

# Matrix3

## Linear actuator



### Benefits

- Silent operation
- Full system with control unit, switch and accessories
- Synchronization possible
- Compact and aesthetic
- Back-up nut as standard

### Technical data

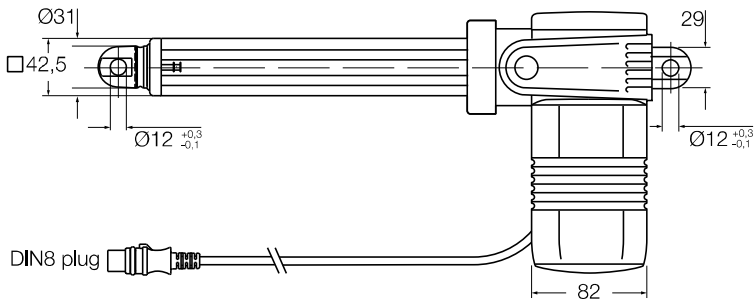
	Unit	MAX3..A..	MAX3..B..	MAX3..C..
Rated push load	N	8 000	4 000	3 000
Rated pull load	N	6 000 <sup>1)</sup>	4 000	3 000
Speed (full load to no load)	mm/s	5 to 7	6 to 9	13 to 18
Stroke	mm	50 to 700	50 to 700	50 to 700
Retracted length	mm	S + 215/280 <sup>2)</sup>	S + 215/280 <sup>2)</sup>	S + 215/280 <sup>2)</sup>
Voltage	V DC	12 or 24	12 or 24	12 or 24
Power consumption	W	120	120	120
Current consumption	A	5	5,2	5,2
Duty cycle	%	10 (1/9)	10 (1/9)	10 (1/9)
Ambient temperature	°C	0 to +40	0 to +40	0 to +40
Type of protection	IP	66S	66S	66S
Weight (at 200 mm stroke)	kg	4,5	4,2	4
Color	–	Grey	Grey	Grey

<sup>1)</sup> Max load for medical application is 5 000 N

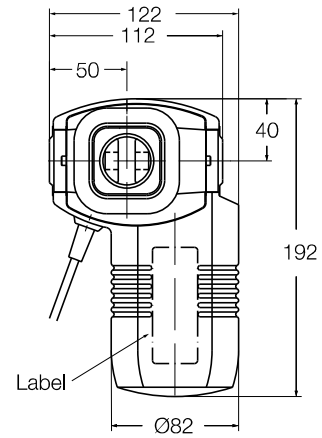
<sup>2)</sup> S ≤ 350 mm; L = S + 215  
S > 350 mm; L = S + 280

## Dimensional drawing

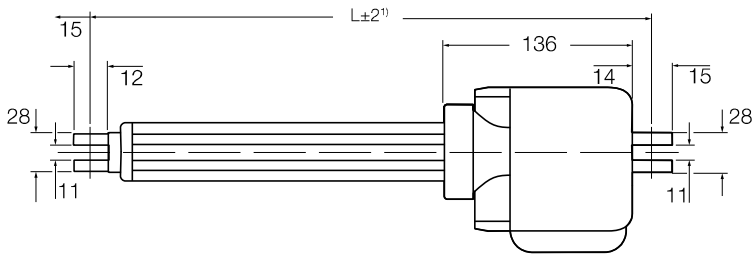
### Side view



### Front view

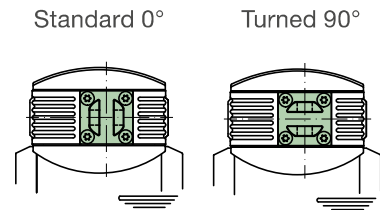


### Top view

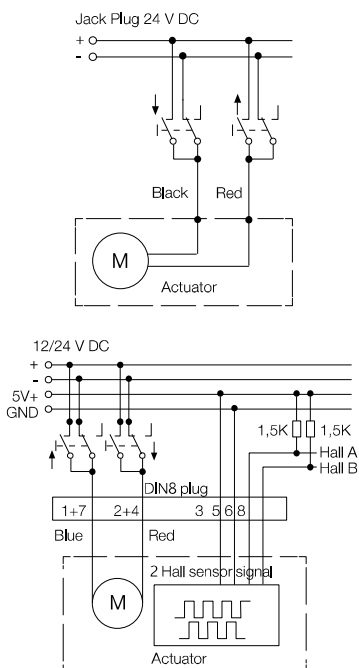


¹) S < 350 mm; L = 215 + S  
S > 350 mm; L = 280 + S

### Rear view



## Connecting diagrams



## Suitable control units and accessories

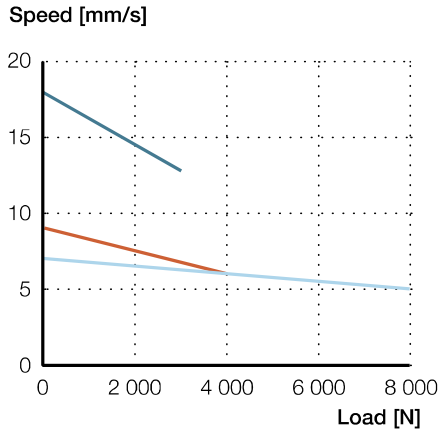
	Control units			
	SCU	VCU	BCU	MCU
<b>MAX 3</b>	•	•	•	•
<b>Operating switches</b>				
EHA 1				•
EHA 3	•	•	•	
STJ	•	•	•	
STF				•
STE	•	•	•	
STA				•

Hand switch    
 Foot switch    
 Desk switch

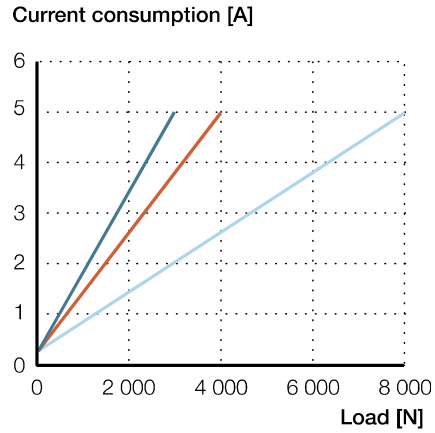
¹) Only valid for MAX 31. MAX 30 must be operated by a BCU, MCU, SCU or VCU control unit.

