

2-JAW PARALLEL GRIPPERS WITH LONG STROKE

SERIES GEH6000IL

▶ PRODUCT ADVANTAGES



IO-Link

“Highest performance”

- ▶ 5 million maintenance-free cycles
- ▶ Integrated sensing via IO-Link
- ▶ Servo drive with integrated controller

Brushless drive technology, position, speed and force control guarantee the highest amount of functionality

▶ IO-Link on board

In addition to the unshielded single-cable solution, the future-proof, hot-pluggable activation provides you with a wide variety of travel profiles for easy implementation into your control system

▶ Gentle yet powerful

Power version -03 for handling heavy workpieces with mechanical self-locking and version -31 for gently gripping of delicate parts



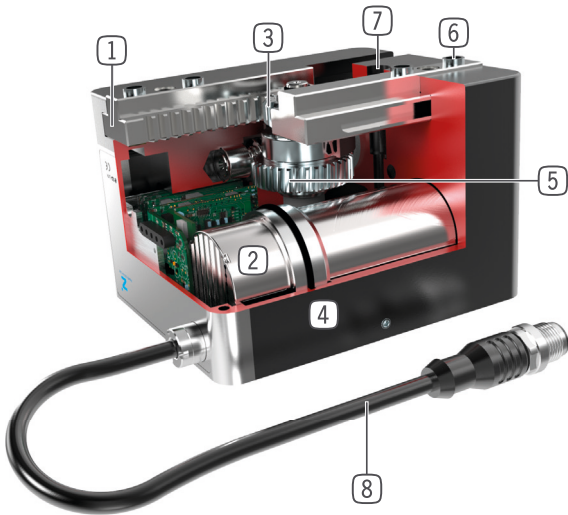
reddot design award
winner 2018

▶ SERIES CHARACTERISTICS

Installation size	Version	
	-03	-31
GEH60XXIL		
Powerful	•	
Gentle		•
Gripping force adjustable	•	•
High movement speed		•
Integrated sensing	•	•
Positionable	•	•
IO-Link	•	•
Self locking mechanism	•	
5 million maintenance-free cycles (max.)	•	•
IP 54	•	•



► BENEFITS IN DETAIL



- ① **Precise T-Slot guide**
- high forces and moments capacity
- ② **Drive**
- Brushless DC servomotor
- ③ **Rack and pinion gear**
- synchronized the movement of the gripper jaws
- high force transfer
- ④ **Robust, lightweight housing**
- Hard-coated aluminum alloy
- ⑤ **Helical worm gear**
- self locking mechanism in case of power drop (only version -03)
- ⑥ **Removable centering sleeves**
- quick and economical positioning of the gripper fingers
- ⑦ **Mounting and positioning**
- mounting possible from several sides for versatile positioning
- ⑧ **Energy supply**
- standardized connector

► TECHNICAL DATA

Installation size	Stroke per jaw, adjustable	Gripping force	Weight	IP class
	mm	[N]	[kg]	
GEH6000IL	40 - 60	10 - 1000	0,7 - 0,9	IP54
GEH6100IL	40 - 80	150 - 1800	1,9 - 2,6	IP54

► FURTHER INFORMATION IS AVAILABLE ONLINE



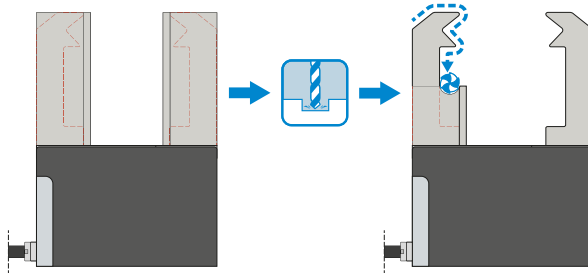
All information just a click away at: www.zimmer-group.com. Find data, illustrations, 3D models and operating instructions for your installation size using the order number for your desired product. Quick, clear and always up-to-date.

2-JAW PARALLEL GRIPPERS WITH LONG STROKE SERIES GEH6000IL FUNCTIONAL DESCRIPTION

1 Series GEH6000IL / 2-Jaw Parallel Grippers with Long Stroke / electrical / Grippers



GRIPPING COMPONENTS



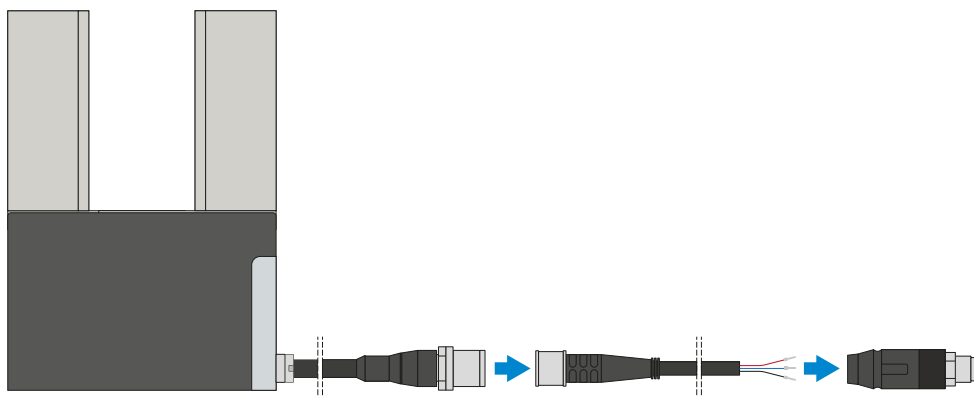
Universal jaws – UB6000-B

Can be used immediately or for individual reprocessing

The gripper blanks are available in an aluminum (AL) version and are installed directly on the gripper using the screws in the scope of delivery. The fits for the centering sleeves are already in place for this purpose. One universal jaw set is required for each gripper.



CONNECTIONS / OTHER



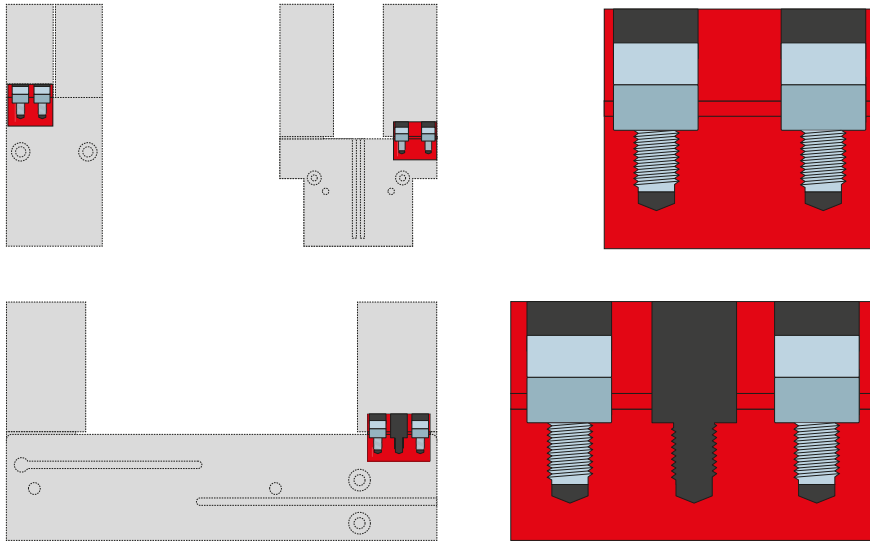
Plug-in connectors

For extending and fabricating the connection lines

Cables with a length of 10 m with exposed leads are available. Depending on the specific needs, the cables can be shortened or fabricated with connectors in sizes M12. A 5 m long cable with connector / socket is available for the IO-Link connection.



