

LINEAR MOTORS P10-70x400U



- ✓ 3 x 400VAC Technology
- ✓ Peak forces up to 2720 N
- ✓ Extremely high dynamic
- ✓ Separate connector for sensor and power cable
- ✓ Can also be controlled by standard third-party servo drives

LINEAR MOTORS P10-70x400U

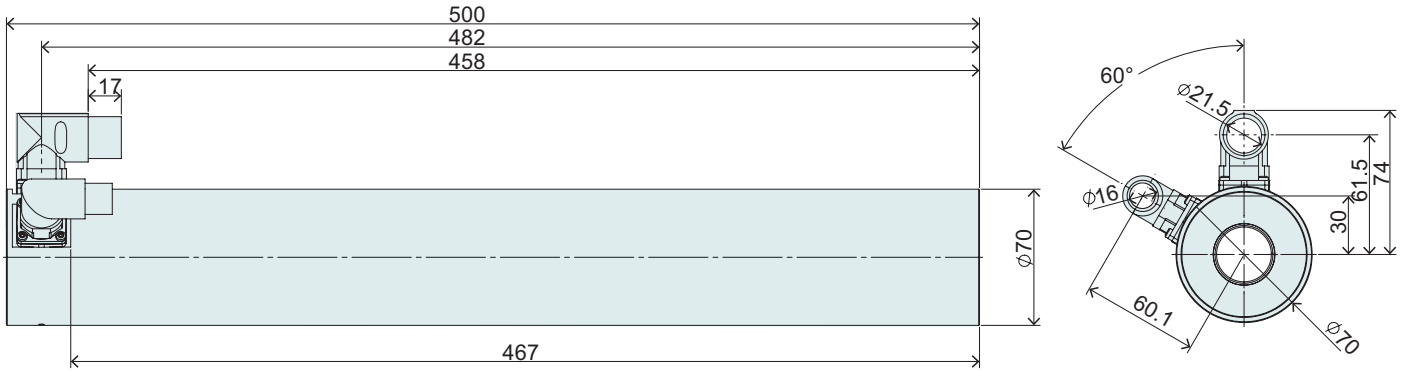
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MOTOR FAMILY P10-70x400U

Technical Data			
Stroke			
Max. Stroke (ES)	mm (in)		1450 (57.1)
Force			
Max. Force @ 1x230VAC	N (lbf)		2150 (483)
Max. Force @ 3x400VAC	N (lbf)		2720 (611)
Max. Cont. Force [Passive cooling / Fan / Fluid]	N (lbf)		320 / 500 / 890 (73 / 110 / 200)
Max. Border Force relative	%		100
Force Constant 1	N/A _{pk} (lbf/A _{pk})		80 (18)
Force Constant 2	N/A _{rms} (lbf/A _{rms})		113 (25.4)
Velocity			
Max. Velocity @ 1x230VAC	m/s (in/s)		2.2 (89.9)
Max. Velocity @ 3x400VAC	m/s (in/s)		3.9 (159.9)
Position Detection			
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)
Electrical Data			
Max. Current @ 1x230VAC	A _{pk} / A _{rms}		26.8 / 18.9
Max. Current @ 3x400VAC	A _{pk} / A _{rms}		33.9 / 23.9
Max. Cont. Current 1 [Passive cooling / Fan / Fluid]	A _{pk}		4 / 6.2 / 11
Max. Cont. Current 2 [Passive cooling / Fan / Fluid]	A _{rms}		2.9 / 4.4 / 7.9
Back EMF Constant	V _{pk} / (m/s) (V _{pk} / (in/s))		92.4 (2.35)
Terminal Resistance 25 °C / 120 °C	Ohm		6.9 / 9.5
Terminal Inductivity	mH		13
Magnetic Period	mm (in)		40 (1.57)
Thermal Data			
Max. Winding Temperature (Sensor)	°C		90
Thermal Resistance [Passive cooling / Fan / Fluid]	°K/W		0.52 / 0.22 / 0.068
Thermal Time Constant [Passive cooling / Fan / Fluid]	s		2100 / 500 / 100
Mechanical Data			
Stator Diameter	mm (in)		70 (2.8)
Stator Length	mm (in)		500 (20)
Stator Mass	g (lb)		8250 (18.15)
Slider Diameter	mm (in)		28 (1.1)
Slider Length	mm (in)		590 - 1990 (23 - 78)
Slider Mass	g (lb)		2770 - 9350 (6.09 - 20.57)
IP Code			IP 65
Certification			
UL	File-No.		E354430

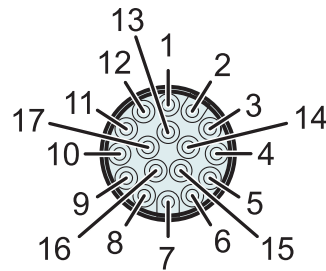
STATOR



Item	Description	Item-No.
PS10-70x400U-BL-QJ	Stator 3x400VAC, LinMot Encoder	0150-1294
PS10-70x400U-BL-QJ-D01	Stator 3x400VAC, Sin/Cos Encoder 1Vpp, KTY	0150-2286
PS10-70x400U-BL-QJ-D02	Stator 3x400VAC, Sin/Cos Encoder 1Vpp, PTC	0150-2363
PS10-70x400U-BL-QJ-D03	Stator 3x400VAC, Sin/Cos 1Vpp, KTY on power connector	0150-2712

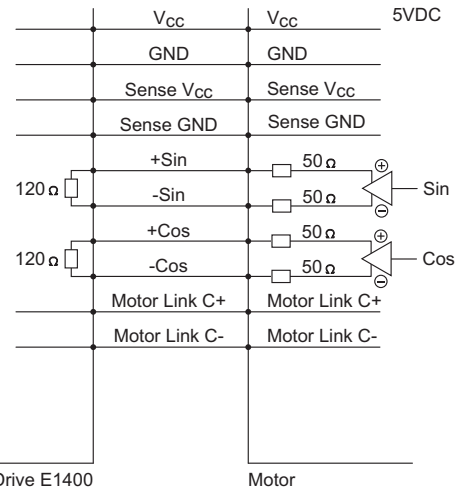
CONNECTOR PS10-70x400U-BL-QJ

Motor Connector Wiring		Connector Encoder J	Wire Color Motor Cable
+5 VDC	Supply	1	red
GND	Supply	2	black
Sense +5V	Supply Sense	3	white
Sense GND	Supply Sense	4	brown
Mot. Link C+	Communication	5	pink
Mot. Link C-	Communication	6	grey
Sin+	Encoder	7	yellow
Sin-	Encoder	8	orange
Cos+	Encoder	9	green
Cos-	Encoder	10	blue
n. c.	n. c.	11	n. c.
n. c.	n. c.	12	n. c.
n. c.	n. c.	13	n. c.
n. c.	n. c.	14	n. c.
n. c.	n. c.	15	n. c.
n. c.	n. c.	16	n. c.
n. c.	n. c.	17	n. c.



Connector Encoder J

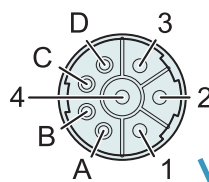
View: Motor connector, plug side



LinMot Drive E1400

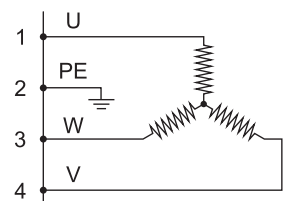
Motor

Motor Connector Wiring	Connector Power Q	Wire Color Motor Cable
Phase U	1	red
PE	2	yellow-green
Phase W	3	green
Phase V	4	blue
n. c.	A	n. c.
n. c.	B	n. c.
n. c.	C	n. c.
n. c.	D	n. c.

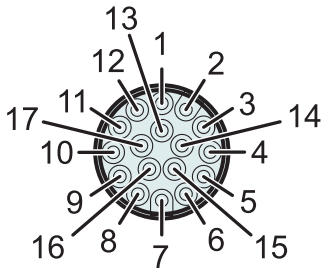


Connector Power Q

View: Motor connector, plug side



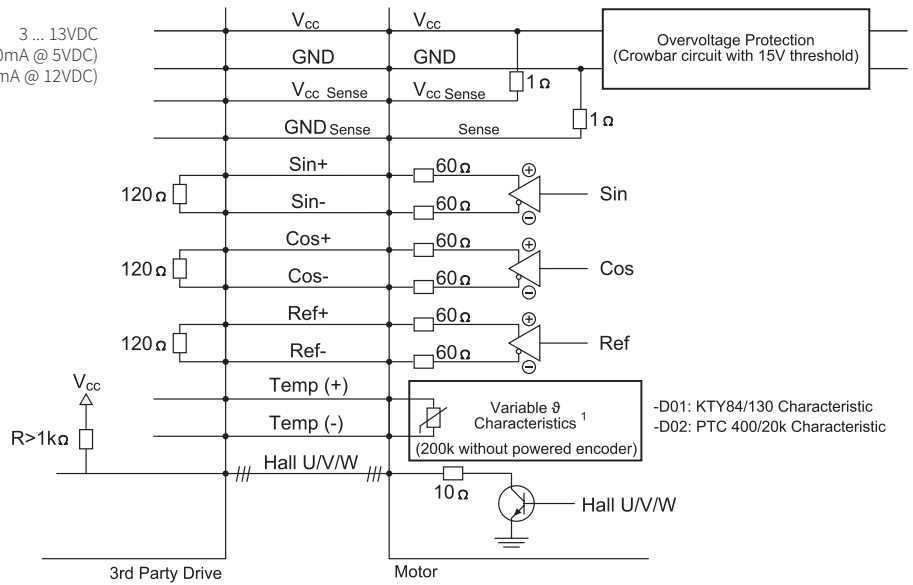
CONNECTOR PS10-70x400U-BL-QJ-D01/02



Connector Encoder J

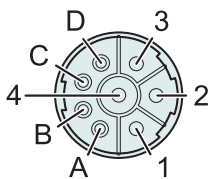
View: Motor connector, plug side

3 ... 13VDC
(I_{max} < 150mA @ 5VDC)
(I_{max} < 80mA @ 12VDC)



