



Direct drive electronic
position indicators

STANDARD MACHINE ELEMENTS WORLDWIDE

elesa®

DD51-E Electronic position indicators

direct drive, 5-digit display, technopolymer



BASE AND CASE

High-resistance polyamide based (PA) technopolymer.
Black base.

Case in the following colours:

- **C2:** RAL 2004 orange, glossy finish.
- **C3:** RAL 7035 grey, glossy finish.

Available on request in RAL 7021 grey-black colour (C1).

Cover with perfectly sealed gasket and AISI 304 stainless steel UNI 6955 type self-tapping screws with six-lobe socket TORX®T06 (registered trademark by TEXTRON INC.)

The ultrasonic welding between the base and the case prevents separation and avoids dust penetration.

BOSS

AISI 304 stainless steel with Ø 14 mm H7 reamed hole, fitting to shaft by means of AISI 304 stainless steel grub screw, hexagon socket and cup end UNI 5929-85, included in the supply.

WINDOW

Transparent polyamide based (PA-T) technopolymer, moulded over the case and with a perfect seal. Resistant to solvents, oils, greases and other chemical agents (avoid contact with alcohol during cleaning operations).

DISPLAY

- 5-digit LCD of 8 mm height and special characters.

The visualization parameters can be set and modified by the operator by means of appropriate keys:

- values displayed in mm, inches or degrees
- display of mode for use (absolute or incremental mode)
- reading orientation (right or reverse).

KEYBOARD

Polyester membrane. Resistant to solvents, alcohol, acids, alkalis.

INTERNAL GASKET

O-ring front sealing in NBR synthetic rubber, between the case and the bushing.

Brass bushing with double O-ring sealing in NBR synthetic rubber inside the rear cavity of the base (DD51-E-SST-IP67).

REAR GASKET

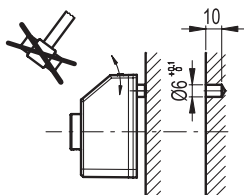
Foam polyethylene, supplied.

STANDARD EXECUTIONS

- **DD51-E-SST-IP65:** completely sealed indicator with IP 65 protection class, see IEC 529 table.
- **DD51-E-SST-IP67:** completely sealed indicator with IP 67 protection class, see IEC 529 table obtained by means of a brass bushing with double seal ring inside the rear cavity of the base.

ASSEMBLY INSTRUCTIONS

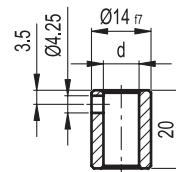
1. Drill a Ø 6 mm by 10 mm hole in the body of the machine with a 22 mm centre distance from the spindle to fit the rear referring pin.
2. Fit the indicator onto the spindle and make sure that the referring pin fit the hole.
3. Clamp the bushing to the spindle by tightening the grub screw with hexagon socket and cup end, according to UNI 5929-85.



ELESA Original design

ACCESSORIES ON REQUEST (TO BE ORDERED SEPARATELY)

AISI 304 stainless steel RB51 reduction sleeves.



RB51-SST



Code	Description	dH7
CE.95941	RB51-6-SST-304	6
CE.95951	RB51-8-SST-304	8
CE.95956	RB51-10-SST-304	10
CE.95961	RB51-12-SST-304	12

FEATURES AND APPLICATIONS

DD51-E position indicators, with battery power supply, can be used on passing through shafts in any position to provide the reading of the absolute or incremental positioning of a machine component.

The 5-digit display of 8,0 mm height ensures excellent readability even from a distance and from different viewing angles.

The window in transparent technopolymer protects the LCD display against accidental shocks.

The high protection degree, IP 65 or IP67, makes the indicator suitable for applications that require frequent washing, even with intense water jets.

In the operating mode, by using the 3 function keys, it is possible to select the incremental or the absolute mode, the unit of measure (mm, inches or degrees), reset the absolute counter or load a preset source value and the preset offset value.

