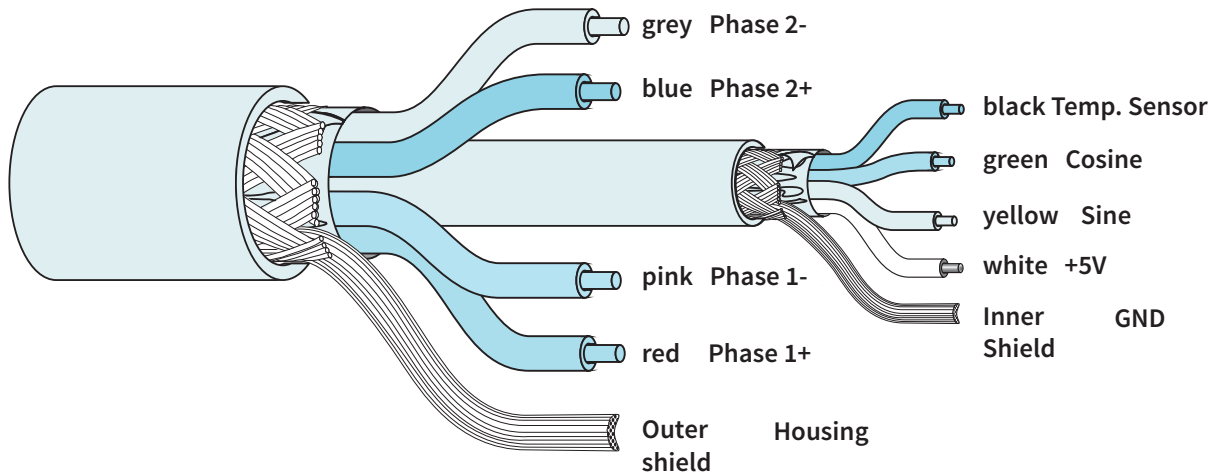


# MOTOR CABLES FOR STANDARD AND LINEAR ROTARY MOTORS



- ✓ Hybrid cables for phases and motor feedback
- ✓ Standard cables for fixed installation
- ✓ High-flex cables for cable chain applications
- ✓ Robot cables for torsional loads
- ✓ Prefabricated motor cables

For type P0x and PR linear motors, one single cable is sufficient to connect the motor and drive. This motor cable contains the motor phases and sensor signals for the position measurement integrated in the motor. The double shielding in the cable (see illustration) ensures that the linear motor can operate without interference with a cable up to 30 m long.



**Single-cable concept for type P0x linear motors and PR01 motors**

**TYPES OF MOTOR CABLES**

The abbreviations K, KS, KR, and KF specify the available types of the cables.

The standard type K motor cable is suitable for stationary cable routing. It is used wherever the motor cable is fixed and not subject to any motion.

The high-flex trailing chain KS motor cable is suitable for applications where the motor cable moves, where the cable is routed through a cable carrier and undergoes a roll-up motion.

If the motor cable is subject to a torsional motion, then the special type KR robot cable should be used. In order to protect the robot cable from mechanical damage, it should be routed through a suitable cable tube.

A ribbon cable is with the designation KF is available for the P02-23Sx80 short motor. The ribbon cable can be subjected to roll-up motion, just like the high-flex cable.

**MOTOR CABLE BY LENGTH**

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

LinMot carries all of the motor plugs for customers to assemble their own motor cables. The individual connections for customer-assembled motor cables should be checked carefully for short circuits and correct configuration prior to commissioning. The insulation strength between individual conductors must be tested with a test voltage of 1500VDC.

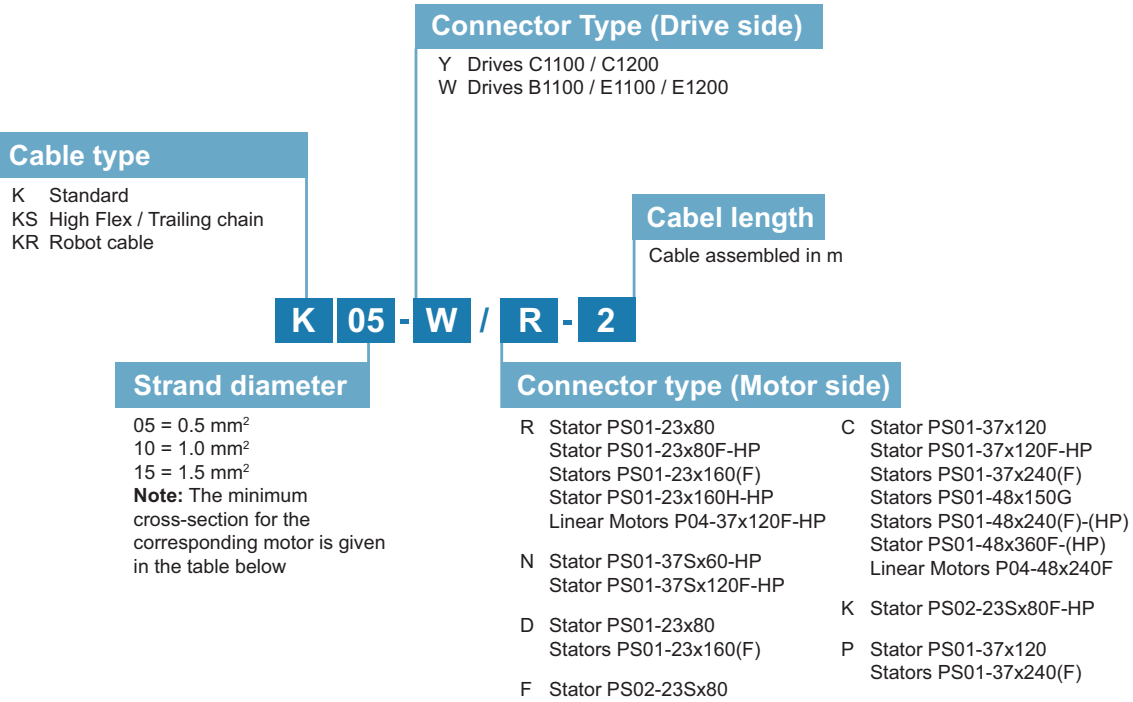
**PREFABRICATED MOTOR CABLES**

Fully assembled motor cables can be shipped in lengths up to 30 m. Order the motor cable in the desired length together with the matching motor plugs (assembled). Longer cables can also be assembled after consultation with LinMot.

Prefabricated motor cables with the most commonly used plug combinations can be shipped from stock in standard lengths.

LinMot motor cables are produced using only crimped contacts and are tested under high voltage prior to shipment.

