

**Codi**

**04**



**CS**

181



**CV**

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# CODI



**TYPICAL APPLICATIONS** Electronic function selector  
Washing machines and dishwashers

**WIRING DIAGRAMAS**

- 4-bit digital output
- Up to 32 positions
- BCD, Gray Code and resistor array selection

**CYCLE NR** 10.000

**AMBIENT TEMPERATURE** 105 °C

Designed with the special demands of today's electronic control applications in mind.  
Everel encoders provide an outstanding array of potential solutions.

## Rating

0,1 A / 250 VAC

0,1 mA / 5 VDC

50 mA / 5 VDC

T 105 °C

## ADDITIONAL FEATURES

- Golden contacts
- 360° with or without end stop
- Permitted angular tolerance:  $\pm 2^\circ$
- 10.000 cycles
- Typical operating torque:  $3.5 \pm 1$  Ncm
- Different connecting systems
- Different mounting solutions available, such as snap-in, twist-lock or screws
- Coupling with function selector switches

## SOLUTIONS



### Screw mounting CODI

The encoder can be fixed to panel with a screw or a nut.



### Pin strip connector CODI

It allows to weld the encoder directly on the circuit board of the customer product without wiring.



### M4 screw mounting CODI

The encoder can be fixed on the panel by two M4 screws.



### Version without PCB for mounting on PCB

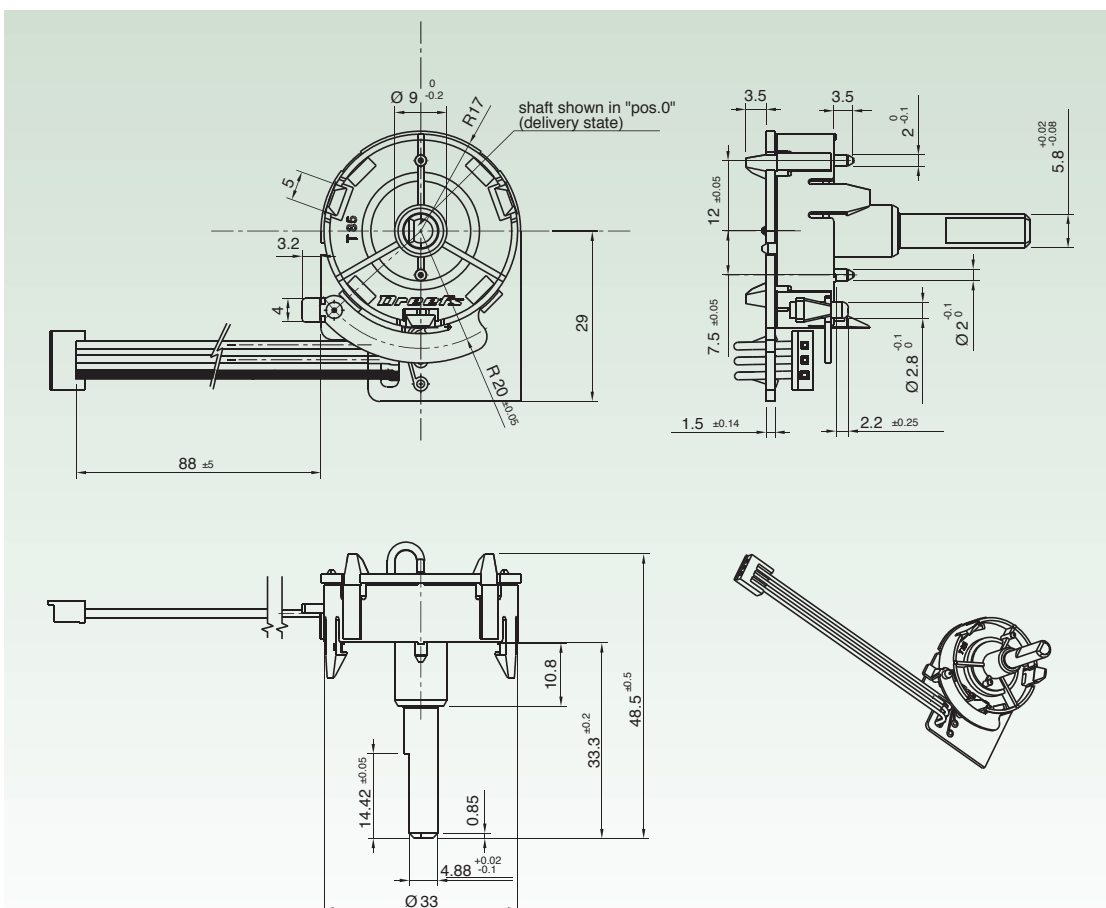
Everel can also supply only the electromechanical part of the encoder allowing the customer to define the board circuit.

