

SJ-310 Series Specifications

Specifications

Type of detector	Standard drive unit type		Retractable drive unit type		Transverse tracing drive unit type			
Model No.	SJ-310 (0.75 mN type)	SJ-310 (4 mN type)	SJ-310 (0.75 mN type)	SJ-310 (4 mN type)	SJ-310 (0.75 mN type)	SJ-310 (4 mN type)		
	inch/mm	178-571-11A	178-571-12A	178-573-11A	178-573-12A	178-575-11A	178-575-12A	
Measuring range	X axis	.63" (16.0mm)				.22" (5.6 mm)		
	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		400 mN or less						
Applicable standards		JIS '82/JIS '94/JIS '01/ISO '97/ANSI/VDA						
Assessed profiles		Primary, Roughness, DF, R-Motif, W-Motif						
Parameters		Ra, Rc, Ry, Rz, Rq, Rt, Rmax ^{*1} , Rp, Rv, R3z, Rsk, Rku, Rc, RPl, Rsm, Rz1max ^{*2} , S, HSC, RzJIS ^{*3} , Rppi, RΔa, RΔq, Rlr, Rmr, Rmr(c), Rδ c, Rk, Rpk, Rvk, Mr1, Mr2, A1, A2, Vo, λ a, λ q, Lo, Rpm, tp ^{*4} , Htp ^{*4} , R, Rx, AR, W, AW, Wx, Wte, Possible Customize						
Graph analysis		Bearing area curve/Amplitude distribution curve						
Filters		Gaussian, 2CR75, PC75						
Cut-off length		λ c λ s ^{*5}		.003, .01, .03, .1, .3" (0.08, 0.25, 0.8, 2.5, 8 mm) 100, 320 μin (2.5, 8 μm)				
Sampling length		.003, .01, .03, .1, .3" (0.08, 0.25, 0.8, 2.5, 8 mm)						
Number of sampling lengths		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		4.64" x 3.47" (117.8 x 88.2 mm)						
Display languages		Japanese, English, German, French, Italian, Spanish, Portuguese, Korean, Traditional Chinese, Simplified Chinese, Czech, Polish, Hungarian, Turkish, Swedish, Dutch						
Measurement result display		1-parameter display: one parameter measurement result 4-parameter display: four parameter measurement results Profile display: one parameter measurement result and the measured profile Trace display: The ten latest measurement results using the same parameter						
Printing function		Measurement conditions/Calculation results/GO/NG judgement result/Calculation results for each sampling length/ Tolerance value/Assessed profile/Graphic curve/Bearing area curve/Amplitude distribution curve/Environmental setting information						
External I/O		USB I/F, Digimatic output, RS-232C I/F, External SW I/F						
Functions	Customization	Desired parameters can be selected for calculation and display						
	GO/NG judgement ^{*6}	Max rule/16 % rule/Average rule/Standard deviation (1 σ, 2 σ, 3 σ)						
	Storage of measurement condition	Save the condition at power OFF						
	Storage	Internal memory: Measurement condition (10 sets) Memory card (option): 500 measurement conditions, 10000 measuring data, 10000 text data, 500 statistic data, 1 backup of machine setting, the last ten traces (Trace 10)						
	Calibration	Auto-calibration with the entry of numerical value/Average calibration with multiple measurement (MAX.12 times) is available						
Power-saving function		Auto-sleep function (30-600 sec) ^{*7}						
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 1500 measurements (differs slightly due to use conditions/environment)						
Size (WxDxH)	Display unit	10.8" x 4.3" x 7.8" (275 x 109 x 198 mm)						
	Drive unit	4.5"x 0.9" x 8.9" (115 x 23 x 26.7 mm)						
Mass		About 3.9 lbs. (1.8 kg) (Display unit + Drive unit + Standard detector)						
Standard accessories		12AAW066	Connecting cable ^{*8}			12AAW066	Connecting cable ^{*8}	
		178-601	Roughness reference specimen (Ra3 μm)			178-606	Roughness reference specimen (Ra1 μm)	
		357651	AC adapter			357651	AC adapter	
		12AAA217	Nosepiece for plane surface			12AAE643	Point-contact adapter	
		12AAA218	Nosepiece for cylinder			12AAE644	V-type adapter	
		12AAA216	Supporting leg			12BAK700	Calibration stage	
		12BAK700	Calibration stage			12BAG834	Stylus pen	
		12BAG834	Stylus pen			12BAL402	Protection sheet	
		12BAL402	Protection sheet			270732	Printer paper (5 pieces)	
		270732	Printer paper (5 pieces)			12BAL400	Carrying case	
		Philips screwdriver, Strap for stylus pen, Operation manual, Quick reference manual, Warranty				Philips screwdriver, Strap for stylus pen, Operation manual, Quick reference manual, Warranty		

*1 Only for VDA/ANSI/JIS '82 standards. *2 Only for ISO '97 standard. *3 Only for JIS '01 standard. *4 Only for ANSI standard. *5 Not available for JIS '82 standard.

*6 Standard deviation only can be selected in ANSI. 16% rule cannot be selected in VDA. *7 Auto-sleep function is invalid when AC adapter is used.

*8 For connecting the calculation display unit and drive unit.

Note: To denote your AC line voltage add the following suffixes (e.g. **178-570-11A**). 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)