CONNECTIONS / OTHER



Centering sleeves

For defined position measurement of the gripper fingers

The centering sleeves are inserted into the fits of the gripper jaws to define the position of the gripper fingers. The centering sleeves are comparable to a pin connection.

2-JAW PARALLEL GRIPPERS WITH LONG STROKE INSTALLATION SIZE GEH6040IL

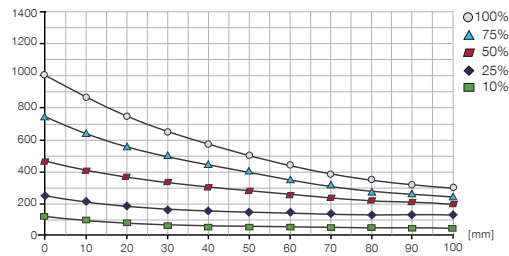
PRODUCT SPECIFICATIONS

 IO-Link



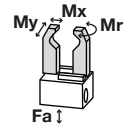
Gripping force diagram GEH6040IL-03-B

Shows the arithmetic total of the individual forces that occur on the gripper fingers, depending on the gripper finger length and the set gripping force



Forces and moments

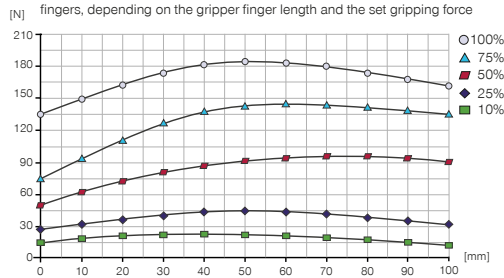
Displays static forces and moments that can also have an effect, besides the gripping force.



Mr [Nm]	25
Mx [Nm]	25
My [Nm]	25
Fa [N]	500

Gripping force diagram GEH6040IL-31-B

Shows the arithmetic total of the individual forces that occur on the gripper fingers, depending on the gripper finger length and the set gripping force



INCLUDED IN DELIVERY



4 [piece]
Centering Disc
DST40400

RECOMMENDED ACCESSORIES



GRIPPING COMPONENTS



UB6000-B
Universal jaw set aluminium



CONNECTIONS / OTHER



 IO-Link

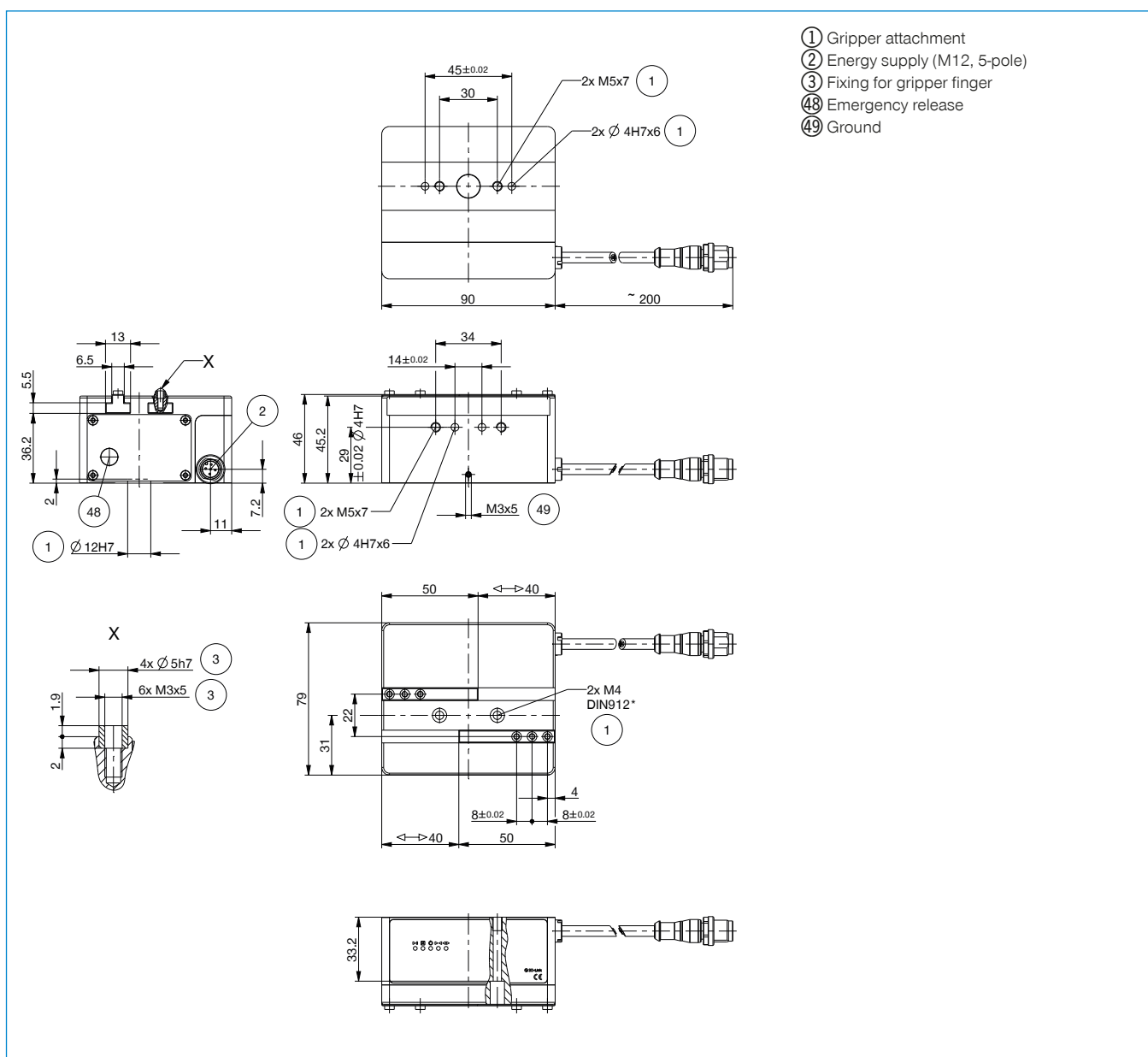
KAG500IL
Plug-in connector straight 5 m - plug, socket M12