**MOTOR CABLES FOR STANDARD MOTORS & SHORT TYPE MOTORS**

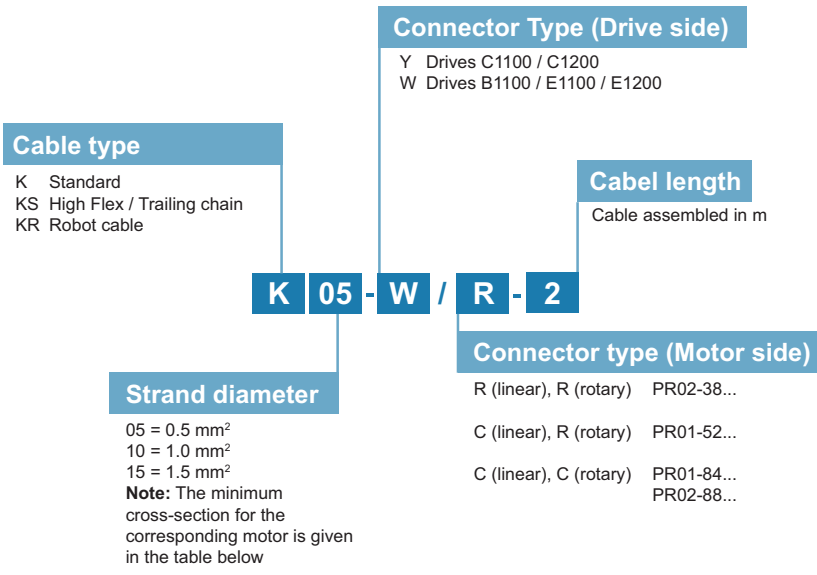


Minimum Strand Diameter						
	Max. Cont. Force [A rms]		Strand diameter according to DIN		Strand diameter according to UL	
	Passive cooling	Fan cooling	Passive cooling	Fan cooling	Passive cooling	Fan cooling
PS01-23x80	0.6	1.1	K(x)05	K(x)05	K(x)05	K(x)05
PS01-23x80F-HP	1.2	1.0	K(x)05	K(x)05	K(x)05	K(x)05
PS02-23Sx80	0.6	1.0	K(x)05	K(x)05	K(x)05	K(x)05
PS02-23Sx80F-HP	1.1	2.0	K(x)05	K(x)05	K(x)05	K(x)05
PS01-23x160	0.6	1.0	K(x)05	K(x)05	K(x)05	K(x)05
PS01-23x160F	0.8	1.6	K(x)05	K(x)05	K(x)05	K(x)05
PS01-23x160H-HP	1.8	2.7	K(x)05	K(x)05	K(x)05	K(x)05
PS01-37Sx60-HP	0.9	1.8	K(x)05	K(x)05	K(x)05	K(x)05
PS01-37x120	1.5	1.9	K(x)05	K(x)05	K(x)05	K(x)05
PS01-37x120F-HP	2.1	3.8	K(x)05	K(x)05	K(x)05	K(x)05
PS01-37Sx120F-HP	1.5	3.0	K(x)05	K(x)05	K(x)05	K(x)05
PS01-37x240	1.0	1.8	K(x)05	K(x)05	K(x)05	K(x)05
PS01-37x240F	1.5	2.8	K(x)05	K(x)05	K(x)05	K(x)05
PS01-48x150G-HP	6.7	11	K(x)05	K(x)05	K(x)10	K(x)15*
PS01-48x240	2.7	4.7	K(x)05	K(x)05	K(x)05	K(x)10
PS01-48x240F	4.8	8.3	K(x)05	K(x)05	K(x)10	K(x)15
PS01-48x240F-HP	7.7	13	K(x)05	K(x)10	K(x)15	K(x)15**
PS01-48x360F	4.6	7.9	K(x)05	K(x)05	K(x)10	K(x)15
PS01-48x360F-HP	7.7	13	K(x)05	K(x)10	K(x)15	K(x)15***
P04-37x120F-HP	2.9	4.0	K(x)05	K(x)05	K(x)05	K(x)05
P04-48x240F	4.7	8.3	K(x)05	K(x)05	K(x)10	K(x)15

\*Up to max. cont. force 156 N rms  
 \*\*Up to max. cont. force 220 N rms  
 \*\*\*Up to max. cont. force 325 N rms

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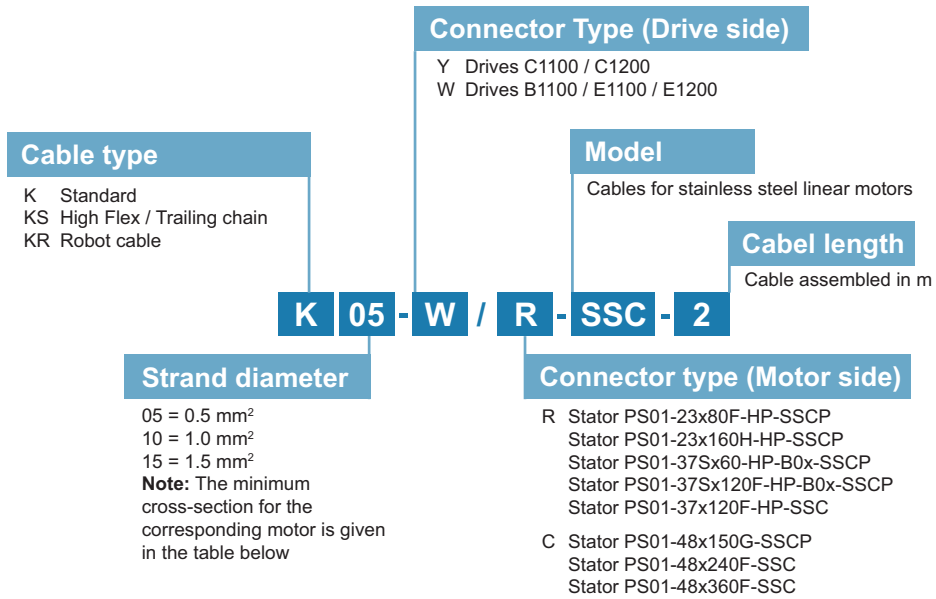
**MOTOR CABLES FOR LINEAR ROTARY MOTORS**



Minimum Strand Diameter (Linear Unit)						
	Max. Cont. Force [A rms]		Strand diameter according to DIN		Strand diameter according to UL	
	Passive cooling	Fan cooling	Passive cooling	Fan cooling	Passive cooling	Fan cooling
PR01-52x40-R/37x120F-HP-C-80 (-L)	2.1	3.8	K(x)05	K(x)05	K(x)05	K(x)05
PR01-52x60-R/37x120F-HP-C-100 (-L)	2.1	3.8	K(x)05	K(x)05	K(x)05	K(x)05
PR01-52x60-R/37x120F-HP-C-150 (-L)	2.1	3.8	K(x)05	K(x)05	K(x)05	K(x)05
PR01-84x80-C/48x240F-C-100 (-L)	4.8	8.3	K(x)05	K(x)05	K(x)10	K(x)15
PR01-84x80-C/48x240F-C-150 (-L)	4.8	8.3	K(x)05	K(x)05	K(x)10	K(x)15
PR01-84x80-C/48x240F-C-300 (-L)	4.8	8.3	K(x)05	K(x)05	K(x)10	K(x)15
PR01-84x80-C/48x360F-C-100 (-L)	4.6	7.9	K(x)05	K(x)05	K(x)10	K(x)15
PR01-84x80-C/48x360F-C-150 (-L)	4.6	7.9	K(x)05	K(x)05	K(x)10	K(x)15
PR01-84x80-SSC-C/48x240F-C-150 (-L)	4.8	8.3	K(x)05	K(x)05	K(x)10	K(x)15
PR01-84x80-SSC-C/48x240F-C-300-L	4.8	8.3	K(x)05	K(x)05	K(x)10	K(x)15
PR01-84x80-SSC-C/48x360F-C-150 (-L)	4.6	7.9	K(x)05	K(x)05	K(x)10	K(x)15
PR01-52x60-R/37x120F-HP-C-100-G...	2.1	3.8	K(x)05	K(x)05	K(x)05	K(x)15
PR01-84x80-C/48x240F-C-150-G...	4.8	8.3	K(x)05	K(x)05	K(x)10	K(x)15
PR01-84x80-C/48x360F-C-150-G...	4.6	7.9	K(x)05	K(x)05	K(x)10	K(x)15