CS

CS1

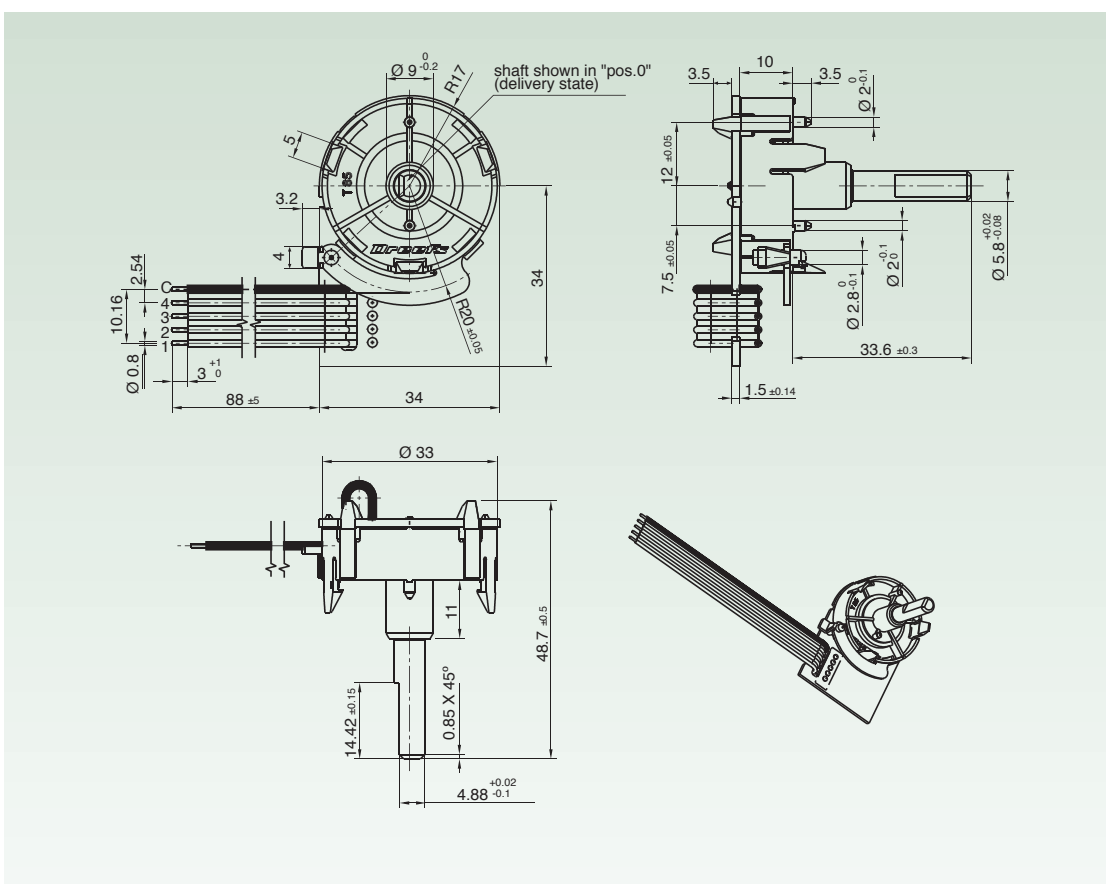


| CODI | FIXING TYPE | H SHAFT (mm) | NUMBER OF POSITIONS |
|------|-------------|--------------|---------------------|
| CS   | Snap-in     | ■ 22,5       | ■ 16 P              |



MF encoder, standard body version with snap in fixing type or self snapping fixing type.

CS2



MF encoder, standard body version with snap in fixing type or self snapping fixing type.

## CV1



## CV2

[illegible]

MF encoder, standard body version with snap in fixing type.



