

V3 83161 High release force 831611 Part number 83161118



- Nominal ratings 0.1 A to 20 A / 250 VAC
- Operating temperature up to +125 °C
- Conforming to EN 61058 and UL 1054
- Choice of actuators with 4 possible fixing positions

Part numbers

| | Type | Function | Connections |
|----------|---------------------------|----------------|-------------|
| 83161118 | High release force 831611 | I (changeover) | W3 |

Specifications

Electrical characteristics

| | |
|------------------------------|----|
| Rating nominal / 250 VAC (A) | 16 |
| Rating thermal / 250 VAC (A) | 20 |

Mechanical characteristics

| | |
|--|----------------------|
| Maximum operating force (N) | 3 |
| Min. Release force (N) | 1 |
| Maximum total travel force (N) | 4,5 |
| Max. permitted overtravel force (N) | 20 |
| Maximum rest position (mm) | 16,1 |
| Operating position (mm) | 14,7 ^{±0,4} |
| Maximum differential travel (mm) | 0,35 |
| Min. overtravel CRA (mm) | 1,1 |
| Ambient operating temperature (°C) | -20 → +125 |
| Mechanical life for 2/3 CRA (operations) | 10 ⁷ |
| Contact gap (mm) | 0,4 |
| Weight (g) | 5,6 |

Additional specifications

Components

Material

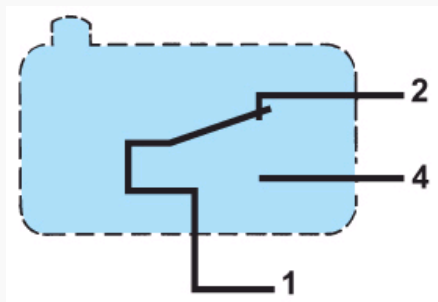
- Housings : polyamide or polyester
- Button : polyamide
- Contacts : AgNi

Levers

- Flat : stainless steel
- Roller : stainless steel, glass-filled polyamide roller
- Other polyamides

Approvals : NF

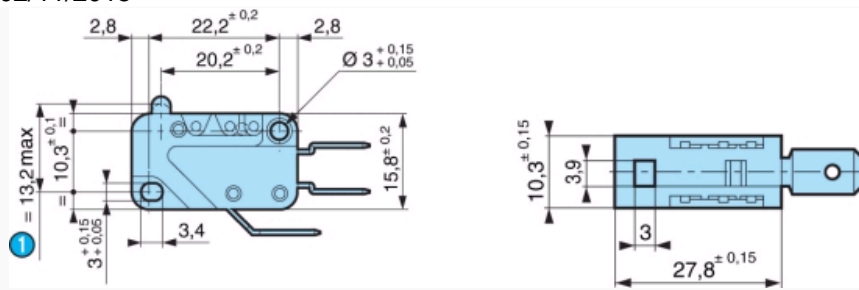
Principles



Dimensions (mm)

Product

83161

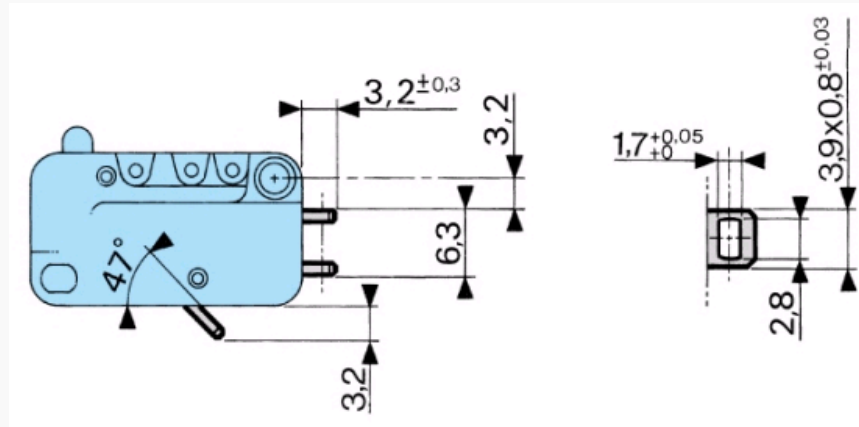


| N° | Legend |
|----|--------|
| ① | OL |

Dimensions (mm)

