posirot®
Magnetic Angle Sensors

PRMAG

Position magnets for magnetic angle sensors posi**rot**®

Product versions

PRMAG20

PRMAG21

PRMAG22

PRMAG-M10

PRMAG2-VA / PRMAG2-Z-VA

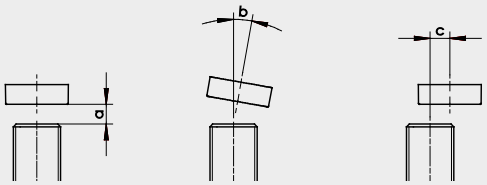
PRMAG5-Z / PRMAG5-Z-VA

PRMAG5-Z-VA-WP

PRMAG6-Z / PRMAG6-Z-VA

PRMAG7-Z-VA

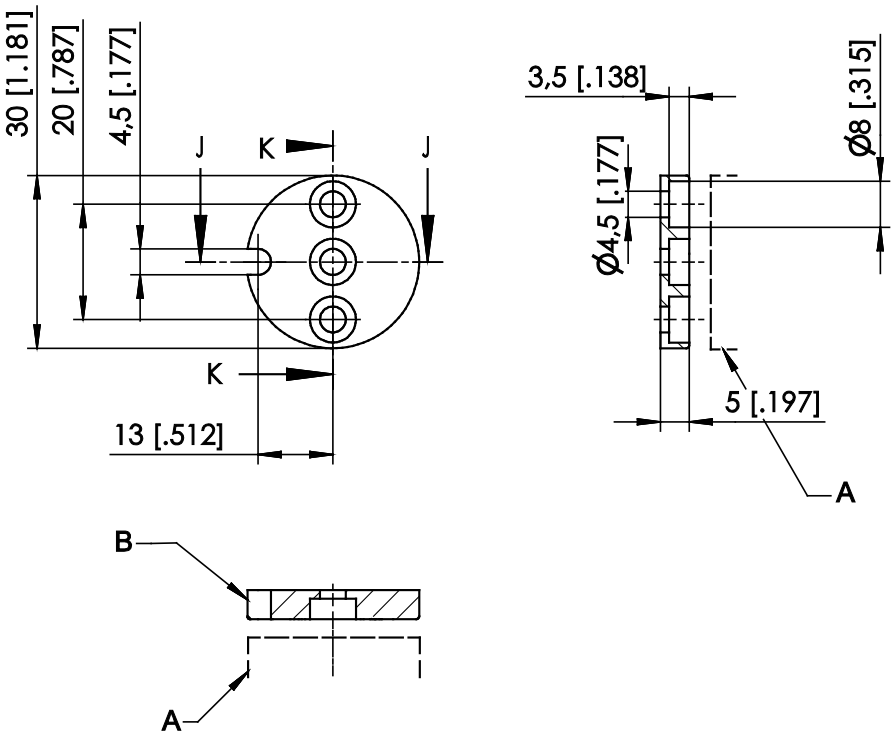
Measuring error by misalignment of the position magnet



Air gap (a)
Parallelism (b)
Axial misalignment (c)

