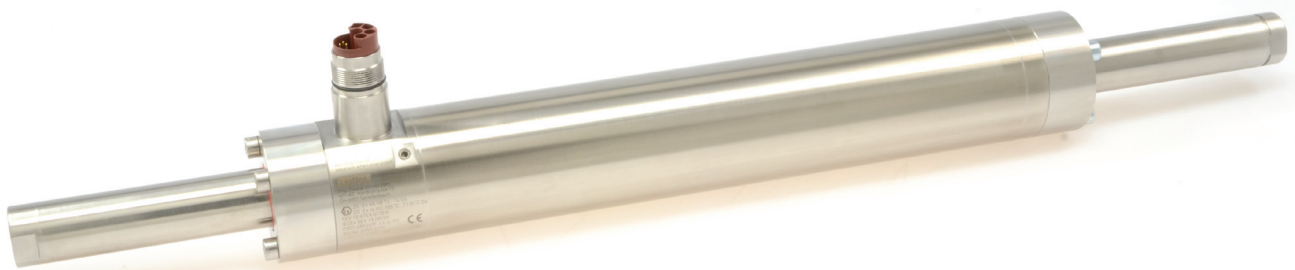


LINEAR MOTORS P01-48X240F-HP-EX

6



- ✓ 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-HP-EX

Technical Data **695**

Motor Specifications

P01-48x240F/80x80-HP-EX-E **698**

P01-48x240F/200x200-HP-EX-E **699**

P01-48x240F/290x290-HP-EX-E **700**

P01-48x240F/380x380-HP-EX-E **701**

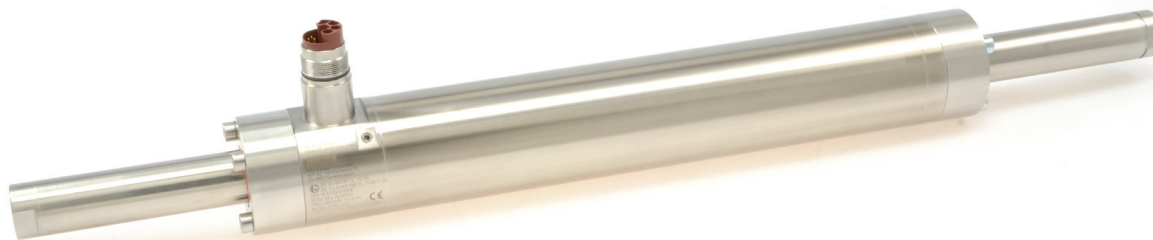
P01-48x240F/500x500-HP-EX-E **702**

P01-48x240F/590x590-HP-EX-E **703**

P01-48x240F/800x800-HP-EX-E **704**

P01-48x240F/980x980-HP-EX-E **705**

Accessories **706**



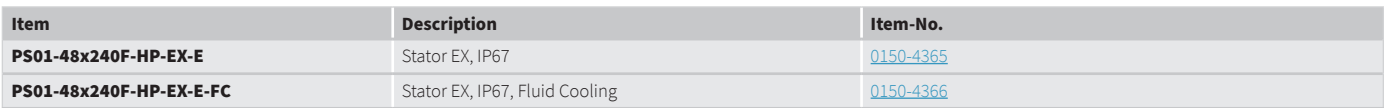
MOTOR FAMILY P01-48x240F-HP-EX

Technical Data				
Stroke				
Max. Stroke	mm	(in)	980	(38.6)
Force				
Max. Force @ 48VDC	N	(lbf)	496	(111)
Max. Force @ 72VDC	N	(lbf)	496	(111)
Max. Cont. Force [Passive cooling/ Fan / Fluid]	N	(lbf)	92 / - / 260	(20.8 / - / 58.5)
Max. Border Force relative	%		100	
Force Constant	N/A _{pk}	(lbf/A _{pk})	19.1	(4.29)
Velocity				
Max. Velocity @ 48VDC	m/s	(in/s)	2.3	(89)
Max. Velocity @ 72VDC	m/s	(in/s)	3.4	(131.5)
Position Detection				
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)
Electrical Data				
Max. Current @ 48VDC	A _{pk}		26	
Max. Current @ 72VDC	A _{pk}		26	
Max. Cont. Current [Passive cooling /Fan / Fluid]	A _{pk}		4.8 / - / 13.6	
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		100	
Thermal Resistance [Passive cooling / Fan / Fluid]	°K/W		2 / - / 0.26	
Thermal Time Constant [Passive cooling / Fan / Fluid]	s		2000 / - / 250	
Mechanical Data				
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			IP67	

