

## LINEAR MOTORS P02-23Sx80F-HP



- ✓ Short design
- ✓ Integrated mounting flange
- ✓ Pluggable motor cable with cover
- ✓ Free positionable cable outlet
- ✓ For use where space is limited and in multi-axis applications

**LINEAR MOTORS P02-23Sx80F-HP**

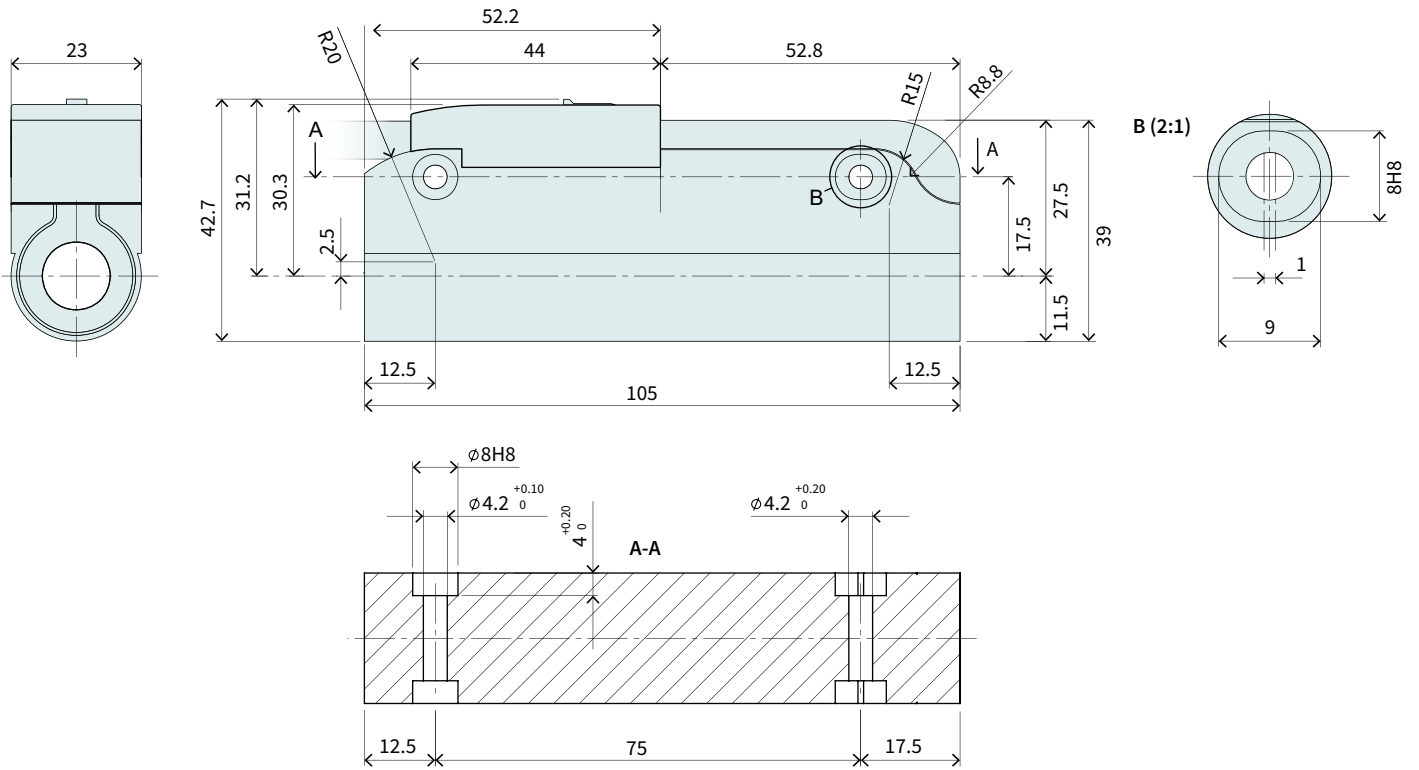
<b>Technical Data</b>	<b>93</b>
<b>Motor Specifications</b>	
P02-23Sx80F/0x60-HP	<b>97</b>
P02-23Sx80F/20x80-HP	<b>98</b>
P02-23Sx80F/40x100-HP	<b>99</b>
P02-23Sx80F/70x130-HP	<b>100</b>
P02-23Sx80F/100x160-HP	<b>101</b>
P02-23Sx80F/140x200-HP	<b>102</b>
P02-23Sx80F/160x220-HP	<b>103</b>
P02-23Sx80F/220x280-HP	<b>104</b>
P02-23Sx80F/290x350-HP	<b>105</b>
P02-23Sx80F/350x410-HP	<b>106</b>
P02-23Sx80F/450x510-HP	<b>107</b>
P02-23Sx80F/630x690-HP	<b>108</b>
P02-23Sx80F/720x780-HP	<b>109</b>
<b>Accessories</b>	<b>110</b>



### MOTOR FAMILY P02-23Sx80F-HP

Technical Data				
<b>Stroke</b>				
Standard Stroke (SS)	mm	(in)	≤ 720	(≤ 28.3)
Extended Stroke (ES)	mm	(in)	≤ 780	(≤ 30.69)
<b>Force</b>				
Max. Force @ 48VDC	N	(lbf)	67.1	(15.1)
Max. Force @ 72VDC	N	(lbf)	67.1	(15.1)
Max. Cont. Force [Passive cooling / Fan / Fluid]	N	(lbf)	13 / 24 / -	(2.9 / 5.3 / -)
Max. Border Force relative	%		≤ 63	
Force Constant	N/A <sub>pk</sub>	(lbf/A <sub>pk</sub> )	8.95	(2.01)
<b>Velocity</b>				
Max. Velocity @ 48VDC	m/s	(in/s)	4.9	(189.9)
Max. Velocity @ 72VDC	m/s	(in/s)	7.3	(289.9)
<b>Position Detection</b>				
Position Resolution	mm	(in)	0.002	(0.0001)
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>		7.4	
Max. Current @ 72VDC	A <sub>pk</sub>		7.4	
Max. Cont. Current [Passive cooling / Fan / Fluid]	A <sub>pk</sub>		1.5 / 2.7 / -	
Terminal Resistance 25 °C / 150 °C	Ohm		4.2 / 6.2	
Terminal Inductivity	mH		0.6	
Magnetic Period	mm	(in)	20	(0.78)
<b>Thermal Data</b>				
Max. Winding Temperature (Sensor)	°C		120	
Thermal Resistance [Passive cooling / Fan / Fluid]	°K/W		6.4 / 1.9 / -	
Thermal Time Constant [Passive cooling / Fan / Fluid]	s		830 / 250 / -	
<b>Mechanical Data</b>				
Stator Diameter	mm	(in)	23	(0.91)
Stator Length [Connector type / Cable type]	mm	(in)	105	(4.1)
Stator Mass	g	(lb)	245	(0.54)
Slider Diameter	mm	(in)	12	(0.47)
Slider Length	mm	(in)	130 - 850	(5.1 - 33)
Slider Mass	g	(lb)	90 - 700	(0.2 - 1.54)
IP Code			IP 50	

**STATOR**

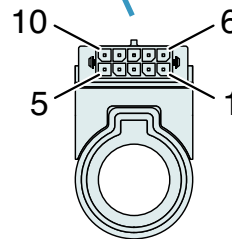


Item	Description	Item-No.
PS02-23Sx80F-HP-K	Stator HP, Cable -90°, 0°, +90°	0150-1285

**CONNECTOR**

Motor Connector Wiring		Wire color motor cable
Pin 1	Phase 1+	red
Pin 2	Phase 2+	blue
Pin 3	n.c.	n.c.
Pin 4	Phase 1-	pink
Pin 5	Phase 2-	grey
Pin 6	Sensor Sin	yellow
Pin 7	Sensor Cos	green
Pin 8	GND	brown
Pin 9	+5V	white
Pin 10	Temp sensor	black
	Housing	Shield

