INDUSTRIAL DEVICES

Working with a well-established supplier base we ensure our customers receive the best possible products to meet their requirements.

Our reliable products are designed for long service and demanding situations, as well as harsh environments and extreme temperatures.

Our highly trained staff have over 60 years' experience in technical applications and strive to offer the best and most complete service to satisfy all our customers' requirements.

Industrial Devices is a family run business, we are always keen to talk to new customers and explore ways in which their products can be used.

Pioneering Linear Actuator Solutions Globally

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Electric Linear Actuators

IDM3 Compact Industrial Electric Actuator

IDM8-22BE Industrial Electric Actuator

IDM6E Industrial Electric Actuator

LD600E Electric Linear Actuator

PMZ10 Industrial Electric Actuator

Lifting Columns

Multilift Lifting Column

Alpha Lifting Column

Heavy Duty Industrial

SLZ90P Electric Actuator

Height Adjustable Systems

Height Adjustable Ready Kit

Linear Actuator Controllers

AS23 Actuator Controller

AS26A Synchronised Controller

AS24 Quattro Actuator Controller

Electric Linear Actuators

Exceptional Performance

Electric Linear actuators convert rotational motion from motors into straight push and pull movements. Our electric linear actuators are highly versatile and suitable for various applications that require lifting, tilting, pushing and pulling with a smooth, stable motion when a large amount of force is required. Electric linear actuators are particularly favoured for their simplicity, safety, cleanliness, precise control, and smooth motion.

IDM3 Compact Industrial Electric Actuator

The IDM3 industrial electric actuator is a compact design for industrial applications. The units are fitted with high quality 12v or 24v DC motors for long term reliability. Customer tested to over 200,000 operations.

IDM3 Compact Industrial Actuator

Features

- 2,500N static load
- Low noise design
- Enhanced corrosion resistance
- Thermal protection
- Aluminium outer section
- Zinc alloy housing
- Aluminium thrust rod
- High precision metal gears
- Lubricated for life

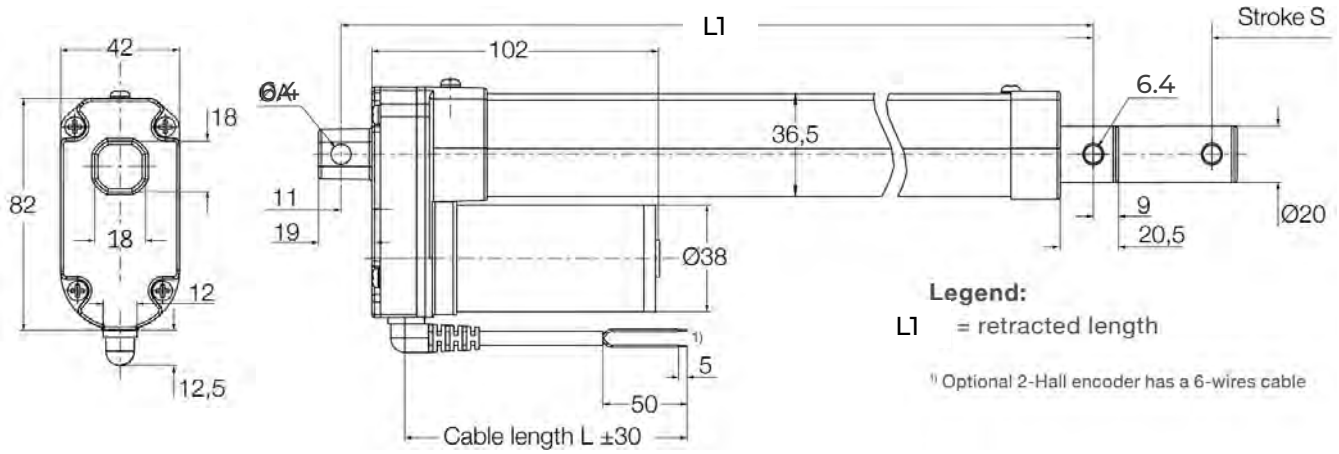
Options

- Potentiometer feedback
- Hall sensor feedback
- Customised stroke lengths

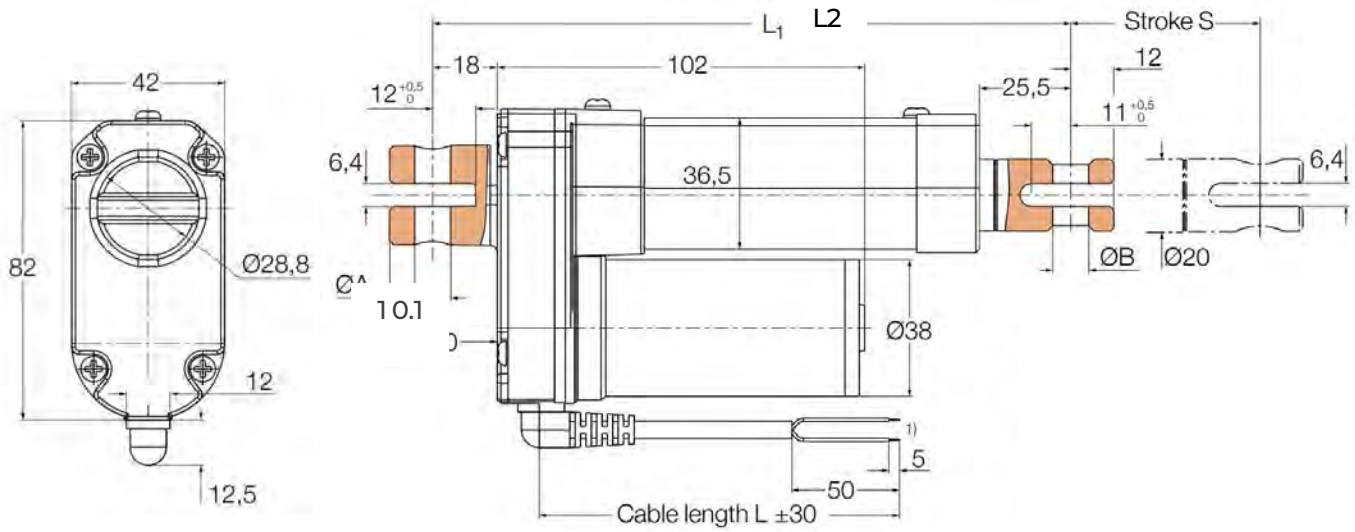
Specification						
Version	1	2	3	4	5	6
Input Voltage	12v / 24v DC					
Load Capacity	120N	240N	500N	750N	1000N	1500N
Static Load	2500N					
Stroke Length	50, 100, 150, 200, 250, 300mm					
Speed at Full Load	45mm/s	24mm/s	13mm/s	8mm/s	6mm/s	5mm/s
Speed at NO Load	56mm/s	30mm/s	16mm/s	10mm/s	8mm/s	8mm/s
Duty Cycle	25%					
Ambient Temperature	-40 to +85°C					
Limit Switch	Built in Factory Set					
Protection	IP66S/IP69K					

Dimensions

Basic configuration and hall sensor version



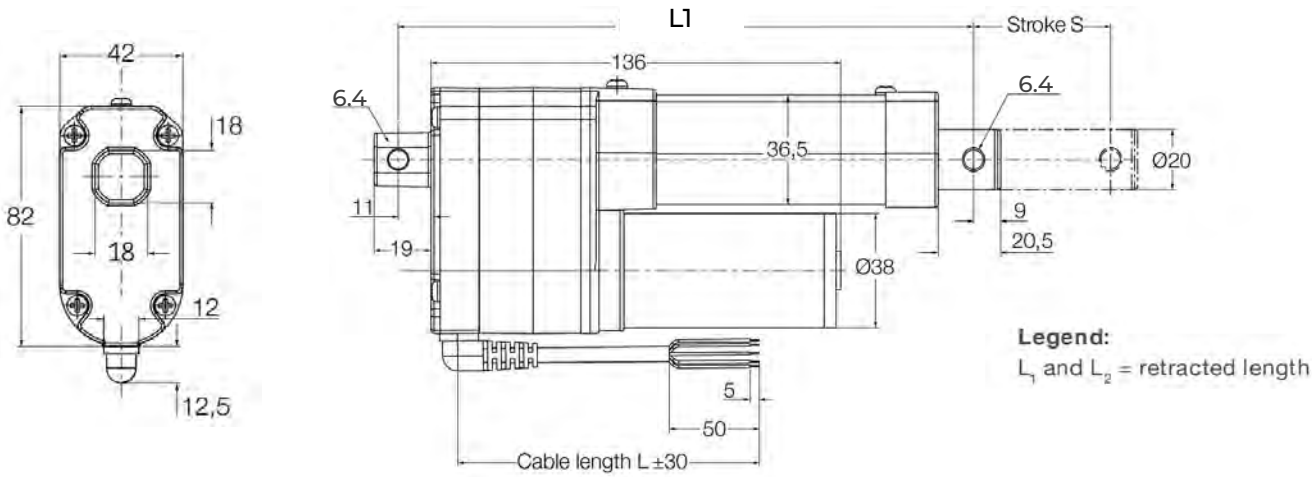
Unit with clevis ends



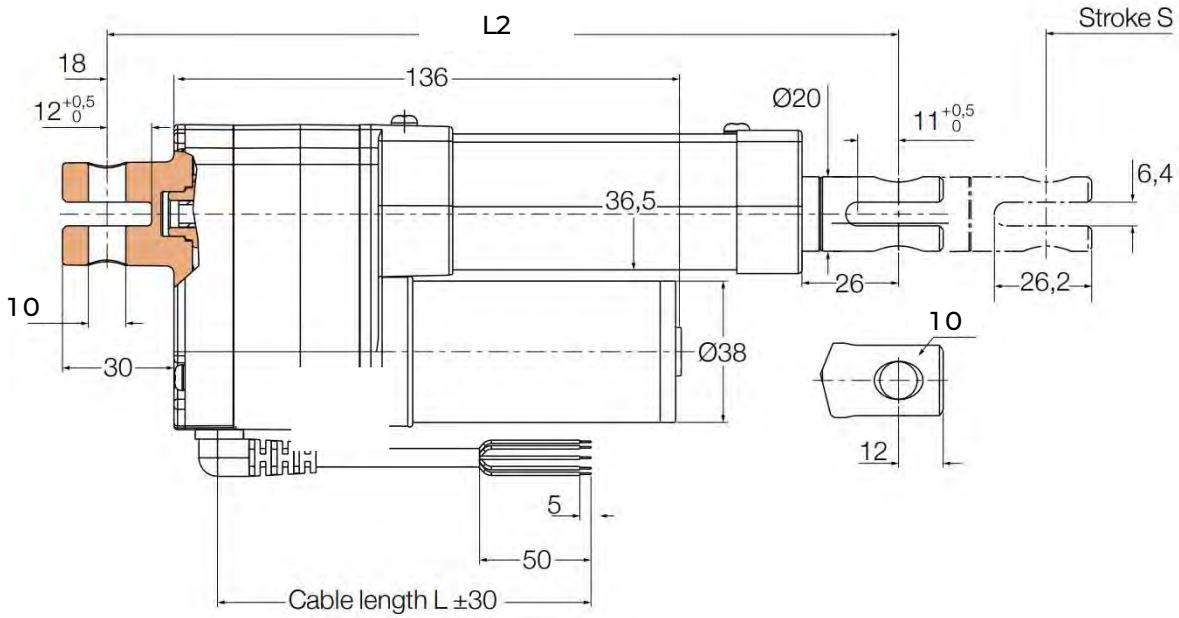
Retracted Length						
Stroke	50	100	150	200	250	300
L1	158	209	260	311	362	413
L2	179	230	281	332	383	434

Dimensions

Potentiometer option

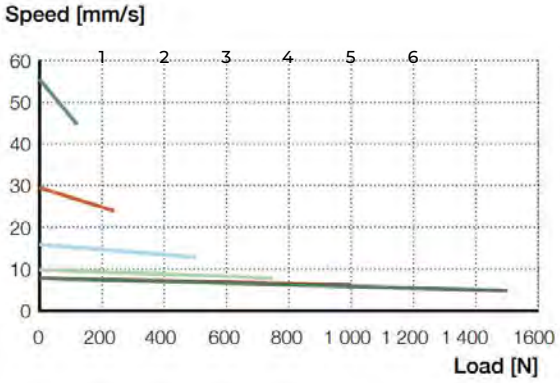


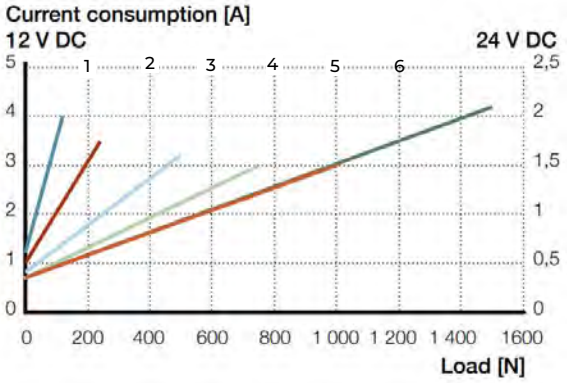
Potentiometer option with clevis ends



Retracted Length						
Stroke	50	100	150	200	250	300
L1	192	243	294	345	396	447
L2	213	264	315	366	417	468

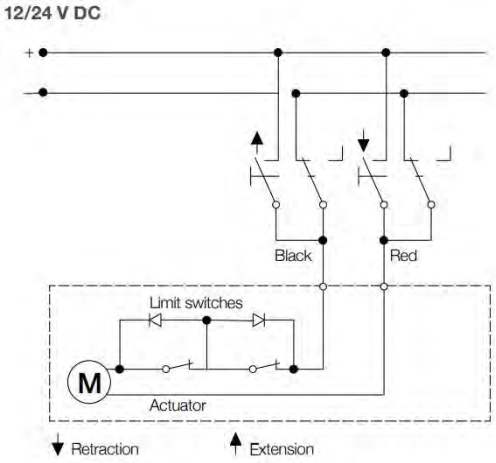
Performance Diagrams



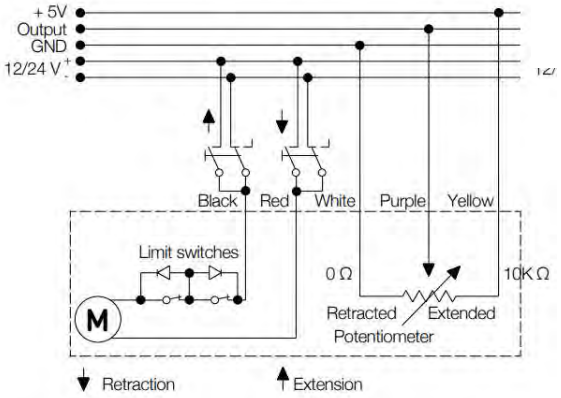


Wiring Diagrams

Basic Configuration

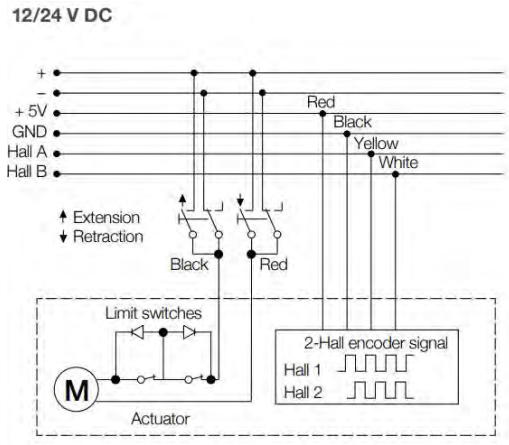


Potentiometer



Stroke (mm)	50 - 80	80 - 160	160 - 300
Potentiometer resolution (Ω/mm)	100	50	16.6
Minimum resistance value of potentiometer	700-1300Ω		

Hall Sensor Feedback



Hall sensors resolution

Version	1	2	3	4	5	6
mm/pulse	0.3	0.1 5	0.075	0.05	0.0375	0.0375

IDM8-22BE Industrial Electric Actuator

The IDM8-22BE electric actuator is a compact design for industrial applications. The units are fitted with high quality 12v, 24v or 48V DC motors for long term reliability.

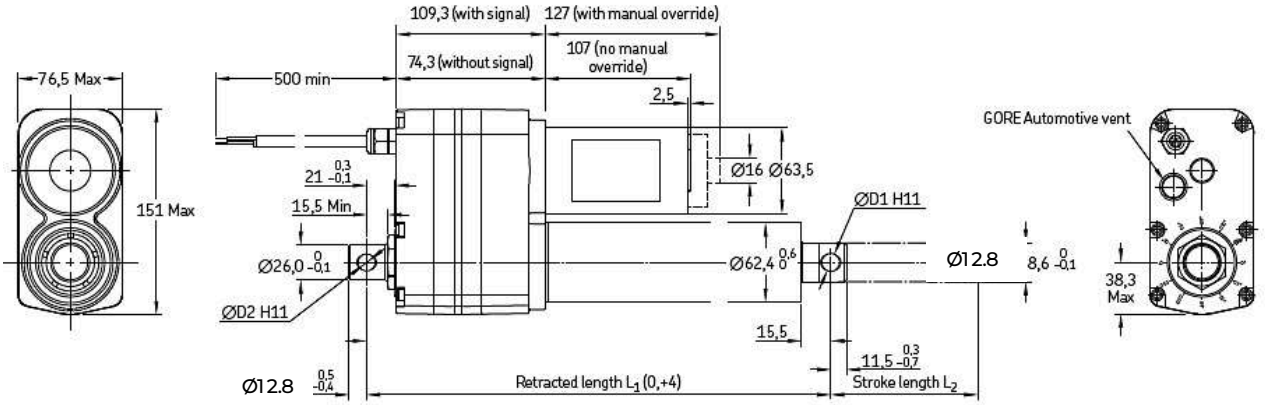
IDM8-22BE
Industrial Actuator

Features

- High Efficiency Ball Screw
- Protection up to IP69K
- No Limit switch, 6800N AND 10,000N ONLY
- Lubricated for life
- Mechanical overload protection
- Enhanced Corrosion resistance
- Power Coated Steel outer tube
- Thrust Rod Stainless steel
- Powder coated Aluminium Alloy Housing
- Salt Spray test ISO 9227 201 2, 250 hours

Specification				
Input Voltage	1 2/24/48 VDC			
Load Capacity	2300N	3500N	6800N	1 0,000N
Limit switches	NA	NA	Standard	Standard
Static Load	1 4,000N			
Stroke Length	100, 150, 200, 250, 300, 400, 450, 500, 600, 700mm			
Speed at Full Load	42mm/s	37mm/s	1 7mm/s	10mm/s
Speed at No Load	53mm/s	45mm/s	22mm/s	13mm/s
Current Consumption1 2v DC	20.5A	22A	23A	21 .5A
Current Consumption24v DC	8A	9.5A	9.5 A	8.5A
Current Consumption 48v DC	4.5A	5A	5A	4.3A
Duty Cycle	20%			
Operating Temperature Range	-40 to +85°C			
Protection	IP69K/66M			

Dimensions

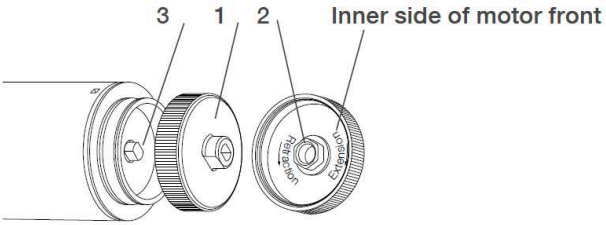


Stroke Length (mm)	100	150	200	250	300	350	400	450	500	600	700
Retracted Length (L1) without Limit switch	294	344	394	444	494	579	629	679	729	829	929
Retracted Length (L1) with Limit switch	300	350	400	450	500	585	635	685	735	835	935
Retracted Length (L1) without Limit switch but with potentiometer or encoder	329	379	429	479	529	614	664	714	764	864	964
Retracted Length (L1) with Limit switch and with potentiometer or encoder	335	385	435	485	535	620	670	720	770	870	970

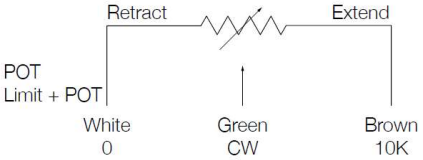
Tolerance ± 2mm up to 305mm, then ± 3mm

Manual override

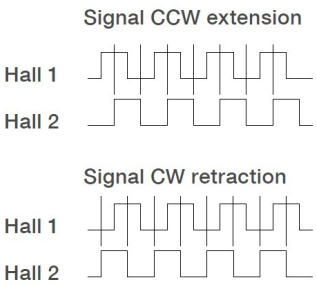
Release the motor cover (1). Use the slot (2) to Rotate the motor shaft(3) in the required direction



Potentiometer feedback



Encoder feedback

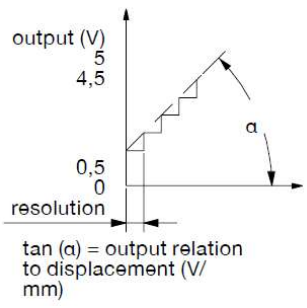


Encoder supply voltage: 5v DC

Absolute analogue position output

Input voltage: 10-55v DC
Current consumption: 15mA max.
Output analogue signal: 0-5v DC

Absolute analogue output setup:
Retracted 0.5± 0.15v
Extended 4.5v to the maximum



Wiring Details

Wire connection with no signal

Wire no.	AWG	Colour	Application
1	14	Red	Motor power(+)=> Extension, (–)=> Retraction
2	14	Black	Motor power(–)=> Extension, (+)=> Retraction

Wire connection with potentiometer

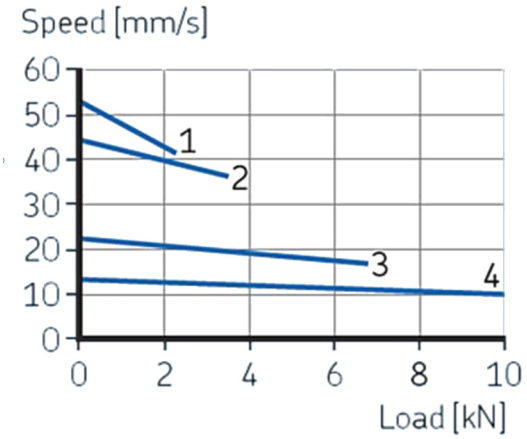
Wire no.	AWG	Colour	Application
1	22	Green	See picture description
2	22	White	See picture description
3	22	Brown	See picture description
4	14	Red	Motor power(+)=> Extension, (–)=> Retraction
5	14	Black	Motor power(–)=> Extension, (+)=> Retraction

Wire connection with encoder

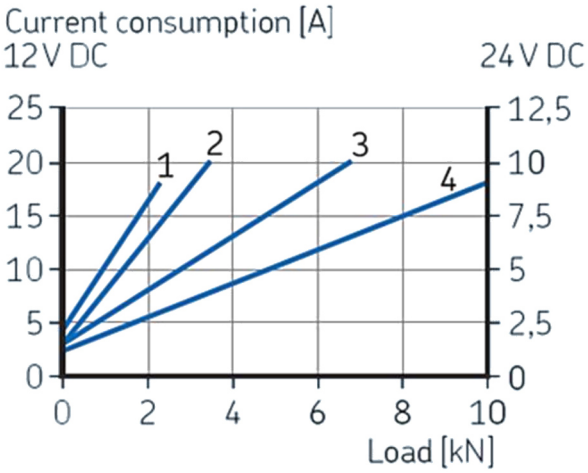
Wire no.	AWG	Colour	Application	
1	26	Green	Sensor signal 1	Encoder
2	26	Yellow	Sensor signal 2	Encoder
3	26	Black	Sensor power GND	Encoder
4	26	Red	Sensor power 5 V	Encoder
5	14	Red	Motor power(+)=> Extension, (–)=> Retraction	
6	14	Black	Motor power(–)=> Extension, (+)=> Retraction	

Performance diagrams

Speed and load



Current load



1 = 2300N 2 = 3500N 3 = 6800N 4 = 10,000N

Optional Mounting Brackets

IDM6E Industrial Electric Actuator

The IDM6E electric actuator is a compact design for industrial applications. The units are fitted with high quality 12v or 24v DC motors for long term reliability.