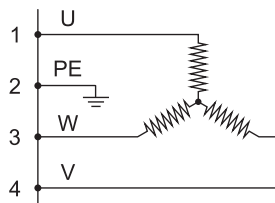
Motor Connector Wiring				
PS10-70x400U-BL-QJ-D01	PS10-70x400U-BL-QJ-D02	Function	Connector Encoder J	Wire Color Motor Cable
3 ... 13 VDC	3 ... 13 VDC	Supply	1	white
GND	GND	Supply	2	brown
V _{cc} Sense (optional)	V _{cc} Sense (optional)	Supply Sense	3	green
GND Sense (optional)	GND Sense (optional)	Supply Sense	4	yellow
Do not connect	Do not connect	-	5	-
Do not connect	Do not connect	-	6	-
Sin+	Sin+	Encoder 1 V _{pp}	7	grey
Sin-	Sin-	Encoder 1 V _{pp}	8	pink
Cos+	Cos+	Encoder 1 V _{pp}	9	blue
Cos-	Cos-	Encoder 1 V _{pp}	10	red
Ref+	Ref+	Encoder 1 V _{pp}	11	black
Ref-	Ref-	Encoder 1 V _{pp}	12	violett
Hall U	Hall U	Encoder (open collector)	13	grey-red
Hall V	Hall V	Encoder (open collector)	14	red-blue
Hall W	Hall W	Encoder (open collector)	15	white-green
Temp+ (KTY84/130 Char.)	Temp+ (PTC 400/20k Char.)	Temperature ¹	16	yellow-brown
Temp- (KTY84/130 Char.)	Temp- (PTC 400/20k Char.)	Temperature ¹	17	white-yellow

1) The temperature evaluation circuit must be powered from the encoder supply and must be at the same potential. The grounds of the temperature evaluation circuit and the encoder have to be connected. The encoder must have been powered on for at least 50 ms, before valid temperatures can be measured. If the encoder is powered off, 200k Ohms are measured between Pins 16 and 17. The maximum voltage between Pin 16 and 17 must not exceed 16 VDC. The maximum current must not exceed 15 mA.



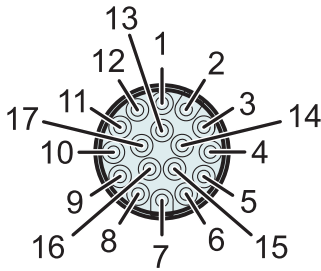
Connector Power Q

View: Motor connector, plug side



Mmotor Steckerbelegung			
PS10-70x400U-BL-QJ-D01	PS10-70x400U-BL-QJ-D02	Wire Color Motor Cable	Connector Power Q
Phase U	Phase U	red	1
PE	PE	yellow-green	2
Phase W	Phase W	green	3
Phase V	Phase V	blue	4
n. c.	n. c.	n. c.	A
n. c.	n. c.	n. c.	B
n. c.	n. c.	n. c.	C
n. c.	n. c.	n. c.	D

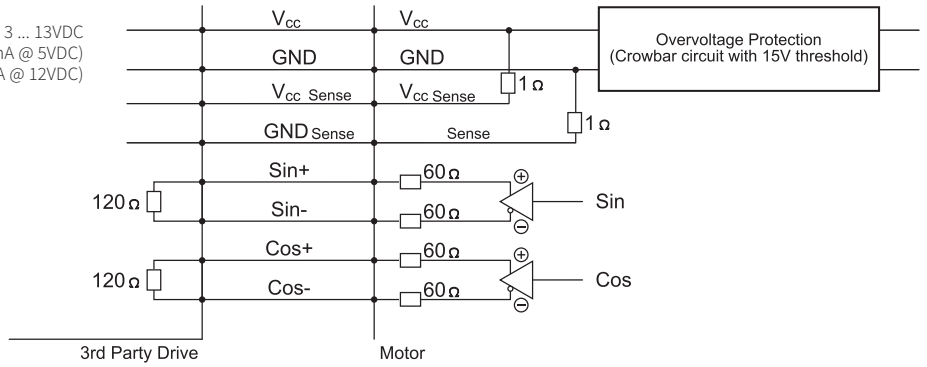
CONNECTOR PS10-70x400U-BL-QJ-D03



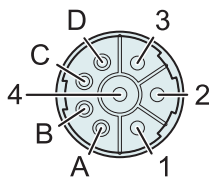
Connector Encoder J

View: Motor connector, plug side

3 ... 13VDC
($I_{max} < 150\text{mA}$ @ 5VDC)
($I_{max} < 80\text{mA}$ @ 12VDC)

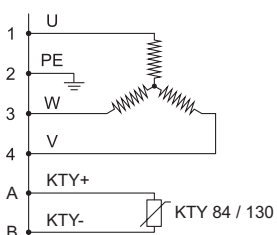


Motor Connector Wiring		Wire Color Motor Cable	Connector Encoder J
3 ... 13VDC	Supply	red	1
GND	Supply	black	2
Vcc Sense (optional)	Supply Sense	white	3
GND Sense (optional)	Supply Sense	brown	4
Do not connect	-	-	5
Do not connect	-	-	6
Sin+	Encoder 1 Vpp	yellow	7
Sin-	Encoder 1 Vpp	orange	8
Cos+	Encoder 1 Vpp	green	9
Cos-	Encoder 1 Vpp	blue	10
n. c.	-	n. c.	11
n. c.	-	n. c.	12
n. c.	-	n. c.	13
Do not connect	-	n. c.	14
n. c.	-	n. c.	15
n. c.	-	n. c.	16
n. c.	-	n. c.	17



Connector Power Q

View: Motor connector, plug side

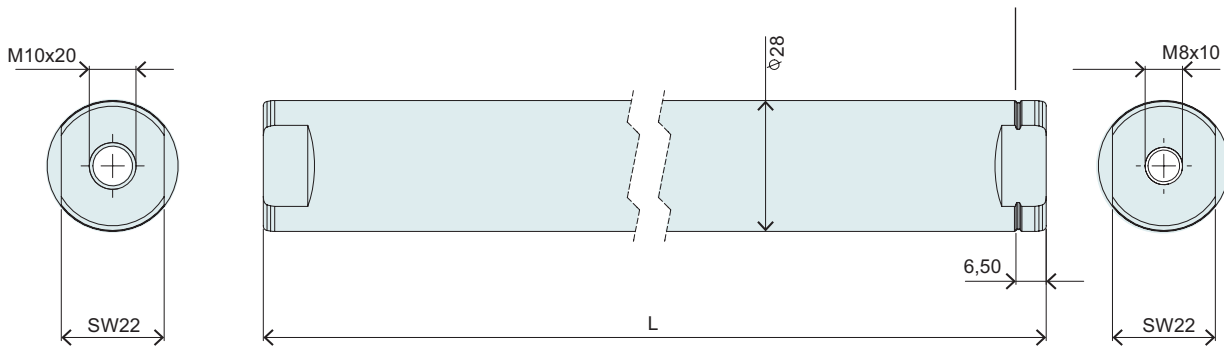


Motor Connector Wiring	Connector Power Q	Wire Color Motor Cable
Phase U	1	red (previously: black 1)
PE	2	yellow-green
Phase W	3	green (previously: black 3)
Phase V	4	blue (previously: black 2)
KTY +	A	purple (previously: black 5)
KTY -	B	grey (previously: black 6)
n. c.	C	yellow (previously: black 7)
n. c.	D	brown (previously: black 8)

SLIDER

Slider Standard

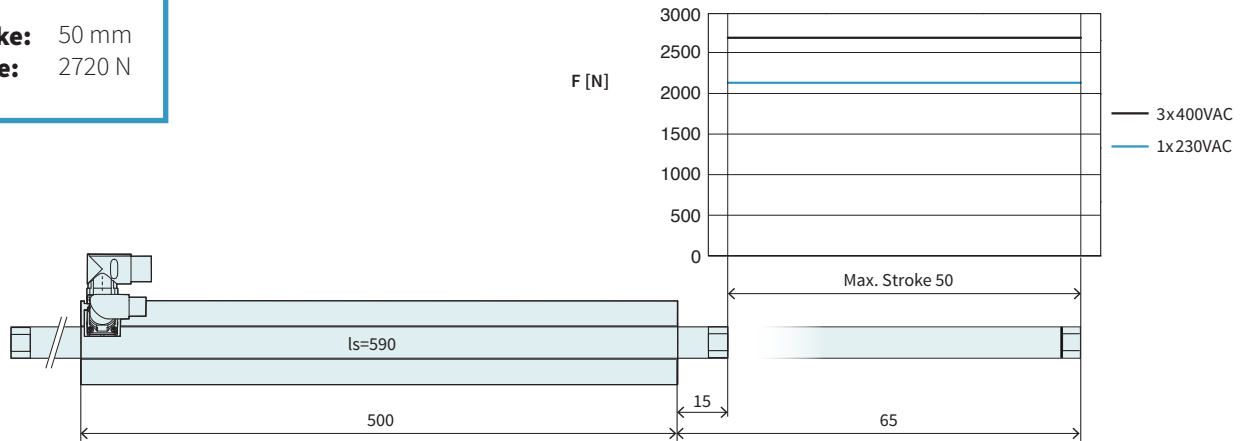
Number of grooves determines the slider type (see chapter 2 / slider) and marks the front end.



