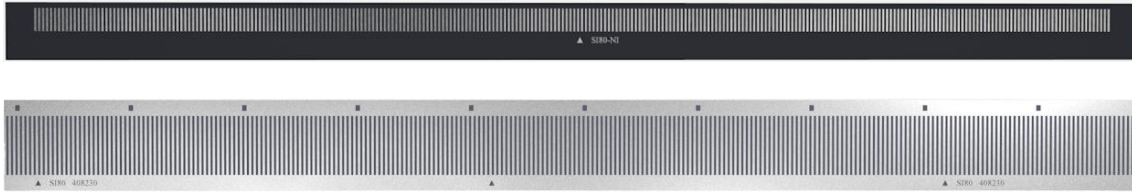


# Datasheet

## SI80 Series Incremental Scale





### Highlights

#### Scale

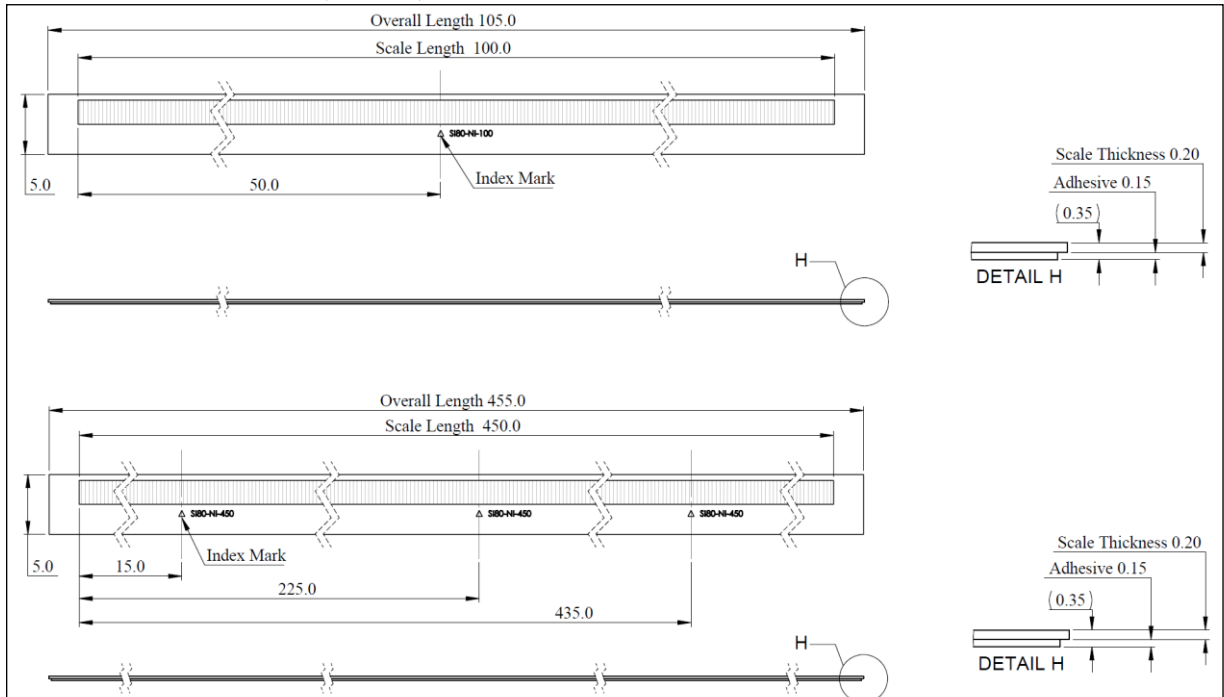
- Low thermal expansion coefficient
- Durable to corrosive substance

1. Specifications

		Scale	
<b>Image</b>			
<b>Series</b>	<b>With Adhesive</b>	SI80-NI	SI80-SS
<b>Scanning Principle</b>		Optical (Reflective)	
<b>Grating Type</b>		Linear Incremental	
<b>Grating Period</b>		80 μm	
<b>Substrate Material</b>		Nickel	Stainless Steel
<b>Thermal Expansion Coefficient</b>		14 ppm/°C	11 ppm/°C
<b>Accuracy</b>		±15 μm/m	
<b>Temperature</b>	<b>Storage</b>	-20 °C to +70 °C @ RH < 95% (Non-condensing)	
	<b>Operating</b>	0 °C to +70 °C @ RH < 95% (Non-condensing)	
<b>Form</b>	<b>Width</b>	5.0 mm	8.0 mm
	<b>Thickness (Scale)</b>	0.20 mm	0.25 mm
	<b>Thickness (Adhesive)</b>	0.15 mm	0.17 mm
<b>Mass</b>	<b>With Adhesive</b>	6.0 g/m	18.0 g/m
<b>Length</b>		Up to 450 mm	Up to 3000 mm

