

Expert Series

ProfiSignal

NEW

EVEN MORE data acquisition and test stand automation



Expert Key 100C

9.24Voc 83
0Voc 82
PE 81

Power
Run
Reset
Error

USB

Ethernet

REF 1 33
REF 2 34
REF 3 35
REF 4 36
REF 5 37
REF 6 38

Delphin

Expert Series



Expert Series – the new class of data

The plug&play complete package

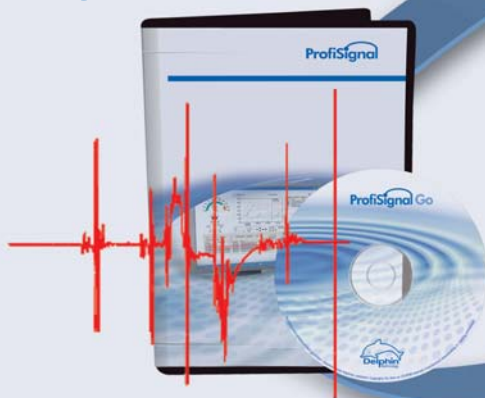
Expert Series is the latest generation of data acquisition equipment from Delphin. Expert Key devices enable measurement data to be acquired, monitored and analysed and experiments and test stands to be automated. Expert Key devices have both USB and network interfaces that can be optionally used. Measurement data can be either acquired directly at a local PC or decentrally across a LAN. Measurement can begin as soon as the device is connected to a PC via USB or Ethernet.

Expert Key devices are supplied with the powerful ProfiSignal Go software. ProfiSignal Go is professional PC software for the online and offline monitoring and analysis of measurement data. If you are already using other measurement software, the full service package also contains LabView™-driver, Diadem-Export, Modbus TCP and OPCServer.

User benefits

- Complete hardware and software package
- Very cost effective
- Extensive software package included
- Scalable, even for large applications
- Universal via USB or LAN
- Easy to use
- „Made in Germany“ quality
- Signal conditioning included

ProfiSignal Go



Saves Time



Saves Costs

Expert Series



The Expert Key L model, with plug-in screw terminals, has been developed especially for laboratory and experimental use. The Expert Key C model is available for fixed mountings, e.g. within a cabinet. The Expert Key M model is available for mobile use within a case and is equipped with variable connection options.



acquisition and testing technology

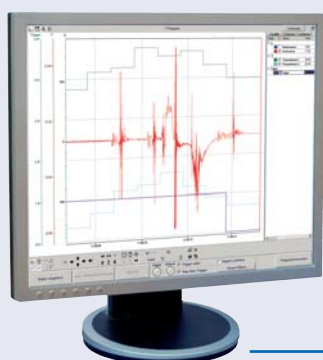
Fast and universal

Inputs and outputs of the Expert devices are universal and therefore suitable for a wide range of different types of applications. Each channel can be separately configured as an mV / V, mA, thermocouple or RTD input. A sampling rate of up to 100,000 measurement values per second can be optionally assigned to the channels. Inputs have galvanic isolation and therefore protected against earth loops. Experiments can be controlled or events triggered via analog, digital or PWM outputs. Digital inputs are available for acquiring status, frequencies or impulses.