Connections

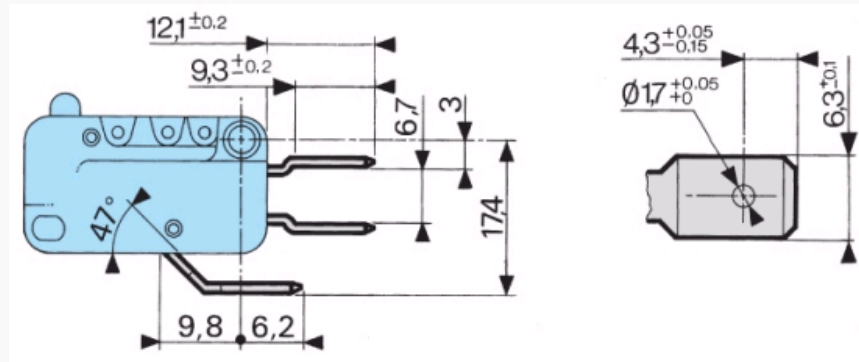
W2 solder



Dimensions (mm)

Connections

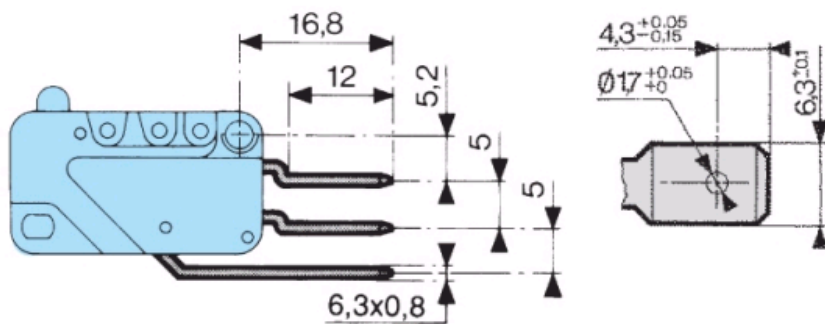
W3 for 6.35 mm clips (6.3 x 0.8)



Dimensions (mm)

Connections

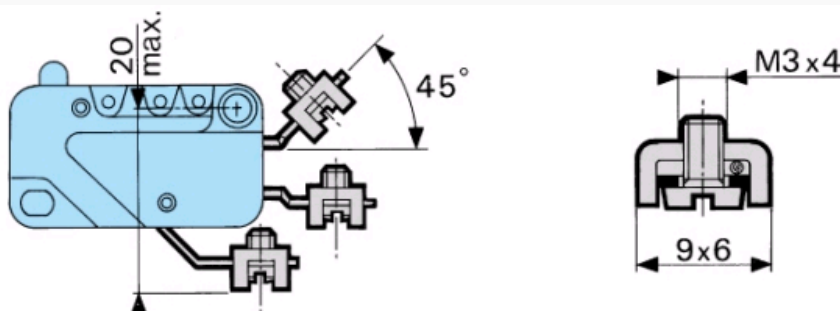
W3R5 for 6.35 mm clips (6.3 x 0.8)



Dimensions (mm)

Connections

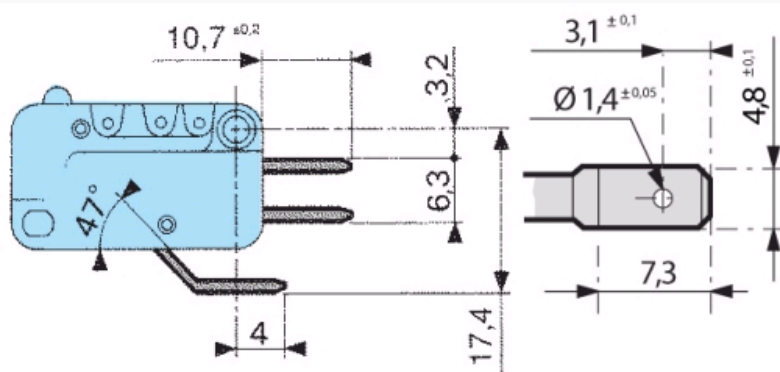
W5 screw



Dimensions (mm)