## 2. Scale Dimension Drawing

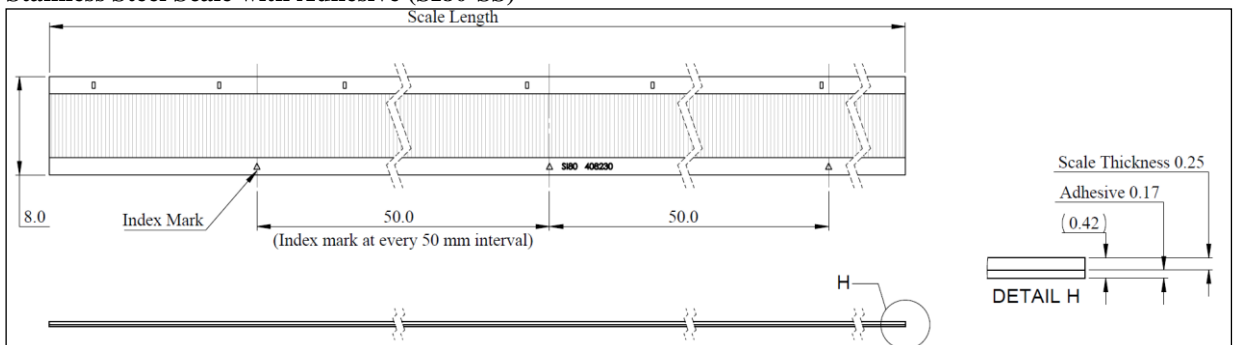
### 2.1 Nickel Scale with Adhesive (SI80-NI)



**Note:**

1. All dimensions are in mm.
2.  $\triangle$  = Index mark

### 2.2 Stainless Steel Scale with Adhesive (SI80-SS)



**Note:**

1. All dimensions are in mm.
2.  $\triangle$  = Index mark

### 3. Model Name

#### 3.1 Nickel Scale with Adhesive (SI80-NI)

<b>SI80-NI-450</b>	
	<b>Scale Length:</b> 100: Length in 100 mm 450: Length in 450 mm
	<b>Substrate Material:</b> NI: Nickel with adhesive
	<b>Series:</b> SI80: Incremental scale for 80 μm grating period

**Note:**

- 1. For customization of the scale length, please contact our sales team for more information.

#### 3.2 Stainless Steel Scale with Adhesive (SI80-SS)

<b>SI80-SS-3000</b>	
	<b>Scale Length:</b> 1000: Length in 1000 mm 2000: Length in 2000 mm 3000: Length in 3000 mm
	<b>Substrate Material:</b> SS: Stainless steel with adhesive
	<b>Series:</b> SI80: Incremental scale for 80 μm grating period




**Note:**

- 1. For customization of the scale length, please contact our sales team for more information.

#### 4. Compatible Readhead

Scale Type	Readhead Model	Description
SI80-NI	ABI80	Incremental 80 μm signal period with optical (reflective) scanning principle
SI80-SS	ABI801	Incremental 80 μm signal period with optical (reflective) scanning principle

#### 5. Accessories List

Part Number	Image	Compatible Scale	Description
908081-01		SI80-NI	<b>Scale applicator tool</b> is used to accurately and efficiently assemble scale to the readhead's measuring surface, ensuring they are properly aligned and securely attached, which is crucial for the encoder system to deliver precise and reliable motion measurements.
908082-01		SI80-SS	<b>Scale applicator tool</b> is used to accurately and efficiently assemble scale to the readhead's measuring surface, ensuring they are properly aligned and securely attached, which is crucial for the encoder system to deliver precise and reliable motion measurements.
908083-01		SI80-SS	<b>Index mark selector</b> allows the readhead to accurately locate the index mark by detecting it as the readhead moves past in the incremental measuring system.  <b>Note:</b> Max homing speed is 0.2 m/s