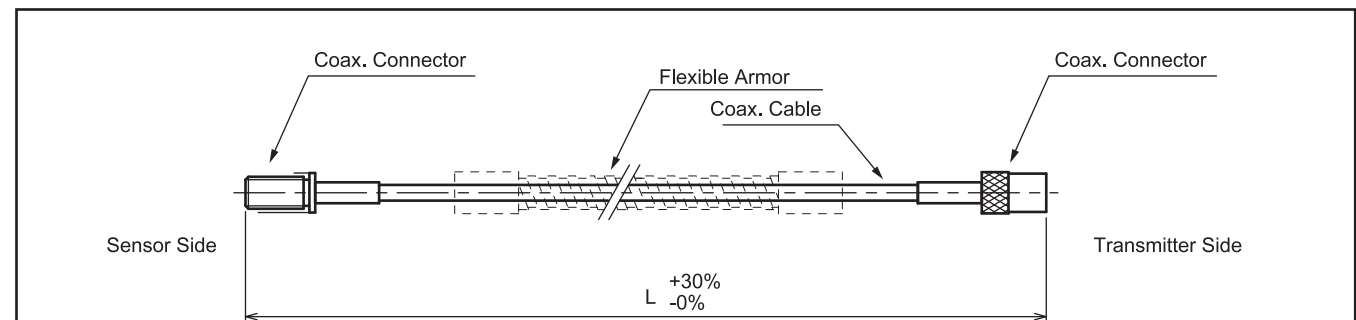


WL-142K05 □ - □ □ □ □ □ □ /NB □

	Armor	Threaded Size	Unthreaded length* (L1)	Case length* (L2)	Cable length (L3)	Non-incendive
A	With (Without Fluoro resin coating)	M1	M8 x 1	10 mm step, 0 to 230 mm e.g.) 06 = 60 mm L1 ≤ L2 - 20 mm	10 mm step, 20 to 250mm e.g.) 25 = 250 mm	1 CSA : Class I Div2 GR. A,B,C,D ATEX : Ex nA II T4 Gc
		M2	M10 x 1			8 KTL : Ex nA II T4
T	With (With Fluoro resin coating)	U1	1/4-28 UNF-2A	0.1 inch step, 0 to 9.2 inch e.g.) 04 = 0.4 inch L1 ≤ L2 - 0.7 inch	0.1 inch step, 0.8 to 9.9 inch e.g.) 35 = 3.5 inch	C TR-CU : 2Ex nA II T4 Gc X
		U2	3/8-24 UNF-2A			
L	Without					

\* inch for UNF-2A thread  
mm for M thread

### WW Extension Cable



WW-142K □ - □ /NB □

	Armor	Extension Cable length	Non-incendive
A	With (Without Fluoro resin coating)	1 4.0 m	1 CSA : Class I Div.2 Gr. A,B,C,D ATEX : Ex nA II T4 Gc
T	With (With Fluoro resin coating)	2 4.5 m	8 KTL : Ex nA II T4
L	Without	3 6.0 m	C TR-CU : 2Ex nA II T4 Gc X
		4 6.5 m	
		5 8.0 m	
		6 8.5 m	