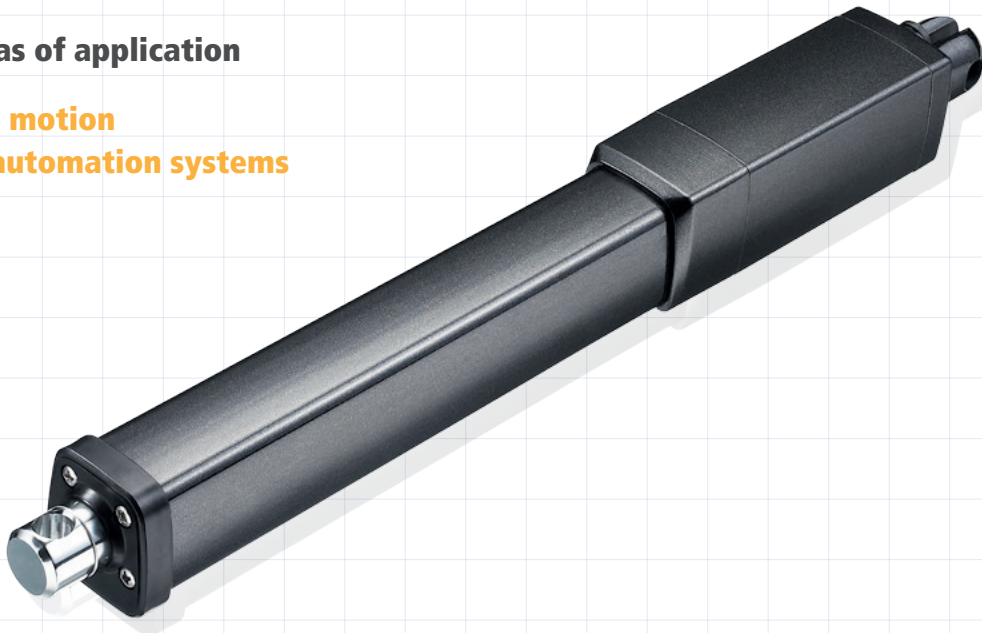# Electric actuator
# JP3

## Typical areas of application

- **Industrial motion**
- **Building automation systems**

The JP3 series inline linear actuator was designed for low load industrial applications where up to IP69K dust and liquid ingress protection is necessary. It is best suited for applications with visual or compact installation dimension requirements. Hall sensors are optional for the JP3 which allow for synchronization and position feedback.

## Key figures

| | |
|---|---|
| • Voltage of motor | 12 V DC or 24 V DC |
| • Max. load | 2000 N in push/pull |
| • Max. speed at full load | 20.0 mm/s (with 500 N in a push or pull condition) |
| • Standard stroke | 20 ~ 500 mm |
| • Min. installation dimension | stroke+217 mm |
| • IP rating | up to IP69K |
| • Color | black or grey |
| • Standards, directives | EN60601-1 compliant |
| • Operational temperature range | -5 °C ~ +65 °C |
| • Operational temperature range at full performance | +5 °C ~ +45 °C |
| • Storage temperature range | -40 °C ~ +70 °C |

**An inline actuator specially designed for small spaces.**

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## Load and speed

| CODE | Load | | Self locking force 1) | Typical current 2) | | Typical speed | |
|---|---|---|---|---|---|---|---|
| | push | pull | | no load 24 VDC | with load 24 VDC | no load 24 VDC | full load 24 VDC |
| | [N] | (N) | [N] | [A] | [A] | [mm/s] | [mm/s] |
| **Motor speed 5600 min$^{-1}$, duty cycle 10%** | | | | | | | |
| B | 2000 | 2000 | 2000 | 1.0 | 3.0 | 7.5 | 4.2 |
| C | 1500 | 1500 | 1500 | 1.0 | 3.0 | 10.5 | 6.5 |
| D | 1000 | 1000 | 1000 | 1.0 | 3.0 | 15.5 | 9.5 |
| E | 500 | 500 | 500 | 1.0 | 3.0 | 26.5 | 20.0 |

### Note

1) This self-locking force level is reached only when a short circuit is applied on the terminals of the motor. All the control boxes have this feature built-in.

2) With a 12 V motor, the current is approximately twice the current measured in 24 V; speed will be similar for both voltages.

