USM 35X

The latest version of the USM 35 portable ultrasonic flaw detector from GE's Inspection Technologies business, is now totally protected against the ingress of dust and high pressure jets of water to IP 66 and contains new software which allows its operation to Japanese weld inspection
standards.

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{tab=Features}

- Protection accorind to IP66
- Can be operated in harsh or industrial environments
- Fast and bright color LCD
- Rechargeable battery with ability to operate for 14 hours
- Max allowable operating temperature range from 0°C to 50°C
- Optional DGS module for single element or dual element (T/R) probes. The module includes some preset GE's single or dual probes. Other probes can be configured by the user.

- *true* DGS® angle beam transducers and software for significantly improved sizing capabilities to EN 583-2

{tab=Specifications} **Calibration ranges**

Min 0 to 0.5 mm +10 % (steel), 0 to 0.02” +10 % (steel)
Max 0 to 9,999 mm +10 % (steel), 0 to 390” +10 % (steel) within the frequency range from 0.2 to 1 M
Sound velocity 1,000 to 15,000 m/s, 40 to 600 inch/ms variable in steps of 1 m/s, 0.1 inch/ms and fixed program
Display delay Ey to 1,000 mm, -0.3 to 40” (340 µs)
Probe delay 0 to 200 µs
Auto calibration Measurement and setting of sound velocity and probe delay using two known calibration echoes
Pulse energy 2 to 5 nF
Damping 50 ohms, 500 ohms (1,000 ohms in TR mode)
Pulse repetition frequency 4 to 1,000 Hz variable in 10 steps

Frequency ranges (-3 dB) 0.2 to 1 MHz / 0.5 to 4 MHz / 0.8 to 8 MHz / 2 to 20 MHz
Gain 0 to 110 dB, variable in steps
Gain steps 1 / 2 / 6 / 12 dB (or user-adjustable), step 0 is locked
Fine gain 1 dB, continuously variable in 40 steps
Rectification Full wave, negative and positive half-wave, RF mode
Reject Linear, 0 to 80 % screen height Variable in steps of 1 %
Monitor gates 2 independent gates in color bar mode, start and width variable over the entire calibration range
Sound path measurement Digital measurement of sound path (projection distance, depth) between initial pulse and the first echo
Measurement resolution Sound path range up to 99.99 mm/ 0.1 mm within a range from 100 to 999.9 mm/ 1 mm ab
Amplitude display In % screen height
USM 35X DAC: additionally in dB above DAC or TCG
USM 35X S: additionally in dB above DGS curve or ERS
Displayed reading Sound path, (reduced) projection distance, depth, amplitude for every gate, userconfigurable at
A-scan functions Max. function, automatic A-scan freeze, A-scan comparison, echo dynamics (envelope), peak echo
Color functions Palette selection, color-coded display of legs in angle testing, adaptation of background color to the light
DAC / TCG (Option) USM 35X and USM 35X S: Distance- Amplitude Curves (DAC) or TCG line (TCG) wit
DGS (Option) Only USM 35X S: DGS curves for single-element and dual-element probes (B1S, B2S, B4S, ME
Display size / resolution 1/4 VGA screen, 87 mm x 65 mm, 3.4" x 2.6" (W x H)
320 x 240 pixels
A-scan size / resolution 1/4 VGA screen, 80 mm x 60 mm, 3.2” x 2.4”
320 x 220 pixels (zoom)
Units of measurement mm or inch
Data memory 300 instrument setups or reports, including AScans can be stored, recalled, printed or exported
Direct documentation Display screen contents, report including A-scan, reading, function list (parameter dump)
Printer driver HP DeskJet, HP LaserJet, HP DJ 1200 (DeskJet),HP LJ 1012 (LaserJet), EPSON FX/LX, SEIK
RS 232 interface 32 bit, bi-directional, 300 - 57,600 baud An USB adapator cable can be provided to conne
Input/output 8-way Lemo-1 socket (trigger output, gate alarm, test data release)
Additional analog output for amplitude or sound path in selected gate
VGA output 10-way Lemo-1 socket for the connection of an external display screen or beamer
Probe connections 2 connections BNC
Dialog languages German, English, French, Italian, Portuguese, Spanish, Danish, Swedish, Norwegian, Finnish, C
Battery operation Li-ion battery or 6 C-cells (NiCad, NiMH or AlMn), operating time: 14 hours with Li-ion battery (6
Power pack / battery charger Wide range power supply (85 to 265 VAC);
Operating voltage: 6 to 12 VDC
Current consumption: max. 9 W, depending on the setting
Weight 2.2 kg, 4.9 lbs., including batteries
Size 177 mm x 255 mm x 100 mm, 7.0" x 10" x 3.9" (H x W x D)
Environmental Protection class: IP 66 Shock proof acc. to DIN IEC 68: 6 ms, 60 g, 3 shocks per orientation Vib
to DIN IEC 68: 0 - 150 Hz, 2 g, 20 cycles per orientation
Operating temperature: 0° to 60°C; 32° to 140°F (-10°C; 14°F on special request)
Storage temperature: -20° to 60°C; 4° to 140°F

Data Logger Option

Memory capacity 5,000 readings, 500 A-scans for the readings, 100 jobs, 10 comment texts per job
Storable readings Sound path and sound path differences of all gates, amplitudes (% SH, dB-to-threshold, dBto-c
Lines / columns Number of lines: maximum 5,000 (Linear file with one column), numerical indexing Number of co
Tolerance monitor Upper and lower acceptance level with monitor function

Minimum reading capture Storage of the minimum value measured in continuous scanning, display of the value 3 seconds
Monitor gate Additional independent gate in color bar mode
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