

2-jaw angular self-centering electric gripper

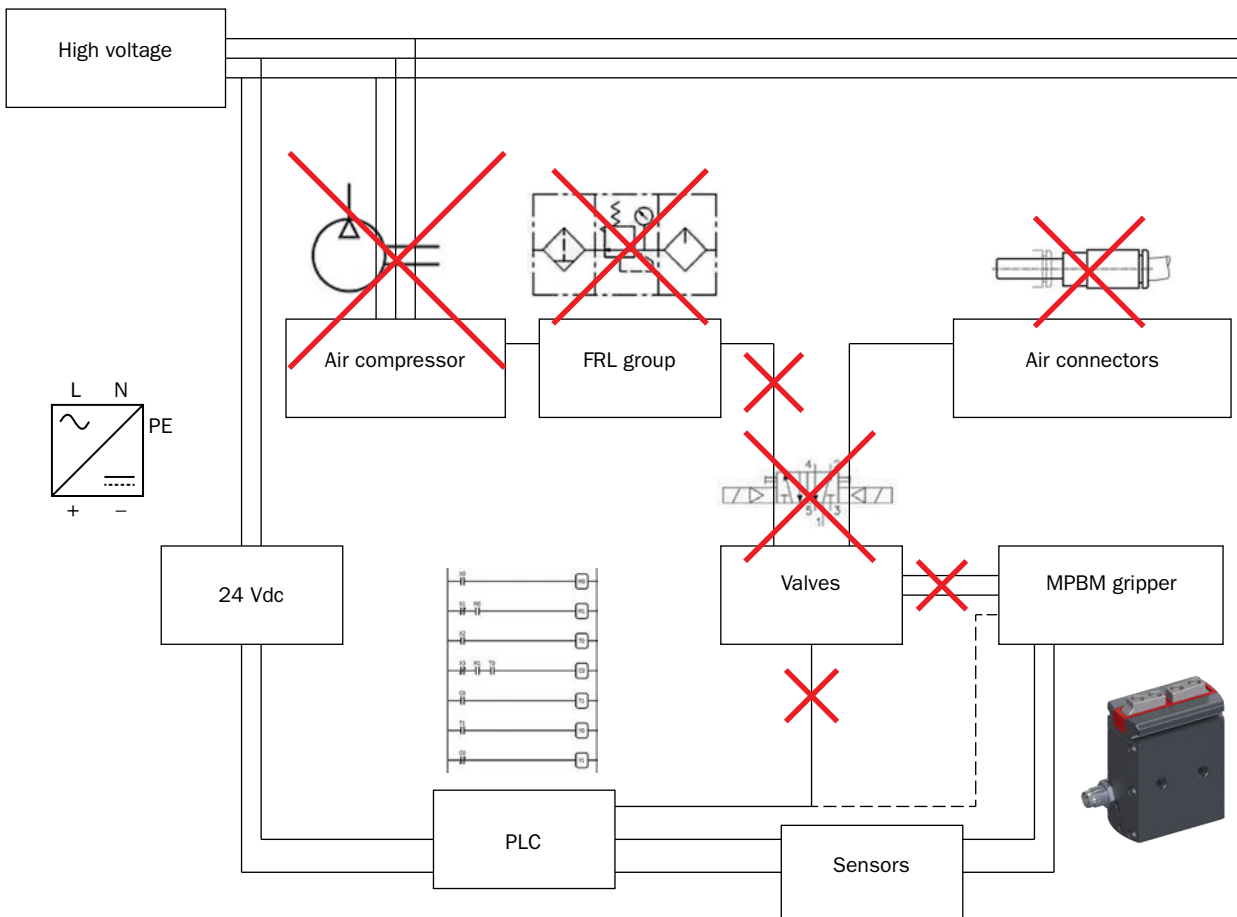
- Plug & play user friendly gripper.
- No electricity consumption when gripper is engaged.
- No programming required.
- Gripper retention guaranteed in event of blackout.
- Self Adapting jaws part.
- Long life Brushless motor (Brushless DC).
- Built-in motor driver.
- 24 Vdc Low Voltage Power Supply.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



