MRL-IE

Analog extension MRL-IE

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 analogor SDI-12 interfaces. The MRL-IE extends the input ports of MRL data loggers and offers conversion between RS-485 and SDI-12 signals.

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

Versions

- **MRL-IE**
- **MRL-IEa** with additional analog and digital output board

FEATURES

- 8 analog inputs individually configurable
- Signal conversion from analog to SDI-12, RS485 and Modbus RTU
- Signal conversion from SDI-12 to RS485 and Modbus RTU
- Parallel SDI-12, Modbus RTU and analog output
- Acquisition of up to 99 variables
- Multiple sensor voltage supplies

Additionally with **MRL-IEa**

- Signal conversion from SDI-12 and RS485 to analog
- Impuls output of acquired quantities, e.g. for flowmeters
- Parallel SDI-12, Modbus RTU, analog and impuls output

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 ?-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 overvoltage fine protection up to 36 V
- **Outputs**
    - 1x RS-485 (9600...115200 Baud), ModbusRTU
    - 1x SDI-12 as secondary/slave (version 1.3)
    - Additionally with **MRL-IEa**
    - 4x Analog current output
    - 6x Switched output @ supply voltage (can be used as pulse output by adding a pulldown resistor)
- **Number of recorded variables** max. 99
- **Measurement interval** 2 s … 12 h
- **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 kAPpp
- **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)