

MRL-7, MRL-7B, MRL-7-GPS, MRL-7B-GPS, MRL-7O

Data logger



The MRL-7 is a compact data logger designed to acquire, process and store all sorts of environmental data. Its waterproof housing, integrated modem and solar charger make the MRL-7 ideal for remote, autonomous monitoring applications. The MRL-7 is compatible with all sensors offered by SOMMER Messtechnik and all third-party devices equipped with analog, SDI-12 or RS485 interface options.

Versions

Art	Version
20054	MRL-7 data logger with integrated 2G / 3G modem and solar charger
20992	MRL-7 data logger with integrated 4G modem (Europe) and solar charger
20061	MRL-7 data logger with integrated 4G modem (North America) and solar charger
20056	MRL-7B data logger with integrated 2G / 3G modem, solar charger, 4 Ah lead-acid battery
20840	MRL-7O data logger with integrated solar charger
20055	MRL-7 data logger with integrated GPS receiver, 2G / 3G modem and solar charger
20057	MRL-7B data logger with integrated GPS receiver, 2G / 3G modem, solar charger, 4 Ah lead-acid battery

Scope of delivery

Name
MRL-7 in the required version
Manual and Commander Software on USB stick

Accessories

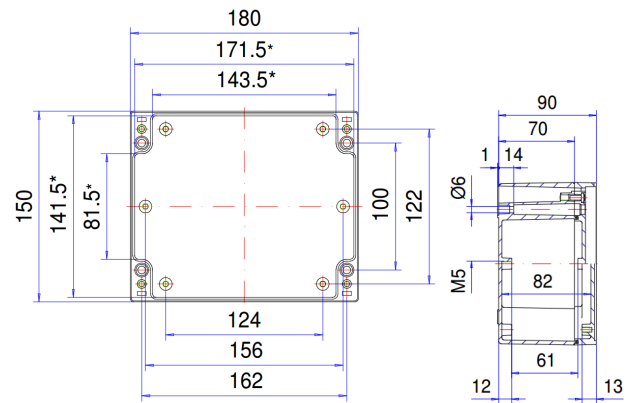
Art	Accessory
20181	RS-232 to USB converter cable with push-pull connector, 1.8 m
21118	Antenna for MRL-7 and DCM-3 with 2.5m cable for 2G / 3G / 4G / Bluetooth / WiFi 2.4, with SMA / M connector
20595	Digital time laps camera
20436	Blanking plug for unused cable glands
20434	Internal connector set
	GPS antenna for GPS-versions of MRL-7 available on request

Specifications

Device specifications	
Power supply	11.5 ... 28 VDC; Overvoltage and reverse voltage protection Solar panel supply: max. 40 W/12 V MRL-7B: Internal lead-acid battery: 12 V/4 Ah, deep-discharge protected
Power consumption	Active: <23 mA @12V Standby: <0.6 mA @ 12V
Sensor supply	100 mA @ 5V 200 mA @ 12V 1x 1.10 A and 3 x 0.50 A @ switched supply voltage (max. 2 A in total)

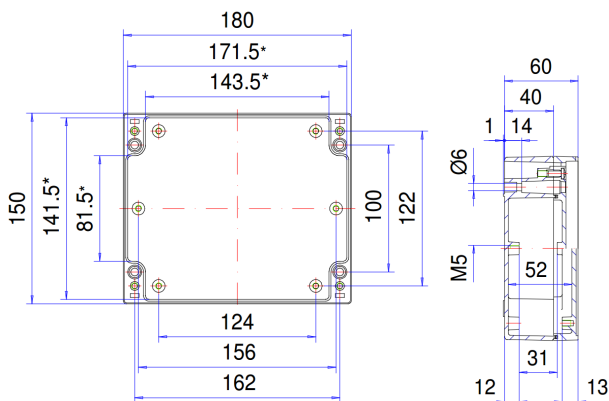
Device specifications

Inputs	<ul style="list-style-type: none"> 4x Analog 0...2.5 V, 16 bit (3 single ended, 1 differential) 2x Counter (one optionally as encoder) 1x Wind speed 1x Wind direction 1x RS-485 sensor or camera input 1x SDI-12 (MRL-7 as master) 1x Manual observer input (has no measurement input; only accepts an offset)
Outputs	<ul style="list-style-type: none"> 3x Switch output (each approx. 500 mA @ supply voltage) 1x RS-232 (1200...115200 Baud, ASCII protocol) 1x RS-485 1x USB 1x Bluetooth
Memory	<ul style="list-style-type: none"> 4 MB internal flash memory (equivalent to approx. 500'000 measurement values) 32 GB SD-card (write only)
Measurement interval	1 s ... 24 h
Mobile modem	<ul style="list-style-type: none"> 2G, 3G (optionally 4G) 3 FTP/HTTP servers Functions: IP call, fixed IP, time-synchronization via NTP, e-Mail and SMS messages
Operating temperature	-30 ... 60 °C (-22...140 °F), 10...95 %rH
Storage temperature, humidity	-40 ... 85 °C (-40...185 °F), 10...95 %rH
Protection rating	IP 67
Size L x W x H	<ul style="list-style-type: none"> MRL-7: 180 x 150 x 60 mm (7.09 x 5.91 x 2.36 inch) MRL-7B: 180 x 150 x 90 mm (7.09 x 5.91 x 3.54 inch)
Weight	<ul style="list-style-type: none"> MRL-7: 1260 g (2.78 lb) MRL-7B: 1610 g (3.55 lb)



Dimensions MRL-7B

Figure 1 MRL-7 dimensions



Dimensions MRL-7