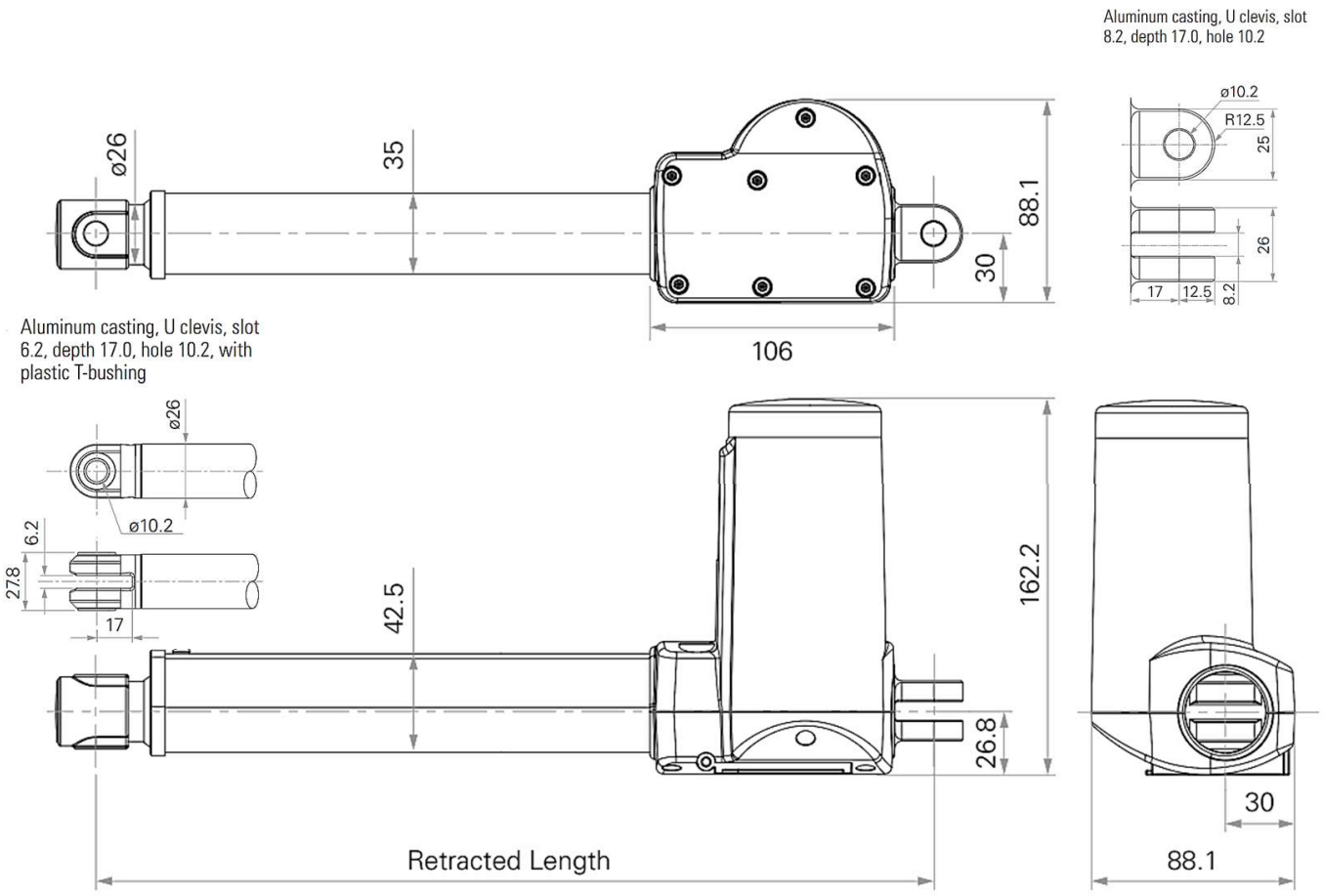
IDM6E Industrial Actuator

Features

- Protection up to IP66W
- Die-cast gearbox fire resistant material
- Longer life
- Low noise
- Built in limit switches
- High resolution Hall Sensor available
- Safety nut and quick release available
- Large range of different loads and speeds
- CE approved
- Certificate: IEC60601-1, ES60601-1

REF.	RATED LOAD (N)		SELF LOCKING (KG)	CURRENT (A) (24v)	SPEED		MOTOR TYPE
	PUSH	PULL			NO LOAD (32v DC)	FULL LOAD (24v DC)	
IDM6E.1	1000	1000	1 00	2.1	32.1	19.1	STANDARD
IDM6E.2	1000	1000	1 00	3.0	39.0	23.4	FAST
IDM6E.3	2000	2000	200	2.8	21.4	12.1	STANDARD
IDM6E.4	2000	2000	200	4.0	26.1	14.9	FAST
IDM6E.5	2500	2500	250	3.2	15.9	8.3	STANDARD
IDM6E.6	2500	2500	250	4.1	19.4	11.1	FAST
IDM6E.7	3500	3500	350	3.6	11.9	6.0	STANDARD
IDM6E.8	3500	3500	350	4.6	14.5	7.9	FAST
IDM6E.9	5000	4000	500	3.5	8.0	4.1	STANDARD
IDM6E.10	5000	4000	500	4.7	11.3	6.6	FAST
IDM6E.11	6000	4000	600	3.5	6.0	3.1	STANDARD
IDM6E.12	6000	4000	600	4.2	7.3	4.1	FAST
IDM6E.13	8000	4000	800	4.2	5.4	2.6	STANDARD
IDM6E.14	8000	4000	800	5.2	5.2	3.4	FAST
IDM6E.15	10000	4000	1 000	5.3	5.7	3.2	FAST

Dimensions



Technical Data

Voltage	12VDC or 24VDC
Current	6.3A maximum
Protection	IP66
Ambient Temperature	+5°C to +45°C
Load	Up to 10,000N Push, 4,000 Pull
Speed	Up to 23.4mm/s at full load

Closed Length

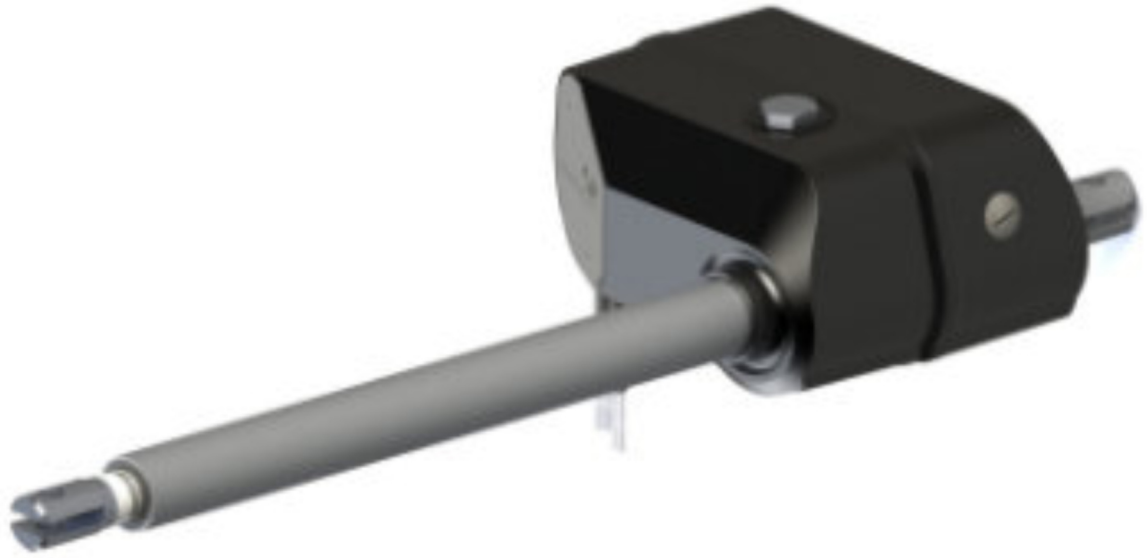
Stroke (mm)	50	100	150	200	250	300
Cast Front and Rear Slotted Clevis	228mm	278mm	328mm	378mm	428mm	478mm
Plastic Front and Rear Slotted Clevis	213mm	263mm	313mm	363mm	413mm	463mm

Terms of use - Product details subject to change without notice

LD600E Electric Linear Actuator

The LD600 linear actuator from Industrial Devices boasts a sleek design, high performance, and advanced technology. Ideal for agricultural, heavy industry, and domestic applications, the LD600 is also available in a fully stainless steel design, making it perfect for the marine and food industries.

LBM600E SERIES



Technical Data

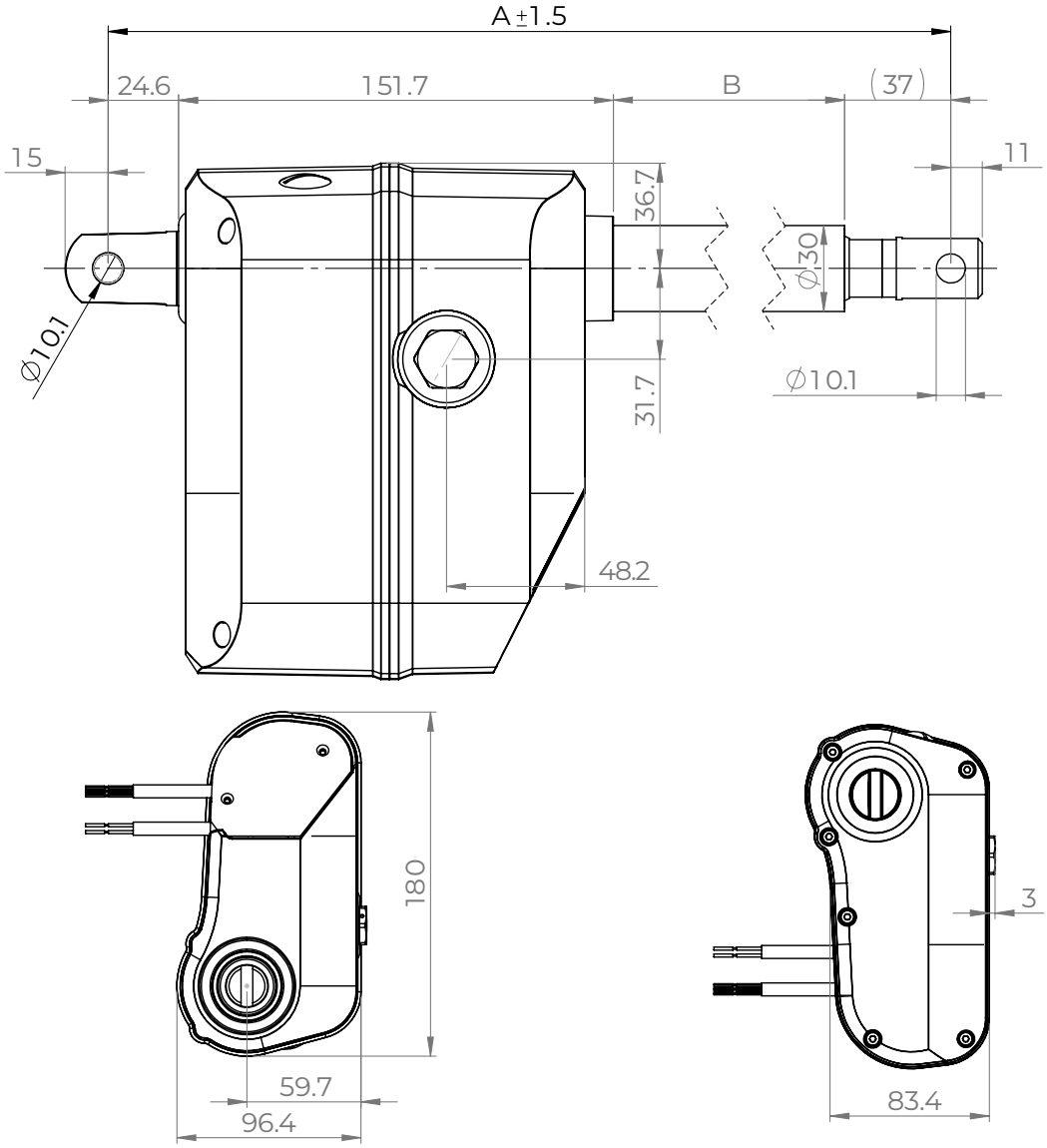
General Data

Force	Max. 6000N
Speed	Max. 19mm/s
Stroke	Max. 600mm
Installation dimension (A)	Stroke + 200mm
Duty cycle	10% / 20min
Position feedback	Optional
Supply voltage	12VDC, 24VDC
Integrated limit switch	Yes
End position signal	Optional
Protection class	IP69K (static)
Protection class	Up to nominal load
Storage temperature	-40°C to +80°C
Potentiometer	Optional

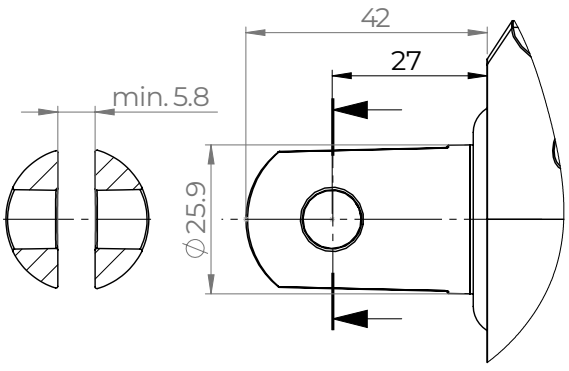
Components

Rod end	Stainless steel, borehole 10.1mm
Rear adapter	Die-cast aluminum, borehole 10.1mm
Lifting tube material	Stainless steel, borehole 10.1mm
Housing material	Die-cast aluminum
Housing color	Similar to RAL 9005, black
Connection	Cable (open cable end) incl. plug (drive end)
Cable length	1.5m, 3m, 5m
Options	Special strokes and special installation dimensions adjustable ex works Special strokes also adjustable by the customer Emergency actuation
Control	Voltage polarity
Position feedback	Potential-bound limit signal

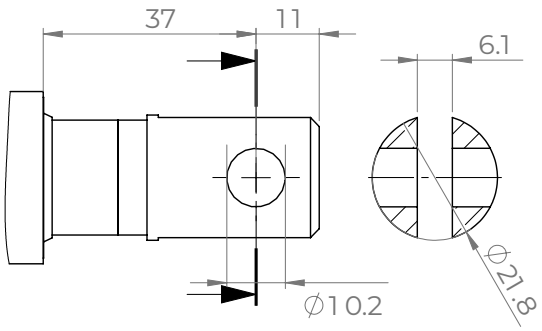
Technical Drawings



Rear suspension:



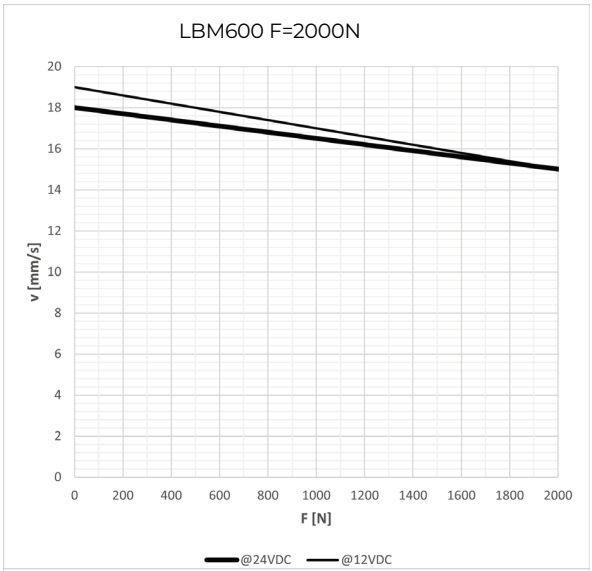
Front suspension:

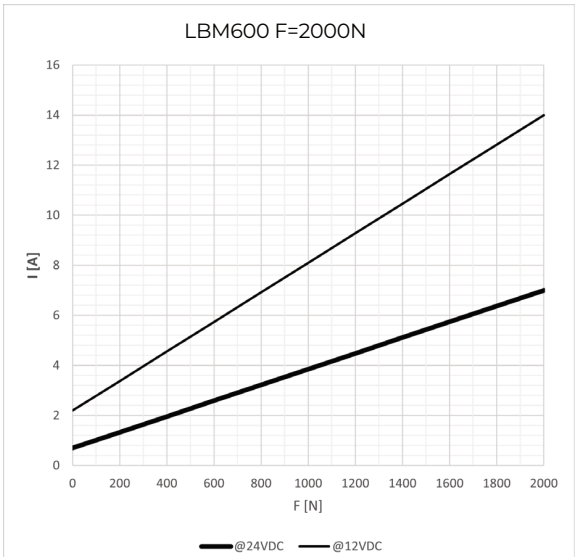


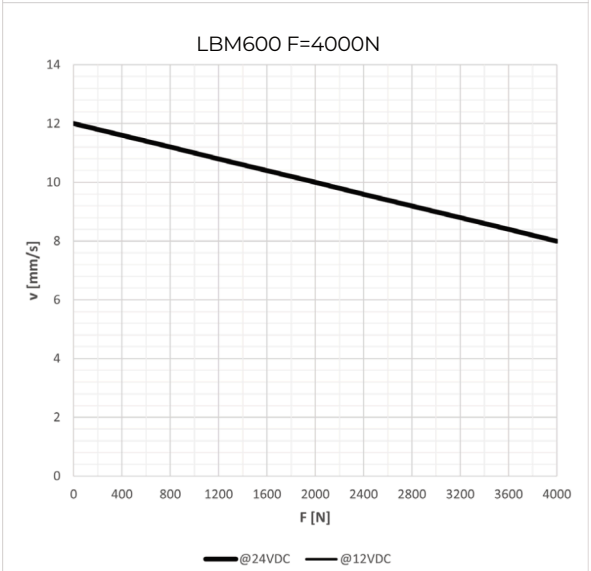
Stroke(mm)	100	150	200	250	300	350	400	500	600	700	800	900	1000
Dim. A(mm)	300	350	400	450	500	550	600	700	800	900	1000	1100	1200

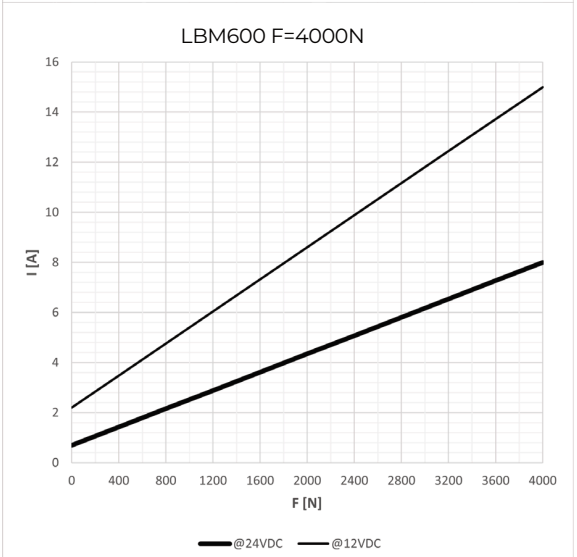
Terms of use - Product details subject to change without notice