Sensor	Position magnet	Air gap [mm]	Parallelism [°]	Error by axial misalignment [°]					
				0.2 mm	0.5 mm	1 mm	2 mm	3 mm	4 mm
PRAS20 PRAS21 PRAS26	PRMAG20	0 ... 7	0 ... 5	0.1	0.3	0.7	2	4.6	–
	PRMAG21	0 ... 2	0 ... 5	0.15	0.3	0.9	3.6	9.6	–
	PRMAG22	0 ... 10	0 ... 5	0	0	0.7	1.5	3.8	7
	PRMAG-M10	0 ... 3	0 ... 5	0.1	0.1	0.5	2	7	–
PRAS27 PRDS27 PRAS29 PRDS29	PRMAG20	0 ... 7.5	0 ... 5	0.1	0.3	0.7	2	4.6	–
	PRMAG21	0 ... 2.5	0 ... 5	0.15	0.3	0.9	3.6	9.6	–
	PRMAG22	0 ... 10.5	0 ... 5	0	0	0.7	1.5	3.8	7
	PRMAG-M10	0 ... 3.5	0 ... 5	0.1	0.1	0.5	2	7	–
PRAS1 PRDS1	PRMAG20	0 ... 6.5	0 ... 5	0.15	0.4	0.8	2.2	5.0	–
	PRMAG21	0 ... 4	0 ... 5	0.2	0.4	1	3.8	10	–
	PRMAG22	0 ... 9.5	0 ... 5	0.1	0.4	1	2.2	4.5	8
	PRMAG-M10	0 ... 5	0 ... 5	0.1	0.1	0.5	2.0	7	–
PRAS2 PRDS2	PRMAG2-Z-VA	0 ... 9	0 ... 5	0.1	0.2	0.6	1.5	4.5	8.5
	PRMAG20	0 ... 6	0 ... 5	0.15	0.4	0.8	2.2	5	–
	PRMAG21	0 ... 3.5	0 ... 5	0.2	0.4	1	3.8	10	–
	PRMAG22	0 ... 9	0 ... 5	0.1	0.4	1	2.2	4.5	8.0
PRAS4	PRMAG5-Z-VA-WP	0 ... 6.5	0 ... 5	0.1	0.2	0.6	1.5	4.5	8.5
PRAS5 PRAS6 PRAS7 PRDS5 PRDS6 PRDS7	PRMAG2-Z-(VA)	0 ... 8.5	0 ... 5	0.1	0.2	0.6	1.5	4.5	8.5
	PRMAG5-Z-(VA)	0 ... 7.5	0 ... 5	0.1	0.2	0.6	1.5	4.5	8.5
	PRMAG6-Z-(VA)	0 ... 7.5	0 ... 5	0.1	0.2	0.6	1.5	4.5	8.5
	PRMAG7-Z-VA	0 ... 7.5	0 ... 5	0.1	0.2	0.6	1.5	4.5	8.5
	PRMAG20	0 ... 5.5	0 ... 5	0.15	0.4	0.8	2.2	5	–
	PRMAG21	0 ... 3	0 ... 5	0.2	0.4	1	3.8	10	–
	PRMAG22	0 ... 8.5	0 ... 5	0.1	0.4	1	2.2	4.5	8

