

Magnetic Grippers SGM-SV-BY

Gripping surface (Ø): 46 mm

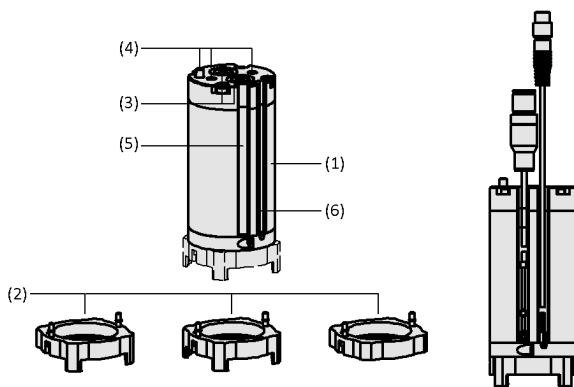


Suitability for industry specific applications

Application

- Handling of round cells with a diameter of 46 mm
- Process-safe gripping of charged and uncharged cells
- Round cells can be gripped at the top and bottom
- Handling of round cells with different heights
- Can be used in both cell production and module assembly

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Design

- Robust aluminum housing with permanent magnet (1) with high gripping forces for handling round battery cells
- Interchangeable gripping elements with different numbers of guide teeth (2) for holding the round cells
- Bistable version: In the event of power failure at the compressed air connection (3), the solenoid position "grip" or "deposit" is maintained
- Mounting thread and centering pin on head side (4)
- Slot for mounting a sensor for monitoring the switching state of the gripper (5)
- Slot for mounting a sensor for component detection (6)

System design Magnetic Grippers SGM-SV-BY



Magnetic gripper when handling round battery cells

Product highlights

- High holding force for reliable handling of round cells, even in fast pick-and-place processes
- Short-circuit-proof contact thanks to gripping elements made of insulating plastics
- Guide teeth on the gripping element ensure precise positioning
- Loss protection in the event of power failure due to bistable permanent magnet
- Sensors for component presence and switching state

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Designation code Magnetic Grippers SGM-SV-BY

SGM-SV	–	46	–	4	–	BY	–	M5-IG	–	PNP
1		2		3		4		5		6

1 – Abbreviated designation

Code	Version
SGM-SV	SGM-SV

2 – Diameter

Code	Diameter in mm
46	\emptyset 46

3 – Number of guide teeth

Code	Number
0...4	0 to 4

4 – Construction

Code	Type
BY	Round battery cells

5 – Connection

Code	Connection
M5-IG	M5-IG (IG = female (F))

6 – Additional function

Code	Type
PNP	Sensor PNP

The magnetic gripper SGM-SV-BY is delivered as a ready-to-connect product.

Available spare parts: sensors for part presence and switching state. Gripping elements with 4, 2 or 0 teeth for positioning and routing the battery cell

Available accessories: sensors for part presence and switching state. Gripping elements with 4, 2 or 0 teeth for positioning and routing the battery cell

Ordering data Magnetic Grippers SGM-SV-BY

Type	Part no.
SGM-SV 46 4 BY M5-IG PNP	10.01.17.00748
SGM-SV 46 2 BY M5-IG PNP	10.01.17.00749
SGM-SV 46 0 BY M5-IG PNP	10.01.17.00750
SGM-SV 46 4 BY M5-IG	10.01.17.00751
SGM-SV 46 2 BY M5-IG	10.01.17.00752
SGM-SV 46 0 BY M5-IG	10.01.17.00753

Ordering data Spare parts Magnetic Grippers SGM-SV-BY

Type	Spare parts		Part no.
SGM-SV 46 4 BY M5-IG PNP	Proximity switch	NAEH-SCHA SIND 1 10-30V-DC	21.01.09.00195
SGM-SV 46 2 BY M5-IG PNP	Proximity switch	NAEH-SCHA SIND 1 10-30V-DC	21.01.09.00195
SGM-SV 46 0 BY M5-IG PNP	Proximity switch	NAEH-SCHA SIND 1 10-30V-DC	21.01.09.00195

