

# VN HIGH-ACCURACY TYPE THICKNESS MEASUREMENT CONVERTER

Model Code / Additional Spec. Code (No entry if additional spec. code is not specified. )

## • Converter

VN-    A-   /SLC

## • Extension cable(length : 6m)

| Thickness measured range |               | Power supply |        | Extension cable |                         | Silicon |          |
|--------------------------|---------------|--------------|--------|-----------------|-------------------------|---------|----------|
| 010                      | 0 to 1,000μm  | 0            | 100VAC | 0               | With 6m extension cable |         |          |
| 020                      | 0 to 2,000μm  | 1            | 115VAC |                 |                         |         |          |
| 040                      | 0 to 4,000μm  | 2            | 200VAC | 1               | Without extension cable |         |          |
| 050                      | 0 to 5,000μm  | 3            | 220VAC |                 |                         |         |          |
| 080                      | 0 to 8,000μm  |              |        |                 |                         |         |          |
| 100                      | 0 to 10,000μm |              |        |                 |                         |         | • Sensor |
| 250                      | 0 to 25,000μm |              |        |                 |                         |         | NS       |

NW-100A (without thermocouple)

NW-100B (with thermocouple)

## • Sensor

NS-    A (without thermocouple)NS-    B (with thermocouple)NS-    C (without thermocouple, extension cable)

## • Touch-roll attachment

NT-    A/AG  /SGL/NWT

| Specification   | Angle*1 | Roller oscillation *1 | No weight                             |
|-----------------|---------|-----------------------|---------------------------------------|
| 020 For NS-020□ | 0 0°    | Horizontal±15°        | *1 Applicable for NT-020,NT-050 only. |
| 050 For NS-050□ | 1 10°   |                       |                                       |
| 080 For NS-080□ | 2 20°   |                       |                                       |
| 100 For NS-100□ | 3 30°   |                       |                                       |
| 250 For NS-250□ | 4 40°   |                       |                                       |

| Thickness measured range |                            |
|--------------------------|----------------------------|
| 020                      | 0 to 1,000 or 0 to 2,000μm |
| 050                      | 0 to 4,000 or 0 to 5,000μm |
| 080                      | 0 to 8,000μm               |
| 100                      | 0 to 10,000μm              |
| 250                      | 0 to 25,000μm              |

## SPECIFICATIONS

|                                                    |                                                                                                                                        |                                                                                                     |                                                                                                                                                                                                                      |                    |
|----------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|
| Measured range<br>(specified by<br>Model Code No.) | Thickness measured range                                                                                                               | Actual gap                                                                                          | Note) • Actual gap (distance between sensor tip and target) is thickness measured range + off set gap (800μm).<br><br>• Actual gap shall be indicated as the measured range in inspection report and name plate etc. |                    |
|                                                    | 0 to 1,000μm                                                                                                                           | 800 to 1,800μm                                                                                      |                                                                                                                                                                                                                      |                    |
|                                                    | 0 to 2,000μm                                                                                                                           | 800 to 2,800μm                                                                                      |                                                                                                                                                                                                                      |                    |
|                                                    | 0 to 4,000μm                                                                                                                           | 800 to 4,800μm                                                                                      |                                                                                                                                                                                                                      |                    |
|                                                    | 0 to 5,000μm                                                                                                                           | 800 to 5,800μm                                                                                      |                                                                                                                                                                                                                      |                    |
|                                                    | 0 to 8,000μm                                                                                                                           | 800 to 8,800μm                                                                                      |                                                                                                                                                                                                                      |                    |
|                                                    | 0 to 10,000μm                                                                                                                          | 800 to 10,800μm                                                                                     |                                                                                                                                                                                                                      |                    |
|                                                    | 0 to 25,000μm                                                                                                                          | 800 to 25,800μm                                                                                     |                                                                                                                                                                                                                      |                    |
| Calibration                                        | Material ( )<br>Shape ( )                                                                                                              | • Calibrated using a specified target.<br>Supply the target if it has a special material and shape. |                                                                                                                                                                                                                      |                    |
| Linearity                                          | Within ±0.5% of F.S. at 25°C (77°F REF.)                                                                                               |                                                                                                     |                                                                                                                                                                                                                      |                    |
| Frequency response                                 | DC to 20Hz(-1dB)                                                                                                                       |                                                                                                     |                                                                                                                                                                                                                      |                    |
| SN ratio                                           | More than 60dB (typical value)                                                                                                         |                                                                                                     |                                                                                                                                                                                                                      |                    |
| Output signal                                      | Thickness measured range                                                                                                               | Actual gap                                                                                          | Output                                                                                                                                                                                                               | Output sensitivity |
|                                                    | 0 to 1,000μm                                                                                                                           | 800 to 1,800μm                                                                                      | 0 to 1V                                                                                                                                                                                                              | 1V/1,000μm         |
|                                                    | 0 to 2,000μm                                                                                                                           | 800 to 2,800μm                                                                                      | 0 to 2V                                                                                                                                                                                                              |                    |
|                                                    | 0 to 4,000μm                                                                                                                           | 800 to 4,800μm                                                                                      | 0 to 4V                                                                                                                                                                                                              |                    |
|                                                    | 0 to 5,000μm                                                                                                                           | 800 to 5,800μm                                                                                      | 0 to 5V                                                                                                                                                                                                              |                    |
|                                                    | 0 to 8,000μm                                                                                                                           | 800 to 8,800μm                                                                                      | 0 to 8V                                                                                                                                                                                                              |                    |
|                                                    | 0 to 10,000μm                                                                                                                          | 800 to 10,800μm                                                                                     | 0 to 10V                                                                                                                                                                                                             |                    |
|                                                    | 0 to 25,000μm                                                                                                                          | 800 to 25,800μm                                                                                     | 0 to 2.5V                                                                                                                                                                                                            | 1V/10,000μm        |
| Zero shift                                         | VN-010A to VN-050A : ±100μm VN-080A to VN-250A : ±5% of F.S.                                                                           |                                                                                                     |                                                                                                                                                                                                                      |                    |
| Output impedance                                   | Less than 1kΩ                                                                                                                          |                                                                                                     |                                                                                                                                                                                                                      |                    |
| Operating temperature                              | Converter : 0 to 50°C                                                                                                                  |                                                                                                     |                                                                                                                                                                                                                      |                    |
|                                                    | Sensor : -30 to +130°C(connector : -25 to +85°C)                                                                                       |                                                                                                     |                                                                                                                                                                                                                      |                    |
| Operating temperature                              | Extension cable : -25 to +85°C                                                                                                         |                                                                                                     |                                                                                                                                                                                                                      |                    |
|                                                    | The above specifications may alter due to measuring conditions such as humidity and temperature gradient, etc. Contact us for details. |                                                                                                     |                                                                                                                                                                                                                      |                    |
| Power supply (specified by Model Code No.)         | 100VAC or 115VAC or 200VAC or 220VAC±10% 50/60Hz                                                                                       |                                                                                                     |                                                                                                                                                                                                                      |                    |

Note) Thickness measured range is the actual measurable thickness of the measured object.