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.

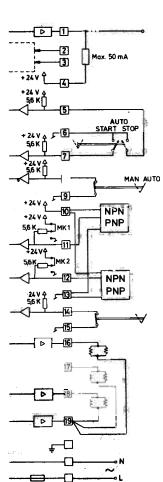
TYPE	ENCLOSURE	CODE NO.	
SRB 3110	IP 00	080B1049	

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 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, $\ensuremath{\mathsf{MAN}/\mathsf{AUTO}}.$
- 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, O = OFF). and
 - activation of output 3 (terminal 18).
 - 15. 0 V.
 - 16. Output for brake valves.
 - 17. Output for clutch valves.
 - 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.

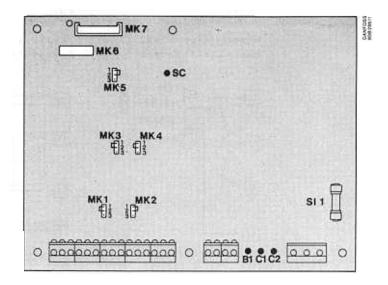
MAN/AUTO - switch

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

POS	MAN. STOP TL.5	MAN. START TL.7	STOP TL.11	START TL.12
MAN (TL.8; level 1)	×	×	×	
AUTO (TL.8; level 0)	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 - PNN	
MK 3.	Pos. 1-2	Activation on negative edge	
Choice of edge sensivity for stop signal source	Pos. 2-3	Activation on positive edge	
MK 4.	Pos. 1-2	Activation on negative edge	
Choice of edge sensivity for start signal source	Pos. 2-3	Activation on positive edge	
MK 5. Activation	Pos. 1-2	Activation via optionbox.	
of output 3. (Brake or clutch valves).	Pos. 2-3	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).	

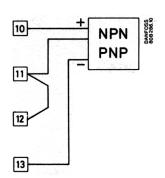
Connection of signal sources

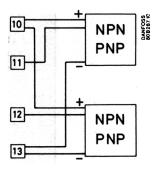
Level control:

Start-/stopsignal from one signal source.

Pulse control:

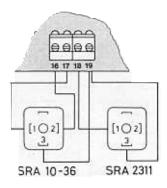
Start-/stopsignal from two signal sources.

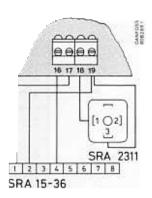




NPN/PNP signal source; see programming page 3.

Connection SRA





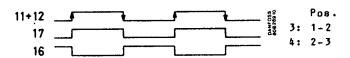
Max. cycling frequency

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.

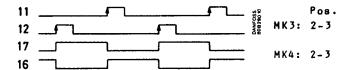


TL.11 + TL.12: Input for start-/stop signal.

TL.17: Output for clutch valves.

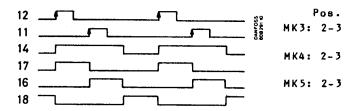
TL.16: Output for brake valves.

EXAMPLE 2: Pulse control with two signal sources.

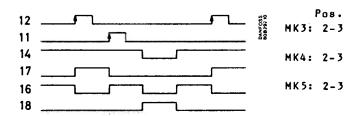


TL.11: Input for stop signal.
TL.12: Input for start signal.
TL.17: Output for clutch valves.
TL.16: Output for brake valves.

EXAMPLE 3: Activation of output 3 terminal 18.



OT



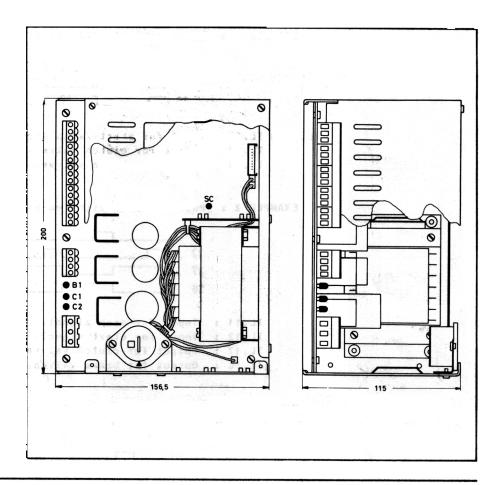
TL.12: Input for start signal.

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

<u>B 1 lights</u> 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.

 $\underline{\mathsf{SC}}$ 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 $_{\mbox{\scriptsize mm}}.$