Slider Standard			
Item	Description	Max. Stroke [mm]	Item-No.
PL10-28x590/540	Slider for P10-70 'standard'	50	0150-2196
PL10-28x690/640	Slider for P10-70 'standard'	150	0150-2197
PL10-28x790/740	Slider for P10-70 'standard'	250	0150-2198
PL10-28x890/840	Slider for P10-70 'standard'	350	0150-2199
PL10-28x990/940	Slider for P10-70 'standard'	450	0150-2203
PL10-28x1190/1140	Slider for P10-70 'standard'	650	0150-2204
PL10-28x1390/1340	Slider for P10-70 'standard'	850	0150-2205
PL10-28x1590/1540	Slider for P10-70 'standard'	1050	0150-2206
PL10-28x1790/1740	Slider for P10-70 'standard'	1250	0150-2207
PL10-28x1990/1940	Slider for P10-70 'standard'	1450	0150-2208

P10-70x400U/50-BL-QJ

Max. Stroke: 50 mm
Peak Force: 2720 N



Dimensions in mm

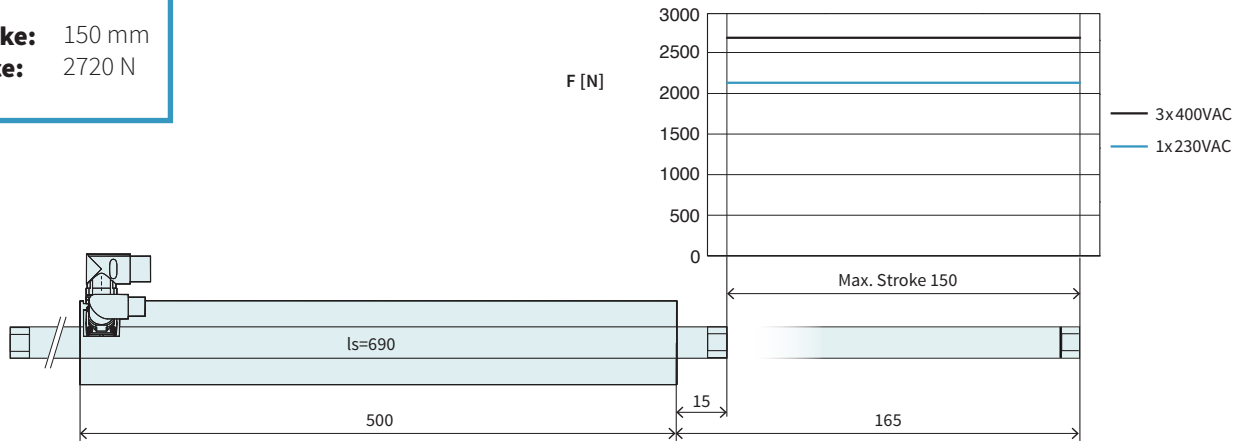
Technical Data P10-70x400U/50			
Stroke			
Max. Stroke	mm (in)	50	(1.96)
Force			
Max. Force @ 1x230VAC	N (lbf)	2150	(483)
Max. Force @ 3x400VAC	N (lbf)	2720	(611)
Max. Cont. Force [Passive cooling / Fan / Fluid]	N (lbf)	320 / 500 / 890	(73 / 110 / 200)
Max. Border Force relative	%	100	
Force Constant 1	N/A _{pk} (lbf/A _{pk})	80	(18)
Force Constant 2	N/A _{rms} (lbf/A _{rms})	113	(25.4)
Velocity			
Max. Velocity @ 1x230VAC	m/s (in/s)	2.2	(89.9)
Max. Velocity @ 3x400VAC	m/s (in/s)	3.9	(3.9)
Position Detection			
Repeatability	mm (in)	±0.05	(±0.002)
Linearity	%	± 1.1	
Electrical Data			
Max. Current @ 1x230VAC	A _{pk} / A _{rms}	26.8 / 18.9	
Max. Current @ 3x400VAC	A _{pk} / A _{rms}	33.9 / 23.9	
Max. Cont. Current 1 [Passive cooling / Fan / Fluid]	A _{pk}	4 / 6.2 / 11	
Max. Cont. Current 2 [Passive cooling / Fan / Fluid]	A _{rms}	2.9 / 4.4 / 7.9	
Thermal Data			
Max. Winding Temperature (Sensor)	°C	90	
Thermal Resistance [Passive cooling / Fan / Fluid]	°K/W	0.52 / 0.22 / 0.068	
Thermal Time Constant [Passive cooling / Fan / Fluid]	s	2100 / 500 / 100	
Mechanical Data			
Slider Length	mm (in)	590	(23)
Slider Mass	g (lb)	2770	(6.09)



Item	Description	Item-No.
PS10-70x400U-BL-QJ	Stator 3x400VAC, LinMot Encoder	0150-1294
PS10-70x400U-BL-QJ-D01	Stator 3x400VAC, Sin/Cos Encoder 1Vpp, KTY	0150-2286
PS10-70x400U-BL-QJ-D02	Stator 3x400VAC, Sin/Cos Encoder 1Vpp, PTC	0150-2363
PS10-70x400U-BL-QJ-D03	Stator 3x400VAC, Sin/Cos 1Vpp, KTY on power connector	0150-2712
PL10-28x590/540	Slider for P10-70 'standard'	0150-2196

P10-70x400U/150-BL-QJ

Max. Stroke: 150 mm
Peak Force: 2720 N



Dimensions in mm

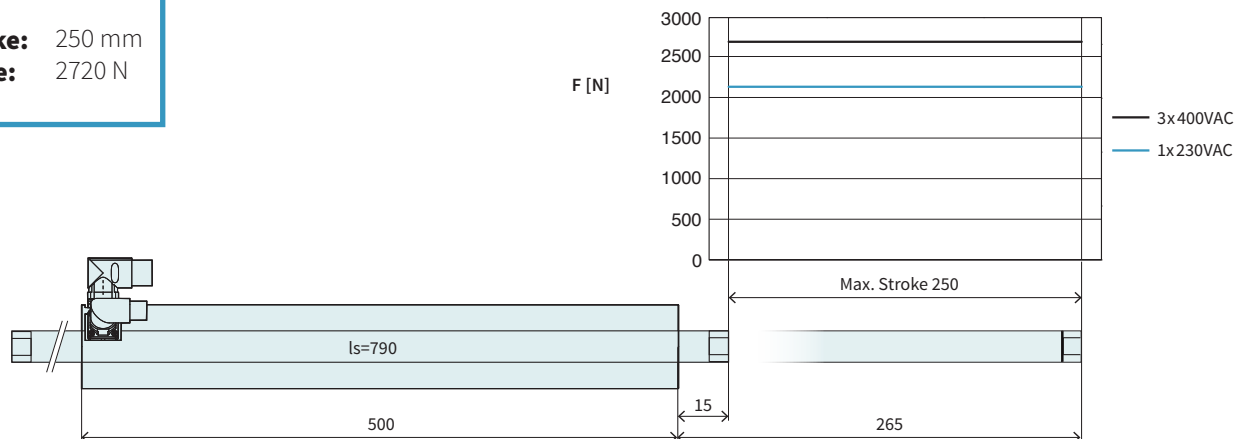
Technical Data P10-70x400U/150				
Stroke				
Max. Stroke	mm	(in)	150	(5.91)
Force				
Max. Force @ 1x230VAC	N	(lbf)	2150	(483)
Max. Force @ 3x400VAC	N	(lbf)	2720	(611)
Max. Cont. Force [Passive cooling / Fan / Fluid]	N	(lbf)	320 / 500 / 890	(73 / 110 / 200)
Max. Border Force relative	%		100	
Force Constant 1	N/A _{pk}	(lbf/A _{pk})	80	(18)
Force Constant 2	N/A _{rms}	(lbf/A _{rms})	113	(25.4)
Velocity				
Max. Velocity @ 1x230VAC	m/s	(in/s)	2.2	(89.9)
Max. Velocity @ 3x400VAC	m/s	(in/s)	3.9	(3.9)
Position Detection				
Repeatability	mm	(in)	±0.05	(±0.002)
Linearity	%		±0.45	
Electrical Data				
Max. Current @ 1x230VAC	A _{pk} / A _{rms}		26.8 / 18.9	
Max. Current @ 3x400VAC	A _{pk} / A _{rms}		33.9 / 23.9	
Max. Cont. Current 1 [Passive cooling / Fan / Fluid]	A _{pk}		4 / 6.2 / 11	
Max. Cont. Current 2 [Passive cooling / Fan / Fluid]	A _{rms}		2.9 / 4.4 / 7.9	
Thermal Data				
Max. Winding Temperature (Sensor)	°C		90	
Thermal Resistance [Passive cooling / Fan / Fluid]	°K/W		0.52 / 0.22 / 0.068	
Thermal Time Constant [Passive cooling / Fan / Fluid]	s		2100 / 500 / 100	
Mechanical Data				
Slider Length	mm	(in)	690	(27)
Slider Mass	g	(lb)	3240	(7.13)