**K-Connector**

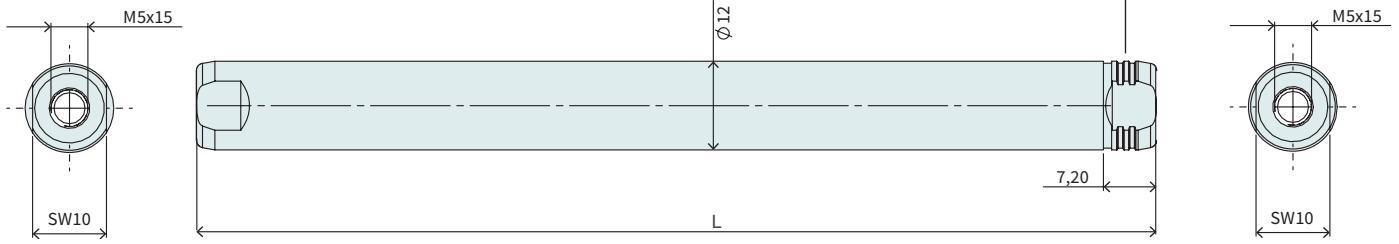


View: Motor Connector, plug side

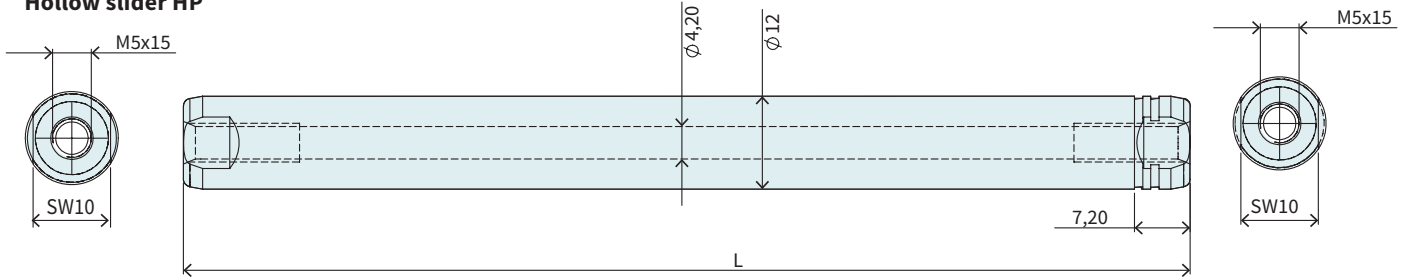
**SLIDER**

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

**Slider HP / Heavy Duty HP**



**Hollow slider HP**



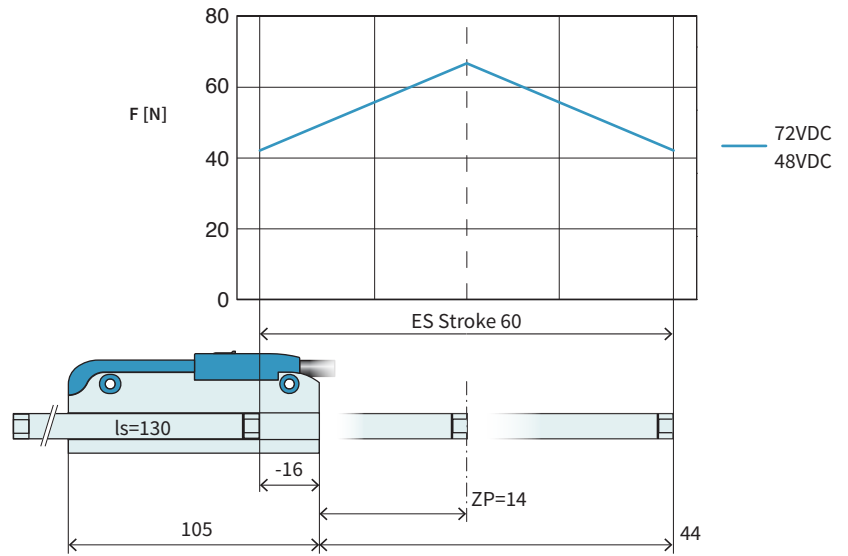
Slider High Performance				
Item	Description	Max. Stroke [mm]	Standard Stroke [mm]	Item-No.
PL01-12x130/90-HP	Slider 'High Performance'	60	-	<a href="#">0150-2209</a>
PL01-12x150/110-HP	Slider 'High Performance'	80	20	<a href="#">0150-2281</a>
PL01-12x170/130-HP	Slider 'High Performance'	100	40	<a href="#">0150-1529</a>
PL01-12x200/160-HP	Slider 'High Performance'	130	70	<a href="#">0150-1518</a>
PL01-12x230/190-HP	Slider 'High Performance'	160	100	<a href="#">0150-1519</a>
PL01-12x270/230-HP	Slider 'High Performance'	200	140	<a href="#">0150-1520</a>
PL01-12x290/250-HP	Slider 'High Performance'	220	160	<a href="#">0150-1521</a>
PL01-12x350/310-HP	Slider 'High Performance'	280	220	<a href="#">0150-1522</a>
PL01-12x420/380-HP	Slider 'High Performance'	350	290	<a href="#">0150-1523</a>
PL01-12x480/440-HP	Slider 'High Performance'	410	350	<a href="#">0150-1524</a>
PL01-12x580/540-HP	Slider 'High Performance'	510	450	<a href="#">0150-1525</a>
PL01-12x760/720-HP	Slider 'High Performance'	690	630	<a href="#">0150-1526</a>
PL01-12x850/810-HP	Slider 'High Performance'	780	720	<a href="#">0150-1527</a>

Slider Heavy Duty High Performance				
Item	Description	Max. Stroke [mm]	Standard Stroke [mm]	Item-No.
PL02-12x130/90-HP	Slider 'heavy duty' 'High Performance'	60	-	<a href="#">0150-2983</a>
PL02-12x150/110-HP	Slider 'heavy duty' 'High Performance'	80	20	on request
PL02-12x170/130-HP	Slider 'heavy duty' 'High Performance'	100	40	<a href="#">0150-1559</a>
PL02-12x200/160-HP	Slider 'heavy duty' 'High Performance'	130	70	<a href="#">0150-1532</a>
PL02-12x230/190-HP	Slider 'heavy duty' 'High Performance'	160	100	<a href="#">0150-1552</a>
PL02-12x270/230-HP	Slider 'heavy duty' 'High Performance'	200	140	<a href="#">0150-1533</a>
PL02-12x290/250-HP	Slider 'heavy duty' 'High Performance'	220	160	<a href="#">0150-1495</a>
PL02-12x350/310-HP	Slider 'heavy duty' 'High Performance'	280	220	<a href="#">0150-1555</a>
PL02-12x420/380-HP	Slider 'heavy duty' 'High Performance'	350	290	<a href="#">0150-1554</a>
PL02-12x480/440-HP	Slider 'heavy duty' 'High Performance'	410	350	<a href="#">0150-2519</a>
PL02-12x580/540-HP	Slider 'heavy duty' 'High Performance'	510	450	<a href="#">0150-2520</a>
PL02-12x760/720-HP	Slider 'heavy duty' 'High Performance'	690	630	<a href="#">0150-2521</a>
PL02-12x850/810-HP	Slider 'heavy duty' 'High Performance'	780	720	<a href="#">0150-2516</a>

Hollow slider High Performance				
Item	Description	Max. Stroke [mm]	Standard Stroke [mm]	Item-No.
PL01-12x130/90-HP-L	Slider 'High Performance L'	60	-	<a href="#">0150-3687</a>
PL01-12x150/110-HP-L	Slider 'High Performance L'	80	20	on request
PL01-12x170/130-HP-L	Slider 'High Performance L'	100	40	<a href="#">0150-3688</a>
PL01-12x200/160-HP-L	Slider 'High Performance L'	130	70	<a href="#">0150-3689</a>
PL01-12x230/190-HP-L	Slider 'High Performance L'	160	100	<a href="#">0150-2546</a>
PL01-12x270/230-HP-L	Slider 'High Performance L'	200	140	<a href="#">0150-2557</a>
PL01-12x290/250-HP-L	Slider 'High Performance L'	220	160	<a href="#">0150-3690</a>
PL01-12x350/310-HP-L	Slider 'High Performance L'	280	220	<a href="#">0150-3691</a>
PL01-12x420/380-HP-L	Slider 'High Performance L'	350	290	<a href="#">0150-3692</a>
PL01-12x480/440-HP-L	Slider 'High Performance L'	410	350	<a href="#">0150-3693</a>
PL01-12x580/540-HP-L	Slider 'High Performance L'	510	450	<a href="#">0150-3694</a>
PL01-12x760/720-HP-L	Slider 'High Performance L'	690	630	<a href="#">0150-3695</a>
PL01-12x850/810-HP-L	Slider 'High Performance L'	780	720	on request

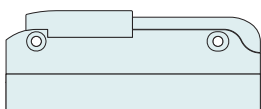
**P02-23Sx80F/0x60-HP**

**Max. Stroke:** 60 mm  
**Peak Force:** 67 N



Dimensions in mm

Technical Data P02-23Sx80F/0x60-HP				
<b>Stroke</b>				
Standard Stroke (SS)	mm (in)		0 (0)	
Extended Stroke (ES)	mm (in)		60 (2.35)	
<b>Force</b>				
Max. Force @ 48VDC	N (lbf)		67.1 (15.1)	
Max. Force @ 72VDC	N (lbf)		67.1 (15.1)	
Max. Cont. Force [Passive cooling / Fan / Fluid]	N (lbf)		13 / 24 / - (2.9 / 5.3 / -)	
Max. Border Force relative	%		63	
Force Constant	N/A <sub>pk</sub> (lbf/A <sub>pk</sub> )		8.95 (2.01)	
<b>Velocity</b>				
Max. Velocity @ 48VDC	m/s (in/s)		4.9 (189.9)	
Max. Velocity @ 72VDC	m/s (in/s)		7.3 (289.9)	
<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>		7.4	
Max. Current @ 72VDC	A <sub>pk</sub>		7.4	
Max. Cont. Current [Passive cooling / Fan / Fluid]	A <sub>pk</sub>		1.5 / 2.7 / -	
<b>Thermal Data</b>				
Max. Winding Temperature (Sensor)	°C		120	
Thermal Resistance [Passive cooling / Fan / Fluid]	°K/W		6.4 / 1.9 / -	
Thermal Time Constant [Passive cooling / Fan / Fluid]	s		830 / 250 / -	
<b>Mechanical Data</b>				
Slider Length	mm (in)		130 (5.1)	
Slider Mass	g (lb)		90 (0.2)	