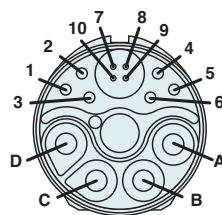
CE 1258 Ex 2G Ex eb IIC T6... T4 Gb

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

6



Motor Connector Wiring	PS01-48x240F-HP-EX-E PS01-48x240F-HP-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	–
P+1000 1+	7	orange
P+1000 1-	8	brown
P+1000 2+	9	purple
P+1000 2-	10	beige

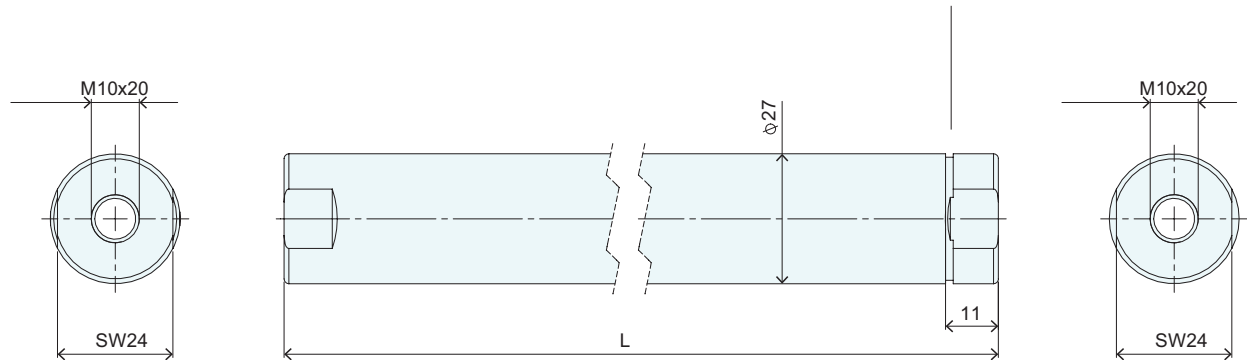


View: Motor connector, plug side

SLIDER

Slider High Clearance

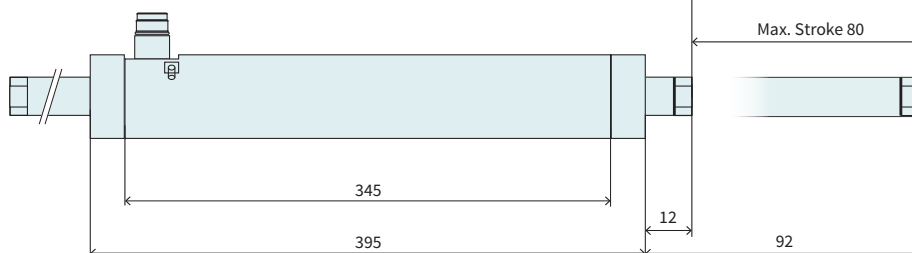
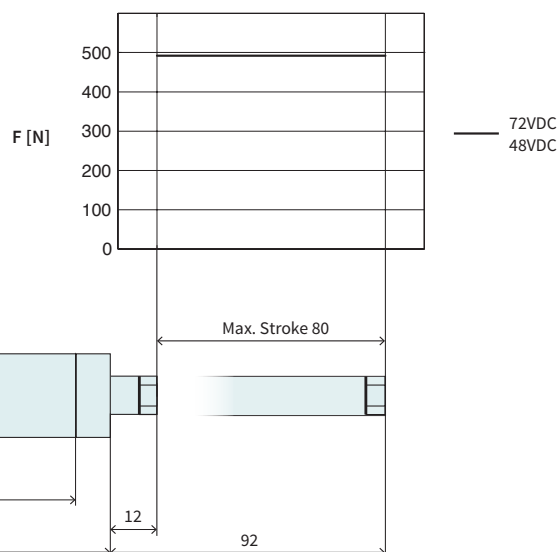
Number of grooves determines the slider type
(see chapter 2 / slider) and marks the front end.



