

MX-L 335 compact

MECHATRONIC LONG STROKE GRIPPER

Mechatronic drive
Gripping force steplessly adjustable up to 27.000 N
Position sensing and monitoring of the gripping force
Pre-positioning and sensitive gripping force adjustment



MX-L 335 compact

Mechatronic gripper

Mechatronic long stroke gripper

■ 2 finger parallel



Application / customer benefits

- Gripping force independent of gripping speed and stroke
- Mechatronic drive with gripping force retention
- Gripping force up to 27.000 N
- Position sensing and monitoring of the gripping force
- OD clamping
- Pre-positioning and sensitive gripping force adjustment

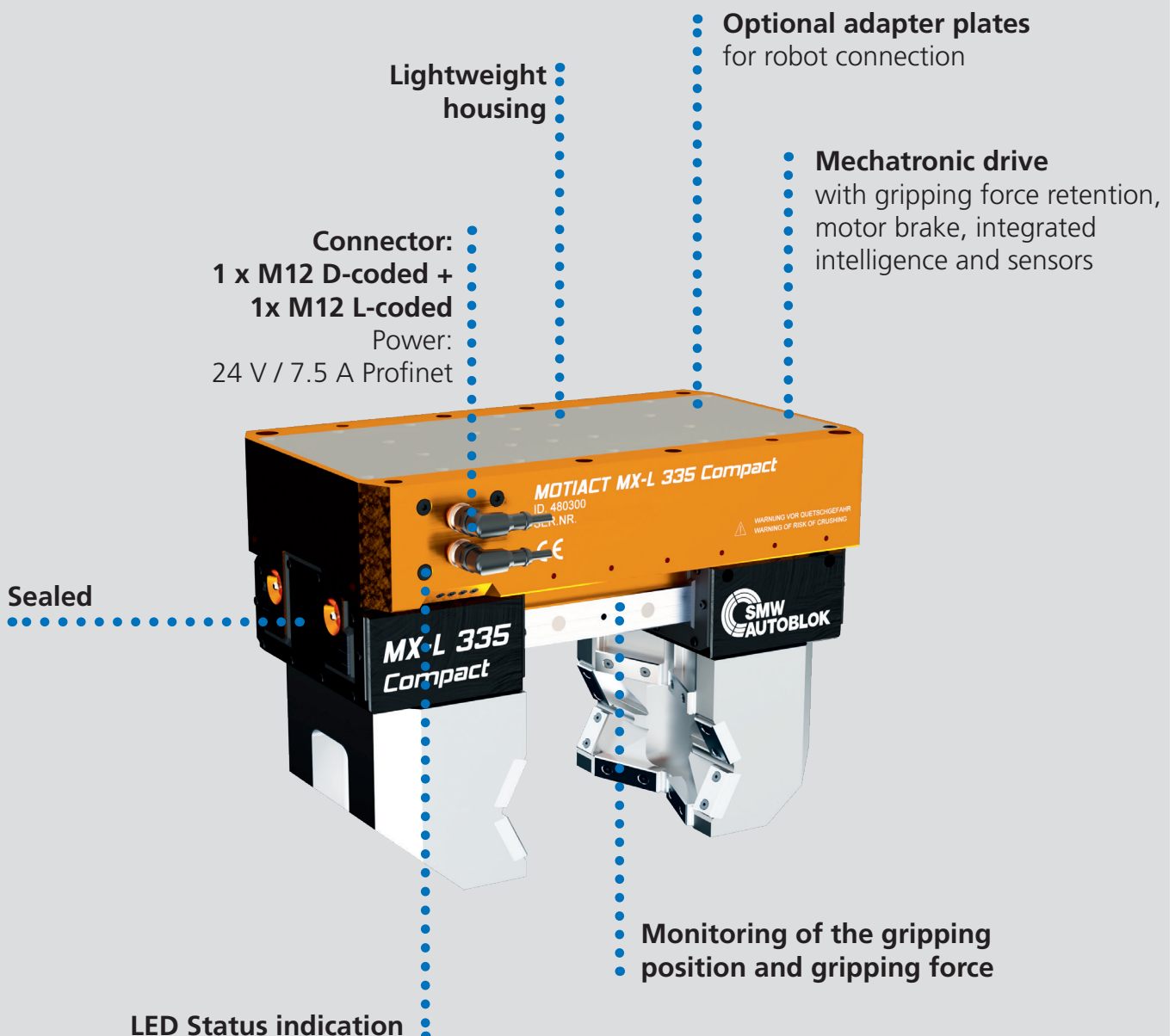
Technical features

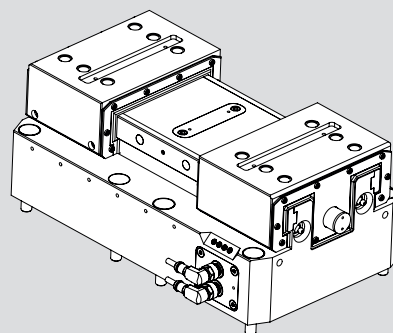
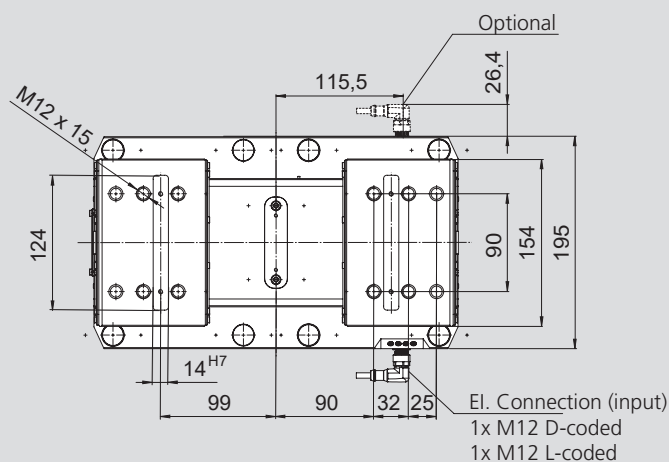
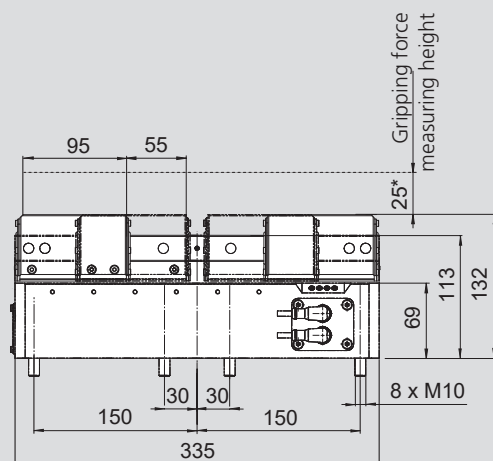
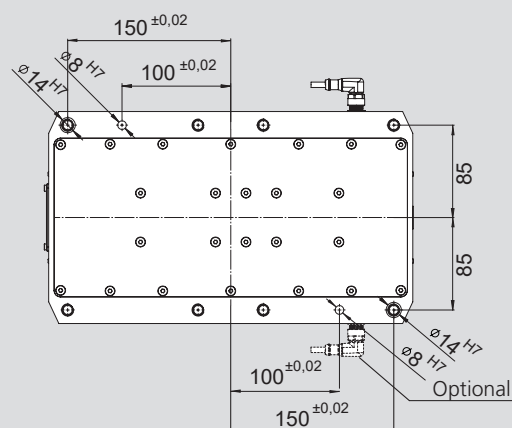
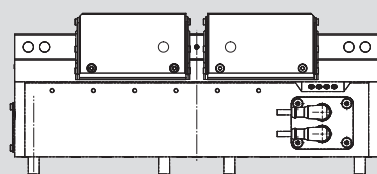
- Aluminum housing
- Sealed/Protection class: IP67
- Repeatability: 0.02 mm
- Recommended workpiece weight up to 135 kg
- Power supply: 24 V / 7.5 A
- Communication interface: Profinet
- Possibility of safe motion shutdown by means of STO Signals (optional)

