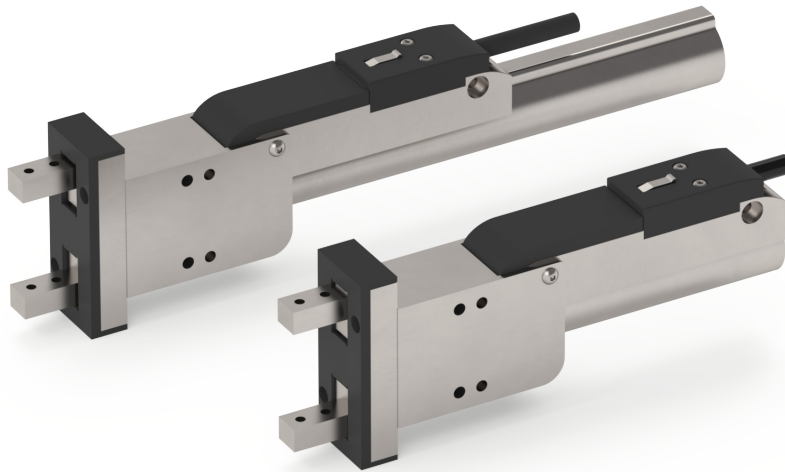


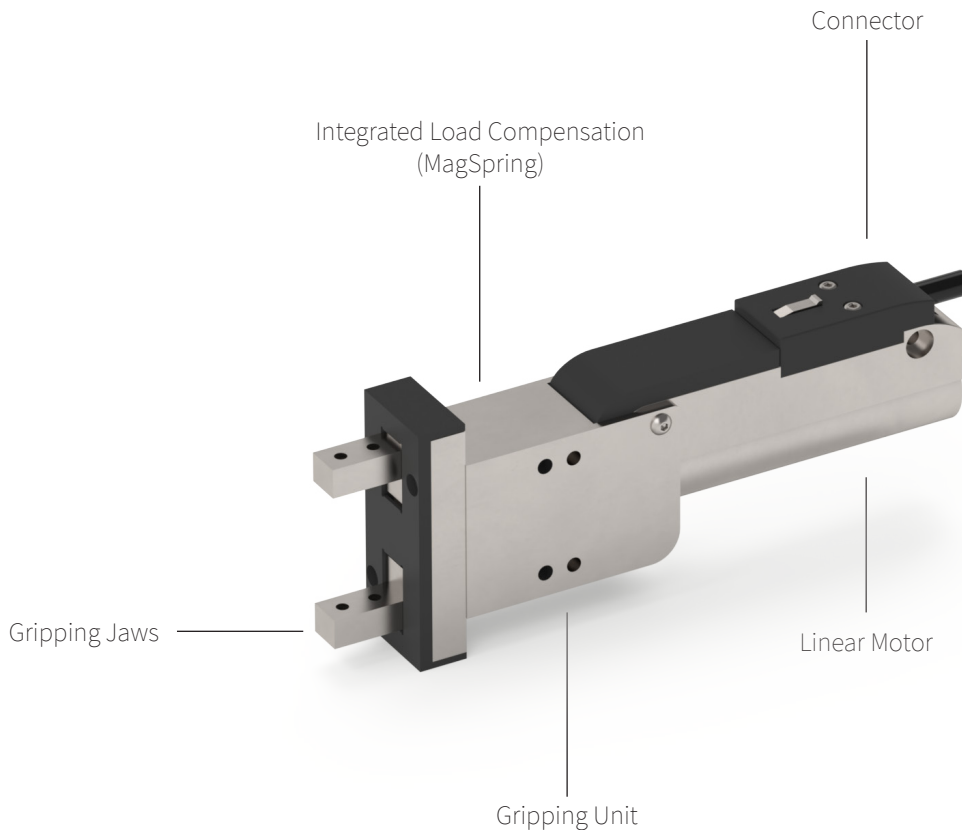
GRIPPER MODULES GM50



- ✓ 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	13



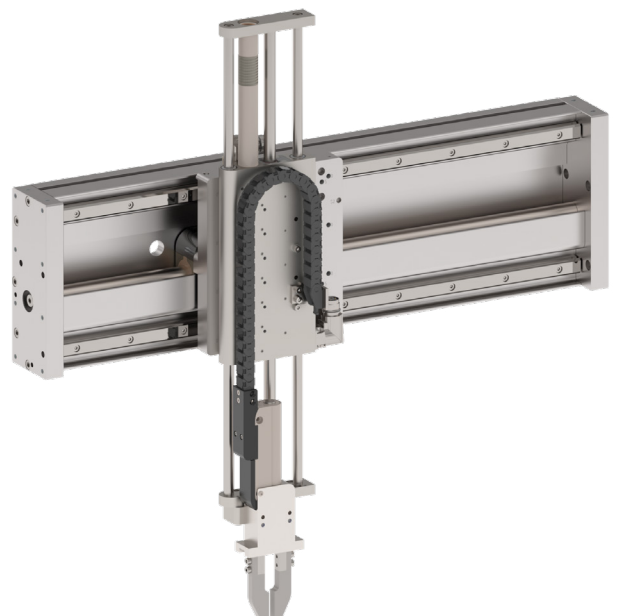
Grippers GM50

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 servo motor allows individual finger positioning and adjustable 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)

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	
Rated Current	A _{pk}	tbd	
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 GM50-23SX160H-XP-K_35-18(_MS03)



Performance Data Gripper Module GM50-23SX160H-XP-K_35-18(_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)	tbd	tbd
Max. Continuous Clamping Force Closing Direction with MagSpring / without MagSpring	N	(lbf)	tbd	tbd
Max. Continuous Clamping Force Opening Direction with MagSpring / without MagSpring	N	(lbf)	tbd	tbd
Max. Continuous Clamping Force Through the MagSpring (no power)	N	(lbf)	tbd	tbd
Velocity				
Minimum Opening/Closing Time	s		tbd	
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	
Rated Current	A _{pk}		tbd	
