



Technical Application Note

Piktronik drives (SAC1/SAC4) - Copenhagen Subsea Thrusters

Revised June 29th, 2020

1. Where to find Drive documentation

All documentation can be found on the website of Piktronik: <https://www.piktronik.com/>

2. Where to download SACTERM software

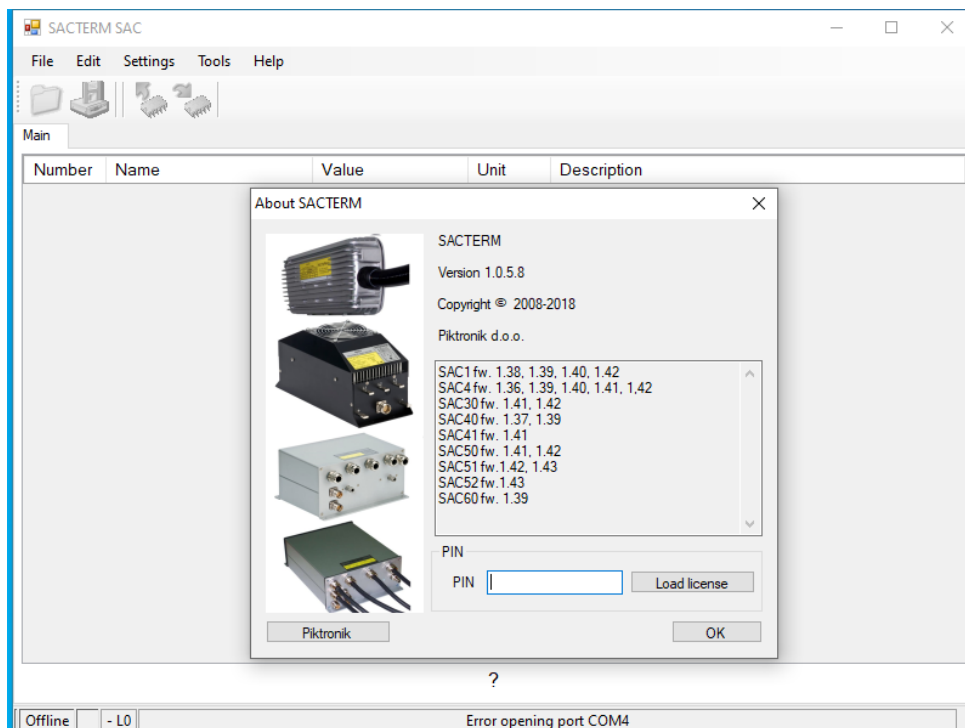
SACTERM is a software developed by Piktronik for easy commissioning of the drive. It allows easy setting of drive parameters and diagnostics.

It can be downloaded in the following link:

<http://www.piktronik.com/index.php/en-products-software>

3. How to load configuration file (specifically adapted to thruster) into Piktronik

- 1-Download SACTERM software as explained in 2.
- 2-Connect the SAC-USB2 adapter to your USB port.
- 3-Power up the controller with the motor disconnected.
- 4-Open SACTERM and click 'Help' – 'About'. Then insert PIN:2265
- 5- Go to 'Parameters' and then click 'Write data'
- 6- Load the desired configuration file (.p1_142 extension)





4. What are the cable Kits provided by Piktronik

Two different cable kits are provided:

1-Part number : C4B6

Used for quick commissioning/testing of the thruster and drive solution. Wiring diagram and components used at Copenhagen Subsea A/S facilities can be seen in the Appendix *Fig 1*.

Extra components:

- 1 kOhm potentiometer needs to be connected between POT and GND pins.
Used @CS : EATON M22-R4K7 (any similar can be used)
<https://dk.rs-online.com/web/p/drejeafbrydere-og-drejeomskiftere-tilbehor/6206024/>
- Emergency OFF button in series with ON/OFF button needs to be connected between pins +Ubat and Start
Used @CS : EATON M22-PV / M22-DRL-W (any similar can be used)
<https://dk.rs-online.com/web/p/products/8475184>
<https://dk.rs-online.com/web/p/trykknaphoveder/1104552/>

2-Part number : C4DR6V7

Used by the customer with self-developed CAN communication protocol. Wiring diagram can be seen in the Appendix *Fig 2*.