Minimum Strand Diameter (Rotary Unit)						
	Max. Cont. Force [A rms]		Strand diameter according to DIN		Strand diameter according to UL	
	Passive cooling	Fan cooling	Passive cooling	Fan cooling	Passive cooling	Fan cooling
PR01-52x40-R/37x120F-HP-C-80 (-L)	1.2	1.8	K(x)05	K(x)05	K(x)05	K(x)05
PR01-52x60-R/37x120F-HP-C-100 (-L)	2.1	3.1	K(x)05	K(x)05	K(x)05	K(x)05
PR01-52x60-R/37x120F-HP-C-150 (-L)	2.1	3.1	K(x)05	K(x)05	K(x)05	K(x)05
PR01-84x80-C/48x240F-C-100 (-L)	3.9	5.5	K(x)05	K(x)05	K(x)05	K(x)10
PR01-84x80-C/48x240F-C-150 (-L)	3.9	5.5	K(x)05	K(x)05	K(x)05	K(x)10
PR01-84x80-C/48x240F-C-300 (-L)	3.9	5.5	K(x)05	K(x)05	K(x)05	K(x)10
PR01-84x80-C/48x360F-C-100 (-L)	3.9	5.5	K(x)05	K(x)05	K(x)05	K(x)10
PR01-84x80-C/48x360F-C-150 (-L)	3.9	5.5	K(x)05	K(x)05	K(x)05	K(x)10
PR01-84x80-SSC-C/48x240F-C-150 (-L)	3.9	5.5	K(x)05	K(x)05	K(x)05	K(x)10
PR01-84x80-SSC-C/48x240F-C-300-L	3.9	5.5	K(x)05	K(x)05	K(x)05	K(x)10
PR01-84x80-SSC-C/48x360F-C-150 (-L)	3.9	5.5	K(x)05	K(x)05	K(x)05	K(x)10
PR01-52x60-R/37x120F-HP-C-100-G...	2.1	3.1	K(x)05	K(x)05	K(x)05	K(x)10
PR01-84x80-C/48x240F-C-150-G...	3.9	5.5	K(x)05	K(x)05	K(x)05	K(x)10
PR01-84x80-C/48x360F-C-150-G...	3.9	5.5	K(x)05	K(x)05	K(x)05	K(x)10

**MOTOR CABLES FOR STAINLESS STEEL LINEAR MOTORS**



Minimum Strand Diameter						
	Max. Cont. Force [A rms]		Strand diameter according to DIN		Strand diameter according to UL	
	Passive cooling	Fluid cooling	Passive cooling	Fluid cooling	Passive cooling	Fluid cooling
<b>PS01-37x120F-HP-SSC</b>	1.3	3.4	K(x)05	K(x)05	K(x)05	K(x)05
<b>PS01-48x150G-HP-SSCP</b>	5.5	8.8	K(x)05	K(x)05	K(x)05	K(x)15
<b>PS01-48x240F-SSC</b>	3.3	9.2	K(x)05	K(x)05	K(x)05	K(x)15*
<b>PS01-48x360F-SSC</b>	3.4	9.4	K(x)05	K(x)05	K(x)05	K(x)15**

\*Up to max. cont. force 230 N rms  
 \*\*Up to max. cont. force 333 N rms



CABLES FOR STANDARD- AND LINEAR ROTARY MOTORS						
	Standard Motor Cable		Trailing Chain Cable		Robot Cable	
<b>Cable type</b>	<b>K05-04/05 (1V1)</b>	<b>K15-04/05 (1V1)</b>	<b>KS05-04/05 (1V1)</b>	<b>KS10-04/05 (1V1)</b>	<b>KR05-04/05 (1V1)</b>	<b>KR10-04/05 (1V1)</b>
<b>Item-No.</b>	<b>0150-4233</b>	<b>0150-4234</b>	<b>0150-4235</b>	<b>0150-4236</b>	<b>0150-4237</b>	<b>0150-4238</b>
Wire cross-section Motor phases	0.5 mm <sup>2</sup> (AWG20)	1.5 mm <sup>2</sup> (AWG16)	0.5 mm <sup>2</sup> (AWG20)	1.0 mm <sup>2</sup> (AWG18)	0.5 mm <sup>2</sup> (AWG20)	1.0 mm <sup>2</sup> (AWG18)
Wire cross-section Sensor signal	0.34 mm <sup>2</sup> (AWG22)		0.34 mm <sup>2</sup> (AWG22)		0.34 mm <sup>2</sup> (AWG22)	
Wire cross-section Inner Filler	0.14 mm <sup>2</sup> (AWG26)		0.14 mm <sup>2</sup> (AWG26)		0.14 mm <sup>2</sup> (AWG26)	
Material Wire insulation	PUR	TPE-U	TPE-E		TPE-E	
Material Cable sheath	PUR		PUR		PUR	
Colour Cable sheath	Black		Black		Black	
Cable cross section	9.2 mm (0.35 in)	11.8 mm (0.46 in)	9.5 mm (0.38 in)	10.8 mm (0.42 in)	9.9 mm (0.38 in)	11.1 mm (0.43 in)
Weight	96 kg/km	185 kg/km	121 kg/km	154 kg/km	129 kg/km	153 kg/km
Approvals	(-)	UL / CSA 300V E467697	UL / CSA 300V E172204		UL / CSA 300V E172204	
AWM-Style	20233		20233		20233	
Minimum bend- ing radius static	25 mm (1 in)	50 mm (2 in)	30 mm (1.2 in)	50 mm (2 in)	40 mm (1.6 in)	50 mm (2 in)
Minimum bend- ing radius moving	Not suitable for applications With moving motor cable		60 mm (2.4 in) No Torsion	100 mm (4 in) No Torsion	80 mm (3.2 in) Max. Torsion: ±270° pro 0.5 m	100 mm (4 in) Max. Torsion: ±270° pro 0.5 m
Temperature range	-40°...+80°C		-40°...+80°C		-40°...+80°C	
Oil resistance	very good acc. DIN VDE 0282 Part 10 + HD 22.10		very good acc. DIN VDE 0282 Part 10 + HD 22.10		very good acc. DIN VDE 0282 Part 10 + HD 22.10	
Chemical resistance	good to acids, alkalis, solvents, hydraulic fluids, etc.		good to acids, alkalis, solvents, hydraulic fluids, etc.		good to acids, alkalis, solvents, hydraulic fluids, etc.	

