

SIMARINE SCQ25 Quadro digital shunt module

EN

DE



USERS MANUAL Revision 1.0

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1 Introduction

SCQ25 digital shunt module is Simarine's most versatile module. It can be used to measure voltage, current.

SCQ25 has 4x 25 A integrated shunts capable of measuring voltage up to 35 V DC and continuous current up to 25 A on each shunt.

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2 Safety

Installation of Simarine electronics should be made by electrical specialists with proper safety equipment. When working with batteries you should wear protective clothing and eye protection.

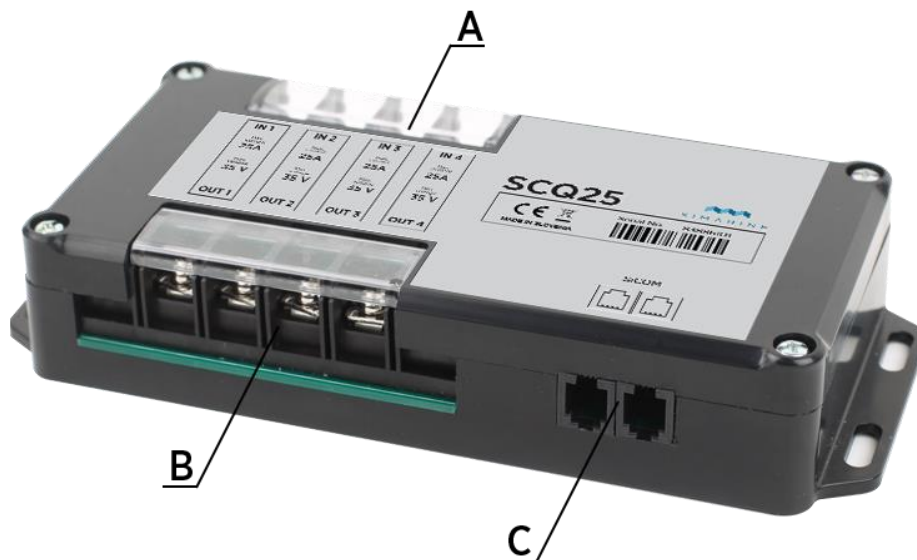
CAUTION: Batteries contain acid, a corrosive, colorless liquid that will burn your eyes, skin and clothing. Should the acid come in contact with eyes, skin or clothing, wash it immediately with soap under fresh water for at least 15 minutes, and seek medical support immediately.

CAUTION: Do NOT connect anything to a damaged battery. It could heat up, catch fire or explode.

CAUTION: Lead-acid Batteries can generate explosive gases during operation. Never smoke, allow flames or sparks near the battery. Make sure to keep sufficient ventilation around the battery.

CAUTION: When working with a battery remove all personal metal items like watches, rings, necklaces and bracelets. Metal items in contact with the battery terminals might cause a short circuit with a very high electric current, which may heat up and melt nearby objects and cause severe burns.

3 Overview



Picture 1 SCQ25

A – 4x shunt input

B – 4x shunt output

C – 2x SiCOM port

4 Installation

4.1 Mounting

CAUTION: install the shunt module in a clean dry place, protected from accidental spilling of liquids.

- You can fix the shunt module with the supplied screws using four holes on both sides of the module.
- Connect all cables (see section 4.3 Connecting).

4.2 Cables

4.2.1 SiCOM data cable

For the SiCOM connection use the supplied cable. If not possible, use the following table to determinate the right cable type.

Cable length	Cable type
< 5m	No limitations
>= 5m	2x2x0.25 mm ² Twisted pair (recommended)

