

LinMot®

CABLES

Import Belgium & Luxembourg

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The linear motor technology for industrial applications

Notes :

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

Motor Cables

Motor cables are available for linear motors with the designation K, KS, and KR for stationary installation, installation in cable chains, and for robot applications.

LinMot motor cables are available in all three versions as bulk goods, as a roll, or as a completely fabricated motor cable with a wide range of plug combinations and any desired length. Standard lengths with the most common connector combinations are also available from stock.

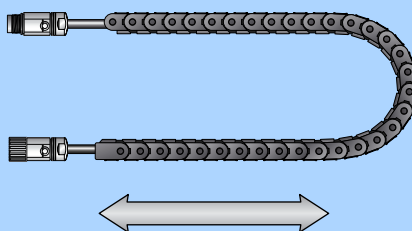


Standard Motor Cable K



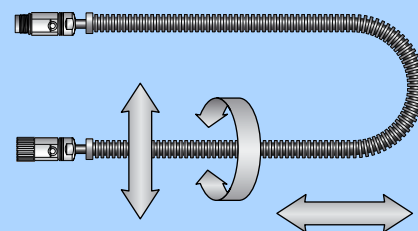
The standard motor cable, type K, is suitable for stationary runs. It is used wherever the motor cable is fixed and is not subject to motion. At exposed locations, the motor cable should be protected from mechanical damage by cable conduits.

High-Flex Motor Cable KS

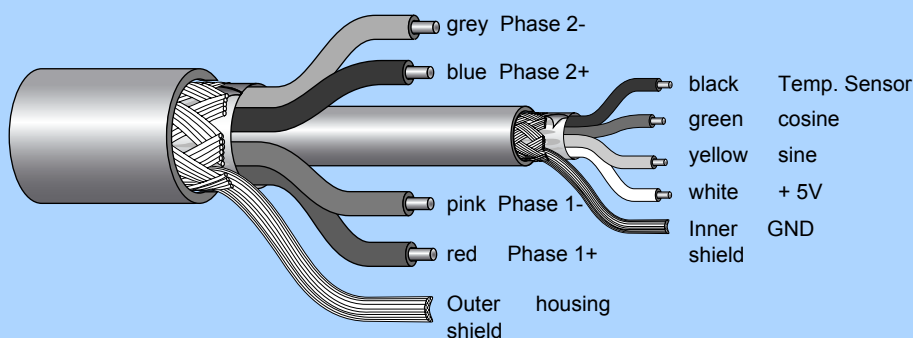


The high-flex motor cable, type KS, is suitable for applications with moving motor cables, where the cable is run inside a cable track, and is subject to roll-up motion. High-Flex cable is supplied without the cable track.

Robot Motor Cable KR



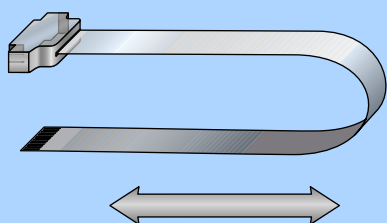
If the motor cable is subject to torsional motion, then the special robot cable, type KR, is used. In order to protect the robot cable from mechanical damage, it should be run in an appropriate cable conduit.



A single motor cable is sufficient to connect the linear motor and servo controller. It contains the motor phases and sensor signals from the position sensors integrated in the motor.

All LinMot motor cables have separate shielding for the motor phases and the sensor signals. This special double shielding ensures fault-free operation of linear motors at up to 50m cable lengths.

Flat Ribbon Cable KF



For the short motor P01-23Sx80, a flat ribbon cable is available with the designation KF. The flat ribbon cable can be subjected to roll-up motion, just as the high-flex cable. Due to its low level of predection, the flat ribbon cable is more suitable for device design than for machine building.

Motor Cable, Bulk Goods

LinMot motor cable is available by the meter in all versions, K, KS, and KR. The cable can be cut to the desired length, or ordered in large quantities on rolls.

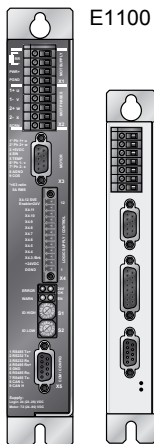
LinMot provides all of its motor connectors for customer fabrication of motor cables. Motor cables fabricated by the customer are to be tested with a test voltage of 1500VDC prior to startup.

