

Magnetic measuring system

Length and angle modes, data transmission via radio frequency

CASE

Glass-fibre reinforced polyamide based (PA) technopolymer, black colour, matte finish.

Retaining clip in acetal resin based (POM) technopolymer, black colour, matte finish.

PLATE WITH KEYBOARD

Polycarbonate resistant to greases, oils, alcohol and mineral acids.

PROTECTION CLASS

- IP54, see EN 60529 table (on page).
- IP67, see EN 60529 table (on page).

MAGNETIC SENSOR WITH CABLE

FC-MPI (see page -) to be ordered separately.

ACCESSORIES ON REQUEST

Magnetic band M-BAND-10 (see page -).

SPECIAL EXECUTIONS ON REQUEST

The display of special plate may be supplied with customised graphic symbols, marks or writings.

ASSEMBLY INSTRUCTIONS

- Drill the sheet (thickness 0.7 ± 2 mm) according to the template dimensions.
- Remove all drilling burrs before fitting the case.
- Fit the lower part of the case into the housing and press until the complete snap fitting (Fig.1).

BATTERY REPLACEMENT INSTRUCTIONS

- Remove the indicator from its seat, applying pressure to the retention wing bringing it to the stop with the aid of a slotted screwdriver (Fig.2).
- Unscrew the AISI 304 stainless steel self-tapping screw with six-lobe socket for TORX®* T06 tool and remove the closing plate (Fig.3).
- Replace the battery paying attention not to invert the polarity (see the position indicated on the cover).
- The replacement of the battery if carried out within 10 seconds (duration of the buffer power supply) avoids the loss of the configuration parameters.

* Registered trademark by TEXTRON INC.



Fig.1

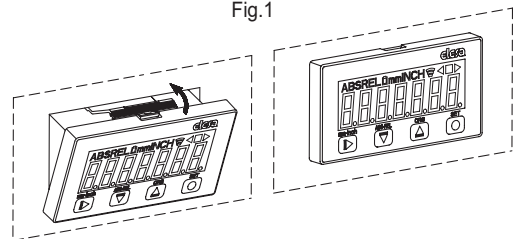


Fig.2

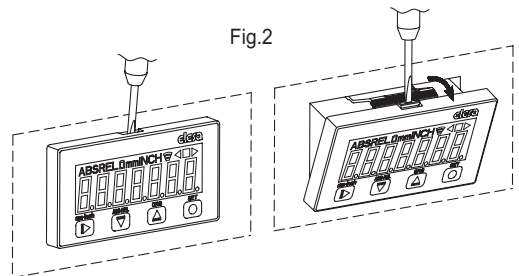
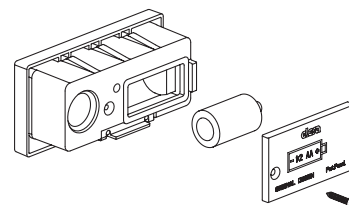
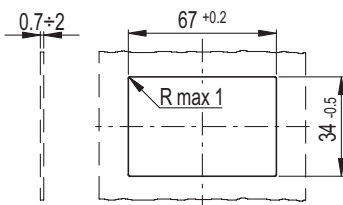


Fig.3



Drilling template



FEATURES AND APPLICATIONS

MPI-R10-RF measuring system connected to a specific sensor FC-MPI (see page -), combined with the magnetic band M-BAND-10 (see page -), is a complete system for the measurement of linear and angular displacement (with a minimum radius of 65 mm). Characterised by an extremely easy assembly, it allows precise alignment and positioning, reducing time and machining procedures to the minimum.

- Maximum ease of assembly and disassembly operations of the device from the panel, thanks to a system with retention wing (ELESA PATENT).
- 7-digit LCD of 12 mm height and special characters.
- Programmable with 4 multifunction keys.
- Values displayed in millimeters, inches or angular degrees.
- Display of absolute or incremental mode.
- Up to 10 programmable offset values.
- Storage and display of 32 target positions.
- Long-life internal lithium battery.
- Buffered memory during battery substitution.
- Housing for FC-MPI connector with snap-in assembly system for easy insertion and removal.

For further information read the "Operating instructions".

QUICK POSITIONING SYSTEM

MPI-R10-RF measuring system is networked to the control unit UC-RF via radio frequency (RF), constituting a wireless system for the rapid positioning of machine parts or multi-axial measurements (fig.4).

The wireless connection allows:

- reading of the current position
- setting of the target position
- configuration of all operational parameters

The radio frequency system network allows different machines to coexist in the same space without problems of mutual interference.

