simex

PORTABLE DATA LOGGING SYSTEMS
for Professionals

MultiCon
MultiLog

P130

P150

Measure,
Control and Log Data

Introduction

SIMEX is a Polish manufacturer and supplier of industrial automation equipment. The company has been in the market for nearly 30 years and offers services provided by a team of young and qualified professionals, both designers and programmers, as well as sales representatives.

We specialise in the production of devices from the following categories: counters, indicators, controllers while concentrating on data recorders. In the offer you will find two families of high quality products for data recording: MultiCon and a series for the less advanced processes - MultiLog. Both devices are designed for stationary measurements.

What's new is the portable case for these products, which allows transporting them from place to place. This is a significant advantage, because stationary recorders gain features of portable recorders and at the same time retain the capabilities for advanced measurement and recording of the tested media. In addition, the sealed case made by PELI ™ protects the devices from damage.

Applications

- Recording the operating parameters in water and sewage pumping stations
- Recording the operating parameters in heat chambers and heat exchange units
- Pressure control of hydrophore stations
- Recording changes in river levels

Mine

Military

Pump station

Extreme conditions

Water treatment plant

Hydrophore station

Heat exchange unit

Sewage treatment plant

Portable case - the advantages

Protection of electronic equipment and valuable recorded data is a growing concern. This is particularly important in non-stationary solutions, when measuring instruments are mounted in portable, sealed transport cases, which are the only barrier against the harsh environmental conditions. Therefore, this case must meet a number of requirements guaranteeing the safety of the devices installed in it, and hence the reliability of this type of data recorders. In the sets offered by our company we use PELI™cases, which is a proven and reliable solution in the transport and storage of sensitive measuring instruments for professionals.

Portable case P150: 464 x 366 x 176 mm

Extra thick 5.3 mm wall construction provides significantly greater strength to weight ratio over conventional injection moulding.

Technological holes allow for lock or seal set up to increase safety in the event of data theft attempts.

Battery powered version available

The neoprene o-ring keeps the case watertight.

Big-fold down and rubberized handles are strong, comfortable and ergonomic

Automatic pressure equalization valve releases air from the interior while keeping water molecules out, ensuring IP 65 protection class.

The double-step latches are smart and make the case easier to open.

Heavy duty „fins" are engineered to protect latch and hinge areas.

Portable case P130: 285 x 246 x 174 mm

Heavy duty „fins"
are engineered to protect
latch and hinge areas.

The double-step latches
are smart and make
the case easier to open.

Technological holes allow for
lock or seal set up to increase safety
in the event of data theft attempts.

The neoprene **o-ring**
keeps the case watertight.

Big-fold down
and rubberized **handles.**

Stainless steel pins
are used in hinges,
latches and handles
to prevent corrosion.

Twin-ribbed
top surface.

**Automatic pressure equalization
valve** releases air from the interior
while keeping water molecules out,
ensuring IP 65 protection class.

Extra thick **5.3 mm wall construction**
provides significantly greater strength
to weight ratio over conventional
injection moulding.

**Ultra High Impact Copolymer
Polypropylene** is extremely strong
and flexible against external impacts.

Portable case
- battery powered P150 design

The MultiCon and MultiLog data loggers inside a battery-powered P150 portable case is a solution designed for measurements in difficult energy areas, e.g. without a direct grid connection.

Each case is made to a specific order. When optimizing the equipment of the set, we always analyze the parameters and requirements of the application. In order to purchase a MultiCon or MultiLog recorder in a battery-powered case, please contact our consultants.

- battery type: Li-ion,
- battery capacity: 19.2 Ah (approx. 500 Wh),
- portable case supply voltage: 105 ÷ 260V AC,
- estimated battery operating time: 72 h,
- built in thermal, voltage and current protections,
- automatic charging of the battery when the case is connected to the mains.

The basic version of such a set includes:

- data logger in the selected configuration,
- Li-ion battery module,
- power switch,
- battery level indicator.