Connections

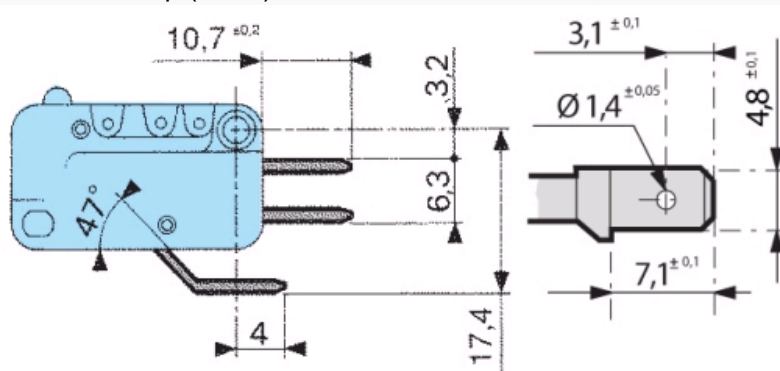
W6A5 for 4.8 mm clips (4.8 x 0.5)



Dimensions (mm)

Connections

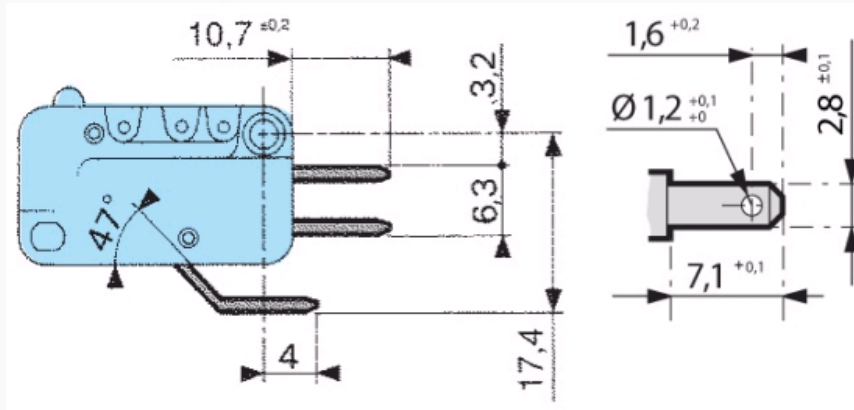
W6D8 for 4.8 mm clips (4.8 x 0.8)



Dimensions (mm)

Connections

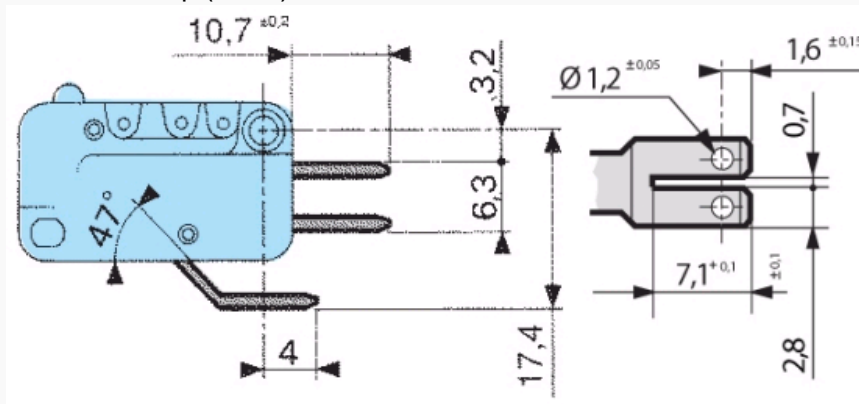
W7A5 for 2.8 mm clips (2.8 x 0.5)



Dimensions (mm)