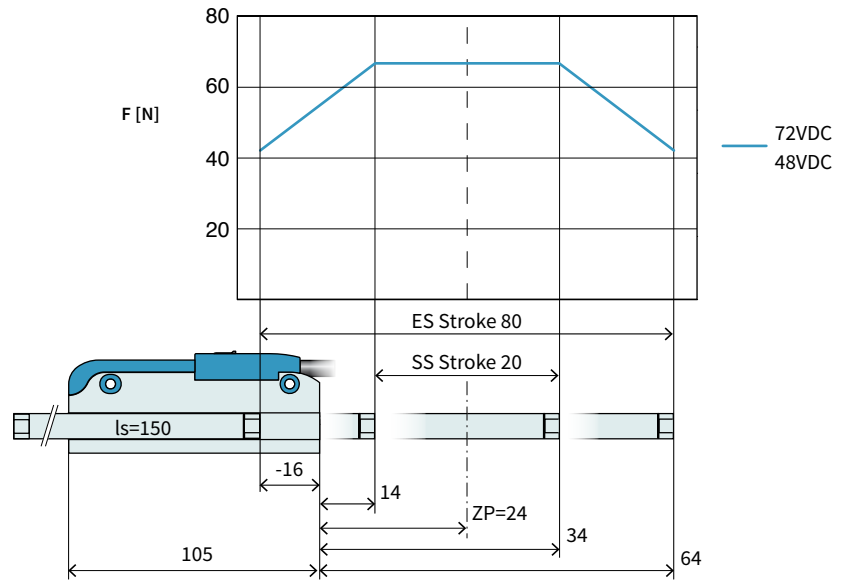


Item	Description	Item-No.
<b>PS02-23Sx80F-HP-K</b>	Stator HP, Cable -90°, 0°, +90°	<a href="#">0150-1285</a>
<b>PL01-12x130/90-HP</b>	Slider 'High Performance'	<a href="#">0150-2209</a>
<b>PL02-12x130/90-HP</b>	Slider 'heavy duty' 'High Performance'	<a href="#">0150-2983</a>
<b>PL01-12x130/90-HP-L*</b>	Slider 'High Performance L'	<a href="#">0150-3687</a>

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

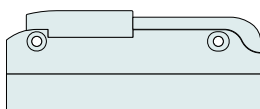
**P02-23Sx80F/20x80-HP**

**Max. Stroke:** 80 mm  
**Peak Force:** 67 N



Dimensions in mm

Technical Data P02-23Sx80F/20x80-HP				
<b>Stroke</b>				
Standard Stroke (SS)	mm (in)		20	(0.78)
Extended Stroke (ES)	mm (in)		80	(3.14)
<b>Force</b>				
Max. Force @ 48VDC	N (lbf)		67.1	(15.1)
Max. Force @ 72VDC	N (lbf)		67.1	(15.1)
Max. Cont. Force [Passive cooling / Fan / Fluid]	N (lbf)		13 / 24 / -	(2.9 / 5.3 / -)
Max. Border Force relative	%		63	
Force Constant	N/A <sub>pk</sub> (lbf/A <sub>pk</sub> )		8.95	(2.01)
<b>Velocity</b>				
Max. Velocity @ 48VDC	m/s (in/s)		4.9	(189.9)
Max. Velocity @ 72VDC	m/s (in/s)		7.3	(289.9)
<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>		7.4	
Max. Current @ 72VDC	A <sub>pk</sub>		7.4	
Max. Cont. Current [Passive cooling / Fan / Fluid]	A <sub>pk</sub>		1.5 / 2.7 / -	
<b>Thermal Data</b>				
Max. Winding Temperature (Sensor)	°C		120	
Thermal Resistance [Passive cooling / Fan / Fluid]	°K/W		6.4 / 1.9 / -	
Thermal Time Constant [Passive cooling / Fan / Fluid]	s		830 / 250 / -	
<b>Mechanical Data</b>				
Slider Length	mm (in)		150	(5.9)
Slider Mass	g (lb)		110	(0.24)



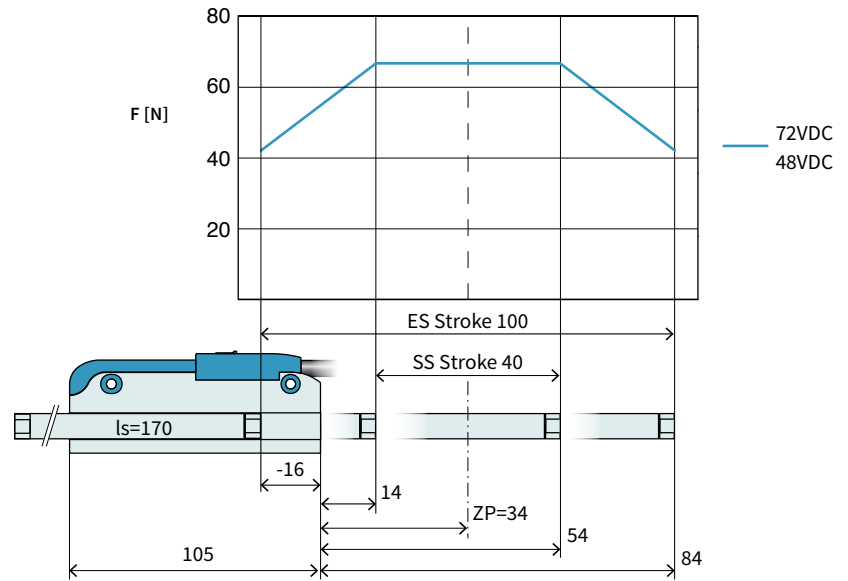
Item	Description	Item-No.
<b>PS02-23Sx80F-HP-K</b>	Stator HP, Cable -90°, 0°, +90°	<a href="#">0150-1285</a>
<b>PL01-12x150/110-HP</b>	Slider 'High Performance'	<a href="#">0150-2281</a>
<b>PL02-12x150/110-HP</b>	Slider 'heavy duty' 'High Performance'	on request
<b>PL01-12x150/110-HP-L*</b>	Slider 'High Performance L'	on request

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



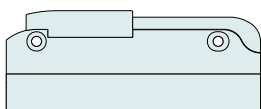
**P02-23Sx80F/40x100-HP**

**Max. Stroke:** 100 mm  
**Peak Force:** 67 N



Dimensions in mm

Technical Data P02-23Sx80F/40x100-HP				
<b>Stroke</b>				
Standard Stroke (SS)	mm	(in)	40	(1.57)
Extended Stroke (ES)	mm	(in)	100	(3.93)
<b>Force</b>				
Max. Force @ 48VDC	N	(lbf)	67.1	(15.1)
Max. Force @ 72VDC	N	(lbf)	67.1	(15.1)
Max. Cont. Force [Passive cooling / Fan / Fluid]	N	(lbf)	13 / 24 / -	(2.9 / 5.3 / -)
Max. Border Force relative	%		63	
Force Constant	N/A <sub>pk</sub>	(lbf/A <sub>pk</sub> )	8.95	(2.01)
<b>Velocity</b>				
Max. Velocity @ 48VDC	m/s	(in/s)	4.9	(189.9)
Max. Velocity @ 72VDC	m/s	(in/s)	7.3	(289.9)
<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>		7.4	
Max. Current @ 72VDC	A <sub>pk</sub>		7.4	
Max. Cont. Current [Passive cooling / Fan / Fluid]	A <sub>pk</sub>		1.5 / 2.7 / -	
<b>Thermal Data</b>				
Max. Winding Temperature (Sensor)	°C		120	
Thermal Resistance [Passive cooling / Fan / Fluid]	°K/W		6.4 / 1.9 / -	
Thermal Time Constant [Passive cooling / Fan / Fluid]	s		830 / 250 / -	
<b>Mechanical Data</b>				
Slider Length	mm	(in)	170	(6.7)
Slider Mass	g	(lb)	130	(0.28)

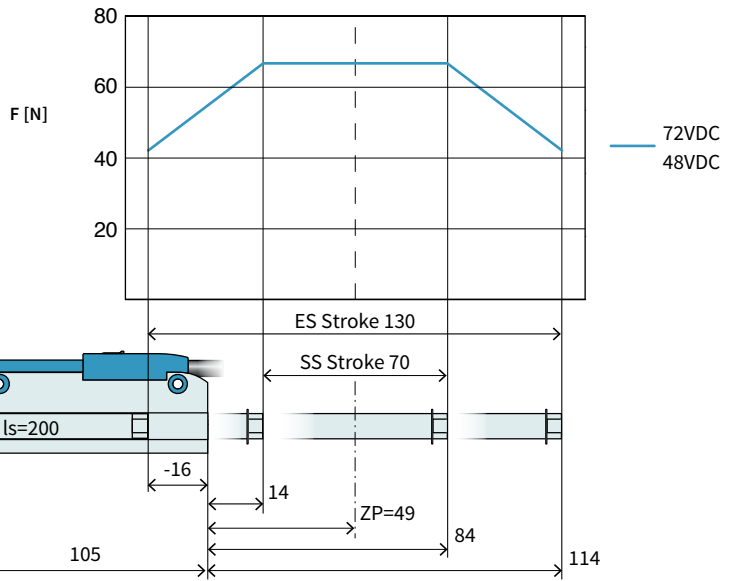


Item	Description	Item-No.
<b>PS02-23Sx80F-HP-K</b>	Stator HP, Cable -90°, 0°, +90°	<a href="#">0150-1285</a>
<b>PL01-12x170/130-HP</b>	Slider 'High Performance'	<a href="#">0150-1529</a>
<b>PL02-12x170/130-HP</b>	Slider 'heavy duty' 'High Performance'	<a href="#">0150-1559</a>
<b>PL01-12x170/130-HP-L*</b>	Slider 'High Performance L'	<a href="#">0150-3688</a>

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

**P02-23Sx80F/70x130-HP**

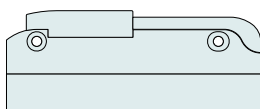
**Max. Stroke:** 130 mm  
**Peak Force:** 67 N



