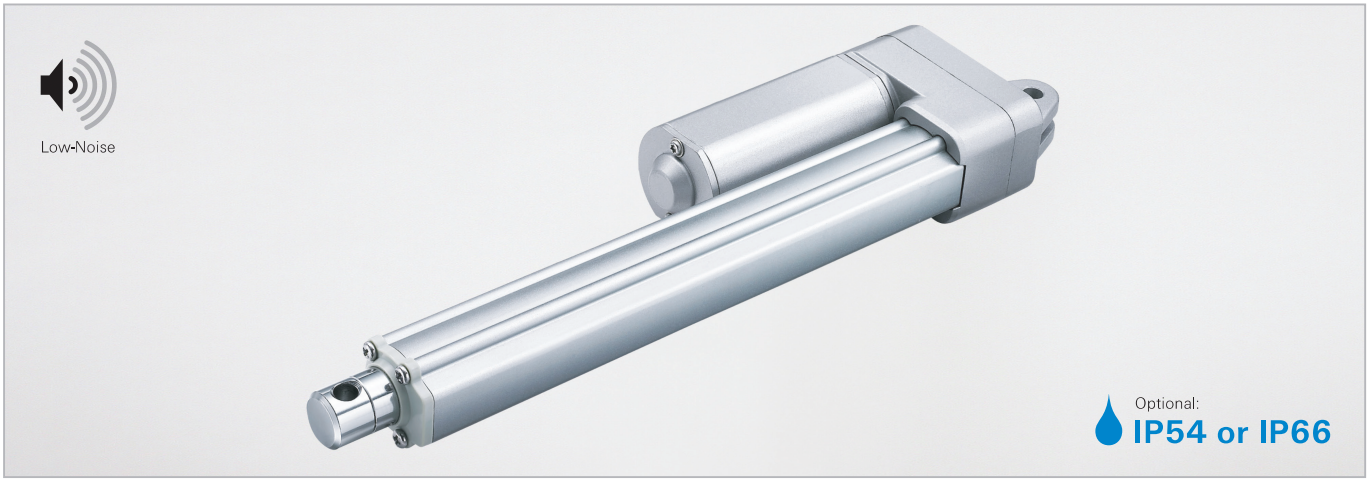
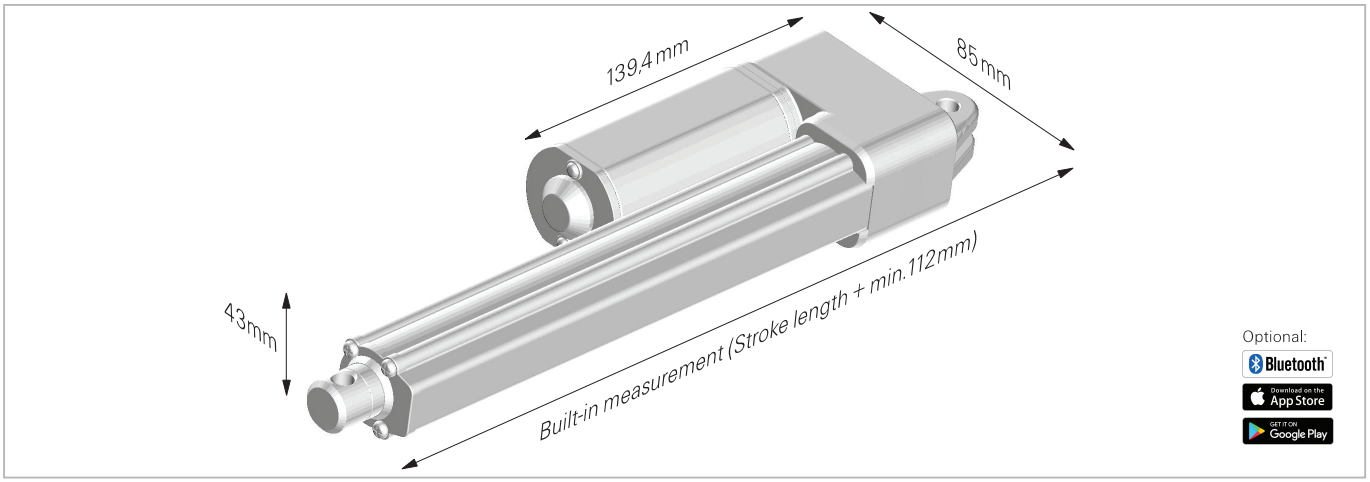
Linear Actuator, Low-Noise

MLA16





Linear Actuator MLA16

Low-Noise compact actuator for medical applications.

Movetecs MLA16 is designed for low-noise medical applications and where a compact actuator is needed. MLA16 is available with IP54 or IP66 protection. The actuator is designed for loads of max. 3500 N in push/pull and can be moved up to 23,5mm/s without load. MLA16 - high stability and a reasonable price level. Plug & Play!

