

2-jaw parallel self-centering electric gripper

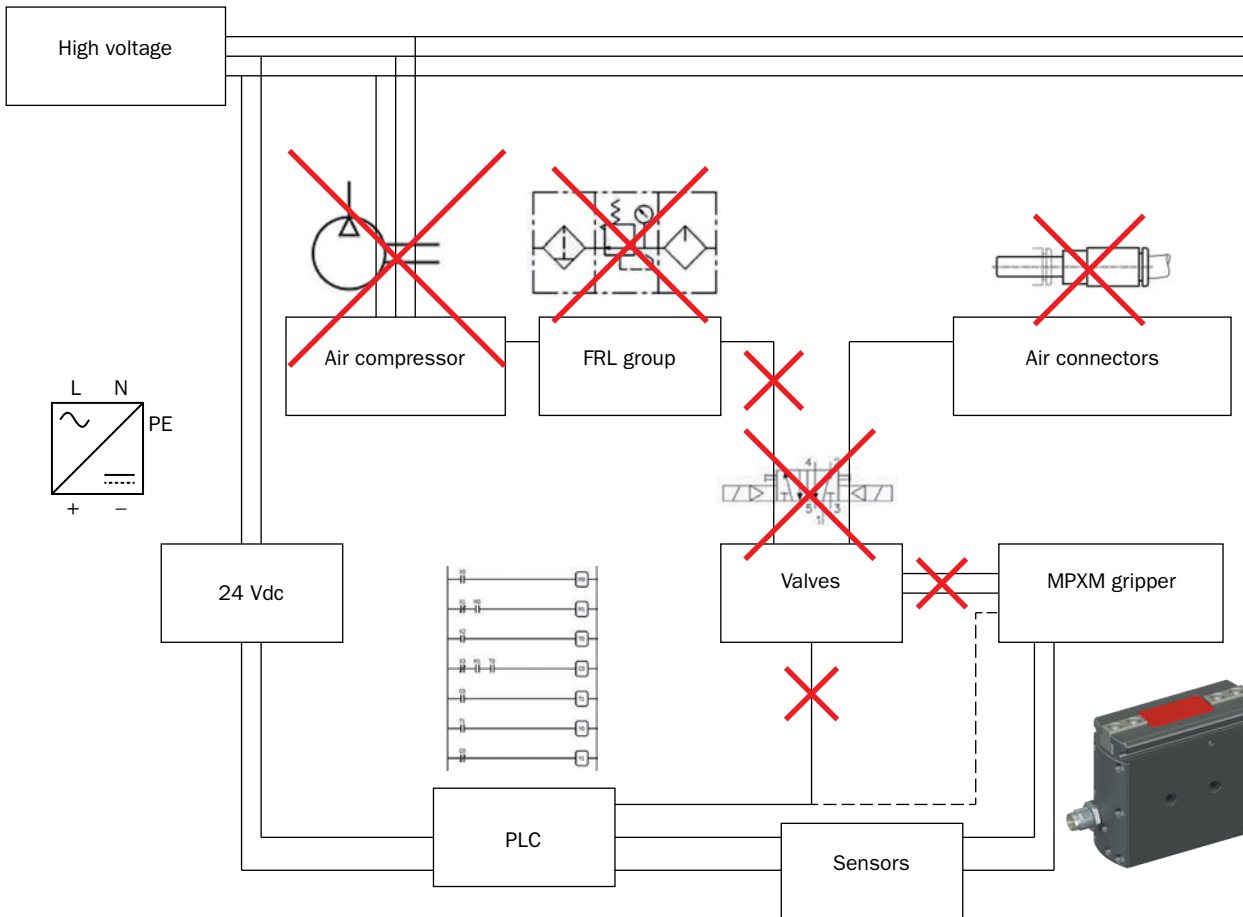
- Plug & play user friendly gripper.
- No electricity consumption when gripper is engaged.
- No programming required.
- Gripper retention guaranteed in event of blackout.
- Self Adapting jaws part.
- Extra stroke.
- Long life Brushless motor (Brushless DC).
- Built-in motor driver.
- 24 Vdc Low Voltage Power Supply.
- M8x1, 3 poles standard connection.
- Controllable by PLC as a pneumatic valve.
- Fiber-carbon gear reduction.
- 10 million cycle maintenance-free.
- T-slot style jaws for heavy loads.
- Weight-dimensions-force best trade off.
- Rotary actuator fitting compatible.
- Optional magnetic sensors.