 IO-Link

B12-Y-5IL
Y-Plug-in Connector

Order no.	▶ Technical data	
	GEH6040IL-03-B	GEH6040IL-31-B
Control	IO-Link	IO-Link
Drive	BLDC motor	BLDC motor
Stroke per jaw, adjustable [mm]	40	40
Nominal gripping force [N]	1000.0	180.0
Gripping force min. [N]	100	10
Current consumption max. [A]	5.00	2
Self locking mechanism	mechanical	-
Permissible weight per jaw max [kg]	0.3	0.3
Length of the gripper fingers max. [mm]	100	100
Max. movement speed per gripper finger [mm/s]	60	120
Repetition accuracy +/- [mm]	0.02	0.02
Operating temperature min. [°C]	5	5
Operating temperature max. [°C]	+50	+50
Protection to IEC 60529	IP54	IP54
Weight [kg]	0.7	0.7



2-JAW PARALLEL GRIPPERS WITH LONG STROKE

INSTALLATION SIZE GEH6060IL

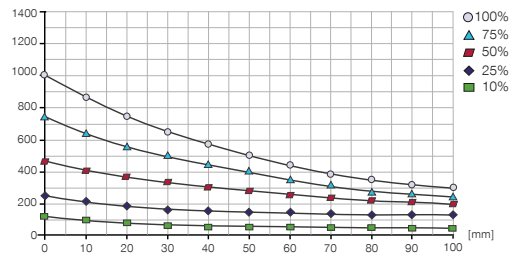
PRODUCT SPECIFICATIONS

 IO-Link



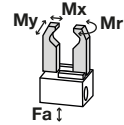
Gripping force diagram GEH6060IL-03-B

Shows the arithmetic total of the individual forces that occur on the gripper fingers, depending on the gripper finger length and the set gripping force



Forces and moments

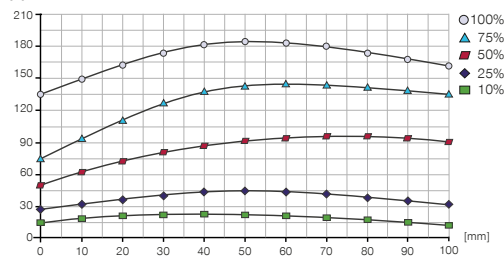
Displays static forces and moments that can also have an effect, besides the gripping force.



Mr [Nm]	35
Mx [Nm]	35
My [Nm]	35
Fa [N]	500

Gripping force diagram GEH6060IL-31-B

Shows the arithmetic total of the individual forces that occur on the gripper fingers, depending on the gripper finger length and the set gripping force



