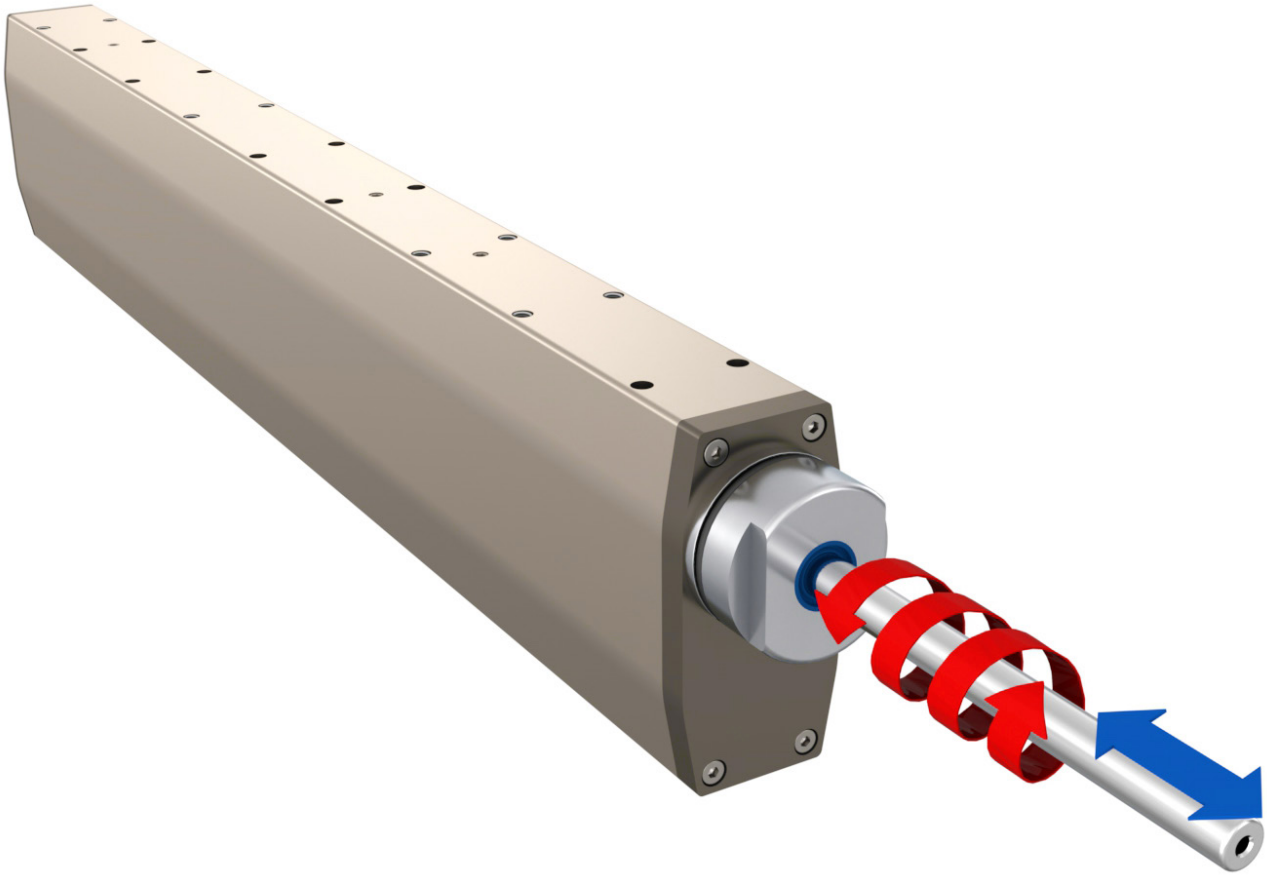
DATA SHEET
Linear Rotary Motors PR04-52

- Closing, screwing, assembling and aligning
- For applications with high demands on flexibility, dynamics and quality
- Easy-to-clean surface
- Optimised design with maximum stroke with the smallest possible footprint and minimum weight
- Independent linear and rotary movements