Dimensions in mm

Technical Data P02-23Sx80F/70x130-HP

Stroke			
Standard Stroke (SS)	mm (in)		70 (2.75)
Extended Stroke (ES)	mm (in)		130 (5.12)
Force			
Max. Force @ 48VDC	N (lbf)		67.1 (15.1)
Max. Force @ 72VDC	N (lbf)		67.1 (15.1)
Max. Cont. Force [Passive cooling / Fan / Fluid]	N (lbf)		13 / 24 / - (2.9 / 5.3 / -)
Max. Border Force relative	%		63
Force Constant	N/A <sub>pk</sub> (lbf/A <sub>pk</sub> )		8.95 (2.01)
Velocity			
Max. Velocity @ 48VDC	m/s (in/s)		4.9 (189.9)
Max. Velocity @ 72VDC	m/s (in/s)		7.3 (289.9)
Position Detection			
Repeatability	mm (in)		±0.05 (±0.002)
Linearity	%		± 0.3
Electrical Data			
Max. Current @ 48VDC	A <sub>pk</sub>		7.4
Max. Current @ 72VDC	A <sub>pk</sub>		7.4
Max. Cont. Current [Passive cooling / Fan / Fluid]	A <sub>pk</sub>		1.5 / 2.7 / -
Thermal Data			
Max. Winding Temperature (Sensor)	°C		120
Thermal Resistance [Passive cooling / Fan / Fluid]	°K/W		6.4 / 1.9 / -
Thermal Time Constant [Passive cooling / Fan / Fluid]	s		830 / 250 / -
Mechanical Data			
Slider Length	mm (in)		200 (7.9)
Slider Mass	g (lb)		155 (0.34)

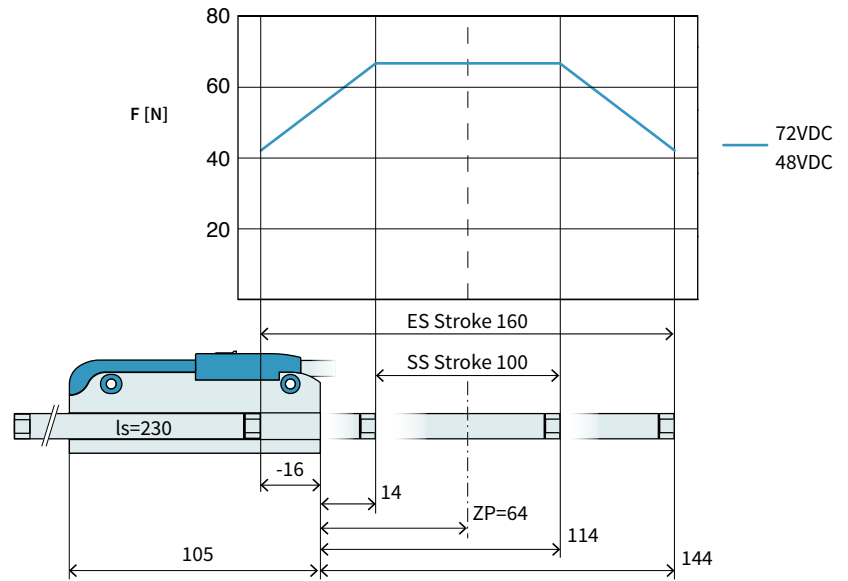


Item	Description	Item-No.
<b>PS02-23Sx80F-HP-K</b>	Stator HP, Cable -90°, 0°, +90°	<a href="#">0150-1285</a>
<b>PL01-12x200/160-HP</b>	Slider 'High Performance'	<a href="#">0150-1518</a>
<b>PL02-12x200/160-HP</b>	Slider 'heavy duty' 'High Performance'	<a href="#">0150-1532</a>
<b>PL01-12x200/160-HP-L*</b>	Slider 'High Performance L'	<a href="#">0150-3689</a>

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

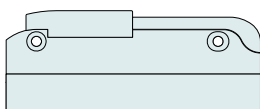
**P02-23Sx80F/100x160-HP**

**Max. Stroke:** 160 mm  
**Peak Force:** 67 N



Dimensions in mm

Technical Data P02-23Sx80F/100x160-HP				
<b>Stroke</b>				
Standard Stroke (SS)	mm	(in)	100	(3.93)
Extended Stroke (ES)	mm	(in)	160	(6.29)
<b>Force</b>				
Max. Force @ 48VDC	N	(lbf)	67.1	(15.1)
Max. Force @ 72VDC	N	(lbf)	67.1	(15.1)
Max. Cont. Force [Passive cooling / Fan / Fluid]	N	(lbf)	13 / 24 / -	(2.9 / 5.3 / -)
Max. Border Force relative	%		63	
Force Constant	N/A <sub>pk</sub>	(lbf/A <sub>pk</sub> )	8.95	(2.01)
<b>Velocity</b>				
Max. Velocity @ 48VDC	m/s	(in/s)	4.9	(189.9)
Max. Velocity @ 72VDC	m/s	(in/s)	7.3	(289.9)
<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>		7.4	
Max. Current @ 72VDC	A <sub>pk</sub>		7.4	
Max. Cont. Current [Passive cooling / Fan / Fluid]	A <sub>pk</sub>		1.5 / 2.7 / -	
<b>Thermal Data</b>				
Max. Winding Temperature (Sensor)	°C		120	
Thermal Resistance [Passive cooling / Fan / Fluid]	°K/W		6.4 / 1.9 / -	
Thermal Time Constant [Passive cooling / Fan / Fluid]	s		830 / 250 / -	
<b>Mechanical Data</b>				
Slider Length	mm	(in)	230	(9.1)
Slider Mass	g	(lb)	180	(0.4)

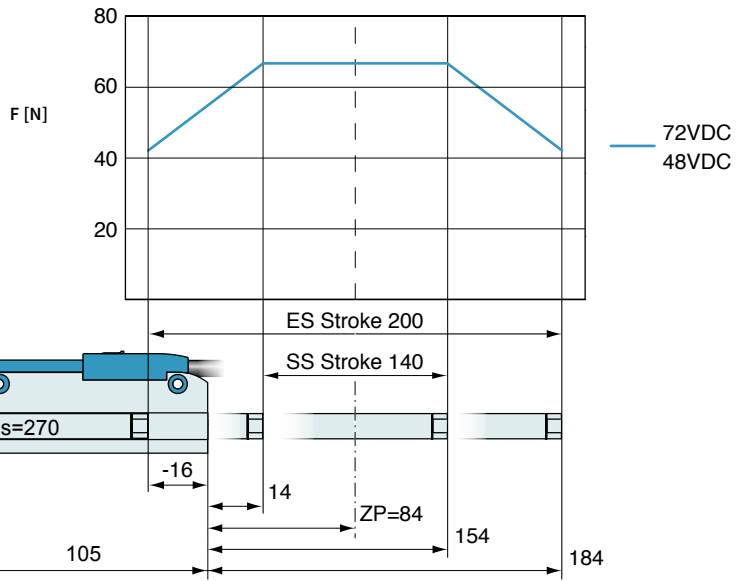


Item	Description	Item-No.
<b>PS02-23Sx80F-HP-K</b>	Stator HP, Cable -90°, 0°, +90°	<a href="#">0150-1285</a>
<b>PL01-12x230/190-HP</b>	Slider 'High Performance'	<a href="#">0150-1519</a>
<b>PL02-12x230/190-HP</b>	Slider 'heavy duty' 'High Performance'	<a href="#">0150-1552</a>
<b>PL01-12x230/190-HP-L*</b>	Slider 'High Performance L'	<a href="#">0150-2546</a>

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

**P0S-23Sx80F/140x200-HP**

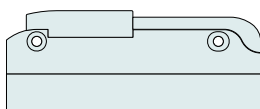
**Max. Stroke:** 200 mm  
**Peak Force:** 67 N



Dimensions in mm

Technical Data P02-23Sx80F/140x200-HP

Stroke			
Standard Stroke (SS)	mm (in)	140 (5.5)	
Extended Stroke (ES)	mm (in)	200 (7.86)	
Force			
Max. Force @ 48VDC	N (lbf)	67.1 (15.1)	
Max. Force @ 72VDC	N (lbf)	67.1 (15.1)	
Max. Cont. Force [Passive cooling / Fan / Fluid]	N (lbf)	13 / 24 / - (2.9 / 5.3 / -)	
Max. Border Force relative	%	63	
Force Constant	N/A <sub>pk</sub> (lbf/A <sub>pk</sub> )	8.95 (2.01)	
Velocity			
Max. Velocity @ 48VDC	m/s (in/s)	4.9 (189.9)	
Max. Velocity @ 72VDC	m/s (in/s)	7.3 (289.9)	
Position Detection			
Repeatability	mm (in)	±0.05 (±0.002)	
Linearity	%	± 0.2	
Electrical Data			
Max. Current @ 48VDC	A <sub>pk</sub>	7.4	
Max. Current @ 72VDC	A <sub>pk</sub>	7.4	
Max. Cont. Current [Passive cooling / Fan / Fluid]	A <sub>pk</sub>	1.5 / 2.7 / -	
Thermal Data			
Max. Winding Temperature (Sensor)	°C	120	
Thermal Resistance [Passive cooling / Fan / Fluid]	°K/W	6.4 / 1.9 / -	
Thermal Time Constant [Passive cooling / Fan / Fluid]	s	830 / 250 / -	
Mechanical Data			
Slider Length	mm (in)	270 (11)	
Slider Mass	g (lb)	215 (0.47)	