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-HP-EX-E

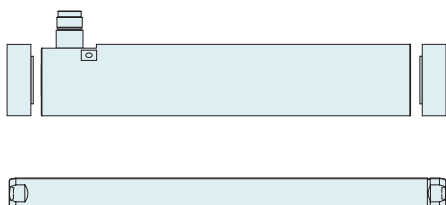
Max. Stroke: 80 mm
Peak Force: 496 N



Dimensions in mm

Technical Data P01-48x240F/80x80-HP-EX-E

Stroke			
Max. Stroke	mm (in)	80	(3.14)
Force			
Max. Force @ 48VDC	N (lbf)	496	(111)
Max. Force @ 72VDC	N (lbf)	496	(111)
Max. Cont. Force [Passive cooling / Fan / Fluid]	N (lbf)	92 / - / 260	(20.8 / - / 58.5)
Max. Border Force relative	%	100	
Force Constant	N/A _{pk} (lbf/A _{pk})	19.1	(4.29)
Velocity			
Max. Velocity @ 48VDC	m/s (in/s)	2.3	(89)
Max. Velocity @ 72VDC	m/s (in/s)	3.4	(131.5)
Position Detection			
Repeatability	mm (in)	±0.05	(±0.002)
Linearity	%	± 1.05	
Electrical Data			
Max. Current @ 48VDC	A _{pk}	26	
Max. Current @ 72VDC	A _{pk}	26	
Max. Cont. Current [Passive cooling / Fan / Fluid]	A _{pk}	4.8 / - / 13.6	
Thermal Data			
Max. Winding Temperature (Sensor)	°C	100	
Thermal Resistance [Passive cooling / Fan / Fluid]	°K/W	2 / - / 0.26	
Thermal Time Constant [Passive cooling / Fan / Fluid]	s	2000 / - / 250	
Mechanical Data			
Slider Length	mm (in)	500	(20)
Slider Mass	g (lb)	2010	(4.42)

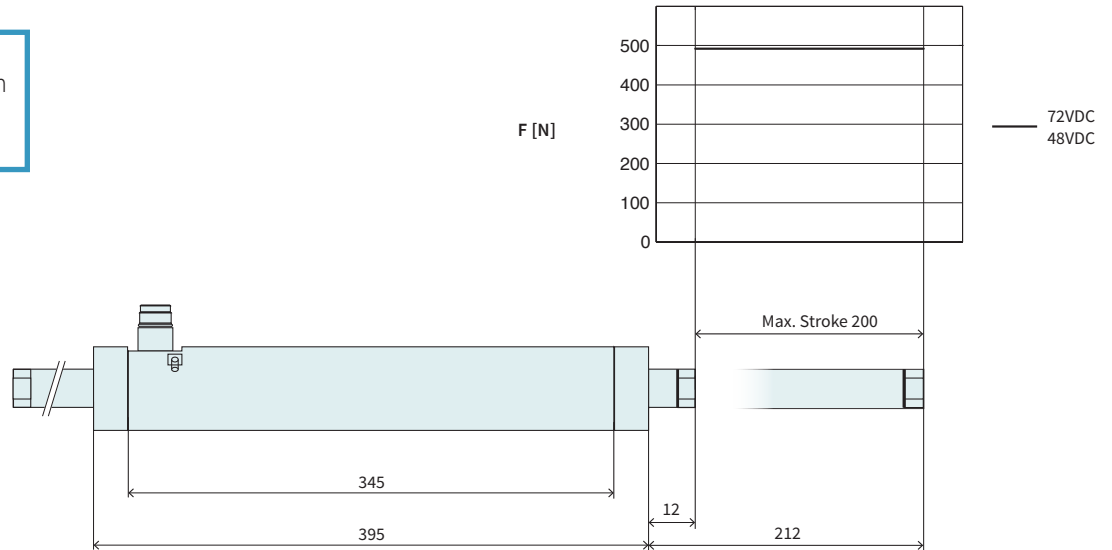


Item	Description	Item-No.
PS01-48x240F-HP-EX-E	Stator HP EX, IP67	0150-4365
PS01-48x240F-HP-EX-E-FC	Stator HP EX, IP67, Fluid Cooling	0150-4366
PB01-48x25-80-E-SSC*	Bearing for PS01-48x...-SSC / EX	0150-4190
PB03-48x25-80-E-SSC*	Bearing Flange for PS01-48x...-SSC / EX	0150-4191
PL01-27x500/420	Slider 'High Clearance'	0150-1469

* 2 Bearings or bearing flanges must be ordered separately.

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

Max. Stroke: 200 mm
Peak Force: 496 N



Dimensions in mm

Technical Data P01-48x240F/200x200-HP-EX-E

Stroke				
Max. Stroke	mm	(in)	200	(7.86)
Force				
Max. Force @ 48VDC	N	(lbf)	496	(111)
Max. Force @ 72VDC	N	(lbf)	496	(111)
Max. Cont. Force [Passive cooling / Fan / Fluid]	N	(lbf)	92 / - / 260	(20.8 / - / 58.5)
Max. Border Force relative	%		100	
Force Constant	N/A _{pk}	(lbf/A _{pk})	19.1	(4.29)
Velocity				
Max. Velocity @ 48VDC	m/s	(in/s)	2.3	(89)
Max. Velocity @ 72VDC	m/s	(in/s)	3.4	(131.5)
Position Detection				
Repeatability	mm	(in)	±0.05	(±0.002)
Linearity	%		± 0.5	
Electrical Data				
Max. Current @ 48VDC	A _{pk}		26	
Max. Current @ 72VDC	A _{pk}		26	
Max. Cont. Current [Passive cooling / Fan / Fluid]	A _{pk}		4.8 / - / 13.6	
Thermal Data				
Max. Winding Temperature (Sensor)	°C		100	
Thermal Resistance [Passive cooling / Fan / Fluid]	°K/W		2 / - / 0.26	
Thermal Time Constant [Passive cooling / Fan / Fluid]	s		2000 / - / 250	
Mechanical Data				
Slider Length	mm	(in)	620	(24)
Slider Mass	g	(lb)	2530	(5.57)