Product description

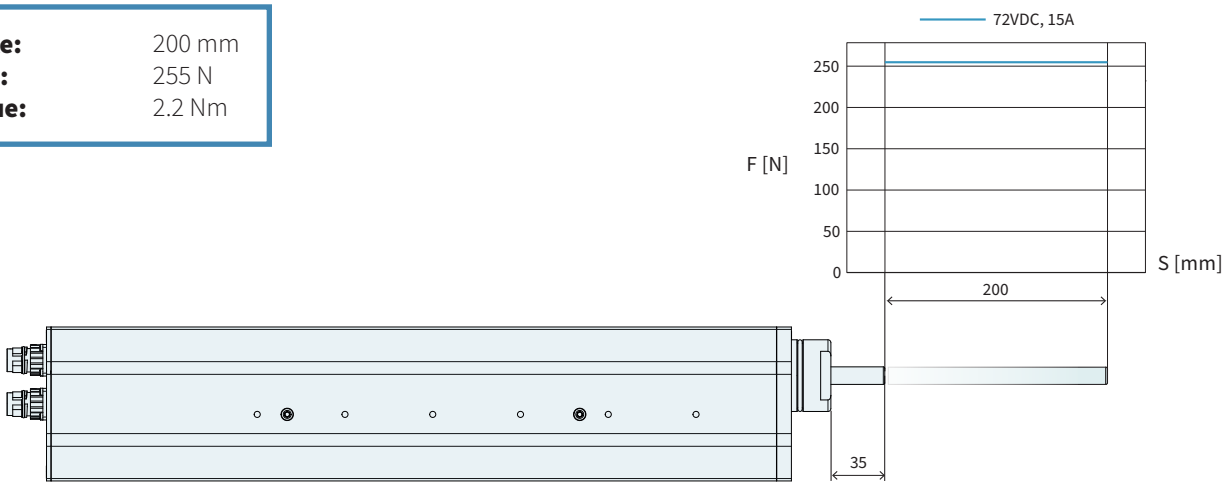
The PR04-52 is another type in LinMot's range of linear rotary motors. Like the other linear rotary motors, this model is characterised by excellent flexibility, dynamics and speed. The PR04-52 combines two electromagnetic servomotors in a single slim housing, allowing combined linear and rotary motion in the simplest way. To keep the net weight and moving mass as low as possible, familiar options such as MagSpring, air feed-through, force and torque sensors have been deliberately omitted. However, their integration is possible on request. The PR04 product family is designed for a very long stroke and at the same time has the best possible optimised overall mass.

The range of applications for this linear rotary motor is very wide. For example, pick, rotate and place applications can be perfectly implemented or, thanks to the small footprint, several PR04 modules can easily be arranged side by side to create multi-axis applications. It is also very easy to combine the PR04 linear motor with a robot in a gantry system. And, of course, the module can easily handle the main disciplines of a linear rotary motor, namely capping, screwing or assembly. The machine designer thus has a completely universal drive element that can be used for countless automation tasks.



PR04-52x60-R_37x120F-HP-R-200(-R01)

Max. Stroke:	200 mm
Peak Force:	255 N
Peak Torque:	2.2 Nm



Dimensions in mm

Motor Specifications			
Linear Motion			
Max. Stroke	mm (in)	200	(7.87)
Peak Forc E12x0 - UC	N (lbf)	255	(57.3)
Constant Force @25°C [1]	N (lbf)	75	(16.9)
Force Constant	N/A_{pk} (lbf/A_{pk})	17	(3.8)
Max. Current @ 72VDC	A_{pk}	15	
Max. Velocity @ 72VDC	m/s (in/s)	3.9	(154)
Position Repeatability	mm (in)	±0.05	(±0.0020)
Linearity	%	±0.10	
Rotary Motion			
Peak Torque (± 10%)	Nm (lbfin)	2.2	(19.5)
Constant Torque (Halt) @25°C [1]	Nm (lbfin)	0.55	(4.9)
Max. Number of revolutions	rpm	1000	
Torque Constant 1	Nm/A_{rpk} ($lbfin/A_{rpk}$)	0.16	(1.42)
Torque Constant 2	Nm/A_{rms} ($lbfin/A_{rms}$)	0.23	(2.04)
Max. Current @ 72VDC	A_{pk} / A_{rms}	13.5 / 9.55	
Position Repeatability	°	±0.1	
Mechanical Data			
Width	mm (in)	50	(1.97)
Height	mm (in)	105.25	(4.13)
Length (with R-Connector / with R01-Connector)	mm (in)	632 / 642	(1.39 / 1.42)
Weight	g (lb)	6700	(14.77)
Linear moving mass	g (lb)	1384	(3.05)
Rotary Torque of Inertia	$kgcm^2$ (lbf^2)	0.26	(0.00062)
Axle Diameter	mm (in)	12h9	(0.47)
Protection Class		IP64	

