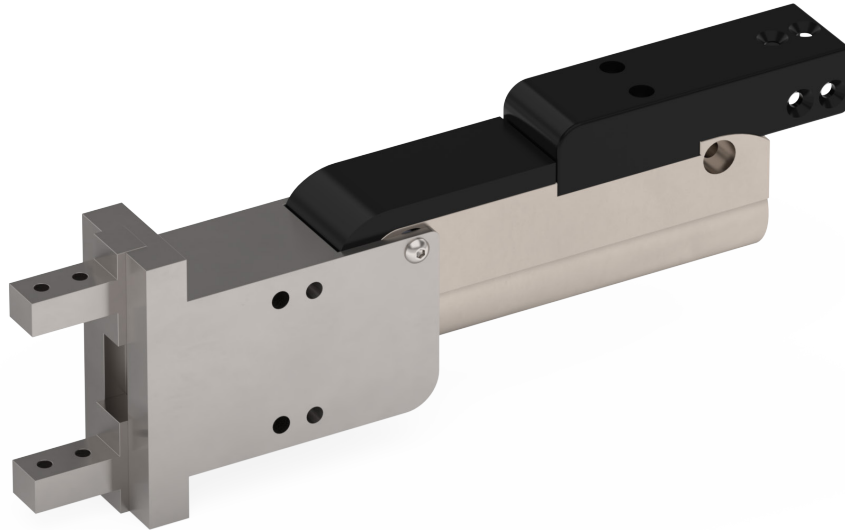


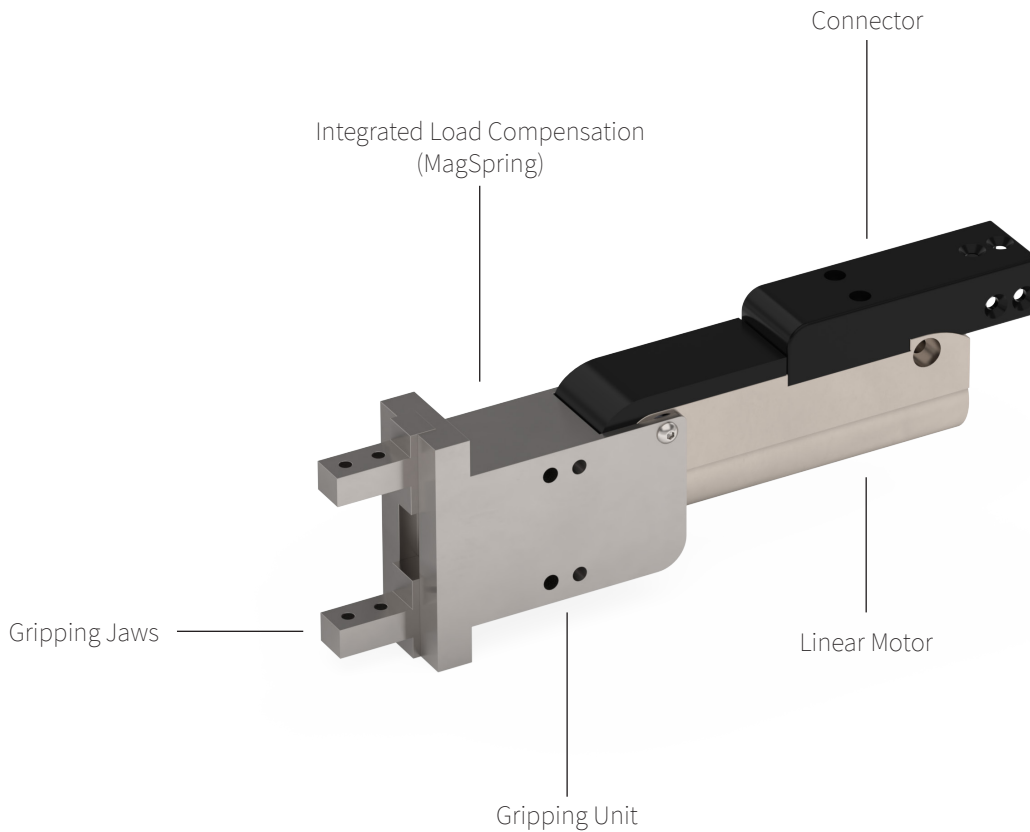
GRIPPER MODULES GM50



- ✓ Electric servo gripper with additional magnetic holding force
- ✓ Highly dynamic gripping, closing and opening times of less than 20 ms
- ✓ Smooth gripping thanks to freely programmable motion profiles
- ✓ Free finger positioning and force control via servo motor
- ✓ Maintains MagSpring force in case of power failure, easy manual opening
- ✓ Clever design for neat cable routing directly with trailing chain connection
- ✓ Low power consumption in open and closed position
- ✓ Compatible with all common fieldbuses

