RM44 and RM58
Rotary Magnetic Encoders

EASY INSTALLATION

HIGH RESOLUTION

NON-CONTACT

The RM44/RM58 is an encoder for integration onto electric motors or other devices for measuring shaft position and rotational speed.

The solid metal housing provides highest IP protection classes, high EMC immunity, extended operating temperature range and best possible shock and vibration resistance.

Features and benefits

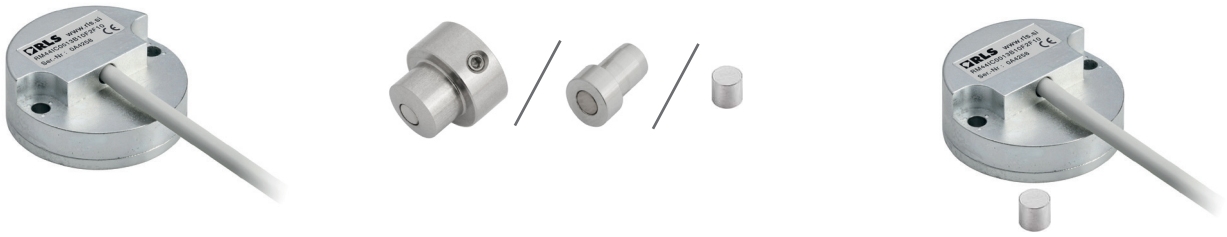
- Industry standard output formats
- Up to 14 bit resolution
- High reliability
- Accuracy up to ±0.5°
- Easy to install with self locating design
- Inexpensive solution for OEM integration
- Fully sealed to IP68

MOTOR CONTROL | PRINTING | ASSEMBLY LINES | OFF-ROAD VEHICLES | INDUSTRIAL AUTOMATION

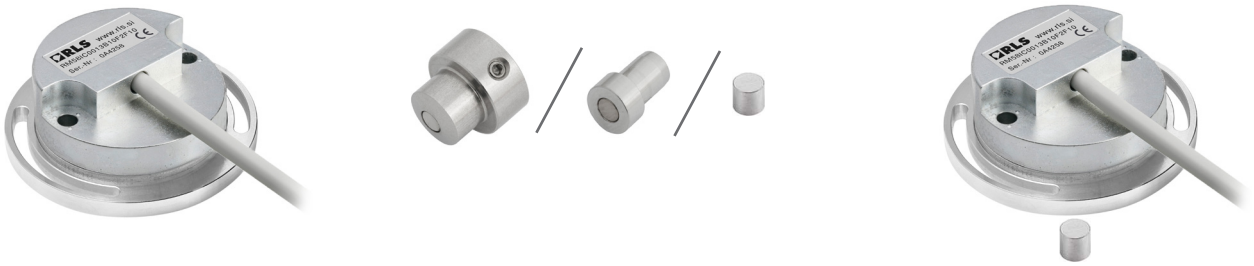
General information

The encoder system consists of a magnetic actuator/flange and a separate encoder body. The rotation of the magnetic actuator is read and processed by a custom encoder chip in the encoder body to obtain the required output format. The output signals are provided in industry standard absolute, incremental, analogue sinusoidal and linear voltage formats. Resolutions of up to 14 bit absolute SSI and/or 16,384 counts per revolution incremental for 5 V or 24 V power supply are available. A system accuracy of ±0.5° can be achieved with the supplied magnet. A range of magnetic actuators is also available for easy integration onto or into the shaft.

RM44 + **Actuator or magnet** = **Encoder system**



RM58 + **Actuator or magnet** = **Encoder system**



If you need a shaft encoder, please refer to the **RE58 data sheet**, which describes how the RM44 can be converted into an RE58 by adding a flange.

For commutation outputs please refer to **Commutation and incremental magnetic encoder solutions.**

Product range

RM44/RM58AC

Analogue with a single sine/cosine cycle per revolution.

RM44/RM58DC

BiSS-C interface with up to 16,384 positions per revolution and optional revolution counter.

RM44/RM58Ix

Incremental with 80 to 4,096 pulses per revolution (320 to 16,384 counts per revolution with x 4 evaluation).

RM44/RM58SC

Synchro serial interface (SSI) with 320 to 16,384 positions per revolution.

RM44/RM58SI

Synchro serial interface (SSI) with 320 to 8,192 positions per revolution and incremental with 80 to 2,048 pulses per revolution (320 to 8,192 counts per revolution with x 4 evaluation).

RM44/RM58Vx

Linear voltage output in a range of variants.

Selection guide

		Power supply	
Product	**Available outputs**	**5 V**	**24 V**
RM44 / RM58	AC - Analogue sinusoidal outputs	✓	-
	DC - Absolute natural binary BiSS-C interface, RS422	✓	-
	IA - Incremental, push-pull	-	✓
	IB - Incremental, open collector NPN	-	✓
	IC - Incremental, RS422	✓	-
	IE - Incremental, open collector	✓	-
	IG - Incremental, push-pull	-	✓
	SC - Absolute binary synchro-serial interface (SSI), RS422	✓	-
	SI - Absolute binary synchro-serial (SSI) + Incremental, RS422	✓	-
	Vx - Linear voltage output	✓	-

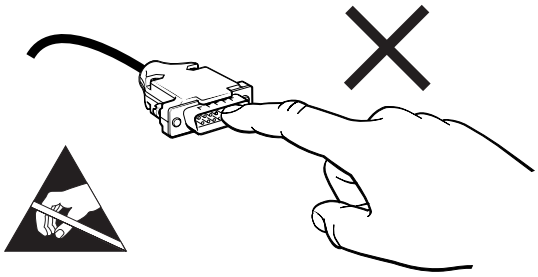
Storage and handling

Operating and storage temperature

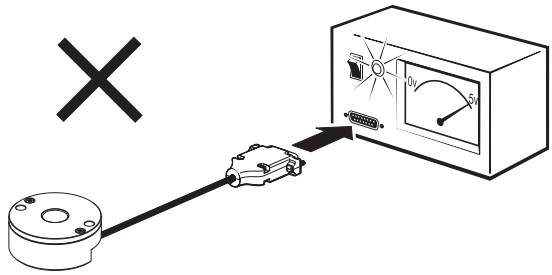
–40 °C to +125 °C (IP64)
–40 °C to +85 °C (IP68)
–30 °C to +80 °C (for AC and Vx output)

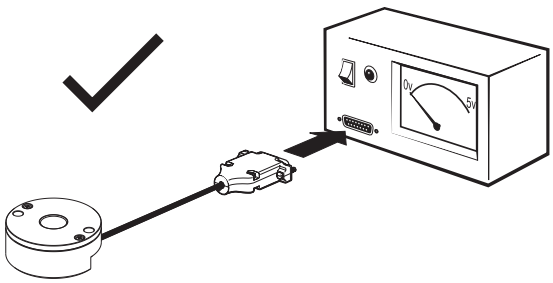
Humidity

Up to IP68



Power to RM44 encoders must be supplied from a DC SELV supply complying with the essential requirements of EN (IEC) 60950 or similar specification. The RM44 series encoders have been designed to the relevant EMC standards, but must be correctly integrated to achieve EMC compliance. In particular, attention to shielding arrangements is critical.