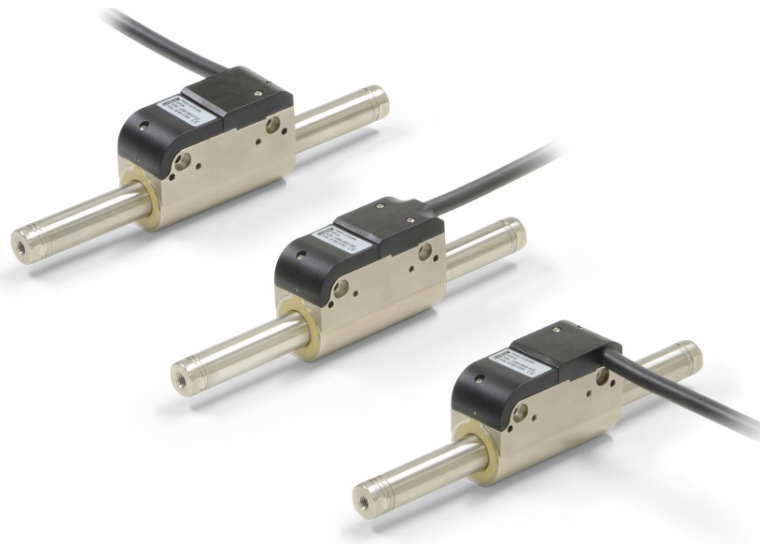


CABLES FOR SHORT TYPE MOTORS						
	Trailing Chain Cable			Robot Cable		Flat Cable
<b>Cable type</b>	<b>KS03-09**</b>	<b>KS05-09**</b>	<b>KS05-04/05</b>	<b>KR03-09**</b>	<b>KR05-04/05</b>	<b>KF02-D15/F-...</b>
<b>Item-No.</b>	<b>0150-2182</b>	<b>0150-2931</b>	<b>0150-1938</b>	<b>0150-2801</b>	<b>0150-1846</b>	<b>assembled</b>
Wire cross-section Motor phases	0.34 mm <sup>2</sup> (AWG22)	0.5 mm <sup>2</sup> (AWG20)	0.5 mm <sup>2</sup> (AWG20)	0.34 mm <sup>2</sup> (AWG22)	0.5 mm <sup>2</sup> (AWG20)	(-)
Wire cross-section Sensor signal		0.14 mm <sup>2</sup> (AWG26)		0.14 mm <sup>2</sup> (AWG26)		(-)
Wire cross-section Inner Filler	(-)	(-)	0.14 mm <sup>2</sup> (AWG26)	(-)	(-)	(-)
Material Wire insulation		TPE-E		TPE-E		Polyester
Material Cable sheath		PUR		PUR		(-)
Colour Cable sheath		Black		Black		White
Cable cross section	6.7 mm (0.26 in)	7.6 mm (0.29 in)	9.5 mm (0.38 in)	7.4 mm (0.29 in)	9.7 mm (0.38 in)	17.8x0.2 mm (0.7x0.008 in)
Weight	64 kg/km	83 kg/km	115 kg/km	69 kg/km	109 kg/km	(-)
Approvals		UL / CSA 300V E172204		UL / CSA 300V E172204		(-)
AWM-Style	21198	21198	20235	21198	20233	(-)
Minimum bending radius static	25 mm (1 in)	25 mm (1 in)	30 mm (1.2 in)	30 mm (1.2 in)	40 mm (1.6 in)	foldable
Minimum bending radius moving	50 mm (2 in)	55 mm (2.2 in)	60 mm (2.4 in) No Torsion	60 mm (2.4 in) Max. Torsion: ±180° pro 0.5 m*	80 mm (3.2 in) Max. Torsion: ±270° pro 0.5 m	25 mm
Temperature range		-40°...+80°C		-40°...+80°C		-55°...+105°C
Oil resistance		very good acc. DIN VDE 0282 Part 10 + HD 22.10		very good acc. DIN VDE 0282 Part 10 + HD 22.10		(-)
Chemical resistance		good to acids, alkalis, solvents, hydraulic fluids, etc.		good to acids, alkalis, solvents, hydraulic fluids, etc.		(-)

\* ±270° / 0.5 m permitted for initialization.

\*\* Max. length 6 m

(Longer cable lengths can result in losses in positioning accuracy, in the operating behaviour and in the interference sensitivity of the motors. Extensions up to 50 m can be realised with cables K05-04/05 1V1 or KS05-04/05 1V1.)



## ASSEMBLED CABLES FOR STANDARD & LINEAR ROTARY MOTORS

MOTOR CABLE FOR LINEAR MOTORS WITH C CONNECTOR		
Item	Description	Item-No.
<b>K05-W/C-2</b>	Motor cable W/C, 2 m	<a href="#">0150-2123</a>
<b>K05-W/C-4</b>	Motor cable W/C, 4 m	<a href="#">0150-2124</a>
<b>K05-W/C-6</b>	Motor cable W/C, 6 m	<a href="#">0150-2125</a>
<b>K05-W/C-8</b>	Motor cable W/C, 8 m	<a href="#">0150-2126</a>
<b>K05-Y/C-2</b>	Motor cable Y/C, 2 m	<a href="#">0150-2425</a>
<b>K05-Y/C-4</b>	Motor cable Y/C, 4 m	<a href="#">0150-2426</a>
<b>K05-Y/C-6</b>	Motor cable Y/C, 6 m	<a href="#">0150-2427</a>
<b>K05-Y/C-8</b>	Motor cable Y/C, 8 m	<a href="#">0150-2428</a>
<b>K05-HI/C-2</b>	Motor cable HI/C, 2 m	<a href="#">0150-2452</a>
<b>K05-HI/C-4</b>	Motor cable HI/C, 4 m	<a href="#">0150-2451</a>
<b>K15-W/C-2</b>	Motor cable W/C, 2 m	<a href="#">0150-1811</a>
<b>K15-W/C-4</b>	Motor cable W/C, 4 m	<a href="#">0150-1801</a>
<b>K15-W/C-5</b>	Motor cable W/C, 5 m	<a href="#">0150-1849</a>
<b>K15-W/C-6</b>	Motor cable W/C, 6 m	<a href="#">0150-1802</a>
<b>K15-W/C-8</b>	Motor cable W/C, 8 m	<a href="#">0150-1803</a>
<b>K15-Y/C-2</b>	Motor cable Y/C, 2 m	<a href="#">0150-2429</a>
<b>K15-Y/C-4</b>	Motor cable Y/C, 4 m	<a href="#">0150-2430</a>
<b>K15-Y/C-6</b>	Motor cable Y/C, 6 m	<a href="#">0150-2431</a>
<b>K15-Y/C-8</b>	Motor cable Y/C, 8 m	<a href="#">0150-2432</a>
<b>K15-HI/C-2</b>	Motor cable HI/C, 2 m	<a href="#">0150-2453</a>
<b>K15-HI/C-4</b>	Motor cable HI/C, 4 m	<a href="#">0150-2458</a>
<b>KS05-W/C-4</b>	Trailing chain cable W/C, 4 m	<a href="#">0150-2127</a>
<b>KS05-W/C-6</b>	Trailing chain cable W/C, 6 m	<a href="#">0150-2128</a>
<b>KS05-W/C-8</b>	Trailing chain cable W/C, 8 m	<a href="#">0150-2129</a>
<b>KS05-Y/C-4</b>	Trailing chain cable Y/C, 4 m	<a href="#">0150-2436</a>
<b>KS05-Y/C-6</b>	Trailing chain cable Y/C, 6 m	<a href="#">0150-2437</a>
<b>KS05-Y/C-8</b>	Trailing chain cable Y/C, 8 m	<a href="#">0150-2438</a>
<b>KS05-C/C-2</b>	Trailing chain cable C/C, 2 m	<a href="#">0150-1827</a>
<b>KS05-C/C-4</b>	Trailing chain cable C/C, 4 m	<a href="#">0150-1828</a>
<b>KS10-W/C-4</b>	Trailing chain cable W/C, 4 m	<a href="#">0150-1807</a>
<b>KS10-W/C-5</b>	Trailing chain cable W/C, 5 m	<a href="#">0150-1860</a>
<b>KS10-W/C-6</b>	Trailing chain cable W/C, 6 m	<a href="#">0150-1858</a>
<b>KS10-W/C-8</b>	Trailing chain cable W/C, 8 m	<a href="#">0150-1808</a>
<b>KS10-Y/C-4</b>	Trailing chain cable Y/C, 4 m	<a href="#">0150-2439</a>
<b>KS10-Y/C-6</b>	Trailing chain cable Y/C, 6 m	<a href="#">0150-2440</a>
<b>KS10-Y/C-8</b>	Trailing chain cable Y/C, 8 m	<a href="#">0150-2441</a>
<b>KS10-C/C-2</b>	Trailing chain cable C/C, 2 m	<a href="#">0150-1816</a>
<b>KS10-C/C-4</b>	Trailing chain cable C/C, 4 m	<a href="#">0150-1817</a>



## MOTOR CABLE FOR LINEAR MOTORS WITH R CONNECTOR

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-3</b>	Motor cable W/R, 3 m	<a href="#">0150-2459</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-10</b>	Motor cable W/R, 10 m	<a href="#">0150-2132</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-HI/R-2</b>	Motor cable HI/R, 2 m	<a href="#">0150-2449</a>
<b>K05-HI/R-4</b>	Motor cable HI/R, 4 m	<a href="#">0150-2450</a>
<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-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-R/R-2</b>	Trailing chain cable R/R, 2 m	<a href="#">0150-1838</a>
<b>KS05-R/R-4</b>	Trailing chain cable R/R, 4 m	<a href="#">0150-1839</a>

