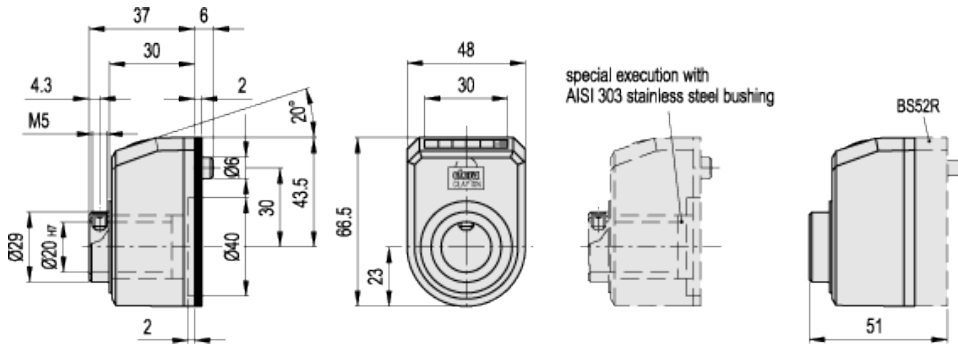


# DD52R

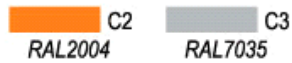
Direct drive  
digital position indicator



ELESA Original design



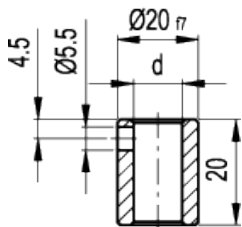
\* Complete with colour index, example: CE.82103 DD52R-AN-000.50-D-C2



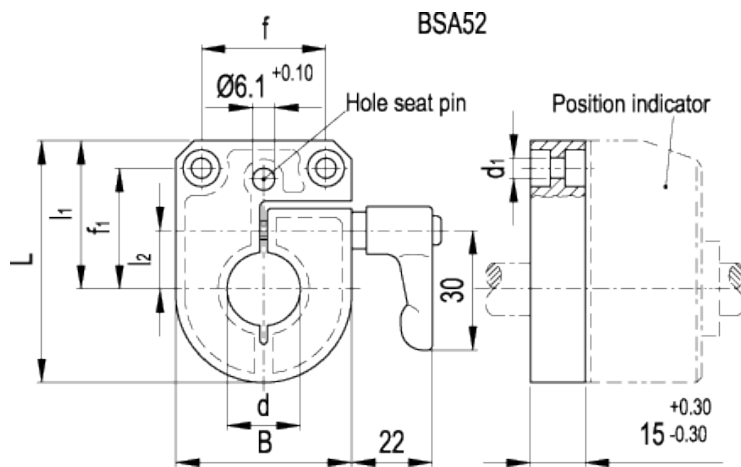
Codes and descriptions of standard combinations											
AN (inclined upper)			AR (inclined lower)			FN (front upper)			FR (front lower)		
C2	C3	*	C2	C3	*	C2	C3	*	C2	C3	*
Code	Code	Description	Code	Code	Description	Code	Code	Description	Code	Code	Description
CE.82103	CE.82101	DD52R-AN-000.50-D-	CE.82603	CE.82601	DD52R-AR-000.50-D-	CE.83103	CE.83101	DD52R-FN-000.50-D-	CE.83603	CE.83601	DD52R-FR-000.50-D-
CE.82104	CE.82102	DD52R-AN-000.50-S-	CE.82604	CE.82602	DD52R-AR-000.50-S-	CE.83104	CE.83102	DD52R-FN-000.50-S-	CE.83604	CE.83602	DD52R-FR-000.50-S-
CE.82133	CE.82131	DD52R-AN-001.00-D-	CE.82633	CE.82631	DD52R-AR-001.00-D-	CE.83133	CE.83131	DD52R-FN-001.00-D-	CE.83633	CE.83631	DD52R-FR-001.00-D-
CE.82134	CE.82132	DD52R-AN-001.00-S-	CE.82634	CE.82632	DD52R-AR-001.00-S-	CE.83134	CE.83132	DD52R-FN-001.00-S-	CE.83634	CE.83632	DD52R-FR-001.00-S-
CE.82153	CE.82151	DD52R-AN-0001.0-D-	CE.82653	CE.82651	DD52R-AR-0001.0-D-	CE.83153	CE.83151	DD52R-FN-0001.0-D-	CE.83653	CE.83651	DD52R-FR-0001.0-D-
CE.82154	CE.82152	DD52R-AN-0001.0-S-	CE.82654	CE.82652	DD52R-AR-0001.0-S-	CE.83154	CE.83152	DD52R-FN-0001.0-S-	CE.83654	CE.83652	DD52R-FR-0001.0-S-
CE.82183	CE.82181	DD52R-AN-0002.0-D-	CE.82683	CE.82681	DD52R-AR-0002.0-D-	CE.83183	CE.83181	DD52R-FN-0002.0-D-	CE.83683	CE.83681	DD52R-FR-0002.0-D-