INCLUDED IN DELIVERY



4 [piece]
Centering Disc
DST40400

RECOMMENDED ACCESSORIES



GRIPPING COMPONENTS



UB6000-B
Universal jaw set aluminium



CONNECTIONS / OTHER



 IO-Link

KAG500IL
Plug-in connector straight 5 m - plug, socket M12

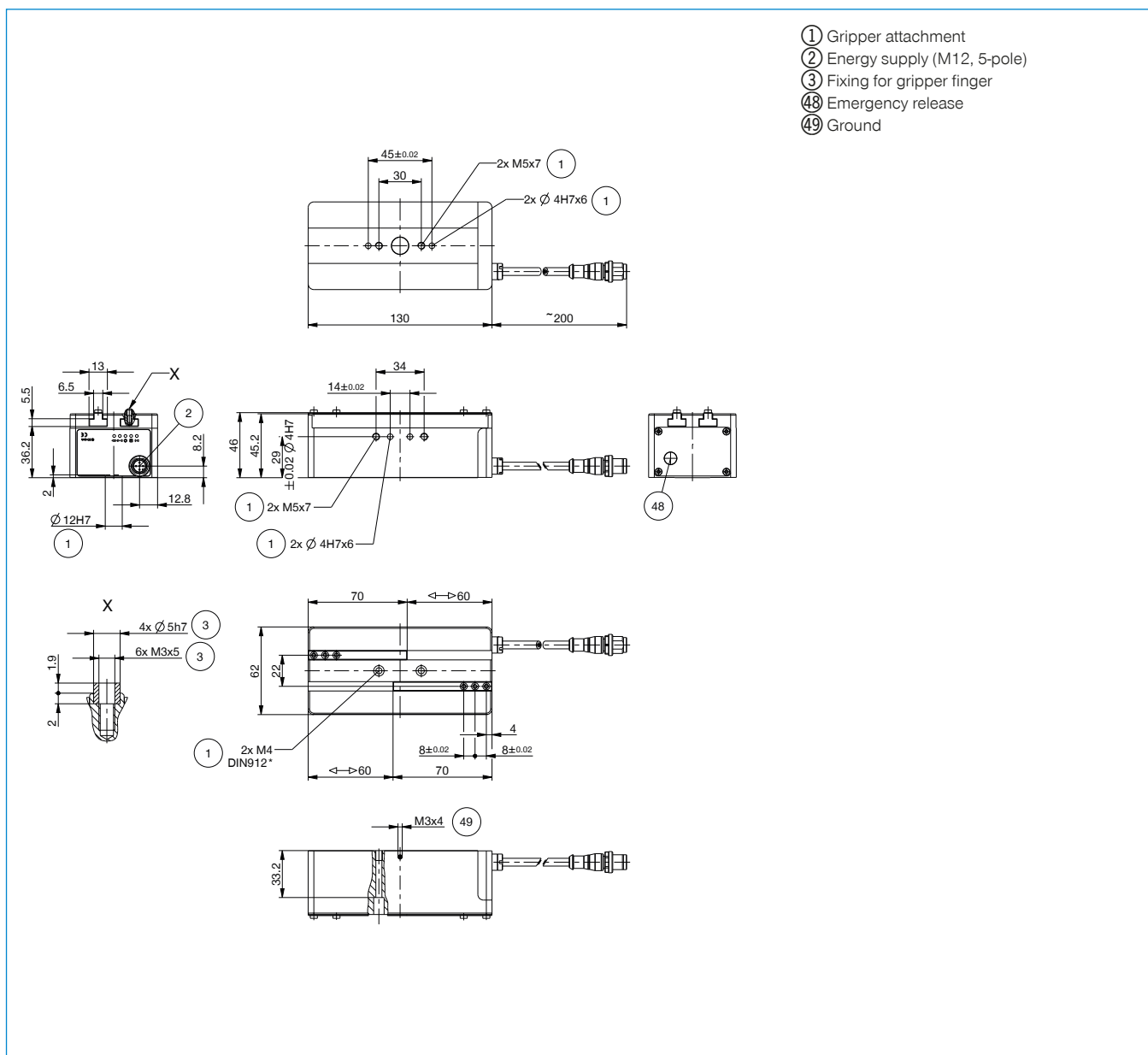


 IO-Link

B12-Y-5IL
Y-Plug-in Connector

Order no.	► Technical data	
	GEH6060IL-03-B	GEH6060IL-31-B
Control	IO-Link	IO-Link
Drive	BLDC motor	BLDC motor
Stroke per jaw, adjustable [mm]	60	60
Nominal gripping force [N]*	1000.0	180.0
Gripping force min. [N]	100	10
Self locking mechanism	mechanical	
Permissible weight per jaw max [kg]	0.3	0.3
Length of the gripper fingers max. [mm]	100	100
Max. movement speed per gripper finger [mm/s]	60	60
Repetition accuracy +/- [mm]	0.02	0.02
Operating temperature min. [°C]	5	5
Operating temperature max. [°C]	+50	+50
Protection to IEC 60529	IP54	IP54
Weight [kg]	0.9	0.9

*Max. peak current ≤ 5 A



2-JAW PARALLEL GRIPPERS WITH LONG STROKE


INSTALLATION SIZE GEH6140IL

1

Installation size GEH6140IL / 2-Jaw Parallel Grippers with Long Stroke / electrical / Grippers

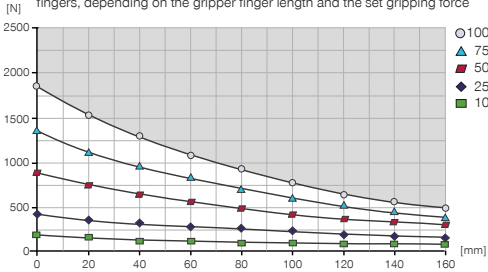
▶ PRODUCT SPECIFICATIONS

IO-Link



Gripping force diagram

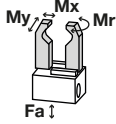
Shows the arithmetic total of the individual forces that occur on the gripper fingers, depending on the gripper finger length and the set gripping force.



Percentage	Symbol
100%	○
75%	▲
50%	■
25%	◆
10%	■

Forces and moments

Displays static forces and moments that can also have an effect, besides the gripping force.



Mr [Nm]	70
Mx [Nm]	80
My [Nm]	60
Fa [N]	1500

▶ INCLUDED IN DELIVERY



4 [piece]
Centering Disc
DST70000

▶ RECOMMENDED ACCESSORIES



GRIPPING COMPONENTS



UB6100-B
Universal jaw set aluminium



CONNECTIONS / OTHER



KAG500IL
Plug-in connector straight 5 m - plug, socket M12

IO-Link

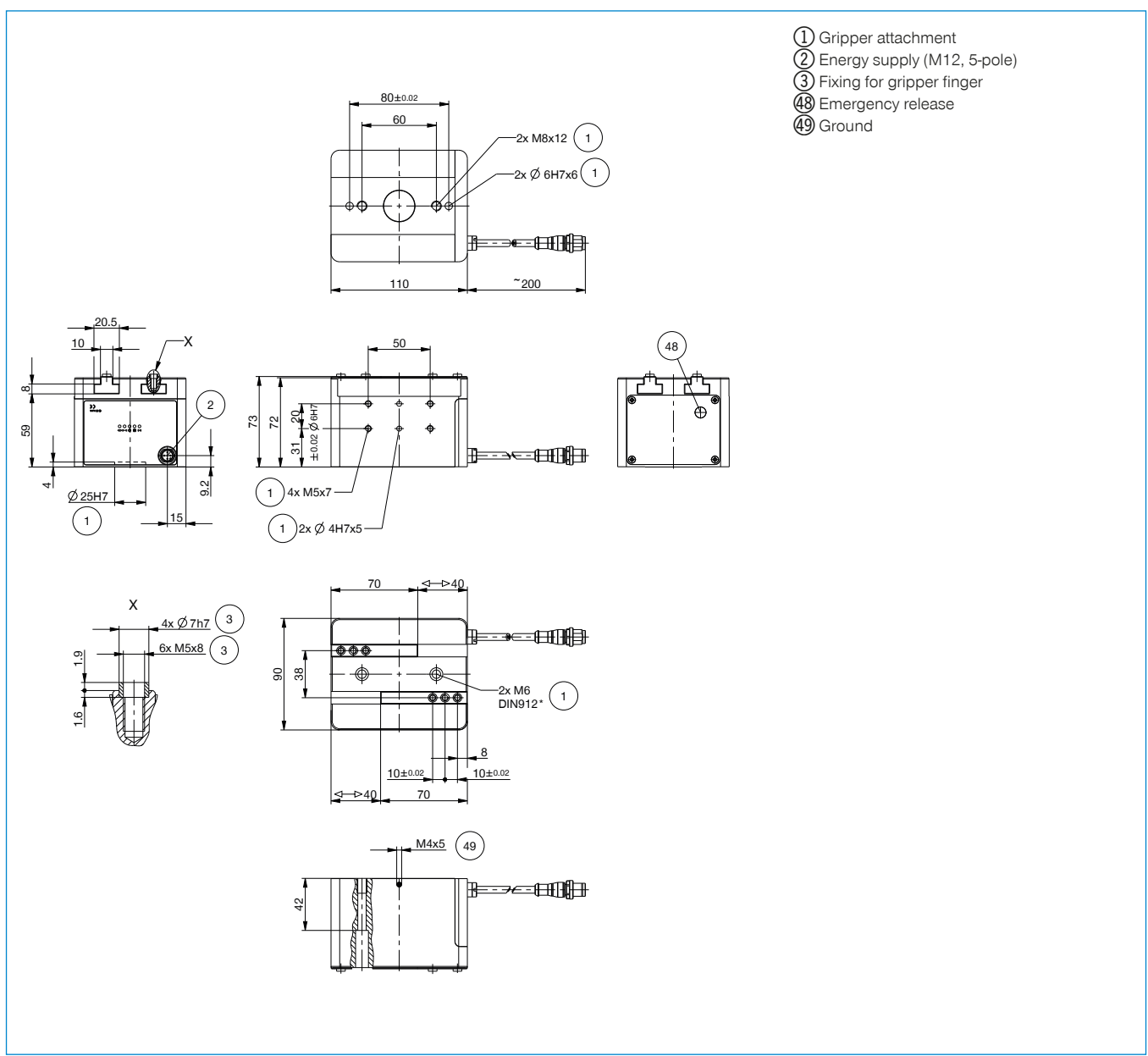


B12-Y-5IL
Y-Plug-in Connector

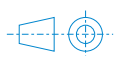
IO-Link

Order no.	▶ Technical data
Control	☑ IO-Link
Drive	BLDC motor
Stroke per jaw, adjustable [mm]	40
Nominal gripping force [N]*	1800.0
Gripping force min. [N]	150
Self locking mechanism	mechanical
Permissible weight per jaw max [kg]	1
Length of the gripper fingers max. [mm]	160
Max. movement speed per gripper finger [mm/s]	50
Repetition accuracy +/- [mm]	0.02
Operating temperature min. [°C]	5
Operating temperature max. [°C]	+50
Protection to IEC 60529	IP54
Weight [kg]	1.9