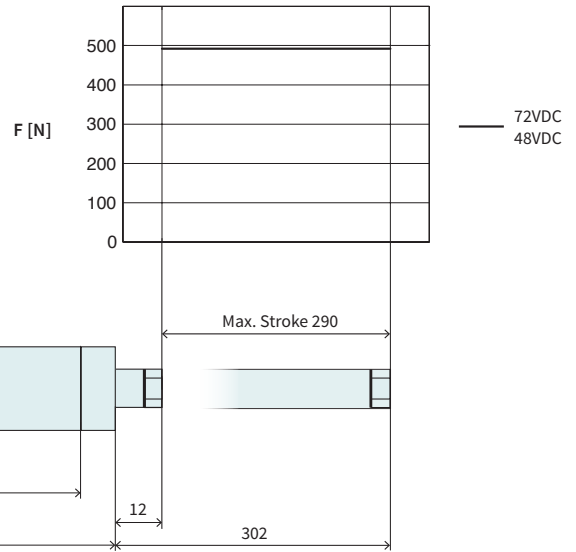


Item	Description	Item-No.
PS01-48x240F-HP-EX-E	Stator HP EX, IP67	0150-4365
PS01-48x240F-HP-EX-E-FC	Stator HP EX, IP67, Fluid Cooling	0150-4366
PB01-48x25-80-E-SSC*	Bearing for PS01-48x...-SSC / EX	0150-4190
PB03-48x25-80-E-SSC*	Bearing Flange for PS01-48x...-SSC / EX	0150-4191
PL01-27x620/540	Slider 'High Clearance'	0150-1470

* 2 Bearings or bearing flanges must be ordered separately.

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

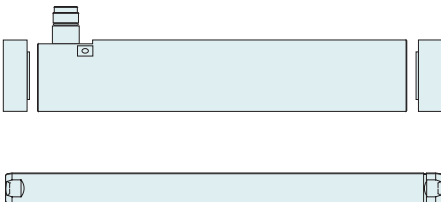
Max. Stroke: 290 mm
Peak Force: 496 N



Dimensions in mm

Technical Data P01-48x240F/290x290-HP-EX-E

Stroke				
Max. Stroke	mm	(in)	290	(11.4)
Force				
Max. Force @ 48VDC	N	(lbf)	496	(111)
Max. Force @ 72VDC	N	(lbf)	496	(111)
Max. Cont. Force [Passive cooling / Fan / Fluid]	N	(lbf)	92 / - / 260	(20.8 / - / 58.5)
Max. Border Force relative	%		100	
Force Constant	N/A _{pk}	(lbf/A _{pk})	19.1	(4.29)
Velocity				
Max. Velocity @ 48VDC	m/s	(in/s)	2.3	(89)
Max. Velocity @ 72VDC	m/s	(in/s)	3.4	(131.5)
Position Detection				
Repeatability	mm	(in)	±0.05	(±0.002)
Linearity	%		± 0.35	
Electrical Data				
Max. Current @ 48VDC	A _{pk}		26	
Max. Current @ 72VDC	A _{pk}		26	
Max. Cont. Current [Passive cooling / Fan / Fluid]	A _{pk}		4.8 / - / 13.6	
Thermal Data				
Max. Winding Temperature (Sensor)	°C		100	
Thermal Resistance [Passive cooling / Fan / Fluid]	°K/W		2 / - / 0.26	
Thermal Time Constant [Passive cooling / Fan / Fluid]	s		2000 / - / 250	
Mechanical Data				
Slider Length	mm	(in)	710	(28)
Slider Mass	g	(lb)	2920	(6.42)

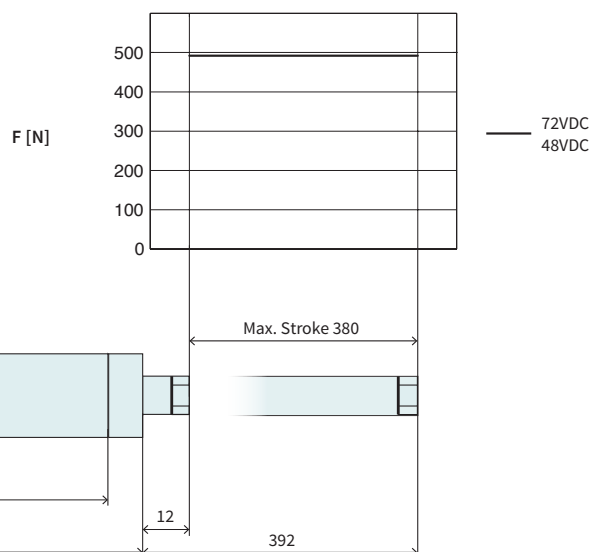


Item	Description	Item-No.
PS01-48x240F-HP-EX-E	Stator HP EX, IP67	0150-4365
PS01-48x240F-HP-EX-E-FC	Stator HP EX, IP67, Fluid Cooling	0150-4366
PB01-48x25-80-E-SSC*	Bearing for PS01-48x...-SSC / EX	0150-4190
PB03-48x25-80-E-SSC*	Bearing Flange for PS01-48x...-SSC / EX	0150-4191
PL01-27x710/630	Slider 'High Clearance'	0150-1471