Mechanical Data				
Gripper Width	mm	(in)	tbd	tbd
Gripper Length	mm	(in)	tbd	tbd
Gripper Height	mm	(in)	tbd	tbd
Gripper Mass	g	(lb)	tbd	tbd
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	
Rated Current	A _{pk}	tbd	
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	

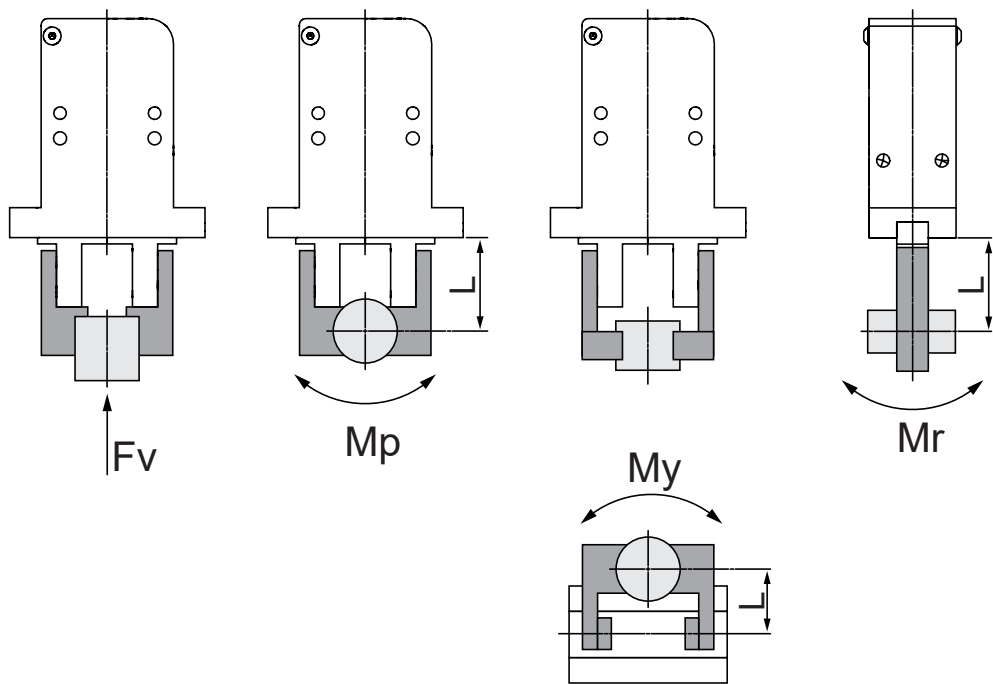
PERFORMANCE DATA GM50-37SX120-XP-N_48-22(_MS03)



Performance Data Gripper Module GM50-37Sx120-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)	tbd	tbd
Max. Continuous Clamping Force Closing Direction with MagSpring / without MagSpring	N	(lbf)	tbd	tbd
Max. Continuous Clamping Force Opening Direction with MagSpring / without MagSpring	N	(lbf)	tbd	tbd
Max. Continuous Clamping Force Through the MagSpring (no power)	N	(lbf)	tbd	tbd
Velocity				
Minimum Opening/Closing Time	s		tbd	
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	
Rated Current	A _{pk}		tbd	
Mechanical Data				
Gripper Width	mm	(in)	tbd	tbd
Gripper Length	mm	(in)	tbd	tbd
Gripper Height	mm	(in)	tbd	tbd
Gripper Mass	g	(lb)	tbd	tbd
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