This system is particularly suitable for applications that require frequent format changes, facilitating the correct adjustment of the target/current position of the machine parts, also representing a safety system. In fact, even if a single MPI-R10 measuring system is not placed in the target position, PLC doesn't allow the beginning of the machine production cycle, thus avoiding production issues.

The installation of the system is quick and easy as it does not require the use of connecting cables between the control unit and the indicators.

Further technical information available in "Operating instructions".

COMPATIBILITY

The magnetic measuring system "-W2" version is compatible exclusively with the magnetic measuring system and control unit of the same "-W2" version.

Mechanical and electrical characteristics	
Power supply	Lithium battery 1/2 AA 3.6 V (included in the supply)
Battery life	2.5 years
Display	7-digit LCD of 12 mm height and special characters
Reading scale	-199999; 999999
Number of decimal digits	programmable
Unit of measure	millimeters, inches or angular degrees programmable
Max operating speed	1 ÷ 5 m/s programmable (1)
Resolution (2)	0.01 mm - 0.001 in - 0.01°
Precision (3)	±0.03 mm
Repeatability (4)	0.0002 x L mm (L = value measured in mm)
Self-diagnostic	Battery check, sensor check, magnetic tape check
Protection class	IP54 or IP67
Working temperature	0 ÷ 50 °C
Storing temperature	-20 ÷ +60 °C
Relative humidity	Max. 95% at 25°C without condensation
Operating environment	Internal use
Altitude	Up to 2000 m
RF frequencies	2400-2416MHz

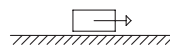
(1) Reading speed affects battery life.

(2) Resolution: the smallest variation in length that the system is able to display.

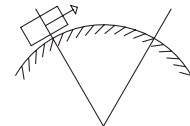
(3) Accuracy: the maximum deviation of the value measured by the system with respect to the real value.

(4) Repeatability: the degree of closeness between a measurement series of the same sample, when the individual measurements are made, leaving the measurement conditions unchanged.

Linear movement measuring

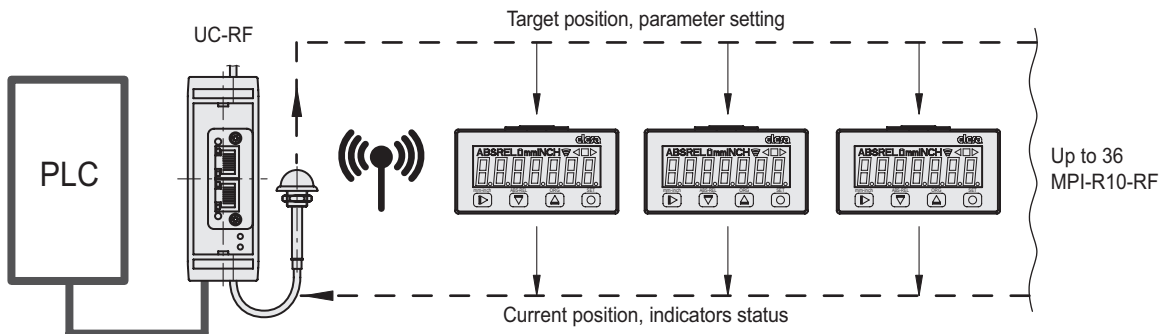


Angular movement measuring



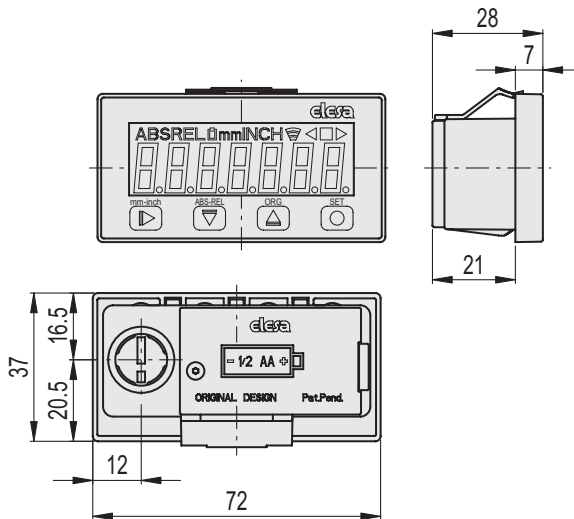
R min. 65mm

Fig.4





Rotary controls 7



MPI-R10-RF

Code	Description	Protection class	△
CE.99971-W2	MPI-R10-RF-W2-IP54	IP54	109
CE.99976-W2	MPI-R10-RF-W2-IP67	IP67	109