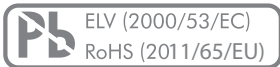


**PRELIMINARY**
**MAIN FEATURES**

HIGH PERFORMANCE AUDIO SELECTOR SWITCHES, SERIES AND LADDER TYPE ATTENUATORS

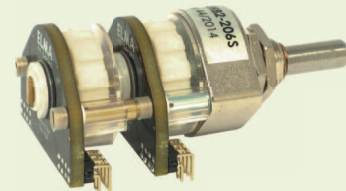
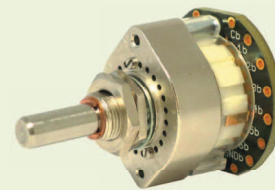
- Exceptional sonic performance with precise switch feel
- Low-bounce contact system with 3 micron gold plating
- Motorized, IR controllable versions available


**SELECTOR SWITCHES**

- 2 poles x 6 positions per wafer
- Shorting or non-shorting
- With selectable end-stops
- Up to 8 wafers

**SERIES AND LADDER TYPE ATTENUATORS**

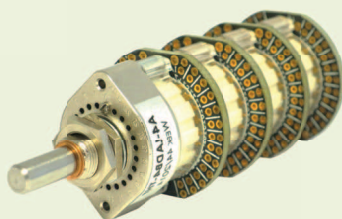
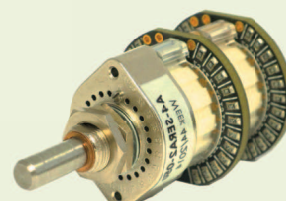
- 24 positions, with selectable end-stops
- Up to 8 channels with series type and 4 channels with ladder type
- Available with pre-populated thin-film SMT resistors
- or non-populated THT version to be populated by the customer
- 10k, 25k, 50k oder 100k Ohms standard input impedance values
- Free Excel resistor calculator tool available

**TWO-WAFER HORIZONTAL SELECTOR**

**SINGLE-WAFER VERTICAL SELECTOR**

**POSSIBLE CUSTOMIZATIONS**

- PCB design and tapers
- Shafts, concentric construction

**TYPICAL APPLICATIONS**

- Mixing desks and outboard studio equipment
- Home audio and home theater

**TWO-CHANNEL THT LADDER TYPE ATTENUATOR**

**TWO-CHANNEL SMT SERIES TYPE ATTENUATOR**


**PRELIMINARY**

**DESCRIPTION**

The A4 audio switch series offers a comprehensive range of selector switches, as well as series and ladder type attenuators. These high performance audio switches incorporate a PCB based switch contact system that is specifically designed to meet audiophile requirements for superb sonic performance.

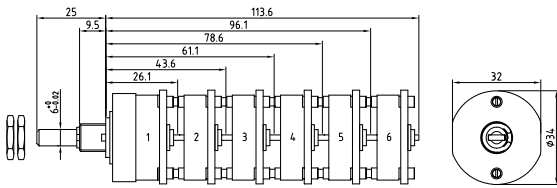
The selector switches are available in horizontal or vertical orientation, and feature switch torques from 1.5 to 15 Ncm and are available in up to 8 wafer versions. The switch functionality is 2 poles x 6 positions per wafer, with shorting or non-shorting contacts. All switches feature selectable end-stops.

The series and ladder type attenuators feature switch torques from 1.5 to 15 Ncm and are available either populated with low-noise, high precision SMT resistors (standard input impedances are 10k, 25k, 50k or 100k), or non-populated THT versions which can be populated by the customer. The series type attenuators are available from 1 to 8 channels and the ladder types are available up to 4 channels.

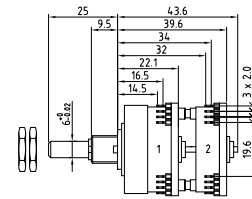
All switches feature Elma’s hallmark indexing feel for superior tactile feedback.

