

Description

- suitable for solenoids with 24/12 VDC and a current of 0.85/1.6 A max
- 16 pin base connector
- current stabilised output
- adjustable dither to control the valve hysteresis
- limitation of min- and max- current
- installation of damping capacitors possible



The current stabilising control box SA controls the DC-solenoids of analogue valves (proportional valves) supplying a constant current, independent of coil temperature and resistance.

The socket of control box SA can be installed as a basic unit and the housing with electronic-card is fitted into the connector, secured by two screws.

Technical data**24 V solenoid****12 V solenoid**

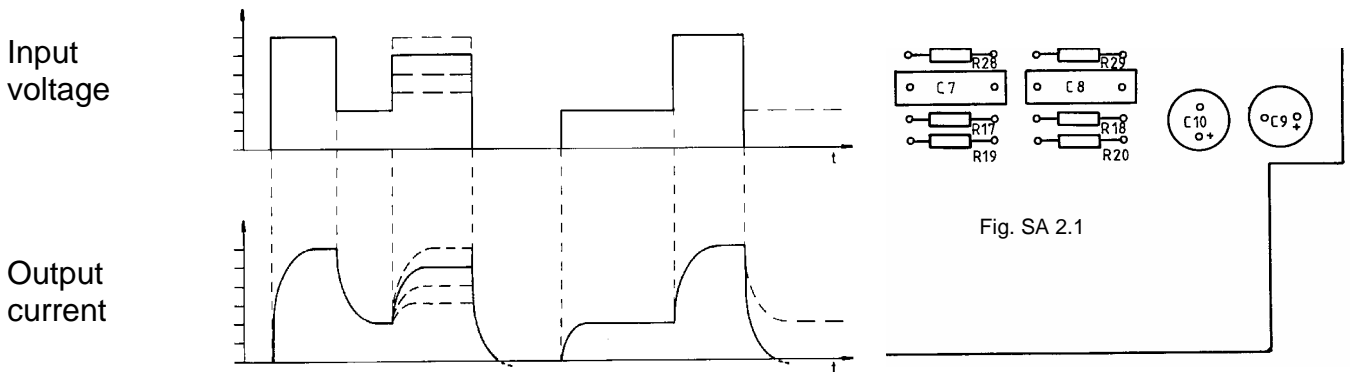
Power supply		see ordering code	see ordering code
Power		35 VA	35 VA
Min-current (I_{\min})	adjustable	0 - 500 mA	0 - 1000 mA
Max-current (I_{\max})	adjustable	100 - 1000 mA	100 - 1600 mA
Output voltage		24 V (approx. 40 V open circuit)	12 V
Load resistance		≥ 16 Ohm	$\geq 5,4$ Ohm
Dither: frequency	adjustable	75 - 200 Hz	75 - 200 Hz
amplitude	adjustable	0 - 150 mA pp	0 - 200 mA pp
Ambient temperature		0 - 35° C	0 - 35° C
Weight		approx. 0,6 kg	approx. 0,6 kg
		approx. 1,4 kg (110/230VAC)	

The SA control box cannot control two outputs at the same time. Only one input should be on at any one time. When both inputs are active the higher of the two signals is selected and the other input is in effect cancelled. The resistance of the current speed control potentiometers should be 10 k Ω and the total load-resistance must not be lower than 1 k Ω (maximum 10 potentiometers)

soft switch function

With the current stabilising control box SA a smooth transition from an output signal to an other is possible.

The capacitors C7 (output A) and C8 (output B) produce the following functions:

