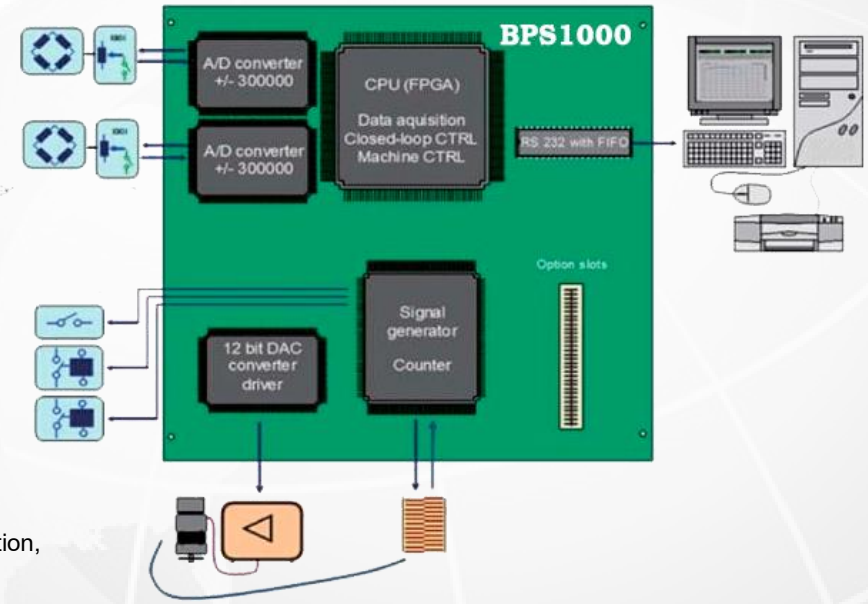
BPS1000 Software

BPS INSTRUMENT
TESTING MACHINE

Features

- Resolution up to ± 500,000.
- Up to 4 or 8 measuring and control channels.
- Visible PID adjustment: immediately displays the result of PID, make the PID no longer be "Invisible and untouchable".
- Expandable design: Several load or deformation sensors can be expanded on one machine.
- Automatic transducer recognition, calibration and balancing, greatly speeds up the testing process and ensures consistent and accurate data; Automatic recognition of all transducers by sensor plug with transducer coding. The recognition includes all set up and calibration data. Each sensor plug stores the information in a flash EPROM.
- All settings of the system can be done by software, all settings can be exported and saved as a data file in computer, end user only need to import data file if old control unit is replaced.



Introductions

BPS1000 Serves as a multi-function controller who is possibilities indata acquisition as simple acquisition only (manual control) or as complete servo controlled materials testing systems. This controller offers all the functions and performances needed for the control and measurements in the testing of static characteristics of materials, actual objects, or structures.

The processor of BPS1000 controller is developed on highly integrated FPGA chip, BPS1000 incorporates full digital control of all elements, including waveform generation, automatic gain control (AGC, hydraulic operation circuits, alarm functions, measurement amplifiers (test force and displacement), settings and display in engineering units, shock less control switching, and servo amplifiers.

The BPS1000 controller permits RS 232 interface connection to PC (BPS1000 operational software's required). This allows the synchronous test operation and waveform distortion correction of up to four units.

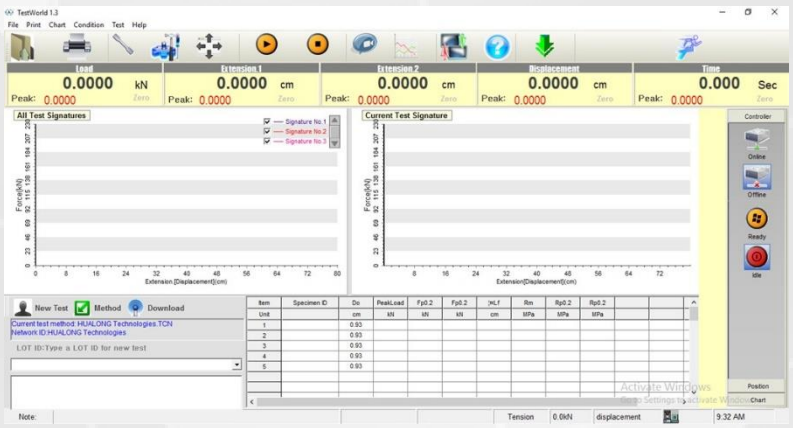
Summary

1. CPU (SOC) with main frequency 25MHz.
2. Up to +/-500,000 steps, 2mv ~ 4mv inputs.
3. Optional one RS485 port. 4. +/-10V (12bit) Analog outputs.
5. 200 kHz Digital output commands.
6. 1MHz TTL Encoder pulse inputs.
7. Optional 1 slot.

