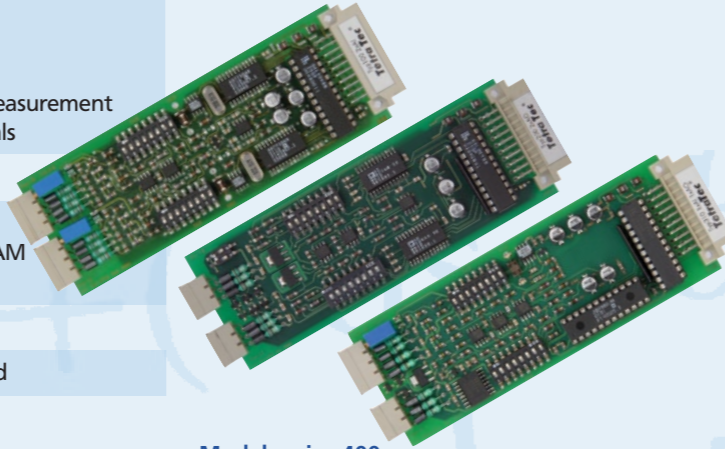


Data sheet: S320 CONTROLLER

Housing	DIN 43700 panel mounted housing 96 x 96 mm, approx. 165 mm deep
Displays, keys	3 seven digit segment displays 10 mm 3 text displays 5 mm, 5 membrane keys
Digital interfaces	8 digital outputs 24V, PLC compatible 8 digital inputs 24V, PLC compatible expandable with slot cards
Data interfaces	1 RS232, programmable 2 RS485, programmable 1 ethernet TCP/IP, programmable 1 RS232 link interface to a PC
Slot cards, replaceable	5 slots for plug-in cards - for analog signals - for digital extensions - for incremental and frequency measurement - for generation of frequency signals
Supply	24 Volt DC, approx. 8 Watt
Processor	32 bit flow point signal processor real-time clock, battery-buffered RAM flash memory technology
Web server	HTTP web server, integrated
File system	file system in flash ROM, integrated



Slot cards for connection of process signals

Model series 100: Analog inputs

Series of analog input modules with signal conditioning (instrument amplifier) and power supply for common sensors (5V, 10V, 15V, 24V und 1mA for PT 100). Different AD conversion methods (SigmaDelta, integrating etc.), different resolutions up to 24 bit.

Model series 200:

Analog outputs

Series of analog output modules with voltage and/or current output. Power supply 24V. Different DA conversion methods.

Model series 300:

Analog inputs and outputs

Series with each, one analog input with signal conditioning and power supply and one analog output (voltage and/or current). Different AD or DA conversion methods.

Model series 400:

Extension with digital interfaces

Series for the extension of the digital interfaces of the basic unit. Different designs of the digital I/O modules for din rail mounting or 19" technology with PLC compatible 24V inputs or outputs.

Model series 500:

Counter and frequency measurement, pulse and frequency generator

Series for incremental sensors (e.g. displacement sensors) for pulse width and frequency measurement or for generation of frequency signals.

Errors excepted, subject to technological changes.

S320 CONTROLLER

Powerful measurement technology

S320 CONTROLLER

Central measuring and calculation unit of our measuring systems



Performance features

- Panel mounted housing
- Freely programmable in a language similar to Pascal
- Complete developing tools for PC included in scope of delivery
- Interface to PC via RS232 or Ethernet TCP/IP
- Easy readable LED displays
- Membrane keys for operating
- Modular technique for signal recognition
- PLC compatible digital inlets and outlets
- Three serial interfaces equipped as standard
- Ethernet TCP/IP network interface equipped as standard
- Integrated web server
- Integrated file system

The S320 Controller is a completely freely programmable measurement device in a standardized 96 x 96 mm front panel housing. LED displays allow the display of 6-digit measurement values and, e.g. physical units consisting of four symbols. Inputs can be made on the front panel membrane keys.

The console is directly programmable in a high level language similar to Pascal. Development tools for programming on a PC are included as standard with delivery. The uploading of programs can be carried out either by the serial interface or via the network interface from the PC. The most advanced of flash memory technology collects data reliably. Mathematical calculations like sine, root, as well as polynomial calculations become simple jobs with the S320 Controller.

Effective libraries for linearisation, for determination of material values such as density, for controlling applications and similar calculations reduce the expense for programming to a minimum.

A modern 32 bit flow point signal processor forms the extremely powerful core of the S320 Controller. Complex calculations are carried out in milliseconds and grant access to a multitude of application ranges.