Readhead is ESD sensitive - handle with care.
Do not touch electronic circuit, wires or sensor area without proper ESD protection or outside of ESD controlled environment.

Packaging

Each encoder is packed individually in an antistatic bag.

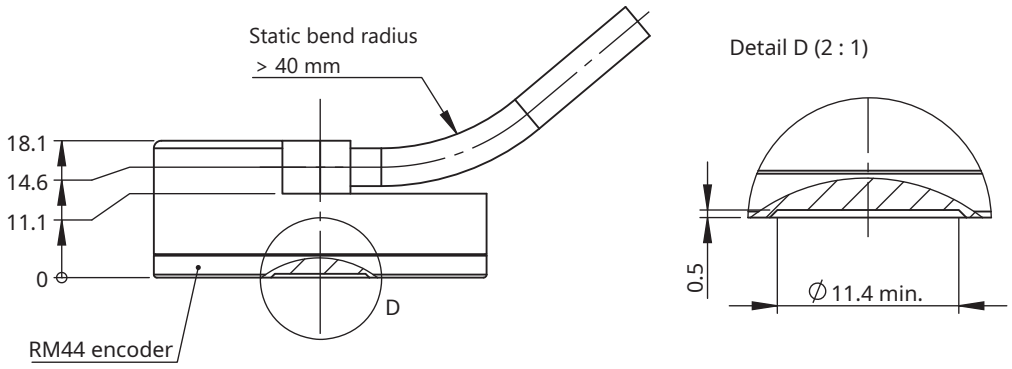
Magnet packaging:

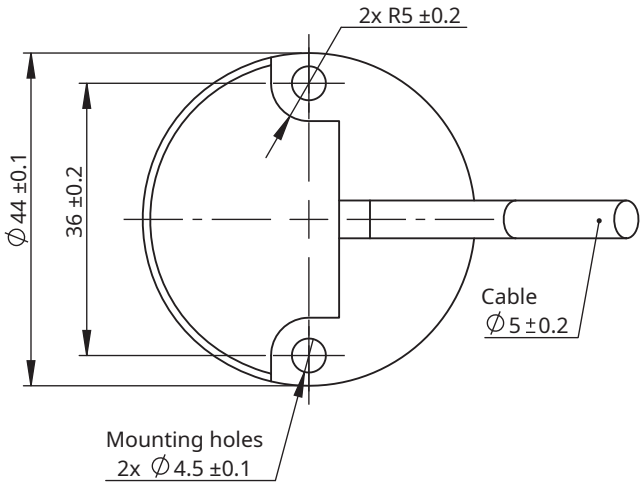
- RMM44A2A00 (individually packed) – for sample quantities only
- RMM44A2C00 (packed in tubes)
- RMM44A3A00 (individually packed) – for sample quantities only
- RMM44A3C00 (packed in tubes)

Dimension drawings

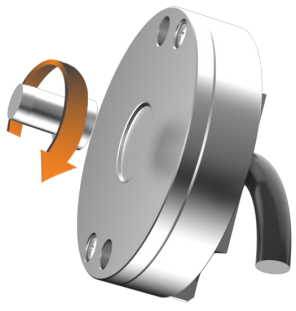
Dimensions and tolerances are in mm. Dimensions without tolerance values are in accordance with ISO 2768-c.

RM44

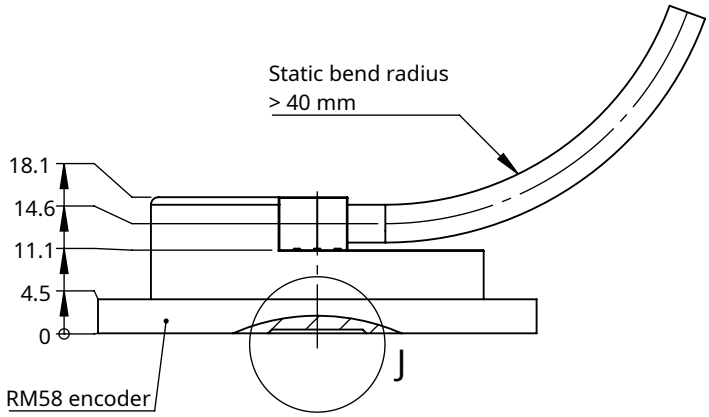


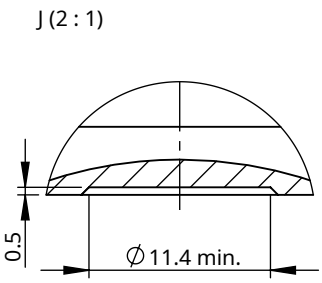


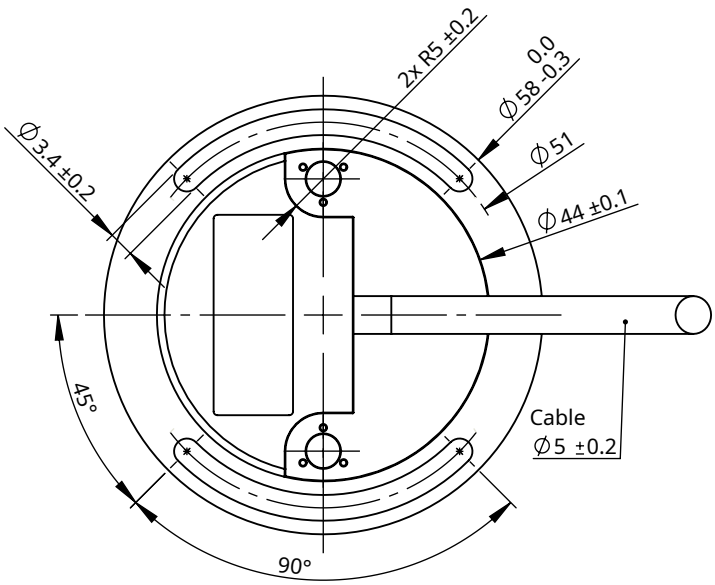
Clockwise (CW) rotation of magnetic actuator