Additionally, it is possible to equip the case with:

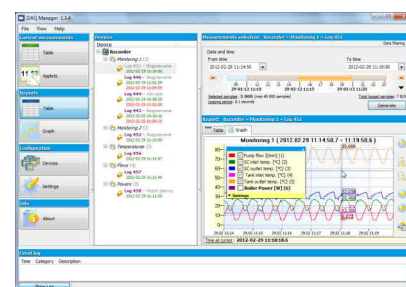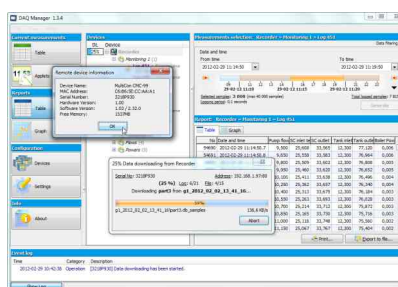- GSM communication module,
- WiFi module,

as well as to perform calibration for selected types of signals.
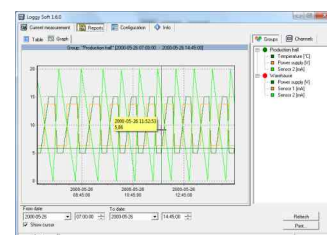
Software

1. Service of MultiCon controllers

DAQ Manager software allows to visualize recorded data in the form of graphs and tables, group measurement results, create reports and export data into other files.
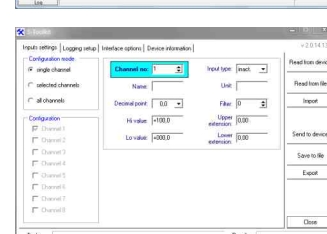
2. Service of MultiLog data loggers

- The Loggy Soft enables the visualization, archiving and printing of measurements (e.g. temperature, humidity, pressure) stored in MultiLog device memory.

- The S-Toolkit enables configuration reading and writing operations, updating the device firmware and obtaining basic information on MultiLog series devices through RS-485 serial interface or flash-disk devices plugged into USB port.

MultiCon

P130-CMC-99 / CMC-141
P150-CMC-99 / CMC-141

- P130: up to 23 input/output/communication connectors
- P150: up to 41 input/output/communication connectors
- colour display with touchscreen, TFT 3.5" or 5.7"
- RS-485 or Ethernet communication
- tight IP 65 case

MultiCon in a portable case is a combination of a multichannel controller / data recorder with a sealed waterproof and dustproof housing. This combination gives you the ability to safely perform measurements and record data in particularly demanding and difficult applications, for example, in field conditions with high dust, high humidity or high risk of flooding the device.

P130

Portable version of MultiCon line data recorder works wherever there is no need or possibility to install stationary devices. Portable case is equipped with all necessary connectors with IP 65 protection degree for connection of sensors, allowing for autonomous operation of the recorder under harsh environmental conditions. By equipping the case with communication interfaces: Ethernet and/or RS-485, the MultiCon can provide measurement data to a PC or a host system.

P150

The main advantages:
- USB Host port for retrieving data,
- waterproof and dustproof housing, designed to work in conditions of high humidity, high temperature jumps, dust, pressure differences, etc.
- free data analyze software.

SET CONTENTS

- portable case P130 or P150,
- MultiCon CMC-99 or CMC-141 controller/data recorder,
- power cable,
- connectors (socket-plug) for sensors and communication links in the ordered amount.

Optionally:
- DAQ Manager Software CD Box,
- LKS-99/141 licence key for data logging,
- MF-16 (16 GB) mini pendrive USB.

ACCESSORIES

MF-16: the mini USB memory stick is an incredibly small and stylish flash drive offering 16 GB data storage, ideal for transporting data, and fits inside the optional lockable door STD-99/141.