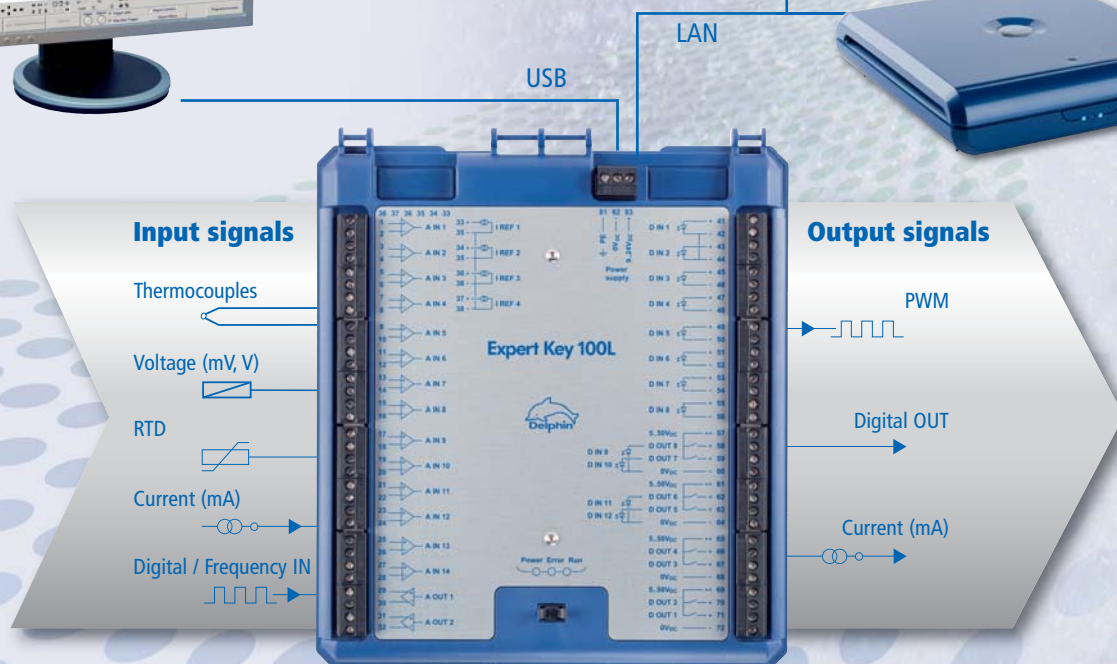
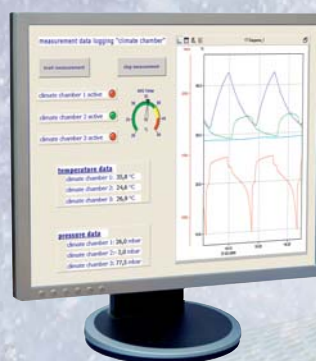
Wide range of applications

In research and development, in experiments and laboratories, in industry

- Data acquisition and analysis
- Automation of measurement processes
- Experiment, trial and test stand automation
- Process visualization / analysis / automation
- Temperature measurement with RTD and thermocouples
- Quality assurance and acquisition of operational data
- Monitoring and alarm functions
- Laboratory data acquisition (also FDA 21 CFR part 11)



ProfiSignalGo
data acquisition / analysis



Hardware: Expert Series

Different models – one concept

Expert Key devices are equipped with USB and network interfaces that can be used as required. All models are available as type 100 or type 200. Type 100 is equipped with a wide range of analog and digital inputs and outputs

and is therefore highly suited for use within test engineering. Type 200 has 28 universal inputs and is intended more for analog data acquisition.

Expert Key L – the laboratory model

Expert Key 100L and 200L are designed for both table-top and wall-mounted usage. Delivery includes the brackets for wall-mounting. Pressing the detachable cover gives a clear overview of connections. Sensors and actuators are connected via plugs located on the side.



Expert Key 100L
Expert Key 200L

Expert Key C – the built-in model

Expert C models are identical to the laboratory models except for the metal enclosure. The enclosure design enables the devices to be used in cabinets, 19" racks or mobile measurement cases. For OEM solutions, the Expert Key can also be supplied without an enclosure.



Expert Key 100C
Expert Key 200C

Model Type	Expert Key	
	100	200
Analog inputs (mV, mA, TE, RTD)	14	28
Analog outputs (mA, V)	2	2
Digital inputs	8	2
with counter function	2	–
Digital outputs	4	1
with PWM function	4	–
Switchable digital inputs/outputs	4	–

Expert versions

Expert Key M – for mobile applications

Expert Key 100M and 200M are portable measurement systems. The measurement cases are set-up for mobile use and are extremely flexible due to a range of connection options using clamps, plugs, etc.

