

# LINEAR MOTORS STAINLESS STEEL



Stainless steel motors from LinMot meet the highest level of hygiene.

**Profilex**  
SYSTEMS

**Profilex s.a.**

6b, Z.I. In den Allern  
L-9911 Troisvierges  
Phone LU : +352 99 89 06  
Phone BE : +32 28 88 16 29  
Fax : +352 26 95 73 73

*info@profilex-systems.com*  
*www.profilex-systems.com*

## Product Description

Developed for a challenging environment, these compact linear motors are designed entirely of EN 1.4404/AISI 316L stainless steel. The motor is designed with hygiene as its primary goal. In order to avoid buildup of contaminants, the motor is designed without unnecessary edges, corners, holes, and threads. In addition, all joints are welded, so no seals are required.

The stainless steel family of motors consists of three sizes and has a range of strokes up to 980 mm. These drives can be used in machines and systems for processing food products or in pharmaceutical industry operations. They are capable of handling extremely rough or corrosive environments without a problem and can be cleaned with any typical industrial cleaning products.



### Special Wash-Down Bearings

For optimal cleaning of the linear motors, LinMot offers stainless steel motors with specially developed wash-down bearings. They are conceived so that any contaminants can be cleaned off under high pressure without leaving any residue. The material used, just like the bearing material indicated above, has been specially certified for food product processing.

### External Guide Bearings

The linear motors are equipped with external sliding bearings that guide the slider precisely over the entire stroke length. This means that the motion inside the stator occurs with no contact whatsoever. The bearing material is specially designed for use with food products and medical applications and is certified to FDA standards.

### IP69K PROTECTION RATING

The windings in the LinMot motor are completely encapsulated in epoxy resin, which protects both the copper filling and the stator package against condensation and corrosion.

Thanks to this complete encapsulation, the motors are also protected against penetration by dust and water (allowing high-pressure and steam-jet cleaning). This leak tightness means that they meet protection class IP69K according to DIN EN 60529.

### INTEGRATED WATER COOLING

The Stainless steel linear motors can optionally be supplied with integrated water cooling. The stator is enclosed by the cooling system along its entire length. The heat losses generated in the motor are dissipated through the liquid cooling system. This increases the rated power of the motor several times over in comparison with the self-cooled version. The lower surface temperature of the motor also greatly reduces microbe growth.

### HIGH AND CONTROLLED DYNAMICS

Max. acceleration values over 400 m/s<sup>2</sup> and travel speeds over 3 m/s allow cyclical motion sequences of several Hertz.

For handling applications with sensitive products, such as transporting wafers in semiconductor production, very gentle, smooth motions with suitable accelerations can be obtained.

**FREELY POSITIONABLE**

LinMot linear motors can be freely positioned. With absolute or relative movement commands, they can move to any desired position in the stroke range. Since the LinMot linear drive is a closed-loop system, not only the end positions are monitored, but also deviations in position during travel. This allows, among other things, precise specification of travel speeds, acceleration and braking ramps, and travel through curved paths.

**PROCESS STABILITY**

For temperature monitoring all linear motions are equipped with sensors that transfer the data to the drive. The data can be analyzed in the superordinate control so that the motor, depending on the processing (for example, foods such as fish) can be kept in a constant temperature range.

Since not only the temperature, but also speed and acceleration are controlled and monitored, motions that are programmed once are carried out the same way over the entire life of the machine.

**SYNCHRONIZATION**

For synchronous machines, the linear motor can be synchronized to the main shaft. By replacing mechanical cam discs with LinMot linear motors, for example, great variations can be achieved, with format changeovers at the push of a button.

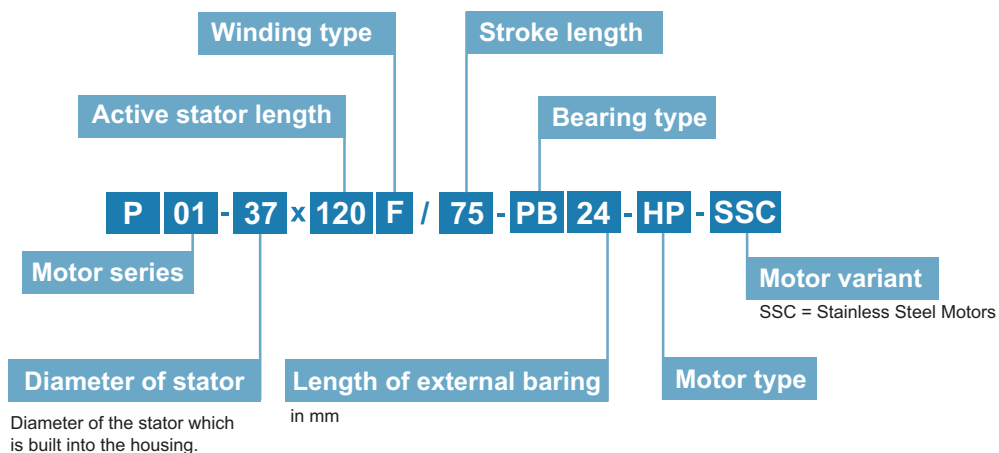
**OVERLOAD PROTECTION**

There are no mechanical components for force transfer that could be damaged in a crash or stall condition in a linear motor. Complex, expensive designs to protect gearboxes, gears, and shafts are thus eliminated. If the linear motor stalls, it acts like a pneumatic cylinder and tries to reach the target position with maximum force. The following error monitor in the drive can, however, immediately recognize a stall condition. Temperature sensors integrated in the stator prevent the drive from overloading in any case.

**LONG LIFESPAN**

Since the linear motion is generated purely magnetically, and no mechanical force transmission takes place, even extremely dynamic applications can be implemented with a long lifespan.

**Type Code**



For explanations of the terms, please refer to the section "Glossary"



# LINEAR MOTORS P01-37x120F-HP-SSC



- ✓ Stainless steel housing EN 1.4404 / AISI / SAE 316L
- ✓ Hygienic design
- ✓ Welded connections
- ✓ Completely encapsulated
- ✓ IP Code IP69K
- ✓ Optional integrated water cooling
- ✓ For use in the food or in the pharmaceutical sector

## LINEAR MOTORS P01-37x120F-HP-SSC

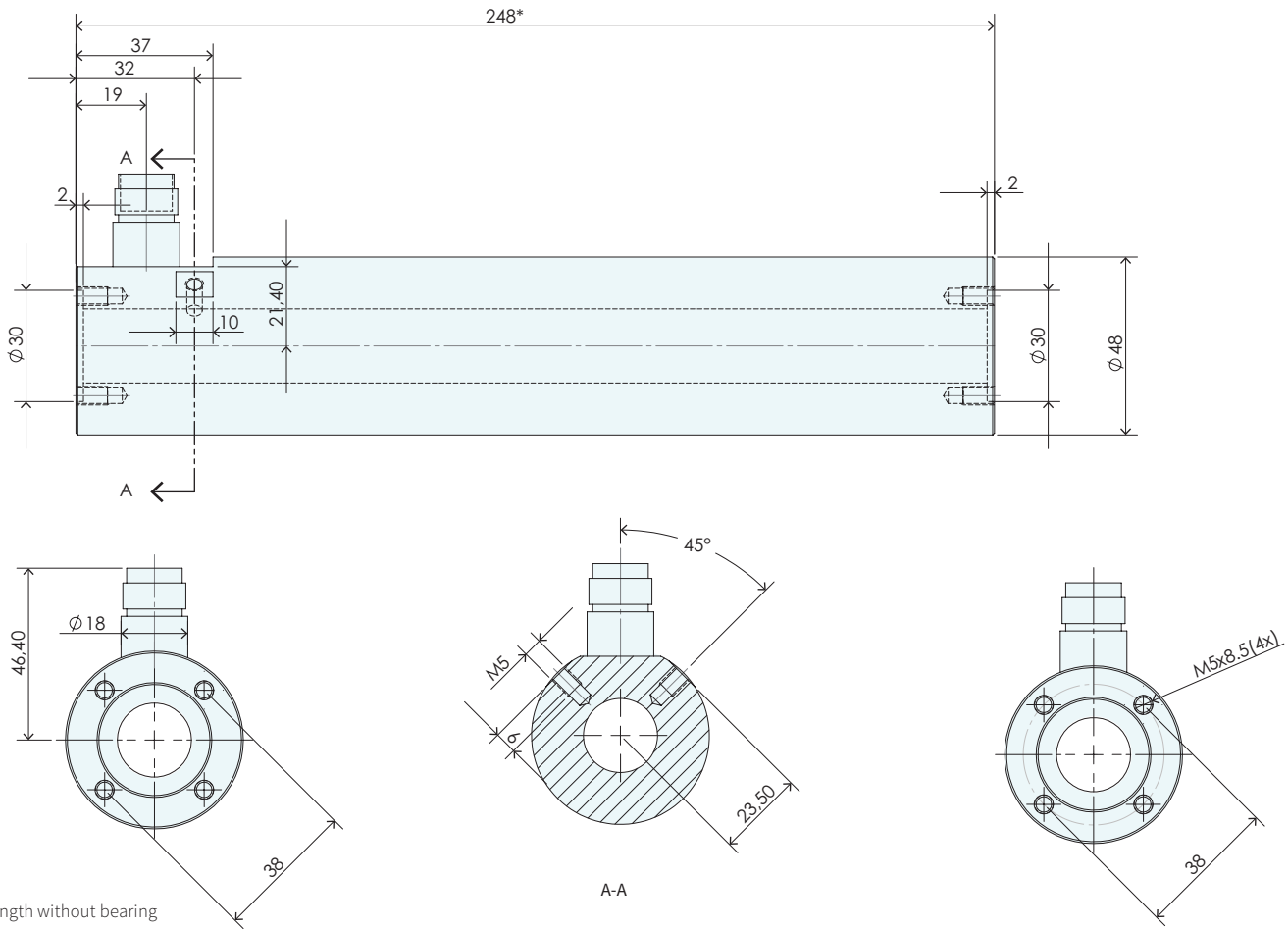
<b>Technical Data</b>	<b>625</b>
<b>Motor Specifications</b>	
P01-37x120F/75-HP-PB24-SSC	<b>628</b>
P01-37x120F/180-HP-PB24-SSC	<b>629</b>
P01-37x120F/280-HP-PB24-SSC	<b>630</b>
P01-37x120F/380-HP-PB24-SSC	<b>631</b>
P01-37x120F/480-HP-PB24-SSC	<b>632</b>
P01-37x120F/580-HP-PB24-SSC	<b>633</b>
P01-37x120F/680-HP-PB24-SSC	<b>634</b>
<b>Linear Guides</b>	<b>635</b>
<b>Accessories</b>	<b>636</b>



### MOTOR FAMILY P01-37x120F-HP-SSC

Technical Data				
<b>Stroke</b>				
Max. Stroke	mm	(in)	680	(26.8)
<b>Force</b>				
Max. Force @ 48VDC	N	(lbf)	210	(47.1)
Max. Force @ 72VDC	N	(lbf)	210	(47.1)
Max. Cont. Force [Passive cooling / Fan / Fluid]	N	(lbf)	23 / - / 63	(5.3 / - / 14)
Max. Border Force relative	%		≤ 100	
Force Constant	N/A <sub>pk</sub>	(lbf/A <sub>pk</sub> )	14	(3.14)
<b>Velocity</b>				
Max. Velocity @ 48VDC	m/s	(in/s)	3.2	(119.9)
Max. Velocity @ 72VDC	m/s	(in/s)	4.6	(189.9)
<b>Position Detection</b>				
Position Resolution	mm	(in)	0.005	(0.0002)
Repeatability	mm	(in)	±0.05	(±0.002)
Position Resolution with ES	mm	(in)	0.001	(0.00004)
Repeatability with ES	mm	(in)	±0.01	(±0.0004)
Linearity with ES	mm	(in)	±0.01	(±0.0004)
<b>Electrical Data</b>				
Max. Current @ 48VDC	A <sub>pk</sub>		14.9	
Max. Current @ 72VDC	A <sub>pk</sub>		14.9	
Max. Cont. Current [Passive cooling / Fan / Fluid]	A <sub>pk</sub>		1.7 / - / 4.5	
Terminal Resistance 25 °C / 120 °C	Ohm		2.4 / 3.5	
Terminal Inductivity	mH		1.6	
Magnetic Period	mm	(in)	40	(1.57)
<b>Thermal Data</b>				
Max. Winding Temperature (Sensor)	°C		120	
Thermal Resistance [Passive cooling / Fan / Fluid]	°K/W		8.3 / - / 1.1	
Thermal Time Constant [Passive cooling / Fan / Fluid]	s		3300 / - / 450	
<b>Mechanical Data</b>				
Stator Diameter	mm	(in)	48	(1.9)
Stator Length [Connector type / Cable type]	mm	(in)	296	(12)
Stator Mass	g	(lb)	2250	(4.95)
Slider Diameter	mm	(in)	19	(0.75)
Slider Length	mm	(in)	240 - 1000	(9.4 - 39)
Slider Mass	g	(lb)	415 - 1800	(0.91 - 3.96)
IP Code			IP 69k	

**STATOR**



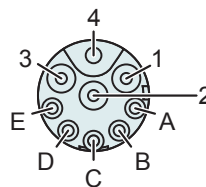
\* Length without bearing

Item	Description	Item-No.
<b>PS01-37x120F-HP-SSC-R</b>	Stator Stainless Steel IP69K	0150-1282
<b>PS01-37x120F-HP-SSC-R-FC</b>	Stator stainless steel IP69K, FC	0150-1283

**CONNECTOR**

Motor Connector Wiring	PS01-37x120F-HP-SSC-R PS01-37x120F-HP-SSC-R-FC	Wire Color Motor Cable
	R-Connector	
Ph 1+	1	red
Ph 1-	2	pink
Ph 2+	3	blue
Ph 2-	4	grey
+5VDC	A	white
GND	B	inner Shield
Sinus	C	yellow
Cosinus	D	green
Temp.	E	black
Shield	Case	outer Shield

**R-Connector**



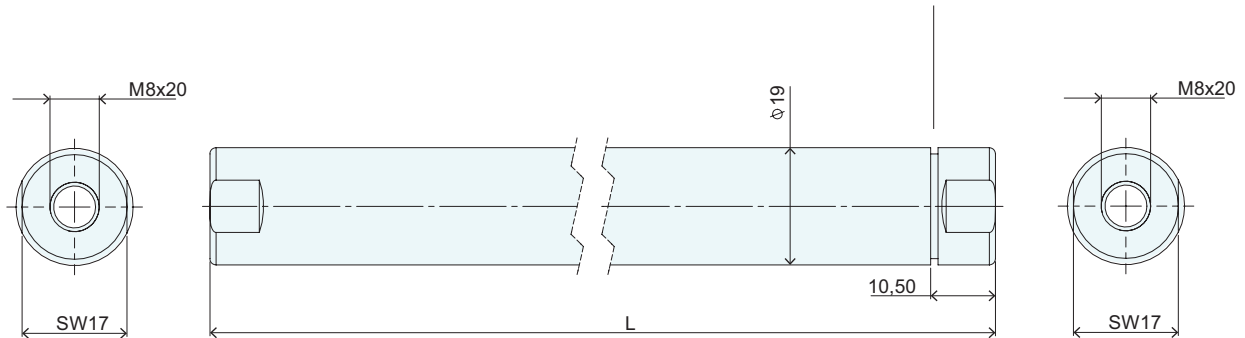
View: Motor connector, plug side



**SLIDER**

**Slider High Clearance**

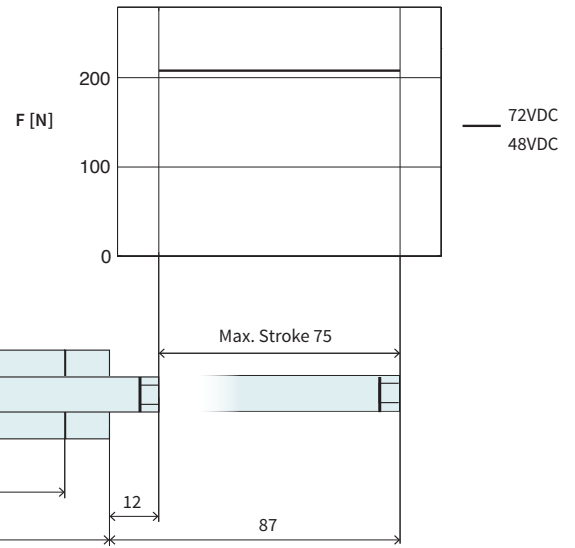
Number of grooves determines the slider type (see chapter 2 / slider) and marks the front end.



Slider High Clearance			
Item	Description	Max. Stroke [mm]	Item-No.
PL01-19x395/320	Slider 'High Clearance'	75	0150-1452
PL01-19x500/420	Slider 'High Clearance'	180	0150-1455
PL01-19x600/520	Slider 'High Clearance'	280	0150-1456
PL01-19x700/620	Slider 'High Clearance'	380	0150-1457
PL01-19x800/720	Slider 'High Clearance'	480	0150-1458
PL01-19x900/820	Slider 'High Clearance'	580	0150-1459
PL01-19x1000/920	Slider 'High Clearance'	680	0150-1460

**P01-37x120F/75-PB24-HP-SSC**

**Max. Stroke:** 75 mm  
**Peak Force:** 210 N



Dimensions in mm

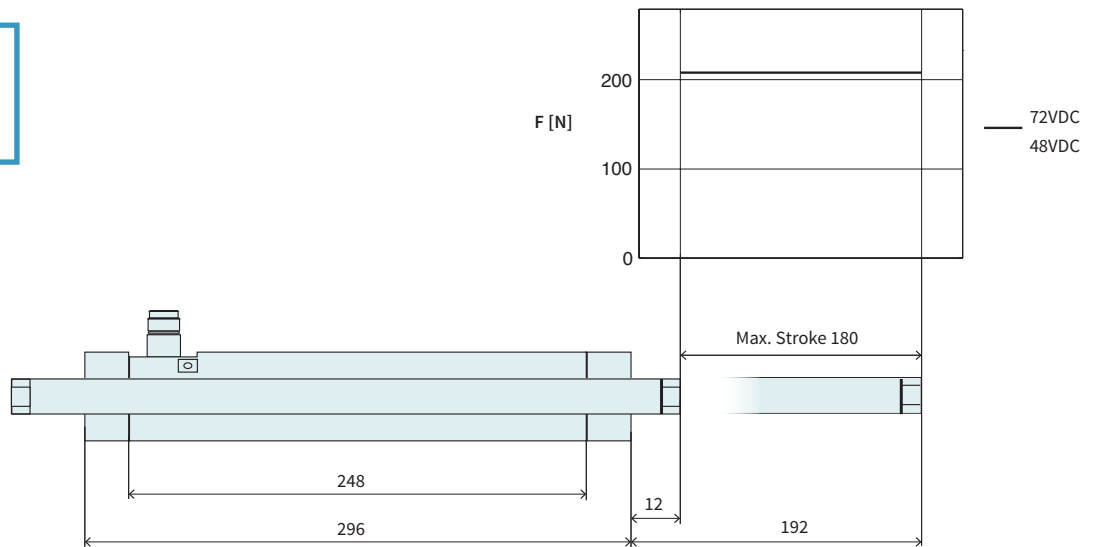
Technical Data P01-37x120F/75-HP-PB24-SSC			
<b>Stroke</b>			
Max. Stroke	mm (in)		75 (2.95)
<b>Force</b>			
Max. Force @ 48VDC	N (lbf)		210 (47.1)
Max. Force @ 72VDC	N (lbf)		210 (47.1)
Max. Cont. Force [Passive cooling / Fan / Fluid]	N (lbf)		23 / - / 63 (5.3 / - / 14)
Max. Border Force relative	%		100
Force Constant	N/A <sub>pk</sub> (lbf/A <sub>pk</sub> )		14 (3.14)
<b>Velocity</b>			
Max. Velocity @ 48VDC	m/s (in/s)		3.2 (119.9)
Max. Velocity @ 72VDC	m/s (in/s)		4.6 (189.9)
<b>Position Detection</b>			
Repeatability	mm (in)		±0.05 (±0.002)
Linearity	%		± 0.75
<b>Electrical Data</b>			
Max. Current @ 48VDC	A <sub>pk</sub>		14.9
Max. Current @ 72VDC	A <sub>pk</sub>		14.9
Max. Cont. Current [Passive cooling / Fan / Fluid]	A <sub>pk</sub>		1.7 / - / 4.5
<b>Thermal Data</b>			
Max. Winding Temperature (Sensor)	°C		120
Thermal Resistance [Passive cooling / Fan / Fluid]	°K/W		8.3 / - / 1.1
Thermal Time Constant [Passive cooling / Fan / Fluid]	s		3300 / - / 450
<b>Mechanical Data</b>			
Slider Length	mm (in)		395 (16)
Slider Mass	g (lb)		748 (1.65)



Item	Description	Item-No.
<b>PS01-37x120F-HP-SSC-R</b>	Stator Stainless Steel IP69K	0150-1282
<b>PS01-37x120F-HP-SSC-R-FC</b>	Stator stainless steel IP69K, FC	0150-1283
<b>PL01-19x395/320</b>	Slider 'High Clearance'	0150-1452

**P01-37x120F/180-PB24-HP-SSC**

**Max. Stroke:** 180 mm  
**Peak Force:** 210 N



Dimensions in mm

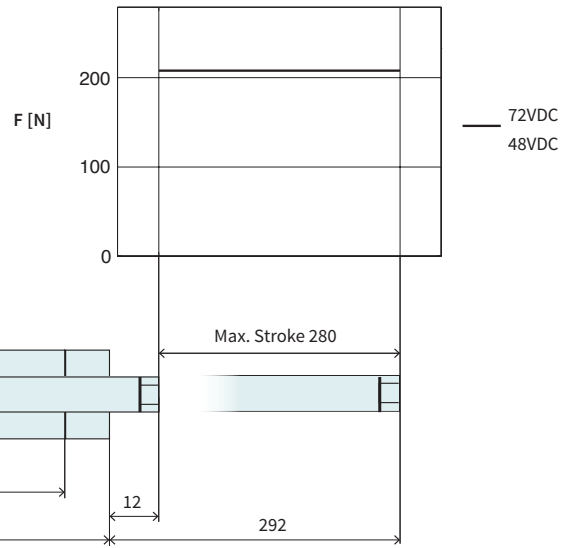
Technical Data P01-37x120F/180-HP-PB24-SSC				
<b>Stroke</b>				
Max. Stroke	mm	(in)	180	(7.08)
<b>Force</b>				
Max. Force @ 48VDC	N	(lbf)	210	(47.1)
Max. Force @ 72VDC	N	(lbf)	210	(47.1)
Max. Cont. Force [Passive cooling / Fan / Fluid]	N	(lbf)	23 / - / 63	(5.3 / - / 14)
Max. Border Force relative	%		100	
Force Constant	N/A <sub>pk</sub>	(lbf/A <sub>pk</sub> )	14	(3.14)
<b>Velocity</b>				
Max. Velocity @ 48VDC	m/s	(in/s)	3.2	(119.9)
Max. Velocity @ 72VDC	m/s	(in/s)	4.6	(189.9)
<b>Position Detection</b>				
Repeatability	mm	(in)	±0.05	(±0.002)
Linearity	%		± 0.4	
<b>Electrical Data</b>				
Max. Current @ 48VDC	A <sub>pk</sub>		14.9	
Max. Current @ 72VDC	A <sub>pk</sub>		14.9	
Max. Cont. Current [Passive cooling / Fan / Fluid]	A <sub>pk</sub>		1.7 / - / 4.5	
<b>Thermal Data</b>				
Max. Winding Temperature (Sensor)	°C		120	
Thermal Resistance [Passive cooling / Fan / Fluid]	°K/W		8.3 / - / 1.1	
Thermal Time Constant [Passive cooling / Fan / Fluid]	s		3300 / - / 450	
<b>Mechanical Data</b>				
Slider Length	mm	(in)	500	(20)
Slider Mass	g	(lb)	960	(2.11)



Item	Description	Item-No.
<b>PS01-37x120F-HP-SSC-R</b>	Stator Stainless Steel IP69K	0150-1282
<b>PS01-37x120F-HP-SSC-R-FC</b>	Stator stainless steel IP69K, FC	0150-1283
<b>PL01-19x500/420</b>	Slider 'High Clearance'	0150-1455

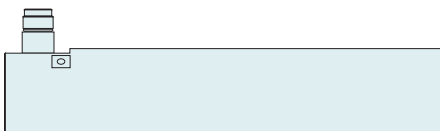
**P01-37x120F/280-PB24-HP-SSC**

**Max. Stroke:** 280 mm  
**Peak Force:** 210 N



Dimensions in mm

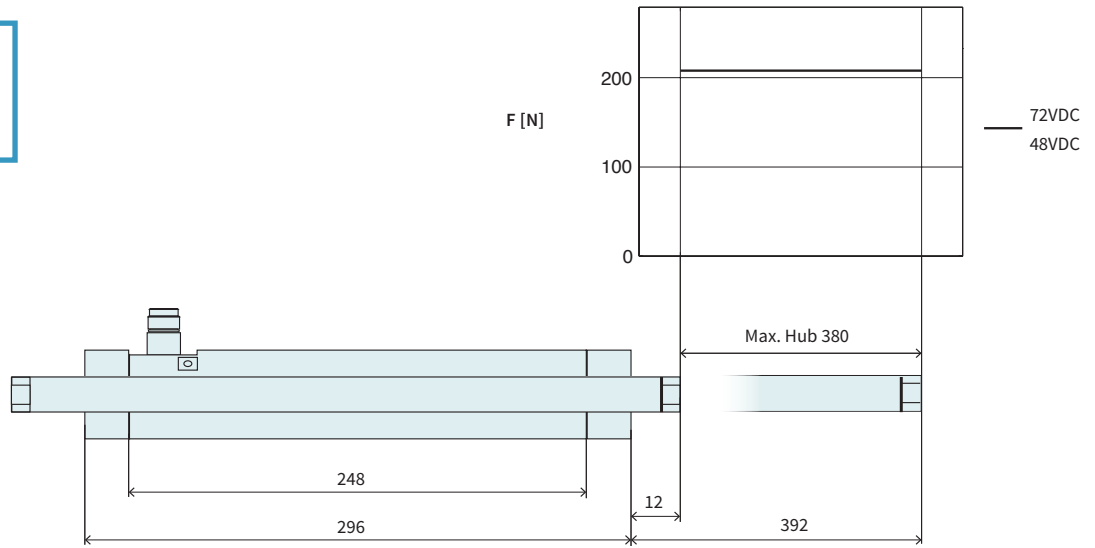
Technical Data P01-37x120F/280-HP-PB24-SSC			
<b>Stroke</b>			
Max. Stroke	mm (in)	280	(10.99)
<b>Force</b>			
Max. Force @ 48VDC	N (lbf)	210	(47.1)
Max. Force @ 72VDC	N (lbf)	210	(47.1)
Max. Cont. Force [Passive cooling / Fan / Fluid]	N (lbf)	23 / - / 63	(5.3 / - / 14)
Max. Border Force relative	%	100	
Force Constant	N/A <sub>pk</sub> (lbf/A <sub>pk</sub> )	14	(3.14)
<b>Velocity</b>			
Max. Velocity @ 48VDC	m/s (in/s)	3.2	(119.9)
Max. Velocity @ 72VDC	m/s (in/s)	4.6	(189.9)
<b>Position Detection</b>			
Repeatability	mm (in)	±0.05	(±0.002)
Linearity	%	± 0.3	
<b>Electrical Data</b>			
Max. Current @ 48VDC	A <sub>pk</sub>	14.9	
Max. Current @ 72VDC	A <sub>pk</sub>	14.9	
Max. Cont. Current [Passive cooling / Fan / Fluid]	A <sub>pk</sub>	1.7 / - / 4.5	
<b>Thermal Data</b>			
Max. Winding Temperature (Sensor)	°C	120	
Thermal Resistance [Passive cooling / Fan / Fluid]	°K/W	8.3 / - / 1.1	
Thermal Time Constant [Passive cooling / Fan / Fluid]	s	3300 / - / 450	
<b>Mechanical Data</b>			
Slider Length	mm (in)	600	(24)
Slider Mass	g (lb)	1171	(2.58)



Item	Description	Item-No.
<b>PS01-37x120F-HP-SSC-R</b>	Stator Stainless Steel IP69K	0150-1282
<b>PS01-37x120F-HP-SSC-R-FC</b>	Stator stainless steel IP69K, FC	0150-1283
<b>PL01-19x600/520</b>	Slider 'High Clearance'	0150-1456

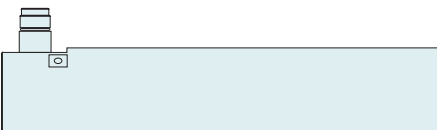
**P01-37x120F/380-PB24-HP-SSC**

**Max. Stroke:** 380 mm  
**Peak Force:** 210 N



Dimensions in mm

Technical Data P01-37x120F/380-HP-PB24-SSC				
<b>Stroke</b>				
Max. Stroke	mm	(in)	380	(14.99)
<b>Force</b>				
Max. Force @ 48VDC	N	(lbf)	210	(47.1)
Max. Force @ 72VDC	N	(lbf)	210	(47.1)
Max. Cont. Force [Passive cooling / Fan / Fluid]	N	(lbf)	23 / - / 63	(5.3 / - / 14)
Max. Border Force relative			%	
			100	
Force Constant	N/A <sub>pk</sub>	(lbf/A <sub>pk</sub> )	14	(3.14)
<b>Velocity</b>				
Max. Velocity @ 48VDC	m/s	(in/s)	3.2	(119.9)
Max. Velocity @ 72VDC	m/s	(in/s)	4.6	(189.9)
<b>Position Detection</b>				
Repeatability	mm	(in)	±0.05	(±0.002)
Linearity			%	
			± 0.25	
<b>Electrical Data</b>				
Max. Current @ 48VDC			A <sub>pk</sub>	
			14.9	
Max. Current @ 72VDC			A <sub>pk</sub>	
			14.9	
Max. Cont. Current [Passive cooling / Fan / Fluid]			A <sub>pk</sub>	
			1.7 / - / 4.5	
<b>Thermal Data</b>				
Max. Winding Temperature (Sensor)			°C	
			120	
Thermal Resistance [Passive cooling / Fan / Fluid]			°K/W	
			8.3 / - / 1.1	
Thermal Time Constant [Passive cooling / Fan / Fluid]			s	
			3300 / - / 450	
<b>Mechanical Data</b>				
Slider Length	mm	(in)	700	(28)
Slider Mass	g	(lb)	1380	(3.04)

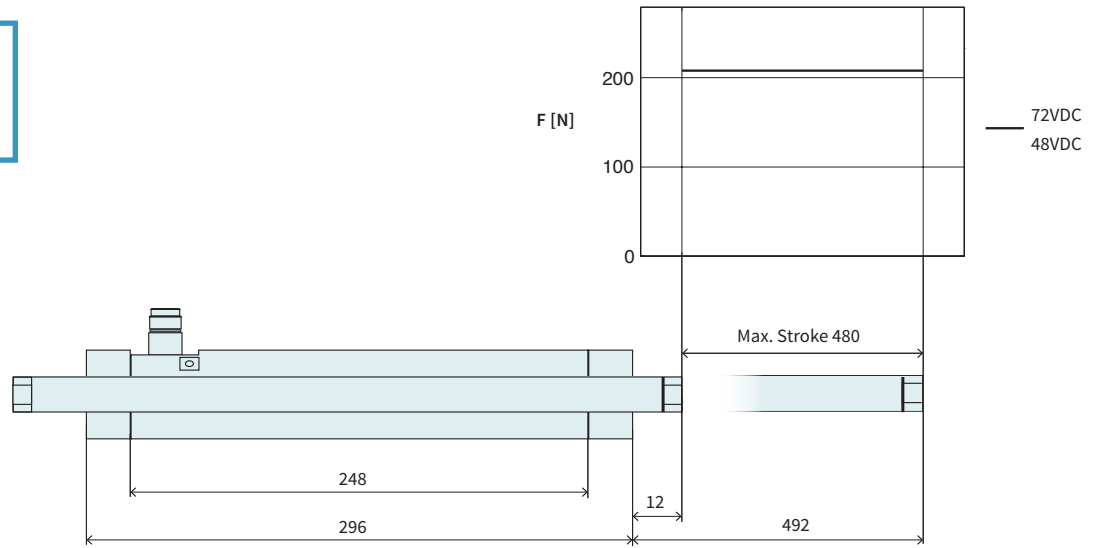


Item	Description	Item-No.
<b>PS01-37x120F-HP-SSC-R</b>	Stator Stainless Steel IP69K	0150-1282
<b>PS01-37x120F-HP-SSC-R-FC</b>	Stator stainless steel IP69K, FC	0150-1283

<b>PL01-19x700/620</b>	Slider 'High Clearance'	0150-1457
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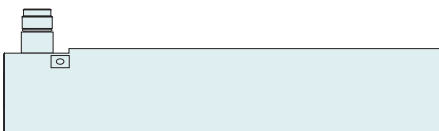
**P01-37x120F/480-PB24-HP-SSC**

**Max. Stroke:** 480 mm  
**Peak Force:** 210 N



Dimensions in mm

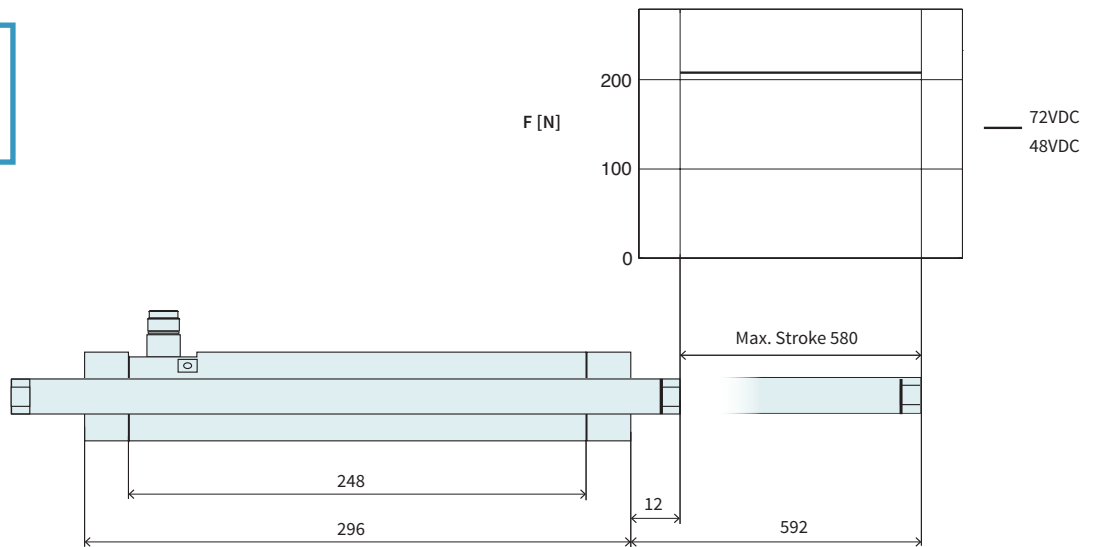
Technical Data P01-37x120F/480-HP-PB24-SSC			
<b>Stroke</b>			
Max. Stroke	mm (in)	480	(18.89)
<b>Force</b>			
Max. Force @ 48VDC	N (lbf)	210	(47.1)
Max. Force @ 72VDC	N (lbf)	210	(47.1)
Max. Cont. Force [Passive cooling / Fan / Fluid]	N (lbf)	23 / - / 63	(5.3 / - / 14)
Max. Border Force relative	%	100	
Force Constant	N/A <sub>pk</sub> (lbf/A <sub>pk</sub> )	14	(3.14)
<b>Velocity</b>			
Max. Velocity @ 48VDC	m/s (in/s)	3.2	(119.9)
Max. Velocity @ 72VDC	m/s (in/s)	4.6	(189.9)
<b>Position Detection</b>			
Repeatability	mm (in)	±0.05	(±0.002)
Linearity	%	± 0.2	
<b>Electrical Data</b>			
Max. Current @ 48VDC	A <sub>pk</sub>	14.9	
Max. Current @ 72VDC	A <sub>pk</sub>	14.9	
Max. Cont. Current [Passive cooling / Fan / Fluid]	A <sub>pk</sub>	1.7 / - / 4.5	
<b>Thermal Data</b>			
Max. Winding Temperature (Sensor)	°C	120	
Thermal Resistance [Passive cooling / Fan / Fluid]	°K/W	8.3 / - / 1.1	
Thermal Time Constant [Passive cooling / Fan / Fluid]	s	3300 / - / 450	
<b>Mechanical Data</b>			
Slider Length	mm (in)	800	(31)
Slider Mass	g (lb)	1590	(3.5)



Item	Description	Item-No.
<b>PS01-37x120F-HP-SSC-R</b>	Stator Stainless Steel IP69K	0150-1282
<b>PS01-37x120F-HP-SSC-R-FC</b>	Stator stainless steel IP69K, FC	0150-1283
<b>PL01-19x800/720</b>	Slider 'High Clearance'	0150-1458

**P01-37x120F/580-PB24-HP-SSC**

**Max. Stroke:** 580 mm  
**Peak Force:** 210 N



Dimensions in mm

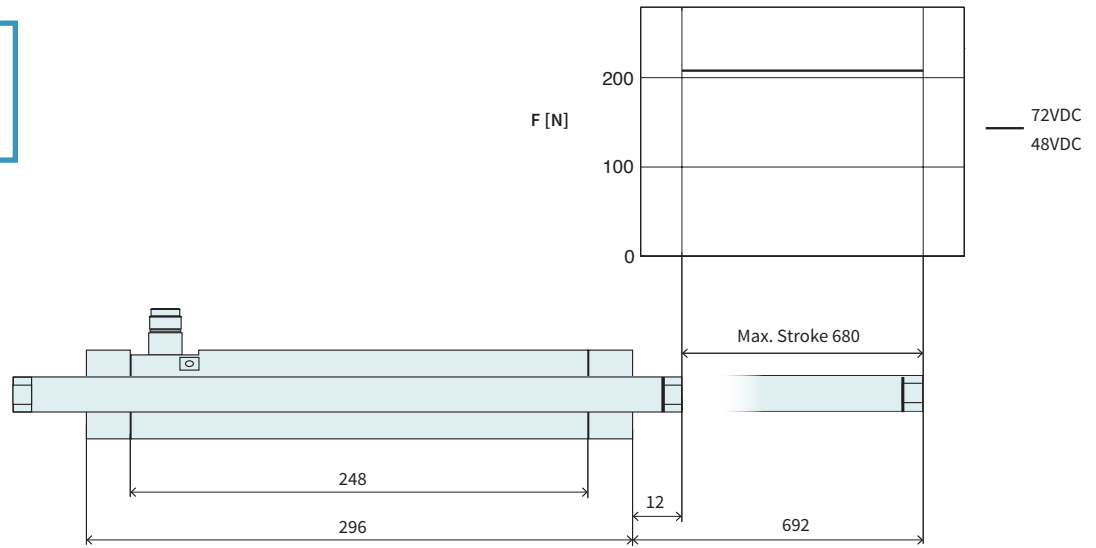
Technical Data P01-37x120F/580-HP-PB24-SSC				
<b>Stroke</b>				
Max. Stroke	mm	(in)	580	(22.8)
<b>Force</b>				
Max. Force @ 48VDC	N	(lbf)	210	(47.1)
Max. Force @ 72VDC	N	(lbf)	210	(47.1)
Max. Cont. Force [Passive cooling / Fan / Fluid]	N	(lbf)	23 / - / 63	(5.3 / - / 14)
Max. Border Force relative	%		100	
Force Constant	N/A <sub>pk</sub>	(lbf/A <sub>pk</sub> )	14	(3.14)
<b>Velocity</b>				
Max. Velocity @ 48VDC	m/s	(in/s)	3.2	(119.9)
Max. Velocity @ 72VDC	m/s	(in/s)	4.6	(189.9)
<b>Position Detection</b>				
Repeatability	mm	(in)	±0.05	(±0.002)
Linearity	%		± 0.2	
<b>Electrical Data</b>				
Max. Current @ 48VDC	A <sub>pk</sub>		14.9	
Max. Current @ 72VDC	A <sub>pk</sub>		14.9	
Max. Cont. Current [Passive cooling / Fan / Fluid]	A <sub>pk</sub>		1.7 / - / 4.5	
<b>Thermal Data</b>				
Max. Winding Temperature (Sensor)	°C		120	
Thermal Resistance [Passive cooling / Fan / Fluid]	°K/W		8.3 / - / 1.1	
Thermal Time Constant [Passive cooling / Fan / Fluid]	s		3300 / - / 450	
<b>Mechanical Data</b>				
Slider Length	mm	(in)	900	(35)
Slider Mass	g	(lb)	1590	(3.5)



Item	Description	Item-No.
<b>PS01-37x120F-HP-SSC-R</b>	Stator Stainless Steel IP69K	0150-1282
<b>PS01-37x120F-HP-SSC-R-FC</b>	Stator stainless steel IP69K, FC	0150-1283
<b>PL01-19x900/820</b>	Slider 'High Clearance'	0150-1459

