

Dakota PMX Precision Thickness Gauge (PMX)

Can be used in accordance with: NIST & MIL-STD-45662A



The Dakota PMX Precision Thickness Gauge can display the thickness value with A and B-Scan displays, allowing users to accurately assess a wide range of materials and offering selectable resolutions of either 0.01mm or 0.001mm.

The Auto-Find feature locates the detection point(s) and adjusts the display settings to bring the waveform into view. The high-speed scan feature on the Dakota PMX thickness gauge speeds up the inspection process by taking 250 measurements per second. Remove the transducer from the test material and it will display the minimum measurement scanned.

Key Features

Accuracy

Flexible & easy to use, the Dakota PMX Precision Thickness Gauge is able to measure the thinnest point of the substrate with maximum precision. This allows it to measure thin materials with pinpoint accuracy

Powerful

Up to 4GB of readings and waveforms can be saved into the gauge memory as each measurement is taken, which can be downloaded later into an inspection application or into DakMaster Software for further analysis and reporting.

Intelligent

Limits can be set on the Dakota PMX Thickness Gauge for individual readings or for each batch with audible & visual alarms. This makes it easy to identify pass/fail limits

Customisable

With a choice of display modes, the user can select the most appropriate option for their needs; Readings, Selected Statistics, Bar Graph, Run Chart & Differential Mode







