

MRL-IE, MRL-IEa

Analog extension module



The MRL-IE is a compact data acquisition module designed to acquire, process and transmit all sorts of environmental data. It is compatible with all sensors offered by SOMMER Messtechnik and numerous third-party devices equipped with analog or SDI-12 interfaces. The MRL-IE extends the input ports of Sommer Messtechnik MRL data loggers and offers conversion between RS-485 and SDI-12 signals.

The MRL-IEa is equipped with an additional analog output board that adds multiple analog, pulse and digital switch outputs.

Versions

Art	Version
	MRL-IE (standard version)
	MRL-IEa with analog output extension

Scope of delivery

Qty.	Name
1	MRL-IE in the required configuration
1	Manual and Commander Software on USB stick
5	Blanking plug for unused cable glands

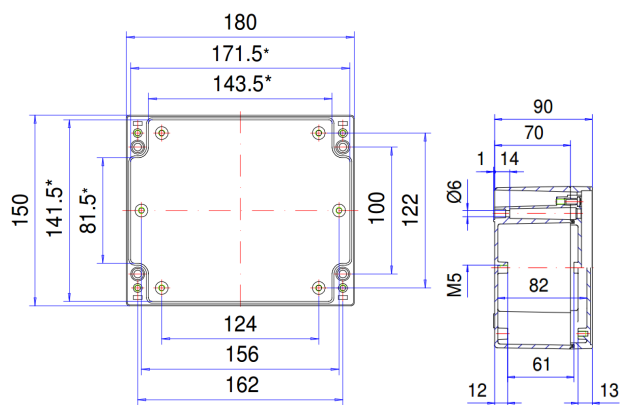
Accessories

Art	Accessory
20181	RS-232 to USB converter cable with push-pull connector, 1.8 m
21118	Antenna for MRL-IE 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

Specifications

Device specifications	
Power supply	9...28 VDC; Overvoltage and reverse voltage protection deep-discharge protected if used with optional battery
Power consumption	min. 0.65 mA @ 12V
Sensor supply	500 mA @ 5 V 500 mA @ 12/14 V 500 mA @ switched supply voltage
Referenced sensor supply	200 mA @ 2.5 V 100 mA @ 2.5 V (wind vane reference)
Inputs	8x Analog 0...2.5 V / 4...20 mA / Resistance; 16 bit resolution (internal 100 Ω -shunts) 1x Counter (max. 25 Hz @ 50% duty cycle) 1x Wind speed (frequency) 1x Wind direction (potentiometer) 1x RS-485 1x SDI-12 as primary/master (version 1.3) All analog inputs are equipped with over-voltage fine protection up to 36 V
Outputs	1x RS-485 (9600...115200 Baud), Modbus RTU 1x SDI-12 as secondary/slave (version 1.3) 4x Analog current output (MRL-IEa) 6x Switched output @ supply voltage (can be used as pulse output by adding a pull-down resistor)
Number of recorded variables	max. 99
Measurement interval	2 s ... 12 h

Device specifications	
Statistics interval	10 s ... 12 h
Operating temperature	-40...60 °C (-40...140 °F)
Storage temperature	-40...60 °C (-40...140 °F)
Protection rating	IP67
Lightning protection	Integrated protection against indirect lightning with a discharge capacity of 6 kA Ppp
Housing material	Aluminium, powder coated
Size L x W x H	180 x 150 x 90 mm (7.09 x 5.91 x 3.54 inch)
Weight	1.48 kg (3.26 lb)



Dimensions MRL-IE