MPPM

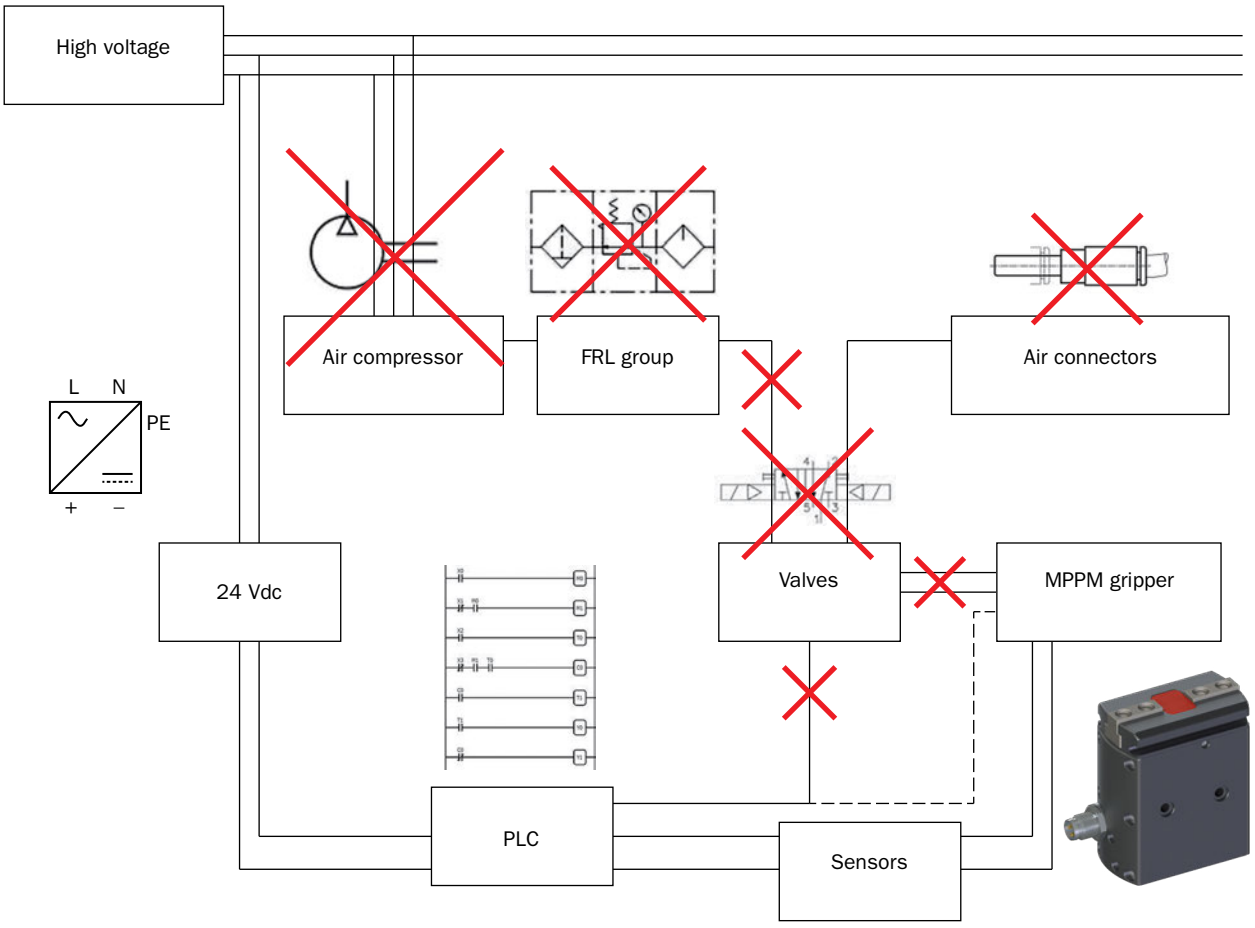
2-jaw parallel self-centering electric gripper

- 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.
- 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 milion cycle maintenance-free.
- T-slot style jaws for heavy loads.
- Weight-dimensions-force best trade off.
- Rotary actuator fitting compatible.
- Optional magnetic sensors.

