

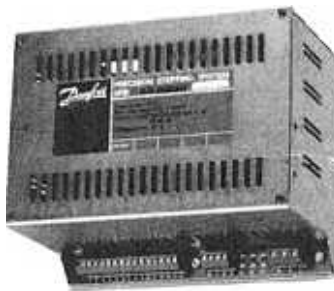
Electronic control unit Type SRB 3110

**Application
SRB 3110**

SRB 3110 is applied for the control of step clutches and precision clutches, type SRA. SRB 3110 is connected to external signal sources. Signals from here give a start/stop signal to the SRA.

By way of SRB 3110 the following functions can be realized:

- Start and stop from the same signal source.
- Start and stop from two signal sources.
- Control of 2 x 1, 2 x 2 or 3 x 2 valves.
- Free mode (SRA on/off).
- Activation on positive and negative edge.
- Supply voltage for signal sources.
- Status signal (brake/clutch mode).
- Manual start and stop.
- Switch for manual and automatic operation.
- Connection for overload protection of the SRA.
- Connection for options.



Code no.

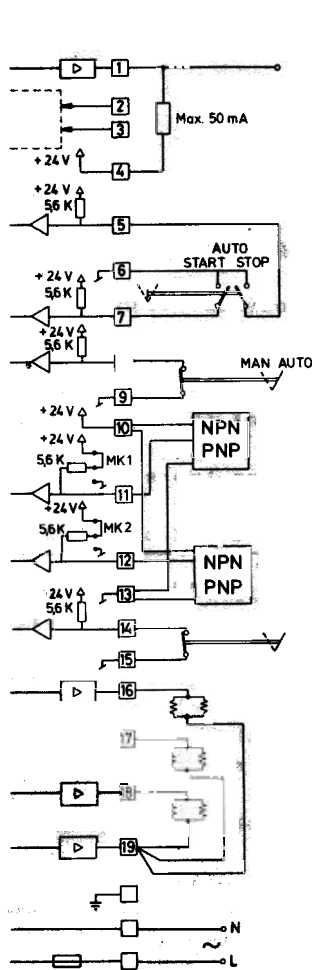
| TYPE | ENCLOSURE | CODE NO. |
|----------|-----------|----------|
| SRB 3110 | IP 00 | 080B1049 |



Technical data

| | |
|---------------------|---|
| Supply voltage | 100, 115, 200, 220 or 240 V ac. |
| Mains frequency | 50 - 60 Hz. |
| Consumption | max. 80 W |
| Ambient temperature | 0 - 40°C * |
| Fuses | 1 pcs. 0,4 A, 1 pcs. 0,8 A slow-blow fuses |

* By the control of only 2 x 1 valves; max. ambient temperature 50°C.

Terminal plan for SRB 3110



1. Status signal (brake/clutch) clutch  brake
NPN open collector max. 50 mA.
- 2-3. Input for signals for internal options.
- *4. Supply voltage: 18-30 V dc. Nominal 24 V dc.
5. Input for manual stopsignal.
6. 0 V.
7. Input for manual startsignal.
8. Input for switch from manual or automatic operation, MAN/AUTO.
9. 0 V.
- *10. See terminal 4.
11. Input for stopsignal. (NPN/PNP).
12. Input for startsignal. (NPN/PNP).
13. 0 V.
14. Input for free mode; SRA on/off. (1 = ON, 0 = OFF).
and activation of output 3 (terminal 18).
15. 0 V.
16. Output for brake valves.
17. Output for clutch valves.
18. Output 3 for brake-/clutch valves. (Is activated from terminal 14).
19. Common output for clutch and brake valves.
-  Ground.
- N-L Supply voltage 100, 115, 200, 220 or 240 V ac.
(The factory setting is for 220 V ac.).

* Max. total load on terminals 4 and 10 is 500 mA.

The terminals 16, 17, 18 and 19 are electrically protected against short - circuit.
Reset by disconnecting the supply voltage on terminals N and L.

MAN/AUTO - switch

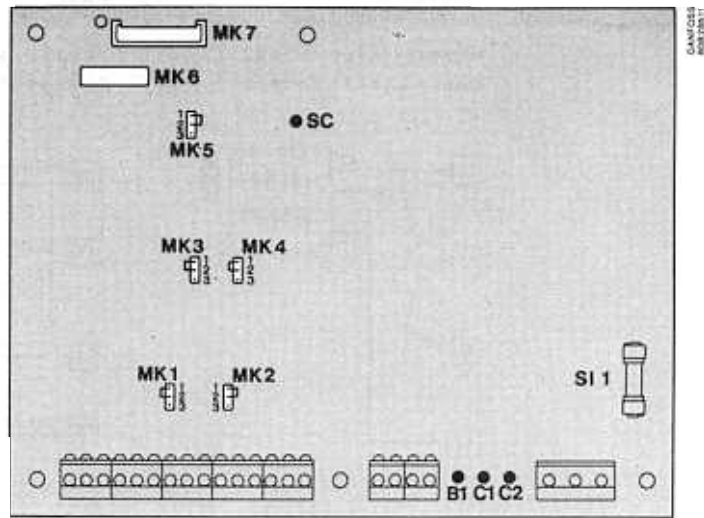
MAN/AUTO - operation is chosen by way of a switch on terminal 8.