NOTE : A graphic display (GD2) that communicates via CAN protocol is included in the wiring diagram (enclosed by an orange rectangle). This graphic display is however not included, as the CAN communication is to be self-developed and integrated by the customer.

For more information regarding CAN mode please refer to section 2.14 in '*Piktronik Motor Controller Manual*'.



Appendix

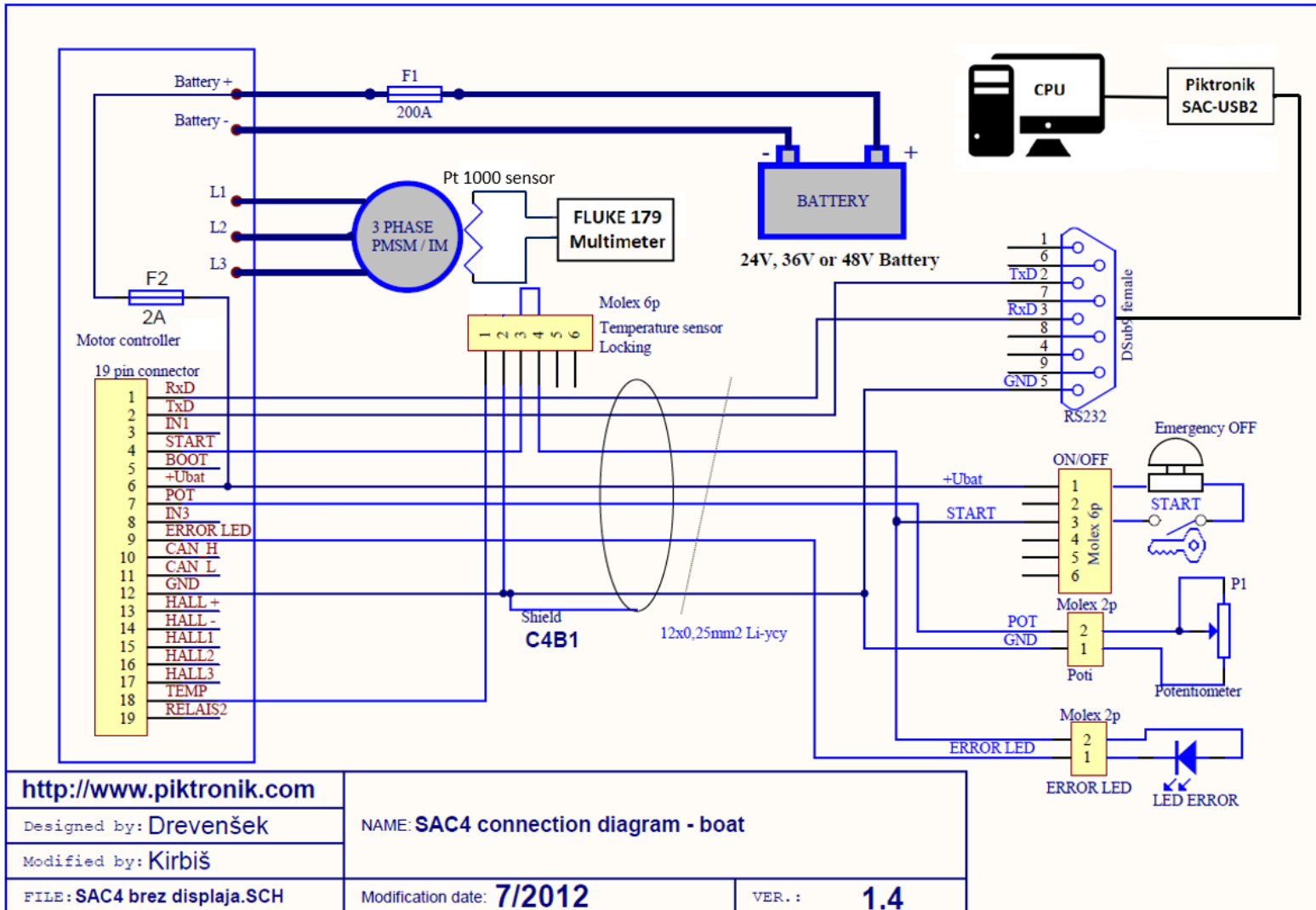


Fig 1: Wiring diagram using Cable Kit C4B6 (Potentiometer)

