OPERATING INSTRUCTIONS

Electronic digital position indicators

DD52R-E *(GN 9053)**

DD52R-E-RF*(GN 9153)**

*(Product series valid only for Germany)

elesa®

Contents

1. Safety Instructions

This device has been designed and manufactured in accordance with current legislation. To keep the product in this state, it must be assembled and used correctly, in strict compliance with the instructions contained in this instruction manual and with the following specific safety precautions.
This manual is intended as an indispensable supplement to the existing documentation (catalogues, data sheets and assembly instructions). Make sure that the user has read and understood the instruction manual and in particular this chapter "Safety instructions". In addition to the instruction manual, all legal regulations regarding accident prevention and environmental protection must be observed.
This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.'
This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment.
This equipment generates,uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.
IMPORTANT NOTE (only for RF version): To comply with FCC RF exposure compliance requirements, the antenna used for this transmitter not be co-located or operating in conjunction with any other antenna or transmitter.

Use without respecting the specific descriptions/ parameters, in combination with systems/machines/ processes to be controlled, can lead to product malfunction, which causes:

- health hazards,
- environmental hazards,
- damage to the product and to its proper functionality.

The device must not be used:
- in explosion hazard areas;
- in medical / life support areas and equipment.

Do not open the equipment and do not make any modifications! Modification of the equipment could adversely affect the reliability of the device and could lead to hazards! Do not attempt any repairs.
Always return any defective equipment to the manufacturer! Any breach of the integrity of the device as delivered will invalidate the warranty.

Configuration/Commissioning
In the event of abnormal behaviour (including change of operating conditions), the device must be shut down immediately. Installation and commissioning must only be carried out by adequately trained and authorised personnel. After correct assembly and commissioning, the device is ready for operation.

Maintenance/repair

Switch off the power supply to the equipment before carrying out any operation. Maintenance must be performed only by trained and authorised persons.
Do not open or modify the indicator case. Tampering with this product can compromise the correctness and accuracy of its function.
In the event of a malfunction, do not attempt to repair the unit and contact the Elesa sales office.

1.1 Product release information

Although almost all features are the same as in previous releases, this manual specifically refers to devices updated to firmware revision 6.0 or later.

Some menu items may not be described as they relate to functionalities that are additional, experimental or reserved for special use. In case of specific need, it is recommended to ask the Elesa service staff for assistance.

Elesa reserves the right, without further communication, to make improvements, additions, corrections to the menu items, that do not modify or affect the described functionality of the product but are necessary for the continuous improvement to which these products are subjected.

2. Description

The DD52R-E position indicators, with battery power supply, can be used, mounted on pass-through shafts, to provide the reading of the absolute or relative positioning of a machine component.

Mechanical and electrical characteristics	
Power supply	Lithium battery CR2477 3.0 V
Battery life	Up to 5 years (up to 3 years for RF version)
Display	6-digit LCD of 12 mm height and special characters
Reading scale	-199999; 999999
Number of decimal digits	programmable
Unit of measure	mm, inches, degrees programmable
Rotation max. speed	300/600/1000 r.p.m. (2) programmable
Resolution	10.000 impulses/revolution
Protection level	IP65 or IP67
Working temperature	0 °C ÷ +50 °C
Storage temperature	-20 °C ÷ +60 °C
Relative humidity	max. 95% a 25 °C without condensation
Environment	indoor use
Conditions of use	For use in closed and sheltered places only
Altitude	up to 2000 m
RF frequencies (RF devices only)	2400-2416MHz

(2) Default: 600 r.p.m.

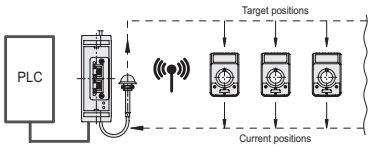
A rotation speed higher than 600 rpm can only be maintained for short periods of time. The maximum speed value affects the battery life. Battery life depends on the conditions of use (setup, temperature, ...). The indicated value is an estimate made in temperature conditions > 20 ° C and <30°C and default setup.
Furthermore, this value refers to the condition of the device when it leaves the Elesa factory. Long storage times must always be considered for the estimation of the battery life when the device becomes operational.

2.1 Version – DD52R-E-RF

The DD52R-E-RF is compatible with Elesa wireless network which allows meters and electronic indicators to communicate via radio with a PLC.