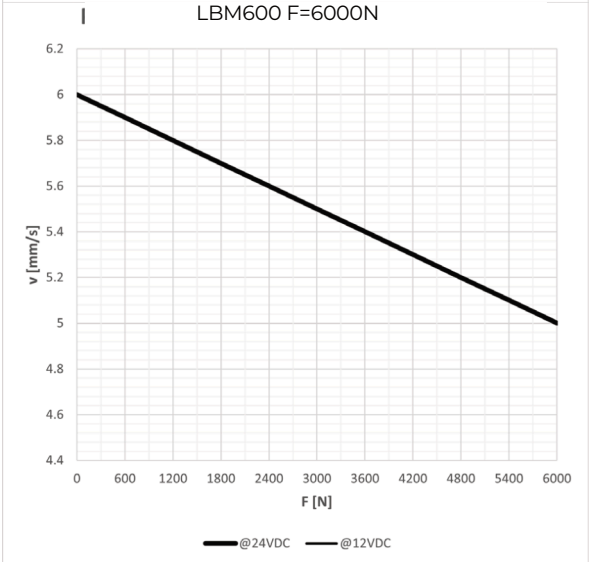
Performance Data

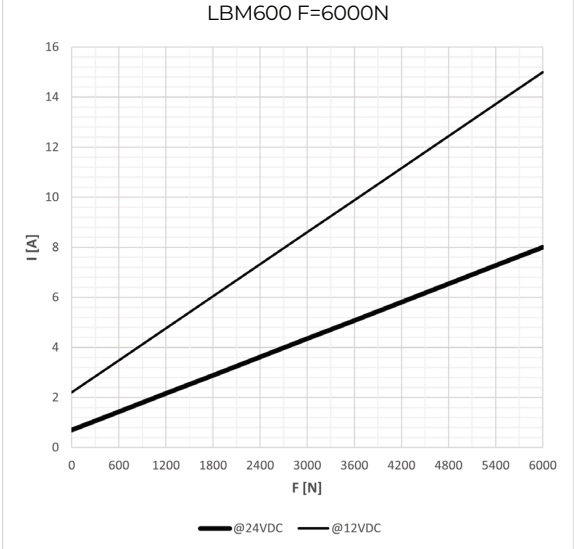












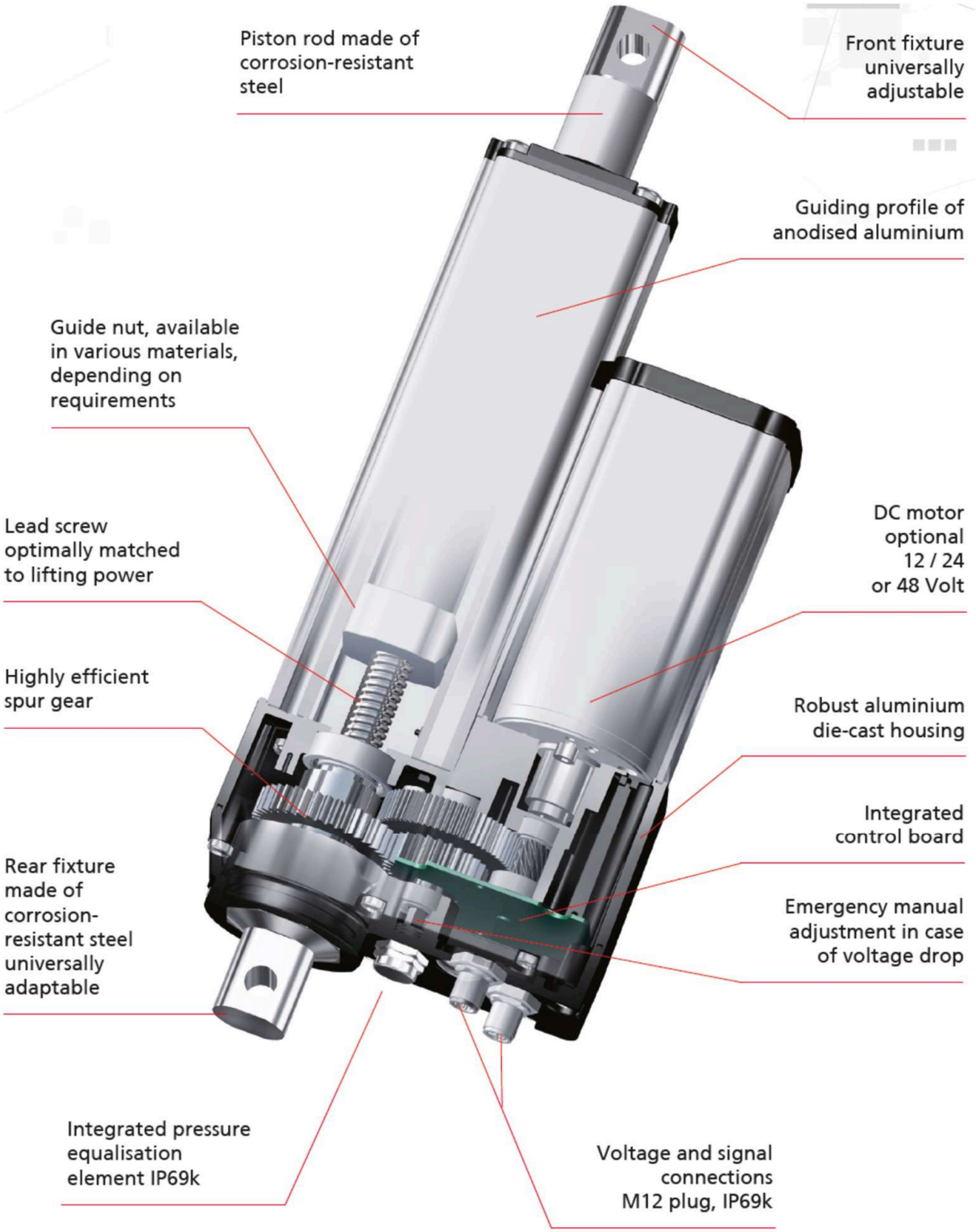
Terms of use - Product details subject to change without notice

PMZ10 Industrial Electric Actuator

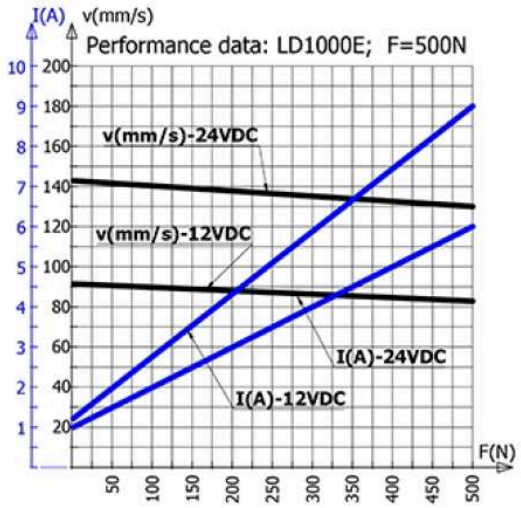
Used mainly as individual units the PMZ10 heavy duty industrial electric actuator systems are used in many Industrial and Agricultural applications worldwide.

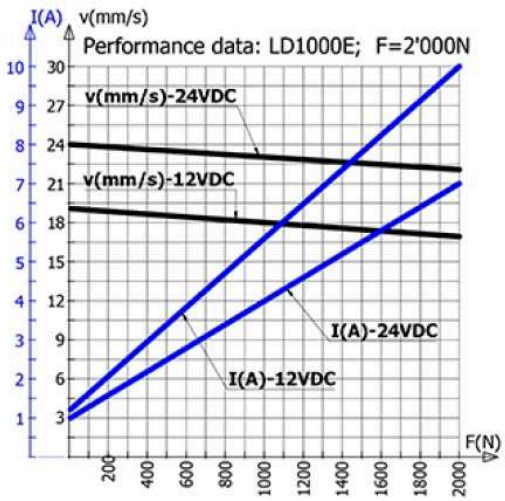
PMZ10 Industrial Electric Actuator

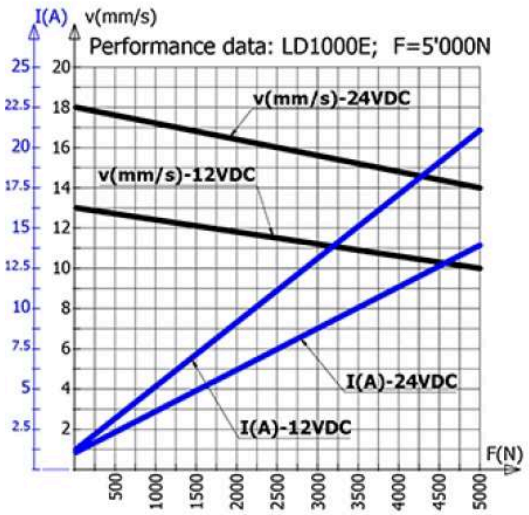
Features

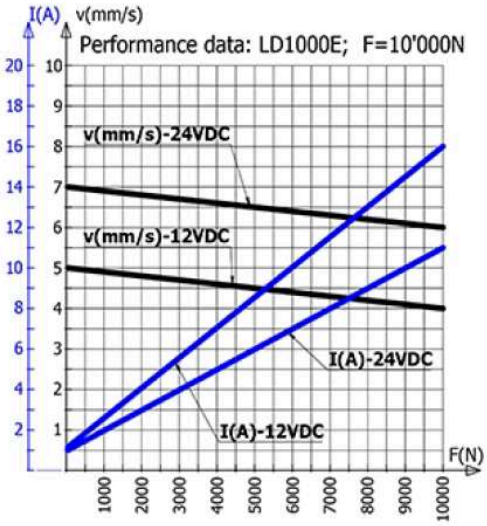

Piston rod made of corrosion-resistant steel
Front fixture universally adjustable
Guiding profile of anodised aluminium
Guide nut, available in various materials, depending on requirements
Lead screw optimally matched to lifting power
DC motor optional 12 / 24 or 48 Volt
Highly efficient spur gear
Robust aluminium die-cast housing
Integrated control board
Rear fixture made of corrosion-resistant steel universally adaptable
Emergency manual adjustment in case of voltage drop
Integrated pressure equalisation element IP69k
Voltage and signal connections M12 plug, IP69k

Technical Data				
Input Voltage	12/24 VDC			
Load Capacity	500N	2000N	5000N	10,000N
Static Load	Maximum force			
Stroke Length	Up to 1000mm			
Speed at Full Load @24v DC	130mm/s	21mm/s	14mm/s	6mm/s
Speed at No Load @24v DC	143mm/s	24mm/s	18mm/s	7mm/s
Current Consumption24v DC	6A	7A	14A	11 A
Duty Cycle	30%			
Operating Temperature Range	-20 to +65°C			
Protection	IP69K			

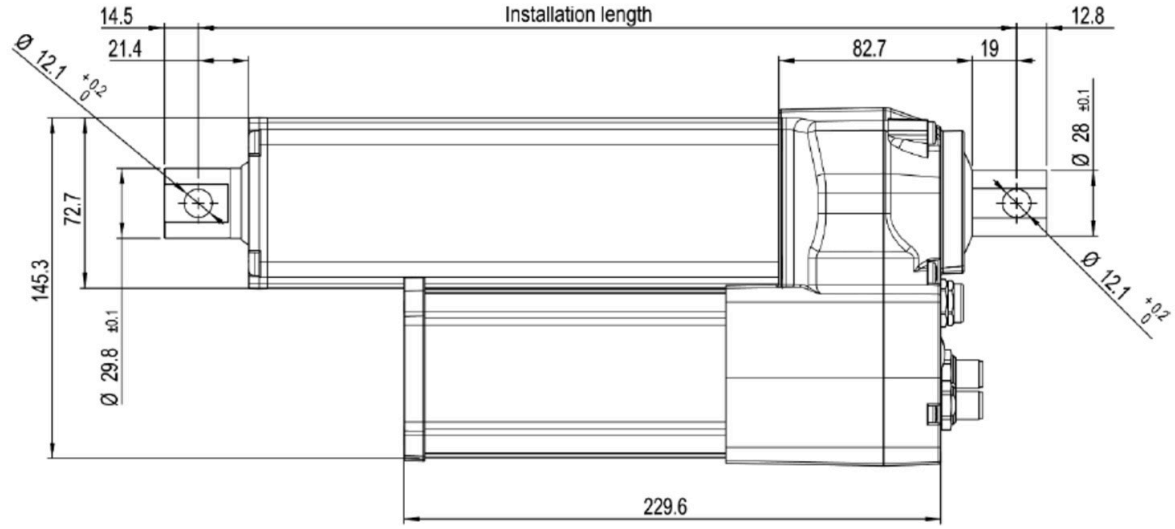


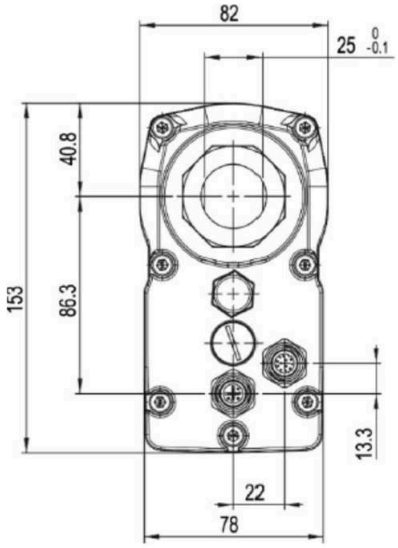


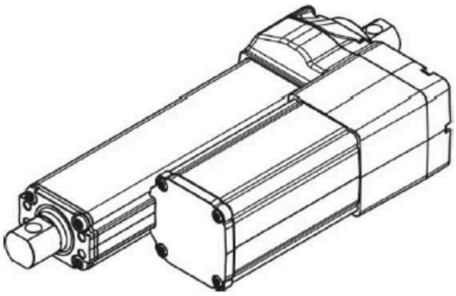


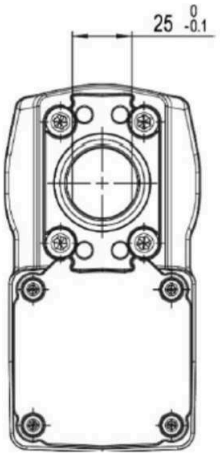


Dimensions

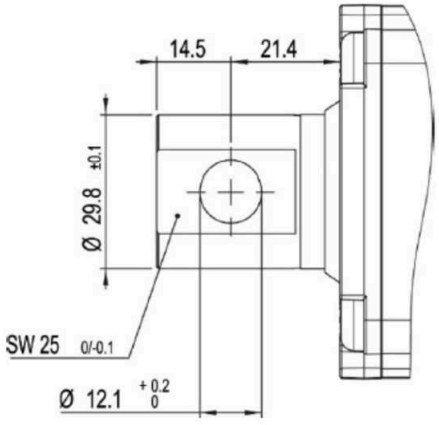




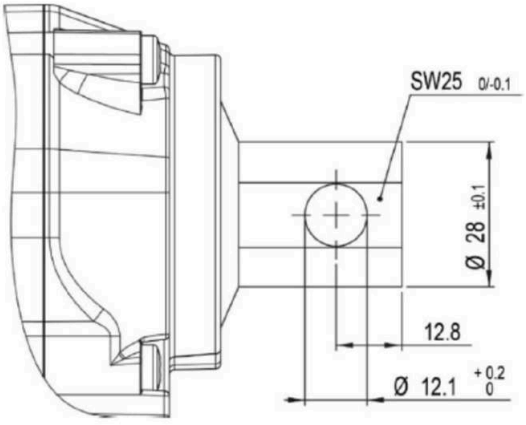




Front mounting:



Rear mounting:



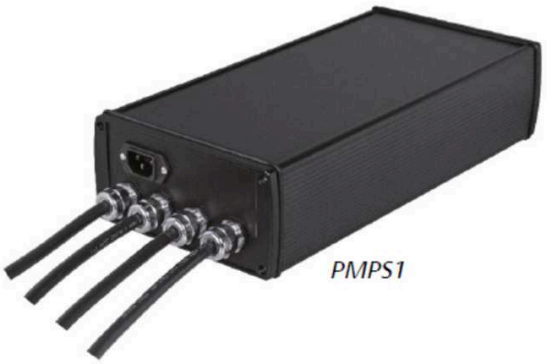
Rear mounting; rotatable in steps of 45°

Accessories

Power supply

To provide reliable voltage to the PMZ10, Phoenix Mecano offers the appropriate power supply.

The model PMPS1* is supplied with a wide range input of 100 VAC to 240 VAC.



PMPS1

Manual switch

Manual switch

By means of the manual switch, the PMZ10 can easily and reliably be manually controlled.

Connection cable

For the various connections there are M12 power as well as M12 signal cables in the lengths of 5 m and 10 m available.

Cable

Applications

TRAFFIC SIGN
ADJUSTMENT

FRONT FLAP
REGULATION

Applications

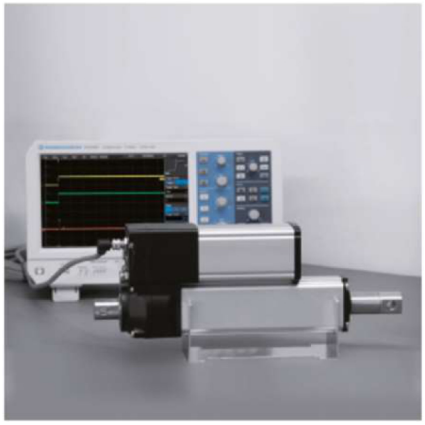
ACCESS LADDER
FOLDING

SAW BLADE
TRACKING

Reliability

We expose our cylinders to an endurance test, under vibration, dust and maximum mechanical stresses, to simulate the functionality also in extreme tough operating conditions.

To survive even extreme climatic conditions, we test our drives for resistance to heat, extreme cold, salt water and protection class IP69k.



A detailed test of the electronic parameters ensures maximum functionality and performance of the drive.

Lifting Columns

Exceptional Stability

Our lifting columns are engineered to provide exceptional stability, precision, and performance for a wide range of applications. Reach out to us today, and let our knowledgeable team help you find the ideal lifting column solution to meet your specific requirements. Enhance your projects with our industry-leading expertise and unmatched customer support.

Multilift Lifting Column

Our controllers can run multiple actuators together, ensuring the equipment moves synchronised.