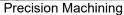






Applications







Automotive Thin Plastics

Product Features

Display Mode Material thickness digits display Secan cross sectional display Secan display Secan display **Rectified, - Rectified, Full Waveform (RF) **Rectified, - Rectified, Full Waveform (RF) **Rectified, - Rectified, Full Waveform (RF) **Rectified, - Rectified, Full Waveform (RF), Landscape View Measurement Range PE contact on steel - 1.00 - 9144mm E contact on steel - 1.254 - 4mm E contact on steel - 1.252 - 4mm E contact on steel - 1.252 - 254.mm E contact on steel - 1.254 - 914.4mm E contact on steel - 2.54 - 914.4mm E contact on steel - 2.54 - 914.4mm EE contact on steel - 2.54 - 914.4mm EEC contact on steel - 2.54 - 914.4mm EEC ontact on steel - 2.54 - 914.4mm	Model	PMX2-DL	PMX3-DL
Combined B-Scan and digits display Combined B-Scan display speed Combined B-Scan display spee			
Combined B-Scan and digits display **Rectified, - Rectified, Full Waveform (RF) **Rectified, - Rectified, Full Waveform (RF) A-Scan display **Rectified, - Rectified, Full Waveform (RF) **Rectified, - Rectified, Full Waveform (RF) Measurement Range PE contact on steel - 1.00 - 9144mm PE contact on steel - 1.00 - 9144mm I E on steel - 1.27 - 25.4mm IE on steel - 1.27 - 25.4mm IE on steel - 1.27 - 25.4mm I E contact on steel - 2.54 - 914.4mm IE on steel - 2.54 - 914.4mm IE on steel - 2.54 - 914.4mm I EE on steel - 0.152 - 12.7mm IEE on steel - 0.152 - 12.7mm IEE on steel - 0.152 - 12.7mm Resolution 0.01mm , 0.001mm selectable IEE on steel - 0.152 - 12.7mm IEE on steel - 0.152 - 12.7mm Resolution 0.01mm , 0.001mm selectable IEE on steel - 0.152 - 12.7mm IEE on steel - 0.152 - 12.7mm Resolution 8 readings per second 8 readings per second 8 readings per second Scan Mode 250 readings per second 8 readings per second 250 readings per second Selectable resolution 10 to 200 readings per second 10 to 200 readings per second Calibration setups 64 custom user-definable setups, transferable to and from a PC archive shadiustable particles, depending on measure mode	Material thickness digits display		
Scan Mode Scan	B-Scan cross sectional display		
A-Scan display Rectified, - Rectified, Full Waveform (RF) Rectified, - Rectified, Full Waveform (RF) Landscape View (RF), Landsc	display		•
Measurement Range (RF) (RF) Landscape View Measurement Range PE contact on steel - 1.00 - 9144mm PE contact on steel - 1.00 - 9144mm PE contact on steel - 1.00 - 9144mm IE on steel - 1.27 - 25.4mm IE on steel - 1.27 - 25.4mm IE on steel - 1.27 - 25.4mm IE on steel - 0.152 - 12.7mm EE contact on steel - 2.54 - 914.4mm IE on steel - 0.152 - 12.7mm IE on steel - 0.152 - 12.7mm EEV contact on steel - 2.54 - 914.4mm IE on steel - 0.152 - 12.7mm EEV contact on steel - 2.54 - 914.4mm IE on steel - 0.152 - 12.7mm EEV contact on steel - 2.54 - 914.4mm IE on steel - 0.152 - 12.7mm EEV contact on steel - 2.54 - 914.4mm IE on steel - 0.152 - 914.7mm EEV contact on steel - 0.54 - 914.4mm IE on steel - 0.152 - 914.7mm EEV contact on steel - 0.152 - 914.7mm EEV contact on steel - 0.54 - 914.4mm IE on steel - 0.152 - 914.7mm EEV contact on steel - 0.152 - 914.7mm EEV contact on steel - 0.152 - 914.7mm EEV contact on steel - 0.54 - 914.4mm IE on steel - 0.152 - 914.4mm EEV contact on steel - 0.152 - 914.4mm EEV contact on steel - 0.54 - 914.4mm EEV contact on steel - 0.54 - 914.4mm EEV contact on steel - 2.54 - 914.4mm EEV contact on steel - 0.54 - 914.4mm EEV contact on steel - 2.54 - 914.4mm EEV contact on steel - 2.54 - 914.4mm <td></td> <td></td> <td></td>			
IE on steel - 1.27 - 25.4mm IE on steel - 1.27 - 25.4mm IE on plastic - from 0.127mm IE contact on steel - 2.54 - 914.4mm IEE on steel - 0.152 - 12.7mm	A-Scan display	(RF)	· · · · · · · · · · · · · · · · · · ·
IE on plastic - from 0.127mm	Measurement Range	PE contact on steel - 1.00 - 9144mm	PE contact on steel - 1.00 - 9144mm
EE contact on steel - 2.54 - 914.4mm EE contact on steel - 2.54 - 914.4mm EE on steel - 0.152 - 12.7mm EEV contact on steel - 2.54 - 152.4mm EV contact on s		IE on steel - 1.27 - 25.4mm	IE on steel - 1.27 - 25.4mm
IEE on steel - 0.152 - 12.7mm IEE on steel - 0.152 - 12.7mm EEV contact on steel - 2.54 - 152.4mm EEV contact on steel - 2.54 - 152.4mm O.01mm, 0.001mm selectable O.01mm, 0.001mm, 0.001mm selectable O.01mm, 0.001mm, 0.001mm selectable O.01mm, 0.001mm, 0.001mm selectable O.01mm, 0.001mm,		IE on plastic - from 0.127mm	IE on plastic - from 0.127mm
Resolution EEV contact on steel - 2.54 - 152.4mm EEV contact on steel - 2.54 - 152.4mm Measurement Rate Manual 8 readings per second 8 readings per second Scan Mode 250 readings per second 250 readings per second Scan bar display 10 to 33 readings per second 250 readings per second Additional Features High Speed Scan Mode Image: Ima		EE contact on steel - 2.54 - 914.4mm	EE contact on steel - 2.54 - 914.4mm
Resolution 0.01mm, 0.001mm selectable Measurement Rate Manual 8 readings per second 8 readings per second Scan Mode 250 readings per second 250 readings per second Scan bar display 10 to 33 readings per second 10 to 33 readings per second Additional Features High Speed Scan Mode Limit alarm mode Image: selectable resolution Image: selectable resolution Image: selectable resolution Selectable resolution Image: selectable resolution Image: selectable resolution Image: selectable resolution resulps 10 to 200 readings per second 10 to 200 readings per second Calibration setups 64 custom user-definable setups, transferable to and from a PC archive 64 custom user-definable setups, transferable to and from a PC archive Gates 3 adjustable gates, depending on measure mode selected 3 adjustable gates, depending on measure mode selected 4 Square wave pulser with adjustable pulse width (spike, thin, wide) Manual or Automatic Gain Control (AGC) Manual or Automatic Gain Control (AGC) Manual or Automatic Gain Control (AGC) with 110dB range, varies with mode selected Adjustable damping (35, 50, 75, 300, 600 & Adj		IEE on steel - 0.152 - 12.7mm	IEE on steel - 0.152 - 12.7mm
