

Krautkramer USM 33

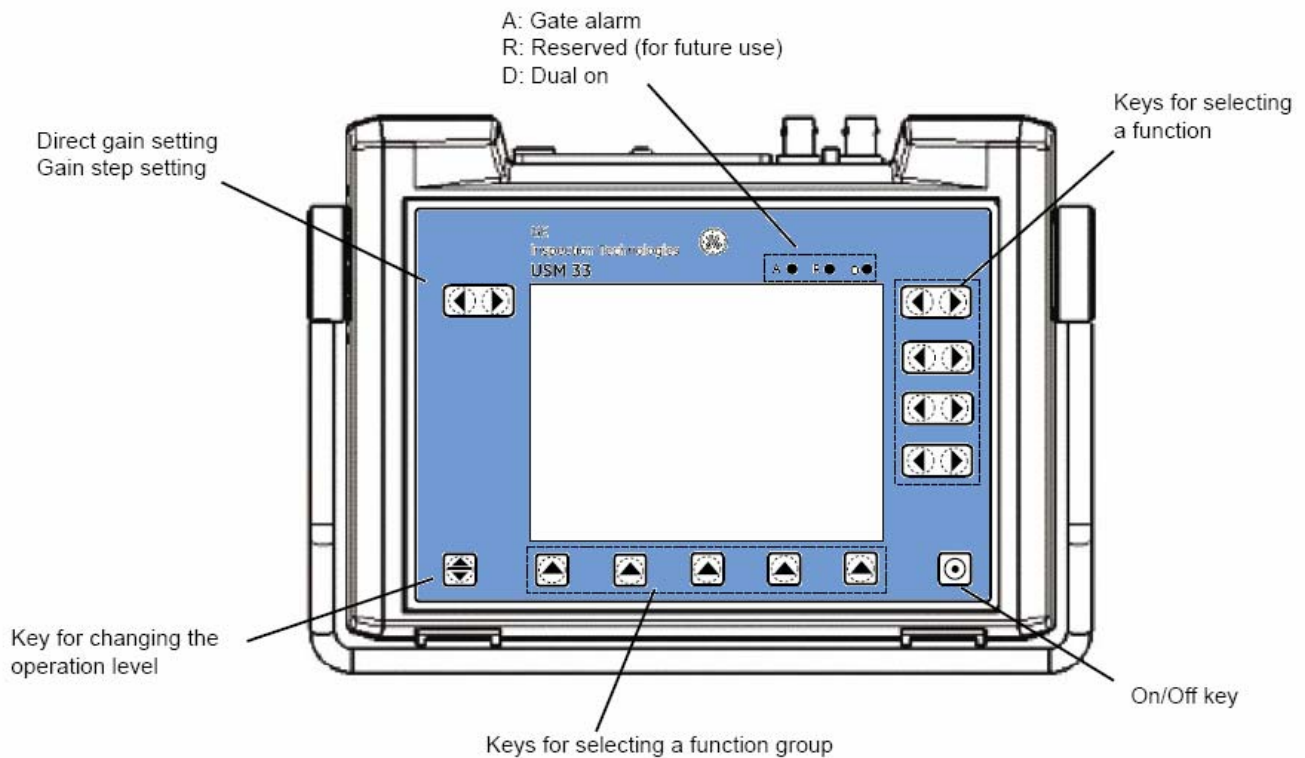
Ultrasonic Flaw Detector with Bright Colour Display, Light and IP54



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Krautkramer USM 33

- Colour display
- Lithium-ion battery up to 8 hrs operation.
- Automatic freeze function.
- Automatically optimized pulse repetition frequency.
- IP54 Protection
- Strong case
- Weighs 1.8 kg (including batteries).
- Two Gates
- Colour coded legs
- Multiple DAC curve
- Data Logger
- Two Point Semiautomatic Calibration



Krautkramer USM 33

Technical Specifications

Calibration range

0 to 9,999 mm +10% (steel),

Sound Velocity

1,000 to 15,000 m/s
Variable steps of 1 m/s

Display Delay

-10 to 1000 mm (340 µs)

Probe Delay

0 to 200µs

Auto Calibration

2 point calibration

Pulse intensity

220pF, 1nF

Damping

50 ohms, 500 ohms, (1,000 ohms for twin crystal probes)

Pulse Repetition Frequency (PRF)

automatically optimize settings

Frequency Range

0.5 MHz to 20 MHz
automatically matched

Gain

0 to 110dB, variable in steps

Gain Steps

0.5, 1, 2, 6, 12dB and user adjustable

Rectification

Full-wave, Negative & Positive Half-Wave, RF mode (measuring range less than 50 mm)

Monitoring gates

Two independent monitoring gates, start and width variable over the entire adjustable range, the response threshold of 10-90% of screen height variable in steps of 1%. (coincidence and anti-coincidence), alarm signal Via LED . Gate Magnification

Amplitude Display

In % screen height or dB above DAC dB

Measurement resolution

0.01mm in the range of 0-99.9mm
0.1mm in the range of 100-999mm,
1.0mm above 1000mm
With evaluation in the frozen A-scan : 0.5% of the calibration range setting

Displayed Reading

Sound path, distance, depth, magnification over gate, user configurable at four positions of measurement.

Colour Mode

Multiple display

Colour Functions

Patented Colour Coded display of legs in angle testing

DAC (Function)

Distance - amplitude - curve (DAC) Up to 10 reference echoes, Four other curves can be displayed with variable db intervals

Display size and resolution

116mm × 87mm (W×H)
320 × 240 pixels

A-scan image size / resolution

116 mm x 80mm,
320 x 220 pixels

Units of Measure

mm, in.

Data Storage

200 instrument parameter settings can be stored with A-scan images and exported to computer.

Display language

English, Chinese

Probe connection options

2 x Lemo 1 or BNC

Direct Documentation

Display screen contents, report including A-scan image, measurement data and parameter settings

Printer Drivers

HP DJ 1200 (DeskJet),
Epson DPU 41X
Epson Dj 1200
DP 345

RS232 interface

Through the RS 232 interface with the computer communications

Battery Operation

Lithium battery with real-time display battery status, up to 8 hrs operation.

Power / Charge

External power supply (85-265 V AC);
Operating Voltage: 6 - 12 V DC
Power: Maximum 9 W depending on the setting.

Weight

1.8kg including battery

Size

175mm x 230mm x 76mm
(length x width x height)

Environment

Protection Level: 54 IP
Impact test under IEC60068-2-27Ea 15g11ms,
Half-sine, each axial vibration test three times under IEC60068-2-6Fc; 5-150Hz, 2g, 1Oct/min,
Sine wave, three times each axial
Operating temp. 0 to 60 ° C (-10 ° C on special request)
Storage temp. -20 to 60° C

Data Logger

Can be used to store measured data

Storage Capacity

5,000 readings (linear data) and 200 Data sets

Storable Readings

Sound path, sound path difference between gates, amplitude (%SH, dB to threshold, dB to curve,% to curve, ERG)

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