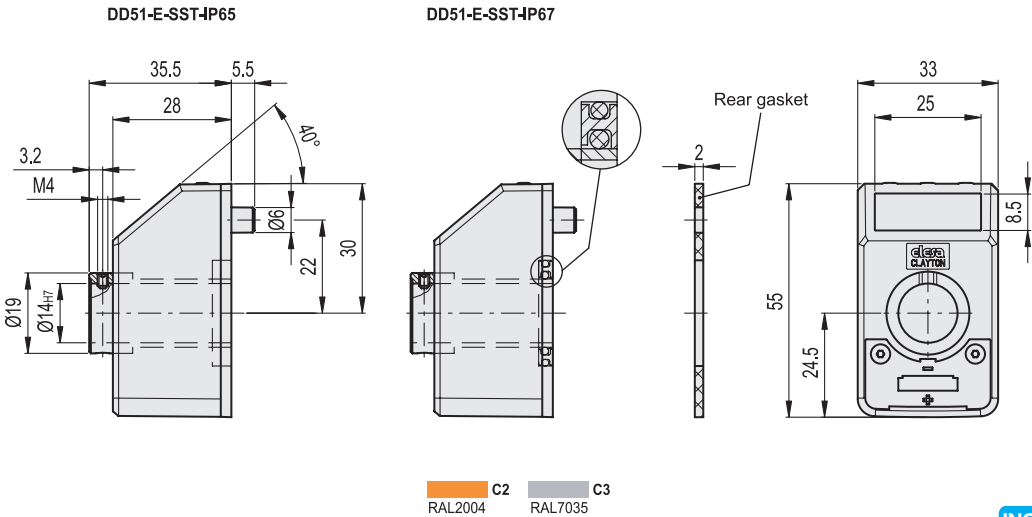
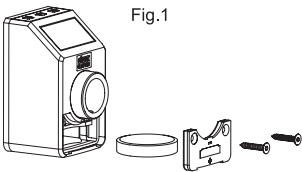
In the programming mode, through the 3 function keys, it is possible to program the reading after one revolution of the shaft, the direction of rotation, the display orientation, the resolution (number of decimal digits displayed), the source value and the offset value, the max. speed of rotation and set the functions of the keys among different options available.

The internal battery ensures long battery life (over 5 years). A special symbol appears on the display when it is necessary to replace the battery. The replacement can be performed easily by removing the front cover (Fig.1), without disassembly of the indicator from the control shaft and without the loss of configuration parameters.

Further technical information available in Operating instructions.

Mechanical and electrical characteristics	
Tension feed	Lithium battery CR2450 3.0 V
Battery life	5 years
Display	5-digit LCD of 8 mm height and special characters
Reading scale	-19999; 99999
Number of decimal digits	programmable ⁽¹⁾
Unit of measure	mm, inches, degrees programmable ⁽¹⁾
Rotation max. speed	300/600/1000 r.p.m ⁽²⁾ programmable ⁽¹⁾
Precision	10.000 impulses / revolution
Protection class	IP65 or IP67
Working temperature	0 ÷ 50 °C
Storing temperature	-20 ÷ +60 °C
Relative humidity	Max. 95% at 25°C without condensation
Interference protection	IEC 61000-4-2

- (1) See the operating instructions.
- (2) Default: 600 r.p.m.
Higher rotation speed to 600 r.p.m. can be maintained for short periods of time.
The value of the max. speed affects the battery life.



Code	Description	Weight
CE.99002	DD51-E-SST-IP65-C2	67
CE.99001	DD51-E-SST-IP65-C3	67
CE.99012	DD51-E-SST-IP67-C2	72
CE.99011	DD51-E-SST-IP67-C3	72

BASE AND CASE

High-resistance polyamide based (PA) technopolymer.
Black base.

Case in the following colours:

- **C2:** RAL 2004 orange, glossy finish.
- **C3:** RAL 7035 grey, glossy finish.

Available on request in RAL 7021 grey-black colour (C1).

Cover with perfectly sealed gasket and AISI 304 stainless steel UNI 6955 type self-tapping screws with six-lobe socket TORX®T06 (registered trademark by TEXTRON INC.).

The ultrasonic welding between the base and the case prevents separation and avoids dust penetration.

BOSS

AISI 304 stainless steel with Ø 20 mm H7 reamed hole, fitting to shaft by means of AISI 304 stainless steel grub screw, hexagon socket and cup end UNI 5929-85, included in the supply.

WINDOW

Transparent polyamide based (PA-T) technopolymer, moulded over the case and with a perfect seal. Resistant to solvents, oils, greases and other chemical agents (avoid contact with alcohol during cleaning operations).

DISPLAY

- 6-digit LCD of 12,0 mm height and special characters.

The visualization parameters can be set and modified by the operator by means of appropriate keys:

- values displayed in mm, inches or degrees
- display of mode for use (absolute or incremental mode)
- reading orientation (right or reverse).

KEYBOARD

Polyester membrane. Resistant to solvents, alcohol, acids, alkalis.

