The latching relays consist of two separate magnet systems. On applying the nominal voltage to A1/A2, the SSPE 34 moves to the contact position 11/14 (SSPE 56: 13/14 closed). Because this is a bistable relay, it means that the operated conditions of the contacts are maintained even in the case of power failure or power interruption. Upon applying the nominal voltage SSPE 34 to B1/B2 (SSPE 56: E1/E2), the relay moves back to the contact position 11/12 (SSPE 56: 13/14 open). The relay contacts have no preferred position and can form any possible combination in their delivery state. For this reason, the relay should be set in the required position before commissioning. It is imperative to avoid excitation of both coils simultaneously, as this will endanger the switching operation and no defined state can be guaranteed. Both coils must be operated using the same voltage.

**Electromechanical elementary relay**

- **Function:** Latching relay
- **Contact complement**
  - SSPE 34: 4 changeover
  - SSPE 56: 3 break contacts & 3 make contacts
- **Front dimensions**
  - SSPE 34: 110.0 x 70.0 mm
  - SSPE 56: 45.0 x 77.0 mm

**Dimensional drawings**

[Diagram showing dimensional drawings for SSPE 34 and SSPE 56]
SSPE 34   SSPE 56 Latching Relay Timers

### Technical data

**Product standard**
EN 61810

**Function type**
Electromechanical latching relay

**Supply circuit**
- Nominal voltage $U_N$: 24 V AC/DC bis 230 V AC/DC
- Nominal frequency: 50 and 60 Hz
- Power consumption during the switching operation: Max. $U_N \times 120$ mA
- Operating voltage range: 0.8 bis 1.1 $U_N$

**Output circuit**
- Contact complement: SSPE 34: 4 changeover
  SSPE 56: 3 break contacts & 3 make contacts
- Contact material: AgSnO₂
- Nominal switching voltage $U_N$ (see figure above): 400 V AC / 30 V DC
- Max. continuous current $I_N$: 5 A
- Utilization category under: DIN EN 60947-5-1
  (VDE 0660 Teil 200): 2000-08; EN 60947-5-1
- Permitted switching rate:
- Mechanical service life:
- Electrical service life (with resistive load and 20 switching cycles per min.): $\leq 3600$ operating cycles / h
  $10^7$ switching cycles
- Time to stable closed condition:

**General data**
- Air gap and creepage distances between the electric circuits by:
  - Impulse voltage withstand level: DIN EN 60664-1: 2008-01; VDE 0110-1: 2008-01
  - Overvoltage category: 4 kV
  - Pollution severity: III
  - Rated voltage: 3 outside, 2 inside
  - AC 250 V
  - Test voltage: 2.21 kV
  - IP 30 / IP 20
  - Temperature range: -10 to +55 °C
  - Weight: 0.3 kg

**Rated voltage**

![Graph of Max. switching power vs. Current A]

**Function diagram**

SSPE 34
- $t_A = \text{Operate time}$
- A1/A2: Excitation var. - Inductor 1
- B1/B2: Excitation var. - Inductor 2
- 11/14: Contact time
- 11/12: Switching element

SSPE 56
- $t_A = \text{Operate time}$
- A1/A2: Excitation var. - Inductor 1
- E1/E2: Excitation var. - Inductor 2
- 13/14: Switching element
- 41/42: Switching element

**Contact voltage**

![Graph of Contact voltage vs. Current A]

- DC resistive
- AC resistive

**Current, A**

- 0.8
- 0.7
- 0.6
- 0.5
- 0.4
- 0.3
- 0.2
- 0.1
- 0

- 10
- 20
- 50
- 100
- 200
- 300
- 400
- 500
- 600
- 700
- 800
- 900
- 1000