* 2 Bearings or bearing flanges must be ordered separately.

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

Max. Stroke: 380 mm
Peak Force: 496 N



Technical Data P01-48x240F/380x380-HP-EX-E

Stroke				
Max. Stroke	mm	(in)	380	(14.99)
Force				
Max. Force @ 48VDC	N	(lbf)	496	(111)
Max. Force @ 72VDC	N	(lbf)	496	(111)
Max. Cont. Force [Passive cooling / Fan / Fluid]	N	(lbf)	92 / - / 260	(20.8 / - / 58.5)
Max. Border Force relative	%		100	
Force Constant	N/A _{pk}	(lbf/A _{pk})	19.1	(4.29)
Velocity				
Max. Velocity @ 48VDC	m/s	(in/s)	2.3	(89)
Max. Velocity @ 72VDC	m/s	(in/s)	3.4	(131.5)
Position Detection				
Repeatability	mm	(in)	±0.05	(±0.002)
Linearity	%		± 0.3	
Electrical Data				
Max. Current @ 48VDC	A _{pk}		26	
Max. Current @ 72VDC	A _{pk}		26	
Max. Cont. Current [Passive cooling / Fan / Fluid]	A _{pk}		4.8 / - / 13.6	
Thermal Data				
Max. Winding Temperature (Sensor)	°C		100	
Thermal Resistance [Passive cooling / Fan / Fluid]	°K/W		2 / - / 0.26	
Thermal Time Constant [Passive cooling / Fan / Fluid]	s		2000 / - / 250	
Mechanical Data				
Slider Length	mm	(in)	800	(31)
Slider Mass	g	(lb)	3310	(7.28)

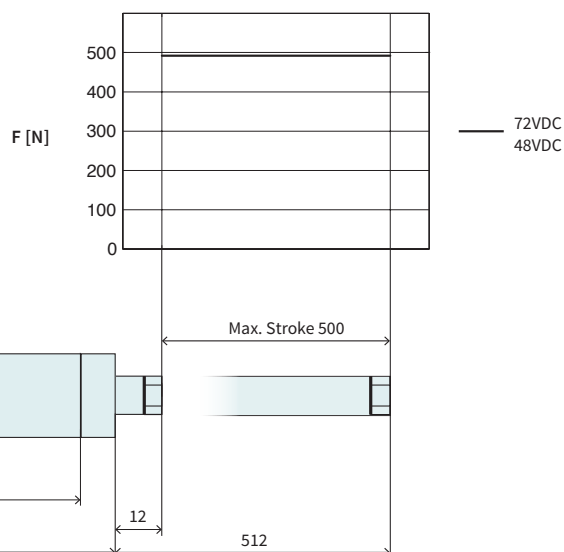


Item	Description	Item-No.
PS01-48x240F-HP-EX-E	Stator HP EX, IP67	0150-4365
PS01-48x240F-HP-EX-E-FC	Stator HP EX, IP67, Fluid Cooling	0150-4366
PB01-48x25-80-E-SSC*	Bearing for PS01-48x...-SSC / EX	0150-4190
PB03-48x25-80-E-SSC*	Bearing Flange for PS01-48x...-SSC / EX	0150-4191
PL01-27x800/720	Slider 'High Clearance'	0150-1472

* 2 Bearings or bearing flanges must be ordered separately.