# Minicodi

04



**MS**

187



**MF**

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**MB**

188



**MV**

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**MK**

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# MINICODI



|                             |                                                                                                                           |
|-----------------------------|---------------------------------------------------------------------------------------------------------------------------|
| <b>TYPICAL APPLICATIONS</b> | Electronic control for appliances                                                                                         |
| <b>WIRING DIAGRAMAS</b>     | <ul style="list-style-type: none"> <li>2-bit digital output (incremental function)</li> <li>Up to 21 positions</li> </ul> |
| <b>CYCLE NR</b>             | 10.000                                                                                                                    |
| <b>AMBIENT TEMPERATURE</b>  | 105 °C                                                                                                                    |

Encoders display different dimensions and mounting systems on the control panel. Dimensions vary a lot depending on the different applications. MINICODI series as potentiometer can be coupled with selector switches.

## ADDITIONAL FEATURES

- Golden contacts
- 360° with or without end stop
- Different mounting solutions available: snap-in or M4 screws or self tapping screws
- Push to select version available
- Coupling with function selector switches
- Miniature encoder
- 2-bit digital output (incremental function)
- Typical use for analogical / resistive applications
- Permitted angular tolerance: +/- 2°
- End stops: ≥ 100 Ncm
- Operating torque: 0,3-9 Ncm
- Edge connectors

### Rating

0,1 A / 250 VAC  
0,1 mA / 5 VDC  
50 mA / 5 VDC  
T 105 °C

## MINICODI - INCREMENTAL ENCODER

The mechanical encoder with digital output are available in absolute or incremental code. The shaft rotation, in the incremental output, generates pulses that, sent to the microprocessor, determine a “relative” position. The counts of pulses continue with the rotation of the shaft, which allows the position to change infinitely, or as the microprocessor allow. Direction may be determined by analyzing difference between the two channels.

### Example of incremental encoder configuration with gray code

| De-<br>tent | Ang. | Output |   |   |
|-------------|------|--------|---|---|
|             |      | C      | 1 | 2 |
| 1           | 0°   | ■      | ■ |   |
| 2           | 30°  | ■      | ■ | ■ |
| 3           | 60°  | ■      |   | ■ |
| 4           | 90°  | ■      |   |   |
| 5           | 120° | ■      | ■ |   |
| 6           | 150° | ■      | ■ | ■ |
| 7           | 180° | ■      |   | ■ |
| 8           | 210° | ■      |   |   |
| 9           | 240° | ■      | ■ |   |
| 10          | 270° | ■      | ■ | ■ |
| 11          | 300° | ■      |   | ■ |
| 12          | 330° | ■      |   |   |

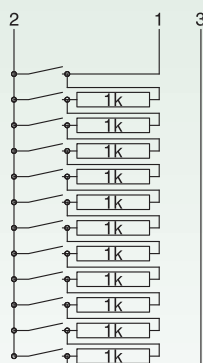
### Example of incremental encoder obtained with momentary positions

| Pos.        | Ang. | Output |   |
|-------------|------|--------|---|
|             |      | 1      | 2 |
| 1 momentary | +30° | ■      |   |
| 0 stable    | 0    |        |   |
| 2 momentary | -30° |        | ■ |

## MINICODI - POTENTIOMETER

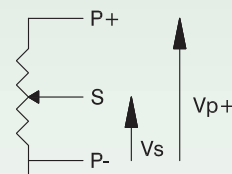
The potentiometer is a mechanical encoder with resistive analogical output. The potentiometer version can be implemented either using a continuous "carbon" layer or a resistor array. The potentiometer has a rotation that can be infinite or steps (positions). Push to select function available.

### Potentiometer resistor array



| Pos. | Ang. | 2   |     |
|------|------|-----|-----|
|      |      | 1   | 3   |
| 1    | 0°   | 10K | 11K |
| 2    | 30°  | 1   | 10K |
| 3    | 60°  | 2K  | 9K  |
| 4    | 90°  | 3K  | 8K  |
| 5    | 120° | 4K  | 7K  |
| 6    | 150° | 5K  | 6K  |
| 7    | 180° | 6K  | 5K  |
| 8    | 210° | 7K  | 4K  |
| 9    | 240° | 8K  | 3K  |
| 10   | 270° | 9K  | 2K  |
| 11   | 300° | 10K | 1K  |
| 12   | 330° | 11K | 10  |