**DIMENSIONS (mm)**

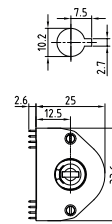
**VERTICAL SELECTOR SWITCH AND ATTENUATORS**



**HORIZONTAL SELECTOR SWITCH**



**FRONT PANEL CUT-OUT**



**SPECIFICATIONS**

**GENERAL**

Indexing Resolution:	12 positions (30° indexing; 330° total switch travel) or 24 positions (15° indexing; 345° total switch travel)
Switching torque:	1.5, 4, 8 or 15 Ncm (+/- 30%, over temperature range and life)
Rotational life:	25k cycles (over temperature range, at 120 RPM)
Contact system:	Low-bounce wiper with 3 micron hard gold plated PCB
SMT resistors:	Attenuators only; 0805 package, thin-film, +/- 0.1%, TCR; +/-25 ppm/°C
Input impedance:	Attenuators only; 10k, 25k, 50k or 100k Ohms
Electrical load:	Selector switches only; 42 VDC max., 500 mA max. (resistive load, over temperature range and life)
Packaging:	Single piece packed, two nuts are included

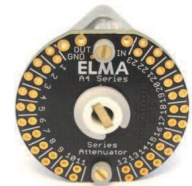
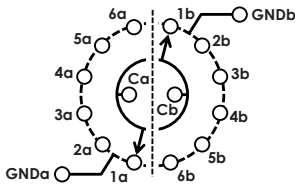
**dB ATTENUATION (SERIES AND LADDER TYPE ATTENUATORS)**

SWITCH POSITION	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Attenuation (dB)	Off	-62	-53	-46	-41	-37	-34	-32	-30	-28	-26	-24	-22	-20	-18	-16	-14	-12	-10	-8	-6	-4	-2	0
Step size (dB)			9	7	5	4	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2

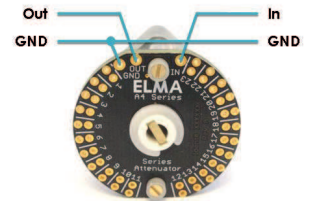
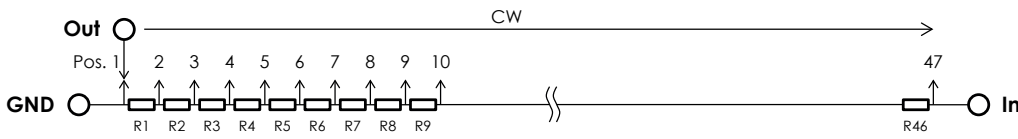
**PRELIMINARY**

**CIRCUITRIES AND PIN ALLOCATION**

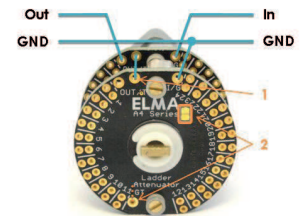
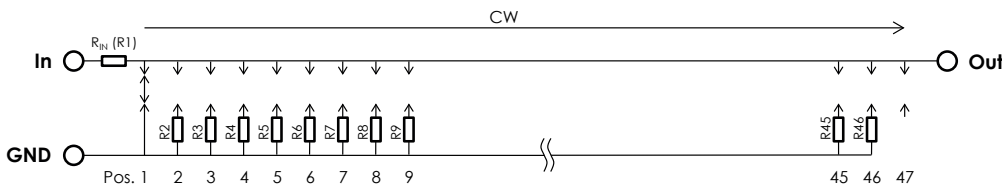
**SELECTOR SWITCHES**



**SERIES TYPE ATTENUATOR**



**LADDER TYPE ATTENUATOR**



The ladder attenuator needs a transit wire between the two wafers per channel (1)  
The GND-planes can be connected by soldering the jumper and adding a GND transit wire (2)

**ORDERING CODE**

<b>A4</b>	-	--	-	-	-	--	-
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**TYPE**

- SLH** Selector switch horizontal (shorting only)
- SLV** Selector switch vertical
- SER** Series type attenuator
- LAD** Ladder type attenuator

**SWITCHING TORQUE**

- A** 1.5 Ncm (not recommended for >2 wafers)
- B** 4 Ncm
- C** 8 Ncm
- D** 15 Ncm

**NUMBER OF WAFERS**

- X** x wafers (max. 8, SER types have 1 wafer per channel, LAD types have 2 wafers per channel)

**SWITCHING MODE**

(For selector switches only, leave blank for attenuators)

- S** Shorting
- N** Non-Shorting (not available for horizontal)

**FUNCTION (per wafer)**

**Selector switches:**  
**206** 2 poles; 6 positions (30° indexing)

**Attenuators:**  
**THT** THT, non-populated  
**010** SMT, 10k Ohms impedance  
**025** SMT, 25k Ohms impedance  
**050** SMT, 50k Ohms impedance  
**100** SMT, 100k Ohms impedance

**ACCESSORIES TO ORDER**

Spare nuts (10 pcs. pack):	P/N 4124-41
Stop screws (10 pcs. pack):	P/N 4124-21
Free Excel resistor calculator:	Available from elma.com