Standard equipment

Gripper (without gripper fingers, centering sleeves and mounting bolts)

MX-L 335 compact



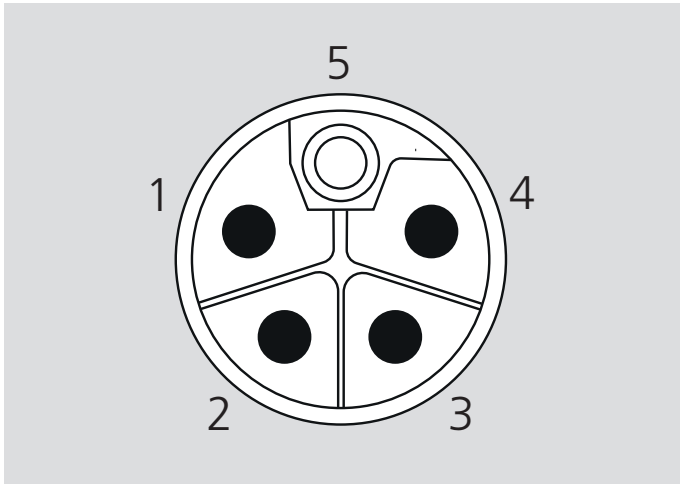


Subject to technical changes.
For more detailed information please ask our customer service.

*Gripping force is the arithmetic sum of the individual forces applied on each jaw at the specified distance.

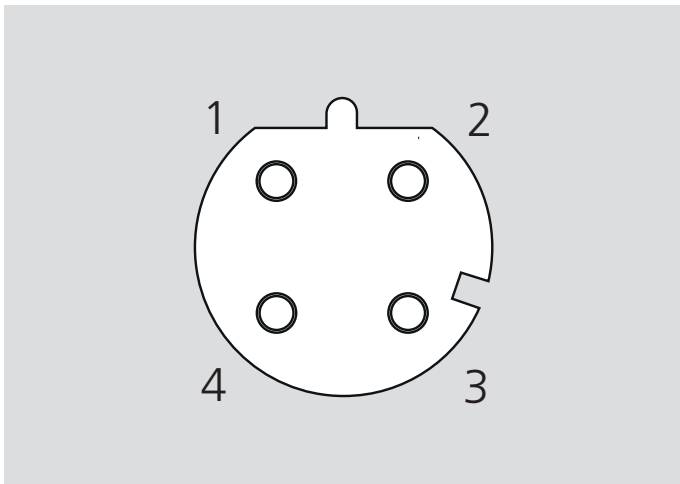
Type		MX-L 335 compact	
Id. No.		PROFINET	
Id. No.		480300	
Gripping force (steplessly adjustable) max.	N	27.000	
Stroke per jaw	mm	55	
Repeatability	mm	0.02	
Weight	kg	32	
Recommended workpiece weight	kg	135	
Travel speed per jaw	mm/s	5	
Voltage (actuators)		24 V ± 10 %	
Max. power consumption (actuators)		7.5 A	
Voltage (sensors)		24 V ± 10 %	
Max. power consumption (sensors)		0.5 A	
Communication interface		Profinet	
STO signals (option)		2	

Pin assignment M12 x 1 – 5 Pin L-coded Male



Power Interface		
Pin	Function	Description
1	+24 V (Us)	Power supply logic
2	GND (Ua)	Ground power supply actuator
3	GND (Us)	Ground power supply logic
4	+24 V (Ua)	Power supply actuator
5	FE	Functional Earth

Pin assignment M12 x 1 – 4 Pin D-coded Female



Ethernet / Profinet Interface		
Pin	Function	Description
1	Tx+	Ethernet/Profinet Tx+
2	Rx+	Ethernet/Profinet Rx+
3	Tx-	Ethernet/Profinet Tx-
4	Rx-	Ethernet/Profinet Rx-