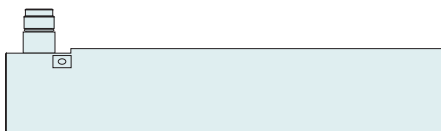
**P01-37x120F/680-PB24-HP-SSC**

**Max. Stroke:** 680 mm  
**Peak Force:** 210 N



Dimensions in mm

Technical Data P01-37x120F/680-HP-PB24-SSC			
<b>Stroke</b>			
Max. Stroke	mm (in)	680 (26.8)	
<b>Force</b>			
Max. Force @ 48VDC	N (lbf)	210 (47.1)	
Max. Force @ 72VDC	N (lbf)	210 (47.1)	
Max. Cont. Force [Passive cooling / Fan / Fluid]	N (lbf)	23 / - / 63 (5.3 / - / 14)	
Max. Border Force relative	%	100	
Force Constant	N/A <sub>pk</sub> (lbf/A <sub>pk</sub> )	14 (3.14)	
<b>Velocity</b>			
Max. Velocity @ 48VDC	m/s (in/s)	3.2 (119.9)	
Max. Velocity @ 72VDC	m/s (in/s)	4.6 (189.9)	
<b>Position Detection</b>			
Repeatability	mm (in)	±0.05 (±0.002)	
Linearity	%	± 0.15	
<b>Electrical Data</b>			
Max. Current @ 48VDC	A <sub>pk</sub>	14.9	
Max. Current @ 72VDC	A <sub>pk</sub>	14.9	
Max. Cont. Current [Passive cooling / Fan / Fluid]	A <sub>pk</sub>	1.7 / - / 4.5	
<b>Thermal Data</b>			
Max. Winding Temperature (Sensor)	°C	120	
Thermal Resistance [Passive cooling / Fan / Fluid]	°K/W	8.3 / - / 1.1	
Thermal Time Constant [Passive cooling / Fan / Fluid]	s	3300 / - / 450	
<b>Mechanical Data</b>			
Slider Length	mm (in)	1000 (39)	
Slider Mass	g (lb)	1800 (3.96)	



Item	Description	Item-No.
<b>PS01-37x120F-HP-SSC-R</b>	Stator Stainless Steel IP69K	0150-1282
<b>PS01-37x120F-HP-SSC-R-FC</b>	Stator stainless steel IP69K, FC	0150-1283
<b>PL01-19x1000/920</b>	Slider 'High Clearance'	0150-1460



**Linear Guides H01-SSC**



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**HM01-37x120/85-SSC | Linear module SSC 37x120 with 85 mm Stroke**

→	H-Guide	H01-37x304/85-SSC	H-Guide for PS01-37x120F-HP-SSC, Stroke max.85 mm	0150-5271
	Stator	PS01-37x120F-HP-SSC-R	Stator Stainless Steel IP69K	0150-1282
		PS01-37x120F-HP-SSC-R-FC	Stator stainless steel IP69K, FC	0150-1283
→	Slider	PL01-19x395/320	Slider 'High Clearance'	0150-1452

**HM01-37x120/190-SSC | Linear module SSC 37x120 with 190 mm Stroke**

→	H-Guide	H01-37x304/190-SSC	H-Guide for PS01-37x120F-HP-SSC, Stroke max.190 mm	0150-5272
	Stator	PS01-37x120F-HP-SSC-R	Stator Stainless Steel IP69K	0150-1282
		PS01-37x120F-HP-SSC-R-FC	Stator stainless steel IP69K, FC	0150-1283
→	Slider	PL01-19x500/420	Slider 'High Clearance'	0150-1455

**HM01-37x120/290-SSC | Linear module SSC 37x120 with 290 mm Stroke**

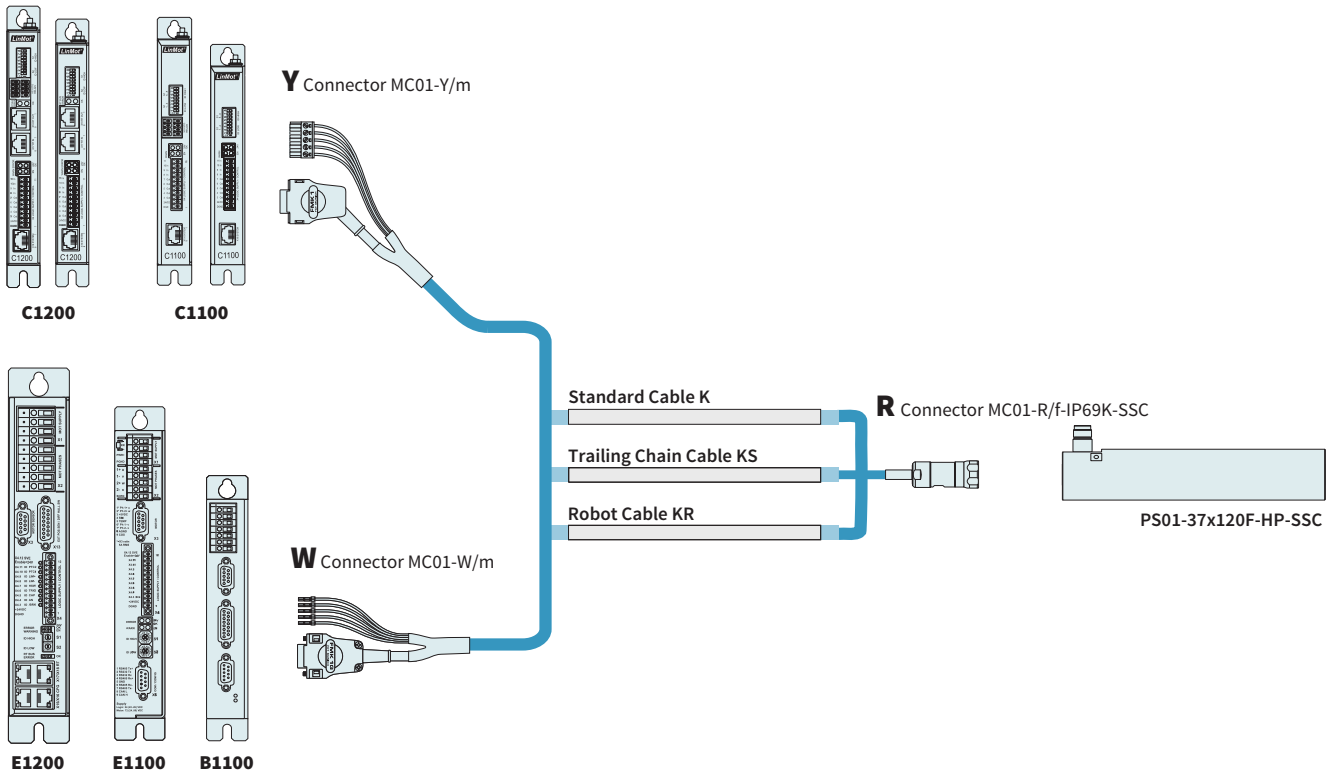
→	H-Guide	H01-37x304/290-SSC	H-Guide for PS01-37x120F-HP-SSC, Stroke max.290 mm	0150-5273
	Stator	PS01-37x120F-HP-SSC-R	Stator Stainless Steel IP69K	0150-1282
		PS01-37x120F-HP-SSC-R-FC	Stator stainless steel IP69K, FC	0150-1283
→	Slider	PL01-19x600/520	Slider 'High Clearance'	0150-1456

**HM01-37x120/390-SSC | Linear module SSC 37x120 with 390 mm Stroke**

→	H-Guide	H01-37x304/390-SSC	H-Guide for PS01-37x120F-HP-SSC, Stroke max.390 mm	0150-5274
	Stator	PS01-37x120F-HP-SSC-R	Stator Stainless Steel IP69K	0150-1282
		PS01-37x120F-HP-SSC-R-FC	Stator stainless steel IP69K, FC	0150-1283
→	Slider	PL01-19x700/620	Slider 'High Clearance'	0150-1457

**FIND MORE PRODUCT DETAILS IN THE CHAPTER "LINEAR GUIDES".**

**Motor Cable**



**ORDERING INFORMATION**

TRAILING CHAIN CABLE

Item	Description	Item-No.
<b>KS05-W/R-SSC-2</b>	Trailing Chain Cable W/R-SSC, 2 m	0150-2683
<b>KS05-W/R-SSC-4</b>	Trailing Chain Cable W/R-SSC, 4 m	0150-2684
<b>KS05-W/R-SSC-6</b>	Trailing Chain Cable W/R-SSC, 6 m	0150-2685
<b>KS05-W/R-SSC-8</b>	Trailing Chain Cable W/R-SSC, 8 m	0150-2686
<b>KS05-W/R-SSC-</b>	Trailing Chain Cable W/R-SSC, Custom length	0150-3583
<b>KS05-Y/R-SSC-2</b>	Trailing Chain Cable Y/R-SSC, 2 m	0150-2687
<b>KS05-Y/R-SSC-4</b>	Trailing Chain Cable Y/R-SSC, 4 m	0150-2688
<b>KS05-Y/R-SSC-6</b>	Trailing Chain Cable Y/R-SSC, 6 m	0150-2689
<b>KS05-Y/R-SSC-8</b>	Trailing Chain Cable Y/R-SSC, 8 m	0150-2690
<b>KS05-Y-Fe/R-SSC-</b>	Trailing Chain Cable Y-Fe/R-SSC, Custom length	0150-3646

ROBOT CABLE

Item	Description	Item-No.
<b>KR05-W/R-SSC-</b>	Robot Cable KR05-W/R-SSC-, Custom length	0150-3587

CONNECTOR & CABLE (INDIVIDUAL)

Item	Description	Item-No.
<b>MC01-W/m</b>	Motor Connector W/m	0150-3140
<b>MC01-Y-Fe/m</b>	Motor Connector Y-Fe/m	0150-3289
<b>MC01-R/f-IP69K-SSC</b>	Motor Connector R/f, IP69k, SSC	0150-3347
<b>K05-04/05</b>	Motor Cable per m	0150-1920
<b>KS05-04/05</b>	Trailing Chain Cable per m	0150-1938
<b>KR05-04/05</b>	Robot Cable per m	0150-1846

**SLIDER MOUNTING**



Item	Description	Item-No.
<b>PLF01-20-SS</b>	Fixed Bearing Set for 19/20 mm sliders, stainless steel	0150-3296
<b>PLL01-19</b>	Floating support for PL01-19 sliders, Material 1.4305 / AISI 303	0150-3335

FIND MORE PRODUCT DETAILS IN THE CHAPTER "ACCESSORIES".

**BEARING KITS**



Item	Description	Item-No.
<b>PB02-37x24-P-WD</b>	Bearing for PS01-37x...-SSC (Plastic)	0150-3299
<b>PB01-37x24-P-SSC</b>	Bearing for PS01-37x...-SSC, stainless steel	0150-3290

FIND MORE PRODUCT DETAILS IN THE CHAPTER "ACCESSORIES".

**EXTERNAL POSITION SENSORS**



Item	Description	Item-No.
<b>MS01-1/D</b>	Linear Encoder 1µm, A/B (for incremental strip)	0150-1840
<b>MB01-1000</b>	Magnetic incremental strip for MS01-1/D, per cm	0150-1963
<b>KS025-D/D-Encoder</b>	Special cable KS025-D15/D-Encoder-	0150-3166
<b>KS025-D/D15-Encoder</b>	Special cable KS025-D15/D-Encoder-	0150-3168

FIND MORE PRODUCT DETAILS IN THE CHAPTER "ACCESSORIES".



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Item	Description	Item-No.
<b>MS01-1/D-SSI</b>	Linear Encoder 1µm, A/B (for absolute strip)	0150-2095
<b>MB01-1000-ABS</b>	Magnetic absolute strip for MS01-1/D-SSI (per cm)	0150-2096
<b>EC01-ABS/ENC-12-S</b>	MS01-1/D-SSI Encoder connector straight	0150-3616
<b>KSS01-12-D15/ABS-ENC</b>	For MS01-1/D-SSI on C1100/C1200/C1400/E1200/E1400 Drives	0150-3652

**FIND MORE PRODUCT DETAILS IN THE CHAPTER "ACCESSORIES".**

# LINEAR MOTORS P01-48x240F-SSC



- ✓ Stainless steel housing EN 1.4404 / AISI / SAE 316L
- ✓ Hygienic design
- ✓ Welded connections, no gaskets
- ✓ Completely encapsulated (IP69K)
- ✓ Protection class IP69K
- ✓ Optional integrated water cooling
- ✓ For use in the food or in the pharmaceutical sector

## LINEAR MOTORS P01-48x240F-SSC

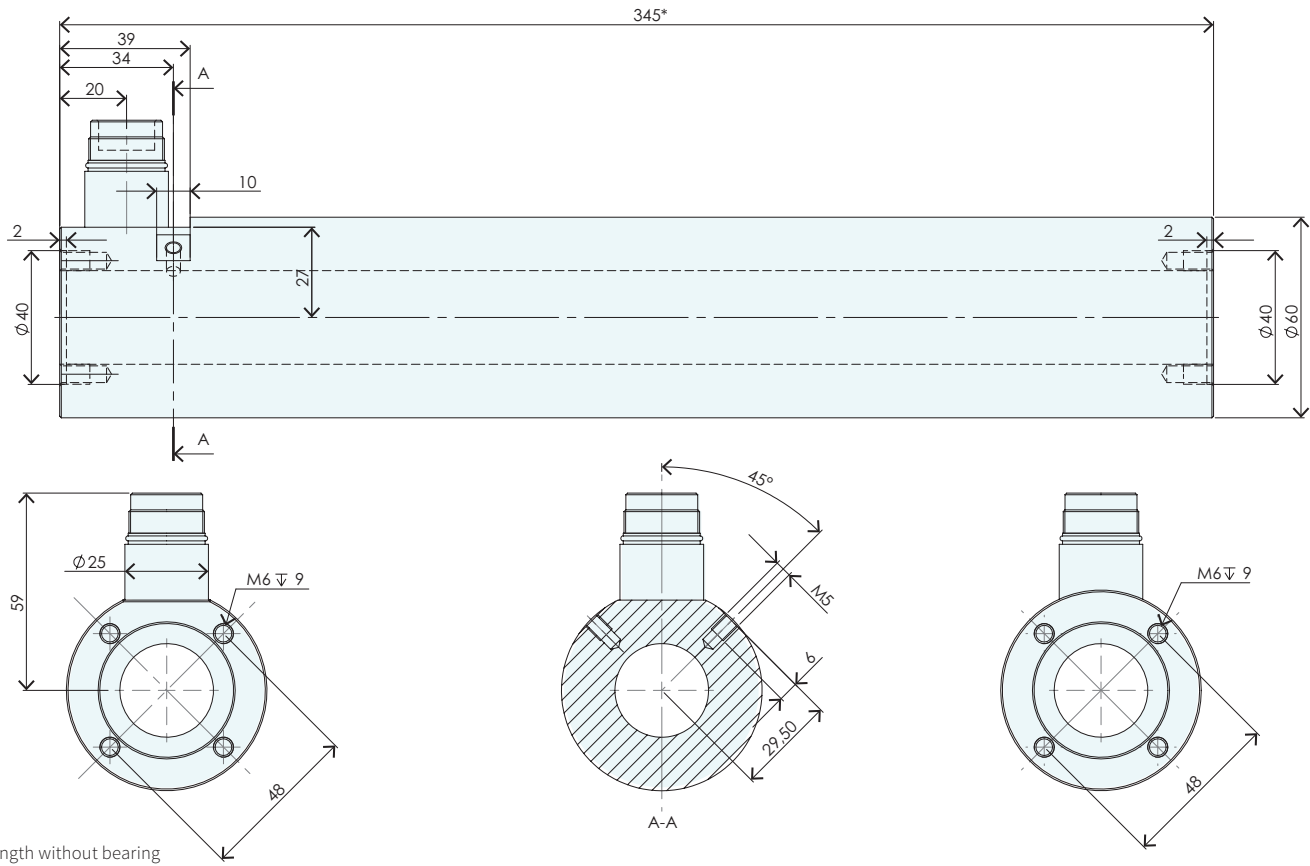
<b>Technical Data</b>	<b>641</b>
<b>Motor Specifications</b>	
P01-48x240F/80-PB25-SSC	<b>644</b>
P01-48x240F/200-PB25-SSC	<b>645</b>
P01-48x240F/290-PB25-SSC	<b>646</b>
P01-48x240F/380-PB25-SSC	<b>647</b>
P01-48x240F/500-PB25-SSC	<b>648</b>
P01-48x240F/590-PB25-SSC	<b>649</b>
P01-48x240F/800-PB25-SSC	<b>650</b>
P01-48x240F/980-PB25-SSC	<b>651</b>
<b>Linear Guides</b>	<b>652</b>
<b>Accessories</b>	<b>653</b>



### MOTOR FAMILY P01-48x240F-SSC

Technical Data				
<b>Stroke</b>				
Max. Stroke	mm	(in)	980	(38.6)
<b>Force</b>				
Max. Force @ 48VDC	N	(lbf)	496	(111)
Max. Force @ 72VDC	N	(lbf)	496	(111)
Max. Cont. Force [Passive cooling / Fan / Fluid]	N	(lbf)	84 / - / 240	(19 / - / 53)
Max. Border Force relative	%		≤ 100	
Force Constant	N/A <sub>pk</sub>	(lbf/A <sub>pk</sub> )	19.1	(4.29)
<b>Velocity</b>				
Max. Velocity @ 48VDC	m/s	(in/s)	2.2	(90.9)
Max. Velocity @ 72VDC	m/s	(in/s)	3.4	(139.9)
<b>Position Detection</b>				
Position Resolution	mm	(in)	0.007	(0.0003)
Repeatability	mm	(in)	±0.05	(±0.002)
Position Resolution with ES	mm	(in)	0.001	(0.00004)
Repeatability with ES	mm	(in)	±0.01	(±0.0004)
Linearity with ES	mm	(in)	±0.01	(±0.0004)
<b>Electrical Data</b>				
Max. Current @ 48VDC	A <sub>sk</sub>		25.9	
Max. Current @ 72VDC	A <sub>sk</sub>		25.9	
Max. Cont. Current [Passive cooling / Fan / Fluid]	A <sub>sk</sub>		4.4 / - / 12	
Terminal Resistance 25 °C / 120 °C	Ohm		0.97 / 1.3	
Terminal Inductivity	mH		1.1	
Magnetic Period	mm	(in)	60	(2.35)
<b>Thermal Data</b>				
Max. Winding Temperature (Sensor)	°C		90	
Thermal Resistance [Passive cooling / Fan / Fluid]	°K/W		2 / - / 0.26	
Thermal Time Constant [Passive cooling / Fan / Fluid]	s		2100 / - / 260	
<b>Mechanical Data</b>				
Stator Diameter	mm	(in)	60	(2.4)
Stator Length [Connector type / Cable type]	mm	(in)	395	(16)
Stator Mass	g	(lb)	4270	(9.4)
Slider Diameter	mm	(in)	27	(1.1)
Slider Length	mm	(in)	350 - 1400	(14 - 55)
Slider Mass	g	(lb)	1360 - 5910	(3 - 13)
IP Code			IP 69k	

**STATOR**



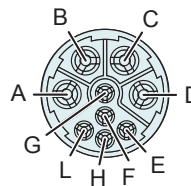
\* Length without bearing

Item	Description	Item-No.
<b>PS01-48x240F-SSC-C</b>	Stator Stainless Steel IP69K	0150-1267
<b>PS01-48x240F-SSC-C-FC</b>	Stator stainless steel IP69K, FC	0150-1268

**CONNECTOR**

Motor Connector Wiring	PS01-48x240F-SSC-C PS01-48x240F-SSC-C-FC	Wire Color Motor Cable
	C-Connector	
Ph 1+	A	red
Ph 1-	B	pink
Ph 2+	C	blue
Ph 2-	D	grey
+5VDC	E	white
GND	F	inner Shield
Sinus	G	yellow
Cosinus	H	green
Temp.	L	black
Shield	Case	outer Shield

**C-Connector**



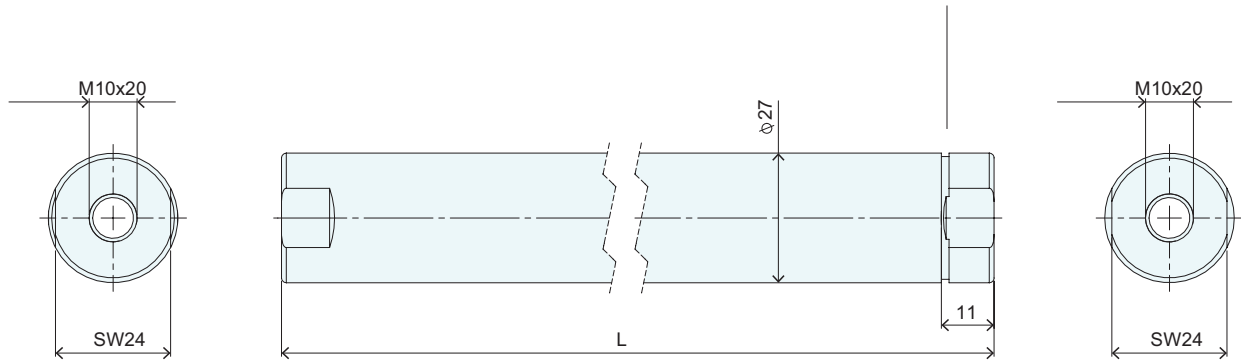
View: Motor connector, plug side



**SLIDER**

**Slider High Clearance**

Number of grooves determines the slider type (see chapter 2 / slider) and marks the front end.

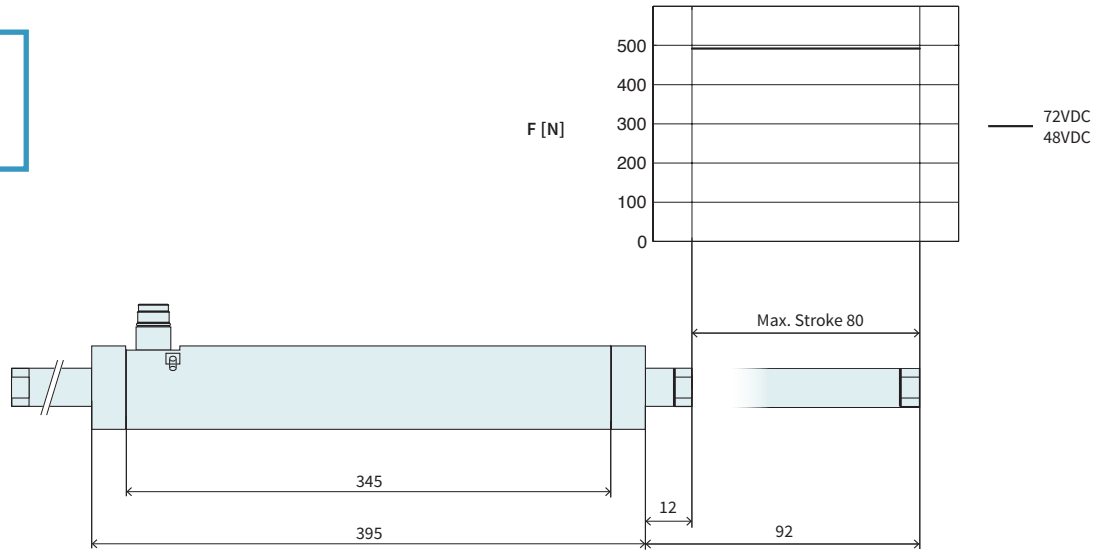


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Slider High Clearance			
Item	Description	Max. Stroke [mm]	Item-No.
PL01-27x500/420	Slider 'High Clearance'	80	0150-1469
PL01-27x620/540	Slider 'High Clearance'	200	0150-1470
PL01-27x710/630	Slider 'High Clearance'	290	0150-1471
PL01-27x800/720	Slider 'High Clearance'	380	0150-1472
PL01-27x920/840	Slider 'High Clearance'	500	0150-1447
PL01-27x1010/930	Slider 'High Clearance'	590	0150-1473
PL01-27x1220/1140	Slider 'High Clearance'	800	0150-1587
PL01-27x1400/1320	Slider 'High Clearance'	980	0150-1588

**P01-48x240F/80-PB25-SSC**

**Max. Stroke:** 80 mm  
**Peak Force:** 496 N



Dimensions in mm

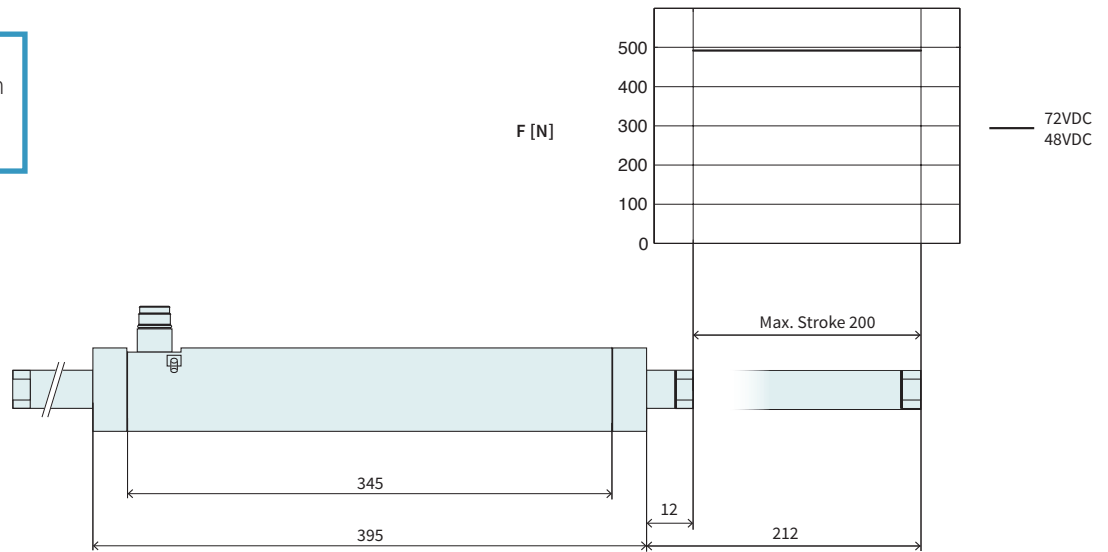
Technical Data P01-48x240F/80-PB25-SSC			
<b>Stroke</b>			
Max. Stroke	mm (in)	80	(3.14)
<b>Force</b>			
Max. Force @ 48VDC	N (lbf)	496	(111)
Max. Force @ 72VDC	N (lbf)	496	(111)
Max. Cont. Force [Passive cooling / Fan / Fluid]	N (lbf)	84 / - / 240	(19 / - / 53)
Max. Border Force relative	%	100	
Force Constant	N/A <sub>pk</sub> (lbf/A <sub>pk</sub> )	19.1	(4.29)
<b>Velocity</b>			
Max. Velocity @ 48VDC	m/s (in/s)	2.2	(90.9)
Max. Velocity @ 72VDC	m/s (in/s)	3.4	(139.9)
<b>Position Detection</b>			
Repeatability	mm (in)	±0.05	(±0.002)
Linearity	%	± 1.05	
<b>Electrical Data</b>			
Max. Current @ 48VDC	A <sub>pk</sub>	25.9	
Max. Current @ 72VDC	A <sub>pk</sub>	25.9	
Max. Cont. Current [Passive cooling / Fan / Fluid]	A <sub>pk</sub>	4.4 / - / 12	
<b>Thermal Data</b>			
Max. Winding Temperature (Sensor)	°C	90	
Thermal Resistance [Passive cooling / Fan / Fluid]	°K/W	2 / - / 0.26	
Thermal Time Constant [Passive cooling / Fan / Fluid]	s	2100 / - / 260	
<b>Mechanical Data</b>			
Slider Length	mm (in)	500	(20)
Slider Mass	g (lb)	2010	(4.42)



Item	Description	Item-No.
<b>PS01-48x240F-SSC-C</b>	Stator Stainless Steel IP69K	0150-1267
<b>PS01-48x240F-SSC-C-FC</b>	Stator stainless steel IP69K, FC	0150-1268
<b>PL01-27x500/420</b>	Slider 'High Clearance'	0150-1469

**P01-48x240F/200-PB25-SSC**

**Max. Stroke:** 200 mm  
**Peak Force:** 496 N



Dimensions in mm

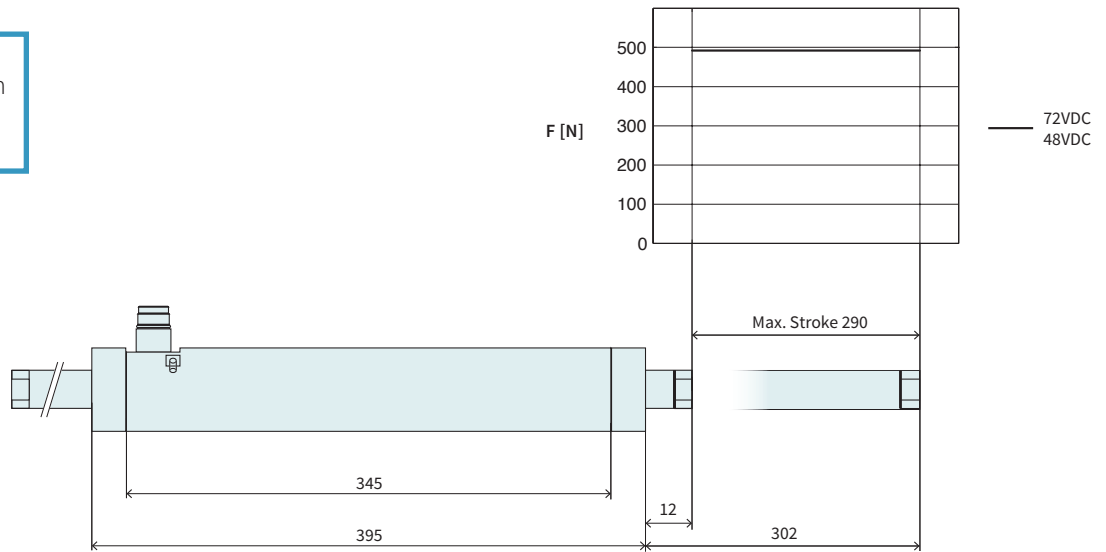
Technical Data P01-48x240F/200-PB25-SSC				
<b>Stroke</b>				
Max. Stroke	mm	(in)	200	(7.86)
<b>Force</b>				
Max. Force @ 48VDC	N	(lbf)	496	(111)
Max. Force @ 72VDC	N	(lbf)	496	(111)
Max. Cont. Force [Passive cooling / Fan / Fluid]	N	(lbf)	84 / - / 240	(19 / - / 53)
Max. Border Force relative	%		100	
Force Constant	N/A <sub>pk</sub>	(lbf/A <sub>pk</sub> )	19.1	(4.29)
<b>Velocity</b>				
Max. Velocity @ 48VDC	m/s	(in/s)	2.2	(90.9)
Max. Velocity @ 72VDC	m/s	(in/s)	3.4	(139.9)
<b>Position Detection</b>				
Repeatability	mm	(in)	±0.05	(±0.002)
Linearity	%		± 0.5	
<b>Electrical Data</b>				
Max. Current @ 48VDC	A <sub>pk</sub>		25.9	
Max. Current @ 72VDC	A <sub>pk</sub>		25.9	
Max. Cont. Current [Passive cooling / Fan / Fluid]	A <sub>pk</sub>		4.4 / - / 12	
<b>Thermal Data</b>				
Max. Winding Temperature (Sensor)	°C		90	
Thermal Resistance [Passive cooling / Fan / Fluid]	°K/W		2 / - / 0.26	
Thermal Time Constant [Passive cooling / Fan / Fluid]	s		2100 / - / 260	
<b>Mechanical Data</b>				
Slider Length	mm	(in)	620	(24)
Slider Mass	g	(lb)	2530	(5.57)



Item	Description	Item-No.
<b>PS01-48x240F-SSC-C</b>	Stator Stainless Steel IP69K	0150-1267
<b>PS01-48x240F-SSC-C-FC</b>	Stator stainless steel IP69K, FC	0150-1268
<b>PL01-27x620/540</b>	Slider 'High Clearance'	0150-1470

**P01-48x240F/290-PB25-SSC**

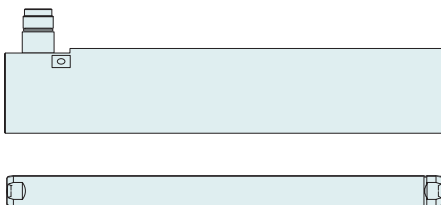
**Max. Stroke:** 290 mm  
**Peak Force:** 496 N



Dimensions in mm

Technical Data P01-48x240F/290-PB25-SSC

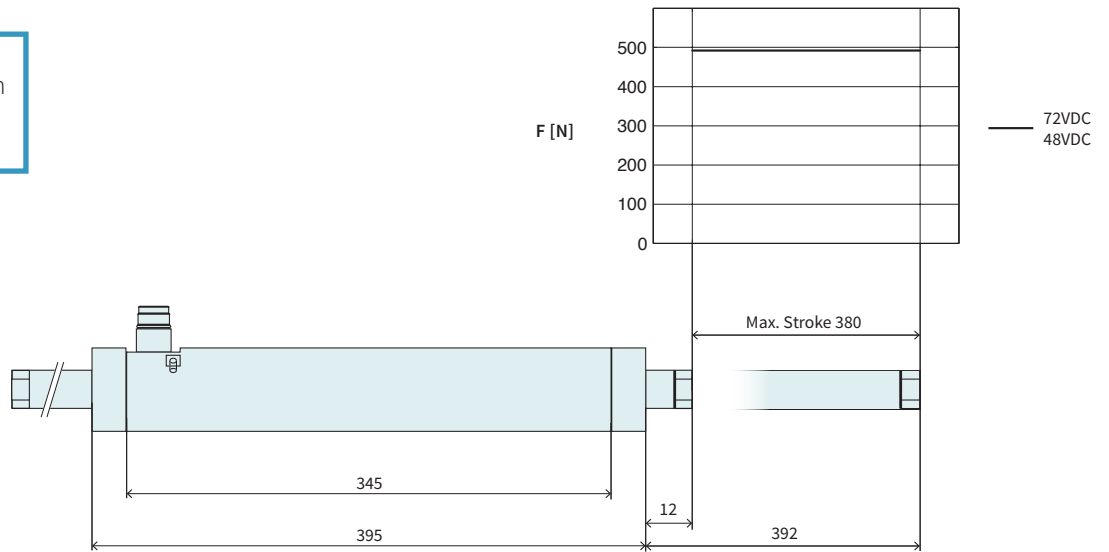
Technical Data P01-48x240F/290-PB25-SSC			
<b>Stroke</b>			
Max. Stroke	mm (in)	290	(11.4)
<b>Force</b>			
Max. Force @ 48VDC	N (lbf)	496	(111)
Max. Force @ 72VDC	N (lbf)	496	(111)
Max. Cont. Force [Passive cooling / Fan / Fluid]	N (lbf)	84 / - / 240	(19 / - / 53)
Max. Border Force relative	%	100	
Force Constant	N/A <sub>pk</sub> (lbf/A <sub>pk</sub> )	19.1	(4.29)
<b>Velocity</b>			
Max. Velocity @ 48VDC	m/s (in/s)	2.2	(90.9)
Max. Velocity @ 72VDC	m/s (in/s)	3.4	(139.9)
<b>Position Detection</b>			
Repeatability	mm (in)	±0.05	(±0.002)
Linearity	%	± 0.35	
<b>Electrical Data</b>			
Max. Current @ 48VDC	A <sub>pk</sub>	25.9	
Max. Current @ 72VDC	A <sub>pk</sub>	25.9	
Max. Cont. Current [Passive cooling / Fan / Fluid]	A <sub>pk</sub>	4.4 / - / 12	
<b>Thermal Data</b>			
Max. Winding Temperature (Sensor)	°C	90	
Thermal Resistance [Passive cooling / Fan / Fluid]	°K/W	2 / - / 0.26	
Thermal Time Constant [Passive cooling / Fan / Fluid]	s	2100 / - / 260	
<b>Mechanical Data</b>			
Slider Length	mm (in)	710	(28)
Slider Mass	g (lb)	2920	(6.42)



Item	Description	Item-No.
<b>PS01-48x240F-SSC-C</b>	Stator Stainless Steel IP69K	0150-1267
<b>PS01-48x240F-SSC-C-FC</b>	Stator stainless steel IP69K, FC	0150-1268
<b>PL01-27x710/630</b>	Slider 'High Clearance'	0150-1471

**P01-48x240F/380-PB25-SSC**

**Max. Stroke:** 380 mm  
**Peak Force:** 496 N



Dimensions in mm

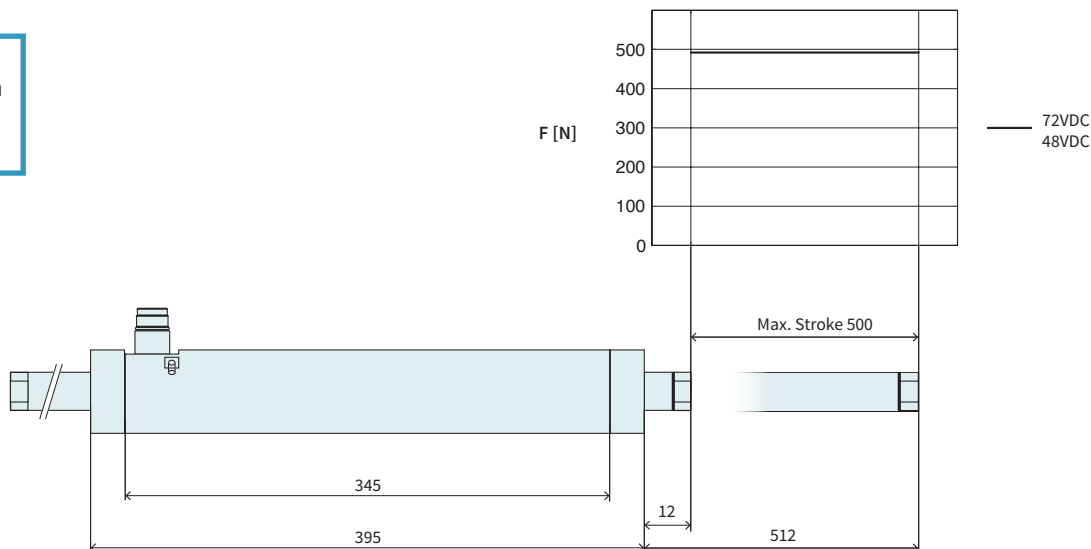
Technical Data P01-48x240F/380-PB25-SSC				
<b>Stroke</b>				
Max. Stroke	mm	(in)	380	(14.99)
<b>Force</b>				
Max. Force @ 48VDC	N	(lbf)	496	(111)
Max. Force @ 72VDC	N	(lbf)	496	(111)
Max. Cont. Force [Passive cooling / Fan / Fluid]	N	(lbf)	84 / - / 240	(19 / - / 53)
Max. Border Force relative			%	
			100	
Force Constant	N/A <sub>pk</sub>	(lbf/A <sub>pk</sub> )	19.1	(4.29)
<b>Velocity</b>				
Max. Velocity @ 48VDC	m/s	(in/s)	2.2	(90.9)
Max. Velocity @ 72VDC	m/s	(in/s)	3.4	(139.9)
<b>Position Detection</b>				
Repeatability	mm	(in)	±0.05	(±0.002)
Linearity			%	
			± 0.3	
<b>Electrical Data</b>				
Max. Current @ 48VDC	A <sub>pk</sub>		25.9	
Max. Current @ 72VDC	A <sub>pk</sub>		25.9	
Max. Cont. Current [Passive cooling / Fan / Fluid]	A <sub>pk</sub>		4.4 / - / 12	
<b>Thermal Data</b>				
Max. Winding Temperature (Sensor)	°C		90	
Thermal Resistance [Passive cooling / Fan / Fluid]	°K/W		2 / - / 0.26	
Thermal Time Constant [Passive cooling / Fan / Fluid]	s		2100 / - / 260	
<b>Mechanical Data</b>				
Slider Length	mm	(in)	800	(31)
Slider Mass	g	(lb)	3310	(7.28)



Item	Description	Item-No.
<b>PS01-48x240F-SSC-C</b>	Stator Stainless Steel IP69K	0150-1267
<b>PS01-48x240F-SSC-C-FC</b>	Stator stainless steel IP69K, FC	0150-1268
<b>PL01-27x800/720</b>	Slider 'High Clearance'	0150-1472