1) Value depends on 2nd motor (see LinMot Designer)

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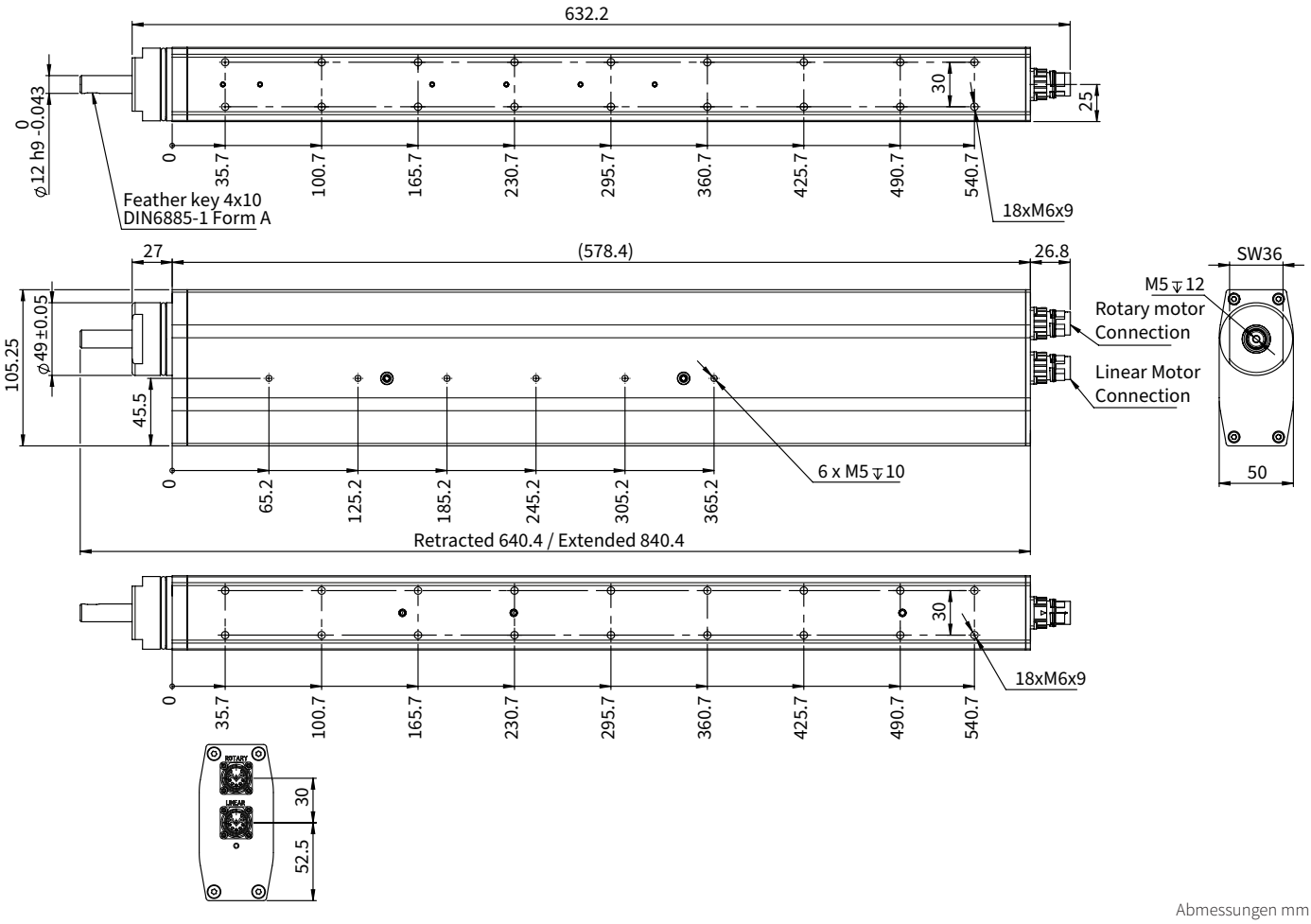
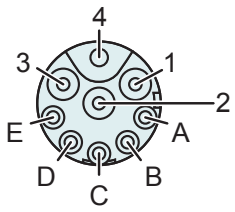