GRIPPER MODULES GM50

Description	3
Technical Data	4
Accessories	9



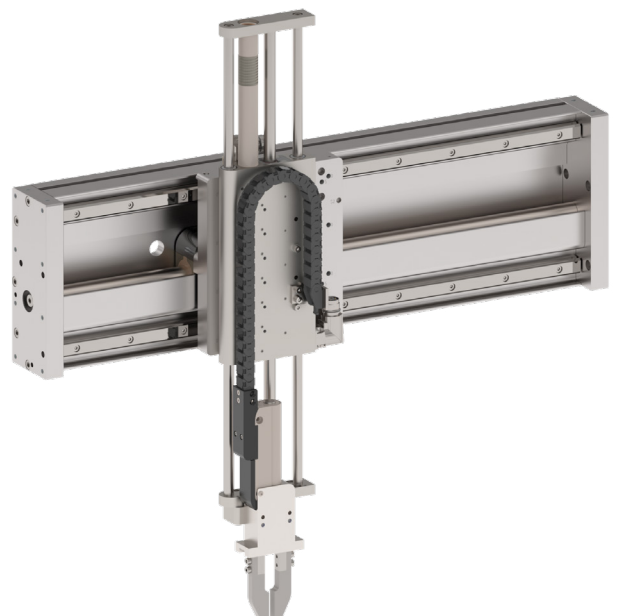
Grippers GM50

The LinMot GM50 gripper is a highly dynamic solution for demanding applications. With extremely fast closing and opening times of less than 20 milliseconds, it enables efficient and reliable gripping. Freely programmable motion profiles can be used to make the gripping process particularly gentle, making it easier to handle sensitive objects. The gripper's servomotor enables precise finger positioning and force control, so gripping can be customised.

A special safety feature is the ability to maintain the MagSpring gripping force even in the event of a power failure, while the gripper can be easily opened by hand. The clever design ensures tidy cable routing with direct connection to trailing chains, making installation easy. The GM50 also consumes minimal power in both open and closed positions and is compatible with all common fieldbus systems, ensuring seamless integration into existing automation solutions.

Combination with guides and modules

The combination of the GM50 parallel gripper with the FM01 and EM01 guides and the DM01 and DM03 modules enables complete pick-and-place applications thanks to the simple coupling and modular design of the LinMot components. The GM50 is also available with passive load compensation (MagSpring). A combination that offers maximum precision, speed and safety even under the most demanding conditions.



PERFORMANCE DATA GM50-23SX80F-XP-K_35-18(_MS03)



Performance Data Gripper Module GM50-23SX80F-XP-K_35-18(_MS03)

