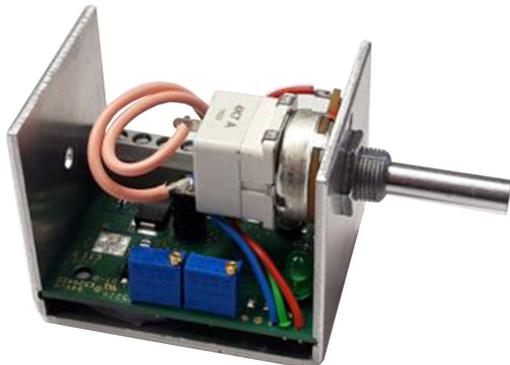


# Amplifier

ESSK106 / ELSK106



- durable, reliable analog technique
- inclusive potentiometer with ON/OFF switch
- reverse polarity
- short circuit-protected
- calibration of min. or max. current

## 1 Description

### 1.1 General

The ESSK/ELSK106 compact amplifier is used to control the solenoid of a proportional hydraulic valve. The current compensation feature ensures that changes in the coil temperature or fluctuations in the supply voltage do not affect the coil current level. It is integrated in a U-profile and can be secured with one nut on, for example, an instrument panel. The front plate must be separately secured. The proportional amplifier requires a smoothed DC power supply in the range 12...30 V. The potentiometer is provided with an

integral ON/OFF switch. The current at the power output varies linearly with the knob rotation of the potentiometer. With the aid of two trimming potentiometers, both minimum and maximum current values can be set. The amplifier switches off automatically for the duration of any short circuit at the load terminals. Within the amplifier, a quenching diode is connected in parallel with the power output. This protects the output stage against switch-off spikes.

### 1.2 Application examples

- Agricultural and forestry equipment
- Construction machines
- Municipal equipment
- General

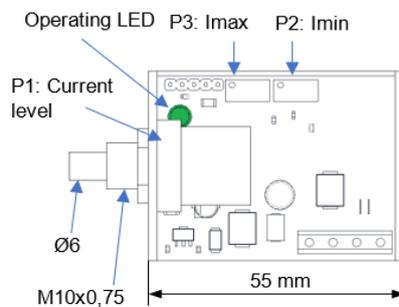
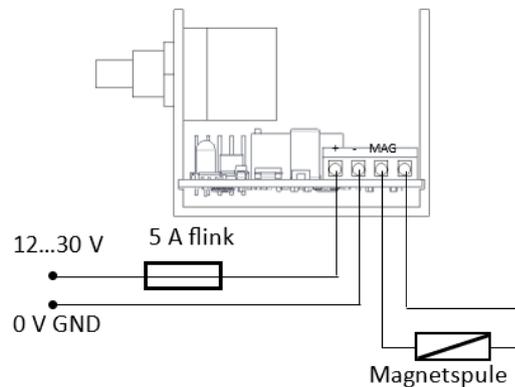
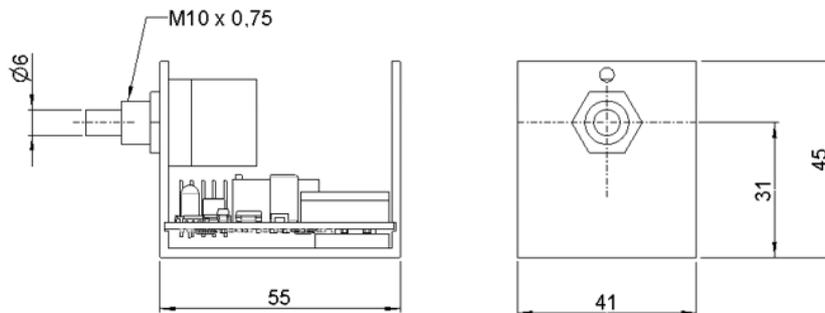
## 2 Technical data

Electrical characteristics	Unit	Description, value
Power supply ( $U_b$ )	V DC	12...30, smoothed. ripple < 10%
Minimum current ( $I_{min}$ )	A	from 0,2...1,2
Maximum current ( $I_{max}$ )	A	$I_{min} + (0,4... 2,5 \text{ adjustable})$
Maximum output voltage	V	approx. (supply voltage -3,5)
Maximum permissible output current ( $I_{zul}$ )	A	2,5
Dither frequency	Hz	factory setting at 100 (triangular wave)
Enclosure protection		IP00
Operating temperature	°C	-20...+50