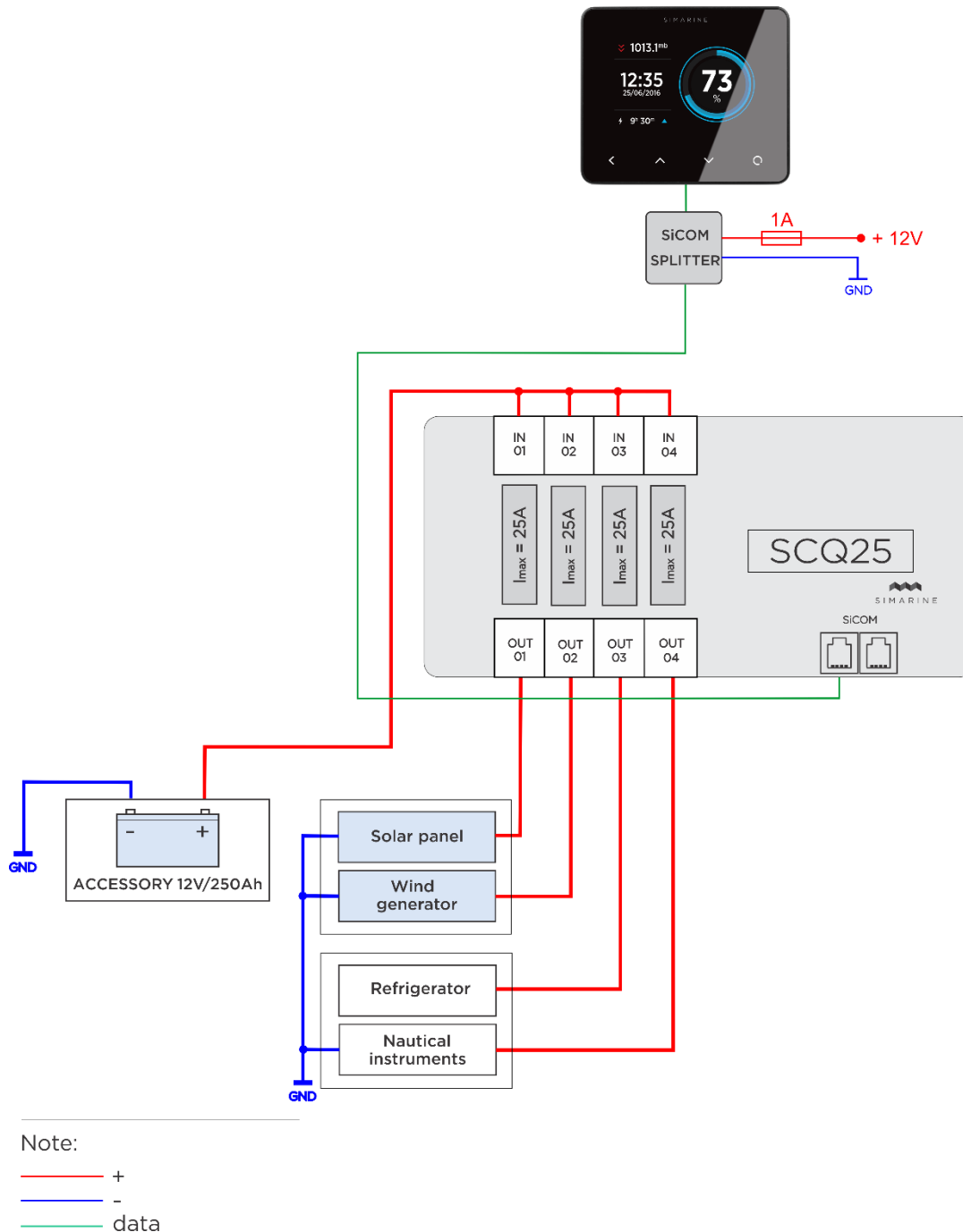
4.3 Connecting

For proper function of Simarine SCQ25 digital shunt module it is necessary to:

1. Connect SCQ25 to Simarine PICO via the SICOM port.
2. Connect consumers/generators minus or plus terminal through one SCQ25 shunt. *

* Each correctly connected shunt needs to be configured. This is done via PICO in an easy way. The configuration process is described in PICO's manual.

4.3.1 SCQ25



Picture 2SCQ25 (POS)

5 Technical specifications

Operating	
Voltage range	6 - 35 V
Temperature range	-20 – 70 °C (-4 – 158 °F)
Power consumption at 12V	
Operating	2.5 mA
Current Measuring (per channel)	
Range	0.01 – 25 A
Accuracy	0.6 %
Resolution	0.01 A
Sampling rate	100 ms
Maximal current	
Continuous	25 A
Peak current (<1min)	35 A
Dimensions	183x91x34 mm
Connectivity	Up to
Shunt	4
SICOM port	2