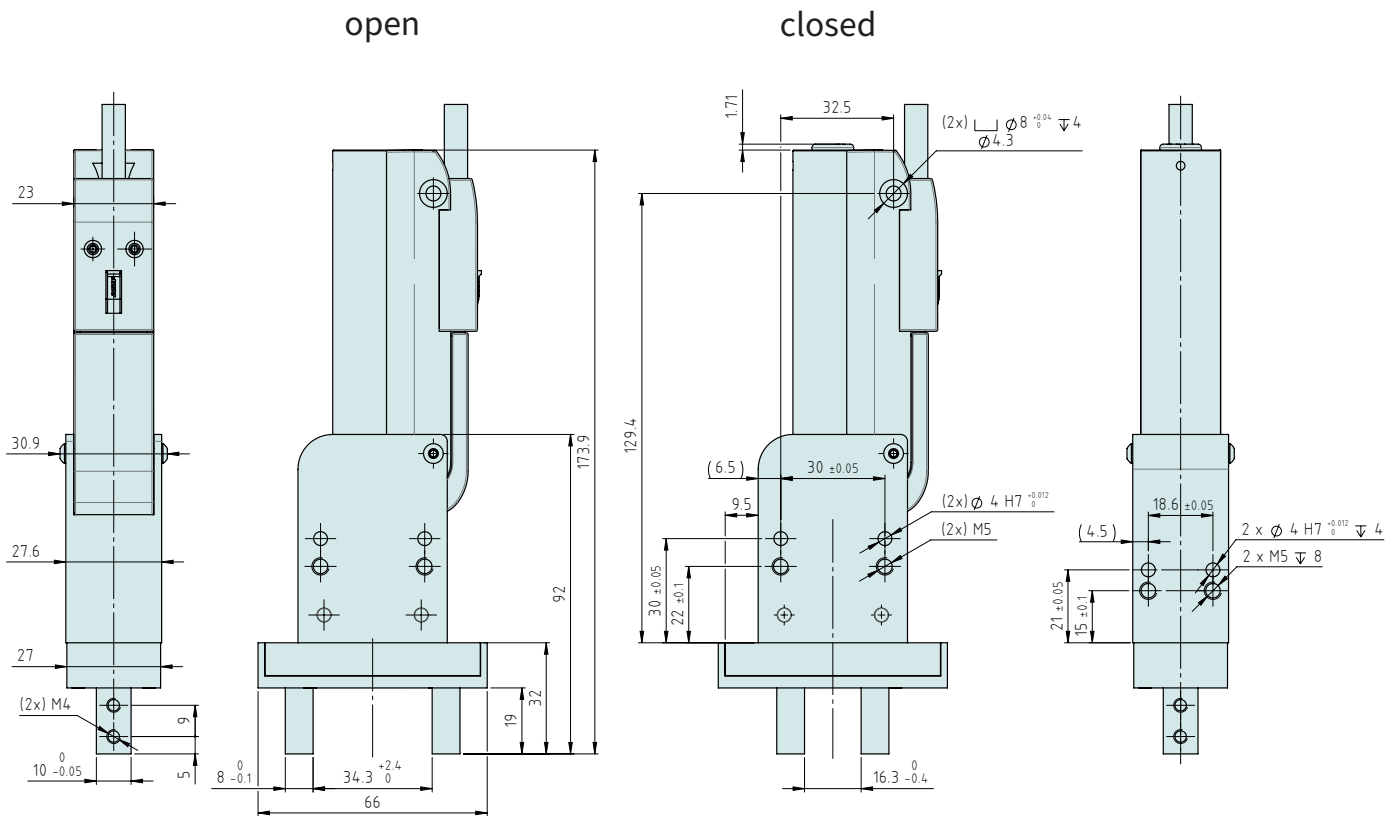
L: Distance to the point at which the load is applied (mm).

Model	Allowable vertical load Fv (N)	Maximum allowable moment		
		Pitch moment Mp (Nm)	Yaw moment My (Nm)	Roll moment Mr (Nm)
GM50-23	147	1.32	1.32	2.65
GM50-37	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
$\text{Allowable load } F \text{ (N)} = \frac{M \text{ (maximum allowable moment) (N} \cdot \text{m)}}{L \times \frac{10^{-3}}{*}}$ (*Unit conversion constant)	When a static load of = 10N is operating, which applies pitch moment to point L = 30mm from the GM50-23 guide. $\text{Allowable load } F \text{ (N)} = \frac{1.32}{30 \times 10^{-3}} = 44.0 \text{ (N)}$ Load $f = 10 \text{ (N)} < 44.0 \text{ (N)}$ Therefore, it can be used.