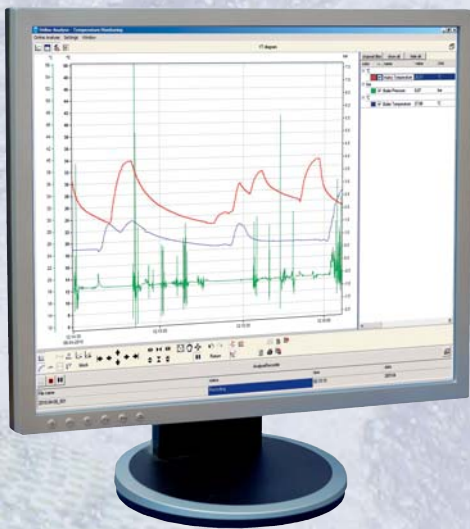
Overview of technical specifications

Expert Key		
Device type	100	200
Analog inputs	14	28
for RTD	4	8
Sensor types	mV, mA, thermocouple, RT	
Resolution (bit)	18	
Sampling rate	100 kHz	
Measurement range	+- 100, 200, 500 mV; 1, 2, 5, 10 V	
Compensation	yes / 1	yes / 2
Galvanic isolation	yes	
Analog outputs	2	2
Resolution (bit)	16	
Max. output rate	100 Hz	
Output voltage / current	0 to 10 V / +- 10 V / 0 to 20 mA / 4 bis 20 mA / +- 20 mA	
Galvanic isolation	yes	
Digital inputs	8 to 12	1
Input voltage / current	5 V, 12 V, 24 V, 48 V / 2,7 mA	
Logic voltage level	< 2,5 V = low / > 3 V high	
Max. input frequency	10 kHz	
Galvanic isolation	yes	
Digital inputs with counter function	2	1
Counter resolution	32	
Max. input frequency / resolution	1 MHz / 1 μ s	
Measurement range	0,1 Hz to 1 MHz	
Max. input voltage / current	5 V, 12 V, 24 V, 48 V / 1,5 mA	
Galvanic isolation	yes	
Digital outputs	4 to 8	1
Max. switching voltage / current	30 V / 1 A or 40 V / 0,75 A or 50 V / 0,6 A	
Max. switching delay	0,5 ms	
Galvanic isolation	yes	
PWM outputs	4	1
Duty cycle	1:100 to 1:500	
Max. switch voltage / current	30 V / 1 A or 40 V / 0,75 A or 50 V / 0,6 A	
PWM basic frequency	5 Hz to 10 kHz	
Galvanic isolation	yes	
General information		
Sensor connected	using screw terminals with 0.14 - 2.5 mm ² openings	
Power supply	external power supply	
Max. power input	5 Watt	
Power supply	9 to 24 VDC	
Temperature range	0 to 50 °C	
Environmentally friendly	RoHS conform	
Interfaces: USB or Ethernet	USB 2.0 High Speed / LAN 100Base T	
Dimensions Expert Key L 100/200	50 x 185 x 215 mm	
Weight Expert Key L 100/200	750 g	
Dimensions Expert Key C 100/200	57 x 280 x 208 mm	
Weight Expert Key C 100/200	1500 g	

Software: ProfiSignal Go

ProfiSignal Go: Online and offline monitoring and analysis

ProfiSignal Go records measurement data, displays it as trends, analyses and exports it. Trends can be observed online and historical data simultaneously evaluated. Set-up is very simple. It takes just a few mouse clicks to get from sensor connection to trend output.



Trend in ProfiSignal Go

Trends without limits

There are practically no limits on how online and offline data can be portrayed. Zooming in on historical data can take place without having to interrupt the running of an experiment.

This function is unique and especially valued by customers. As well as $y(t)$ diagrams, $y(x)$ and logic analysis diagrams are also available.