Fabricated Motor Cable

Fabricated motor cables can be provided with any desired length up to 50m. The motor cable is ordered in the desired length, together with the matching motor connectors (fabricated).

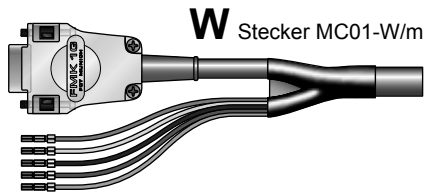
Fabricated motor cables with the most commonly used connector combinations can be ordered from stock in standard lengths.

Fabricated motor cables from LinMot are manufactured exclusively with crimped contacts, and tested under 1500VDC prior to delivery.

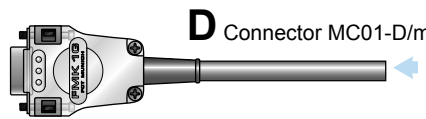


E1100

B1100



W Stecker MC01-W/m



D Connector MC01-D/m

Only for stators with current within the controller's connector specification.

Standard cable K15-04/05

High flex cable KS10-04/05

Robot cable KR10-04/05

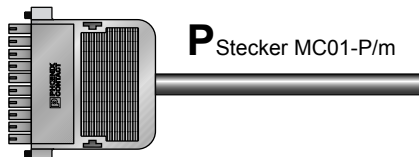


E1100: D-sub connector up to $5 A_{rms} / 7.5 A_{peak}$
For UL, use W connectors only

B1100: D-sub connector up to $3 A_{rms} / 4.5 A_{peak}$



E1001



P Stecker MC01-P/m

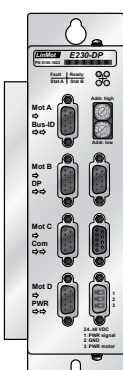
Standard cable K05-04/05

High flex cable KS05-04/05

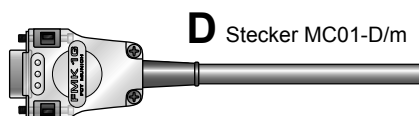
Robot cable KR05-04/05



- For the connection between the linear motor and servo controller, only the specially shielded LinMot cables of type K, KS or KR should be used.
- The length of the cable can be up to 50 m between the linear motor and the servo controller.
- Motor cables fabricated by the customer are to be tested with a test voltage of 1500VDC.
- An improperly fabricated motor cable can damage both the linear motor and the servo controller.
- The minimum bend radius is to be observed for stationary cables as well as for moving motor cables.
- The motor cable must not be plugged in or unplugged while under voltage.



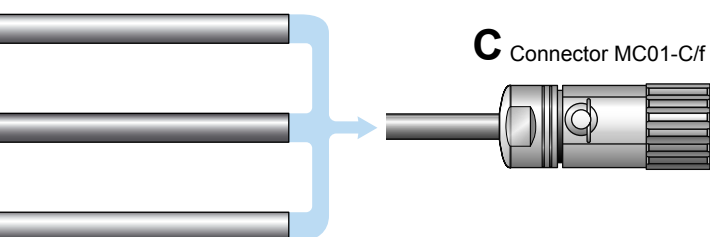
E100




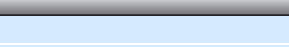



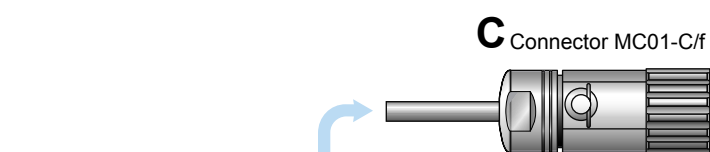
D Stecker MC01-D/m






Ordering Example:

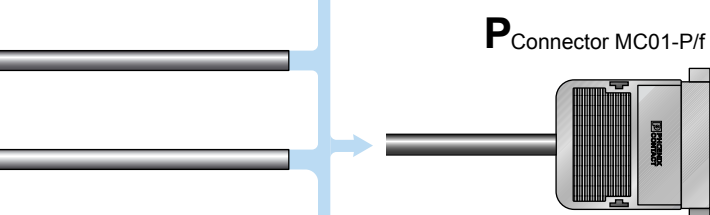
4m high flex cable for servo controller E1100 and linear motor PS01-23x160-R:
- KS05-D/R-4