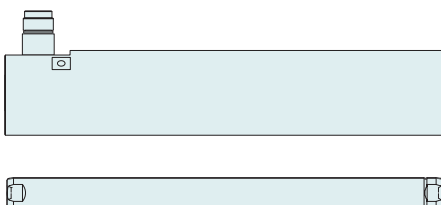
**P01-48x240F/500-PB25-SSC**

**Max. Stroke:** 500 mm  
**Peak Force:** 496 N



Dimensions in mm

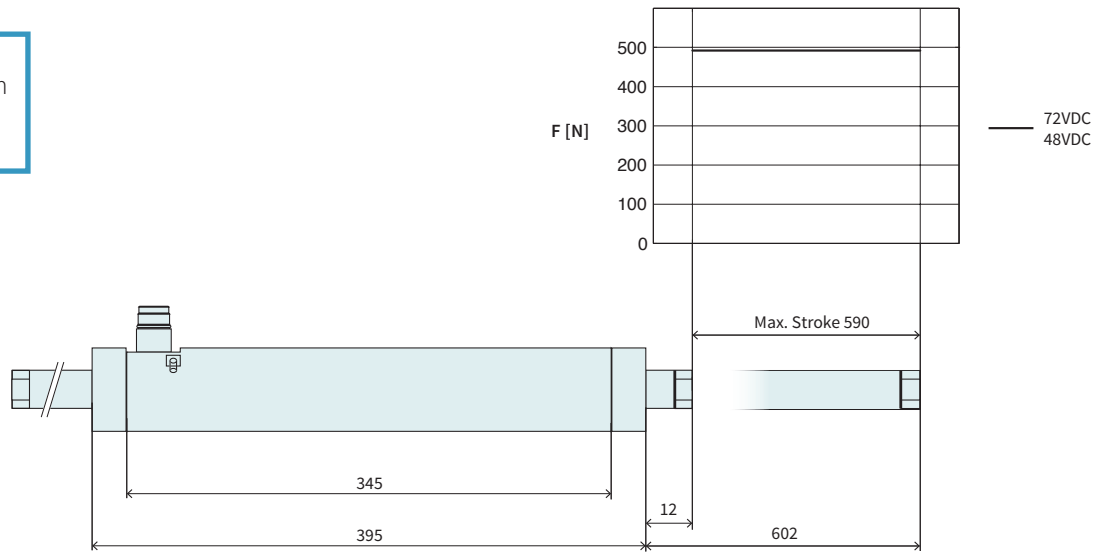
Technical Data P01-48x240F/500-PB25-SSC			
<b>Stroke</b>			
Max. Stroke	mm (in)	500	(19.69)
<b>Force</b>			
Max. Force @ 48VDC	N (lbf)	496	(111)
Max. Force @ 72VDC	N (lbf)	496	(111)
Max. Cont. Force [Passive cooling / Fan / Fluid]	N (lbf)	84 / - / 240	(19 / - / 53)
Max. Border Force relative	%	100	
Force Constant	N/A <sub>pk</sub> (lbf/A <sub>pk</sub> )	19.1	(4.29)
<b>Velocity</b>			
Max. Velocity @ 48VDC	m/s (in/s)	2.2	(90.9)
Max. Velocity @ 72VDC	m/s (in/s)	3.4	(139.9)
<b>Position Detection</b>			
Repeatability	mm (in)	±0.05	(±0.002)
Linearity	%	± 0.25	
<b>Electrical Data</b>			
Max. Current @ 48VDC	A <sub>pk</sub>	25.9	
Max. Current @ 72VDC	A <sub>pk</sub>	25.9	
Max. Cont. Current [Passive cooling / Fan / Fluid]	A <sub>pk</sub>	4.4 / - / 12	
<b>Thermal Data</b>			
Max. Winding Temperature (Sensor)	°C	90	
Thermal Resistance [Passive cooling / Fan / Fluid]	°K/W	2 / - / 0.26	
Thermal Time Constant [Passive cooling / Fan / Fluid]	s	2100 / - / 260	
<b>Mechanical Data</b>			
Slider Length	mm (in)	920	(36)
Slider Mass	g (lb)	3830	(8.43)



Item	Description	Item-No.
<b>PS01-48x240F-SSC-C</b>	Stator Stainless Steel IP69K	0150-1267
<b>PS01-48x240F-SSC-C-FC</b>	Stator stainless steel IP69K, FC	0150-1268
<b>PL01-27x920/840</b>	Slider 'High Clearance'	0150-1447

**P01-48x240F/590-PB25-SSC**

**Max. Stroke:** 590 mm  
**Peak Force:** 496 N



Dimensions in mm

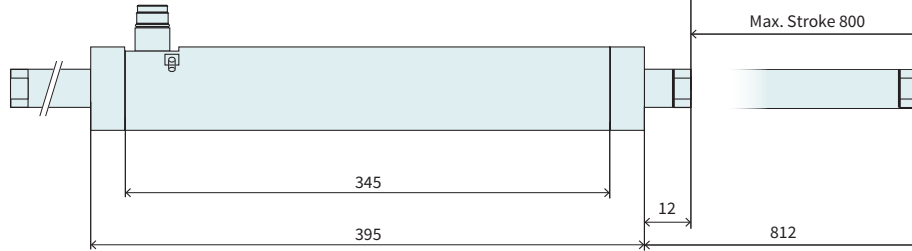
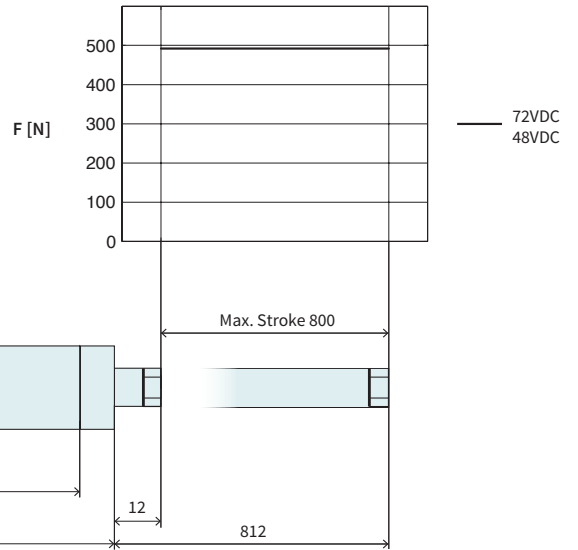
Technical Data P01-48x240F/590-PB25-SSC				
<b>Stroke</b>				
Max. Stroke	mm	(in)	590	(23.19)
<b>Force</b>				
Max. Force @ 48VDC	N	(lbf)	496	(111)
Max. Force @ 72VDC	N	(lbf)	496	(111)
Max. Cont. Force [Passive cooling / Fan / Fluid]	N	(lbf)	84 / - / 240	(19 / - / 53)
Max. Border Force relative	%		100	
Force Constant	N/A <sub>pk</sub>	(lbf/A <sub>pk</sub> )	19.1	(4.29)
<b>Velocity</b>				
Max. Velocity @ 48VDC	m/s	(in/s)	2.2	(90.9)
Max. Velocity @ 72VDC	m/s	(in/s)	3.4	(139.9)
<b>Position Detection</b>				
Repeatability	mm	(in)	±0.05	(±0.002)
Linearity	%		± 0.25	
<b>Electrical Data</b>				
Max. Current @ 48VDC	A <sub>pk</sub>		25.9	
Max. Current @ 72VDC	A <sub>pk</sub>		25.9	
Max. Cont. Current [Passive cooling / Fan / Fluid]	A <sub>pk</sub>		4.4 / - / 12	
<b>Thermal Data</b>				
Max. Winding Temperature (Sensor)	°C		90	
Thermal Resistance [Passive cooling / Fan / Fluid]	°K/W		2 / - / 0.26	
Thermal Time Constant [Passive cooling / Fan / Fluid]	s		2100 / - / 260	
<b>Mechanical Data</b>				
Slider Length	mm	(in)	1010	(40)
Slider Mass	g	(lb)	4220	(9.28)



Item	Description	Item-No.
<b>PS01-48x240F-SSC-C</b>	Stator Stainless Steel IP69K	0150-1267
<b>PS01-48x240F-SSC-C-FC</b>	Stator stainless steel IP69K, FC	0150-1268
<b>PL01-27x1010/930</b>	Slider 'High Clearance'	0150-1473

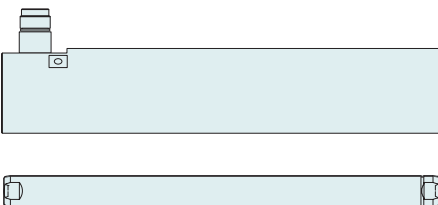
**P01-48x240F/800-PB25-SSC**

**Max. Stroke:** 800 mm  
**Peak Force:** 496 N



Dimensions in mm

Technical Data P01-48x240F/800-PB25-SSC			
<b>Stroke</b>			
Max. Stroke	mm (in)	800	(31.49)
<b>Force</b>			
Max. Force @ 48VDC	N (lbf)	496	(111)
Max. Force @ 72VDC	N (lbf)	496	(111)
Max. Cont. Force [Passive cooling / Fan / Fluid]	N (lbf)	84 / - / 240	(19 / - / 53)
Max. Border Force relative	%	100	
Force Constant	N/A <sub>pk</sub> (lbf/A <sub>pk</sub> )	19.1	(4.29)
<b>Velocity</b>			
Max. Velocity @ 48VDC	m/s (in/s)	2.2	(90.9)
Max. Velocity @ 72VDC	m/s (in/s)	3.4	(139.9)
<b>Position Detection</b>			
Repeatability	mm (in)	±0.05	(±0.002)
Linearity	%	± 0.2	
<b>Electrical Data</b>			
Max. Current @ 48VDC	A <sub>pk</sub>	25.9	
Max. Current @ 72VDC	A <sub>pk</sub>	25.9	
Max. Cont. Current [Passive cooling / Fan / Fluid]	A <sub>pk</sub>	4.4 / - / 12	
<b>Thermal Data</b>			
Max. Winding Temperature (Sensor)	°C	90	
Thermal Resistance [Passive cooling / Fan / Fluid]	°K/W	2 / - / 0.26	
Thermal Time Constant [Passive cooling / Fan / Fluid]	s	2100 / - / 260	
<b>Mechanical Data</b>			
Slider Length	mm (in)	1220	(48)
Slider Mass	g (lb)	5130	(11.29)

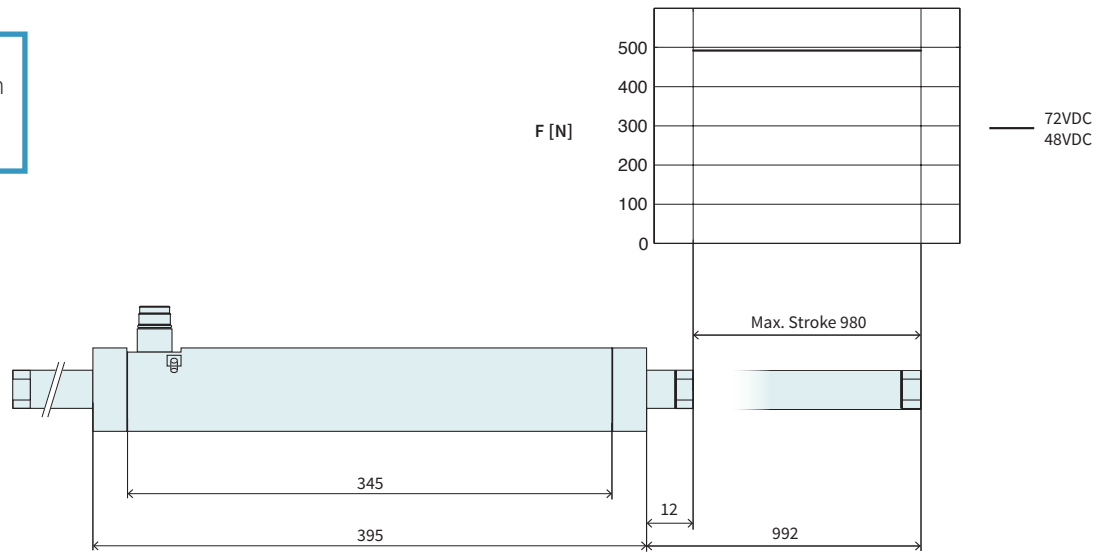


Item	Description	Item-No.
<b>PS01-48x240F-SSC-C</b>	Stator Stainless Steel IP69K	0150-1267
<b>PS01-48x240F-SSC-C-FC</b>	Stator stainless steel IP69K, FC	0150-1268
<b>PL01-27x1220/1140</b>	Slider 'High Clearance'	0150-1587



**P01-48x240F/980-PB25-SSC**

**Max. Stroke:** 980 mm  
**Peak Force:** 496 N



Dimensions in mm

Technical Data P01-48x240F/980-PB25-SSC				
<b>Stroke</b>				
Max. Stroke	mm	(in)	980	(38.6)
<b>Force</b>				
Max. Force @ 48VDC	N	(lbf)	496	(111)
Max. Force @ 72VDC	N	(lbf)	496	(111)
Max. Cont. Force [Passive cooling / Fan / Fluid]	N	(lbf)	84 / - / 240	(19 / - / 53)
Max. Border Force relative			%	
			100	
Force Constant	N/A <sub>pk</sub>	(lbf/A <sub>pk</sub> )	19.1	(4.29)
<b>Velocity</b>				
Max. Velocity @ 48VDC	m/s	(in/s)	2.2	(90.9)
Max. Velocity @ 72VDC	m/s	(in/s)	3.4	(139.9)
<b>Position Detection</b>				
Repeatability	mm	(in)	±0.05	(±0.002)
Linearity			%	
			± 0.2	
<b>Electrical Data</b>				
Max. Current @ 48VDC			A <sub>pk</sub>	
			25.9	
Max. Current @ 72VDC			A <sub>pk</sub>	
			25.9	
Max. Cont. Current [Passive cooling / Fan / Fluid]			A <sub>pk</sub>	
			4.4 / - / 12	
<b>Thermal Data</b>				
Max. Winding Temperature (Sensor)			°C	
			90	
Thermal Resistance [Passive cooling / Fan / Fluid]			°K/W	
			2 / - / 0.26	
Thermal Time Constant [Passive cooling / Fan / Fluid]			s	
			2100 / - / 260	
<b>Mechanical Data</b>				
Slider Length	mm	(in)	1400	(55)
Slider Mass	g	(lb)	5910	(13)



Item	Description	Item-No.
<b>PS01-48x240F-SSC-C</b>	Stator Stainless Steel IP69K	0150-1267
<b>PS01-48x240F-SSC-C-FC</b>	Stator stainless steel IP69K, FC	0150-1268
<b>PL01-27x1400/1320</b>	Slider 'High Clearance'	0150-1588

**Linear Guides H01-SSC**



5

**HM01-48x240/210-SSC | Linear module SSC 48x240 with 210 mm Stroke**

→	H-Guide	H01-48x401/210-SSC	H-Guide for PS01-48x240F-HP-SSC, Stroke max.210 mm	0150-5280
	Stator	PS01-48x240F-SSC-C	Stator Stainless Steel IP69K	0150-1267
		PS01-48x240F-SSC-C-FC	Stator stainless steel IP69K, FC	0150-1268
→	Slider	PL01-27x620/540	Slider 'High Clearance'	0150-1470

**HM01-48x240/300-SSC | Linear module SSC 48x240 with 300 mm Stroke**

→	H-Guide	H01-48x401/300-SSC	H-Guide for PS01-48x240F-HP-SSC, Stroke max.300 mm	0150-5281
	Stator	PS01-48x240F-SSC-C	Stator Stainless Steel IP69K	0150-1267
		PS01-48x240F-SSC-C-FC	Stator stainless steel IP69K, FC	0150-1268
→	Slider	PL01-27x710/630	Slider 'High Clearance'	0150-1471

**HM01-48x240/390-SSC | Linear module SSC 48x240 with 390 mm Stroke**

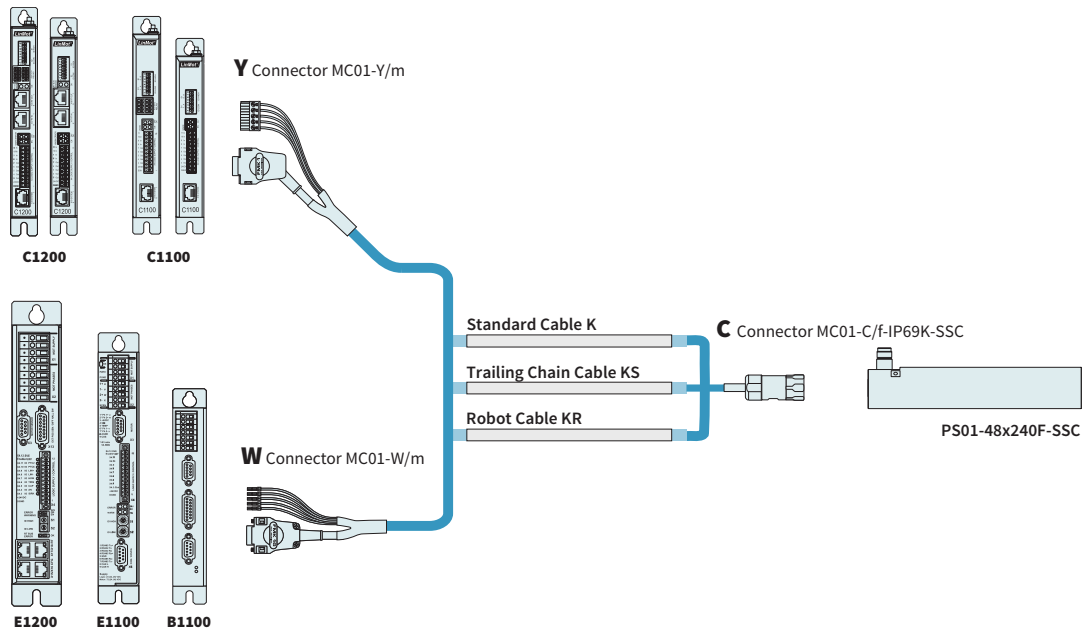
→	H-Guide	H01-48x401/390-SSC	H-Guide for PS01-48x240F-HP-SSC, Stroke max.390 mm	0150-5282
	Stator	PS01-48x240F-SSC-C	Stator Stainless Steel IP69K	0150-1267
		PS01-48x240F-SSC-C-FC	Stator stainless steel IP69K, FC	0150-1268
→	Slider	PL01-27x800/720	Slider 'High Clearance'	0150-1472

**HM01-48x240/510-SSC | Linear module SSC 48x240 with 510 mm Stroke**

→	H-Guide	H01-48x401/510-SSC	H-Guide for PS01-48x240F-HP-SSC, Stroke max.510 mm	0150-5283
	Stator	PS01-48x240F-SSC-C	Stator Stainless Steel IP69K	0150-1267
		PS01-48x240F-SSC-C-FC	Stator stainless steel IP69K, FC	0150-1268
→	Slider	PL01-27x920/840	Slider 'High Clearance'	0150-1447

**FIND MORE PRODUCT DETAILS IN THE CHAPTER "LINEAR GUIDES".**

**Motor Cable**



**ORDERING INFORMATION**

STANDARD CABLE		
Item	Description	Item-No.
<b>K15-W/C-SSC</b>	Motor Cable W/C-SSC, Custom length	0150-3539
<b>K15-Y-Fe/C-SSC-</b>	Motor Cable Y-Fe/C-SSC, Custom length	0150-3630

TRAILING CHAIN CABLE		
Item	Description	Item-No.
<b>KS10-W/C-SSC-2</b>	Trailing Chain Cable W/C-SSC, 2 m	0150-2675
<b>KS10-W/C-SSC-4</b>	Trailing Chain Cable W/C-SSC, 4 m	0150-2676
<b>KS10-W/C-SSC-6</b>	Trailing Chain Cable W/C-SSC, 6 m	0150-2677
<b>KS10-W/C-SSC-8</b>	Trailing Chain Cable W/C-SSC, 8 m	0150-2678
<b>KS10-W/C-SSC-</b>	Trailing Chain Cable W/C-SSC, Custom length	0150-3358
<b>KS10-Y/C-SSC-2</b>	Trailing Chain Cable Y/C-SSC, 2 m	0150-2679
<b>KS10-Y/C-SSC-4</b>	Trailing Chain Cable Y/C-SSC, 4 m	0150-2680
<b>KS10-Y/C-SSC-6</b>	Trailing Chain Cable Y/C-SSC, 6 m	0150-2681
<b>KS10-Y/C-SSC-8</b>	Trailing Chain Cable Y/C-SSC, 8 m	0150-2682
<b>KS10-Y-Fe/C-SSC-</b>	Trailing Chain Cable Y/C-SSC, Custom length	0150-3574

ROBOT CABLE		
Item	Description	Item-No.
<b>KR10-W/C-SSC-</b>	Robot Cable KR05-W/C-SSC-, Custom length	0150-3536

CONNECTOR & CABLE (INDIVIDUAL)		
Item	Description	Item-No.
<b>MC01-W/m</b>	Motor Connector W/m	0150-3140
<b>MC01-Y-Fe/m</b>	Motor Connector Y-Fe/m	0150-3289
<b>MC01-C/f-IP69K-SSC</b>	Motor Connector C/f, IP69K, SSC	0150-3306
<b>K15-04/05</b>	Motor Cable per m	0150-1978
<b>KS10-04/05</b>	Trailing Chain Cable per m	0150-1977
<b>KR10-04/05</b>	Robot Cable per m	0150-1830

**SLIDER MOUNTING**



Item	Description	Item-No.
<b>PLF01-28-SS</b>	Fixed Bearing Set for 27 mm and 28 mm Slider, Stainless steel	0150-3297
<b>PLL01-27</b>	Floating support for PL01-27 sliders	0150-3294

FIND MORE PRODUCT DETAILS IN THE CHAPTER "ACCESSORIES".

**BEARING KITS**



Item	Description	Item-No.
<b>PB02-48x25-P-WD</b>	Bearing for PS01-48x...-SSC (Plastic)	0150-3271
<b>PB01-48x25-P-SSC</b>	Bearing for PS01-48x...-SSC, stainless steel	0150-3281

FIND MORE PRODUCT DETAILS IN THE CHAPTER "ACCESSORIES".

**EXTERNAL POSITION SENSORS**



Item	Description	Item-No.
<b>MS01-1/D</b>	Linear Encoder 1µm, A/B (for incremental strip)	0150-1840
<b>MB01-1000</b>	Magnetic incremental strip for MS01-1/D, per cm	0150-1963
<b>KS025-D/D-Encoder</b>	Special cable KS025-D/D-Encoder- (Length in m)	0150-3166
<b>KS025-D/D15-Encoder</b>	Special cable KS025-D15/D-Encoder- (Length in m)	0150-3168

FIND MORE PRODUCT DETAILS IN THE CHAPTER "ACCESSORIES".



Item	Description	Item-No.
<b>MS01-1/D-SSI</b>	Linear Encoder 1µm, A/B (for absolute strip)	0150-2095
<b>MB01-1000-ABS</b>	Magnetic absolute strip for MS01-1/D-SSI (per cm)	0150-2096
<b>EC01-ABS/ENC-12-S</b>	MS01-1/D-SSI Encoder connector straight	0150-3616
<b>KSS01-12-D15/ABS-ENC</b>	For MS01-1/D-SSI on C1100/C1200/C1400/E1200/E1400 Drives	0150-3652

**FIND MORE PRODUCT DETAILS IN THE CHAPTER "ACCESSORIES".**



# LINEAR MOTORS P01-48x360F-SSC



- ✓ Stainless steel housing EN 1.4404 / AISI / SAE 316L
- ✓ Hygienic design
- ✓ Welded connections, no gaskets
- ✓ Completely encapsulated
- ✓ Protection class IP69K
- ✓ Optional integrated water cooling
- ✓ For use in the food or in the pharmaceutical sector

## **LINEAR MOTORS P01-48x360F-SSC**

**Technical Data** ..... **659**

### **Motor Specifications**

P01-48x360F/80-PB25-SSC ..... **662**

P01-48x360F/170-PB25-SSC ..... **663**

P01-48x360F/260-PB25-SSC ..... **664**

P01-48x360F/380-PB25-SSC ..... **665**

P01-48x360F/470-PB25-SSC ..... **666**

P01-48x360F/680-PB25-SSC ..... **667**

P01-48x360F/860-PB25-SSC ..... **668**

**Accessories** ..... **669**

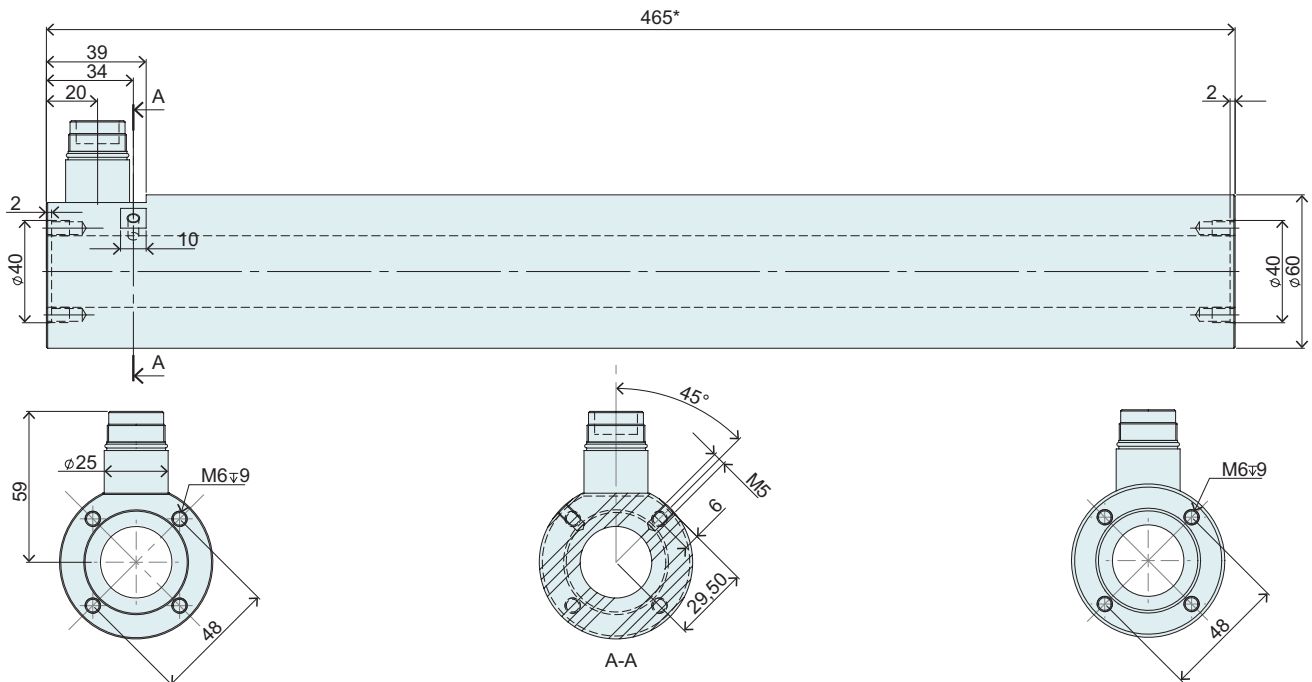




### MOTOR FAMILY P01-48x360F-SSC

Technical Data				
<b>Stroke</b>				
Max. Stroke	mm	(in)	860	(33.9)
<b>Force</b>				
Max. Force @ 48VDC	N	(lbf)	721	(162)
Max. Force @ 72VDC	N	(lbf)	721	(162)
Max. Cont. Force [Passive cooling / Fan / Fluid]	N	(lbf)	130 / - / 350	(29 / - / 80)
Max. Border Force relative	%		≤ 100	
Force Constant	N/A <sub>pk</sub>	(lbf/A <sub>pk</sub> )	27.7	(6.24)
<b>Velocity</b>				
Max. Velocity @ 48VDC	m/s	(in/s)	1.6	(62.9)
Max. Velocity @ 72VDC	m/s	(in/s)	2.3	(93.9)
<b>Position Detection</b>				
Position Resolution	mm	(in)	0.007	(0.0003)
Repeatability	mm	(in)	±0.05	(±0.002)
Position Resolution with ES	mm	(in)	0.001	(0.00004)
Repeatability with ES	mm	(in)	±0.01	(±0.0004)
Linearity with ES	mm	(in)	±0.01	(±0.0004)
<b>Electrical Data</b>				
Max. Current @ 48VDC	A <sub>pk</sub>		25.9	
Max. Current @ 72VDC	A <sub>pk</sub>		25.9	
Max. Cont. Current [Passive cooling / Fan / Fluid]	A <sub>pk</sub>		4.6 / - / 13	
Terminal Resistance 25 °C / 120 °C	Ohm		1.4 / 1.9	
Terminal Inductivity	mH		1.6	
Magnetic Period	mm	(in)	60	(2.35)
<b>Thermal Data</b>				
Max. Winding Temperature (Sensor)	°C		90	
Thermal Resistance [Passive cooling / Fan / Fluid]	°K/W		1.3 / - / 0.17	
Thermal Time Constant [Passive cooling / Fan / Fluid]	s		1900 / - / 240	
<b>Mechanical Data</b>				
Stator Diameter	mm	(in)	60	(2.4)
Stator Length [Connector type / Cable type]	mm	(in)	515	(20)
Stator Mass	g	(lb)	5560	(12.23)
Slider Diameter	mm	(in)	27	(1.1)
Slider Length	mm	(in)	500 - 1400	(20 - 55)
Slider Mass	g	(lb)	2010 - 5910	(4.42 - 13)
IP Code				IP 69k

**STATOR**



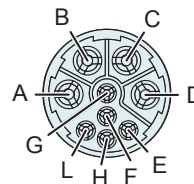
\* Length without bearing

Item	Description	Item-No.
<b>PS01-48x360F-SSC-C</b>	Stator Stainless Steel IP69K	0150-1270
<b>PS01-48x360F-SSC-C-FC</b>	Stator stainless steel IP69K, FC	0150-1271

**CONNECTOR**

Motor Connector Wiring	PS01-48x360F-SSC-C PS01-48x360F-SSC-C-FC	Wire Color Motor Cable
	C-Connector	
Ph 1+	A	red
Ph 1-	B	pink
Ph 2+	C	blue
Ph 2-	D	grey
+5VDC	E	white
GND	F	inner Shield
Sinus	G	yellow
Cosinus	H	green
Temp.	L	black
Shield	Case	outer Shield

**C-Connector**

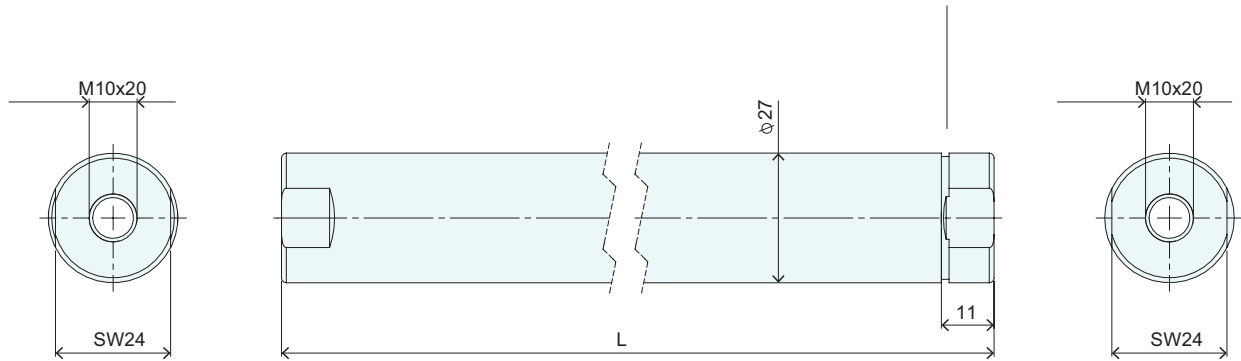


View: Motor connector, plug side

**SLIDER**

**Slider High Clearance**

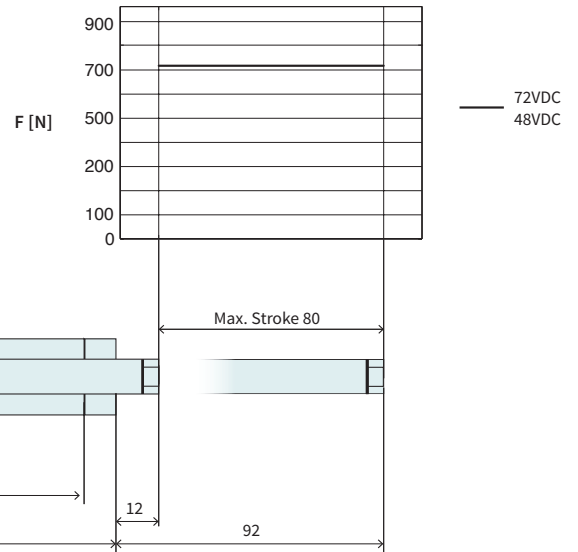
Number of grooves determines the slider type (see chapter 2 / slider) and marks the front end.



Slider High Clearance			
Item	Description	Max. Stroke [mm]	Item-No.
PL01-27x620/540	Slider 'High Clearance'	80	0150-1470
PL01-27x710/630	Slider 'High Clearance'	170	0150-1471
PL01-27x800/720	Slider 'High Clearance'	260	0150-1472
PL01-27x920/840	Slider 'High Clearance'	380	0150-1447
PL01-27x1010/930	Slider 'High Clearance'	470	0150-1473
PL01-27x1220/1140	Slider 'High Clearance'	680	0150-1587
PL01-27x1400/1320	Slider 'High Clearance'	860	0150-1588

**P01-48x360F/80-PB25-SSC**

**Max. Stroke:** 80 mm  
**Peak Force:** 721 N



Technical Data P01-48x360F/80-PB25-SSC

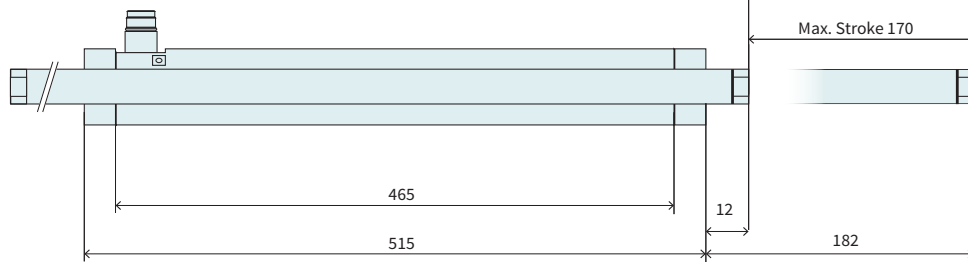
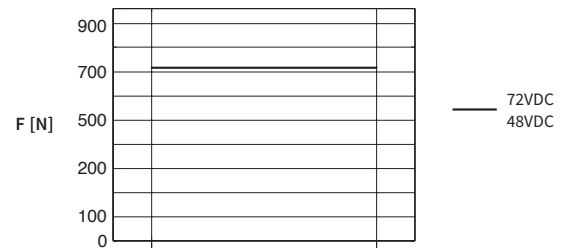
Stroke			
Max. Stroke	mm (in)	80 (3.14)	
Force			
Max. Force @ 48VDC	N (lbf)	721 (162)	
Max. Force @ 72VDC	N (lbf)	721 (162)	
Max. Cont. Force [Passive cooling / Fan / Fluid]	N (lbf)	130 / - / 350 (29 / - / 80)	
Max. Border Force relative	%	100	
Force Constant	N/A <sub>pk</sub> (lbf/A <sub>pk</sub> )	27.7 (6.24)	
Velocity			
Max. Velocity @ 48VDC	m/s (in/s)	1.6 (62.9)	
Max. Velocity @ 72VDC	m/s (in/s)	2.3 (93.9)	
Position Detection			
Repeatability	mm (in)	±0.05 (±0.002)	
Linearity	%	± 1.05	
Electrical Data			
Max. Current @ 48VDC	A <sub>pk</sub>	25.9	
Max. Current @ 72VDC	A <sub>pk</sub>	25.9	
Max. Cont. Current [Passive cooling / Fan / Fluid]	A <sub>pk</sub>	4.6 / - / 13	
Thermal Data			
Max. Winding Temperature (Sensor)	°C	90	
Thermal Resistance [Passive cooling / Fan / Fluid]	°K/W	1.3 / - / 0.17	
Thermal Time Constant [Passive cooling / Fan / Fluid]	s	1900 / - / 240	
Mechanical Data			
Slider Length	mm (in)	620 (24)	
Slider Mass	g (lb)	2530 (5.57)	



Item	Description	Item-No.
<b>PS01-48x360F-SSC-C</b>	Stator Stainless Steel IP69K	0150-1270
<b>PS01-48x360F-SSC-C-FC</b>	Stator stainless steel IP69K, FC	0150-1271
<b>PL01-27x620/540</b>	Slider 'High Clearance'	0150-1470

**P01-48x360F/170-PB25-SSC**

**Max. Stroke:** 170 mm  
**Peak Force:** 721 N



Dimensions in mm

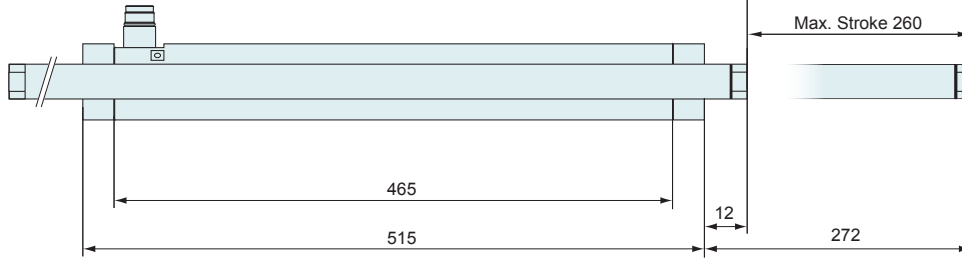
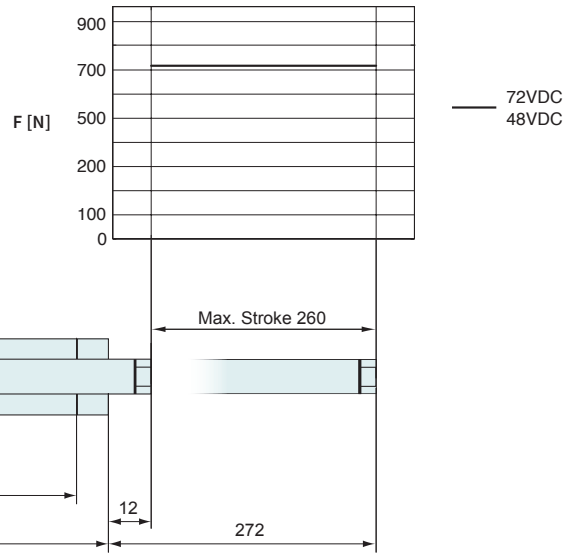
Technical Data P01-48x360F/170-PB25-SSC			
<b>Stroke</b>			
Max. Stroke	mm (in)	170	(6.69)
<b>Force</b>			
Max. Force @ 48VDC	N (lbf)	721	(162)
Max. Force @ 72VDC	N (lbf)	721	(162)
Max. Cont. Force [Passive cooling / Fan / Fluid]	N (lbf)	130 / - / 350	(29 / - / 80)
Max. Border Force relative	%	100	
Force Constant	N/A <sub>pk</sub> (lbf/A <sub>pk</sub> )	27.7	(6.24)
<b>Velocity</b>			
Max. Velocity @ 48VDC	m/s (in/s)	1.6	(62.9)
Max. Velocity @ 72VDC	m/s (in/s)	2.3	(93.9)
<b>Position Detection</b>			
Repeatability	mm (in)	±0.05	(±0.002)
Linearity	%	± 0.55	
<b>Electrical Data</b>			
Max. Current @ 48VDC	A <sub>pk</sub>	25.9	
Max. Current @ 72VDC	A <sub>pk</sub>	25.9	
Max. Cont. Current [Passive cooling / Fan / Fluid]	A <sub>pk</sub>	4.6 / - / 13	
<b>Thermal Data</b>			
Max. Winding Temperature (Sensor)	°C	90	
Thermal Resistance [Passive cooling / Fan / Fluid]	°K/W	1.3 / - / 0.17	
Thermal Time Constant [Passive cooling / Fan / Fluid]	s	1900 / - / 240	
<b>Mechanical Data</b>			
Slider Length	mm (in)	710	(28)
Slider Mass	g (lb)	2920	(6.42)



Item	Description	Item-No.
<b>PS01-48x360F-SSC-C</b>	Stator Stainless Steel IP69K	0150-1270
<b>PS01-48x360F-SSC-C-FC</b>	Stator stainless steel IP69K, FC	0150-1271
<b>PL01-27x710/630</b>	Slider 'High Clearance'	0150-1471

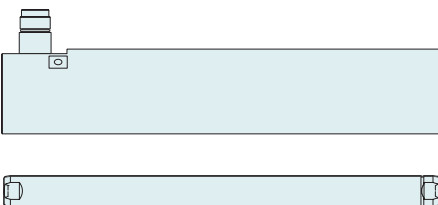
**P01-48x360F/260-PB25-SSC**

**Max. Stroke:** 260 mm  
**Peak Force:** 721 N



Dimensions in mm

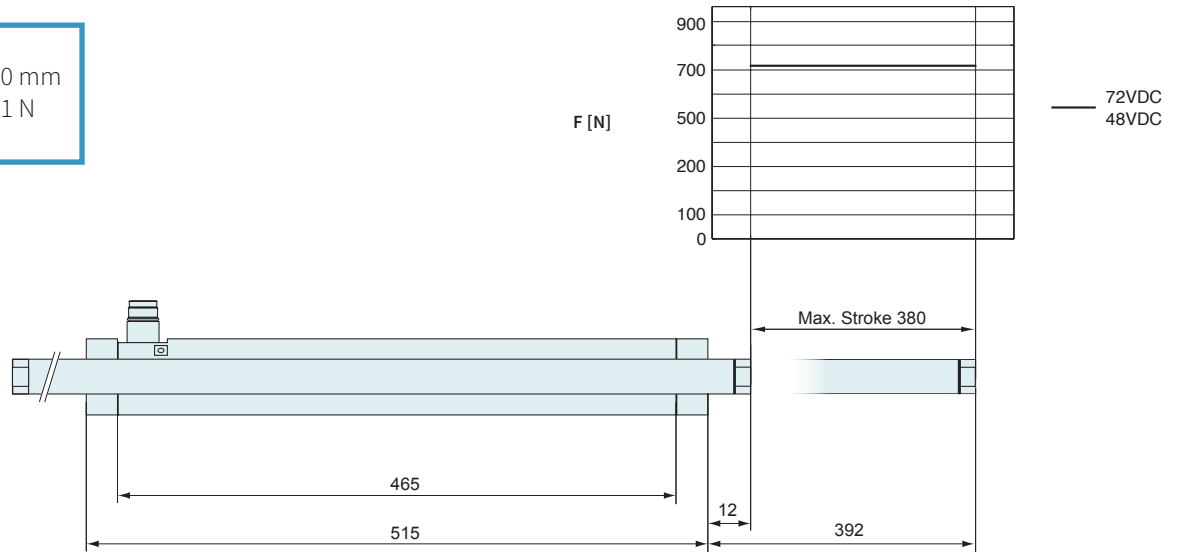
Technical Data P01-48x360F/260-PB25-SSC			
<b>Stroke</b>			
Max. Stroke	mm (in)	260 (10.19)	
<b>Force</b>			
Max. Force @ 48VDC	N (lbf)	721 (162)	
Max. Force @ 72VDC	N (lbf)	721 (162)	
Max. Cont. Force [Passive cooling / Fan / Fluid]	N (lbf)	130 / - / 350 (29 / - / 80)	
Max. Border Force relative	%	100	
Force Constant	N/A <sub>pk</sub> (lbf/A <sub>pk</sub> )	27.7 (6.24)	
<b>Velocity</b>			
Max. Velocity @ 48VDC	m/s (in/s)	1.6 (62.9)	
Max. Velocity @ 72VDC	m/s (in/s)	2.3 (93.9)	
<b>Position Detection</b>			
Repeatability	mm (in)	±0.05 (±0.002)	
Linearity	%	± 0.4	
<b>Electrical Data</b>			
Max. Current @ 48VDC	A <sub>pk</sub>	25.9	
Max. Current @ 72VDC	A <sub>pk</sub>	25.9	
Max. Cont. Current [Passive cooling / Fan / Fluid]	A <sub>pk</sub>	4.6 / - / 13	
<b>Thermal Data</b>			
Max. Winding Temperature (Sensor)	°C	90	
Thermal Resistance [Passive cooling / Fan / Fluid]	°K/W	1.3 / - / 0.17	
Thermal Time Constant [Passive cooling / Fan / Fluid]	s	1900 / - / 240	
<b>Mechanical Data</b>			
Slider Length	mm (in)	800 (31)	
Slider Mass	g (lb)	3310 (7.28)	



