



DATA 500

Acquisition System

Thanks to its unlimited configuration options and ability to monitor multiple sensors, the DaTa500 system provides the best support for destructive and non-destructive testing applications for civil engineering, and can be used both in the field and in the laboratory.

The system has 8 or 16 simultaneous 24-bit channels and 2 Can bus channels.

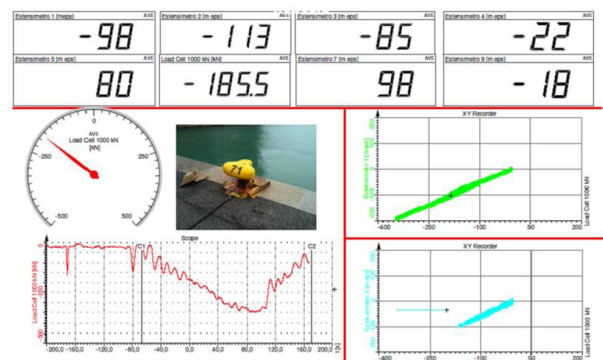
The channels are independent, so that different sensors can be hooked up simultaneously, thus providing a complete, detailed overview of the test situation.

More systems can be connected up to 32 channels and controlled from a single screen.

Appropriate cabling and modules enable the DaTa 500 to connect to all commercially available sensors.

The integrated battery allows the DaTa500 to operate without mains power (battery life varies in relation to the sensors used), which makes the tool particularly adaptable and reliable. The system is USB 2.0 compatible.

The equipment is provided with an IP67 carry case for use in even the most challenging conditions.



■ ANALYSIS SOFTWARE - DEWESOFT

The software license is linked to the client's hardware, so that it can be installed in multiple PC's.

The software configures and calibrates all types of sensor in a simple, intuitive manner.

The display screens can be configured to suit the test, and configurations can be saved for future use.

The data are acquired and displayed in real time.

The logged data can be exported to any format for analysis using the most popular applications.



FIELD OF APPLICATION *

- Static load testing of floor slabs and decks
- Load testing of foundation piles
- Dynamic characterisation of structures
- Dynamic testing
- Extensometry
- Displacements and deformations
- Single/dual flat jacks

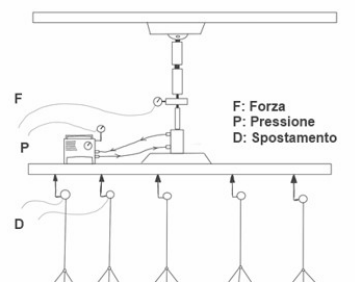
* For the proper use of the equipment, www.drcitalia.net - Download Area section WebHelp Area



examples of fields of application

Load testing

- Decks
- Floor slabs
- Foundations
- Load testing of plates

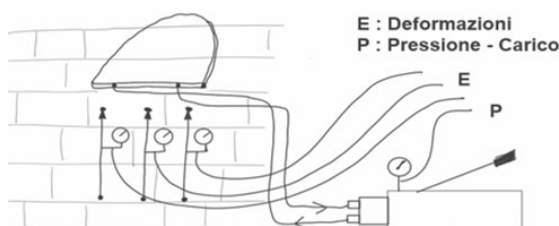


Sensors

- Displacement transducers (potentiometers)
- LVDT's
- Load cells
- Pressure transducers
- Temperature and humidity sensors

Flat Jacks/ Masonry

- Single jack
- Double jack
- Shear testing of masonry

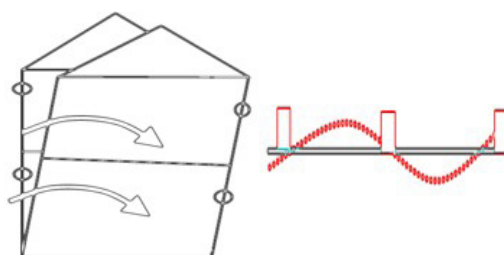


Sensors

- Displacement transducers (potentiometers)
- LVDT's
- Pressure transducers

Vibrations and Dynamics

- Dynamic testing of bridges and structures
- Data acquisition for the dynamic identification of civil engineering works
- Chain tension monitoring
- Measurement of vibration in civil engineering structures due to vehicle traffic
- Measurement of vibration due to machinery

