

- Programmable incremental encoder for large shafts
- Precise optical sensing
- Operating temperature up to -40°C +100°C
- Resolution up to 65536 PPR
- Hollow shaft from Ø 30 to Ø 44 mm
- Other fixing plates available on request
- Programmable via IF100 tool



CP82

### ENVIRONMENTAL SPECIFICATIONS

|                              |                                                                                                                                                                      |
|------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Shock:                       | 250 g, 6 ms acc. to CEI EN 60068-2-27                                                                                                                                |
| Vibrations:                  | 10 g, 5-2000 Hz acc. to CEI EN 60068-2-6                                                                                                                             |
| Protection:                  | IP54                                                                                                                                                                 |
| Operating temperature range: | -25°C +85°C (-13°F +185°F)                                                                                                                                           |
| Storage temperature range:   | -25°C +85°C (-13°F +185°F)<br>(98% R.H. without condensation)                                                                                                        |
| Options:                     | <ul style="list-style-type: none"> <li>• Operating temperature range: -40°C +100°C (-40°F +212°F)</li> <li>• IP65 Protection (2000 rpm max, torque 2 Ncm)</li> </ul> |

### MECHANICAL SPECIFICATIONS

|                                           |                                                                                             |
|-------------------------------------------|---------------------------------------------------------------------------------------------|
| Dimensions:                               | see drawing                                                                                 |
| Shaft hollow:                             | Ø 30, 32, 34, 35, 38, 40, 42, 44 mm                                                         |
| Reducing sleeves, BR2-xx from Ø 30 mm to: | Ø 15, 5/8" (15,875), 16, 17, 18, 19, 20<br>22, 23, 24, 1" (25,4), 28 mm                     |
| Shaft loading:                            | axial: 100 N max.<br>radial: 200 N max.                                                     |
| Shaft rotational speed:                   | ≤ 3000 rpm                                                                                  |
| Starting torque at 20°C:                  | 4 ÷ 12 Ncm (typical)                                                                        |
| Misalignment:                             | ± 0,3 mm radial<br>± 0,2 mm axial                                                           |
| Bearings life:                            | 400 x 10 <sup>6</sup> rev. min.<br>(10 <sup>9</sup> rev. min. with 20 N shaft loading max.) |
| Electrical connections:                   | M23 12 pin plug or cable output 1 m (3.3 ft)                                                |
| Weight:                                   | ~ 0,3 g (10,6 oz)                                                                           |
| Option:                                   | • additional cable                                                                          |

### ELECTRICAL SPECIFICATIONS

|                                |                                                                       |
|--------------------------------|-----------------------------------------------------------------------|
| Resolution (PPR):              | programmable from 1 to 65536 PPR                                      |
| Counting frequency:            | 300 kHz max.                                                          |
| Output circuits:               | Line Driver, Universal circuit                                        |
| Power supply:                  | +5V +30V                                                              |
| Consumption:                   | 70 mA (typical)                                                       |
| Output current (each channel): | 40 mA max.                                                            |
| Protection:                    | against inversion of polarity and short-circuit                       |
| EMC:                           | electro-magnetic immunity, according to: EN 61000-4-2<br>EN 61000-4-4 |

