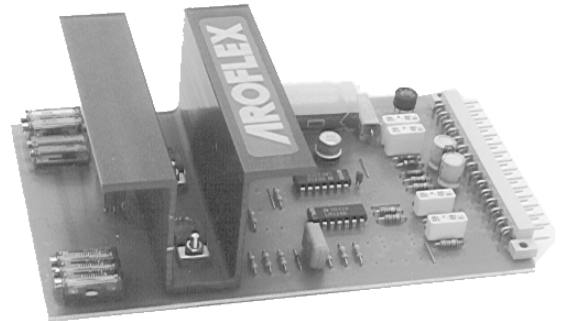


Description

- suitable for solenoids with 24 VDC and a current of 1.0 A maximum current (respectively 12 VDC and 1,6 A)
- Europacard format 100 x 160 mm
- 32-pin male connectors type F or C according to DIN 41612 (DIN 41617 on request)
- current stabilised output
- adjustable dither to control valve hysteresis
- limitation of minimum and maximum currents
- installation of damping capacitors possible



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

Technical Data

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 - 45° C	0 - 45° C
Weight		approx. 200 gr	approx. 200 gr

The EA Europacards 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 remote current control potentiometers should be 10 k Ω and the total load-resistance must not be lower than 1 k Ω (maximum 7 external potentiometers with 3 potentiometers internal)

soft switch function

With the current stabilising control card EA 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:

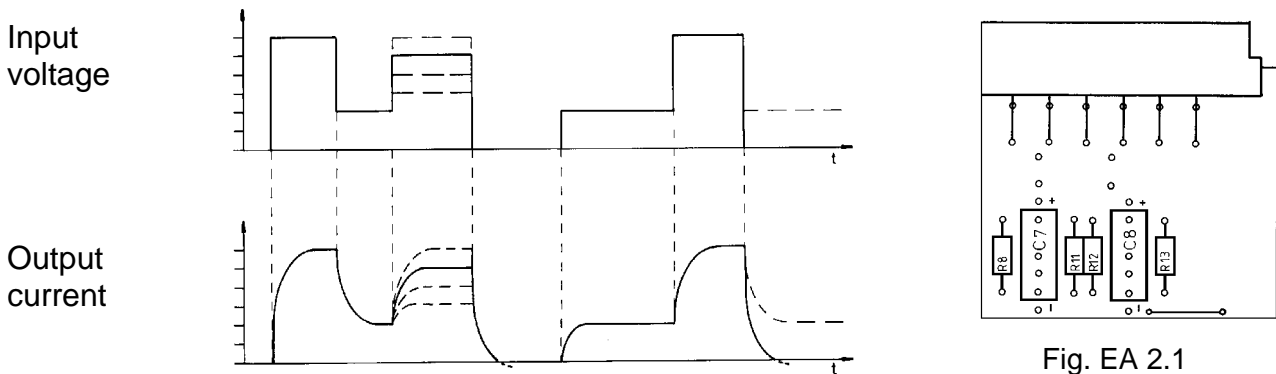


Fig. EA 2.1

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 according to ordering code (page 3.2.3e). 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:

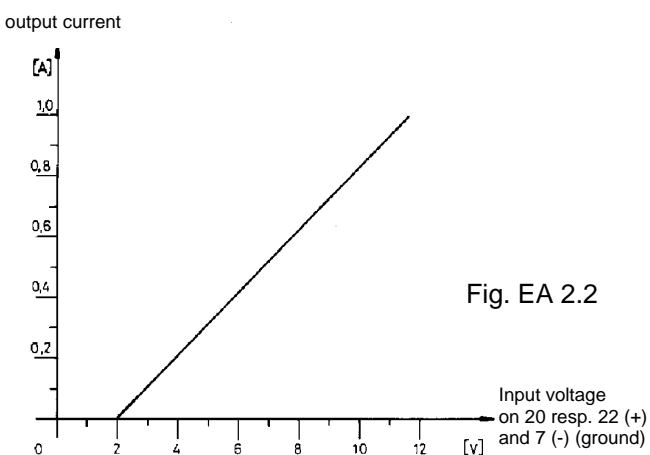


Fig. EA 2.2

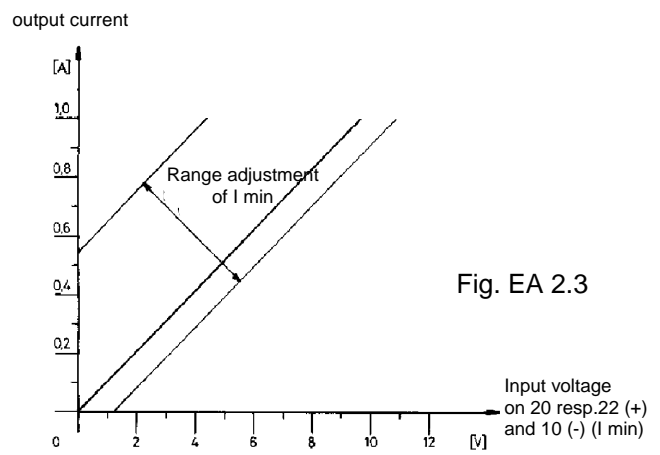


Fig. EA 2.3

NOTE: The internal current limiter (I_{max}) is inoperative with external input signal. (The I_{max} trimmer only affects the supply voltage (8) to the remote potentiometers)

Ordering code

current control card europacard format
connector 31 pin DIN 41617

3 internal preset potentiometer

1 output
2 outputs

power supply 26 V AC
power supply 24 V DC
power supply 24 V DC for 12 V solenoid
power supply 12 V DC for 12 V solenoid