MPPM1606

MPPM2508

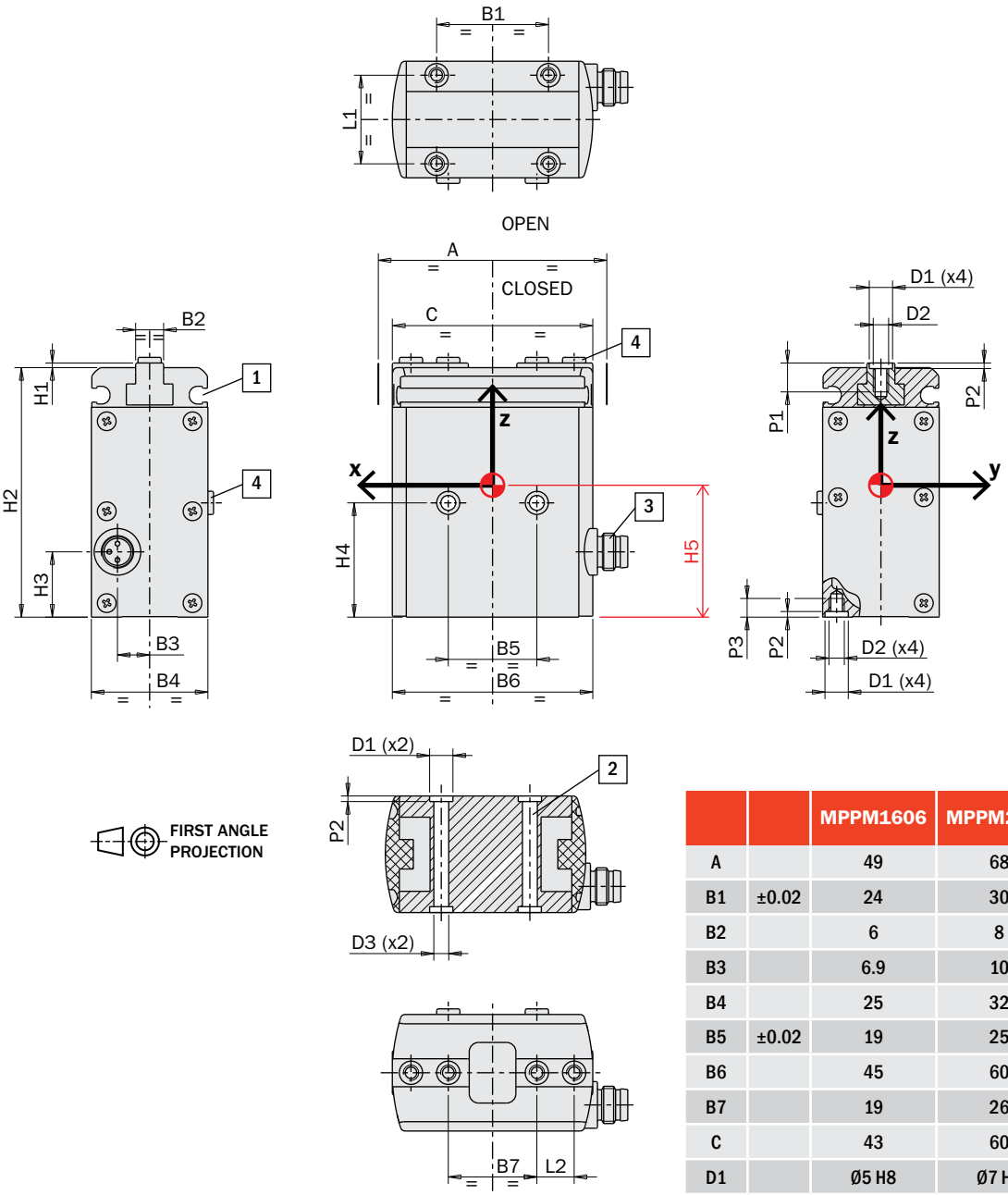
MPPM3210





	MPPM1606	MPPM2508	MPPM3210
Total gripping force	67 N	125 N	245 N
Stroke	2x3 mm	2x4 mm	2x5 mm
Frequency at an ambient temperature of 30°C	1 Hz	0.91 Hz	0.91 Hz
Jaw closing time	0.08 s	0.121 s	0.15 s
Working gripper time	0.21 s	0.3 s	0.27 s
Duty cycle at an ambient temperature of 30°C	43%	55%	50%
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
Environmntal Degree	IP54	IP54	IP54
Noise level	< 70 dB	< 70 dB	< 70 dB
Mass (motor included)	145 g	330 g	525 g
ISO14644-1 Clean Room Certification	CLASS 4	-	-
Reference standards	EN 61000-6-2 + EC + IS1; EN 61000-6-3 + A1		
Barycentric moment of inertia Jxx	0.42 kgcm²	1.68 kgcm²	3.4 kgcm²
Barycentric moment of inertia Jyy	0.54 kgcm²	2.22 kgcm²	4.83 kgcm²
Barycentric moment of inertia Jzz	0.25 kgcm²	1.03 kgcm²	2.33 kgcm²
Technology and options	Page 594 - 595		

Dimensions (mm)



FIRST ANGLE PROJECTION

		MPPM1606	MPPM2508	MPPM3210
A		49	68	83
B1	±0.02	24	30	36
B2		6	8	9
B3		6.9	10	11
B4		25	32	35
