

DATASHEET

# RA-MINI ALU IN-LINE ACTUATOR SERIES



HIGH LIFTING  
FORCE



HIGH  
SPEED



COMPACT SIZE



ELEGANT  
DESIGN



EASY  
INSTALLATION



MAINTENANCE  
FREE



LIMIT  
SWITCHES



OVERCURRENT  
PROTECTION



QUIET  
OPERATION



CUSTOMIZABLE

## SMALL BUT POWERFUL

The RA-MINI ALU is a powerful yet small actuator specially designed to provide the perfect solution for applications with space limitations and a need for compactness. Its elegant lines and anodized black finish give it a modern and stylish feel that makes it easy to integrate into all kinds of applications. Additionally, the actuator offers multiple configuration and control options to suit different needs.

### Main features

- **Powerful:** loads of up to 70 N
- **Fast:** up to 14.7 mm/s
- **Compact:** retracted length (center to center) of 57.5 mm + stroke
- **Resistant:** IP54 rating, aluminum housing, stainless steel rod
- **Safe:** overcurrent protection & integrated limit switches
- **Customizable:** stroke, dimensions, anodized colors, connectors, cable lengths, brackets

### Main applications

- *Battery-operated medical equipment*
- *Robotics*
- *UAV & drones*
- *Industrial automation*
- *Consumer appliances*
- *Safety equipment*
- *RC & toys*
- *Household automation equipment*
- *Automotive industry*

# Technical Specifications

## General specifications

<b>Stroke</b>	30, 50 or 100 mm
<b>Max. load</b>	70 N at 3.5 mm/s
<b>Max. speed (no load)</b>	14.7 mm/s
<b>Backlash</b>	0.1 mm
<b>Power supply</b>	12 VDC
<b>Max. current</b>	114 mA
<b>Starting current</b>	200 mA
<b>Overcurrent protection</b>	116 mA
<b>Integrated limit switch</b>	At stroke end points
<b>Connector</b>	Molex 39-01-3029
<b>IP rating</b>	IP54
<b>Retracted length (center to center)</b>	57.5 mm + stroke
<b>Weight (with a 30 mm stroke)</b>	45 g
<b>Housing material</b>	Aluminum
<b>Rod material</b>	Polished stainless steel
<b>Color</b>	Anodized black (RAL 9005)
<b>Mounting holes diameter</b>	4.1 mm
<b>Cable length</b>	350 mm
<b>Operating temperature</b>	-10 °C to +40 °C
<b>Storage temperature</b>	-30 °C to +70 °C
<b>Duty cycle</b>	30 % (6 out of 20 minutes)
<b>Noise (no load)</b>	50 dB at 45 cm
<b>Max. side load (with a 30 mm stroke, extended)</b>	50 N
<b>Lead</b>	5 mm

## Overcurrent protection

In the event of an obstruction or an excessive load, the overcurrent protection feature will cut off the current to protect the actuator.

## Limit switches

When the actuator reaches its fully extended or fully retracted position, an electronic limit switch automatically cuts off the current to prevent damage to the motor.

## Position feedback potentiometer (opt.) specifications

<b>Signal power supply</b>	5 VDC
<b>Max. stroke voltage</b>	5 V
<b>Min. stroke voltage</b>	0 V

## Customizable upon request

Stroke length (10 - 100 mm)

Dimensions

Anodized colors

Connectors

Cable length

Brackets

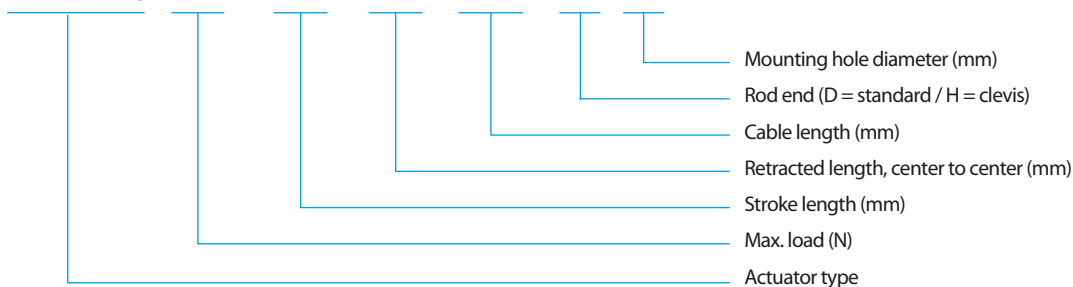
Please, contact [info@regner.es](mailto:info@regner.es) for customized configurations.

## Preset configurations

	High-speed reducer (100:1)	Standard reducer (210:1)	High-force reducer (298:1)
<b>Max. peak load</b>	20 N at 9.0 mm/s	45 N at 3.5 mm/s	70 N at 3.6 mm/s
<b>Rated load</b>	7.5 N at 12.5 mm/s	20 N at 5 mm/s	30 N at 4.4 mm/s
<b>Max. speed (no load)</b>	14.7 mm/s	5.9 mm/s	4.6 mm/s
<b>Max. current</b>	114 mA	76 mA	114 mA

