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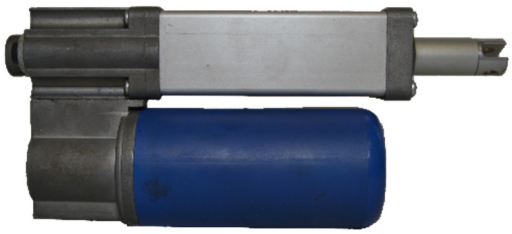
Linear Actuators

ALI1-P – Model



For any special duty requests, please contact our Sales Department for more assistance.

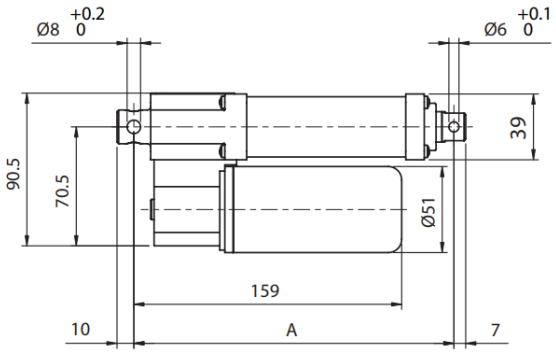
Features and Options:

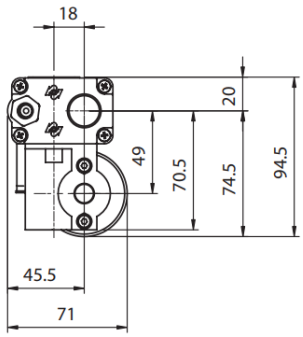
- ✓ Permanent magnet motor 12 - 24 Vdc
- ✓ Double worm gearbox
- ✓ ACME lead screw
- ✓ Aluminum push rod (Stainless steel on request)
- ✓ Permanent grease lubrication
- ✓ IP 65, tested according to rule CEI EN 60529
- ✓ Working temperature range -10°C +60°C
- ✓ Intermittent duty S3 30% (5 min) a 30°C*
- ✓ Encoder on request
- ✓ Limit switches on request (ALI1-PF)

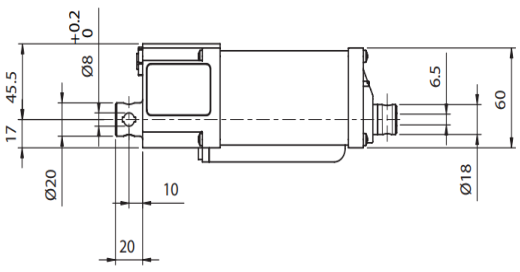
FMAX (N)	SPEED (MM/S)	VERSION	MOTOR SIZE	MOTOR SPEED (RPM)	MAX CURRENT FOR FMAX (A) – 24VDC
1200	16.5	M01	40	6000	4.2
1550	11	M02	40		3.8
2000	8.3	M03	40		3.9
2500	5.6	M04	40		3.6
2500	2.8	M05	40		2.8
2500	0.9	M06	40		1.8

[1]When stroke is longer than 200 mm, check STROKE SETUP section.
[2]For 12 Vdc power supply currents are doubled and loads are 20% lower.

ALI1-P:







DIMENSION	STROKE < TO 240 MM	STROKE > 240 MM
A	90 + stroke	103 + stroke

THIS DOCUMENT DISPLAYS THE MOST TYPICAL STANDARD FEATURES AND SETUPS. PLEASE CONTACT OUR SALES TEAM FOR MORE INFORMATION

Electrical Wirings:

Options available:

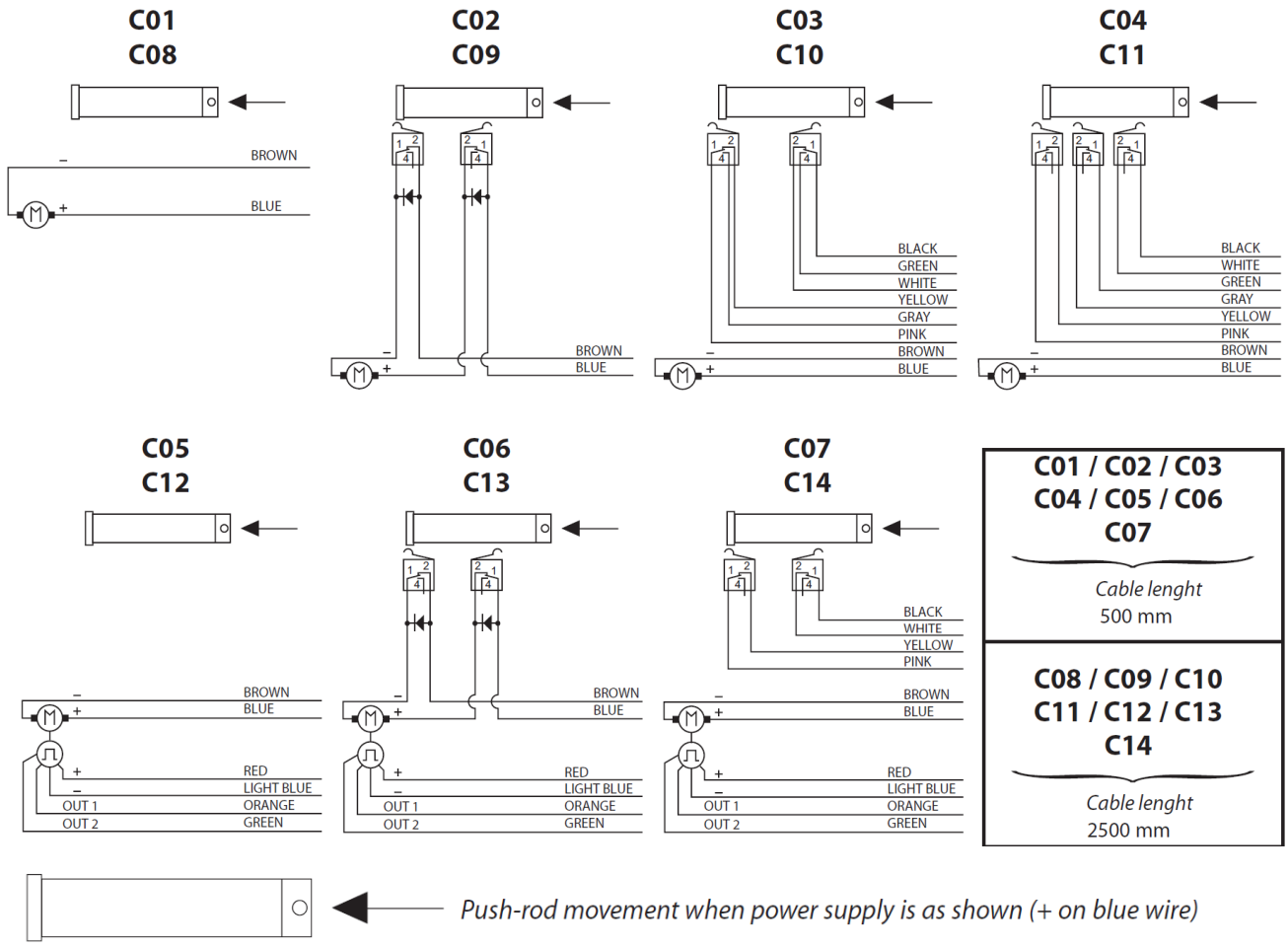
- C01/C08 = motor
- C02/C09 = N° 2 microswitches, diode-wired
- C03/C10 = motor + N° 2 micro
- C04/C11 = motor + N° 3 micro
- C05/C12 = motor + encoder
- C06/C13 = N° 2 micro diode wired + encoder
- C07/C14 = motor + N° 2 micro + encoder
- C00 = special wiring (Presence of not standard options)

WARNING:

Micros are actuated by a cam lying on pushrod itself.
Micro signal, for speeds higher than 30 mm/s, needs to be handled in its very impulse (I.E.when actuated) and not in its state.
Alternatively, an added bush to keep the microswitch lever pressed for a longer time avoiding switch signal mistakes, but cause loss of 10 mm of stroke.

