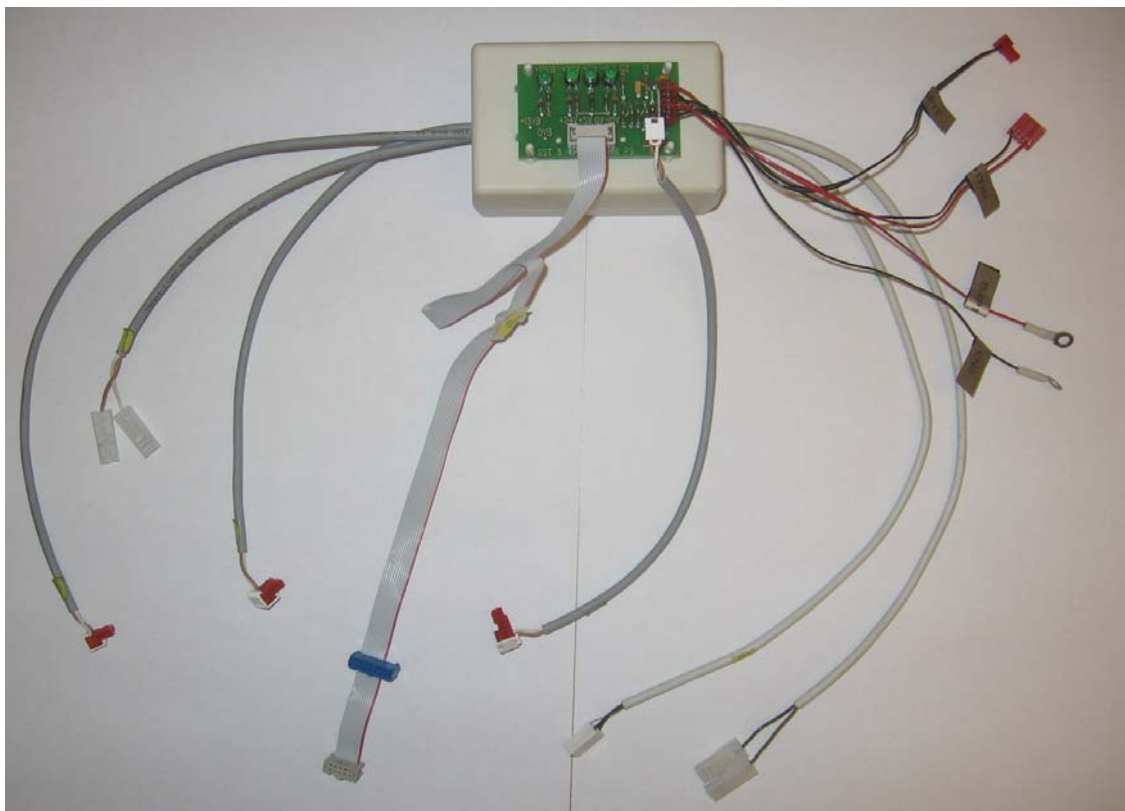


SST 3

Soft-starting tool 3



Instruction manual

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Introduction

Soft-starting tool SST 3

The soft-starting tool is intended for use by technicians with electrical/electronic training for help in connection with fault-tracing and repair.

The SST 3 is made for ESAB's single phase inverters and for 3-phase inverters with 250 A output current. Ordering no. 0459 534 881.

The SST 3 replaces the SST 1, the difference in function is that the SST 1 can only be used for single phase inverters.

Functions for single phase inverters

- *Soft-starting rectifier*
- *Voltage adapter with current limit*
- *Voltage-test board*
- *Gate pulse load with test terminals*
- *Shunt voltage resistor. For single phase inverters with analogue control board:
Arc 151i A31, Arc 152i A31 and OrigoArc*

Functions for 3 phase inverters

- *Voltage adapter with current limit*
- *Voltage-test board*
- *Gate pulse load with test terminals*
- *Temperature monitoring override jumper*