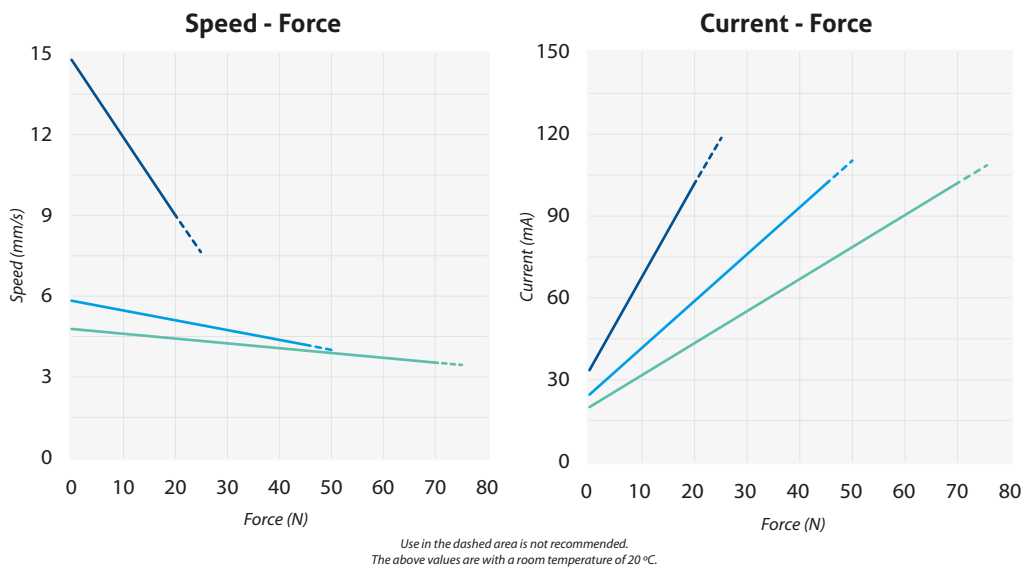
## Ordering example

RA-MINI ALU 45 . 30 . 87 . 350 . D 4

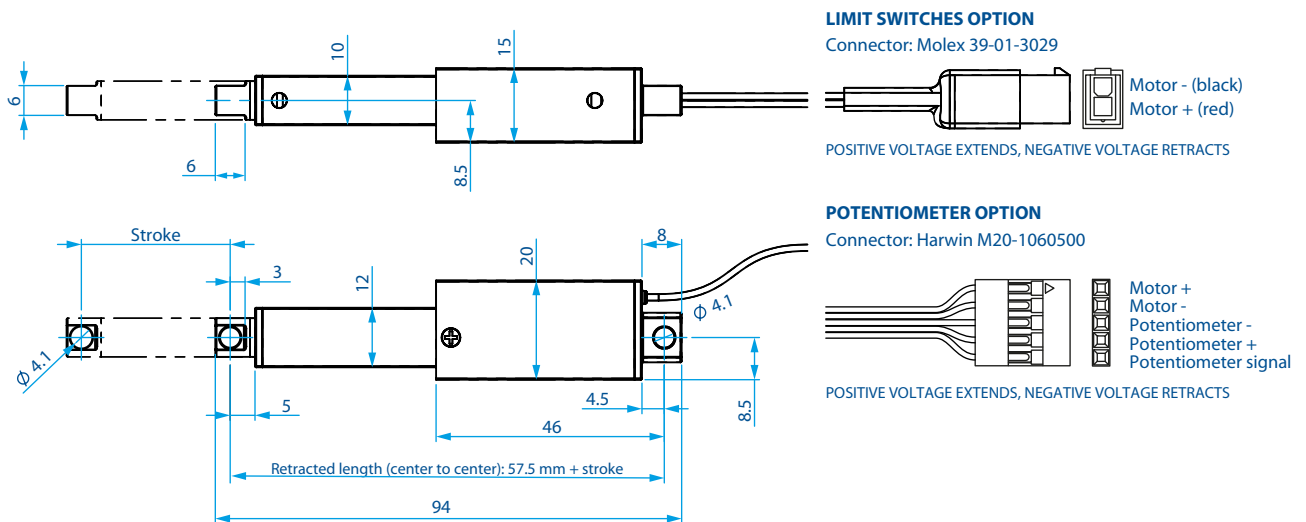


## Force, speed, and current

	Force (N)	No load	5 N	10 N	15 N	20 N	25 N	
RA-MINI High-speed reducer	Average current (mA)	33	50	70	85	100	120	
	Speed (mm/s)	14.7	13.4	12.0	11.5	9.0	7.5	
	Force (N)	No load	10 N	20 N	30 N	40 N	45 N	50 N
RA-MINI Standard reducer	Average current (mA)	25	40	60	75	93	104	115
	Speed (mm/s)	5.9	5.5	5.0	4.8	4.5	4.1	3.9
	Force (N)	No load	20 N	40 N	60 N	70 N	75 N	
RA-MINI High-force reducer	Average current (mA)	20	45	69	90	114	124	
	Speed (mm/s)	4.6	4.5	4.2	4.0	3.6	3.4	



## Dimensions (mm)



## Quality

### Forging ahead to achieve high quality

• We use high quality components and apply semiautomatic production and rigorous testing to verify and validate each motion control solution before they leave our premises. Plus, our management systems, which are continuously audited, ensure optimized agile manufacturing. All these measures translate into high quality products.

### RA-MINI ALU Quality Control

• Every single RA-MINI ALU undergoes strict QC assessments during production in order to guarantee optimal performance and durability.

### Certifications

- ISO 9001:2008 *Quality management*
- ISO 14001:2004 *Environmental management system*
- ISO 13485:2012 *Medical devices*

Quiet  
Safe  
Durable  
Easy  
Efficient  
Powerful  
Elegant  
Customizable