| POS | ACTIVE | MAN. STOP TL.5 | MAN. START TL.7 | STOP TL.11 | START TL.12 |
|-------------------------|--------|----------------|-----------------|------------|-------------|
| MAN (TL.8; level 1) | | X | X | X | |
| AUTO (TL.8; level 0) | | X | (X)** | X | X* |





* Only if MAN.STOP (terminal 5) not has been activated after the connection of main supply voltage.

** Release start (terminal 12) after MAN.STOP (terminal 5) has been active. There is no shift to clutchmode.

Programming



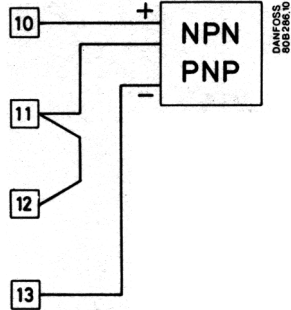
* SI 1, 0,8 A is supplied by a supply voltage of 100 and 115 V ac. The shown jumpers and the fuse, 0,4 A, are mounted on delivery of SRB 3110.

| POS. | FUNCTION | NOTES |
|--|----------------------|--|
| MK 1. Choice of type of signal source | Pos. 1-2 Pos. 2-3 | Input for stop signal - NPN Input for stop signal - PNP |
| MK 2. Choice of type of signal source | Pos. 1-2 Pos. 2-3 | Input for start signal - NPN Input for start signal - PNP |
| MK 3. Choice of edge sensivity for stop signal source | Pos. 1-2 Pos. 2-3 | Activation on negative edge  Activation on positive edge  |
| MK 4. Choice of edge sensivity for start signal source | Pos. 1-2 Pos. 2-3 | Activation on negative edge  Activation on positive edge  |
| MK 5. Activation of output 3. (Brake or clutch valves). | Pos. 1-2 Pos. 2-3 | Activation via optionbox. Activation via terminal 14. Activation on low level |
| MK 6. Options connection 2 | | Connection to internal options. |
| MK 7. Options connection 1 | | Connection to SRB 3200 (optionbox). |

Connection of signal sources

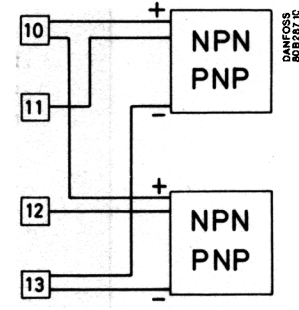
Level control:

Start-/stop signal from one signal source.



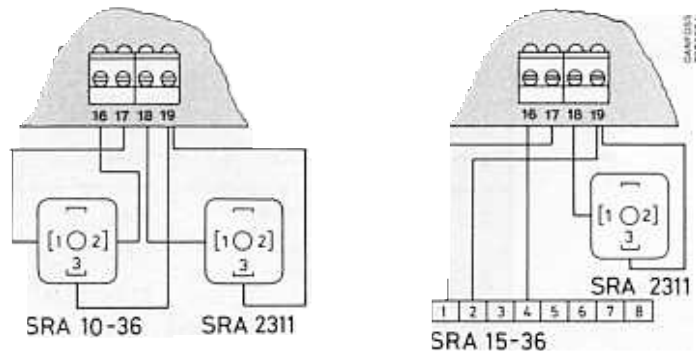
Pulse control:

Start-/stop signal from two signal sources.



NPN/PNP signal source; see programming page 3.

Connection SRA



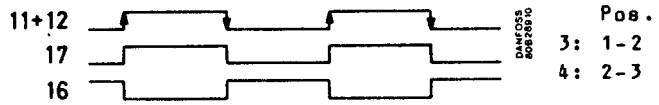
Max. cycling frequency

| NUMBER OF VALVES TOTAL | 2 x 1 | 2 x 2 | 1 x 2 | 3 x 2 | 3 x 1 |
|------------------------|-------|-------|-------|-------|-------|
| MAXIMUM Hz | 50 | 20 | 20 | 13 | 33 |

SRA 10 ; 2 x 1 valves
SRA 15-36 ; 2 x 2 valves
SRA 2311 ; 1 x 2 valves

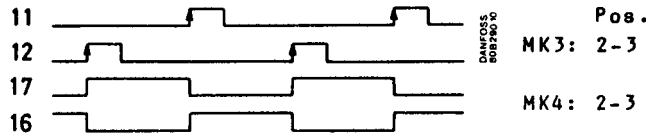
Applications

EXAMPLE 1 : Level control with one signal source.