Measurement Rate Manual 8 readings per second 8 readings per second Scan Mode 250 readings per second 250 readings per second Scan bar display 10 to 33 readings per second 10 to 33 readings per second Additional Features Image: Comparison of the part of the pa		EEV contact on steel - 2.54 - 152.4mm	EEV contact on steel - 2.54 - 152.4mm
Manual8 readings per second8 readings per secondScan Mode250 readings per second250 readings per secondScan bar display10 to 33 readings per second10 to 33 readings per secondAdditional FeaturesHigh Speed Scan ModeImage: Image: Ima	Resolution	0.01mm , 0.001mm selectable	0.01mm, 0.001mm selectable
Scan Mode 250 readings per second 250 readings per second Scan bar display 10 to 33 readings per second 10 to 33 readings per second Additional Features High Speed Scan Mode ■ Limit alarm mode ■ ■ Selectable resolution ■ ■ B-Scan display speed 10 to 200 readings per second 10 to 200 readings per second Calibration setups 64 custom user-definable setups, transferable to and from a PC archive 64 custom user-definable setups, transferable to and from a PC archive Gates 3 adjustable gates, depending on measure mode selected 3 adjustable gates, depending on measure mode selected 3 adjustable gates, depending on measure mode selected Pulser Type Square wave pulser with adjustable pulse width (spike, thin, wide) Square wave pulser with adjustable pulse width (spike, thin, wide) Manual or Automatic Gain Control (AGC) Manual or Automatic Gain Control (AGC) Manual or Automatic Gain Control (AGC) (AGC) with 110dB range, varies with mode selected Adjustable damping (35, 50, 75, 300, 600 & 100 MHz 8 bit ultra-low power digitizer Adjustable damping (35, 50, 75, 300, 600 & 100 MHz 8 bit ultra-low power digitizer Precision TCXO timing with single shot 100 MHz 8 bit ultra-low power digitizer Precision TCXO timing with single shot 100 MHz 8 bit ultra-low power digitizer AGB internal memory AGB i	Measurement Rate		
Scan bar display 10 to 33 readings per second 10 to 33 readings per second Additional Features High Speed Scan Mode ■ Limit alarm mode ■ ■ Selectable resolution ■ ■ B-Scan display speed 10 to 200 readings per second 10 to 200 readings per second Calibration setups 64 custom user-definable setups, transferable to and from a PC archive 64 custom user-definable setups, transferable to and from a PC archive Gates 3 adjustable gates, depending on measure mode selected 3 adjustable gates, depending on measure mode selected Square wave pulser with adjustable pulse width (spike, thin, wide) Square wave pulser with adjustable pulse width (spike, thin, wide) Square wave pulser with adjustable pulse width (spike, thin, wide) Manual or Automatic Gain Control (AGC) with 110dB range, varies with mode selected Manual or Automatic Gain Control (AGC) with 110dB range, varies with mode selected Adjustable damping (35, 50, 75, 300, 600 & 1500ohms) Adjustable damping (35, 50, 75, 300, 600 & 1500ohms) Frecision TCXO timing with single shot 100 MHz 8 bit ultra-low power digitizer Timing Precision TCXO timing with single shot 100 MHz 8 bit ultra-low power digitizer 4GB internal memory 4GB internal memory 4GB internal memory 4GB internal memory Sequential and grid logging <	Manual	8 readings per second	8 readings per second
Additional Features High Speed Scan Mode Limit alarm mode Selectable resolution B-Scan display speed Calibration setups Gates Square wave pulser with adjustable pulse width (spike, thin, wide) Gain Manual or Automatic Gain Control (AGC) with 110dB range, varies with mode selected Adjustable damping (35, 50, 75, 300, 600 & 15000hms) Timing Memory and Data Logging Additional Features I light Speed Scan Mode I I light Speed Scan Mode I I I I I I I I I I I I I I I I I I I	Scan Mode	250 readings per second	250 readings per second
High Speed Scan Mode ■ ■ Limit alarm mode ■ ■ Selectable resolution ■ ■ B-Scan display speed 10 to 200 readings per second 10 to 200 readings per second Calibration setups 64 custom user-definable setups, transferable to and from a PC archive transferable to an	Scan bar display	10 to 33 readings per second	10 to 33 readings per second
Limit alarm modeImage: Company specific procession of the selected procession	Additional Features		
Selectable resolutionImage: Company speedImage: Company speedB-Scan display speed10 to 200 readings per second10 to 200 readings per secondCalibration setups64 custom user-definable setups, transferable to and from a PC archive64 custom user-definable setups, transferable to and from a PC archiveGates3 adjustable gates, depending on measure mode selected3 adjustable gates, depending on measure mode selectedPulser TypeSquare wave pulser with adjustable pulse width (spike, thin, wide)Square wave pulser with adjustable pulse width (spike, thin, wide)GainManual or Automatic Gain Control (AGC) with 110dB range, varies with mode selectedManual or Automatic Gain Control (AGC) with 110dB range, varies with mode selectedAdjustable damping (35, 50, 75, 300, 600 & 1500ohms)Adjustable damping (35, 50, 75, 300, 600 & 1500ohms)TimingPrecision TCXO timing with single shot 100 MHz 8 bit ultra-low power digitizerPrecision TCXO timing with single shot 100 MHz 8 bit ultra-low power digitizerMemory and Data Logging4GB internal memory Sequential and grid loggingSequential and grid logging	High Speed Scan Mode		