Item	Description	Item-No.
PS10-70x400U-BL-QJ	Stator 3x400VAC, LinMot Encoder	0150-1294
PS10-70x400U-BL-QJ-D01	Stator 3x400VAC, Sin/Cos Encoder 1Vpp, KTY	0150-2286
PS10-70x400U-BL-QJ-D02	Stator 3x400VAC, Sin/Cos Encoder 1Vpp, PTC	0150-2363
PS10-70x400U-BL-QJ-D03	Stator 3x400VAC, Sin/Cos 1Vpp, KTY on power connector	0150-2712
PL10-28x690/640	Slider for P10-70 'standard'	0150-2197

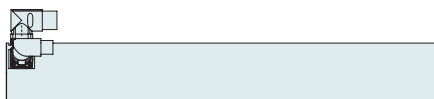
P10-70x400U/250-BL-QJ

Max. Stroke: 250 mm
Peak Force: 2720 N



Dimensions in mm

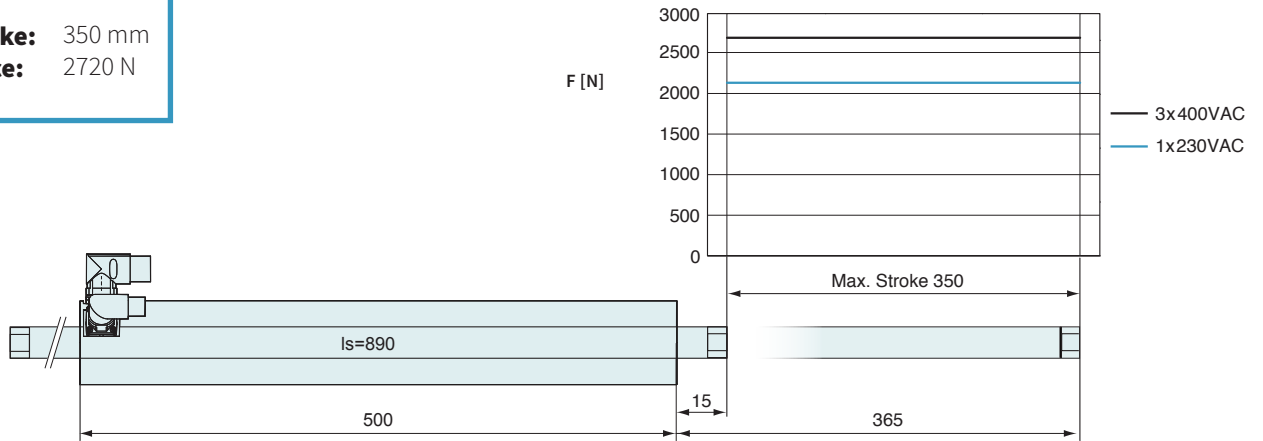
Technical Data P10-70x400U/250				
Stroke				
Max. Stroke	mm	(in)	250	(9.83)
Force				
Max. Force @ 1x230VAC	N	(lbf)	2150	(483)
Max. Force @ 3x400VAC	N	(lbf)	2720	(611)
Max. Cont. Force [Passive cooling / Fan / Fluid]	N	(lbf)	320 / 500 / 890	(73 / 110 / 200)
Max. Border Force relative	%		100	
Force Constant 1	N/A _{pk}	(lbf/A _{pk})	80	(18)
Force Constant 2	N/A _{rms}	(lbf/A _{rms})	113	(25.4)
Velocity				
Max. Velocity @ 1x230VAC	m/s	(in/s)	2.2	(89.9)
Max. Velocity @ 3x400VAC	m/s	(in/s)	3.9	(3.9)
Position Detection				
Repeatability	mm	(in)	±0.05	(±0.002)
Linearity	%		± 0.3	
Electrical Data				
Max. Current @ 1x230VAC	A _{pk} / A _{rms}		26.8 / 18.9	
Max. Current @ 3x400VAC	A _{pk} / A _{rms}		33.9 / 23.9	
Max. Cont. Current 1 [Passive cooling / Fan / Fluid]	A _{pk}		4 / 6.2 / 11	
Max. Cont. Current 2 [Passive cooling / Fan / Fluid]	A _{rms}		2.9 / 4.4 / 7.9	
Thermal Data				
Max. Winding Temperature (Sensor)	°C		90	
Thermal Resistance [Passive cooling / Fan / Fluid]	°K/W		0.52 / 0.22 / 0.068	
Thermal Time Constant [Passive cooling / Fan / Fluid]	s		2100 / 500 / 100	
Mechanical Data				
Slider Length	mm	(in)	790	(31)
Slider Mass	g	(lb)	3710	(8.16)



Item	Description	Item-No.
PS10-70x400U-BL-QJ	Stator 3x400VAC, LinMot Encoder	0150-1294
PS10-70x400U-BL-QJ-D01	Stator 3x400VAC, Sin/Cos Encoder 1Vpp, KTY	0150-2286
PS10-70x400U-BL-QJ-D02	Stator 3x400VAC, Sin/Cos Encoder 1Vpp, PTC	0150-2363
PS10-70x400U-BL-QJ-D03	Stator 3x400VAC, Sin/Cos 1Vpp, KTY on power connector	0150-2712
PL10-28x790/740	Slider for P10-70 'standard'	0150-2198

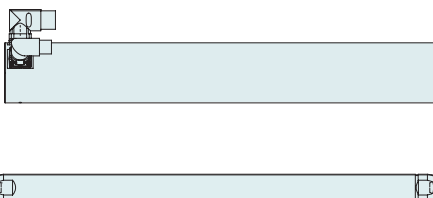
P10-70x400U/350-BL-QJ

Max. Stroke: 350 mm
Peak Force: 2720 N



Dimensions in mm

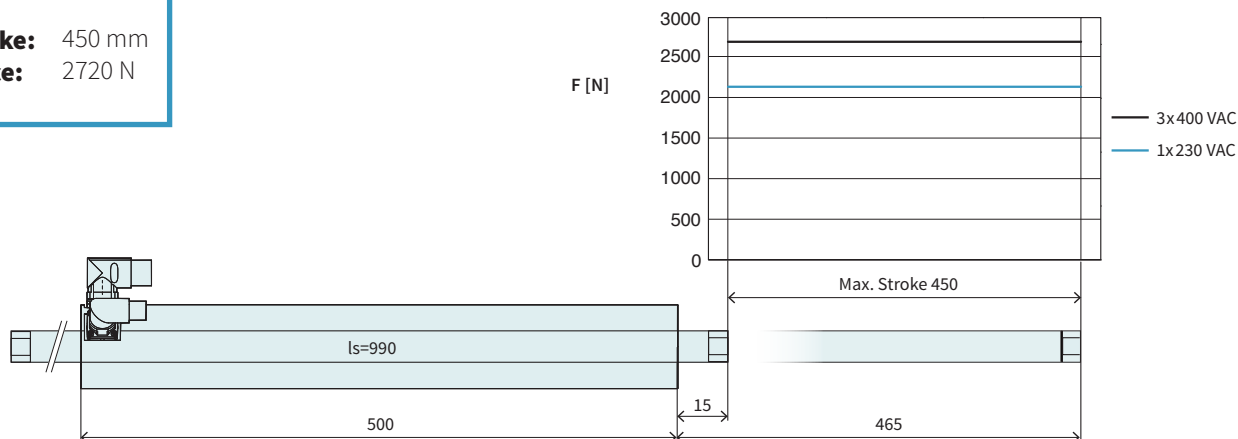
Technical Data P10-70x400U/350			
Stroke			
Max. Stroke	mm (in)		350 (13.8)
Force			
Max. Force @ 1x230VAC	N (lbf)		2150 (483)
Max. Force @ 3x400VAC	N (lbf)		2720 (611)
Max. Cont. Force [Passive cooling / Fan / Fluid]	N (lbf)		320 / 500 / 890 (73 / 110 / 200)
Max. Border Force relative	%		100
Force Constant 1	N/A _{pk} (lbf/A _{pk})		80 (18)
Force Constant 2	N/A _{rms} (lbf/A _{rms})		113 (25.4)
Velocity			
Max. Velocity @ 1x230VAC	m/s (in/s)		2.2 (89.9)
Max. Velocity @ 3x400VAC	m/s (in/s)		3.9 (3.9)
Position Detection			
Repeatability	mm (in)		±0.05 (±0.002)
Linearity	%		± 0.25
Electrical Data			
Max. Current @ 1x230VAC	A _{pk} / A _{rms}		26.8 / 18.9
Max. Current @ 3x400VAC	A _{pk} / A _{rms}		33.9 / 23.9
Max. Cont. Current 1 [Passive cooling / Fan / Fluid]	A _{pk}		4 / 6.2 / 11
Max. Cont. Current 2 [Passive cooling / Fan / Fluid]	A _{rms}		2.9 / 4.4 / 7.9
Thermal Data			
Max. Winding Temperature (Sensor)	°C		90
Thermal Resistance [Passive cooling / Fan / Fluid]	°K/W		0.52 / 0.22 / 0.068
Thermal Time Constant [Passive cooling / Fan / Fluid]	s		2100 / 500 / 100
Mechanical Data			
Slider Length	mm (in)		890 (35)
Slider Mass	g (lb)		4180 (9.2)



