VN Series

Specifications

VND Thickness Measurement Converter (5 mm range)

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	Specifications	Notice
Converter	VND-050A-*	1. Things to prepare before using this device:
Extension cable	NW-100*	Four M6 screws or four M6 bolts are required to install the
Sensor	NS-050*	converter.
Thickness		For the feeler gauge, a 20% of F.S. pitch (for 6-point adjustment)
measurement range	0.0 mm - 5.0 mm (actual gap: 0.8 mm - 5.8 mm)	or a 10% of F.S. pitch (for 11-point adjustment) is required to
Sensor		adjust the device.
offset gap	0.8 mm	Since the accuracy of the feeler gauge to be used depends on the
Calibration material	Chilled steel (flat)	measurement accuracy, use a gauge which matches the required
Output sensitivity	1.0 V/mm, 2.0 V/mm	accuracy.
	±0.5% of F.S. (for 6-point or 11-point adjustment)	
Zero shift range	Approx. ±10% of F.S.	2. Assembling the device
Resolution	1 μm	Before connecting the sensor, extension cable, and converter,
Digital display	5-digit, 7-segment LED (orange)	make sure to match the serial numbers indicated on the converte
Digital display	4-digit thickness display (unit: mm), 1-digit code	name plate or inspection test report.
		Having the wrong combination of serial numbers may result in
	Accuracy: ±0.005 mm	specifications not being met.
Display LED	Power (red)	3. Megger testing of the signal transmission cables that connect to the
	Meas. (green)	instrumentation
	Teach (green)	After you perform a megger test on the signal transmission cable
_	Cal. Z/S (green)	make sure to discharge the electrical charge before connecting
requency response	DC - 20 Hz (-1 dB typ.)	the cable to the converter.
Output impedance	100 Ω	Connecting the cable to the converter or the instrumentation while
Operating temperature		on a charged state may cause a failure
range	(Connector part: -25°C to +85°C)	4. Sensor installation location
	Extension cable: -25°C to +85°C	Do not use the device outdoors where the sensor can be subject
	Converter: 0°C to +50°C	to rain water.
Temperature	Sensor: ±1.5% of F.S.	Doing so may cause deterioration of the insulation and alter the
characteristics	Condition gap: 50% of the thickness measurement range,	sensitivity of the sensor.
	Target: Chilled steel (flat),	sensitivity of the sensor.
	Temperature: +25°C is the normal temperature.	
	Range is 0°C to +100°C	
	Extension cable: ±1.5% of F.S.	
	Condition gap: 50% of the thickness measurement range,	
	Target: Chilled steel (flat),	
	Temperature: +25°C is the normal temperature.	
	Range is 0°C to +80°C	
	Converter: ±1.5% of F.S.	
	Condition gap: 50% of the thickness measurement range,	
	Target: Chilled steel (flat),	
	Temperature: +25°C is the normal temperature.	
	Range is 0°C to +50°C	
Operating humidity		
range	20% to 95% RH (non-condensing, non-immersing)	
Power supply	+24 VDC ±10%, Ripple (p-p) 10% or lower	
Current consumption	Max. of 120 mA	1
Terminal block	Terminal block screw size: M3	1
Converter part	Between the power supply terminal and the FG terminal:	1
insulation resistance	20 M Ω or higher on 500 VDC	
Converter part	Between the power supply terminal and the FG terminal:	1
withstand voltage	60 Hz on 500 VAC within 1 minute	
Mass		4
WIG00		
	Extension cable: Approx. 1.3 kg	
	Converter: Approx. 1.0 kg	4
Other		
	Configura	ation
		Converter
	Sensor	Connector Extension cable
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(Π)	Ϋ́ι Ι	
\sim	✓ Touch-roll attachment	System cable length: 6.5 m
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SHINKAWA Sensor Technology, Inc.

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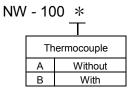
Model code / Additional spec. code (

(No entry if additional spec. code is not specified.

Converter

Thickness measurement range Converter output	Converter output		
0 Voltage output (0	V - 5 V)		
050 0.0 mm - 5.0 mm 2 Voltage output (0	V - 10 V)		

• Extension cable (6 m)



• Sensor (0.5 m)

NS - <u>* * *</u> *									
Thickness measurement range			Thermocouple						
050	0.0 mm - 5.0 mm		Without						
			With						

• Touch-roll attachment

NT - * * * A /AG * /SGL /NWT

						1
Specification			Angle	Swing limit: H	lorizontal ±15°	No weight
050	For NS-050 *	0	0°			
		1	10°			
		2	20°			
		3	30°			
		4	40°			