PRMAG20



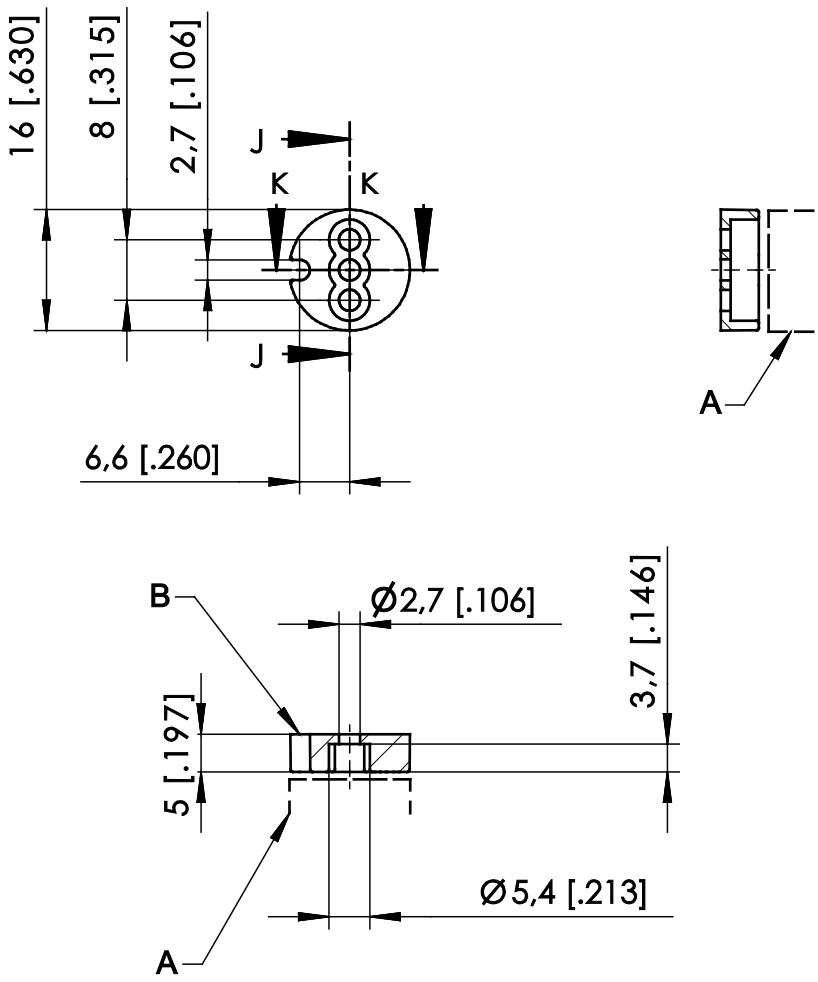
A – Sensor
B – Marking

Order code	Weight	Material	Moment of inertia
PRMAG20	approx. 12 g	zinc coated steel, plastic	1.3 kgmm^2

A misalignment of the position magnet has an effect on the linearity.

Dimensions in mm [inch].
Dimensions informative only.
For guaranteed dimensions please consult factory.

PRMAG21



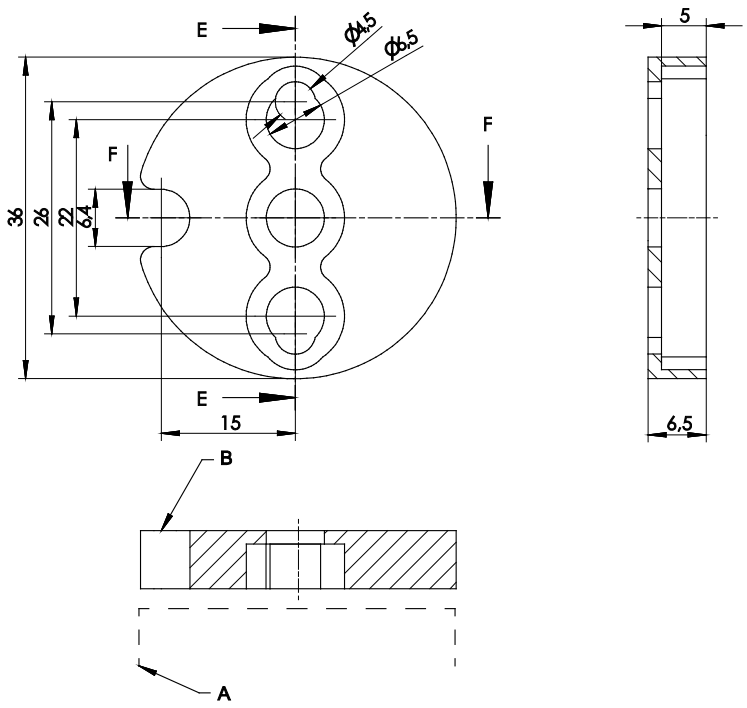
A – Sensor
B – Marking

Order code	Weight	Material	Moment of inertia
PRMAG21	approx. 3 g	zinc coated steel; plastic	0.1 kgmm^2

A misalignment of the position magnet has an effect on the linearity.

Dimensions in mm [inch]
Dimensions informative only.
For guaranteed dimensions please consult factory.

PRMAG22



A – Sensor
B – Marking

Order code	Weight	Material	Moment of inertia
PRMAG22	approx. 19 g	zinc coated steel, plastic	3 kgmm^2

A misalignment of the position magnet has an effect on the linearity.