Item	Description	Item-No.
PS10-70x400U-BL-QJ	Stator 3x400VAC, LinMot Encoder	0150-1294
PS10-70x400U-BL-QJ-D01	Stator 3x400VAC, Sin/Cos Encoder 1Vpp, KTY	0150-2286
PS10-70x400U-BL-QJ-D02	Stator 3x400VAC, Sin/Cos Encoder 1Vpp, PTC	0150-2363
PS10-70x400U-BL-QJ-D03	Stator 3x400VAC, Sin/Cos 1Vpp, KTY on power connector	0150-2712
PL10-28x890/840	Slider for P10-70 'standard'	0150-2199

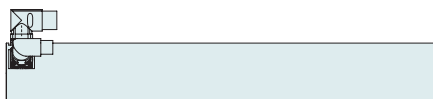
P10-70x400U/450-BL-QJ

Max. Stroke: 450 mm
Peak Force: 2720 N



Dimensions in mm

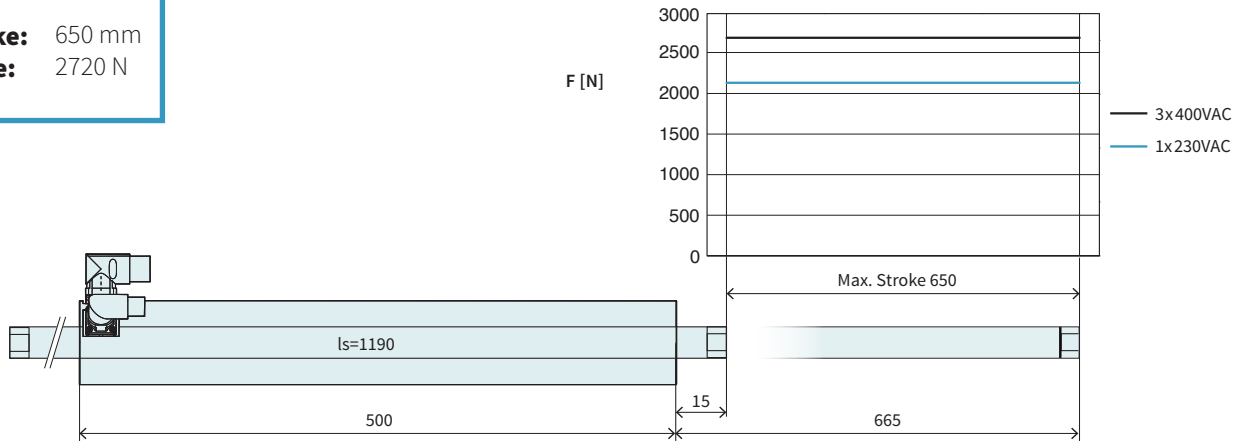
Technical Data P10-70x400U/450				
Stroke				
Max. Stroke	mm	(in)	450	(17.69)
Force				
Max. Force @ 1x230VAC	N	(lbf)	2150	(483)
Max. Force @ 3x400VAC	N	(lbf)	2720	(611)
Max. Cont. Force [Passive cooling / Fan / Fluid]	N	(lbf)	320 / 500 / 890	(73 / 110 / 200)
Max. Border Force relative	%		100	
Force Constant 1	N/A _{pk}	(lbf/A _{pk})	80	(18)
Force Constant 2	N/A _{rms}	(lbf/A _{rms})	113	(25.4)
Velocity				
Max. Velocity @ 1x230VAC	m/s	(in/s)	2.2	(89.9)
Max. Velocity @ 3x400VAC	m/s	(in/s)	3.9	(3.9)
Position Detection				
Repeatability	mm	(in)	±0.05	(±0.002)
Linearity	%		± 0.2	
Electrical Data				
Max. Current @ 1x230VAC	A _{pk} / A _{rms}		26.8 / 18.9	
Max. Current @ 3x400VAC	A _{pk} / A _{rms}		33.9 / 23.9	
Max. Cont. Current 1 [Passive cooling / Fan / Fluid]	A _{pk}		4 / 6.2 / 11	
Max. Cont. Current 2 [Passive cooling / Fan / Fluid]	A _{rms}		2.9 / 4.4 / 7.9	
Thermal Data				
Max. Winding Temperature (Sensor)	°C		90	
Thermal Resistance [Passive cooling / Fan / Fluid]	°K/W		0.52 / 0.22 / 0.068	
Thermal Time Constant [Passive cooling / Fan / Fluid]	s		2100 / 500 / 100	
Mechanical Data				
Slider Length	mm	(in)	990	(39)
Slider Mass	g	(lb)	4650	(10.23)



Item	Description	Item-No.
PS10-70x400U-BL-QJ	Stator 3x400VAC, LinMot Encoder	0150-1294
PS10-70x400U-BL-QJ-D01	Stator 3x400VAC, Sin/Cos Encoder 1Vpp, KTY	0150-2286
PS10-70x400U-BL-QJ-D02	Stator 3x400VAC, Sin/Cos Encoder 1Vpp, PTC	0150-2363
PS10-70x400U-BL-QJ-D03	Stator 3x400VAC, Sin/Cos 1Vpp, KTY on power connector	0150-2712
PL10-28x990/940	Slider for P10-70 'standard'	0150-2203

P10-70x400U/650-BL-QJ

Max. Stroke: 650 mm
Peak Force: 2720 N



Dimensions in mm

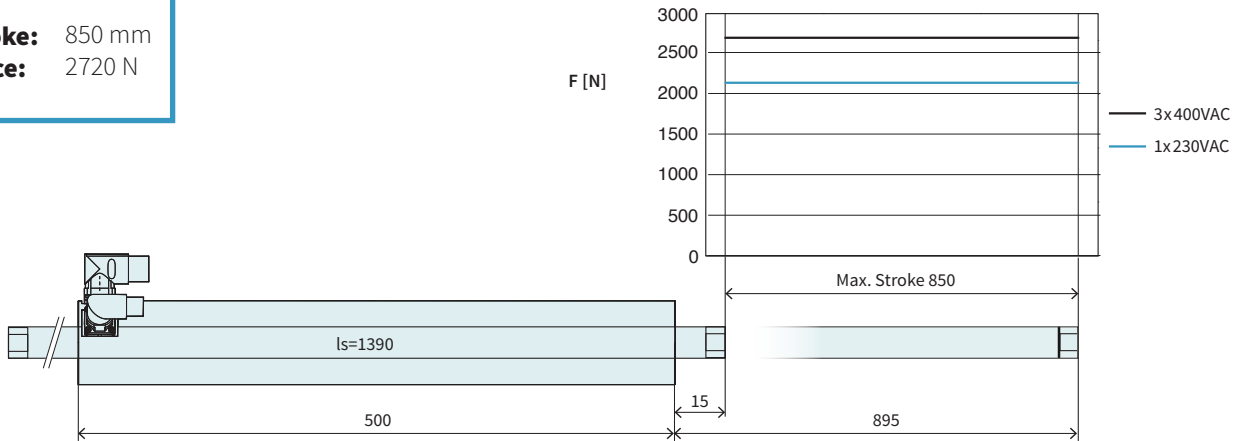
Technical Data P10-70x400U/650			
Stroke			
Max. Stroke	mm (in)	650 (25.6)	
Force			
Max. Force @ 1x230VAC	N (lbf)	2150 (483)	
Max. Force @ 3x400VAC	N (lbf)	2720 (611)	
Max. Cont. Force [Passive cooling / Fan / Fluid]	N (lbf)	320 / 500 / 890 (73 / 110 / 200)	
Max. Border Force relative	%	100	
Force Constant 1	N/A _{pk} (lbf/A _{pk})	80 (18)	
Force Constant 2	N/A _{rms} (lbf/A _{rms})	113 (25.4)	
Velocity			
Max. Velocity @ 1x230VAC	m/s (in/s)	2.2 (89.9)	
Max. Velocity @ 3x400VAC	m/s (in/s)	3.9 (3.9)	
Position Detection			
Repeatability	mm (in)	±0.05 (±0.002)	
Linearity	%	± 0.2	
Electrical Data			
Max. Current @ 1x230VAC	A _{pk} / A _{rms}	26.8 / 18.9	
Max. Current @ 3x400VAC	A _{pk} / A _{rms}	33.9 / 23.9	
Max. Cont. Current 1 [Passive cooling / Fan / Fluid]	A _{pk}	4 / 6.2 / 11	
Max. Cont. Current 2 [Passive cooling / Fan / Fluid]	A _{rms}	2.9 / 4.4 / 7.9	
Thermal Data			
Max. Winding Temperature (Sensor)	°C	90	
Thermal Resistance [Passive cooling / Fan / Fluid]	°K/W	0.52 / 0.22 / 0.068	
Thermal Time Constant [Passive cooling / Fan / Fluid]	s	2100 / 500 / 100	
Mechanical Data			
Slider Length	mm (in)	1190 (47)	
Slider Mass	g (lb)	5590 (12.3)	



Item	Description	Item-No.
PS10-70x400U-BL-QJ	Stator 3x400VAC, LinMot Encoder	0150-1294
PS10-70x400U-BL-QJ-D01	Stator 3x400VAC, Sin/Cos Encoder 1Vpp, KTY	0150-2286
PS10-70x400U-BL-QJ-D02	Stator 3x400VAC, Sin/Cos Encoder 1Vpp, PTC	0150-2363
PS10-70x400U-BL-QJ-D03	Stator 3x400VAC, Sin/Cos 1Vpp, KTY on power connector	0150-2712
PL10-28x1190/1140	Slider for P10-70 'standard'	0150-2204