*Max. peak current ≤ 5 A




- ① Gripper attachment
- ② Energy supply (M12, 5-pole)
- ③ Fixing for gripper finger
- ④ Emergency release
- ⑤ Ground




2-JAW PARALLEL GRIPPERS WITH LONG STROKE

INSTALLATION SIZE GEH6180IL

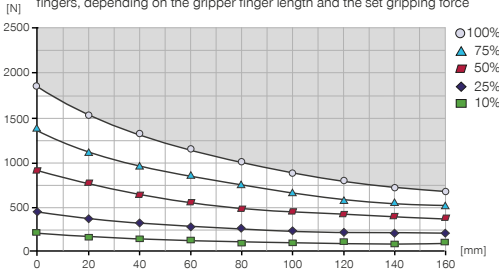
▶ PRODUCT SPECIFICATIONS

 **IO-Link**



▶ Gripping force diagram

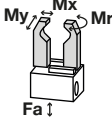
Shows the arithmetic total of the individual forces that occur on the gripper fingers, depending on the gripper finger length and the set gripping force.



Finger Length [mm]	100% Force [N]	75% Force [N]	50% Force [N]	25% Force [N]	10% Force [N]
0	2000	1400	900	500	200
20	1800	1250	800	450	180
40	1600	1100	700	400	160
60	1400	950	600	350	140
80	1200	800	500	300	120
100	1000	650	400	250	100
120	850	550	350	220	90
140	750	480	300	190	80
160	650	400	250	160	70

▶ Forces and moments

Displays static forces and moments that can also have an effect, besides the gripping force.



Mr [Nm]	100
Mx [Nm]	140
My [Nm]	90
Fa [N]	1500

▶ INCLUDED IN DELIVERY



4 [piece]
Centering Disc
DST70000


▶ RECOMMENDED ACCESSORIES



GRIPPING COMPONENTS



UB6100-B
Universal jaw set aluminium



CONNECTIONS / OTHER



KAG500IL
Plug-in connector straight 5 m - plug, socket M12

IO-Link

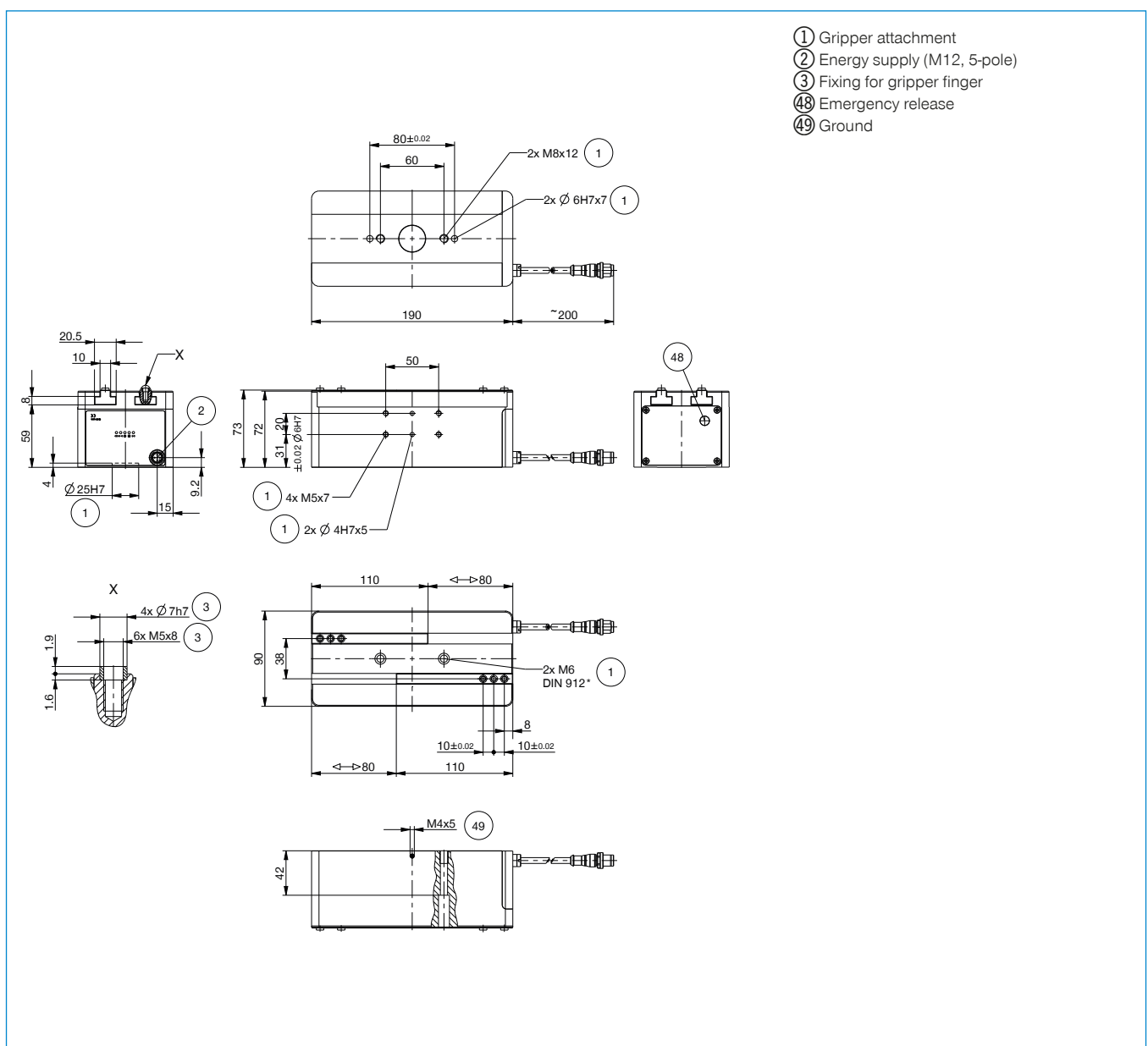


B12-Y-5IL
Y-Plug-in Connector

IO-Link

Order no.	▶ Technical data
Control	☑ IO-Link
Drive	BLDC motor
Stroke per jaw, adjustable [mm]	80
Nominal gripping force [N]*	1800.0
Gripping force min. [N]	150
Self locking mechanism	mechanical
Permissible weight per jaw max [kg]	1
Length of the gripper fingers max. [mm]	160
Max. movement speed per gripper finger [mm/s]	50
Repetition accuracy +/- [mm]	0.02
Operating temperature min. [°C]	5
Operating temperature max. [°C]	+50
Protection to IEC 60529	IP54
Weight [kg]	2.6