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



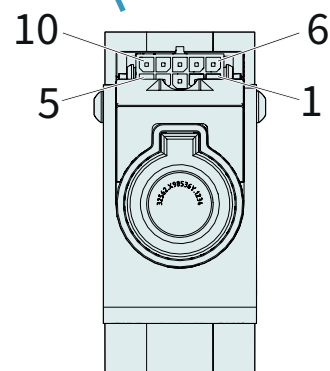
Dimensions in mm

Item	Description	Item-No.
GM50-23Sx80F-XP-K_35-18	Gripper Module, stroke 18 mm	0150-6418
GM50-23Sx80F-XP-K_35-18_MS03	Gripper Module, stroke 18 mm with holding force	0150-6251

CONNECTOR

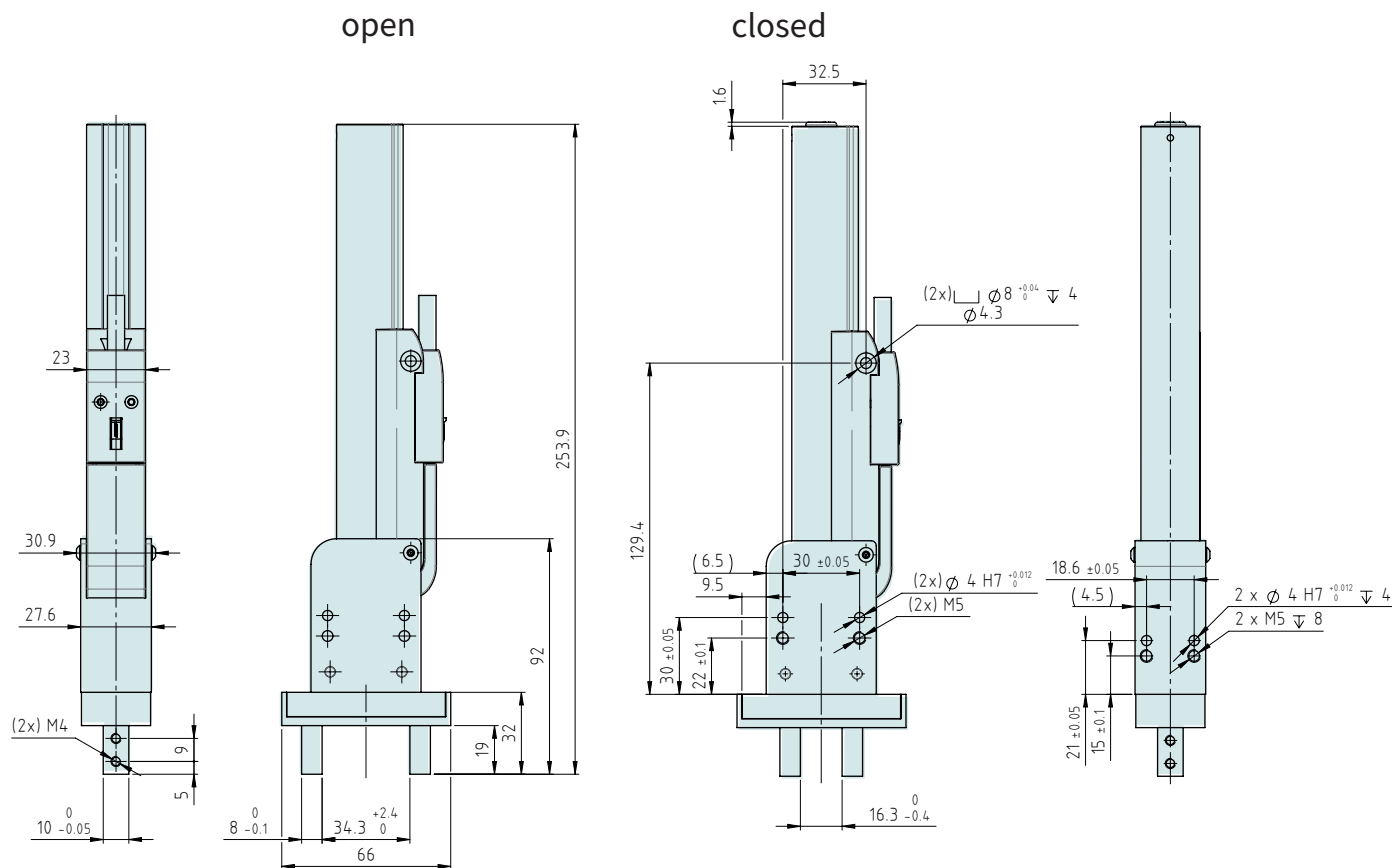
Motor connector wiring		Wire color motor cable
Pin 1	Phase 1+	red
Pin 2	Phase 2+	blue
Pin 3	n.c.	n.c.
Pin 4	Phase 1-	pink
Pin 5	Phase 2-	grey
Pin 6	Sensor Sin	yellow
Pin 7	Sensor Cos	green
Pin 8	GND	brown
Pin 9	+5V	white
Pin 10	Temp sensor	black
	Housing	Shield