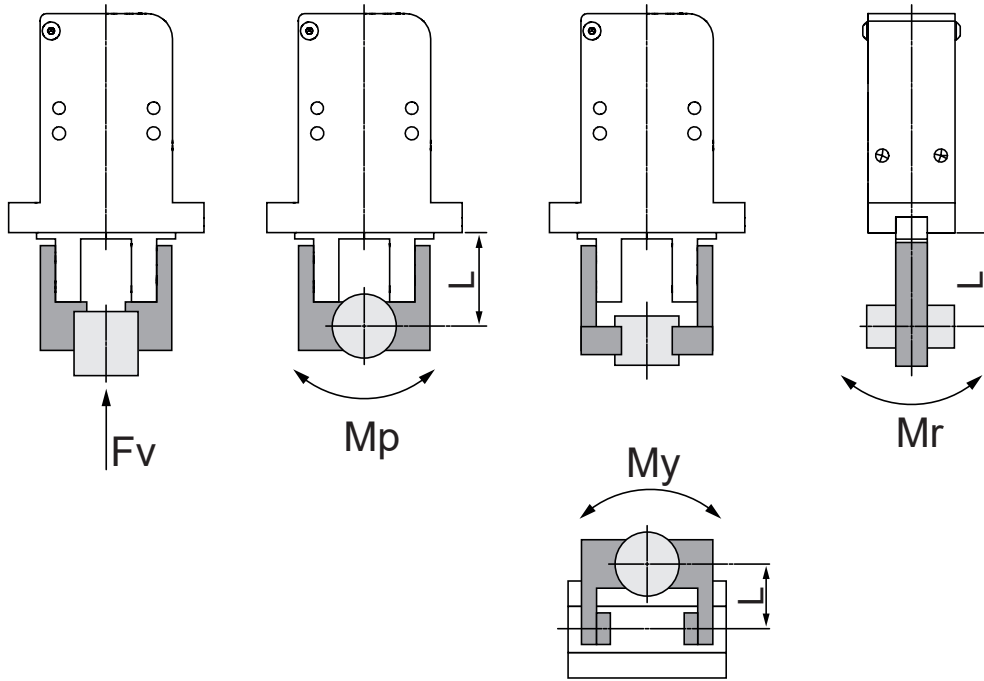
Performance Data Gripper Module GM50-23SX80F-XP-K_35-18(_MS03)			
Stroke			
Max. Opening/Closing Stroke Range	mm (in)	18	(0.71)
Force			
Max. Clamping Force (<0.75 s) with MagSpring / without MagSpring	N (lbf)	56 / 45	(12.59 / 10.12)
Max. Continuous Clamping Force Closing Direction with MagSpring / without MagSpring	N (lbf)	19 / 9	(4.27 / 2.02)
Max. Continuous Clamping Force Opening Direction with MagSpring / without MagSpring	N (lbf)	7 / 7	(1.57 / 1.57)
Max. Continuous Clamping Force Through the MagSpring (no power)	N (lbf)	11	(2.47)
Velocity			
Minimum Opening/Closing Time	s	0.02	
Position Detection			
Position Resolution	mm (in)	0.002	(0.00008)
Repeatability	mm (in)	±0.05	(±0.002)
Electrical Data			
Max. Current @ 48VDC	A _{pk}	7.4	
Max. Current @ 72VDC	A _{pk}	7.4	
Mechanical Data			
Gripper Width	mm (in)	66.2	(2.61)
Gripper Length	mm (in)	30.9	(1.22)
Gripper Height	mm (in)	193.7	(7.63)
Gripper Mass	g (lb)	610	(1.34)
Ambient Temperature	°C	-10 to 60	
IP Protection Class		IP 30	
Drive			
Power Supply Drive	VDC	24-72	
Number of Required Drives	Pcs	1	
Communication Protocols		PROFINET, PROFIdrive, EtherNet/IP, EtherCAT, CANopen, sercos, Ethernet Powerlink	

PERFORMANCE DATA GM50-37SX60-XP-N_48-22(_MS03)



Performance Data Gripper Module GM50-37SX60-XP-N_48-22(_MS03)				
Stroke				
Max. Opening/Closing Stroke Range	mm (in)		22 (0.87)	
Force				
Max. Clamping Force (<0.75 s) with MagSpring / without MagSpring	N (lbf)		128 / 97 (28.78 / 21.81)	
Max. Continuous Clamping Force Closing Direction with MagSpring / without MagSpring	N (lbf)		42 / 12 (9.44 / 2.70)	
Max. Continuous Clamping Force Opening Direction with MagSpring / without MagSpring	N (lbf)		10 / 10 (2.25 / 2.25)	
Max. Continuous Clamping Force Through the MagSpring (no power)	N (lbf)		31 (6.97)	
Velocity				
Minimum Opening/Closing Time	s		0.03	
Position Detection				
Position Resolution	mm (in)		0.005 (0.0002)	
Repeatability	mm (in)		±0.05 (±0.002)	
Electrical Data				
Max. Current @ 48VDC	A_{pk}		9.4	
Max. Current @ 72VDC	A_{pk}		9.4	
Mechanical Data				
Gripper Width	mm (in)		97 (2.45)	
Gripper Length	mm (in)		45 (1.77)	
Gripper Height	mm (in)		181 (7.13)	
Gripper Mass	g (lb)		1580 (3.48)	
Ambient Temperature	°C		-10 to 60	
IP Protection Class			IP 30	
Drive				
Power Supply Drive	VDC		24-72	
Number of Required Drives	Pcs		1	
Communication Protocols			PROFINET, PROFIdrive, EtherNet/IP, EtherCAT, CANopen, sercos, Ethernet Powerlink	

