

Position indicators are mechanical measuring devices which indicate and monitor the movement of a machine component along a linear shaft or threaded lead spindle.

They are used to move and give a readout of values such as lengths [m, mm], forces [N], volumes [l], revolutions [rpm], etc.

Position indicators are split into the following categories:

Operating principle of the measuring mechanism

- Energized by a weighted pendulum and gravity (gravity drive) for connecting to a horizontal spindle
 - EN 000.8 → *page 350*
 - EN 000.3 → *page 351*
- Self-energized, direct or indirect, stationary system to be connected in any required position
 - EN 000.9 → *page 366*
 - EN 000.13 → *page 367*
 - EN 953 → *page 372*
 - EN 953.2 → *page XYZ*
 - EN 954 → *page 374*
 - EN 954.2 → *page XYZ*
 - EN 955 → *page 376*
- Drive, direct and contact-free
 - EN 9053 → *page 378*
 - EN 9054 → *page 380*

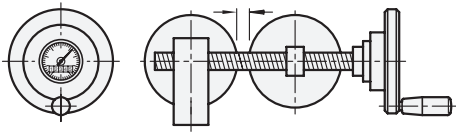
Type of readout

- Analog (EN 000.8 / EN 000.9)
- Digital / analog (EN 000.3 / EN 000.13)
- Digital (EN 953 / EN 954 / EN 955)
- Digital, electronic, LCD display (EN 9053 / EN 9054)

The movement is in most cases initiated by operating elements. There is an extensive range of handwheels and hand knobs available that can be used for incorporating position indicators in their hubs.

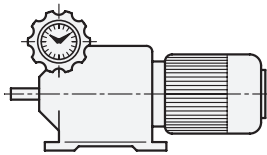
Position Indicators

Application Examples



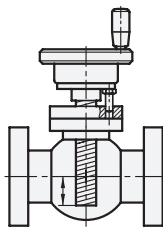
Handwheel with position indicator EN 000.3
Operating principle gravity drive, digital and analog readout

Application example:
Lining of rollers (rolls) in mechanical engineering
(printing machines, straightening machines)



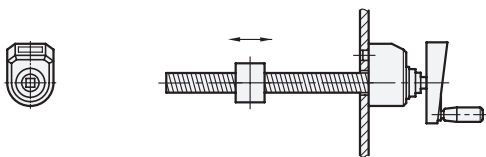
Handwheel with position indicator EN 000.8
Operating principle gravity drive, analog readout

Application example:
Regulating rpm speed on steplessly adjustable gear boxes



Handwheel with position indicator EN 000.9 / EN 000.13
Operating principle stationary system, digital and analog readout

Application example:
Valve adjustment with vertical adjustment spindle



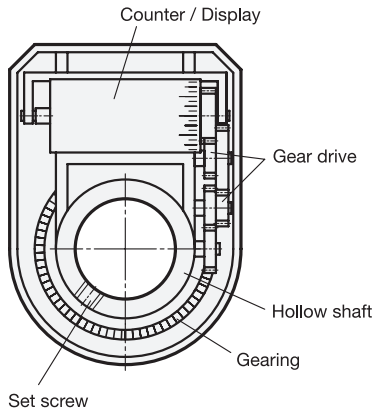
Crank handle with position indicators EN 953 / EN 953.2 / EN 954 / EN 954.2 /
EN 955 / EN 9053 / EN 9054 / EN 9153
Operating principle stationary system (direct driven), digital readout

Application example:
Positioning of machine parts



Operating principle

The digital position indicator is equipped with a hollow shaft that is slid directly onto the spindle and is connected to the spindle by a set screw. The spindle rotations are transmitted to a counter directly by a gearbox. For torque support, a pin of the housing projects into a hole made on the machine side, establishing the position relative to the mounting site.



The transmission ratio and counting direction of the counter are determined by the pitch of the adjusting spindle. The indicated value after one turn starting from the 0 position serves as a characteristic value. Decimal places are indicated in red.

Position indicators are also suitable for motor-driven spindles up to a certain maximum speed.

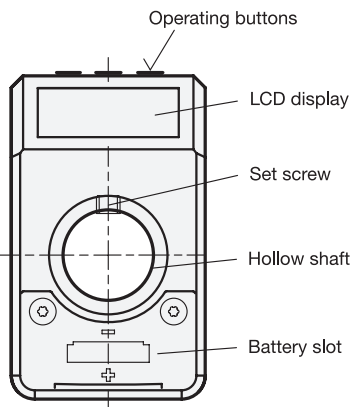
Operating principle

EN 9053 / EN 9054 / EN 9153 electronic position indicators are very similar to EN 953 / EN 954 / EN 955 mechanical position indicators with regard to installation and external dimensions and can normally replace them.

The protection class IP 65 or IP 67 of the housing permits use in wet areas, even in contact with direct streams of water.

The measurement of the spindle rotations takes place directly, electronically and without contact. The required energy is supplied by a lithium battery with a lifespan of 5 or 8 years that can be easily replaced.

The special advantage of the electronic position indicator lies in its programmability. Nearly any desired counting option can be configured directly on the device using the function buttons.



With 3 or 4 function buttons, it is possible to:

- Switch between incremental and absolute measurement modes
- Change the unit of measurement (mm, inches or degrees)
- Reset the counter or set an offset value
- Change the display after one rotation of the shaft and set the resolution, in other words, the number of decimal places displayed
- Set the direction of rotation / counting direction
- Adjustment for the display orientation (depending on the installation situation) and the maximum rotation speed