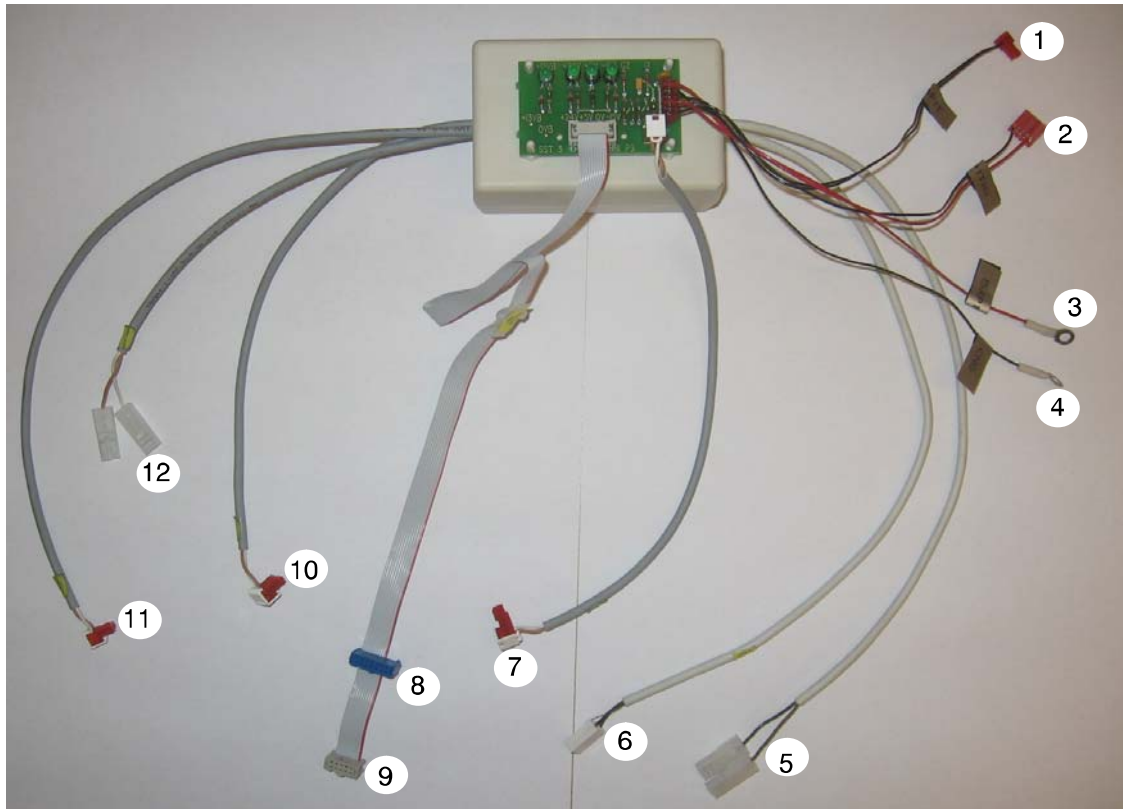
This manual describes the connection of the SST 3 to single phase and 3-phase inverters.

The service manuals for the power sources describes in detail how to use the SST 3.

The manuals have the following filename / ordering no:

- | | |
|---------------------|--|
| 0740 800 161 | Caddy Arc 150i, Caddy Tig 150i, Origo Tig 150i, CaddyArc 150, CaddyTig 150, OrigoTig 150 |
| 0740 800 162 | Origo Arc 150i, OrigoArc 150 |
| 0740 800 163 | Origo Arc 200i, OrigoArc 200 |
| 0740 800 164 | Caddy Tig 200i, Origo Tig 200i, CaddyTig 200, OrigoTig 200 |
| 0740 800 179 | Tig 2200i AC/DC |
| 0740 800 183 | Arc 152i A31 |
| 0740 800 184 | Arc 151i A31 |
| 0740 800 185 | Arc 151i A33, Arc 201i A33 |
| 0740 800 186 | Tig 1500i TA34, Tig 2200i TA3, Tig 2200i TA34 |
| 0740 800 188 | Arc 251i |
| 0740 800 190 | Tig 1500i TA33 |
| 0740 801 015 | MechTig C2002i with serial no, 652-xxx-xxxx |
| 0740 801 024 | MechTig C2002i from serial no, 810-xxx-xxxx |