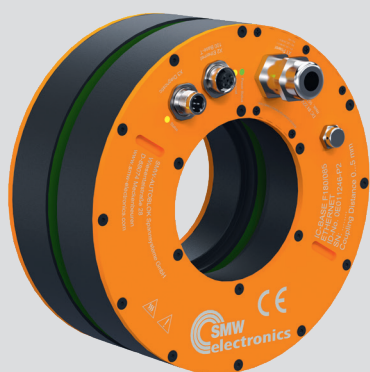
Notes

F180 Ethernet

Axial coupler

Inductive Coupling System

■ Contact free transmission of energy and signals



Application / customer benefits

- Contact free transmission of energy and signals between moving / rotating and stationary components
- Application examples: packaging machines, special machines, automation, machine tools, printing machines, robot applications (EOAT)
- Substitution of slip ring / connector
- Dynamic Pairing
- Wear and maintenance free
- Protective functions: Temperature monitoring, foreign object detection
- Status LED with good visibility

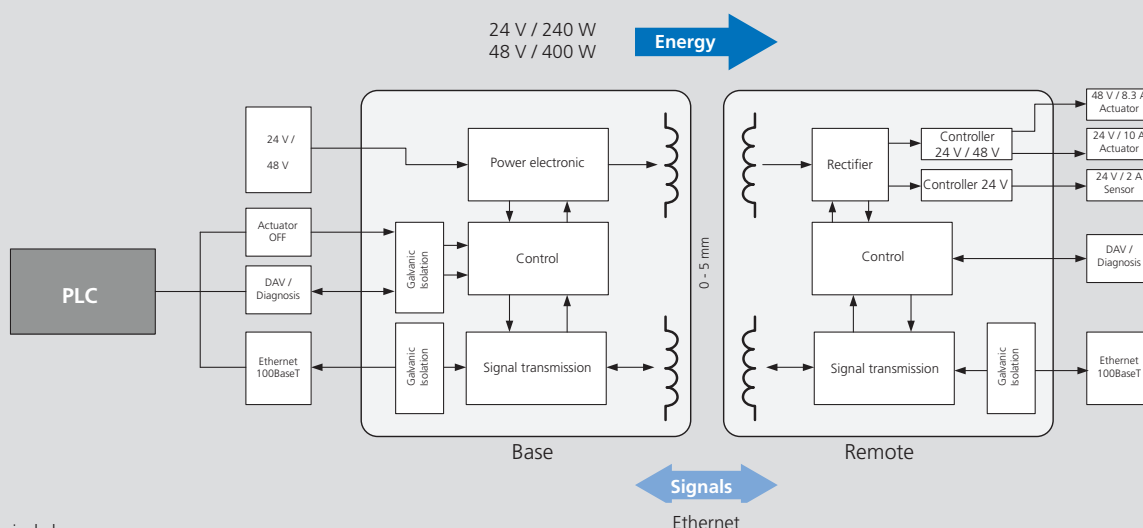
Technical features

- Diameter: 180 mm / through hole: 85 mm
- Operating voltage: 24 V or 48 V
- Transmission distance: 0 - 5 mm at 24 V or 0 - 3 mm at 48 V
- Energy transmission: 24 V / 240 W or 48 V / 400 W (adjustable)
- Signal transmission: Ethernet 100 Base-T
- Transmission bandwidth < 5 MBit/s
- Connections: M12 Ethernet (D-coded), M12 diagnosis (A-coded), terminal block (Energy)
- Protection class: IP67

Block diagram

Standard equipment

Inductive coupler base oder remote



Subject to technical changes.

For more detailed information please ask our customer service.