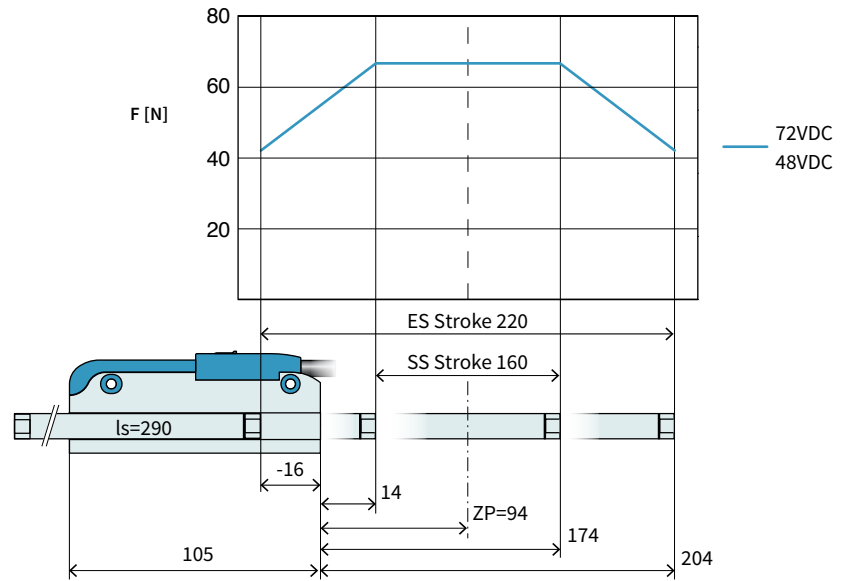


Item	Description	Item-No.
<b>PS02-23Sx80F-HP-K</b>	Stator HP, Cable -90°, 0°, +90°	<a href="#">0150-1285</a>
<b>PL01-12x270/230-HP</b>	Slider 'High Performance'	<a href="#">0150-1520</a>
<b>PL02-12x270/230-HP</b>	Slider 'heavy duty' 'High Performance'	<a href="#">0150-1533</a>
<b>PL01-12x270/230-HP-L*</b>	Slider 'High Performance L'	<a href="#">0150-2557</a>

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

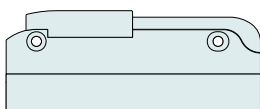
**P02-23Sx80F/160x220-HP**

**Max. Stroke:** 220 mm  
**Peak Force:** 67 N



Dimensions in mm

Technical Data P02-23Sx80F/160x220-HP				
<b>Stroke</b>				
Standard Stroke (SS)	mm	(in)	160	(6.29)
Extended Stroke (ES)	mm	(in)	220	(8.65)
<b>Force</b>				
Max. Force @ 48VDC	N	(lbf)	67.1	(15.1)
Max. Force @ 72VDC	N	(lbf)	67.1	(15.1)
Max. Cont. Force [Passive cooling / Fan / Fluid]	N	(lbf)	13 / 24 / -	(2.9 / 5.3 / -)
Max. Border Force relative	%		63	
Force Constant	N/A <sub>pk</sub>	(lbf/A <sub>pk</sub> )	8.95	(2.01)
<b>Velocity</b>				
Max. Velocity @ 48VDC	m/s	(in/s)	4.9	(189.9)
Max. Velocity @ 72VDC	m/s	(in/s)	7.3	(289.9)
<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>		7.4	
Max. Current @ 72VDC	A <sub>pk</sub>		7.4	
Max. Cont. Current [Passive cooling / Fan / Fluid]	A <sub>pk</sub>		1.5 / 2.7 / -	
<b>Thermal Data</b>				
Max. Winding Temperature (Sensor)	°C		120	
Thermal Resistance [Passive cooling / Fan / Fluid]	°K/W		6.4 / 1.9 / -	
Thermal Time Constant [Passive cooling / Fan / Fluid]	s		830 / 250 / -	
<b>Mechanical Data</b>				
Slider Length	mm	(in)	290	(11)
Slider Mass	g	(lb)	230	(0.51)

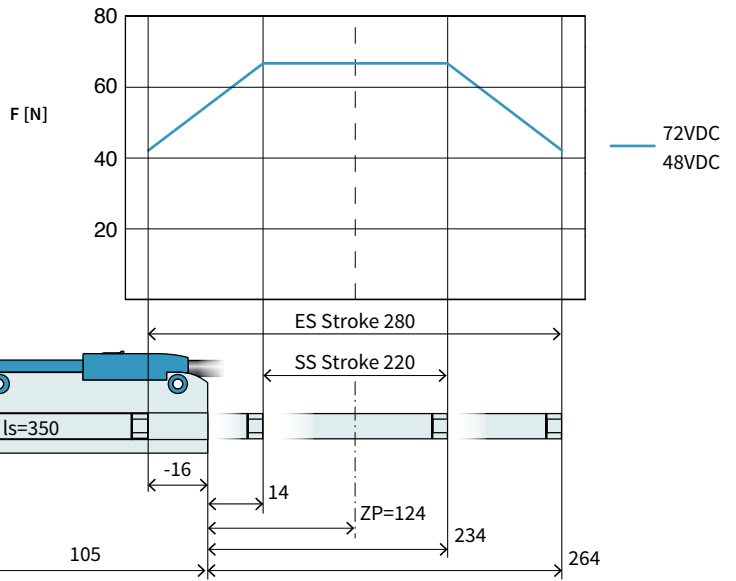


Item	Description	Item-No.
<b>PS02-23Sx80F-HP-K</b>	Stator HP, Cable -90°, 0°, +90°	<a href="#">0150-1285</a>
<b>PL01-12x290/250-HP</b>	Slider 'High Performance'	<a href="#">0150-1521</a>
<b>PL02-12x290/250-HP</b>	Slider 'heavy duty' 'High Performance'	<a href="#">0150-1495</a>
<b>PL01-12x290/250-HP-L*</b>	Slider 'High Performance L'	<a href="#">0150-3690</a>

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

**P02-23Sx80F/220x280-HP**

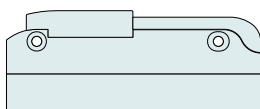
**Max. Stroke:** 280 mm  
**Peak Force:** 67 N



Dimensions in mm

Technical Data P02-23Sx80F/220x280-HP

Stroke			
Standard Stroke (SS)	mm (in)		220 (8.65)
Extended Stroke (ES)	mm (in)		280 (10.99)
Force			
Max. Force @ 48VDC	N (lbf)		67.1 (15.1)
Max. Force @ 72VDC	N (lbf)		67.1 (15.1)
Max. Cont. Force [Passive cooling / Fan / Fluid]	N (lbf)		13 / 24 / - (2.9 / 5.3 / -)
Max. Border Force relative	%		63
Force Constant	N/A <sub>pk</sub> (lbf/A <sub>pk</sub> )		8.95 (2.01)
Velocity			
Max. Velocity @ 48VDC	m/s (in/s)		4.9 (189.9)
Max. Velocity @ 72VDC	m/s (in/s)		7.3 (289.9)
Position Detection			
Repeatability	mm (in)		±0.05 (±0.002)
Linearity	%		± 0.2
Electrical Data			
Max. Current @ 48VDC	A <sub>pk</sub>		7.4
Max. Current @ 72VDC	A <sub>pk</sub>		7.4
Max. Cont. Current [Passive cooling / Fan / Fluid]	A <sub>pk</sub>		1.5 / 2.7 / -
Thermal Data			
Max. Winding Temperature (Sensor)	°C		120
Thermal Resistance [Passive cooling / Fan / Fluid]	°K/W		6.4 / 1.9 / -
Thermal Time Constant [Passive cooling / Fan / Fluid]	s		830 / 250 / -
Mechanical Data			
Slider Length	mm (in)		350 (14)
Slider Mass	g (lb)		280 (0.62)

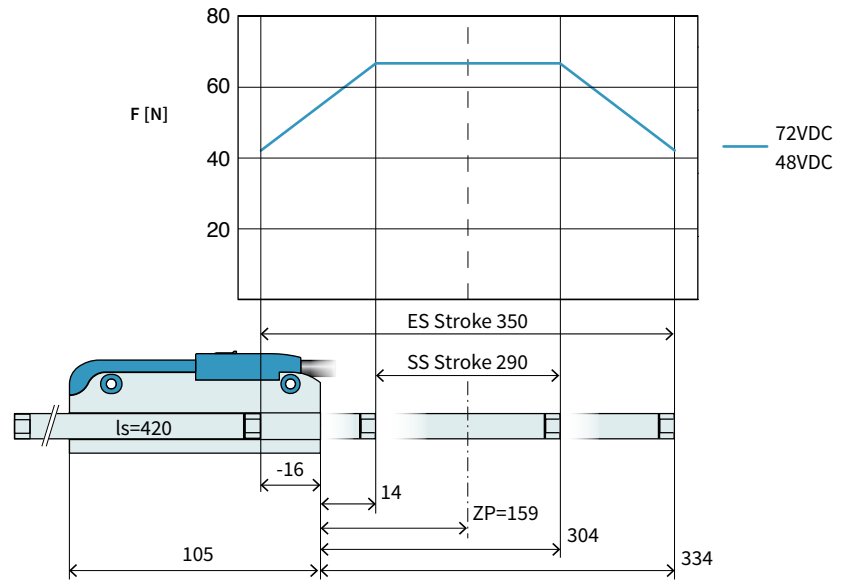


Item	Description	Item-No.
<b>PS02-23Sx80F-HP-K</b>	Stator HP, Cable -90°, 0°, +90°	<a href="#">0150-1285</a>
<b>PL01-12x350/310-HP</b>	Slider 'High Performance'	<a href="#">0150-1522</a>
<b>PL02-12x350/310-HP</b>	Slider 'heavy duty' 'High Performance'	<a href="#">0150-1555</a>
<b>PL01-12x350/310-HP-L*</b>	Slider 'High Performance L'	<a href="#">0150-3691</a>