### Potentiometer carbon film



| Value between P- and S |      |                  |
|------------------------|------|------------------|
| Detent                 | Ang. | Output voltage % |
| 1                      | 0°   | 0%               |
| 2                      | 35°  | 11%              |
| 3                      | 70°  | 22%              |
| 4                      | 105° | 33%              |
| 5                      | 140° | 44%              |
| 6                      | 175° | 56%              |
| 7                      | 210° | 67%              |
| 8                      | 245° | 78%              |
| 9                      | 280° | 89%              |
| 10                     | 315° | 100%             |

endstop

# MS

### MS1

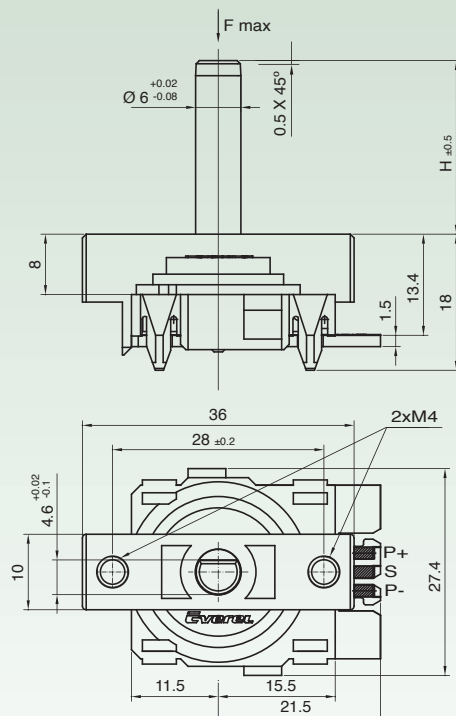


### MS2



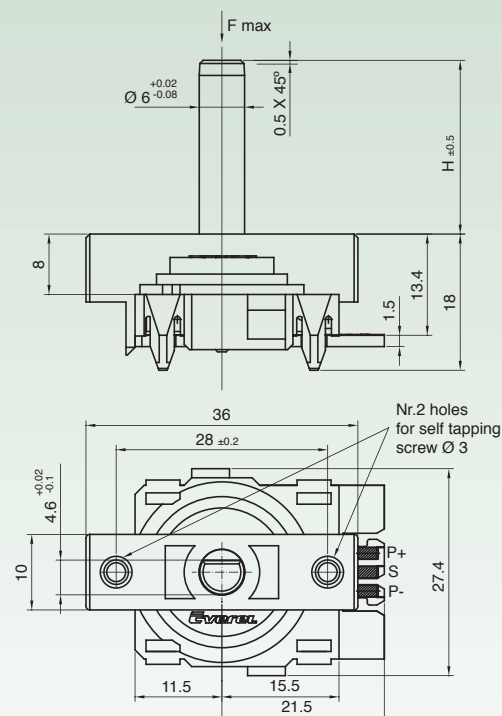
| MINICODI | FIXING TYPE        | H SHAFT (mm)                                                                               | NUMBER OF POSITIONS                                                                                                                           |
|----------|--------------------|--------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| MS1      | Screw m4           | <ul style="list-style-type: none"> <li>11</li> <li>13</li> </ul>                           | <ul style="list-style-type: none"> <li>Free rotation 360°</li> <li>Free rotation with mechanical stop</li> </ul>                              |
| MS2      | Self tapping screw | <ul style="list-style-type: none"> <li>16</li> <li>18</li> <li>20,4</li> <li>23</li> </ul> | <ul style="list-style-type: none"> <li>Positions number: min. 2 - max 21 with or without mechanical stop</li> <li>Double momentary</li> </ul> |

### MS1



MS1 encoder, body standard version with M4 screw fixing type.

### MS2



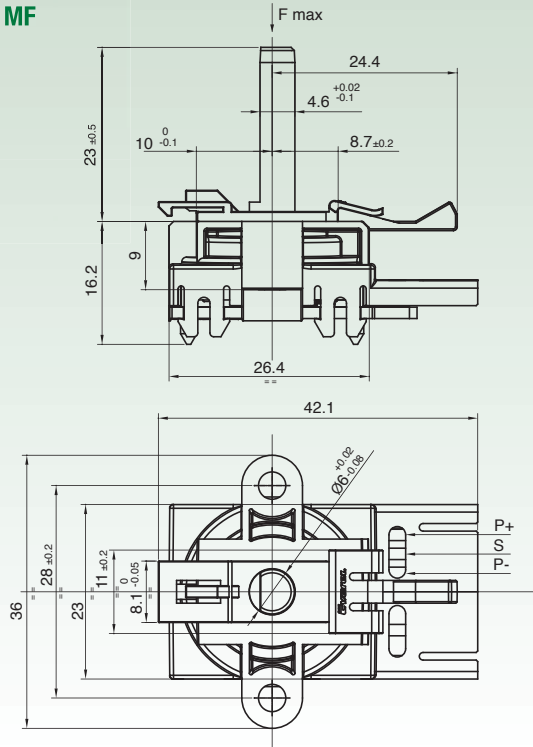
MS2 encoder, body standard version with self tapping screw fixing type.