MPBM1640

MPBM2540

MPBM3240





	MPBM1640	MPBM2540	MPBM3240
Total gripping torque	68 Ncm	151 Ncm	277 Ncm
Stroke	2x23° (±2°)	2x23° (±2°)	2x23° (±2°)
Frequency at an ambient temperature of 30°C	0.93 Hz	0.85 Hz	0.81 Hz
Jaw closing time	0.09 s	0.13 s	0.14 s
Working gripper time	0.18 s	0.31 s	0.25 s
Duty cycle at an ambient temperature of 30°C	34%	53%	41%
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)	140 g	315 g	510 g
Maximum inertial load	-	-	-
IPA Clean Room Certification	-	-	-
Reference standards	EN 61000-6-2 + EC + IS1; EN 61000-6-3 + A1		
Barycentric moment of inertia	Jxx	0.42 kgcm ²	1.72 kgcm ²
Barycentric moment of inertia	Jyy	0.53 kgcm ²	2.18 kgcm ²
Barycentric moment of inertia	Jzz	0.23 kgcm ²	0.94 kgcm ²
Technology and options	Page 594 - 595		

Rotary Units

Quick Changer

Profiles and Brackets

Grippers

Linear Actuators

Suspensions

Nippers

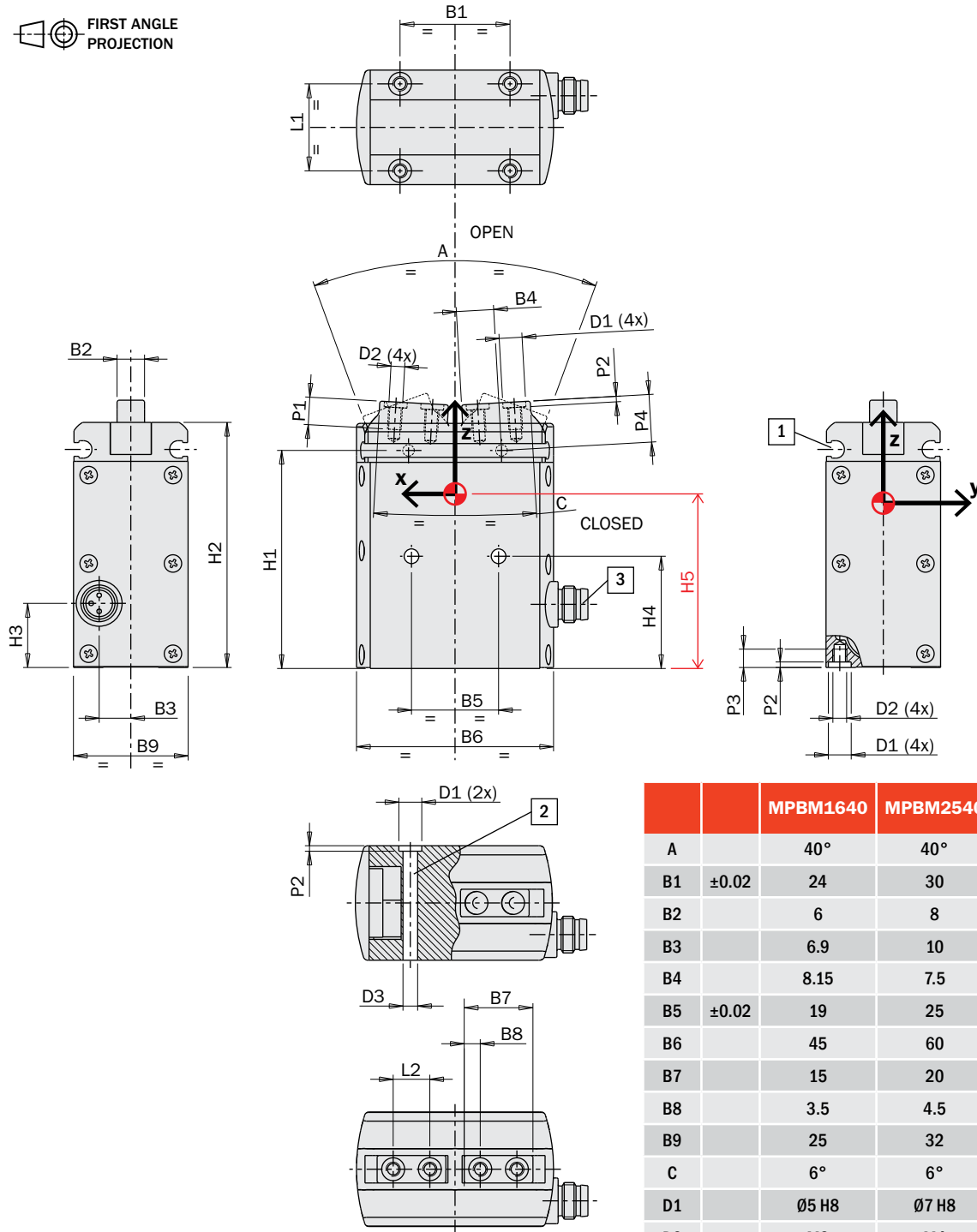
Robot Kit

Options

Sensors

Dimensions (mm)

FIRST ANGLE PROJECTION



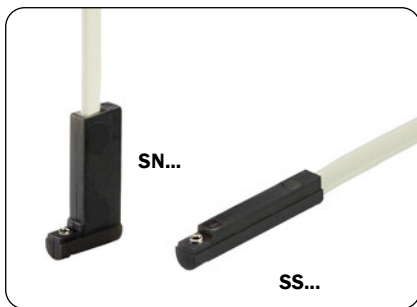
- 1** Magnetic sensor slot
- 2** Through hole for gripper fastening