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

Max. Stroke: 500 mm
Peak Force: 496 N



Dimensions in mm

Technical Data P01-48x240F/500x500-HP-EX-E

Stroke				
Max. Stroke	mm	(in)	500	(19.69)
Force				
Max. Force @ 48VDC	N	(lbf)	496	(111)
Max. Force @ 72VDC	N	(lbf)	496	(111)
Max. Cont. Force [Passive cooling / Fan / Fluid]	N	(lbf)	92 / - / 260	(20.8 / - / 58.5)
Max. Border Force relative	%		100	
Force Constant	N/A _{pk}	(lbf/A _{pk})	19.1	(4.29)
Velocity				
Max. Velocity @ 48VDC	m/s	(in/s)	2.3	(89)
Max. Velocity @ 72VDC	m/s	(in/s)	3.4	(131.5)
Position Detection				
Repeatability	mm	(in)	±0.05	(±0.002)
Linearity	%		± 0.25	
Electrical Data				
Max. Current @ 48VDC	A _{pk}		26	
Max. Current @ 72VDC	A _{pk}		26	
Max. Cont. Current [Passive cooling / Fan / Fluid]	A _{pk}		4.8 / - / 13.6	
Thermal Data				
Max. Winding Temperature (Sensor)	°C		100	
Thermal Resistance [Passive cooling / Fan / Fluid]	°K/W		2 / - / 0.26	
Thermal Time Constant [Passive cooling / Fan / Fluid]	s		2000 / - / 250	
Mechanical Data				
Slider Length	mm	(in)	920	(36)
Slider Mass	g	(lb)	3830	(8.43)

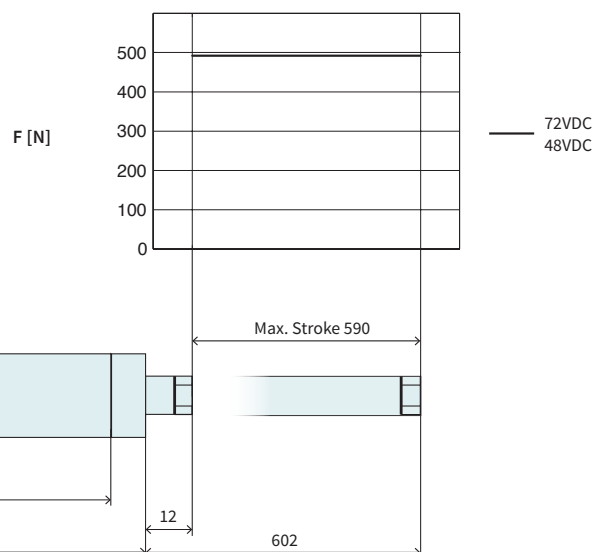


Item	Description	Item-No.
PS01-48x240F-HP-EX-E	Stator HP EX, IP67	0150-4365
PS01-48x240F-HP-EX-E-FC	Stator HP EX, IP67, Fluid Cooling	0150-4366
PB01-48x25-80-E-SSC*	Bearing for PS01-48x...-SSC / EX	0150-4190
PB03-48x25-80-E-SSC*	Bearing Flange for PS01-48x...-SSC / EX	0150-4191
PL01-27x920/840	Slider 'High Clearance'	0150-1447

* 2 Bearings or bearing flanges must be ordered separately.

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

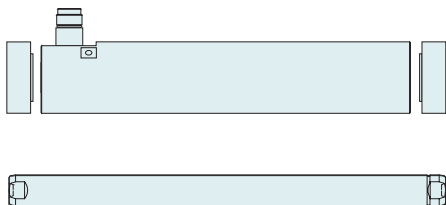
Max. Stroke: 590 mm
Peak Force: 496 N



Dimensions in mm

Technical Data P01-48x240F/590x590-HP-EX-E

Stroke				
Max. Stroke	mm	(in)	590	(23.19)
Force				
Max. Force @ 48VDC	N	(lbf)	496	(111)
Max. Force @ 72VDC	N	(lbf)	496	(111)
Max. Cont. Force [Passive cooling / Fan / Fluid]	N	(lbf)	92 / - / 260	(20.8 / - / 58.5)
Max. Border Force relative	%		100	
Force Constant	N/A _{pk}	(lbf/A _{pk})	19.1	(4.29)
Velocity				
Max. Velocity @ 48VDC	m/s	(in/s)	2.3	(89)
Max. Velocity @ 72VDC	m/s	(in/s)	3.4	(131.5)
Position Detection				
Repeatability	mm	(in)	±0.05	(±0.002)
Linearity	%		± 0.25	
Electrical Data				
Max. Current @ 48VDC	A _{pk}		26	
Max. Current @ 72VDC	A _{pk}		26	
Max. Cont. Current [Passive cooling / Fan / Fluid]	A _{pk}		4.8 / - / 13.6	
Thermal Data				
Max. Winding Temperature (Sensor)	°C		100	
Thermal Resistance [Passive cooling / Fan / Fluid]	°K/W		2 / - / 0.26	
Thermal Time Constant [Passive cooling / Fan / Fluid]	s		2000 / - / 250	
Mechanical Data				
Slider Length	mm	(in)	1010	(40)
Slider Mass	g	(lb)	4220	(9.28)