Connections to / from SST 3



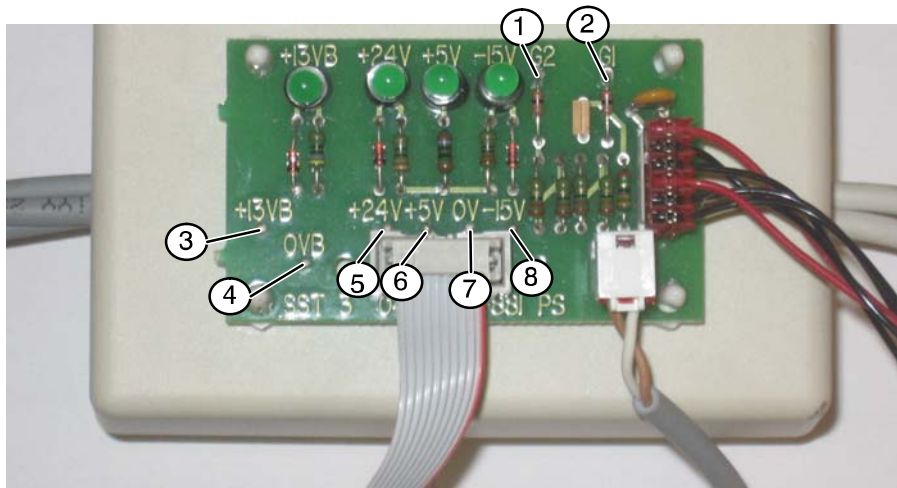
- | | | |
|----|--|------------|
| 1 | 2 pole socket.
Overrides the temperature monitoring circuits when the gate pulses are tested. | 3ph |
| 2 | 5 pole socket. Power supply from 20AP1 during soft start.
Negative on terminal 1.
Positive on terminal 5. | 3ph |
| 3 | Cable terminal with red wire. Positive power supply to 15AP1. | 3ph |
| 4 | Cable terminal with black wire. Negative power supply to 15AP1. | 3ph |
| 5 | 2 flat pin sockets. 230 V AC input. | 1ph |
| 6 | 3 pole socket. 325 V power supply to 2AP_.
Positive on terminal 1.
Negative on terminal 3. | 1ph |
| 7 | 2 pole socket. Gate pulse input from 20AP1. | A |
| 8 | 14 pole socket. Voltage test. | 3ph |
| 9 | 10 pole socket. Voltage test. | 1ph |
| 10 | 5 pole socket, terminals 1 and 2 are connected. Shunt voltage resistor.
Only for Arc 151i A31, Arc 152i A31, OrigoArc 150 and OrigoArc 200. | 1ph |
| 11 | 3 pole socket. 24 V DC power supply from 2AP_.
Positive on terminal 1, negative on terminal 3 | 1ph |
| 12 | 2 flat pin sockets. 24 V DC supply to 15AP1. | 1ph |

3ph = used for 3 phase inverters

1ph = used for single phase inverters

A = used for all inverters.

Test points

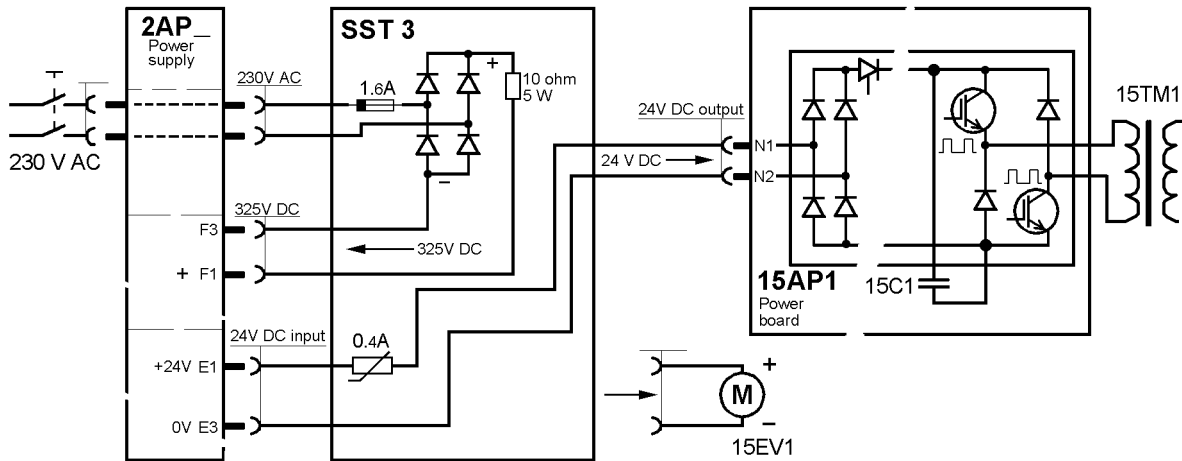


- 1 G2 - connection point for oscilloscope probe when checking gate pulses.
- 2 G1 - connection point for oscilloscope ground when checking gate pulses.
- 3 +13VB - power supply from 2AP_.
- 4 0VB - power supply from 2AP_.
- 5 +24V - power supply from 2AP_.
- 6 +5V - power supply from 2AP_.
- 7 0V - power supply from 2AP_.
- 8 -15V - power supply from 2AP_.