Abmessungen mm

Motor Connector Wiring	Linear Unit: R-Connector	Rotary Unit: R-Connector	Wire Color Motor Cable
Ph 1+ / Ph A	1	1	red
Ph 1- / Ph B	2	2	pink
Ph 2+ / Ph C	3	3	blue
Ph 2- / (-)	4	4 (not connected)	grey
+5VDC	A	A	white
GND	B	B	inner shield
Sin	C	C	yellow
Cos	D	D	green
Temp.	E	E	black
Shield	Housing	Housing	outer shield

R-Connector



View: Motor connector, plug on

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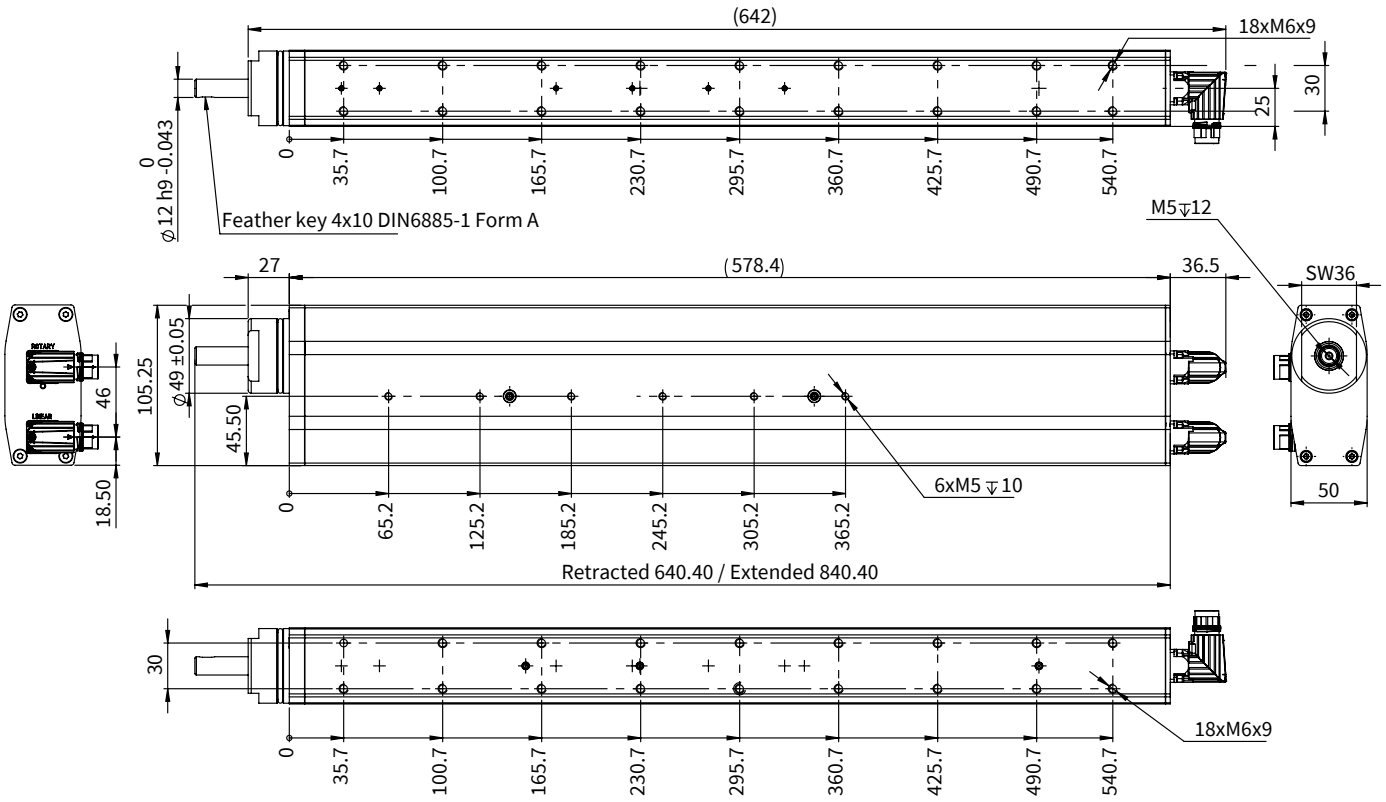
SUBJECT TO ALTERATIONS

