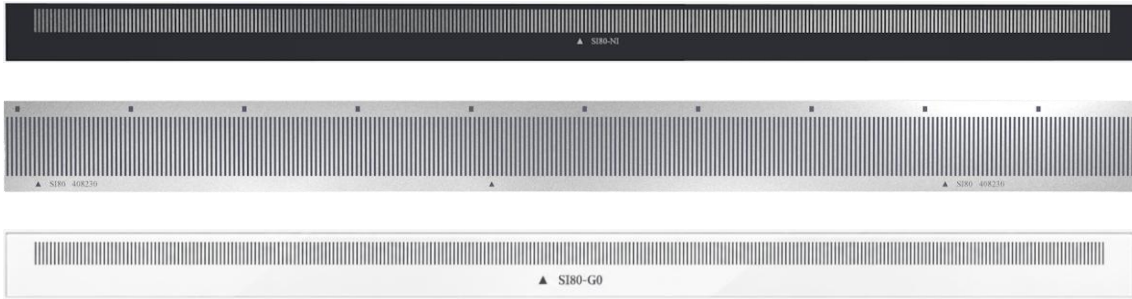


Datasheet

SI80 Series Incremental Scale



Highlights

Scale

- Low thermal expansion coefficient
- Durable to corrosive substance

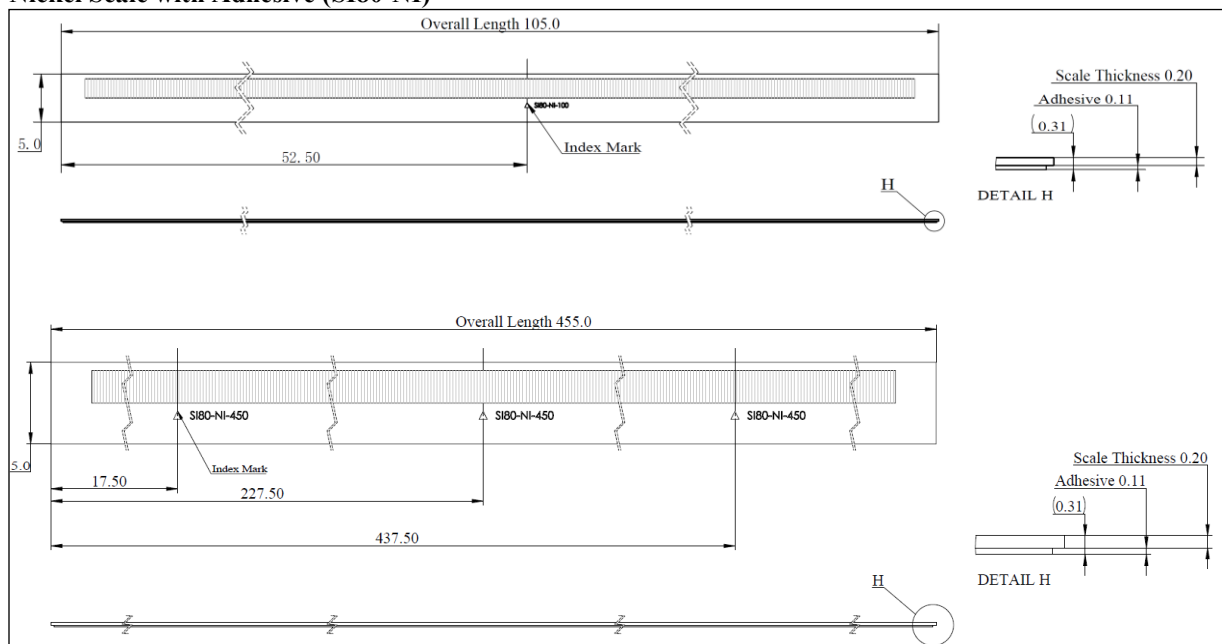
1. Specifications

Scale			
Image			
Series	With Adhesive	SI80-NI	SI80-SS
Scanning Principle		Optical (Reflective)	
Grating Type		Linear Incremental	
Grating Period		80 µm	
Substrate Material		Nickel	Stainless Steel
Thermal Expansion Coefficient		14 ppm/°C	11 ppm/°C
Accuracy		±15 µm/m	
Temperature	Storage	-20 °C to +70 °C @ RH < 95% (Non-condensing)	
	Operating	0 °C to +70 °C @ RH < 95% (Non-condensing)	
Form	Width	5.0 mm	8.0 mm
	Thickness (Scale)	0.20 mm	0.25 mm
	Thickness (Adhesive)	0.11 mm	0.20 mm