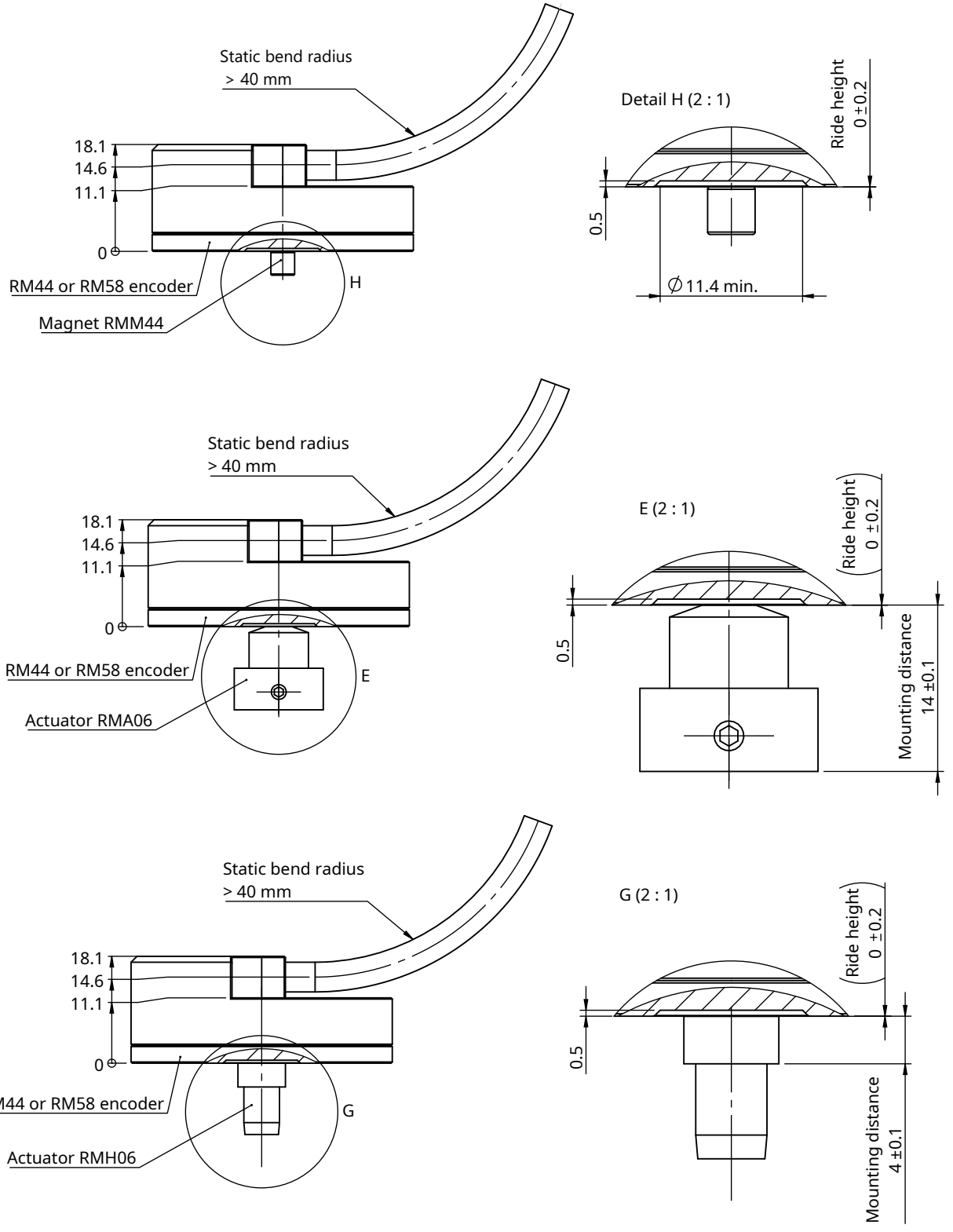
RM58


Static bend radius
> 40 mm
18.1
14.6
11.1
4.5
0
J
RM58 encoder


J (2 : 1)
0.5
∅11.4 min.

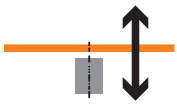
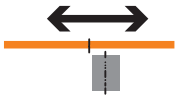
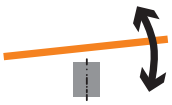

2x R5 ±0.2
∅58 0.0 -0.3
∅51
∅44 ±0.1
∅3.4 ±0.2
45°
90°
Cable
∅5 ±0.2

Installation drawing



The magnet should not be in direct contact with ferrous material. When using the RMM44 magnet, the shaft must be non-ferrous.

Installation tolerances

Mounting distance	See installation drawings of encoder assemblies on **page 7.**	
Radial displacement (concentricity)	0.2 mm	
Perpendicularity	0.2°	

- Encoder - Magnet

Technical specifications

Mechanical data

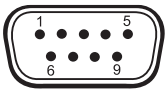
Housing material	Zamak
Cable	Outside diameter 5 mm
Mass	Encoder unit 1 m cable (no connector) IP64 112 g, IP68 129 g Magnetic actuator <2 g
Magnet material	Sm2Co17 with Ni-Cu-Ni protective layer
Actuator material	RMH: Aluminium RMA: Stainless steel

Environmental data

Operating and storage temperature	–40 °C to +125 °C (IP64) –40 °C to +85 °C (IP68) –30 °C to +80 °C (for AC and Vx output)
Environmental sealing	IP64 (IP68 optional) EN 60529
EMC compliance	EN 61326
Shock	100 G (6 ms, standard EN 60068-2-27:2009)
Vibration	40 G (55 Hz–2000 Hz, standard EN 60068-2-6:2008)
Temperature drift error	0.004°/°C

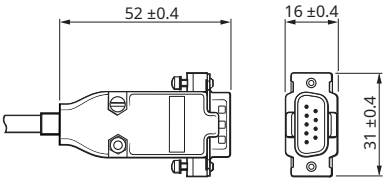
Electrical connections

9-way D-type connector (male type)