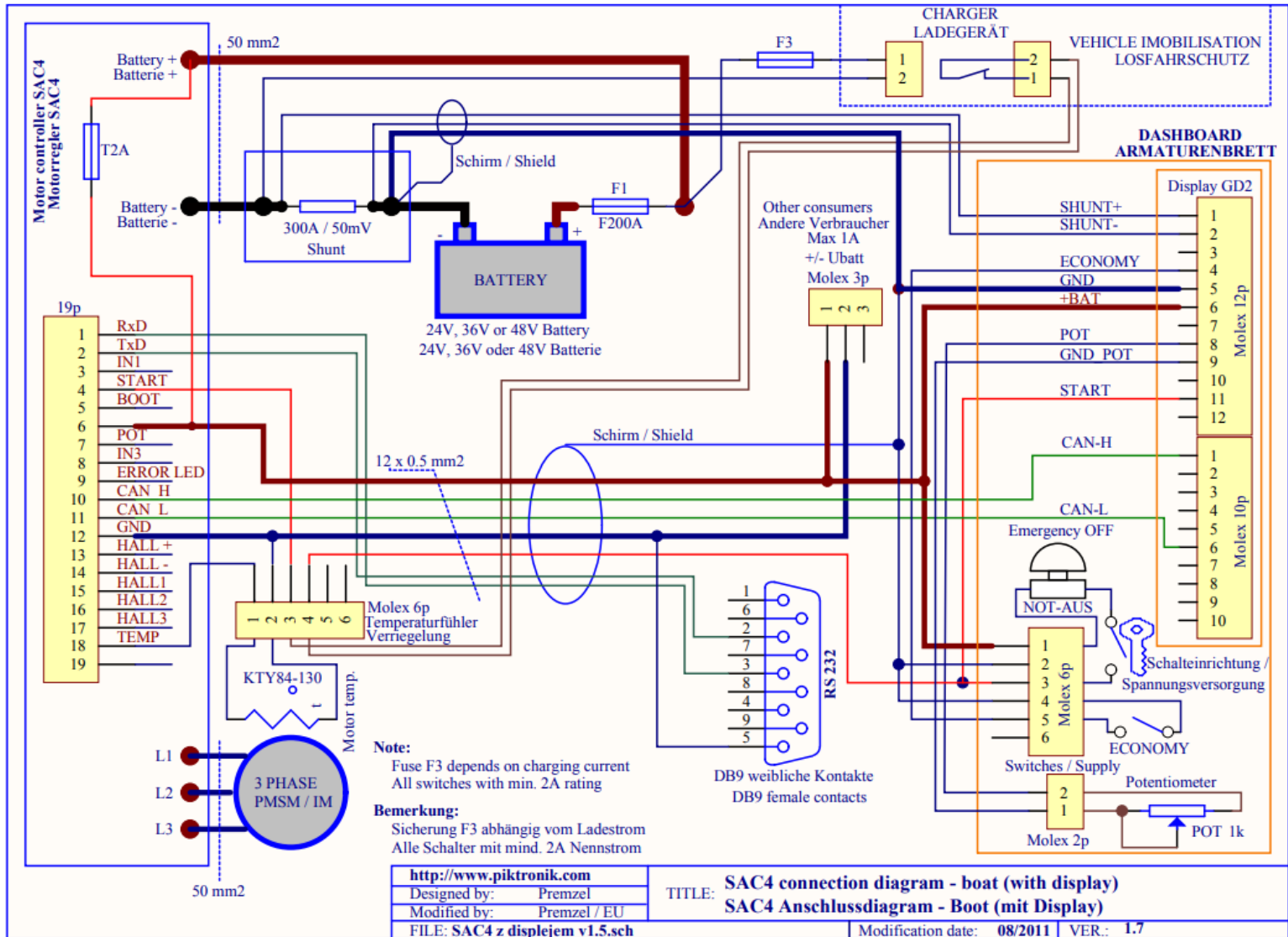


Fig 2: Wiring diagram using Cable Kit C4DR6V7