



# UM-1 Series Technical Specifications

## Product Introduction

UM-1 series ultrasonic thickness gauge has extremely high measurement performance with a high reading stability and accuracy.

We first introduced the penetration coating technology in 2006. UM-1D has this special function, which can directly measure the thickness of the substrate without removing the coating such as paint layer, plastic coating, etc. This function is achieved by measuring two consecutive bottom echoes of the substrate, it has advantages of no zero point calibration, high stability of the indication, and zero drift.

Technical parameter	
Display Type	128×64 dot-matrix LCD screen with EL backlight
Operating Principle	P-E (pulse-echo) , E-E (echo-echo) with dual-crystal probes (Only UM-1D)
Measuring Range In Standard Mode	0.8mm to 300mm, depending on material and probe
Measuring Range In Thru Coating Mode	3mm-20mm with PT-08 probe (Only UM-1D)
Measuring Limits of Tube (Steel)	Φ20mm×3.0mm(PT-08 probe) Φ15mm×2.0mm(PT-06 probe)    The measuring error is up to ±0.1mm
Measuring Error	Low limit to 10mm: ±0.1mm      10mm to high limit: ± (1%H+0.1) mm Note: H is the actual thickness of the measured object
Repeatability	0.1mm
Resolution	0.1mm,0.001 inch
Units	Inch or Millimeter
Calibration Method	Zero calibration,Two-point calibration
V-Path Correction	Automatic
Update Rate	4Hz
Velocity Range	1000 ~ 9999 m/s (0.0394 to 0.3937in/us)
Memory Function	500 readings can be stored in 5 groups
Minimum Value Checking	Move the probe along the surface of the testing piece, the gauge is able to find the thinnest point automatically.
Warning Function	If the measured value exceeds the pre-set limit, the warning tone will be start.
Velocity Storage	Totally 5 different materials velocities can be stored
Languages	English and Chinese
Communication Port	USB port or Serial RS 232 port (Optional)
Application Software	UmView Software for transmission,storage,analysis and documents editing (Optional)
Power Source	Two 1.5V AA alkaline batteries(Warning with low battery voltage)
Operating Time	Up to 200 hours with alkaline batteries (without backlight)
Instrument Shut-off	AUTO OFF after 5 minutes of inactivity
Operating Temperature	-10° C to +50° C ,    -20° C in special requirements
Dimensions	149mm X 73mm X 32mm(H X W X D)
Weight	210g including batteries

## Optional Accessories

High Temperature Probe	Cast Iron Probe	Small Tube Probe	Fingertip Probe	Probe Cable
Step Calibration Block	Application Software	Data Transmission Cable	Rubber Sheath	Couplant and High Temperature Couplant