CALCULATION OF THE LOAD MOMENTS



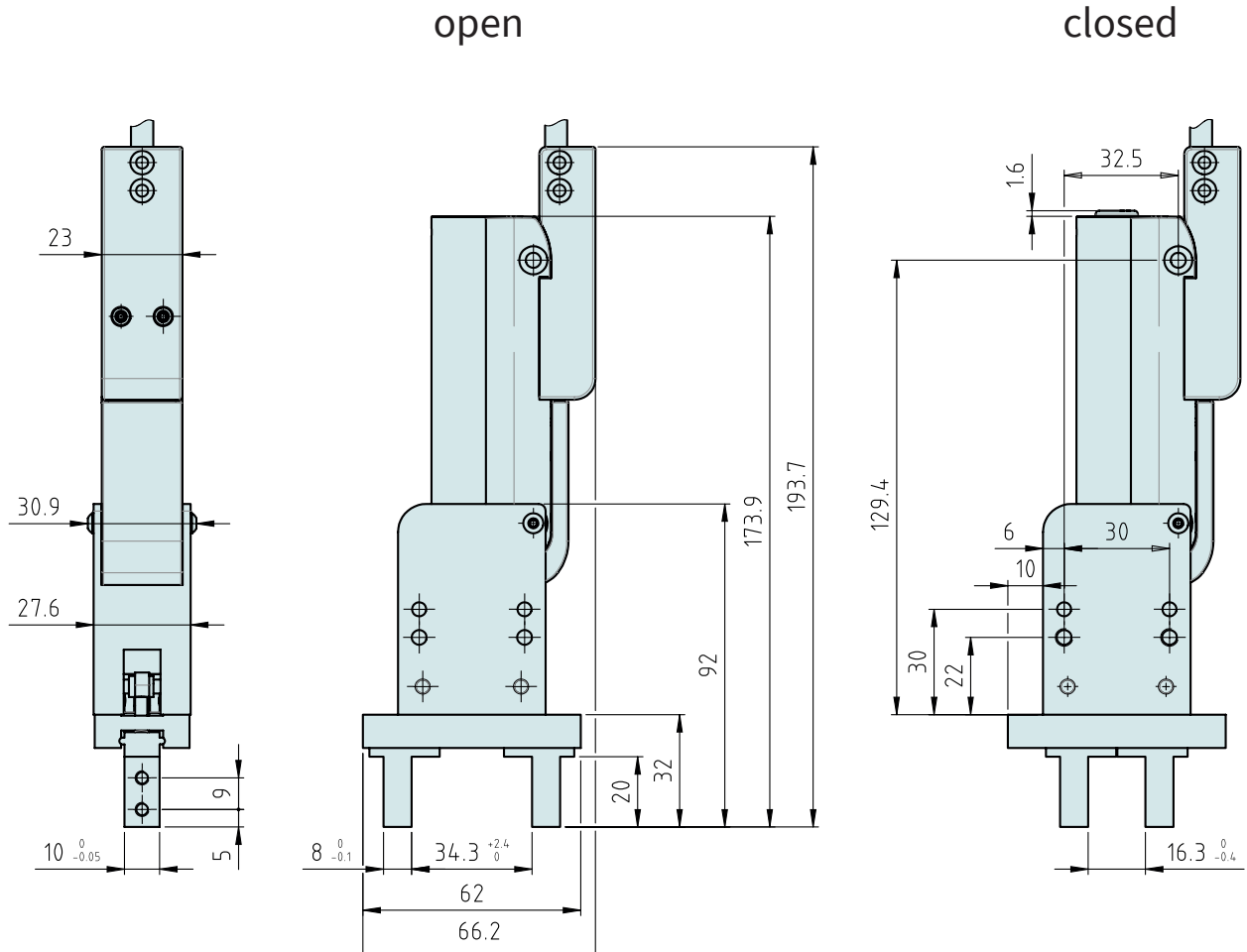
L: Distance to the point at which the load is applied (mm).

Model	Allowable vertical load F_v (N)	Maximum allowable moment		
		Pitch moment M_p (Nm)	Yaw moment M_y (Nm)	Roll moment M_r (Nm)
GM50-23Sx80F-XP-K_35-18(_MS03)	147	1.32	1.32	2.65
GM50-37Sx60-XP-N_48-22(_MS03)	343	3.0	3.0	6.0

Values for load and moment in the table indicate static values.

