



**MEM/MEM-V**



**Description**

- SSI serial output
- Different configurations available
- Metal case
- Series MEM single & multiturn 30 µs typical monoflop time
- Series MEM-V singleturn 16 µs typical monoflop time
- High resolution, Binary or Gray code

Available with a wide array of mechanical solutions, absolute encoders series MRE52, MRE54 and MRE62 grant high resolutions (8, 9, 10, 12 or 13 bits). The different output signals (serial or parallel) and voltage supplies allow to couple them to any counting system or PLC.

**Mechanical versions**

| MEM520/MEM520V  | MEM540/MEM540V   | MEM510/MEM510V  | MEM530/MEM530V   |
|---|--|---|--|
| Ø 58 mm round flange  | Ø 58 mm round flange   | Ø 58 mm round flange  | Flange type RE0444   |
| Servo coupling  | Servo coupling   | Servo coupling  | Shaft Ø 11 mm  |
| Ø 50 mm centering mask  | Ø 36 mm centering mask   | Ø 31.75 mm centering mask   | Aluminium case   |
| Shaft Ø 6, 8, 9.52 or 10 mm   | 3 M4 holes 120° on Ø 48 mm                                       | Shaft Ø 6, 8, 9.52 or 10 mm   |  |
| MEM410/MEM410V  | MEM430/MEM430V   | MEM620/MEM620V  | MEM650/MEM650  |
| Hollow shaft for motor shaft coupling – hole Ø 8, 10, 12, 14 or 15 mm | Hollow shaft for motor shaft coupling – hole Ø 8, 10, 14 or 15mm | 63.5x63.5 square flange<br>Ø 31.75 mm centering mask<br>Shaft Ø 6, 8, 9,52 or 10 mm | 63.5x63.5 square flange<br>Ø 50 mm centering mask<br>Shaft Ø 6, 8, 9,52 or 10 mm |
|   | Antirotational elastic support                                   |   |  |

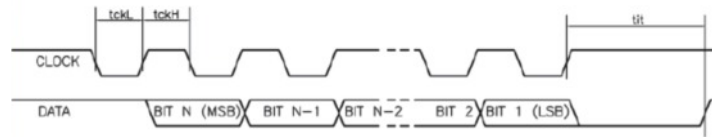
**Mechanical & Environmental Specifications**

| TYPE                               | MEM/MEM-V           | 520/510/540                     | 620/650                     |
|------------------------------------|---------------------|---------------------------------|-----------------------------|
| Weight                             | 400 g ca.           | 500 g ca.                       | 450 g ca.                   |
| Materials: case<br>shaft           |                     | aluminium<br>stainless steel    |                             |
| Shaft/Joint hole diameter          | 6, 8, 9.52 or 10 mm | 11 mm                           | hole Ø 8, 10, 12, 14, 15 mm |
| Revolutions/minute                 |                     | 6000                            |                             |
| Starting torque                    |                     | ≤ 0.8 Ncm                       |                             |
| Inertia                            |                     | ≤ 25 g cm <sup>2</sup>          |                             |
| Max. load                          |                     | 80 N axial / 1000 N radial      |                             |
| Shock resistance (11 ms)           |                     | 50 G                            |                             |
| Vibrations resistance (10÷2000 Hz) |                     | 100 m/sec <sup>2</sup>          |                             |
| Protection degree                  |                     | IP64, optional IP65 (version K) |                             |
| Operating temperature              |                     | -30 ÷ +70°C                     |                             |
| Storage temperature                |                     | -30 ÷ +85°C                     |                             |

**Electrical & Operating Specifications**

|                          |  |
|--------------------------|--|
| Resolution               | 5 ÷ 13 bit (32÷8192 info/rev.)                                       |
| Steps/revolution         | 2÷15 bit (4÷32768)   |
| Code                     | Binary or Gray   |
| Output signals           | SSI serial (RS422)   |
| Supply voltage           | 5 ÷ 28 Vdc<br>Protection against polarity reversal                   |
| Power consumption        | 1.2 W  |
| I max parallel outputs   | 50 mA  |
| SSI Clock max. frequency | 1 MHz  |
| Accuracy                 | ±1/2 LSB   |
| Interference immunity    | EN61000-6-2  |
| Emitted interference     | EN61000-6-4  |
| Connections              | axial or radial cable 1 m lg or axial/radial 12-pin Connei connector |