Connections

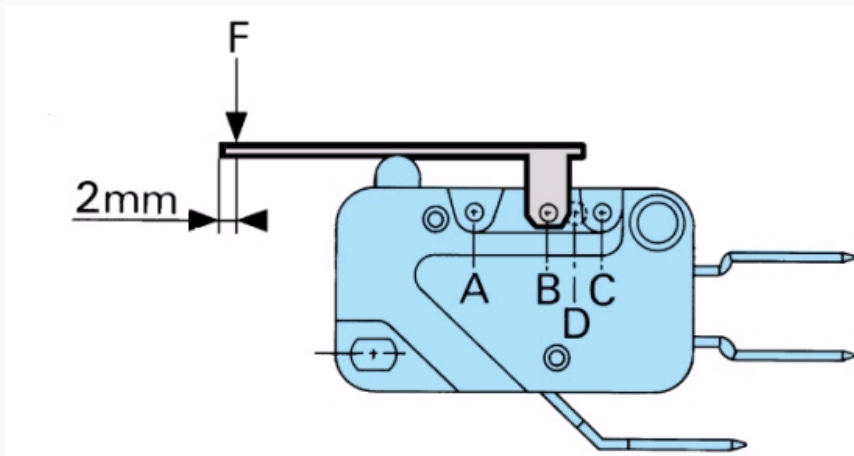
2W7A8 for 2.8 mm clips (2.8 x 0.8)



Dimensions (mm)

Actuator mounting positions

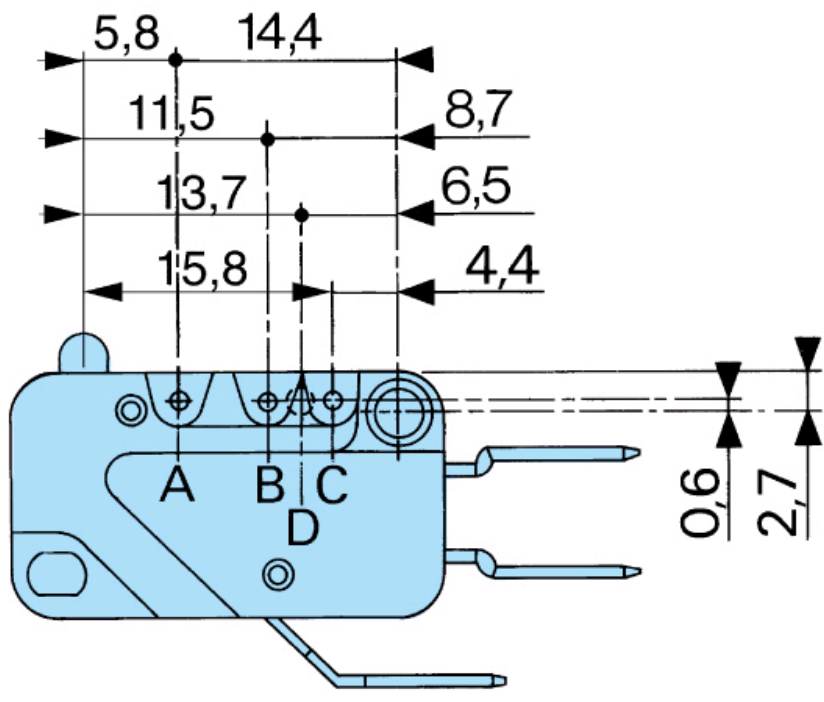
Levers



To calculate force Divide the switch force by the coefficient given in the table. To calculate travel Multiply the switch travel by the same coefficient. Example : 83 161 3 with lever 161 A - R 25.4 position A (coeff. 4) Operating force : $0.8 : 4 = 0.2$ N Pre-travel : $1.4 \times 4 = 5.6$ mm

Dimensions (mm)