Multilift Lifting Column

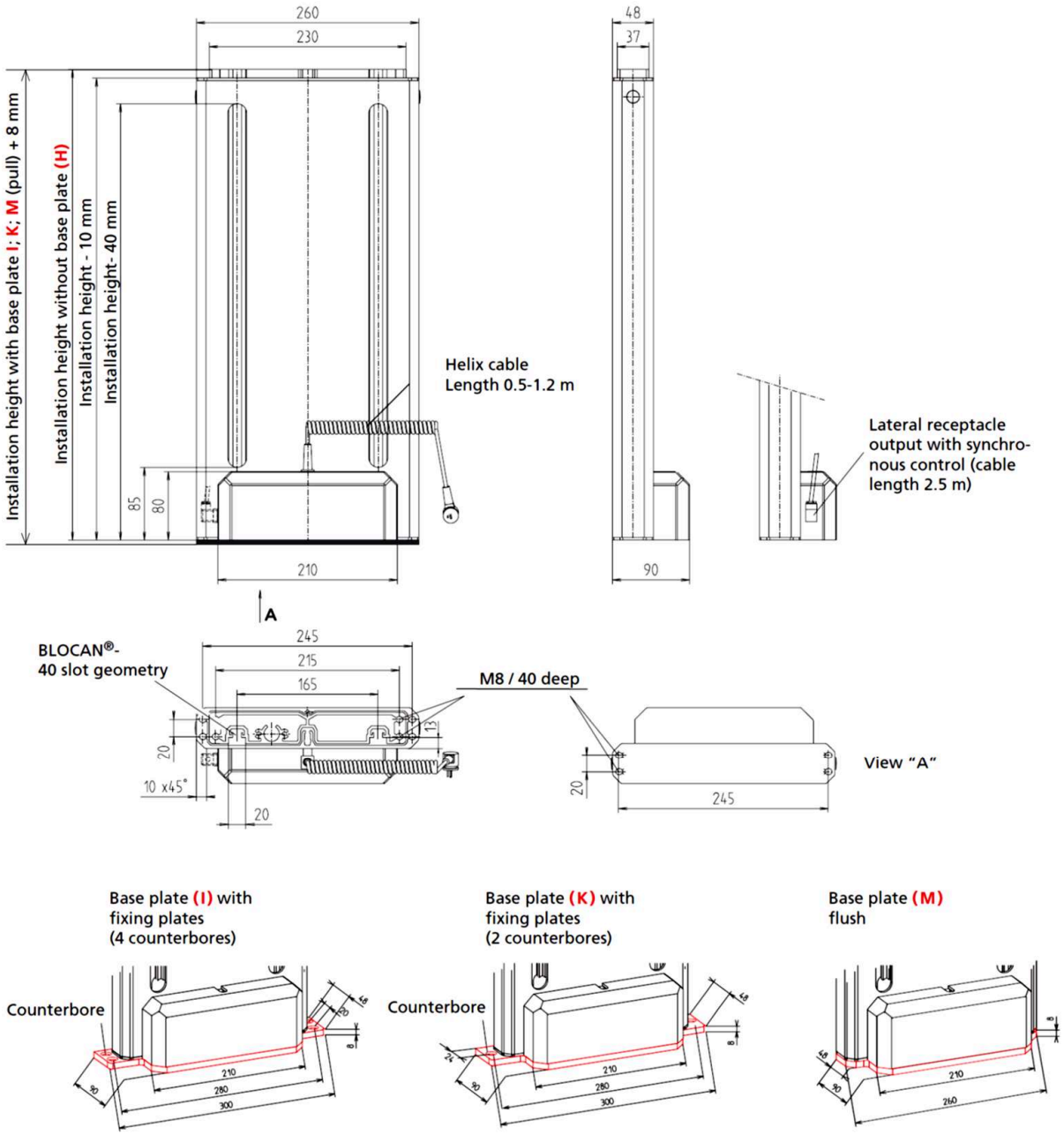
Features

- Self Locking
- Synchronised System 2, 3 or 4 units
- Virtual limit switch
- Extruded Aluminium profiles with or without slots
- Stroke Standard up to 498mm
- High overhung load capacity

Specifications

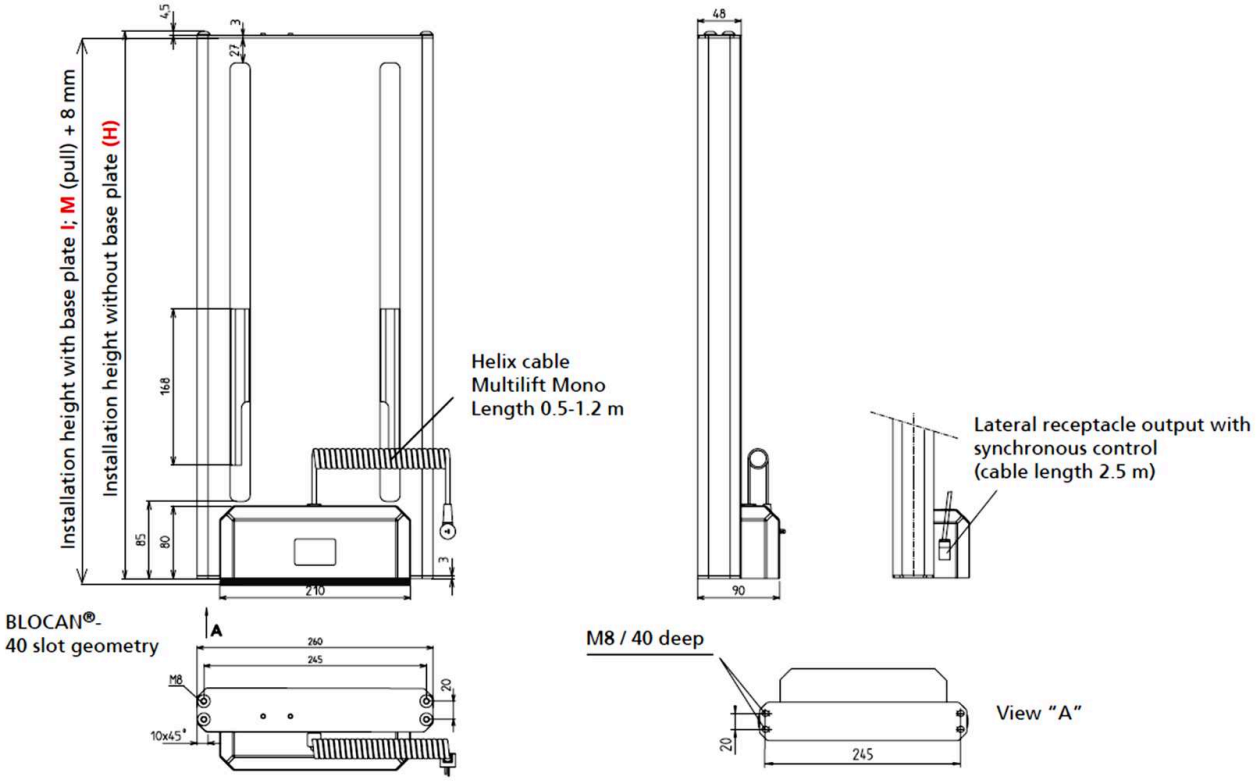
Version	With Slots or Without Slots	
Load Capacity	1 000N (1 00Kg)	3000N (300Kg)
Voltage	24VDC or 230v AC with power Supply	
Stroke Length (standard)	355, 400, 452, 498mm	
Speed	1 6mm/s	8mm/s
Duty Cycle	10%	
Protection	IP20	

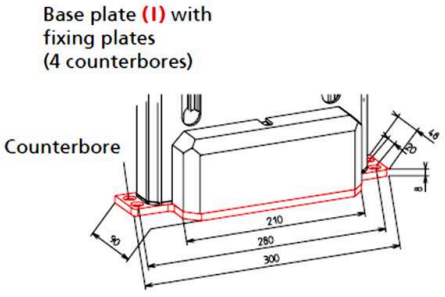
Dimensions

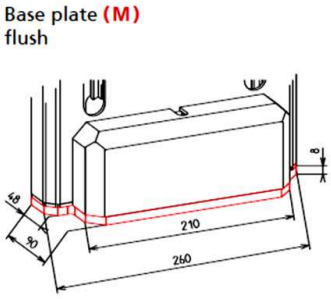


Stroke (mm)	Maximum Push Force (N)	Maximum Pull Force (N)	Installation Height without base plate (mm)
355	3000	1 000	550
400	3000	1 000	595
452	3000	1 000	650
498	3000	1 000	695

Dimensions Internal Carriage

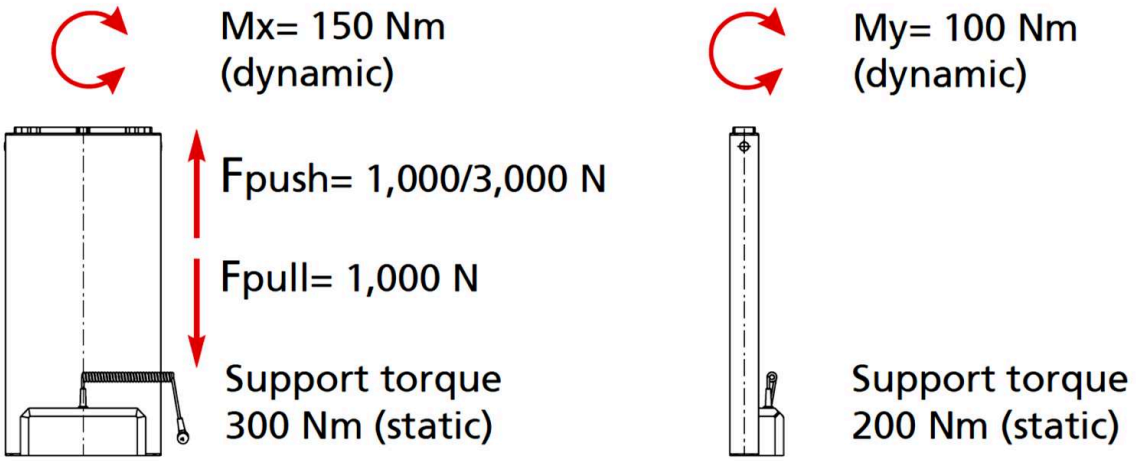




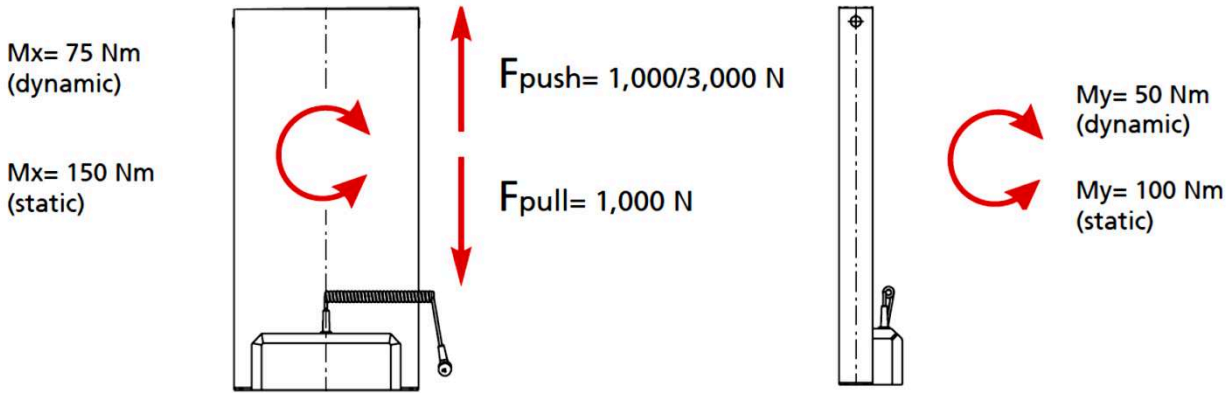


Stroke (mm)	Maximum Push Force (N)	Maximum Pull Force (N)	Installation Height without base plate (mm)
355	3000	1 000	557.5
400	3000	1 000	602.5
452	3000	1 000	657.5
498	3000	1 000	702.5

Overhung load Data



Overhung load Data
Internal Carriage



Notes:-

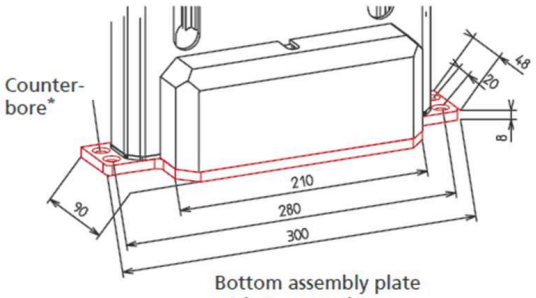
“Dynamic” is the load the Multilift can support while moving, “Static” is while stationary.

150Nm Dynamic equates to approximately 1 5Kg load hanging 1 m from the centre line of the Multilift moving up and down. At a shorter distance for example 30Kg at 0.5m from the centre line.

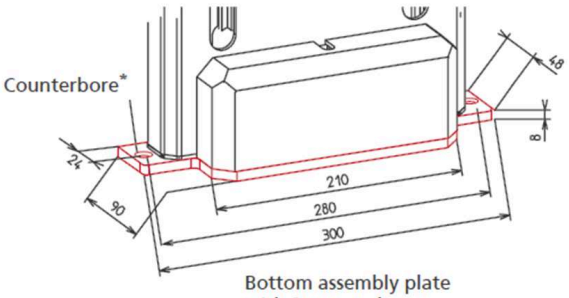
300Nm Static equates to approximately 30Kg load hanging 1 m from the centre line of the Multilift , applied when not moving. At a shorter distance for example 60Kg at 0.5m static load from the centre line.

Additional Features

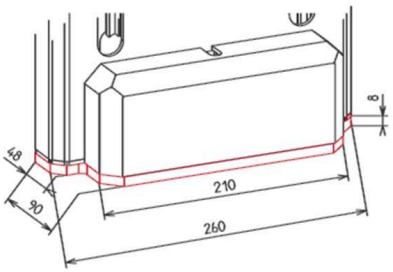
Adapter Plates



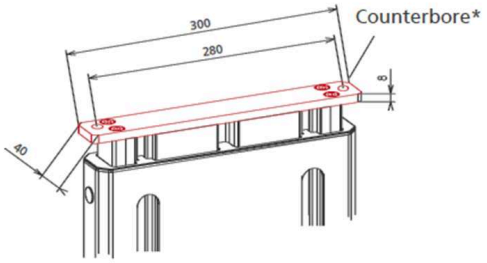
Bottom assembly plate
with 4 counterbores



Bottom assembly plate
with 2 counterbores

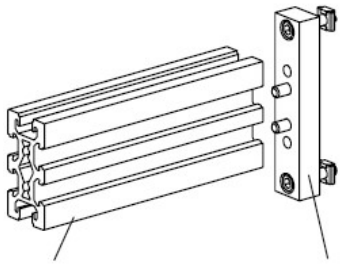


Compression plate



Top assembly plate

Cross Struts



Cross Struts Adapter plate

Alpha Column System

The Alpha Lifting Column is designed in column form for industrial applications with high overhung load. Ideal for assembly jigs, machine tables, display and computer benches.

Alpha Column System

Description

The Alpha Column is a lifting device for the continuous height adjustment of assembly tables, medical equipment, audio visual displays etc.

Due to the well designed anodised aluminium profile the column does not need any other external panelling.

The Alpha column is available in two sizes “Medium” and “Large”. Due to increased dimensions the “Large” version is able to take higher overhung loads.

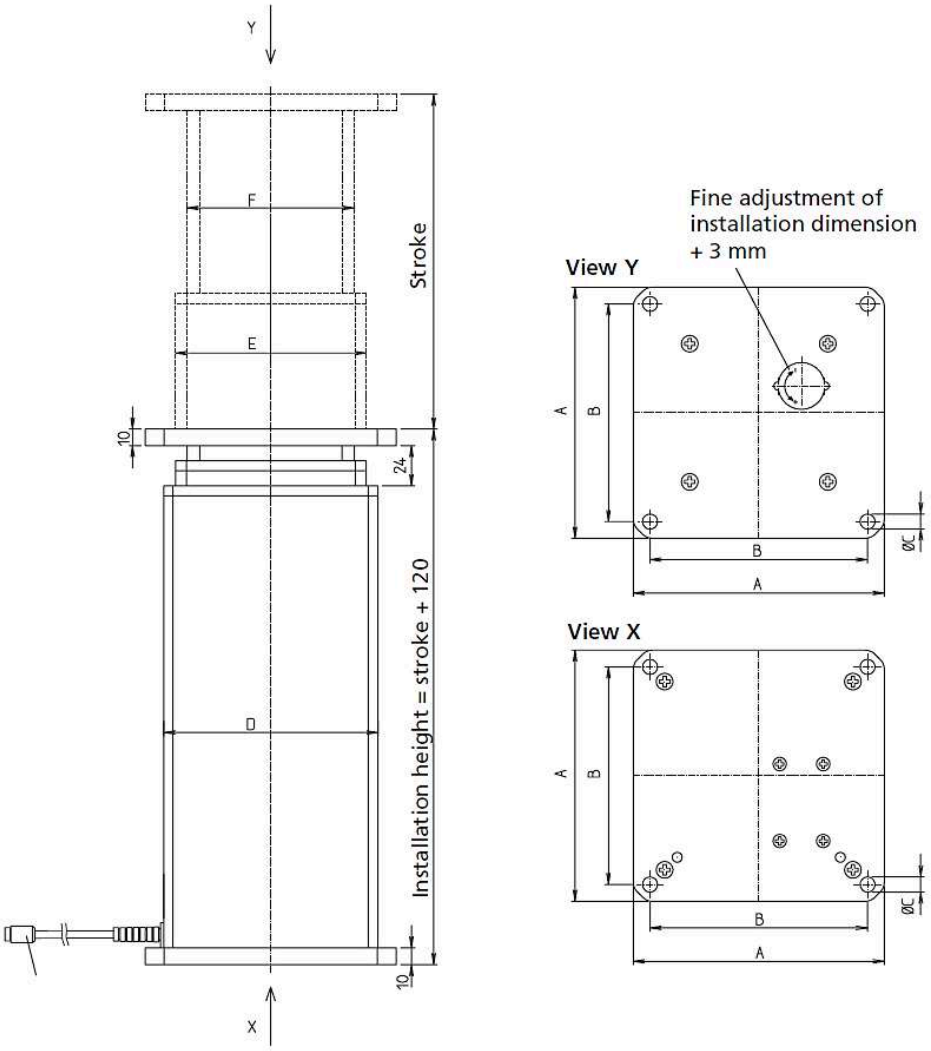
Load Capacity up to 3000N at 5mm/s and a maximum travel length of 1000mm.

Special stroke lengths on request

Features

- Adjusted sliding guides guarantee zero backlash, even after years of operation
- Assembly dimensions can be adjusted by ± 3mm
- Integrated limit switches
- Self locking, even under maximum load
- Compressive and tensile forces
- Attractive design, anodised aluminium
- Smooth surface for easy cleaning
- Single unit or synchronised controls

Dimensions



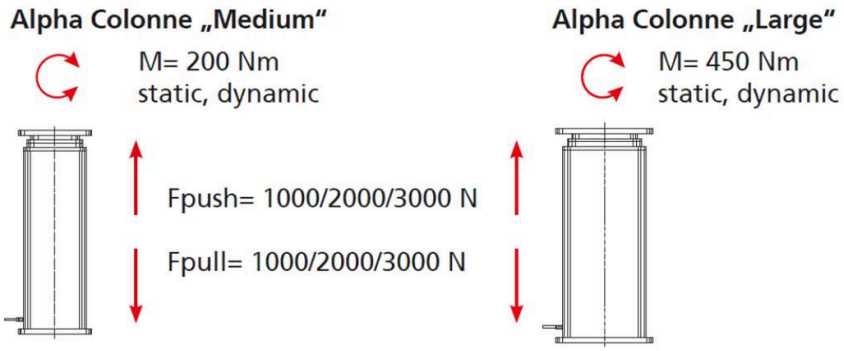
Technical Data

Standard Column

Voltage	24VDC for Standard
Controller	120/230VAC
Current	5A maximum
Protection	IP40
Ambient Temperature	-10°C to + 75°C
Load Capacity	1000N, 2000N, 3000N

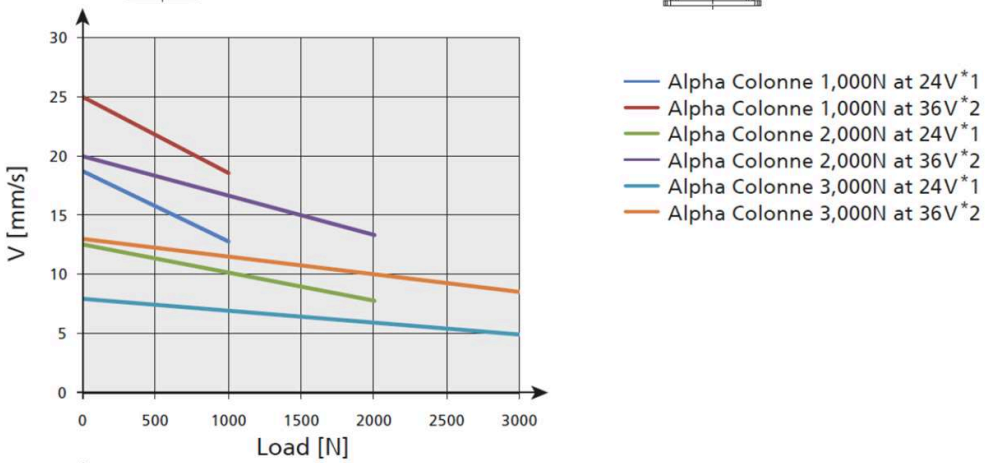
Dimension	ACM "Medium"	ACL "Large"
A	150	190
B	130	170
C	9	11
D	128	163
E	114	145
F	100	128

Load Data



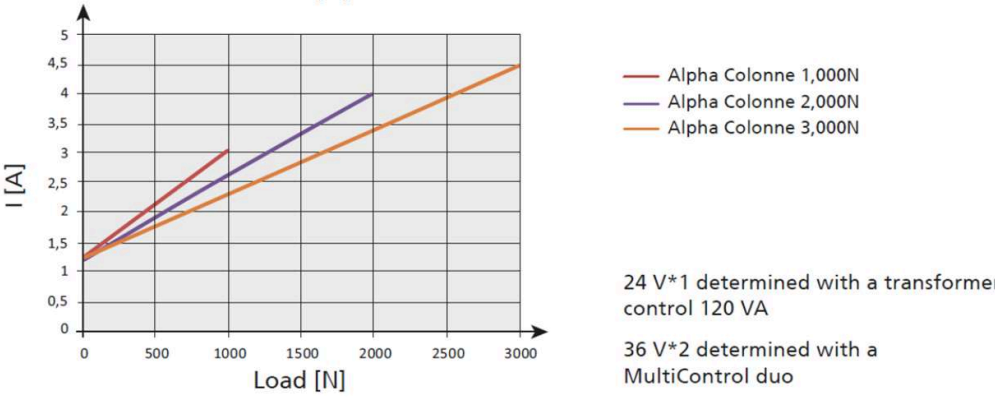
Speed/Force diagram

Alpha Colonne for external control



Current output/Force diagram

Alpha Colonne with external control



24 V*1 determined with a transformer control 120 VA

36 V*2 determined with a MultiControl duo

Duty Cycle

The lifting columns are designed for intermittent service. The maximum operating time under normal load may not exceed 20% (2 minutes operation, 8 minutes rest)

Over Hung Load

Medium Units - 250Nm
Large Unites - 450 Nm

Heavy Duty

Unmatched Performance

Industrial Devices presents a diverse range of high-performance Electric Linear Actuators and systems meticulously crafted for heavy industrial applications. Engineered to deliver exceptional force, extended stroke lengths, and continuous duty cycles designed to meet the rigorous demands of heavy-duty industrial processes.

SLZ90P Electric Actuator

Used for very heavy duty applications the SLZ90P electric actuator comes in either ball screw or ACME thread versions.