Calculation of allowable external force (when moment load is applied)	Calculation example
$\text{Allowable load } F \text{ (N)} = \frac{M \text{ (maximum allowable moment) (N} \cdot \text{m)}}{L \times \frac{10^{-3}}{*}}$ <p>(*Unit conversion constant)</p>	<p>When a static load of = 10N is operating, which applies pitch moment to point L = 30mm from the GM50-23 guide.</p> $\text{Allowable load } F \text{ (N)} = \frac{1.32}{30 \times 10^{-3}} = 44.0 \text{ (N)}$ <p>Load $f = 10 \text{ (N)} < 44.0 \text{ (N)}$ Therefore, it can be used.</p>

GRIPPER GM50-23SX80F-XP-K_35-18(_MS03)



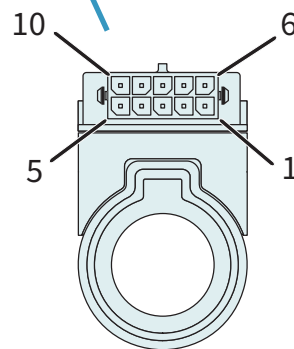
Dimensions in mm

Item	Description	Item-No.
GM50-23Sx80F-XP-K_35-18	Gripper Module, max. stroke 18 mm, max. Force 45 N	0150-6418
GM50-23Sx80F-XP-K_35-18_MS03	Gripper Module with MagSpring, max. stroke 18 mm, max. force 56 N	0150-6251

CONNECTOR

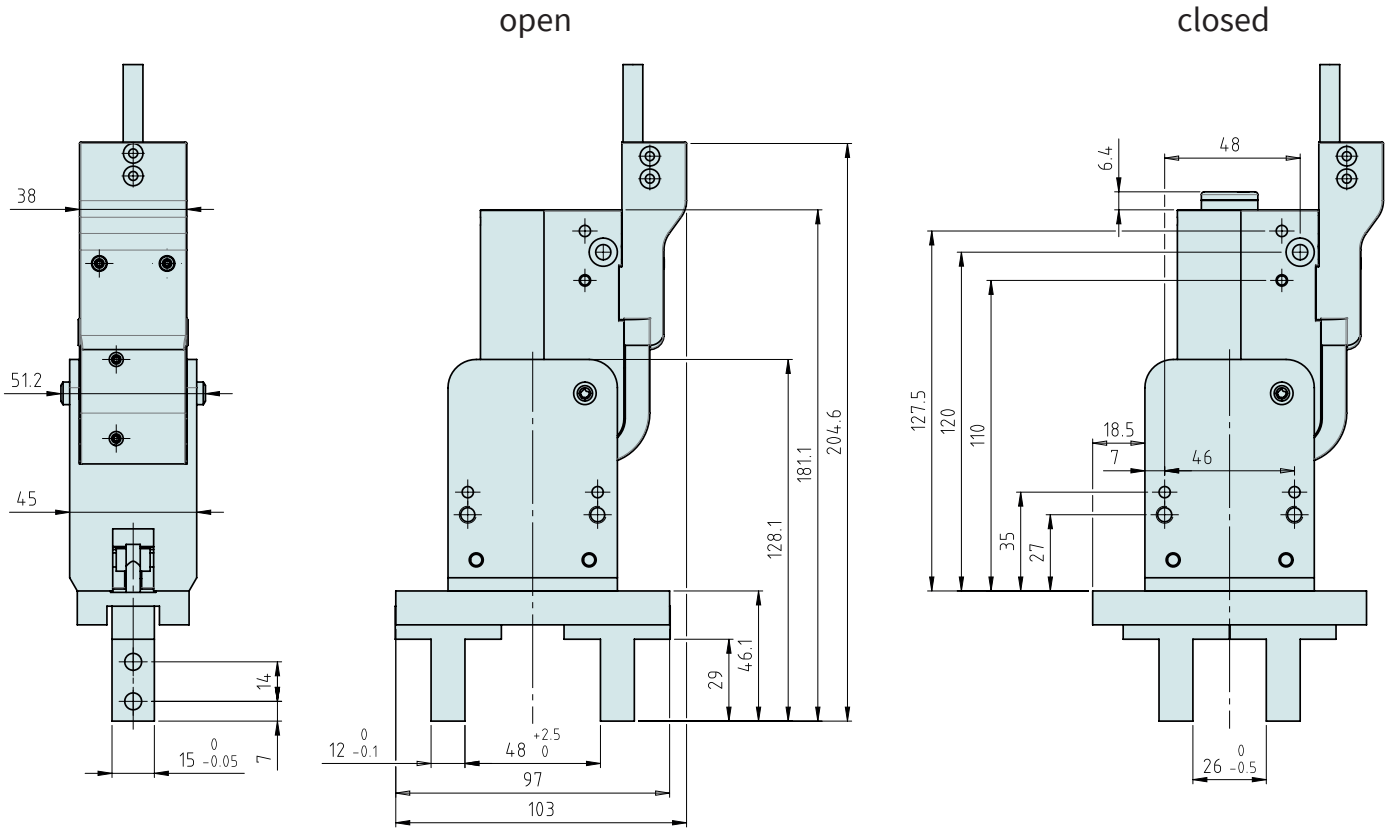
Motor connector wiring		Wire color motor cable
Pin 1	Phase 1+	red
Pin 2	Phase 2+	blue
Pin 3	n.c.	n.c.
Pin 4	Phase 1-	pink
Pin 5	Phase 2-	grey
Pin 6	Sensor Sin	yellow
Pin 7	Sensor Cos	green
Pin 8	GND	brown
Pin 9	+5V	white
Pin 10	Temp sensor	black
	Housing	Shield