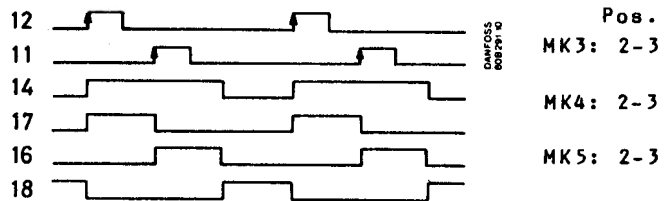
TL.11 + TL.12 : Input for start-/stop signal.
 TL.17 : Output for clutch valves.
 TL.16 : Output for brake valves.

EXAMPLE 2 : Pulse control with two signal sources.

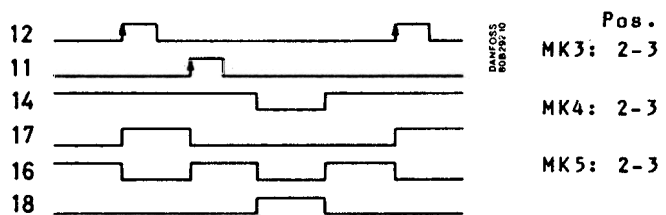


TL.11 : Input for stop signal.
 TL.12 : Input for start signal.
 TL.17 : Output for clutch valves.
 TL.16 : Output for brake valves.

EXAMPLE 3 : Activation of output 3 terminal 18.

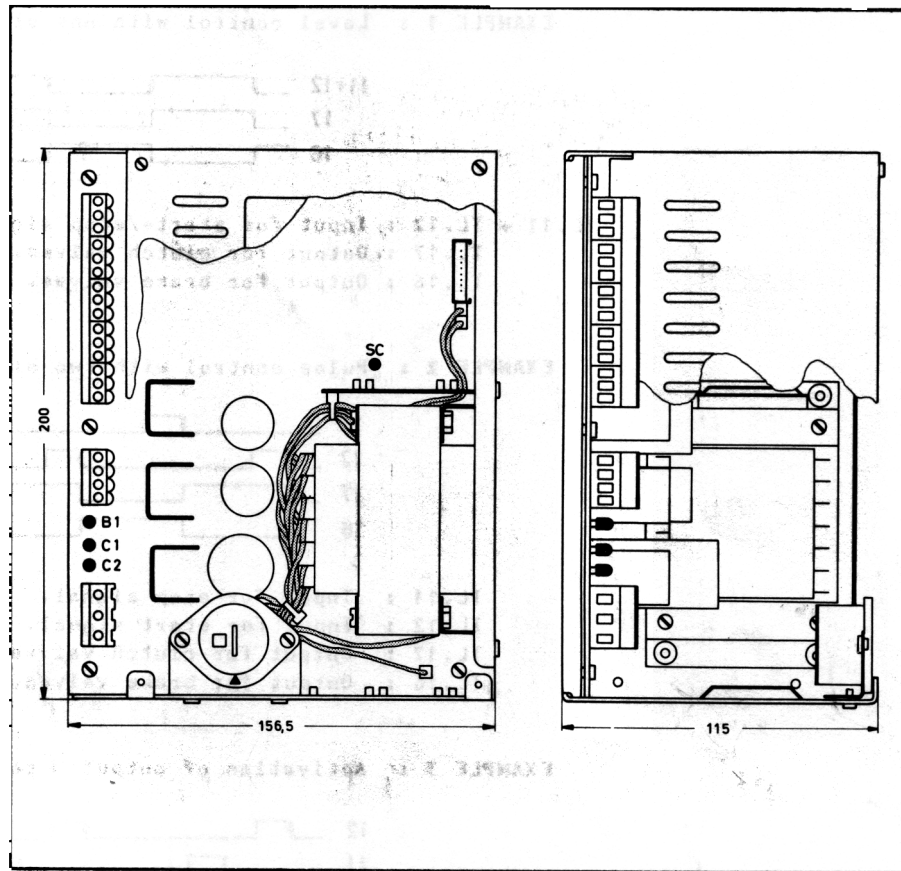


or



TL.12 : Input for start signal.
 TL.11 : Input for stop signal.
 TL.14 : Input for free mode.
 TL.17 : Output for clutch valves.
 TL.16 : Output for brake valves.
 TL.18 : Output 3 for clutch-/brake valves.

Dimensional sketch



Light-emitting diodes

B 1 lights when output, TL.16, is ON (brake mode)
The control always starts up in this position.

C 1 lights when output, TL.17, is ON (clutch mode).

C 2 lights when output 3, TL.18, is ON.

SC lights if the valve outputs are short-circuited

Connection cables

Between the SRB 3110 and signal sources:

Screened cable, min. 0,5 mm², max. length 50 m.

Between the SRB 3110 and the SRA:

Screened cable, min. 0,5 mm², max. 0,25 ohm per conductor.

Where it is possible, the space between the connection cables and other installations should be at least 200 mm.