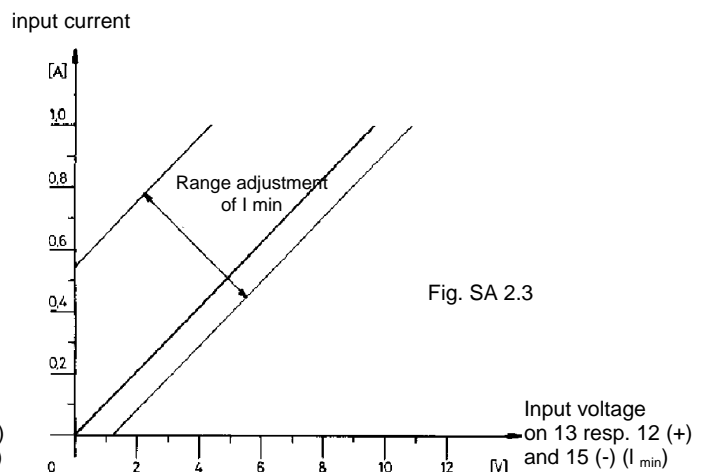
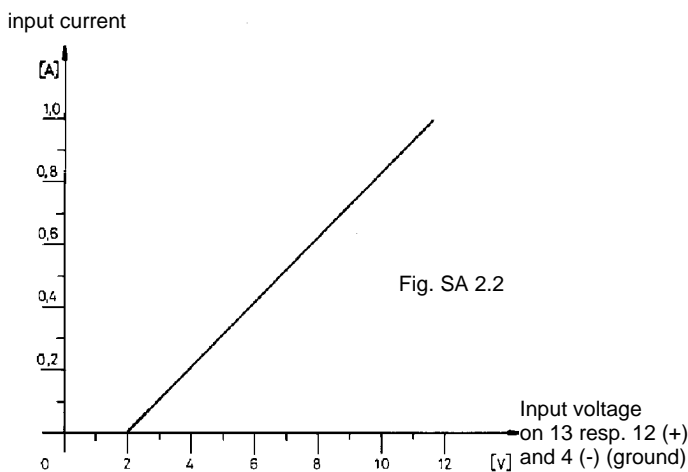


Time constant t (in sec) = $0,036 \times C$ (μF) e.g. $C = 10 \mu\text{F}$, $t = 0,36$ sec.

The capacitor voltage will be approximately one volt. Electrolytical capacitors must be connected with the correct polarity. Capacitors can be factory fitted to according ordering code (page 3.1.3e). The standard values are: $1 \mu\text{F}$, $2,2 \mu\text{F}$, $4,7 \mu\text{F}$, $10 \mu\text{F}$, $22 \mu\text{F}$, $47 \mu\text{F}$, $100 \mu\text{F}$.

input from external source

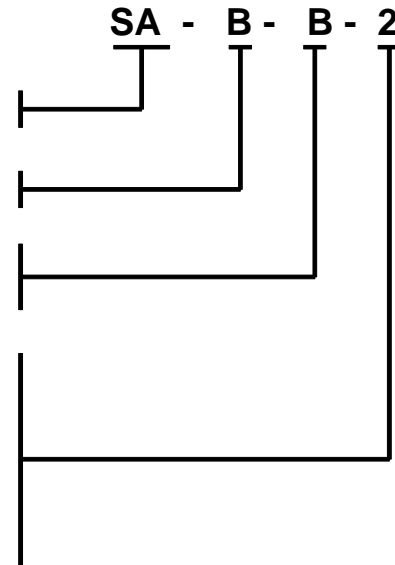
The input from external source has to be potential free to the supply voltage. The input voltage has to be within the range as shown in the diagrams below:



NOTE: The internal current limiter (I_{\max}) is inoperative with external input signal. (The I_{\max} trimmer only affects the supply voltage (16) to the remote potentiometers)

Ordering code

Current control box	- SA
External potentiometers	- B
1 output	- A
2 outputs	- B
Power supply 26 VAC	- 0
Power supply 110V 50-60Hz	- 1
Power supply 230V 50 Hz	- 2
Power supply 24 VDC	- 2424
Power supply 24 VDC for 12 V solenoid	- 00
Power supply 12 VDC for 12 V solenoid	- 1212