Inductive coupling system F180 Ethernet

Type	Base	Remote
Id. No.	0E011246	0E011247
Operating temperature (body surface)	-20° C ... +60° C	
Stocking temperature	-20° C ... +60° C	
Transmission distance	0 mm ... 5 mm (24 V) 0 mm ... 3 mm (48 V)	
Operating voltage	24 V / 48 V	-
Output voltage (Actuator supply)*	-	24 V DC / 10 A 48 V DC / 8.3 A
Output voltage (Sensor supply)*	-	24 V DC / 4 A
Signal transmission	Ethernet 100 Base-T	
LED function display	3 LEDs 2-color	
Current consumption (base)	15 A (24 V) 12 A (48 V)	-
Overload protection / short-circuit protection	✓	✓
Reverse polarity protection	-	< 50 mV
Data valid output	max. 100 mA	-
Ready delay	< 5 s	

*max. 400 W total

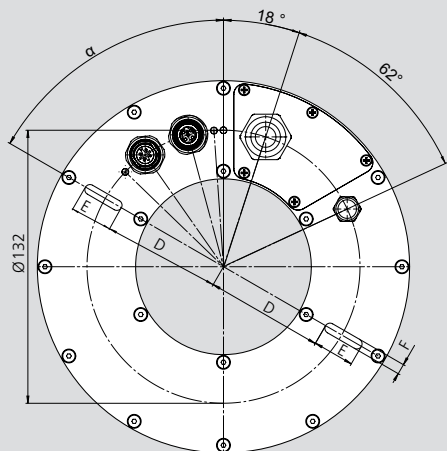
Inductive Coupling System

- Stationary Unit – Base
- Mobile Unit – Remote

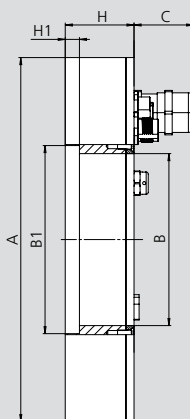
F180 Ethernet

Axial coupler

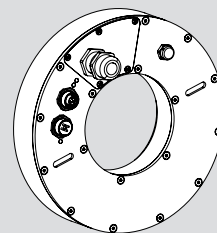
Base / Remote:



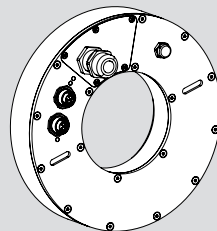
Base / Remote:



Base:



Remote:



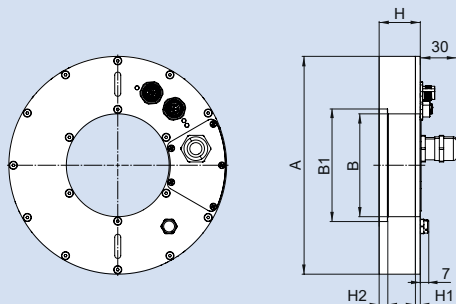
Subject to technical changes.
For more detailed information please ask our customer service.

Inductive coupling system F180 Ethernet

Type		Base	Remote
Id. No.		0E011246	0E011247
A	mm	180	
B	mm	85	
B1	mm	93	
C	mm	29.5	
D	mm	57	
E	mm	20	
F	mm	5	
H	mm	34	
H1	mm	7	
a	degree	60	
Housing material		Al, GFK	
Protection class		IP67	
Weight	kg	1.172	1.275