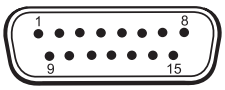


	Output type											
	AC		DC		IA, IC, IG		IB, IE		SC		Vx	
Pin Nr.	Function	Wire colour	Function	Wire colour	Function	Wire colour	Function	Wire colour	Function	Wire colour	Function	Wire colour
1	Shield - see connection diagram				Shield - see connection diagram				Shield - see connection diagram			
2	V_A	Black	MA	White	Z+	White	Z	White	Clock	White	NC	-
3	V_B	Brown	MA–	Brown	B+	Green	B	Green	Clock–	Brown	V_{out}	Black
4	NC	-	NC	-	A+	Grey	A	Grey	NC	-	NC	-
5	V_{dd}	Red	V_{dd}	Red	V_{dd}	Red	V_{dd}	Red	V_{dd}	Red	V_{dd+}	Red
6	NC	-	SLO	Green	Z–	Brown	NC	-	Data	Green	NC	-
7	NC	-	SLO–	Yellow	B–	Yellow	NC	-	Data–	Yellow	NC	-
8	NC	-	NC	-	A–	Pink	NC	-	NC	-	NC	-
9	GND	Or-ange	GND	Blue	GND	Blue	GND	Blue	GND	Blue	GND	Or-ange

9-way connector pin-out

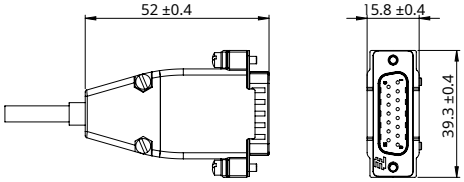


15 pin



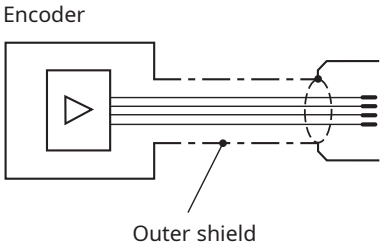
	Output type		
	SI		
Pin Nr.	Function	Wire colour	
1	Shield		
2	A+	Grey	
3	A–	Pink	
4	B+	Green	
5	B–	Yellow	
6	Z+	White	
7	Z–	Brown	
8	V_{dd}	Red	
9	Clock+	Black	
10	Clock–	Violet	
11	NC	-	
12	Data+	Grey/ Pink	
13	Data–	Red/ Bue	
14	NC	-	
15	GND	Blue	

15-pin connector pin-out



Shield connection

Figure below shows a recommended shield termination in order to ensure electromagnetic compatibility.



Housing of the encoder is galvanically connected with the housing of the connector via the cable outer shield. The encoder system must be correctly integrated to achieve EMC compliance. In particular, attention to shielding arrangements is essential.

Cable

Output type	IA, IB, IC, IE, IG, SC, DC	AC, Vx	SI
Cable specification	LI12YC12Y	LiYCY	LI12YC
Configuration	4 × 2 × 0.14 mm² (Twisted pairs)	4 × 0.20 mm²	12 × 0.14 mm²
Outer diameter		Approx. 5 mm	
Wires AWG	AWG 26	AWG 24	AWG 26
Rated Voltage	250 V	300 V	150 V
Mass	38 g/m	38 g/m	40 g/m

Output types

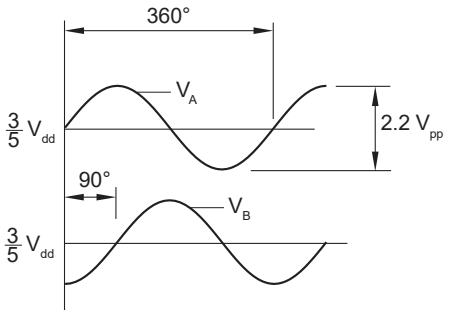
AC – Analogue sinusoidal outputs

2 channels V_A V_B sinusoids (90° phase shifted, single ended)

Specifications

Power supply	V_{dd} = 5 V ±5 %
Current consumption	13 mA
Outputs	Signal amplitude 2.2 ±0.2 V_{pp} Signal offset $\frac{3}{5}$ V_{dd} ±5 mV
Internal serial impedance	720 Ω
Maximum speed	60,000 rpm
Maximum cable length	3 m
Operating temperature	–30 °C to +80 °C

Timing diagram



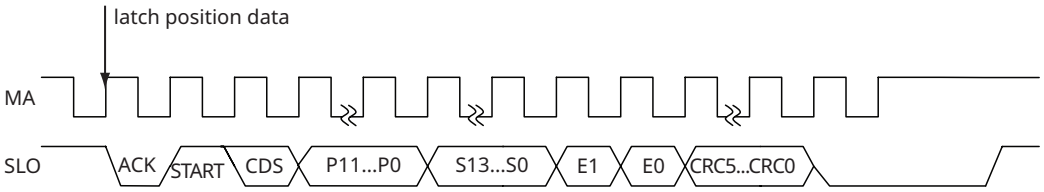
V_A leads V_B by 90° for clockwise rotation of magnetic actuator.

DC – Absolute natural binary BiSS-C interface

Specifications

Output code	Natural binary
Power supply	V_{dd} = 5 V ±5 %
Current consumption	Max. 65 mA
Clock input	MA (RS422)
Data output	SLO (RS422)
Accuracy	Typ. ±0.5°
Hysteresis	0.18°
Resolution	320, 360, 400, 500, 512, 800, 1000, 1024, 1600, 2000, 2048, 3600, 4000, 4096, 8000, 8192, 10000, 16000, 16384 positions per revolution
Revolution counter	12 bit (4096 revolutions)
Maximum speed	30,000 rpm
Operating temperature	–40 °C to +125 °C (IP64) –40 °C to +85 °C (IP68)
Max MA frequency	8 MHz

Timing diagram – BiSS C



Data	Length	Description
P11 – P0	0 or 12 bit	Revolution counter value when enabled (see Part numbering/resolution)*
S13 – S0	7 to 14 bit	Position inside the revolution (length depends on the resolution)
E1 – E0	2 bit	Error status
CRC5 – CRC0	5 to 6 bit	Cyclic redundancy check data; polynomial 0x43; inverted bit output

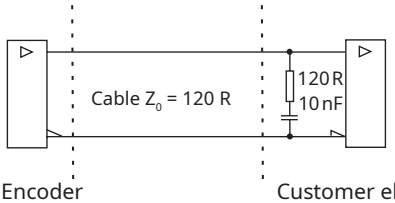
* The revolution counter counts the number of mechanical revolutions of the shaft or magnet of the encoder. Counting is possible only when the encoder is powered. When the encoder is powered off, the revolution counter is reset to 0.