K-Connector



View: motor connector, plug side

GRIPPER GM50-37SX60-XP-N_48-22(_MS03)



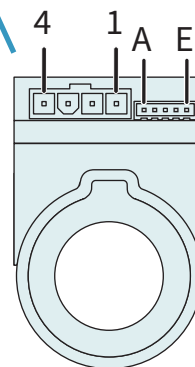
Dimensions in mm

Item	Description	Item-No.
GM50-37Sx60-XP-N_48-22	Gripper Module, max. stroke 22 mm, max. Force 97 N	0150-6596
GM50-37Sx60-XP-N_48-22_MS03	Gripper Module with MagSpring, max. stroke 22 mm, max. force 128 N	0150-6255

CONNECTOR

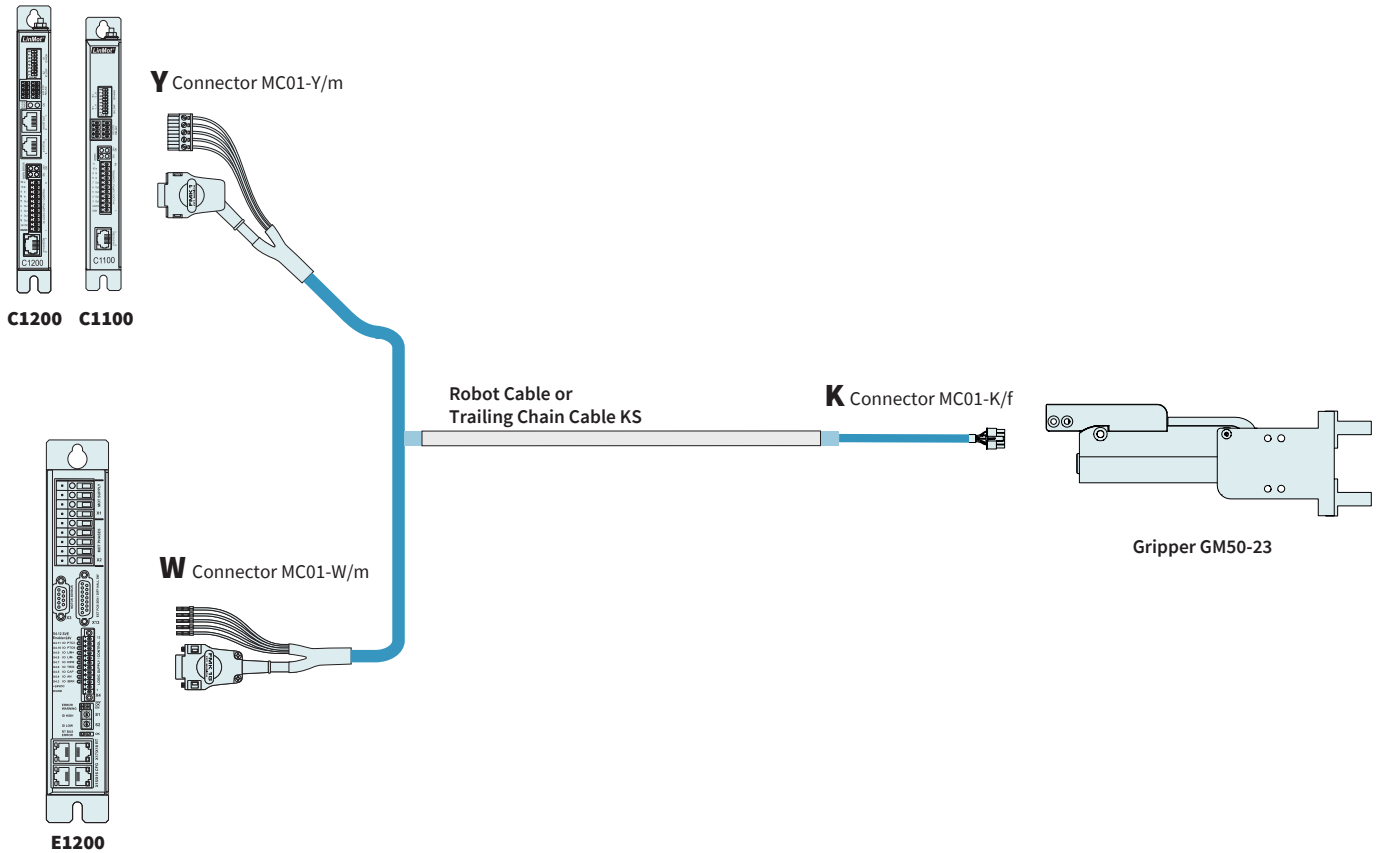
Motor connector wiring	N-Connector	Wire color motor cable
Phase 1+	Pin 4	red
Phase 1-	Pin 3	pink
Phase 2+	Pin 2	blue
Phase 2-	Pin 1	grey
+5V	Pin A	white
GND	Pin B	Inner Shield
Sensor Sin	Pin C	yellow
Sensor Cos	Pin D	green
Temp Sensor	Pin E	black
Housing		Outer Shield