Item	Description	Item-No.
<b>PS01-48x360F-SSC-C</b>	Stator Stainless Steel IP69K	0150-1270
<b>PS01-48x360F-SSC-C-FC</b>	Stator stainless steel IP69K, FC	0150-1271
<b>PL01-27x800/720</b>	Slider 'High Clearance'	0150-1472

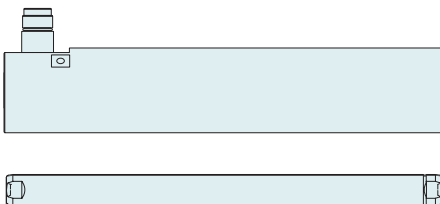
**P01-48x360F/380-PB25-SSC**

**Max. Stroke:** 380 mm  
**Peak Force:** 721 N



Dimensions in mm

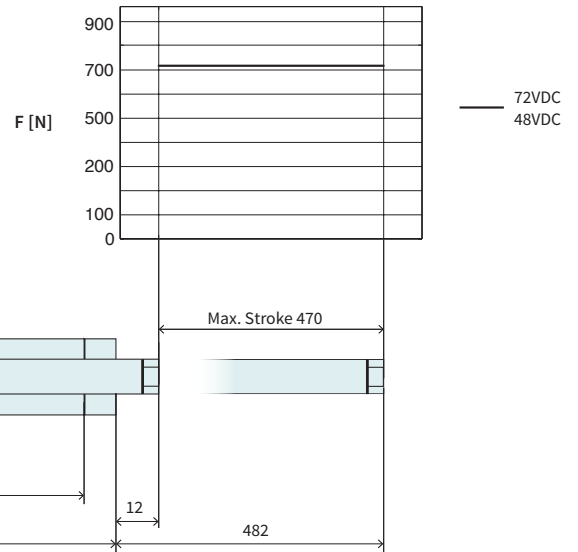
Technical Data P01-48x360F/380-PB25-SSC			
<b>Stroke</b>			
Max. Stroke	mm (in)	380	(14.99)
<b>Force</b>			
Max. Force @ 48VDC	N (lbf)	721	(162)
Max. Force @ 72VDC	N (lbf)	721	(162)
Max. Cont. Force [Passive cooling / Fan / Fluid]	N (lbf)	130 / - / 350	(29 / - / 80)
Max. Border Force relative	%	100	
Force Constant	N/A <sub>pk</sub> (lbf/A <sub>pk</sub> )	27.7	(6.24)
<b>Velocity</b>			
Max. Velocity @ 48VDC	m/s (in/s)	1.6	(62.9)
Max. Velocity @ 72VDC	m/s (in/s)	2.3	(93.9)
<b>Position Detection</b>			
Repeatability	mm (in)	±0.05	(±0.002)
Linearity	%	± 0.3	
<b>Electrical Data</b>			
Max. Current @ 48VDC	A <sub>pk</sub>	25.9	
Max. Current @ 72VDC	A <sub>pk</sub>	25.9	
Max. Cont. Current [Passive cooling / Fan / Fluid]	A <sub>pk</sub>	4.6 / - / 13	
<b>Thermal Data</b>			
Max. Winding Temperature (Sensor)	°C	90	
Thermal Resistance [Passive cooling / Fan / Fluid]	°K/W	1.3 / - / 0.17	
Thermal Time Constant [Passive cooling / Fan / Fluid]	s	1900 / - / 240	
<b>Mechanical Data</b>			
Slider Length	mm (in)	920	(36)
Slider Mass	g (lb)	3830	(8.43)



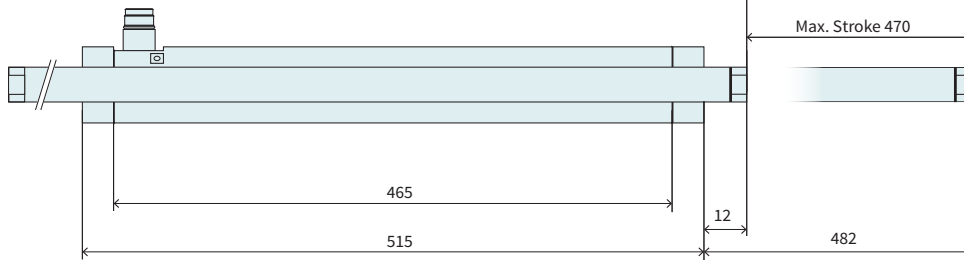
Item	Description	Item-No.
<b>PS01-48x360F-SSC-C</b>	Stator Stainless Steel IP69K	0150-1270
<b>PS01-48x360F-SSC-C-FC</b>	Stator stainless steel IP69K, FC	0150-1271
<b>PL01-27x920/840</b>	Slider 'High Clearance'	0150-1447

**P01-48x360F/470-PB25-SSC**

**Max. Stroke:** 470 mm  
**Peak Force:** 721 N



Dimensions in mm



Technische Daten P01-48x360F/470-PB25-SSC			
<b>Stroke</b>			
Max. Stroke	mm (in)	470	(18.49)
<b>Force</b>			
Max. Force @ 48VDC	N (lbf)	721	(162)
Max. Force @ 72VDC	N (lbf)	721	(162)
Max. Cont. Force [Passive cooling / Fan / Fluid]	N (lbf)	130 / - / 350	(29 / - / 80)
Max. Border Force relative	%	100	
Force Constant	N/A <sub>pk</sub> (lbf/A <sub>pk</sub> )	27.7	(6.24)
<b>Velocity</b>			
Max. Velocity @ 48VDC	m/s (in/s)	1.6	(62.9)
Max. Velocity @ 72VDC	m/s (in/s)	2.3	(93.9)
<b>Position Detection</b>			
Repeatability	mm (in)	±0.05	(±0.002)
Linearity	%	± 0.25	
<b>Electrical Data</b>			
Max. Current @ 48VDC	A <sub>pk</sub>	25.9	
Max. Current @ 72VDC	A <sub>pk</sub>	25.9	
Max. Cont. Current [Passive cooling / Fan / Fluid]	A <sub>pk</sub>	4.6 / - / 13	
<b>Thermal Data</b>			
Max. Winding Temperature (Sensor)	°C	90	
Thermal Resistance [Passive cooling / Fan / Fluid]	°K/W	1.3 / - / 0.17	
Thermal Time Constant [Passive cooling / Fan / Fluid]	s	1900 / - / 240	
<b>Mechanical Data</b>			
Slider Length	mm (in)	1010	(40)
Slider Mass	g (lb)	4220	(9.28)

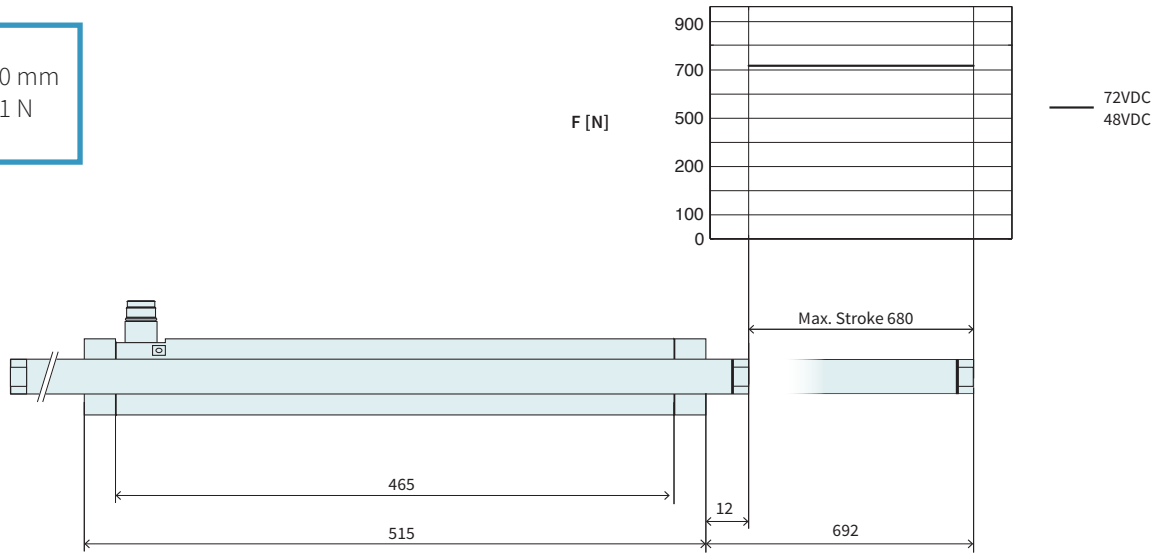


Item	Description	Item-No.
<b>PS01-48x360F-SSC-C</b>	Stator Stainless Steel IP69K	0150-1270
<b>PS01-48x360F-SSC-C-FC</b>	Stator stainless steel IP69K, FC	0150-1271
<b>PL01-27x1010/930</b>	Slider 'High Clearance'	0150-1473



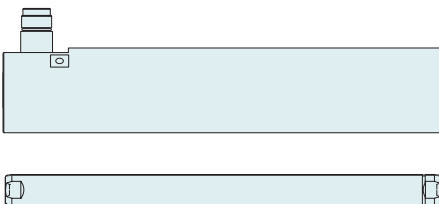
**P01-48x360F/680-PB25-SSC**

**Max. Stroke:** 680 mm  
**Peak Force:** 721 N



Dimensions in mm

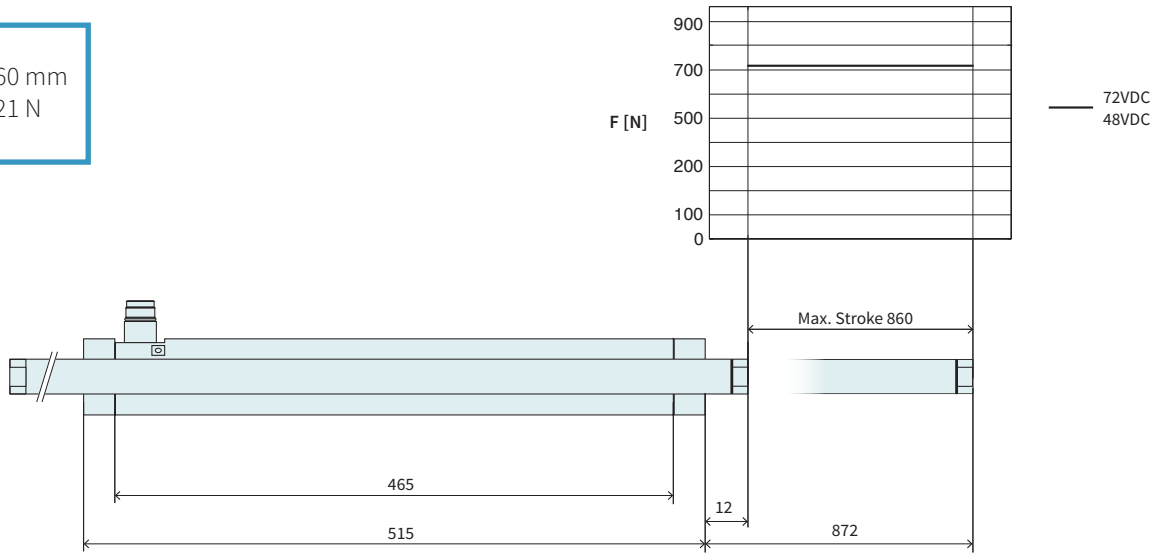
Technical Data P01-48x360F/680-PB25-SSC			
<b>Stroke</b>			
Max. Stroke	mm (in)	680	(26.8)
<b>Force</b>			
Max. Force @ 48VDC	N (lbf)	721	(162)
Max. Force @ 72VDC	N (lbf)	721	(162)
Max. Cont. Force [Passive cooling / Fan / Fluid]	N (lbf)	130 / - / 350	(29 / - / 80)
Max. Border Force relative	%	100	
Force Constant	N/A <sub>pk</sub> (lbf/A <sub>pk</sub> )	27.7	(6.24)
<b>Velocity</b>			
Max. Velocity @ 48VDC	m/s (in/s)	1.6	(62.9)
Max. Velocity @ 72VDC	m/s (in/s)	2.3	(93.9)
<b>Position Detection</b>			
Repeatability	mm (in)	±0.05	(±0.002)
Linearity	%	± 0.2	
<b>Electrical Data</b>			
Max. Current @ 48VDC	A <sub>pk</sub>	25.9	
Max. Current @ 72VDC	A <sub>pk</sub>	25.9	
Max. Cont. Current [Passive cooling / Fan / Fluid]	A <sub>pk</sub>	4.6 / - / 13	
<b>Thermal Data</b>			
Max. Winding Temperature (Sensor)	°C	90	
Thermal Resistance [Passive cooling / Fan / Fluid]	°K/W	1.3 / - / 0.17	
Thermal Time Constant [Passive cooling / Fan / Fluid]	s	1900 / - / 240	
<b>Mechanical Data</b>			
Slider Length	mm (in)	1220	(48)
Slider Mass	g (lb)	5130	(11.29)



Item	Description	Item-No.
<b>PS01-48x360F-SSC-C</b>	Stator Stainless Steel IP69K	0150-1270
<b>PS01-48x360F-SSC-C-FC</b>	Stator stainless steel IP69K, FC	0150-1271
<b>PL01-27x1220/1140</b>	Slider 'High Clearance'	0150-1587

**P01-48x360F/860-PB25-SSC**

**Max. Stroke:** 860 mm  
**Peak Force:** 721 N



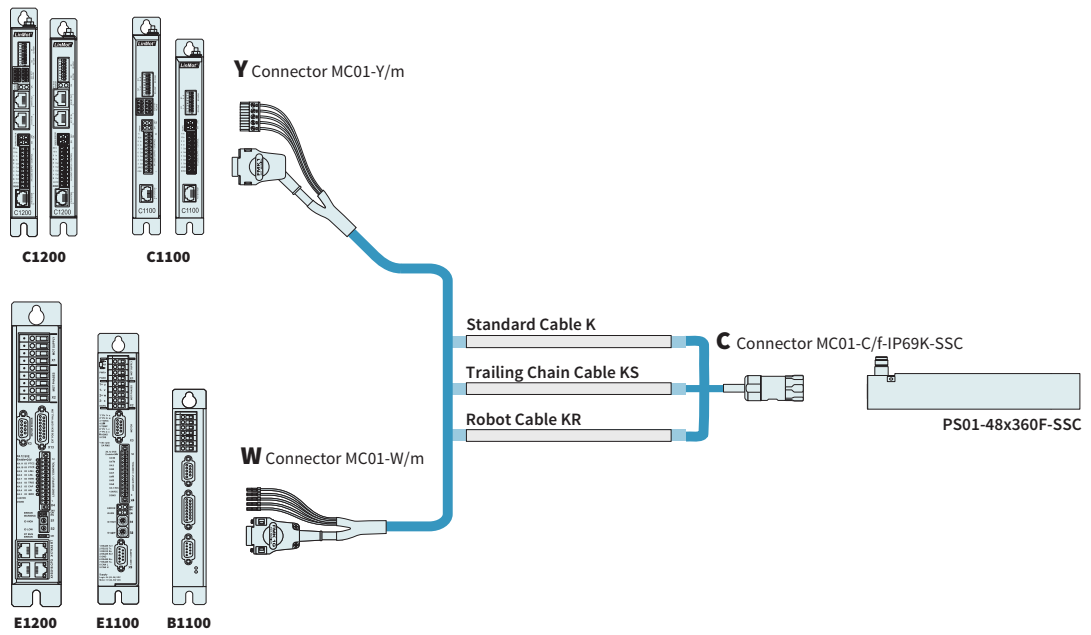
Dimensions in mm

Technical Data P01-48x360F/860-PB25-SSC			
<b>Stroke</b>			
Max. Stroke	mm (in)	860	(33.89)
<b>Force</b>			
Max. Force @ 48VDC	N (lbf)	721	(162)
Max. Force @ 72VDC	N (lbf)	721	(162)
Max. Cont. Force [Passive cooling / Fan / Fluid]	N (lbf)	130 / - / 350	(29 / - / 80)
Max. Border Force relative	%	100	
Force Constant	N/A <sub>pk</sub> (lbf/A <sub>pk</sub> )	27.7	(6.24)
<b>Velocity</b>			
Max. Velocity @ 48VDC	m/s (in/s)	1.6	(62.9)
Max. Velocity @ 72VDC	m/s (in/s)	2.3	(93.9)
<b>Position Detection</b>			
Repeatability	mm (in)	±0.05	(±0.002)
Linearity	%	± 0.2	
<b>Electrical Data</b>			
Max. Current @ 48VDC	A <sub>pk</sub>	25.9	
Max. Current @ 72VDC	A <sub>pk</sub>	25.9	
Max. Cont. Current [Passive cooling / Fan / Fluid]	A <sub>pk</sub>	4.6 / - / 13	
<b>Thermal Data</b>			
Max. Winding Temperature (Sensor)	°C	90	
Thermal Resistance [Passive cooling / Fan / Fluid]	°K/W	1.3 / - / 0.17	
Thermal Time Constant [Passive cooling / Fan / Fluid]	s	1900 / - / 240	
<b>Mechanical Data</b>			
Slider Length	mm (in)	1400	(55)
Slider Mass	g (lb)	5910	(13)



Item	Description	Item-No.
<b>PS01-48x360F-SSC-C</b>	Stator Stainless Steel IP69K	0150-1270
<b>PS01-48x360F-SSC-C-FC</b>	Stator stainless steel IP69K, FC	0150-1271
<b>PL01-27x1400/1320</b>	Slider 'High Clearance'	0150-1588

**Motor Cable**



**ORDERING INFORMATION**

STANDARD CABLE		
Item	Description	Item-No.
<b>K15-W/C-SSC</b>	Motor Cable W/C-SSC, Custom length	0150-3539
<b>K15-Y-Fe/C-SSC-</b>	Motor Cable Y-Fe/C-SSC, Custom length	0150-3630

TRAILING CHAIN CABLE		
Item	Description	Item-No.
<b>KS10-W/C-SSC-2</b>	Trailing Chain Cable W/C-SSC, 2 m	0150-2675
<b>KS10-W/C-SSC-4</b>	Trailing Chain Cable W/C-SSC, 4 m	0150-2676
<b>KS10-W/C-SSC-6</b>	Trailing Chain Cable W/C-SSC, 6 m	0150-2677
<b>KS10-W/C-SSC-8</b>	Trailing Chain Cable W/C-SSC, 8 m	0150-2678
<b>KS10-W/C-SSC-</b>	Trailing Chain Cable W/C-SSC, Custom length	0150-3358
<b>KS10-Y/C-SSC-2</b>	Trailing Chain Cable Y/C-SSC, 2 m	0150-2679
<b>KS10-Y/C-SSC-4</b>	Trailing Chain Cable Y/C-SSC, 4 m	0150-2680
<b>KS10-Y/C-SSC-6</b>	Trailing Chain Cable Y/C-SSC, 6 m	0150-2681
<b>KS10-Y/C-SSC-8</b>	Trailing Chain Cable Y/C-SSC, 8 m	0150-2682
<b>KS10-Y-Fe/C-SSC-</b>	Trailing Chain Cable Y/C-SSC, Custom length	0150-3574

ROBOT CABLE		
Item	Description	Item-No.
<b>KR10-W/C-SSC-</b>	Robot Cable KR05-W/C-SSC-, Custom length	0150-3536

CONNECTOR & CABLE (INDIVIDUAL)		
Item	Description	Item-No.
<b>MC01-W/m</b>	Motor Connector W/m	0150-3140
<b>MC01-Y-Fe/m</b>	Motor Connector Y-Fe/m	0150-3289
<b>MC01-C/f-IP69K-SSC</b>	Motor Connector C/f, IP69K, SSC	0150-3306
<b>K15-04/05</b>	Motor Cable per m	0150-1978
<b>KS10-04/05</b>	Trailing Chain Cable per m	0150-1977
<b>KR10-04/05</b>	Robot Cable per m	0150-1830

**SLIDER MOUNTING**



Item	Description	Item-No.
<b>PLF01-28-SS</b>	Fixed Bearing Set for 27 mm and 28 mm Slider, Stainless steel	0150-3297
<b>PLL01-27</b>	Floating support for PL01-27 sliders	0150-3294

FIND MORE PRODUCT DETAILS IN THE CHAPTER "ACCESSORIES".

**BEARING KITS**



Item	Description	Item-No.
<b>PB01-48x25-80-P-SSC</b>	Bearing for PS01-48x360-SSC, (stainless steel)	0150-3413

FIND MORE PRODUCT DETAILS IN THE CHAPTER "ACCESSORIES".

**EXTERNAL POSITION SENSORS**



Item	Description	Item-No.
<b>MS01-1/D</b>	Linear Encoder 1µm, A/B (for incremental strip)	0150-1840
<b>MB01-1000</b>	Magnetic incremental strip for MS01-1/D, per cm	0150-1963
<b>KS025-D/D-Encoder</b>	Special cable KS025-D/D-Encoder- (Length in m)	0150-3166
<b>KS025-D/D15-Encoder</b>	Special cable KS025-D15/D-Encoder- (Length in m)	0150-3168

FIND MORE PRODUCT DETAILS IN THE CHAPTER "ACCESSORIES".



Item	Description	Item-No.
<b>MS01-1/D-SSI</b>	Linear Encoder 1µm, A/B (for absolute strip)	0150-2095
<b>MB01-1000-ABS</b>	Magnetic absolute strip for MS01-1/D-SSI (per cm)	0150-2096
<b>EC01-ABS/ENC-12-S</b>	MS01-1/D-SSI Encoder connector straight	0150-3616
<b>KSS01-12-D15/ABS-ENC</b>	For MS01-1/D-SSI on C1100/C1200/C1400/E1200/E1400 Drives	0150-3652

**FIND MORE PRODUCT DETAILS IN THE CHAPTER "ACCESSORIES".**



# LINEAR MOTORS ATEX



Linear motors with ATEX  
and IECEx certification.

## Product Description

Wherever explosive gases or vapors are mixed with air, or flammable dust can occur, drives with enhanced protective mechanisms are required.

For this purpose, LinMot series P01–48 linear motors have been developed and certified as EX protected motors in accordance with directive 94/9/EC. Device classifications 2G and 2D mean that the devices can be used in an explosive atmosphere consisting of gases, vapors, mist, or dust in zones 1/21 and 2/22.

The drives are thus optimally designed for use in printing machines, painting lines, plastic-processing machines, or in the chemical or pharmaceutical field.

The ATEX family of motors consists of two sizes for which a wide range of slider lengths is available. The stroke length ranges up to 980 mm, along which a peak force of 720 N can be achieved.



### Safely protected in ATEX environments

The ATEX motors are completely encapsulated in stainless steel and do not require seals. All joint connections are welded. To completely seal off the motor, the windings and other internal components of the stator are potted in epoxy resin. This guarantees optimal protection of the motor and eliminates the risk of electrical arcing. The motors have been designed to be very compact and have no unnecessary edges, corners, holes, or threaded connections, so there is no place where explosive material could collect. This eliminates additional potential sources of ignition and the risk of non-uniform heating is greatly minimized. Even in environments with a low ignition temperature ( $> 85\text{ °C}$ ), LinMot ATEX motors are permitted to be used.

#### ADDITIONAL TEMPERATURE MONITORING

In addition to sensors for monitoring the winding temperature in the stator of the ATEX motor, additional temperature sensors are installed under the motor housing.

This allows 2-channel temperature monitoring of the motor. If the motor should overheat due to an error, the drive feed is interrupted by the higher-level channel. The technical safety concept of the LinMot ATEX motors is such that no further certified elements are required in the explosion hazard zone other than the motor and the feed cable.

#### INTEGRATED WATER COOLING

LinMot's ATEX linear motors can optionally be supplied with integrated water cooling. The stator is enclosed by the cooling system along its entire length.

The heat losses generated in the motor are dissipated through the liquid cooling system. This increases the rated power of the motor several times over in comparison with the self-cooled version. Due to the lower surface temperature of the motor, it can also be used in an explosive atmosphere with a lower ignition temperature.

#### HIGH AND CONTROLLED DYNAMICS

Max. acceleration values over  $400\text{ m/s}^2$  and travel speeds over  $3\text{ m/s}$  allow cyclical motion sequences of several Hertz.

For handling applications with sensitive products, such as transporting wafers in semiconductor production, very gentle, smooth motions with suitable accelerations can be obtained.



**FREELY POSITIONABLE**

LinMot linear motors can be freely positioned. With absolute or relative movement commands, they can move to any desired position in the stroke range. Since the LinMot linear drive is a closed-loop system, not only the end positions are monitored, but also deviations in position during travel. This allows, among other things, precise specification of travel speeds, acceleration and braking ramps, and travel through curved paths.

**PROCESS STABILITY**

Since not only the end position, but also speed and acceleration are controlled and monitored, motions that are programmed once are carried out the same way over the entire life of the machine.

**MOTOR CONNECTOR**

For the purpose of complete encapsulation, the plug is welded to the housing of the motor. The plug is made of stainless steel and is tightened with a coupling nut. At the same time the protection class IP 66/67 is fulfilled. To protect an outgoing spark, the motor plug and the cable plug are securely screwed together.

**SYNCHRONIZATION**

For synchronous machines, the linear motor can be synchronized to the main shaft. By replacing mechanical cam discs with LinMot linear motors, for example, great variations can be achieved, with format changeovers at the push of a button.

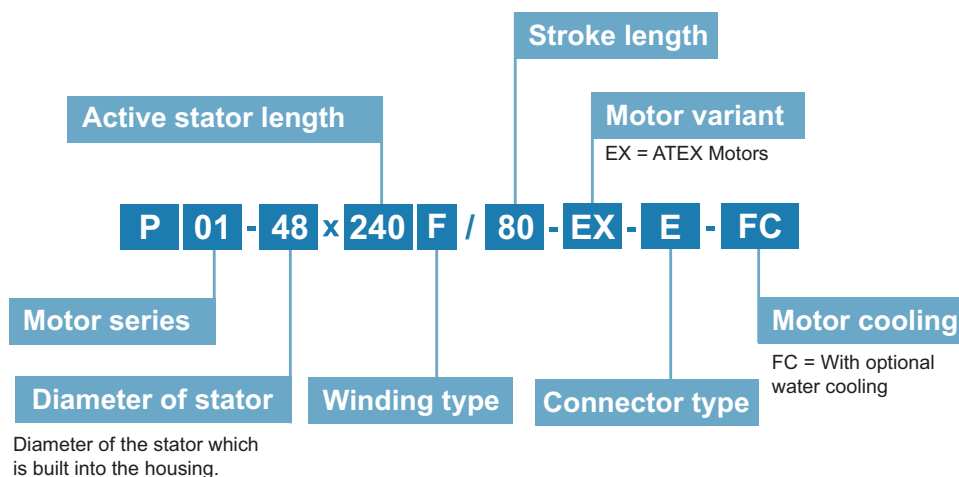
**OVERLOAD PROTECTION**

There are no mechanical components for force transfer that could be damaged in a crash or stall condition in a linear motor. Complex, expensive designs to protect gearboxes, gears, and shafts are thus eliminated. If the linear motor stalls, it acts like a pneumatic cylinder and tries to reach the target position with a defined force. The following error monitor in the drive can, however, immediately recognize a stall condition. Temperature sensors integrated in the stator prevent the drive from overloading in any case.

**LONG LIFESPAN**

Since the linear motion is generated purely magnetically, and no mechanical force transmission takes place, even extremely dynamic applications can be implemented with a long lifespan.

**Type Code**



For explanations of the terms, please refer to the section "Glossary"



# LINEAR MOTORS P01-48x240F-EX



- ✓ For use in an explosive atmosphere consisting of gases, vapors, mist, or dust
- ✓ Welded connections
- ✓ Completely encapsulated
- ✓ Optional integrated water cooling

## LINEAR MOTORS P01-48x240F-EX

<b>Technical Data</b>	<b>679</b>
<b>Motor Specifications</b>	
P01-48x240F/80x80-EX-E	<b>682</b>
P01-48x240F/200x200-EX-E	<b>683</b>
P01-48x240F/290x290-EX-E	<b>684</b>
P01-48x240F/380x380-EX-E	<b>685</b>
P01-48x240F/500x500-EX-E	<b>686</b>
P01-48x240F/590x590-EX-E	<b>687</b>
P01-48x240F/800x800-EX-E	<b>688</b>
P01-48x240F/980x980-EX-E	<b>689</b>
<b>Linear Guides</b>	<b>690</b>
<b>Accessories</b>	<b>691</b>



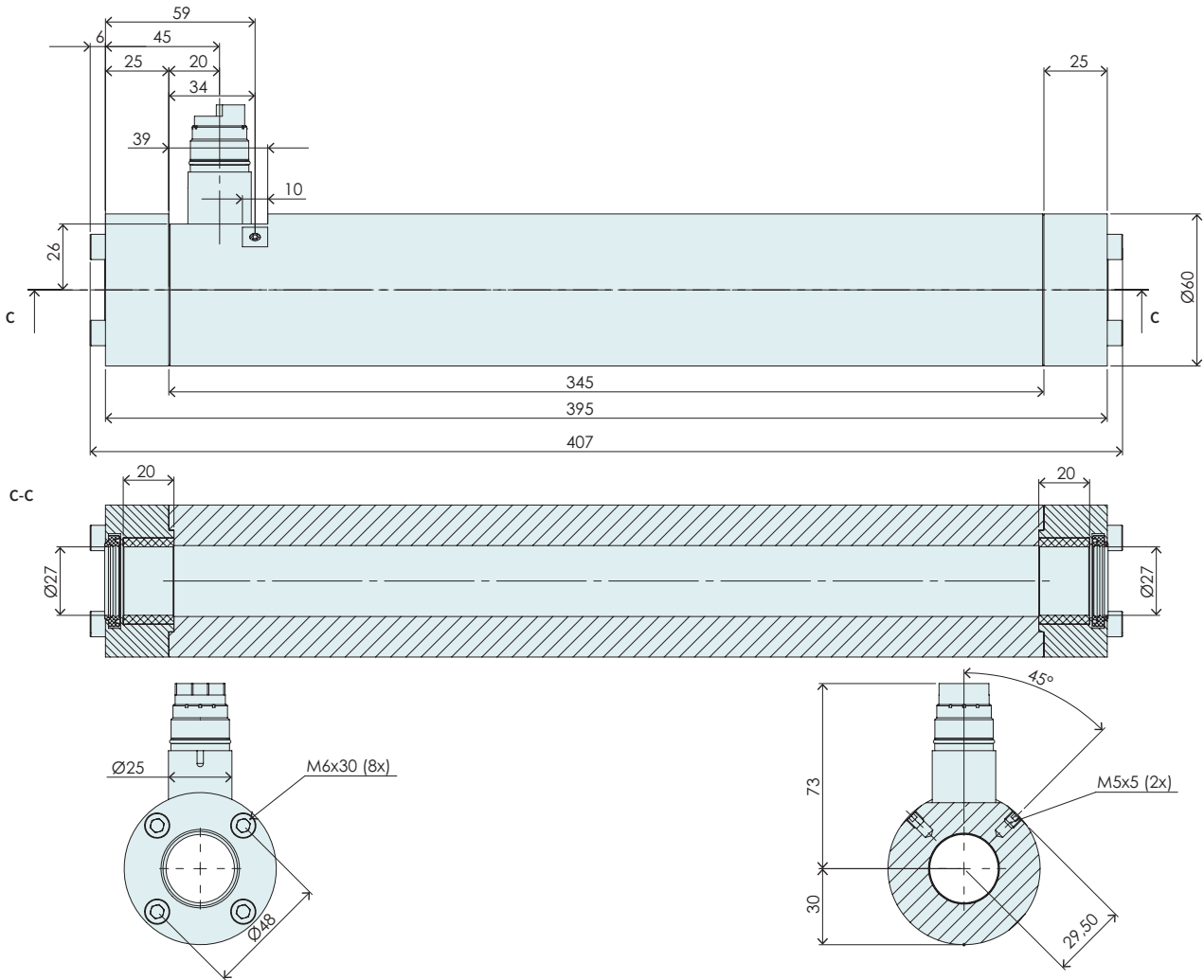
### MOTOR FAMILY P01-48x240F-EX

Technical Data				
<b>Stroke</b>				
Max. Stroke	mm	(in)	980	(38.6)
<b>Force</b>				
Max. Force @ 48VDC	N	(lbf)	496	(111)
Max. Force @ 72VDC	N	(lbf)	496	(111)
Max. Cont. Force [Passive cooling / Fan / Fluid]	N	(lbf)	84 / - / 240	(19 / - / 53)
Max. Border Force relative	%		≤ 100	
Force Constant	N/A <sub>pk</sub>	(lbf/A <sub>pk</sub> )	19.1	(4.29)
<b>Velocity</b>				
Max. Velocity @ 48VDC	m/s	(in/s)	2.2	(90.9)
Max. Velocity @ 72VDC	m/s	(in/s)	3.4	(139.9)
<b>Position Detection</b>				
Position Resolution	mm	(in)	0.007	(0.0003)
Repeatability	mm	(in)	±0.05	(±0.002)
Position Resolution with ES	mm	(in)	0.001	(0.00004)
Repeatability with ES	mm	(in)	±0.01	(±0.0004)
Linearity with ES	mm	(in)	±0.01	(±0.0004)
<b>Electrical Data</b>				
Max. Current @ 48VDC	A <sub>pk</sub>		25.9	
Max. Current @ 72VDC	A <sub>pk</sub>		25.9	
Max. Cont. Current [Passive cooling / Fan / Fluid]	A <sub>pk</sub>		4.4 / - / 12	
Terminal Resistance 25 °C / 120 °C	Ohm		0.97 / 1.3	
Terminal Inductivity	mH		1.1	
Magnetic Period	mm	(in)	60	(2.35)
<b>Thermal Data</b>				
Max. Winding Temperature (Sensor)	°C		90	
Thermal Resistance [Passive cooling / Fan / Fluid]	°K/W		2 / - / 0.26	
Thermal Time Constant [Passive cooling / Fan / Fluid]	s		2100 / - / 260	
<b>Mechanical Data</b>				
Stator Diameter	mm	(in)	60	(2.4)
Stator Length	mm	(in)	395	(16)
Stator Mass	g	(lb)	4270	(9.4)
Slider Diameter	mm	(in)	27	(1.1)
Slider Length	mm	(in)	350 - 1400	(14 - 55)
Slider Mass	g	(lb)	1360 - 5910	(3 - 13)
IP Code			IP 69k	

☺ 1258 ☹ 2G Ex eb IIC T6... T4 Gb

☺ 1258 ☹ 2D Ex tb IIC T85°C... T135°C Db

**STATOR**

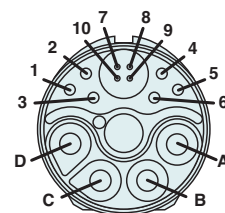


Item	Description	Item-No.
<b>PS01-48x240F-EX-E</b>	Stator EX, IP67	0150-2544
<b>PS01-48x240F-EX-E-FC</b>	Stator EX, IP67, FC	0150-1299

**CONNECTOR**

Motor Connector Wiring	PS01-48x240F-EX-E PS01-48x240F-EX-E-FC	Wire Color Motor Cable
	E6k-Connector	
Ph 1+	A	red
Ph 1-	B	pink
Ph 2+	C	blue
Ph 2-	D	grey
PE	Protective Earth	green-yellow
+5VDC	1	white
GND	2	Inner Shield
Sinus	3	yellow
Cosinus	4	green
Temp.	5	black
n. c.	6	-
Kty 1+	7	orange
Kty 1-	8	brown
Kty 2+	9	purple
Kty 2-	10	beige

**E6k-Connector**

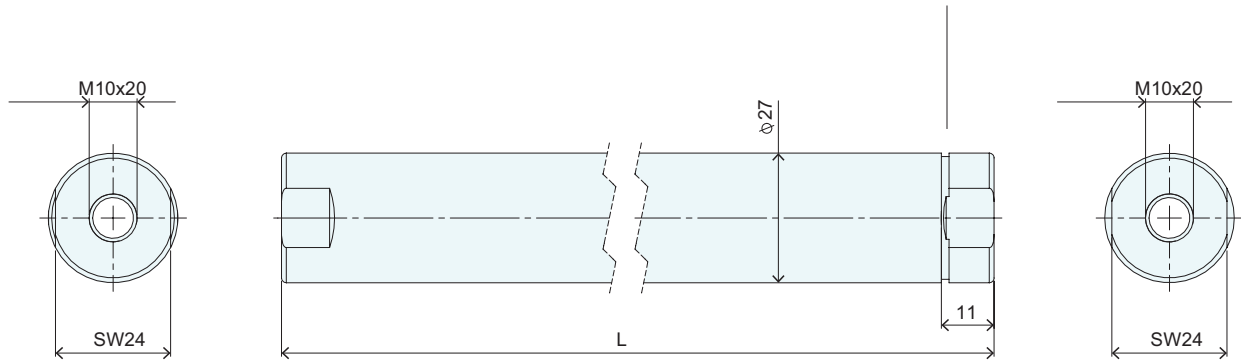


View: Motor connector, plug side

**SLIDER**

**Slider High Clearance**

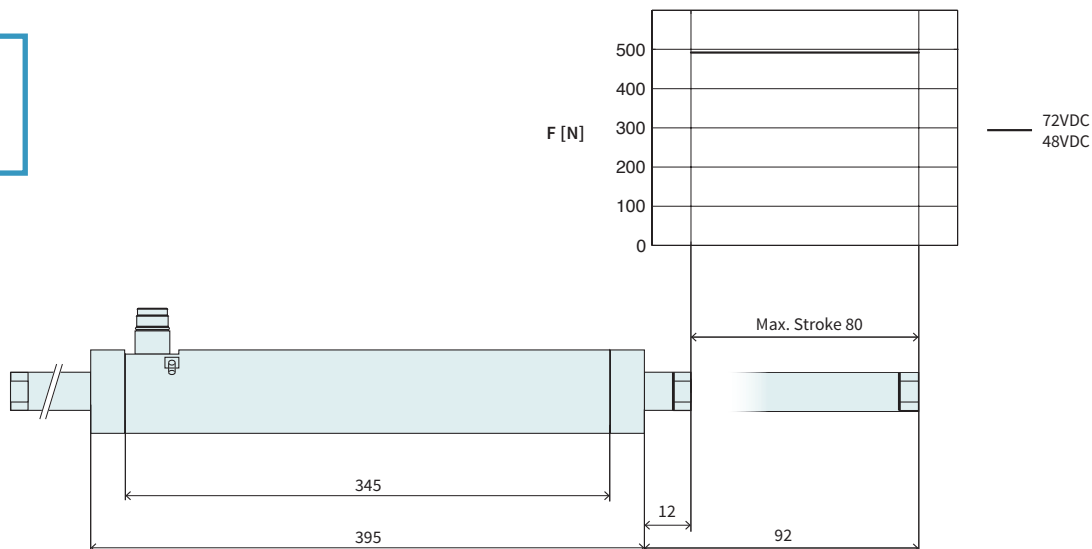
Number of grooves determines the slider type (see chapter 2 / slider) and marks the front end.



