

Digital Control System DIGICON 4000 for Building Materials Testing Machines

DIGICON 4000 is the latest generation of digital measurement and control system tailor-made for testing of building materials including cement, concrete, rocks, asphalt and soils.

The DIGICON 4000 is the direct replacement of the DIGICON 2000 controller with consequent enhancement and continuous implementations of new standards, customer inputs, feedbacks and hundredfold successful installations across the globe. The controller can be used in standalone operation, in combination with its large 7" color touch screen with intuitive pre-defined test templates or in combination with the comprehensive Proteus application software.



The DIGICON 4000 can control monotonic servohydraulic as well as electromechanical AC or DC driven testing machines. In combination with servohydraulic test systems, this controller can control up to 4 testing machines / frames in alternating mode with one servo-valve. Typical applications are machine combination like cement testing machine together with a concrete testing machine controlled with one controller and one hydraulic system.

Features:

- Application-Designed for closed loop control of building materials testing machines
- Simple operation as standalone unit with pre-defined test templates according to related standards with USB-Interface for Data export
- Advanced functionality in combination with Proteus Software Package.
- Latest controller generation provides long life-cycle
- Provides accurate closed loop control with closed loop control rate of up to 2000 Hz (2 kHz)
- High data acquisition rate on all channels
- Controller can be equipped with up to 8 amplifier cards with 18-bit resolution for data acquisition and control of force, displacement, strain and other sensors.
- Machine interlock direct from controller including protection device, quick piston drawdown, unpressurized circulation etc.



Reliable

This latest generation of data acquisition and control unit reflect the knowledge and best practices gained from decades of experience. The unit includes consequent enhancement and continuous implementation of hundredfolds successful installation across the globe since early 1970's.

Versatile

The DIGICON 4000 can be configured to control servohydraulic as well as electromechanical testing machines. With its up to 8 available channels for data acquisition and control this controller can be configured to meet your unique needs of today and can be extended in the future when your test needs would change.

Accurate

The DIGICON 4000 digital controller offers 2000 Hz closed loop control rate and 1000 Hz data collection on all channels. This enables you to generate high resolution test data for analyses. The high speed closed-loop control rate assures high control accuracy and repeatable tests.

Compatible with Digicon 2000

The DIGICON 4000 is designed to direct replace the Digicon 2000. This makes it easy to upgrade your existing test system with this latest generation of digital control system.

Flexibility through Electronic Data Sheet (TEDS)

The DIGICON 4000 features an intelligent transducer plug system featuring an incorporated electronic data sheet that will be automatically recognized and read by the digital controller. The characteristics as electronic label, specifying sensor type, operating range, coefficients for linearization, transducer calibration etc. are stored in the form of an electronic data sheet.

Once the transducer is connected to the amplifier card of the DIGICON 4000 the information will be read and imported. It gives the laboratory the flexibility to connect and transducer with electronic data sheet to any available DIGICON 4000 controller in the laboratory without quick plug and play installation and without the need of execute a calibration of verification procedure.

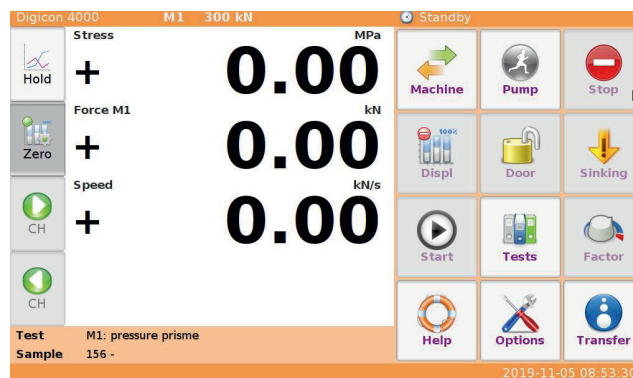
Operator Safety

The controller fully comply with current safety requirements. Protection devices can be connected direct to the controller.

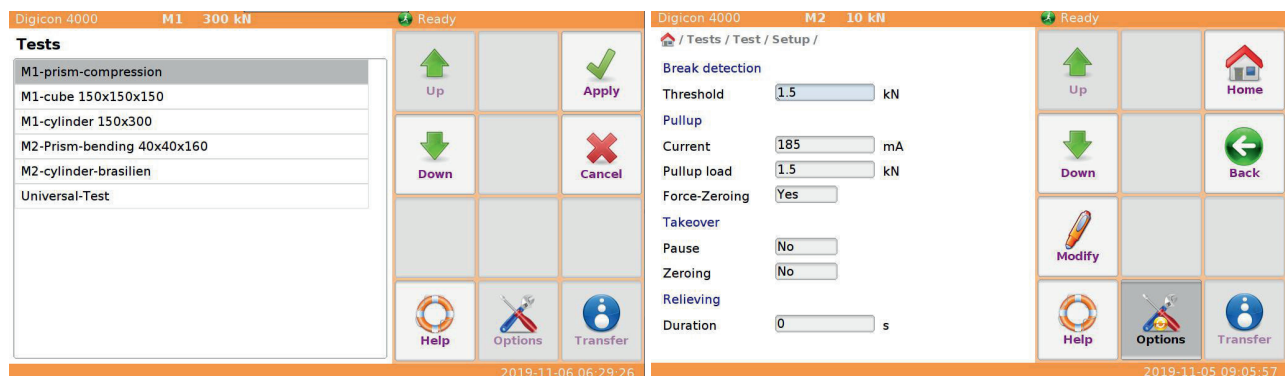
Standalone Operation

The controller can be used in easy-to-use standalone operation, in combination with its large 7" color touch screen with intuitive pre-defined test templates.

The DIGICO 4000 offers an extensive and growing library of standards-compliant test methods and free to program sequences and full complement of accessories for cement, concrete, asphalt, wood and other materials testing.



Main Screen



Template Selection

Adjustement Screen

Export

This controller offers the test data export even when used at standalone unit without application software Proteus. The test data are saved as XML-File and can be exported via USB port to your host system for data backup, data processing, creating your own reports or import into an existing laboratory information management system (LIMS).

External Remote Touch Unit

The DIGICON 4000 can be supplied with external Remote 7" color touch screen that allows to install the operating touch screen up to 2.5 meter away from the controller.



Technical Data	
Closed-loop control rate	2 kHz
Data acquisition rate	1kHz
Measurement channels	max. 8
Analogous resolution	18Bit with SAR-Technology
Control Inputs	6 Optocoupler configurable
Control Outputs	9 Relais configurable
Signal Inputs	10V, SSI and Increment
Valve	24V Proportional Valve Servovalves
Electromechanical drive	Module for DC and AC motors
PC-Interface	Ethernet / LAN
I/O-Interfaces	USB
Intelligent Display	intern or remote
Capacitive Touch-Screen	7inch HDMI 1024x 600 Pixel
Options	
Amplifiers	4 Dual MV11
Type	DMS-LVDT-SSI or Potentiometric
Teds-Connector	1-wire EEPROM for the Linearisation