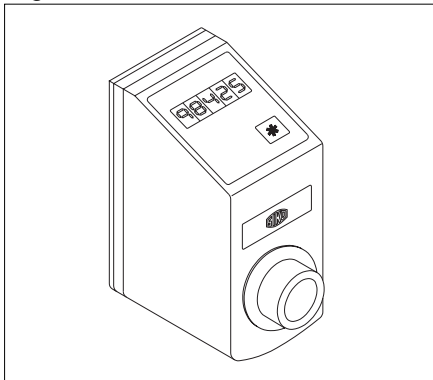


# DE09

## Digital Position Indicator



**ENGLISH**

### 1. Safety information

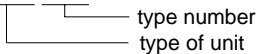
In order to carry out installation correctly, we strongly recommend this document is read very carefully. This will ensure your own safety and the operating reliability of the device.

- Your device has been quality controlled, tested and is ready for use. Please respect all warnings and information which are marked either directly on the device or in this document.
- Warranty can only be claimed for components supplied by SIKO GmbH. If the system is used together with other products, the warranty for the complete system is invalid.
- Repairs should be carried out only at our works. If any information is missing or unclear, please contact the SIKO sales staff.

### 2. Identification

Please check particular type of unit and type number from the identification plate. Type number and the corresponding execution are indicated in the delivery documentation.

e.g. DE09-0023



### 3. Summary description

The DE 09 is an absolute, electronic position indicator with hollow shaft. It is used as direct read-out for position values. The display parameters are pre-programmed at the factory.

Its main advantages compared to mechanical digital displays are higher resolution and accuracy and suitability for higher rotational speeds.

#### Features:

- resolution: up to 0,01 mm for all spindle pitches up to 10 mm
- absolute display (capacitive measuring system)
- easily readable, 5-digit LCD display
- display with sign for negative values
- speed max. = 600 rpm
- also suitable as angle display; resolution 0,5°
- incremental measurement function (relative dimension)
- battery life approx. 10 years
- hollow through shaft
- easy mounting via hollow shaft and torque pin
- suitable for various mounting positions

### 4. Installation

The unit should be used only up to the IP-protection level stated. Protect the unit, if necessary, against environmental influences such as sprayed water, dust, knocks, extreme temperatures.

- Ensure sliding fit between solid shaft and DE09.
- Ensure accurate shaft alignment and mount the DE09 without force. Do not exceed the values for the maximum axial and radial shaft load. If the shaft is not correctly aligned, strain on the bearings will result, which may cause overheating and irreparable damage.
- Especially when using torque pin type A for fixing, ensure that DE09 does not jam and that it is mounted without strain. Please remember this when choosing the DE09's bore diameter.
- Avoid knocking the unit.

Torque pin type A : pin  $\varnothing$  6 h9  
type B : bore  $\varnothing$  10 +0.8

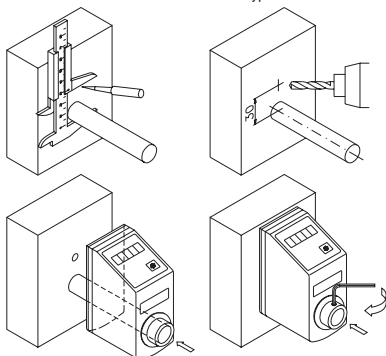




Fig. 1: Mounting instructions

## 5. Incremental measurement (option)

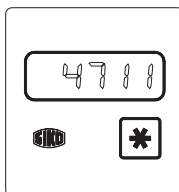


**Note:** The following information is only relevant for DE09 indicators with 'Incremental measurement function'.

Press key  to set the display to '0'. On the left side of the display the sign "<" appears. The following displacements are displayed as relative incremental dimension.

If key  is pressed again, the absolute value is displayed, but to this is added or deducted however, the relative displacement (see fig. 2).