MultiCon

	CMC-99 in portable case	CMC-141 in portable case
Power supply	19V ÷ 50V DC, 16V ÷ 35V AC or 85V ÷ 260V AC/DC, 50-60 Hz or 105V ÷ 260V AC (with built-in Li-ion battery, capacity: 19.2 Ah, estimated battery operating time: 72 h, built-in thermal, voltage and current protections)	19V ÷ 50V DC, 16V ÷ 35V AC or 85V ÷ 260V AC/DC, 50-60 Hz or 105V ÷ 260V AC (with built-in Li-ion battery, capacity: 19.2 Ah, estimated battery operating time: 72 h, built-in thermal, voltage and current protections)
Inputs / outputs type	up to 23 or 41 input/output connectors: universal, analogue (0/4 ÷ 20 mA, 0/1 ÷ 5V, 0/2 ÷ 10V, 0 ÷ 30V), termocouple (J, K, S, T, N, R, B, E, L, ± 25 mV, ± 100 mV, -10 ÷ 25 mV, -10 ÷ 100 mV), resistance (Pt100, Pt500, Pt1000, Pt'50, Pt'100, Pt'500, Ni100, Ni500, Ni1000, Cu50, Cu100, Cu'50, Cu'100, 0 ÷ 300 , 0 ÷ 3k), counter / flowmeter / ratemeter, digital	up to 23 or 41 input/output connectors: universal, analogue (0/4 ÷ 20 mA, 0/1 ÷ 5V, 0/2 ÷ 10V, 0 ÷ 30V), termocouple (J, K, S, T, N, R, B, E, L, ± 25 mV, ± 100 mV, -10 ÷ 25 mV, -10 ÷ 100 mV), resistance (Pt100, Pt500, Pt1000, Pt'50, Pt'100, Pt'500, Ni100, Ni500, Ni1000, Cu50, Cu100, Cu'50, Cu'100, 0 ÷ 300 , 0 ÷ 3k), counter / flowmeter / ratemeter, digital
Sensor supply output	24V DC ±5% / typically 200 mA	24V DC ±5% / typically 200 mA
Communication interface	options: RS-485, Modbus RTU, 1200 ÷ 115200 bit/sec., Ethernet	options: RS-485, Modbus RTU, 1200 ÷ 115200 bit/sec., Ethernet
Display	TFT 3.5"; colour, graphic TFT, 320 x 240 pixels, with touchscreen	TFT 5.7"; colour, graphic TFT, 320 x 240 pixels, with touchscreen
Memory capacity Data recording speed	internal 3,5 GB from 0.1 s to 24 h with resolution 0.1 s	internal 3,5 GB from 0.1 s to 24 h with resolution 0.1 s
Protection class	IP 65	IP 65
Operating temperature	0°C ÷ +50°C (optional -20°C ÷ +50°C)	0°C ÷ +50°C (optional -20°C ÷ +50°C)
Weight	depending on equipment: ca. 2.5 kg (with P130 case), ca. 4 kg (with P150 case), ca. 8.5 kg (with battery-powered P150 case)	depending on equipment: ca. 2.5 kg (with P130 case), ca. 4 kg (with P150 case), ca. 8.5 kg (with battery-powered P150 case)
Dimensions	portable case P130: 285 x 246 x 174 mm portable case P150: 464 x 366 x 176 mm MultiCon CMC-99: 96 x 96 x 100 mm	portable case P130: 285 x 246 x 174 mm portable case P150: 464 x 366 x 176 mm MultiCon CMC-141: 144 x 144 x 100 mm

■ ORDERING

P130-CMC-<u>XXX</u>-<u>XX</u>-<u>X</u>-<u>X</u> *
P150-CMC-<u>XXX</u>-<u>XX</u>-<u>X</u>-<u>X</u> *

version:
99A : 3.5" display, case with a compartment for accessories/sensors, 11 (for P130, mounted on the right side of the case) or 41 (for P150) input/output/communication connectors max.
99B : 3.5" display, case without a compartment for accessories/sensors, 41 input/output/communication connectors max.
141A : 5.7" display, case with a compartment for accessories/sensors, 41 (for P150) input/output/communication connectors max. (not available for P130)
141B : 5.7" display, case without a compartment for accessories/sensors, 41 input/output/communication connectors max.

number of connectors:
1
2
...
23 (P130)
41 (P150)

Ethernet port:
0 : none
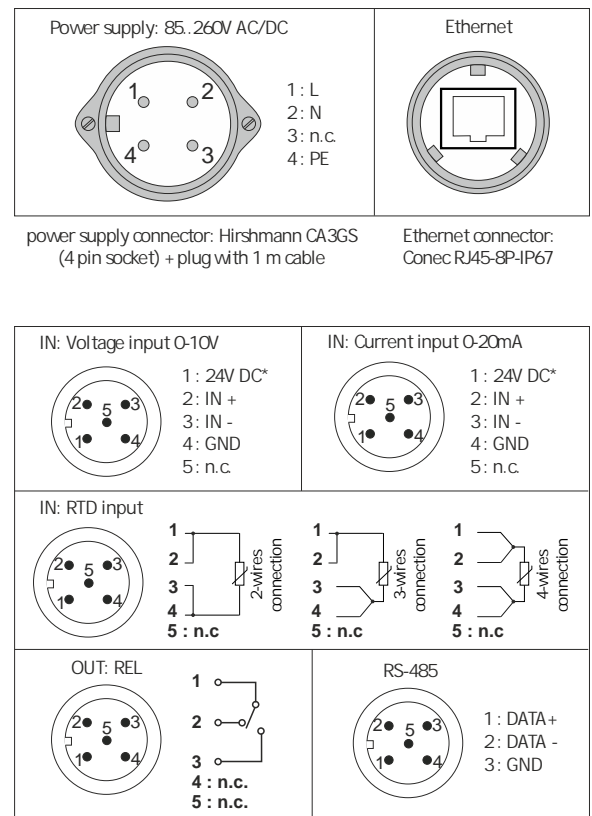4 : RJ45

power supply:
3 : 24V AC/DC
4 : 85V - 260V AC/DC
4-BATT : battery 105V - 260V AC**