P10-70x400U/850-BL-QJ

Max. Stroke: 850 mm
Peak Force: 2720 N



Dimensions in mm

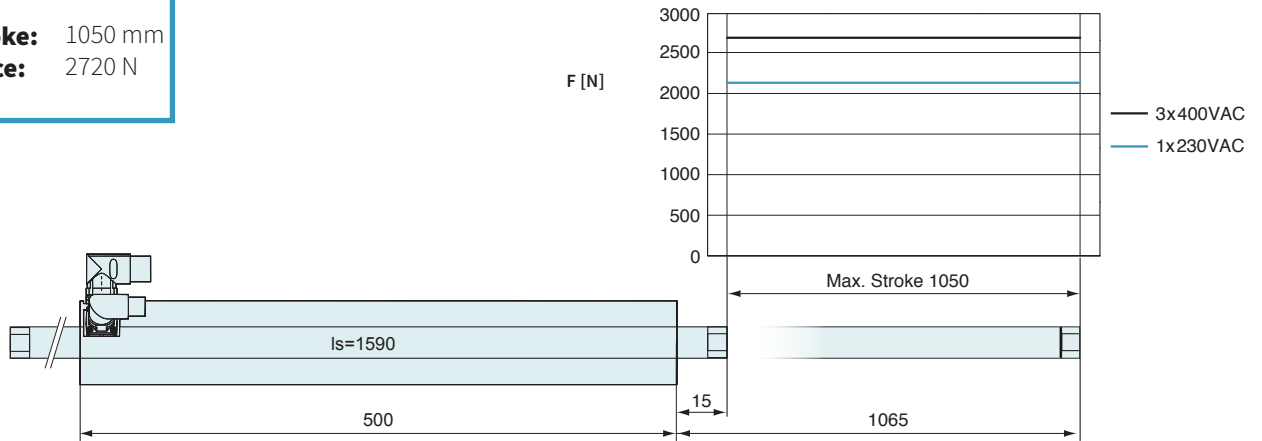
Technical Data P10-70x400U/850			
Stroke			
Max. Stroke	mm	(in)	850 (33.49)
Force			
Max. Force @ 1x230VAC	N	(lbf)	2150 (483)
Max. Force @ 3x400VAC	N	(lbf)	2720 (611)
Max. Cont. Force [Passive cooling / Fan / Fluid]	N	(lbf)	320 / 500 / 890 (73 / 110 / 200)
Max. Border Force relative	%		100
Force Constant 1	N/A_{pk}	(lbf/ A_{pk})	80 (18)
Force Constant 2	N/A_{rms}	(lbf/ A_{rms})	113 (25.4)
Velocity			
Max. Velocity @ 1x230VAC	m/s	(in/s)	2.2 (89.9)
Max. Velocity @ 3x400VAC	m/s	(in/s)	3.9 (3.9)
Position Detection			
Repeatability	mm	(in)	±0.05 (±0.002)
Linearity	%		± 0.15
Electrical Data			
Max. Current @ 1x230VAC	A_{pk} / A_{rms}		26.8 / 18.9
Max. Current @ 3x400VAC	A_{pk} / A_{rms}		33.9 / 23.9
Max. Cont. Current 1 [Passive cooling / Fan / Fluid]	A_{pk}		4 / 6.2 / 11
Max. Cont. Current 2 [Passive cooling / Fan / Fluid]	A_{rms}		2.9 / 4.4 / 7.9
Thermal Data			
Max. Winding Temperature (Sensor)	°C		90
Thermal Resistance [Passive cooling / Fan / Fluid]	*K/W		0.52 / 0.22 / 0.068
Thermal Time Constant [Passive cooling / Fan / Fluid]	s		2100 / 500 / 100
Mechanical Data			
Slider Length	mm	(in)	1390 (55)
Slider Mass	g	(lb)	6530 (14.37)



Item	Description	Item-No.
PS10-70x400U-BL-QJ	Stator 3x400VAC, LinMot Encoder	0150-1294
PS10-70x400U-BL-QJ-D01	Stator 3x400VAC, Sin/Cos Encoder 1Vpp, KTY	0150-2286
PS10-70x400U-BL-QJ-D02	Stator 3x400VAC, Sin/Cos Encoder 1Vpp, PTC	0150-2363
PS10-70x400U-BL-QJ-D03	Stator 3x400VAC, Sin/Cos 1Vpp, KTY on power connector	0150-2712
PL10-28x1390/1340	Slider for P10-70 'standard'	0150-2205

P10-70x400U/1050-BL-QJ

Max. Stroke: 1050 mm
Peak Force: 2720 N



Dimensions in mm

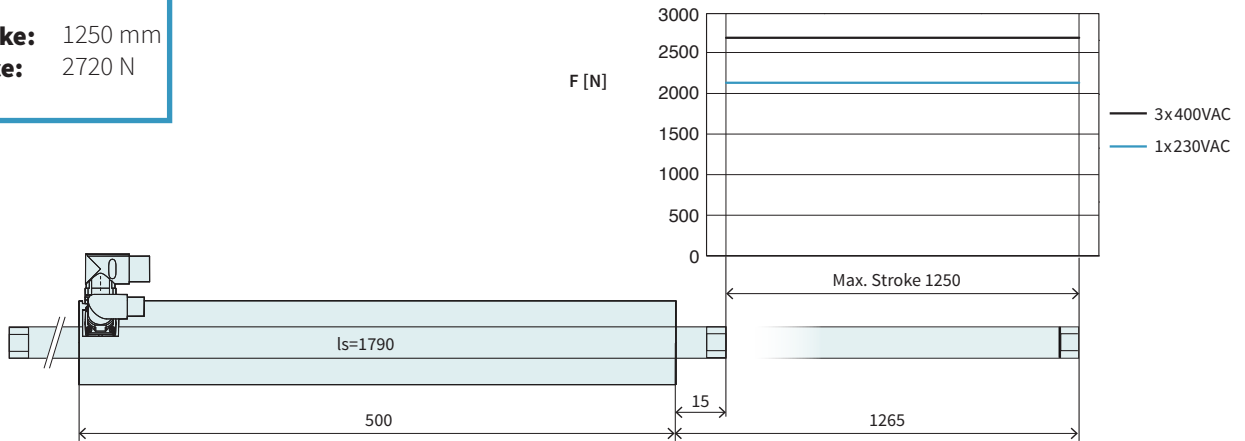
Technical Data P10-70x400U/1050			
Stroke			
Max. Stroke	mm (in)	1050	(41.29)
Force			
Max. Force @ 1x230VAC	N (lbf)	2150	(483)
Max. Force @ 3x400VAC	N (lbf)	2720	(611)
Max. Cont. Force [Passive cooling / Fan / Fluid]	N (lbf)	320 / 500 / 890	(73 / 110 / 200)
Max. Border Force relative	%	100	
Force Constant 1	N/A _{pk} (lbf/A _{pk})	80	(18)
Force Constant 2	N/A _{rms} (lbf/A _{rms})	113	(25.4)
Velocity			
Max. Velocity @ 1x230VAC	m/s (in/s)	2.2	(89.9)
Max. Velocity @ 3x400VAC	m/s (in/s)	3.9	(3.9)
Position Detection			
Repeatability	mm (in)	±0.05	(±0.002)
Linearity	%	±0.15	
Electrical Data			
Max. Current @ 1x230VAC	A _{pk} / A _{rms}	26.8 / 18.9	
Max. Current @ 3x400VAC	A _{pk} / A _{rms}	33.9 / 23.9	
Max. Cont. Current 1 [Passive cooling / Fan / Fluid]	A _{pk}	4 / 6.2 / 11	
Max. Cont. Current 2 [Passive cooling / Fan / Fluid]	A _{rms}	2.9 / 4.4 / 7.9	
Thermal Data			
Max. Winding Temperature (Sensor)	°C	90	
Thermal Resistance [Passive cooling / Fan / Fluid]	°K/W	0.52 / 0.22 / 0.068	
Thermal Time Constant [Passive cooling / Fan / Fluid]	s	2100 / 500 / 100	
Mechanical Data			
Slider Length	mm (in)	1590	(63)
Slider Mass	g (lb)	7470	(16.43)



Item	Description	Item-No.
PS10-70x400U-BL-QJ	Stator 3x400VAC, LinMot Encoder	0150-1294
PS10-70x400U-BL-QJ-D01	Stator 3x400VAC, Sin/Cos Encoder 1Vpp, KTY	0150-2286
PS10-70x400U-BL-QJ-D02	Stator 3x400VAC, Sin/Cos Encoder 1Vpp, PTC	0150-2363
PS10-70x400U-BL-QJ-D03	Stator 3x400VAC, Sin/Cos 1Vpp, KTY on power connector	0150-2712
PL10-28x1590/1540	Slider for P10-70 'standard'	0150-2206