8.1 RS 232 port (com1).

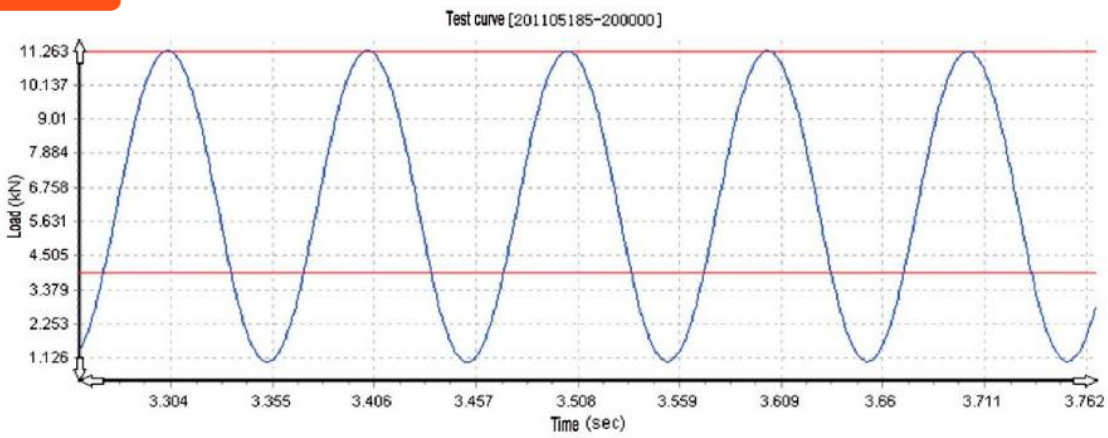
9.1 Commissioning port (JT AG).

10. Synchronization option plug.
11. Servo valve or proportional valve amplifier port.

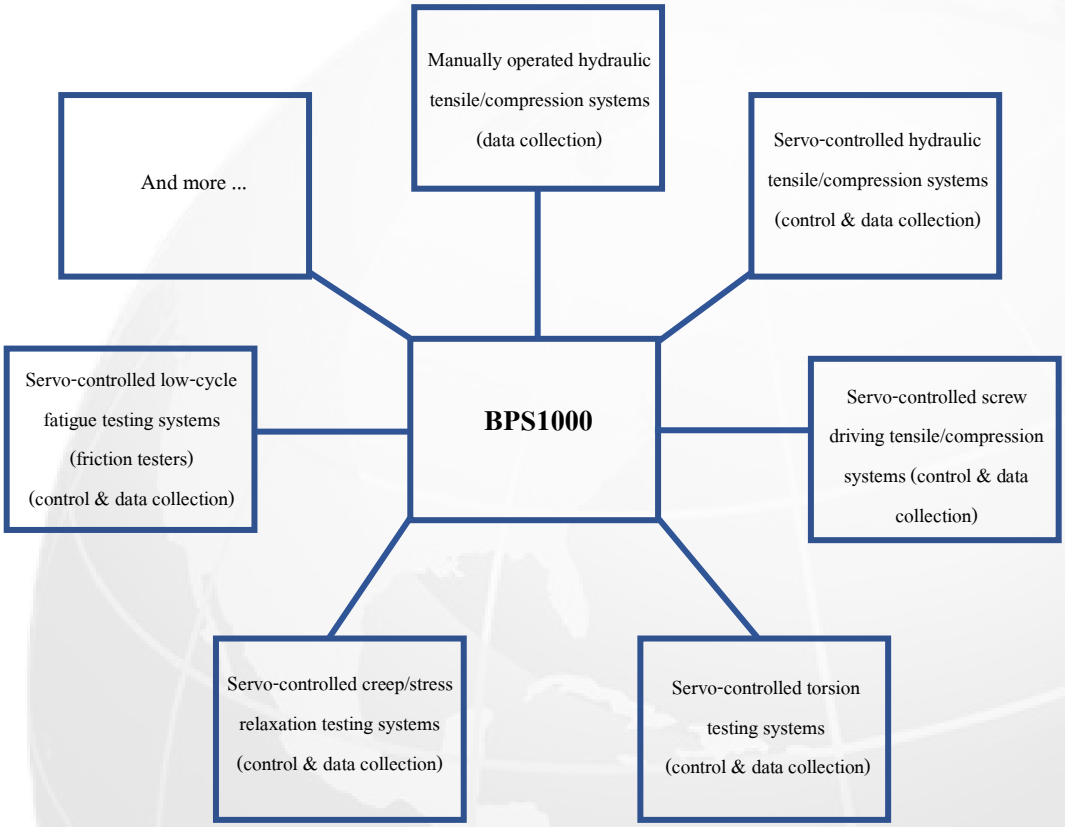


40/16, Moo 5, Lamlukka, Lamlukka, Pathum Thani, 12150
Tel: 02-150-1090 to 92
Hotline: 086-378-7534 (Contact Miss panya)
Fax : 02-150-1093
E-MAIL: info@bpsinstrument.com
ID LINE: bpsinstrument

Multi functions



BPS1000 data sampling frequency up to 3KHz, fully meet requirements on low frequency fatigue test 1Hz.



Highly integrated electronics on single PCB board guarantee durability, reliability as well as cost effectiveness of control unit.