## ASSEMBLED CABLES FOR STAINLESS STEEL MOTORS

## MOTOR CABLE FOR LINEAR MOTORS WITH R-SSC CONNECTORS (STAINLESS STEEL)

Item	Description	Item-No.
<b>KS05-W/R-SSC-2</b>	Trailing chain cable W/R-SSC, 2 m	<a href="#">0150-2683</a>
<b>KS05-W/R-SSC-4</b>	Trailing chain cable W/R-SSC, 4 m	<a href="#">0150-2684</a>
<b>KS05-W/R-SSC-6</b>	Trailing chain cable W/R-SSC, 6 m	<a href="#">0150-2685</a>
<b>KS05-W/R-SSC-8</b>	Trailing chain cable W/R-SSC, 8 m	<a href="#">0150-2686</a>
<b>KS05-Y/R-SSC-2</b>	Trailing chain cable Y/R-SSC, 2 m	<a href="#">0150-2687</a>
<b>KS05-Y/R-SSC-4</b>	Trailing chain cable Y/R-SSC, 4 m	<a href="#">0150-2688</a>
<b>KS05-Y/R-SSC-6</b>	Trailing chain cable Y/R-SSC, 6 m	<a href="#">0150-2689</a>
<b>KS05-Y/R-SSC-8</b>	Trailing chain cable Y/R-SSC, 8 m	<a href="#">0150-2690</a>

## MOTOR CABLE FOR LINEAR MOTORS WITH C-SSC CONNECTORS (STAINLESS STEEL)

Item	Description	Item-No.
<b>KS10-W/C-SSC-2</b>	Trailing chain cable W/C-SSC, 2 m	<a href="#">0150-2675</a>
<b>KS10-W/C-SSC-4</b>	Trailing chain cable W/C-SSC, 4 m	<a href="#">0150-2676</a>
<b>KS10-W/C-SSC-6</b>	Trailing chain cable W/C-SSC, 6 m	<a href="#">0150-2677</a>
<b>KS10-W/C-SSC-8</b>	Trailing chain cable W/C-SSC, 8 m	<a href="#">0150-2678</a>
<b>KS10-Y/C-SSC-2</b>	Trailing chain cable Y/C-SSC, 2 m	<a href="#">0150-2679</a>
<b>KS10-Y/C-SSC-4</b>	Trailing chain cable Y/C-SSC, 4 m	<a href="#">0150-2680</a>
<b>KS10-Y/C-SSC-6</b>	Trailing chain cable Y/C-SSC, 6 m	<a href="#">0150-2681</a>
<b>KS10-Y/C-SSC-8</b>	Trailing chain cable Y/C-SSC, 8 m	<a href="#">0150-2682</a>

## ASSEMBLED CABLES FOR SHORT TYPE MOTORS

MOTOR CABLE FLAT FOR SHORT TYPE MOTORS P02-23Sx80-F		
Item	Description	Item-No.
<b>KF02-D15/F-0.08</b>	Flat cable 0.08m, for PS02-23Sx80-F	<a href="#">0150-2150</a>
<b>KF02-D15/F-0.16</b>	Flat cable 0.16m, for PS02-23Sx80-F	<a href="#">0150-2156</a>
<b>KF02-D15/F-0.32</b>	Flat cable 0.32m, for PS02-23Sx80-F	<a href="#">0150-2152</a>
<b>KF02-D15/F-0.48</b>	Flat cable 0.48m, for PS02-23Sx80-F	<a href="#">0150-2154</a>
<b>KF02-D15/F-0.70</b>	Flat cable 0.70m, for PS02-23Sx80-F	<a href="#">0150-2158</a>
<b>K05-D/D15-1</b>	Adapter cable D/D15,1m (for PS01-23Sx80)	<a href="#">0150-1936</a>

MOTOR CABLE FOR SHORT TYPE MOTORS P02-23Sx80-F-HP-K		
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-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-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>

MOTOR CABLE FOR SHORT TYPE MOTORS P01-37SX...-HP-N		
Item	Description	Item-No.
<b>KS05-W/N-2</b>	Trailing chain cable W/N, 2 m	<a href="#">0150-2296</a>
<b>KS05-W/N-4</b>	Trailing chain cable W/N, 4 m	<a href="#">0150-2297</a>
<b>KS05-W/N-6</b>	Trailing chain cable W/N, 6 m	<a href="#">0150-2298</a>
<b>KS05-W/N-8</b>	Trailing chain cable W/N, 8 m	<a href="#">0150-2299</a>
<b>KS05-Y/N-2</b>	Trailing chain cable Y/N, 2 m	<a href="#">0150-2442</a>
<b>KS05-Y/N-4</b>	Trailing chain cable Y/N, 4 m	<a href="#">0150-2443</a>
<b>KS05-Y/N-6</b>	Trailing chain cable Y/N, 6 m	<a href="#">0150-2444</a>
<b>KS05-Y/N-8</b>	Trailing chain cable Y/N, 8 m	<a href="#">0150-2445</a>

### CABLE PER M FOR STANDARD AND LINEAR ROTARY MOTORS

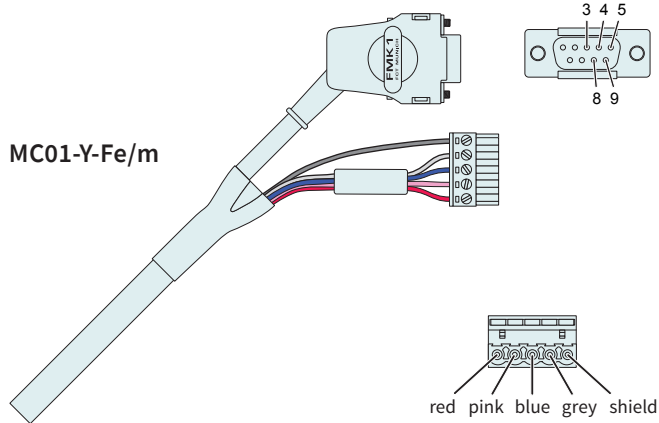
MOTOR CABLE PER M		
Item	Description	Item-No.
<b>K05-04/05 (1V1)</b>	Motor cable per m, 1V1	<a href="#">0150-4233</a>
<b>K05-04/05-50 (1V1)</b>	Motor cable 50 m roll, 1V1	<a href="#">0150-4241</a>
<b>K05-04/05-100 (1V1)</b>	Motor cable 100 m roll, 1V1	<a href="#">0150-4243</a>
<b>K05-04/05-200 (1V1)</b>	Motor cable 200 m roll, 1V1	<a href="#">0150-4244</a>
<b>K15-04/05 (1V1)</b>	Motor cable per m, 1V1	<a href="#">0150-4234</a>
<b>K15-04/05-50 (1V1)</b>	Motor cable 50 m roll, 1V1	<a href="#">0150-4246</a>
<b>K15-04/05-100 (1V1)</b>	Motor cable 100 m roll, 1V1	<a href="#">0150-4245</a>
<b>KS05-04/05 (1V1)</b>	Trailing chain cable per m, 1V1	<a href="#">0150-4235</a>
<b>KS05-04/05-100 (1V1)</b>	Trailing chain cable 100 m roll, 1V1	<a href="#">0150-4247</a>
<b>KS10-04/05 (1V1)</b>	Trailing chain cable per m, 1V1	<a href="#">0150-4236</a>
<b>KS10-04/05-100 (1V1)</b>	Trailing chain cable 100 m roll, 1V1	<a href="#">0150-4249</a>
<b>KR05-04/05 (1V1)</b>	Robot cable per m, 1V1	<a href="#">0150-4237</a>
<b>KR05-04/05-100 (1V1)</b>	Robot cable 100 m roll, 1V1	<a href="#">0150-4250</a>
<b>KR10-04/05 (1V1)</b>	Robot cable per m, 1V1	<a href="#">0150-4238</a>
<b>KR10-04/05-100 (1V1)</b>	Robot cable 100 m roll, 1V1	<a href="#">0150-4251</a>