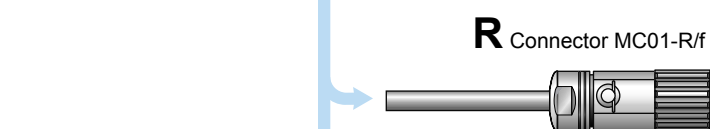
Connector Type	 	PS01-48X240-C PS01-48x240F-C
	 	PS01-37x240F-C
Cable Type		PS01-37X240F-C20


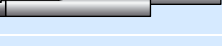
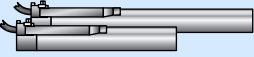


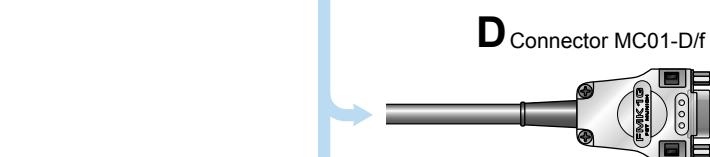
Connector Type	 	PS01-48X240-C PS01-48X240F-C
	 	PS01-37X240-C PS01-37X240F-C PS01-37x120-C PS01-37x120F-HP-C
Cable Type		PS01-37X240-C20 PS01-37X240F-C20 PS01-37X120-C20 PS01-37X120F-HP-C20

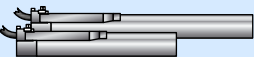


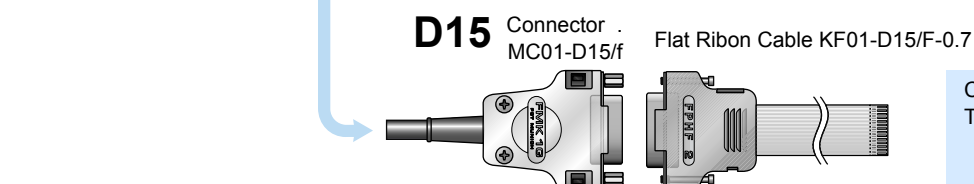
Cable Type		PS01-37x240 PS01-37X120
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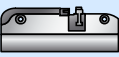


Connector Type	 	PS01-23x160-R PS01-23x160F-R PS01-23x160G-HP-R PS01-23x80-R
Cable Type		PS01-23x160-R20 PS01-23x160F-R20 PS01-23x160G-HP-R20 PS01-23x80-R20



Cable Type		PS01-23x160 PS01-23x80
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Cable Type		PS01-23Sx80
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Fabricated motor cables in standard lengths