B5	±0.02	19	25	30
B6		45	60	73
B7		19	26	32
C		43	60	73
D1		Ø5 H8	Ø7 H8	Ø7 H8
D2		M3	M4	M5
D3		Ø3.2	Ø4.2	Ø5.2
H1		1	1	1
H2		53.5	70	80
H3		14	17	19
H4	±0.02	24.5	32	38
H5		32.5	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	6	8

1 *Magnetic sensor slot*

2 *Through hole for gripper fastening*

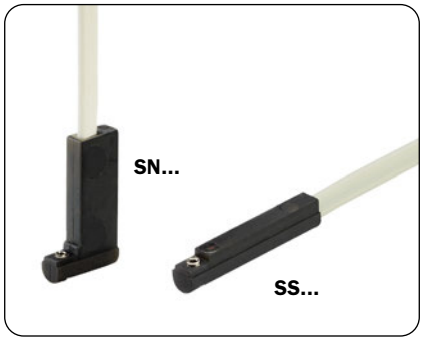
3 *Electrical connection*

4 *Centering sleeves*

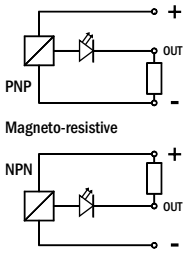
09/2022

Sensors

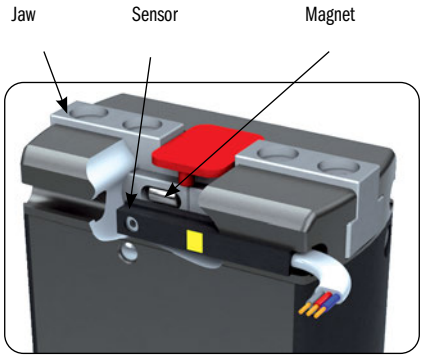
The operating position can be checked by one or more magnetic sensors (optional), that detect the position by the magnets on the jaws inside.
For details, see the "Accessories" section.

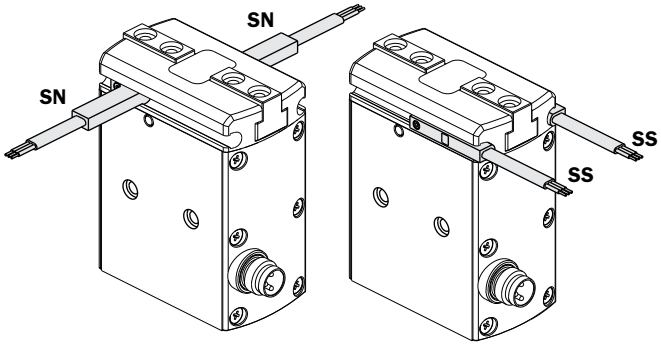


SN4N225-G SS4N225-G	PNP	2.5m cable
SN4M225-G SS4M225-G	NPN	2.5m cable
SN3N203-G SS3N203-G	PNP	M8 snap plug connector
SN3M203-G SS3M203-G	NPN	M8 snap plug connector



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.

	MPPM1606	MPPM2508	MPPM3210
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