Actuator mounting positions

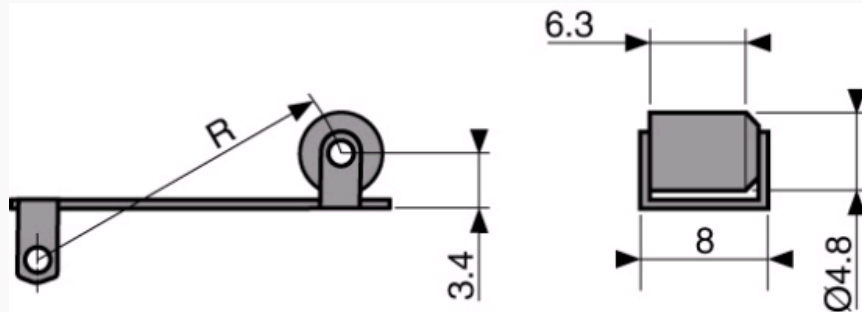


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Dimensions (mm)

Actuators

161 E

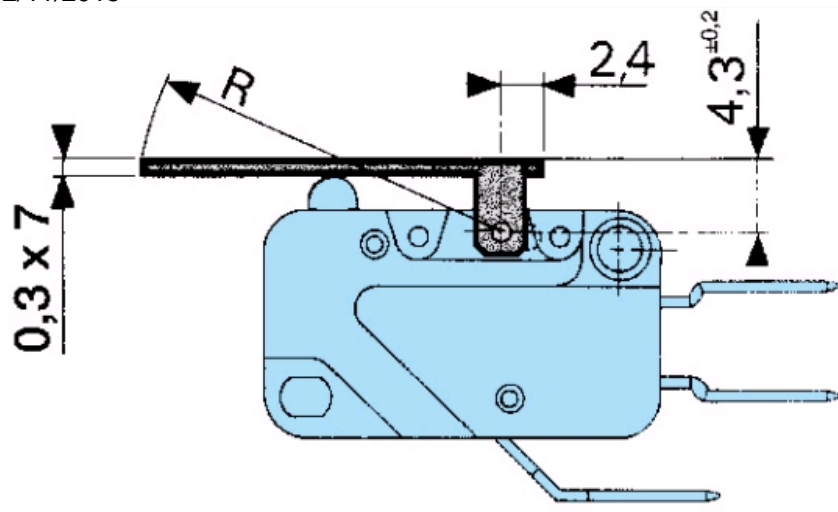


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Dimensions (mm)