Item	Description	Part Number
Standard cable		
K05-D/C-2	Standard cable D/C, 2 m	0150-1819
K05-D/C-4	Standard cable D/C, 4 m	0150-1820
K05-D/C-6	Standard cable D/C, 6 m	0150-1821
K05-D/C-8	Standard cable D/C, 8 m	0150-1822
K05-D/D-2	Standard cable D/D, 2 m	0150-1910
K05-D/D-4	Standard cable D/D, 4 m	0150-1911
K05-D/D-6	Standard cable D/D, 6 m	0150-1912
K05-D/D-8	Standard cable D/D, 8 m	0150-1913
K05-D/P-0.25	Standard cable D/P, 0.25m	0150-1921
K05-D/P-2	Standard cable D/P, 2 m	0150-1949
K05-D/P-4	Standard cable D/P, 4 m	0150-1995
K05-D/P-6	Standard cable D/P, 6 m	0150-1994
K05-D/R-2	Standard cable D/R, 2 m	0150-1832
K05-D/R-4	Standard cable D/R, 4 m	0150-1833
K05-D/R-6	Standard cable D/R, 6 m	0150-1834
K05-D/R-8	Standard cable D/R, 8 m	0150-1835
K05-P/C-2	Standard cable P/C, 2 m	0150-1818
K05-P/C-4	Standard cable P/C, 4 m	0150-1804
K05-P/C-6	Standard cable P/C, 6 m	0150-1805
K05-P/C-8	Standard cable P/C, 8 m	0150-1806
K05-P/D-0.4	Standard cable P/D, 0.4 m	0150-1922
K05-P/P-2	Standard cable P/P, 2 m	0150-1915
K05-P/P-4	Standard cable P/P, 4 m	0150-1916
K05-P/P-6	Standard cable P/P, 6 m	0150-1917
K05-P/P-8	Standard cable P/P, 8 m	0150-1918
K05-W/C-2	Standard cable W/C, 2 m	0150-2123
K05-W/C-4	Standard cable W/C, 4 m	0150-2124
K05-W/C-6	Standard cable W/C, 6 m	0150-2125
K05-W/C-8	Standard cable W/C, 8 m	0150-2126
K05-W/D-0.4	Standard cable W/D, 0.4 m	0150-1947
K05-W/P-0.4	Standard cable W/P, 0.4 m	0150-1948
K05-W/R-2	Standard cable W/R, 2 m	0150-2119
K05-W/R-4	Standard cable W/R, 4 m	0150-2120
K05-W/R-6	Standard cable W/R, 6 m	0150-2121
K05-W/R-8	Standard cable W/R, 8 m	0150-2122
K15-W/C-2	Standard cable W/C, 2 m	0150-1811
K15-W/C-4	Standard cable W/C, 4 m	0150-1801
K15-W/C-6	Standard cable W/C, 6 m	0150-1802
K15-W/C-8	Standard cable W/C, 8 m	0150-1803
High Flex cable chain cable		
KS05-C/C-2	High Flex cable C/C, 2m	0150-1827
KS05-C/C-4	High Flex cable C/C, 4 m	0150-1828
KS05-D/C-2	High Flex cable D/C, 2 m	0150-1856
KS05-D/C-4	High Flex cable D/C, 4 m	0150-1823
KS05-D/C-6	High Flex cable D/C, 6 m	0150-1857
KS05-D/C-8	High Flex cable D/C, 8 m	0150-1824
KS05-D/D-2	High Flex cable D/D, 2 m	0150-1988
KS05-D/D-4	High Flex cable D/D, 4 m	0150-1989
KS05-D/R-2	High Flex cable D/R, 2 m	0150-1854
KS05-D/R-4	High Flex cable D/R, 4 m	0150-1836
KS05-D/R-6	High Flex cable D/R, 6 m	0150-1855
KS05-D/R-8	High Flex cable D/R, 8 m	0150-1837
KS05-P/C-4	High Flex cable P/C, 4 m	0150-1809
KS05-P/C-8	High Flex cable P/C, 8 m	0150-1810
KS05-P/P-2	High Flex cable P/P, 2 m	0150-1990
KS05-P/P-4	High Flex cable P/P, 4 m	0150-1991
KS05-R/R-2	High Flex cable R/R, 2 m	0150-1838
KS05-R/R-4	High Flex cable R/R, 4 m	0150-1839
KS05-W/C-4	High Flex cable W/C, 4 m	0150-2127
KS05-W/C-6	High Flex cable W/C, 6 m	0150-2128
KS05-W/C-8	High Flex cable W/C, 8 m	0150-2129
KS05-W/R-4	High Flex cable W/R, 4 m	0150-2106
KS05-W/R-6	High Flex cable W/R, 6 m	0150-2131
KS05-W/R-8	High Flex cable W/R, 8 m	0150-2107
KS10-C/C-2	High Flex cable C/C, 2 m	0150-1816
KS10-C/C-4	High Flex cable C/C, 4 m	0150-1817
KS10-W/C-4	High Flex cable W/C, 4 m	0150-1807
KS10-W/C-5	High Flex cable W/C, 5 m	0150-1860
KS10-W/C-6	High Flex cable W/C, 6 m	0150-1858
KS10-W/C-8	High Flex cable W/C, 8 m	0150-1808
Cabel for short motor PS01-23Sx80		
KF01-D15/F-0.7	Flat Ribbon cable 0.7m for PS01-23Sx80	0150-1937
K05-D/D15-1	Standard cable D/D15,1m (für PS01-23Sx80)	0150-1936