K-Connector



View: motor connector, plug side

GRIPPER GM50-23SX160H-XP-K_35-18(_MS03)

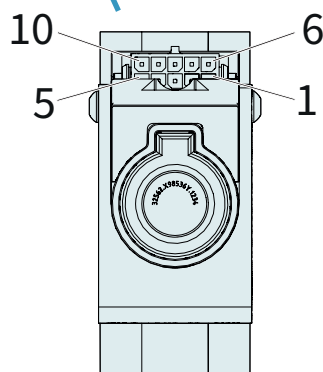


Dimensions in mm

Item	Description	Item-No.
GM50-23Sx160H-XP-K_35-18	Gripper Module, stroke 18 mm	0150-6632
GM50-23Sx160H-XP-K_35-18_MS03	Gripper Module, stroke 18 mm with holding force	0150-6631

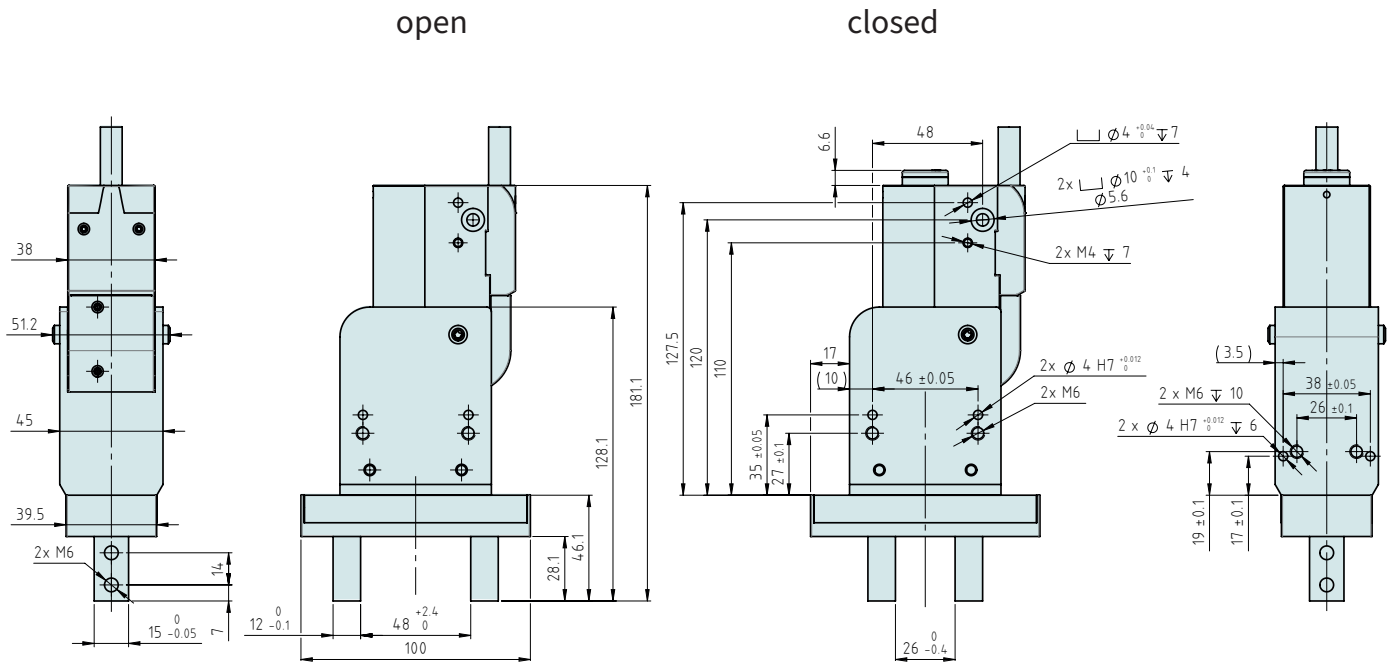
CONNECTOR

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



View: motor connector, plug side

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



