Controller

ELSK 103-*****

- Solid-state electronics; no wear-prone contacts
- Stepless adjustment
- Ergonomic design
- Tough, heavy-duty housing

1 Description

The ELSK 103-***** unit is used to control a proportional solenoid. It consists of the ESSK 103-91*** card, fitted in a Makrolon housing. The housing is provided with a front plate with an On/Off switch, a green LED and a demand signal potentiometer with indicator knob. The output current varies linearly with the angle of rotation of the demand signal potentiometer. The green LED lights as soon as the unit is switched on.

2 Technical data

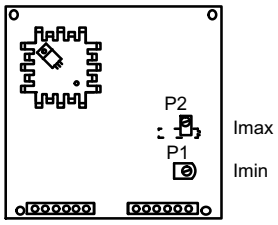
General characteristics	Description, value, unit
Power supply	12 V ... 30 V DC, smoothed. Ripple < 10%
Rotation angle of potentiometer knob	270°
Minimum current I_{min} (adjustable)	(0 A ... 0,5 A) x I_{max}
Maximum current I_{max} (adjustable)	0,5 A ... 2,5 A
Maximum permissible output current I_{per}	2,5 A
Dither frequency	factory-set at 40 Hz (square-wave form)
Operating temperature	-20 °C ... +50 °C
Dimensions	160 mm x 120 mm x 55 mm (Makrolon housing)
Weight	ca. 400 g
Enclosure protection	IP41
Notable features	- the power supply input is reverse-polarity protected - the amplifier switches off automatically for the duration of excessive coil current (coil short circuit)
Electrical connections	power supply: cable, 2 x 1 mm^2, two metres long coil connections: screw terminals inside the housing
Cable lengths and sections	for 1 mm^2 section wire, the maximum cable length is 10 metres

BUCHER
hydraulics

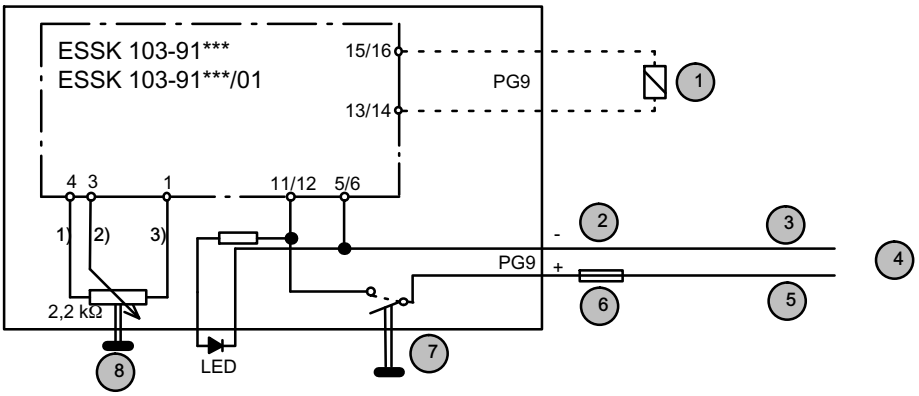
3 Commissioning

1. Connect the solenoid coil in accordance with the connection diagram and switch on the power supply.
2. Set the demand signal potentiometer to maximum.
3. Using trim potentiometer P2, and while increasing the signal, set the required maximum current (the coil current must not exceed 2.5 A).
4. Set the demand signal potentiometer to minimum.
5. Using trim potentiometer P1, and while decreasing the signal, set the required minimum current.
6. Check the settings and fine-tune as necessary.

The trim potentiometers that are sealed with colour spots are pre-set in the factory.



4 Connection diagram



1) red; 2) yellow; 3) black

1	Solenoid	5	black 1
2	Cable 2 x 1 mm^2; two metres long	6	3 A ... 5 A fast-acting fuse (not supplied)
3	black 2	7	On/ Off switch
4	Power supply 12 V ... 30 V	8	Potentiometer

5 Accessories

Solenoid connecting leads (2 x 1 mm^2) can be supplied with the amplifier. The maximum length is 10 metres. As well as the connecting leads, type GDM 309 connector plugs can also be supplied. If connected devices malfunction as a result of long solenoid leads, then type GDM 209D connector plugs should be used instead.

Description	Part No.
Solenoid connecting leads, 2 x 1 mm^2 (state required length in metres)	604380
Solenoid plug GDM 309	064970
Solenoid plug GDM 209D	014130
Fuse, 5 A	606938
Flying fuse holder	607349

6 Service parts

Description	Part No.
Makrolon housing	241819
Front plate no. 1	214784
Round-head hammer rivet	211673
Cable gland, PG 9	601550
Retaining nut, PG 9	601554
Potentiometer, 2.2 kΩ	214663
Potentiometer indicator knob	604397
On/Off switch	607681
LED, green, 5 mm	606555
In-line resistor, 1 kΩ, 1 W	607205
ESSK 103-91***	014781
ESSK 103-91***/01	015674
Cable, 2 x 1 mm^2	604380
Rubber switch cover	607319

BUCHER
hydraulics

info.kl@bucherhydraulics.com www.bucherhydraulics.com

Classification: 470.710.730