Electrical characteristics	Unit	Description, value
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)
Cable length and section		For 1 mm <sup>2</sup> section wire, max. cable length is 10 metres
Electromagnetic compatibility		EN 14982 radiated emission DIN EN ISO 13766-1:2019 based on ISO 7637-2:2011 (12V), ISO 11452-4:2011, ISO 11452-2:2004 and ISO 10605:2008 ESD (4KV)

### 3 Dimension

#### 3.1 Connection diagram



P1 = potentiometer  
P2 = minimum current (I<sub>min</sub>)  
P3 = maximum current (I<sub>max</sub>)

P2/P3 = trim potentiometer  
max. 20 turns

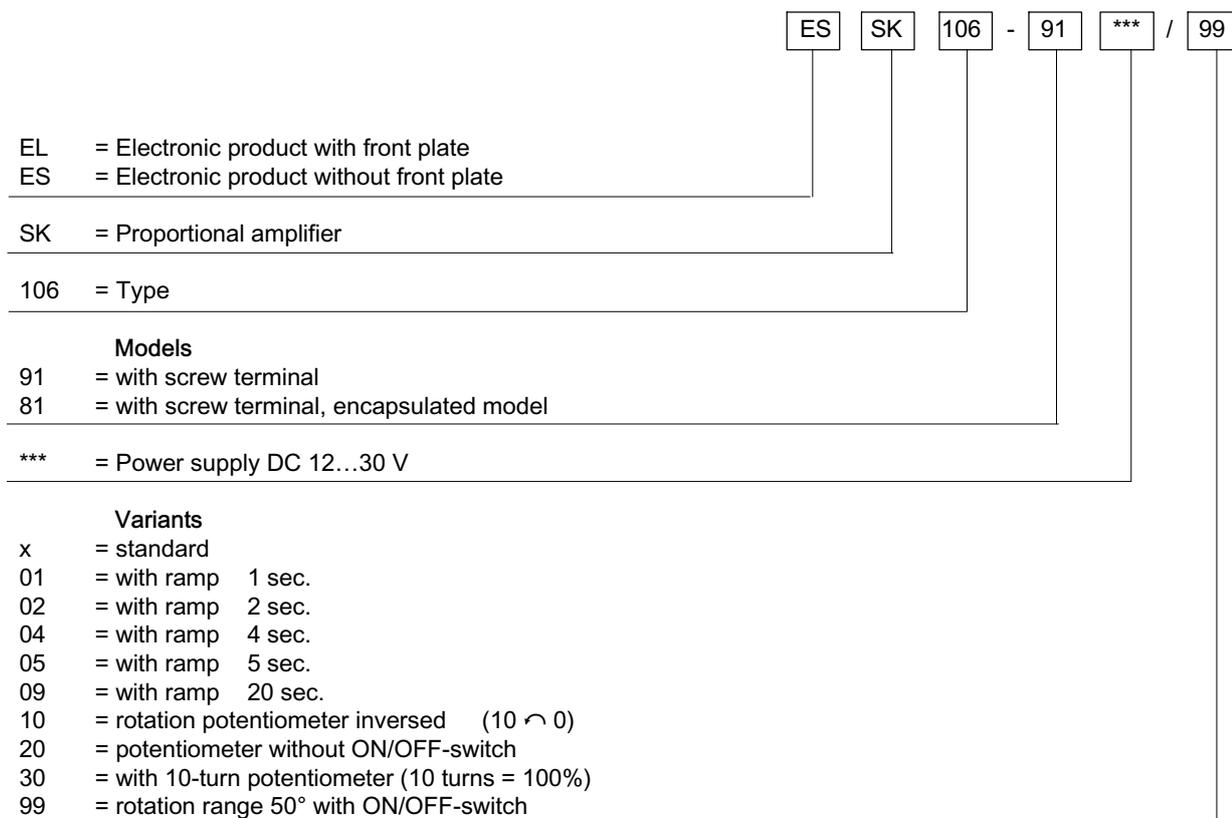
## 4 Initial start-up

Connect the amplifier corresponding to the connection plan and correct if necessary.

## 5 Setup procedure

1. Set the demand signal potentiometer P1 to minimum.
2. Using the trim potentiometer P2, while decreasing the signal, set the required current.
3. Set the demand signal potentiometer to maximum.
4. Using the trim potentiometer P3, while increasing the signal, set the required maximum current level (coil current must not exceed 2,5 A).
5. Check the results of the procedure.

## 6 Ordering code



## 7 Accessories

Description	Ord. code
Front plate	100218778
Potentiometer indicator knob	100604397
Low-voltage fuse, 5 A, fast-acting	100606938
Flying fuse holder	100607349

## 8 Fault Finding