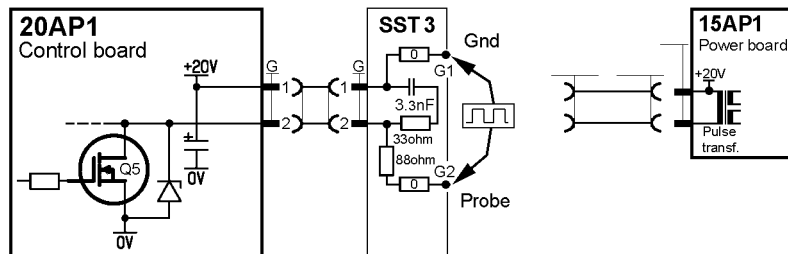
Connections to single phase inverters

For detailed instructions see the service manual for the actual power source.

Power supply for soft start

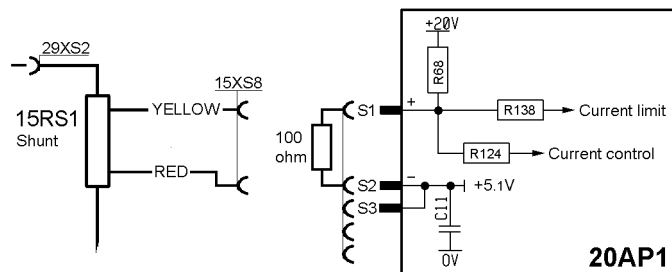


Checking the gate pulses



Connection of shunt voltage resistor

This applies only to Origo Arc 150i, OrigoArc 150, Origo Arc 200i, OrigoArc 200, Arc 152i A31 and Arc 151i A31



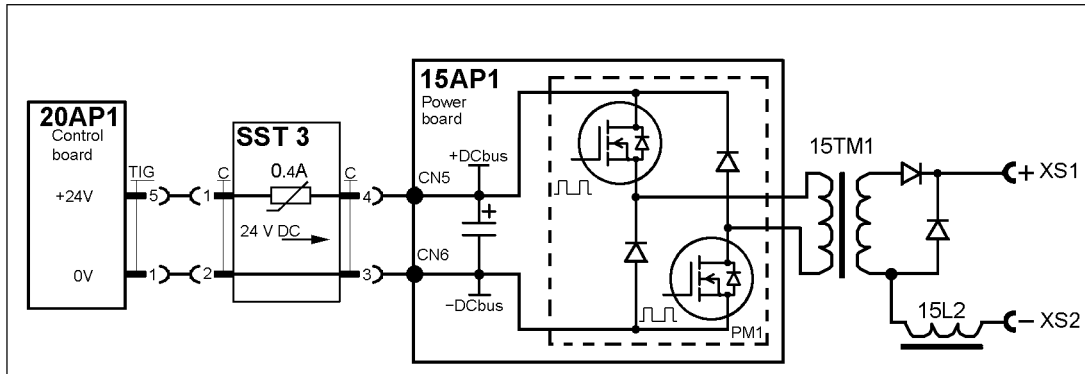
Voltage test

See pages 4, 5 and 8.

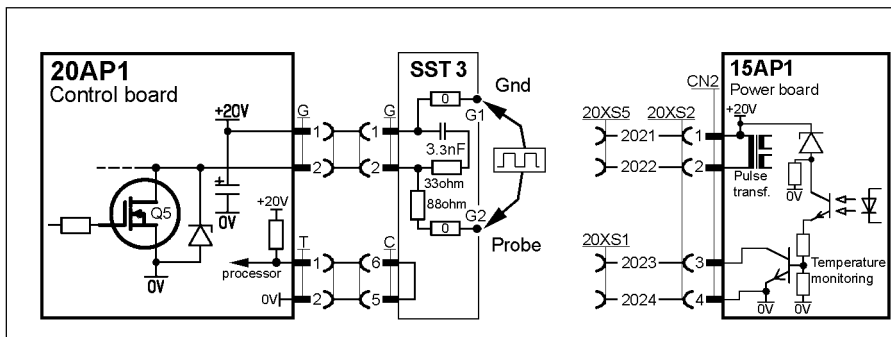
Connections to 3 phase inverters

For detailed instructions see the service manual for the actual power source.

