GRYF

Manufacturer of Electronic Measuring Instruments

Measuring Instruments

- measuring electrochemical and physical values
- monitoring the environment
- controlling technological processes

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XBase XBP

The XBase XBP measuring system fundamentally innovates standardly known and preferred industrial systems used for industrial measuring and controlling technological processes. Thanks to its extensive modularity, just one measuring system is able to serve tens of stations (where an industrial PC is used for evaluation of measured data). This systems outstanding new feature includes the capability to control basic technological processes such as water chemistry modification, temperature control, flow control, etc. using its analog and digital outputs.

Key functions include:

- Measuring up to 16 measuring locations with the basic set-up
- High accuracy with great comfort for the operator
- Signalization of exceeded pre-set limits, process control using digital and analog outputs
- Data-logger function, allowing the collection of measured data at adjustable intervals and real-time
- Option to export measured data into other formats such as DBF, CSV, TXT
- Printing measurement and calibration protocols
- Maximal SLP (GLP) protocol support
- Recording and archiving all activities that have been performed on the system
- Technological visualization
- Providing measured data to other applications via XBC Net or Modbus TCP
- Controlling technical processes (motor speed control, fluids dosing, switching alarms, sending information to higher-level systems, controlling of the fermenter, etc.)
- Require Windows PC system

Technical Specifications

Attributes	Data
Number of connected probes	1 ÷ 16
Probe power supply	via connecting cable, the probes are galvanic separated from the environment
SLP (GLP) protocol support	Yes
PC connection	interface RS232 (COM port) or 10/100Base T (ethernet)
User's data memory	300 values/ channel
Circle data memory	200 values / channel
Measuring period	adjustable, 0,5 ÷ 60 sec.
Data logger - memory capacity	limited by the PC HDD capacity
Data logger - recording period	1 sec. ÷ 24 hours
Power supply	external source 11 ÷ 37V DC/ 400mA, consumption is configuration dependant
Electronic switches	up to 16x 28V, 100mA DC
Voltage or current output	up to 8x 0 ÷ 10V or 0(4) ÷ 20mA
Logic inputs up to 8x - input voltage for logic unit	up to 8x 5 ÷ 35V DC 11 ÷ 60V AC
Logic input - input resistance	500 Ohm
Working temperature range	0 °C ÷ 50 °C
Storage temperature range	-20 °C ... 70 °C
Magic interface dimensions	used in conjunction with DIN 32 rail number of modules is dependant on system config.
Minimal PC requirements	RS232 port (COM) or10/100Base T (ethernet) MS Windows 2000, XP, Vista, 7

XBase XBM

Hand-held measuring instruments

XBase XBM is a portable version of the XBase line containing the most functions of its industrial predecessors. Thanks to its ruged design it is ideally suited for outdoor applications as well as laboratory use.

Key functions include:

- Rugged portable measuring system with IP67 coverage
- Up to three any values at a time (pH, O2,
- Redox,ORP, ISE, temperature, etc.)
- Submersible probes IP68
- Datalogger - up to 100 000 values
- Data export - DBF, CSV, TXT
- XBase Graphs - software
- User accounts
- GPS optional
- Fully compatible with GRYF's new optical sensor

Technical Specifications

Attributes	Data
Probe connection	Cable
Number of connected probes	1 ÷ 3 (bench version 1÷4)
Power supply of the probes	Via a connecting cable Probes Galvan. separated from the environment
Supporting of the SLP (GLP) report	yes
PC connection	PDA with interface or USB2
Minimal PC requirements	free port RS232 (COM) or USB, Pentium 100MHz, W98,WME,W2000,WXP
User data memory	Shared and separated record
Circle data memory	100 values / channel
Measuring period	adjustable, 1 ÷ 60 sec.
Data logger – memory capacity	Limited by the PDA memory (16MB) 1MB…approx. 30000 values
Data logger – record period	2 sec. ÷ 24 hours
Power supply	Internal accumulator, loading-external source 230VAC/12V DC
Working temperature range	0 °C ÷ 50 °C
Storage temperature range	-10 °C ÷ 60 °C
Coverage	IP67 (not the bench version)
PDA requirements	WIN CE, Version 5.00
Data storage	Inner PDA memory Transfer of the data into the PC