Mass	With Adhesive	6.0 g/m	18.0 g/m
Length		Up to 450 mm	Up to 3000 mm

Scale		
Image		
Series	Without Adhesive	SI80-G0N
Scanning Principle		Optical (Reflective)
Grating Type		Linear Incremental
Grating Period		80 µm
Substrate Material		High Borosilicate
Thermal Expansion Coefficient		3 ppm/°C
Temperature	Storage	-20 °C to +70 °C @ RH < 95% (Non-condensing)
	Operating	0 °C to +70 °C @ RH < 95% (Non-condensing)
Form	Width	5.0 mm
	Thickness (Scale)	1.10 mm
Length		Up to 430 mm

2. Scale Dimension Drawing

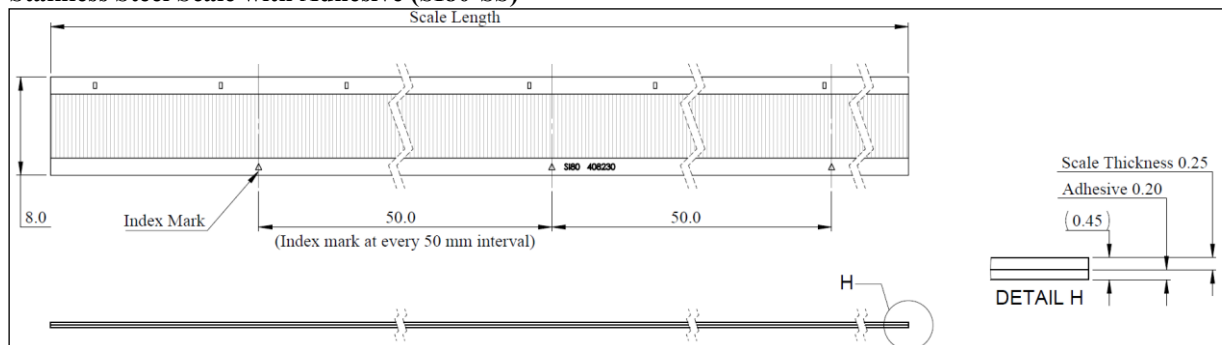
2.1 Nickel Scale with Adhesive (SI80-NI)



Note:

1. All dimensions are in mm.
2. Δ = Index mark

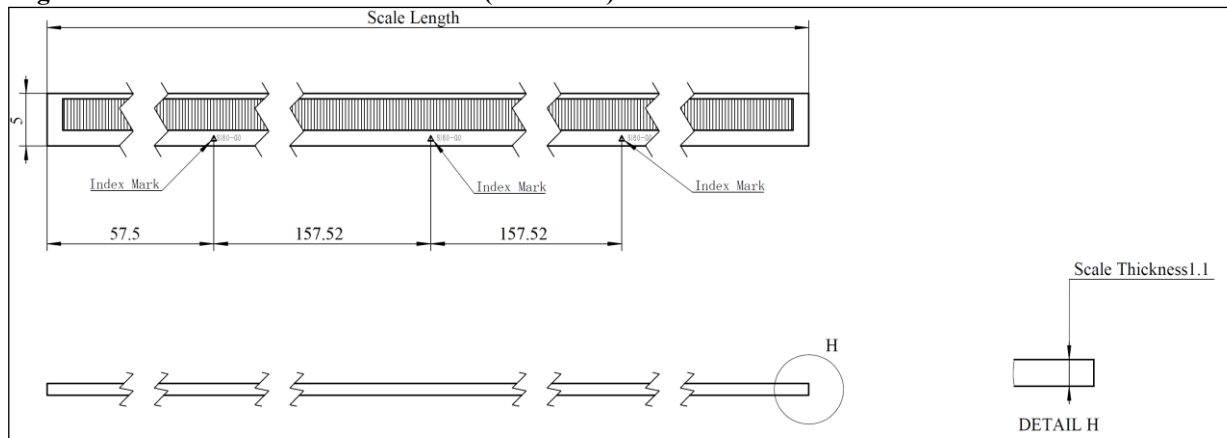
2.2 Stainless Steel Scale with Adhesive (SI80-SS)