Actuators

161 A

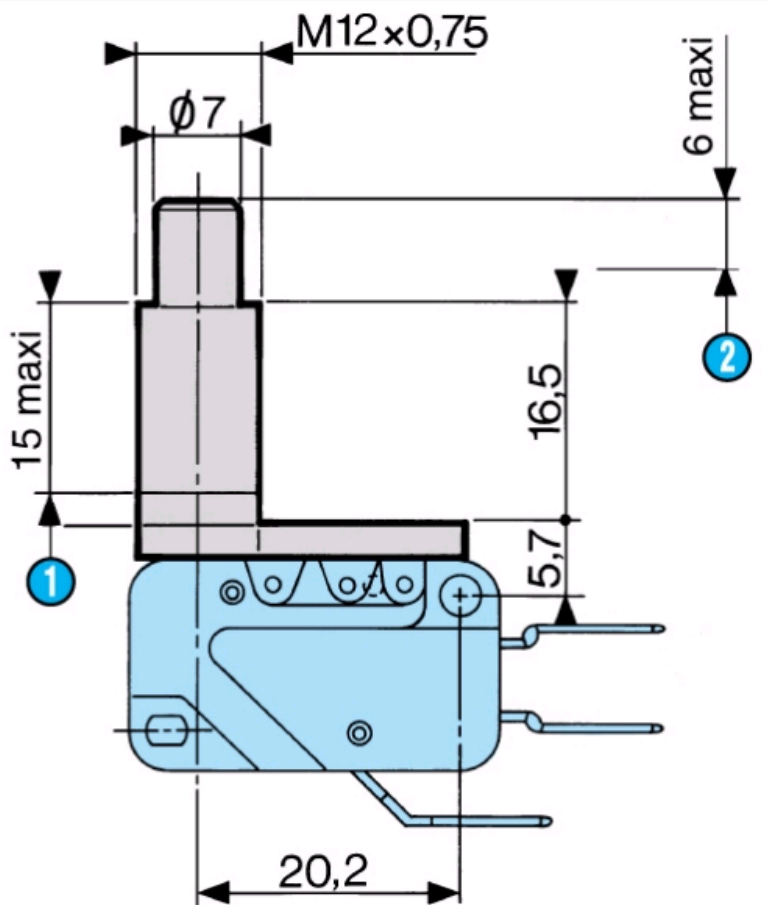


To calculate force Divide the switch force by the coefficient given in the table. To calculate travel Multiply the switch travel by the same coefficient. Example : 83 161 3 with lever 161 A - R 25.4 position A (coeff. 4) Operating force : 0.8 : 4 = 0.2 N Pre-travel : 1.4 x 4 = 5.6 mm

Dimensions (mm)

Actuators

161 L



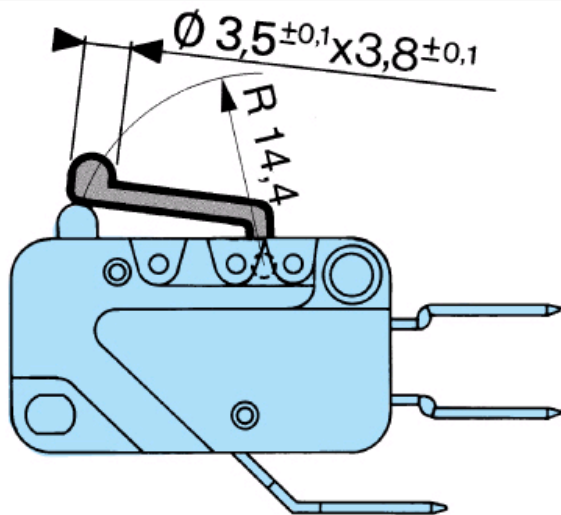
Nut thickness Max. torque 1.5 mm 5 Cm N 2 mm 7 Cm N 2.5 mm 10 Cm N

| N° | Legend |
|----|--------------|
| 1 | Thread |
| 2 | Total travel |

Dimensions (mm)

Actuators

161 V

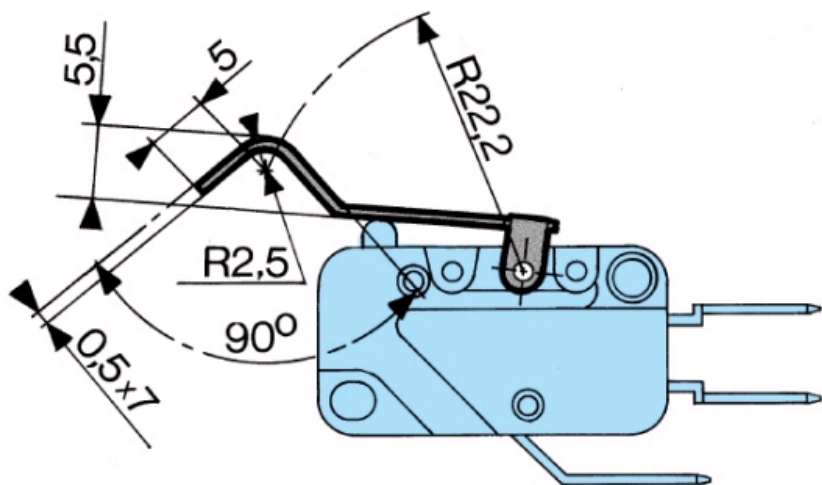


Nut thickness Max. torque 1.5 mm 5 Cm N 2 mm 7 Cm N 2.5 mm 10 Cm N

Dimensions (mm)