Table 1 Technical specification

6 Trouble shooting

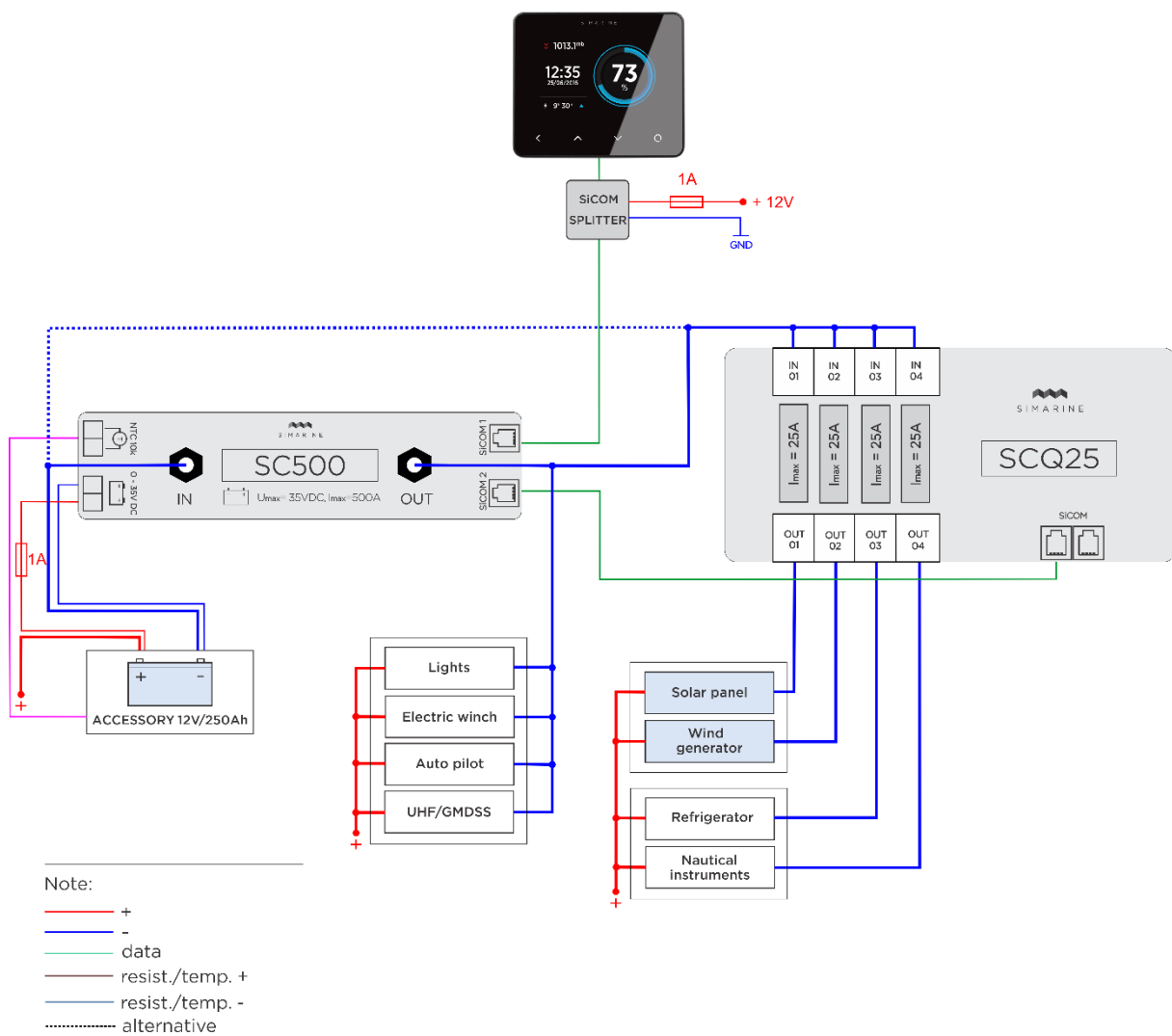
6.1 Negative current values

If PICO is showing wrong sign for current value. Check if the shunt is correctly installed. This means the consumers/generators minus (optionally plus) terminal is connected to the IN terminal on the shunt. If this is not the case, you can reinstall the shunt or simply switch the IN and OUT terminal via the shunt configuration on PICO.