Dimensions in mm [inch].
Dimensions informative only
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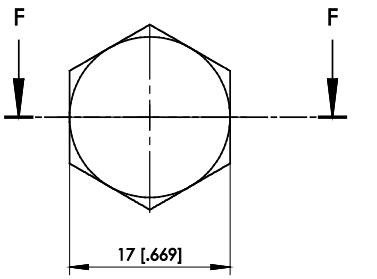
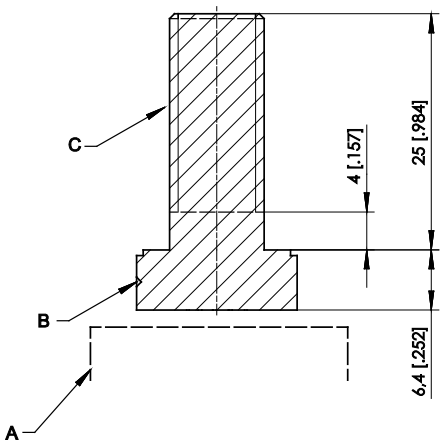
PRMAG-M10





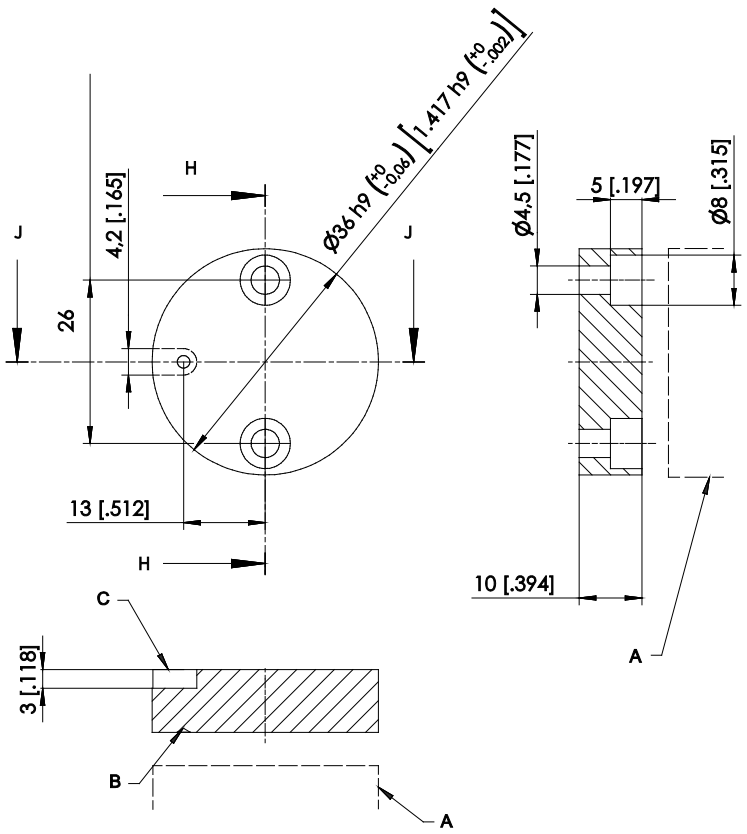
A – Sensor
B – Marking
C – Thread M10

Order code	Weight	Material	Moment of inertia
PRMAG-M10	approx. 30 g	stainless steel A2	1.3 kgmm2

A misalignment of the position magnet has an effect on the linearity.

Dimensions in mm [inch].
Dimensions informative only.
For guaranteed dimensions please consult factory.