Note:

1. All dimensions are in mm.
2. Δ = Index mark

2.3 High Borosilicate Scale without Adhesive (SI80-G0N)



Note:

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

3. Model Name

3.1 Nickel Scale with Adhesive (SI80-NI)

SI80-NI-450		
		Scale Length: 100: Length in 105 mm 450: Length in 455 mm
		Substrate Material: NI: Nickel with adhesive
		Series: SI80: Incremental scale for 80 µm grating period

Note:

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

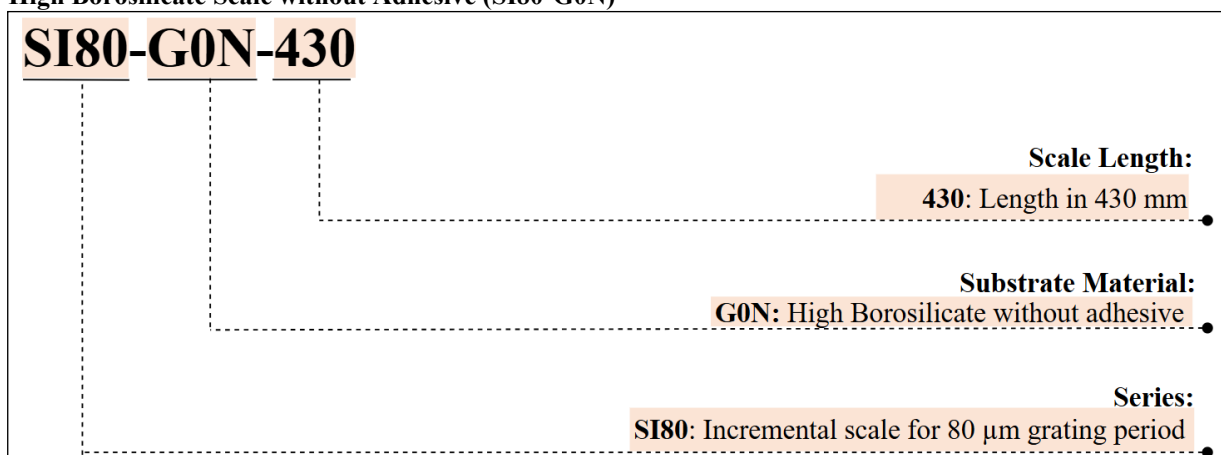
3.2 Stainless Steel Scale with Adhesive (SI80-SS)

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

Note:

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

3.3 High Borosilicate Scale without Adhesive (SI80-G0N)



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	ABI80 ABI80L	Incremental 80 µm signal period with optical (reflective) scanning principle
SI80-G0N	ABI80	Incremental 80 µm signal period with optical (reflective) scanning principle

5. Accessories List

Part Number	Image	Compatible Scale	Description
908081-01		SI80-NI	Scale applicator tool 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	Scale applicator tool 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	Index mark selector allows the readhead to accurately locate the index mark by detecting it as the readhead moves past in the incremental measuring system. Note: Max homing speed is 0.2 m/s