*Max. peak current ≤ 5 A



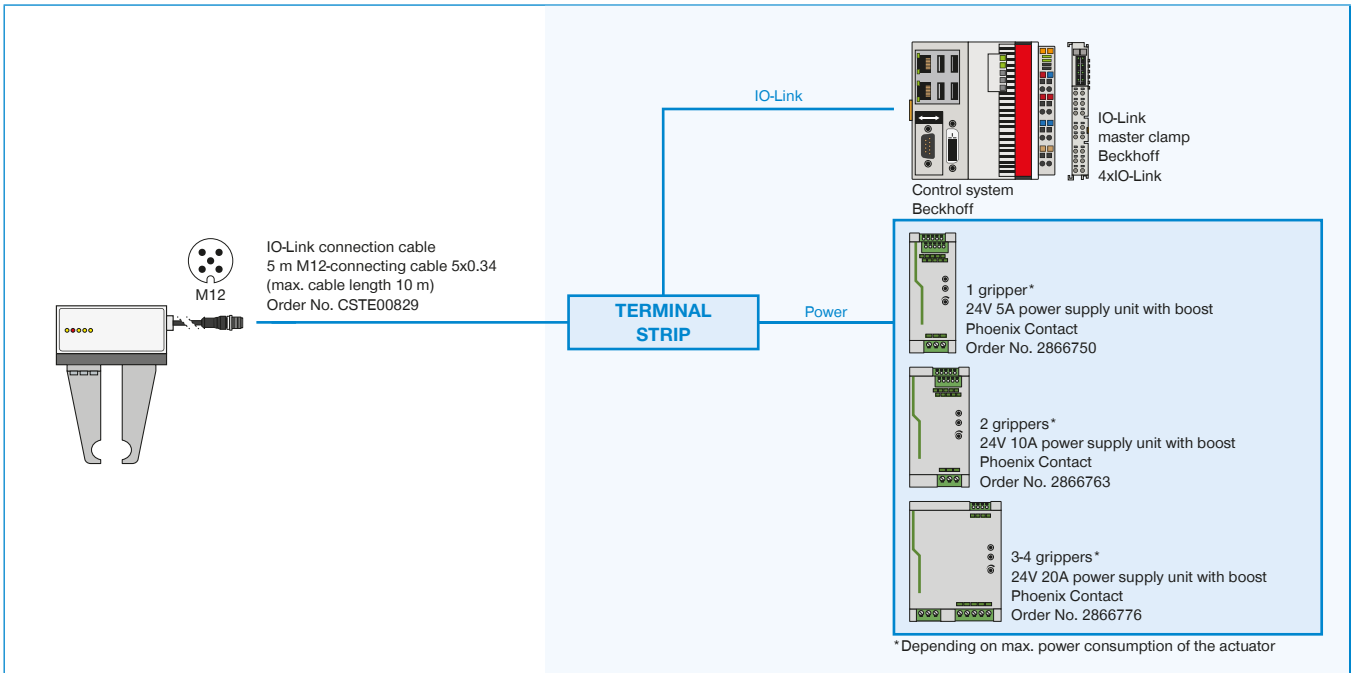
SECURED CONFIGURATION EXAMPLES

GEH6000IL SERIES

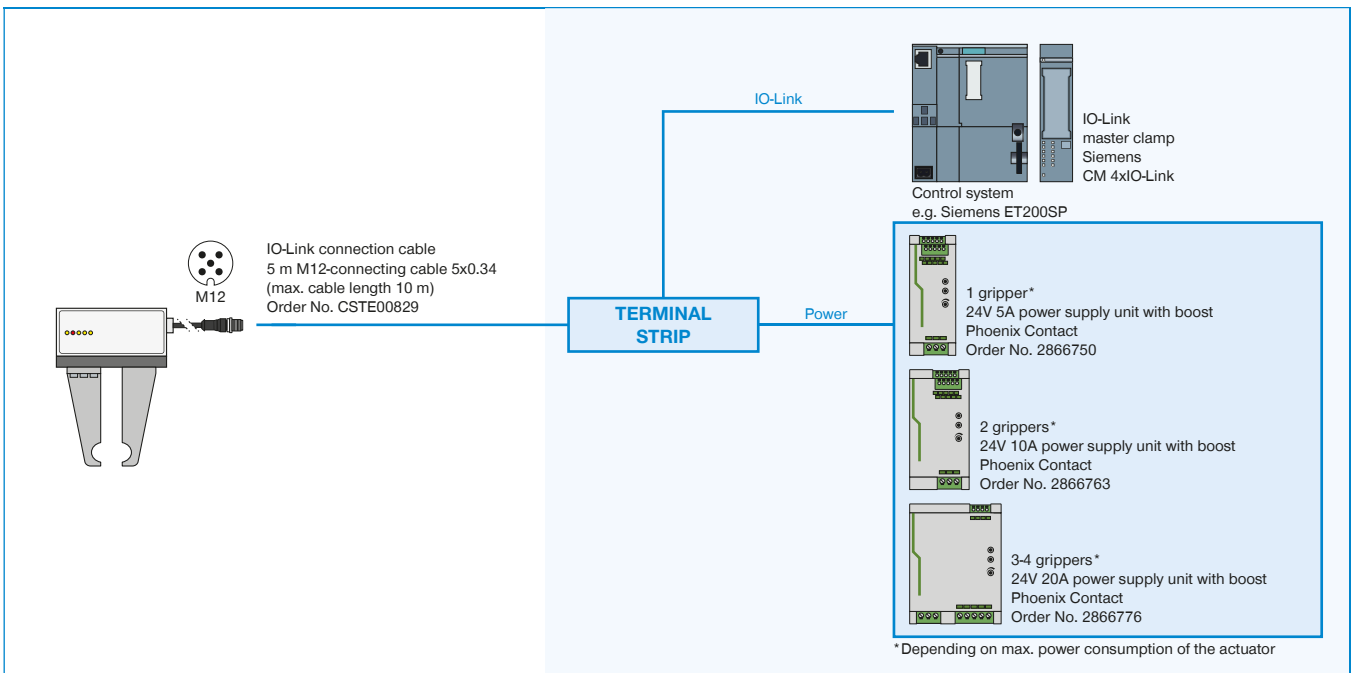
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GEH6000IL series / Secured configuration examples