Error status	E0	E1
No error	1	1
Amplitude or temperature error	0	1
Too high velocity	1	0
Undervoltage; Configuration; System error	0	0

For more information on BiSS C protocol please visit **www.biss-interface.com.**

Recommended signal termination

For data output lines only



IA – Incremental, push-pull

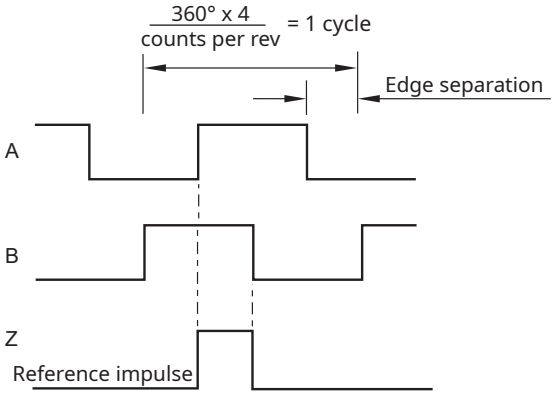
Square wave output

Specifications

Power supply	V_{dd} = 8 V to 26 V
Current consumption	50 mA
Output signals	A, B, Z, A–, B–, Z– (RS422)
Maximum output load	30 mA
Accuracy	Typ. ±0.5°
Hysteresis	0.18°
Resolution	80 to 2,048 pulses per revolution (320, 400, 500, 512, 800, 1000, 1024, 1600, 2000, 2048, 4096, 8192 counts per revolution)
Maximum speed	30,000 rpm
Maximum cable length	20 m
Operating temperature	–40 °C to +125 °C (IP64) –40 °C to +85 °C (IP68)

Timing diagram

Complementary signals not shown



B leads A for clockwise rotation of magnetic actuator.

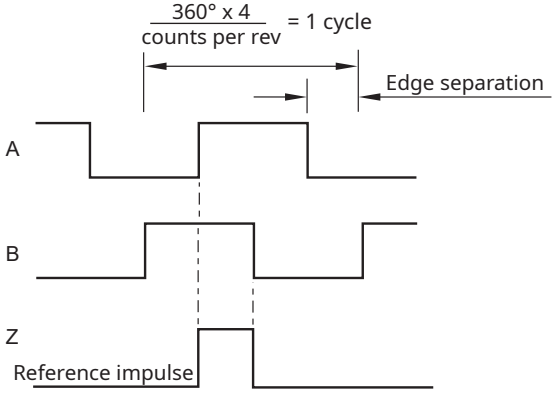
IB – Incremental, open collector NPN

Square wave output

Specifications

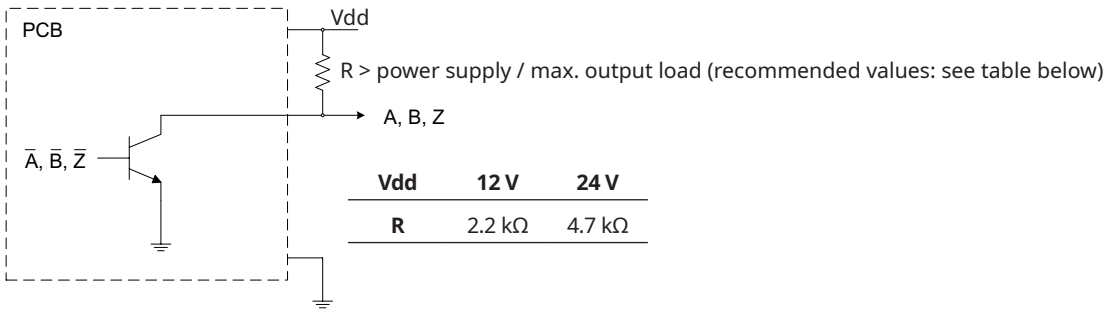
Power supply	V_{dd} = 8 V to 26 V
Current consumption	50 mA
Output signals	A, B, Z
Maximum output load	20 mA
Accuracy	Typ. ±0.5°
Hysteresis	0.18°
Resolution	80 to 2,048 pulses per revolution (320, 400, 500, 512, 800, 1000, 1024, 1600, 2000, 2048, 4096, 8192 counts per revolution)
Maximum speed	30,000 rpm
Maximum cable length	20 m
Operating temperature	–40 °C to +125 °C (IP64) –40 °C to +85 °C (IP68)

Timing diagram



B leads A for clockwise rotation of magnetic actuator.

Recommended signal termination



Vdd	12 V	24 V
R	2.2 kΩ	4.7 kΩ

IC – Incremental, RS422

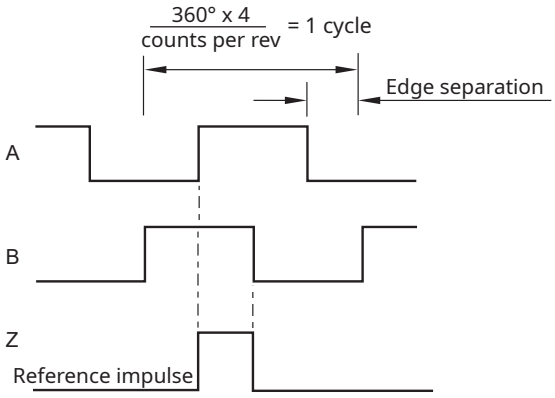
Square wave differential line driver to RS422

Specifications

Power supply	V_{dd} = 5 V ±5 %
Current consumption	Max. 65 mA
Output signals	A, B, Z, A–, B–, Z– (RS422)
Accuracy	Typ. ±0.5°
Hysteresis	0.18°
Resolution	80 to 4,096 pulses per revolution (320, 360, 400, 500, 512, 800, 1000, 1024, 1600, 2000, 2048, 3600, 4000, 4096, 8000, 8192, 10000, 16000, 16384 counts per revolution)
Maximum speed	30,000 rpm
Maximum cable length	50 m
Operating temperature	–40 °C to +125 °C (IP64) –40 °C to +85 °C (IP68)

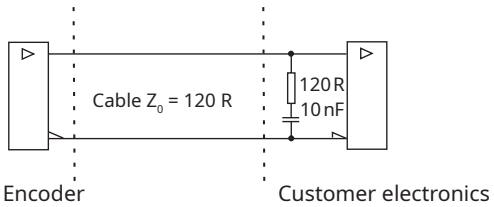
Timing diagram

Complementary signals not shown



B leads A for clockwise rotation of magnetic actuator.