## SSI Interface Signals



MSB: Most Significant Bit

LSB: Less Significant Bit

tckL: 0.5 µs min.

tckH: 0.5 µs max

Encoder MEM = tit: 30 µs typical

Encoder MEM-V= tit 16 µs typical

(tit: when the tit time lag expires the encoder considers the interrogation ended)

The output code is increasing with shaft rotating clockwise (shaft side sight).

## Input & Output signals

### SSI SERIAL OUTPUT

| SIGNALS | CABLE COLOURS | 12-PIN CONNECTOR |
|---------|---------------|------------------|
| Clock+  | Brown         | PIN 1            |
| Clock-  | White         | PIN 2            |
| Data+   | Green         | PIN 3            |
| Data-   | Yellow        | PIN 4            |
| Reset   | Pink          | PIN 5            |
| 0V      | Blue          | PIN 12           |
| +Vdc    | Red           | PIN 11           |

### PNP Count reset input

Applying a high logic level to this input (5÷28 Vdc) resets the position data.

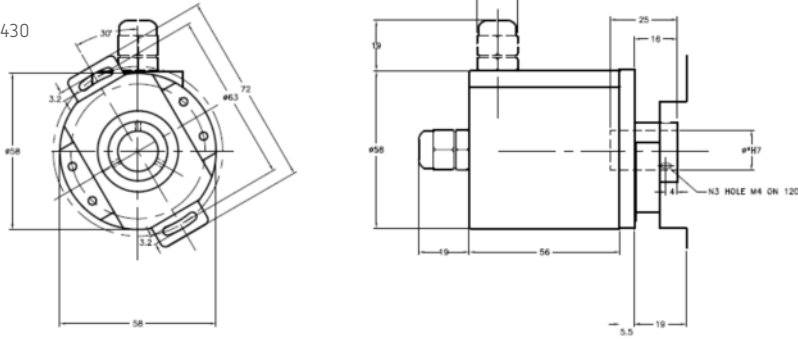
## Ordering information

|   |   |    |     |      |   |   |  |
|---|---|----|-----|------|---|---|--|
| MEM520  | - | 13 | 15B | 5/28 | A | 8 | SSI  |
|   |   |    |     |      |   |   | <u>OUTPUT SIGNALS</u><br>SSI = SSI Serial<br>PP = Push-pull parallel   |
|   |   |    |     |      |   |   | <u>SHAFT DIAMETER/ JOINT HOLE</u><br>Shaft 6 – 8 – 9.52 – 10 mm -11 mm (MEM530)<br>Joint 8 – 10 – 12- 14 – 15 mm   |
|   |   |    |     |      |   |   | <u>Connections outlet</u><br>A axial /R radial<br>Standard: 12-pin connector<br>cable 1 m lg.on request            |
|   |   |    |     |      |   |   | <u>SUPPLY</u><br>5÷28 Vdc  |
|   |   |    |     |      |   |   | <u>REVOLUTIONS NO. &amp; CODE 00</u><br>single turn / 4÷15 bit<br>B Binary code / G Gray code                      |
|   |   |    |     |      |   |   | <u>RESOLUTION/ REVOLUTION</u><br>5÷13 bit  |
|   |   |    |     |      |   |   | <u>MECHANICAL PECULIARITIES (Optional Field) - =</u><br>Standard version<br>C = Cable Outlet<br>K = Sealing O-ring |
| <u>TYPE</u><br>MEM520 – MEM540 – MEM510 – MEM530 Round flange MEM520V<br>– MEM540V – MEM510V – MEM530V Round flange MEM620 –<br>MEM650 – MEM620V – MEM650V Square flange<br>MEM410 – MEM430 – MEM410 – MEM410V Cable outlet |   |    |     |      |   |   |  |