MF



| MINICODI | FIXING TYPE                                                            | H SHAFT (mm)             | NUMBER OF POSITIONS                                                                                                                 |
|----------|------------------------------------------------------------------------|--------------------------|-------------------------------------------------------------------------------------------------------------------------------------|
| MF       | <div><div></div>Self tapping screw</div> <div><div></div>Snap in</div> | <div><div></div>23</div> | <div><div></div>3 P</div> <div><div></div>6 P</div> <div><div></div>8 P</div> <div><div></div>10 P</div> <div><div></div>12 P</div> |

MF



MF encoder, version with snap in fixing type or self tapping fixing type.

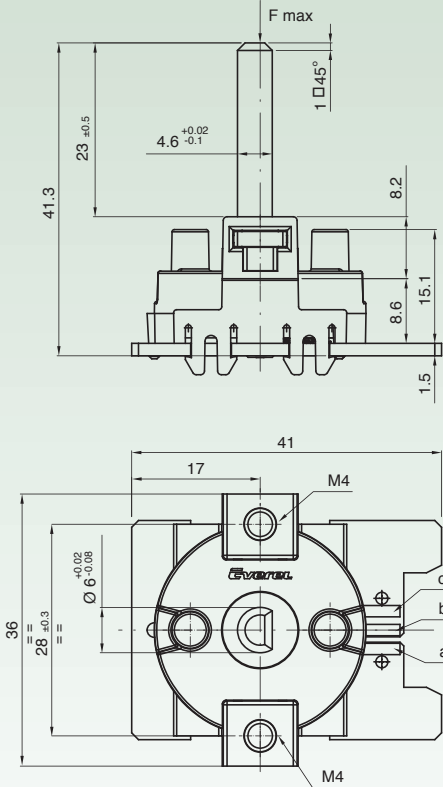
MB

| MINICODI | FIXING TYPE | H SHAFT (mm)                                              | NUMBER OF POSITIONS                                                                                             |
|----------|-------------|-----------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|
| MB1      | Screw m4    | <div><div></div>13,7 cross</div> <div><div></div>23</div> | <div><div></div>Free rotation with 1 position at 0°</div> <div><div></div>Free rotation with 20 positions</div> |
| MB2      | Snap in     |                                                           |                                                                                                                 |

MB1

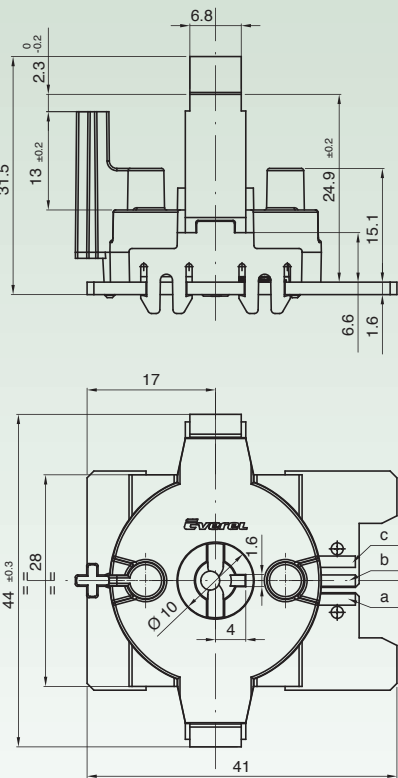


MB1



MS1 encoder, version with M4 screw fixing type.

MB2



MS2 encoder, version with snap in fixing type.