INTERNAL GASKET

O-ring front sealing in NBR synthetic rubber, between the case and the bushing.

Brass bushing with double O-ring sealing in NBR synthetic rubber inside the rear cavity of the base (DD52R-E-SST-IP67).

REAR GASKET

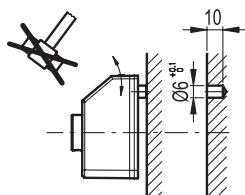
Foam polyethylene, supplied.

STANDARD EXECUTIONS

- **DD52R-E-SST-IP65:** completely sealed indicator with IP 65 protection class, see IEC 529 table.
- **DD52R-E-SST-IP67:** completely sealed indicator with IP 67 protection class, see IEC 529 table obtained by means of a brass bushing with double seal ring inside the rear cavity of the base.

ASSEMBLY INSTRUCTIONS

1. Drill a Ø 6 mm by 10 mm hole in the body of the machine with a 30 mm centre distance from the spindle to fit the rear referring pin.
2. Fit the indicator onto the spindle and make sure that the referring pin fit the hole.
3. Clamp the bushing to the spindle by tightening the grub screw with hexagon socket and cup end, according to UNI 5929-85.

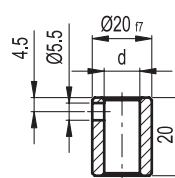


ELESA Original design

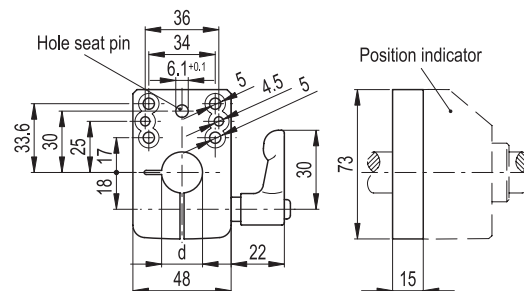
ACCESSORIES ON REQUEST (TO BE ORDERED SEPARATELY)

- AISI 304 stainless steel RB52 reduction sleeves.

RB52-SST		
Code	Description	dh7
CE.97941	RB52-12-SST-304	12
CE.97951	RB52-14-SST-304	14
CE.97956	RB52-15-SST-304	15
CE.97961	RB52-16-SST-304	16



- **BSA52-E:** die-cast zinc alloy bases for spindle locking, epoxy resin coating, black colour, matte finish. Type GN 302 adjustable handle with die-cast zinc alloy lever body and AISI 304 stainless steel clamping element. A Ø6.1 mm hole to fit the referring pin of the indicator. Handle positioned either on the right or on the left. Fitting to the machine by means of two M4 cylindrical head screws (not included in the supply).



Code	Description	dh7
CE.99091	BSA52-E-12	12
CE.99093	BSA52-E-14	14
CE.99094	BSA52-E-15	15
CE.99095	BSA52-E-16	16
CE.99099	BSA52-E-20	20

FEATURES AND APPLICATIONS

DD52R-E position indicators, with battery power supply, can be used on passing through shafts in any position to provide the reading of the absolute or incremental positioning of a machine component.

The 6-digit display of 12,0 mm height ensures excellent readability even from a distance and from different viewing angles.

The window in transparent technopolymer protects the LCD display against accidental shocks.

The high protection degree, IP65 or IP67, makes the indicator suitable for applications that require frequent washing, even with intense water jets.

In the operating mode, by using the 4 function keys, it is possible to select the incremental or the absolute mode, the unit of measure (mm, inches or degrees), reset the absolute counter or load a preset source value and the preset offset value.

