



EWELLIX

EWELLIX Lifting Columns

CPMT

Product Data Sheet

We pioneer motion

SCHAEFFLER

1 CPMT

For medical devices

1

1 CPMT



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Benefits

- low installation height
- long stroke
- high load carrying capacity
- high safety and reliability
- flexible design options

Standards

- IEC 60601-1

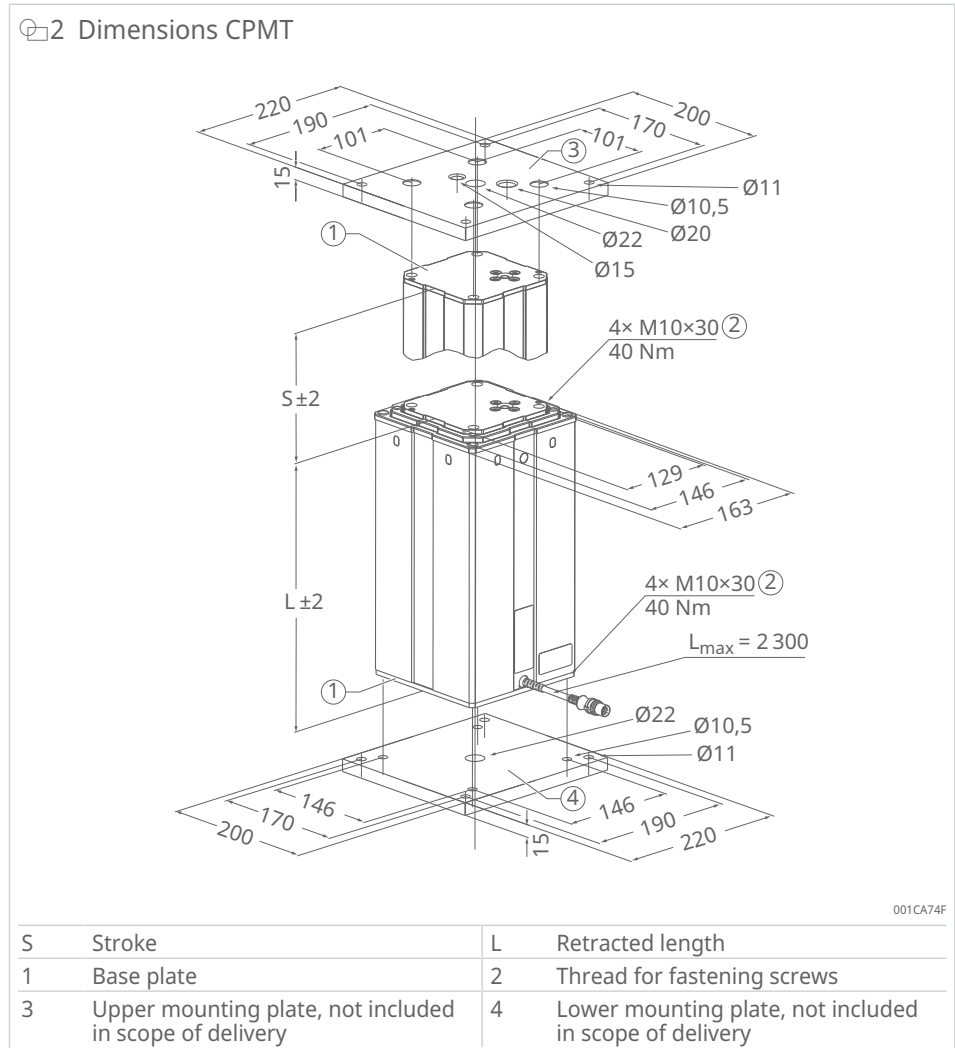
1 Technical data CPMT

| Feature | Unit | CPMT1-1S | CPMT1-1M | CPMT1-2S | CPMT1-2M |
|---|------|---------------------|----------------------|---------------------|----------------------|
| Rated push force | N | 5000 | 5000 | 6000 | 6000 |
| Rated pull force | N | 4000 | 4000 | 4000 | 4000 |
| Static push load ¹⁾ | N | 15000 | 15000 | 15000 | 15000 |
| Static factor under load conditions ²⁾ | - | 4 | 4 | 4 | 4 |
| Dynamic offset load | Nm | ≤ 450 ³⁾ | ≤ 1200 ³⁾ | ≤ 550 ³⁾ | ≤ 1400 ³⁾ |
| Static offset load | Nm | ≤ 1000 | ≤ 3000 | ≤ 1000 | ≤ 3000 |
| Speed (full load to no load) | mm/s | 14 to 34 | 14 to 34 | 12 to 26 | 12 to 26 |
| Lifting column version (number of guide tubes) | - | 3-piece | 3-piece | 3-piece | 3-piece |
| Stroke S | mm | 400 to 600 | 300 to 600 | 400 to 600 | 300 to 600 |
| Retracted length L | mm | S/2 + 120 | S/2 + 240 | S/2 + 120 | S/2 + 240 |
| Voltage | V DC | 24 to 30 | 24 to 30 | 24 to 30 | 24 to 30 |
| Current consumption under push load | A | ≤ 12 | ≤ 12 | ≤ 10 | ≤ 10 |
| Current consumption under pull load | A | ≤ 10 | ≤ 10 | ≤ 7 | ≤ 7 |