N-Connector



View: motor connector, plug side

MOTOR CABLES FOR GM50-23



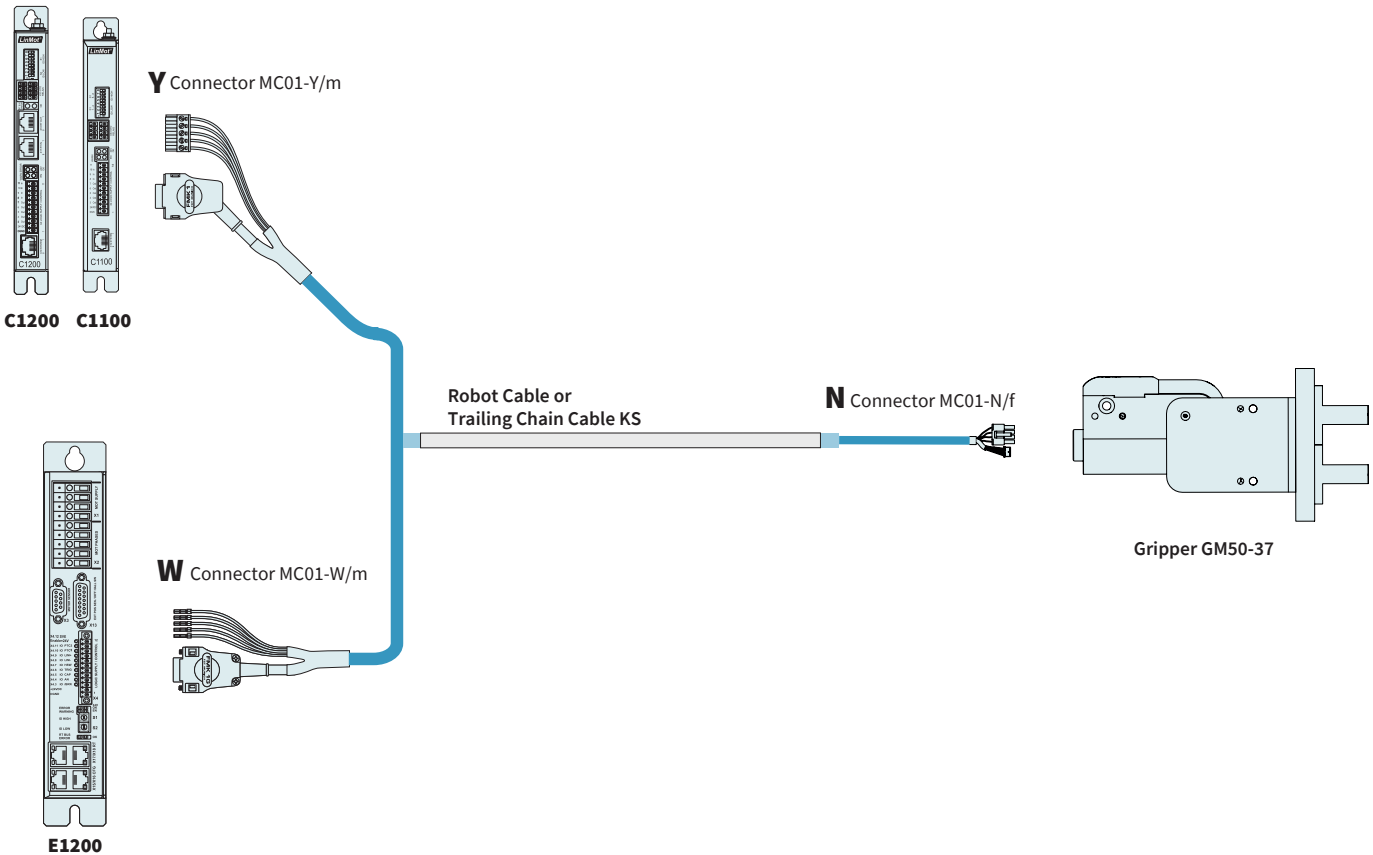
TRAILING CHAIN CABLES

Item	Description	Item-No.
KS03-W/K-2	Trailing Chain Cable W/K, 2 m	0150-2187
KS03-W/K-4	Trailing Chain Cable W/K, 4 m	0150-2369
KS03-W/K-6	Trailing Chain Cable W/K, 6 m	0150-2370
KS03-W/K-	Special Cable W/K, Custom length	0150-3357
KS03-Y/K-2	Trailing Chain Cable Y/K, 2 m	0150-2446
KS03-Y/K-4	Trailing Chain Cable Y/K, 4 m	0150-2447
KS03-Y/K-6	Trailing Chain Cable Y/K, 6 m	0150-2448
KS03-Y/K-	Special Cable Y/K, Custom length	0150-3516
KS03-R/K-1	Trailing Chain Cable R/K, 1 m	0150-2185
KS03-R/K-2	Trailing Chain Cable R/K, 2 m	0150-2186
KS03-R/K-	Special Cable R/K, Custom length	0150-3530
KS03-A/K-	Special Cable A/K, Custom length	0150-3542
KS03-C/K-	Special Cable C/K, Custom length	0150-3577
KS03-OE/K-	Special Cable OE/K, Open end, Custom length	0150-4764

ROBOT CABLES

Item	Description	Item-No.
KR03-R/K-	Special Cable R/K, Custom length	0150-3754
KR03-Y/K-	Special Cable Y/K, Custom length	0150-3718
KS03-W/K-	Special Cable W/K, Custom length	0150-3755

MOTOR CABLES FOR GM50-37