Actuators

161 F

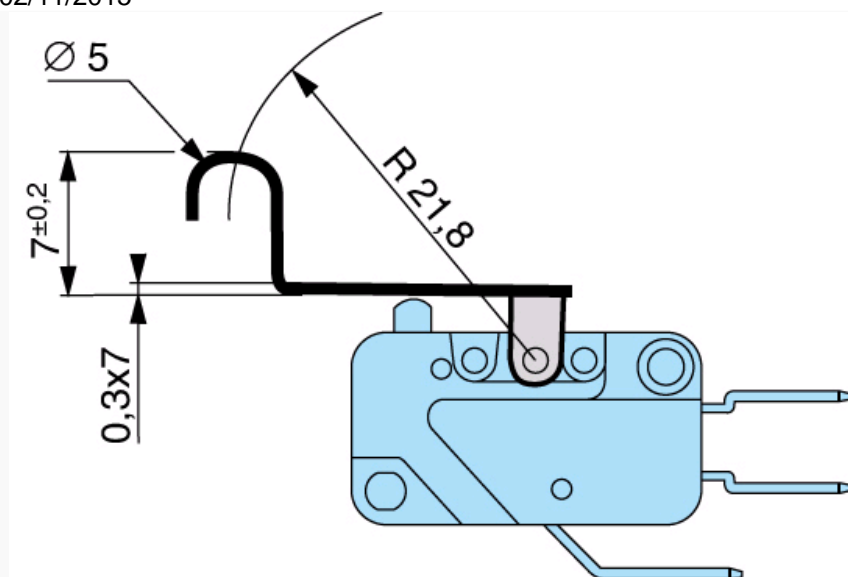


Nut thickness Max. torque 1.5 mm 5 Cm N 2 mm 7 Cm N 2.5 mm 10 Cm N

Dimensions (mm)

Actuators

161 G

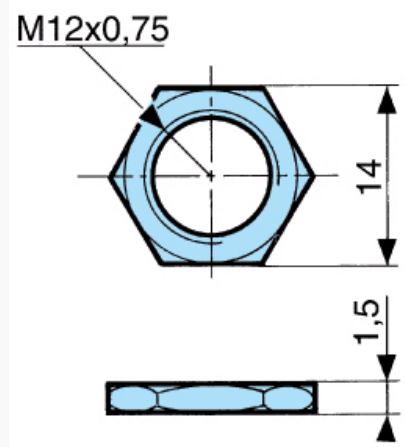


Nut thickness Max. torque 1.5 mm 5 Cm N 2 mm 7 Cm N 2.5 mm 10 Cm N

Dimensions (mm)

Mounting accessories

Nut 70602118

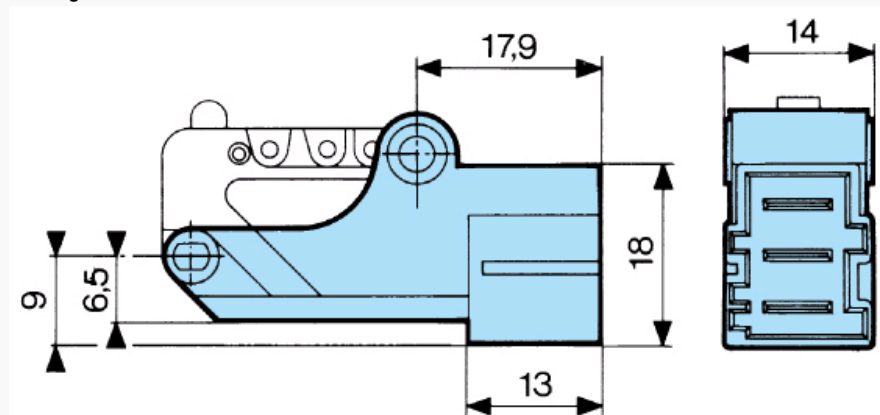


Nut thickness Max. torque 1.5 mm 5 Cm N 2 mm 7 Cm N 2.5 mm 10 Cm N

Dimensions (mm)

