



## MATERIAL

- **Handle body:** glass-fibre reinforced polyamide based (PA) technopolymer certified self-extinguishing UL-94 V0, black colour, matte finish.
- **LED light diffuser:** self-extinguishing polycarbonate UL-94 V0, opal colour.

## LED STRIP

Type RGB, supply voltage 24Vdc +/- 10% (Max. current consumption = 120 mA). Colour tones may vary slightly depending on supply voltage.

## STANDARD EXECUTIONS

Brass bushings, M6 threaded blind holes for rear mounting.

- **M.2000-LD-RGB-C:** plastic connector with 4 poles, back output. 8-pole cable UL: AWG22 RAL9005 PVC UL AWM Style 1569/2517, back output, cable bending radius > 70 mm
- **M.2000-LD-RGB-F2.5:** length 2.5 m.
- **M.2000-LD-RGB-F5:** length 5 m.

## IP PROTECTION

IP67 and IP69K protection class, see Table EN 60529.

## FEATURES AND APPLICATIONS

The M.2000-LD handle is an ideal combination of ergonomics, functionality, and compactness.

In addition to the handle function, it integrates in a single product the function of signalling light column. These handles are typically assembled on machine doors or protections. With the appropriate electrical connection, it is possible to configure the colour of the LED strip to indicate the status of the guard (IEC 60204-1).

Example:

- red: immediate action required to address a hazardous situation
  - green: normal operational conditions
  - yellow: wait, machinery shutting down or in a transitional phase
  - blue: operator has made operation request (example: pressing key)
- In case of use of an extension with angled connector, the direction of the cable output is shown in Fig.1.

## TECHNICAL DATA

Tensile stress and impact strength: the values F1, F2, L1 and L2 indicated in the table were obtained during breaking tests carried out under the test conditions shown in the figure with ambient temperature.

## EC DECLARATION OF CONFORMITY

The object of the above declaration described above is in conformity with the relevant European Union harmonisation legislation:

- **2014/35/EU** Low-voltage directive
- **2014/30/EU (EMC)** Electromagnetic Compatibility Directive
- **2011/65/EU (RoHS)** Restriction of the use of certain hazardous substances in electrical and electronic equipment

Harmonised standards and references to other technical specifications used in relation to which conformity is declared: **EN 60947-5-1:2017**

## ACCESSORIES ON REQUEST

FC-M12x1 (see page -): extensions with 4 pole M12x1 female axial connector.

## SPECIAL EXECUTIONS ON REQUEST

- LED operating voltage 12V.

## ANOTHER STANDARD EXECUTION

M.2000: Single complementary handle without switch.

M.2000-SWM: Handles with double contact monostable switch.

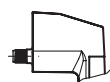
M.2000-SWM-LD: Handles with monostable switch and LED indicator light.



ELESA Original design



M.2000-C



M.2000-F

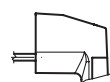
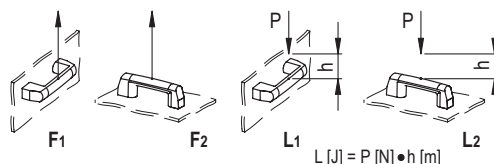
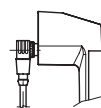


Fig.1



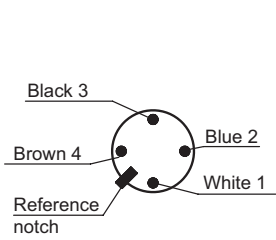
LED STRIP WIRING INSTRUCTIONS

With appropriate cabling, it is possible to obtain one of the 7 colours of the LED strip.

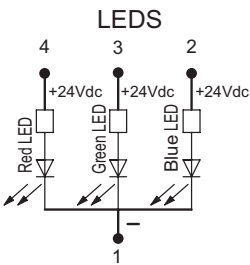
The common contact (1) corresponding to the white wire (cable version) must always be connected to the negative pole of the power supply. The other three wires can be connected individually to the positive pole to respectively obtain the red, green, and blue colour of the LED strip, or connected simultaneously to obtain the remaining colours, as indicated in the table below. Other colours are possible by controlling the brightness of the individual channels with the PWM technique.

LED strip colours	Red (6)	Green (7)	Blue (1)
Red	ON	OFF	OFF
Green	OFF	ON	OFF
Blue	OFF	OFF	ON
Yellow	ON	ON	OFF
Light blue	OFF	ON	ON
Violet	ON	OFF	ON
White	ON	ON	ON

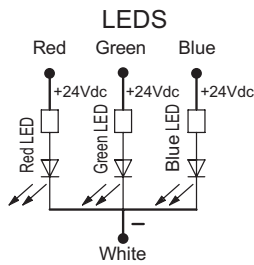
Wiring connector version



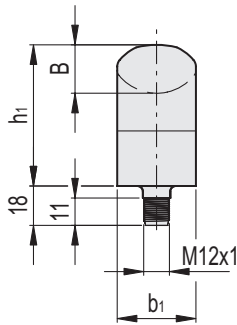
The colours shown correspond to the colours of the FC-M12x1-P4 extension cable connected to the rear M12 connector.



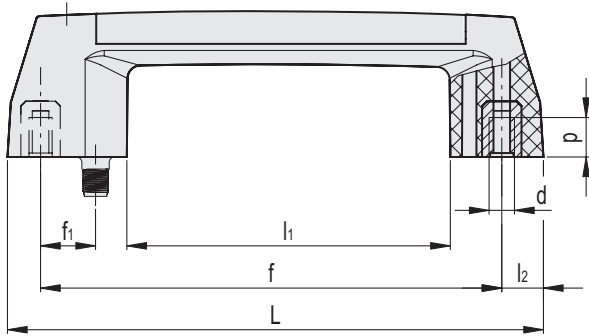
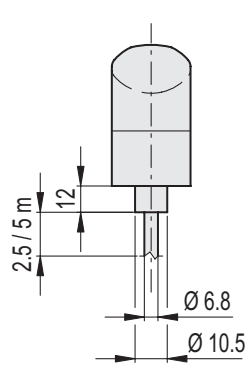
Wiring cable version



M.2000-C



M.2000-F



M.2000-LD-RGB-C

Code	Description	L	f±1	d	f1	h1	B	b1	l1	l2	p	F1 [N]	F2 [N]	L1 [J]	L2 [J]	⚖
260803-C1	M.2000/180-M6-LD-RGB-C	212.5	180	M6	29	65	24	35	113	20	12	700	900	7	6	260.5

M.2000-LD-RGB-F2.5

Code	Description	L	f±1	d	f1	h1	B	b1	l1	l2	p	F1 [N]	F2 [N]	L1 [J]	L2 [J]	⚖
260813-C1	M.2000/180-M6-LD-RGB-F2.5	212.5	180	M6	29	65	24	35	113	20	12	700	900	7	6	335

M.2000-LD-RGB-F5

Code	Description	L	f±1	d	f1	h1	B	b1	l1	l2	p	F1 [N]	F2 [N]	L1 [J]	L2 [J]	⚖
260823-C1	M.2000/180-M6-LD-RGB-F5	212.5	180	M6	29	65	24	35	113	20	12	700	900	7	6	405