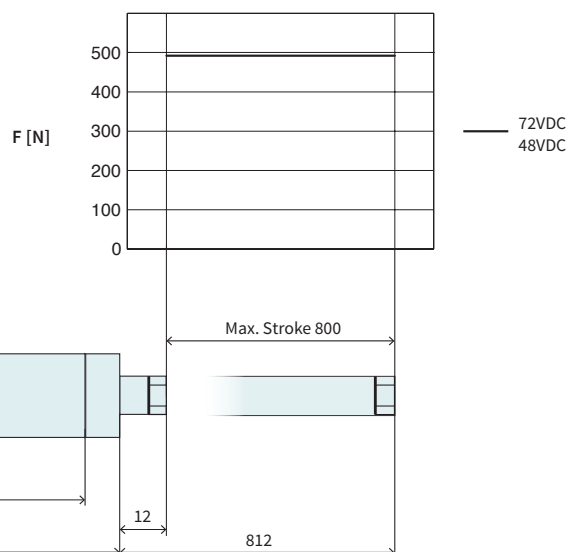


Item	Description	Item-No.
PS01-48x240F-HP-EX-E	Stator HP EX, IP67	0150-4365
PS01-48x240F-HP-EX-E-FC	Stator HP EX, IP67, Fluid Cooling	0150-4366
PB01-48x25-80-E-SSC*	Bearing for PS01-48x...-SSC / EX	0150-4190
PB03-48x25-80-E-SSC*	Bearing Flange for PS01-48x...-SSC / EX	0150-4191
PL01-27x1010/930	Slider 'High Clearance'	0150-1473

* 2 Bearings or bearing flanges must be ordered separately.

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

Max. Stroke: 800 mm
Peak Force: 496 N



Dimensions in mm

Technical Data P01-48x240F/800x800-HP-EX-E

Stroke			
Max. Stroke	mm (in)	800	(31.49)
Force			
Max. Force @ 48VDC	N (lbf)	496	(111)
Max. Force @ 72VDC	N (lbf)	496	(111)
Max. Cont. Force [Passive cooling / Fan / Fluid]	N (lbf)	92 / - / 260	(20.8 / - / 58.5)
Max. Border Force relative	%	100	
Force Constant	N/A _{pk} (lbf/A _{pk})	19.1	(4.29)
Velocity			
Max. Velocity @ 48VDC	m/s (in/s)	2.3	(89)
Max. Velocity @ 72VDC	m/s (in/s)	3.4	(131.5)
Position Detection			
Repeatability	mm (in)	±0.05	(±0.002)
Linearity	%	± 0.2	
Electrical Data			
Max. Current @ 48VDC	A _{pk}	26	
Max. Current @ 72VDC	A _{pk}	26	
Max. Cont. Current [Passive cooling / Fan / Fluid]	A _{pk}	4.8 / - / 13.6	
Thermal Data			
Max. Winding Temperature (Sensor)	°C	100	
Thermal Resistance [Passive cooling / Fan / Fluid]	°K/W	2 / - / 0.26	
Thermal Time Constant [Passive cooling / Fan / Fluid]	s	2000 / - / 250	
Mechanical Data			
Slider Length	mm (in)	1220	(48)
Slider Mass	g (lb)	5130	(11.29)

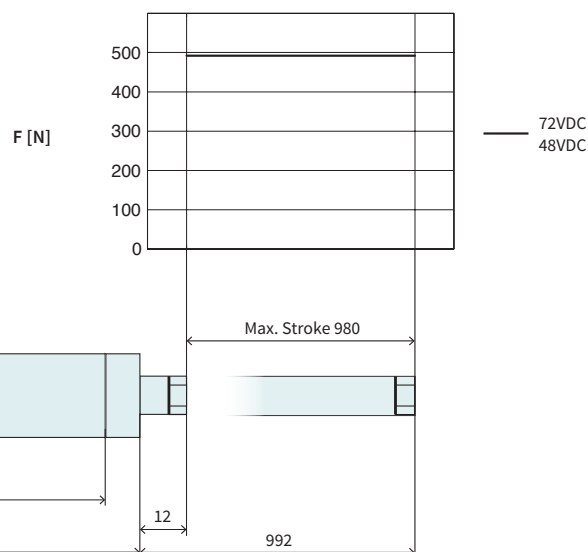


Item	Description	Item-No.
PS01-48x240F-HP-EX-E	Stator HP EX, IP67	0150-4365
PS01-48x240F-HP-EX-E-FC	Stator HP EX, IP67, Fluid Cooling	0150-4366
PB01-48x25-80-E-SSC*	Bearing for PS01-48x...-SSC / EX	0150-4190
PB03-48x25-80-E-SSC*	Bearing Flange for PS01-48x...-SSC / EX	0150-4191
PL01-27x1220/1140	Slider 'High Clearance'	0150-1587

* 2 Bearings or bearing flanges must be ordered separately.