Power supply for soft start



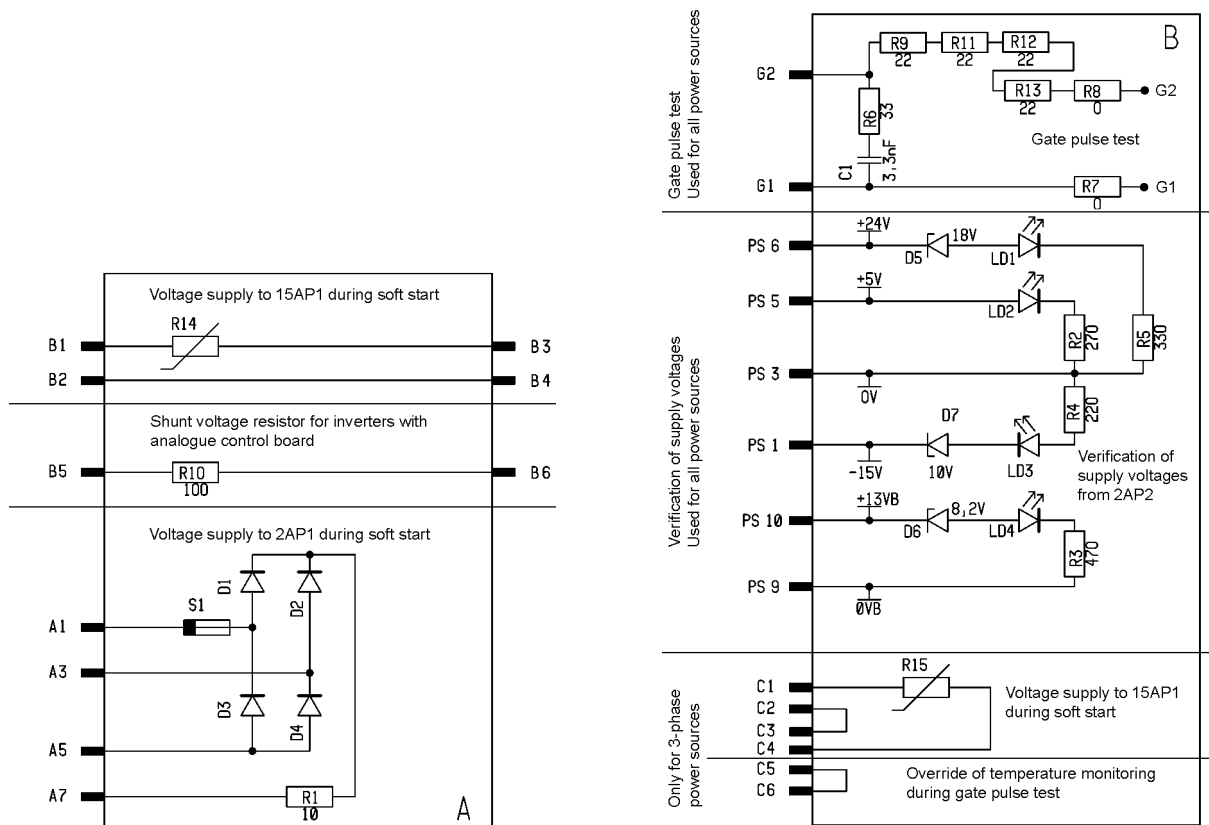
Checking the gate pulses



Voltage test

See pages 4, 5 and 8.

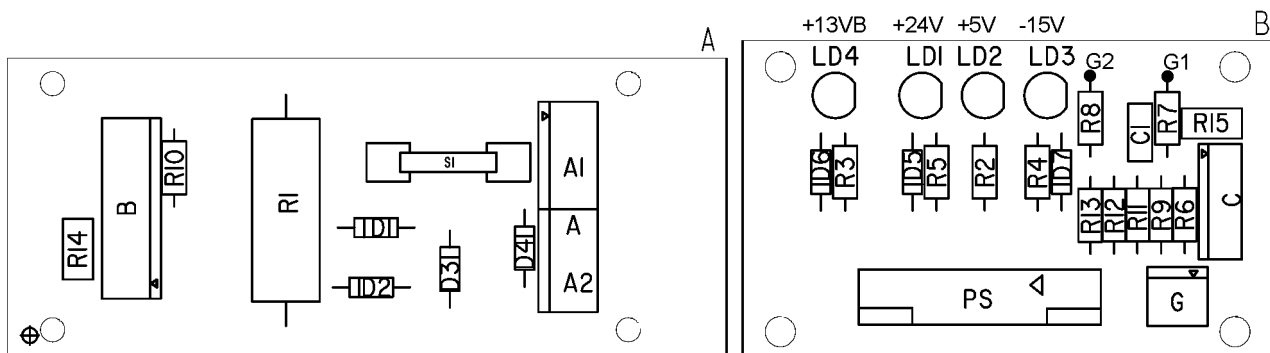
Circuit diagram SST 3



Circuit board A is fitted in the SST 3 box, the functions of the board are only used **for single phase inverters**

Circuit board B is fitted on the top of the SST 3 box

Component positions SST 3



Circuit board A

Circuit board B

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