B-Scan display speed Calibration setups 64 custom user-definable setups, transferable to and from a PC archive Gates 3 adjustable gates, depending on measure mode selected Pulser Type Square wave pulser with adjustable pulse width (spike, thin, wide) Gain Manual or Automatic Gain Control (AGC) With 110dB range, varies with mode selected Adjustable damping (35, 50, 75, 300, 600 & 1500ohms) Timing Precision TCXO timing with single shot 100 MHz 8 bit ultra-low power digitizer Memory and Data Logging 10 to 200 readings per second 64 custom user-definable setups, transferable to and from a PC archive transferable to and from a PC archiv	Limit alarm mode		
Calibration setups 64 custom user-definable setups, transferable to and from a PC archive Gates 3 adjustable gates, depending on measure mode selected Pulser Type Square wave pulser with adjustable pulse width (spike, thin, wide) Gain Manual or Automatic Gain Control (AGC) with 110dB range, varies with mode selected Adjustable damping (35, 50, 75, 300, 600 & 100 MHz 8 bit ultra-low power digitizer Memory and Data Logging 64 custom user-definable setups, transferable to and from a PC archive transferable to and	Selectable resolution		
transferable to and from a PC archive Gates 3 adjustable gates, depending on measure mode selected Pulser Type Square wave pulser with adjustable pulse width (spike, thin, wide) Gain Manual or Automatic Gain Control (AGC) with 110dB range, varies with mode selected Adjustable damping (35, 50, 75, 300, 600 & 1500ohms) Timing Precision TCXO timing with single shot 100 MHz 8 bit ultra-low power digitizer Memory and Data Logging transferable to and from a PC archive transferable to adjustable gates, depending on measure mode selected Square wave pulser with adjustable pulse square mode selected Manual or Automatic Gain Control (AGC) Manual or Automatic Gain Control (AGC) with 110dB range, varies with mode selected Manual or Automatic Gain Control (AGC) Manual or Automatic Gain Control	B-Scan display speed		10 to 200 readings per second
Gates Bulser Type Square wave pulser with adjustable pulse width (spike, thin, wide) Gain Manual or Automatic Gain Control (AGC) with 110dB range, varies with mode selected Adjustable damping (35, 50, 75, 300, 600 & 1500ohms) Timing Precision TCXO timing with single shot 100 MHz 8 bit ultra-low power digitizer Memory and Data Logging Adjustable gates, depending on measure mode selected Square wave pulser with adjustable pulse pulse width (spike, thin, wide) Manual or Automatic Gain Control (AGC) Manual or Automatic Gain Control (AGC) with 110dB range, varies with mode selected Adjustable damping (35, 50, 75, 300, 600 & 1500ohms) Precision TCXO timing with single shot 100 MHz 8 bit ultra-low power digitizer Memory and Data Logging 4GB internal memory Sequential and grid logging Sequential and grid logging	Calibration setups		
GainWidth (spike, thin, wide)pulse width (spike, thin, wide)Manual or Automatic Gain Control (AGC) with 110dB range, varies with mode selectedManual or Automatic Gain Control (AGC) with 110dB range, varies with mode selectedAdjustable damping (35, 50, 75, 300, 600 & 1500ohms)Adjustable damping (35, 50, 75, 300, 600 & 1500ohms)TimingPrecision TCXO timing with single shot 100 MHz 8 bit ultra-low power digitizerPrecision TCXO timing with single shot 100 MHz 8 bit ultra-low power digitizerMemory and Data Logging4GB internal memory Sequential and grid logging4GB internal memory Sequential and grid logging	Gates	3 adjustable gates, depending on	3 adjustable gates, depending on
with 110dB range, varies with mode selected Adjustable damping (35, 50, 75, 300, 600 & 1500ohms) Timing Precision TCXO timing with single shot 100 MHz 8 bit ultra-low power digitizer Memory and Data Logging with 110dB range, varies with mode mode selected Adjustable damping (35, 50, 75, 300, 600 & 1500ohms) Precision TCXO timing with single shot 100 MHz 8 bit ultra-low power digitizer 4GB internal memory 4GB internal memory Sequential and grid logging Sequential and grid logging	Pulser Type		
Timing& 1500ohms)600 & 1500ohms)TimingPrecision TCXO timing with single shot 100 MHz 8 bit ultra-low power digitizerPrecision TCXO timing with single shot 100 MHz 8 bit ultra-low power digitizerMemory and Data Logging4GB internal memory4GB internal memorySequential and grid loggingSequential and grid logging	Gain	with 110dB range, varies with mode selected	(AGC) with 110dB range, varies with mode selected
Memory and Data Logging 4GB internal memory Sequential and grid logging 100 MHz 8 bit ultra-low power digitizer 4GB internal memory 4GB internal memory Sequential and grid logging		& 1500ohms)	600 & 1500ohms)
Sequential and grid logging Sequential and grid logging	Timing		
	Memory and Data Logging	4GB internal memory	4GB internal memory
Alpha numeric batch identification Alpha numeric batch identification		Sequential and grid logging	Sequential and grid logging
		Alpha numeric batch identification	Alpha numeric batch identification