Mounting accessories

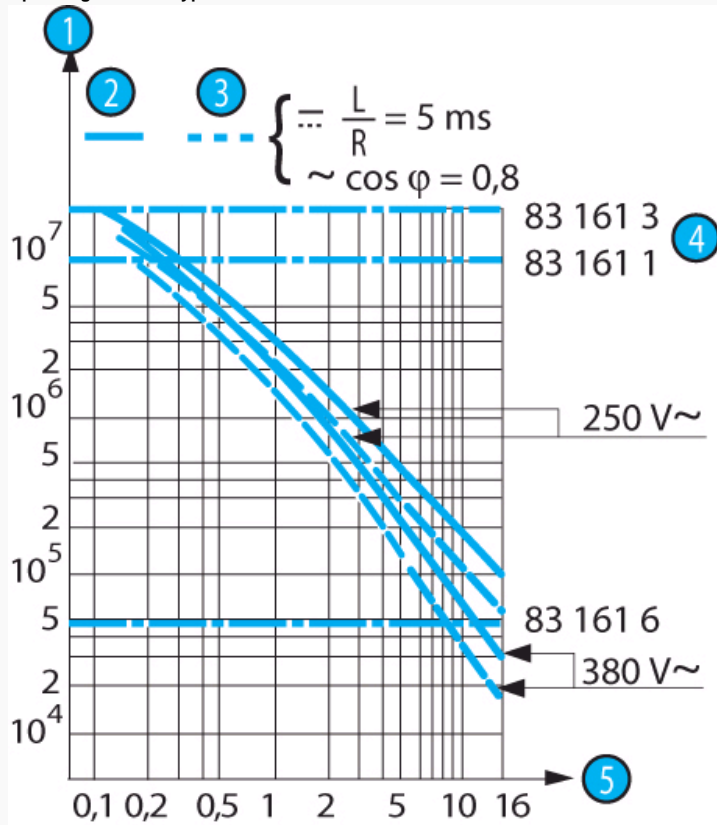
Housing 161 J for connections W3 R5



Nut thickness Max. torque 1.5 mm 5 Cm N 2 mm 7 Cm N 2.5 mm 10 Cm N

Curves

Operating curve for types 831611 / 831613 / 831616



| N° | Legend |
|----|-----------------------|
| 1 | Number of cycles |
| 2 | Resistive circuit |
| 3 | Inductive circuit |
| 4 | Mechanical life limit |
| 5 | Current in Amps |

Connections

Actuators and fixing positions

| Part numbers for standard actuators | 79 215 740 | 70 507 524 | 79 215 742 | 70 507 529 | 70 507 528 | |
|-------------------------------------|--|--|---------------------------------------|--|---------------------------------------|-----------------------------------|
| Actuators | Plain 161A R14,2 | Plain 161A R25,4 | Roller 161E R13,6 | Roller 161E R24,1 | Dummy roller 161F R22,2 | |
| Fixing positions | A B | A B C | A B | A B C | A B | |
| Coefficient | 2 1 | 4 2 1,5 | 2 1 | 4 2 1,5 | 3 1,8 | |
| Tripping point (except 83 161 6) | 15,2 st 15,2 st 15,2 st | 15,2 st 15,2 st 15,2 st | 20,5 st 20,5 st | 20,5 st 20,5 st 20,5 st | 20,4 st 20,4 st | |
| Tripping point 83 161 6 | 14,8 st 15 st | 14,4 st 14,8 st 14,9 st | 20,1 st 20,3 st | 19,7 st 20,1 st 20,2 st | 20,2 st 20,2 st | |
| Part numbers for standard actuators | 79 218 651 | | | | | |
| Actuators | Dummy roller 161G R21,8 | **Telescopic plunger 161 L | Manual action | 161V | Housing 161J | Nut for 161L Part no.: 70 602 118 |
| Fixing positions | A B | D | D | | | |
| Coefficient | 3 1,8 | 1 | 1 | | | |
| Tripping point (except 83 161 6) | 21,7 st 21,7 st | 21,5 st | 18,35 st | | | |
| Tripping point 83 161 6 | 21,5 st 21,5 st | 21,5 st | | | | |

Except where otherwise indicated, plain and roller levers are supplied unmounted.
 For factory mounting, specify fixing position A, B or C.
 ** For 83 161 1, 83 161 2, 83 161 3, 83 161 6 mounted in factory (supplied without nut)

Other information

Mounting - Operation

See basic technical concepts

Product adaptations



- Special levers
- Special connections
- Specific fixing
- High operating temperature
- Special operating force
- Approvals : UL - cUL

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