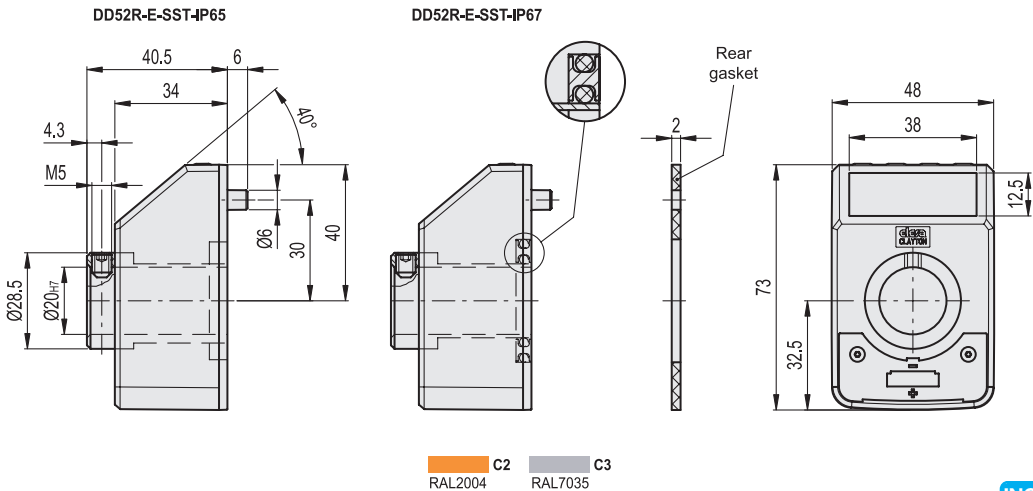
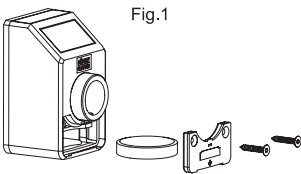
In the programming mode, through the 4 function keys, it is possible to program the reading after one revolution of the shaft, the direction of rotation, the display orientation, the resolution (number of decimal digits displayed), the source value and the offset value, the max. speed of rotation and set the functions of the keys among different options available.

The internal battery ensures long battery life (over 8 years). A special symbol appears on the display when it is necessary to replace the battery. The replacement can be performed easily by removing the front cover (Fig.1), without disassembly of the indicator from the control shaft and without the loss of configuration parameters.

Further technical information available in Operating instructions.

Mechanical and electrical characteristics	
Tension feed	Lithium battery CR2477 3.0 V
Battery life	8 years
Display	6-digit LCD of 12 mm height and special characters
Reading scale	-19999; 99999
Number of decimal digits	programmable ⁽¹⁾
Unit of measure	mm, inches, degrees programmable ⁽¹⁾
Rotation max. speed	300/600/1000 r.p.m ⁽²⁾ programmable ⁽¹⁾
Precision	10.000 impulses / revolution
Protection class	IP65 or IP67
Working temperature	0 ÷ 50 °C
Storing temperature	-20 ÷ +60 °C
Relative humidity	Max. 95% at 25°C without condensation
Interference protection	IEC 61000-4-2

- (1) See the operating instructions.
- (2) Default: 600 r.p.m.
- Higher rotation speed to 600 r.p.m. can be maintained for short periods of time.
- The value of the max. speed affects the battery life.



Code	Description	
CE.99052	DD52R-E-SST-IP65-C2	129
CE.99051	DD52R-E-SST-IP65-C3	129
CE.99062	DD52R-E-SST-IP67-C2	141
CE.99061	DD52R-E-SST-IP67-C3	141

Direct drive electronic position indicators

The position indicators with battery power supply, can be used on passing through shafts in any position to provide the reading of the absolute or incremental positioning of a machine component.

Thanks to the available functions and to the programmable parameters, one item can be used for many applications including all shaft pitch variations, direction of rotation, unit of measure etc.



Wide display

5 digit display of 8 mm (DD51-E) or **6 digit display** 12 mm (DD52R-E) height. Ensures excellent readability even from a distance and from different viewing angles. The window in transparent technopolymer protects the LCD display against accidental shocks.



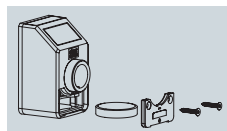
High protection class

IP65 or IP67 protection class. The indicator is suitable for applications that require frequent washing, even with water jets.



Corrosion resistance

AISI 304 stainless steel bushing with Ø 14 (DD51-E) or 20 (DD52R-E) mm H7 reamed hole. High-resistance polyamide based (PA) technopolymer base and case.



Long battery life

The internal lithium battery ensures a battery **life of over 5** (DD51-E) **or 8** (DD52R-E) **years**. The battery replacement can be performed easily, without disassembly of the indicator from the control shaft and without the loss of parameter configuration.

One item for all applications

Available functions

By using the function keys, it is possible to:

- select the incremental or the absolute measure mode
- convert the linear unit of measure (mm, inches) or select the angular measure mode (degrees)
- set the source value of the absolute counter
- select the offset value

Programmable parameters

The function keys allow to program:

- the reading after one revolution of the shaft
- the direction of rotation
- the resolution (number of decimal digits)
- the display orientation
- the source value and the offset value
- the max. speed of rotation
- the functions of the keys among different options available





ELESA. More and more...



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