MB2

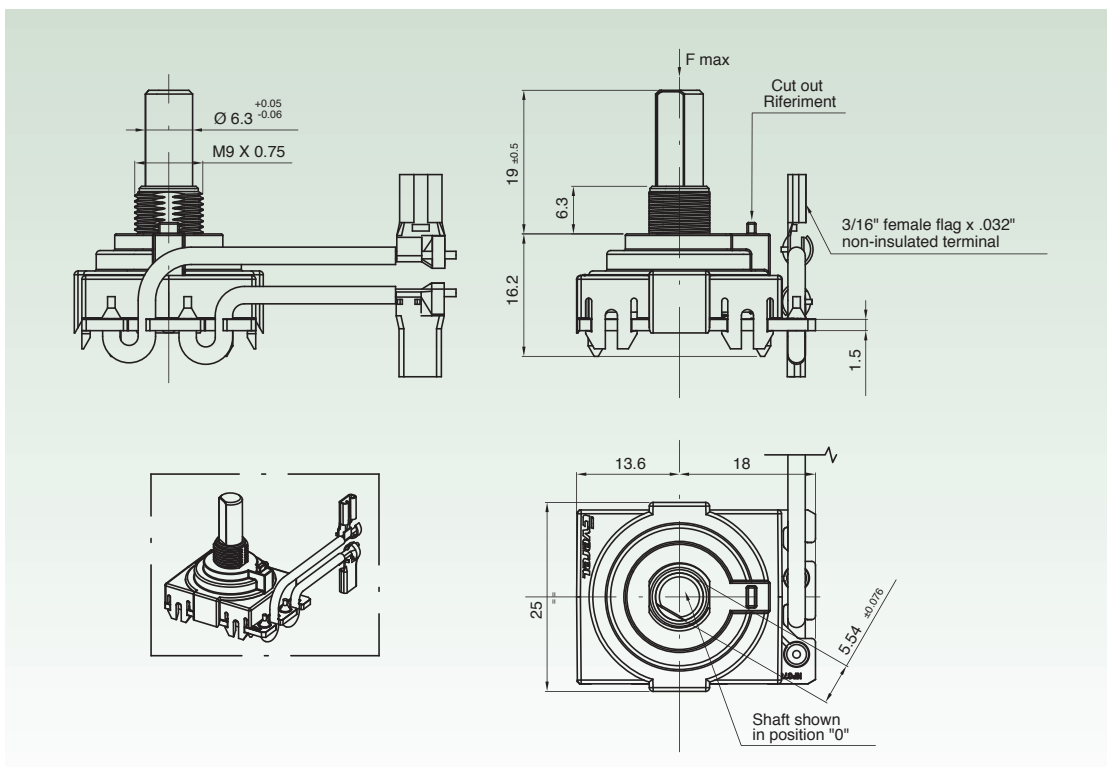


MV

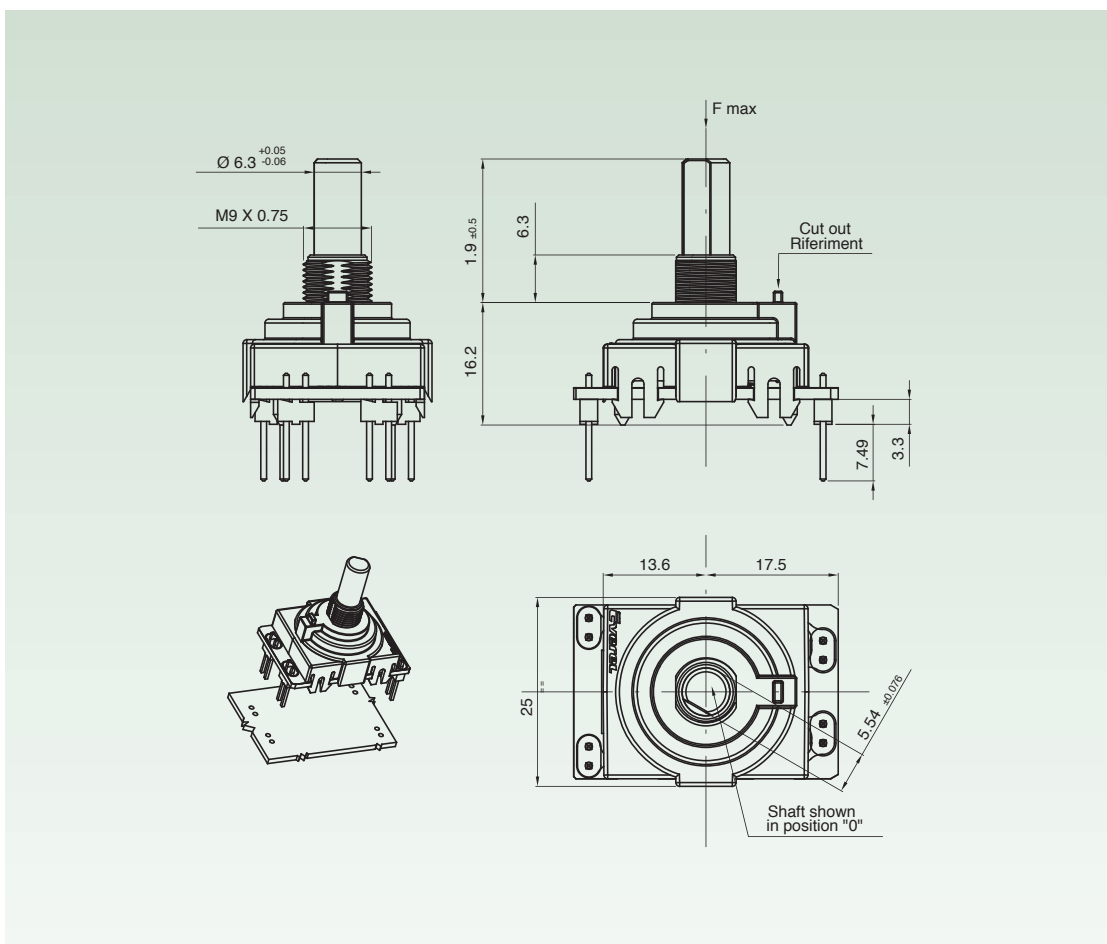
MV1



| MINICODI | FIXING TYPE   | H SHAFT (mm) | NUMBER OF POSITIONS            |
|----------|---------------|--------------|--------------------------------|
| MV1      | Threaded ring | ■ 12,7       | ■ Free rotation 360° with stop |
| MV2      | Soldering pin |              |                                |



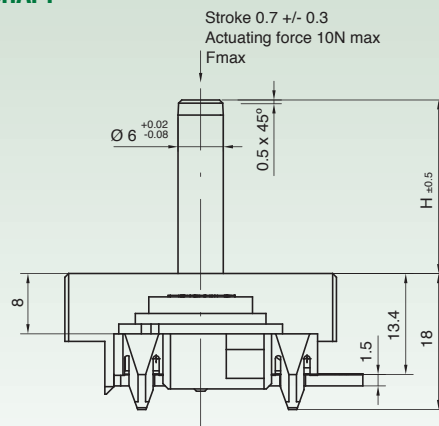
MV2



# MK

| MINICODI | FIXING TYPE        | H SHAFT (mm)                                                                               | NUMBER OF POSITIONS                                                                                                                        |
|----------|--------------------|--------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|