Elesa wireless network is made by the following components:

- One control unit UC-RF
- Max 36 device as DD51-E-RF, DD52R-E-RF or MPI-R10-RF



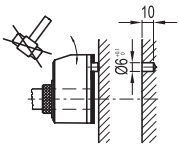
The UC-RF exchanges information with the DD52R-E-RF via radio frequency and makes it possible to set the target position and check the current position of each indicator. Through an interface, available for the most common industrial buses (ProfiNet, Ethernet/IP, Modbus/TCP, and others), the UC-RF control unit allows the exchange of this information with a PLC and/or a generic controller of the machine.

3. Installation

1.Drill a Ø 6x10 mm hole in the machine body with a 30 mm centre distance from the shaft for mounting the rear reference pin.

2. Mount the indicator on the shaft and make sure the reference pin fits into the hole.

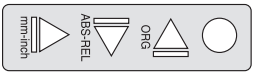
3. Lock the bushing on the shaft by tightening the grub screw with a 2.5 mm hexagon socket (as per UNI 5929-85).



4. Display

1. Relative mode indicator
2. Low battery level indicator
3. Connection indicator (only for DD52R-E-RF)
4. Unit of measure: mm, inch ou degrees
5. Target position indications

5. Key functions



Key Or Key Combination	Operating Mode	Programming Mode
○	Keep pressed for 3 sec to enter the programming mode.	Select the item menu or confirm selection or insertion of the parameter value

	Keep key pressed for 3 seconds to set the origin of the measurement. Programmable with one of the following options (see the ___D___ voice of the menu – cap. 8.3): **d_tArG**: When a target is loaded, the display shows the current absolute position. By pressing the key, the position of the destination to be reached appears on the display. **d_toGO**[DEFAULT]: when a target is loaded, the display flashes the distance from the current position to the target position to be reached. By pressing the key, the current absolute position will appear on the display. **OFF**: the function is disabled.	Digit increase selected / Scroll up the list of possible selections or menu items
	Select the measure mode: **ABS**: absolute measure mode **REL**: relative measure mode It is possible to choose one of the following options (see item ___D___ of the menu - chap.8.3): **ArCLr** [DEFAULT]: when changing from **ABS** to **REL** the counter is reset **Ar**: when changing from **ABS** to **REL**the counter is not reset. **OFF**: the function is disabled.	Digit decrease selected / Scroll down the list of possible selections or menu items

	Unit of measure selection. The available options are: millimetres, inches and degrees. It is possible to choose one of the following options (see item `D_____` of the menu – chap. 8.3): `ALL` [DEFAULT]: selectable units of measure: mm, inch, D `nodEG`: selectable units of measure: mm, inch `OFF`: the function is disabled.	exit / select the next digit
	Programmable for one of the following functions (see menu item `D____D` – chap.8.3): `P_OrG` [DEFAULT]: shows and allows you to set the `OriGin` parameter. `P_StP`: shows and allows you to set the `StEP` parameter. `P_OFS`: shows and allows you to set the `OFFS` parameters. `OFF`: the combination is disabled.	N/A
	In relative measure mode, resets the measure. In absolute measure mode it is programmable for one of the following functions (see menu item `__D__D` – chap.8.3): `L_OFFS` [DEFAULT]: select one of the offsets (see chap.7.6 and 7.7). `SetOrg:` the key combination allows to reset the origin (see chap. 7.5). `OFF`: the combination is disabled.	N/A

	Programmable for one of the following functions (see menu item `___0_0` – chap.8.3): `tArGEt`: the key combination allows to load / program one of the 32 target positions (see chap.8.4) `OFF` [DEFAULT]: the combination is disabled.	N/A

Note: the words: increase, decrease, up and down, refer to the direction of the arrow in the default configuration as shown in the figure. By changing the orientation of the display, the meaning of the keys is reversed accordingly.

6. Switching on/off the device

6.1 Switching on the device

After reading and understanding the "Safety Instructions" section, proceed by switching on the indicator.

To switch on the indicator, hold down  while pressing the key  . The display will switch on and the indicator will be ready for use.

WARNING: When the device is turned on, especially after a long period of storage, it is possible that some segments of the display remain abnormally lit during the startup phase. The phenomenon is transitory and does not affect correct operation and use of the device as it will disappear in a short time.

6.2 Switching off the device (for storage only)

To switch the system off:

- select the `rESEt` item from the main menu (see chap.8.3)

- using the key  or , scroll through the items to select OFF.

