

DATA SHEET

Ultrasonic Pulse Velocity Tester



58-E4800 complete set

General description

Introduction

The 58-E4800 UPV tester is used for quality control and inspection of concrete. It measures the transit time of ultrasonic pulses through concrete for inspection of new and old structures, slabs, columns, walls, fire damaged areas, precast and prestressed beams, cylinders and other concrete forms.

Combined with an oscilloscope can identify honey combs, voids, cracks and other non homogeneous conditions in concrete.

Description

Hand held light instrument, battery operated, microprocessor incorporated, supplied complete with two 54 kHz transducers (transmitter and receiver), calibration rod, 250 mm of coupling agent, instruction manual and carrying case. The meter can also be used with low and high frequency transducers. See accessories.

Note

Another advanced model of UPV tester is also available. See [Ultrasonic pulse analyser PULSONIC](#) model 58-E4900 with incorporated oscilloscope, suitable for determining the Dynamic Modulus of elasticity, the measurement of the Attenuation of the transmitted energy, the Spectrum analysis by FFT method, the Concrete strength evaluation combining the pulse velocity with the Rebound number of the concrete hammer (SonReb method), etc.

Main features

- For the non destructive evaluation of concrete homogeneity and determination of Dynamic Elastic Modulus
- Ergonomic and compact
- Lightweight and portable
- Battery operated
- Large size digital display 128x64 pixel
- Digital calibration
- High price/quality ratio

Standards

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- EN 12504-4
- ASTM C597

Specifications

Microprocessor incorporated
Battery operated by internal rechargeable battery pack (2400 MAh) and External charger
14 working hours using 1 Hz pulse rate
RS 232 output for PC or printer
Connectable to oscilloscope
Transit time measurement from 0.1 to 1999.9 microseconds
Pulse rate 1, 2, 5, 10 per second, selectable
Resolution 0.1 microseconds
Transmitter output 1200 V
Frequency range 24 to 150 kHz
Receiver input impedance 1 MOhm
Weight of the tester 0.5 kg, complete set 2.3 kg



58-E4800 in use. Although the direction in which the maximum Energy is transmitted at right angle to the face of transmitting transducer, it is possible to detect pulses which have travelled through concrete in other directions: adjacent faces (semi-direct transmission) or same face (indirect or surface transmission).

Products

58-E4800

Ultrasonic pulse velocity tester battery operated - Conforming to EN 12504-4 and ASTM C597

Accessories and consumables

82-P0172/B

24 columns serial printer, rechargeable battery operated. External battery charger and batteries included. 110-230V/50-60Kz/1ph

82-P0172/1

Serial cable for printer connection.

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58-E0046/2

Spare cable 2 m long

58-E0046/3

Coupling agent (contact paste), 250 cc bottle.

58-E0046/30

24 kHz testing head

58-E0046/33

150 kHz testing head

58-E4800/P

Piezoelectric head for ultrasonic tester. Nominal frequency 50 kHz. Can be used either as receiver or transmitter. Fitted with BNC connector for coaxial cable (not included).