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

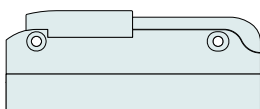
**P02-23Sx80F/290x350-HP**

**Max. Stroke:** 350 mm  
**Peak Force:** 67 N



Dimensions in mm

Technical Data P02-23Sx80F/290x350-HP				
<b>Stroke</b>				
Standard Stroke (SS)	mm	(in)	290	(11.4)
Extended Stroke (ES)	mm	(in)	350	(13.8)
<b>Force</b>				
Max. Force @ 48VDC	N	(lbf)	67.1	(15.1)
Max. Force @ 72VDC	N	(lbf)	67.1	(15.1)
Max. Cont. Force [Passive cooling / Fan / Fluid]	N	(lbf)	13 / 24 / -	(2.9 / 5.3 / -)
Max. Border Force relative	%		63	
Force Constant	N/A <sub>pk</sub>	(lbf/A <sub>pk</sub> )	8.95	(2.01)
<b>Velocity</b>				
Max. Velocity @ 48VDC	m/s	(in/s)	4.9	(189.9)
Max. Velocity @ 72VDC	m/s	(in/s)	7.3	(289.9)
<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>		7.4	
Max. Current @ 72VDC	A <sub>pk</sub>		7.4	
Max. Cont. Current [Passive cooling / Fan / Fluid]	A <sub>pk</sub>		1.5 / 2.7 / -	
<b>Thermal Data</b>				
Max. Winding Temperature (Sensor)	°C		120	
Thermal Resistance [Passive cooling / Fan / Fluid]	°K/W		6.4 / 1.9 / -	
Thermal Time Constant [Passive cooling / Fan / Fluid]	s		830 / 250 / -	
<b>Mechanical Data</b>				
Slider Length	mm	(in)	420	(17)
Slider Mass	g	(lb)	340	(0.75)

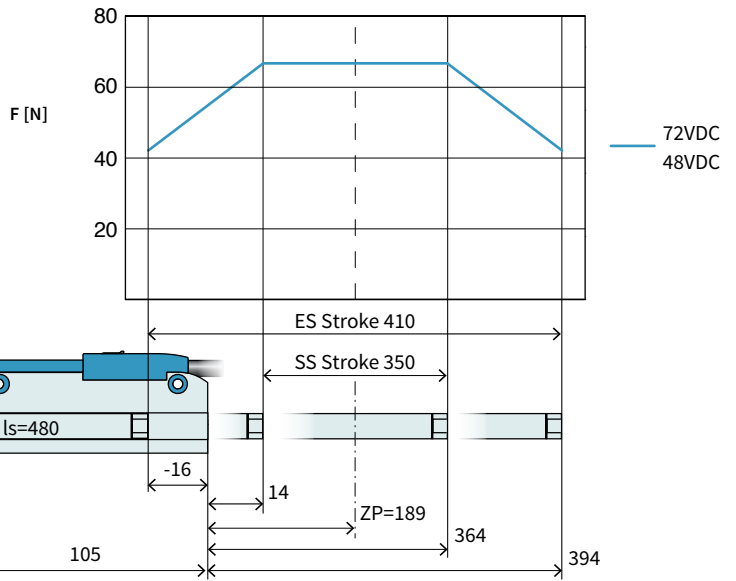


Item	Description	Item-No.
<b>PS02-23Sx80F-HP-K</b>	Stator HP, Cable -90°, 0°, +90°	<a href="#">0150-1285</a>
<b>PL01-12x420/380-HP</b>	Slider 'High Performance'	<a href="#">0150-1523</a>
<b>PL02-12x420/380-HP</b>	Slider 'heavy duty' 'High Performance'	<a href="#">0150-1554</a>
<b>PL01-12x420/380-HP-L*</b>	Slider 'High Performance' L'	<a href="#">0150-3692</a>

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

**P02-23Sx80F/350x410-HP**

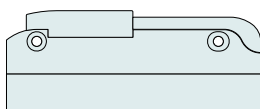
**Max. Stroke:** 410 mm  
**Peak Force:** 67 N



Dimensions in mm

Technical Data P02-23Sx80F/350x410-HP

Stroke			
Standard Stroke (SS)	mm (in)		350 (13.8)
Extended Stroke (ES)	mm (in)		410 (16.1)
Force			
Max. Force @ 48VDC	N (lbf)		67.1 (15.1)
Max. Force @ 72VDC	N (lbf)		67.1 (15.1)
Max. Cont. Force [Passive cooling / Fan / Fluid]	N (lbf)		13 / 24 / - (2.9 / 5.3 / -)
Max. Border Force relative	%		63
Force Constant	N/A <sub>pk</sub> (lbf/A <sub>pk</sub> )		8.95 (2.01)
Velocity			
Max. Velocity @ 48VDC	m/s (in/s)		4.9 (189.9)
Max. Velocity @ 72VDC	m/s (in/s)		7.3 (289.9)
Position Detection			
Repeatability	mm (in)		±0.05 (±0.002)
Linearity	%		± 0.15
Electrical Data			
Max. Current @ 48VDC	A <sub>pk</sub>		7.4
Max. Current @ 72VDC	A <sub>pk</sub>		7.4
Max. Cont. Current [Passive cooling / Fan / Fluid]	A <sub>pk</sub>		1.5 / 2.7 / -
Thermal Data			
Max. Winding Temperature (Sensor)	°C		120
Thermal Resistance [Passive cooling / Fan / Fluid]	°K/W		6.4 / 1.9 / -
Thermal Time Constant [Passive cooling / Fan / Fluid]	s		830 / 250 / -
Mechanical Data			
Slider Length	mm (in)		480 (19)
Slider Mass	g (lb)		390 (0.78)



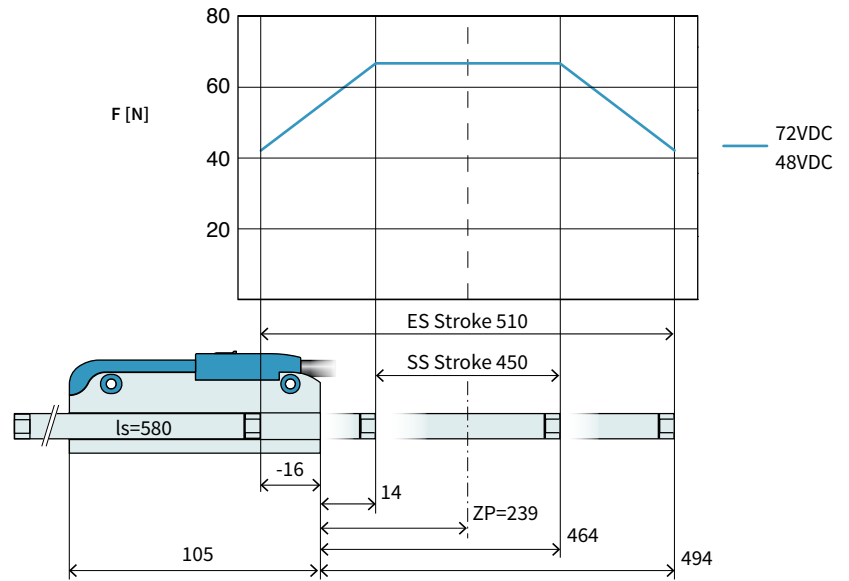
Item	Description	Item-No.
<b>PS02-23Sx80F-HP-K</b>	Stator HP, Cable -90°, 0°, +90°	<a href="#">0150-1285</a>
<b>PL01-12x480/440-HP</b>	Slider 'High Performance'	<a href="#">0150-1524</a>
<b>PL02-12x480/440-HP</b>	Slider 'heavy duty' 'High Performance'	<a href="#">0150-2519</a>
<b>PL01-12x480/440-HP-L*</b>	Slider 'High Performance L'	<a href="#">0150-3693</a>

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



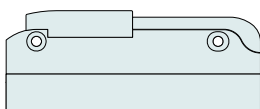
**P02-23Sx80F/450x510-HP**

**Max. Stroke:** 510 mm  
**Peak Force:** 67 N



Dimensions in mm

Technical Data P02-23Sx80F/450x510-HP				
<b>Stroke</b>				
Standard Stroke (SS)	mm	(in)	450	(17.69)
Extended Stroke (ES)	mm	(in)	510	(20.1)
<b>Force</b>				
Max. Force @ 48VDC	N	(lbf)	67.1	(15.1)
Max. Force @ 72VDC	N	(lbf)	67.1	(15.1)
Max. Cont. Force [Passive cooling / Fan / Fluid]	N	(lbf)	13 / 24 / -	(2.9 / 5.3 / -)
Max. Border Force relative	%		63	
Force Constant	N/A <sub>pk</sub>	(lbf/A <sub>pk</sub> )	8.95	(2.01)
<b>Velocity</b>				
Max. Velocity @ 48VDC	m/s	(in/s)	4.9	(189.9)
Max. Velocity @ 72VDC	m/s	(in/s)	7.3	(289.9)
<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>		7.4	
Max. Current @ 72VDC	A <sub>pk</sub>		7.4	
Max. Cont. Current [Passive cooling / Fan / Fluid]	A <sub>pk</sub>		1.5 / 2.7 / -	
<b>Thermal Data</b>				
Max. Winding Temperature (Sensor)	°C		120	
Thermal Resistance [Passive cooling / Fan / Fluid]	°K/W		6.4 / 1.9 / -	
Thermal Time Constant [Passive cooling / Fan / Fluid]	s		830 / 250 / -	
<b>Mechanical Data</b>				
Slider Length	mm	(in)	580	(23)
Slider Mass	g	(lb)	480	(1.06)