SLZ90P Heavy Duty Linear Actuator

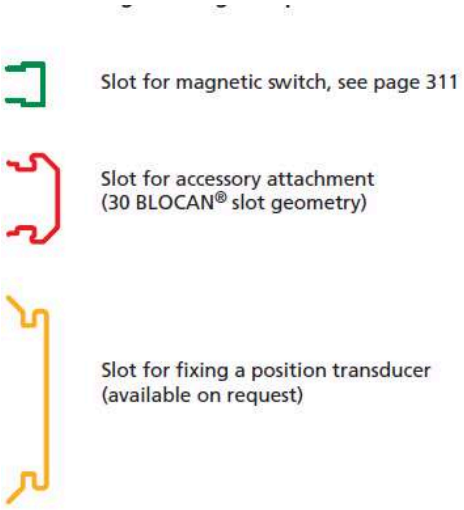
Description

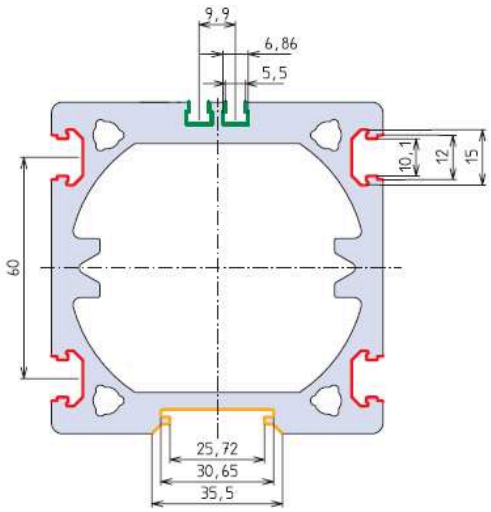
- Up to 25KN dynamic load versions available
- Ball screws (Ø25 or 32mm) or
- ACME thread screws (Ø26 or 36mm)
- Travel speed up to 933mm/s
- Travel length up to 2000mm
- 100% duty cycle (ball screw)
- Protection IP54 (IP66 Optional)
- Interchangeable with pneumatic or hydraulic cylinders
- Various motor options available

Specification

Type	Ball screw spindle Ø25 or 32mm	ACME spindle Ø26 or 36mm
Screw lead pitch	5 / 10 / 20mm	5 / 6mm
Load Capacity maximum	25,000 N	25,000 N
Travel Length maximum	1900 mm	2000 mm
Speed maximum	933mm/s	63 mm/s
Guiding	Double bearing provided by side bushes	
Duty Cycle (at max. load)	100%	25%
Ambient temperature	-20 to +70 ˚C	
Repeatability	To within 0.05mm	To within 0.3mm
Installation Position	Any position, without shear forces	

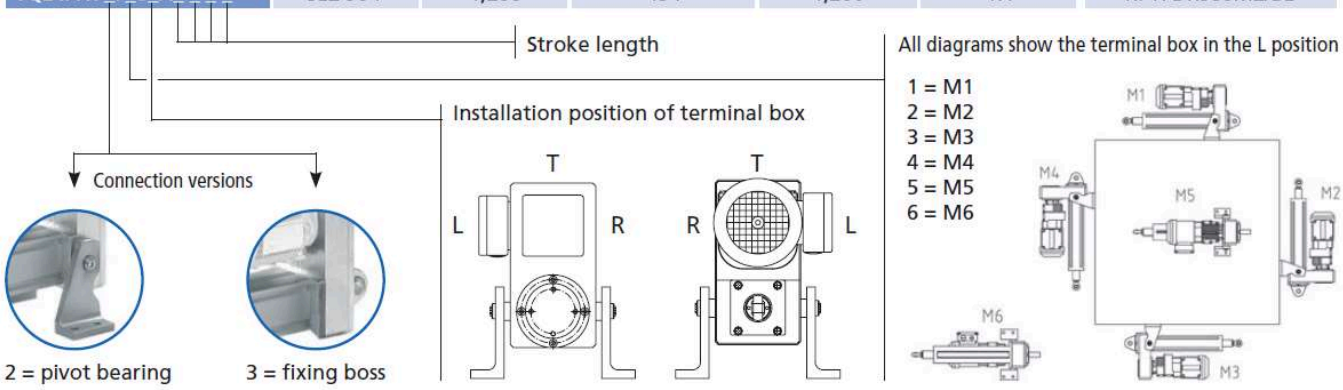
Connecting Slots and Guide Profile





Ball Screw Version

Code No.	Type	Max. force F [N]	Max. speed [mm/s]	Max. stroke [mm]	Output [kW]	Motor selection with motor brake
Ball screw 25 x 5						
TQ21A1P_C_3_A_ _ _ _	SLZ 90 P	6,500	115	800	1.1	80-4/BMG
TQ21A1P_K_3_A_ _ _ _	SLZ 90 P	13,000	38	900	0.75	RF17DRS80S2/BE
TQ21A1P_X_3_A_ _ _ _	SLZ 90 P	14,000	13	900	0.37	RF17DRS71S4/BE
TQ21A1P_R_3_A_ _ _ _	SLZ 90 P	14,000	21	900	0.55	RF17DRS71M2/BE
TQ21A1P_E_3_A_ _ _ _	SLZ 90 P	14,000	52	900	1.1	RF17DRS80M2/BE
Ball screw 25 x 10						
TQ21A1P_B_4_A_ _ _ _	SLZ 90 P	3,500	233	800	1.5	80-4/BMG
TQ21A1P_E_4_A_ _ _ _	SLZ 90 P	7,000	105	1,300	1.1	RF17DRS80M2/BE
TQ21A1P_M_4_A_ _ _ _	SLZ 90 P	9,000	52	1,200	0.75	RF17DRS80S4/BE
TQ21A1P_S_4_A_ _ _ _	SLZ 90 P	13,000	30	900	0.55	RF17DRS71M4/BE
Ball screw 25 x 25						
TQ21A1P_C_5_A_ _ _ _	SLZ 90 P	1,500	583	800	1.1	80-4/BMG
TQ21A1P_F_5_A_ _ _ _	SLZ 90 P	1,800	308	1,000	1.1	RF17DRS80M2/BE
Ball screw 32 x 5						
TQ21A1P_B_6_A_ _ _ _	SLZ 90 P	8,000	116	800	1.5	80-4/BMG
TQ21A1P_E_6_A_ _ _ _	SLZ 90 P	12,000	52	1,500	1.1	RF17DRS80M2/BE
TQ21A1P_X_6_A_ _ _ _	SLZ 90 P	18,000	13	1,300	0.37	RF17DRS71S4/BE
TQ21A1P_M_6_A_ _ _ _	SLZ 90 P	18,000	26	1,300	0.75	RF17DRS80S4/BE
Ball screw 32 x 10						
TQ21A1P_B_7_A_ _ _ _	SLZ 90 P	3,500	233	1,000	1.5	80-4/BMG
TQ21A1P_E_7_A_ _ _ _	SLZ 90 P	7,000	105	1,900	1.1	RF17DRS80M2/BE
TQ21A1P_M_7_A_ _ _ _	SLZ 90 P	9,000	52	1,800	0.75	RF17DRS80S4/BE
TQ21A1P_N_7_A_ _ _ _	SLZ 90 P	18,000	27	1,300	0.75	RF17DRS80S4/BE
TQ21A1P_U_7_A_ _ _ _	SLZ 90 P	25,000	17	1,100	0.55	RF17DRS71M4/BE
Ball screw 32 x 40						
TQ21A1P_B_8_A_ _ _ _	SLZ 90 P	1,000	933	900	1.5	80-4/BMG
TQ21A1P_F_8_A_ _ _ _	SLZ 90 P	1,200	494	1,200	1.1	RF17DRS80M2/BE

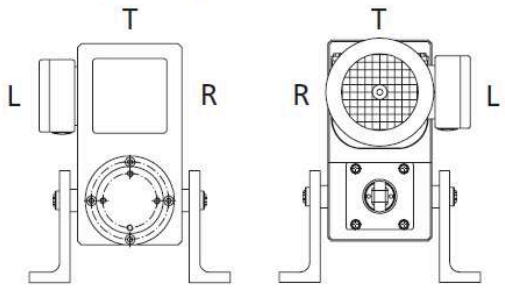


Acme Screw Version

Code No.	Type	Max. force F [N]	Max. speed [mm/s]	Max. stroke [mm]	Output [kW]	Motor selection
ACME screw 26 x 5						without motor brake
TQ21A1P_T_1_A_ _ _ _	SLZ 90 P	12,000	13	1,000	0.55	RF17DRS71M4
TQ21A1P_Y_1_A_ _ _ _	SLZ 90 P	14,000	8	1,000	0.37	RF17DRS71S4
						with motor brake
TQ21A1P_E_1_A_ _ _ _	SLZ 90 P	6,000	52	1,300	1.1	RF17DRS80M2/BE
TQ21A1P_L_1_A_ _ _ _	SLZ 90 P	8,000	30	1,200	0.75	RF17DRS80S4/BE
ACME screw 36 x 6						without motor brake
TQ21A1P_H_2_A_ _ _ _	SLZ 90 P	18,000	18	1,400	1.1	RF17DRS80M2
TQ21A1P_P_2_A_ _ _ _	SLZ 90 P	25,000	10	1,100	0.75	RF17DRS80S4
						with motor brake
TQ21A1P_E_2_A_ _ _ _	SLZ 90 P	5,000	63	2,000	1.1	RF17DRS80M2/BE
TQ21A1P_G_2_A_ _ _ _	SLZ 90 P	8,000	37	2,000	1.1	RF17DRS80M2/BE

Stroke length

Installation position of terminal box



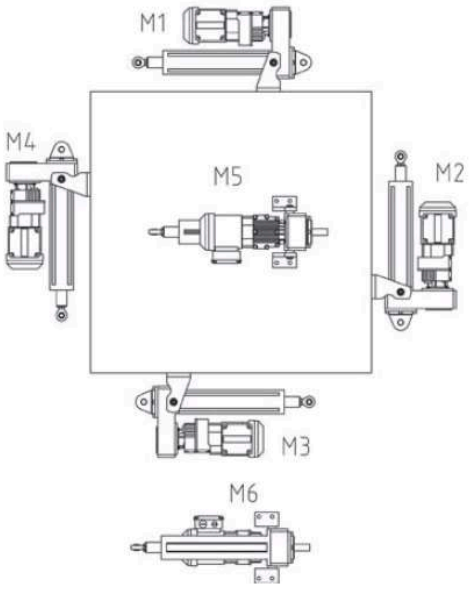
Connection versions

2 = pivot bearing

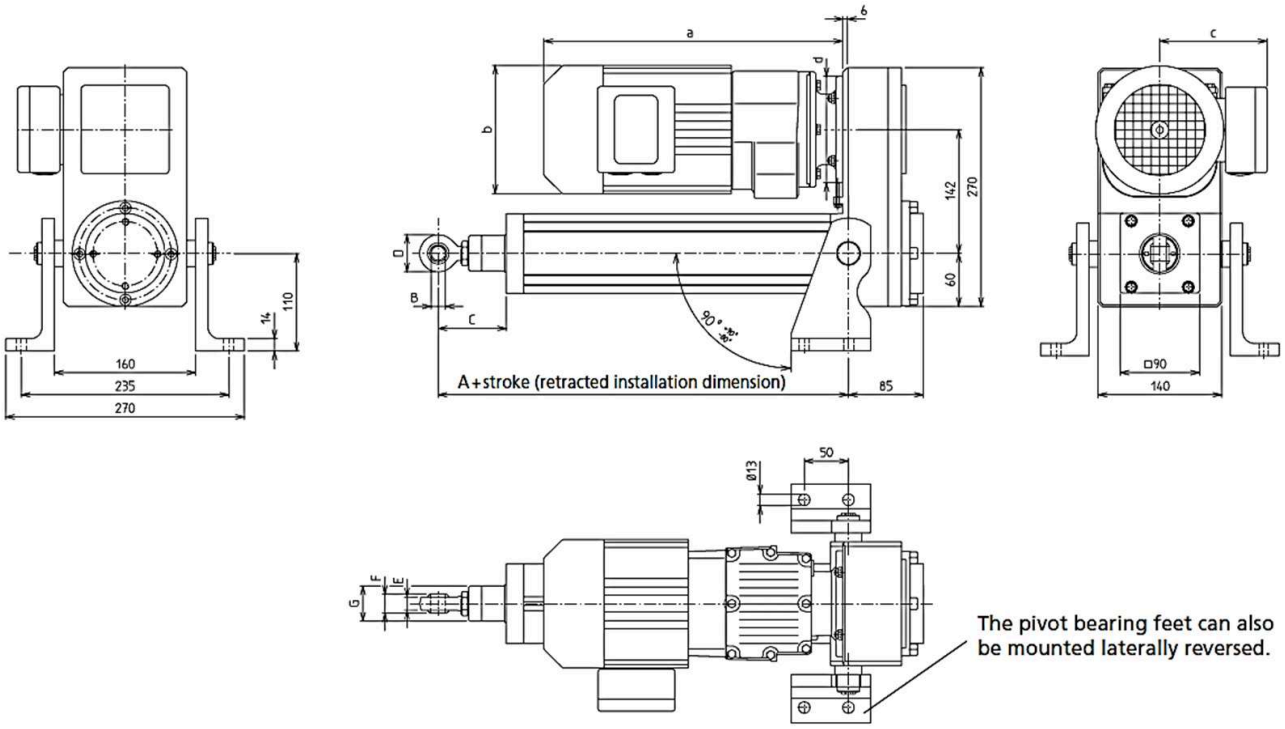
3 = fixing boss

All diagrams show the terminal box in the L position

1 = M1 4 = M4
2 = M2 5 = M5
3 = M3 6 = M6



Version With Pivot Bearing Feet



The pivot bearing feet can also be mounted laterally reversed.

Ball Screw Version

3-phase motors	a	b	c	d	Weight [kg]
RF17DRS71/BE	428	Ø 139	129	Ø 120	12
RF17DRS80/BE	428	Ø 156	139	Ø 120	14
80-4/BMG	306	Ø 156	131	Ø 120	13

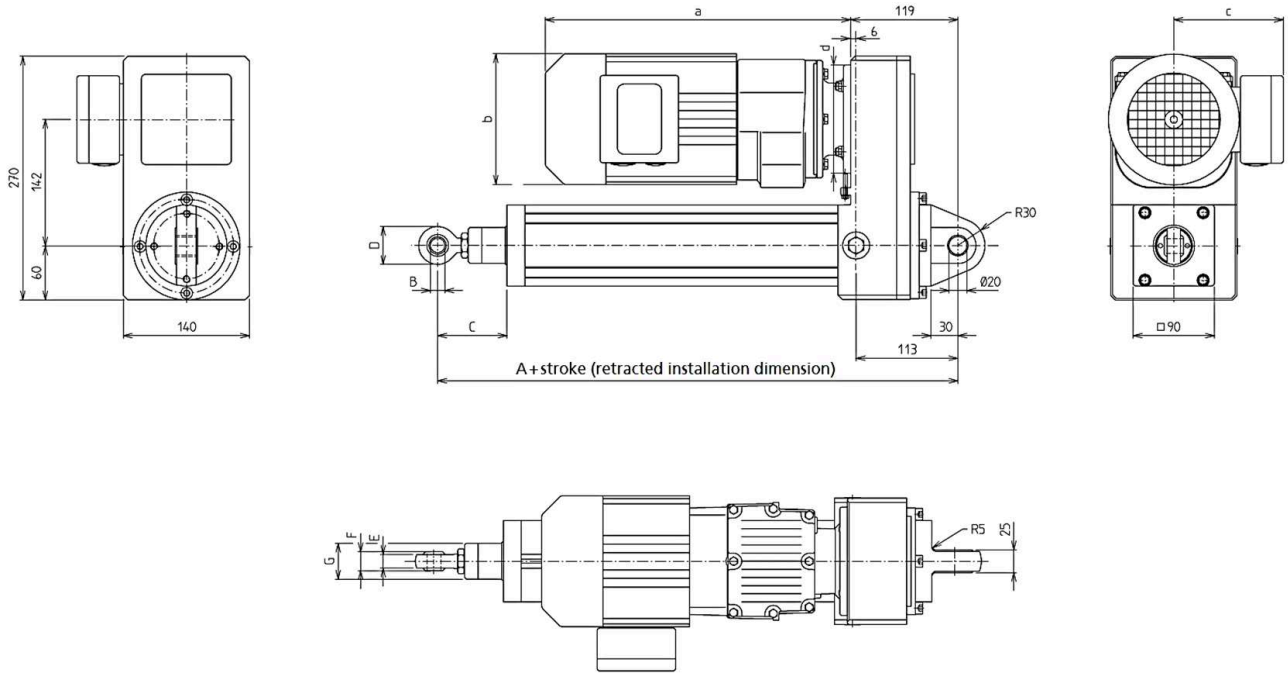
Type	A	B	C	D	E	F	G	Weight [kg]	
								Basic length (dimension A)	Additional weight/ 100 mm
KG 25 x 5, 25 x 10, 25 x 25	265	Ø 16	78	42	15	21	Ø 40	13.0	1.5
KG 32 x 5, 32 x 10, 32 x 40	294	Ø 20	113	50	18	25	Ø 50	13.1	1.9

Acme Screw Version

3-phase motors	a	b	c	d	Weight [kg]
RF17DRS71	360	Ø 139	119	Ø 120	9
RF17DRS71/BE	428		129		12
RF17DRS80	360	Ø 156	128	Ø 120	11
RF17DRS80/BE	428		139		14

Type	A	B	C	D	E	F	G	Weight [kg]	
								Basic length (dimension A)	Additional weight/ 100 mm
Tr 26 x 5	215	Ø 16	94	42	15	21	Ø 40	12.1	1.5
Tr 36 x 6	245	Ø 20	113	50	18	25	Ø 50	13.1	2.0

Version With Rear Mounting



Ball Screw Version

3-phase motors	a	b	c	d	Weight [kg]
RF17DRS71/BE	428	Ø 139	129	Ø 120	12
RF17DRS80/BE	428	Ø 156	139	Ø 120	14

Type	A	B	C	D	E	F	G	Weight [kg]	
								Basic length (dimension A)	Additional weight/ 100 mm
KG 25 x 5, 25 x 10, 25 x 25	378	Ø 16	78	42	15	21	Ø 40	11.2	1.5
KG 32 x 5, 32 x 10, 32 x 40	410	Ø 20	86	50	18	25	Ø 50	12.0	1.9

Acme Screw Version

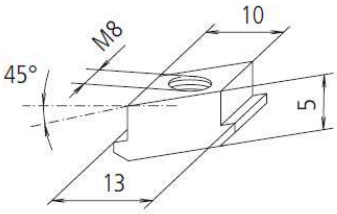
3-phase motors	a	b	c	d	Weight [kg]
RF17DRS71	360	Ø 139	119	Ø 120	9
RF17DRS71/BE	428		129		12
RF17DRS80	360	Ø 156	128	Ø 120	11
RF17DRS80/BE	428		139		14

Type	A	B	C	D	E	F	G	Weight [kg]	
								Basic length (dimension A)	Additional weight/ 100 mm
Tr 26 x 5	328	Ø 16	94	42	15	21	Ø 40	10.3	1.5
Tr 36 x 6	358	Ø 20	113	50	18	25	Ø 50	11.3	2.0

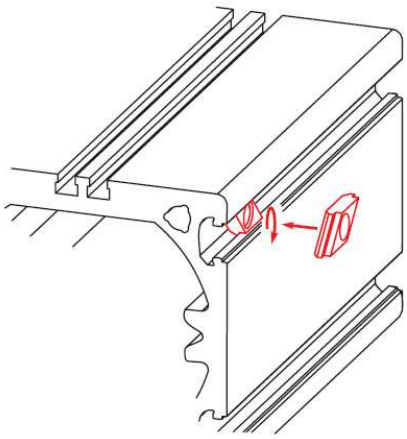
Accessories

Slot stone -R-

- Slot stones facilitate the fitting of attachments to the cylinder.
- To this end, they can be swivelled into the slot from above (Type -R-).



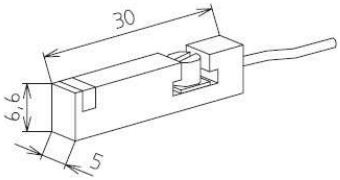
Type -R-

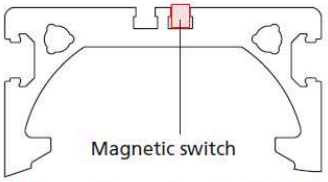


Code No.	Type	F [N]
4006223	Slot stone -R- M8	4,000

Magnetic switch

- Signals from the magnetic switch can be collected and evaluated by a customer-provided control unit (such as a PLC).
- The switch can be retrofitted in the lateral slot (protected by a cover profile as standard)





Code No.	Type
qzd050193	Magnetic switch, NO contact, cable length 6 m
qzd050334	Magnetic switch, NC contact, cable length 5.3 m

Magnetic switch – Technical data

	NC contact	NO contact
Voltage	10-30 V DC	5-30 V DC
Current consumption	< 10 mA	< 10 mA
Output current	Max. 100 mA	Max. 50 mA
Output type	PNP	PNP
Function indication	LED	LED
Ambient temperature	-25°C to + 85°C	-20°C to + 70°C
Protection class	IP 67	IP 68

Height Adjustable Systems

Precise Engineering

Our electric linear actuators are designed to deliver the very highest performance possible. Connect with us today, and let our experienced team guide you towards finding the perfect linear actuator solution for your unique needs. Elevate your projects with our industry-leading expertise and top-notch customer service.

Height Adjustable Ready Kit

Designed primarily for height adjustable work benches, the Height Adjustable ready kit is a simple micro hydraulic actuator system.

Height Adjustable Ready Kit

The Ready Kit Systems are delivered completely assembled and ready to use.

