SHINKAWA

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SHINKAWA

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.

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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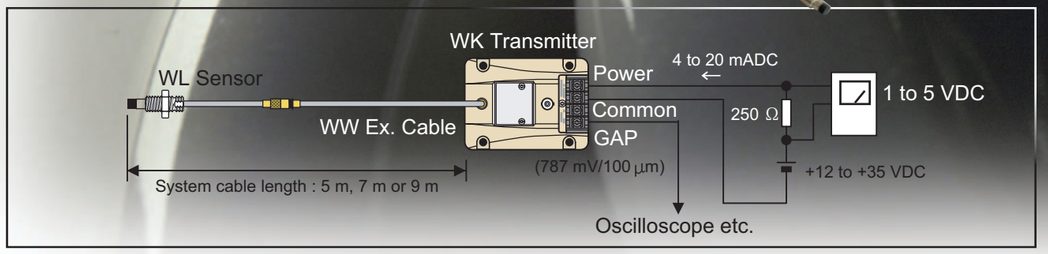
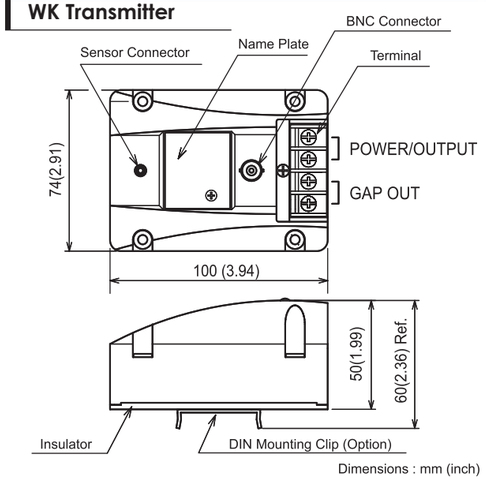
Example of SYSTEM CONFIGURATION



Outline Drawing

WK Transmitter



Dimensions : mm (inch)

Specifications

		WK-142K	WK-142T
Current Output	**4 to 20mA Output Range**	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
	4 to 20mA Output Conversion Accuracy	±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)
Gap Output	**Max. Load Resistance**	43.5×(Vps-12)Ω(Vps=Power supply voltage)	
	Calibration Material	JIS SCM440 flat (AISI 4140 equivalent)	
	Linear Range*	1.4 mm (Gap : 0.3 to 1.7 mm)	
	Scable Factor*	7.87 mV/μm	
	Scale Factor Error*	5 m, 7 m system : 7.87 mV/μm±6.5% typ. (including interchangeability errors) 9m system : 7.87mV/μm±10% typ. (including interchangeability errors) Step : 200μm, Target : 30 mm dia.	
	Output Impedance*	10 kΩ (it is calibrated load impedance at 10 MΩ)	
System	**Frequency Response***	5 Hz to 6,000 Hz (+0 dB, −3 dB) at 900 μm Gap	
	Operating Temperature Range	Transmitter : 0 to 70℃ Sensor & Extension cable : −34 to +177℃ (Connector : Max.125℃)	
	Relative Humidity	95% RH (non-condensing)	
	Power Supply Voltage	12 to 35 VDC	
	System Cable Length	5 m, 7 m or 9 m	5 m, 7 m

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

Model Code

For Shaft Vibration

WK-142K □ - □ /NB1 /DNC /CEM

System Cable Length		Output Range		Non-incendive		With DIN Mounting Clips	CE Marking
1	5 m	1	0 to 100 μm pk-pk	1	CSA : Class I Div.2 Gr. A,B,C,D ATEX : EEx nA II T6		
2	7 m	2	0 to 125 μm pk-pk				
5	9 m	3	0 to 200 μm pk-pk				
		4	0 to 250 μm pk-pk				
		5	0 to 400 μm pk-pk				

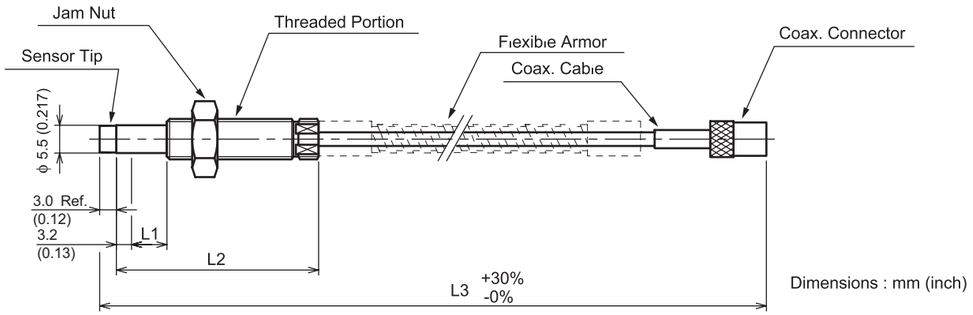
For Thrust Position

WK-142T □ - □ /NB1 /DNC /CEM

System Cable Length		Output Range		Non-incendive		With DIN Mounting Clips	CE Marking
1	5m	1	-0.6 to 0 to +0.6 mm	1	CSA : Class I Div.2 Gr. A,B,C,D ATEX : EEx nA II T6		
2	7m	2	-0.635 to 0 to +0.635 mm (-25 to 0 to +25 mils)				

Outline Drawing and Model Code

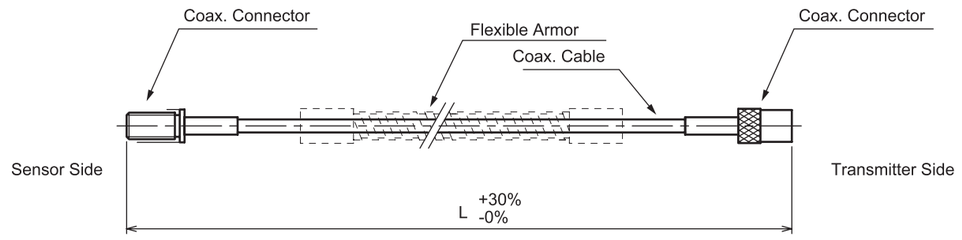
WL Sensor



WL-142K05 □ - □□□□□□ /NB1

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	0.5 m	1	CSA : Class I Div.2 Gr. A,B,C,D ATEX : EEx nA II T6
T	With (With Fluoro resin coating)	M2	M10 x 1			2	4.5 m		
L	Without	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	3	5.0 m		
		U2	3/8-24 UNF-2A			4	7.0 m		

WW Extension Cable



WW-142K □ - □ /NB1

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 : EEx nA II T6
T	With (With Fluoro resin coating)	2	4.5 m		
L	Without	3	6.0 m		
		4	6.5 m		
		5	8.0 m		
		6	8.5 m		