PR04-52X60-R_37X120F-HP-R-200-R01



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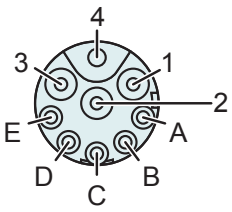
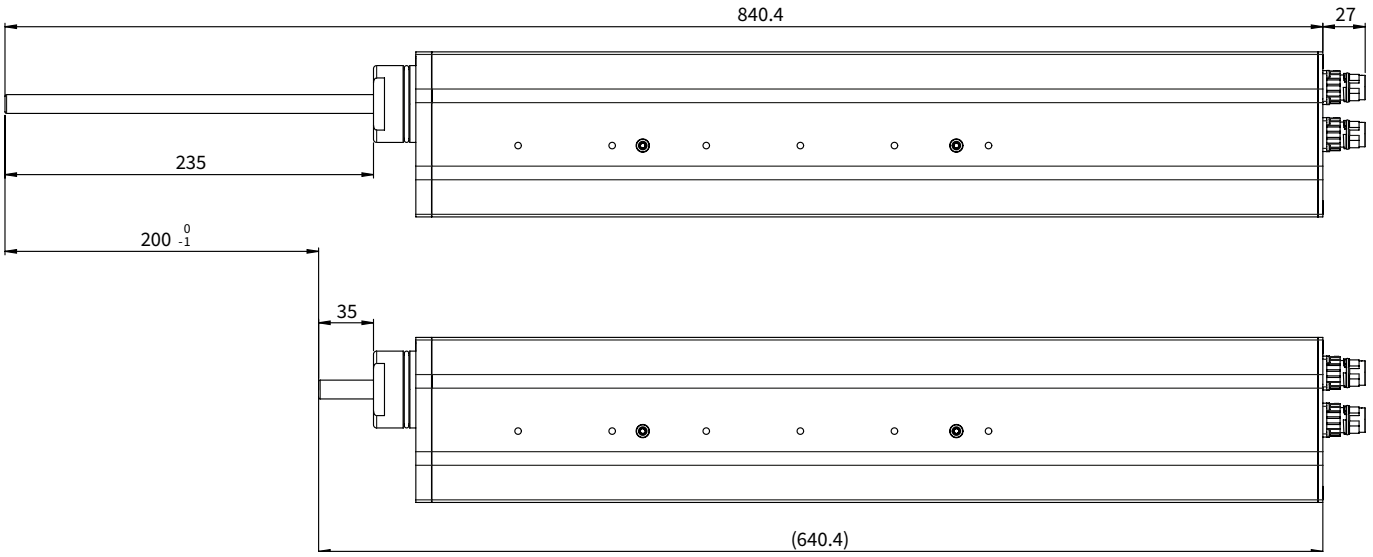
R-Connector