TRAILING CHAIN CABLES

Item	Description	Item-No.
KS05-W/N-2	Trailing Chain Cable W/N, 2 m	0150-2296
KS05-W/N-4	Trailing Chain Cable W/N, 4 m	0150-2297
KS05-W/N-6	Trailing Chain Cable W/N, 6 m	0150-2298
KS05-W/N-8	Trailing Chain Cable W/N, 8 m	0150-2299
KS05-W/N-	Special Cable W/N, Custom length	0150-3412
KS05-Y/N-2	Trailing Chain Cable Y/N, 2 m	0150-2442
KS05-Y/N-4	Trailing Chain Cable Y/N, 4 m	0150-2443
KS05-Y/N-6	Trailing Chain Cable Y/N, 6 m	0150-2444
KS05-Y/N-8	Trailing Chain Cable Y/N, 8 m	0150-2445
KS05-Y/N-	Special Cable Y/N, Custom length	0150-3509
KS05-A/N-	Special Cable A/N, Custom length	0150-3551
KS05-C/N-	Special Cable C/N, Custom length	0150-3517
KS05-R/N-	Special Cable R/N, Custom length	0150-3486
KS03-OE/N-	Special Cable OE/N, Open end, Custom length	0150-6071
KS05-OE/N-	Special Cable OE/N, Open end, Custom length	0150-3716

MOTOR CABLES FOR GM50-37

ROBOT CABLES		
Item	Description	Item-No.
KR05-R/N-	Special Cable R/N, Custom length	0150-3757
KR05-Y/N-	Special Cable Y/N, Custom length	0150-3514
KS05-W/N-	Special Cable W/N, Custom length	0150-3406

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