

Shore® Model S1 Modular Digital Durometer: Description



Shore®

The truly state-of-the-art Shore® Model S1 Modular Digital Durometer revolutionizes and surpasses traditional methods of testing the hardness of rubber and plastic materials. It provides the user with a large, high contrast, digital LCD display that holds the reading at a preset elapsed time, until reset by the operator. Adjustable through the integral timer, it assures accurate timed readings.

Engineered and built to exacting standards, the Shore® Model S1 Modular Digital Durometer will provide the precision and longevity associated with the Shore® name since 1915.

The unique Shore® Model S1 Modular Digital Durometer incorporates an “LVDT” with I/C technology that accurately senses indenter position and a “Load Indicator” that assures the proper application of force to the test specimen for improved accuracy and repeatability when used as a hand held durometer.

The modular design provides 10 standard scale interchangeable pre-calibrated test probes in Shore scales A, B, C, D, DO, M, O, OO, and JIS scales A & C. The new Types 000 and 000-S will be introduced in the coming months.

Shown on the right is the S1 with the optional mounting kit including the RS232-C cable, additional test probes, test blocks, and carrying case.

The optional mounting kit attaches the S1 to Shore® automatic or manual operating stands.



The Model S1, shown on the left, is in the display stand (included with the test stand mounting kit). The detachable probe (center) is connected to the main display body using an RS232-C cable (not shown) and may be operated as a hand held unit independent of the display body.

The detachable probe (right) is shown with the adapter interface. This allows the probe to be mounted on a Shore® operating stand using the optional test stand mounting kit.

Please refer to the [Shore® Durometer Selection Guide](#) for an explanation of Shore® model, type and scale designations, as well to assure the proper selection of the Shore® durometer to suit your specific application.

Shore® Model S1 Modular Digital Durometer: Features




- 3 digit (00.0), high contrast, backlit, easy-to-read LCD display;
- Sound transducer audibly indicates the “end of test”;
- Indenter positioning sensor employing an LVDT and IC technology;
- An electronic timer, adjustable from 1–25 seconds in 1 second increments;
- RS–232C interface output;
- Test counter displays the number of test performed;
- Out-of-tolerance indicators, both audible and visual;
- Quick, reliable pass/fail testing;
- Integral memory allows for on-board storage and recall of up to 256 test determinations under lot and part numbers;
- Statistics, including maximum, minimum, range, standard deviation and average values;
- Battery operation for portability, includes an automatic sleep mode for extended battery life and a low battery indicator;
- Ergonomically designed for operator comfort when used as a hand-held instrument;
- Modular design provides testing flexibility with interchangeable test scale probes.

Shore® Model S1 Modular Digital Durometer: Specifications





LCD Display:	3 digit resolution (00.0)
Presser Foot:	Diameter: 18 mm (0.71 inch)
	Length: 9.5 mm (0.374 inch)
Dimensions:	Height: 203 mm (8 inch)
	Width: 96 mm (3 inch)
	Depth: 38 mm (1.5 inch)
Indenter:	Extension: 2.54 mm
	Force: $\pm 0.1\%$ full scale
Weight:	< 0.5 kg (1 lb.)
Power Supply:	4 AAA batteries
	120 VAC / 60 Hz adapter optional
Battery Life:	2000 hours
	24 hours continuous use with illumination
Dwell Time:	1 – 25 s, adjustable
Environment:	10 – 38 C° (50 – 100 F°)
	10 – 90 %RH, non-condensing
Displayed Results:	<ul style="list-style-type: none"> ● Scale in use ● Hardness determination ● Average or Median value ● Lot number ● Part number ● Test number
User Interface Buttons:	<ul style="list-style-type: none"> ● Test / Recall ● Select ● Next ● Power (On / Off) ● Delete ● Print
Statistics:	<ul style="list-style-type: none"> ● Total test ● Highest hardness value ● Lowest hardness value ● Range ● Standard deviation ● Average or Median
Memory:	256 test results
Data Output:	RS232C
Standards:	ASTM D2240, ISO 868, ISO 7619, DIN 53505 and JIS K6253


Shore® Model S1 Modular Digital Durometer: Model & Pricing Information

MODEL S1 ASTM DUROMETERS				
Part Number	Model	Type	Description	Individual RFQs
9130-021	S1A	A	MODULAR TYPE A	Please Submit a RFQ
9130-022	S1B	B	MODULAR TYPE B	Please Submit a RFQ
9130-023	S1C	C	MODULAR TYPE C	Please Submit a RFQ
9130-024	S1D	D	MODULAR TYPE D	Please Submit a RFQ
9130-025	S1DO	DO	MODULAR TYPE DO	Please Submit a RFQ
9130-026	S1O	O	MODULAR TYPE O	Please Submit a RFQ
9130-027	S1OO	OO	MODULAR TYPE OO	Please Submit a RFQ
9130-032	S1M	M	MODULAR TYPE M	Please Submit a RFQ

 The Type M Micro Hardness System includes the hydraulic operating stand; digital display head; base adapter for probe; Type M probe; o-ring fixture kit; and test block set.

MODEL S1 JIS K 6253 DUROMETERS				
Part Number	Model	Type	Description	Individual RFQs
9130-030	S1JISA	JIS A	MODULAR TYPE JISA	Please Submit a RFQ
9130-031	S1JISC	JIS C	MODULAR TYPE JISC	Please Submit a RFQ

MODEL S1 ACCESSORIES				
Part Number	Model	Type	Description	Individual RFQs
9130-121	S1PA	A	 PROBE TYPE A	Please Submit a RFQ
9130-122	S1PB	B	PROBE TYPE B	Please Submit a RFQ
9130-123	S1PC	C	PROBE TYPE C	Please Submit a RFQ
9130-124	S1PD	D	PROBE TYPE D	Please Submit a RFQ
9130-125	S1PDO	DO	PROBE TYPE DO	Please Submit a RFQ
9130-126	S1PO	O	PROBE TYPE O	Please Submit a RFQ
9130-127	S1POO	OO	PROBE TYPE OO	Please Submit a RFQ
9130-130	S1PJISA	JIS A	PROBE TYPE JIS A	Please Submit a RFQ
9130-131	S1PJISC	JIS C	PROBE TYPE JIS C	Please Submit a RFQ
9130-035	S1MDB	N/A	MAIN DISPLAY BODY	Please Submit a RFQ
9130-036	S1TSMK	N/A	TEST STAND MOUNTING KIT	Please Submit a RFQ
9130-037	S1VA120	N/A	120 VAC ADAPTER	Please Submit a RFQ
9130-038	S1VA220	N/A	220 VAC ADAPTER	Please Submit a RFQ
9130-039	S1CC	N/A	CARRYING CASE	Please Submit a RFQ
9130-150	S1TP1	N/A	 MICRO PRINTER 120 VAC	Please Submit a RFQ
9130-151	S1TP2	N/A	MICRO PRINTER 220 VAC	Please Submit a RFQ
9130-152	S1CIFC	N/A	INTERFACE CABLE (RS232C)	Please Submit a RFQ
9130-153	S1SIFC	N/A	INTERFACE CABLE (to stand)	Please Submit a RFQ
9130-244	S1902	N/A	 AUTOMATIC STAND 120 VAC	Please Submit a RFQ
9130-245	S1902	N/A	 AUTOMATIC STAND 230 VAC	Please Submit a RFQ

 The S1 902 Automatic Operating Stand System includes the base adapter, communications cable, and dust cover. Please order the S1 durometer separately.

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