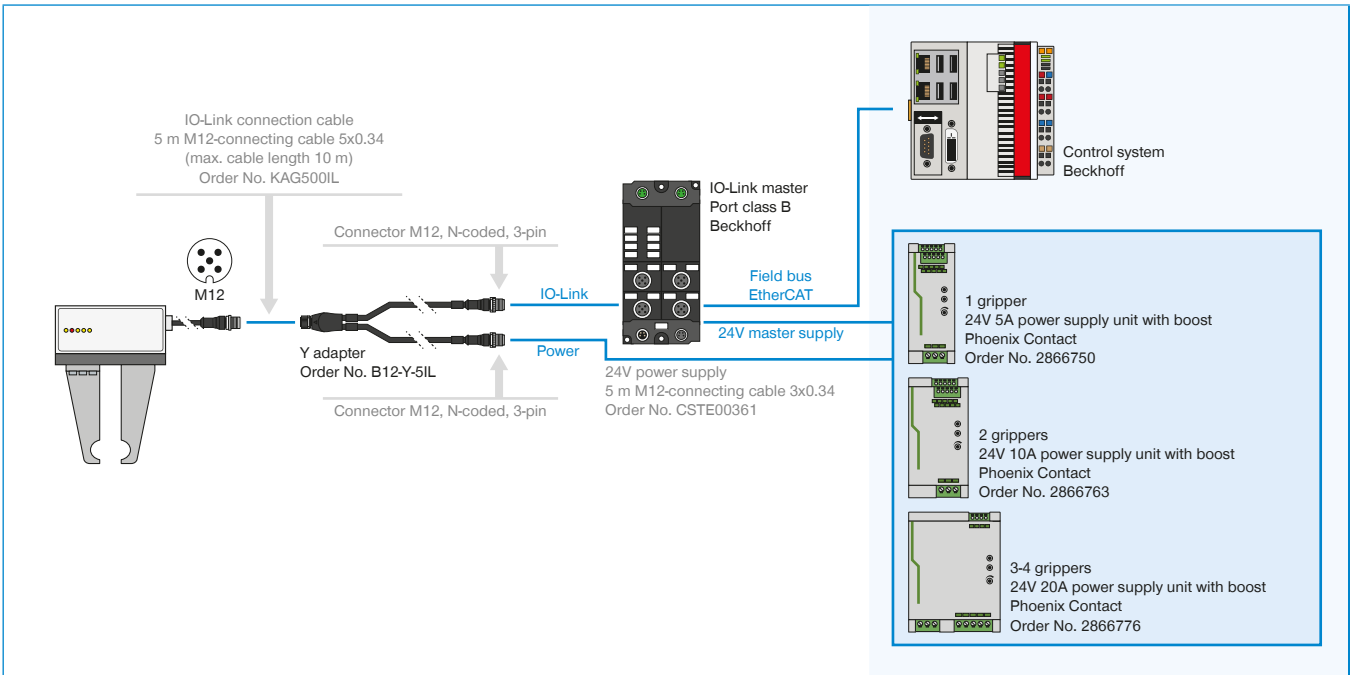
▶ GEH6000IL (IO-LINK) WIRING TO CONTROL CABINET (BECKHOFF)



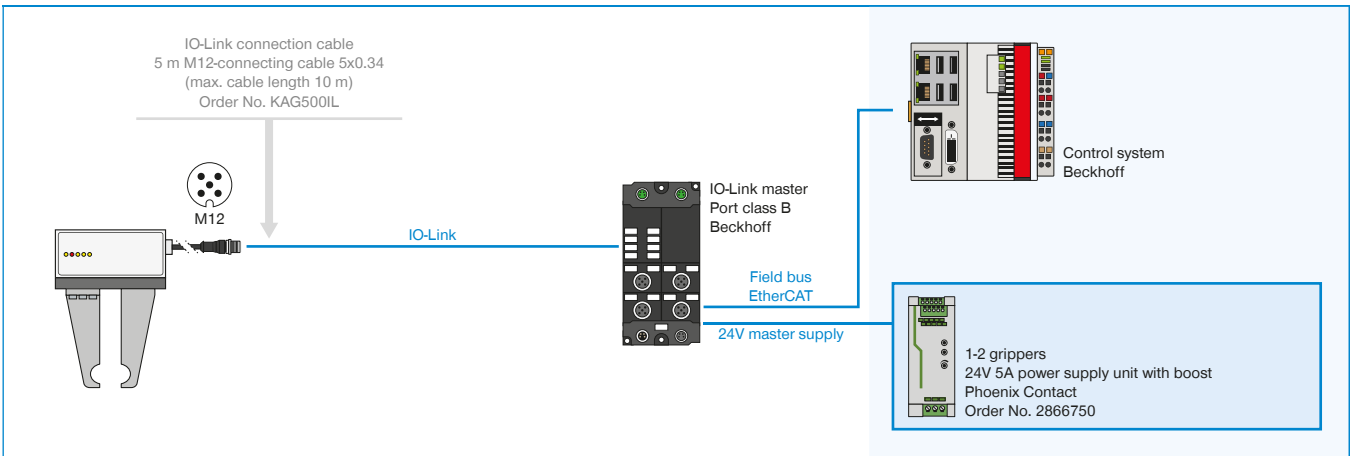
▶ GEH6000IL (IO-LINK) WIRING TO CONTROL CABINET (SIEMENS)



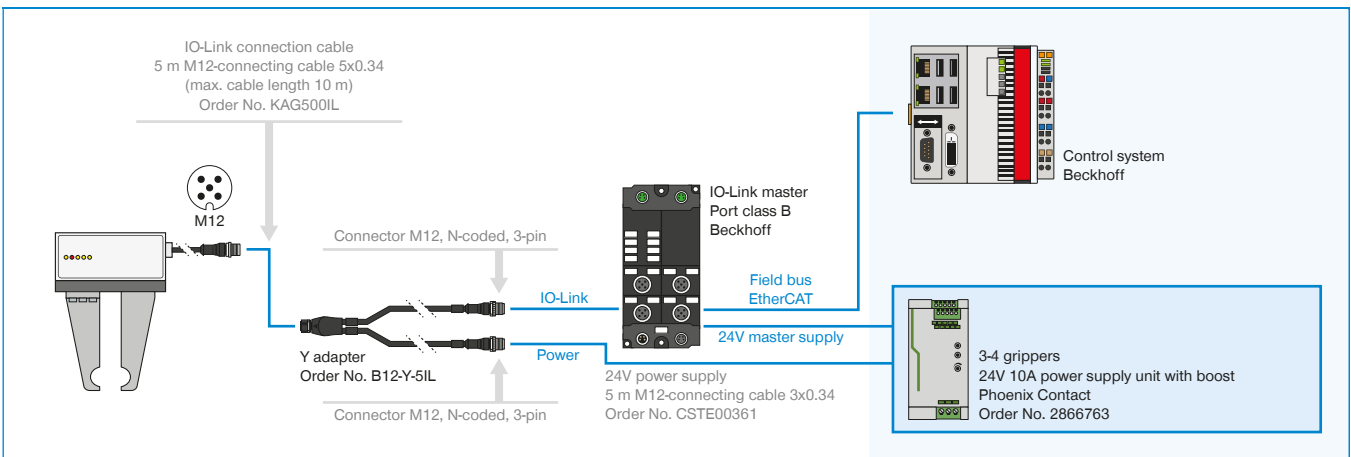
▶ **GEH6000IL-03-B WIRING TO IO-LINK MASTER IP67 (BECKHOFF)**