Recommended signal termination



IE – Incremental, open collector

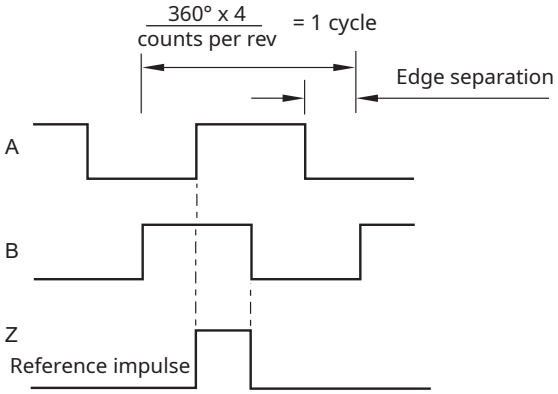
Low cost alternative for ball bearing encoders

Specifications

Power supply	V_{dd} = 5 V ±5 %
Current consumption	35 mA (not loaded)
Output signals	A, B, Z
Maximum output load	20 mA
Accuracy	Typ. ±0.5°
Hysteresis	0.18°
Resolution	80 to 2,048 pulses per revolution (320, 400, 500, 512, 800, 1000, 1024, 1600, 2000, 2048, 4096, 8192 counts per revolution)
Maximum speed	30,000 rpm
Maximum cable length	20 m
Operating temperature	–40 °C to +125 °C (IP64) –40 °C to +85 °C (IP68)

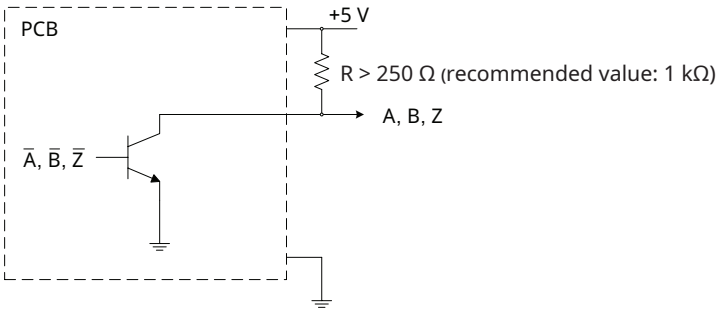
Timing diagram

Complementary signals not shown



B leads A for clockwise rotation of magnetic actuator.

Recommended signal termination



IG – Incremental, push-pull

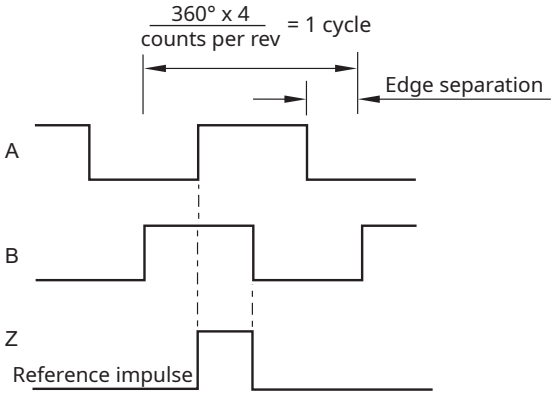
Square wave output

Specifications

Power supply	V_{dd} = 8 V to 26 V
Current consumption	50 mA
Output signals	A, B, Z, A–, B–, Z– (5 V RS422)
Maximum output load	30 mA
Accuracy	Typ. ±0.5°
Hysteresis	0.18°
Resolution	80 to 2,048 pulses per revolution (320, 400, 500, 512, 800, 1000, 1024, 1600, 2000, 2048, 4096, 8192 counts per revolution)
Maximum speed	30,000 rpm
Maximum cable length	20 m
Operating temperature	–40 °C to +125 °C (IP64) –40 °C to +85 °C (IP68)

Timing diagram

Complementary signals not shown



B leads A for clockwise rotation of magnetic actuator.

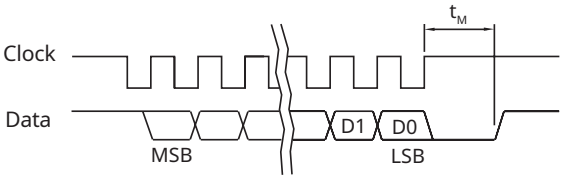
SC – Absolute binary synchro-serial interface (SSI)

Serial encoded absolute position measurement

Specifications

Output code	Natural binary
Power supply	V_{dd} = 5 V ±5 %
Current consumption	Max. 65 mA
Data output	Serial data (RS422)
Data input	Clock (RS422)
Accuracy	Typ. ±0.5°
Hysteresis	0.18°
Resolution	320, 360, 400, 500, 512, 800, 1000, 1024, 1600, 2000, 2048, 3600, 4000, 4096, 8000, 8192, 10000, 16000, 16384 positions per revolution
Maximum speed	30,000 rpm
Maximum cable length	100 m (at 1 MHz)
Operating temperature	–40 °C to +125 °C (IP64) –40 °C to +85 °C (IP68)

Timing diagram

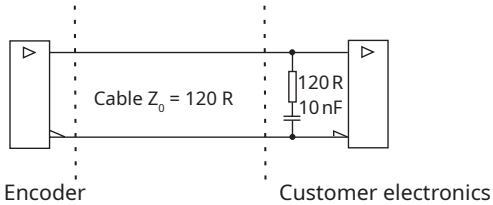


Clock ≤ 4 MHz 12.5 µs ≤ t_m ≤ 20.5 µs

Position increases for clockwise rotation of magnetic actuator.

Recommended signal termination

For data output lines only



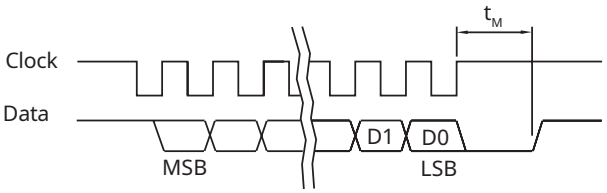
SI – Absolute binary synchro-serial (SSI) + Incremental, RS422

Complex feedback device for absolute position at start up as well as during operation + incremental outputs.
Both the incremental and the SSI output always have the same fixed resolution.