- press the key  to confirm. The display will switch off and the indicator will go into sleep mode.

7. Operational mode

7.1 Reference points, origin and offset

When the device is turned on or reset, the position of the shaft at that moment is set as the origin of the measure.

The value attributed to this position is given by the parameters, Origin and Offset, which can be set by the user. Origin is an arbitrary number that can be set in the range -199999÷999999 depending on the resolution set and is to be considered as the machine's limit switch value in its default conditions.The offset is added to Origin which is always an arbitrary value that can be set in the range -199999÷999999 depending on the resolution and which allows you to move the actual origin of the measure based on any changes in the machine configuration.

For example, a certain set point can operate different tools with relative displacements of the point of origin. For example, in the case of a tube cutting machine the device indicates the position of the stop that determines the length of the tube. The limit switch point is fixed but it does not necessarily correspond to a zero length of the tube and therefore Origin will be different from zero but always the same.

However, the machine makes it possible to mount different blades depending on the type of tube and these can have different positions and/or thicknesses.Therefore the actual length will have to be corrected with a determined value which will be memorised as an offset.

For greater flexibility of use, the DD52R-E permits storage of up to 10 different offset values. To program the offset values see the OFFS parameter in chap. 8.2.

However, during installation and for other specific applications, it is useful to be able to reset the internal reference value in another position. For this purpose, see chap. 8.5.1.

WARNING: The value of the Origin parameters and the offsets are the same for the mm and inch units of measure and are displayed, depending on the unit of measure in use (see chap. 7.4), with the appropriate conversion coefficient.In the case of degrees, these parameters are totally different and independent from the previous ones.

7.2 Resolution

The device manages different measure display resolution values for each of the three units of measure managed (mm, inch and degrees). The same display resolution set is used to set different parameters such as Origin, offsets and targets.

WARNING: If the resolution of one of the units of measure is changed, to avoid setting errors, all the parameters that are affected are reset: Origin, offset, etc.: It is therefore advisable to decide and set the display resolution of all units of measure as a first step in installing the device.To make the most of the device's measure capacity, the resolution is automatically reduced if the measure to be displayed exceeds the capacity of the display. The measure on the display will flash.

In this case, the resolution variation is temporary (it is restored if the display is able to display the measurement with the set resolution) and has no effect on the set parameters.

7.3 Absolute or relative measure selection

Press the key  to select the absolute or relative measure mode. The relative measure mode is indicated on the display by the symbols:

ABS: absolute measure mode

REL: relative measure mode

It is possible to change the function of the key by choosing one of the options available in the menu item _ _ 0_ _ _

The available options are:

- *ArCLr*(default): when changing from *ABS* to *REL* the counter is reset.

- *Ar*: when changing from *ABS* to *REL* the counter is not reset. In both cases, only in relative measure mode, the counter is set to zero by pressing  .

- *OFF*: the key  is disabled and it is not permitted to change the measure mode.

7.4 Unit of measure selection

Press the key  to select the required unit of measure.

The available options are millimetres, inches and degrees.

The selected measure mode is indicated on the display by the symbols:

- *mm*: millimeters - *INCH*: inches - *D*: degrees

It is possible to change the function of the key by choosing one of the options available in the menu item. 0_____

The available options are:

- *ALL* (default): selectable units of measure: mm, inches and degrees.

- *nodEG*: selectable units of measure: mm, inch

- *OFF*: the key  is disabled and it is not permitted to change the selected measure mode.

7.5 Reference measurement reset

It is possible to reset the internal reference of the measure device in the two ways described below:

By keeping the key  pressed for more than 3s, the SEtOrg message is displayed. Pressing the button  to confirm the choice ant to reset the origin point to the current position.

It is also possible to enable the pair of keys  +  to reset the internal reference, see chap. 7.6. In this case when the two keys are pressed at the same time, the message SEtOrg is diplayed.

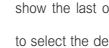
Press the key  to confirm the choise and to reset the origin point to the current position.
Alternatively, it is possible to use the Reset command as described in chap. 8.5.1

7.6 Reference point setting

Using this key combination ○ + PRESET it is possible either to set an offset value choosing from those stored or to reset the device measurement references (see chap.7.1).

By pressing the key combination ○ + ZERO the screen will show the last offset value used (e.g *OFS 0*). It is possible to select the desired offset value by pressing the key ZERO and then confirm by pressing the key ○.