Variations admitted without notice

**Dimensions**

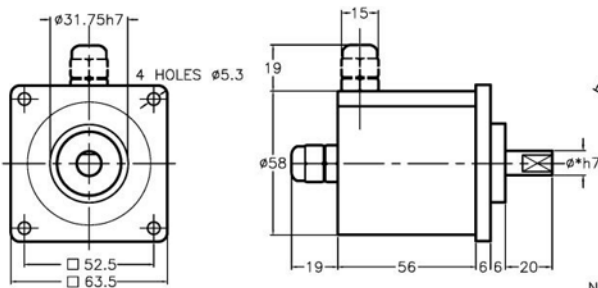
MEM430



\* FORO DISPONIBILE NEI DIAMETRI/AVAILABLE HOLLOW SHAFT DIAMETER  
8mm - 10mm - 12mm - 14mm - 15mm

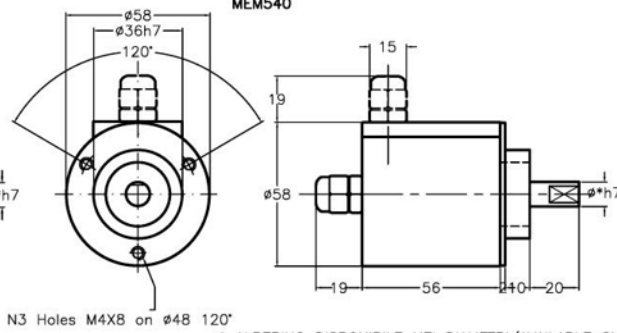
RIF. M1447

MEM620



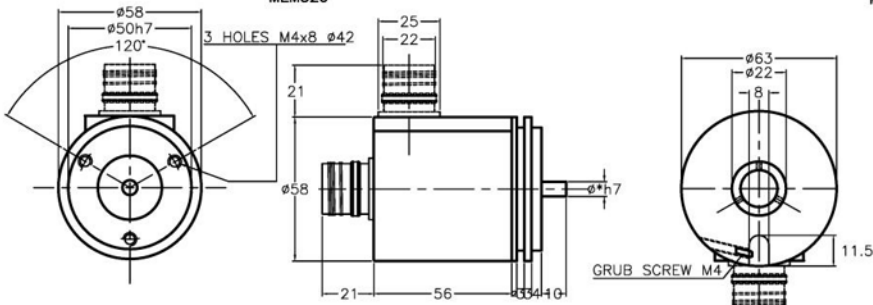
\* ALBERINO DISPONIBILE NEI DIAMETRI/AVAILABLE SHAFT DIAMETER  
8mm - 10mm con sporgenza/lenght 20mm  
6mm con sporgenza/lenght 10mm

MEM540



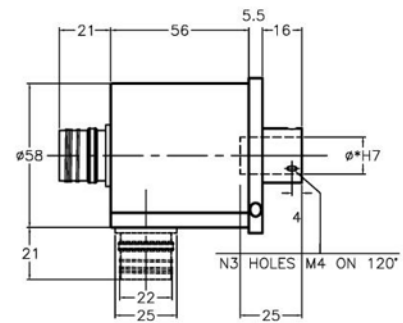
\* ALBERINO DISPONIBILE NEI DIAMETRI/AVAILABLE SHAFT DIAMETER  
8mm - 10mm con sporgenza/lenght 20mm  
6mm con sporgenza/lenght 10mm

MEM520



\* ALBERINO DISPONIBILE NEI DIAMETRI/AVAILABLE SHAFT DIAMETER  
8mm - 10mm con sporgenza/lenght 20mm  
6mm con sporgenza/lenght 10mm

MEM410



\* FORO DISPONIBILE NEI DIAMETRI/AVAILABLE HOLE DIAMETER  
8mm - 10mm - 12mm - 14mm - 15mm