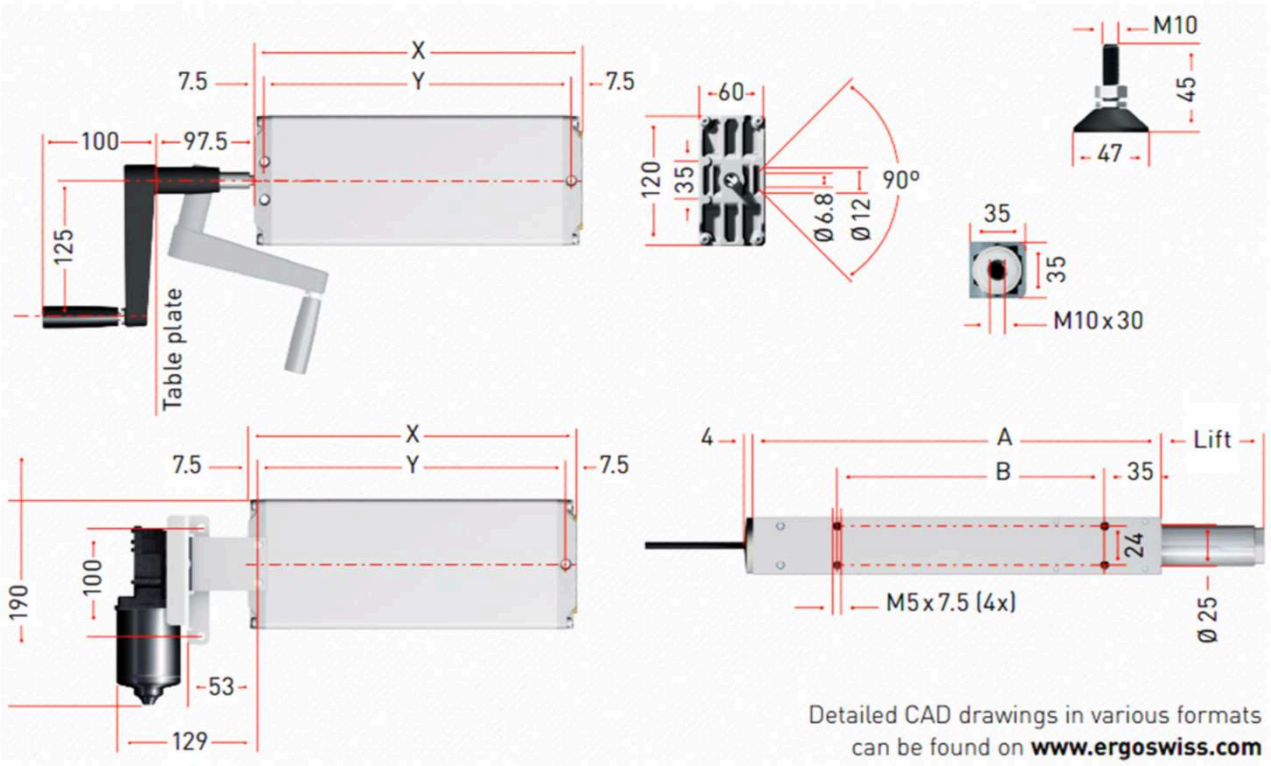
1. Crank or Motor drive
2. 2-off 8ft Sections of flexible tubing, 2-off 10 ft. sections of flexible tubing
3. 4-off lift cylinders
4. 4-off rubber feet

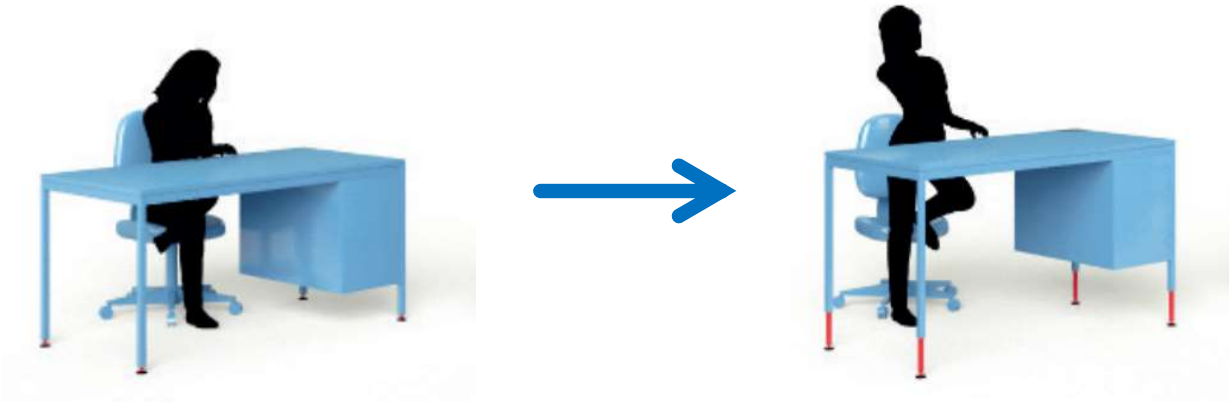
Features

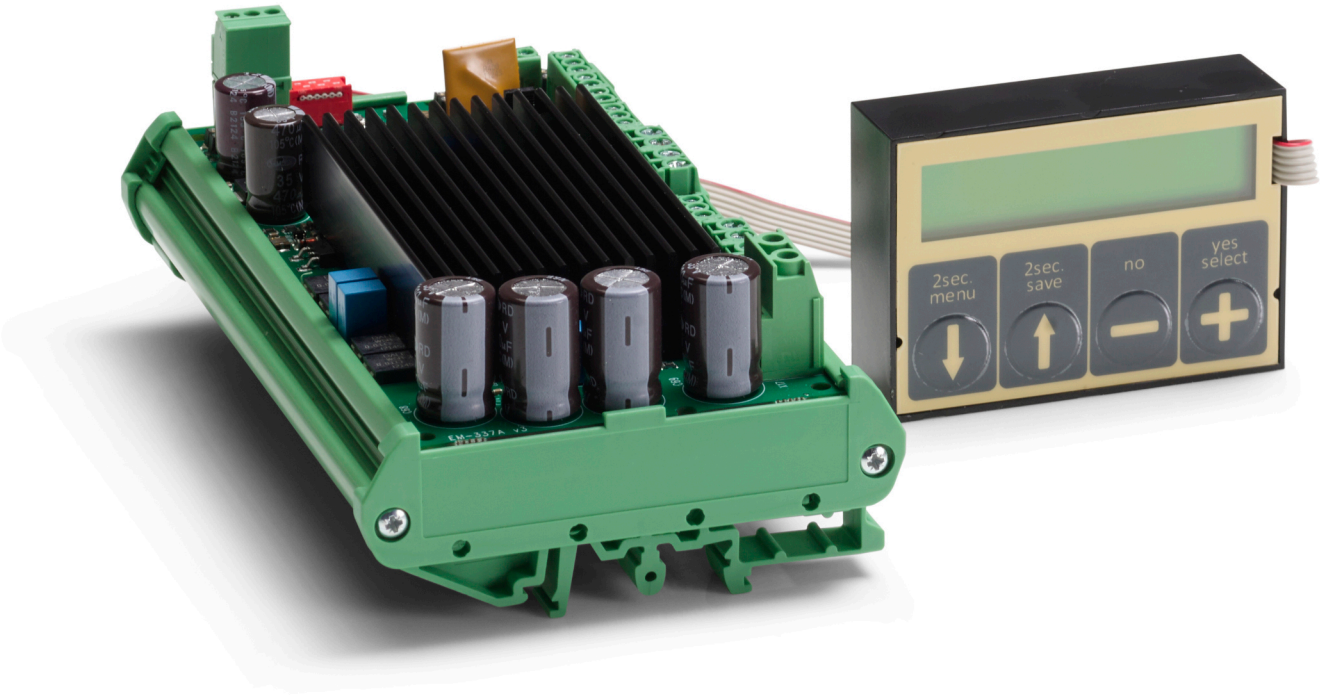
- Motor or crank driven
- Installation tips
- Drilling templates
- Maximum lift capacity 350kg
- Adjustment range 1 50/200/300/400mm

Ready Kit Systems

350Kg System	Linear Unit		Pump	
	A (mm)	B (mm)	C (mm)	D (mm)
150mm	252	165	298.5	283.5
200mm	317	240	358.5	343.5
300mm	442	340	480.5	465.5
400mm	542	340	600.5	585.5







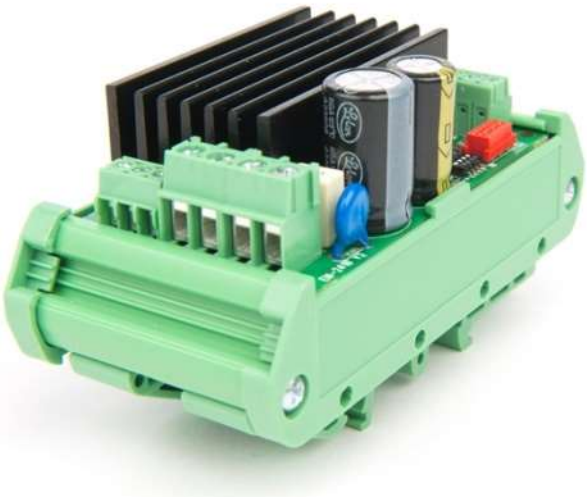
Linear Actuator Controllers

Premium Quality

Linear Actuator Controllers and Power Supplies are vital components in the operation of linear actuators. The controller is responsible for directing the motion of the actuator, often with precision control, while the power supply provides the necessary energy for operation. These components are crucial in many industries, including heavy industry, pharmaceutical, and military equipment.

AS23 Actuator Controller

The AS23 is used as an electronic speed controller and current sensing device for a DC actuator. This unit uses actuator feedback for adjustable end stop position. This also gives adjustable acceleration and deceleration raps.



AS23 Actuator Controller

Description

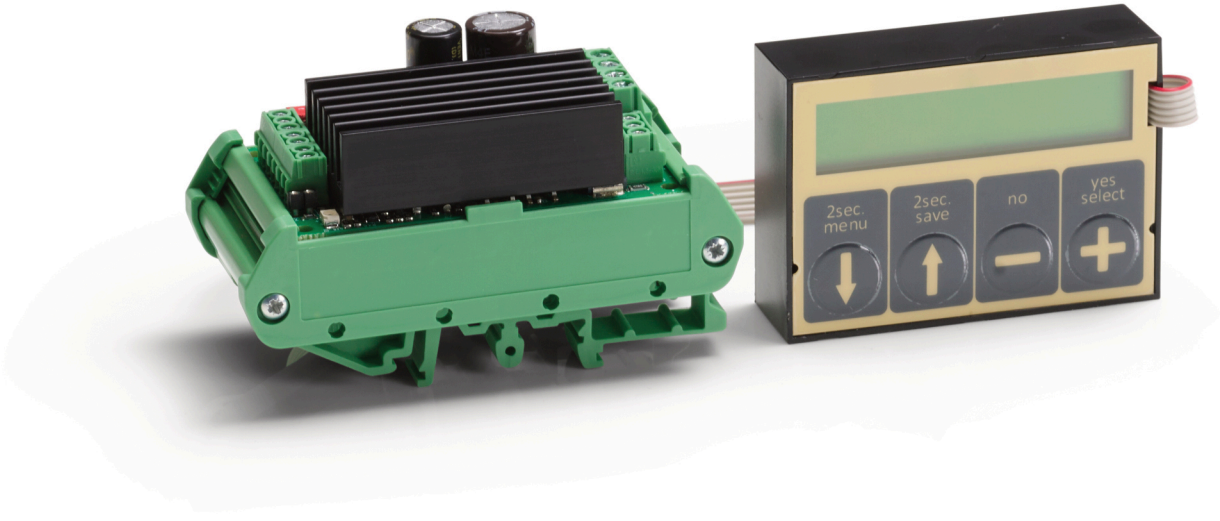
The AS23 is used as an electronic speed controller and current sensing device for a DC actuator. This unit uses actuator feedback for adjustable end stop position. This also gives adjustable acceleration and deceleration raps.

The AS23 performs an automatic current stop if the motor is in an unforeseen overload situation. When the adjusted current level is exceeded the unit stops the actuator, in either direction of stroke, protecting the actuator from overload and the application from mechanical damage.

The sensitivity of this, as well as the many other functions of this controller are set with the Digital Interface Unit.

Key Features

- Digitally adjustable current sensing in both directions of stroke.
- In the event of the actuator tripping, it will travel in the opposite direction for a pre-set period of time.
- A signal can be generated in the event of a trip situation.
- The actuator speed can be controlled, from 0-100% of the rated speed of the actuator, in either direction of movement.
- A soft start, and soft finish can be programmed (dependent on suitable actuator).
- 10 -35v DC Supply.

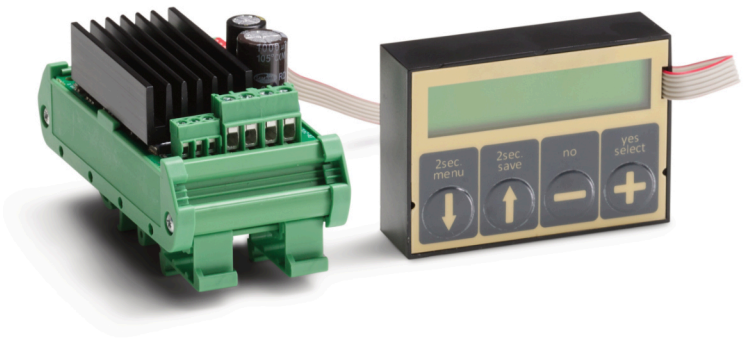


Functions of the AS23, and how to set the parameters

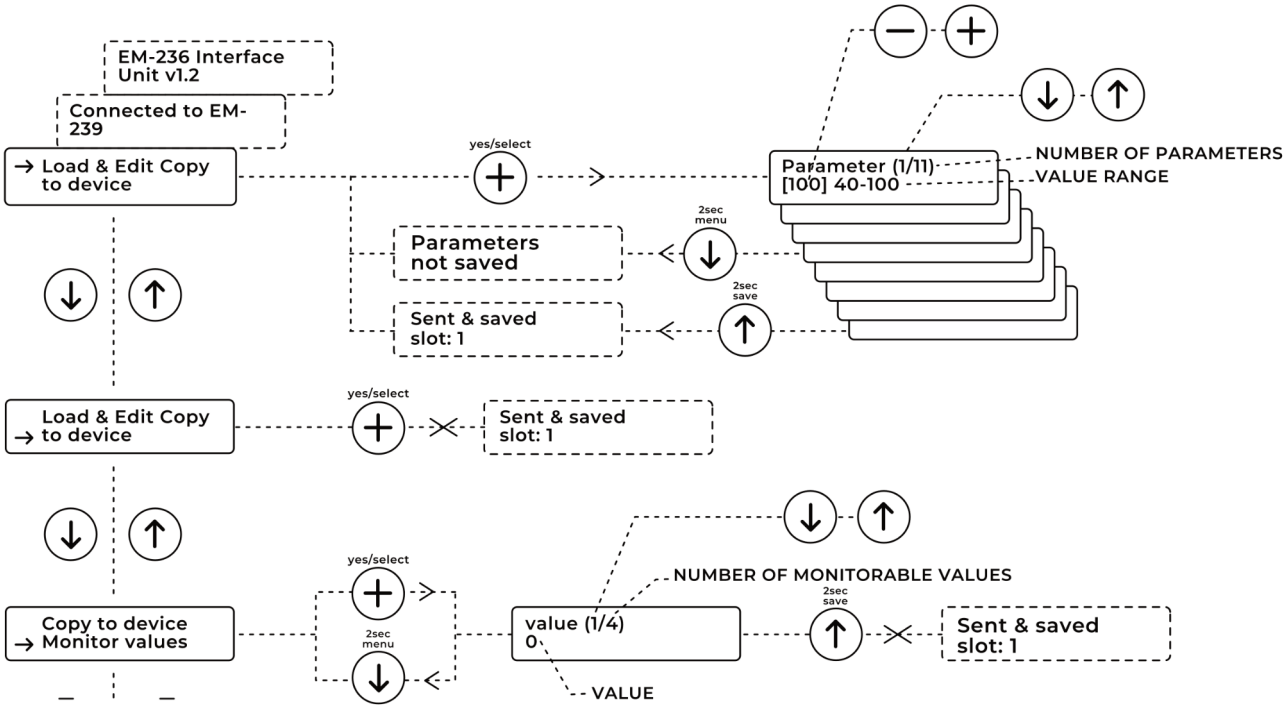
Each of the functions of the AS23 are programmed via the Digital Interface Unit (DIU). This simply plugs into the AS23 controller, to allow you to set, and adjust each parameter, the settings are saved, the DIU is then removed to prevent these settings being inadvertently altered.

No	Parameter	Options	Default	Description
1	Command Mode	0-1	0	0= Press and hold to drive - forward or reverse 1= One touch operation – will then drive forward and reverse to limit switches after one touch
2	Start condition combinations	0-3	1	Actuator will only drive in opposite direction when tripped on over current
3	Input logic combinations	0-3	0	Do not change– refer to IDGB
4	Run speed - 1	0-100%	100%	Normal running speed
5	Run speed - 2	0-100%	50%	Selectable secondary speed
6	Current limit – Forward 0.1 A – 20A	1-200	30	Forward direction trip protection
7	Current limit – Reverse 0.1 A – 20A	1-200	30	Reverse direction trip protection
8	Trip combinations	0-3	1	Trips on over current
9	Trip delay	0-255ms	20	Over current trips after 20ms
10	Fault output combinations	0-3	1	Output signal when tripped on over current
11	Over voltage limit	15-40V	35	Do not change – refer to IDGB
12	Load compensation	0-255	0	Do not change – refer to IDGB
13	Timeout	0-255s	0	Do not change – refer to IDGB
14	Reset for start and hour counter	0-1	0	Reset for time and hour count
15	Start ramp 0-5 seconds	0-500	100	Time to accelerate to full speed
16	Stop ramp 0-5 seconds	0-500	100	Time to decelerate to stop
17	Start kick	0-200ms	0	Do not change – refer to IDGB
18	Current trip auto reverse 0-5 seconds	0-500	0	Actuator will drive in opposite direction for so many seconds following a current overload trip
19	Reverse count limit	0-65000	1	Electronic home limit
20	Forward count limit	0-65000	1000	Electronic fully extended limit
21	Reverse limit advance	0-5000	100	Electronic position to start deceleration ramp in reverse direction
22	Forward limit advance	0-5000	100	Electronic position to start deceleration ramp in forward direction
23	Home run initialisation	0-2	0	Press forward and reverse command for 5 seconds to initialise home run
24	PWM frequency	1-2	1	Reduces audible noise from motor

Digital Interface Unit DIU



Connecting it to a powered driver unit



Start Up

The DIU is started up by connecting to the AS23 Load & Edit This will pick up the parameters from the AS23.

Load & Edit

Parameters will be displayed and you can scroll and edit these with the DIU. After editing a value, it will blink three times before it is valid.

NOTE. Edited parameter list is only in the DIU until you save. After saving (by pressing the SAVE button for 2 seconds) new edited parameters will be sent to the AS23 and stored in its memory.

Copy to Device

This will copy all the parameters within the DIU to the Controller in one command.

Monitor Values

This will enable the user to monitor various dynamic values during the use of the AS23.

1/6	Motor Current 0-20A (0-200)
2/6	PWM level % 0-100% (0-100)
3/6	Hour Counter (Max. 65535h)
4/6	Start Counter (max.65535)
5/6	Carry Counter for Start Counter
6/6	Pulse Counter Value 0-65000

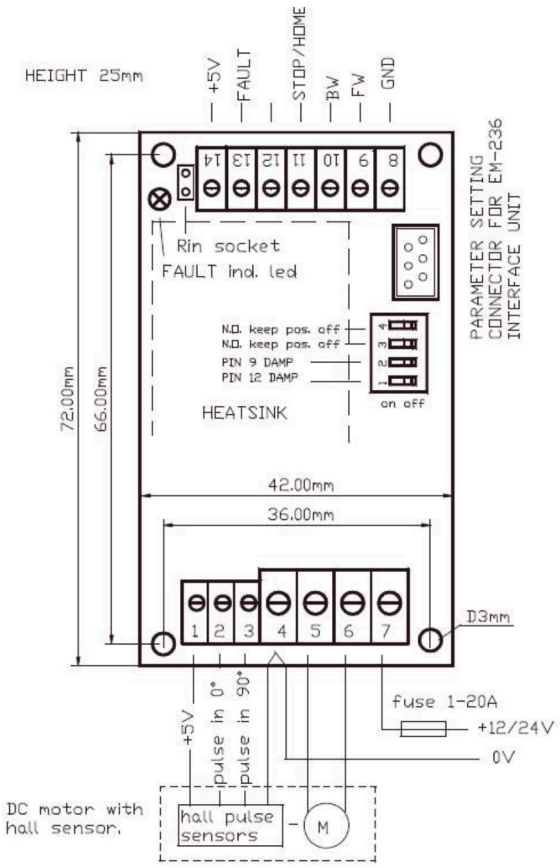
In the event of a fault, the LED located on the AS23 will flash to signify the following faults –

Power on.	One blink
Current on limit.	LED on
Current trip.	Fast blinking...
Zero-current trip.	Long blink- short pause...
Over-voltage.	4 x blink - pause...
Overheat.	Short blink - long pause...
Timeout.	3 x blink + long blink...
Fault input.	2 x short + 1x long blink...

Connections

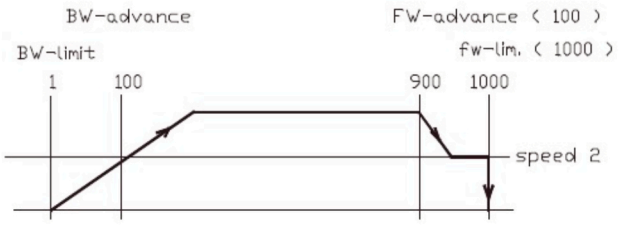
Supply voltage must be filtered DC of 10-35V, and ripple should be less than 30% at full load.