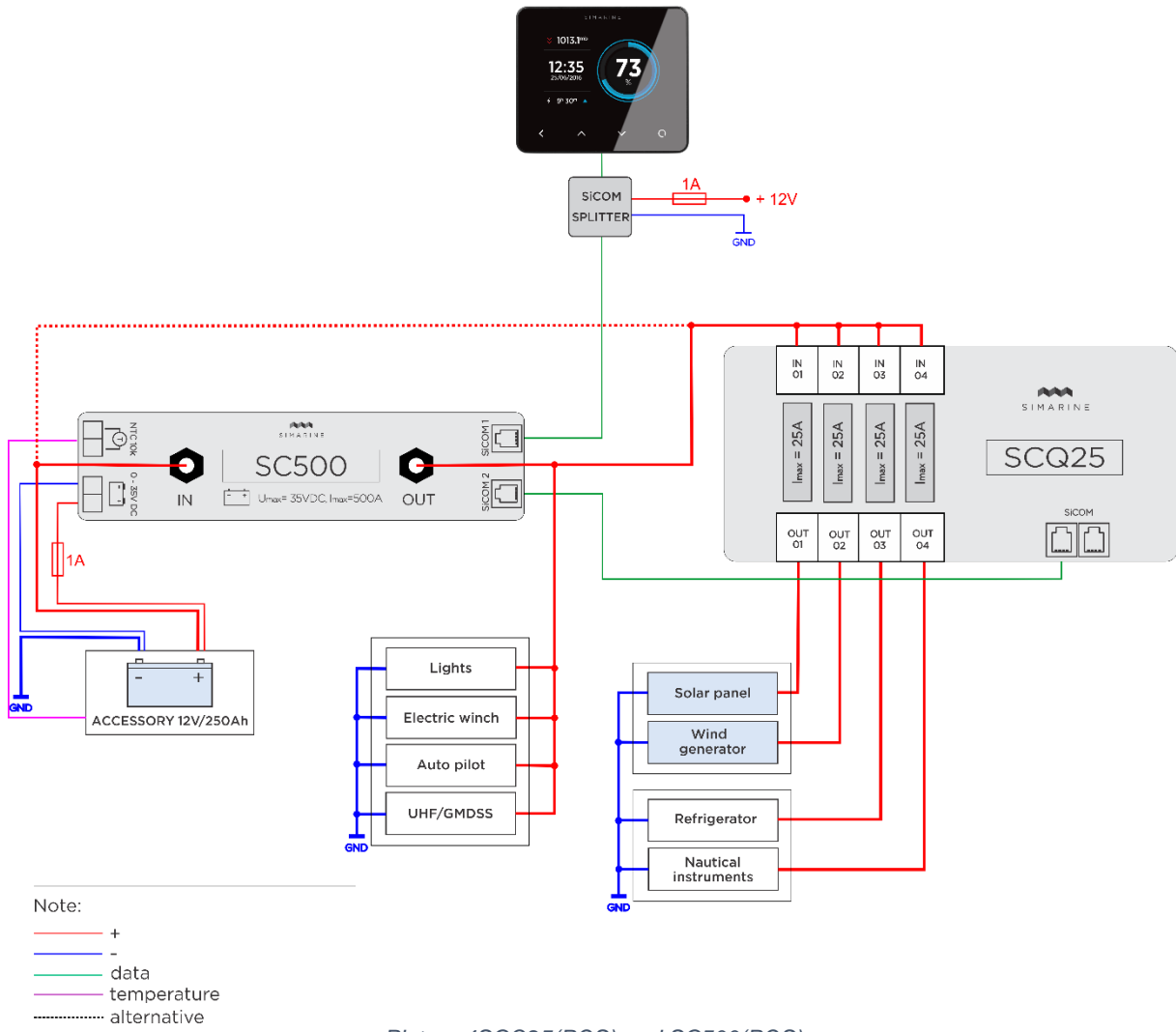
6.2 Shunt sensor is not visible on pico

If the shunt sensor is not visible in PICO's menu, check the following:

- Is the SCQ25 properly connected via the SiCOM port to the PICO.
- If you are using your own SiCOM cable make sure it has the right square and is twisted.



Picture 3SCQ25(NEG) and SC500(NEG)



Picture 4 SCQ25(POS) and SC500(POS)