Slider High Clearance			
Item	Description	Max. Stroke [mm]	Item-No.
PL01-27x500/420	Slider 'High Clearance'	80	0150-1469
PL01-27x620/540	Slider 'High Clearance'	200	0150-1470
PL01-27x710/630	Slider 'High Clearance'	290	0150-1471
PL01-27x800/720	Slider 'High Clearance'	380	0150-1472
PL01-27x920/840	Slider 'High Clearance'	500	0150-1447
PL01-27x1010/930	Slider 'High Clearance'	590	0150-1473
PL01-27x1220/1140	Slider 'High Clearance'	800	0150-1587
PL01-27x1400/1320	Slider 'High Clearance'	980	0150-1588

**P01-48x240F/80x80-EX-E**

**Max. Stroke:** 80 mm  
**Peak Force:** 496 N



Dimensions in mm

Technical Data P01-48x240F/80x80-EX-E			
<b>Stroke</b>			
Max. Stroke	mm (in)	80 (3.14)	
<b>Force</b>			
Max. Force @ 48VDC	N (lbf)	496 (111)	
Max. Force @ 72VDC	N (lbf)	496 (111)	
Max. Cont. Force [Passive cooling / Fan / Fluid]	N (lbf)	84 / - / 240 (19 / - / 53)	
Max. Border Force relative	%	100	
Force Constant	N/A <sub>pk</sub> (lbf/A <sub>pk</sub> )	19.1 (4.29)	
<b>Velocity</b>			
Max. Velocity @ 48VDC	m/s (in/s)	2.2 (90.9)	
Max. Velocity @ 72VDC	m/s (in/s)	3.4 (139.9)	
<b>Position Detection</b>			
Repeatability	mm (in)	±0.05 (±0.002)	
Linearity	%	± 1.05	
<b>Electrical Data</b>			
Max. Current @ 48VDC	A <sub>pk</sub>	25.9	
Max. Current @ 72VDC	A <sub>pk</sub>	25.9	
Max. Cont. Current [Passive cooling / Fan / Fluid]	A <sub>pk</sub>	4.4 / - / 12	
<b>Thermal Data</b>			
Max. Winding Temperature (Sensor)	°C	90	
Thermal Resistance [Passive cooling / Fan / Fluid]	°K/W	2 / - / 0.26	
Thermal Time Constant [Passive cooling / Fan / Fluid]	s	2100 / - / 260	
<b>Mechanical Data</b>			
Slider Length	mm (in)	500 (20)	
Slider Mass	g (lb)	2010 (4.42)	



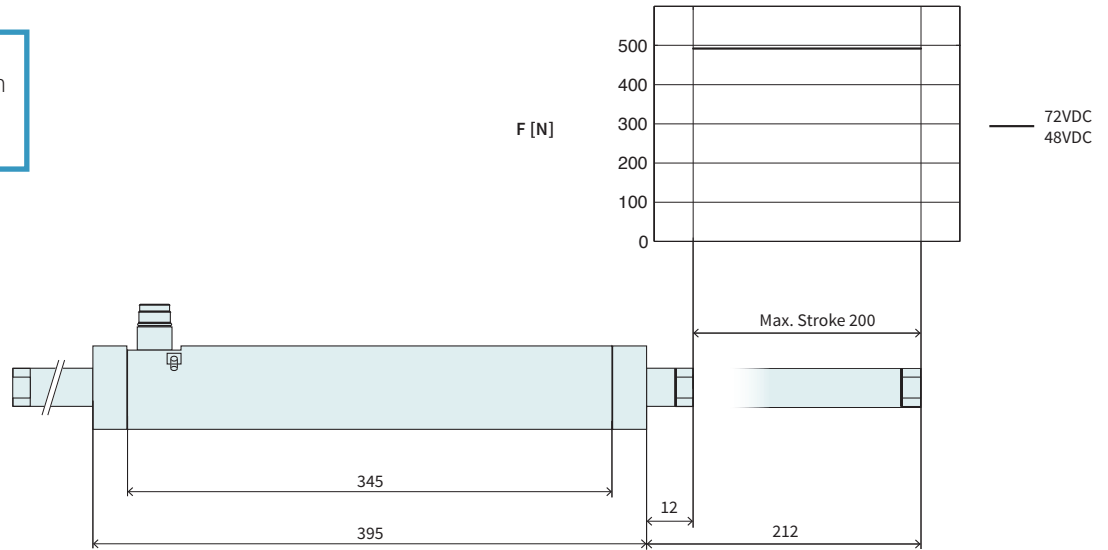
Item	Description	Item-No.
<b>PS01-48x240F-EX-E</b>	Stator EX, IP67	0150-2544
<b>PS01-48x240F-EX-E-FC</b>	Stator EX, IP67, FC	0150-1299
<b>PB01-48x25-P-SSC*</b>	Bearing for PS01-48x240-SSC (Stainless)	0150-3281
<b>PL01-27x500/420</b>	Slider 'High Clearance'	0150-1469

\* 2 Bearing kits must be ordered separately.



**P01-48x240F/200x200-EX-E**

**Max. Stroke:** 200 mm  
**Peak Force:** 496 N



Dimensions in mm

Technical Data P01-48x240F/200x200-EX-E				
<b>Stroke</b>				
Max. Stroke	mm	(in)	200	(7.86)
<b>Force</b>				
Max. Force @ 48VDC	N	(lbf)	496	(111)
Max. Force @ 72VDC	N	(lbf)	496	(111)
Max. Cont. Force [Passive cooling / Fan / Fluid]	N	(lbf)	84 / - / 240	(19 / - / 53)
Max. Border Force relative			%	
			100	
Force Constant	N/A <sub>pk</sub>	(lbf/A <sub>pk</sub> )	19.1	(4.29)
<b>Velocity</b>				
Max. Velocity @ 48VDC	m/s	(in/s)	2.2	(90.9)
Max. Velocity @ 72VDC	m/s	(in/s)	3.4	(139.9)
<b>Position Detection</b>				
Repeatability	mm	(in)	±0.05	(±0.002)
Linearity			%	
			± 0.5	
<b>Electrical Data</b>				
Max. Current @ 48VDC			A <sub>pk</sub>	
			25.9	
Max. Current @ 72VDC			A <sub>pk</sub>	
			25.9	
Max. Cont. Current [Passive cooling / Fan / Fluid]			A <sub>pk</sub>	
			4.4 / - / 12	
<b>Thermal Data</b>				
Max. Winding Temperature (Sensor)			°C	
			90	
Thermal Resistance [Passive cooling / Fan / Fluid]			°K/W	
			2 / - / 0.26	
Thermal Time Constant [Passive cooling / Fan / Fluid]			s	
			2100 / - / 260	
<b>Mechanical Data</b>				
Slider Length	mm	(in)	620	(24)
Slider Mass	g	(lb)	2530	(5.57)

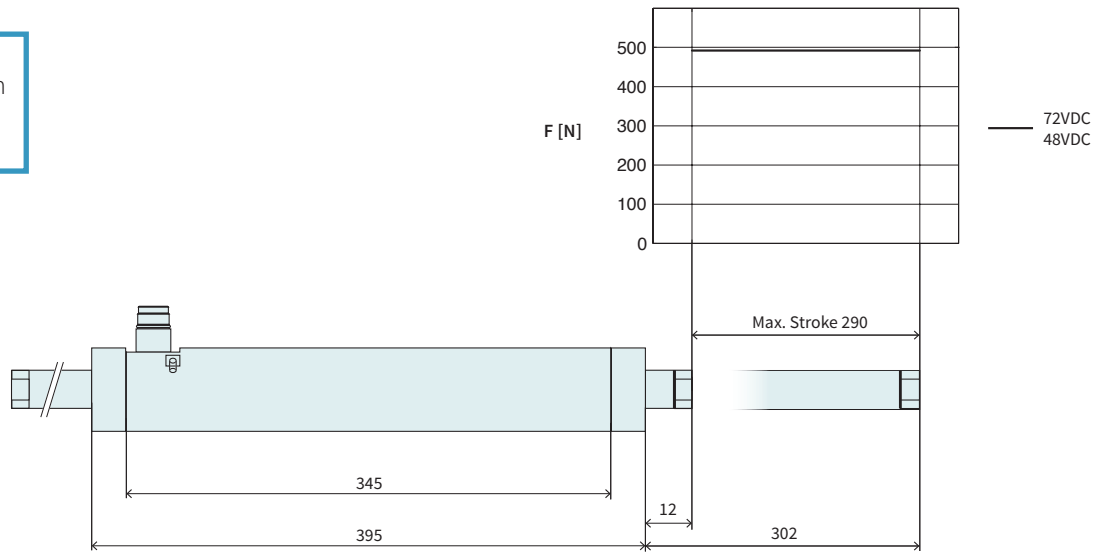


Item	Description	Item-No.
<b>PS01-48x240F-EX-E</b>	Stator EX, IP67	0150-2544
<b>PS01-48x240F-EX-E-FC</b>	Stator EX, IP67, FC	0150-1299
<b>PB01-48x25-P-SSC*</b>	Bearing for PS01-48x240-SSC (Stainless)	0150-3281
<b>PL01-27x620/540</b>	Slider 'High Clearance'	0150-1470

\* 2 Bearing kits must be ordered separately.

**P01-48x240F/290x290-EX-E**

**Max. Stroke:** 290 mm  
**Peak Force:** 496 N



Dimensions in mm

Technical Data P01-48x240F/290x290-EX-E			
<b>Stroke</b>			
Max. Stroke	mm (in)	290	(11.4)
<b>Force</b>			
Max. Force @ 48VDC	N (lbf)	496	(111)
Max. Force @ 72VDC	N (lbf)	496	(111)
Max. Cont. Force [Passive cooling / Fan / Fluid]	N (lbf)	84 / - / 240	(19 / - / 53)
Max. Border Force relative	%	100	
Force Constant	N/A <sub>pk</sub> (lbf/A <sub>pk</sub> )	19.1	(4.29)
<b>Velocity</b>			
Max. Velocity @ 48VDC	m/s (in/s)	2.2	(90.9)
Max. Velocity @ 72VDC	m/s (in/s)	3.4	(139.9)
<b>Position Detection</b>			
Repeatability	mm (in)	±0.05	(±0.002)
Linearity	%	± 0.35	
<b>Electrical Data</b>			
Max. Current @ 48VDC	A <sub>pk</sub>	25.9	
Max. Current @ 72VDC	A <sub>pk</sub>	25.9	
Max. Cont. Current [Passive cooling / Fan / Fluid]	A <sub>pk</sub>	4.4 / - / 12	
<b>Thermal Data</b>			
Max. Winding Temperature (Sensor)	°C	90	
Thermal Resistance [Passive cooling / Fan / Fluid]	°K/W	2 / - / 0.26	
Thermal Time Constant [Passive cooling / Fan / Fluid]	s	2100 / - / 260	
<b>Mechanical Data</b>			
Slider Length	mm (in)	710	(28)
Slider Mass	g (lb)	2920	(6.42)

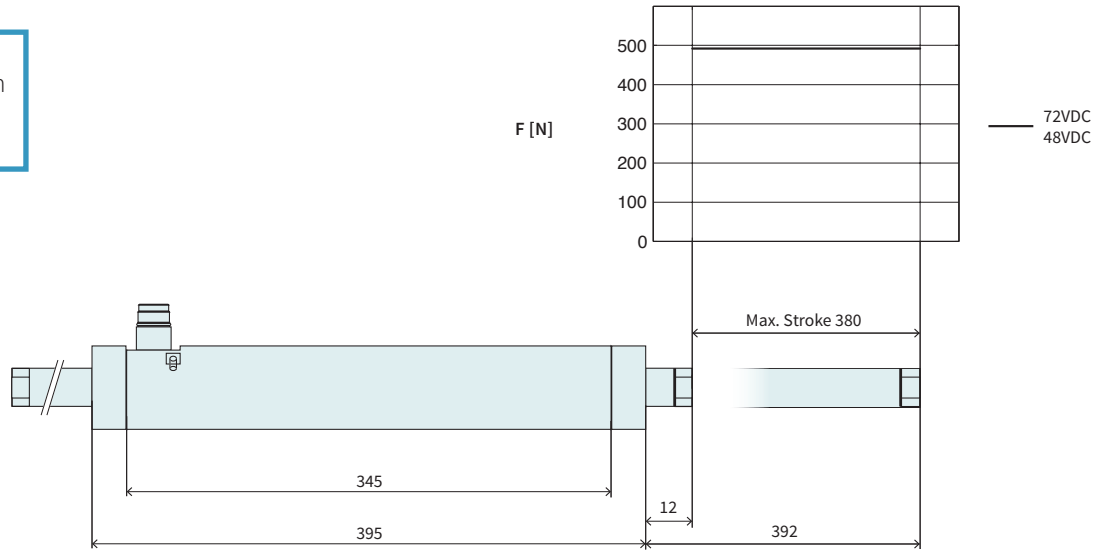


Item	Description	Item-No.
<b>PS01-48x240F-EX-E</b>	Stator EX, IP67	0150-2544
<b>PS01-48x240F-EX-E-FC</b>	Stator EX, IP67, FC	0150-1299
<b>PB01-48x25-P-SSC*</b>	Bearing for PS01-48x240-SSC (Stainless)	0150-3281
<b>PL01-27x710/630</b>	Slider 'High Clearance'	0150-1471

\* 2 Bearing kits must be ordered separately.

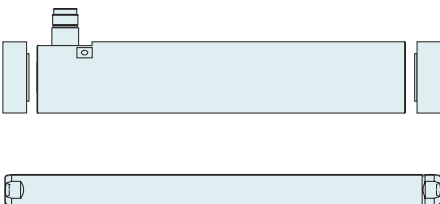
**P01-48x240F/380x380-EX-E**

**Max. Stroke:** 380 mm  
**Peak Force:** 496 N



Dimensions in mm

Technical Data P01-48x240F/380x380-EX-E				
<b>Stroke</b>				
Max. Stroke	mm	(in)	380	(14.99)
<b>Force</b>				
Max. Force @ 48VDC	N	(lbf)	496	(111)
Max. Force @ 72VDC	N	(lbf)	496	(111)
Max. Cont. Force [Passive cooling / Fan / Fluid]	N	(lbf)	84 / - / 240	(19 / - / 53)
Max. Border Force relative			100	
Force Constant	N/A <sub>pk</sub>	(lbf/A <sub>pk</sub> )	19.1	(4.29)
<b>Velocity</b>				
Max. Velocity @ 48VDC	m/s	(in/s)	2.2	(90.9)
Max. Velocity @ 72VDC	m/s	(in/s)	3.4	(139.9)
<b>Position Detection</b>				
Repeatability	mm	(in)	±0.05	(±0.002)
Linearity			± 0.3	
<b>Electrical Data</b>				
Max. Current @ 48VDC	A <sub>pk</sub>		25.9	
Max. Current @ 72VDC	A <sub>pk</sub>		25.9	
Max. Cont. Current [Passive cooling / Fan / Fluid]	A <sub>pk</sub>		4.4 / - / 12	
<b>Thermal Data</b>				
Max. Winding Temperature (Sensor)	°C		90	
Thermal Resistance [Passive cooling / Fan / Fluid]	°K/W		2 / - / 0.26	
Thermal Time Constant [Passive cooling / Fan / Fluid]	s		2100 / - / 260	
<b>Mechanical Data</b>				
Slider Length	mm	(in)	800	(31)
Slider Mass	g	(lb)	3310	(7.28)

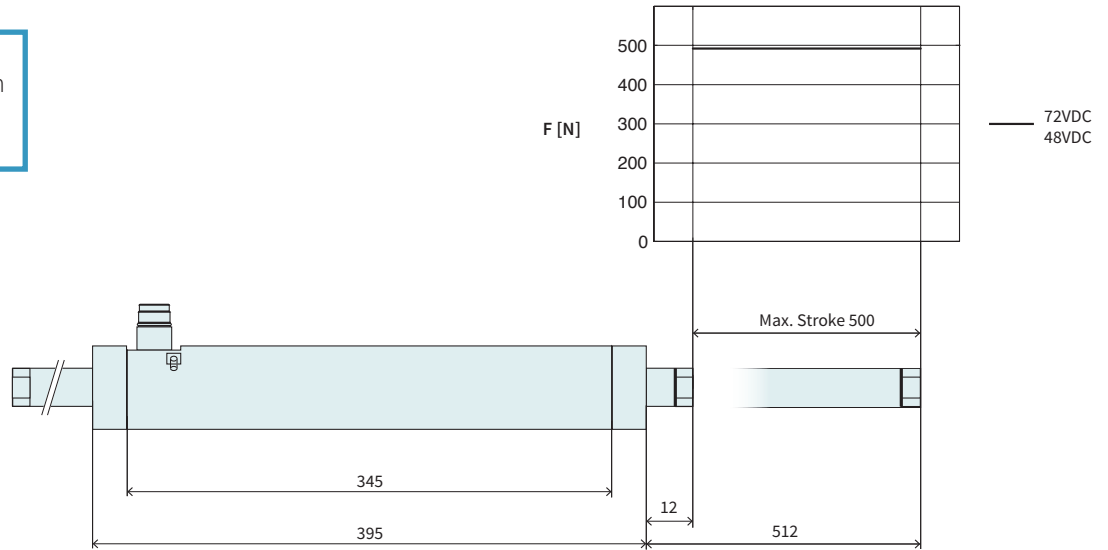


Item	Description	Item-No.
<b>PS01-48x240F-EX-E</b>	Stator EX, IP67	0150-2544
<b>PS01-48x240F-EX-E-FC</b>	Stator EX, IP67, FC	0150-1299
<b>PB01-48x25-P-SSC*</b>	Bearing for PS01-48x240-SSC (Stainless)	0150-3281
<b>PL01-27x800/720</b>	Slider 'High Clearance'	0150-1472

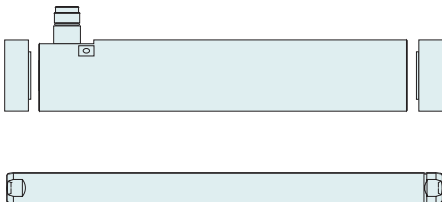
\* 2 Bearing kits must be ordered separately.

**P01-48x240F/500x500-EX-E**

**Max. Stroke:** 500 mm  
**Peak Force:** 496 N



Technical Data P01-48x240F/500x500-EX-E			
<b>Stroke</b>			
Max. Stroke	mm (in)	500	(19.69)
<b>Force</b>			
Max. Force @ 48VDC	N (lbf)	496	(111)
Max. Force @ 72VDC	N (lbf)	496	(111)
Max. Cont. Force [Passive cooling / Fan / Fluid]	N (lbf)	84 / - / 240	(19 / - / 53)
Max. Border Force relative	%	100	
Force Constant	N/A <sub>pk</sub> (lbf/A <sub>pk</sub> )	19.1	(4.29)
<b>Velocity</b>			
Max. Velocity @ 48VDC	m/s (in/s)	2.2	(90.9)
Max. Velocity @ 72VDC	m/s (in/s)	3.4	(139.9)
<b>Position Detection</b>			
Repeatability	mm (in)	±0.05	(±0.002)
Linearity	%	± 0.25	
<b>Electrical Data</b>			
Max. Current @ 48VDC	A <sub>pk</sub>	25.9	
Max. Current @ 72VDC	A <sub>pk</sub>	25.9	
Max. Cont. Current [Passive cooling / Fan / Fluid]	A <sub>pk</sub>	4.4 / - / 12	
<b>Thermal Data</b>			
Max. Winding Temperature (Sensor)	°C	90	
Thermal Resistance [Passive cooling / Fan / Fluid]	°K/W	2 / - / 0.26	
Thermal Time Constant [Passive cooling / Fan / Fluid]	s	2100 / - / 260	
<b>Mechanical Data</b>			
Slider Length	mm (in)	920	(36)
Slider Mass	g (lb)	3830	(8.43)

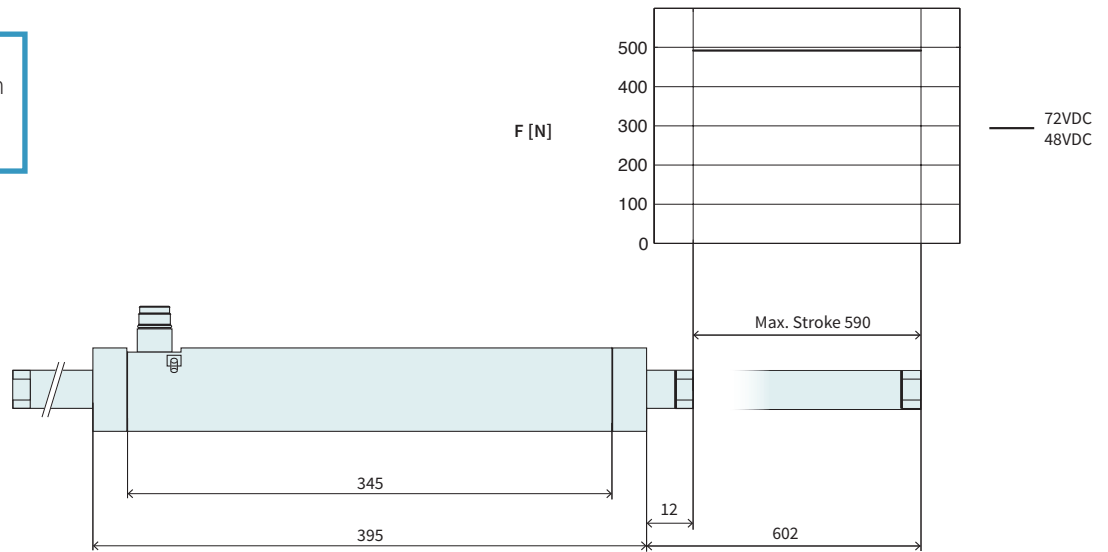


Item	Description	Item-No.
<b>PS01-48x240F-EX-E</b>	Stator EX, IP67	0150-2544
<b>PS01-48x240F-EX-E-FC</b>	Stator EX, IP67, FC	0150-1299
<b>PB01-48x25-P-SSC*</b>	Bearing for PS01-48x240-SSC (Stainless)	0150-3281
<b>PL01-27x920/840</b>	Slider 'High Clearance'	0150-1447

\* 2 Bearing kits must be ordered separately.

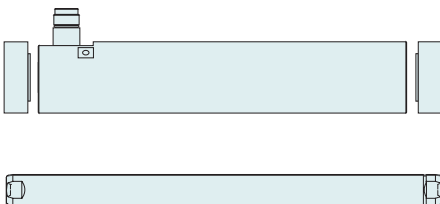
**P01-48x240F/590x590-EX-E**

**Max. Stroke:** 590 mm  
**Peak Force:** 496 N



Dimensions in mm

Technical Data P01-48x240F/590x590-EX-E				
<b>Stroke</b>				
Max. Stroke	mm	(in)	590	(23.19)
<b>Force</b>				
Max. Force @ 48VDC	N	(lbf)	496	(111)
Max. Force @ 72VDC	N	(lbf)	496	(111)
Max. Cont. Force [Passive cooling / Fan / Fluid]	N	(lbf)	84 / - / 240	(19 / - / 53)
Max. Border Force relative			%	
			100	
Force Constant	N/A <sub>pk</sub>	(lbf/A <sub>pk</sub> )	19.1	(4.29)
<b>Velocity</b>				
Max. Velocity @ 48VDC	m/s	(in/s)	2.2	(90.9)
Max. Velocity @ 72VDC	m/s	(in/s)	3.4	(139.9)
<b>Position Detection</b>				
Repeatability	mm	(in)	±0.05	(±0.002)
Linearity			%	
			± 0.25	
<b>Electrical Data</b>				
Max. Current @ 48VDC			A <sub>pk</sub>	
			25.9	
Max. Current @ 72VDC			A <sub>pk</sub>	
			25.9	
Max. Cont. Current [Passive cooling / Fan / Fluid]			A <sub>pk</sub>	
			4.4 / - / 12	
<b>Thermal Data</b>				
Max. Winding Temperature (Sensor)			°C	
			90	
Thermal Resistance [Passive cooling / Fan / Fluid]			°K/W	
			2 / - / 0.26	
Thermal Time Constant [Passive cooling / Fan / Fluid]			s	
			2100 / - / 260	
<b>Mechanical Data</b>				
Slider Length	mm	(in)	1010	(40)
Slider Mass	g	(lb)	4220	(9.28)

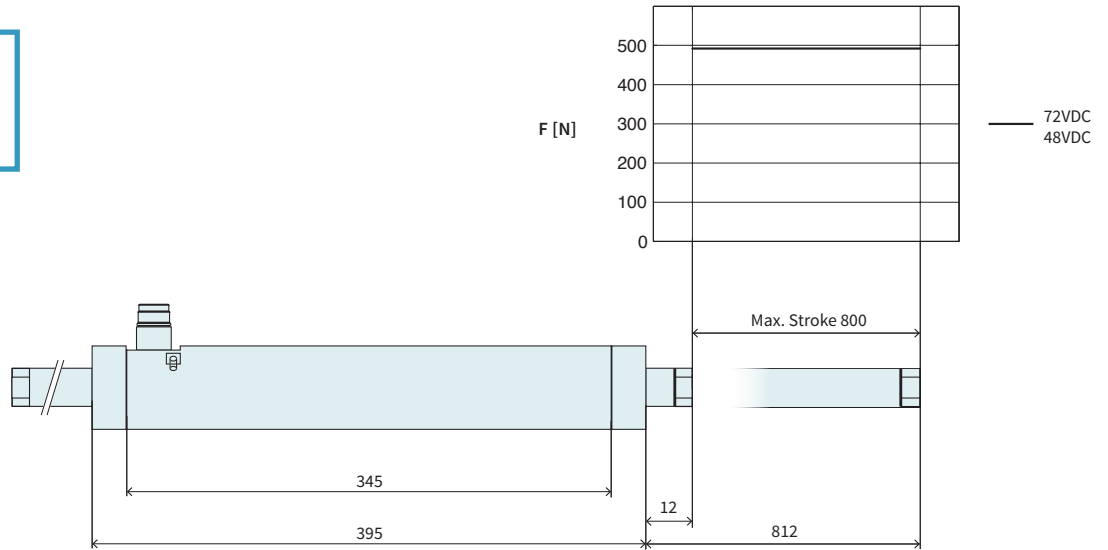


Item	Description	Item-No.
<b>PS01-48x240F-EX-E</b>	Stator EX, IP67	0150-2544
<b>PS01-48x240F-EX-E-FC</b>	Stator EX, IP67, FC	0150-1299
<b>PB01-48x25-P-SSC*</b>	Bearing for PS01-48x240-SSC (Stainless)	0150-3281
<b>PL01-27x1010/930</b>	Slider 'High Clearance'	0150-1473

\* 2 Bearing kits must be ordered separately.

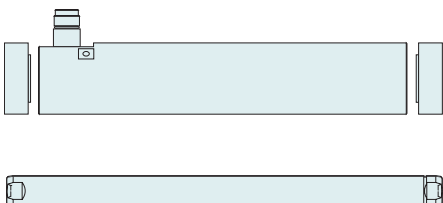
**P01-48x240F/800x800-EX-E**

**Max. Stroke:** 800 mm  
**Peak Force:** 496 N



Dimensions in mm

Technical Data P01-48x240F/800x800-EX-E			
<b>Stroke</b>			
Max. Stroke	mm (in)	800	(31.49)
<b>Force</b>			
Max. Force @ 48VDC	N (lbf)	496	(111)
Max. Force @ 72VDC	N (lbf)	496	(111)
Max. Cont. Force [Passive cooling / Fan / Fluid]	N (lbf)	84 / - / 240	(19 / - / 53)
Max. Border Force relative	%	100	
Force Constant	N/A <sub>pk</sub> (lbf/A <sub>pk</sub> )	19.1	(4.29)
<b>Velocity</b>			
Max. Velocity @ 48VDC	m/s (in/s)	2.2	(90.9)
Max. Velocity @ 72VDC	m/s (in/s)	3.4	(139.9)
<b>Position Detection</b>			
Repeatability	mm (in)	±0.05	(±0.002)
Linearity	%	± 0.2	
<b>Electrical Data</b>			
Max. Current @ 48VDC	A <sub>pk</sub>	25.9	
Max. Current @ 72VDC	A <sub>pk</sub>	25.9	
Max. Cont. Current [Passive cooling / Fan / Fluid]	A <sub>pk</sub>	4.4 / - / 12	
<b>Thermal Data</b>			
Max. Winding Temperature (Sensor)	°C	90	
Thermal Resistance [Passive cooling / Fan / Fluid]	°K/W	2 / - / 0.26	
Thermal Time Constant [Passive cooling / Fan / Fluid]	s	2100 / - / 260	
<b>Mechanical Data</b>			
Slider Length	mm (in)	1220	(48)
Slider Mass	g (lb)	5130	(11.29)

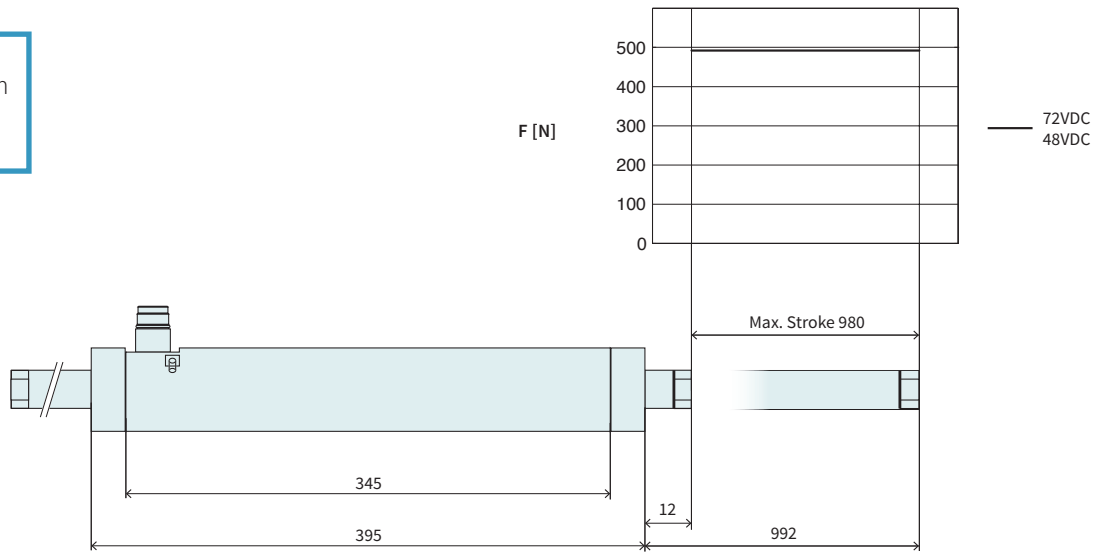


Item	Description	Item-No.
<b>PS01-48x240F-EX-E</b>	Stator EX, IP67	0150-2544
<b>PS01-48x240F-EX-E-FC</b>	Stator EX, IP67, FC	0150-1299
<b>PB01-48x25-P-SSC*</b>	Bearing for PS01-48x240-SSC (Stainless)	0150-3281
<b>PL01-27x1220/1140</b>	Slider 'High Clearance'	0150-1587

\* 2 Bearing kits must be ordered separately.

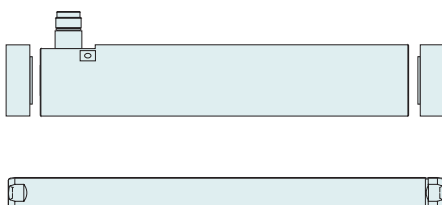
**P01-48x240F/980x980-EX-E**

**Max. Stroke:** 980 mm  
**Peak Force:** 496 N



Dimensions in mm

Technical Data P01-48x240F/980x980-EX-E			
<b>Stroke</b>			
Max. Stroke	mm (in)	980	(38.6)
<b>Force</b>			
Max. Force @ 48VDC	N (lbf)	496	(111)
Max. Force @ 72VDC	N (lbf)	496	(111)
Max. Cont. Force [Passive cooling / Fan / Fluid]	N (lbf)	84 / - / 240	(19 / - / 53)
Max. Border Force relative	%	100	
Force Constant	N/A <sub>pk</sub> (lbf/A <sub>pk</sub> )	19.1	(4.29)
<b>Velocity</b>			
Max. Velocity @ 48VDC	m/s (in/s)	2.2	(90.9)
Max. Velocity @ 72VDC	m/s (in/s)	3.4	(139.9)
<b>Position Detection</b>			
Repeatability	mm (in)	±0.05	(±0.002)
Linearity	%	± 0.2	
<b>Electrical Data</b>			
Max. Current @ 48VDC	A <sub>pk</sub>	25.9	
Max. Current @ 72VDC	A <sub>pk</sub>	25.9	
Max. Cont. Current [Passive cooling / Fan / Fluid]	A <sub>pk</sub>	4.4 / - / 12	
<b>Thermal Data</b>			
Max. Winding Temperature (Sensor)	°C	90	
Thermal Resistance [Passive cooling / Fan / Fluid]	°K/W	2 / - / 0.26	
Thermal Time Constant [Passive cooling / Fan / Fluid]	s	2100 / - / 260	
<b>Mechanical Data</b>			
Slider Length	mm (in)	1400	(55)
Slider Mass	g (lb)	5910	(13)



Item	Description	Item-No.
<b>PS01-48x240F-EX-E</b>	Stator EX, IP67	0150-2544
<b>PS01-48x240F-EX-E-FC</b>	Stator EX, IP67, FC	0150-1299
<b>PB01-48x25-P-SSC*</b>	Bearing for PS01-48x240-SSC (Stainless)	0150-3281
<b>PL01-27x1400/1320</b>	Slider 'High Clearance'	0150-1588

\* 2 Bearing kits must be ordered separately.

**Linear Guides H01-SSC**



6

**HM01-48x240/210-SSC | Linear module SSC 48x240 with 210 mm Stroke**

→	H-Guide	H01-48x401/210-SSC	H-Guide for PS01-48x240F-HP-SSC, Stroke max. 210 mm	0150-5280
	Stator	PS01-48x240F-EX-E	Stator EX, IP67	0150-2544
		PS01-48x240F-EX-E-FC	Stator EX, IP67, FC	0150-1299
→	Slider	PL01-27x620/540	Slider 'High Clearance'	0150-1470

**HM01-48x240/300-SSC | Linear module SSC 48x240 with 300 mm Stroke**

→	H-Guide	H01-48x401/300-SSC	H-Guide for PS01-48x240F-HP-SSC, Stroke max. 300 mm	0150-5281
	Stator	PS01-48x240F-EX-E	Stator EX, IP67	0150-2544
		PS01-48x240F-EX-E-FC	Stator EX, IP67, FC	0150-1299
→	Slider	PL01-27x710/630	Slider 'High Clearance'	0150-1471

**HM01-48x240/390-SSC | Linear module SSC 48x240 with 390 mm Stroke**

→	H-Guide	H01-48x401/390-SSC	H-Guide for PS01-48x240F-HP-SSC, Stroke max. 390 mm	0150-5282
	Stator	PS01-48x240F-EX-E	Stator EX, IP67	0150-2544
		PS01-48x240F-EX-E-FC	Stator EX, IP67, FC	0150-1299
→	Slider	PL01-27x800/720	Slider 'High Clearance'	0150-1472

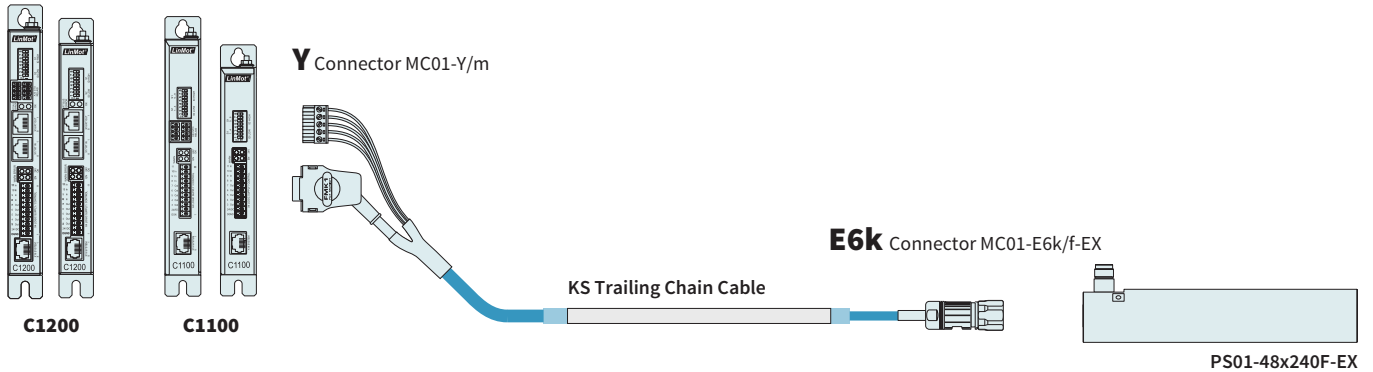
**HM01-48x240/510-SSC | Linear module SSC 48x240 with 510 mm Stroke**

→	H-Guide	H01-48x401/510-SSC	H-Guide for PS01-48x240F-HP-SSC, Stroke max. 510 mm	0150-5283
	Stator	PS01-48x240F-EX-E	Stator EX, IP67	0150-2544
		PS01-48x240F-EX-E-FC	Stator EX, IP67, FC	0150-1299
→	Slider	PL01-27x920/840	Slider 'High Clearance'	0150-1447

**FIND MORE PRODUCT DETAILS IN THE CHAPTER "LINEAR GUIDES".**



**Motor Cable**



**ORDERING INFORMATION**

TRAILING CHAIN CABLE		
Item	Description	Item-No.
<b>KS10-EX-Y-Fe/E6k-</b>	Trailing Chain Cable KS10-EX-Y-Fe/E6k-, Custom length	0150-3642

CONNECTOR & CABLE (INDIVIDUAL)		
Item	Description	Item-No.
<b>MC01-Y-Fe/m</b>	Motor Connector Y-Fe/m	0150-3289
<b>MC01-E6k/f-EX</b>	Connector with hexagonal union nut	0150-3538
<b>KS10-05/05/04-EX</b>	Motor cable for EX applications per m	0150-9010

**SLIDER MOUNTING**



Item	Description	Item-No.
<b>PLF01-28-SS</b>	Fixed Bearing Set for 27/28 mm sliders, stainless steel	0150-3297
<b>PLL01-27</b>	Floating Bearing for 27 mm sliders	0150-3294

FIND MORE PRODUCT DETAILS IN THE CHAPTER „ACCESSORIES“.

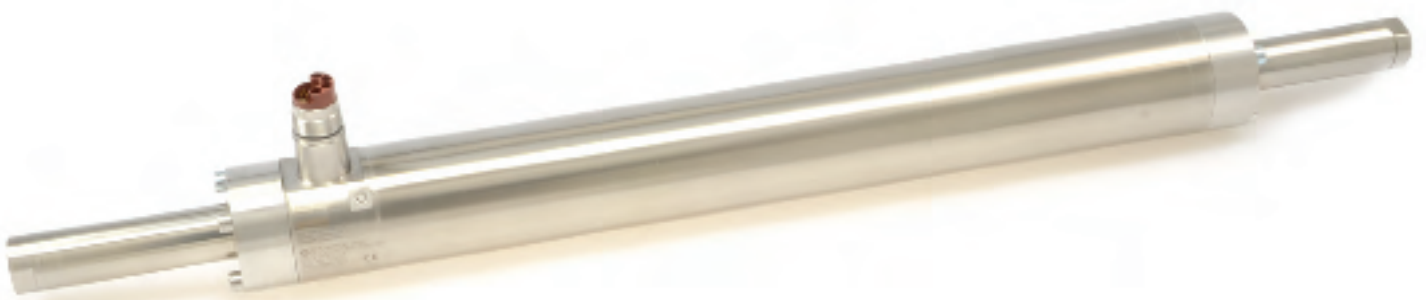
**BEARING KIT**



Item	Description	Item-No.
<b>PB01-48x25-P-SSC</b>	Bearing for PS01-48x240-SSC (Stainless)	0150-3281

FIND MORE PRODUCT DETAILS IN THE CHAPTER „ACCESSORIES“.