CAUTION ! Wrong polarity can damage the unit.
CAUTION ! Unit doesn't have an internal fuse, so an external fuse should be added if fuse required.



Actuator Performance Example

In this example the parameters have been set to the default values.



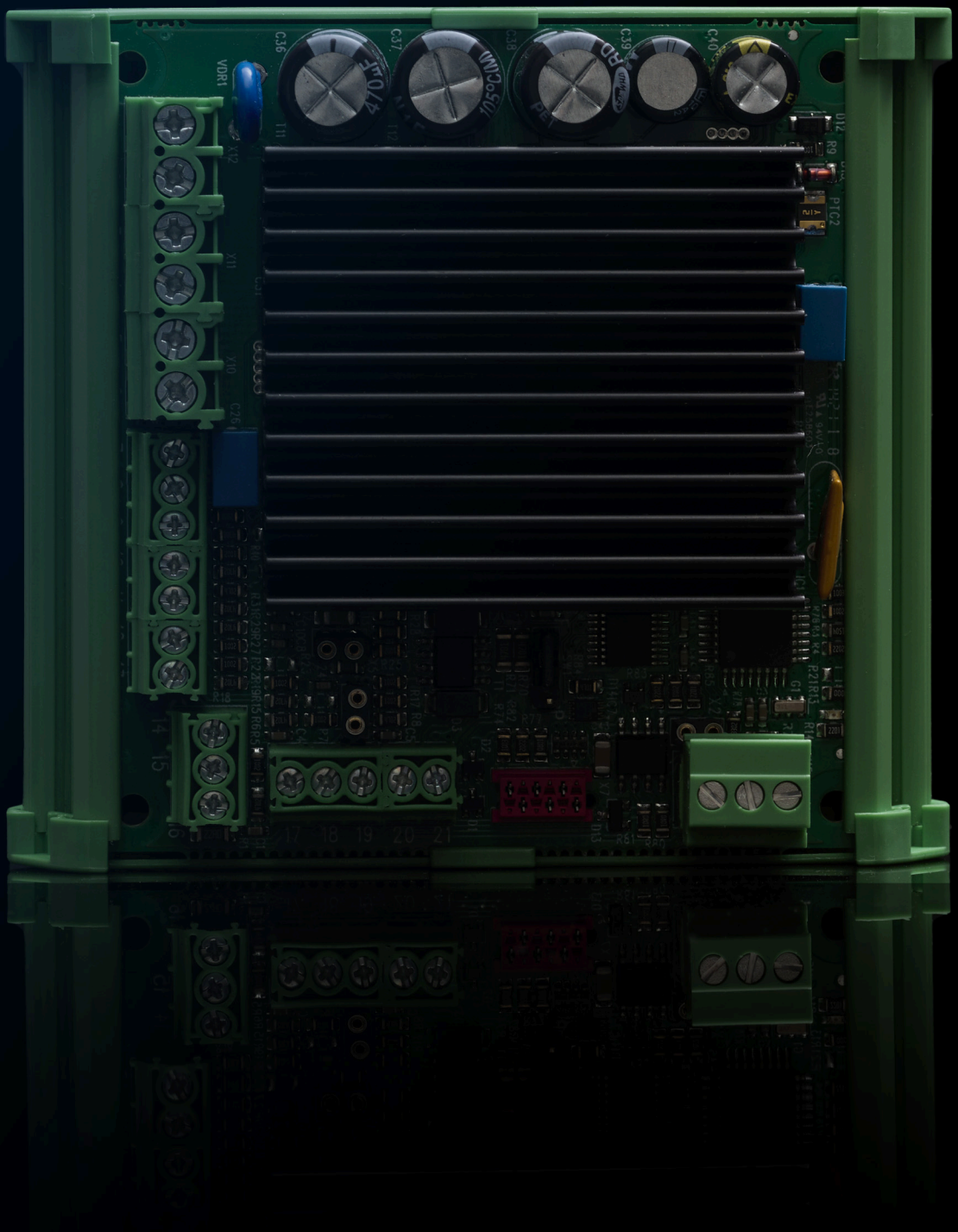
Home Run = Pule Count Reset

The hall sensor pulse count need to be reset for new installations. Initialising the home run will start the actuator running in the reverse direction at set speed 2. When the actuator hits the inward limit switch the counter is reset to 0.

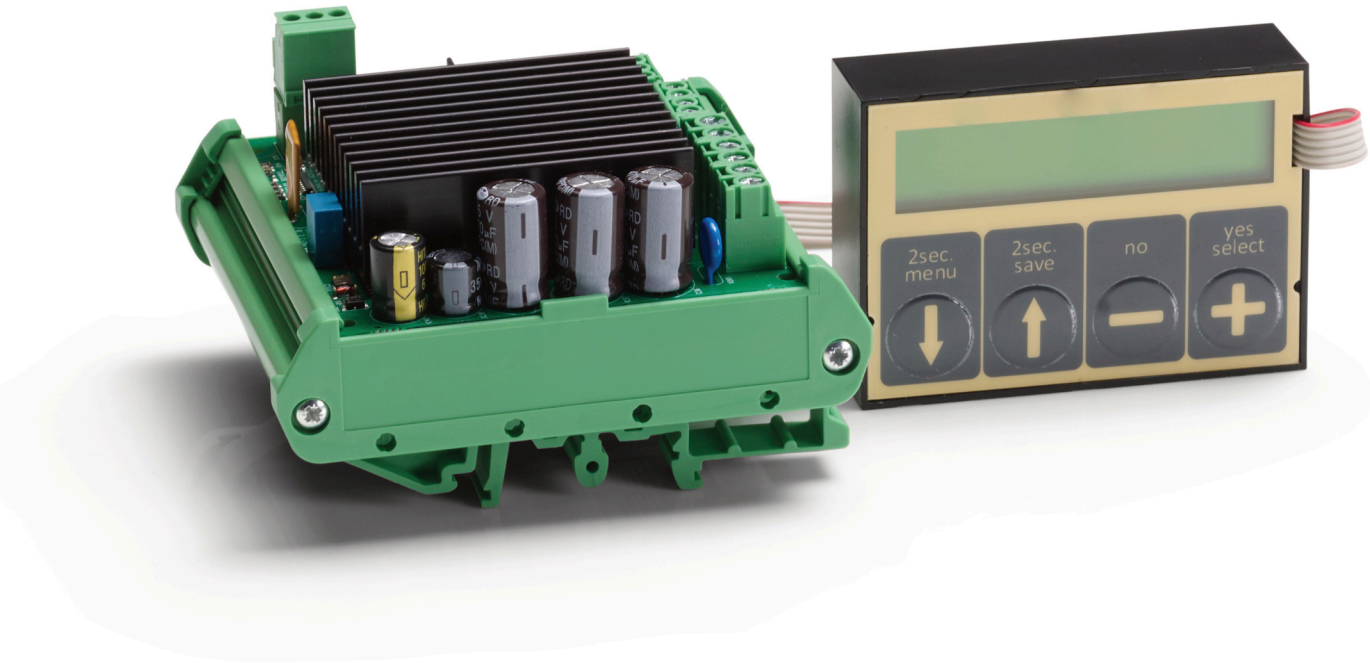
Run the actuator to other end of stroke and check the forward position pulse count, this value should be set in parameter 20, forward count limit.

AS26A Synchronised Controller

The AS26A is used to drive two actuators in parallel (or synchronised).



AS26A Synchronised Controller



Description

The AS26A is used to drive two actuators in parallel (or synchronised). The synchronisation is done by comparing the pulse feedback signals from each actuator and then making fine adjustment to the actuators speed to ensure they stay together.

The controller will maintain the synchronisation even when the load on each actuator is different. When the imbalance becomes to large the controller will stop both actuators to prevent excessive mechanical stress or damage.

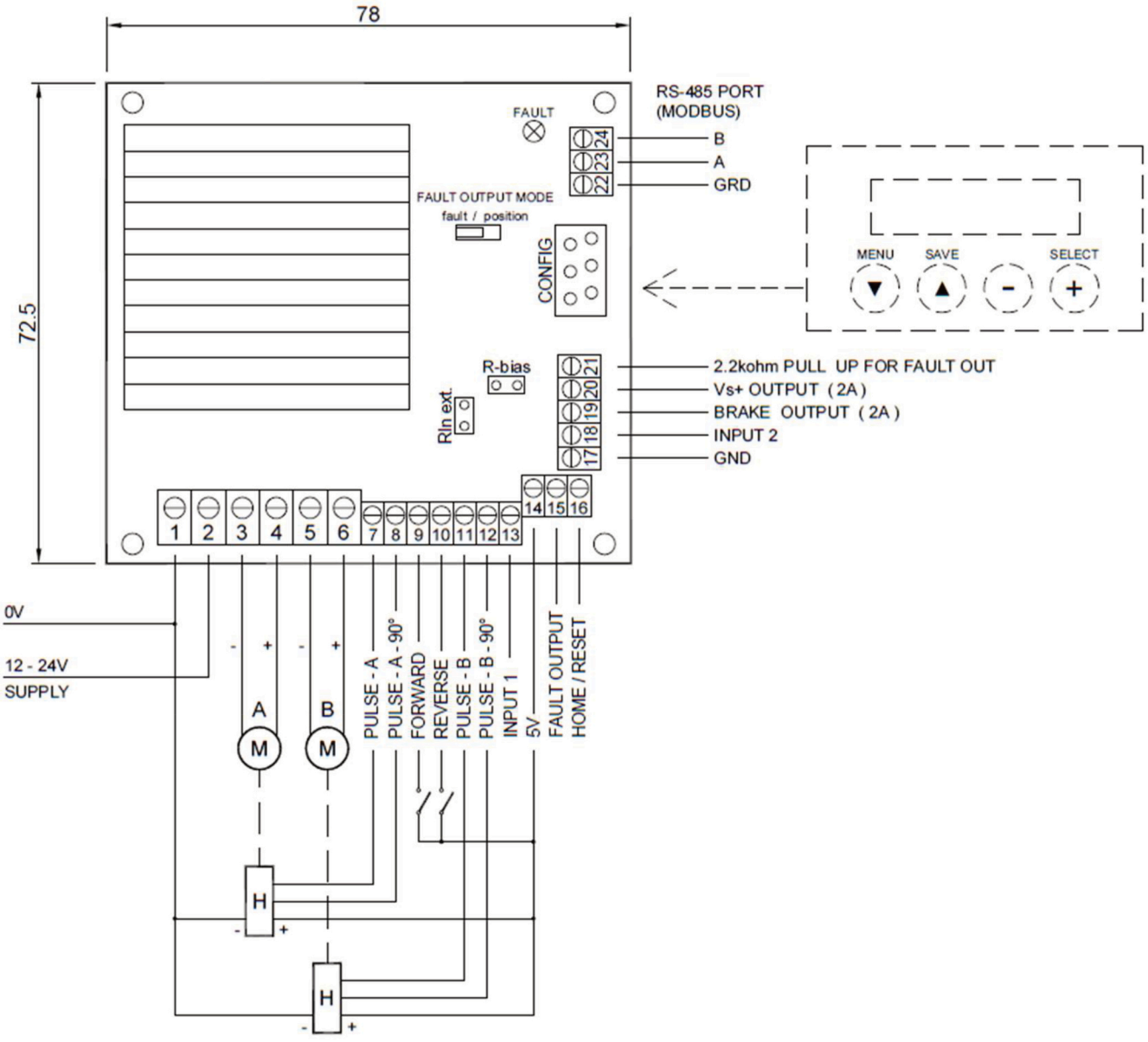
The AS26A performs an automatic current stop if the motors exceed the adjustable current limit.

Current limit and other parameters can be set with the Digital Interface.

Key Features

- Supply 1 0-30v DC
- Digital parameter setting
- 2 x 1 0A constant
- 2 x 20A (25% duty)
- DIN rail mount included
- Start and Stop ramp speed adjustment

AS26A
Connection Diagram



AS26A Technical Details

Pulse Feedback

The pulse inputs can work with either, positive or, negative feedback signals.
When the pulse logic switch is set to the negative position the inputs are internally pulled to 5V with a 10kOhm resistor.
When the pulse logic switch is set to the positive position the inputs are pulled to 0V.
The controller counts pulse edges so the count value displayed will be double compared to the actual number of pulses generated.

Fault Output

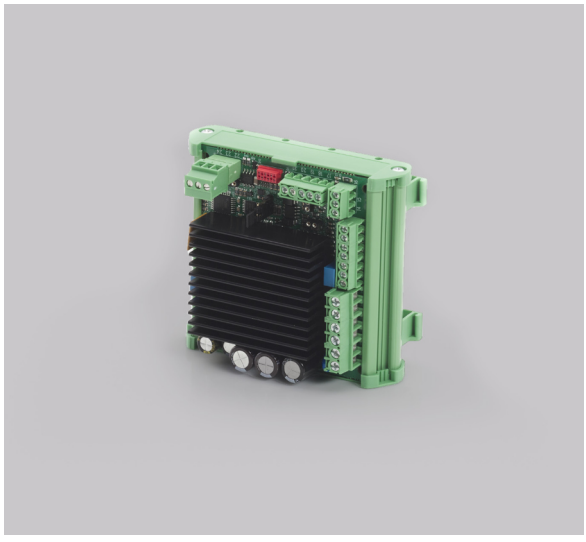
The fault output is activated if any one of the following conditions occurs.

- Difference limit exceeded
- Pulses have disappeared
- Temperature is too high
- Current limit is exceeded

Fault output is NPN open collector max. 50mA and is pulled down on alarm.

Input Signals

Signal level	High 4-30VDC
	Low 0-1VDC



AS26A Technical Details

Connections

Supply voltage must be filtered DC of 12-35V, and ripple should be less than 30% at full load. CAUTION ! Wrong polarity can damage the unit.

CAUTION ! Unit doesn't have an internal fuse, so an external fuse should be added if fuse required.

Values that can be monitored from the Digital Interface

- 1/8 Fault Code
- 2/8 Motor 'A' Current 0.1A/ digit
- 3/8 Motor 'B' Current 0.1A/ digit
- 4/8 Current limit setting 0.1 A/digit
- 5/8 Motor 'A' pulse count
- 6/8 Motor 'B' pulse count
- 7/8 Operating voltage 0.075A/ digit
- 8/8 Safety Edge input voltage 0.05V/ digit

LED Fault Codes. LED will flash to indicate fault condition.

Homing in Progress	**Continuous Light**
Homing failed or position corrupted	1 blink
Over Current	2 blinks
No Pulse detected	3 blinks
Motor pulse difference to large	4 blinks
Over voltage	5 blinks
Safety edge failure	6 blinks
Bus time-out	7 blinks

Home Routine

The home routine is a calibration cycle for balancing the system. Home routine can be started by giving a 'forward' and 'backward' command at the same time for 3 seconds or with a signal to the 'home' Input (Terminal 16) for 5 seconds.

The home routine can be interrupted at any time with a new signal to either 'forwards' or 'backwards' inputs or a signal to the 'stop' input. When the home routine starts both actuators start to run in the same direction and will run until either, the current limit has been exceeded or, the pulses stop because the actuators have reached their limit switches.

During the home routine the fault LED will be continuously on. When both actuators have also stopped and the fault LED has gone off the home routine is complete and the pulse counters have been reset to zero. If there is a need to change the home routine direction this can be done by swapping the motor wires. It would also be necessary to swap the hall sensor input wires.

Auto Balance

When auto balance is enabled it automatically corrects the difference between the pulse count from each actuator every time the system is driven to the home position. The point at which the auto balance is triggered is related to the home position and can be adjusted. The auto balance trigger point is defined by the number of pulses before the home position and can be set using parameter 12.

Pulse Feedback

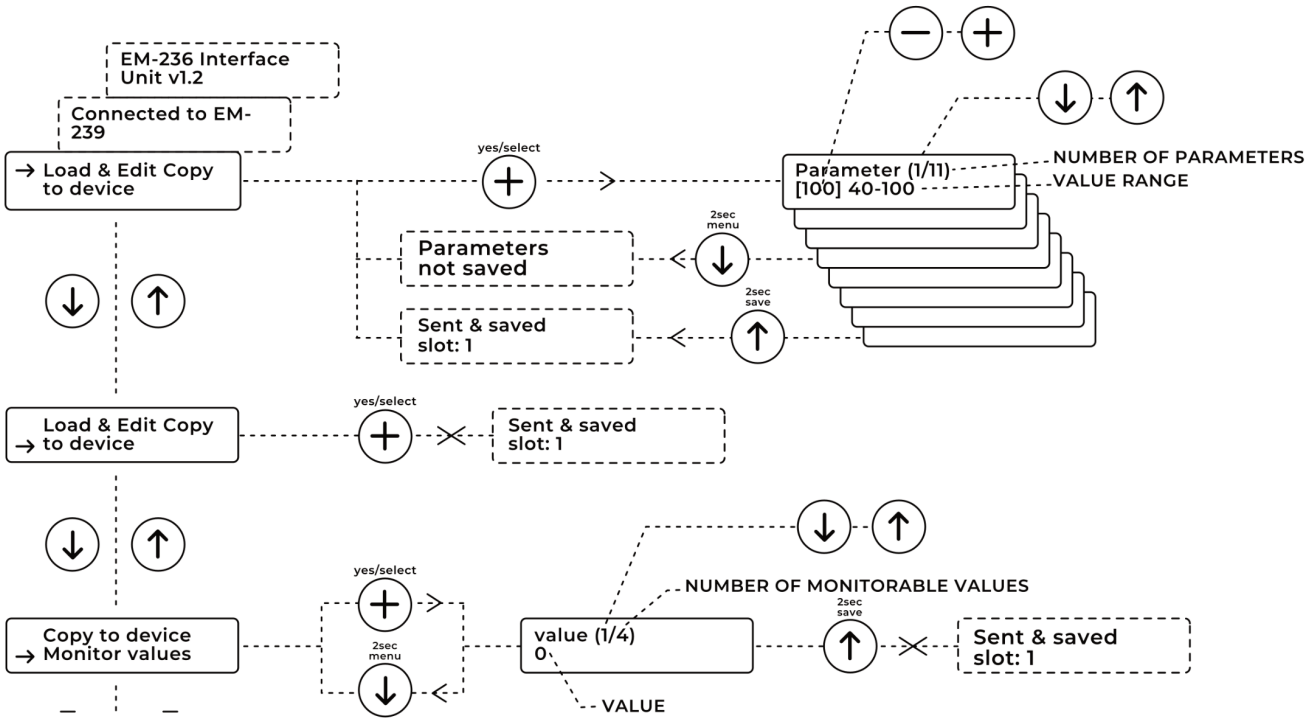
The pulse inputs can work with either, positive or, negative feedback signals.
When the pulse logic switch is set to the negative position the inputs are internally pulled to 5V with a 10kOhm resistor.When the pulse logic switch is set to the positive position the inputs are pulled to 0V.
The controller counts pulse edges so the count value displayed will be double compared to the actual number of pulses generated.

Digital Interface Programming

No	Parameter	Options	Default	Description
1	Motor Output regulation	10-30	0	Maintains motor supply voltage even if input voltage varies
2	Over Voltage limit	1 5-40	35	Controller shuts down when over voltage is reached
3	Motor output Frequency	1 -2	1	PWM frequency, silent when set to 216kHz
4	Hall Sensor type	1 -2	2	1 =PNP, 2=NPN
5	Control Mode	1 -3	1	1 = Continual push required, 2= One push operation, stops with opposite direction command 3= One push operation, changes direction without stop in opposite direction
6	Input1 (Pin 13) function options	1 -4	1	1 = Stop (disable) 2= Change to speed 2 3= End Limit switch forward direction, 4= End Limit switch forward direction, reverse logic 5= Disable
7	Input 2 (Pin 18) function options	1 - 6	2	1 = Safety switch input with opening contact (N.C.) 2= Safety switch input with closing contact (N.O.) 3= Safety switch input with (N.O.) contact and line monitor 4= Speed 2 activation 5= End Limit switch reverse direction 6= End limit switch reverse direction, reverse logic 7= Disable
8	Brake Output	0-2	0	0= Activated when over voltage is detected 1 = Activated when driving, use to release mechanical brake 2= Activated at either end of stroke (with respect to pulse count)
9	Running Speed	20-100%	100	Running speed can be limited to a percentage of normal running speed
10	Home Speed / Speed 2	20-100%	60	Home run speed set to a percentage of normal running speed
11	Current Limit forward	1-250	50	Current limit when driving forward direction (0.1-25A)
12	Current Limit reverse	1-250	50	Current limit when driving reverse direction (0.1 -25A)
13	Start kick	0-250	1	0= Start kick disabled 1 = Start kick after home run 2-250 = Start kick duration in milliseconds also after current trip
14	Fault Output (Pin 1 5) function options	1 -4	1	Do not change– refer to IDGB
15	Start Ramp	1 -25	1 0	Time to accelerate to full speed 1-25 = 0.1-2.5s
16	Stop Ramp	1 -25	2	Time to decelerate to stop 1-25 = 0.1-2.5s
17	Pulse Lost reaction time	1-100	50	Time to react to lost pulses 1-100 = 0.01 to 1 s
18	Safety reverse	0-30	0	Safety reverse drive time after obstacle detected 0 = not in use 1 -1 0 = 1 to 10 seconds safety reverse when driving in either direction 1 1-20 = 1 to 10 seconds safety reverse when driving forwards 21-30 = 1 to 10 seconds safety reverse when driving reverse
19	Load compensation	0-255	0	Do not change– refer to IDGB
20	Synchronisation accuracy	1 -30	1 5	Defines how intensively the controller adjusts to maintain synchronisation. High value more aggressive
21	Reverse count limit	0-65000	40	Electronic home limit
22	Forward count limit	0-65000	1000	Electronic fully extended limit
23	Reverse limit advance	0-65000	200	Electronic position to start deceleration ramp, reverse direction
24	Forward limit advance	0-65000	200	Electronic position to start deceleration ramp, forward direction
25	Serial line configuration	1 -8	1	1 = 9600bps 8N1 5 = 1 9200bps 8N1 2 = 9600bps 8N2 6 = 1 9200bps 8N2 3 = 9600bps 8E1 7 = 1 9200bps 8E1 4 = 9600bps 8O1 8 = 1 9200bps 8O1
26	Modbus address	1-247	1	Modbus address 1 -247
27	Not used			
28	Not used			

Digital Interface Unit DIU

Connecting it to a powered driver unit



START UP

Interface unit is started up by connecting it to a powered driver unit

Load & Edit

This will pick up the parameters from the driver unit. Parameters will be displayed and you can scroll and edit those with EM-236. After editing a value, it will blink three times before it is valid.