| Feature | Unit | CPMT1-1S | CPMT1-1M | CPMT1-2S | CPMT1-2M |
|--------------------------------------|------|------------------------|------------------------|------------------------|------------------------|
| Duty cycle, intermittent operation | min | ON: 1 min / OFF: 9 min | ON: 1 min / OFF: 9 min | ON: 1 min / OFF: 9 min | ON: 1 min / OFF: 9 min |
| Ambient temperature during operation | °C | +10 to +40 | +10 to +40 | +10 to +40 | +10 to +40 |
| | °F | +50 to +104 | +50 to +104 | +50 to +104 | +50 to +104 |
| Protection code (IP) | - | IP20 | IP20 | IP20 | IP20 |
| Mass | kg | 16.5 to 20 | 19 to 23.5 | 16.5 to 20 | 19 to 23.5 |

- 1) conforms to static load in accordance with IEC 60601-2-46
- 2) static pull safety factor to prevent mechanical hazards in accordance with IEC 60601-1
- 3) for details, see bending load diagram

Dimensional drawings



Mounting plates are not included in the scope of delivery and are available separately as accessories.

Fastening screws are not included in the scope of delivery and are available separately as accessories.

Configuration options

3 CPMT configuration options – option S



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4 CPMT configuration options – option M



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5 DIN-8 plug and flying leads cable



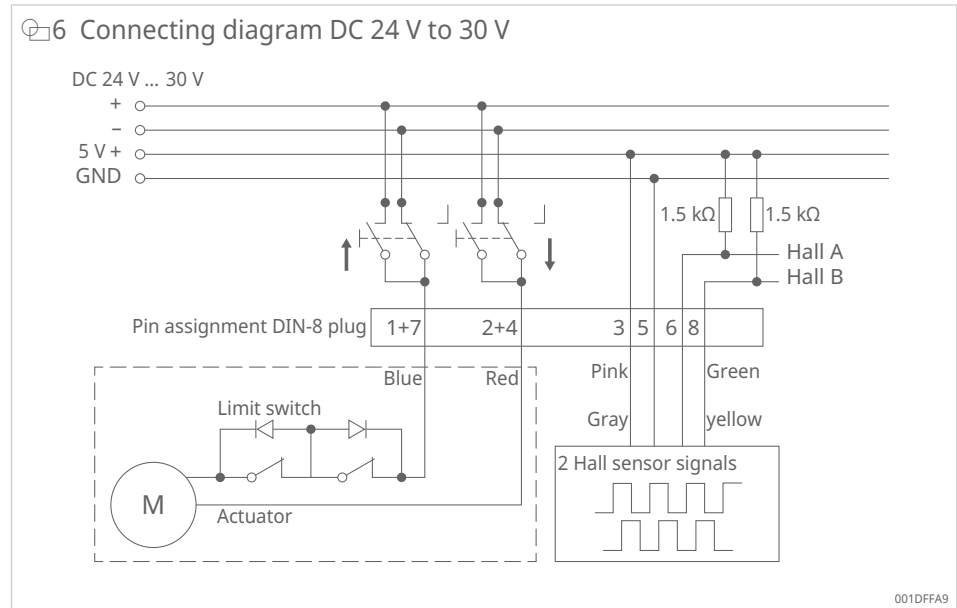
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2 Flying leads cable and DIN-8 plug: Pin assignment