Specifications

Output code	Natural binary
Power supply	V_{dd} = 5 V ±5 %
Current consumption	Max. 35 mA
Incremental outputs	A, B, Z, A–, B–, Z– (RS422)
Data output	Serial data (RS422)
Data input	Clock (RS422)
Accuracy	Typ. ±0.5°
Hysteresis	0.18°
Resolution	80 to 2,048 pulses per revolution (320, 400, 500, 512, 800, 1000, 1024, 1600, 2000, 2048, 4096, 8192 counts per revolution)
Maximum speed	30,000 rpm
Maximum cable length	50 m
Operating temperature	–40 °C to +125 °C (IP64) –40 °C to +85 °C (IP68)

Timing diagram - SSI

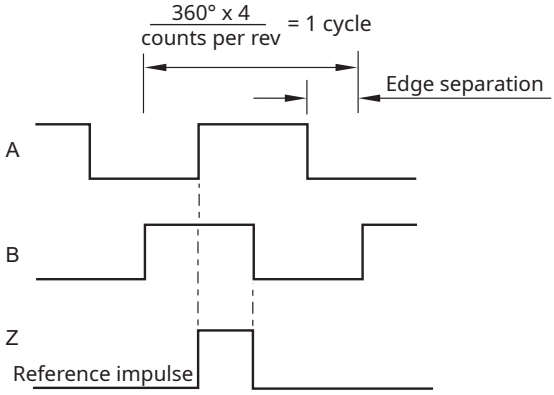


Clock ≤ 4 MHz 12.5 µs ≤ t_m ≤ 20.5 µs

Position increases for clockwise rotation of magnetic actuator.

Timing diagram - Incremental

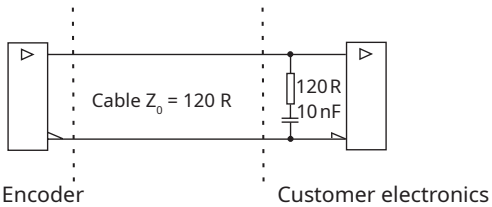
Complementary signals not shown



B leads A for clockwise rotation of magnetic actuator.

Recommended signal termination

For incremental signals + SSI data output lines only



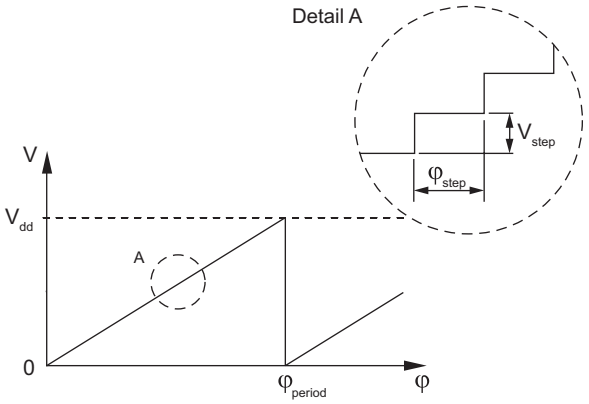
Vx – Linear voltage output

Alternative for potentiometers

Specifications

Power supply	V_{dd} = 5 V ± 5 %
Current consumption	Typ. 26 mA
Output voltage	0 V to V_{dd}
Output loading	Max. 10 mA
Nonlinearity	1 %
Maximum speed	30,000 rpm
Maximum cable length	20 m
Operating temperature	–30 °C to +80 °C

Timing diagram



φ_{period}	N_{period}	N_{step}	φ_{step}
360°	1	1,024	0.35°
180°	2	1,024	0.18°
90°	4	1,024	0.09°
45°	8	512	0.09°

$$\varphi_{step} = \frac{\varphi_{period}}{N_{step}} \qquad V_{step} = \frac{V_{dd}}{N_{step}}$$

φ_{period} = Angle covered in one period (one sawtooth)
V_{period} = Output voltage range for one period
φ_{step} = Step angle (angular movement needed to register a change in the position)
V_{step} = Output voltage range for one step
N_{period} = Number of periods in one revolution
N_{step} = Number of steps in one period

Output type and electrical variant

Rotation \ φ_{period}	360°	180°	90°	45°
Clockwise	VA	VB	VC	VD
Counterclockwise	VE	VF	VG	VH

Part numbering

RM44 IC 00 13B 10 F 2 E 10

Series
RM44 - Ø44 mm body
RM58 - Ø58 mm body

Output type
AC - Analogue sinusoidal, 5 V
DC - Absolute natural binary BiSS-C, RS422, 5 V
IA - Incremental, push pull, 24 V
IB - Incremental, open collector NPN, 24 V
IC - Incremental, RS422, 5 V
IE - Incremental, open collector, 5 V
IG - Incremental, RS422, 5 V, supply 24 V
SC - Absolute binary synchro-serial (SSI), RS422, 5 V
SI - SSI + Incremental, RS422, 5 V
Vx - Linear voltage:

Linear voltage output 0 - 5 V, supply 5 V DC				
	360°	180°	90°	45°
CW	VA	VB	VC	VD
CCW	VE	VF	VG	VH

Shaft size
00 - N/A

Resolution
For **AC:**
01S - One sine/cosine period per revolution

For **IA**, **IB**, **IE**, **IG** and **SI** (counts/positions per revolution):

Decimal			Binary		
2D0 - 2000	**D80** - 800	**D32** - 320	**13B** - 8192	**10B** - 1024	**07B** - 128
1D6 - 1600	**D50** - 500		**12B** - 4096	**09B** - 512	
1D0 - 1000	**D40** - 400		**11B** - 2048	**08B** - 256	

For **IC**, **SC** and **DC** (counts/positions per revolution):

Decimal					Binary		
16D - 16000	**4D0** - 4000	**1D6** - 1600	**D50** - 500	**D32** - 320	**14B** - 16384	**11B** - 2048	**08B** - 256
10D - 10000	**3D6** - 3600	**1D0** - 1000	**D40** - 400		**13B** - 8192	**10B** - 1024	
8D0 - 8000	**2D0** - 2000	**D80** - 800	**D36** - 360		**12B** - 4096	**09B** - 512	