## Wire definitions

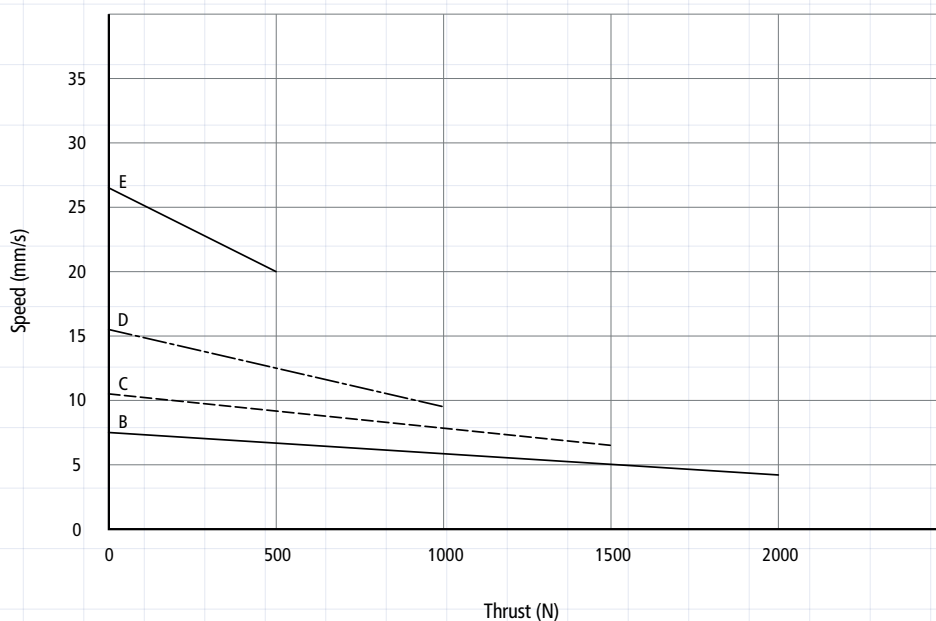| CODE* | Pin 1 (green) | Pin 2 (red) | Pin 3 (white) | Pin 4 (black) | Pin 5 (yellow) | Pin 6 (blue) |
|---|---|---|---|---|---|---|
| 1 | extend (VDC+) | N/A | N/A | N/A | retract (VDC+) | N/A |
| 2 | extend (VDC+) | N/A | middle switch pin B | middle switch pin A | retract (VDC+) | N/A |
| 3 | extend (VDC+) | common | upper limit switch | N/A | retract (VDC+) | lower limit switch |
| 4 | extend (VDC+) | common | upper limit switch | medium limit switch | retract (VDC+) | lower limit switch |

### Note

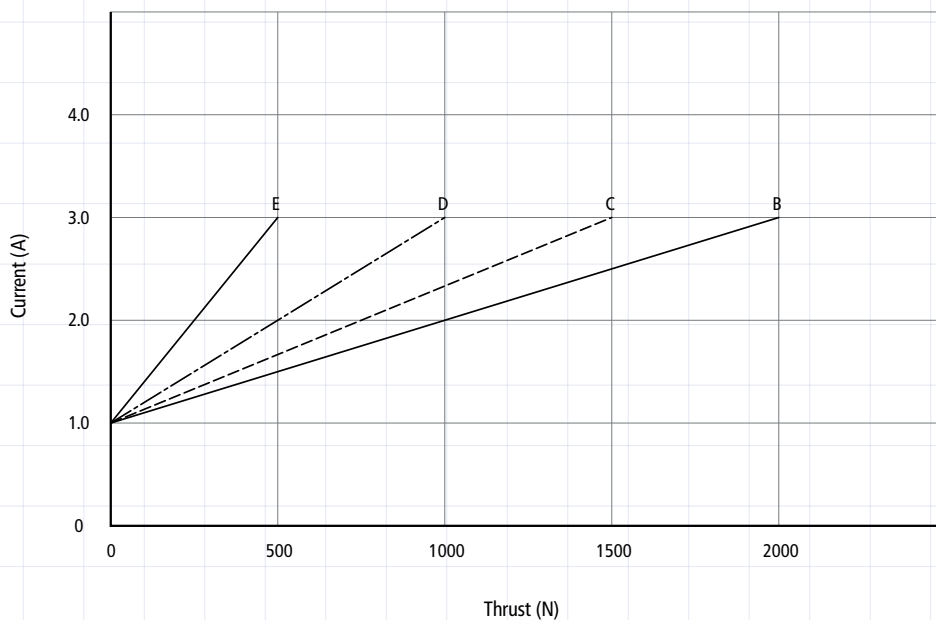* See ordering key – functions for limit switches.

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## Performance data (24 VDC motor)

Motor speed 5600 min$^{-1}$, duty cycle 10%

### Speed vs. Thrust



### Current vs. Thrust



## Note

• The performance data in the curve charts shows theoretical value.

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Subject to technical changes and errors excepted.