The screen will display the correct current measure value with the stored Origin value plus that of the selected offset.



It is possible to change the function of the key combination by choosing one of the options available in the menu item _ _0 _ _0

The available options are:

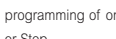
- *L_OFFS*: the key combination allows you to select an offset .
- SetOrg: the key combination allows to reset the origin (see chap. 7.5).
- *OFF*: the key combination ○ + ZERO is disabled.

WARNING: This function is available only in absolute measure mode.

If the OFFS option has been selected, pressing the key combination ○ + PRESET will display the last used offset value (e.g. OFFS 0). It is possible to choose the desired compensation value among the 10 memorized by pressing the key PRESET. Then, by pressing the key ○, the selected offset value will be loaded and used in the measurement. By pressing the key ZERO, the operation will be cancelled. If the SEtOrg option has been selected, pressing the key combination ○ + PRESET the screen will show SEtOrg. By pressing the ke ○ the origin of the measurement will be moved to the current position and the display will show the value of the origin point given by the value of Origin + Offset.

7.7 Direct programming of Origin, Offset and Step parameters

The key combination + allows direct access to the programming of one of the following parameter: Origin, Offset or Step.



It is possible to change the function of the key combination by choosing one of the options available in the menu item 0 _ _ _ _ 0.

The available options are:

- *P_OrG*: direct programming of the absolute reference value (Origin parameter)
- *P_StP*: direct programming of the reading after one revolution (Step parameter)
- *P_OFS*: direct programming of the offset value (OFFS parameter).
- *OFF*: the key combination + is disabled.

7.8 Targets

The DD52R-E allows you to set up to 32 target positions allowing you to store any relevant and frequently used settings.

7.8.1 Programming the targets

To program the targets:

- select *tArGEt* in the main menu (see chap. 8.3)
- select *PrOG_t* (see chap. 8.4)
- select the desired memory location (from *PtG01* to *PtG32*) using the keys and .
- press the key to select.
- follow the instructions in chap. 8.1 to set the desired value.

7.8.2 Load a target:

To load a target:

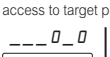
- select *tArGEt* in the main menu (see chap. 8.3)
- select *LOAd_t* (see chap. 8.4)
- select the desired target value (from *LtG01* to *LtG32*) using the keys and .
- Press the key to select.

- The selected target value is displayed.

- Press ○ again to confirm or press ESC to return to the target selection list.

7.8.3 Direct access to target programming and/or loading

The key combination ○ and ESC allows, if enabled, direct access to target programming or loading (see chap.8.4).



It is possible to change the function of the key by choosing one of the options available in the menu item ___0_0

The available options are:

- **tArGEt:** enables direct access to the target loading or programming menu (see chap. 8.4).

- **OFF**: the key combination ○ + ESC is disabled.

7.8.4 Indications for reaching the target position

When a target is selected it is sent by the PLC (RF version only), the device will sug gest the direction of rotation of the shaft to reach the target through the symbols ◀◀/▶▶ of the target position indicators.

It is possible to set an acceptable tolerance value for the targets through the **PtOLL** parameter so that the target position is considered to have been reached when the difference between the set target and the current position is less than **PtOLL** in absolute value.

The target position ◀◀/▶▶ indicators work, depending on the, **dir** and **PtOLL** parameters, as in the following table:

T = target value set
M = actual measure
Toll = tolerance (see **PtOLL**)

	dir –o	**dir o--**
M < T - Toll	◀◀ (blinking)	▶▶ (blinking)
T - Toll ≤ M < T	◀|	|▶
M = T		
T < M ≤ T + Toll	|▶	◀|
M > T + Toll	▶▶ (blinking)	◀◀ (blinking)

7.8.5 Disabling the target

If a target is active, it can be cancelled by accessing programming mode and selecting the *StoP_t* option.

Alternatively, the target can be canceled by pressing, if activated, the key combination + up and and the function StOP_t is confirmed by pressing the key . To keep the selection of the target press the horizontal arrow key .

WARNING: while a target is active, it will not be possible to change the unit of measurement, set the origin and other functions accessible from the keyboard. The absolute or relative measurement function remains available but remember that the target values both stored on the device and sent via RF always refer to the absolute value.

7.8.6 Display in target mode

By pressing the key when a target is active, you can view the current position or the target position depending on the device settings.