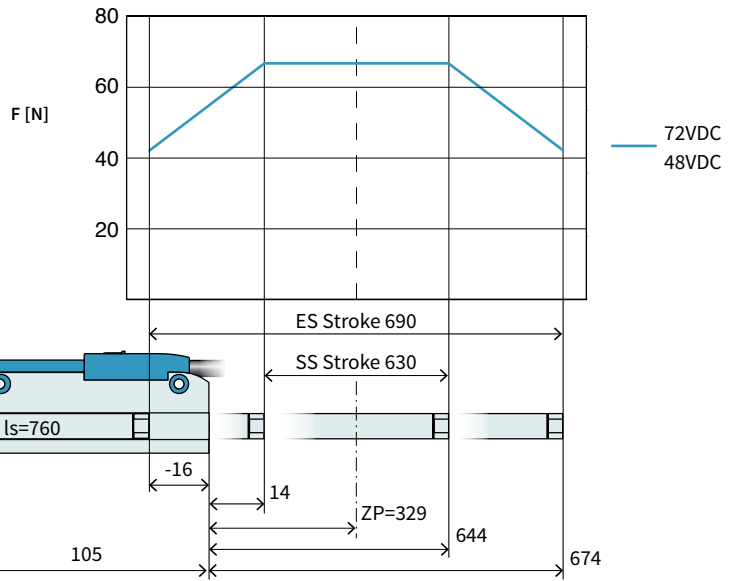


Item	Description	Item-No.
<b>PS02-23Sx80F-HP-K</b>	Stator HP, Cable -90°, 0°, +90°	<a href="#">0150-1285</a>
<b>PL01-12x580/540-HP</b>	Slider 'High Performance'	<a href="#">0150-1525</a>
<b>PL02-12x580/540-HP</b>	Slider 'heavy duty' 'High Performance'	<a href="#">0150-2520</a>
<b>PL01-12x580/540-HP-L*</b>	Slider 'High Performance' L'	<a href="#">0150-3694</a>

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

**P02-23Sx80F/630x690-HP**

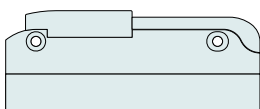
**Max. Stroke:** 690 mm  
**Peak Force:** 67 N



Dimensions in mm

Technical Data P02-23Sx80F/630x690-HP

Stroke			
Standard Stroke (SS)	mm (in)	630 (24.8)	
Extended Stroke (ES)	mm (in)	690 (27.19)	
Force			
Max. Force @ 48VDC	N (lbf)	67.1 (15.1)	
Max. Force @ 72VDC	N (lbf)	67.1 (15.1)	
Max. Cont. Force [Passive cooling / Fan / Fluid]	N (lbf)	13 / 24 / - (2.9 / 5.3 / -)	
Max. Border Force relative	%	63	
Force Constant	N/A <sub>pk</sub> (lbf/A <sub>pk</sub> )	8.95 (2.01)	
Velocity			
Max. Velocity @ 48VDC	m/s (in/s)	4.9 (189.9)	
Max. Velocity @ 72VDC	m/s (in/s)	7.3 (289.9)	
Position Detection			
Repeatability	mm (in)	±0.05 (±0.002)	
Linearity	%	± 0.15	
Electrical Data			
Max. Current @ 48VDC	A <sub>pk</sub>	7.4	
Max. Current @ 72VDC	A <sub>pk</sub>	7.4	
Max. Cont. Current [Passive cooling / Fan / Fluid]	A <sub>pk</sub>	1.5 / 2.7 / -	
Thermal Data			
Max. Winding Temperature (Sensor)	°C	120	
Thermal Resistance [Passive cooling / Fan / Fluid]	°K/W	6.4 / 1.9 / -	
Thermal Time Constant [Passive cooling / Fan / Fluid]	s	830 / 250 / -	
Mechanical Data			
Slider Length	mm (in)	760 (30)	
Slider Mass	g (lb)	630 (1.39)	

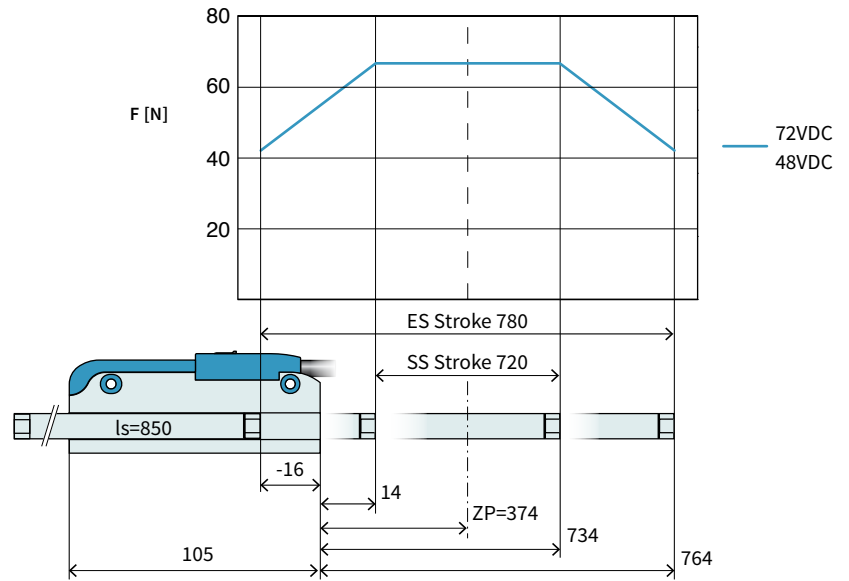


Item	Description	Item-No.
<b>PS02-23Sx80F-HP-K</b>	Stator HP, Cable -90°, 0°, +90°	<a href="#">0150-1285</a>
<b>PL01-12x760/720-HP</b>	Slider 'High Performance'	<a href="#">0150-1526</a>
<b>PL02-12x760/720-HP</b>	Slider 'heavy duty' 'High Performance'	<a href="#">0150-2521</a>
<b>PL01-12x760/720-HP-L*</b>	Slider 'High Performance L'	<a href="#">0150-3695</a>

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

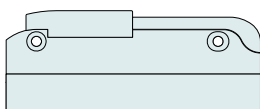
**P02-23Sx80F/720x780-HP**

**Max. Stroke:** 780 mm  
**Peak Force:** 67 N



Dimensions in mm

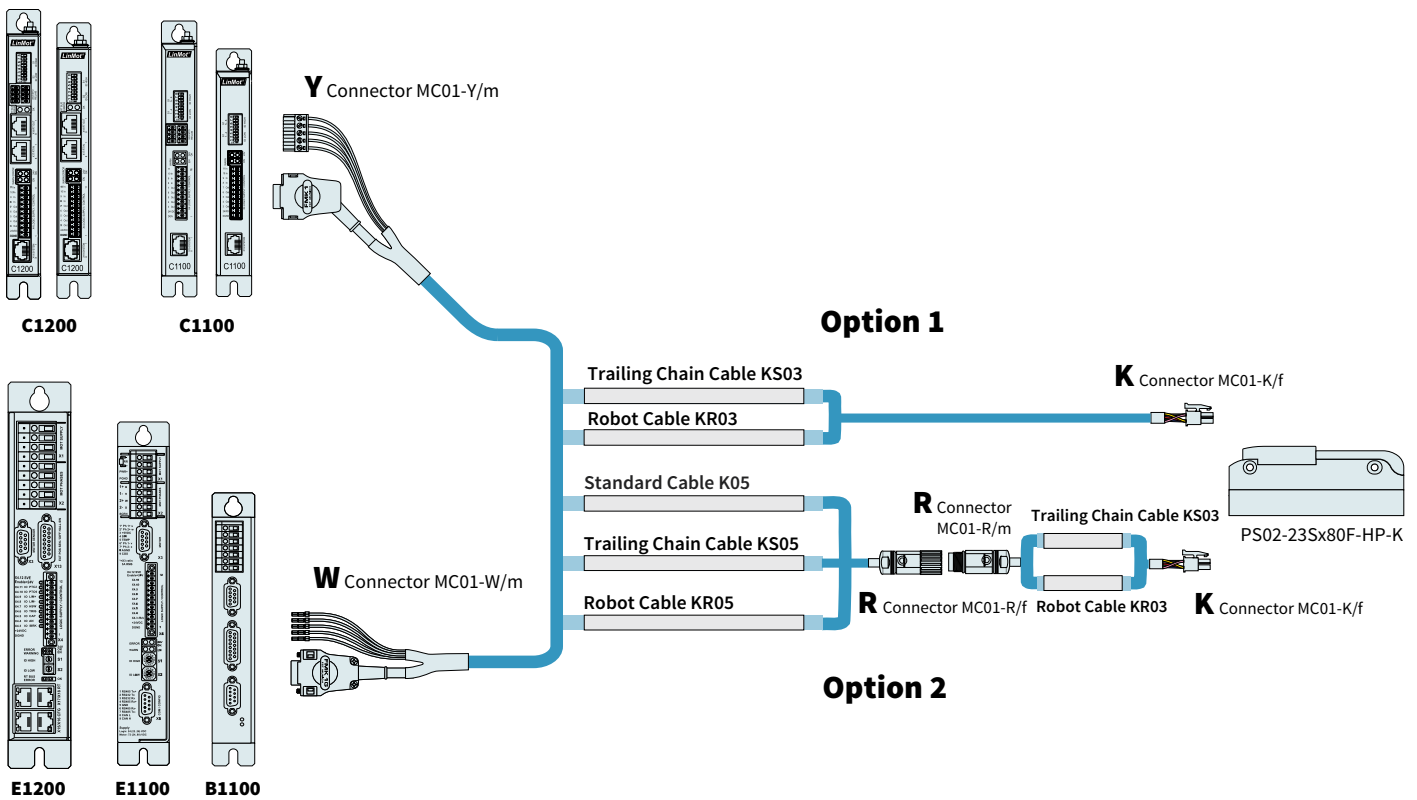
Technical Data P02-23Sx80F/720x780-HP				
<b>Stroke</b>				
Standard Stroke (SS)	mm	(in)	720	(28.3)
Extended Stroke (ES)	mm	(in)	780	(30.69)
<b>Force</b>				
Max. Force @ 48VDC	N	(lbf)	67.1	(15.1)
Max. Force @ 72VDC	N	(lbf)	67.1	(15.1)
Max. Cont. Force [Passive cooling / Fan / Fluid]	N	(lbf)	13 / 24 / -	(2.9 / 5.3 / -)
Max. Border Force relative	%		63	
Force Constant	N/A <sub>pk</sub>	(lbf/A <sub>pk</sub> )	8.95	(2.01)
<b>Velocity</b>				
Max. Velocity @ 48VDC	m/s	(in/s)	4.9	(189.9)
Max. Velocity @ 72VDC	m/s	(in/s)	7.3	(289.9)
<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>		7.4	
Max. Current @ 72VDC	A <sub>pk</sub>		7.4	
Max. Cont. Current [Passive cooling / Fan / Fluid]	A <sub>pk</sub>		1.5 / 2.7 / -	
<b>Thermal Data</b>				
Max. Winding Temperature (Sensor)	°C		120	
Thermal Resistance [Passive cooling / Fan / Fluid]	°K/W		6.4 / 1.9 / -	
Thermal Time Constant [Passive cooling / Fan / Fluid]	s		830 / 250 / -	
<b>Mechanical Data</b>				
Slider Length	mm	(in)	850	(33)
Slider Mass	g	(lb)	700	(1.54)