PRMAG2-Z / PRMAG2-Z-VA



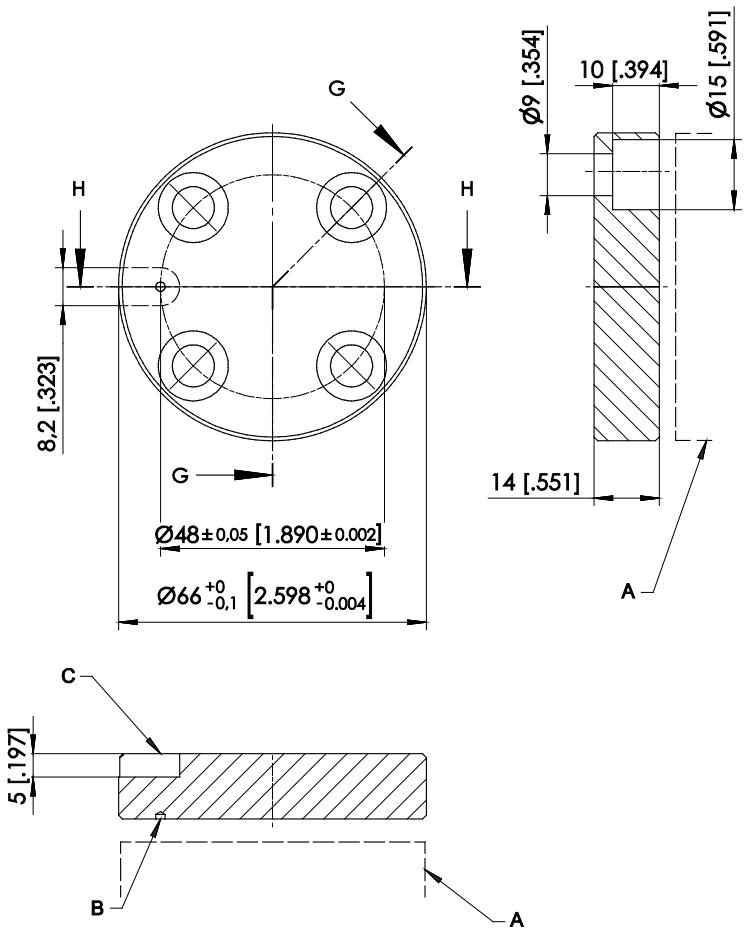
A – Sensor
B – Marking
C – Notch

Order code	Weight	Material	Moment of inertia
PRMAG2-Z	approx. 30 g	AlMgSi1	4.9 kgmm^2
PRMAG2-Z-VA	approx. 67 g	stainless steel EN 1.4404 (AISI 316L)	10.9 kgmm^2

A misalignment of the position magnet has an effect on the linearity.

Dimensions in mm [inch].
Dimensions informative only.
For guaranteed dimensions please consult factory.