It is possible to modify the function of the key and the target mode by selecting one of the options available in the menu item _ _ _ _0_ (see chap. 8.3)

The available options are:

- **OFF:** the key is disabled. This setting is related to the target mode. Other functions are not involved.

- *d_tArG* (default): when a target is activated, the display shows the actual absolute position and the indication to reach the target (see chap. 7.8.4).

Pressing the key shows the set target position.

- *d_toGo*: when a target is activated, the display flashes showing the distance from the set target and the indication to reach the target (see chap. 7.8.4). When the target is reached, less than the set tolerance, the display shows the current position and stops flashing.

Pressing the key ,the display shows the current absolute position.

7.9 Version - DD52R-E-RF

7.9.1 Programming the Net ID and Net CH parameters

Each RF device is defined within the Elesa wireless network by the following two parameters:

nEt id: this is a number between 0 and 99 and differentiates different subnets allowing different systems to work on the same RF channels.

nEt ch: this is the RF transmission channel and can be set from 1 to 36. Two or more devices set to the same Net CH cannot have the same Net ID.

These parameters can be configured in the indicator's Radio menu (see chap. 8.2) and must be set according to the PLC settings to ensure perfect communication with UC-RF.

WARNING: In pre-existing systems in which a UC-RF with a firmware release prior to 0F051120 is used (for more information refer to the UC-RF manual) it is necessary to take into consideration that the Net CHs are out of phase by 3 channels. In practice, a DD52R-E-RF set with Net CH = 1 will communicate with UC-RF on CH = 4 and so on for the following channels.

It will not be possible for DD52R-E-RF with firmware revision 6.0 or later to communicate with older generation UC-RF on channels 1 to 3.

7.9.2 Targets

Using the DD52R-E-RF, the target positions can be sent from the PLC to the indicators via the UC-RF control unit. When a target is transmitted, it behaves in the same way described in chap. 7.8.

WARNING: If the target transmission on UC-RF is enabled, it will be refreshed on the DD every time a communication occurs. Consequently, before disabling the target on the device (see chap. 7.8.5), disable the target transmission on UC-RF.

8. Programming mode

Press the key  p for 3 seconds to access programming mode. Depending on the setting of the *PASS* parameter (see chap. 8.5.4), the system may ask for a password to be entered.

Press the key  and to scroll through the list of menu items or parameters and select the desired one by pressing the

key . Press the key to return to the previous menu level (when allowed) or exit programming mode. Programming mode is automatically exited after 30 seconds of inactivity.

WARNING: When programming the parameters, the bushing must be locked in the current position, otherwise there is the possibility of obtaining a false measurement once you exit the programming mode. If this is not possible, it is recommended to check the device setting once back in measurement mode.

8.1 Input of numeric parameters

Press the key and the selected digit, flashing, increases in value up to 9 and then returns to 0.
If the first digit on the left is selected and the parameter can assume negative values, -1 will be displayed after digit 9 and, by pressing the key again, -.

It is possible to select the digit to be changed by pressing the key With each press, the digit to the right of the current one will be selected. If the selected digit is already at the far right of the display, the selection will jump to the first digit on the left. Press the key to confirm the value entered. If the confirmed parameter is different from the one currently stored, the display will show the message *CHAnGd*.
WARNING: It is not possible to cancel the insertion of a parameter value but only to confirm the displayed one. If you do not want to change the value already stored, it is obviously possible to set it to the same value as before and check that the word *CHAnGd*. does not appear. Or, by waiting 30s, the device will exit programming mode without saving the changes. The value of any modified parameters is stored only when exiting the programming mode. If the operation was successful, the display will show the messag *StorE.*

8.2 Programmable parameters (in alphabetical order)

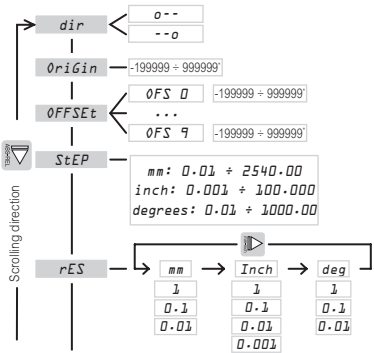
Parameter	Description	Available options	Default
dir	Direction of measure. Sets the positive rotation direction of the shaft.	*--o* anticlockwise *o--* clockwise	*--o*