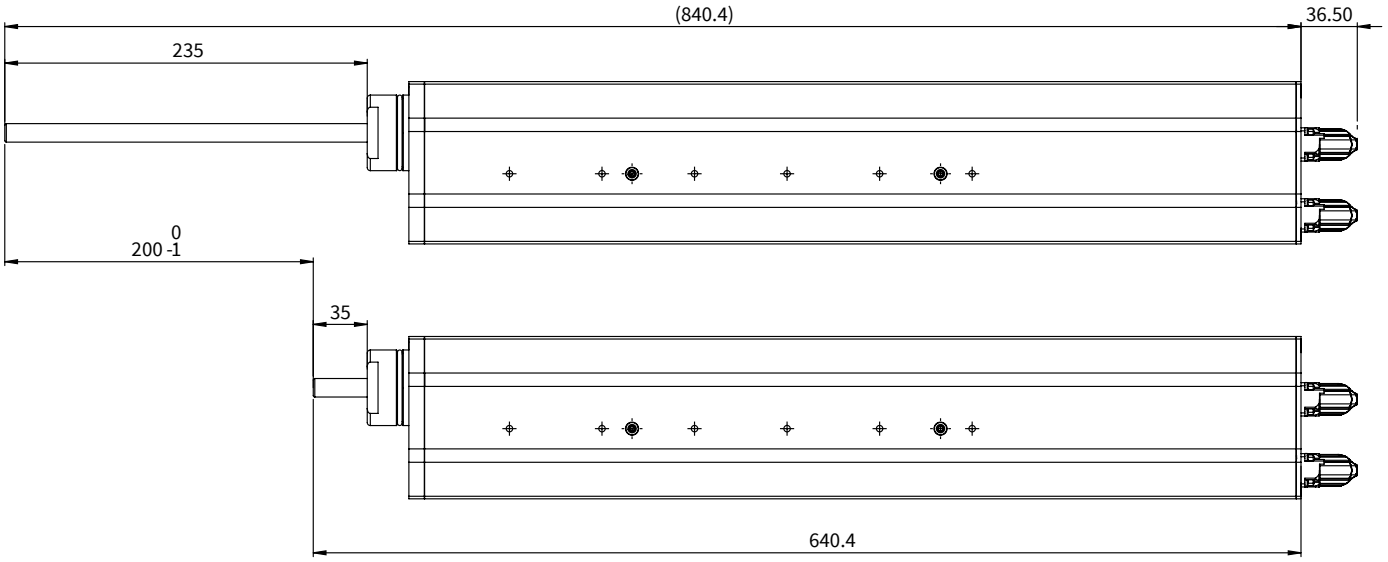


View: Motor connector, plug on

MAX. STROKE PR04-52X60-R_37X120F-HP-R-200



MAX. STROKE PR04-52X60-R_37X120F-HP-R-200-R01



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ORDERING INFORMATION

Item	Description	Item-No.
PR04-52x60-R_37x120F-HP-R-200	Linear Rotary Motor	0150-6431
PR04-52x60-R_37x120F-HP-R-200-R01	Linear Rotary Motor, Angled R-Connector	0150-6250

ACCESSORIES

Item	Description	Item-No.
K05-Y/R-2	Motor Cable Y/R, 2 m	0150-2421
K05-Y/R-4	Motor Cable Y/R, 4 m	0150-2422
K05-Y/R-6	Motor Cable Y/R, 6 m	0150-2423
K05-Y/R-8	Motor Cable Y/R, 8 m	0150-2424
K05-Y-Fe/R-	Motor Cable K05-Y-Fe/R, Custom length	0150-3501
KS05-Y/R-4	Trailing Chain Cable Y/R, 4 m	0150-2433
KS05-Y/R-6	Trailing Chain Cable Y/R, 6 m	0150-2434
KS05-Y/R-8	Trailing Chain Cable Y/R, 8 m	0150-2435
KS05-Y-Fe/R-	Trailing Chain Cable KS05-Y-Fe/R, Custom length	0150-3507
KR05-Y-Fe/R-	Robot Cable KR05-Y-Fe/R, Custom length	0150-3512
RS01-SS12x22	Shaft-hub clamping for 12mm shaft	0230-0101
RS02-BK52	Holding brake kit for Linear Rotory Motor PR02-52	0150-2987

ALL LINEAR MOTION FROM A SINGLE SOURCE

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