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

Max. Stroke: 980 mm
Peak Force: 496 N



Dimensions in mm

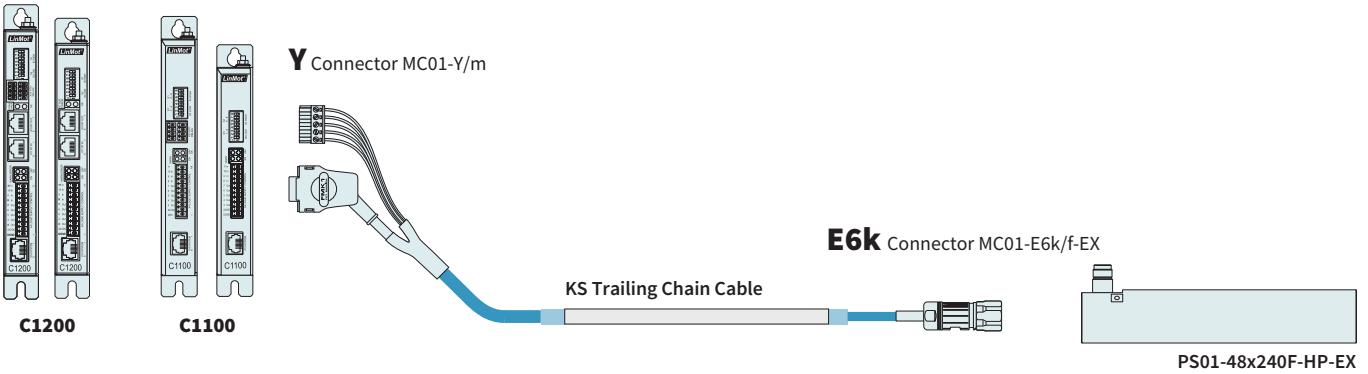
Technical Data P01-48x240F/980x980-HP-EX-E				
Stroke				
Max. Stroke	mm	(in)	980	(38.6)
Force				
Max. Force @ 48VDC	N	(lbf)	496	(111)
Max. Force @ 72VDC	N	(lbf)	496	(111)
Max. Cont. Force [Passive cooling / Fan / Fluid]	N	(lbf)	92 / - / 260	(20.8 / - / 58.5)
Max. Border Force relative	%		100	
Force Constant	N/A _{pk}	(lbf/A _{pk})	19.1	(4.29)
Velocity				
Max. Velocity @ 48VDC	m/s	(in/s)	2.3	(89)
Max. Velocity @ 72VDC	m/s	(in/s)	3.4	(131.5)
Position Detection				
Repeatability	mm	(in)	±0.05	(±0.002)
Linearity	%		± 0.2	
Electrical Data				
Max. Current @ 48VDC	A _{pk}		26	
Max. Current @ 72VDC	A _{pk}		26	
Max. Cont. Current [Passive cooling / Fan / Fluid]	A _{pk}		4.8 / - / 13.6	
Thermal Data				
Max. Winding Temperature (Sensor)	°C		100	
Thermal Resistance [Passive cooling / Fan / Fluid]	°K/W		2 / - / 0.26	
Thermal Time Constant [Passive cooling / Fan / Fluid]	s		2000 / - / 250	
Mechanical Data				
Slider Length	mm	(in)	1400	(55)
Slider Mass	g	(lb)	5910	(13)



Item	Description	Item-No.
PS01-48x240F-HP-EX-E	Stator HP EX, IP67	0150-4365
PS01-48x240F-HP-EX-E-FC	Stator HP EX, IP67, Fluid Cooling	0150-4366
PB01-48x25-80-E-SSC*	Bearing for PS01-48x...-SSC / EX	0150-4190
PB03-48x25-80-E-SSC*	Bearing Flange for PS01-48x...-SSC / EX	0150-4191
PL01-27x1400/1320	Slider 'High Clearance'	0150-1588

* 2 Bearings or bearing flanges must be ordered separately.

Motor Cable



ORDERING INFORMATION

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

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

SLIDER MOUNTING



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

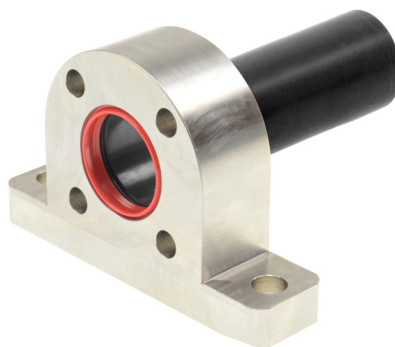
FIND MORE PRODUCT DETAILS IN THE CHAPTER „ACCESSORIES“.

BEARING



Item	Description	Item-No.
PB01-48x25-80-F-SSC	Bearing for PS01-48x...-SSC / ATEX	0150-6339

FIND MORE PRODUCT DETAILS IN THE CHAPTER „ACCESSORIES“.



Item	Description	Item-No.
PB03-48x25-80-F-SSC	Bearing Flange for PS01-48x...-SSC / ATEX	0150-6340

FIND MORE PRODUCT DETAILS IN THE CHAPTER „ACCESSORIES“.