PRMAG5-Z / PRMAG5-Z-VA



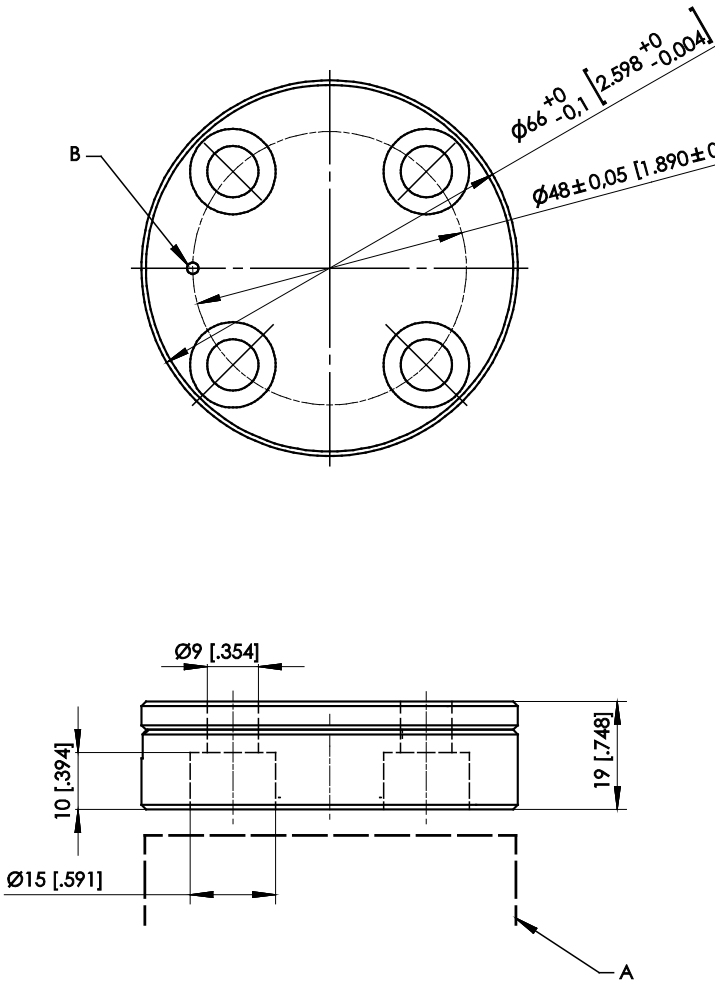
A – Sensor
B – Marking
C – Notch

Order code	Weight	Material	Moment of inertia
PRMAG5-Z	approx. 110 g	AlMgSi1	59,9 kgmm^2
PRMAG5-Z-VA	approx. 275 g	stainless steel EN 1.4404 (AISI 316L)	149,9 kgmm^2

A misalignment of the position magnet has an effect on the linearity.

Dimensions in mm [inch].
Dimensions informative only.
For guaranteed dimensions please consult factory.

PRMAG5-Z-VA-WP



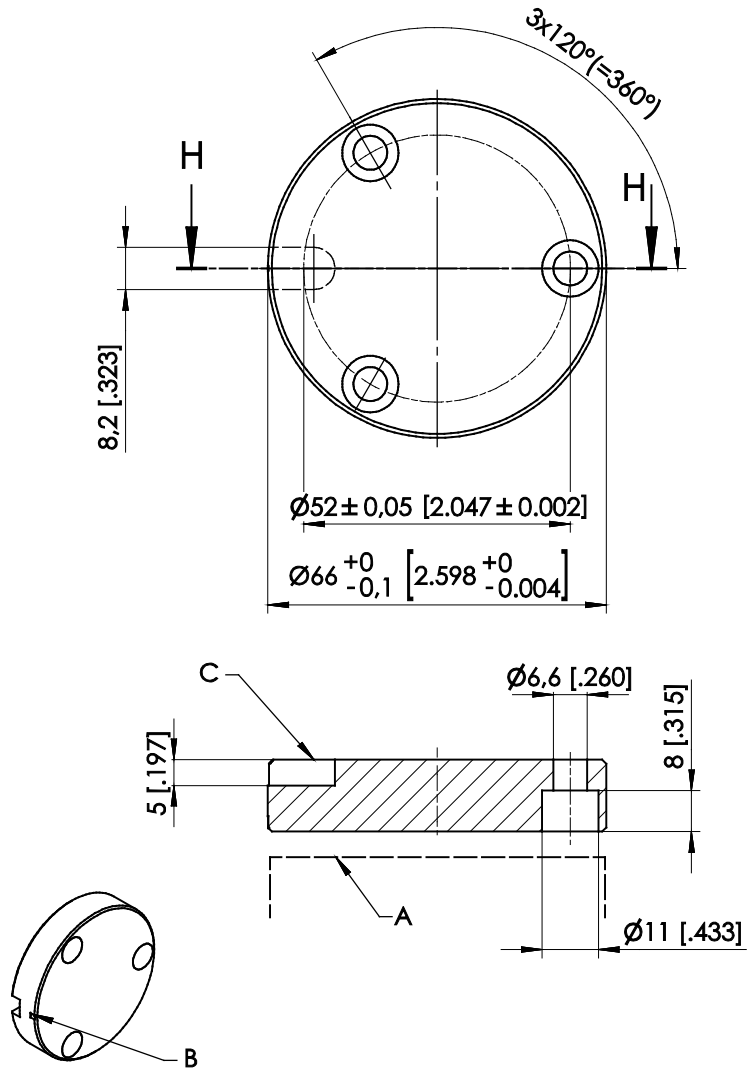
A – Position magnet
B – Marking

Order code	Weight	Material	Moment of inertia
PRMAG5-Z-VA-WP	approx. 292 g	stainless steel EN 1.4404 (AISI 316L)	175 kgmm^2

IP68 / 100 m, continuous use.
A misalignment of the position magnet has an effect on the linearity.