### CABLE PER M FOR SHORT TYPE MOTORS

MOTOR CABLE PER M		
Item	Description	Item-No.
<b>KS03-09</b>	Trailing chain cable per m (max. 6 m)	<a href="#">0150-2182</a>
<b>KS05-09</b>	Trailing chain cable per m	<a href="#">0150-2931</a>
<b>KS05-04/05</b>	Trailing chain cable per m	<a href="#">0150-1938</a>
<b>KS05-04/05-100</b>	Trailing chain cable 100 m roll	<a href="#">0150-1959</a>
<b>KR03-09</b>	Robot cable per m	<a href="#">0150-2801</a>
<b>KR05-04/05</b>	Robot cable per m	<a href="#">0150-1846</a>
<b>KR05-04/05-100</b>	Robot cable 100 m roll	<a href="#">0150-1847</a>

**Y-CONNECTOR**

**DRIVE SERIES C1100 / C1200**

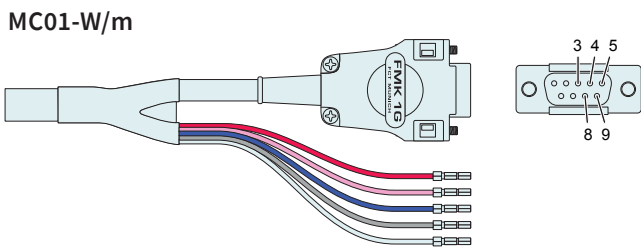


Strand red	Phase 1+	red
Strand pink	Phase 1-	pink
Strand blue	Phase 2+	blue
Strand grey	Phase 2-	grey
3	+5V	white
8	GND	inner Shield
4	Sensor Sine	yellow
9	Sensor Cosine	green
5	Temp. Sensor	black
Shield	Shield	Outer shield

Item	Description	Item-No.
<b>MC01-Y-Fe/m</b>	Motor connector Y-Fe/m	<a href="#">0150-3289</a>
<b>MC01-Y-Fe/m-as (assembled)</b>	Y/m-Connector assembled	<a href="#">0150-3500</a>

**W-CONNECTOR**

**DRIVE SERIES C1100 / C1200**

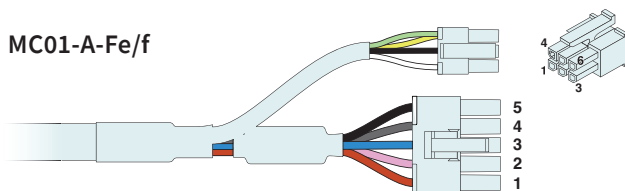


Strand red	Phase 1+	red
Strand pink	Phase 1-	pink
Strand blue	Phase 2+	blue
Strand grey	Phase 2-	grey
3	+5V	white
8	GND	inner Shield
4	Sensor Sine	yellow
9	Sensor Cosine	green
5	Temp. Sensor	black
Shield	Shield	Outer Shield

Item	Description	Item-No.
<b>MC01-W/m</b>	Motor connector W/m	<a href="#">0150-3140</a>
<b>MC01-W/m-as (assembled)</b>	W/m-Connector assembled	<a href="#">0150-3147</a>

**A-CONNECTOR**

**DRIVE SERIES A1100**



**Power**

1	Phase 1+	red
2	Phase 1-	pink
3	Phase 2+	blue
4	Phase 2-	grey
5	Shield	Outer Shield

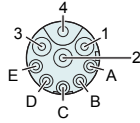
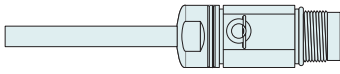
**Signal**

1	GND	brown (Kx03) / Drain wire inner shield (Kx05)
2	Temp. Sensor	black
3	Sensor Sine	yellow
4	+5V	white
5	n. c.	n. c.
6	Sensor Cosine	green

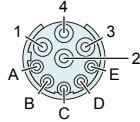
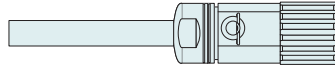
Item	Description	Item-No.
<b>MC01-A-Fe/f-as</b>	A-Fe/f-connector assembled	<a href="#">0150-3541</a>

**R-CONNECTOR**

**MC01-R/m**



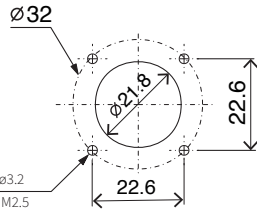
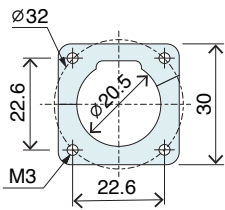
**MC01-R/f**



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

**MC01-F/R**

**Mounting window**



Back panel mounting:ø3.2  
Front panel mounting:M2.5

Item	Description	Item-No.
<b>MC01-R/m</b>	Motor connector R/m	<a href="#">0150-3130</a>
<b>MC01-R/f</b>	Motor connector R/f	<a href="#">0150-3129</a>
<b>MC01-R/m-as (assembled)</b>	R/m-Connector assembled	<a href="#">0150-3097</a>
<b>MC01-R/f-as (assembled)</b>	R/f-Connector assembled	<a href="#">0150-3143</a>
<b>MC01-F/R</b>	Mounting flange for connector MC01-R	<a href="#">0150-3253</a>
<b>MC01-R/m-cap (Kappe)</b>	Metal protection cap for R/m (Motor)	<a href="#">0150-3376</a>
<b>MC01-R/f-cap (Kappe)</b>	Metal protection cap for R/f (Cable)	<a href="#">0150-3377</a>

**MC01-R/m-cap**



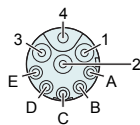
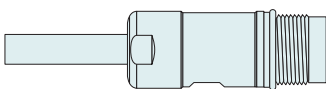
**MC01-R/f-cap**



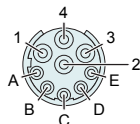
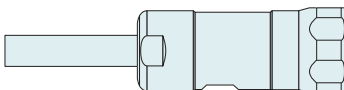
Material  
Zinc die-cast nickel-plated  
Seal: Fluororubber

**R-CONNECTOR STAINLESS STEEL**

**MC01-R/m-IP69K-SSC**



**MC01-R/f-IP69K-SSC**



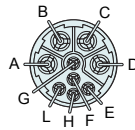
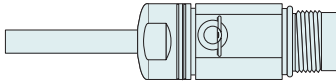
1	Phase 1+	red
2	Phase 1-	pink
3	Phase 2+	blue
4	Phase 2-	grey
A	+5V	white
B	GND	inner Shield
C	Sensor Sine	yellow
D	Sensor Cosine	green
E	Temp. Sensor	black
Housing	Shield	Outer Shield

Item	Description	Item-No.
<b>MC01-R/m-IP69K-SSC</b>	Motor connector R/m-SSC	<a href="#">0150-3381</a>
<b>MC01-R/f-IP69K-SSC</b>	Motor connector R/f, IP69k, SSC	<a href="#">0150-3347</a>
<b>MC01-R/m-IP69K-SSC-as (assembled)</b>	R/m-Connector IP69K, SSC, assembled	<a href="#">0150-3685</a>
<b>MC01-R/f-IP69K-SSC-as (assembled)</b>	R/f-Connector IP69K, SSC, assembled	<a href="#">0150-3343</a>

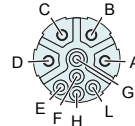
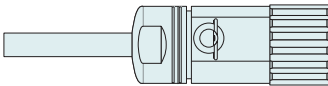
Material: Stainless steel 1.4404 / AISI 316L

**C-CONNECTOR**

**MC01-C/m**

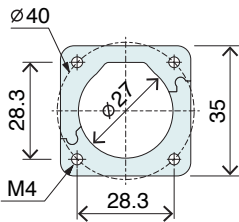


**MC01-C/f**

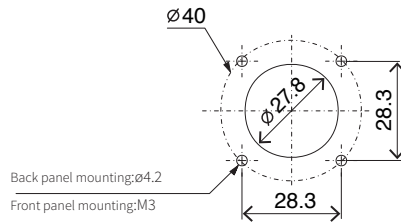


A	Phase 1+	red
B	Phase 1-	pink
C	Phase 2+	blue
D	Phase 2-	grey
E	+5V	white
F	GND	inner Shield
G	Sensor Sine	yellow
H	Sensor Cosine	green
L	Temp. Sensor	black
Housing	Shield	Outer Shield