| Wire color | Pin | Pin assignment |
|------------|-------|---|
| Blue | 1 + 7 | + motor power supply (DC 24 V ... 30 V) |
| Red | 2 + 4 | - motor power supply (DC 24 V ... 30 V) |
| Pink | 3 | DC 5 V Hall encoder |
| Gray | 5 | GND Hall encoder |
| Yellow | 6 | Hall sensor signal A |
| Green | 8 | Hall sensor signal B |

Wiring diagrams

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Suitable control units and accessories

3 Suitable control units and operating devices for CPMT

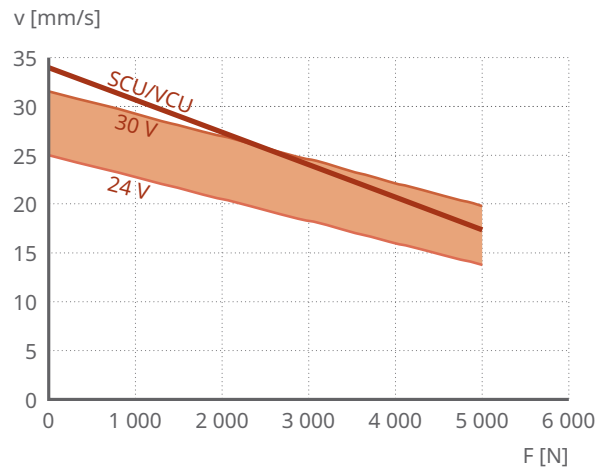
| Operating device | | Control unit | | |
|------------------|--------|--------------|-----|-------------------|
| Designation | Switch | SCU | VCU | BCU ⁴⁾ |
| EHA3 | M | ✓ | ✓ | ✓ |
| STJ0 | F | ✓ | ✓ | ✓ |
| STE | T | ✓ | ✓ | ✓ |