| MK1      | Screw m4           | <ul style="list-style-type: none"> <li>13</li> <li>18,7</li> <li>23</li> <li>24</li> </ul> | <ul style="list-style-type: none"> <li>21 positions free rotation</li> <li>20 positions free rotation</li> <li>Double momentary</li> </ul> |
| MK2      | Self tapping screw |                                                                                            |                                                                                                                                            |

## SHAFT



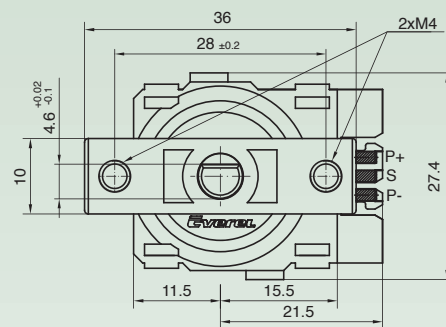
## PUSH TO SELECT

The push to select accessory is used to select a scroll menu function and to confirm the selected value (i.e. temperature).

### MK1



### MK1

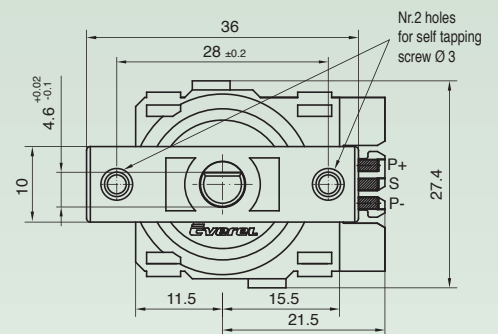


MK1 encoder, version with M4 screw fixing type.

### MK2



### MK2



MK2 encoder, version with self tapping screw fixing type.