Fabricated motor cables

Connector assembled

Item	Description	Part Number
MC01-R/m-as	R/m-as connector, assembled	0150-3097
MC01-R/f-as	R/f-as connector, assembled	0150-3143
MC01-C/m-as	C/m-as connector, assembled	0150-3099
MC01-C/f-as	C/f-as connector, assembled	0150-3146
MC01-D/m-as	D/m-as connector, assembled	0150-3055
MC01-D/f-as	D/f-as connector, assembled	0150-3142
MC01-P/m-as	P/m-as connector, assembled	0150-3056
MC01-P/f-as	P/f-as connector, assembled	0150-3144
MC01-W/m-as	W/m-as connector, assembled	0150-3147
MC01-D15/f-as	D15/f-as connector, assembled	0150-3073

Cable by the meter

Item	Description	Part Number
K05-04/05	Standard cable per m	0150-1920
K05-04/05-50	Standard cable 50m rolls	0150-1956
K05-04/05-100	Standard cable 100m rolls	0150-1957
K05-04/05-200	Standard cable 200m rolls	0150-1958
K15-04/05	Standard cable per m	0150-1978
K15-04/05-100	Standard cable, 100m rolls	0150-1969
KS05-04/05	High Flex cable per m	0150-1938
KS05-04/05-100	High Flex cable 100 m rolls	0150-1959
KS10-04/05	High Flex cable per m	0150-1977
KS10-04/05-100	High Flex cable, 100m rolls	0150-1968
KR05-04/05	Robot cable (per m)	0150-1846
KR05-04/05-100	Robot cable, 100m rolls	0150-1847
KR10-04/05	Robot cable (per m)	0150-1830
KR10-04/05-100	Robot cable, 100m rolls	0150-1831

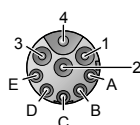
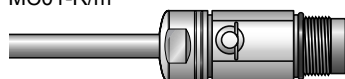
Ordering Example:

4m high-flex motor cable for linear motor P01-48x240 and servo controller E1100-HC

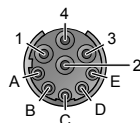
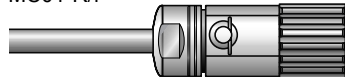
KS10-W/C-4	1 piece	MC01-W/m-as	W/m-as connector, assembled
	1 piece	MC01-C/f-as	C/f-as Cconnector, assembled
	4 m	KS10-04/05	High-flex cable per meter

R-Connector

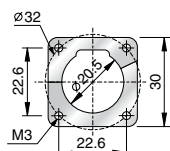
MC01-R/m



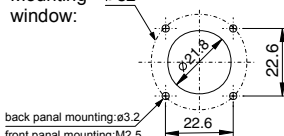
MC01-R/f



MC01-F/R



Mounting-window:



1	Phase 1+	red
2	Phase 1-	pink
3	Phase 2+	blue
4	Phase 2-	grey
A	+5V	white
B	GND	inner shield
C	Sensor sine	yellow
D	Sensor cosine	green
E	Temp. Sensor	black
housing	shield	outer shield

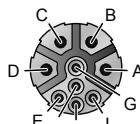
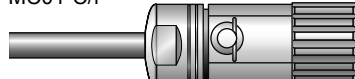
Item	Part Number
MC01-R/m	0150-3130
MC01-R/f	0150-3129
MC01-R/m-as (assembled)	0150-3097
MC01-R/f -as (assembled)	0150-3143
MC01-F/R Connector Flange	0150-3253

C-Connector

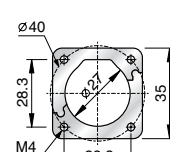
MC01-C/m



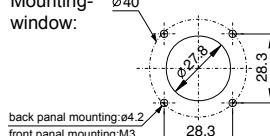
MC01-C/f



MC01-F/C



Mounting-window:

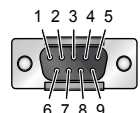


A	Phase 1+	red
B	Phase 1-	pink
C	Phase 2+	blue
D	Phase 2-	grey
E	+5V	white
F	GND	inner shield
G	Sensor sine	yellow
H	Sensor cosine	green
L	Temp. Sensor	black
housing	shield	outer shield

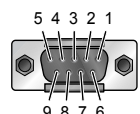
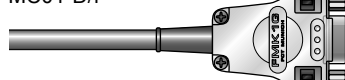
Item	Part Number
MC01-C/m	0150-3093
MC01-C/f	0150-3080
MC01-C/m-as (assembled)	0150-3099
MC01-C/f-as (assembled)	0150-3146
MC01-F/C Connector Flange	0150-3254