P10-70x400U/1250-BL-QJ

Max. Stroke: 1250 mm
Peak Force: 2720 N



Dimensions in mm

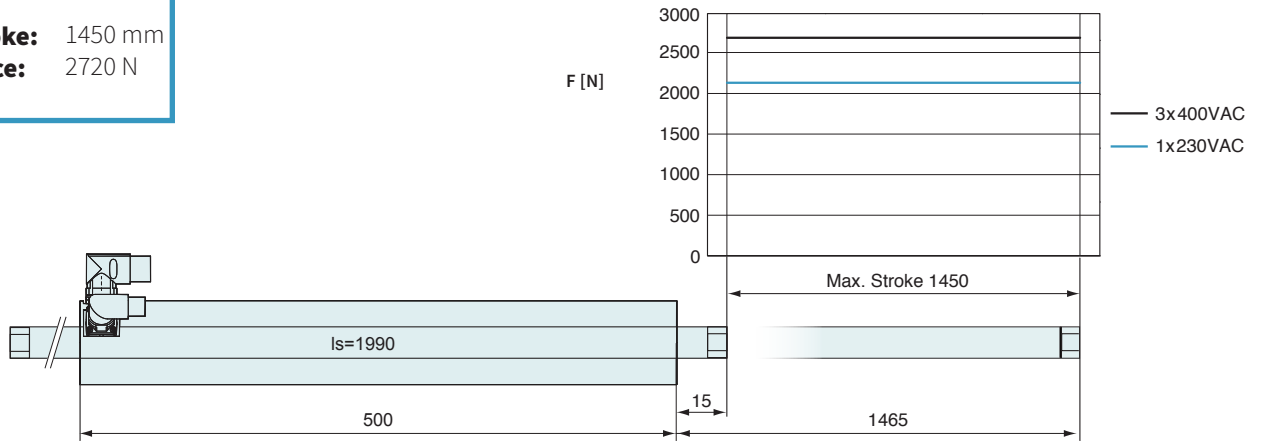
Technical Data P10-70x400U/1250			
Stroke			
Max. Stroke	mm (in)		1250 (49.2)
Force			
Max. Force @ 1x230VAC	N (lbf)		2150 (483)
Max. Force @ 3x400VAC	N (lbf)		2720 (611)
Max. Cont. Force [Passive cooling / Fan / Fluid]	N (lbf)		320 / 500 / 890 (73 / 110 / 200)
Max. Border Force relative	%		100
Force Constant 1	N/A _{pk} (lbf/A _{pk})		80 (18)
Force Constant 2	N/A _{rms} (lbf/A _{rms})		113 (25.4)
Velocity			
Max. Velocity @ 1x230VAC	m/s (in/s)		2.2 (89.9)
Max. Velocity @ 3x400VAC	m/s (in/s)		3.9 (3.9)
Position Detection			
Repeatability	mm (in)		±0.05 (±0.002)
Linearity	%		± 0.15
Electrical Data			
Max. Current @ 1x230VAC	A _{pk} / A _{rms}		26.8 / 18.9
Max. Current @ 3x400VAC	A _{pk} / A _{rms}		33.9 / 23.9
Max. Cont. Current 1 [Passive cooling / Fan / Fluid]	A _{pk}		4 / 6.2 / 11
Max. Cont. Current 2 [Passive cooling / Fan / Fluid]	A _{rms}		2.9 / 4.4 / 7.9
Thermal Data			
Max. Winding Temperature (Sensor)	°C		90
Thermal Resistance [Passive cooling / Fan / Fluid]	°K/W		0.52 / 0.22 / 0.068
Thermal Time Constant [Passive cooling / Fan / Fluid]	s		2100 / 500 / 100
Mechanical Data			
Slider Length	mm (in)		1790 (70)
Slider Mass	g (lb)		8413 (18.51)



Item	Description	Item-No.
PS10-70x400U-BL-QJ	Stator 3x400VAC, LinMot Encoder	0150-1294
PS10-70x400U-BL-QJ-D01	Stator 3x400VAC, Sin/Cos Encoder 1Vpp, KTY	0150-2286
PS10-70x400U-BL-QJ-D02	Stator 3x400VAC, Sin/Cos Encoder 1Vpp, PTC	0150-2363
PS10-70x400U-BL-QJ-D03	Stator 3x400VAC, Sin/Cos 1Vpp, KTY on power connector	0150-2712
PL10-28x1790/1740	Slider for P10-70 'standard'	0150-2207

P10-70x400U/1450-BL-QJ

Max. Stroke: 1450 mm
Peak Force: 2720 N



Dimensions in mm

Technical Data P10-70x400U/1450			
Stroke			
Max. Stroke	mm (in)	1450	(57.1)
Force			
Max. Force @ 1x230VAC	N (lbf)	2150	(483)
Max. Force @ 3x400VAC	N (lbf)	2720	(611)
Max. Cont. Force [Passive cooling / Fan / Fluid]	N (lbf)	320 / 500 / 890	(73 / 110 / 200)
Max. Border Force relative	%	100	
Force Constant 1	N/A _{pk} (lbf/A _{pk})	80	(18)
Force Constant 2	N/A _{rms} (lbf/A _{rms})	113	(25.4)
Velocity			
Max. Velocity @ 1x230VAC	m/s (in/s)	2.2	(89.9)
Max. Velocity @ 3x400VAC	m/s (in/s)	3.9	(3.9)
Position Detection			
Repeatability	mm (in)	±0.05	(±0.002)
Linearity	%	± 0.15	
Electrical Data			
Max. Current @ 1x230VAC	A _{pk} / A _{rms}	26.8 / 18.9	
Max. Current @ 3x400VAC	A _{pk} / A _{rms}	33.9 / 23.9	
Max. Cont. Current 1 [Passive cooling / Fan / Fluid]	A _{pk}	4 / 6.2 / 11	
Max. Cont. Current 2 [Passive cooling / Fan / Fluid]	A _{rms}	2.9 / 4.4 / 7.9	
Thermal Data			
Max. Winding Temperature (Sensor)	°C	90	
Thermal Resistance [Passive cooling / Fan / Fluid]	°K/W	0.52 / 0.22 / 0.068	
Thermal Time Constant [Passive cooling / Fan / Fluid]	s	2100 / 500 / 100	
Mechanical Data			
Slider Length	mm (in)	1990	(78)
Slider Mass	g (lb)	9350	(20.57)



Item	Description	Item-No.
PS10-70x400U-BL-QJ	Stator 3x400VAC, LinMot Encoder	0150-1294
PS10-70x400U-BL-QJ-D01	Stator 3x400VAC, Sin/Cos Encoder 1Vpp, KTY	0150-2286
PS10-70x400U-BL-QJ-D02	Stator 3x400VAC, Sin/Cos Encoder 1Vpp, PTC	0150-2363
PS10-70x400U-BL-QJ-D03	Stator 3x400VAC, Sin/Cos 1Vpp, KTY on power connector	0150-2712
PL10-28x1990/1940	Slider for P10-70 'standard'	0150-2208

Linear Guides H10



HM10-70x400/50		Linear Module 70x400 with 50 mm Stroke		
→	H-Guide	H10-70x400/50	H-Guide for P10-70x400, Stroke max. 50 mm	0150-5419
	Stator	PS10-70x400U-BL-QJ	Stator 3x400VAC, LinMot Encoder	0150-1294
		PS10-70x400U-BL-QJ-D01	Stator 3x400VAC, Sin/Cos Encoder 1Vpp, KTY	0150-2286
		PS10-70x400U-BL-QJ-D02	Stator 3x400VAC, Sin/Cos Encoder 1Vpp, PTC	0150-2363
		PS10-70x400U-BL-QJ-D03	Stator 3x400VAC, Sin/Cos 1Vpp, KTY on power connector	0150-2712
Slider	PL10-28x590/540	Slider for P10-70 'standard'	0150-2196	
HM10-70x400/150		Linear Module 70x400 with 150 mm Stroke		
→	H-Guide	H10-70x400/150	H-Guide for P10-70x400, Stroke max. 150 mm	0150-5420
	Stator	PS10-70x400U-BL-QJ	Stator 3x400VAC, LinMot Encoder	0150-1294
		PS10-70x400U-BL-QJ-D01	Stator 3x400VAC, Sin/Cos Encoder 1Vpp, KTY	0150-2286
		PS10-70x400U-BL-QJ-D02	Stator 3x400VAC, Sin/Cos Encoder 1Vpp, PTC	0150-2363
		PS10-70x400U-BL-QJ-D03	Stator 3x400VAC, Sin/Cos 1Vpp, KTY on power connector	0150-2712
Slider	PL10-28x690/640	Slider for P10-70 'standard'	0150-2197	
HM10-70x400/250		Linear Module 70x400 with 250 mm Stroke		
→	H-Guide	H10-70x400/250	H-Guide for P10-70x400, Stroke max. 250 mm	0150-5421
	Stator	PS10-70x400U-BL-QJ	Stator 3x400VAC, LinMot Encoder	0150-1294
		PS10-70x400U-BL-QJ-D01	Stator 3x400VAC, Sin/Cos Encoder 1Vpp, KTY	0150-2286
		PS10-70x400U-BL-QJ-D02	Stator 3x400VAC, Sin/Cos Encoder 1Vpp, PTC	0150-2363
		PS10-70x400U-BL-QJ-D03	Stator 3x400VAC, Sin/Cos 1Vpp, KTY on power connector	0150-2712
Slider	PL10-28x790/740	Slider for P10-70 'standard'	0150-2198	