Item	Description	Item-No.
<b>PS02-23Sx80F-HP-K</b>	Stator HP, Cable -90°, 0°, +90°	<a href="#">0150-1285</a>
<b>PL01-12x850/810-HP</b>	Slider 'High Performance'	<a href="#">0150-1527</a>
<b>PL02-12x850/810-HP</b>	Slider 'heavy duty' 'High Performance'	<a href="#">0150-2516</a>
<b>PL01-12x850/810-HP-L*</b>	Slider 'High Performance L'	on request

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

**Motor Cable**



**ORDERING INFORMATION**

**OPTION 1 – TRAILING CHAIN CABLE / ROBOT CABLE**

Item	Description	Item-No.
<b>KS03-W-Fe/K-2</b>	Trailing Chain Cable W-Fe/K 2 m	<a href="#">0150-2187</a>
<b>KS03-W-Fe/K-4</b>	Trailing Chain Cable W-Fe/K 4 m	<a href="#">0150-2369</a>
<b>KS03-W-Fe/K-6</b>	Trailing Chain Cable W-Fe/K 6 m	<a href="#">0150-2370</a>
<b>KS03-W-Fe/K-</b>	Trailing Chain Cable W-Fe/K, Custom Length (max. 6m)	<a href="#">0150-3357</a>
<b>KS03-Y-Fe/K-2</b>	Trailing Chain Cable Y-Fe/K, 2 m	<a href="#">0150-2446</a>
<b>KS03-Y-Fe/K-4</b>	Trailing Chain Cable Y-Fe/K, 4 m	<a href="#">0150-2447</a>
<b>KS03-Y-Fe/K-6</b>	Trailing Chain Cable Y-Fe/K, 6 m	<a href="#">0150-2448</a>
<b>KS03-Y-Fe/K-</b>	Trailing Chain Cable Y-Fe/K, Custom Length (max. 6m)	<a href="#">0150-3516</a>
<b>KR03-Y-Fe/K-</b>	Robot Cable KR03-Y-Fe/K, Custom Length (max. 6m)	<a href="#">0150-3718</a>
<b>KR03-W-Fe/K-</b>	Robot Cable KR03-W-Fe/K, Custom Length (max. 6m)	<a href="#">0150-3755</a>

**OPTION 2 – STANDARD CABLE**

Item	Description	Item-No.
<b>K05-W/R-2</b>	Motor Cable W/R, 2 m	<a href="#">0150-2119</a>
<b>K05-W/R-4</b>	Motor Cable W/R, 4 m	<a href="#">0150-2120</a>
<b>K05-W/R-6</b>	Motor Cable W/R, 6 m	<a href="#">0150-2121</a>
<b>K05-W/R-8</b>	Motor Cable W/R, 8 m	<a href="#">0150-2122</a>
<b>K05-W/R-</b>	Motor Cable W/R, Custom length	<a href="#">0150-3262</a>
<b>K05-Y/R-2</b>	Motor Cable Y/R, 2 m	<a href="#">0150-2421</a>
<b>K05-Y/R-4</b>	Motor Cable Y/R, 4 m	<a href="#">0150-2422</a>
<b>K05-Y/R-6</b>	Motor Cable Y/R, 6 m	<a href="#">0150-2423</a>
<b>K05-Y/R-8</b>	Motor Cable Y/R, 8 m	<a href="#">0150-2424</a>
<b>K05-Y-Fe/R-</b>	Motor Cable Y/R, Custom length	<a href="#">0150-3501</a>

## OPTION 2 – TRAILING CHAIN CABLE

Item	Description	Item-No.
<b>KS05-W/R-4</b>	Trailing Chain Cable W/R, 4 m	<a href="#">0150-2106</a>
<b>KS05-W/R-6</b>	Trailing Chain Cable W/R, 6 m	<a href="#">0150-2131</a>
<b>KS05-W/R-8</b>	Trailing Chain Cable W/R, 8 m	<a href="#">0150-2107</a>
<b>KS05-W/R-</b>	Trailing Chain Cable W/R, Custom length	<a href="#">0150-3256</a>
<b>KS05-Y/R-4</b>	Trailing Chain Cable Y/R, 4 m	<a href="#">0150-2433</a>
<b>KS05-Y/R-6</b>	Trailing Chain Cable Y/R, 6 m	<a href="#">0150-2434</a>
<b>KS05-Y/R-8</b>	Trailing Chain Cable Y/R, 8 m	<a href="#">0150-2435</a>
<b>KS05-Y/R-</b>	Trailing Chain Cable Y/R, Custom length	<a href="#">0150-3507</a>

## OPTION 2 – ROBOT CABLE

Item	Description	Item-No.
<b>KR05-W/R-</b>	Robot Cable KR05-W/R, Custom length	<a href="#">0150-3336</a>
<b>KR05-Y-Fe/R-</b>	Robot Cable KR05-Y-Fe/R, Custom length	<a href="#">0150-3512</a>

## OPTION 2 – TRAILING CHAIN CABLE / ROBOT CABLE

Item	Description	Item-No.
<b>KS03-R/K-1</b>	Trailing Chain Cable R/K 1 m	<a href="#">0150-2185</a>
<b>KS03-R/K-2</b>	Trailing Chain Cable R/K 2 m	<a href="#">0150-2186</a>
<b>KS03-R/K-</b>	Trailing Chain Cable R/K, Custom length (max. 6m)	<a href="#">0150-3530</a>
<b>KR03-R/K-</b>	Robot Cable R/K, Custom length (max. 6m)	<a href="#">0150-3754</a>

## CONNECTOR &amp; CABLE (INDIVIDUAL)

Item	Description	Item-No.
<b>MC01-W/m</b>	Motor Connector W/m	<a href="#">0150-3140</a>
<b>MC01-Y-Fe/m</b>	Motor Connector Y-Fe/m	<a href="#">0150-3289</a>
<b>MC01-R/f</b>	Motor Connector R/f	<a href="#">0150-3129</a>
<b>MC01-K/f</b>	Motor Connector K (f)	<a href="#">0150-3345</a>
<b>K05-04/05</b>	Motor Cable per m	<a href="#">0150-1920</a>
<b>KS05-04/05</b>	Trailing Chain Cable per m	<a href="#">0150-1938</a>
<b>KR05-04/05</b>	Robot Cable per m	<a href="#">0150-1846</a>
<b>KS03-09</b>	Trailing Chain Cable per m (max. 6m connection length)	<a href="#">0150-2182</a>
<b>KR03-09</b>	Robot Cable per m	<a href="#">0150-2801</a>

**SLIDER MOUNTING**



Item	Description	Item-No.
<b>PLF01-12</b>	Fixed End Washer Set for 12 mm sliders	<a href="#">0150-3085</a>
<b>PLF01-12-Ni</b>	Fixed Bearing Set for 12 mm sliders, nickel-plated	<a href="#">0150-3573</a>
<b>PLL02-12</b>	Floating Bearing Set for PL01-12 sliders	<a href="#">0150-3111</a>

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 1mm incremental strip)	<a href="#">0150-1840</a>
<b>MB01-1000</b>	Magnetic incremental strip for MS01-1/D, per cm	<a href="#">0150-1963</a>
<b>KS025-D/D-Encoder</b>	Encoder Cable (Length in m)	<a href="#">0150-3166</a>
<b>KS025-D/D15-Encoder</b>	Encoder Cable (Length in m)	<a href="#">0150-3168</a>

FIND MORE PRODUCT DETAILS IN THE CHAPTER "ACCESSORIES".



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

FIND MORE PRODUCT DETAILS IN THE CHAPTER "ACCESSORIES".