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

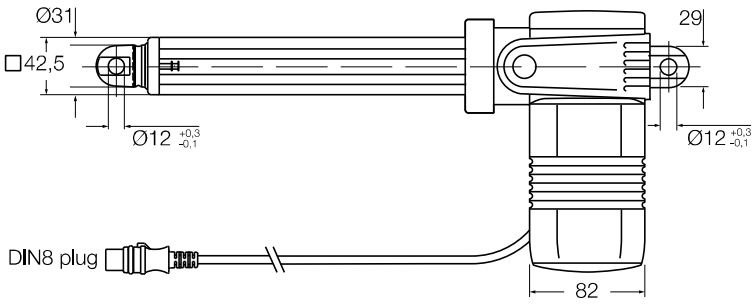
	Unit	MAX3..A..	MAX3..B..	MAX3..C..
Rated push load	N	8 000	4 000	3 000
Rated pull load	N	6 000[1)]	4 000	3 000
Speed (full load to no load)	mm/s	5 to 7	6 to 9	13 to 18
Stroke	mm	50 to 700	50 to 700	50 to 700
Retracted length	mm	S + 215/280[2)]	S + 215/280[2)]	S + 215/280[2)]
Voltage	V DC	12 or 24	12 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

[1)] Max load for medical application is 5 000 N

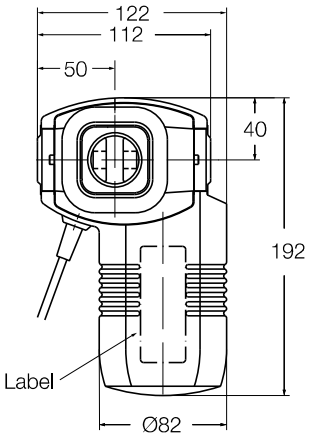
[2)] S ≤ 350 mm; L = S + 215
S > 350 mm; L = S + 280

Dimensional drawing

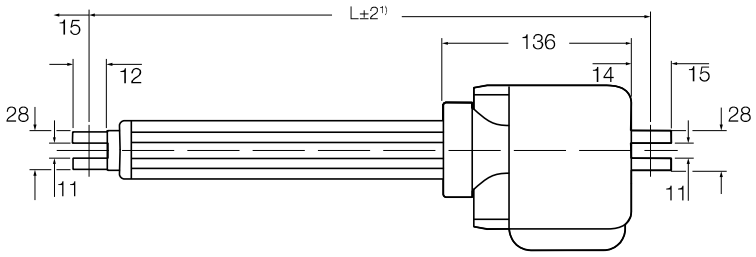
Side view



Front view

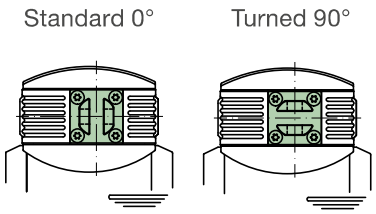


Top view

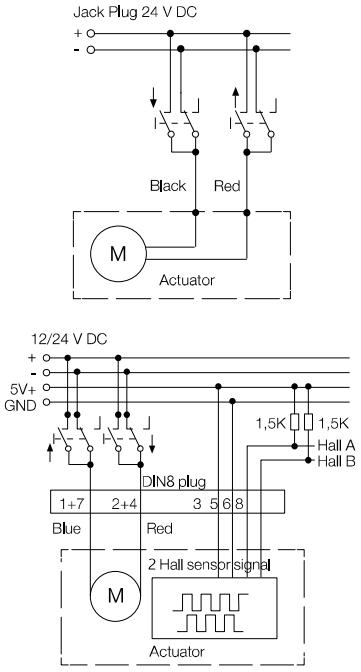


¹⁾ S < 350 mm; L = 215 + S
S > 350 mm; L = 280 + S

Rear view



Connecting diagrams



Suitable control units and accessories

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

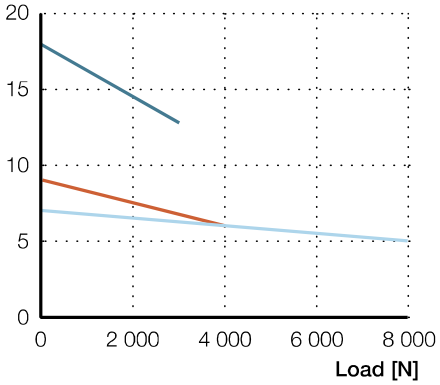
Hand switch Foot switch Desk switch

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

Performance diagrams

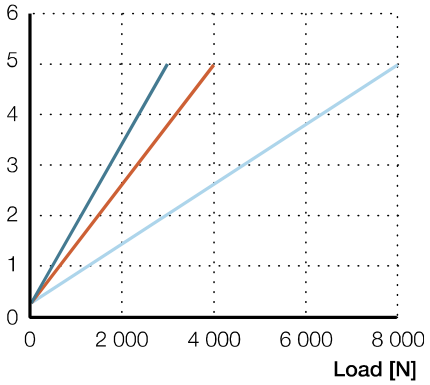
Speed-load diagram

Speed [mm/s]



Current-load diagram

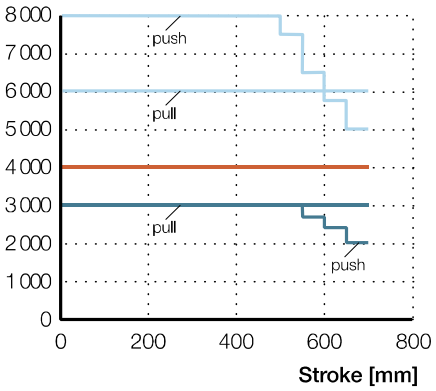
Current consumption [A]



Rated push force 3 000 | Rated push force 4 000 | Rated push force 8 000

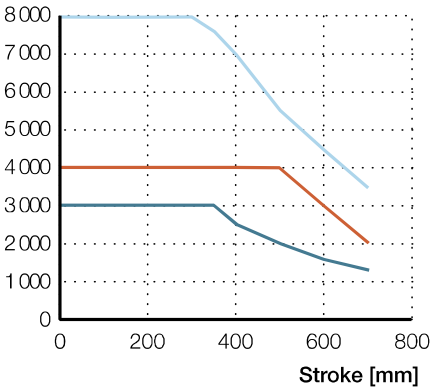
Safety factor load conditions

Load [N]



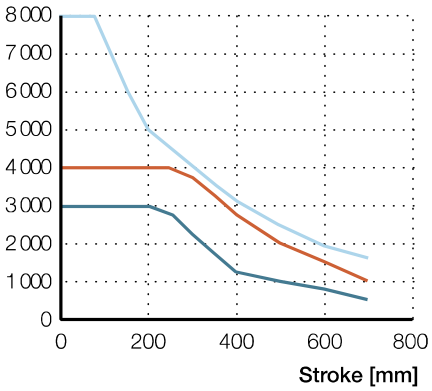
Push load reduction static
Safety factor S=1

Load [N]



Push load reduction static
Safety factor S=2

Load [N]



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)[1]
F	Quick-release +EKZm, push, fork head bore 90° to button (for actuator design “C” is L= +115 mm)[1]
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

[1] 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.