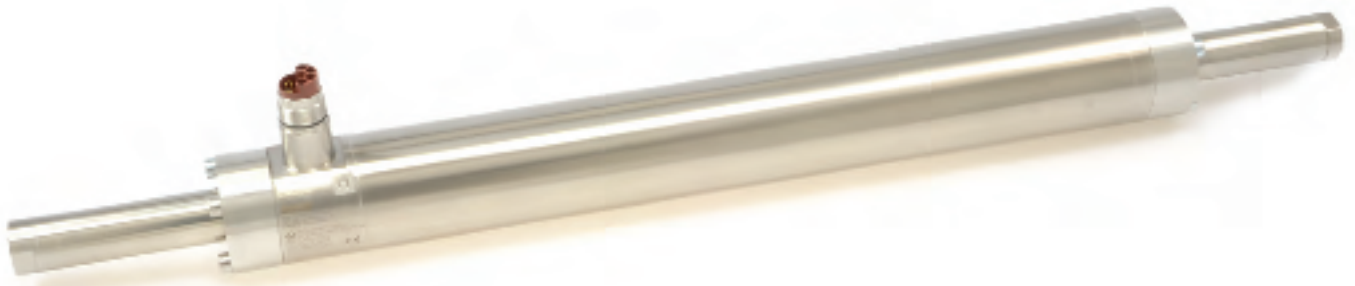
# LINEAR MOTORS P01-48x360F-EX



- ✓ For use in an explosive atmosphere consisting of gases, vapors, mist, or dust
- ✓ Welded connections
- ✓ Completely encapsulated
- ✓ Optional integrated water cooling

## LINEAR MOTORS P01-48x360F-EX

<b>Technical Data</b>	<b>695</b>
<b>Motor Specifications</b>	
P01-48x360F/80x80-EX-E	<b>698</b>
P01-48x360F/170x170-EX-E	<b>699</b>
P01-48x360F/260x260-EX-E	<b>700</b>
P01-48x360F/380x380-EX-E	<b>701</b>
P01-48x360F/470x470-EX-E	<b>702</b>
P01-48x360F/680x680-EX-E	<b>703</b>
P01-48x360F/860x860-EX-E	<b>704</b>
<b>Accessories</b>	<b>705</b>



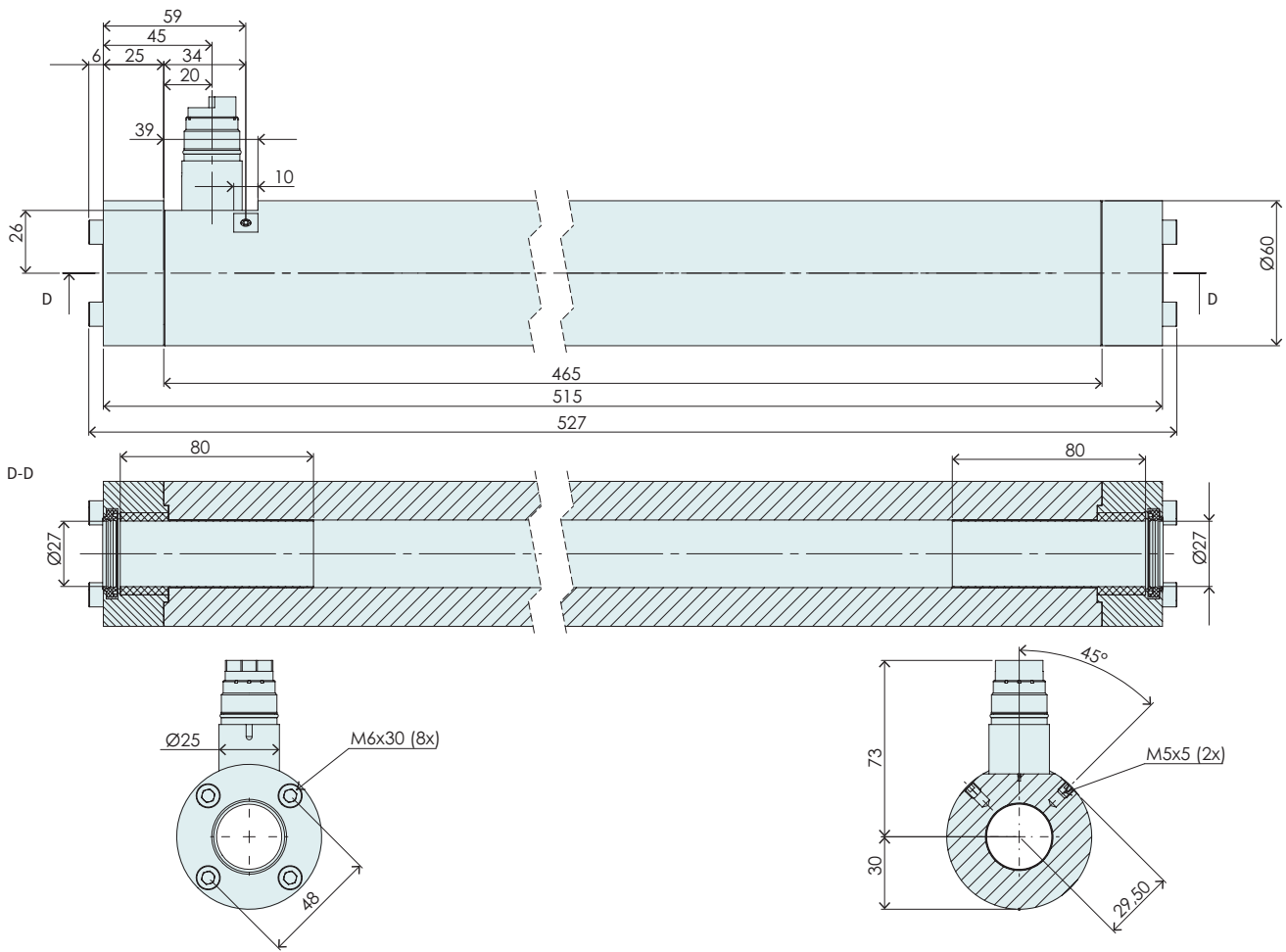
### MOTOR FAMILY P01-48X360F-EX

Technical Data				
<b>Stroke</b>				
Max. Stroke	mm	(in)	860	(33.9)
<b>Force</b>				
Max. Force @ 48VDC	N	(lbf)	721	(162)
Max. Force @ 72VDC	N	(lbf)	721	(162)
Max. Cont. Force [Passive cooling / Fan / Fluid]	N	(lbf)	130 / - / 350	(29 / - / 80)
Max. Border Force relative	%		≤ 100	
Force Constant	N/A <sub>pk</sub>	(lbf/A <sub>pk</sub> )	27.7	(6.24)
<b>Velocity</b>				
Max. Velocity @ 48VDC	m/s	(in/s)	1.6	(62.9)
Max. Velocity @ 72VDC	m/s	(in/s)	2.3	(93.9)
<b>Position Detection</b>				
Position Resolution	mm	(in)	0.007	(0.0003)
Repeatability	mm	(in)	±0.05	(±0.002)
Position Resolution with ES	mm	(in)	0.001	(0.00004)
Repeatability with ES	mm	(in)	±0.01	(±0.0004)
Linearity with ES	mm	(in)	±0.01	(±0.0004)
<b>Electrical Data</b>				
Max. Current @ 48VDC	A <sub>pk</sub>		25.9	
Max. Current @ 72VDC	A <sub>pk</sub>		25.9	
Max. Cont. Current [Passive cooling / Fan / Fluid]	A <sub>pk</sub>		4.6 / - / 13	
Terminal Resistance 25 °C / 120 °C	Ohm		1.4 / 1.9	
Terminal Inductivity	mH		1.6	
Magnetic Period	mm	(in)	60	(2.35)
<b>Thermal Data</b>				
Max. Winding Temperature (Sensor)	°C		90	
Thermal Resistance [Passive cooling / Fan / Fluid]	°K/W		1.3 / - / 0.17	
Thermal Time Constant [Passive cooling / Fan / Fluid]	s		1900 / - / 240	
<b>Mechanical Data</b>				
Stator Diameter	mm	(in)	60	(2.4)
Stator Length	mm	(in)	515	(20)
Stator Mass	g	(lb)	5560	(12.23)
Slider Diameter	mm	(in)	27	(1.1)
Slider Length	mm	(in)	500 - 1400	(20 - 55)
Slider Mass	g	(lb)	2010 - 5910	(4.42 - 13)
IP Code			IP 69k	

CE 1258 Ex eb IIC T6... T4 Gb

CE 1258 Ex tb IIC T85°C... T135°C Db

**STATOR**

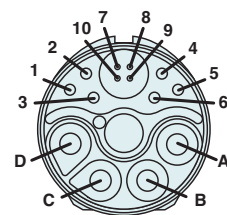


Item	Description	Item-No.
<b>PS01-48x360F-EX-E</b>	Stator EX, IP67	0150-2545
<b>PS01-48x360F-EX-E-FC</b>	Stator EX, IP67, Fluid-Kühlung	0150-1300

**CONNECTOR**

Motor Connector Wiring	PS01-48x360F-EX-E PS01-48x360F-EX-E-FC	Wire Color Motor Cable
	E6k-Connector	
Ph 1+	A	red
Ph 1-	B	pink
Ph 2+	C	blue
Ph 2-	D	grey
PE	Protective Earth	green-yellow
+5VDC	1	white
GND	2	Inner Shield
Sinus	3	yellow
Cosinus	4	green
Temp.	5	black
n. c.	6	-
Kty 1+	7	orange
Kty 1-	8	brown
Kty 2+	9	purple
Kty 2-	10	beige

**E6k-Connector**

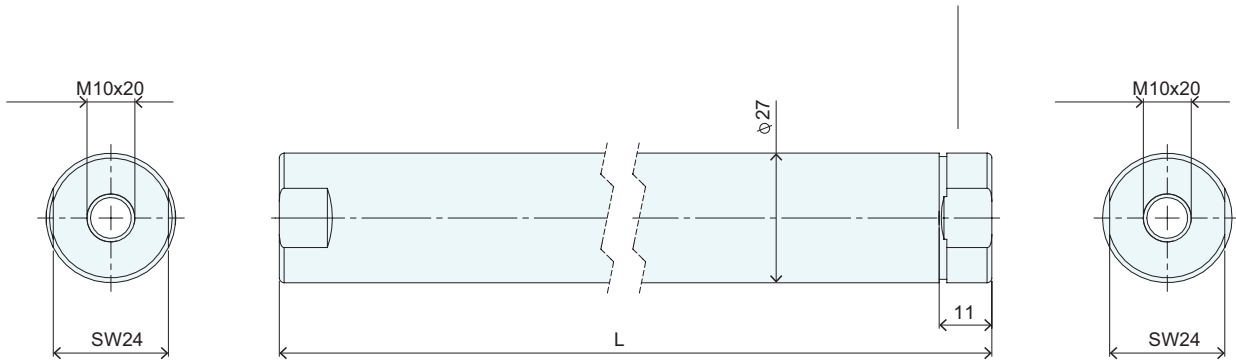


View: Motor connector, plug side

**SLIDER**

**Slider High Clearance**

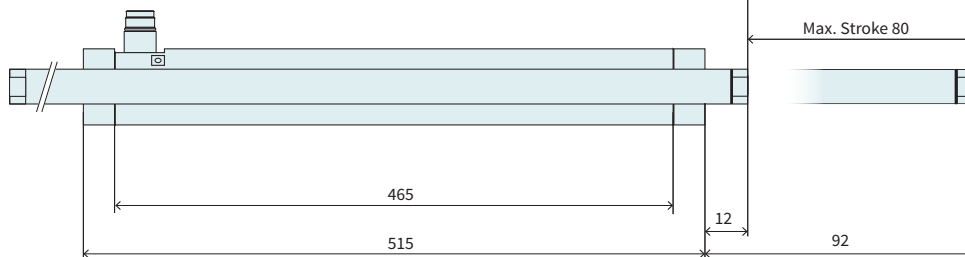
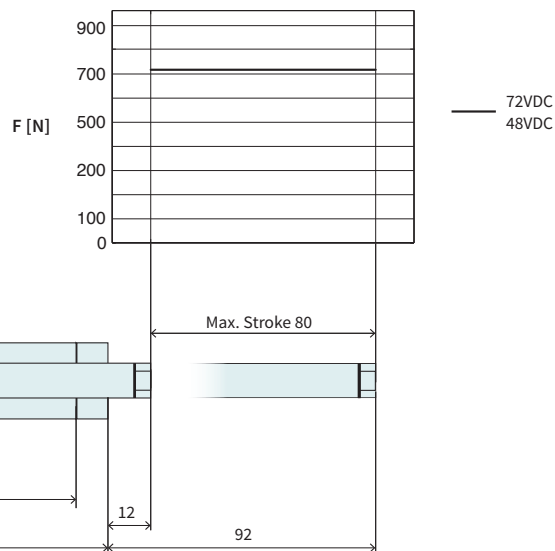
Number of grooves determines the slider type (see chapter 2 / slider) and marks the front end.



Slider High Clearance			
Item	Description	Max. Stroke [mm]	Item-No.
PL01-27x620/540	Slider 'High Clearance'	80	0150-1470
PL01-27x710/630	Slider 'High Clearance'	170	0150-1471
PL01-27x800/720	Slider 'High Clearance'	260	0150-1472
PL01-27x920/840	Slider 'High Clearance'	380	0150-1447
PL01-27x1010/930	Slider 'High Clearance'	470	0150-1473
PL01-27x1220/1140	Slider 'High Clearance'	680	0150-1587
PL01-27x1400/1320	Slider 'High Clearance'	860	0150-1588

**P01-48x360F/80x80-EX-E**

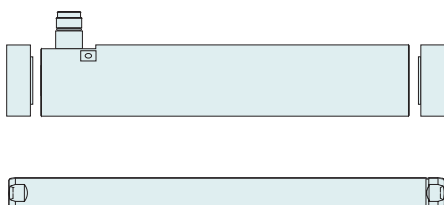
**Max. Stroke:** 80 mm  
**Peak Force:** 721 N



Dimensions in mm

Technical Data P01-48x360F/80x80-EX-E

Stroke			
Max. Stroke	mm (in)	80 (3.14)	
Force			
Max. Force @ 48VDC	N (lbf)	721 (162)	
Max. Force @ 72VDC	N (lbf)	721 (162)	
Max. Cont. Force [Passive cooling / Fan / Fluid]	N (lbf)	130 / - / 350 (29 / - / 80)	
Max. Border Force relative	%	100	
Force Constant	N/A <sub>pk</sub> (lbf/A <sub>pk</sub> )	27.7 (6.24)	
Velocity			
Max. Velocity @ 48VDC	m/s (in/s)	1.6 (62.9)	
Max. Velocity @ 72VDC	m/s (in/s)	2.3 (93.9)	
Position Detection			
Repeatability	mm (in)	±0.05 (±0.002)	
Linearity	%	± 1.05	
Electrical Data			
Max. Current @ 48VDC	A <sub>pk</sub>	25.9	
Max. Current @ 72VDC	A <sub>pk</sub>	25.9	
Max. Cont. Current [Passive cooling / Fan / Fluid]	A <sub>pk</sub>	4.6 / - / 13	
Thermal Data			
Max. Winding Temperature (Sensor)	°C	90	
Thermal Resistance [Passive cooling / Fan / Fluid]	°K/W	1.3 / - / 0.17	
Thermal Time Constant [Passive cooling / Fan / Fluid]	s	1900 / - / 240	
Mechanical Data			
Slider Length	mm (in)	620 (24)	
Slider Mass	g (lb)	2530 (5.57)	



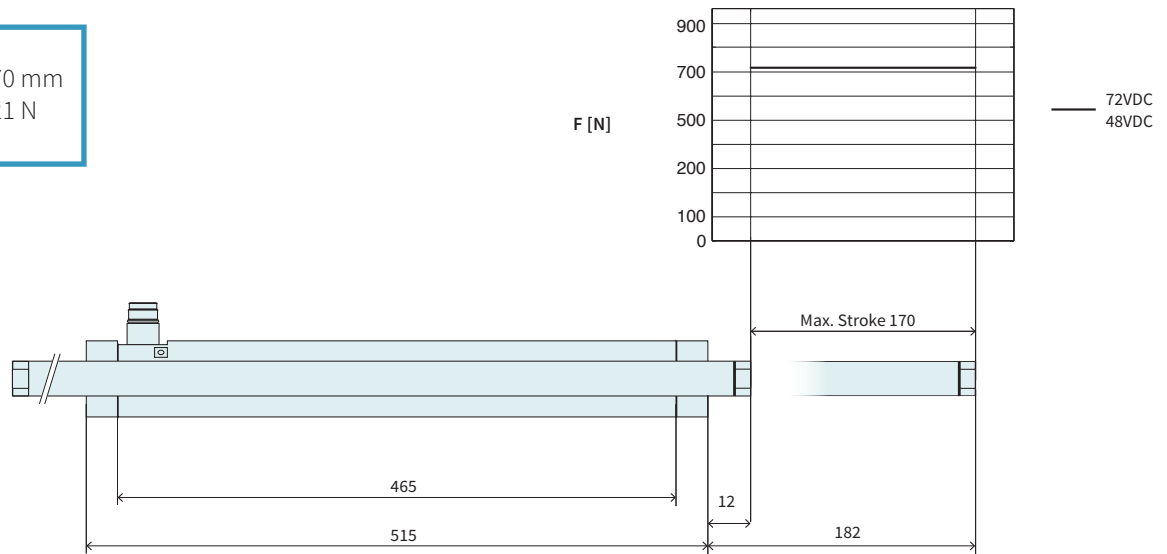
Item	Description	Item-No.
<b>PS01-48x360F-EX-E</b>	Stator EX, IP67	0150-2545
<b>PS01-48x360F-EX-E-FC</b>	Stator EX, IP67, FC	0150-1300
<b>PB01-48x25-80-P-SSC*</b>	Lager for PS01-48x360-SSC / EX	0150-3413
<b>PL01-27x620/540</b>	Slider 'High Clearance'	0150-1470

\* 2 Bearing kits must be ordered separately.



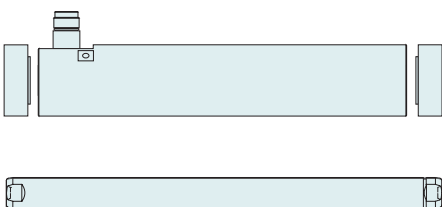
**P01-48x360F/170x170-EX-E**

**Max. Stroke:** 170 mm  
**Peak Force:** 721 N



Dimensions in mm

Technical Data P01-48x360F/170x170-EX-E			
<b>Stroke</b>			
Max. Stroke	mm (in)	170	(6.69)
<b>Force</b>			
Max. Force @ 48VDC	N (lbf)	721	(162)
Max. Force @ 72VDC	N (lbf)	721	(162)
Max. Cont. Force [Passive cooling / Fan / Fluid]	N (lbf)	130 / - / 350	(29 / - / 80)
Max. Border Force relative	%	100	
Force Constant	N/A <sub>pk</sub> (lbf/A <sub>pk</sub> )	27.7	(6.24)
<b>Velocity</b>			
Max. Velocity @ 48VDC	m/s (in/s)	1.6	(62.9)
Max. Velocity @ 72VDC	m/s (in/s)	2.3	(93.9)
<b>Position Detection</b>			
Repeatability	mm (in)	±0.05	(±0.002)
Linearity	%	± 0.55	
<b>Electrical Data</b>			
Max. Current @ 48VDC	A <sub>pk</sub>	25.9	
Max. Current @ 72VDC	A <sub>pk</sub>	25.9	
Max. Cont. Current [Passive cooling / Fan / Fluid]	A <sub>pk</sub>	4.6 / - / 13	
<b>Thermal Data</b>			
Max. Winding Temperature (Sensor)	°C	90	
Thermal Resistance [Passive cooling / Fan / Fluid]	°K/W	1.3 / - / 0.17	
Thermal Time Constant [Passive cooling / Fan / Fluid]	s	1900 / - / 240	
<b>Mechanical Data</b>			
Slider Length	mm (in)	710	(28)
Slider Mass	g (lb)	2920	(6.42)

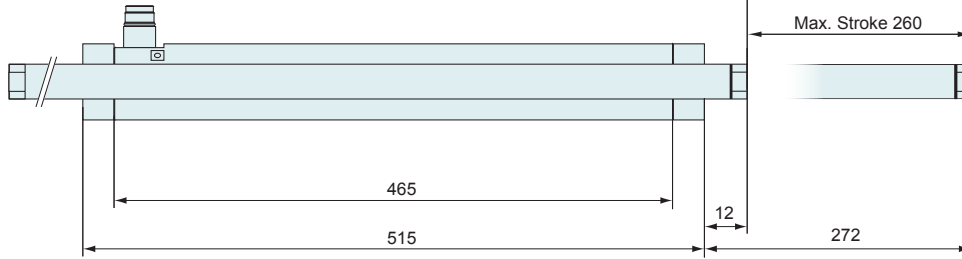
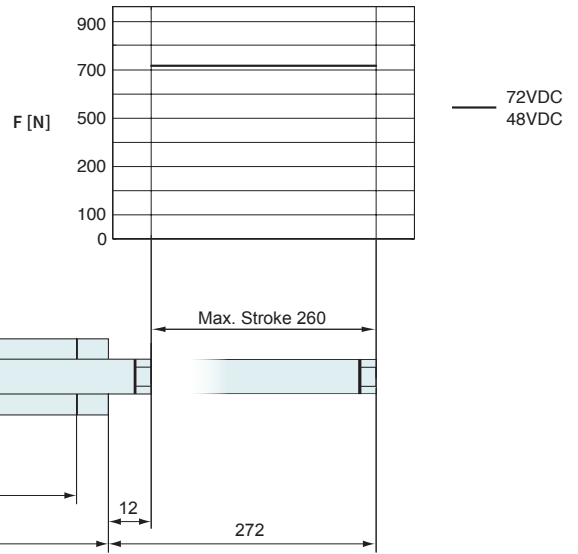


Item	Description	Item-No.
<b>PS01-48x360F-EX-E</b>	Stator EX, IP67	0150-2545
<b>PS01-48x360F-EX-E-FC</b>	Stator EX, IP67, FC	0150-1300
<b>PB01-48x25-80-P-SSC*</b>	Lager for PS01-48x360-SSC / EX	0150-3413
<b>PL01-27x710/630</b>	Slider 'High Clearance'	0150-1471

\* 2 Bearing kits must be ordered separately.

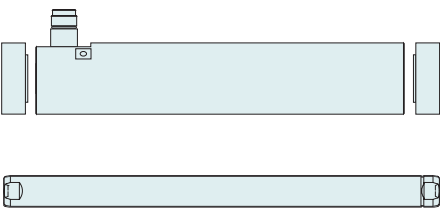
**P01-48x360F/260x260-EX-E**

**Max. Stroke:** 260 mm  
**Peak Force:** 721 N



Dimensions in mm

Technical Data P01-48x360F/260x260-EX-E			
<b>Stroke</b>			
Max. Stroke	mm (in)	260	(10.19)
<b>Force</b>			
Max. Force @ 48VDC	N (lbf)	721	(162)
Max. Force @ 72VDC	N (lbf)	721	(162)
Max. Cont. Force [Passive cooling / Fan / Fluid]	N (lbf)	130 / - / 350	(29 / - / 80)
Max. Border Force relative	%	100	
Force Constant	N/A <sub>pk</sub> (lbf/A <sub>pk</sub> )	27.7	(6.24)
<b>Velocity</b>			
Max. Velocity @ 48VDC	m/s (in/s)	1.6	(62.9)
Max. Velocity @ 72VDC	m/s (in/s)	2.3	(93.9)
<b>Position Detection</b>			
Repeatability	mm (in)	±0.05	(±0.002)
Linearity	%	± 0.4	
<b>Electrical Data</b>			
Max. Current @ 48VDC	A <sub>pk</sub>	25.9	
Max. Current @ 72VDC	A <sub>pk</sub>	25.9	
Max. Cont. Current [Passive cooling / Fan / Fluid]	A <sub>pk</sub>	4.6 / - / 13	
<b>Thermal Data</b>			
Max. Winding Temperature (Sensor)	°C	90	
Thermal Resistance [Passive cooling / Fan / Fluid]	°K/W	1.3 / - / 0.17	
Thermal Time Constant [Passive cooling / Fan / Fluid]	s	1900 / - / 240	
<b>Mechanical Data</b>			
Slider Length	mm (in)	800	(31)
Slider Mass	g (lb)	3310	(7.28)

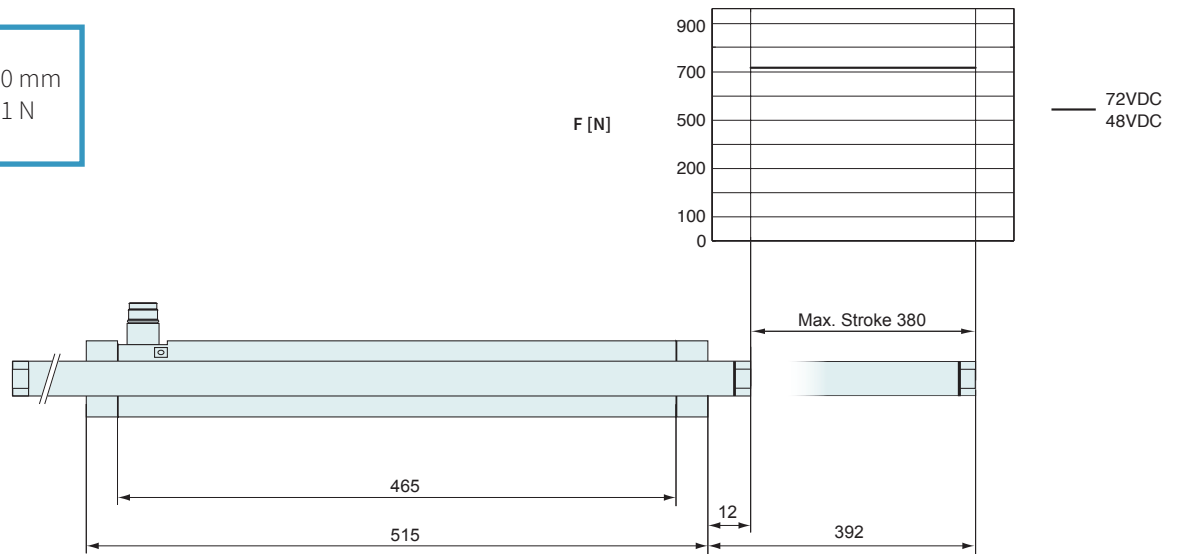


Item	Description	Item-No.
<b>PS01-48x360F-EX-E</b>	Stator EX, IP67	0150-2545
<b>PS01-48x360F-EX-E-FC</b>	Stator EX, IP67, FC	0150-1300
<b>PB01-48x25-80-P-SSC*</b>	Lager for PS01-48x360-SSC / EX	0150-3413
<b>PL01-27x800/720</b>	Slider 'High Clearance'	0150-1472

\* 2 Bearing kits must be ordered separately.

**P01-48x360F/380x380-EX-E**

**Max. Stroke:** 380 mm  
**Peak Force:** 721 N



Dimensions in mm

Technical Data P01-48x360F/380x380-EX-E				
<b>Stroke</b>				
Max. Stroke	mm	(in)	380	(14.99)
<b>Force</b>				
Max. Force @ 48VDC	N	(lbf)	721	(162)
Max. Force @ 72VDC	N	(lbf)	721	(162)
Max. Cont. Force [Passive cooling / Fan / Fluid]	N	(lbf)	130 / - / 350	(29 / - / 80)
Max. Border Force relative			%	
			100	
Force Constant	N/A <sub>pk</sub>	(lbf/A <sub>pk</sub> )	27.7	(6.24)
<b>Velocity</b>				
Max. Velocity @ 48VDC	m/s	(in/s)	1.6	(62.9)
Max. Velocity @ 72VDC	m/s	(in/s)	2.3	(93.9)
<b>Position Detection</b>				
Repeatability	mm	(in)	±0.05	(±0.002)
Linearity			%	
			± 0.3	
<b>Electrical Data</b>				
Max. Current @ 48VDC			A <sub>pk</sub>	
			25.9	
Max. Current @ 72VDC			A <sub>pk</sub>	
			25.9	
Max. Cont. Current [Passive cooling / Fan / Fluid]			A <sub>pk</sub>	
			4.6 / - / 13	
<b>Thermal Data</b>				
Max. Winding Temperature (Sensor)			°C	
			90	
Thermal Resistance [Passive cooling / Fan / Fluid]			°K/W	
			1.3 / - / 0.17	
Thermal Time Constant [Passive cooling / Fan / Fluid]			s	
			1900 / - / 240	
<b>Mechanical Data</b>				
Slider Length	mm	(in)	920	(36)
Slider Mass	g	(lb)	3830	(8.43)

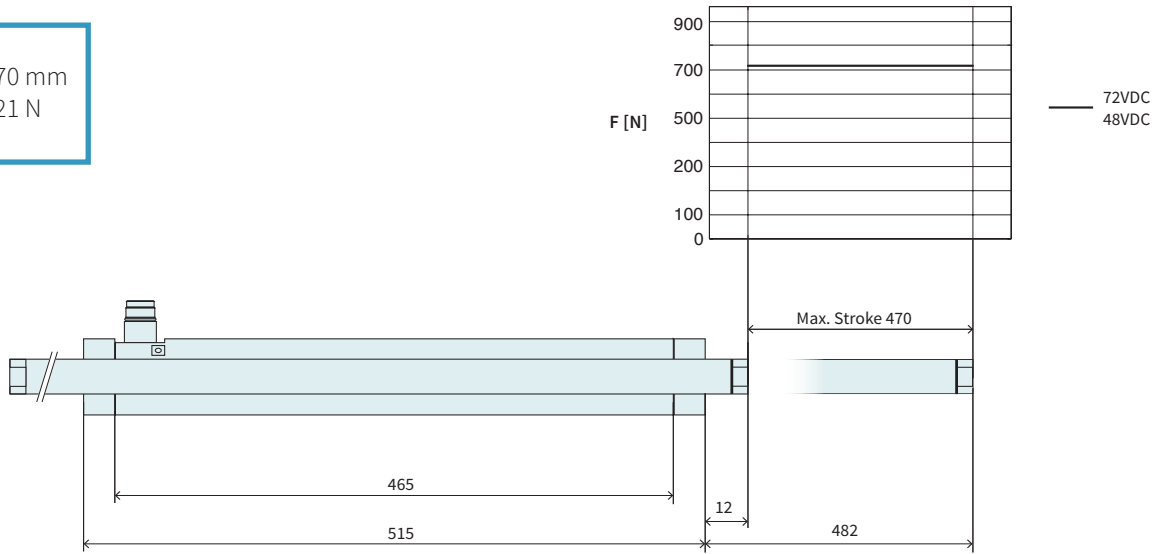


Item	Description	Item-No.
<b>PS01-48x360F-EX-E</b>	Stator EX, IP67	0150-2545
<b>PS01-48x360F-EX-E-FC</b>	Stator EX, IP67, FC	0150-1300
<b>PB01-48x25-80-P-SSC*</b>	Lager for PS01-48x360-SSC / EX	0150-3413
<b>PL01-27x920/840</b>	Slider 'High Clearance'	0150-1447

\* 2 Bearing kits must be ordered separately.

**P01-48x360F/470x470-EX-E**

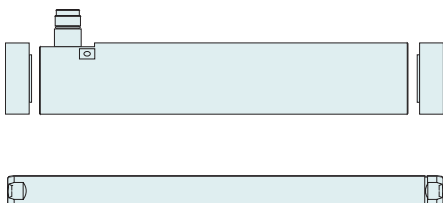
**Max. Stroke:** 470 mm  
**Peak Force:** 721 N



Dimensions in mm

**Technical Data P01-48x360F/470x470-EX-E**

Stroke			
Max. Stroke	mm (in)	470 (18.49)	
Force			
Max. Force @ 48VDC	N (lbf)	721 (162)	
Max. Force @ 72VDC	N (lbf)	721 (162)	
Max. Cont. Force [Passive cooling / Fan / Fluid]	N (lbf)	130 / - / 350 (29 / - / 80)	
Max. Border Force relative	%	100	
Force Constant	N/A <sub>pk</sub> (lbf/A <sub>pk</sub> )	27.7 (6.24)	
Velocity			
Max. Velocity @ 48VDC	m/s (in/s)	1.6 (62.9)	
Max. Velocity @ 72VDC	m/s (in/s)	2.3 (93.9)	
Position Detection			
Repeatability	mm (in)	±0.05 (±0.002)	
Linearity	%	± 0.25	
Electrical Data			
Max. Current @ 48VDC	A <sub>pk</sub>	25.9	
Max. Current @ 72VDC	A <sub>pk</sub>	25.9	
Max. Cont. Current [Passive cooling / Fan / Fluid]	A <sub>pk</sub>	4.6 / - / 13	
Thermal Data			
Max. Winding Temperature (Sensor)	°C	90	
Thermal Resistance [Passive cooling / Fan / Fluid]	°K/W	1.3 / - / 0.17	
Thermal Time Constant [Passive cooling / Fan / Fluid]	s	1900 / - / 240	
Mechanical Data			
Slider Length	mm (in)	1010 (40)	
Slider Mass	g (lb)	4220 (9.28)	

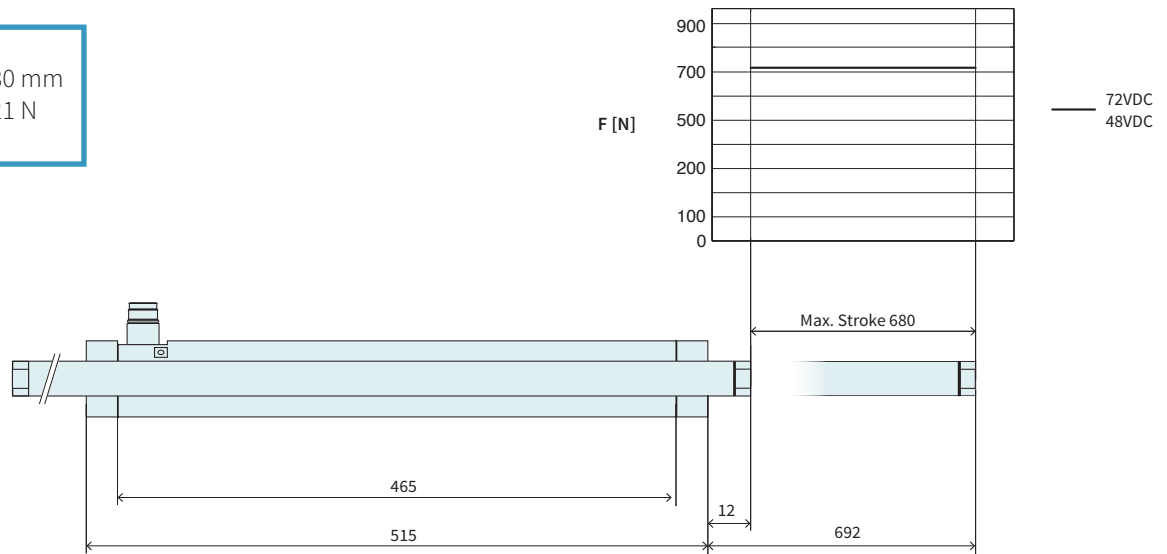


Item	Description	Item-No.
<b>PS01-48x360F-EX-E</b>	Stator EX, IP67	0150-2545
<b>PS01-48x360F-EX-E-FC</b>	Stator EX, IP67, FC	0150-1300
<b>PB01-48x25-80-P-SSC*</b>	Lager for PS01-48x360-SSC / EX	0150-3413
<b>PL01-27x1010/930</b>	Slider 'High Clearance'	0150-1473

\* 2 Bearing kits must be ordered separately.

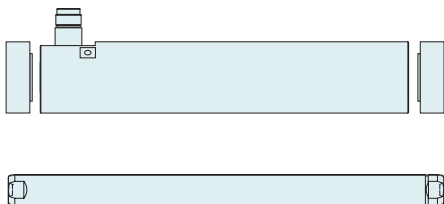
**P01-48x360F/680x680-EX-E**

**Max. Stroke:** 680 mm  
**Peak Force:** 721 N



Dimensions in mm

Technical Data P01-48x360F/680x680-EX-E			
<b>Stroke</b>			
Max. Stroke	mm (in)	680	(26.8)
<b>Force</b>			
Max. Force @ 48VDC	N (lbf)	721	(162)
Max. Force @ 72VDC	N (lbf)	721	(162)
Max. Cont. Force [Passive cooling / Fan / Fluid]	N (lbf)	130 / - / 350	(29 / - / 80)
Max. Border Force relative	%	100	
Force Constant	N/A <sub>pk</sub> (lbf/A <sub>pk</sub> )	27.7	(6.24)
<b>Velocity</b>			
Max. Velocity @ 48VDC	m/s (in/s)	1.6	(62.9)
Max. Velocity @ 72VDC	m/s (in/s)	2.3	(93.9)
<b>Position Detection</b>			
Repeatability	mm (in)	±0.05	(±0.002)
Linearity	%	± 0.2	
<b>Electrical Data</b>			
Max. Current @ 48VDC	A <sub>pk</sub>	25.9	
Max. Current @ 72VDC	A <sub>pk</sub>	25.9	
Max. Cont. Current [Passive cooling / Fan / Fluid]	A <sub>pk</sub>	4.6 / - / 13	
<b>Thermal Data</b>			
Max. Winding Temperature (Sensor)	°C	90	
Thermal Resistance [Passive cooling / Fan / Fluid]	°K/W	1.3 / - / 0.17	
Thermal Time Constant [Passive cooling / Fan / Fluid]	s	1900 / - / 240	
<b>Mechanical Data</b>			
Slider Length	mm (in)	1220	(48)
Slider Mass	g (lb)	5130	(11.29)

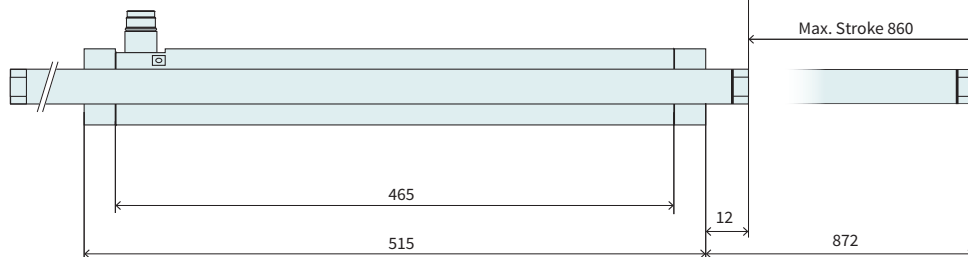
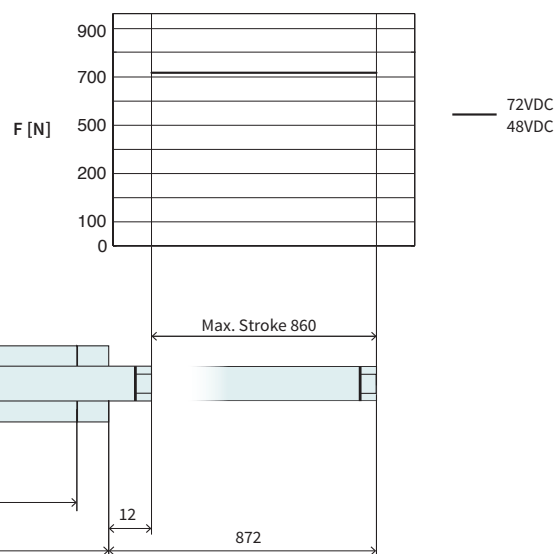


Item	Description	Item-No.
<b>PS01-48x360F-EX-E</b>	Stator EX, IP67	0150-2545
<b>PS01-48x360F-EX-E-FC</b>	Stator EX, IP67, FC	0150-1300
<b>PB01-48x25-80-P-SSC*</b>	Lager for PS01-48x360-SSC / EX	0150-3413
<b>PL01-27x1220/1140</b>	Slider 'High Clearance'	0150-1587

\* 2 Bearing kits must be ordered separately.

**P01-48x360F/860x860-EX-E**

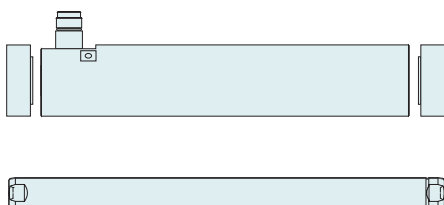
**Max. Stroke:** 860 mm  
**Peak Force:** 721 N



Dimensions in mm

**Technical Data P01-48x360F/860x860-EX-E**

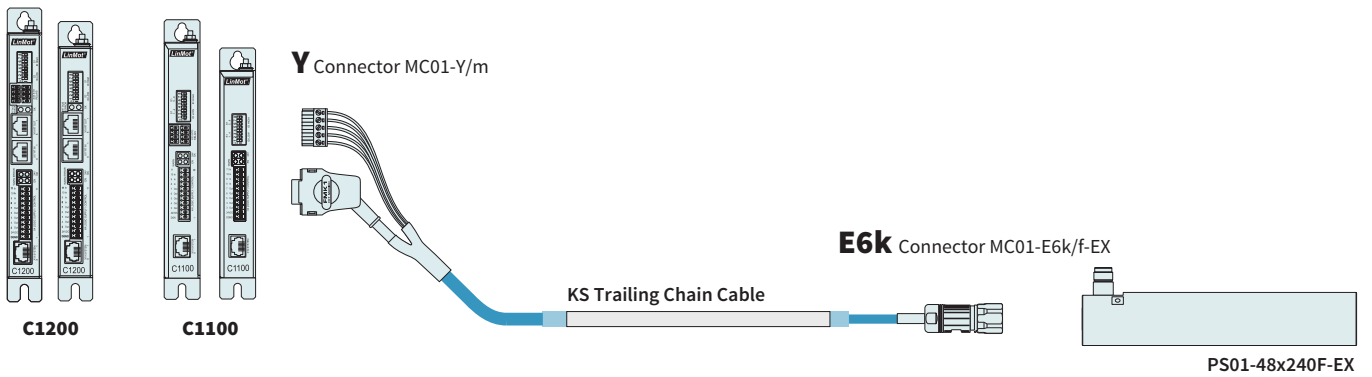
Stroke			
Max. Stroke	mm (in)	860	(33.89)
Force			
Max. Force @ 48VDC	N (lbf)	721	(162)
Max. Force @ 72VDC	N (lbf)	721	(162)
Max. Cont. Force [Passive cooling / Fan / Fluid]	N (lbf)	130 / - / 350	(29 / - / 80)
Max. Border Force relative	%	100	
Force Constant	N/A <sub>pk</sub> (lbf/A <sub>pk</sub> )	27.7	(6.24)
Velocity			
Max. Velocity @ 48VDC	m/s (in/s)	1.6	(62.9)
Max. Velocity @ 72VDC	m/s (in/s)	2.3	(93.9)
Position Detection			
Repeatability	mm (in)	±0.05	(±0.002)
Linearity	%	± 0.2	
Electrical Data			
Max. Current @ 48VDC	A <sub>pk</sub>	25.9	
Max. Current @ 72VDC	A <sub>pk</sub>	25.9	
Max. Cont. Current [Passive cooling / Fan / Fluid]	A <sub>pk</sub>	4.6 / - / 13	
Thermal Data			
Max. Winding Temperature (Sensor)	°C	90	
Thermal Resistance [Passive cooling / Fan / Fluid]	°K/W	1.3 / - / 0.17	
Thermal Time Constant [Passive cooling / Fan / Fluid]	s	1900 / - / 240	
Mechanical Data			
Slider Length	mm (in)	1400	(55)
Slider Mass	g (lb)	5910	(13)



Item	Description	Item-No.
<b>PS01-48x360F-EX-E</b>	Stator EX, IP67	0150-2545
<b>PS01-48x360F-EX-E-FC</b>	Stator EX, IP67, FC	0150-1300
<b>PB01-48x25-80-P-SSC*</b>	Lager for PS01-48x360-SSC / EX	0150-3413
<b>PL01-27x1400/1320</b>	Slider 'High Clearance'	0150-1588

\* 2 Bearing kits must be ordered separately.

