

# SJ-210 Series Specifications

Specifications						
Type of detector	Standard drive unit type		Retractable drive unit type		Transverse tracing drive unit type	
Model No.	SJ-210 (0.75 mN type)	SJ-210 (4 mN type)	SJ-210 (0.75 mN type)	SJ-210 (4 mN type)	SJ-210 (0.75 mN type)	SJ-210 (4 mN type)
	inch/mm		inch/mm		inch/mm	
X axis	.63" (16.0mm)				.22" (5.6mm)	
Measuring range	Range	14400 μin (-7900 μin to +6300 μin) [360 μm (-200 μm to +160 μm)]				
	Z axis (Detector) Range/Resolution	14400 μin / .8 μin (360 μm / 0.02 μm) 4000 μin / .2 μin (100 μm / 0.006 μm) 1000 μin / .08 μin (25 μm / 0.002 μm)				
Measuring speed	When measuring: 0.01, 0.02, 0.03 in/s (0.25mm/s, 0.5mm/s, 0.75mm/s) When returning: 04 in/s (1mm/s)					
Measuring force/Stylus tip	0.75 mN / 2 μmR 60°, 4 mN / 5 μmR 90°					
Skid force	Less than 400 mN					
Applicable standards	JIS '82/JIS '94/JIS '01/ISO '97/ANSI/VDA					
Assessed profiles	Primary profile, Roughness profile, DF profile, Roughness profile-Motif					
Parameters	Ra, Rc, Ry, Rz, Rq, Rt, Rmax <sup>1</sup> , Rp, Rv, R3z, Rsk, Rku, Rc, RPC, Rsm, Rz1max <sup>2</sup> , S, HSC, Rz1S <sup>3</sup> , Rppi, RΔ a, RΔ q, Rlr, Rmr, Rmr(c), RΔ c, Rk, Rpk, Rvk, Mr1, Mr2, A1, A2, Vo, Rpm, tp <sup>4</sup> , Htp <sup>4</sup> , R, Rx, AR, Possible Customize					
Graph analysis	Bearing area curve/Amplitude distribution curve					
Filters	Gaussian, 2CR75, PC75					
Cut off length	$\frac{\lambda c}{\lambda s^5}$	0.003, 0.01, 0.03, 0.1" (0.08, 0.25, 0.8, 2.5mm)				
Sampling length	0.003, 0.01, 0.03, .1" (0.08, 0.25, 0.8, 2.5mm)					
Number of sampling lengths (xn)	x1, x2, x3, x4, x5, x6, x7, x8, x9, x10, Arbitrary 0.01~.63" (.0001" interval) [(0.3~16.0mm: 0.01mm interval)]				x1, x2, x3, x4, x5, x6, x7, x8, x9, x10, Arbitrary .0118 ~ .22" (.0001" interval) [(0.3 ~ 5.6mm: 0.01mm Interval)]	
LCD dimensions	1.45 x 1.93" (36.7x48.9 mm)					
Display languages	Japanese, English, German, French, Italian, Spanish, Portuguese, Korean, Traditional Chinese, Simplified Chinese, Czech, Polish, Hungarian, Turkish, Swedish, Dutch					
Measurement result display	Vertical display: 1-parameter display/3-parameter display/Trace display Horizontal display: 1-parameter display/4-parameter display/Trace display (Horizontal display is invertable)					
Printing function <sup>6</sup> (Dedicated printer is required separately.)	Measurement conditions/Calculation results/GO/NG judgement result/Calculation results for each sampling length/ Assessed profile/Bearing area curve/Amplitude distribution curve/Environment setting information					
External I/O	USB I/F, Digimatic Output, Printer Output, RS-232C I/F, Foot SW I/F					
Functions	Customization	Desired parameters can be selected for calculation and display				
	GO/NG judgment <sup>7</sup>	By max value/16 %/Standard deviation				
	Storage of measurement condition	Save the conditions at power OFF				
Storage	Internal memory: Measurement condition (10 sets) Memory card (Option): 500 measurement conditions, 10000 measured profiles, 500 display images Text file (Measurement conditions/Measured profile/Assessed profile/ Bearing area curve/Amplitude distribution curve)					
	Calibration	Auto-calibration with the entry of numerical value/ Average calibration with multiple measurement (Max.5 times) is available				
Power-saving function	Auto-sleep off function (10-600 sec) <sup>8</sup>					
Power supply	Two-way power supply: battery (rechargeable Ni-MH battery) and AC adapter Note 1: Charging time: about 4 hours (may vary due to ambient temperature) Note 2: Endurance: about 1000 measurements (differs slightly due to use conditions/environment)					
Size (WxDxH)	Display unit	2.05 x 2.6" x 6.3" (52.1x65.8x160mm) (sliding cover closed, detector not mounted)				
	Drive unit	4.5 x .9 x 1.02" (115x23x26mm) (detector not mounted)				
Mass	About 1.1lbs (500g) (Display unit + Drive unit + Standard detector)					
Standard accessories	<b>12BAA303</b> Connecting cable <sup>9</sup> <b>178-601</b> Roughness specimen Ra (3 μm) <b>12BAR344</b> Carrying case <b>12BAK700</b> Calibration stage Protective sheets for display, AC Adapter, Operation manual, Quick reference manual, Warranty				<b>12BAA303</b> Connecting cable <sup>9</sup> <b>178-605</b> Roughness specimen Ra (1 μm) <b>12AAE643</b> Point-contact adapter <b>12AAE644</b> V-type adapter <b>12BAR344</b> Carrying case <b>12BAK700</b> Calibration stage Protective sheets for display AC Adapter, Operation manual Quick reference manual, Warranty	

\*1 Calculation is available only when selecting the VDA, ANSI, or JIS '82 standard.

\*2 Calculation is available only when selecting the ISO '97 standard.

\*3 Calculation is available only when selecting the JIS '01 standard.

\*4 Calculation is available only when selecting the ANSI standard.

\*5 Not available when selecting the JIS '82 standard.

\*6 Order the SJ-210 printer (178-421, optional accessory) separately. See page 19 for details about the SJ-210 printer.

\*7 Standard deviation only can be selected in ANSI. 16 % rule cannot be selected in VDA.

\*8 Auto-sleep function is invalid when AC adaptor is used.

\*9 For connecting the calculation display unit and drive unit.

Note: To denote your AC line voltage add the following suffixes (e.g. 178-560-11A).

A for 120 V, C for 100 V, D for 230 V, E for 230 V (for UK), DC for 220 V (for China), K for 220 V (for Korea)