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

HM10-70x400/350		Linear Module 70x400 with 350 mm Stroke		
→	H-Guide	H10-70x400/350	H-Guide for P10-70x400, Stroke max. 350 mm	0150-5422
	Stator	PS10-70x400U-BL-QJ	Stator 3x400VAC, LinMot Encoder	0150-1294
		PS10-70x400U-BL-QJ-D01	Stator 3x400VAC, Sin/Cos Encoder 1Vpp, KTY	0150-2286
		PS10-70x400U-BL-QJ-D02	Stator 3x400VAC, Sin/Cos Encoder 1Vpp, PTC	0150-2363
		PS10-70x400U-BL-QJ-D03	Stator 3x400VAC, Sin/Cos 1Vpp, KTY on power connector	0150-2712
Slider	PL10-28x890/840	Slider for P10-70 'standard'	0150-2199	

HM10-70x400/450		Linear Module 70x400 with 450 mm Stroke		
→	H-Guide	H10-70x400/450	H-Guide for P10-70x400, Stroke max. 450 mm	0150-5423
	Stator	PS10-70x400U-BL-QJ	Stator 3x400VAC, LinMot Encoder	0150-1294
		PS10-70x400U-BL-QJ-D01	Stator 3x400VAC, Sin/Cos Encoder 1Vpp, KTY	0150-2286
		PS10-70x400U-BL-QJ-D02	Stator 3x400VAC, Sin/Cos Encoder 1Vpp, PTC	0150-2363
		PS10-70x400U-BL-QJ-D03	Stator 3x400VAC, Sin/Cos 1Vpp, KTY on power connector	0150-2712
Slider	PL10-28x990/940	Slider for P10-70 'standard'	0150-2203	

Accessories				
→	Fan	HV01-37/48	Fan cooling for H01-37/48 & PF02-37/48	0150-5051

Motor Cable

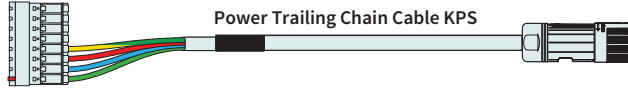
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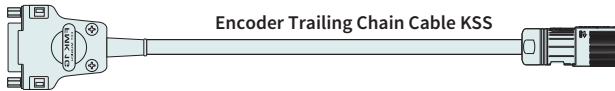
C1400

B Connector MC10-B/m

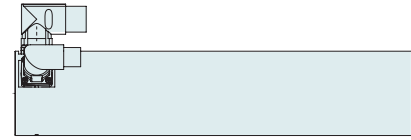
Q Connector MC10-Q/f



Power Trailing Chain Cable KPS



Encoder Trailing Chain Cable KSS



P10-70x400U

D15 Connector MC01-D15/f

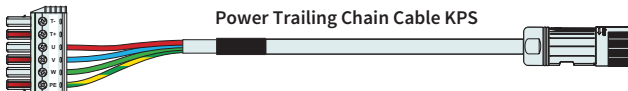
J Connector MC10-J/f



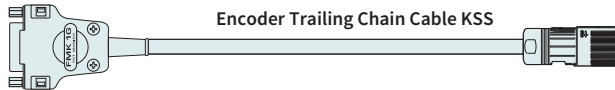
E1400

L Connector MC10-L/m

Q Connector MC10-Q/f



Power Trailing Chain Cable KPS



Encoder Trailing Chain Cable KSS



P10-70x400U

D15 Connector MC01-D15/f

J Connector MC10-J/f

ORDERING INFORMATION

TRAILING CHAIN CABLE FOR LINMOT DRIVES

Item	Description	Item-No.
KPS15-04-L/Q-3	Power Trailing Chain Cable E1400/P10-70, 3 m	0150-2266
KPS15-04-L/Q-5	Power Trailing Chain Cable E1400/P10-70, 5 m	0150-2261
KPS15-04-L/Q-8	Power Trailing Chain Cable E1400/P10-70, 8 m	0150-2267
KPS15-04-L/Q-12	Power Trailing Chain Cable E1400/P10-70, 12 m	0150-2268
KPS15-04-L/Q-	Power Trailing Chain Cable L/Q-, Custom length	0150-3388
KPS15-04-B/Q-3	Power Trailing Chain Cable C1400/P10-70, 3 m	0150-3660
KPS15-04-B/Q-5	Power Trailing Chain Cable C1400/P10-70, 5 m	0150-3661
KPS15-04-B/Q-8	Power Trailing Chain Cable C1400/P10-70, 8 m	0150-3662
KPS15-04-B/Q-12	Power Trailing Chain Cable C1400/P10-70, 12 m	0150-3663
KPS15-04-B/Q-	Power Trailing Chain Cable B/Q-, Custom length	0150-3608

TRAILING CHAIN CABLE FOR LINMOT DRIVES

Item	Description	Item-No.
KSS 05-02/08-D15/J-3	Encoder Trailing Chain Cable D15/J, 3 m	0150-2263
KSS 05-02/08-D15/J-5	Encoder Trailing Chain Cable D15/J, 5 m	0150-2262
KSS 05-02/08-D15/J-8	Encoder Trailing Chain Cable D15/J, 8 m	0150-2264
KSS 05-02/08-D15/J-12	Encoder Trailing Chain Cable D15/J, 12 m	0150-2265
KSS 05-02/08-D15(f)-45°/J-	Encoder Trailing Chain Cable D15/J-, Custom length	0150-3389

TRAILING CHAIN CABLE FOR STATOR SERIES D01 / D02

Item	Description	Item-No.
KPS15-04-.../Q-10	Power Trailing Chain Cable .../Q, 10 m for D0x	0150-2376
KPS15-04-./Q-	Power Trailing Chain Cable .../Q, for D0x, Custom length	0150-3491
KSS05-02/13-./J-10	Encoder Trailing Chain Cable ./J, 10 m for D0x	0150-2377
KSS05-02/13-./J-	Encoder Trailing Chain Cable ./J, for D0x, Custom length	0150-3492
KPS15-04	Power Trailing Chain Cable P10-70 (per m)	0150-2257
KSS05-02/13	Trailing Chain Cable Encoder P10-...-Dxx (per m)	0150-2259

TRAILING CHAIN CABLE FOR STATOR SERIES D03

Item	Description	Item-No.
KPS15-04/04.../Q-10	Power Trailing Chain Cable .../Q, 10 m for D03	0150-3654
KPS15-04/04-./Q-	Power Trailing Chain Cable .../Q, for D03, Custom length	0150-3579
KSS05-02/06-./J-10	Encoder Trailing Chain Cable ./J, 10 m for D03	0150-3655
KSS05-02/06-./J-	Encoder Trailing Chain Cable ./J, for D03, Custom length	0150-3611
KPS15-04/04	Power Trailing Chain Cable P10-...-Dx3 (per m)	0150-2269
KSS05-02/06	Trailing Chain Cable Encoder P10-...-Dx3 (per m)	0150-2490

CONNECTOR

Item	Description	Item-No.
MC10-L/m	Connector Power E1400/X2	0150-3382
MC01-D15/f	Motor Connector D15 (f)	0150-3136
MC10-Q/f	Connector Power PS10-70	0150-2268
MC10-J/f	Connector Encoder PS10-70	0150-2269

MOTOR FLANGES

4



Item	Description	Item-No.
PF10-70x430	Flange for PS10-70x400	0150-2276



Item	Description	Item-No.
PF10-70x430-FC	Flange for PS10-70x400 fluid cooling	0150-2295

FIND MORE PRODUCT DETAILS IN THE CHAPTER "ACCESSORIES".

FANS



Item	Description	Item-No.
HV01-37/48	Fan cooling for H01-37/48 & PF02-37/48	0150-5051

FIND MORE PRODUCT DETAILS IN THE CHAPTER "ACCESSORIES".

SLIDER MOUNTING



Item	Description	Item-No.
PLF01-28	Fixed Bearing Set for 27/28 mm sliders	0150-3087
PLF01-28-SS	Fixed Bearing Set for 27/28 mm sliders, stainless steel	0150-3297
PLL01-28	Floating Bearing for 28 mm sliders	0150-3094
PLM01-28-MK	Mounting Kit for 28 mm sliders	0150-3095

FIND MORE PRODUCT DETAILS IN THE CHAPTER "ACCESSORIES".

BEARING KIT



Item	Description	Item-No.
PB10-70x400-L	Bearing Kit for PS10-70x400	0150-3435

FIND MORE PRODUCT DETAILS IN THE CHAPTER "ACCESSORIES".

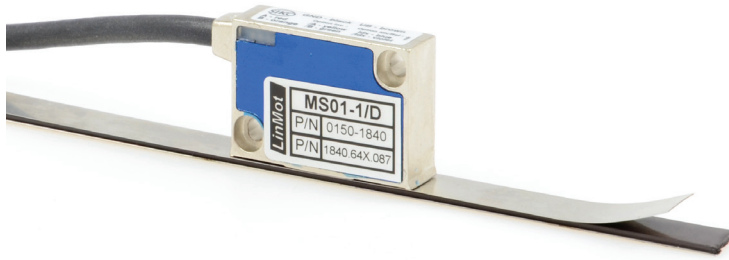
LUBRICANT RESERVOIR



Item	Description	Item-No.
PA10-70/28	Lubricant reservoir for PS10-70 with lubricating nipple	0150-3543

FIND MORE PRODUCT DETAILS IN THE CHAPTER "ACCESSORIES".

EXTERNAL POSITION SENSORS



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

FIND MORE PRODUCT DETAILS IN THE CHAPTER "ACCESSORIES".



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

FIND MORE PRODUCT DETAILS IN THE CHAPTER "ACCESSORIES".