	OBSTRUCT indicates inaccessible locations	OBSTRUCT indicates inaccessible locations	
	Bitmap graphic capture and capture viewer	Bitmap graphic capture and capture viewer	
Calibration Options	Single, two-point, velocity and material type	Single, two-point, velocity and material type	
Transducer Probe Type	Single element with delay tip, pencil with delay tip and contact probes	Single element with delay tip, pencil with delay tip and contact probes	
Transducer Frequency Range	1 - 25MHz	1 - 25MHz	
Transducer Recognition	manual - selectable from a list	manual - selectable from a list	
Display	1/8" VGA (greyscale), 62 x 45.7mm	1/4 VGA AMOLED colour display 57.6	
	viewable area	x 43.2mm viewable area	
Display Refresh Rate	25Hz	25Hz	
Units (selectable)	mm	mm	
LED Backlight	on / off / auto	on / off / auto	
Repeatability / Stability Indicator			

Technical Specifications

Part Number	Description	Certificate
Z-307-0002	Dakota PZX1 Precision Thickness Gauge (PZX-7)	•
Z-308-0002	Dakota PZX1-DL Precision Thickness Gauge (PZX-7 DL)	•
Operating Temperature	-10 to 60°C	
Power Supply	2 x AA batteries	
Battery Life	Alkaline – 35 hrs, Nicad – 18 hrs	
Gauge Weight	312g - including batteries	
Gauge Dimensions	63.5 x 131 x 31.5mm	

[•] Certificate of Calibration supplied as standard.

Packing List

Dakota PZX Precision Thickness Gauge
Standard 1/4" Delay Line Transducer (2 Delay Tips – 3/8" & 1/2" L) & Cable
Couplant
Manual, Certificate of Calibration
AA Batteries, Plastic Carrying Case

Part Numbers

Dakota PMX2-DL Precision Thickness Gauge (PVX)



Part Number: Z-157-0006

Dakota PMX3-DL Precision Thickness Gauge (PVX Colour)



Part Number: Z-157-0007

Accessories

Part Number	Description
N-306-0010	1.8m RS232 (DB-9 to Lemo)
N-402-0510	USB to Serial Adapter

