



**Technical Data**

**SCREEN**

Screen type	<ul style="list-style-type: none"> <li>➤ Colour LC display</li> <li>➤ transmissive / transreflective</li> <li>➤ suitable for daylight</li> <li>➤ background illumination</li> </ul>
Screen size	143.4 x 79.3 mm <sup>2</sup>
Resolution	400 x 240 pix, 256 colours
A-scan size	142 x 73.5 mm <sup>2</sup>
Scale	electronically generated, can be switched on/off
Scale division	<ul style="list-style-type: none"> <li>➤ coarse: 10 sections horizontally, 5 sections vertically</li> <li>➤ fine: 50 sections horizontally, 25 sections vertically</li> </ul>

**A-SCREEN REPRESENTATION AND DIGITISING**

Image repetition frequency	50 Hz
A-screen representation	<ul style="list-style-type: none"> <li>➤ envelope</li> <li>➤ inverse (filled)</li> <li>➤ freeze</li> <li>➤ echo-dynamic curve</li> <li>➤ zoom across gate 1</li> </ul>
RF representation	possible across the entire adjustment range
Rectification	full-wave, positiv, negativ, RF
Suppression	selectable manually: 0 – 99% screen height in steps of 1% (linear)
Zoom	Gate range (gate 1) to full screen width
A/D converter	9 bit
Digitising process	direct, w/ A/D converters
Scan rate	80 MHz
Scan error during digitising	< ± 0.5% screen height at 4 MHz
Reaction delay	< 20ms

**SWEEP RANGE**

Time base range	2.5 – 4850 mm steel
Sound velocity	100 – 15000 m/s in steps of 1 m/s
Delayed time base sweep	0 – 3000 mm in steps of 0.1 mm
Linearity of time base	+ 0.5 % of the screen width
Pulse repetition frequency	8 Hz to 1500 Hz (depending on time base range, selectable from - 85% to +50% in steps of 1%)
Trigger modes	internally, externally, 1st echo

**TRANSMITTERS**

Number of transmitters	2 (1 resolution, 1 power)
Shape of the TX pulse	Unidirectional (negative) needle pulse
TX damping	10, 50, 220, without [Ω]

**AMPLIFIER AND DAMPING**

Number of frequency ranges	3 (NF and RF range, broadband)
Adjustable damping	100 dB in 0.1, 1, 2, 6, 12, 20 dB-steps

**ECHO EVALUATION, DETERMINATION OF FLAW SIZE**

Indication of echo height in (valid for both gates)	<ul style="list-style-type: none"> <li>➤ % screen height (%FSH)</li> <li>➤ dBrel (from DAC-version)</li> <li>➤ dBabs (from DAC-version)</li> <li>➤ mmFBH (DGS/DAC-version)</li> </ul>
Indication of echo run time	<ul style="list-style-type: none"> <li>➤ sound path</li> <li>➤ depth and projection distance and/or reduced projection distance (with angled scan)</li> <li>➤ resolution 0.1 mmSt</li> </ul>

**DISTANCE AMPLITUDE CORRECTION (DAC-version)**

Number of points	max. 11
DAC-curve shift	max. + 80 dB
Additional eval. curves	4 (max. ± 15 dB shift to DAC curve)

**DGS METHOD (DGS/DAC-version)**

DGS curve	0 to 30 mmFBH and backwall
Reference reflector	backwall or FBH
Additional eval. curves	4 (max. ± 15 dB shift to DGS curve)

**MONITOR GATES**

Number of monitor gates	2
Response time	Pulse repetition frequency (≤1500 Hz)
Operating modes	normal, inverted, off
Adjustment range	<ul style="list-style-type: none"> <li>➤ Gate start: 0 – 3000 mm in steps of 0.1 mm</li> <li>➤ Gate width: 0 – 1000 mm in steps of 0.1 mm</li> </ul>
Statistical clearing	0 – 250 occurrences
Switching outputs Go/NoGo (both monitor gates)	<ul style="list-style-type: none"> <li>➤ Level: TTL (5V) , low: active, ZA = 100 Ω</li> <li>➤ Response accuracy: ± 0.5%FSH</li> <li>➤ Switching hysteresis: &lt; 0.5%FSH</li> <li>➤ Hold time: max 12 ms</li> </ul>
Optical indication (both monitor gates)	2 LED's on the front panel

**INPUTS AND OUTPUTS**

USB interface	USB 1 interface for PC connection and for printing via PC
VGA output*	for an external monitor
Synchronising input/output	TTL level (5V), low active, trigger threshold 2 V approx.

**MISCELLANEOUS**

Measuring systems	Selectable mm, inch
Date and time	Built-in real-time clock
Languages	German, English, one additional language* can be stored in the instrument via PC (the texts are editable by means of a PC)

**STORAGE FACILITIES**

A-scan representation	Current A-scan representation on the screen by means of the FREEZE key
Data sets	224 data sets incl. A-scans, parameters, time and text* (8 lines with 37 characters each) in the internal memory

**ENVIRONMENTAL CONDITIONS**

Operating temperature	0 °C - +50 °C
Storage temperature	-40 °C - +85 °C
Permissible humidity	0 – 95%

**POWER SUPPLY**

Power supply	85 – 264 VAC, 47 – 63 Hz
Operating time w/ battery supply (with full load)	with Li-Ion battery <ul style="list-style-type: none"> <li>➤ 7 hrs approx. and</li> <li>➤ 13 hrs when the illumination is switched off</li> </ul>
Battery replacement	from backside
Energy save modus	on / off
Automatic switch-off	with undervoltage of mains or battery supply

**MECHANICS**

Size (H x W x D)	280 x 130 x 240 mm <sup>3</sup>
Weight	4.0 kg (w/ Li-Ion battery)
Connectors	<ul style="list-style-type: none"> <li>➤ 2 x Lemo 1 for probes</li> <li>➤ PC: USB 1</li> <li>➤ D-type sub (9 pin) for service, flaw output and external trigger</li> </ul>

\* available on request