Parameter	Description	Available options	Default
diSPL	Display orientation	0° 180°	180°
OFFSEt	Offset values	It is possible to store up to 10 offset value: OFS 0 … OFS 9 The settable values depend on the resolution set as follows: **Res = 1 : -199999 ÷ 999999** **Res = 0.1 : -19999.9 ÷ 99999.9** **Res = 0.0: -1999.99 ÷ 9999.99** **Res =0.001: -199.999 ÷ 999.999**	0
OriGin	Reference value	The settable values depend on the resolution set as follows: **Res = 1: -199999 ÷ 999999** **Res = 0.1 : -19999.9 ÷ 99999.9** **Res = 0.0: -1999.99 ÷ 9999.99** **Res =0.001: -199.999 ÷ 999.999**	0.0
P_toll	Tolerance of target position	The settable values depend on the unit of measure in use: ***mm: 0.01 ÷ 9.99*** ***inches: 0.001 ÷ 0.393*** ***degrees: 0.01 ÷ 9.99***	mm: 0.10 inches: 0.004 Degrees: 0.10
Radio	RF settings	***nEt id: id00 ÷ id99*** ***nEt ch: ch01 ÷ ch36***	Netid: 00 Netch: 01

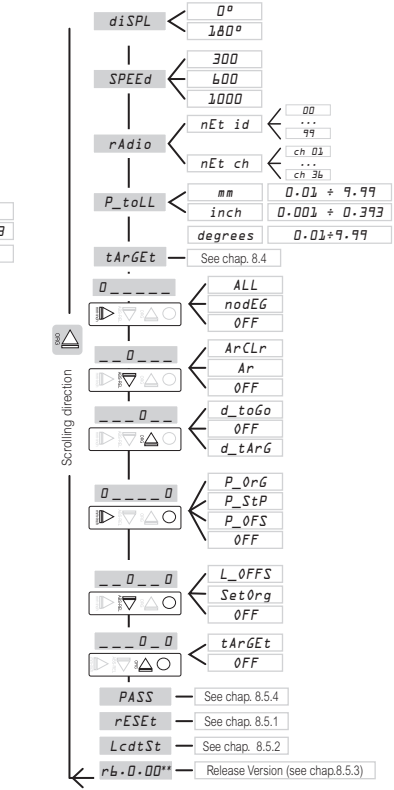
Parameter	Description	Available options	Default
rES	Resolution of the displayed measure	Depending on the unit of measurement, the permitted values are: **mm: *1*; *0.1*; *0.01*** **inches: *1*; *0.1*; *0.01*; *0.001*** **degrees: *1*; *0.1*; *0.01*** *An independent resolution is stored for each unit of measure.*	mm: 0.01 inches: 0.001 degrees: 0.01°
SPEEd	Maximum permitted shaft rotation speed	300; 600; 1000	600
StEP	Conversion coefficient between the number of shaft rotations and the selected unit of measure	*The programmable values depend on the selected unit of measure:* ***mm: 0.01 ÷ 2540.00*** ***inch : 0.001 ÷ 100.000*** ***degrees: 0.01 ÷ 1000.00*** *The step value for mm and inch is the same except for the appropriate conversion when viewing the measure. The Step value for degrees is, on the other hand, independent.*	001.00
_ _ _0_ _ "t_Sho"	Display mode when the target is active. In the menu appears as the setting for the key (_ _ _0_ _)	d_toGO or d_tArG: See chap. 7.8.6.	d_toGO

Parameter	Description	Available options	Default
tArGEt	Target positions	It is possible to store up to 32 target values: TG 01, ..., TG 32. The settable values depend on the resolution set as follows: **Res = 1: -199999 ÷ 999999** **Res = 0.1 : -19999.9 ÷ 99999.9** **Res = 0.0: -1999.99 ÷ 9999.99** **Res =0.001: -199.999 ÷ 999.999**	0.0

8.3 Main menu tree

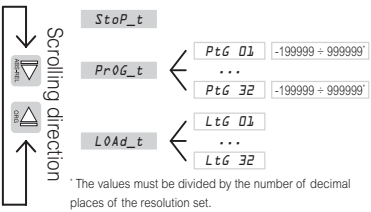


* The values must be divided by the number of decimal places of the resolution set.



" The revision code may vary depending on the actual revision of the firmware loaded on the device.

8.4 Target menu tree



* The values must be divided by the number of decimal places of the resolution set.