**Motor Cable**



**ORDERING INFORMATION**

TRAILING CHAIN CABLE		
Item	Description	Item-No.
<b>KS10-EX-Y-Fe/E6k-</b>	Trailing Chain Cable KS10-EX-Y-Fe/E6k-, Custom length	0150-3642

CONNECTOR & CABLE (INDIVIDUAL)		
Item	Description	Item-No.
<b>MC01-Y-Fe/m</b>	Motor Connector Y-Fe/m	0150-3289
<b>MC01-E6k/f-EX</b>	Connector with hexagonal union nut	0150-3538
<b>KS10-05/05/04-EX</b>	Motor cable for EX applications per m	0150-9010

**SLIDER MOUNTING**



Item	Description	Item-No.
<b>PLF01-28-SS</b>	Fixed Bearing Set for 27/28 mm sliders, stainless steel	0150-3297
<b>PLL01-27</b>	Floating Bearing for 27 mm sliders	0150-3294

FIND MORE PRODUCT DETAILS IN THE CHAPTER „ACCESSORIES“.

**BEARING KIT**



Item	Description	Item-No.
<b>PB01-48x25-80-P-SSC</b>	Lager for PS01-48x360-SSC (Edelstahl)	0150-3413

FIND MORE PRODUCT DETAILS IN THE CHAPTER „ACCESSORIES“.



# LINEAR MOTORS PD03-37Sx120F-HP



- ✓ High-performance linear motor with integrated drive
- ✓ Compact form factor
- ✓ Highly dynamic
- ✓ Suitable for daisy-chain linkages
- ✓ Integrated mounting flange
- ✓ Low cabling effort

## LINEAR MOTORS PD03-37Sx120F-HP

<b>Technical Data</b>	<b>710</b>
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### Motor Specifications

PD03-37Sx120F/40-HP	<b>713</b>
PD03-37Sx120F/100-HP	<b>714</b>
PD03-37Sx120F/160-HP	<b>715</b>
PD03-37Sx120F/200-HP	<b>716</b>
PD03-37Sx120F/300-HP	<b>717</b>
PD03-37Sx120F/400-HP	<b>718</b>

<b>Accessories</b>	<b>719</b>
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## Product Description

The PD03 drive unit consists of a compact linear motor and an integrated drive. This innovative concept will allow the controller to be eliminated from the electrical enclosure for linear direct drives, thus greatly reducing installation time and effort.

In addition, this opens up the possibility to efficiently couple several devices in a daisy chain linkage. This new generation of motors can be used to implement modular machine concepts easily.



### TUBULAR LINEAR MOTOR

Inside the PD03 is a series 37Sx120F-HP linear motor. This short style motor can produce a peak force 255 N and peak speed of 3.8 m/s. Together with the high-resolution slider program, the stroke range is up to 1480 mm.

Like all LinMot motors, this model can also be positioned freely and has high process stability and long service life, with no wear components.



### INTEGRATED DRIVE

The drive supplies the motor with a peak phase current of up to 25 A and has an industrial Ethernet interface. EtherCAT, ProfiNet, Ethernet IP, Sercos III, and Powerlink are available. Device profiles CoE, CiA402, SoE, and PROFIdrive are also supported. The RS232 configuration interface and the DIP switch are installed behind a protective cover, which guarantees that leak tightness requirements are met. The complete motor with integrated drive thus meets protection class IP 65 to prevent dust and water spray infiltration.

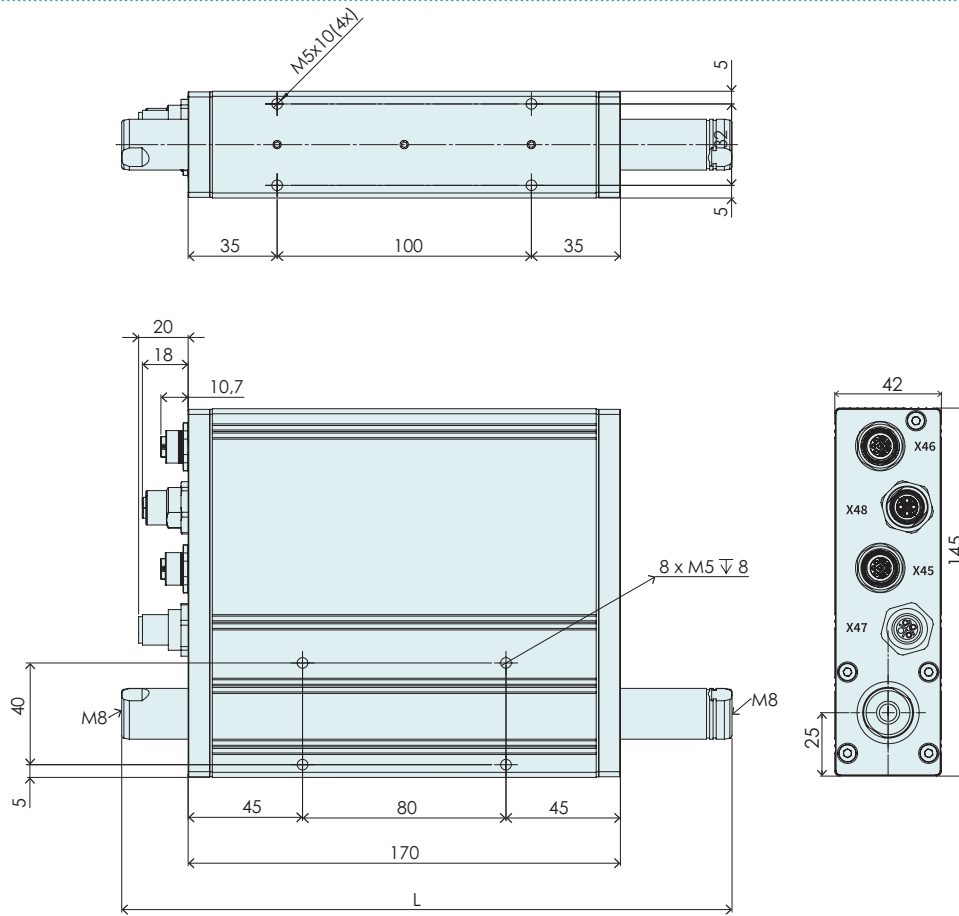


## MOTOR FAMILY PD03-37Sx120F-HP

### Technical Data

Technical Data			
<b>Stroke</b>			
Max. Stroke	mm (in)		400 (15.75)
<b>Force</b>			
Max. Force @ 48VDC	N (lbf)		255 (57.3)
Max. Force @ 72VDC	N (lbf)		255 (57.3)
Max. Cont. Force [Passive cooling / Fan / Fluid]	N (lbf)		48 / - / - (11 / - / -)
Force Constant	N/A <sub>pk</sub> (lbf/A <sub>pk</sub> )		17 (3.82)
<b>Velocity</b>			
Max. Velocity @ 48VDC	m/s (in/s)		2.5 (99.9)
Max. Velocity @ 72VDC	m/s (in/s)		3.8 (149.9)
<b>Position Detection</b>			
Position Resolution	mm (in)		0.005 (0.0002)
Repeatability	mm (in)		±0.05 (±0.002)
<b>Electrical Data</b>			
Max. Current @ 48VDC	A <sub>pk</sub>		14.9
Max. Current @ 72VDC	A <sub>pk</sub>		14.9
Max. Cont. Current [Passive cooling / Fan / Fluid]	A <sub>pk</sub>		2.8 / - / -
Terminal Resistance 25 °C / 150 °C	Ohm		2.4 / 3.5
Terminal Inductivity	mH		1.6
Magnetic Period	mm (in)		40 (1.57)
<b>Thermal Data</b>			
Max. Winding Temperature (Sensor)	°C		120
Thermal Resistance [Passive cooling / Fan / Fluid]	°K/W		2.9 / - / -
Thermal Time Constant [Passive cooling / Fan / Fluid]	s		1200 / - / -
<b>Mechanical Data</b>			
Stator Width	mm (in)		42 (1.65)
Stator Height	mm (in)		145 (5.71)
Stator Length	mm (in)		170 (6.7)
Stator Mass	g (lb)		1900 (4.18)
Slider Diameter	mm (in)		20 (0.79)
Slider Length	mm (in)		240 - 600 (9.4 - 24)
Slider Mass	g (lb)		490 - 1330 (0.88 - 2.4)
IP Code			IP 65
<b>Integrated Servo Drive</b>			
Nominal Voltage Power	VDC		72 (24 - 85)
Nominal Voltage Signal	VDC		24 (22 - 26)
Nominal Current Signal	mA		150
Internal Fuse Signal			Sicherung 3 A-T
Field Bus			EtherCAT
Configuration Interface			RS232

**STATOR**

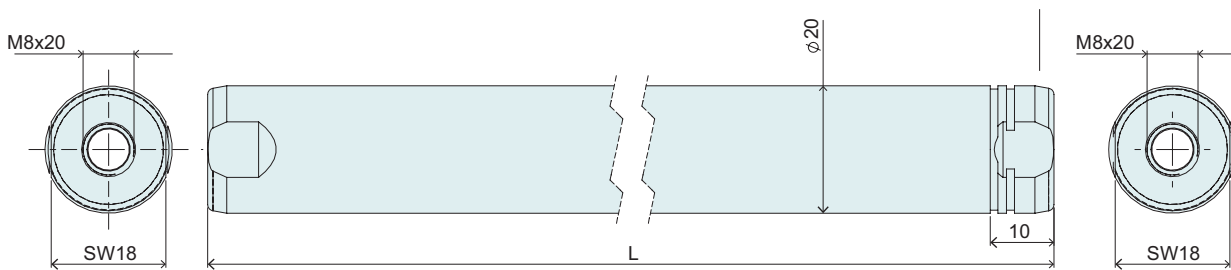


Item	Description	Item-No.
<b>PSD03-37Sx120F-HP-I1150-EC-XC-0S-000</b>	Stator with EtherCAT Drive (72V/15A)	0150-2806
<b>PSD03-37Sx120F-HP-I1150-DS-XC-0S-000</b>	Stator with EtherCAT CoE Drive (72V/15A)	0150-2807
<b>PSD03-37Sx120F-HP-I1150-SE-XC-0S-000</b>	Stator with EtherCAT SoE Drive (72V/15A)	0150-2808

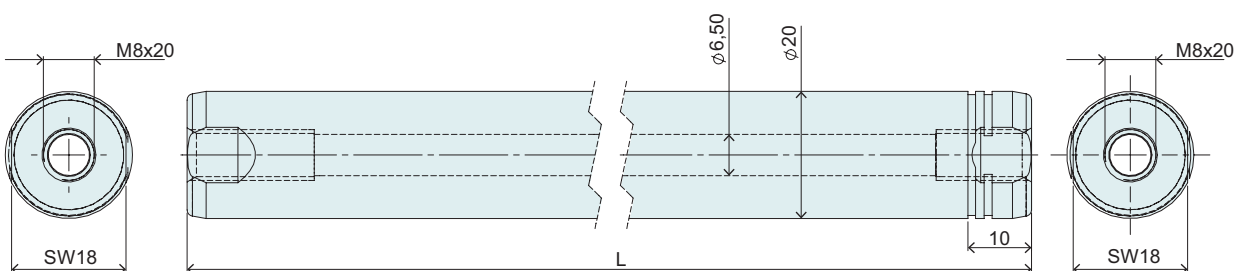
**SLIDER**

**Slider HP / Heavy Duty HP**

Number of grooves determines the slider type (see chapter 2 / slider) and marks the front end.



**Hollow Slider HP**



Slider High Performance			
Item	Description	Max. Stroke [mm]	Item-No.
PL01-20x240/180-HP	Slider 'High Performance'	40	0150-1505
PL01-20x300/240-HP	Slider 'High Performance'	100	0150-1506
PL01-20x360/300-HP	Slider 'High Performance'	160	0150-1507
PL01-20x400/340-HP	Slider 'High Performance'	200	0150-1508
PL01-20x500/440-HP	Slider 'High Performance'	300	0150-1509
PL01-20x600/540-HP	Slider 'High Performance'	400	0150-1510

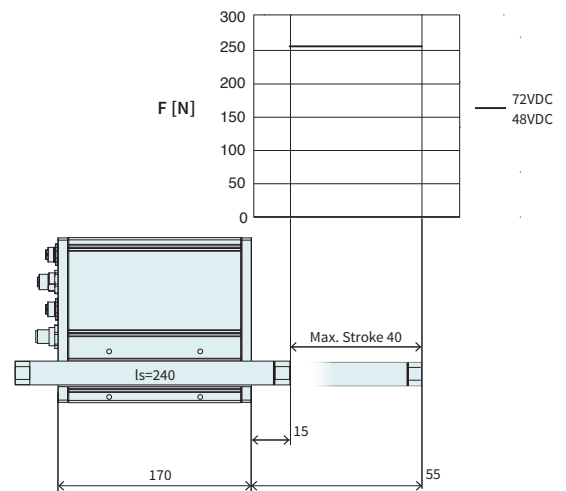
Slider Heavy Duty High Performance			
Item	Description	Max. Stroke [mm]	Item-No.
PL02-20x240/180-HP	Slider 'heavy duty' 'High Performance'	40	0150-2162
PL02-20x300/240-HP	Slider 'heavy duty' 'High Performance'	100	0150-2163
PL02-20x360/300-HP	Slider 'heavy duty' 'High Performance'	160	0150-2164
PL02-20x400/340-HP	Slider 'heavy duty' 'High Performance'	200	0150-2165
PL02-20x500/440-HP	Slider 'heavy duty' 'High Performance'	300	0150-2166
PL02-20x600/540-HP	Slider 'heavy duty' 'High Performance'	400	0150-2167

Hollow Slider High Performance			
Item	Description	Max. Stroke [mm]	Item-No.
PL01-20x240/180-HP-L	Slider 'High Performance L'	40	0150-2540
PL01-20x300/240-HP-L	Slider 'High Performance L'	100	0150-3696
PL01-20x360/300-HP-L	Slider 'High Performance L'	160	0150-1537
PL01-20x400/340-HP-L	Slider 'High Performance L'	200	0150-3697
PL01-20x500/440-HP-L	Slider 'High Performance L'	300	0150-3698
PL01-20x600/540-HP-L	Slider 'High Performance L'	400	0150-3699

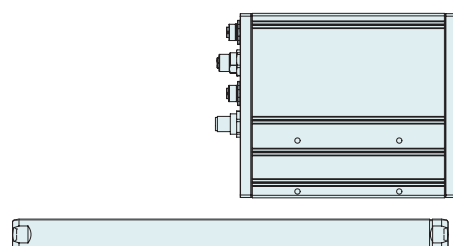
**PD03-37Sx120F/40-HP**

**Max. Stroke:** 40 mm  
**Peak Force:** 255 N

Dimensions in mm



Technical Data PD03-37Sx120F/40-HP			
<b>Stroke</b>			
Max. Stroke	mm (in)		40 (1.57)
<b>Force</b>			
Max. Force @ 48VDC	N (lbf)		255 (57.3)
Max. Force @ 72VDC	N (lbf)		255 (57.3)
Max. Cont. Force [Passive cooling / Fan / Fluid]	N (lbf)		48 / - / - (11 / - / -)
Force Constant	N/A <sub>pk</sub> (lbf/A <sub>pk</sub> )		17 (3.82)
<b>Velocity</b>			
Max. Velocity @ 48VDC	m/s (in/s)		2.5 (99.9)
Max. Velocity @ 72VDC	m/s (in/s)		3.8 (149.9)
<b>Position Detection</b>			
Repeatability	mm (in)		±0.05 (±0.002)
Linearity	%		± 0.5
<b>Electrical Data</b>			
Max. Current @ 48VDC	A <sub>pk</sub>		14.9
Max. Current @ 72VDC	A <sub>pk</sub>		14.9
Max. Cont. Current [Passive cooling / Fan / Fluid]	A <sub>pk</sub>		2.8 / - / -
<b>Thermal Data</b>			
Max. Winding Temperature (Sensor)	°C		120
Thermal Resistance [Passive cooling / Fan / Fluid]	°K/W		2.9 / - / -
Thermal Time Constant [Passive cooling / Fan / Fluid]	s		1200 / - / -
<b>Mechanical Data</b>			
Slider Length	mm (in)		240 (9.4)
Slider Mass	g (lb)		490 (1.08)
<b>Integrated Servo Drive</b>			
Nominal Voltage Power	VDC		72 (24 -85)
Nominal Voltage Signal	VDC		24 (22 -26)
Nominal Current Signal	mA		150
Internal Fuse Signal			Sicherung 3 A-T
Field Bus			EtherCAT
Configuration Interface			RS232

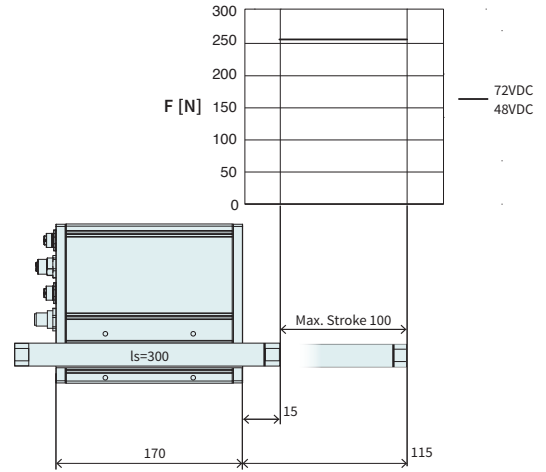


Item	Description	Item-No.
<b>PSD03-37Sx120F-HP-I1150-EC-XC-0S-000</b>	Stator with EtherCAT Drive (72V/15A)	0150-2806
<b>PSD03-37Sx120F-HP-I1150-DS-XC-0S-000</b>	Stator with EtherCAT CoE Drive (72V/15A)	0150-2807
<b>PSD03-37Sx120F-HP-I1150-SE-XC-0S-000</b>	Stator with EtherCAT SoE Drive (72V/15A)	0150-2808
<b>PL01-20x240/180-HP</b>	Slider 'High Performance'	0150-1505
<b>PL02-20x240/180-HP</b>	Slider 'heavy duty' 'High Performance'	0150-2162
<b>PL01-20x240/180-HP-L*</b>	Slider 'High Performance L'	0150-2540

\*With this slider, the motor specifications above change.

**PD03-37Sx120F/100-HP**

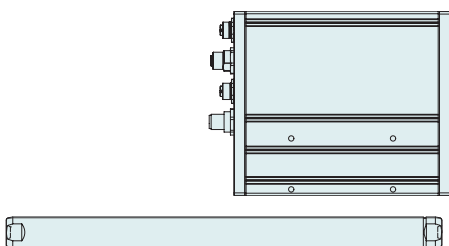
**Max. Stroke:** 100 mm  
**Peak Force:** 255 N



Dimensions in mm

7

Technical Data PD03-37Sx120F/100-HP			
<b>Stroke</b>			
Max. Stroke	mm (in)	100	(3.93)
<b>Force</b>			
Max. Force @ 48VDC	N (lbf)	255	(57.3)
Max. Force @ 72VDC	N (lbf)	255	(57.3)
Max. Cont. Force [Passive cooling / Fan / Fluid]	N (lbf)	48 / - / -	(11 / - / -)
Force Constant	N/A <sub>pk</sub> (lbf/A <sub>pk</sub> )	17	(3.82)
<b>Velocity</b>			
Max. Velocity @ 48VDC	m/s (in/s)	2.5	(99.9)
Max. Velocity @ 72VDC	m/s (in/s)	3.8	(149.9)
<b>Position Detection</b>			
Repeatability	mm (in)	±0.05	(±0.002)
Linearity	%	± 0.4	
<b>Electrical Data</b>			
Max. Current @ 48VDC	A <sub>pk</sub>	14.9	
Max. Current @ 72VDC	A <sub>pk</sub>	14.9	
Max. Cont. Current [Passive cooling / Fan / Fluid]	A <sub>pk</sub>	2.8 / - / -	
<b>Thermal Data</b>			
Max. Winding Temperature (Sensor)	°C	120	
Thermal Resistance [Passive cooling / Fan / Fluid]	°K/W	2.9 / - / -	
Thermal Time Constant [Passive cooling / Fan / Fluid]	s	1200 / - / -	
<b>Mechanical Data</b>			
Slider Length	mm (in)	300	(12)
Slider Mass	g (lb)	630	(1.39)
<b>Integrated Servo Drive</b>			
Nominal Voltage Power	VDC	72 (24 -85)	
Nominal Voltage Signal	VDC	24 (22 -26)	
Nominal Current Signal	mA	150	
Internal Fuse Signal		Sicherung 3 A-T	
Field Bus		EtherCAT	
Configuration Interface		RS232	



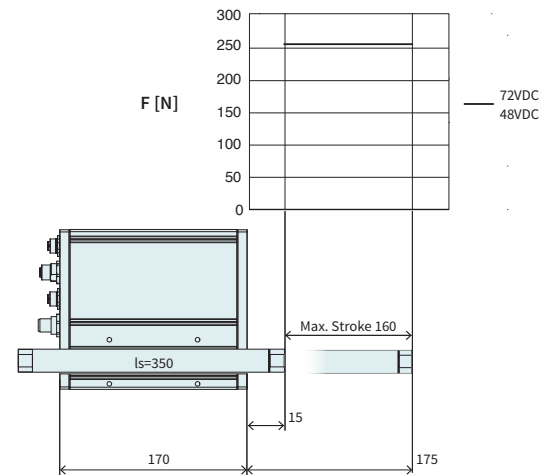
Item	Description	Item-No.
<b>PSD03-37Sx120F-HP-I1150-EC-XC-0S-000</b>	Stator with EtherCAT Drive (72V/15A)	0150-2806
<b>PSD03-37Sx120F-HP-I1150-DS-XC-0S-000</b>	Stator with EtherCAT CoE Drive (72V/15A)	0150-2807
<b>PSD03-37Sx120F-HP-I1150-SE-XC-0S-000</b>	Stator with EtherCAT SoE Drive (72V/15A)	0150-2808
<b>PL01-20x300/240-HP</b>	Slider 'High Performance'	0150-1506
<b>PL02-20x300/240-HP</b>	Slider 'heavy duty' 'High Performance'	0150-2163
<b>PL01-20x300/240-HP-L*</b>	Slider 'High Performance L'	0150-3696

\* With this slider, the motor specifications above change.



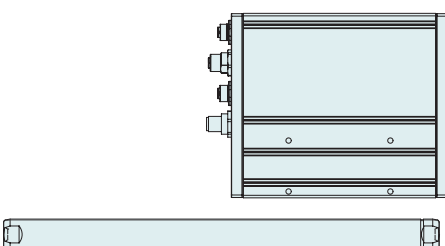
**PD03-37Sx120F/160-HP**

**Max. Stroke:** 160 mm  
**Peak Force:** 255 N



Dimensions in mm

Technical Data PD03-37Sx120F/160-HP			
<b>Stroke</b>			
Max. Stroke	mm (in)	160	(6.29)
<b>Force</b>			
Max. Force @ 48VDC	N (lbf)	255	(57.3)
Max. Force @ 72VDC	N (lbf)	255	(57.3)
Max. Cont. Force [Passive cooling / Fan / Fluid]	N (lbf)	48 / - / -	(11 / - / -)
Force Constant	N/A <sub>pk</sub> (lbf/A <sub>pk</sub> )	17	(3.82)
<b>Velocity</b>			
Max. Velocity @ 48VDC	m/s (in/s)	2.5	(99.9)
Max. Velocity @ 72VDC	m/s (in/s)	3.8	(149.9)
<b>Position Detection</b>			
Repeatability	mm (in)	±0.05	(±0.002)
Linearity	%	± 0.3	
<b>Electrical Data</b>			
Max. Current @ 48VDC	A <sub>pk</sub>	14.9	
Max. Current @ 72VDC	A <sub>pk</sub>	14.9	
Max. Cont. Current [Passive cooling / Fan / Fluid]	A <sub>pk</sub>	2.8 / - / -	
<b>Thermal Data</b>			
Max. Winding Temperature (Sensor)	°C	120	
Thermal Resistance [Passive cooling / Fan / Fluid]	°K/W	2.9 / - / -	
Thermal Time Constant [Passive cooling / Fan / Fluid]	s	1200 / - / -	
<b>Mechanical Data</b>			
Slider Length	mm (in)	360	(14)
Slider Mass	g (lb)	760	(1.67)
<b>Integrated Servo Drive</b>			
Nominal Voltage Power	VDC	72 (24 - 85)	
Nominal Voltage Signal	VDC	24 (22 - 26)	
Nominal Current Signal	mA	150	
Internal Fuse Signal		Sicherung 3 A-T	
Field Bus		EtherCAT	
Configuration Interface		RS232	

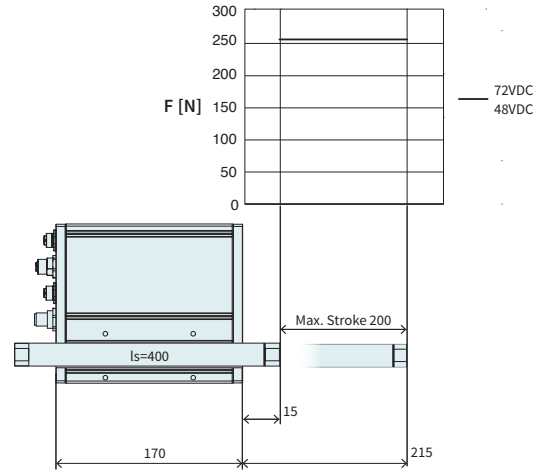


Item	Description	Item-No.
<b>PSD03-37Sx120F-HP-I1150-EC-XC-0S-000</b>	Stator with EtherCAT Drive (72V/15A)	0150-2806
<b>PSD03-37Sx120F-HP-I1150-DS-XC-0S-000</b>	Stator with EtherCAT CoE Drive (72V/15A)	0150-2807
<b>PSD03-37Sx120F-HP-I1150-SE-XC-0S-000</b>	Stator with EtherCAT SoE Drive (72V/15A)	0150-2808
<b>PL01-20x360/300-HP</b>	Slider 'High Performance'	0150-1507
<b>PL02-20x360/300-HP</b>	Slider 'heavy duty' 'High Performance'	0150-2164
<b>PL01-20x360/300-HP-L*</b>	Slider 'High Performance L'	0150-1537

\* With this slider, the motor specifications above change.

**PD03-37Sx120F/200-HP**

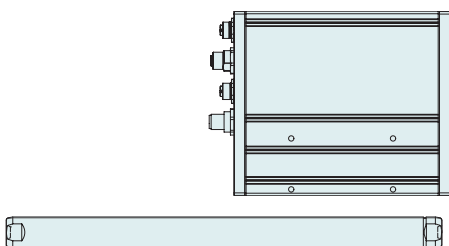
**Max. Stroke:** 200 mm  
**Peak Force:** 255 N



Dimensions in mm

7

Technical Data PD03-37Sx120F/200-HP			
<b>Stroke</b>			
Max. Stroke	mm (in)	200	(7.86)
<b>Force</b>			
Max. Force @ 48VDC	N (lbf)	255	(57.3)
Max. Force @ 72VDC	N (lbf)	255	(57.3)
Max. Cont. Force [Passive cooling / Fan / Fluid]	N (lbf)	48 / - / -	(11 / - / -)
Force Constant	N/A <sub>pk</sub> (lbf/A <sub>pk</sub> )	17	(3.82)
<b>Velocity</b>			
Max. Velocity @ 48VDC	m/s (in/s)	2.5	(99.9)
Max. Velocity @ 72VDC	m/s (in/s)	3.8	(149.9)
<b>Position Detection</b>			
Repeatability	mm (in)	±0.05	(±0.002)
Linearity	%	± 0.3	
<b>Electrical Data</b>			
Max. Current @ 48VDC	A <sub>pk</sub>	14.9	
Max. Current @ 72VDC	A <sub>pk</sub>	14.9	
Max. Cont. Current [Passive cooling / Fan / Fluid]	A <sub>pk</sub>	2.8 / - / -	
<b>Thermal Data</b>			
Max. Winding Temperature (Sensor)	°C	120	
Thermal Resistance [Passive cooling / Fan / Fluid]	°K/W	2.9 / - / -	
Thermal Time Constant [Passive cooling / Fan / Fluid]	s	1200 / - / -	
<b>Mechanical Data</b>			
Slider Length	mm (in)	400	(16)
Slider Mass	g (lb)	860	(1.9)
<b>Integrated Servo Drive</b>			
Nominal Voltage Power	VDC	72 (24 -85)	
Nominal Voltage Signal	VDC	24 (22 -26)	
Nominal Current Signal	mA	150	
Internal Fuse Signal		Sicherung 3 A-T	
Field Bus		EtherCAT	
Configuration Interface		RS232	

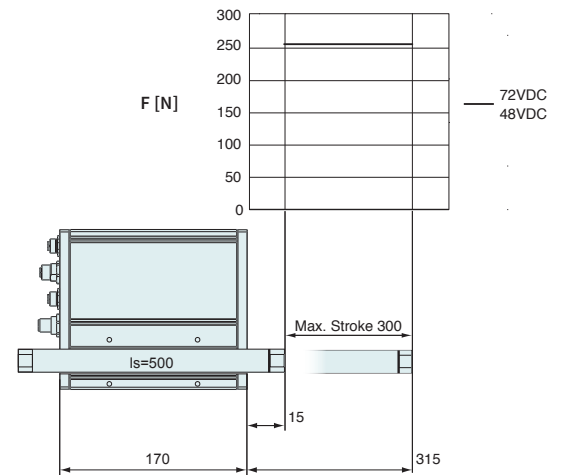


Item	Description	Item-No.
<b>PSD03-37Sx120F-HP-I1150-EC-XC-0S-000</b>	Stator with EtherCAT Drive (72V/15A)	0150-2806
<b>PSD03-37Sx120F-HP-I1150-DS-XC-0S-000</b>	Stator with EtherCAT CoE Drive (72V/15A)	0150-2807
<b>PSD03-37Sx120F-HP-I1150-SE-XC-0S-000</b>	Stator with EtherCAT SoE Drive (72V/15A)	0150-2808
<b>PL01-20x400/340-HP</b>	Slider 'High Performance'	0150-1508
<b>PL02-20x400/340-HP</b>	Slider 'heavy duty' 'High Performance'	0150-2165
<b>PL01-20x400/340-HP-L*</b>	Slider 'High Performance' L'	0150-3697

\* With this slider, the motor specifications above change.

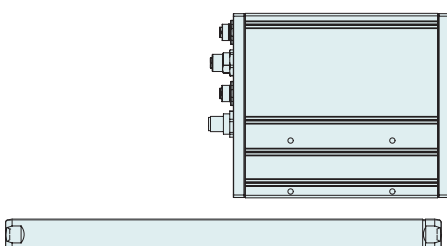
**PD03-37Sx120F/300-HP**

**Max. Stroke:** 300 mm  
**Peak Force:** 255 N



Dimensions in mm

Technical Data PD03-37Sx120F/300-HP				
<b>Stroke</b>				
Max. Stroke	mm	(in)	300	(11.8)
<b>Force</b>				
Max. Force @ 48VDC	N	(lbf)	255	(57.3)
Max. Force @ 72VDC	N	(lbf)	255	(57.3)
Max. Cont. Force [Passive cooling / Fan / Fluid]	N	(lbf)	48 / - / -	(11 / - / -)
Force Constant	N/A <sub>pk</sub>	(lbf/A <sub>pk</sub> )	17	(3.82)
<b>Velocity</b>				
Max. Velocity @ 48VDC	m/s	(in/s)	2.5	(99.9)
Max. Velocity @ 72VDC	m/s	(in/s)	3.8	(149.9)
<b>Position Detection</b>				
Repeatability	mm	(in)	±0.05	(±0.002)
Linearity	%		± 0.25	
<b>Electrical Data</b>				
Max. Current @ 48VDC	A <sub>pk</sub>		14.9	
Max. Current @ 72VDC	A <sub>pk</sub>		14.9	
Max. Cont. Current [Passive cooling / Fan / Fluid]	A <sub>pk</sub>		2.8 / - / -	
<b>Thermal Data</b>				
Max. Winding Temperature (Sensor)	°C		120	
Thermal Resistance [Passive cooling / Fan / Fluid]	°K/W		2.9 / - / -	
Thermal Time Constant [Passive cooling / Fan / Fluid]	s		1200 / - / -	
<b>Mechanical Data</b>				
Slider Length	mm	(in)	500	(20)
Slider Mass	g	(lb)	1090	(2.4)
<b>Integrated Servo Drive</b>				
Nominal Voltage Power	VDC		72 (24 -85)	
Nominal Voltage Signal	VDC		24 (22 -26)	
Nominal Current Signal	mA		150	
Internal Fuse Signal			Sicherung 3 A-T	
Field Bus			EtherCAT	
Configuration Interface			RS232	

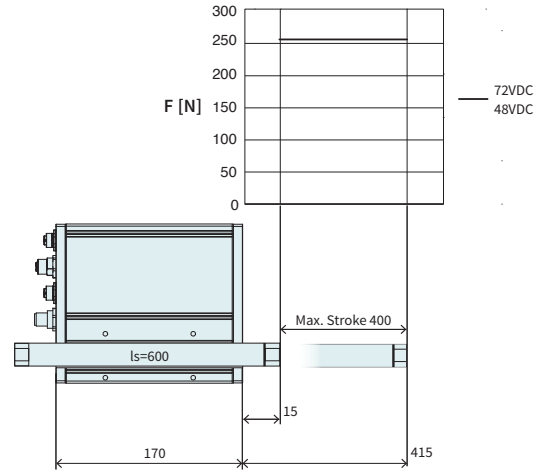


Item	Description	Item-No.
<b>PSD03-37Sx120F-HP-I1150-EC-XC-0S-000</b>	Stator with EtherCAT Drive (72V/15A)	0150-2806
<b>PSD03-37Sx120F-HP-I1150-DS-XC-0S-000</b>	Stator with EtherCAT CoE Drive (72V/15A)	0150-2807
<b>PSD03-37Sx120F-HP-I1150-SE-XC-0S-000</b>	Stator with EtherCAT SoE Drive (72V/15A)	0150-2808
<b>PL01-20x500/440-HP</b>	Slider 'High Performance'	0150-1509
<b>PL02-20x500/440-HP</b>	Slider 'heavy duty' 'High Performance'	0150-2166
<b>PL01-20x500/440-HP-L*</b>	Slider 'High Performance L'	0150-3698

\* With this slider, the motor specifications above change.

**PD03-37Sx120F/400-HP**

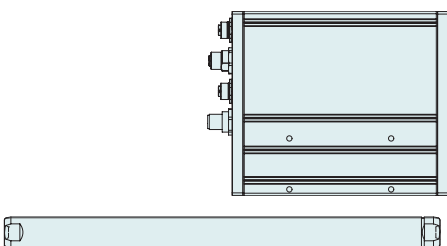
**Max. Stroke:** 400 mm  
**Peak Force:** 255 N



Dimensions in mm

7

Technical Data PD03-37Sx120F/400-HP			
<b>Stroke</b>			
Max. Stroke	mm (in)		400 (15.69)
<b>Force</b>			
Max. Force @ 48VDC	N (lbf)		255 (57.3)
Max. Force @ 72VDC	N (lbf)		255 (57.3)
Max. Cont. Force [Passive cooling / Fan / Fluid]	N (lbf)		48 / - / - (11 / - / -)
Force Constant	N/A <sub>pk</sub> (lbf/A <sub>pk</sub> )		17 (3.82)
<b>Velocity</b>			
Max. Velocity @ 48VDC	m/s (in/s)		2.5 (99.9)
Max. Velocity @ 72VDC	m/s (in/s)		3.8 (149.9)
<b>Position Detection</b>			
Repeatability	mm (in)		±0.05 (±0.002)
Linearity	%		± 0.2
<b>Electrical Data</b>			
Max. Current @ 48VDC	A <sub>pk</sub>		14.9
Max. Current @ 72VDC	A <sub>pk</sub>		14.9
Max. Cont. Current [Passive cooling / Fan / Fluid]	A <sub>pk</sub>		2.8 / - / -
<b>Thermal Data</b>			
Max. Winding Temperature (Sensor)	°C		120
Thermal Resistance [Passive cooling / Fan / Fluid]	°K/W		2.9 / - / -
Thermal Time Constant [Passive cooling / Fan / Fluid]	s		1200 / - / -
<b>Mechanical Data</b>			
Slider Length	mm (in)		600 (24)
Slider Mass	g (lb)		1330 (2.93)
<b>Integrated Servo Drive</b>			
Nominal Voltage Power	VDC		72 (24 -85)
Nominal Voltage Signal	VDC		24 (22 -26)
Nominal Current Signal	mA		150
Internal Fuse Signal			Sicherung 3 A-T
Field Bus			EtherCAT
Configuration Interface			RS232



Item	Description	Item-No.
<b>PSD03-37Sx120F-HP-I1150-EC-XC-0S-000</b>	Stator with EtherCAT Drive (72V/15A)	0150-2806
<b>PSD03-37Sx120F-HP-I1150-DS-XC-0S-000</b>	Stator with EtherCAT CoE Drive (72V/15A)	0150-2807
<b>PSD03-37Sx120F-HP-I1150-SE-XC-0S-000</b>	Stator with EtherCAT SoE Drive (72V/15A)	0150-2808
<b>PL01-20x600/540-HP</b>	Slider 'High Performance'	0150-1510
<b>PL02-20x600/540-HP</b>	Slider 'heavy duty' 'High Performance'	0150-2167
<b>PL01-20x600/540-HP-L*</b>	Slider 'High Performance L'	0150-3699

\* With this slider, the motor specifications above change.

**SLIDER MOUNTING**

Item	Description	Item-No.
<b>PLF01-20</b>	Fixed Bearing Set for 19/20 mm sliders	0150-3297
<b>PLF01-20-SS</b>	Fixed Bearing Set for 19/20 mm sliders, stainless steel	0150-3297
<b>PLL01-19</b>	Floating Bearing for 19 mm sliders	0150-3297
<b>PLL01-20</b>	Floating Bearing for 20 mm sliders	0150-3297
<b>PLM01-20-MK</b>	Mounting Kit for 20 mm sliders	0150-3294

FIND MORE PRODUCT DETAILS IN THE CHAPTER „ACCESSORIES“.

Area with horizontal dotted lines for notes.

# LINEAR MOTORS P04



The motor to replace pneumatics.

## Product Description

The P04 linear motor has all of the features of the tubular linear motors and has the additional advantage of an integrated guidance. Under the compact aluminum housing is a powerful LinMot PS01-37x120F or PS01-48x240F that drives the precision shaft on bearings. The shaft is guided by a linear ball bearing and has a maximum stroke of 150 mm. With the M10x1.25 thread on the front end, loads can be quickly and easily attached to the

shaft. Additional installation options are provided by the profile grooves and T-slots found on every side of the housing.

The ability to move to any position and accelerate up to  $50 \text{ m/s}^2$  means that precision dynamic motions can be implemented for a broad range of applications.

### Can be equipped with mechanical accessories for pneumatic systems

The P04 actuator can be equipped with familiar mechanical accessories for pneumatic systems. Several design details on the motor make this possible. The load end of rod has a thread that is identical to ISO 15552 pneumatic cylinders. All mounting elements for pneumatics can be used accordingly. This particularly includes swivel heads and clevis mounts. The PD04 linear motor itself can be mounted like a pneumatic cylinder or by using the T-slots in the housing. All known pivoting and stationary mounting flanges can be used.



### HARDENED SHAFT FOR TRANSVERSE LOADS

The integrated bearing of the PD04 linear motor provides a substantial benefit. The transverse loads that are applied in special applications can be supported.

Simple applications such as ejectors can be implemented in the simplest manner without additional components.



### HIGH AND CONTROLLED DYNAMICS

Max. acceleration values over  $50 \text{ m/s}^2$  and travel speeds over  $3 \text{ m/s}$  allow cyclical motion sequences of several Hertz.

For handling applications with sensitive products, smooth motions with suitable accelerations can be obtained.



### FREELY POSITIONABLE

LinMot linear motors can be freely positioned. With absolute or relative movement commands, they can move to any desired position in the stroke range. Since the LinMot linear drive is a closed-loop system, not only the end positions are monitored, but also deviations in position during travel. This allows, among other things, precise specification of travel speeds, acceleration and braking ramps, and travel through curved paths.



**PROCESS STABILITY**

For temperature monitoring, all linear motors are equipped with sensors, which transmit the data to the drive. The data can be evaluated in the higher-level control in such a way that the motor can be kept in a constant temperature range.

Since not only the end positions, but also speed and acceleration are controlled and monitored, motions that are programmed once are carried out the same way over the entire life of the machine.

**SYNCHRONIZATION**

For synchronous machines, the linear motor can be synchronized to the main shaft. By replacing mechanical cam discs with LinMot linear motors, for example, great variations can be achieved, with format changeovers at the push of a button.