D-Connector

MC01-D/m



MC01-D/f

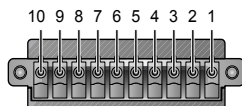
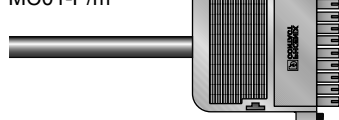


1	Phase 1+	red
6	Phase 1-	pink
2	Phase 2+	blue
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3	+5V	white
8	GND	inner shield
4	Sensor sine	yellow
9	Sensor cosine	green
5	Temp. Sensor	black
housing	shield	outer shield

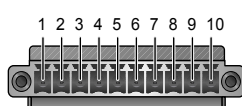
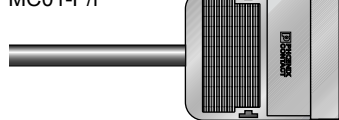
Item	Part Number
MC01-D/m	0150-3024
MC01-D/f	0150-3025
MC01-D/m-as (assembled)	0150-3055
MC01-D/f-as (assembled)	0150-3142

P-Connector

MC01-P/m



MC01-P/f

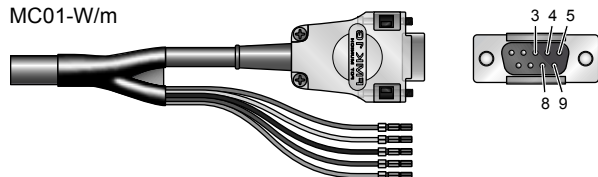


1	Phase 1+	red
2	Phase 1-	pink
3	Phase 2+	blue
4	Phase 2-	grey
5	+5V	white
6	GND	inner shield
7	Sensor sine	yellow
8	Sensor cosine	green
9	Temp. Sensor	black
10	shield	outer shield

Item	Part Number
MC01-P/m	0150-3020
MC01-P/f	0150-3021
MC01-P/m-as (assembled)	0150-3056
MC01-P/f-as (assembled)	0150-3144

W-Connector

MC01-W/m

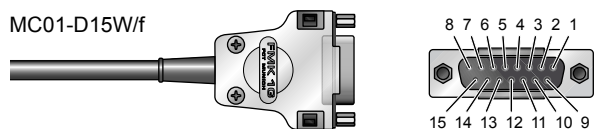


strand red	Phase 1+	red
strand pink	Phase 1-	pink
strand blue	Phase 2+	blue
strand grey	Phase 2-	grey
3	+5V	white
8	GND	inner shield
4	Sensor sine	yellow
9	Sensor cosine	green
5	Temp. Sensor	black
shield	shield	outer shield

Item	Part Number
MC01-W/m	0150-3140
MC01-W/m-as (assembled)	0150-3147

D15-Connector

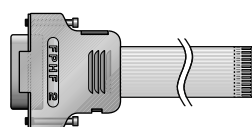
MC01-D15W/f



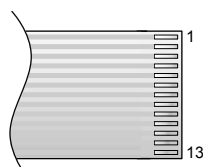
7 & 15	Phase 1+	red
3 & 10	Phase 1-	pink
6 & 14	Phase 2+	blue
2 & 9	Phase 2-	grey
11	+5V	white
12	GND	inner shield
13	Sensor sine	yellow
5	Sensor cosine	green
4	Temp. Sensor	black
housing	shield	outer shield

