

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			178-561-11A	178-561-12A	178-563-11A	178-563-12A	178-565-11A	178-565-12A
Measuring range	X axis		.63" (16.0mm)				.22" (5.6mm)	
	Z axis (Detector)	Range	14400 μin (-7900 μin to +6300 μin) [360 μm (-200 μm to +160 μm)]					
		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 ^{*1} , Rp, Rv, R3z, Rsk, Rku, Rc, RPe, Rsm, Rz1max ^{*2} , S, HSC, RzJIS ^{*3} , Rppi, RΔa, RΔq, Rlr, Rmr, Rmr(c), RΔc, Rk, Rpk, Rvk, Mr1, Mr2, A1, A2, Vo, Rpm, tp ^{*4} , Htp ^{*4} , R, Rx, AR, Possible Customize					
Graph analysis			Bearing area curve/Amplitude distribution curve					
Filters			Gaussian, 2CR75, PC75					
Cut off length		λc λs ^{*5}	0.003, 0.01, 0.03, 0.1" (0.08, 0.25, 0.8, 2.5mm) 100, 300μin (2.5, 8μm)					
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 ^{*6} (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 ^{*7}		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)						
		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) ^{*8}					
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			12BAA303 Connecting cable ^{*9} 178-601 Roughness specimen Ra (3 μm) 12BAR344 Carrying case 12BAK700 Calibration stage Protective sheets for display, AC Adapter, Operation manual, Quick reference manual, Warranty				12BAA303 Connecting cable ^{*9} 178-606 Roughness specimen Ra (1 μm) 12AAE643 Point-contact adapter 12AAE644 V-type adapter 12BAR344 Carrying case 12BAK700 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)