- 3** Electrical connection

		MPBM1640	MPBM2540	MPBM3240
A		40°	40°	40°
B1	±0.02	24	30	36
B2		6	8	9
B3		6.9	10	11
B4		8.15	7.5	12.25
B5	±0.02	19	25	30
B6		45	60	73
B7		15	20	24
B8		3.5	4.5	5
B9		25	32	35
C		6°	6°	6°
D1		Ø5 H8	Ø7 H8	Ø7 H8
D2		M3	M4	M5
D3		Ø3.2	Ø4.2	Ø5.2
H1		47.6	63	72
H2		53.5	70	80
H3		14	17	19
H4	±0.02	24.5	32	38
H5		32.3	42.5	48.5
L1	±0.02	19	24	26
L2	±0.02	8	11	14
P1		6	8	10
P2	+0.1	1.2	1.5	1.5
P3		4	6	8
P4		10.4	14	16

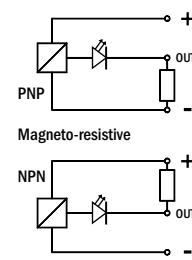
Sensors

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

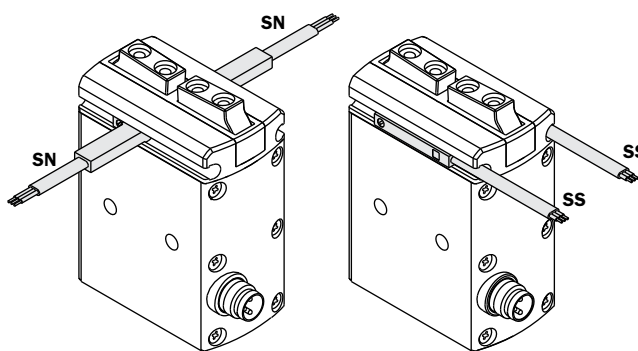
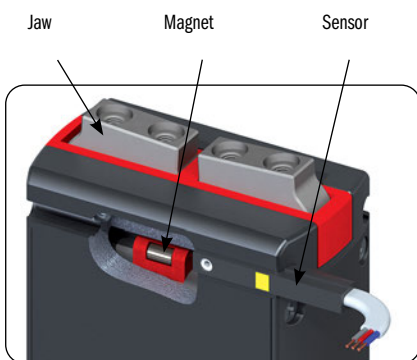
For details, see the "Accessories" section.



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 , M_x , M_y , M_z are the maximum permitted loads under static conditions, that is with motionless jaws. J is the maximum permitted moment of inertia on each gripping tool.

The picture below shows also the jaw maximum backlash.

	MPBM1640	MPBM2540	MPBM3240
F_s	40 N	80 N	120 N
M_x	0.5 Nm	1 Nm	2.5 Nm
M_y	1 Nm	2 Nm	5 Nm
M_z	1 Nm	2 Nm	5 Nm
J	0.4 kgcm ²	2 kgcm ²	5 kgcm ²

