

WKN-142 SERIES

Two-wire TRANSDUCER



SIMPLE WIRING

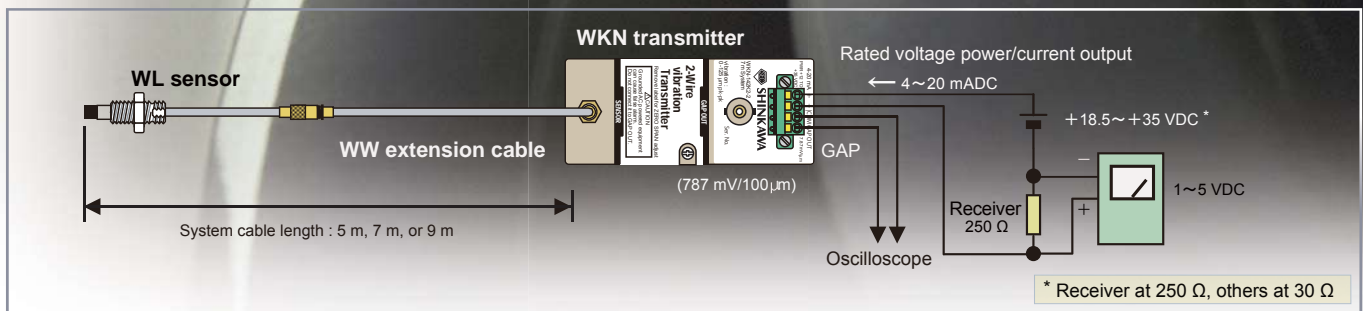
TWO-WIRE TRANSDUCER

The WKN Series transmitter combines the signal conditioning circuit with the probe driver into one package for easy installation. The two wire current loop drives the transducer and transmits signals at the same time, saving wiring cost.

- Ideal for monitoring of general purpose rotating equipment and compressors.
- Compact, space-saving (50% smaller, 60% lighter than the conventional)
- Current output allows for long wiring distances.
- Direct connection to PLCs and DCS control systems. No external signal conditioner required.
- Phoenix terminal type allows for quick and efficient wiring
- RoHS and CE compliance



System configuration

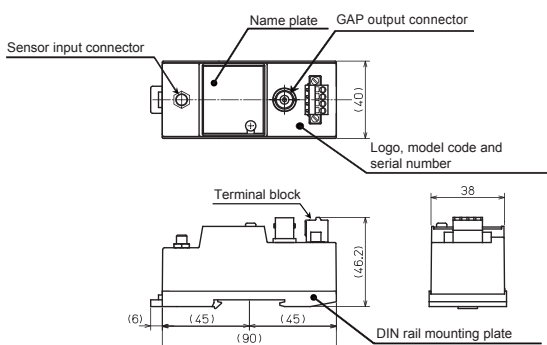


Specification

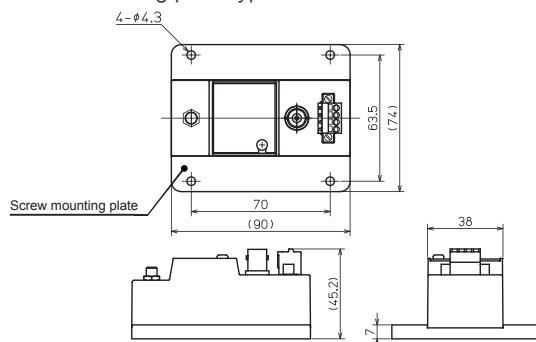
Transmitter Outline Drawing (by mount type)

Unit: mm

- 35 mm DIN rail mounting plate type



- Screw mounting plate type



For WK series users:

Holes of screw mounting plates are the same as WK series.

You can replace your WK series with WKN series without making new holes.

Specifications		WKN-142K	WKN-142T
Current Output	4 to 20 mA 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 or -0.635 to 0 to +0.635 mm (-25 to 0 to +25 mils)
	4 to 20 mA Conversion Accuracy	±1.5 % of full scale range (Input to test pin and current output)	
	Maxi. Load Resistance	43.5 × (Vps-12)Ω (Vps = power supply voltage)	
GAP Output	Calibration Target	JIS SCM440 flat surface	
	Linear Range*	1.4 mm (Gap : 0.3 to 1.7 mm)	
	Scale Factor*	7.87 mV/μm	
	Scale Factor Error*	5 m, 7 m System: 7.87 mV/μm ±6.5 % typ. 9 m System: 7.87 mV/μm ±10 % typ. (Values include interchangeability errors) 200 μm step, target diameter ø30 mm	
System	Output Impedance*	10 kΩ (calibrated at 10 MΩ load impedance)	
	Frequency Responce*	5 Hz to 6,000 Hz (+0 dB, -3 dB) at 900 μm gap	
	Operation Temperature	Transmitter: Operation, 0 to 70 °C; Storage, -34 to +100 °C Sensor and cable: Operation -34 to +177 °C (Connector: Max.125 °C)	
	Relative Humidity	30 to 95 % RH (non-condensing)	
	Power Supply Voltage	12 to 35 VDC	
	System Cable Length	5 m, 7 m, 9 m	