Codes and descriptions of standard combinations											
AN (inclined upper)			AR (inclined lower)			FN (front upper)			FR (front lower)		
C2	C3	*	C2	C3	*	C2	C3	*	C2	C3	*
Code		Description	Code		Description	Code		Description	Code		Description
CE.82184	CE.82182	DD52R-AN-0002.0-S-	CE.82684	CE.82682	DD52R-AR-0002.0-S-	CE.83184	CE.83182	DD52R-FN-0002.0-S-	CE.83684	CE.83682	DD52R-FR-0002.0-S-
CE.82199	CE.82197	DD52R-AN-0002.5-D-	CE.82699	CE.82697	DD52R-AR-0002.5-D-	CE.83199	CE.83197	DD52R-FN-0002.5-D-	CE.83699	CE.83697	DD52R-FR-0002.5-D-
CE.82200	CE.82198	DD52R-AN-0002.5-S-	CE.82700	CE.82698	DD52R-AR-0002.5-S-	CE.83200	CE.83198	DD52R-FN-0002.5-S-	CE.83700	CE.83698	DD52R-FR-0002.5-S-
CE.82213	CE.82211	DD52R-AN-0003.0-D-	CE.82713	CE.82711	DD52R-AR-0003.0-D-	CE.83213	CE.83211	DD52R-FN-0003.0-D-	CE.83713	CE.83711	DD52R-FR-0003.0-D-
CE.82214	CE.82212	DD52R-AN-0003.0-S-	CE.82714	CE.82712	DD52R-AR-0003.0-S-	CE.83214	CE.83212	DD52R-FN-0003.0-S-	CE.83714	CE.83712	DD52R-FR-0003.0-S-
CE.82233	CE.82231	DD52R-AN-0004.0-D-	CE.82733	CE.82731	DD52R-AR-0004.0-D-	CE.83233	CE.83231	DD52R-FN-0004.0-D-	CE.83733	CE.83731	DD52R-FR-0004.0-D-
CE.82234	CE.82232	DD52R-AN-0004.0-S-	CE.82734	CE.82732	DD52R-AR-0004.0-S-	CE.83234	CE.83232	DD52R-FN-0004.0-S-	CE.83734	CE.83732	DD52R-FR-0004.0-S-
CE.82253	CE.82251	DD52R-AN-0005.0-D-	CE.82753	CE.82751	DD52R-AR-0005.0-D-	CE.83253	CE.83251	DD52R-FN-0005.0-D-	CE.83753	CE.83751	DD52R-FR-0005.0-D-
CE.82254	CE.82252	DD52R-AN-0005.0-S-	CE.82754	CE.82752	DD52R-AR-0005.0-S-	CE.83254	CE.83252	DD52R-FN-0005.0-S-	CE.83754	CE.83752	DD52R-FR-0005.0-S-
CE.82265	CE.82263	DD52R-AN-0006.0-D-	CE.82765	CE.82763	DD52R-AR-0006.0-D-	CE.83265	CE.83263	DD52R-FN-0006.0-D-	CE.83765	CE.83763	DD52R-FR-0006.0-D-
CE.82266	CE.82264	DD52R-AN-0006.0-S-	CE.82766	CE.82764	DD52R-AR-0006.0-S-	CE.83266	CE.83264	DD52R-FN-0006.0-S-	CE.83766	CE.83764	DD52R-FR-0006.0-S-
CE.82293	CE.82291	DD52R-AN-0010.0-D-	CE.82793	CE.82791	DD52R-AR-0010.0-D-	CE.83293	CE.83291	DD52R-FN-0010.0-D-	CE.83793	CE.83791	DD52R-FR-0010.0-D-
CE.82294	CE.82292	DD52R-AN-0010.0-S-	CE.82794	CE.82792	DD52R-AR-0010.0-S-	CE.83294	CE.83292	DD52R-FN-0010.0-S-	CE.83794	CE.83792	DD52R-FR-0010.0-S-