* - full order code for the MultiCon CMC-99/141 should also be provided
** - battery power supply (Li-ion) only in the version P150 case without the accessory compartment

Ordering example:
P130-CMC-99A-5-4-3 with CMC-99-PS32/ETU/E/E/RT4-1B1
P150-CMC-141B-36-0-4 with CMC-141-PS42/E/I24/E/R121-1B1
P150-CMC-99B-13-4-4-BATT with CMC-99-PS32/ACM/UN3/HM4/E-101

■ EXAMPLARY PIN ASSIGNMENT

Power supply: 85..260V AC/DC	Ethernet
1 : L 2 : N 3 : n.c. 4 : PE	

power supply connector: Hirshmann CA3GS (4 pin socket) + plug with 1 m cable

Ethernet connector: Conec RJ45-8P-IP67

IN: Voltage input 0-10V
1 : 24V DC*
2 : IN +
3 : IN -
4 : GND
5 : n.c.

IN: Current input 0-20mA
1 : 24V DC*
2 : IN +
3 : IN -
4 : GND
5 : n.c.

IN: RTD input
2-wires connection
3-wires connection
4-wires connection
5 : n.c

OUT: REL
1
2
3
4 : n.c.
5 : n.c.

RS-485
1 : DATA+
2 : DATA -
3 : GND

examples of signal connections to connectors

MultiLog

P130-SRD-99
P150-SRD-99

- **P130**: up to 11 input/output/communication connectors
- **P150**: up to 13 input/output/communication connectors
- LCD 2.9" monochrome display
- USB Host port for flash data storage
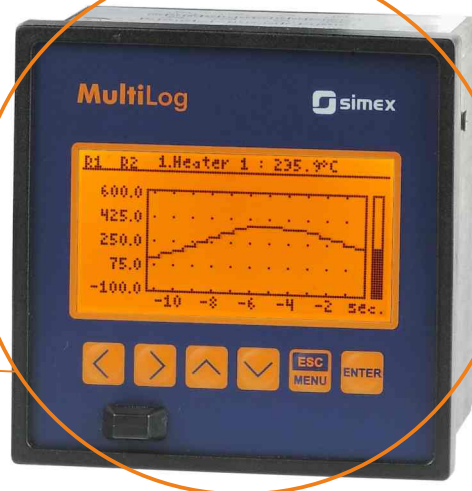- 2 electronic relay outputs optional

P130

The portable MultiLog SRD-99 data recorder set in a portable case is designed to record, display current or average values and present data in the form of trend graphs of various technological parameters. The set may be equipped with 1 to 8 measuring inputs: 0/4-20 mA or Pt100/500/1000 and, optionally, 2 relay outputs. The primary function of the outputs is signalling alarm states but the configuration menu also allows to use them in a variety of control systems. Each of the outputs can be controlled by a single channel or group of measurement channels with individually adjustable thresholds. The recorder was placed in a high quality transport case. High impact, dustproof and waterproof case housing allows to use the set virtually in any environmental conditions.

The main advantages:
- USB Host port to retrieve and store the data in flash memory (as standard, front or rear),
- waterproof and dustproof case housing, designed to work in conditions of high humidity, high temperature jumps, dust, pressure differences, etc.,
- 8 MB data memory,
- free configuration and recording software.
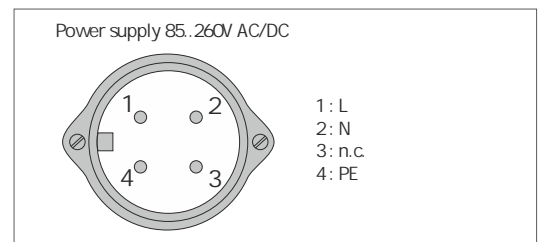
ACCESSORIES