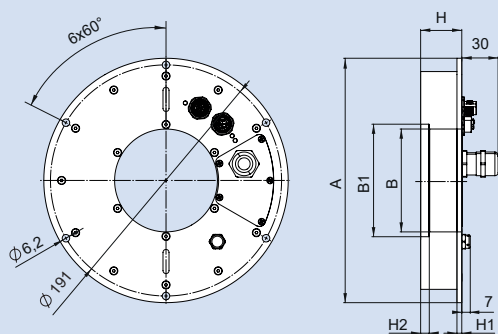
Function Base		Function Remote	
LED Power		LED Actuator	
Color	Green/red	Color	Green/red
Function	Off » Unit not supplied with voltage (or undervoltage)	Function	Off » Unit not paired
	On (green) » Voltage ok and mobile unit has been detected		On (green) » Unit paired, voltage output actuator ok
	2 Hz green 50 / 50 % » Operating temperature in critical range		Flashes 2 Hz red » Unit paired but short circuit on actuator
	1 Hz green 25 / 75 % » Voltage ok but no mobile unit detected		Flashes 5 Hz red » Internal error
	1 Hz red/green » Incompatible mobile unit detected	LED Sensor supply	
	2 Hz red » Foreign element detected	Color	Green/red
5 Hz red » Internal error	Function	Off » Unit not paired	
On (green) » Unit paired, voltage output sensor (24 V) ok			
Flashes 2 Hz red » Unit paired but short circuit on sensor (24 V)			
LED Signal transmission Ethernet		Flashes 5 Hz red » Internal error	
Color	Yellow/red	LED Signal transmission	
Function	Off » No mobile unit detected	Color	Yellow/red
	On/yellow » Signal transmission ready	Function	Off » No mobile unit detected
	1 Hz yellow » Data packets are being transmitted		On/yellow » Signal transmission ready
	3 Hz yellow » 50 % of the transmission bandwidth used (10 s)		Flashes 1 Hz yellow » Data packets are being transmitted
	8 Hz red » Data packets were discarded (in the last 10 s)		Flashes 3 Hz yellow » 50 % of the transmission bandwidth used (10 s)
On/red » Error in data transmission (internal error)	Flashes 8 Hz red » Data packets were discarded (in the last 10 s)		
LED Energy transmission		On/red » Error in data transmission (internal error)	
Color	Yellow/red		
Function	Off » No mobile unit detected		
	On (yellow) » Unit coupled, voltage output ok		
	1 Hz red/yellow » Short circuit at voltage output sensor		
	3 Hz red/yellow » Short circuit at voltage output actuator		
	3 Hz red » Short circuit at both voltage outputs		
	5 Hz red » Internal error		

Standard flange



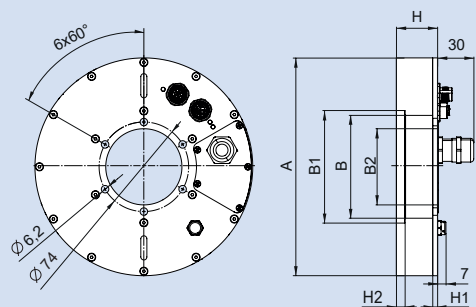
Type	F180 Ethernet	
	IC-Base F180 Ethernet D180/085	IC-Remote F180 Ethernet D180/085
Id. No.	0E011246	0E011247
A	180	
B	85	
B1	93	
B2	-	
H	34	
H1	3	
H2	7	
Weight	1.31 kg	

Outer flange with feed-through



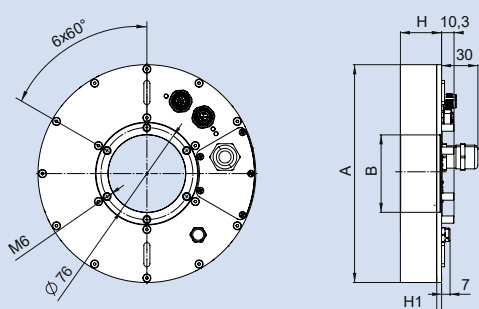
Type	F180 Ethernet	
	IC-Base F180 Ethernet D202/085	IC-Remote F180 Ethernet D202/085
Id. No.	0E012340	0E012341
A	202	
B	85	
B1	93	
B2	-	
H	34	
H1	4	
H2	7	
Weight	1.47 kg	

Inner flange with feed-through



Type	F180 Ethernet	
	IC-Base F180 Ethernet D180/063	IC-Remote F180 Ethernet D180/063
Id. No.	0E012342	0E012343
A	180	
B	85	
B1	93	
B2	63	
H	34	
H1	4	
H2	7	
Weight	1.4 kg	

Flange ring with feed-through



Type	F180 Ethernet	
	IC-Base F180 Ethernet D180/064	IC-Remote F180 Ethernet D180/064
Id. No.	0E012344	0E012345
A	180	
B	64	
B1	-	
B2	-	
H	34	
H1	4	
H2	-	
Weight	1.58 kg	

FURTHER OPTIONS AVAILABLE ON REQUEST!

- Outer flange without feed-through
- Inner flange without feed-through
- Threaded sleeve with feed-through

Notes

Notes

Notes



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