SENTERA CONTROLS

ALR -M1
Alarm device

ALR -M1 is an audible and visual signal device intended to generate alarms and indicate failures or alerts. It needs a master unit, such as the Sentera RDPU or any BMS or master module that is able to write a value in the correct Modbus holding registers. The device is Power over Modbus supplied and all parameters are accessible via Modbus RTU.

Key features

- Three LED indicators activated via Modbus RTU
- Piezo buzzer activated via Modbus RTU
- Power over Modbus
- RJ45 or terminal block connection
- 3 open collector outputs for supplying external devices such as LED indicators or relays
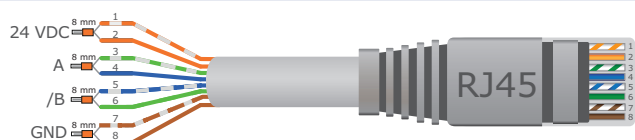- Bootloader for uploading new firmware via Modbus RTU

Technical specifications

Power supply		24 VDC, Power over Modbus
Open collector outputs		24 VDC / 100 mA per output
Maximum Power consumption		0,48 W
Nominal or average power consumption in normal operation		0,36 W
Imax		20 mA
Protection standard		IP65 (according to EN 60529)
Ambient conditions	Temperature	-0—50 °C
	Rel. humidity	5—95 % rH (non-condensing)

Wiring and connections

INPUT	
RJ45 connection [1]	

24 VDC	Supply voltage 24 VDC
GND	Supply voltage, ground
A	Modbus RTU communication, signal A
/B	Modbus RTU communication, signal /B
Terminal block connection [1]	
V+	Supply voltage 24 VDC
GND	Supply voltage, ground
A	Modbus RTU communication, signal A
/B	Modbus RTU communication, signal /B
OUTPUT (optional)	
V+	24 VDC output supply connection
Green	Digital output 1 (open collector, max. 100 mA) to control a relay or external indication light
Yellow	Digital output 2 (open collector, max. 100 mA) to control a relay or external indication light
Red	Digital output 3 (open collector, max. 100 mA) to control a relay or external indication light
Output connections	Spring contact terminal block: pitch 3,5 mm; 1,5 mm²; max. 100 mA per output

[1]Attention! ALR -M1 needs to be supplied via the RJ45 connector or via the connection terminals. Do not connect the device via the RJ45 connector and the terminal block simultaneously!

Modbus registers

The Sensistant Modbus configurator allows you to easily monitor and/or configure Modbus parameters.

The parameters of the unit can be monitored / configured through the 3SModbus software platform. You can download it from the following link:
https://www.sentera.eu/en/3SMCenter

For more information about the Modbus registers, please refer to the product Modbus Register Map.

Standards

- EMC directive 2014/30/EC
    - EN 61000-6-1:2007 Electromagnetic compatibility (EMC) - Part 6-1: Generic standards - Immunity for residential, commercial and light-industrial environments
    - EN 61000-6-3:2007 Electromagnetic compatibility (EMC) - Part 6-3: Generic standards - Emission standard for residential, commercial and light-industrial environments Amendments A1:2011 and AC:2012 to EN 61000-6-3
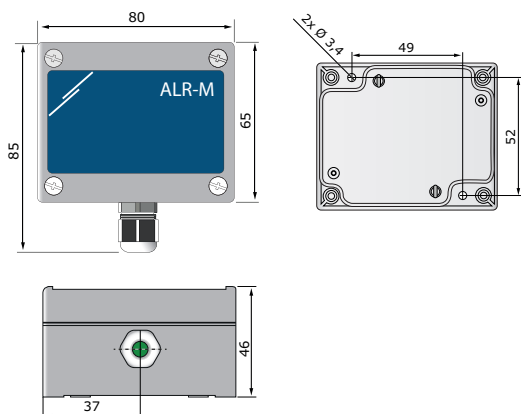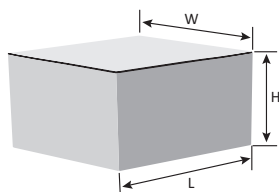- WEEE Directive 2012/19/EC
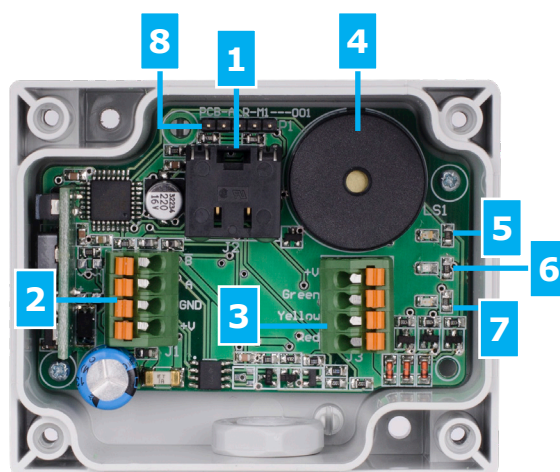- RoHs Directive 2011/65/EC

CE

Fixing and dimensions

Packaging

Article	Packaging	Length [mm]	Width [mm]	Height [mm]	Net weight	Gross weight
ALR -M1	Unit (1 pc.)	95	85	70	0,116 kg	0,117 kg
	Carton (10 pcs.)	495	185	87	1,16 kg	1,27 kg
	Box (60 pcs.)	580	380	280	6,96 kg	7,10 kg

Indications and settings

1 - RJ45 Socket[1]		Plug the communication and power cable into the socket
2 - Supply terminal block[1]		Power supply and communication connection
3 - Output terminal block		Output connection
4 - Piezo buzzer		Audible alarm signal
5 - Red	Continuous	Visual alarm signal accompanied by audible alarm signal
	Blinking	Bootloader mode activated
6 - Yellow	Continuous	Warning
7 - Green	Continuous	OK
8 - PROG header, P1	1 2 3 4 5	Put a jumper onto pins 1 and 2 and wait for at least 5 seconds to reset the Modbus communication parameters
	1 2 3 4 5	Put a jumper onto pins 3 and 4 and restart the supply to enter bootloader mode

[1]*Attention! ALR -M1 needs to be supplied via the RJ45 connector or via the connection terminals. Do not connect the device via the RJ45 connector and the terminal block simultaneously!*