Connections C02 and C06 make a circuit which stops motor supply, so that the push rod won't overstep the area of the two micros.
This system can work only if inertia generated by the actuator and load connected to it does not allow to over-step the micro when stroke is over.
So, this works just with low speeds (M01 - M03), with a load opposing the ongoing direction of the push rod. If not, relay or PLC solutions, using C03 and C07 connections, are needed.

Wiring diagrams of connections above are following:



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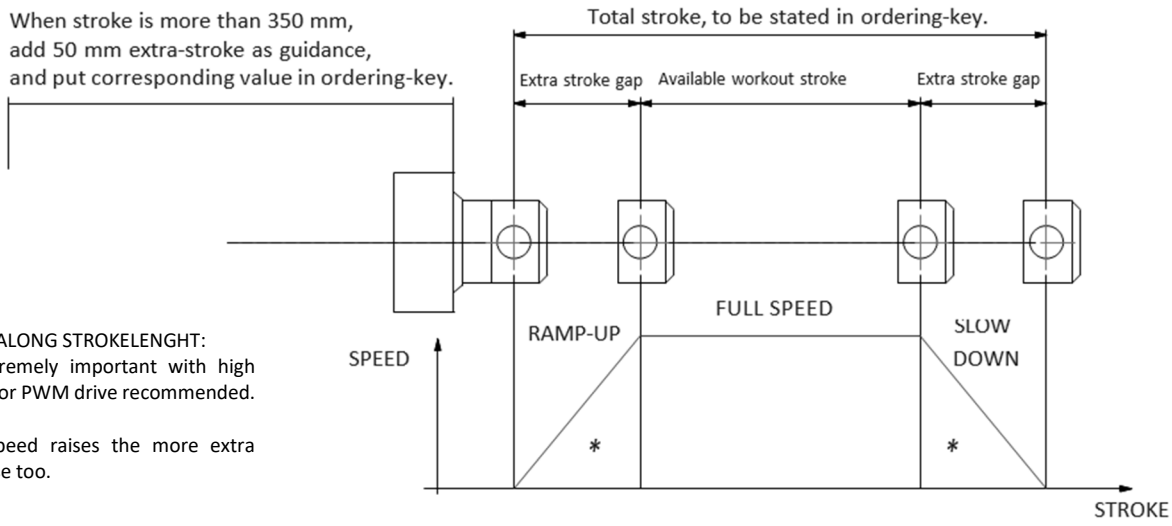
Stroke Setup:

Useful tips for handling stroke and avoid run-on-block collision



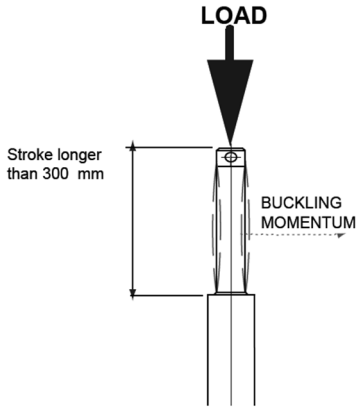
WARNING:

SPEED-TIMING ALONG STROKELENGHT:
Ramps are extremely important with high speed. Inverter or PWM drive recommended.

* The more speed raises the more extra stroke must raise too.

Buckling:

When stroke is longer than 300 mm, BUCKLING can be a risk
Please check mounting with our Sales Department.



IMPORTANT:

Long strokes, even if load is low, can generate significant buckling momentums, as sketch slows.

This happens when actuator is in its all-opened position: that's the reason why we recommend 100 mm extra-stroke.

Pushtube will have this 100 mm-portion always inside the overtube, improving guidance against buckling.

For more information on this, please contact our Sales Department.

