

DATA PROCESSING

Data logger DL16

Part number: 9.172x.xx.xxx

The Datalogger DL16 is a complete measuring system for automatic acquisition and storing of meteorological and environmental measuring data: wind velocity, wind direction, temperature, precipitation, rel. air humidity, radiation, etc. In doing so, the DL 16 is characterized by its high flexibility.

Due to its internal structure it is possible to interlink any measuring values, to average individually, and to store in different intervals. For this, 4Mbyte data are available for the configuration, and 8Mbyte as data storage. For memoryintensive application also the storage of the SD card with a capacity of up to 4Gbyte can be used as archive. There are sampling intervals of 1 sec ... 10 min available, in which wind velocity values can be sampled by up to 4 Hz.

The acquisition and processing of all signals is conform to WMO recommendations and IEC 61400-12-1.



Specification

Part number: 9.172x.xx.xxx

Analogue data sampling

A/D - converter	24 bit
Accuracy	±0.01 % of meas. range
Noise ratio	typ. 100dB @ 50Hz
Input voltage	fully bipolar inputs with typ. 20 V common-mode input voltage range

Multifunction inputs

Quantity	16
Function	6 x wind speed 8 x wind direction 6 x counter 16 x PT100 16 x PT1000 16 x -40 ... 40 mV 16 x 0 ... 100 mV 16 x 0 ... 1 V 16 x 0 ... 10 V 16 x 0 ... 20 mA 16 x 4 ... 20 mA 16 x status (0 ... 5 V)

Precipitation

Electrical input	6 x impulses (0 ... 5 V) 16 x status (0 ... 5 V)
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Wire break detection	yes
Resolution	0.1 or 0.2 mm
Radiation	
Electrical input	16 x -40 ... 40 mV
Accuracy	±1 W/m² (@ 15 µV/W sensitivity)
Temperature	
Electrical input	16 x PT100 16 x PT1000
Measuring range	-40 ... +70 °C
Accuracy	±0,01 mK
Rel. Humidity	
Electrical input	16 x 0 ... 1 V
wire break detection	yes
Measuring range	0 ... 100 % rel. h.
Accuracy	±0.0001% rel. h.
Air pressure	
Electrical input	16 x 0 ... 5 V
Measuring range	800 ... 1060 hPa
Accuracy	±0.0005 hPa
Miscellaneous	
Electrical input	16 x 0 ... 100 mV 16 x 0 ... 1 V 16 x 0 ... 10 V 16 x 0 ... 20 mA 16 x 4 ... 20 mA 1 x high current input 0 ... 1 A (galvanic decoupled) 1 x high current 0 ... 10 A (galvanic decoupled)
Serial interfaces	
Quantity	7
Configuration	COM1: USB COM2: RS232 or RS485 HD/FD COM3: RS232 or RS485 HD/FD COM4: RS485 HD/FD COM5: RS485 HD/FD COM6: optional with additional interface Ethernet: UDP, WEB, FTP
Supported devices	COM2, COM3, COM4, COM5, COM6 supports: LPM, US2D, US2D Compact, Clima Sensor US, WSC11, Sensor Interface

Function	COM1: Configuration COM2: Sensors, data access COM3: Sensors, data access COM4: Sensors, data access COM5: Sensors, data access COM6: Sensors, data access, modem Ethernet: Configuration, Sensors, data output, NTP
Data output digital	
Output type	4 x heavy-power disconnectors max. 60V DC/AC and max 10 A each
Data management	
Measurement cycle	1 ... 3600 s
Memory cycle	1 ... 3600 s
Memory capacity	8 MByte internal 1 x SD card via slot
Number data records	storing capacity max. 1 year, depending to configuration
Output of archive values	serial via COM1 (ASCII - formatted) serial via COM2 (ASCII - formatted) serial via COM3 (ASCII - formatted) serial via COM4 (ASCII - formatted) serial via COM5 (ASCII - formatted) serial via Telnet (ASCII - formatted) Export to SD - card (ASCII - formatted)
Time base	
Type	real-time clock with automatic leap-year identification, battery-backed
Synchronisation	$\pm 3.5 \text{ ppm} = \pm 0.3 \text{ s} / 24 \text{ h}$ in the range from $-40 \dots +85^\circ\text{C}$; NTP, DCF77, GPS - receiver
Operating voltage	
Electronic	110 ... 230 V AC
Current consumption	min. 3.5 mA max. 115.0 mA
Battery connection	for 12 V battery
Internal battery charger	15 ... 18 V
General	
Operation	1 rotary switch on device. Remote operation via serial interfaces (COM1, USB) or Ethernet (Telnet)
Ambient temp.	$-30 \dots +60^\circ\text{C}$
Electr. connection	clamp
Dosplay	LCD-Display 4 x 20 digits

Mounting	mast tube or wall
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Versions

As per 9.172x.xx.xxx, but:

Product number 9.1720.00.000

General	
Protection	IP 66
Dimension	300 x 380 x 155mm
Weight	6 kg

Product number 9.1721.00.000

General	
Protection	IP 66
Dimension	380 x 600 x 210 mm
Weight	8 kg

Product number 9.1722.20.000

General	
Protection	IP 66
Dimension	380 x 600 x 210 mm
Weight	8 kg

Accessories

Product	Product name	Brief description
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Meteo-Online
9.1700.98.x01

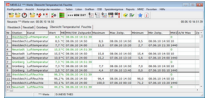
Meteo-Online is a software for detecting, filing, and displaying data of meteorological measuring instruments. The display of the data is carried out graphically as diagram and/or as text. The user has the possibility to place the display-elements free on the screen, and to save them.

Data display

Monitor - display	- Values - Diagrams - Tables - Windrose - Time - Date
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Compatibility

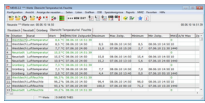
Connectable instruments	- US-Anemometer - Datalogger - Clima Sensor - Weather station WSC11 - Wind display - etc.
System requirements	PC mit - Prozessor > 1 GHz - RAM > 1 GB
Operating system	- Windows 2003 SP2 - Windows Server 2008 - Windows 7 - Windows Server 2008 R2 - Windows 7 SP1 - Windows Server 2008 R2 SP1 - Windows 8 - Windows 10



Mevis Light
9.1796.40.xxx

PC- program for automatically data request of THIES- data logger with archiving, vdata visualisation and evaluation

Compatibility	
Connectable instruments	all THIES data logger
System requirements	PC mit - Prozessor > 1 GHz - RAM > 1 GB
Operating system	- Windows 2003 SP2 - Windows Server 2008 - Windows 7 - Windows Server 2008 R2 - Windows 7 SP1 - Windows Server 2008 R2 SP1 - Windows 8 - Windows 10
Software	
max. stations	5
max. components per station	30
ASCII - import	not available
MEVIS data path	fix, not changeble
automatical data export	only manually via dialog
Extentions	no
Lizence protection	intalledUser



Mevis Full Version
9.1796.50.xxx

PC- program for automatically data request of THIES- data logger with archiving, vdata visualisation and evaluation

Compatibility	
Connectable instruments	all THIES data logger
System requirements	PC mit - Prozessor > 1 GHz - RAM > 1 GB
Operating system	- Windows 2003 SP2 - Windows Server 2008 - Windows 7 - Windows Server 2008 R2 - Windows 7 SP1 - Windows Server 2008 R2 SP1 - Windows 8 - Windows 10
Software	
max. stations	99
max. components per station	99
ASCII - import	available
MEVIS data path	configurable
automatical data export	available
Extentions	MEVIS viewer
Lizence protection	hardware dongle