### Performance diagrams

Speed-load diagram



Current-load diagram

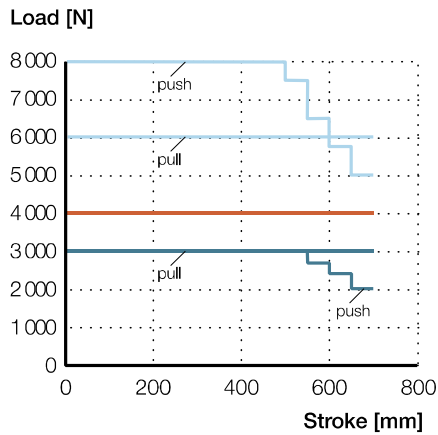


— Rated push force 3 000

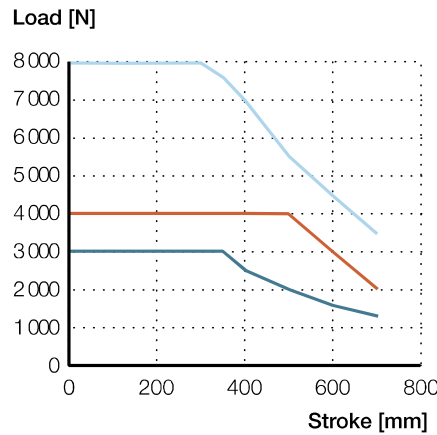
— Rated push force 4 000

— Rated push force 8 000

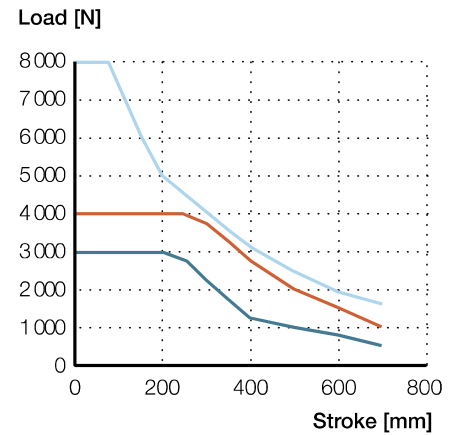
### Safety factor load conditions



Push load reduction static  
Safety factor S=1



Push load reduction static  
Safety factor S=2



Push load reduction static  
Safety factor S=4 (EN60601)

— Rated push force 3 000

— Rated push force 4 000

— Rated push force 8 000

## Ordering key



**Type**

**Voltage**

- 0 24 V DC
- 1 24 V DC with integrated current cut-off
- 2 12 V DC

**Load**

- A 8 000 N
- B 4 000 N
- C 3 000 N

**Stroke (S)**

- 050 265 50 mm
- 100 315 100 mm
- 150 365 150 mm
- 200 415 200 mm
- 250 465 250 mm
- 300 515 300 mm
- 350 565 350 mm
- 400 680 400 mm
- 450 730 450 mm
- 500 780 500 mm
- 550 830 550 mm
- 600 880 600 mm
- 650 930 650 mm
- 700 980 700 mm

--- --Other stroke lengths; 50 < S < 700 mm

**Cable / Connecting plug**

- 0 B Coiled, 0,75 m (not stretched) / DIN8 plug
- C 5 Straight, 2,5 m / DIN8 plug
- 0 A Coiled, 0,75 m (not stretched) / Jack plug
- 2 5 Straight, 2,5 m / Jack plug
- Special cable length on request

**Orientation of rear attachment**

- 0 No fork head (customized option)
- 1 Standard (as drawing)
- 2 Turned 90°

**Option 1**

- 0 No option, only valid for actuator "A" (push and pull)
- E Quick-release +EKZm, push, fork head bore parallel to button (for actuator design "C" is L= +115 mm)<sup>1)</sup>
- F Quick-release +EKZm, push, fork head bore 90° to button (for actuator design "C" is L= +115 mm)<sup>1)</sup>
- I Mechanical anti-pinching, motor direction pull, no fixing in term. position (for load "A", L= +45 mm; "B" and "C", L= +30 mm)
- J Mechanical anti-pinching, motor direction push, no fixing in term. position (for load "A", L= +45 mm; "B" and "C", L= +30 mm)
- K Electrical anti-pinching protection, motor direction pull
- L Electrical anti-pinching protection, motor direction push
- M Push load, for actuator version "B" and "C"
- N Pull load, for actuator version "B" and "C"

**Option 2**

- 0 No option
- F 2-Hall encoder, DIN8 plug
- M Lifetime monitoring
- P Lifetime monitoring, 2-Hall encoder, DIN8 plug

**Option 3**

- 0 No option
- V Emergency lowering, fork head bore parallel to clamping lever (for actuator design "A", L+30 mm)
- W Emergency lowering, fork head bore 90° to clamping lever (for actuator design "A", L+30 mm)

**Customized**

<sup>1)</sup> EKZm: mechanical anti-pinching min. stroke 150 mm up to 300 mm

Options shown in red are only available on request. Contact Ewellix for more information on minimum quantities and additional costs.