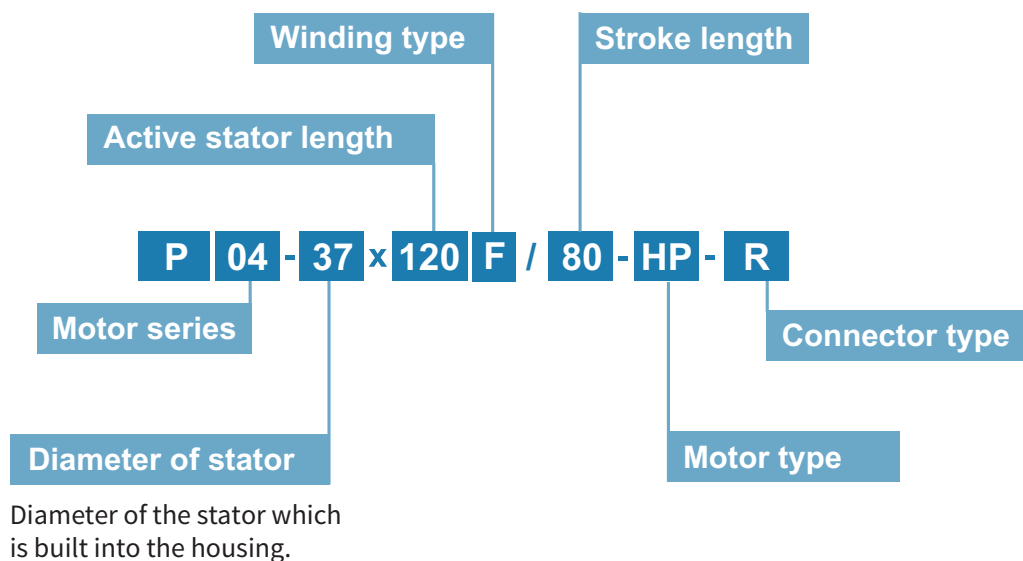
**OVERLOAD PROTECTION**

There are no mechanical components for force transfer that could be damaged in a crash or stall condition in a linear motor. Complex, expensive designs to protect gearboxes, gears, and shafts are thus eliminated. If the linear motor stalls, it acts like a pneumatic cylinder and tries to reach the target position with maximum force. The following error monitor in the drive can, however, immediately recognize a stall condition. Temperature sensors integrated in the stator prevent the drive from overloading in any case.

**LONG LIFESPAN**

Since the linear motion is generated purely magnetically, and no mechanical force transmission takes place, even extremely dynamic applications can be implemented with a long lifespan.

**Type Code**



For explanations of the terms, please refer to the section "Glossary"



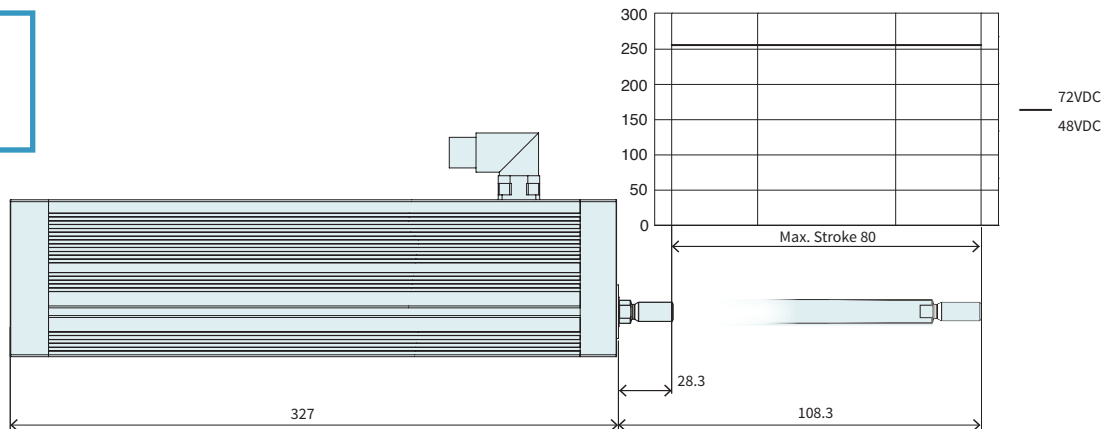
# LINEAR MOTORS P04-37x120F-HP



- ✓ Peak Force bis for 255 N
- ✓ Stroke up to 135 mm
- ✓ Hardened rod capable to handle side load
- ✓ Mounting connection according to ISO pneumatic cylinder
- ✓ Stator encapsulated (IP65)
- ✓ Ideal for use in harsh environments

**P04-37x120F/80-HP-R**

**Max. Stroke:** 80 mm  
**Peak Force:** 255 N

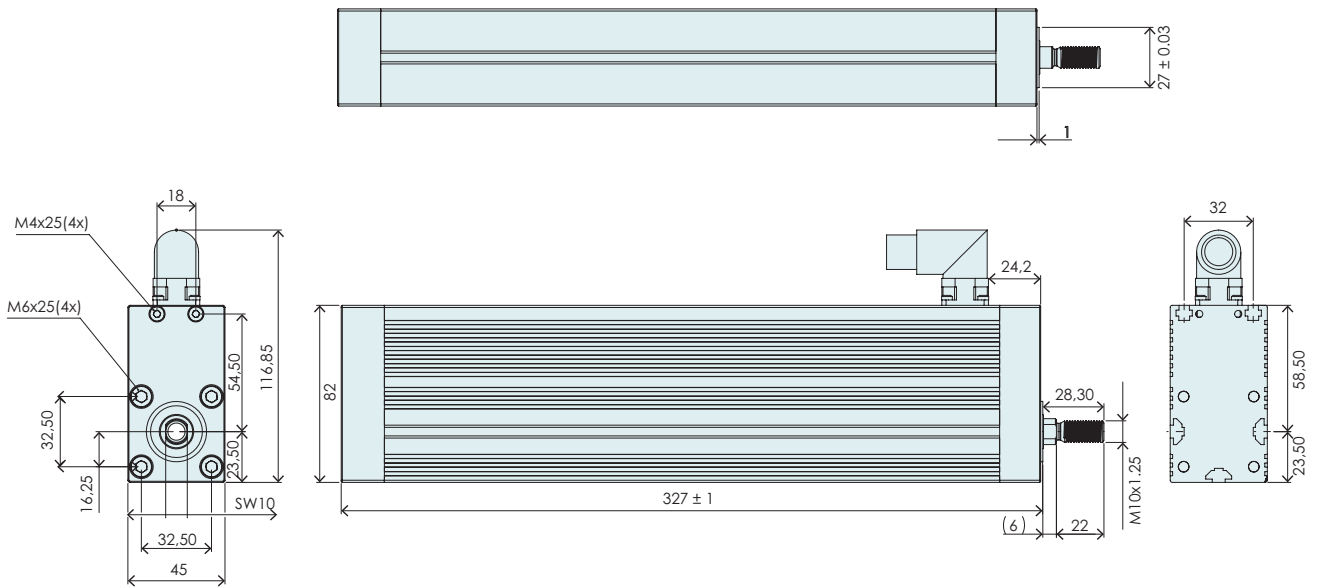


Dimensions in mm

Technical Data P04-37x120F/80-HP

Stroke			
Max. Stroke	mm (in)	80 (3.14)	
Force			
Max. Force @ 48VDC	N (lbf)	255 (57.3)	
Max. Force @ 72VDC	N (lbf)	255 (57.3)	
Max. Cont. Force [Passive cooling / Fan / Fluid]	N (lbf)	63 / 93 / - (14 / 21 / -)	
Force Constant	N/A <sub>pk</sub> (lbf/A <sub>pk</sub> )	17 (3.82)	
Velocity			
Max. Velocity @ 48VDC	m/s (in/s)	2.5 (99.9)	
Max. Velocity @ 72VDC	m/s (in/s)	3.8 (149.9)	
Position Detection			
Position Resolution	mm (in)	0.005 (0.0002)	
Repeatability	mm (in)	±0.05 (±0.002)	
Linearity	%	± 0.4	
Electrical Data			
Max. Current @ 48VDC	A <sub>pk</sub>	14.9	
Max. Current @ 72VDC	A <sub>pk</sub>	14.9	
Max. Cont. Current [Passive cooling / Fan / Fluid]	A <sub>pk</sub>	3.7 / 5.5 / -	
Terminal Resistance 25 °C / 150 °C	Ohm	2.4 / 3.5	
Terminal Inductivity	mH	1.6	
Magnetic Period	mm (in)	40	(1.57)
Thermal Data			
Max. Winding Temperature (Sensor)	°C	120	
Thermal Resistance [Passive cooling / Fan / Fluid]	°K/W	1.7 / 0.78 / -	
Thermal Time Constant [Passive cooling / Fan / Fluid]	s	680 / 310 / -	
Mechanical Data			
Stator Width	mm (in)	45 (1.77)	
Stator Height	mm (in)	82 (3.23)	
Stator Length	mm (in)	327 (12.88)	
Stator Mass	g (lb)	2365 (5.2)	
Rod Diameter	mm (in)	16 (0.63)	
Rod Mass	g (lb)	507 (1.12)	
Max. shear force to the rod	N (lbf)	60 (13.5)	
Max. torque to the rod	Nm (lbf·in)	1 (8.93)	
IP Code		IP 65	

**MOTOR**

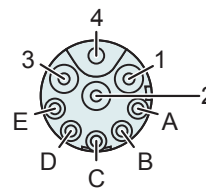


Item	Description	Item-No.
P04-37x120F/80-HP-R	Linear motor P04-37, 80 mm Stroke	0150-2756

**CONNECTOR**

Motor Connector Wiring	R-Connector	Wire Color Motor Cable
	Ph 1+	1
Ph 1-	2	pink
Ph 2+	3	blue
Ph 2-	4	grey
+5VDC	A	white
GND	B	Inner Shield
Sinus	C	yellow
Cosinus	D	green
Temp.	E	black
Shield	Case	Outer Shield

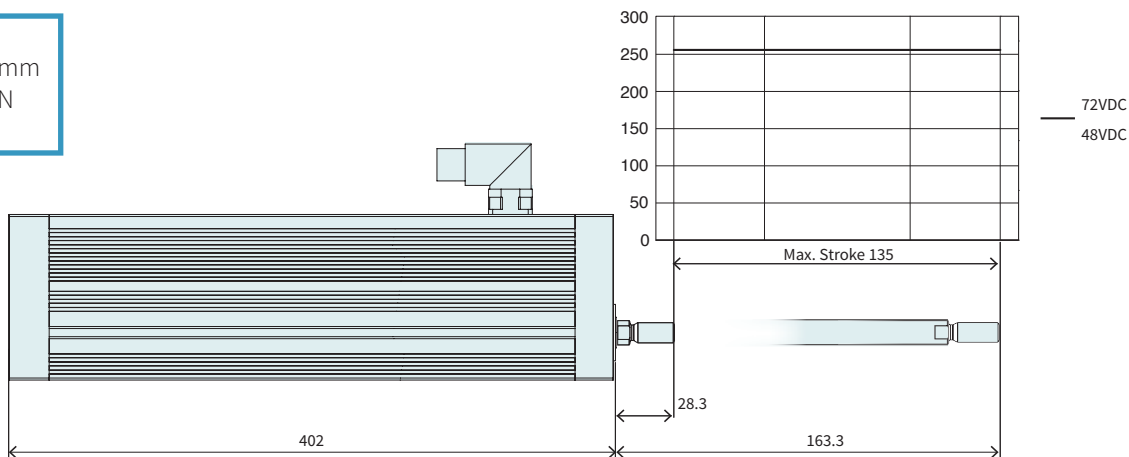
**R-Connector**



View: Motor connector, plug on

**P04-37x120F/135-HP-R**

**Max. Stroke:** 135 mm  
**Peak Force:** 255 N

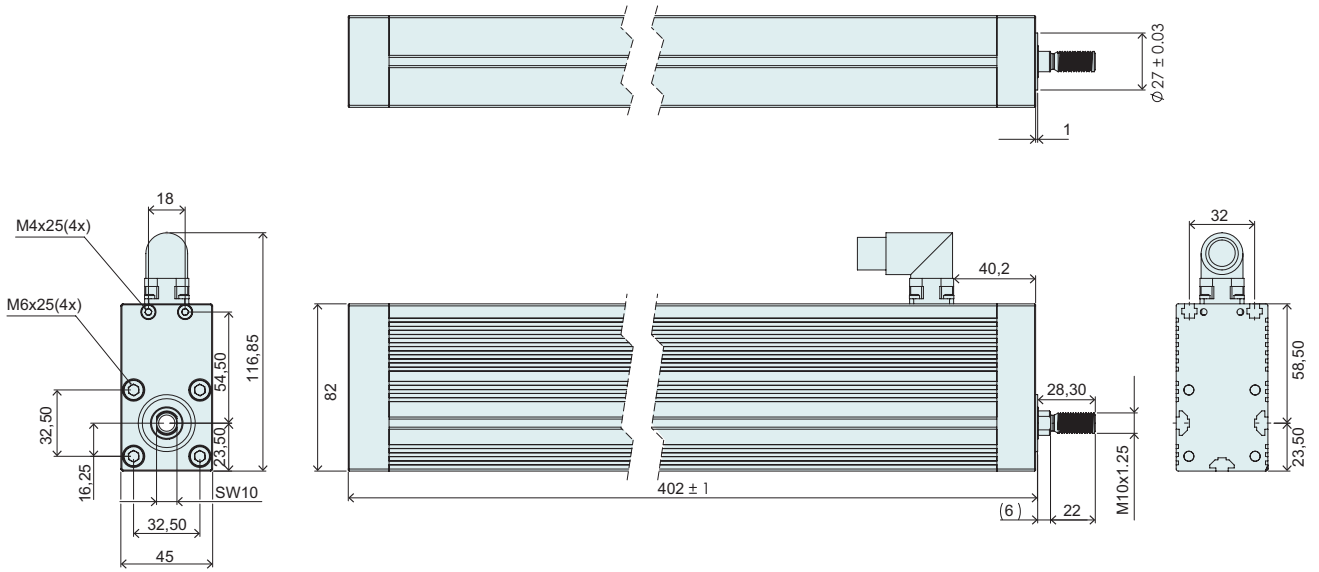


Dimensions in mm

Technical Data P04-37x120F/135-HP-R

Stroke			
Max. Stroke	mm (in)	135 (5.3)	
Force			
Max. Force @ 48VDC	N (lbf)	255 (57.3)	
Max. Force @ 72VDC	N (lbf)	255 (57.3)	
Max. Cont. Force [Passive cooling / Fan / Fluid]	N (lbf)	63 / 93 / - (14 / 21 / -)	
Force Constant	N/A <sub>pk</sub> (lbf/A <sub>pk</sub> )	17 (3.82)	
Velocity			
Max. Velocity @ 48VDC	m/s (in/s)	2.5 (99.9)	
Max. Velocity @ 72VDC	m/s (in/s)	3.8 (149.9)	
Position Detection			
Position Resolution	mm (in)	0.005 (0.0002)	
Repeatability	mm (in)	±0.05 (±0.002)	
Linearity	%	± 0.4	
Electrical Data			
Max. Current @ 48VDC	A <sub>pk</sub>	14.9	
Max. Current @ 72VDC	A <sub>pk</sub>	14.9	
Max. Cont. Current [Passive cooling / Fan / Fluid]	A <sub>pk</sub>	3.7 / 5.5 / -	
Terminal Resistance 25 °C / 150 °C	Ohm	2.4 / 3.5	
Terminal Inductivity	mH	1.6	
Magnetic Period	mm (in)	40	(1.57)
Thermal Data			
Max. Winding Temperature (Sensor)	°C	120	
Thermal Resistance [Passive cooling / Fan / Fluid]	°K/W	1.7 / 0.78 / -	
Thermal Time Constant [Passive cooling / Fan / Fluid]	s	680 / 310 / -	
Mechanical Data			
Stator Width	mm (in)	45 (1.77)	
Stator Height	mm (in)	82 (3.23)	
Stator Length	mm (in)	402 (15.83)	
Stator Mass	g (lb)	2675 (5.89)	
Rod Diameter	mm (in)	16 (0.63)	
Rod Mass	g (lb)	625 (1.38)	
Max. shear force to the rod	N (lbf)	60 (13.5)	
Max. torque to the rod	Nm (lbf·in)	1 (8.93)	
IP Code		IP 65	

**MOTOR**

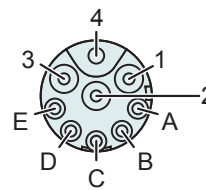


Item	Description	Item-No.
P04-37x120F/135-HP-R	Linear motor P04-37, 135 mm Stroke	0150-2738

**CONNECTOR**

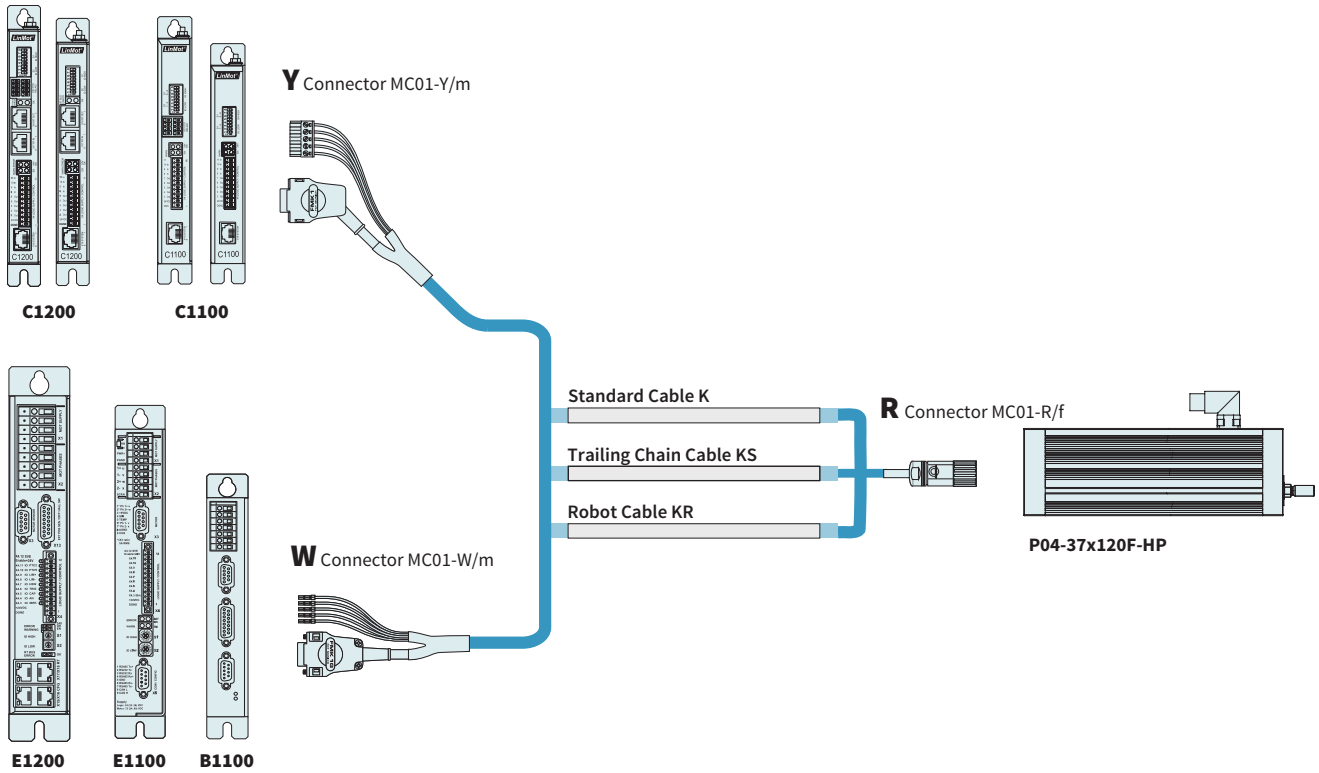
Motor Connector Wiring	R-Connector	Wire Color Motor Cable
	Ph 1+	1
Ph 1-	2	pink
Ph 2+	3	blue
Ph 2-	4	grey
+5VDC	A	white
GND	B	Inner Shield
Sinus	C	yellow
Cosinus	D	green
Temp.	E	black
Shield	Case	Outer Shield

**R-Connector**



View: Motor connector, plug on

**Motor Cable**



8

**ORDERING INFORMATION**

STANDARDKABEL

Item	Description	Item-No.
<b>K05-W/R-2</b>	Motor Cable W/R, 2 m	0150-2119
<b>K05-W/R-4</b>	Motor Cable W/R, 4 m	0150-2120
<b>K05-W/R-6</b>	Motor Cable W/R, 6 m	0150-2121
<b>K05-W/R-8</b>	Motor Cable W/R, 8 m	0150-2122
<b>K05-W/R-</b>	Motor Cable W/R, Custom length	0150-3262

<b>K05-Y/R-2</b>	Motor Cable Y/R, 2 m	0150-2421
<b>K05-Y/R-4</b>	Motor Cable Y/R, 4 m	0150-2422
<b>K05-Y/R-6</b>	Motor Cable Y/R, 6 m	0150-2423
<b>K05-Y/R-8</b>	Motor Cable Y/R, 8 m	0150-2424
<b>K05-Y-Fe/R-</b>	Motor Cable Y/R, Custom length	0150-3501

TRAILING CHAIN CABLE

Item	Description	Item-No.
<b>KS05-W/R-4</b>	Trailing Chain Cable W/R, 4 m	0150-2106
<b>KS05-W/R-6</b>	Trailing Chain Cable W/R, 6 m	0150-2131
<b>KS05-W/R-8</b>	Trailing Chain Cable W/R, 8 m	0150-2107
<b>KS05-W/R-</b>	Trailing Chain Cable W/R, Custom length	0150-3256

<b>KS05-Y/R-4</b>	Trailing Chain Cable Y/R, 4 m	0150-2433
<b>KS05-Y/R-6</b>	Trailing Chain Cable Y/R, 6 m	0150-2434
<b>KS05-Y/R-8</b>	Trailing Chain Cable Y/R, 8 m	0150-2435
<b>KS05-Y/R-</b>	Trailing Chain Cable Y/R, Custom length	0150-3507



ROBOT CABLE		
Item	Description	Item-No.
<b>KR05-W/R-</b>	Robot Cable KR05-W/R, Custom length	0150-3336
<b>KR05-Y-Fe/R-</b>	Robot Cable KR05-Y-Fe/R, Custom length	0150-3512

CONNECTOR & CABLE (INDIVIDUAL)		
Item	Description	Item-No.
<b>MC01-W/m</b>	Motor Connector W/m	0150-3140
<b>MC01-Y-Fe/m</b>	Motor Connector Y-Fe/m	0150-3289
<b>MC01-R/f</b>	Motor Connector R/f	0150-3129
<b>K05-04/05</b>	Motor Cable per m	0150-1920
<b>KS05-04/05</b>	Trailing Chain Cable per m	0150-1938
<b>KR05-04/05</b>	Robot Cable per m	0150-1846



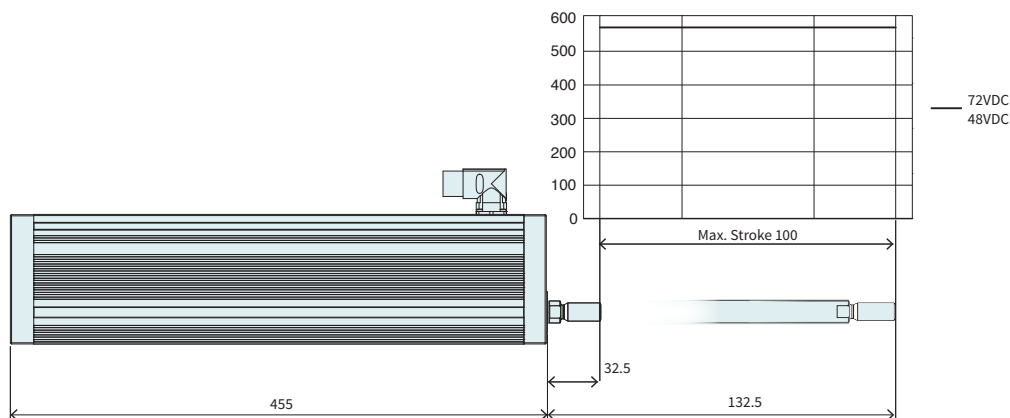
# LINEAR MOTORS P04-48x240F



- ✓ Peak force up to 570 N
- ✓ Stroke up to 150 mm
- ✓ Hardened rod capable to handle side load
- ✓ Mounting connection according to ISO pneumatic cylinder
- ✓ Stator encapsulated (IP65)
- ✓ Ideal for use in harsh environments

**P04-48x240F/100-C**

**Max. Stroke:** 100 mm  
**Peak Force:** 572 N

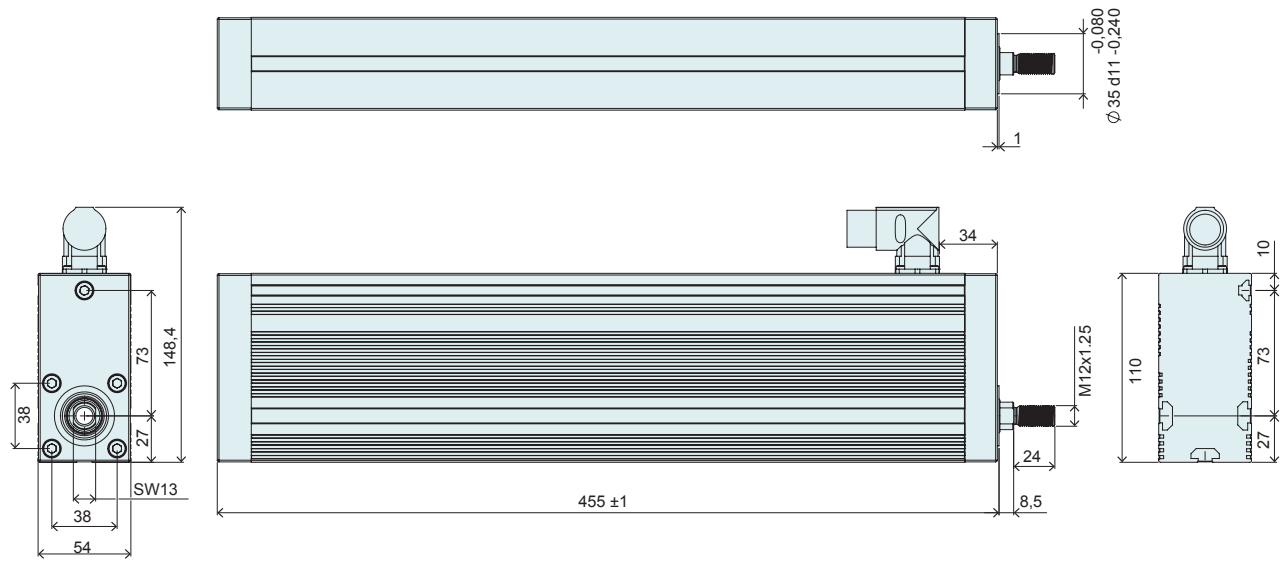


Dimensions in mm

Technical Data P04-48x240F/100

Technical Data P04-48x240F/100				
<b>Stroke</b>				
Max. Stroke	mm	(in)	100	(3.93)
<b>Force</b>				
Max. Force @ 48VDC	N	(lbf)	572	(129)
Max. Force @ 72VDC	N	(lbf)	572	(129)
Max. Cont. Force [Passive cooling / Fan / Fluid]	N	(lbf)	190 / 250 / -	(42 / 56 / -)
Force Constant	N/A <sub>pk</sub>	(lbf/A <sub>pk</sub> )	22	(4.95)
<b>Velocity</b>				
Max. Velocity @ 48VDC	m/s	(in/s)	1.9	(78.9)
Max. Velocity @ 72VDC	m/s	(in/s)	2.9	(119.9)
<b>Position Detection</b>				
Position Resolution	mm	(in)	0.007	(0.0003)
Repeatability	mm	(in)	±0.05	(±0.002)
Linearity	%		± 0.4	
<b>Electrical Data</b>				
Max. Current @ 48VDC	A <sub>pk</sub>		25.9	
Max. Current @ 72VDC	A <sub>pk</sub>		25.9	
Max. Cont. Current [Passive cooling / Fan / Fluid]	A <sub>pk</sub>		8.6 / 11 / -	
Terminal Resistance 25 °C / 120 °C	Ohm		0.97 / 1.3	
Terminal Inductivity	mH		1.1	
Magnetic Period	mm	(in)	60	(2.35)
<b>Thermal Data</b>				
Max. Winding Temperature (Sensor)	°C		90	
Thermal Resistance [Passive cooling / Fan / Fluid]	°K/W		0.54 / 0.31 / -	
Thermal Time Constant [Passive cooling / Fan / Fluid]	s		550 / 320 / -	
<b>Mechanical Data</b>				
Stator Width	mm	(in)	54	(2.13)
Stator Height	mm	(in)	110	(4.33)
Stator Length	mm	(in)	455	(17.92)
Stator Mass	g	(lb)	3555	(7.82)
Rod Diameter	mm	(in)	20	(0.79)
Rod Mass	g	(lb)	1109	(2.45)
Max. shear force to the rod	N	(lbf)	90	(20.25)
Max. torque to the rod	Nm	(lbfin)	2.5	(22.32)
IP Code			IP 65	

**MOTOR**

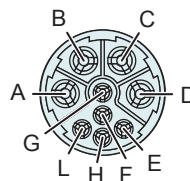


Item	Description	Item-No.
P04-48x240F/100-C	Linear motor P04-48, 100 mm Stroke	0150-2757

**CONNECTOR**

Motor Connector Wiring	C-Connector	
	C-Connector	Wire Color Motor Cable
Ph 1+	A	red
Ph 1-	B	pink
Ph 2+	C	blue
Ph 2-	D	grey
+5VDC	E	white
GND	F	Inner Shield
Sinus	G	yellow
Cosinus	H	green
Temp.	L	black
Shield	Gehäuse	Outer Shield

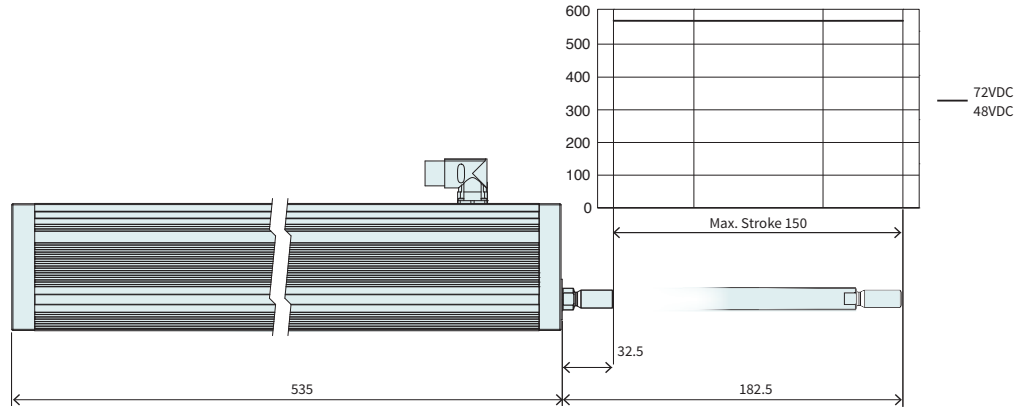
**C-Connector**



View: Motor connector, plug on

**P04-48x240F/150-C**

**Max. Stroke:** 150 mm  
**Peak Force:** 572 N

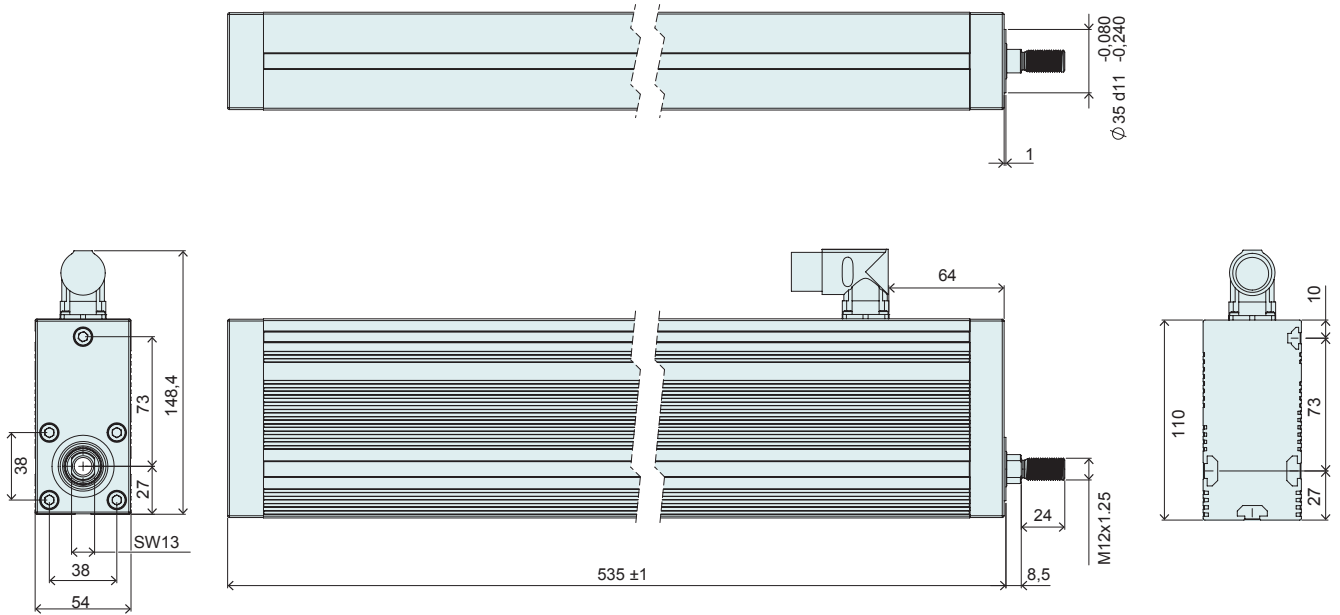


Dimensions in mm

Technical Data P04-48x240F/150

Stroke			
Max. Stroke	mm (in)	150 (5.91)	
Force			
Max. Force @ 48VDC	N (lbf)	572 (129)	
Max. Force @ 72VDC	N (lbf)	572 (129)	
Max. Cont. Force [Passive cooling / Fan / Fluid]	N (lbf)	190 / 250 / - (42 / 56 / -)	
Force Constant	N/A <sub>pk</sub> (lbf/A <sub>pk</sub> )	22 (4.95)	
Velocity			
Max. Velocity @ 48VDC	m/s (in/s)	1.9 (78.9)	
Max. Velocity @ 72VDC	m/s (in/s)	2.9 (119.9)	
Position Detection			
Position Resolution	mm (in)	0.007 (0.0003)	
Repeatability	mm (in)	±0.05 (±0.002)	
Linearity	%	± 0.4	
Electrical Data			
Max. Current @ 48VDC	A <sub>pk</sub>	25.9	
Max. Current @ 72VDC	A <sub>pk</sub>	25.9	
Max. Cont. Current [Passive cooling / Fan / Fluid]	A <sub>pk</sub>	8.6 / 11 / -	
Terminal Resistance 25 °C / 120 °C	Ohm	0.97 / 1.3	
Terminal Inductivity	mH	1.1	
Magnetic Period	mm (in)	60	(2.35)
Thermal Data			
Max. Winding Temperature (Sensor)	°C	90	
Thermal Resistance [Passive cooling / Fan / Fluid]	°K/W	0.54 / 0.31 / -	
Thermal Time Constant [Passive cooling / Fan / Fluid]	s	550 / 320 / -	
Mechanical Data			
Stator Width	mm (in)		
Stator Height	mm (in)		
Stator Length	mm (in)		
Stator Mass	g (lb)	3865 (6.9)	
Rod Diameter	mm (in)		
Rod Mass	g (lb)		
Max. shear force to the rod	N (lbf)		
Max. torque to the rod	Nm (lbf·in)		
IP Code		IP 65	

**MOTOR**

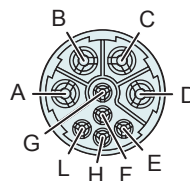


Item	Description	Item-No.
P04-48x240F/150-C	Linear motor P04-48, 150 mm Stroke	0150-2745

**CONNECTOR**

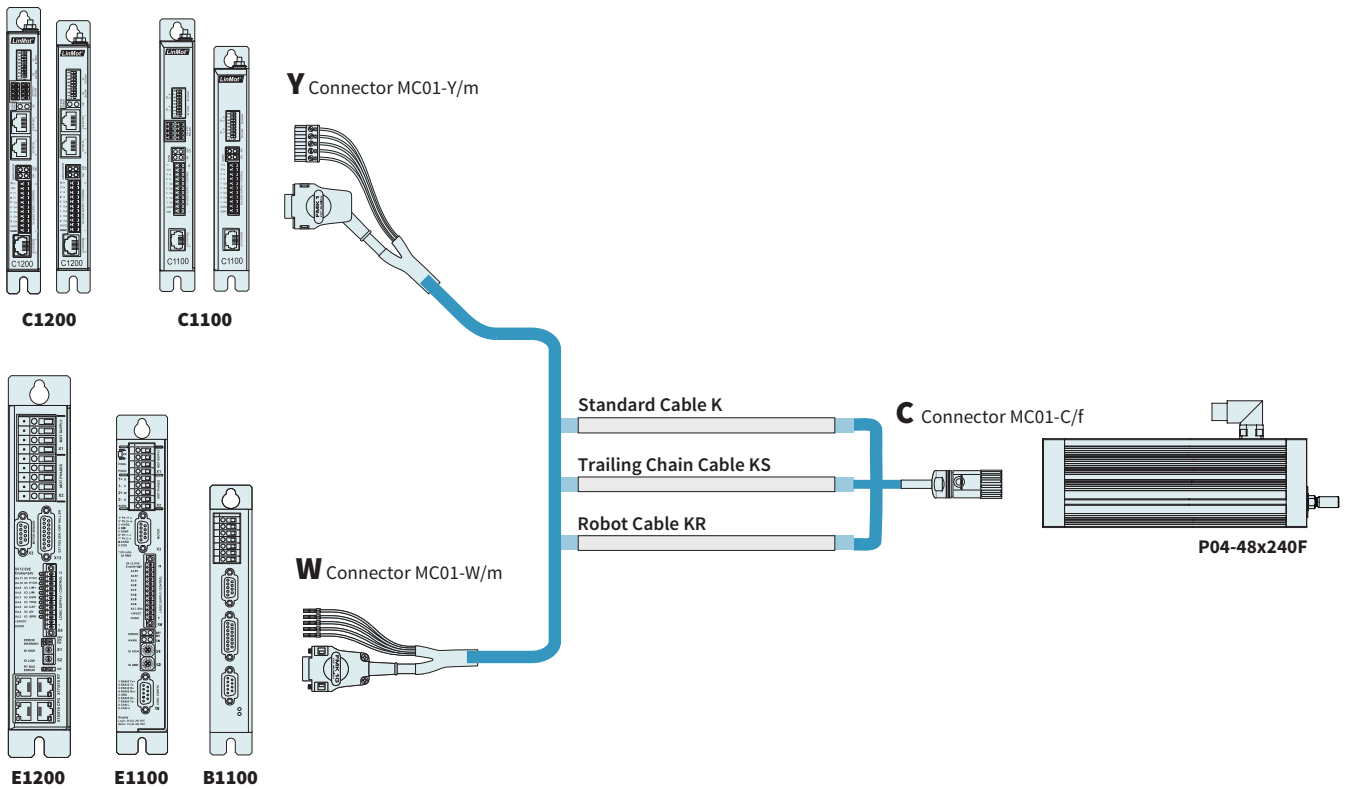
Motor Connector Wiring	C-Connector	
	C-Connector	Wire Color Motor Cable
Ph 1+	A	red
Ph 1-	B	pink
Ph 2+	C	blue
Ph 2-	D	grey
+5VDC	E	white
GND	F	Inner Shield
Sinus	G	yellow
Cosinus	H	green
Temp.	L	black
Shield	Gehäuse	Outer Shield

**C-Connector**



View: Motor connector, plug on

**Motor Cable**



**ORDERING INFORMATION**

STANDARDKABEL

Item	Description	Item-No.
<b>K15-W/C-2</b>	Motor Cable W/C, 2 m	0150-1811
<b>K15-W/C-4</b>	Motor Cable W/C, 4 m	0150-1801
<b>K15-W/C-6</b>	Motor Cable WC, 6 m	0150-1802
<b>K15-W/C-8</b>	Motor Cable W/C, 8 m	0150-1803
<b>K15-W/C-</b>	Motor Cable W/C, Custom length	0150-3131

<b>K15-Y/C-2</b>	Motor Cable Y/C, 2 m	0150-2429
<b>K15-Y/C-4</b>	Motor Cable Y/C, 4 m	0150-2430
<b>K15-Y/C-6</b>	Motor Cable Y/C, 6 m	0150-2431
<b>K15-Y/C-8</b>	Motor Cable Y/C, 8 m	0150-2432
<b>K15-Y/C-</b>	Motor Cable Y/C, Custom length	0150-3506

TRAILING CHAIN CABLE

Item	Description	Item-No.
<b>KS10-W/C-4</b>	Trailing Chain Cable W/C, 4 m	0150-1807
<b>KS10-W/C-6</b>	Trailing Chain Cable W/C, 6 m	0150-1858
<b>KS10-W/C-8</b>	Trailing Chain Cable W/C, 8 m	0150-1808
<b>KS10-W/C-</b>	Trailing Chain Cable W/C, Custom length	0150-3139

<b>KS10-Y/C-4</b>	Trailing Chain Cable Y/C, 4 m	0150-2439
<b>KS10-Y/C-6</b>	Trailing Chain Cable Y/C, 6 m	0150-2440
<b>KS10-Y/C-8</b>	Trailing Chain Cable Y/C, 8 m	0150-2441
<b>KS10-Y/C-</b>	Trailing Chain Cable Y/C, Custom length	0150-3511



ROBOT CABLE		
Item	Description	Item-No.
<b>KR10-W/C-</b>	Robot Cable KR10-W/C, Custom length	0150-3199
<b>KR10-Y-Fe/C-</b>	Robot Cable KR10-Y-Fe/C, Custom length	0150-3515

CONNECTOR & CABLE (INDIVIDUAL)		
Item	Description	Item-No.
<b>MC01-W/m</b>	Motor Connector W/m	0150-3140
<b>MC01-Y-Fe/m</b>	Motor Connector Y-Fe/m	0150-3289
<b>MC01-C/f</b>	Motor Connector C/f	0150-3080
<b>K15-04/05</b>	Motor Cable per m	0150-1978
<b>KS10-04/05</b>	Trailing Chain Cable per m	0150-1977
<b>KR10-04/05</b>	Robot Cable per m	0150-1830