**MC01-F/C**



**Mounting window**



Item	Description	Item-No.
<b>MC01-C/m</b>	Motor connector C/m	<a href="#">0150-3093</a>
<b>MC01-C/f</b>	Motor connector C/f	<a href="#">0150-3080</a>
<b>MC01-C/m-as (assembled)</b>	C/m-Connector assembled	<a href="#">0150-3099</a>
<b>MC01-C/f-as (assembled)</b>	C/f-Connector assembled	<a href="#">0150-3146</a>
<b>MC01-F/C Steckerflansch</b>	Mounting flange for connector MC01-C	<a href="#">0150-3254</a>
<b>MC01-C/m-cap (Kappe)</b>	Metal protection cap for C/m (Motor)	<a href="#">0150-3378</a>
<b>MC01-C/f-cap (Kappe)</b>	Metal protection cap for C/f (Cable)	<a href="#">0150-3379</a>

**MC01-C/m-cap**



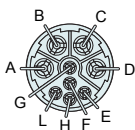
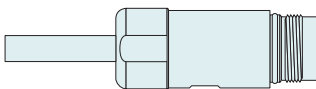
**MC01-R/m-cap**



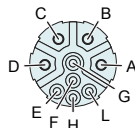
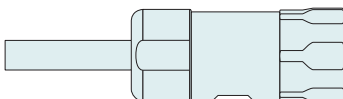
Material  
Zinc die-cast nickel-plated  
Seal: Fluororubber

**C-CONNECTOR INOX**

**MC01-C/m-IP69K-SSC**



**MC01-C/f-IP69K-SSC**



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

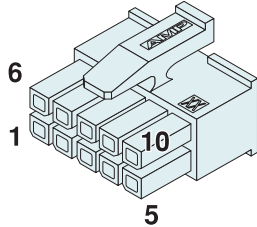
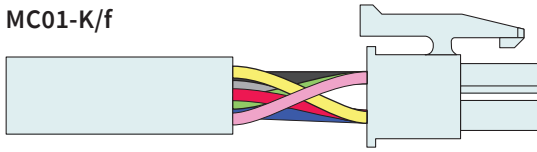
Material: Stainless steel 1.4404 / AISI 316L

Item	Description	Item-No.
<b>MC01-C/m-IP69K-SSC</b>	Motor connector C/m-SSC	<a href="#">0150-3372</a>
<b>MC01-C/f-IP69K-SSC</b>	Motor connector C/f, IP69K, SSC	<a href="#">0150-3306</a>
<b>MC01-C/m-IP69K-SSC as (assembled)</b>	Motor connector C/m, IP69K, SSC assembled	<a href="#">0150-3404</a>
<b>MC01-C/f-IP69K-SSC-as (assembled)</b>	C/f-Connector IP69K, SSC assembled	<a href="#">0150-3325</a>



**K-CONNECTOR**

MC01-K/f



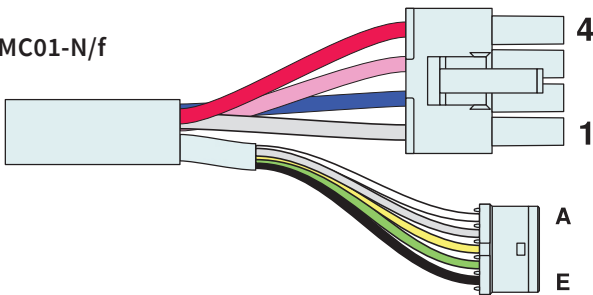
Cable types: KS03-09 (Max. length 6m)

1	Phase 1+	red
2	Phase 2+	blue
4	Phase 1-	pink
5	Phase 2-	grey
9	+5V	white
8	GND	brown
6	Sensor Sine	yellow
7	Sensor Cosine	green
10	Temp. Sensor	black
Shield	Shield	Outer Shield

Item	Description	Item-No.
<b>MC01-K/f</b>	Motor connector K (f)	<a href="#">0150-3345</a>
<b>MC01-K/f-as (assembled)</b>	K/f-Connector assembled	<a href="#">0150-3346</a>

**N-CONNECTOR**

MC01-N/f



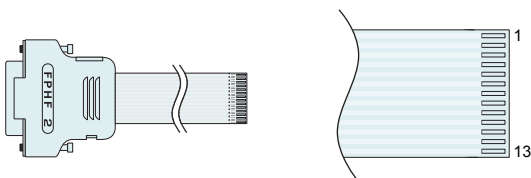
Cable types: KS05-09 (Max. length 6m)  
KS05-04/05

4	Phase 1+	red
3	Phase 1-	pink
2	Phase 2+	blue
1	Phase 2-	grey
A	+5V	white
B	GND	inner Shield
C	Sensor Sine	yellow
D	Sensor Cosine	green
E	Temp. Sensor	black
	Housing	Outer shield

Item	Description	Item-No.
<b>MC01-N/f</b>	Motor connector N/f	<a href="#">0150-3407</a>
<b>MC01-N/f-as (assembled)</b>	N/f-Connector assembled	<a href="#">0150-3408</a>

**F-CONNECTOR**

14



MC01-D15W/f

ZIF-Line Molex  
pitch 1.25 mm

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

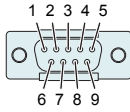
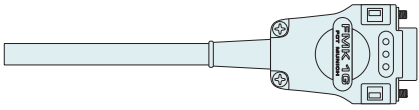
Item	Description	Item-No.
<b>KF02-D15/F-...</b>	Flat cable with D15/m-Connector	see section ordering information / Motor cable flat for short motors P02-23Sx80-F



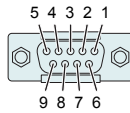
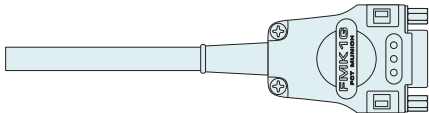
Plugging in or unplugging the flat ribbon cable under voltage can damage the motor and drive.

**D-CONNECTOR**

**MC01-D/m**



**MC01-D/f**

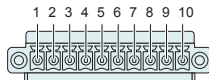
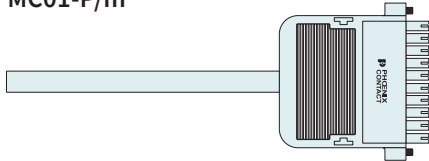


1	Phase 1+	red
6	Phase 1-	pink
2	Phase 2+	blue
7	Phase 2-	grey
3	+5V	white
8	GND	inner Shield
4	Sensor Sine	yellow
9	Sensor Cosine	green
5	Temp. Sensor	black
Housing	Shield	Outer Shield

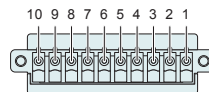
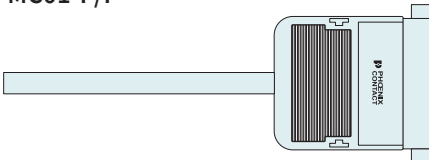
Item	Description	Item-No.
<b>MC01-D/m</b>	Motor connector D (m)	<a href="#">0150-3024</a>
<b>MC01-D/f</b>	Motor connector D (f)	<a href="#">0150-3025</a>
<b>MC01-D/m-as (assembled)</b>	D/m-Connector assembled	<a href="#">0150-3055</a>
<b>MC01-D/f-as (assembled)</b>	D/f-Connector assembled	<a href="#">0150-3142</a>