Type	Spare parts		Part no.
SGM-SV 46 4 BY M5-IG PNP	Gripping element SGM	GR-E SGM-SV46 4BY	10.01.17.00740
SGM-SV 46 2 BY M5-IG PNP	Gripping element SGM	GR-E SGM-SV46 2BY	10.01.17.00741
SGM-SV 46 0 BY M5-IG PNP	Gripping element SGM	GR-E SGM-SV46 0BY	10.01.17.00755
SGM-SV 46 4 BY M5-IG	Gripping element SGM	GR-E SGM-SV46 4BY	10.01.17.00740
SGM-SV 46 2 BY M5-IG	Gripping element SGM	GR-E SGM-SV46 2BY	10.01.17.00741
SGM-SV 46 0 BY M5-IG	Gripping element SGM	GR-E SGM-SV46 0BY	10.01.17.00755

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Ordering data Accessories Magnetic Grippers SGM-SV-BY

Type	Accessories		Part no.
SGM-SV 46 4 BY M5-IG	Proximity switch	NAEH-SCHA SIND 1 10-30V-DC	21.01.09.00195
SGM-SV 46 2 BY M5-IG	Proximity switch	NAEH-SCHA SIND 1 10-30V-DC	21.01.09.00195
SGM-SV 46 0 BY M5-IG	Proximity switch	NAEH-SCHA SIND 1 10-30V-DC	21.01.09.00195

Accessories		Part no.
GR-E SGM-SV46 4BY	Gripping element 4 guide teeth	10.01.17.00740
GR-E SGM-SV46 2BY	Gripping element 2 guide teeth	10.01.17.00741
GR-E SGM-SV46 0BY	Gripping element 0 guide teeth	10.01.17.00755

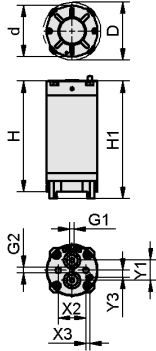
Technical data Magnetic Grippers SGM-SV-BY

Type	Holding force [N]	Remaining holding force [N]	Operating pressure	Installation position	Control valve	Additional function	Operating temperature	Weight [g]
SGM-SV 46 4 BY M5-IG PNP	72	0.5	3.5 ... 6.0 bar	Any	Bistable	Sensor PNP	5 ... 70 °C	460
SGM-SV 46 2 BY M5-IG PNP	72	0.5	3.5 ... 6.0 bar	Any	Bistable	Sensor PNP	5 ... 70 °C	460
SGM-SV 46 0 BY M5-IG PNP	72	0.5	3.5 ... 6.0 bar	Any	Bistable	Sensor PNP	5 ... 70 °C	459
SGM-SV 46 4 BY M5-IG	72	0.5	3.5 ... 6.0 bar	Any	Bistable	-	5 ... 70 °C	440
SGM-SV 46 2 BY M5-IG	72	0.5	3.5 ... 6.0 bar	Any	Bistable	-	5 ... 70 °C	440
SGM-SV 46 0 BY M5-IG	72	0.5	3.5 ... 6.0 bar	Any	Bistable	-	5 ... 70 °C	439

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Type	D [mm]	d [mm]	G1	G2	H [mm]	H1 [mm]	X2 [mm]	X3 [mm]	Y1 [mm]	Y3 [mm]
SGM-SV 46 4 BY M5-IG PNP	52	46	M5-F	M6-F	100	106	25	3.5	18	6.5
SGM-SV 46 2 BY M5-IG PNP	52	46	M5-F	M6-F	100	106	25	3.5	18	6.5
SGM-SV 46 0 BY M5-IG PNP	52	46	M5-F	M6-F	100	-	25	3.5	18	6.5
SGM-SV 46 4 BY M5-IG	52	46	M5-F	M6-F	100	106	25	3.5	18	6.5
SGM-SV 46 2 BY M5-IG	52	46	M5-F	M6-F	100	106	25	3.5	18	6.5
SGM-SV 46 0 BY M5-IG	52	46	M5-F	M6-F	100	-	25	3.5	18	6.5

Multimedia product presentation

Medium	Link
Product video	https://vimeo.com/985651651