MF-16: the mini USB memory stick is an incredibly small and stylish flash drive offering 16 GB data storage, ideal for transporting data, and fits inside the optional lockable door STD-99/141.
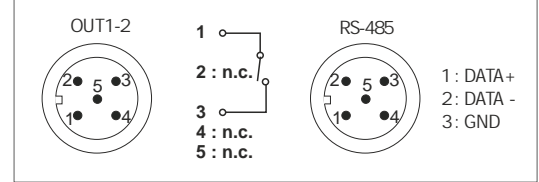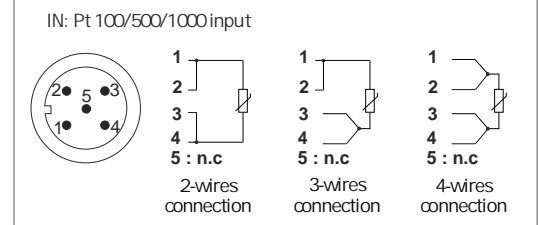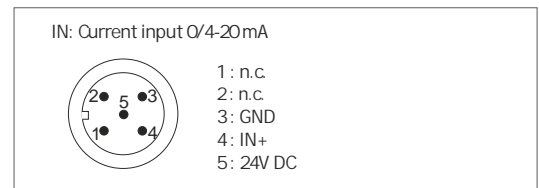
P150

MultiLog

	SRD-99 in portable case
Power supply	19V ÷ 50V DC, 16V ÷ 35V AC or 85V ÷ 260V AC/DC, 50-60 Hz or 105V ÷ 260V AC (with built-in Li-ion battery, capacity: 19.2 Ah, estimated battery operating time: 72 h, built-in thermal, voltage and current protections)
Measuring inputs Digital input	1, 4 or 8 measuring inputs 1 digital input, 10-30V DC
Measuring range	0/4-20 mA; 0/1-5V, 0/2-10V; TC (K, S, J, T, N, R, B, E); Pt100 / Pt500 / Pt1000 (4-wires); 0-60 mV, 0-75 mV, 0-100 mV, 0-150 mV
Outputs Sensor supply output	2 electronic relays (ER1, ER2), 24VAC (35VDC)/200 mA 24V DC / max. 200 mA, not separated
Communication interface	RS-485, Modbus RTU, 1200 ÷ 115200 bit/sec.; USB PC port and USB Host port (front or rear)
Display	2.9″ LCD, graphic, 128 x 64 points, with backlight (amber or white)
Memory capacity	8 MB internal (up to 3 000 000 data records)
Protection class	IP 65
Operating temperature	0°C ÷ +50°C (standard), -20°C ÷ +50°C (option)
Weight	depending on equipment: ca. 2.5 kg (with P130 case), ca. 4 kg (with P150 case), ca. 8.5 kg (with battery-powered P150 case)
Materials	body: Polypropylene; latch: ABS; lid O-Ring: Polymer; pins: Stainless Steel
Dimensions	portable case P130: 285 x 246 x 174 mm portable case P150: 464 x 366 x 176 mm MultiLog SRD-99: 96 x 96 x 100 mm

EXAMPLARY PIN ASSIGNMENT

Power supply 85..260V AC/DC

1 2
4 3

1 : L
2 : N
3 : n.c.
4 : PE

power supply connector: Hirshmann CA3GS (4 pin socket)
+ plug with 1 m cable

IN: Current input 0/4-20 mA

2 5 3
1 4

1 : n.c.
2 : n.c.
3 : GND
4 : IN+
5 : 24V DC

IN: Pt 100/500/1000 input

2 5 3
1 4

1
2
3
4
5 : n.c

2-wires connection

1
2
3
4
5 : n.c

3-wires connection

1
2
3
4
5 : n.c

4-wires connection

OUT1-2

2 5 3
1 4

1
2 : n.c.
3
4 : n.c.
5 : n.c.

RS-485

2 5 3
1 4

1 : DATA+
2 : DATA -
3 : GND

examples of signal connections to connectors

ORDERING

P130-SRD-99X-XX-O-X *
P150-SRD-99X-XX-O-X *

version:
A : case with a compartment for accessories/sensors
B : case without a compartment for accessories/sensors

power supply:
3 : 24V AC/DC
4 : 85V - 260V AC/DC
4-BATT : battery 105V - 260V AC**

number of connectors:
1
2
⋮
11 (P130)
13 (P150)

* - full order code for the MultiLog SRD-99 should also be provided
** - battery power supply (Li-ion) only in the version P150 case
   without the accessory compartment

Ordering example:
P130-SRD-99A-4-O-4 with SRD-99W-4T28-51-4-001
P150-SRD-99B-6-O-4-BATT with SRD-99A-4828-51-3-001

SET CONTENTS

- portable case: P130 or P150,
- MultiLog SRD-99 data logger,
- power cable,
- connectors (socket-plug) for sensors and communication links,
- compartment for accessories/sensors,
- CD-ROM with software and manuals.

Optionally:
- SRS-U4A-081
- MF-16 (16 GB) mini pendrive USB

Polska

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