* The specifications above apply to a system of WL-142K sensor, WW-142K extension cable and WKN-142 transmitter under the following conditions: calibration target, SCM440 flat surface; 24VDC power supply voltage; ambient temperature, 25°C.

Model code

Transmitter (for vibration)

WKN-142K - - / NB1

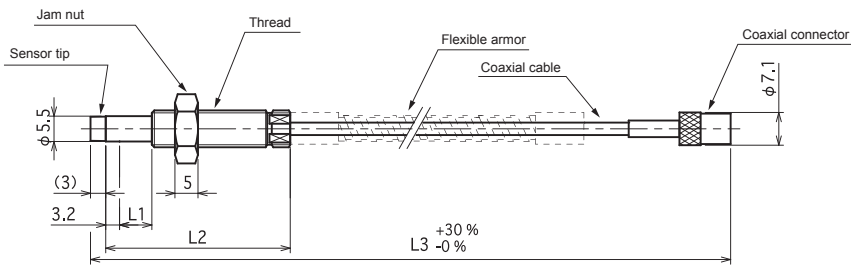
System Cable Length		Output Range		Mounting Plate		Non-incendive	
1	5 m	1	0 to 100 μ m pk-pk	1	35 mm DIN Rail Mounting Plate	1	CSA: Class I Div.2 Gr.A,B,C,D ATEX: Ex nA II T4
2	7 m	2	0 to 125 μ m pk-pk	2	Screw Mounting Plate		
5	9 m	3	0 to 200 μ m pk-pk				
		4	0 to 250 μ m pk-pk				
		5	0 to 400 μ m pk-pk				

Transmitter (for thrust)

WKN-142T - - / NB1

System Cable Length		Output Range		Mounting Plate		Non-incendive	
1	5 m	1	-0.6 to 0 to +0.6 mm	1	35 mm DIN Rail mounting plate	1	CSA: Class I Div.2 Gr.A,B,C,D ATEX: Ex nA II T4
2	7 m	2	-0.635 to 0 to +0.635 mm (-25 to 0 to +25 mils)	2	Screw mounting plate		
5	9 m						

Sensor

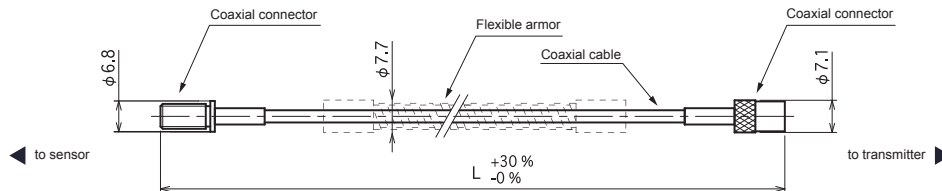


WL-142K05 - / NB1

Armor		Thread 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 250 mm e.g.) 25=250 mm	1	0.5 m	1	CSA: Class I Div.2 Gr.A,B,C,D ATEX: Ex nA II T4		
		M2	M10 X 1			2	1.0 m				
T	With (With Fluoro resin coating)	U1	1/4-28 UNF-2A	0.1 in step, 0 to 9.2 in e.g.) 04=0.4 in, L1≤L2-0.7 in	0.1in step, 0.8 to 9.9 in e.g.) 35=3.5 in	3	5.0 m				
		U2	3/8-24 UNF-2A			4	7.0 m				
L	Without					5	9.0 m				

* Specify length in mm for M thread, in inch for UNF-2A thread
** For sensors of cable length 5.0, 7.0, 9.0 meters, extension cable cannot be used. Connect the sensor cable directly to the transmitter.

Extension Cable



WW-142K - / NB1

Armor		Cable Length (L)		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
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		

WKN-142K/T



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* Specifications, outline drawings and other written information may be changed without notice.