MPXM1612

MPXM2516

MPXM3220





	MPXM1612	MPXM2516	MPXM3220	
Total gripping force	68 N	95 N	215 N	
Stroke	2x6 mm (±2°)	2x8 mm (±2°)	2x10 mm (±2°)	
Frequency at an ambient temperature of 30°C	0.75 Hz	1.2 Hz	0.85 Hz	
Jaw closing time	0.21 s	0.19 s	0.23 s	
Working gripper time	0.3 s	0.28 s	0.3 s	
Duty cycle at an ambient temperature of 30°C	45%	68%	51%	
Power supply	24 Vdc ±10%	24 Vdc ±10%	24 Vdc ±10%	
Peak current	0.9 Apk	1.2 Apk	3.8 Apk	
Nominal current	0.3 Arms	0.4 Arms	0.8 Arms	
Brushless motor power	6 W	11 W	23 W	
Connection	M8 - 3 poles			
Open/closed input signal	PNP open collector			
Repetition accuracy	0.02 mm	0.02 mm	0.02 mm	
Operating temperature	5° ÷ 60°C	5° ÷ 60°C	5° ÷ 60°C	
Environmental Degree	IP54	IP54	IP54	
Noise level	< 70 dB	< 70 dB	< 70 dB	
Mass (motor included)	184 g	390 g	604 g	
IPA Clean Room Certification	-	-	-	
Reference standards	EN 61000-6-2 + EC + IS1; EN 61000-6-3 + A1			
Barycentric moment of inertia	Jxx	0.55 kgcm ²	2.02 kgcm ²	3.99 kgcm ²
Barycentric moment of inertia	Jyy	0.93 kgcm ²	3.18 kgcm ²	6.69 kgcm ²
Barycentric moment of inertia	Jzz	0.55 kgcm ²	1.76 kgcm ²	3.78 kgcm ²
Technology and options	Page 594 - 595			

Rotary Units

Quick Changer

Profiles and Brackets

Grippers

Linear Actuators

Suspensions

Nippers

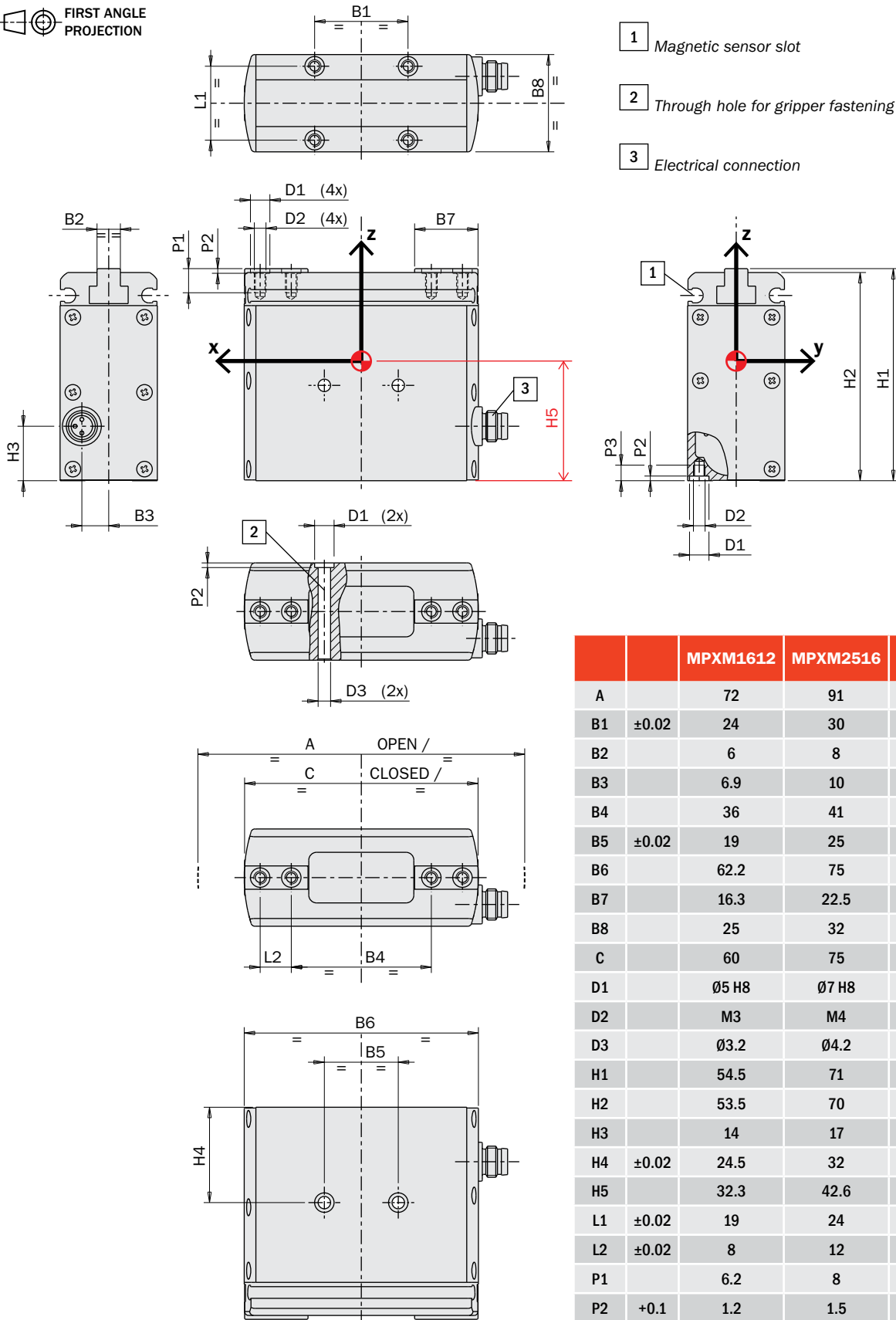
Robot Kit

Options

Sensors

Dimensions (mm)