Optional accessories

XBase XBC

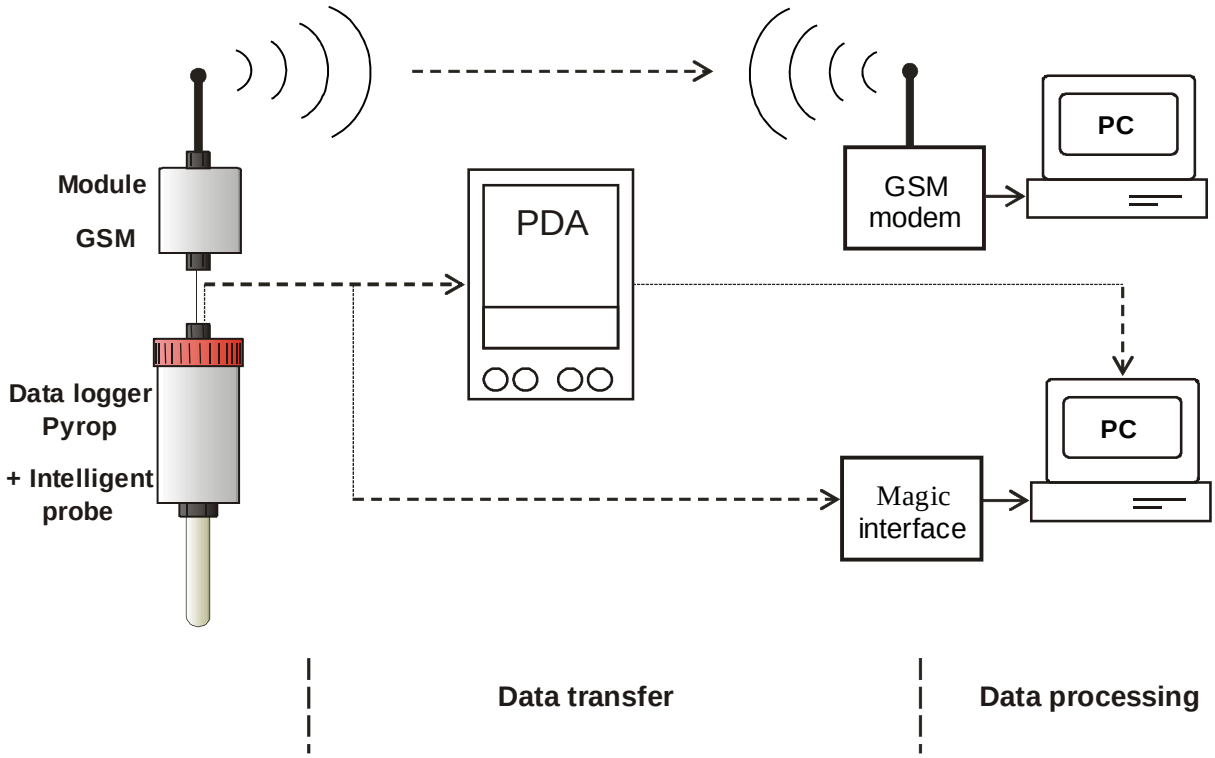
The XBase XBC system is suitable especially for laboratories and clean environment operations.

- XBase XBC can measure up to four values at the same time (real time) and allows the possibility to use laboratory or submersible probes
- System is available in two versions
- Interface includes 5 outlets (4x switch and 1x analog) which can be allocated to any measuring channel
- The outputs can be used for automatic titration control or for activating a warning alarm when preset values have been exceeded
- Avaible in cable or wireless version (bluetooth)
- High accuracy with great comfort for the operator
- Signalization of exceeded pre-set limits, process control using digital and analog outputs
- Data-logger function, allowing the collection of measured data at adjustable intervals and real-time
- Option to export measured data into other formats such as DBF, CSV, TXT
- Printing measurement and calibration protocols
- Maximal SLP (GLP) protocol support
- Recording and archiving all activities that have been performed on the system
- Technological visualization
- Providing measured data to other applications via XBC Net or Modbus TCP

Technical Specifications

Attributes	Data
Probe connection	cable or wireless
Number of connected probes	1 ÷ 4
Probe power supply	via connecting cable, the probes are galvanic separated from the environment Bluetooth probes are powered by a built in battery and will last up to 24 hours with measurement sampling interval set 1 second
SLP (GLP) protocol support	Yes
PC connection	RS232 port (COM) USB interface LAN ethernet
User's data memory	300 values / channel
Circle data memory Measuring period	200 values / channel adjustable, 0,5 ÷ 60 sec.
Data logger - memory capacity	limited by the PC HDD capacity
Data logger - recording period	1 sec. ÷ 24 hours
Power supply	external source 8 ÷ 15V DC/ 200mA, or USB
Electronic switches (outputs)	4 x 28V, 100mA DC
Voltage or current output	0 ÷ 1V, max. 2mA
Working temerature range	0 °C ÷ 50 °C
Storage temperature range	-20 °C ... 70 °C
XBC Interface dimensions	156 x 151 x 36 mm
Coverage	IP 40
PC requirements	Rs232 port (COM), USB, MS Windows 2000, XP, Vista, 7

Connection diagram



The main section of the arrangement is the Pyrop data logger to which can support up to four probes. These probes can be either placed inside the data logger casing or separately from the data logger casing. Each electrode has its own housing and data logger and are not interchangeable (any arrangement change in the field is not suspected) and all settings and calibration data are stored in the data logger memory. Operation of multiple Magic Pyrop systems requires just one PC or PDA.

Pre-setting data logger parameters, probe calibration and data reading is made possible by the Pyrop program. This program can be run on a PC or a PDA with a Palm OS operating system. By using a PDA or a PC, the data logger can be adjusted and measured data can be read. It is best to transfer measured data to a PC for further processing.

Another option to transfer measured data is by using GSM. This wireless data transfer is made possible by connecting a GSM module to the data logger and a GSM modem to a PC. This connection will allow the PC to receive the measured data from the sensor. GSM2PC program is used to transfer the measured data. Data can be recorded at set periodical intervals or by individual command. This transmission channel is also able to report any "over the limit" status/situations in a form of a text message to a chosen phone number.

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