Ordering Key:

ALI1P / 0250 / M01 / 12 / M0 / C02 / P1 / A1

MODEL:
ALI1-P (without limit switches) ALI1-PF (with limit switches)

STROKE:
es. 250 mm = 0250

VERSION:
M01 / M02/ M03 / M04 / M05/ M06
M00 = Not standard speed

MOTOR:
12 = 12 Vdc
24 = 24 Vdc

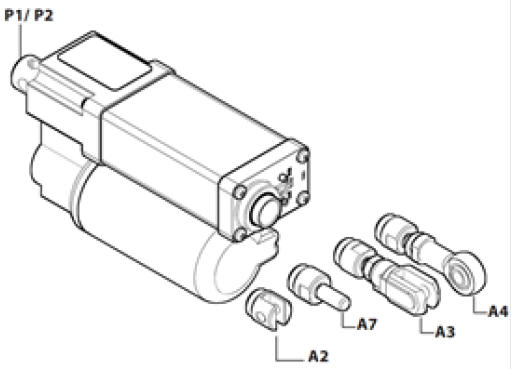
MOTOR POSITION:
MO/M1

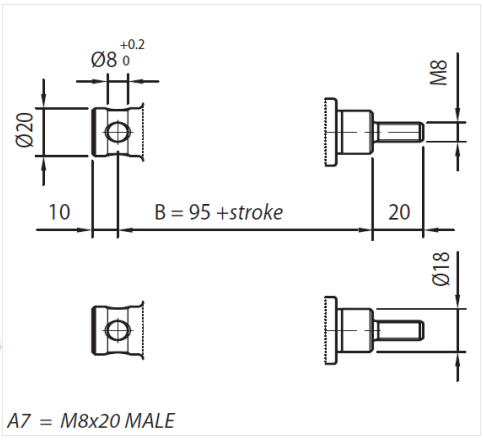
MOTOR OPTIONS:
C01 / C08: Motore / Motor
C02 / C09: 2LS Diode wired
C03 / C10: Motor + 2LS
C04 / C11: Motor + 3LS
C05 / C12: Motor + encoder
C06 / C13: 2LS diode wired + encoder
C07 / C14: Motor + encoder + 2LS
C00: Special wiring (Presence of not standard options)
Note: LS (limit switches)

REAR END:
P0 = None
P1/P2 = Standard

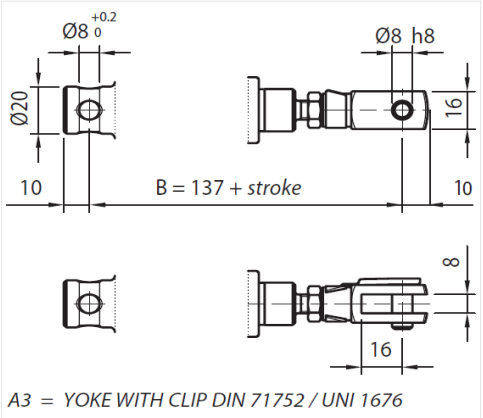
FRONT END:
A2 = Yoke A3 = Yoke + Clip
A4 = Rod end A7 = M8x20 male

NOTE: COMPLETE THE ORDERING KEY ADDING THE OPTIONS YOU CAN FIND IN THE "ACCESSORIES AND OPTIONS" SECTION ON THE BIRCRAFT WEBSITE.

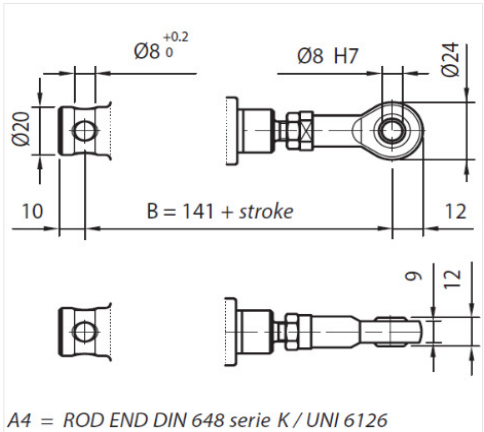




A7 = M8x20 MALE



A3 = YOKE WITH CLIP DIN 71752 / UNI 1676



A4 = ROD END DIN 648 serie K / UNI 6126

NOTES:

"B" dimension changes according to model

ALI1-F = See pictures
ALI1-F stroke > 240 mm = + 13 mm

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GUIDELINE DIMENSIONS ONLY