40/16, Moo 5, Lamlukka, Lamlukka, Pathum Thani, 12150
Tel: 02-150-1090 to 92
Hotline: 086-378-7534 (Contact Miss panya)
Fax : 02-150-1093
E-MAIL: info@bpsinstrument.com
ID LINE: bpsinstrument

BPS1000 Software

BPS INSTRUMENT
TESTING MACHINE

Software Part

TestWorld provides all the capabilities you need to handle basic tensile, compression, bend/flexure, peel, tear, friction, and simple cyclic test requirements quickly and efficiently, it features programmable control channels, programmable calculations and programmable report templates.

Windows-based plat form
Software package on Windows-based platform which is user-friendliness and easy-to-use.

Multi measurement units
Load can be displayed in kN, lbf or kgf as selected by the operator.

Multi controlling channels
Displacement control,
force control, deformation control,stress control, strain control, constant stress, constant strain etc.

Multi-Stage Testing
The multi-stage setup allows the user to configure virtually any type of test setup imaginable. Each part of a test is defined as a "stage". Each stage can be setup with its own independent load or distance characteristic and speed. Multi-stage testing can be used for creep tests, load hold or distance hold tests or other sophisticated test methods. You can configure a wide range of wave shape methods including sine, triangle, saw tooth, square, ramp and trapezoidal to your test sample. The user has total freedom to create the test movement required for testing their sample without the need for expensive 3rd-party software applications or validation requirements.
For example, testing process can be divided into four stages, first: pre-load, the other three stages may select control type of displacement control, force control, deformation control, strain control and stress control etc. Parameters of each stage may be freely set and be switched automatically and smoothly.

Test method storable
User can work out an optimal test method according to test specimen of different material and dimensions according to their experience, then operator only need to load existed test process and click "Start" to conduct the same test specimen for next tests.

Memory return
The crossbeam can be set automatically return to the original position when test completed.

Intelligent navigation
Powerful and mature wizard guide operator of fresh hand to finish every test procedure with no mistakes.
Straightforward operation menu makes the switching among different menus clear and simple, full intelligent tips help you avoiding any operation mistakes.

Software linear compensation
Up to 20 sections of linear compensation function for the sensors which can improve the accuracy degree when necessary.

Automatic input the specimen dimensions
Automatically re-generate the same specimen dimensions, which has reduced the input operations and avoided re-input errors.

Reset value
Force, deformation, and displacement can be manually reset to zero by clicking button on software, while, the value automatically reset to zero when starting a test.

Recall Test process
Test process can be recalled as video clip on review window for teaching and research purpose. (Recall every finished test like video clip to review what really happened during test.)

Data editable on curve
Test parameters can be marked on finished testing curve.
You can select required parameters to show on test curves.

Editable report
User can freely edit tailor-made EXCEL report template.

Multi curve diagrams
Display real-time Stress-Strain, Force-elongation, Force-time, Force-displacement and other related graphs or switch to other graphs on demand.
Y-axis could be Force, stress
X-axis could be Elongation, extension, strain, time, displacement

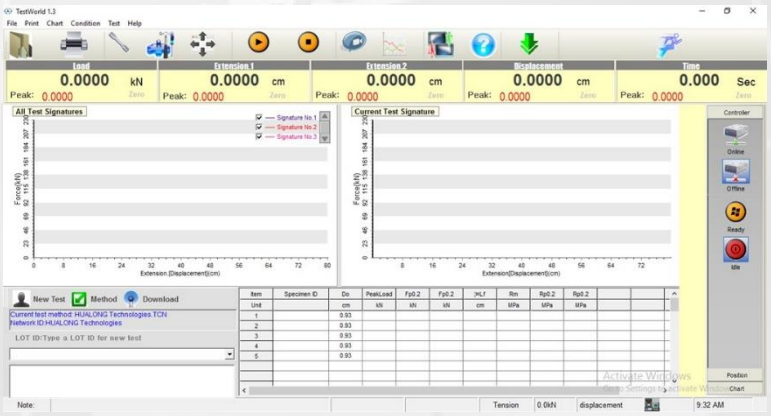
Curve comparison
Curves of the same specimen group may be compared to analyze the differences.

Part enlargement
Any part of the testing curves can be enlarged for data analysis.

Automatic calculation
System automatically calculate related test parameters according to EN, ISO, ASTM, JIS, GB etc, such as Fm (Fb), Feh, Fel, Fp, Rm , ReH, ReL, Rp0.2, Rp0.1, Rp0.05,E,Et, Ec, A, t and other test parameters, test data can be saved in several formats. (You can select required test parameters that you want to display on main interface as well as show on report.)

Networking Interface system available
It can download test information and upload test result to remote computer facilitate the whole test procedure.

Tailored language pack available
TestWorld is currently available in Chinese, English, Swedish, other languages are available upon request.



40/16, Moo 5, Lamlukka, Lamlukka, Pathum Thani, 12150
Tel: 02-150-1090 to 92
Hotline: 086-378-7534 (Contact Miss panya)
Fax : 02-150-1093
E-MAIL: info@bpsinstrument.com
ID LINE: bpsinstrument