NOTE. Edited parameter list is only in RAM until you save. After saving (pressing 2sec save button) new edited parameters will be sent to driver unit and stocked in to selected memory slots of the EM-236 Interface unit.

Copy to device

This command will send the parameter list in selected slot in to the driver unit.

Monitor values

This will enable user to monitor some dynamic values during the use of the driver. Monitor able values can be scrolled with arrow -buttons.

Memory

* Show selected

From here you can see the parameter list which is stored in the slot which is selected at the time.

First you get a message, which slot is selected and for what product the parameters are. Then you are displayed the parameters, which you can scroll trough, but not edit until those are saved.

*Select slot

Here you choose which one of the 5 memory slots is active. When you save, copy, or go to "Show selected", the operation is referred to the slot you have chosen here.

SAVING

In "Load & Edit" press "2sec save" -button.

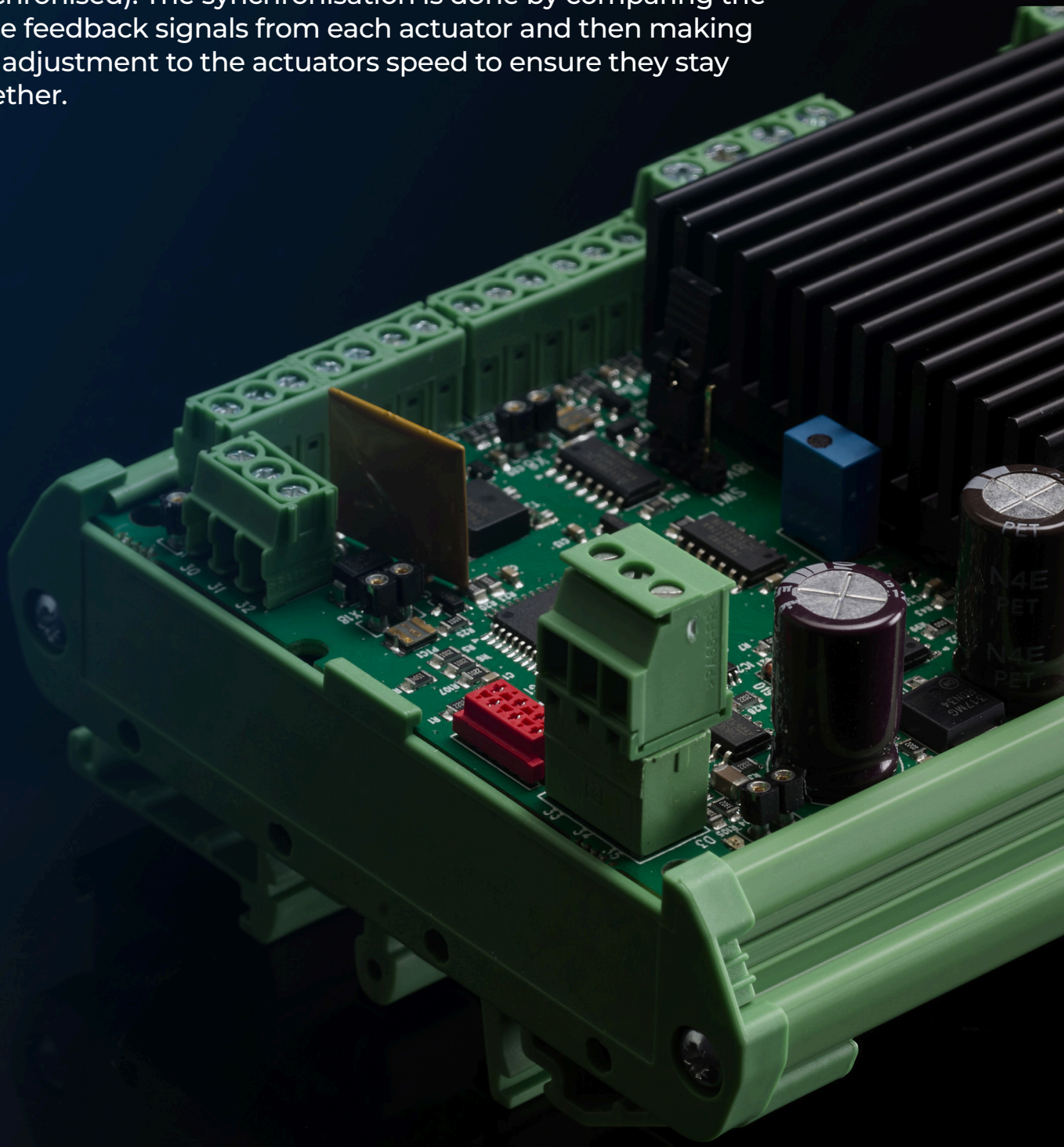
The displayed parameters (edited or not) will be sent to the driver device and saved to the interface units active slot.

"Copy to device" will send the parameters that are in the interface units active slot to the driver device.

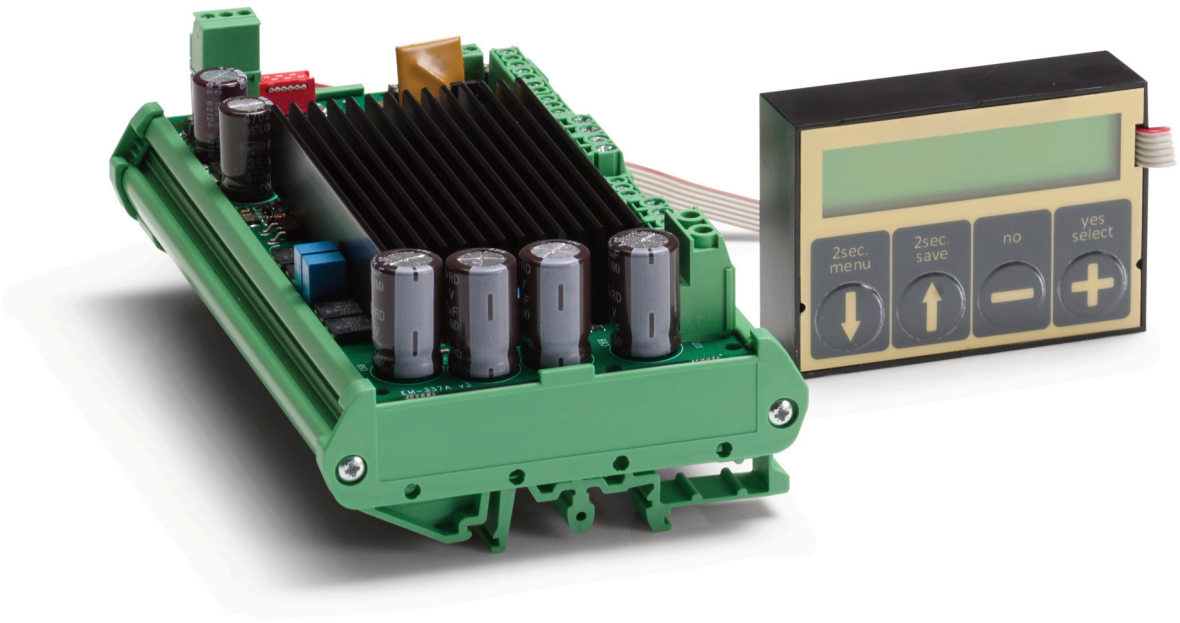
In all other situations, pressing "2sec save" -button will send the parameters from active slot to driver unit.

AS24 Quattro Actuator Controller

The AS24 is used to drive up to 4 actuators in parallel (or synchronised). The synchronisation is done by comparing the pulse feedback signals from each actuator and then making fine adjustment to the actuators speed to ensure they stay together.



AS24 Quattro
Actuator Controller



Description

The AS24 is used to drive up to 4 actuators in parallel (or synchronised). The synchronisation is done by comparing the pulse feedback signals from each actuator and then making fine adjustment to the actuators speed to ensure they stay together.

The controller will maintain the synchronisation even when the load on each actuator is different. When the imbalance becomes to large the controller will stop all actuators to prevent excessive mechanical stress or damage.

The AS24 performs an automatic current stop if the motors exceed the adjustable current limit.

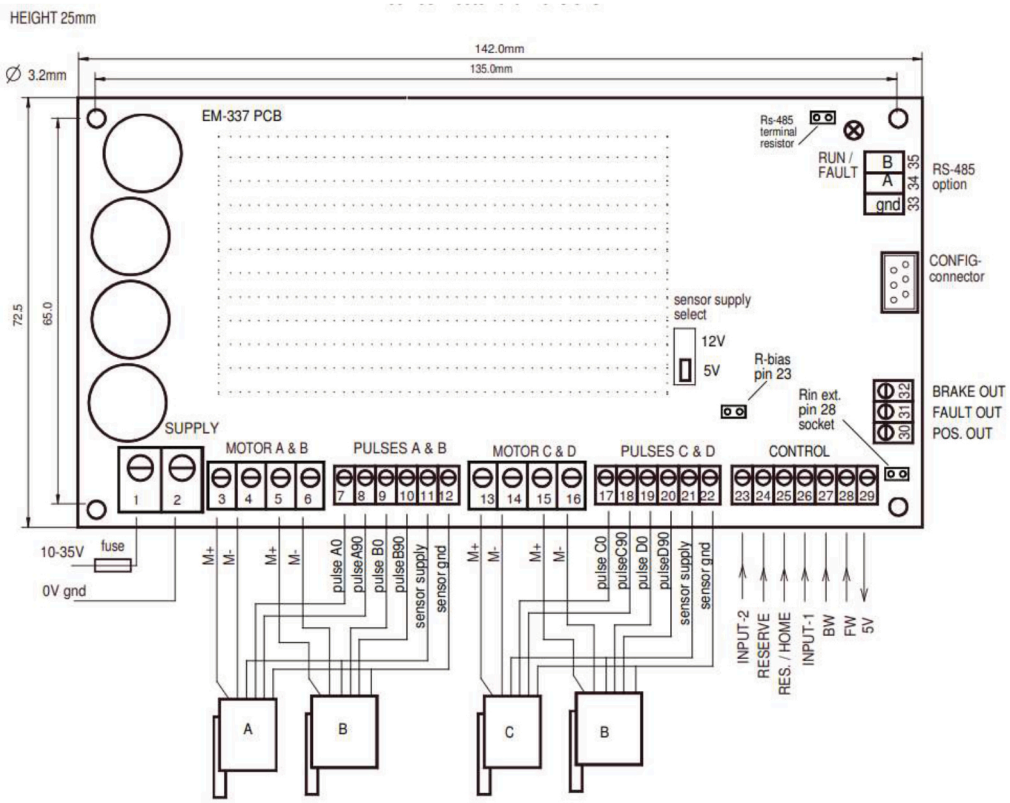
Current limit and other parameters can be set with the Digital Interface.

Key Features

- Digitally adjustable current sensing in both directions of stroke.
- Synchronisation will keep all actuators in the same position.
- If there is a synchronisation error all actuators will stop.
- Adjustable acceleration and deceleration
- The actuator speed can be controlled, from 0-100% of the rated speed of the actuator, in either direction of movement.
- A soft start, and soft finish can be programmed
- 10 -35v DC Supply

Technical Data

Supply voltage	1 0-35v DC
Under voltage shutdown	8v DC
Over voltage limit	38v DC
Motor Current	4 x 15A duty cycle 50% 4 x 20A duty cycle 25% 4 x 30A maximum at start
Current Limit 1 -20A	
Over temperature limit	90°C
PWM frequency	2kHz
Input control logic levels	NPN ON=0-1 v, OFF= 4-30v or open PNP on=4-30v, OFF=0-1 v or open
Control input impedance	1 0Kohm
Fault out	NPN open max. 30v 50mA
Disable in NPN – Logic	0-1v = Fault
5v Auxiliary output	maximum 20mA
Supply connection	4mm²
Motor	2.5mm²
Control	2.5mm²
Weight	200g
Operating Temperature	0-60°C

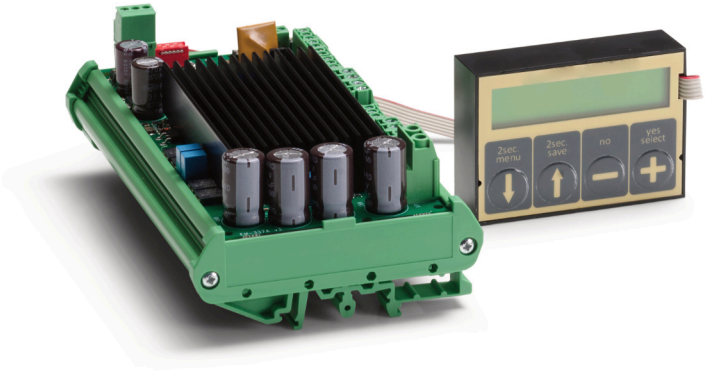


Functions of the AS24, and how to set the parameters

Each of the functions of the AS24 are programmed via the Digital Interface Unit (DIU). This simply plugs into the AS24 controller, to allow you to set, and adjust each parameter, the settings are saved, the DIU is then removed to prevent these settings being inadvertently altered.

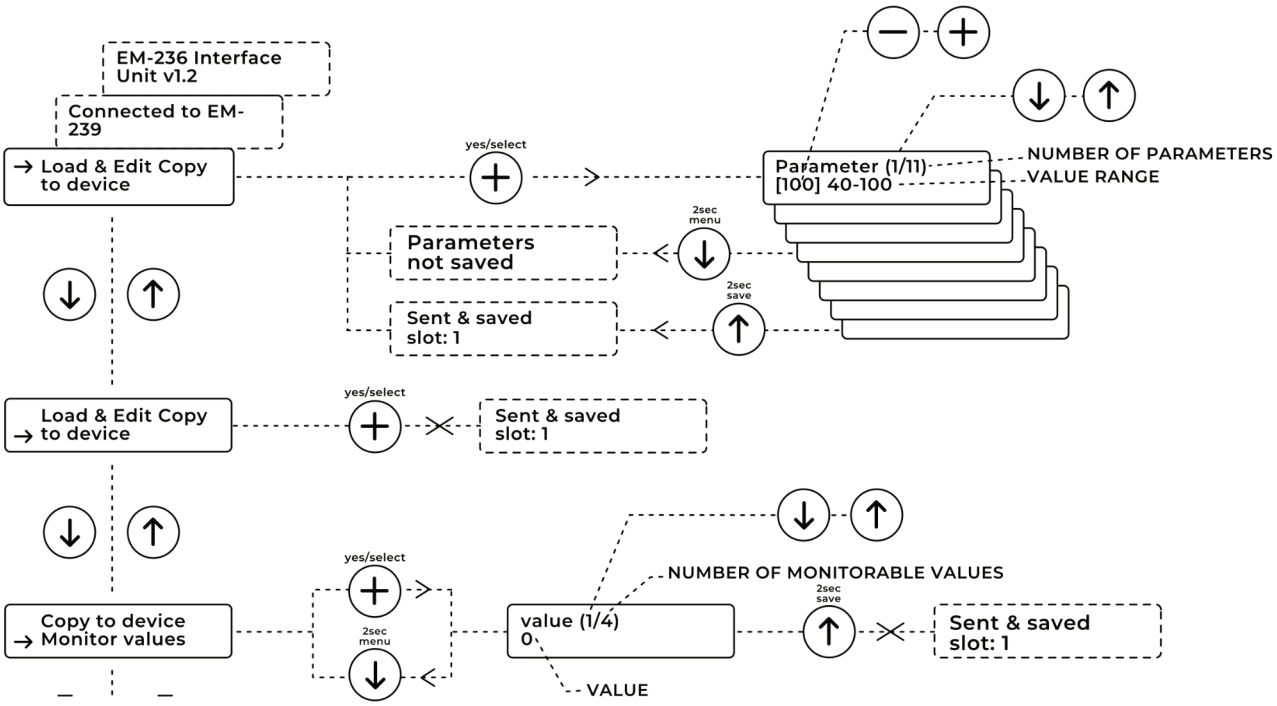
No	Parameter	Options	Default	Description
1	Motor Output regulation 10-30v	0 - 30	0	Voltage regulation, refer to IDGB
2	Over Voltage 15-40v	15 - 40	35	Protects the unit and switches off if the supply voltage is exceeded
3	PMW Frequency	1 - 2	1	1=2kHz 2=1 6kHz
4	Motor Pulse Logic	1 - 2	2	1=NPN 2=PNP
5	Control Mode	1 - 3	1	1= Continuous (Push and hold) 2=Impulse (One touch operation) 3=Impulse 2 (one touch and change direction without stop input)
6	Input – 1 (Pin 26)	1 - 4	1	1=disabled 2=Set speed 2 activation 3=End limit forward direction 4=End limit forward direction inverted
7	Input – 2 (Pin 23)	1 - 6	2	1=safety switch input with open contact N.C. 2=safety switch input with closed contact N.O. 3=safety switch input with closed contact N.O. with line monitor 4=Set speed 2 activation 5=End limit backward direction 6=End limit backward direction inverted
8	Brake output control (Pin 19)	0 - 2	0	0=Over voltage 1=run indication 2=end of stroke indication
9	Motor speed 20-100%	20 - 100	100	Motor run speed
10	Set Speed 2 20-100%	20 - 100	60	Set speed 2
11	Current limit – Forward 0.1 A – 25A	1 - 25	50	Forward direction trip protection
12	Current limit – Reverse 0.1 A – 25A	1 - 25	50	Reverse direction trip protection
13	Not used			
14	Not used			
15	Start ramp 0-2.5s	0 - 25	10	Start ramp
16	Stop ramp 0-2.5s	0 - 25	10	Stop ramp
17	Difference Limit 0-255 pulses	0 - 255	50	Pulse Difference limit between motors 0=disabled
18	Safety reverse after trip	0 - 30	0	0=disabled 1=1 -1 0s reverse time in both directions 2=1 1-20 reverse time 1 -1 0s only reverse direction 3=21 -30 reverse time 1 -1 0s only forward direction
19	Load compensation	0 - 255	0	Torque boost at low speed
20	Synchronisation strength	1 - 30	10	Wide or tight tolerance between the motor positions
21	Reverse Count Limit	0 - 65000	40	Electronic end limit
22	Forward Count Limit	0 - 65000	1000	Electronic end limit
23	Reverse limit deceleration	0 - 65000	200	Electronic position to start deceleration ramp reverse direction
24	Forward limit deceleration	0 - 65000	200	Electronic position to start deceleration ramp forward direction
25	Serial Line configuration	1 - 8	1	Refer to IDGB
26	Modbus address	1 - 247	1	Refer to IDGB
27	Not used			
28	Not used			

Digital Interface Unit DIU



Schematic Diagram for DIU -

Connecting it to a powered driver unit



Start Up

The DIU is started up by connecting to the AS24.

Load & Edit

This will pick up the parameters from the AS24 Parameters will be displayed and you can scroll and edit these with the DIU. After editing a value, it will blink three times before it is valid.

NOTE. Edited parameter list is only in the DIU until you save. After saving (by pressing the SAVE button for 2 seconds) new edited parameters will be sent to the AS24 and stored in its memory.

Copy to Device

This will copy all the parameters within the DIU to the AS24 in one command.

Monitor Values

This will enable the user to monitor various dynamic values during the use of the AS24.

Fault Output Indication

In the event of a fault, the LED located on the AS24 will flash to signify the following faults –

1 blink	Home run in progress
2 blinks	Over current
3 blinks	No pulses detected
4 blinks	Motor position difference to big
5 blinks	Over voltage
6 blinks	Safety edge wiring fault

Connections

Supply voltage must be filtered DC of 10-35V, and ripple should be less than 30% at full load.

CAUTION ! Wrong polarity can damage the unit.
CAUTION ! Unit doesn't have an internal fuse, so an external fuse should be added if fuse required.

HOME RUN = pule count reset

The hall sensor pulse count need to be reset for new installations. Initialising the home run will start the actuator running in the reverse direction. When the actuator hits the inward limit switch the counter is reset to 0.

Run the actuator to other end of stroke and check the forward position pulse count, this value should be set in parameter 22, forward count limit.

Actuator Performance Example

Via the Digital Interface Unit you are also able to monitor various data –

1	Fault Code as indicated by LED
2	Motor A Current 0.1 A/digit
3	Motor B Current 0.1 A/digit
4	Motor C Current0.1 A/digit
5	Motor D Current0.1 A/digit
6	Current Limit setting 0.1 A/digit
7	Motor A pulse counter value
8	Motor B pulse counter value
9	Motor C pulse counter value
10	Motor D pulse counter value
11	Operating voltage 0.05v/digit
12	Safety edge voltage 0.05v/digit

INDUSTRIAL DEVICES

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