8.5 Additional functions

8.5.1 Reset

To restore the factory settings on the device:

- select the voice **rESEt** from the main menu (see chap. 8.3)
- using the key and select **ALL**.
- press the key to confirm.

To reset the only internal reference measure:

- select the voice **rESEt** from the main menu (see chap. 8.3)
- using the key and selezionare **ALL** .
- press the key to confirm.

To exit the reset command, press the key or:

- using the keys and select No.
- press the key to confirm.

8.5.2 LCD test

The `LcdtSt` item in the main menu allows you to turn on all the segments and symbols of the display to check that it is working correctly.

8.5.3 Device version

The device version code is displayed as the last item of the main menu, with the r as the first character. By pressing the key ○ several times, other data are displayed which, if support is required, must be noted and provided to Elesa.

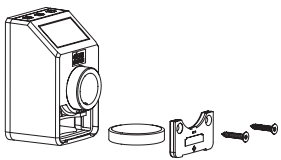
WARNING: A variation of the last two digits in the revision code has no impact on the device's features and performance.

8.5.4 Password

You can avoid unwanted access to the device menu by choosing "`on`" in the `PASS` menu item. In this case to enter the menu the password 22011 must be inserted.

9. Battery replacement

The internal lithium battery CR2477 - 3.0 V guarantees a battery life up to 5 years (up to 3 years for RF). The symbol appears on the display when the battery needs replacing. To replace the battery, simply remove the battery cover without removing the indicator from the drive shaft, keeping all the configuration parameters unchanged. The cover is screwed with two TORX T6 screws. To facilitate the removal of the battery from the battery compartment, the use of a magnet is recommended.



10. Display messages and troubleshoting

Message on the display	Description	Action
-----	The value cannot be displayed because it exceeds the capacity of the display (-199999;999999)	In operational mode, the device continues to correctly measure the position of the shaft. If the measured value is within the capacity of the display, it will be shown correctly. If you are viewing a parameter, the problem may be due to the difference in units of measure between when it was set and when it is displayed. Change the current unit of measure and try again to view the parameter. Attempting to change a parameter when the display shows -----, automatically returns the parameter to the first value that can be displayed, losing the initial setting.
S_Err	The shaft has exceeded the maximum permitted rotation speed.	Press the key ○ to go back to reading the measured value.
Flashing battery symbol	Low Battery	Replace the battery as soon as possible (see chap. 9).

EU DECLARATION OF CONFORMITY (DoC)

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Declare that the DoC is issued under our sole responsibility and belongs to the following product:

PRODUCT:	Electronic Position Indicators
APPARATUS MODEL:	DD52R-E
TRADE MARK:	Elesa

The object of the Declaration described above is in conformity with the relevant Union Harmonization Legislation:

2014/30/UE (EMC): Electromagnetic Compatibility Directive

2011/65/UE (RoHS): Restriction of the use of certain Hazardous Substances in electrical and electronic equipment

The following harmonized standards and technical specifications have been applied:

EN 61326-1:2013

Notified Body:

Not Involved (Annex II - Conformity Assessment Module A)

Additional information:

Software Version: 5.1 or higher

PLACE, DATE OF ISSUE:	CARLO BERTANI
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APPARATUS MODEL:	DD52R-E-RF
TRADE MARK:	Elesa

The object of the Declaration described above is in conformity with the relevant Union Harmonization Legislation:

2014/53/EU (RED) Radio Equipment Directive
2011/65/UE (RoHS) Restriction of the use of certain Hazardous Substances in electrical and electronic equipment

The following harmonized standards and technical specifications have been applied:

EN 62311:2008
EN 61010-1:2010
ETSI EN 301 489-1 V2.1.1
ETSI EN 301 489-1 V2.2.3
ETSI EN 301 489-17 V3.1.1
Draft ETSI EN 301 489-17 v3.2.2
EN 61326-1:2013
ETSI EN 300 328 V2.2.2

Notified Body:

Not Involved (Annex II - Conformity Assessment Module A)

Additional information:

Software Version: 5.1 or higher

PLACE, DATE OF ISSUE:	CARLO BERTANI
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Elesa S.p.A., Monza, December 2022

The texts and examples have been written with great care, nonetheless, mistakes can always happen.

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Art. Nr. ZZDOIU-DD52E-EN-R01
DDEMAN-002-09EN