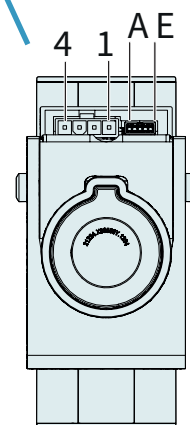
Dimensions in mm

Item	Description	Item-No.
GM50-37Sx60-XP-N_48-22	Gripper Module, stroke 22 mm	0150-6596
GM50-37Sx60-XP-N_48-22_MS03	Gripper Module, stroke 22 mm with holding force	0150-6255

CONNECTOR

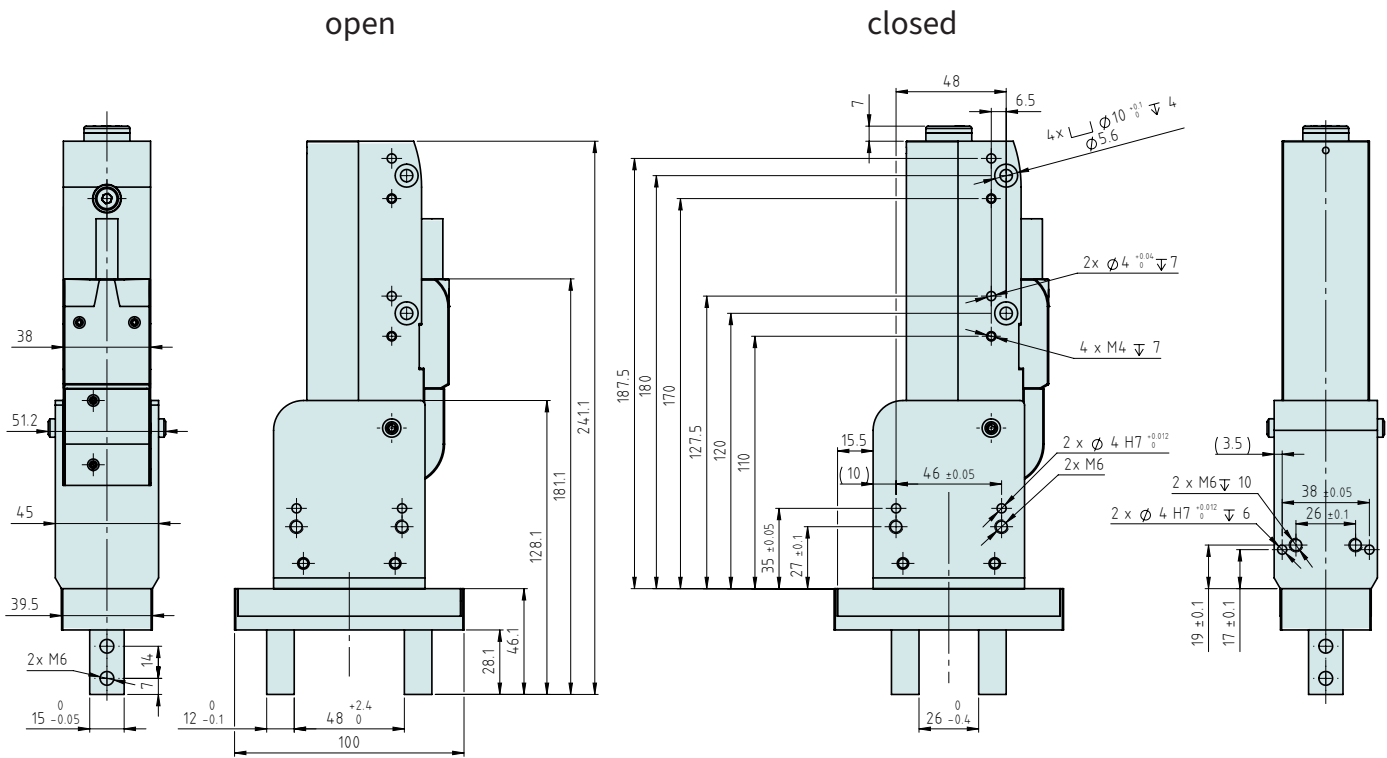
Motor connector wiring	N-Connector	Wire color motor cable
Phase 1+	Pin 4	red
Phase 1-	Pin 3	pink
Phase 2+	Pin 2	blue
Phase 2-	Pin 1	grey
+5V	Pin A	white
GND	Pin B	Inner Shield
Sensor Sin	Pin C	yellow
Sensor Cos	Pin D	green
Temp Sensor	Pin E	black
Housing		Outer Shield