Plug & Play: You can also get MLA 16 as a complete Plug & Play solution, including one or more MLA 16 actuators, a Movetec control box 230V AC, all cables and a control panel.
By Selecting a control box with Bluetooth®, MLA16 are easily controlled by iPhone® or Android®-Smartphone.

Material specifications:

Outer profile: Anodized Aluminium
Spindle: Carbon Steel/Stainless Steel
Spindle nut: POM Derivate
Front and rear attachments, casting/U clevis: Aluminium/steel
Actuator drive parts: Aluminium, Steel, ABS, POM, PP and others.

Technical data:

Max. load: 3500 N in push/pull
Noise: Very Low-Noise
Max. speed without load: 23,5mm/s (1500 N in push or pull)
Stroke length: 50-500mm (special versions up to 1000mm possible)
Installation length/Built-in measurement: Stroke length + min.112mm
Size: 43mm x 85mm x length
Attachment front: Aluminium casting, no slot, or U-clevis
Attachment rear: Aluminium casting, U-clevis
Front- and rear attachment holes: Ø6,4mm, Ø8mm or Ø10mm
Operation temperature: +5 °C - +45 °C
Power supply/Voltage: 12/24V DC
IP Rating: Without protection, with IP54- or IP66 protection
Intermittens: 25%
Double Hall-sensors: Yes
Control box: More options, see www.movetec.dk
Synchronized drive: Max.12x actuators in synchronized drive
Control panel: More options, see www.movetec.dk
Certificates: EN60601-1 and IEC60601-1 compliant

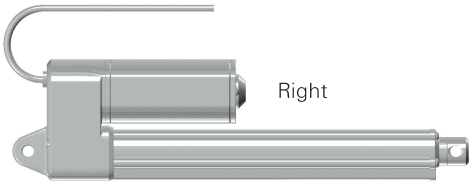
Options: Bluetooth® controlling for iPhone®- and Android® Smartphones. Potentiometer. IP54 or IP66 protection.12V DC.

MOVETEC

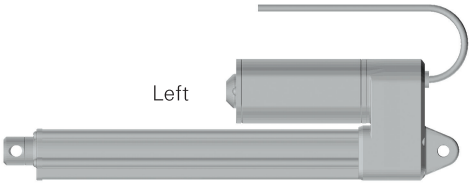
True Innovative Moving Technology

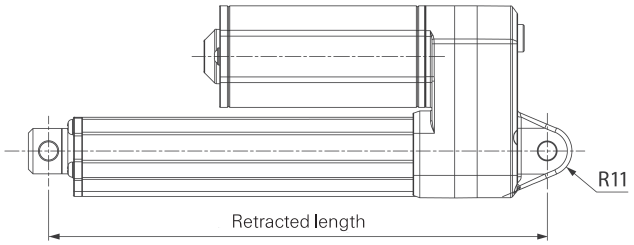
Linear Actuator, Low-Noise

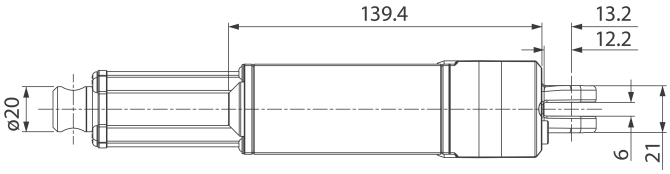
MLA16

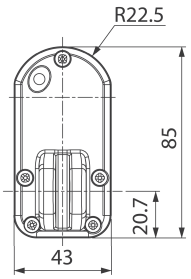


Built-in measurement (Stroke length + min.112mm)

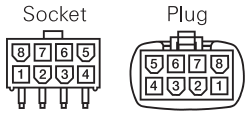








Front- and rear attachment holes:
Ø6,4mm, Ø8mm or Ø10mm



Control boxes and control panels:

MLA16 can be used with all Movetec control boxes and Movetec control panels. Some control boxes can also be programmed for customer-specific functions - please contact us with your wishes, we are looking forward to your call: +45 64 89 28 05.

CAD-drawings:

You can download 3D-drawings (STEP-Data) for MLA16 for your CAD-Program or as a PDF-file on our homepage.

Molex plugs/connections:

Product	1	2	3	4	5	6	7	8
Color	White	Red		Green	Blue	Orange	Black	Yellow
Dual Hall	Hall 1	+5V	NC	Motor+	Hall 2	NC	Ground	Motor–

Manuals, installation instructions, approvals/certificates, Safety instructions etc.:

Installation manuals, assembly- and installation instructions, warnings, instructional videos and further information, can be found on our homepage: www.movetec.dk

Lifting columns data:

Gear/drive-type no.	Load, Push N	Load, Pull N	Load, Brake N	Typ. power consumption by load A	Speed, without load (32 V DC) mm/s	Stroke length (standard) in mm	Built-in measurement in mm
A	2500	2500	2500	2,8	5,2	50 - 500	Stroke length + min.112mm
B	2000	2000	2000	2,8	8,3	50 - 500	Stroke length + min.112mm
C	1500	1500	1000	2,8	11,9	50 - 500	Stroke length + min.112mm
D	1000	1000	1000	2,8	17,7	50 - 500	Stroke length + min.112mm
G	3500	3500	2000	4,7	12,0	50 - 500	Stroke length + min.112mm
J	2000	2000	1000	3,2	17,0	50 - 500	Stroke length + min.112mm
K	1500	1500	700	3,5	23,5	50 - 500	Stroke length + min.112mm

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Further information → www.movetec.dk

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True Innovative Moving Technology

Vers.:LKD/MLA16/dat042-UKb/1/100/1017

Retracted length (mm)
1. Calculate A+B+C = Y
2. Retracted length needs to ≥ Stroke+Y

A. Attachment	Rear Attachment Code
Front Attachment Code	1, 2, 3
1, 2, 3	+112
4, 5, 6	+122

B. Load vs Stroke	Load (N)	
Stroke (mm)	< 3500	= 3500
20~150	-	+5
151~200	+8	+13
201~250	+8	+13
251~300	+13	+18
301~350	+13	+18
351~400	+18	+23

For stroke over 400mm, +5mm for each incremental 50mm stroke.

C. Output Signals	
Code	
0, 4, 5	-
1	+36

Load and Speed

CODE	Load (N)		Self Locking Force (N)	Typical Current (A)		Typical Speed (mm/s)	
	Push	Pull		No Load 32V DC	With Load 24V DC	No Load 32V DC	With Load 24V DC
Motor Speed (3800RPM, Duty Cycle 10%)							
A	2500	2500	2500	0.9	2.8	5.2	3.0
B	2000	2000	2000	0.9	2.8	8.3	4.7
C	1500	1500	1000	0.9	2.8	11.9	7.0
D	1000	1000	1000	1.0	2.8	17.7	10.3
Motor Speed (5600RPM, Duty Cycle 10%)							
G	3500	3500	2000	1.5	4.7	12.0	6.5
J	2000	2000	1000	1.5	3.2	17.0	10.5
K	1500	1500	700	1.5	3.5	23.5	13.5

Note
1 With a 12V motor, the current is approximately twice the current measured in 24V. With a 36V motor, the current is approximately two-thirds the current measured in 24V; speed will be similar for both voltages.
2 Above self lock performance needs working with MOVETEC control system.

Wire Definitions

CODE*	Pin					
	1 (green)	2 (red)	3 (white)	4 (black)	5 (yellow)	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

MLA16 Ordering Key

Vers.:LKD/MLA16/dat042-UKb/1/100/1017

	Voltage	1 = 12V		2 = 24V	
	Load and Speed	See page 3.			
	Stroke (mm)				
	Retracted Length (mm)	See page 3.			
	Rear Attachment (mm)	1 = Aluminum casting, U clevis, width 6.0, depth 12.2, hole 6.4, one piece casting with gear box 2 = Aluminum casting, U clevis, width 6.0, depth 12.2, hole 8.0, one piece casting with gear box 3 = Aluminum casting, U clevis, width 6.0, depth 12.2, hole 10.0, one piece casting with gear box			
	Front Attachment (mm)	1 = Aluminum casting, no slot, hole 6.4 2 = Aluminum casting, no slot, hole 8.0 3 = Aluminum casting, no slot, hole 10.0 4 = Aluminum casting, U clevis, width 6.0, depth 13.0, hole 6.4 5 = Aluminum casting, U clevis, width 6.0, depth 13.0, hole 8.0 6 = Aluminum casting, U clevis, width 6.0, depth 13.0, hole 10.0			
	Direction of Rear Attachment (Counterclockwise)	1 = 90°		2 = 0°	
	IP Rating	1 = Without	2 = IP54	3 = IP66	
	Functions for Limit Switches	1 = Two switches at full retracted/extended positions to cut current 2 =Two switches at full retracted/extended positions to cut current + 3rd LS to send signal 3 =Two switches at full retracted/extended positions to send signal 4 =Two switches at full retracted/extended positions to send signal + 3rd LS to send signal			
	Special Functions for Spindle Sub-Assembly	0 = Without		2 = Standard push only	
	Output Signals	0 = Without	1 = POT	4 = One Hall sensor	5 = Two Hall sensors
	Connector	1 = DIN 6pin, 90° plug 2 = Tinned leads 4 = Big 01pin, plug C = Y cable (for direct cut system, water proof, anti pull)		E = MOLEX 8pin, plug F = DIN 6pin, 180° plug G = Audio plug	
	Cable Length	0 =Straight, 100mm 1 =Straight, 500mm 2 =Straight, 750mm	3 =Straight, 1000mm 4 =Straight, 1250mm 5 =Straight, 1500mm	6 =Straight, 2000mm 7 =Coiled, 200mm 8 =Coiled, 400mm	B~H = For direct cut system, please contact MOVETEC

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