

MU28S 34-32N

iC-MU150 MAGNETIC TARGET DESCRIPTION

preliminary

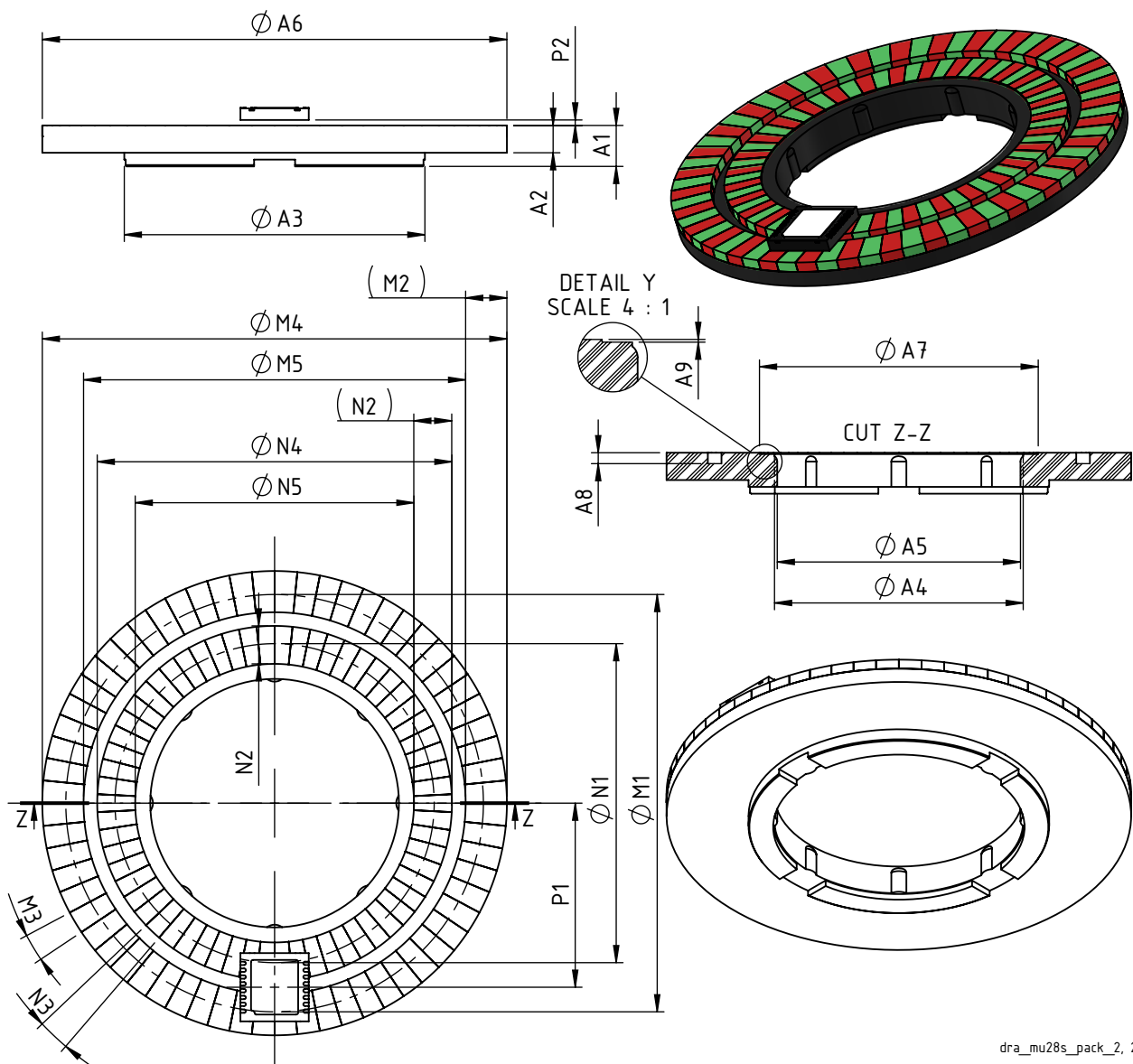


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ORDERING INFORMATION

Type	Order Destination	Description/Options
Magnetic target (rotary, axial)	MU28S 34-32N	2-Track nonius encoder disc, bipolar magnetized Number of pole pairs: master 32, nonius 31 Outer diameter 34 mm, for 18 mm shaft Injection molded permanent magnet material

CODE DISC DIMENSIONS



Notice: Interference in function

External magnetic fields can change the functional properties and may reduce system accuracy or damage the disc magnetization. The functionality of the system may no longer be ensured. Direct contact with magnetic clamps or other permanent magnets must be avoided.

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ABSOLUTE MAXIMUM RATINGS

Beyond these values damage may occur; device operation is not guaranteed.

Item No.	Symbol	Parameter	Conditions	Min.	Max.	Unit
G001	Bext	Maximum External Magnetic Field Strength		-20	20	mT

THERMAL DATA

Operation conditions: No changes of the magnetic characteristics

Item No.	Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
T01	Ta	Operating Ambient Temperature Range		-40		125	°C

DIMENSION TABLE

General tolerances according to DIN 16742-TG4 unless otherwise specified. Surfaces according to DIN EN ISO1302.

Carrier material is a combination of polyamide PA6 and hard ferrite.

Item No.	Parameter	Comments	Min.	Typ.	Max.	Tolerance	Unit
Physical Dimensions Carrier							
A1	Total Height			3.0		±0.08	mm
A2	Disc Thickness			2.0		±0.05	mm
A3	Diameter of Outer Shaft			22.0		±0.1	mm
A4	Diameter of Bore Hole	for pressing and gluing on 18.0mm shafts		18.2		±0.09	mm
A5	Diameter of Press Ridge			17.8		±0.09	mm
A6	Disc Outer Diameter			34.0		±0.11	mm
A7	Diameter of Cavity			20.4			mm
A9	Depth of Cavity			0.15		+ 0.05 / - 0.1	mm
A8	Depth of Code Free Area			0.8			mm
Magnetic Dimensions Outer Track (Master)							
M1	Scanning-diameter of master track	referred to axial center		30.56			mm
M2	Height of master track			3.02			mm
M3	Pole width of master track	referred to scanning-diameter		1.50			mm
M4	Outer diameter of master track			34.00			mm
M5	Inner diameter of master track			27.96			mm
Magnetic Dimensions Inner Track (Nonius)							
N1	Scanning-diameter of nonius track	referred to axial center		23.36			mm
N2	Height of nonius track			2.78			mm
N3	Pole width of nonius track	referred to scanning-diameter		1.18			mm
N4	Outer diameter of nonius track			25.96			mm
N5	Inner diameter of nonius track			20.40			mm
Recommended Chip Position							
P1	Radial Position of Chip Center	referred to axial center		13.48			mm
P2	Distance Package Surface DFN16-5x5	referred to magnetic coating surface		0.4			mm
P3	Distance Sensor Surface (Bare Die)	referred to magnetic coating surface		0.8			mm
Magnetic Material Characteristics							
Br	Remanence	at 20 °C		235			mT
TKB	Temperature Coefficient of the Remanence	temperature range -40 °C...125 °C		-0.19			%/K
General							
W1	Weight			4.3			g

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REVISION HISTORY

Rel.	Rel. Date*	Chapter	Modification	Page
A1	2018-04-24		Initial releases	

Rel.	Rel. Date*	Chapter	Modification	Page
A2	2018-06-13	DIMENSION TABLE	Magnetic Dimensions Inner Track (Nonius) corrected item M4 → N4 item M5 → N5	2

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* Release Date format: YYYY-MM-DD