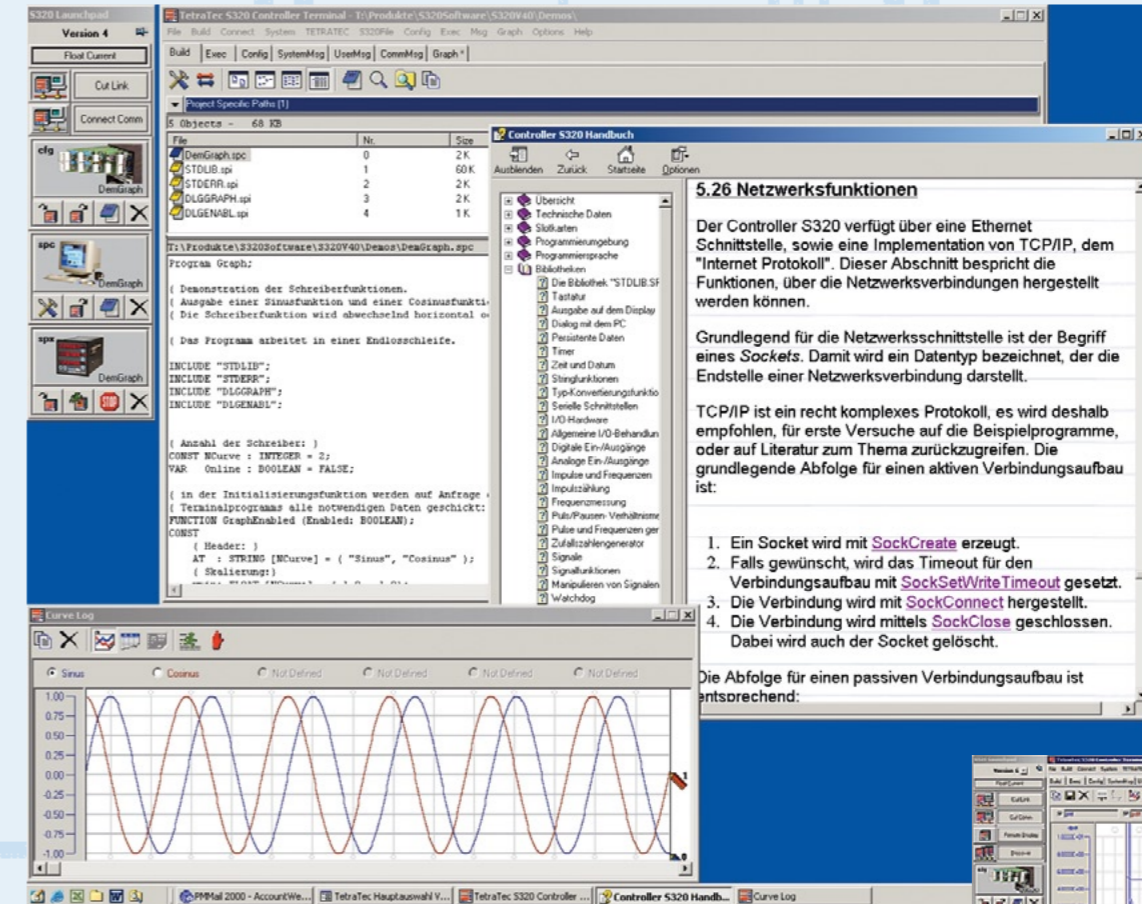
The connection of analog or digital sensors or measuring elements is achieved by exchangeable slot cards for data logging and processing. The Controller S320 also powers the sensor systems, so that external power sources are not required, as a rule.

Equipped as standard the Controller S320 communicates via three serial interfaces either by RS232 or RS485 bus standard or via network interface. All interfaces are arbitrarily accessible by the program.

Sample applications

Flow measurement	Restrictor measuring, LFE measuring, mass measuring
Control technology	Pressure or flow control, hydraulic systems control
Device control	Leakage testing, functional testing
PLC control	Pre-analysis of analog processing signals
Data logging	Local acquisition of sensor data
Assembly stands	Component testing, control of the adaptation

Universal and freely programmable evaluation unit for measurement data acquisition



The S320 Controller is programmed with SPELL-OS, a high level language similar to Pascal.

For programming the S320 Controller is connected to one of the serial interfaces or to the network interface of the PC.

The graphic user interface links to the Controller S320 either by a serial or by the network interface.

The software supports you in all aspects relating to the Controller S320:

- Programming
- Compilation and download
- Justification of device configurations
- Modification of configurations
- Establishing of modem or telnet connections
- File transfer to and from the Controller S320
- Transfer of web content
- Test mode for analog und digital signals
- Calibration of analog signals
- Graphical display of measurement signals
- Transfer of systems and user messages
- Retrieval of program sources
- Integrated online help

With the S320 Controller mathematical functions, e.g. sine, tangent or root calculation, are as simple as the handling of floating point figures, integers, logical values or strings, due to its completely free programmability in a high level language.

Operating the S320 Controller requires no hardware or system knowledge at all.

The operating system in combination with the supplied libraries provides you with all required functions in high level language. For example real-time applications can be synchronised with predefined timer functions. For indication on the displays simply supply the desired measurements with the requisite number of decimal places. When reading analog data you will receive directly, if requested, the measurement value in its physical representation as a floating point number.

For the sending and receiving of data via interface you can use predefined transmission or reception routines, without having to think about which process is actually used for this purpose depending on the interface. Your application is even notified by the operating system, as required, via predefined signal functions, for example as soon as a button has been pressed or a string has been received from one of the interfaces.

The Controller S320 is equipped with an integrated web server and a file system. Your application can create appropriate web contents which you can access easily with any browser via LAN.



Calibration assembly with a HUMTMP sensor