FIRST ANGLE PROJECTION

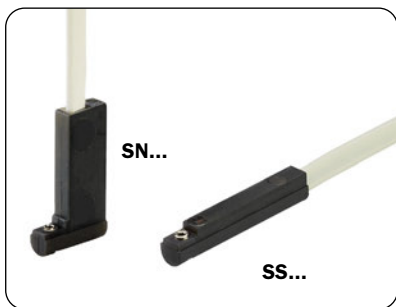


- 1 Magnetic sensor slot
- 2 Through hole for gripper fastening
- 3 Electrical connection

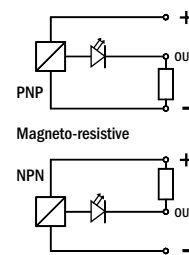
		MPXM1612	MPXM2516	MPXM3220
A		72	91	109
B1	±0.02	24	30	36
B2		6	8	9
B3		6.9	10	11
B4		36	41	48
B5	±0.02	19	25	30
B6		62.2	75	89
B7		16.3	22.5	28
B8		25	32	35
C		60	75	89
D1		Ø5 H8	Ø7 H8	Ø7 H8
D2		M3	M4	M5
D3		Ø3.2	Ø4.2	Ø5.2
H1		54.5	71	81
H2		53.5	70	80
H3		14	17	19
H4	±0.02	24.5	32	38
H5		32.3	42.6	48.4
L1	±0.02	19	24	26
L2	±0.02	8	12	14
P1		6.2	8	8.5
P2	+0.1	1.2	1.5	1.5
P3		4	7	8

Sensors

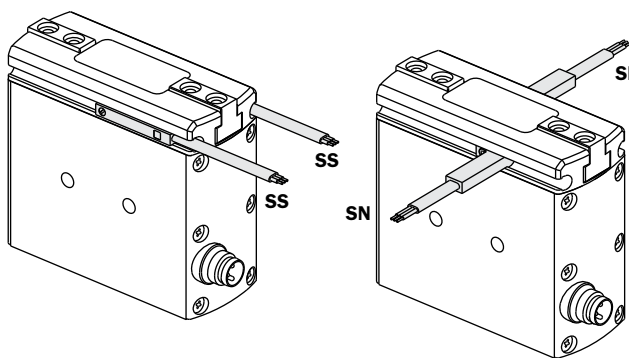
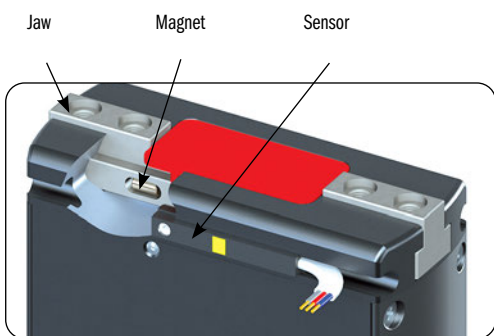
The operating position can be checked by one or more magnetic sensors (optional), that detect the position by the magnets on the jaws inside.
For details, see the "Accessories" section.



SN4N225-G SS4N225-G	PNP	2.5m cable
SN4M225-G SS4M225-G	NPN	2.5m cable
SN3N203-G SS3N203-G	PNP	M8 snap plug connector
SN3M203-G SS3M203-G	NPN	M8 snap plug connector



They are all provided with a 3-wire flat cable and a LED.



Safety loads and backlashes

Check the table for the maximum permitted loads.
Excessive forces or torques can damage the gripper, cause operation problems and endanger the safety of the operator.
F s, Mx s, My s, Mz s, are the maximum permitted loads under static conditions, that is with motionless jaws.
F d, Mx d, My d, Mz d, are the maximum permitted loads under dynamic conditions, that is with running jaws.
The following table also shows the maximum permitted load (m) on each gripping tool when the gripper operates at peak performance.
The picture below shows also the jaw maximum backlash.

	MPXM1612	MPXM2516	MPXM3220
F s	60 N	120 N	200 N
Mx s	3 Nm	8 Nm	20 Nm
My s	3 Nm	8 Nm	20 Nm
Mz s	3 Nm	8 Nm	20 Nm
F d	0.6 N	1.2 N	2 N
Mx d	3 Ncm	8 Ncm	20 Ncm
My d	3 Ncm	8 Ncm	20 Ncm
Mz d	3 Ncm	8 Ncm	20 Ncm
m	60 g	120 g	200 g