**P-CONNECTOR**

**MC01-P/m**



**MC01-P/f**

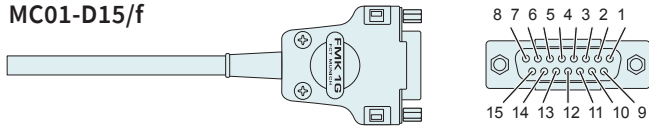


1	Phase 1+	red
2	Phase 1-	pink
3	Phase 2+	blue
4	Phase 2-	grey
5	+5V	white
6	GND	inner Shield
7	Sensor Sine	yellow
8	Sensor Cosine	green
9	Temp. Sensor	black
10	Shield	Outer Shield

Item	Description	Item-No.
<b>MC01-P/m</b>	Motor connector P (m)	<a href="#">0150-3020</a>
<b>MC01-P/f</b>	Motor connector P (f)	<a href="#">0150-3021</a>
<b>MC01-P/m-as (assembled)</b>	P/m-Connector assembled	<a href="#">0150-3056</a>
<b>MC01-P/f-as (assembled)</b>	P/f-Connector assembled	<a href="#">0150-3144</a>

**D15-CONNECTOR**

**MC01-D15/f**

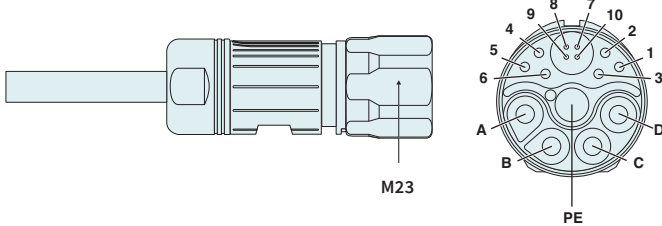


7 & 15	Phase 1+	red
3 & 10	Phase 1-	pink
6 & 14	Phase 2+	blue
2 & 9	Phase 2-	grey
11	+5V	white
12	GND	inner Shield
13	Sensor Sine	yellow
5	Sensor Cosine	green
4	Temp. Sensor	black
Housing	Shield	Outer shield

Item	Description	Item-No.
<b>MC01-D15/f</b>	Motor connector D15 (f)	<a href="#">0150-3136</a>
<b>MC01-D15/f-as (assembled)</b>	D15/f-Connector assembled	<a href="#">0150-3073</a>

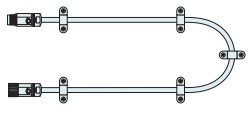
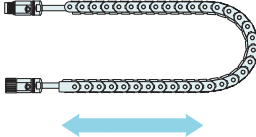
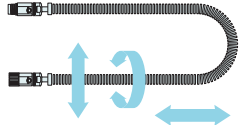
**E6k-CONNECTOR EX**

**MC01-E6k/f-EX**



A	Phase 1+	red
B	Phase 1-	pink
C	Phase 2+	blue
D	Phase 2-	grey
PE	Protective Earth	green-yellow
1	+5V	white
2	GND	Inner shield (Signal Leads)
3	Sensor Sine	yellow
4	Sensor Cosine	green
5	Temp. Sensor	black
6	n.c.	-
7	Kty 1+	orange
8	Kty 1-	brown
9	Kty 2+	violett
10	Kty 2-	beige
Housing	Shield	Inner shield (Kty Leads) Outer shield

Item	Description	Item-No.
<b>MC01-E6k/f-EX</b>	Connector with hexagonal union nut	<a href="#">0150-3538</a>
<b>MC01-E6k/f-EX-as</b>	E/f-Connector with hexagonal union nut assembled	<a href="#">0150-3641</a>

REPLACED CABLES				
	Standard Motor Cable		Trailing Chain Cable	Robot Cable
				
<b>Cable type</b>	<b>K05-04/05</b>	<b>K15-04/05</b>	<b>KS10-04/05</b>	<b>KR10-04/05</b>
<b>Item-No.</b>	<b>0150-1920</b>	<b>0150-1978</b>	<b>0150-1977</b>	<b>0150-1830</b>
Wire cross-section Motor phases	0.5 mm <sup>2</sup> (AWG20)	1.5 mm <sup>2</sup> (AWG16)	1.0 mm <sup>2</sup> (AWG18)	1.0 mm <sup>2</sup> (AWG18)
Wire cross-section Sensor signal		0.14 mm <sup>2</sup> (AWG26)	0.14 mm <sup>2</sup> (AWG26)	0.14 mm <sup>2</sup> (AWG26)
Wire cross-section Inner Filler		0.14 mm <sup>2</sup> (AWG26)	0.14 mm <sup>2</sup> (AWG26)	0.14 mm <sup>2</sup> (AWG26)
Material Wire insulation	PUR	TPE-U	TPE-E	TPE-E
Material Cable sheath		PUR	PUR	PUR
Colour Cable sheath		Black	Black	Black
Cable cross section	8.2 mm (0.31 in)	11.2 mm (0.44 in)	10.8 mm (0.42 in)	10.9 mm (0.43 in)
Weight	83 kg/km	180 kg/km	139 kg/km	160 kg/km
Approvals	(-)	UL / CSA 300V E467697	UL / CSA 300V E172204	UL / CSA 300V E172204
AWM-Style		20233	20235	20233
Minimum bend- ing radius static	25 mm (1 in)	50 mm (2 in)	50 mm (2 in)	50 mm (2 in)
Minimum bend- ing radius moving	Not suitable for applications With moving motor cable		100 mm (4 in) No Torsion	100 mm (4 in) Max. Torsion: ±270° pro 0.5 m
Temperature range	-40°...+80°C		-40°...+80°C	
Oil resistance	very good acc. DIN VDE 0282 Part 10 + HD 22.10		very good acc. DIN VDE 0282 Part 10 + HD 22.10	
Chemical resistance	good to acids, alkalis, solvents, hydraulic fluids, etc.		good to acids, alkalis, solvents, hydraulic fluids, etc.	

## GUIDELINES FOR THE LAYING OF CABLES IN CABLE CHAINS

The laying of cables in cable chains has to be done carefully. In general the following points have to be considered:

- It is recommended to lay the cables separately side by side. In case that cables with different diameters are laid on top of each other or side by side, we recommend the use of separators.
- The cables should be movable in the track. There must be at least 10% - 20% of the cable diameter as free space between the cables and the internal dimensions of the cable chain for safety reasons.
- Please observe that the cables pass the bend radius without being forced. In case of several cable layers, the cables need a corresponding clearance among each other in the bend so that relative movements of the cables among each other and in the chain are possible. In principle the cables must be able to move freely lengthwise at any time and there shall be no tensile force on the cable in the radius. After a short operating time it is recommended to control in regular intervals the position of the cable - particular with long travel paths (control must be executed in push and pull direction). Furthermore, it has to be paid attention to an efficient installation and aspects of wear.
- A torsion-free laying of the cables in the cable chain has to be observed (non-rotational). Therefore, the cables have to be unwound from reels before being installed. (Do not lift off the cables in loops). The ideal case is to take the cable directly from the drum. The cable imprint can't be used for a torsion free adjustment of the cable, as the imprint runs slightly helical around the cable due to production reasons.
- The weight arrangement in the cable chain or in the links has to be done symmetrically. Heavy cables have to be laid towards the outside of the cable chain and the smaller ones in the middle. After the rupture of the chain, all cables have to be exchanged due to excessive elongation.
- All cables have to be strain-relieved at the fixed point and at the driver, at least at the movable end of the chain. For use in long chains (sliding application), please contact our staff as there are no general regulations. It has to be observed with clamping that there is only large-surface pressure on the outer jacket. Careful clamping avoids any squeezing of the conductors and at the same time any displacement of the cable. It has to be avoided to move the cable up to the fixing point. The distance between the final point of the flexion to the fixing point should be as large as possible (10 - 20 x cable diameter are taken as relaxation zone).
- In general only cable chain cables should be used. The allowed bending radius has to be strictly observed. The information on the minimum bending radius for the cables are based on the application at normal temperatures (approx. 20 °C). Under circumstances other bending radii can be recommended. The choice of a bigger radius as the minimum radius will have a positive effect on the service life.

Area with horizontal dotted lines for notes.