N-Connector



View: motor connector, plug side

GRIPPER GM50-37SX120F-XP-N_48-22(_MS03)



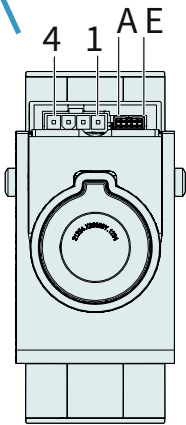
Dimensions in mm

Item	Description	Item-No.
GM50-37Sx120F-XP-N_48-22	Gripper Module, stroke 22 mm	0150-6656
GM50-37Sx120F-XP-N_48-22_MS03	Gripper Module, stroke 22 mm with holding force	0150-6657

CONNECTOR

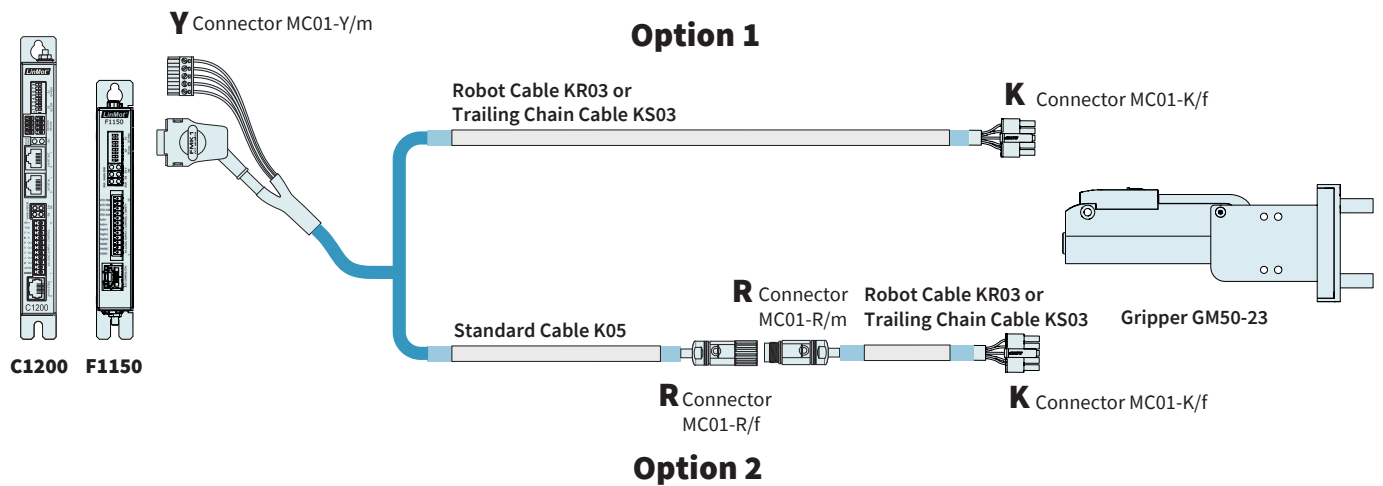
Motor connector wiring	N-Connector	Wire color motor cable
Phase 1+	Pin 4	red
Phase 1-	Pin 3	pink
Phase 2+	Pin 2	blue
Phase 2-	Pin 1	grey
+5V	Pin A	white
GND	Pin B	Inner Shield
Sensor Sin	Pin C	yellow
Sensor Cos	Pin D	green
Temp Sensor	Pin E	black
Housing		Outer Shield

N-Connector



View: motor connector, plug side

MOTOR CABLES FOR GM50-23



OPTION 1

Item	Description	Item-No.
KS03-Y-Fe/K-2	Trailing Chain Cable Y-Fe/K, 2 m	0150-2446
KS03-Y-Fe/K-4	Trailing Chain Cable Y-Fe/K, 4 m	0150-2447
KS03-Y-Fe/K-6	Trailing Chain Cable Y-Fe/K, 6 m	0150-2448
KS03-Y-Fe/K-	Trailing Chain Cable Y-Fe/K, Custom length (max. 6 m)	0150-3516
KR03-Y-Fe/K-	Robot Cable Y-Fe/K, Custom length (max. 6 m)	0150-3718