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## Drawing

Standard dimensions (mm)
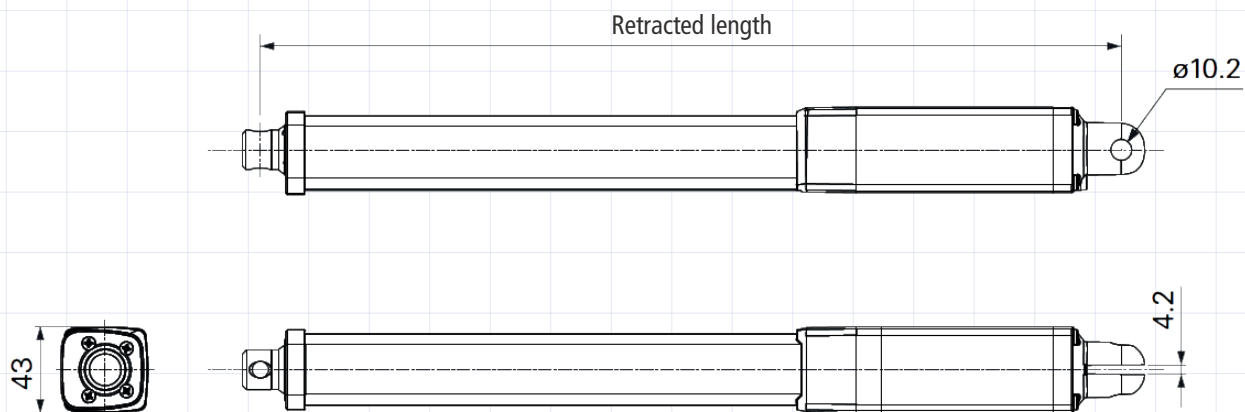


## Retracted length (mm)

**Retracted length ≥ Stroke+A+B+C**

| A | |
|---|---|
| Code front attachment | A |
| 1 | +217 |
| 2 | +217 |
| 3 | +230 |
| 4 | +230 |
| 5 | +230 |

| B | |
|---|---|
| Stroke (mm) | B |
| 20~150 | - |
| 151~200 | - |
| 201~250 | +5 |
| 251~300 | +10 |
| 301~350 | +15 |
| 351~400 | +20 |

| C | |
|---|---|
| Code output signals | |
| 0 | - |
| 1 | +13 |
| 2 | +13 |

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## Ordering key  (e. g.: JP3-100317-11113-01011)

JP3-

| | | | | | |
|---|---|---|---|---|---|
| ☐ | **Voltage** | 1 = 12 V | 2 = 24 V | 5 = 24 V, PTC | |
| ☐ | **Load and speed** | see page 2 | | | |
| - | | | | | |
| ☐ | **Stroke (mm)** | | | | |
| ☐ | | | | | |
| ☐ | | | | | |
| ☐ | **Retracted lenght (mm)** | see page 5 | | | |
| ☐ | | | | | |
| ☐ | | | | | |
| - | | | | | |
| ☐ | **Rear attachment** | 1 = aluminum casting, U clevis, slot 4.2 mm, depth 18.0 mm, hole 10.2 mm | | | |
| ☐ | **Front attachment** | 1 = aluminum casting, no slot, hole 6.4 mm <br> 2 = aluminum casting, no slot, hole 8.0 mm <br> 3 = aluminum casting, U clevis, slot 6.0 mm, depth 13.0 mm hole 10.0 mm <br> 4 = aluminum casting, U clevis, slot 6.0 mm, depth 13.0 mm, hole 6.4 mm <br> 5 = aluminum casting, U clevis, slot 6.0 mm, depth 13.0 mm, hole 8.0 mm | | | |
| ☐ | **Direction of rear attachment (counterclockwise)** | 1 = 0° | | | |
| ☐ | **Color** | 1 = black | | 2 = grey (Pantone 428C) | |
| ☐ | **IP rating** | 1 = without <br> 2 = IP54 | 3 = IP66 <br> 5 = IP66W | 6 = IP66D <br> 7 = IP68 | 8 = IP69K |
| - | | | | | |
| ☐ | **Special functions for spindle sub-assembly** | 0 = without (standard) | | | |
| ☐ | **Functions for limit switches** | 1 = two switches at full retracted/extended positions to cut current <br> 2 = two switches at full retracted/extended positions to cut current + 3rd LS to send signal <br> 3 = two switches at full retracted/extended positions to send signal <br> 4 = two switches at full retracted/extended positions to send signal + 3rd LS to send signal | | | |
| ☐ | **Output signals** | 0 = without | 1 = one Hall sensor | 2 = two Hall sensors | |
| ☐ | **Connector** | 1 = DIN 6pin, 90° plug | | 2 = tinned leads | |
| ☐ | **Cable length** | 0 = straight, 100 mm <br> 1 = straight, 500 mm | | 3 = straight, 1000 mm | |

## Terms of use

The user is responsible for determining the suitability of VARIMAX products for a specific application.
VARIMAX products are subject to change without prior notice.