### RB52



RB52		Mounting hole
Code	Description	d <sub>H7</sub>
CE.87940	RB52-12	12
CE.87950	RB52-14	14
CE.87955	RB52-15	15
CE.87960	RB52-16	16



BSA52		Main dimensions							Mounting hole	Weight
Code	Description	B	L	d <sub>1</sub>	f	f <sub>1</sub>	l <sub>1</sub>	l <sub>2</sub>	d	g
CE.87901	BSA52-12	48	66.5	5.5	34	33.6	43.1	16	12	165
CE.87903	BSA52-14	48	66.5	5.5	34	33.6	43.1	16	14	164
CE.87904	BSA52-15	48	66.5	5.5	34	33.6	43.1	16	15	163
CE.87905	BSA52-16	48	66.5	5.5	34	33.6	43.1	16	16	162
CE.87909	BSA52-20	48	66.5	5.5	34	33.6	43.1	16	20	160

#### Base and case

High-resistance polyamide based (PA) technopolymer.

Resistant to solvents, oils, greases and other chemical agents.

Black base.

Case in the following colours:

- C2: RAL 2004 orange, glossy finish.

- C3: RAL 7035 grey, glossy finish.

On request and for a quantity of at least 10 pieces, it is available in RAL 7021 (C1) grey-black.

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

#### 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

It indicates the displacement of the mechanism controlled by the spindle from the start position (0).

Five-digit roller counter (four black rolls and one red roll or three black rolls and two red rolls). The digits of red rolls show the decimal values. An additional graduated scale next to the last decimal digit offers further accuracy of reading.

The display can be in different positions (see "Table of the possible combinations").

- AN: inclined display, counter in upper position.
- AR: inclined display, counter in lower position.
- FN: front display, counter in upper position.
- FR: front display, counter in lower position.

Table of the possible combinations						Inches reading			
Display position	Pitch	Reading after one revolution #			Speed (rpm) *	Direction of rotation	Colour	Reading after one revolution #	Speed (rpm) *
		0000.5	0005.0	0005.0					
 inclined upper AN	0.5		000.50	00050	500	 clockwise D		00.019(8875)	1270
	0.5	0000.5	000.05	00005	1500			00.019(8875)	1270
	0.9	0000.9(6)	000.09(6)	00009(6)	1500				
	1.0	0001.0	000.10	00010	1500			00.039(375)	630
	1.25	0001.2(5)	000.12(5)	00012(5)	1500				
	1.5	0001.5	000.15	00015	1500				
	1.58	0001.5(8)	000.15(8)	00015(8)	1500				
	1.607	0001.6(07)	000.16(07)	00016(07)	1500				
	1.75	0001.7(5)	000.17(5)	00017(5)	1420				
	2.0	0002.0	000.20	00020	1250			00.078(75)	310
 inclined lower AR	2.5	0002.5	000.25	00025	1000	 anti-clockwise S			
	2.54	0002.5(4)	000.25(4)	00025(4)	980				
	3.0	0003.0	000.30	00030	830			00.118(125)	210
	3.15	0003.1(5)	000.31(5)	00031(5)	790				
	3.175	0003.1(75)	000.31(75)	00031(75)	780				
	3.5	0003.5	000.35	00035	710				
	4.0	0004.0	000.40	00040	625			00.15(75)	1500
	5.0	0005.0	000.50	00050	500			00.19(8875)	1270
	5.08	0005.0(8)	000.50(8)	00050(8)	490				
	5.294	0005.2(94)	000.52(94)	00052(94)	470				
 front upper FN	5.647	0005.6(47)	000.56(47)	00056(47)	440	 anti-clockwise S			
	6.0	0006.0	000.60	00060	415				
	6.25	0006.2(5)	000.62(5)	00062(5)	400				
	6.35	0006.3(5)	000.63(5)	00063(5)	390				
	7.0	0007.0	000.70	00070	350				
	7.5	0007.5	000.75	00075	330				
	8.0	0008.0	000.80	00080	315				
	9.0	0009.0	000.90	00090	270				
	10.0	0010.0	001.00	00100	250			00.39(375)	630
	10.5	0010.5	001.05	00105	235				
 front lower FR	11.905	0011.9(05)	001.19(05)	00119(05)	210				
	12.0	0012.0	001.20	00120	200				
	13.0	0013.0	001.30	00130	190				
	15.0	0015.0	001.50	00150	160				
	16.0	0016.0	001.60	00160	150				
	20.0	0020.0	002.00	00200	125				

D D 5 2 R - AR - 0 0 0 5 0 - S - C3

# The internal mechanism counts also the figures between brackets (even if they do not appear on the display).  
 \* The maximum rotation speed (rpm) of the spindle reported in the table corresponds to a maximum rotation speed of 25000 units per minute of the last roll on the right side of the counter. Rotational speed tests have been performed in our laboratory under standard operating conditions.

