

Controller

ELSK 103-16***



- Using the Hare-Tortoise switch, two maximum speeds can be set
- Solid-state electronics
- Stepless adjustment
- Ergonomic design
- Tough, heavy-duty enclosure

1 Description

The ELSK 103-16*** unit is used to control one or other of two proportional solenoid. It consists of the ESSK 103-91*** card, fitted in a plastic enclosure. The enclosure is provided with a front panel with an On/Off switch, a green status LED, a switch (Hare 0-100%, Tortoise 0-50%), and a demand-

signal potentiometer with indicator knob. In each of the two working positions (right / left), the corresponding output is energised. 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.

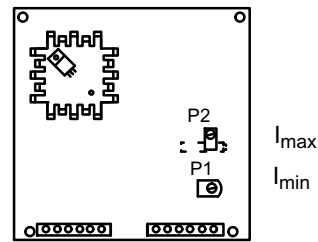
2 Technical data

Characteristics	Description, value, unit
Supply voltage	12 ... 30 DC, smoothed. Ripple < 10%
Rotation angle of potentiometer knob	270°
Adjustable minimum current (I_{min})	$(0 \dots 0,5) \times I_{max}$
Adjustable maximum current (I_{max})	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)
Protection class	IP41
Operating temperature	-20 °C ... +50 °C
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)
Dimensions	approx. 160 mm x 120 mm x 55 mm (Makrolon enclosure)
Weight	ca. 400 g
Power supply connection	PG 9 cable gland
Solenoid connections	Six-pin solder socket insert, Sta 6 F Löt, with bulkhead housing H-A3 Ag
Cable lengths and cross-sections	for 1 mm ² section wire, max. cable length is 10 metres

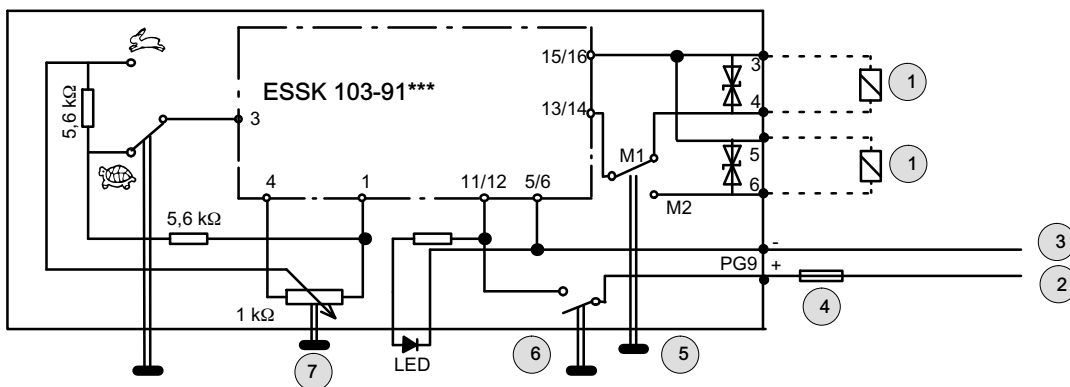
3 Commissioning

16. Connect the solenoid coil in accordance with the connection diagram and switch on the power supply
17. Set the demand-signal potentiometer to maximum
18. Put the switch in the Hare position
19. Using trim potentiometer P2, and while increasing the signal, set the required maximum current (the coil current must not exceed 2.5 A.)
20. Set the demand-signal potentiometer to minimum
21. Using trim potentiometer P1, and while decreasing the signal, set the required minimum current
22. Check the settings and fine-tune as necessary.

The trim potentiometers that are sealed with colour spots are preset in the factory



4 Connection diagram



1	Solenoid	5	M1 Normal funktion, M2 Actuated funktion
2	Cable 2 x 1 mm ² , two metres long (black 1)	6	On / Off switch
3	Supply voltage 12 V to 30 V (black 2)	7	Potentiometer
4	Fuse 3 A to 5 A, fast acting		

5 Accessories

To connect the solenoid, a GDM 309 connector plug can be supplied. In the event of proportional valve malfunctions that are caused by long power leads, use GDM 209D solenoid plugs.

	Part No.
Solenoid plug, GDM 309	064970
Solenoid plug, GDM209D	014130
Fuse, 5 A	606938
Flying fuse holder	607349
Plug insert (solder), Sta 6 F Löt	209336
Line housing, H-A3 Tgv, for plug insert	209472

For details of these accessories, see data sheet P70010, "Electronic Accessories".

6 Service parts

	Part No.
Plastic enclosure, MBM 161255	228968
Front panel, ELSK 103	214784
Cable gland, PG 9	601550
Retaining nut, PG 9	601554
Potentiometer, 1 k Ω	214662
Potentiometer indicator knob	604397
On/Off switch (Hare and Tortoise)	607681
ON-MOM switch	609738
LED, green, 5 mm	606555
Dropping resistor, 1 Ω , 1 W	607205
ESSK 103-91***	014781
Cable, 2 x 1 mm ²	604380
Rubber switch cover	607319
Resistor, 5.6 k Ω / 0.25 W	606690
Socket insert (solder), H-A3 Sta 6 S Löt	209471
Bulkhead housing, H-A3 Ag, for socket insert	607297

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