Dimensions in mm [inch]
Dimensions informative only.
For guaranteed dimensions please consult factory.

PRMAG6-Z / PRMAG6-Z-VA



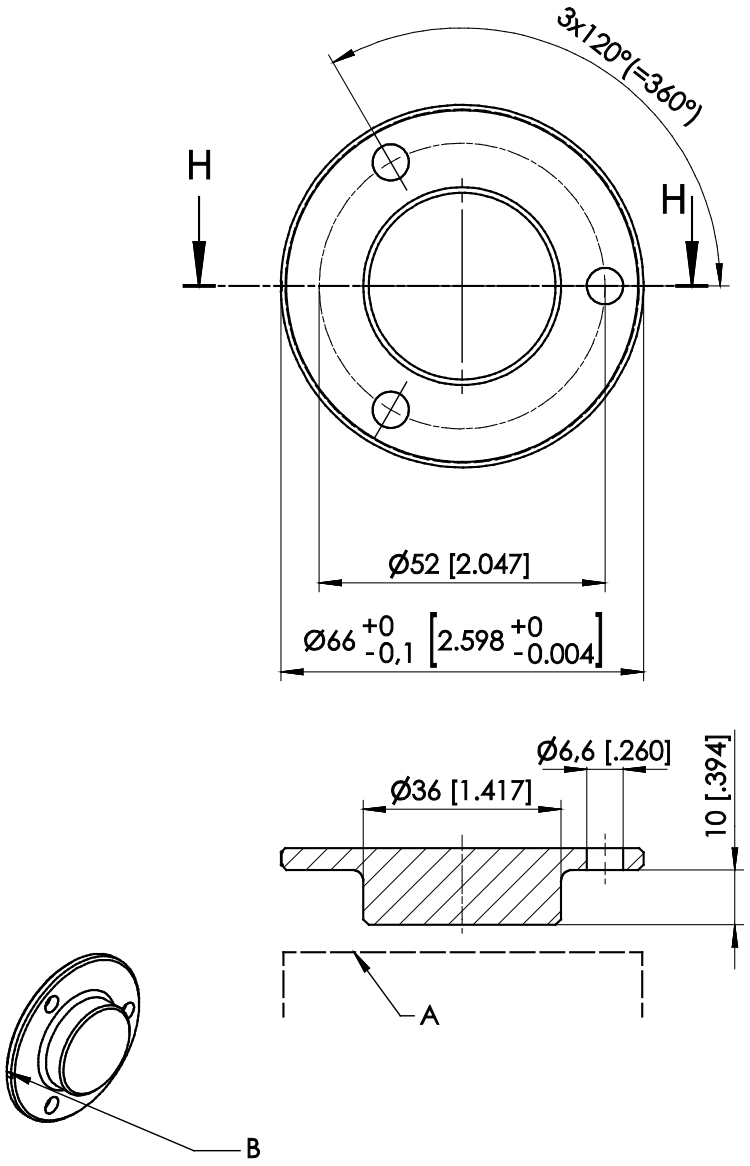
A – Sensor
B – Marking
C – Notch

Order code	Weight	Material	Moment of inertia
PRMAG6-Z	approx. 110 g	AlMgSi1,	65 kgmm^2
PRMAG6-Z-VA	approx. 315 g	stainless steel EN 1.4404 (AISI 316L)	190 kgmm^2

A misalignment of the position magnet has an effect on the linearity.

Dimensions in mm [inch].
Dimensions informative only.
For guaranteed dimensions please consult factory.

PRMAG7-Z-VA



A – Sensor
B – Marking

Order code	Weight	Material	Moment of inertia
PRMAG7-Z-VA	approx. 146 g	stainless steel EN 1.4404 (AISI 316L)	68 kgmm^2

A misalignment of the position magnet has an effect on the linearity.

Dimensions in mm [inch]
Dimensions informative only.
For guaranteed dimensions please consult factory.