Options

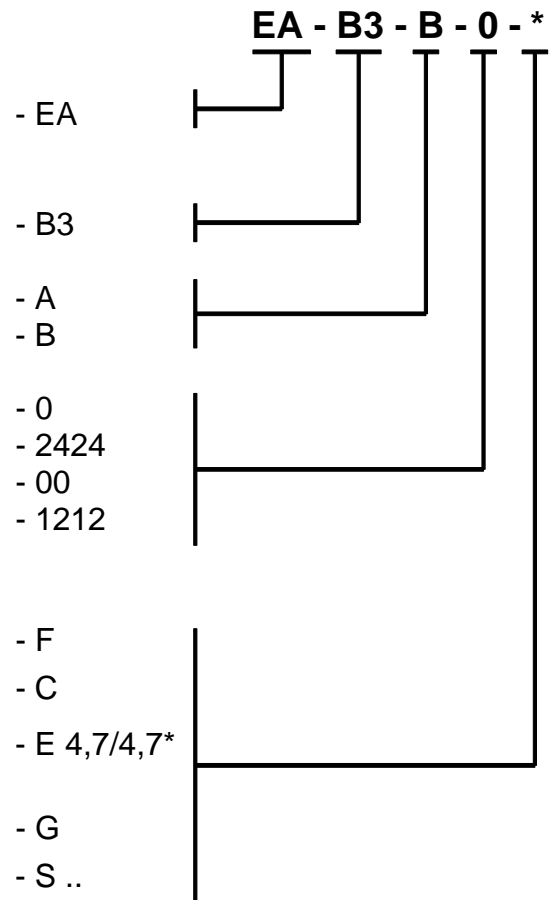
connector 32 pin DIN 41612 F, z + b

connector 32 pin DIN 41612 C, a + c

capacitors for soft switching, *capacitor (μF)
1. number for solenoid A / 2. number for solenoid B

independent adjustment of min. current on output B

special model



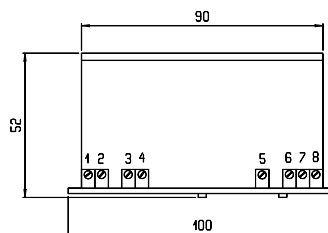
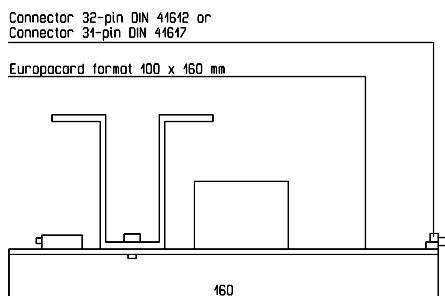
Factory adjustment

The cards 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.

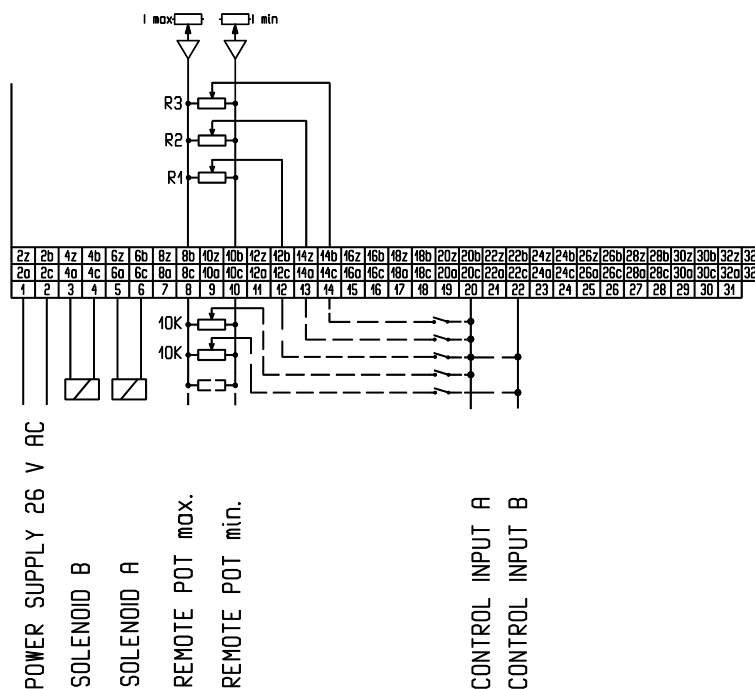
Unit dimensions



Potentiometer

- 1 Max.-current I_{\max}
- 2 Min.-current I_{\min}
- 3 Amplitude
- 4 Frequency
- 5 Balance I_{\min}
- 6 Preset value 3
- 7 Preset value 2
- 8 Preset value 1

Connection diagram



DIN 41612 F	DIN 41612 C	DIN 41617	Remarks
2z	2a	1	Power supply 26 V ~
2b	2c	2	
4z	4a	3	Solenoid B +
4b	4c	4	
6z	6a	5	Solenoid A +
6b	6c	6	
8z	8a	7	
8b	8c	8	Remote potentiometer max
10z	10a	9	
10b	10c	10	Remote potentiometer min
12z	12a	11	
12b	12c	12	Internal potentiometer 1
14z	14a	13	Internal potentiometer 2
14b	14c	14	Internal potentiometer 3
16z	16a	15	
16b	16c	16	
18z	18a	17	
18b	18c	18	
20z	20a	19	
20b	20c	20	Control input A
22z	22a	21	
22b	22c	22	Control input B
24z	24a	23	
24b	24c	24	
26z	26a	25	
26b	26c	26	
28z	28a	27	
28b	28c	28	
30z	30a	29	
30b	30c	30	
32z	32a	31	
32b	32c		