▶ **GEH6000IL-31-B WIRING TO IO-LINK MASTER IP67 (BECKHOFF) WITH 1-2 GRIPPERS**



▶ **GEH6000IL-31-B WIRING TO IO-LINK MASTER IP67 (BECKHOFF) WITH 3-4 GRIPPERS**



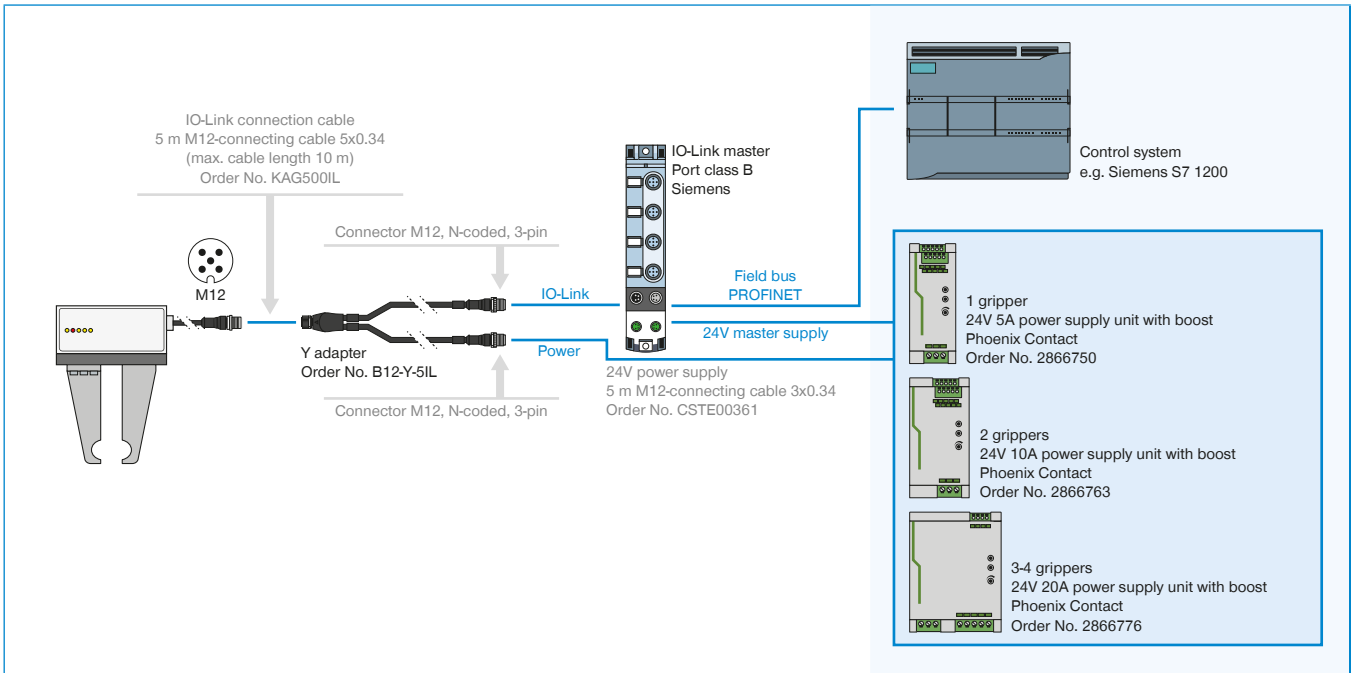
SECURED CONFIGURATION EXAMPLES

GEH6000IL SERIES

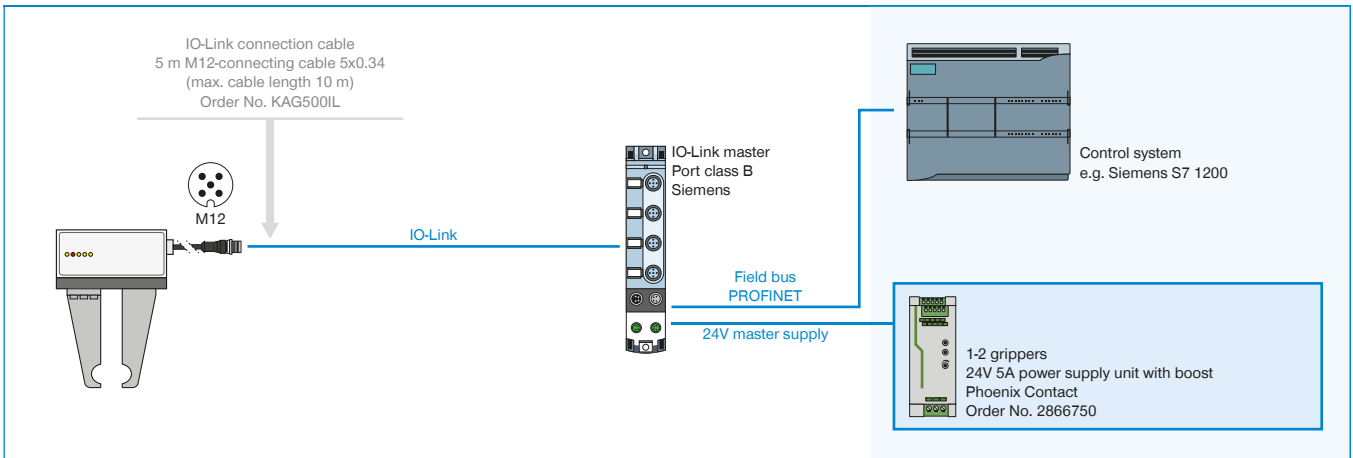
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GEH6000IL series / Secured configuration examples

▶ GEH6000IL-03-B WIRING TO IO-LINK MASTER IP67 (BECKHOFF)



▶ GEH6000IL-31-B WIRING TO IO-LINK MASTER IP67 (SIEMENS) WITH 1-2 GRIPPERS



▶ GEH6000IL-31-B WIRING TO IO-LINK MASTER IP67 (SIEMENS) WITH 3-4 GRIPPERS