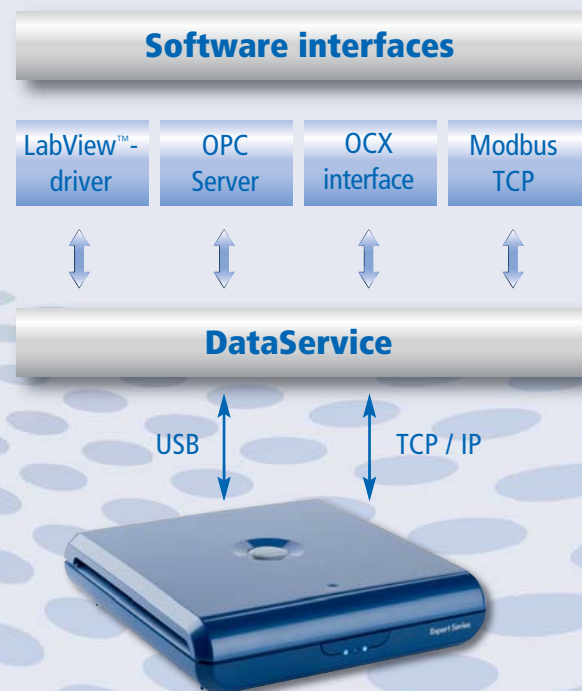
User benefits

- No limit between online and offline evaluation
- Fast trend output even for large data volumes
- Intuitive and simple operation
- Different trend diagrams $y(t)$, $y(x)$, logic
- Integrated monitoring and alarm functions
- Export function for MS Excel™ and other analysis software

Extensive software interfaces

Expert Key are supplied with ProfiSignal Go as standard as well as with LabView™-driver, an OPC Server and a Modbus TCP for use within industrial environments.

A well-documented and extensive OCX interface is also supplied for self-programming purposes.



Extendable system



Expert Series

ProfiSignal – modular and extendable

ProfiSignal is available in three variations: Go, Basic and Klicks. Basic and Klicks offer more functions than Go and provide a development environment for creating and amending individual applications. ProfiSignal Basic includes all functions of ProfiSignal Go. ProfiSignal Klicks includes all functions of ProfiSignal Basic.



ProfiSignal Basic

ProfiSignal Basic enables measurement data to be acquired, processes to be monitored, and testing procedures to be operated and observed. Basic provides many visualization tools and practical analysis functions including trend and characteristic curve portrayals. It also has report and print functions. ProfiSignal Basic is permanently configured and can be used for continuous processes (e.g. operational data acquisition) as well as batch processes (e.g. data from experiments and trials).

ProfiSignal Klicks

ProfiSignal Klicks is equipped with functions for automating processes and for generating user-defined reports. There are input screens for test parameters and recipes, a structure diagram function, documentation enhancements for reports and the Klicks automation programming language. Klicks enables the easy generation and maintenance of applications. No specialist IT knowledge is required and therefore no learning of a programming language.

ProfiSignal Go	ProfiSignal Basic	ProfiSignal Klicks
Data acquisition	Monitoring	Automation
Runtime system	Development system	Development system
Online trends	Logger substitute	Test stands
Historical measurement data	Fault analysis	Technical installations
Alarm tables	Acquisition of fault data	Laboratory automation
Data export	Damage diagnostics	Automated processes
	Quality assurance	Acquisition of operational data
	Remote monitoring	SQL interface
		Comprehensive reporting

Typical applications for Go, Basic and Klicks

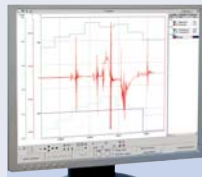
Delphin – Product range

Technology



Expert Series

Instrumentation & control



ProfiSignalGo

Measurement, evaluation



Message Series

Instrumentation & control,
recording, monitoring



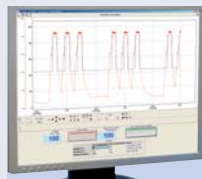
ProfiSignalBasic

Measurement, evaluation,
monitoring, operation, observation



Laboratory devices

For tests, research and
development



ProfiSignalKlicks

Measurement, evaluation, monitoring,
operation, observation, automation,
parameter / recipe input, reports



Control cabinets

For industrial applications



Services

Project planning, application develop-
ment, installation, calibration, service
hotline, training and more



Mobile measurement case

Field trials, servicing



ISO 9001
certified



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