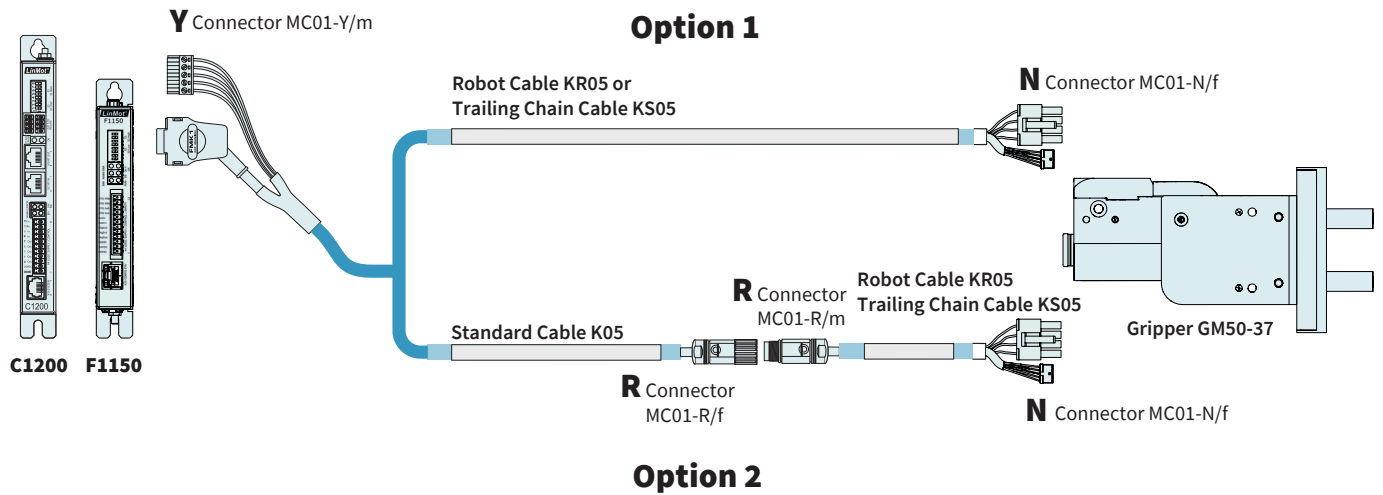
OPTION 2

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 Y/R, Länge auf Mass	0150-3501
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-4	Trailing Chain Cable R/K, 4 m	TBD
KS03-R/K-6	Trailing Chain Cable R/K, 6 m	TBD
KS03-R/K-	Trailing Chain Cable R/K, Custom length	0150-3530
KR03-Y-Fe/K-	Robot Cable R/K, Custom length	0150-3754

MOTOR CABLES FOR GM50-23

CONNECTOR & CABLE (INDIVIDUAL)		
Item	Description	Item-No.
MC01-Y-Fe/m	Motor Connector Y-Fe/m	0150-3289
MC01-R/f	Motor Connector R/f	0150-3129
MC01-K/f	Motor Connector K (f)	0150-3345
K05-04/05	Motor Cable per m	0150-1920
KS05-04/05	Trailing Chain Cable per m	0150-1938
KR05-04/05	Robot Cable per m	0150-1846
KS03-09	Trailing Chain Cable per m (max. 6m connection length)	0150-2182
KR03-09	Robot Cable per m	0150-2801

MOTOR CABLES FOR GM50-37



OPTION 1

Item	Description	Item-No.
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-Fe/N-	Trailing Chain Cable Y/N, Custom length	0150-3509
KR05-Y-Fe/N-	Robot Cable Y/N, Custom length	0150-3514

OPTION 2

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 Y/R, Länge auf Mass	0150-3501
KS05-09-R/N-1.5	Trailing Chain Cable R/N, 1,5 m	0150-3880
KS05-09-R/N-2	Trailing Chain Cable R/N, 2 m	0150-3881
KS05-09-R/N-3	Trailing Chain Cable R/N, 3 m	0150-3882
KS05-09-R/N-4	Trailing Chain Cable R/N, 4 m	TBD
KS05-09-R/N-6	Trailing Chain Cable R/N, 6 m	TBD
KS05-09-R/N-	Trailing Chain Cable R/N, Custom length	0150-3889
KR05-R/N-	Robot Cable R/N, Custom length	0150-3757

MOTOR CABLES FOR GM50-37

CONNECTOR & CABLE (INDIVIDUAL)		
Item	Description	Item-No.
MC01-Y-Fe/m	Motor Connector Y-Fe/m	0150-3289
MC01-R/f	Motor Connector R/f	0150-3129
MC01-N/f	Motor Connector N/f	0150-3407
K05-04/05	Motor Cable per m	0150-1920
KS05-04/05	Trailing Chain Cable per m	0150-1938
KR05-04/05	Robot Cable per m	0150-1846

ALL LINEAR MOTION FROM A SINGLE SOURCE

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