



SCQ25 & SCQ50

USER MANUAL

V1.0

SCQ25 & SCQ50

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1. Introduction

SCQ 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.

SCQ50 has 4x 50 A integrated shunts capable of measuring voltage up to 35 V DC and continuous current up to 50 A on each shunt.



2. EU Declaration of conformity



MANUFACTURER: SIMARINE d.o.o.

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Declares that the following product:

PRODUCT TYPE: SCQ25 & SCQ50

Is in conformity with the relevant European union harmonization legislation:

EMC Directive 2014/30/EU

(as per harmonized standards EN EIC 61000-6-1:2023, etc.)

Low Voltage Directive 2014/35/EU

(as per harmonized standards EN EIC 62368-1:2023)

Radio Equipment Directive 2014/53/EU

(as per harmonized standards ETSI EN 300 328, ETSI EN 301 489-1, ETSI EN 301 489-17 and EN 18031)

UNECE Regulation No. 10 (ECE-R10)

(as per the latest applicable version, e.g., ECE-R10, Rev.6/Amend.5)

RoHS Directive 2011/65/EU and amendments

(as per harmonized standards EN EIC 63000:2018.)

3. Safety

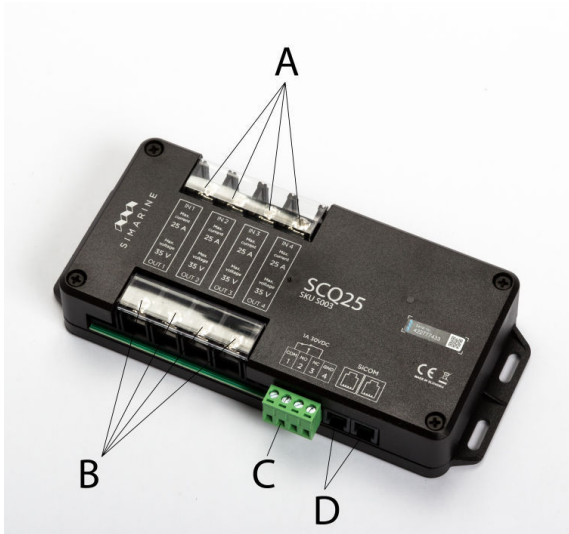
Electrical specialists with proper safety equipment should make installation of Simarine electronics. When working with batteries, you should wear protective clothing and eye protection.

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 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.

4. Overview



- A - 4x shunt input
- B - 4x shunt output
- C - 1x Alarm signal relay
- D - 2x SiCOM port

5. Installation

5.1 Mounting

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

1. You can fix the module with the supplied screws using four holes on both sides of the module.
2. Connect all cables

5.2 Cables

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	2 x 2 x 0.25 mm ² Twister pair (recommended)

Note: Minimum power cable cross-section requirement at maximal temperature of insulation 70 °C (160 °F).

6. Connecting

For proper function of Simarine's SCQ digital shunt **it is necessary to take the following steps:**

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

- PICO manual & other user manuals: <https://simarine.net/support/>

CAUTION: After connecting the shunt, make sure that all the connections between cables and shunt are tight. Loose connections may cause sparks, heating and even a fire. It may also damage the shunt.

7. Technical specifications

SCQ25	
Operating	
Voltage range	6 - 35 V
Temperature range	-20°C - 70°C (-4°F - 158°F)
Power consumption at 12V	
Operating	2.5 mA
Current Measuring (per channel)	
Range	0.01 - 25 A
Accuracy	1%
Resolution	0.01 A
Sampling rate	100 ms
Maximal current	
Continuous	25 A
Peak current (<1min)	35 A
Dimensions	183 x 91 x 34 mm
Current channels	4
Connectivity	SiCOM
Alarm contact	1

SCQ50	
Operating	
Voltage range	6 - 35 V
Temperature range	-20°C - 70°C (-4°F - 158°F)
Power consumption at 12V	
Operating	2.5 mA
Current Measuring (per channel)	
Range	0.01 - 50 A
Accuracy	1%
Resolution	0.01 A
Sampling rate	100 ms
Maximal current	

Continuous	50 A
Peak current (<1min)	60 A
Dimensions	183 x 91 x 34 mm
Current channels	4
Connectivity	SiCOM
Alarm contact	1

Safe Voyage.



S I M A R I N E

SIMARINE marine electronics

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