⁴⁾ Reduced load carrying capacity: CPMT1-1 ≤ 3000 N, CPMT1-2 ≤ 4000 N

- M Hand switch
- F Foot switch
- T Desk switch
- ✓ suitable
- not suitable

Performance diagrams

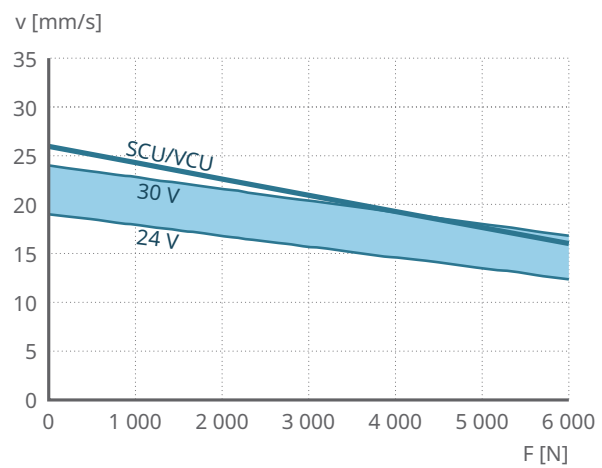
7 Speed-load diagram CPMT1-1



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v Speed | F Load

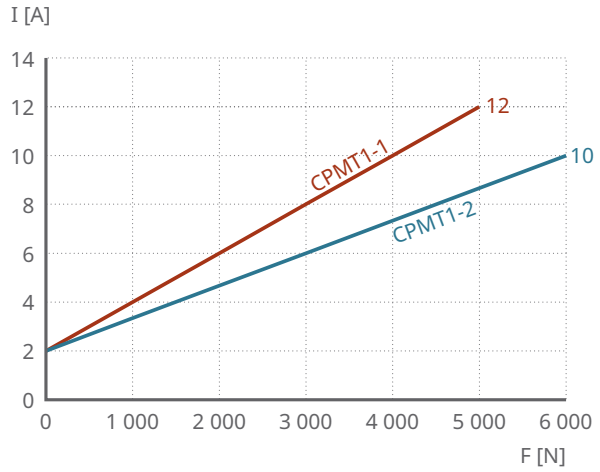
8 Speed-load diagram CPMT1-2



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v Speed | F Load

9 Current-load diagram

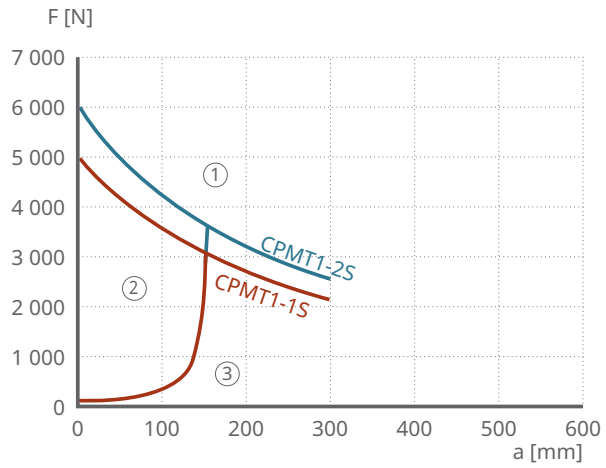


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| | | | |
|---|---------------------|---|------|
| I | Current consumption | F | Load |
|---|---------------------|---|------|

Offset load diagrams

10 Offset load diagram CPMT1-1S, CPMT1-2S

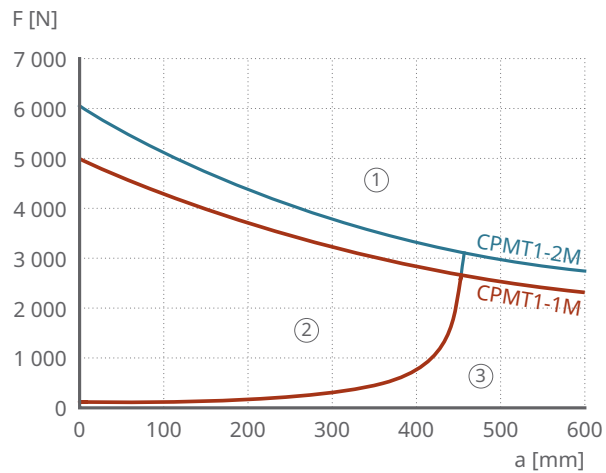


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| | | | |
|-------------------------------|-----------------|---|-------------------------------------|
| F | Load | a | Load distance from center of column |
| 1 | Overload range | 2 | Ideal load range |
| 3 | Underload range | | |
| Offset load in extended state | | | |