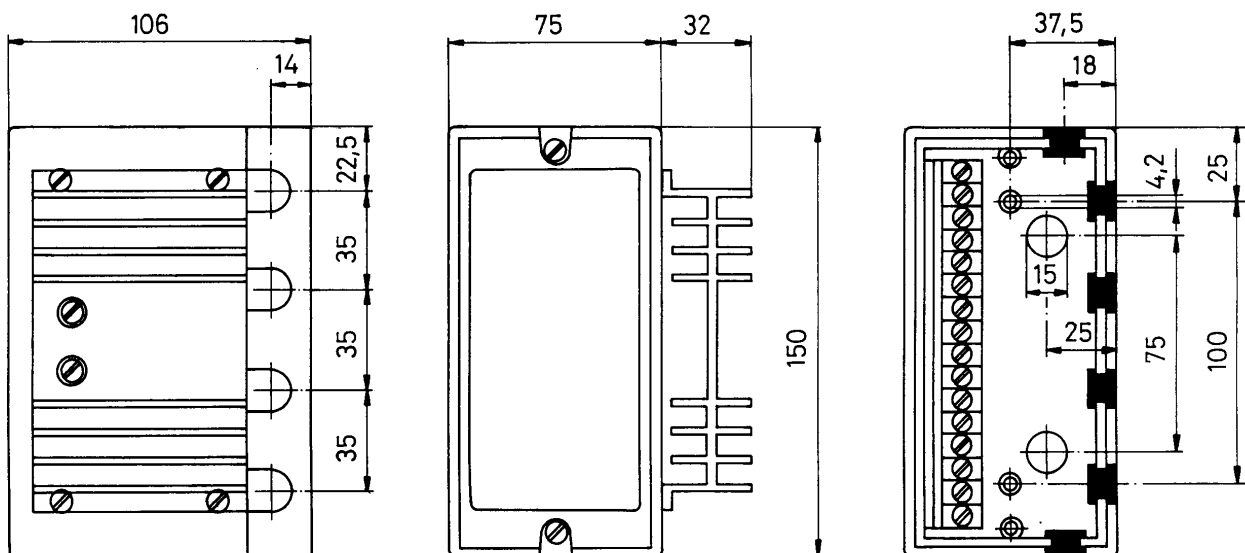
Factory adjustment

The units will be delivered with the following settings:

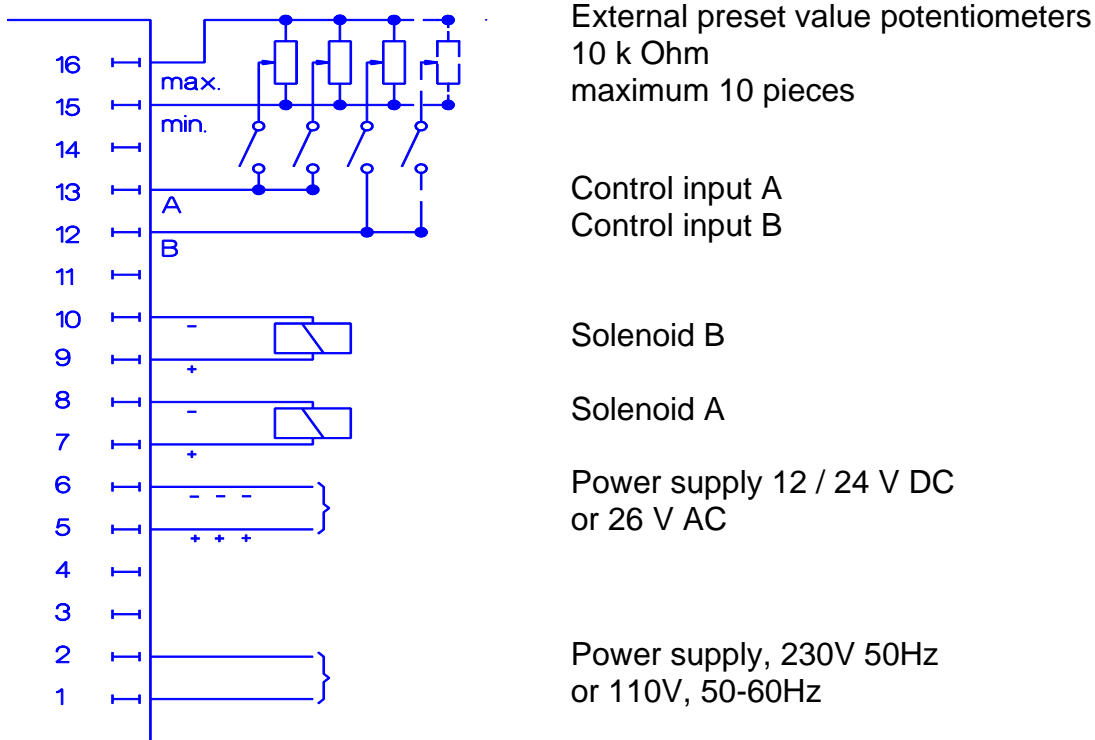
I_{min}	220 mA (400 mA)	Frequency	125 Hz
I_{max}	850 mA (1600 mA)	Amplitude	50 mA

If any other values are required, please specify at order.

Unit dimensions



Connection diagram



Position of potentiometers