**Internal gasket**

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

**Rear gasket**

Foam polyethylene, supplied.

**Bushing**

Black-oxide steel with Ø 20 mm H7 reamed hole, fitting to shaft by means of a supplied grub screw with hexagon socket and cup end UNI 5929-85.

**Direction of rotation**

- D: clockwise. Increasing values with clockwise rotation of the bushing.
- S: anti-clockwise. Increasing values with anti-clockwise rotation of the bushing.

**Weight**

96 grams.

*Special executions on request*

- AISI 303 stainless steel bushings.
- Special readings after one revolution.
- AISI 303 stainless steel hole reduction sleeves RB52.
- Case in different colours.
- Completely sealed digital position indicators 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.

*Features and applications*

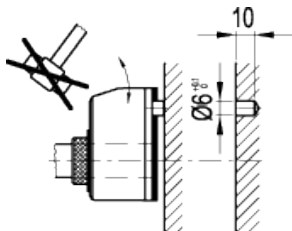
Lowered direct drive digital position indicators can be assembled on passing through spindles in any position to give direct reading of the positioning of a machine component. They are suitable also for motor driven applications (see "Table of the possible combinations").

### Ergonomy and design

Compact roller counter. Ergonomically designed digits for rapid reading. The readability of the counter is increased by the magnifying window.

### Assembly instructions

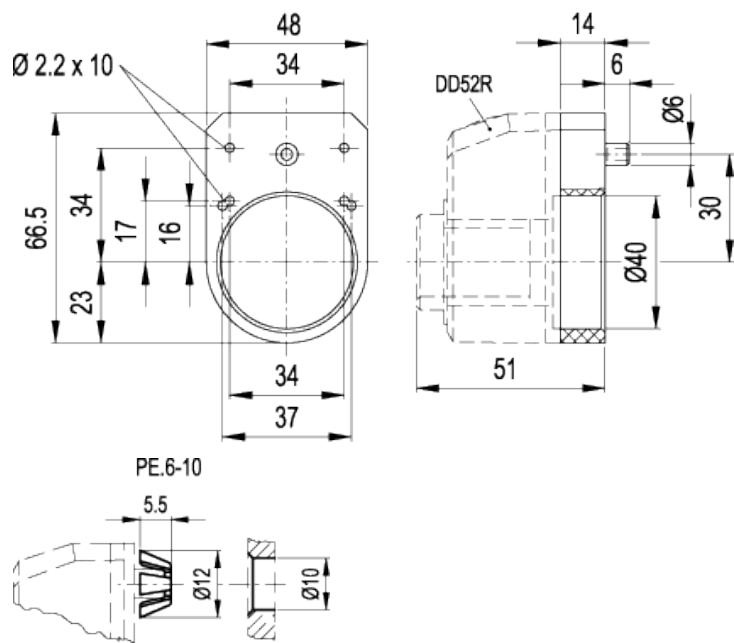
1. Drill a  $\varnothing 6$  mm by 10 mm hole in the body of the machine with a 30 mm centre distance from the spindle to fit the rear referring pin.
2. Set the spindle to the start or referring position.
3. Fit the indicator with the zeroed roller counter onto the spindle and make sure that the referring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



### Accessories on request (to be ordered separately)

- BSA52: zinc die-cast bases for spindle locking, epoxy resin coating, black colour, matte finish (see table). Type GN 302 adjustable handle. BSA52 locking bases allow an easy and quick locking of the spindles after their positioning. They are equipped with a  $\varnothing 6.1$  mm hole to fit the referring pin of the indicator. They can be assembled with the handle either on the right or on the left and can be fitted to the machine by means of two M5 cylindrical-head screws (not included in the supply).
- BS52R: glass-fibre reinforced polyamide based (PA) technopolymer spacer base (code CE.83950), designed with two pre-drilled holes for UNI 10227 self-tapping screws  $\varnothing 2.2$  (not included in the supply).
- RB52: black-oxide steel reduction sleeves (see table).
- PE.6-10: red technopolymer pin (code CE.83960).

### BS52R



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