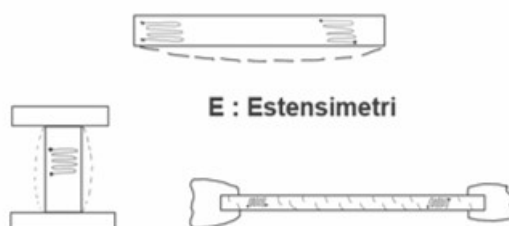


Sensors

- ICP accelerometers
- IEPE accelerometers
- MEMS accelerometers
- Signal conditioners
- Signal amplifiers
- Anemometers

Extensometry

The acquisition of sensors, such as strain gauges (bridge, half bridge and a quarter of bridge) allows to use the DaTa500 acquisition system also for laboratory testing on specimens and samples

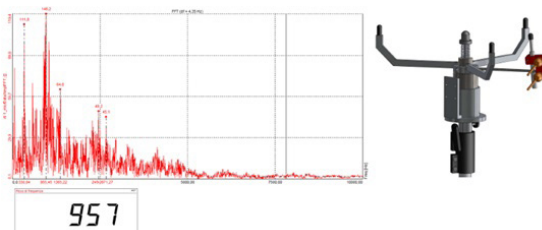


Sensors

- STRAIN GAUGES to:
- a quarter of bridge
 - half bridge
 - full bridge
 - thermocouples

Failure of ceiling slabs

Verification of failures in hollow core concrete ceiling slabs



Sensors

- Microphones
- Accelerometers
- Displacement transducers (potentiometers)
- LVDT's

TECHNICAL SPECIFICATIONS



16-channels DaTa500 PRO acquisition system



8-channels DaTa500 acquisition system

GENERAL TECHNICAL DATA

| | |
|-----------------------|--|
| NUMBER OF CHANNELS | 8 or 16 simultaneous channels |
| MEASURABLE SIGNALS | Tension, Full bridge (IEPE, Charge, Thermocouples e RTD /MSI adapter |
| RESOLUTION | 24 bit |
| ADC TYPE | Sigma - Delta |
| ACQUISITION FREQUENCY | 10 to 200 000 Hz 204.8 kS/s |
| INPUT RANGE | Voltage $\pm 0,01$ V, $\pm 0,1$ V, ± 1 V, ± 10 V; Voltage via MSI adapter; Full bridge ± 10 mV/V, ± 100 mV/V, ± 1000 mV/V; Half bridge ; IEPE—MSI adapter $\pm 0,1$ V, ± 1 V, ± 10 ; Thermocouples (-200°C to 1000°C and from 0 to 6.5kOhm) |
| DC ACCURACY | 10V range: 0,1% of value, +1 mV 1 V range: 0,1% of value, +0,5 mV 100mV range: 0,1 of value, +0.1 mV 10mV range: 0.1% of value, +0.1 mV |
| TENSION SENSORS | ± 5 V 0.1% @ 100mA, 12V@400mA for single channel |
| OVERLOAD PROTECTION | ± 0 70V |

WORK ENVIRONMENT

| | |
|-----------------------|--------------|
| OPERATING TEMPERATURE | 0 to 50 °C |
| STORAGE TEMPERATURE | -20 to 70 °C |
| RELATIVE HUMIDITY | 10 to 90% |

CONSUMPTIONS

| | |
|-----------------------------|-----|
| TYPICAL CONSUMPTION | 5 W |
| MAXIMUM CONSUMPTION SENSORS | 6 W |

SYSTEM REQUIREMENTS

| | |
|-----------------|-----------------------------------|
| INTERFACE | USB 2.0 |
| HARDWARE SYSTEM | PC includes the DEWESoft software |

PHYSICAL

| | 8-channels | 16-channels |
|------------|----------------|----------------|
| DIMENSIONS | 400x300x180 mm | 490x380x200 mm |
| WEIGHT | 7,50 Kg | 14,00 Kg |



8-channels DaTa500 acquisition system
Article code 01.DRC.0141



16-channels DaTa500 PRO acquisition system
Article code 01.DRC.0141P



The kit includes:

- DaTa500 Acquisition system
- DEWESoft Software
- USB mini cable
- Power supply 220 Volt
- IP67 rigid case

PACKAGE

| | 8-channels | 16-channels |
|------------|----------------|----------------|
| DIMENSIONS | 420x320x200 mm | 510x400x220 mm |
| WEIGHT | 8,00 Kg | 14,50 Kg |

Warranty & Maintenance

24
months

DRC guarantees maintenance service at its center or
at authorized centers

DRC
Diagnostic Research Company
Non Destructive Testing

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