

Technical specifications

DM5E family

Instrument specifications		
Operating principle	Ultrasonic, pulse echo measurement method	
Measuring range	Depends on probe and material, 0.60 mm to 508 mm (0.025" to 20.00") in IP to 1st BW measurement mode, 2.00 mm to 127.0 mm (0.079" to 5.00") in dual-multi measurement mode, the coating thickness range shall be 0.3 mm to 2.50 mm (0" to 0.098").	
Measuring resolution	0.01 mm default – selectable 0.01, 0.1 mm (0.001" default – selectable 0.001", 0.01")	
Material velocity range	0.508 to 18.699 mm/msec (0.0200" to 0.7362"/msec)	
Material velocity resolution	1 m/s (0.0001"/msec)	
Units	Inch or millimeter	
Calibration	One-point cal, on-block and off-block, two-point cal	
Pulser	Excitation Pulse	Spike pulser
	Voltage	120 V into 50 ohm load, using 20 MHz oscilloscope
Receiver	Bandwidth	500 KHz to 12 MHz @ -3 dB
	Gain	Automatic gain control
Display type	High-resolution graphical LCD, 64 x 128 pixels, 53.0 mm x 27.0 mm with backlight and adjustable contrast	
Update rate	4 Hz or 8 Hz, user selectable, 24 Hz scan mode capture rate	
Thickness value display	NORMAL view mode	5 Digit, 10.6 mm (0.4") high
	B-SCAN view mode	5 Digit, 2.55 mm (0.1") high
Display of last reading	Solid filled or hollow digits indicate coupled or uncoupled condition	
Setups	9 standard setups for probes	
Alarm settings	Minimum and maximum alarms, range of 0.25 mm to 508 mm, 0. (0.010" to 20.00") reading alternates between solid and hollow when alarms are enabled and violated	
Power requirements	2 "AA" size batteries	
Battery life/operating time	Approximately 60 hours	
Instrument shut-off	Selectable ALWAYS ON or AUTO OFF after 5, 10, 15, 30 minutes of inactivity	
Language	Selectable English, German, French, Spanish, Italian, Russian, Japanese and Chinese	
I/O connectors	Transducer	Dual Lemo 00 (coax)
	Mini-USB	Mini USB to PC
Temperature	Operating	-10°C to +50°C (+10°F to +120°F)
	Storage	-20°C to +60°C (-10°F to +140°F)
Weight	223 g (0.597 lb) including batteries	
Size	138 mm x 32 mm x 75 mm	
Shock	IEC 68-2-27 Ea, as per Mil Std 810C Method 516.2 Procedure I with a 15g 11ms impulse half sinusoidal wave applied 6 times per axis	
Sealing	IEC529 / IP54, dust proof/dripping water proof as per IEC 529 specifications for IP54 classification	

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Data recorder option features	
Capacity	50,000 readings
File structures	Grid file
Number of rows	1 to 50,000
Number of columns	1 to 223
File naming	Up to 24-character alphanumeric name
Optional software	UltraMATE and UltraMATE Lite

DM5E probe/transducer specifications					
	Model DA501	Model DA503	Model DA512	Model DA590	Model FH2E
Frequency	5 MHz	2 MHz	7.5 MHz	5 MHz	7.5 MHz
Probe style	Standard	Standard	Fingertip	High-temperature	Fingertip
Operating temperature range (continuous)	-20 to 70°C	-20 to 70°C	-20 to 70°C	-20 to 204°C	<54°C
Contact diameter	12 mm (0.470")	16.1 mm (0.630")	7.5 mm (0.300")	12.7 mm (0.500")	9.6 mm
IP to first measurement range	1.0 to 200 mm (0.040 to 8")	5 to 300 mm (0.200 to 12")	0.6 to 60 mm (0.020 to 2.4")	1 to 125 mm @20°C (0.040 to 5" @68°F) 1.3 to 25.4 mm @204°C (0.050 to 1" @400°F)	0.75-25 mm
Minimum multi-echo measurement range	3.0 to 45 mm (0.120 to 1.5")	N/A	2.0 to 10 mm (0.080 to 0.400")	N/A	N/A

Note: Instrument specifications are subject to change without prior notice.