Display of absolute value



Display of incremental dimension

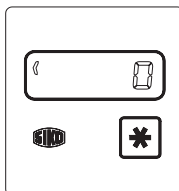


Fig. 2: Incremental measurement

## 6. Interference and distortion

**The location should be selected to ensure that no capacitive or inductive interferences can affect the display!** Interference can be caused by motors, switch gear, cyclic controls and contactors.

**The following point should be observed:**

- The display should be positioned well away from cables with interference.

## 7. Voltage supply

Digital Position Indicator DE09 is battery-powered; battery life approx. 10 years.

Battery life is influenced by operating time, operational speed and other environmental conditions. When LCD-display starts blinking, battery must be exchanged within two weeks.

Battery exchange can either be carried out by the customers, the SIKO-agents or at our factory.

If you are going to carry out battery exchange yourselves, please observe the below mentioned points.

### Battery change

- Only the recommended battery type should be used. (Type CR 17335; Fa. Sanyo)
- Ensure correct polarisation when you insert battery. Symbols inside the battery box show correct insert direction. In case of wrong polarity, programming of the DE09 will be lost.
- **Attention:** inflammable, explosion / burn hazard. Battery cannot be recharged and must not be punctured, burned or exposed to temperatures above 100°C.
- Discharged batteries should be removed from the device and disposed of safely.
- New batteries must be exchanged within 45 seconds. Otherwise the DE09 will lose parameter programming.



Battery box is at the rear of the DE09 under the sealing.

To change the battery, please proceed as follows (see fig. 3):

- Remove DE09 from the machine.
- Prepare new battery.
- Partially remove sealing (1).
- Unscrew the two fastening screws (2) and withdraw the battery box (3) in axial direction.
- Disconnect the cables of the used battery with a soldering iron. Check the polarity before soldering the cables at the new battery.

- Carefully push the battery box back and check the LCD-display's function.
- Tighten fastening screws and glue foam rubber seal.

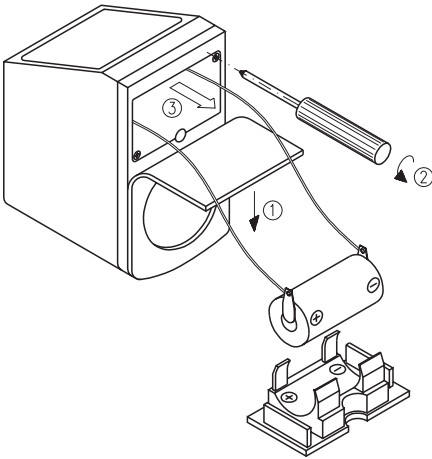


Fig. 3 : Battery change

## 8. Trouble Shooting

**Error:** device carries out self-test. Display does not show the old value, but value 400.

**Reason:** max. allowable time of 45 sec. for battery exchange was exceeded.

**Elimination:** device has to be re-programmed, either at SIKO, at a SIKO agent or by using programming software PROSO-DE09.

**Error:** despite new battery no value displayed.

**Reason:** battery contacts bent and hence bad contacts. Similar to allowable time for battery exchange exceeded.

**Elimination:** return DE09 to SIKO or to a SIKO agent for repairing battery contact springs.

**Error:** although 0 was exceeded, sign does not change from "-" (minus) to "+" (plus).

**Reason:** max. "-" (minus)-display range was passed over.

**Elimination:** turn shaft in "+" (plus)-direction (upward counting display) until correct sign is shown (0 has to be passed max. 10 times),.

**SIKO** GmbH  
DR.-ING. G. WANDRES

Postanschrift / Postal address:  
Postfach 1106  
D-79195 Kirchzarten

Werk / Factory:  
Weihermattenweg 2  
D-79256 Buchenbach

Telefon / Phone 0 76 61 / 3 94 - 0  
Telefax / Fax 0 76 61 / 3 94 - 388  
Internet [www.siko.de](http://www.siko.de)