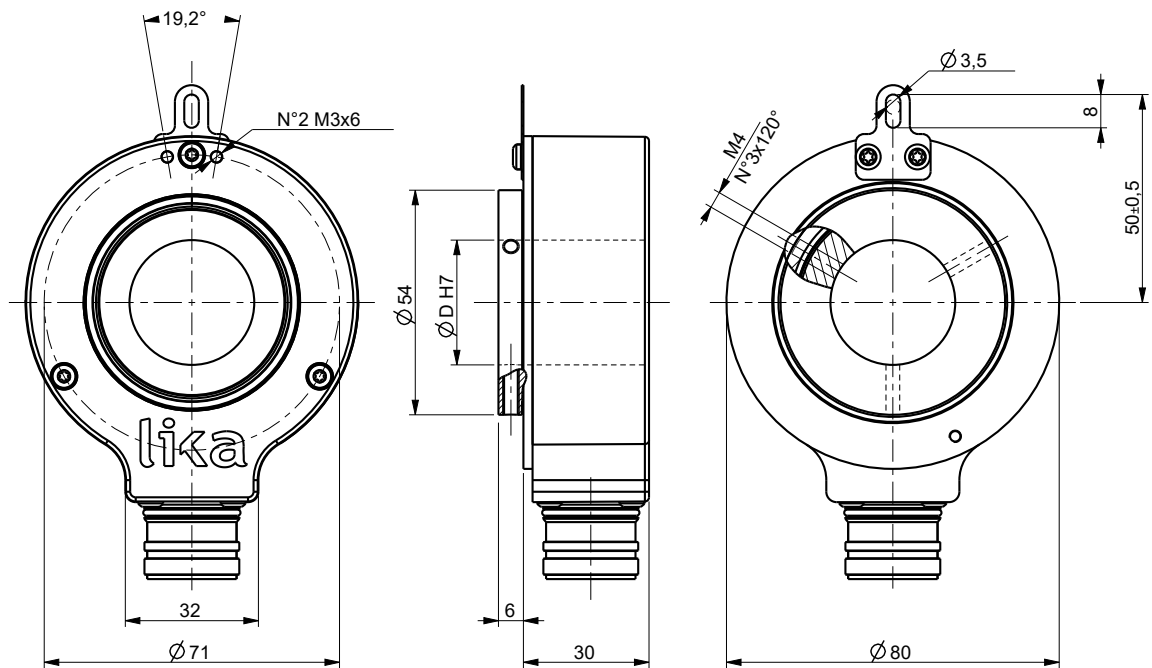
### MATERIALS

|           |                                            |
|-----------|--------------------------------------------|
| Flange:   | anticorodal, UNI EN AW-6082                |
| Housing:  | die cast alluminium, UNI EN AC-46100       |
| Bearings: | ABEC 5                                     |
| Shaft:    | stainless steel, non-magnetic, UNI EN 4305 |

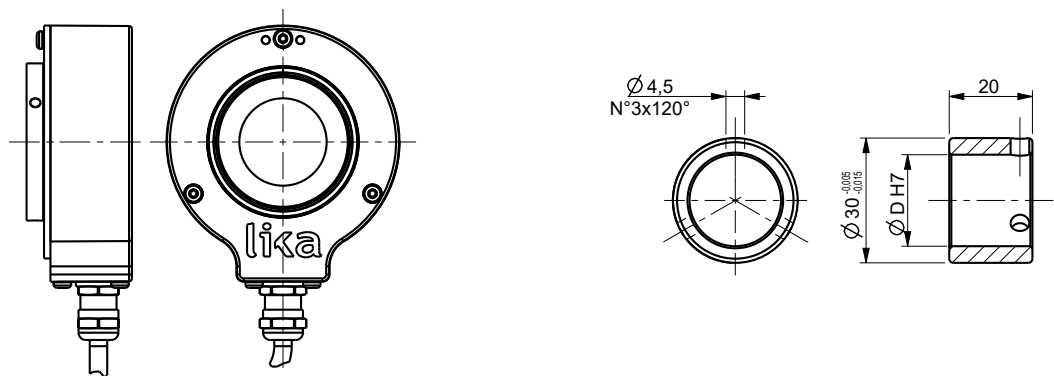


### ACCESSORIES

|                     |                                |
|---------------------|--------------------------------|
| IF100:              | programming tool               |
| EC-C12F-LK-I8-L050: | Cordset 5m with M23 connector  |
| EC-C12F-LK-I8-L100: | Cordset 10m with M23 connector |
| EPFL121:            | M23 12 pin mating connector    |
| BR2-xx:             | reducing sleeves               |



CP82



BR2-xx

Order code

|      |   |     |   |       |   |     |   |     |   |     |     |   |     |      |       |
|------|---|-----|---|-------|---|-----|---|-----|---|-----|-----|---|-----|------|-------|
| CP82 | - | XX  | - | XXXXX | - | XXX | - | XX  | - | X   | X   | - | X   | XXXX | /Sxxx |
|      |   | (a) |   | (b)   |   | (c) |   | (d) |   | (e) | (f) |   | (g) | (h)  | (i)   |

|                                                                                                                                |                                                                                                                                                   |                                                                                                 |                                                                                                                                                 |
|--------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>(a) OUTPUT CIRCUITS / POWER SUPPLY</b><br>H4 = PP/LD universal circuit, +5V÷ +30V<br>L4 = Line Driver (RS422), +5V÷ +30V    | <b>(d) SHAFT DIAMETER</b><br>30 = 30 mm<br>32 = 32 mm<br>34 = 34 mm<br>35 = 35 mm<br>38 = 38 mm<br>40 = 40 mm<br>42 = 42 mm<br>44 = 44 mm (43,97) | <b>(e) PROTECTION</b><br>V = IP54 (standard)<br>P = IP65                                        | <b>(h) CABLE LENGTH</b><br>L010 = cable output 1 m<br>L020 = cable output 2 m<br>L070 = cable output 7 m<br>Lxx0 = cable output x m (max. 10 m) |
| <b>(b) RESOLUTION (PPR)</b><br>See electrical specifications                                                                   |                                                                                                                                                   | <b>(f) OPERATING TEMP.</b><br>T = -25°C +85°C (-13°F +185°F)<br>K = -40°C +100°C (-40°F +212°F) |                                                                                                                                                 |
| <b>(c) OUTPUT SIGNALS / CONNECTIONS</b><br>ZCZ = AB0 /AB0, M23 12 pin plug<br>ZCW = AB0 /AB0, 12 wires cable output (type T12) |                                                                                                                                                   | <b>(g) CONNECTION POSITION</b><br>R = radial                                                    | <b>(i) CUSTOM VERSION</b>                                                                                                                       |

|                  |            |             |
|------------------|------------|-------------|
| Document release | Date       | Description |
| 1.0              | 14.11.2025 | First issue |