For output types **DC** with enabled 12 bit revolution counter:

Binary		
14M - 16384	**11M** - 2048	**08M** - 256
13M - 8192	**10M** - 1024	**07M** - 128
12M - 4096	**09M** - 512	

For **Vx:**
10B - 1024 counts/positions per revolution

Cable length
10 - 1.0 meter (or 10 meters if **1M** special requirement is chosen)

Connector options
A - 'D' type connector - 9 way
B - 'D' type connector - 15 way (for output type SI only)
F - Flying lead (no connector)

Body style and cable exit
2 - Cylindrical body, radial cable exit

Environment and material
E - IP64, die-cast body (Zinc alloy), standard EMC grade (standard)
F - IP68, die-cast body (Zinc alloy), standard EMC grade

Special requirements
10 - No special requirements (standard)
1M - Cable length in meters

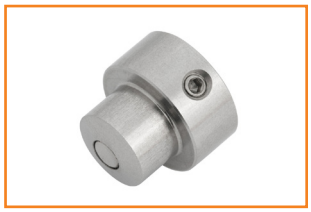
Not all part number combinations are valid. Please refer to the table of available combinations on the next page.

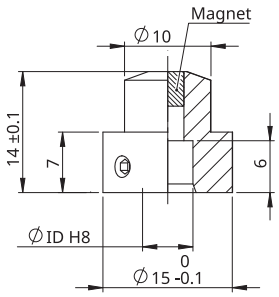
Table of available combinations

Series	Output type	Shaft size	Resolution	Cable length	Connector option	Body style	Material	Special requirements
RM44 / RM58	AC	00	01S	10	A / F	2	E / F	10 / 1M
	Vx		10B					
	IA		2D0 / 1D6 / 1D0 / D80 / D50 / D40 / D32 / 13B / 12B / 11B / 10B / 09B / 08B / 07B					
	IB		2D0 / 1D6 / 1D0 / D80 / D50 / D40 / D32 / 13B / 12B / 11B / 10B / 09B / 08B / 07B					
	IC		16D / 10D / 8D0 / 4D0 / 3D6 / 2D0 / 1D6 / 1D0 / D80 / D50 / D40 / D36 / D32 / 14B / 13B / 12B / 11B / 10B / 09B / 08B / 07B					
	IE		2D0 / 1D6 / 1D0 / D80 / D50 / D40 / D32 / 13B / 12B / 11B / 10B / 09B / 08B / 07B					
	IG		2D0 / 1D6 / 1D0 / D80 / D50 / D40 / D32 / 13B / 12B / 11B / 10B / 09B / 08B / 07B					
	SC		16D / 10D / 8D0 / 4D0 / 3D6 / 2D0 / 1D6 / 1D0 / D80 / D50 / D40 / D36 / D32 / 14B / 13B / 12B / 11B / 10B / 09B / 08B / 07B					
	SI		2D0 / 1D6 / 1D0 / D80 / D50 / D40 / D32 / 13B / 12B / 11B / 10B / 09B / 08B / 07B		B / F			
	DC		16D / 10D / 8D0 / 4D0 / 3D6 / 2D0 / 1D6 / 1D0 / D80 / D50 / D40 / D36 / D32 / 14B / 13B / 12B / 11B / 10B / 09B / 08B / 07B		A / F			
			14M / 13M / 12M / 11M / 10M / 09M / 08M / 07M					

Magnetic actuator and magnet ordering information

Actuator for integration onto shaft





Shaft = Ø ID h7
Fixing: Grub screw provided

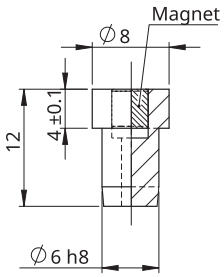
* Hole diameter for nominal shaft size.
See table on the right for more information on available shaft sizes.

Part numbers:

For resolutions up to 9 bit absolute (512 cpr incremental)
RMA04A2A00 – ID = Ø4 mm
RMA05A2A00 – ID = Ø5 mm
RMA06A2A00 – ID = Ø6 mm
RMA08A2A00 – ID = Ø8 mm
RMA10A2A00 – ID = Ø10 mm
RMA19A2A00 – ID = Ø3/16" mm
RMA25A2A00 – ID = Ø1/4" mm
RMA37A2A00 – ID = Ø3/8" mm

For resolutions from 10 bit absolute (800 cpr incremental) and above
RMA04A3A00 – ID = Ø4 mm
RMA05A3A00 – ID = Ø5 mm
RMA06A3A00 – ID = Ø6 mm
RMA08A3A00 – ID = Ø8 mm
RMA10A3A00 – ID = Ø10 mm
RMA19A3A00 – ID = Ø3/16" mm
RMA25A3A00 – ID = Ø1/4" mm
RMA37A3A00 – ID = Ø3/8" mm

Actuator for integration into shaft



Part numbers:

For resolutions up to 9 bit absolute (512 cpr incremental)
RMH06A2A00

For resolutions from 10 bit absolute (800 cpr incremental) and above
RMH06A3A00

with N-pole marker

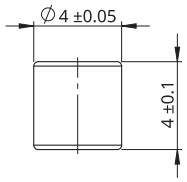
With N-pole marker scribed to a ±5° accuracy:

For resolutions up to 9 bit absolute (512 cpr incremental)
RMH06A2A02

For resolutions from 10 bit absolute (800 cpr incremental) and above
RMH06A3A02

Hole = Ø6G7
Fixing: Adhesive (recommended – LOCTITE 648 or 2701)

Magnet for direct recessing in non-ferrous shafts



Fixing: Adhesive (recommended – LOCTITE 648 or 2701)

Part numbers:

For resolutions up to 9 bit absolute (512 cpr incremental)
RMM44A2A00 (individually packed) – for sample quantities only
RMM44A2C00 (packed in tubes)

For resolutions from 10 bit absolute (800 cpr incremental) and above
RMM44A3A00 (individually packed) – for sample quantities only
RMM44A3C00 (packed in tubes)

If you need a shaft encoder, please refer to the **RE58 data sheet**, which describes how the RM44 can be converted into an RE58 by adding a flange.

Accessories

USB interface (for incremental encoders)
E201-9Q

USB interface (for SSI communication interface)
E201-9S

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Document issues

Issue	Date	Page	Description
1	16. 10. 2024	General	Redesign of RM44D01