11 Offset load diagram CPMT1-1M, CPMT1-2M

CPMT1-1M, -2M

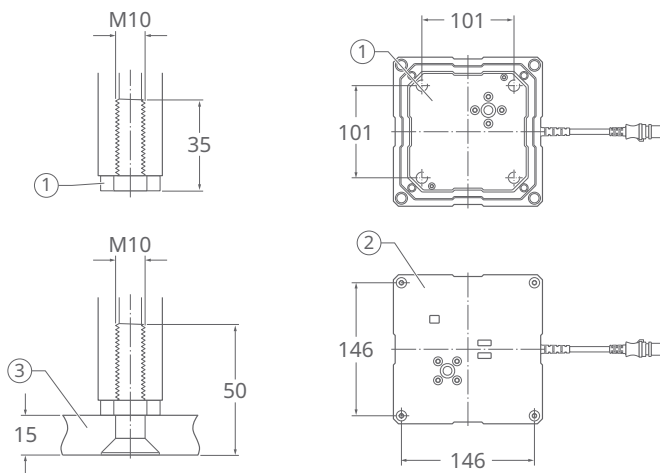


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| | | | |
|-------------------------------|-----------------|---|-------------------------------------|
| F | Load | a | Load distance from center of column |
| 1 | Overload range | 2 | Ideal load range |
| 3 | Underload range | | |
| Offset load in extended state | | | |

Mounting details

12 Mechanical connections



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| | | | |
|---|------------------------------|---|------------------------------|
| 1 | Base plate of the inner tube | 2 | Base plate of the outer tube |
| 3 | Mounting plate (accessory) | | |

The lifting column must be mounted on a flat and rigid surface using 4 screws M10 (accessories), which must be screwed 25 mm to 35 mm into the lifting column.

Additional attachment options

13 Additional attachment options CPMT



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Optional threads can be configured on the outer tube section for additional attachment options. For further information, please contact Schaeffler.

- size and position options
- high strength for supporting attached linear actuators

Accessories

4 Accessories

| Designation | Ordering designation |
|--|----------------------|
| Control units | |
| Control unit SCU, 3 or 6 ports | SCUXX-003XXX-000 |
| Control unit VCU, 3 or 5 ports | VCUXX-003XX0-000 |
| Control unit BCU, 3 ports | BCUX3-XX3100-0000 |
| Operating devices | |
| Hand switch EHA3, 1 – 5 channels | EHA3X-23MXXN-000 |
| Foot switch STJ0, 1 – 3 channels | STJ0X-XXXXXX-XX00 |
| Table switch STE, 1 – 5 channels | STEXX-XXXXXX-XX00 |
| Mounting materials | |
| Upper mounting plate | ZPL-290268 |
| Lower mounting plate | ZPL-290265 |
| Fastening screw for mounting plate (4 screws/plate required) | ZBE-510707 |

Ordering key

14 Ordering designation CPMT

| CPMT | | 1 | - | 1 | S | 0 | 300 | F | 1 | - | 000 |
|---------------------------|---------------------------------------|--|---|---|---|---|-----|---|---|---|-----|
| Type | | | | | | | | | | | |
| Voltage | | | | | | | | | | | |
| 1 | DC 24 ... 30 V | | | | | | | | | | |
| Load | | | | | | | | | | | |
| | Push | Pull | | | | | | | | | |
| 1 | 5000 N | 4000 N | | | | | | | | | |
| 2 | 6000 N | 4000 N | | | | | | | | | |
| Retracted length | | | | | | | | | | | |
| S | Stroke/2 + 120 mm | | | | | | | | | | |
| M | Stroke/2 + 240 mm | | | | | | | | | | |
| Stroke S | | | | | | | | | | | |
| 300 | 300 mm | For retracted length M only | | | | | | | | | |
| 350 | 350 mm | For retracted length M only | | | | | | | | | |
| 400 | 400 mm | | | | | | | | | | |
| 450 | 450 mm | | | | | | | | | | |
| 500 | 500 mm | | | | | | | | | | |
| 550 | 550 mm | | | | | | | | | | |
| 600 | 600 mm | | | | | | | | | | |
| ... | Other | In increments of 10 mm, starting at 300 mm (or 400 mm for retracted length S) up to 600 mm, available on request | | | | | | | | | |
| Electrical options | | | | | | | | | | | |
| F | Dual Hall encoder, end limit switches | | | | | | | | | | |
| Cable options | | | | | | | | | | | |
| 1 | 1 m cable with DIN-8 plug | | | | | | | | | | |
| 2 | 2.3 m cable with DIN-8 plug | | | | | | | | | | |
| 3 | 2.3 m cable with flying leads | | | | | | | | | | |

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