Item	Part Number
MC01-D15/f	0150-3136
MC01-D15/f-as (assembled)	0150-3073

F-Connector



MC01-D15W/f



ZIF-Line AMP
pitch 1.27mm

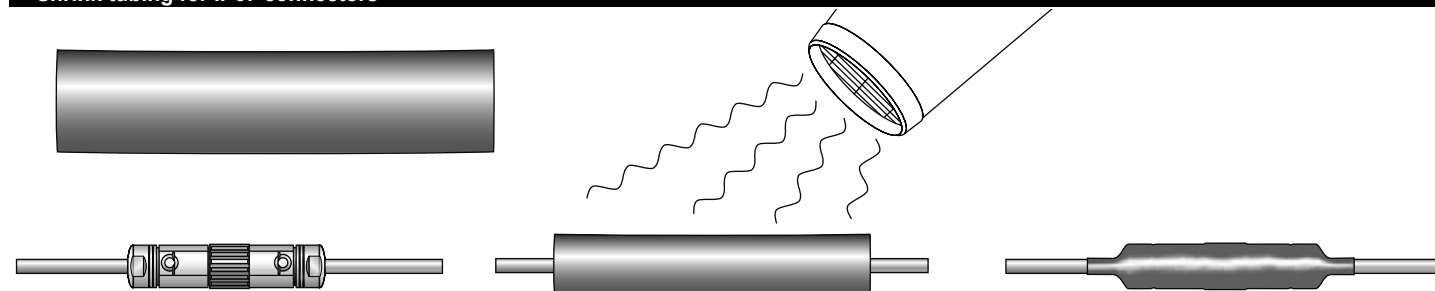


Plugging in or unplugging the flat ribbon cable under voltage can damage the motor and controller.

1 & 2	Phase 1+	1 & 2
10 & 11	Phase 1-	10 & 11
3 & 4	Phase 2+	3 & 4
12 & 13	Phase 2-	12 & 13
9	+5V	9
7	GND	7
5	Sensor sine	5
6	Sensor cosine	6
8	Temp. Sensor	8

Item	Part Number
KF01-D15/F-0.7	0150-1937
Flat ribbon cable with D15/m-Connector	

Shrink tubing for IP67 connectors



Item	Material	Part Number
MC01-18 Shrink tubing (with hot glue coating) for additional protection of IP67 connectors	Polyolefin	0150-3089

LinMot Cable

	Standard cable		High Flex cable		Robot cable		Flat ribbon cable
Cable Type	K05-04/05	K15-04/05	KS05-04/05	KS10-04/05	KR05-04/05	KR10-04/05	KF01-D15/F-0.7
Diameter	0.5mm ²	1.5mm ²	0.5mm ²	1.0mm ²	0.5mm ²	1.0mm ²	
Motor phases	(AWG20)	(AWG16)	(AWG20)	(AWG18)	(AWG20)	(AWG18)	
Diameter		0.14mm ²		0.14mm ²		0.14mm ²	
Sensor signals		(AWG26)		(AWG26)		(AWG26)	
Inner isolation material	TPE-U		TPE-E		TPE-E		Polyester
Outer isolation material	PUR		PUR		PUR		
Cable color	black		black		black		white
Cable diameter	8.2mm (0.31in)	11.2mm (0.44in)	9.5mm (0.38in)	10.8mm (0.42in)	9.7mm (0.38in)	10.9mm (0.43in)	17.8x0.2mm (0.7x0.008in)
Weight	83kg/km	180kg/km	113kg/km	139kg/km	109kg/km	136kg/km	
Approvals	Materials according UL		UL / CSA 300V		UL / CSA 300V		
Minimal bending radius fix installed	25mm (1in)	50mm (2in)	30mm (1.2in)	50mm (2in)	30mm (1.2in)	50mm (2in)	foldable
Minimal bending radius moving	do not use in applications with moving motor cable		60mm (2.4in) no torsion	100mm (4in) no torsion	60mm (2.4in) Maximal torsion: ±270° per 0.5m	100mm (4in) Maximal torsion: ±270° per 0.5m	25mm
Temperature range	-40°...+80°C		-40°...+80°C		-40°...+80°C		-55°...+105°C
Available lengths	cable per m cable on rolls 50m, 100m, 200m		cable per m cable on rolls 100m		cable per m cable on rolls 100m		0.7m

Ordering information

	Standard cable		High-Flex cable		Robot cable		Flat ribbon cable
	0.5mm ²	1.5mm ²	0.5mm ²	1.0mm ²	0.5mm ²	1.0mm ²	
Cable per m	K05-04/05	K15-04/05	KS05-04/05	KS10-04/05	KR05-04/05	KR10-04/05	
	0150-1920	0150-1978	0150-1938	0150-1977	0150-1846	0150-1830	
Rolls 50m	K05-04/05-50						
	0150-1956						
Rolls 100m	K05-04/05-100	K15-04/05-100	KS05-04/05-100	KS10-04/05-100	KR05-04/05-100	KR10-04/05-100	
	0150-1957	0150-1969	0150-1959	0150-1968	0150-1847	0150-1831	
Rolls 200m	K05-04/05-200						
	0150-1958						
Single cable 0.7m							KF01-D15/F-0.7 0150-1937