OLYMPUS®

Your Vision, Our Future

Industrial UT Acquisition Unit

OmniScan *i*X

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Conventional UT Integrated Instrument

The Simple and Cost-Efficient Solution for Fully Automated Inspection Systems

The OmniScan® *i*X is a multichannel, conventional UT unit designed to inject high performance into fully automated inspection systems.

A single unit is capable of driving up to 8 conventional UT probes, offering increased coverage and reduced inspection time. A single OmniScan *i*X effectively replaces one or multiple conventional UT instruments.

The OmniScan *i*X can be easily interfaced with PC and PLC components for complete system automation.

Low Cost Solution

- Available with 2, 4, or 8 channels.
- Replaces multiple flaw detector units.
- Easy integration.
- Intuitive software.

Flexible Integration

- PC and PLC integration enabled.
- 16 real-time alarm and analog outputs.
- Rackmount or VESA compatible mounting.

OmniScan *i*X Specifications

GENERAL		
Overall Dimensions (W × H × D)	Benchtop version: 375 mm × 238 mm × 185 mm (14.75 in. × 9.4 in. × 7.3 in.)	
	Rackmount version: 485 mm × 222 mm × 190 mm (19 in. × 8.7 in. × 7.5 in.)	
Weight	6.5 kg (14.3 lb)	
Display	800 × 600, 10.4 in., TFT color LCD	
Connectors	BNC (2, 4, or 8)	
PULSER		
Number of Pulsers	2, 4, or 8	
Pulse Output	50 V, 100 V, 200 V, 300 V (±10 %)	
Pulse Width	Adjustable from 30 ns to 1,000 ns (±10 %), resolution of 2.5 ns.	
Fall Time	Less than 7 ns	
Pulse Shape	Negative square wave	
Output Impedance	Less than 7 Ω	
RECEIVER		
Number of Receivers	2, 4, or 8	
Receiver Gain Range	0 dB to 100 dB, by steps of 0.1 dB	
Maximum Input Signal	20 Vp-p (screen at 128 %)	
Minimum Sensitivity	200 µVp-p (screen at 128 %)	
Input-Referred Noise	160 µVp-p (26 µV RMS) (128 %)	
Input Impedance	50 Ω	
Input Filters (100 % Bandwidth)	Band-pass:	centered at 1, 2, 5, 10, 15, and 20 MHz
	Low-pass:	1 MHz from 0.25 MHz to 1 MHz (for low frequency transducers)
	High-pass:	12 to 35 MHz, 15 to 35 MHz, and 20 MHz to 35 MHz (for high-frequency transducer)
	Broadband:	from 2 MHz to 25 MHz
Rectifier	Positive, negative, full wave, unrectified	
Modes	PE (pulse-echo), PC (pitch-and-catch), and TT (through-transmission) In PC and TT modes, the maximum number of pulsers equals the number of channels divided by 2.	
Smoothing	Digital	
TIME-CORRECTED GAIN		
Number of Points	32 (range up to 40 dB); TCG points can have a negative value.	
Maximum Gain Slope	20 dB/µs	
DATA ACQUISITION		
A-Scan Acquisition Rate	6,000 A-scans/s (PRF/*N*, where *N* = number of channels) (512 point A-scan)	
Maximum Pulsing Rate	12 kHz (C-scan + alarm mode). Up to 6 kHz with full A-scan recording	
DATA PROCESSING		
Real-Time Averaging	2, 4, 8, 16	
GATES		
Quantity	3: I (synchro), A, and B (measure)	
Synchronization	I, A, B referenced on main bang, B referenced on gate I or (postsynchronization)	
Back Wall Echo Attenuator (BEA)	On the first half of the total available channels (for example: on a 4 channel instrument, BEA on channels 1 and 2)	
DATA STORAGE		
A-Scan Recording	6,000 A-scans/s (512 point A-scan) (3 MB/s transfer rate)	
C-Scan-Type Data Recording	12,000 (A1, A2, A3, T1, T2, T3) (3 gates); 12 kHz (lower frequency for corrosion mapping)	
Storage	Internal 8 GB CompactFlash	
DATA VISUALIZATION		
Refresh rate	60 Hz	
Modes	A-scan, B-scan, C-scan, strip chart, and multiple A-scans	
Data Synchronization		
Time	1 Hz to 12 kHz	
Encoder	On 1 or 2 axes divided by 1 to 65,536 steps	
INPUTS AND OUTPUTS		
Number of Alarms	16 (programmable, hold time and delay, filters for n occurrences)	
Conditions	Any logical combination of gates	
Signal	Amplitude or time of flight (TOF) of gate A or B	
Analog Outputs (at full PRF)	16 (0 V to 5 V) (programmable for each gate)	
Digital Inputs	4 programmable DIN	

OmniScan *i*X Options

Hardware Options

OmniScan *i*X Rackmount option

OmniScan *i*X Benchtop option

OMNI-IX-A-SCASE: OmniScan *i*X hard carrying case.

Software Options

OMNI-IX-SO-ENC1: OmniScan *i*X software option to activate two encoder inputs on the instrument.

OMNI-IX-SO-BEA: OmniScan *i*X software option to activate the back wall echo attenuator on the instrument.

OMNI-IX-SE-UTVME: OmniScan *i*X software option for the measurement of velocity on casting parts.

Standard Inclusions

- OmniScan *i*X instrument.
- Ethernet cable.
- OmniScan *i*X software with free lifetime updates.
- NDT Remote Control Library (RCLIB) license.
- User's manual.
- USB storage key.

OLYMPUS SCIENTIFIC SOLUTIONS AMERICAS CORP. is certified to ISO 9001, ISO 14001, and OHSAS 18001.

*All specifications are subject to change without notice.

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