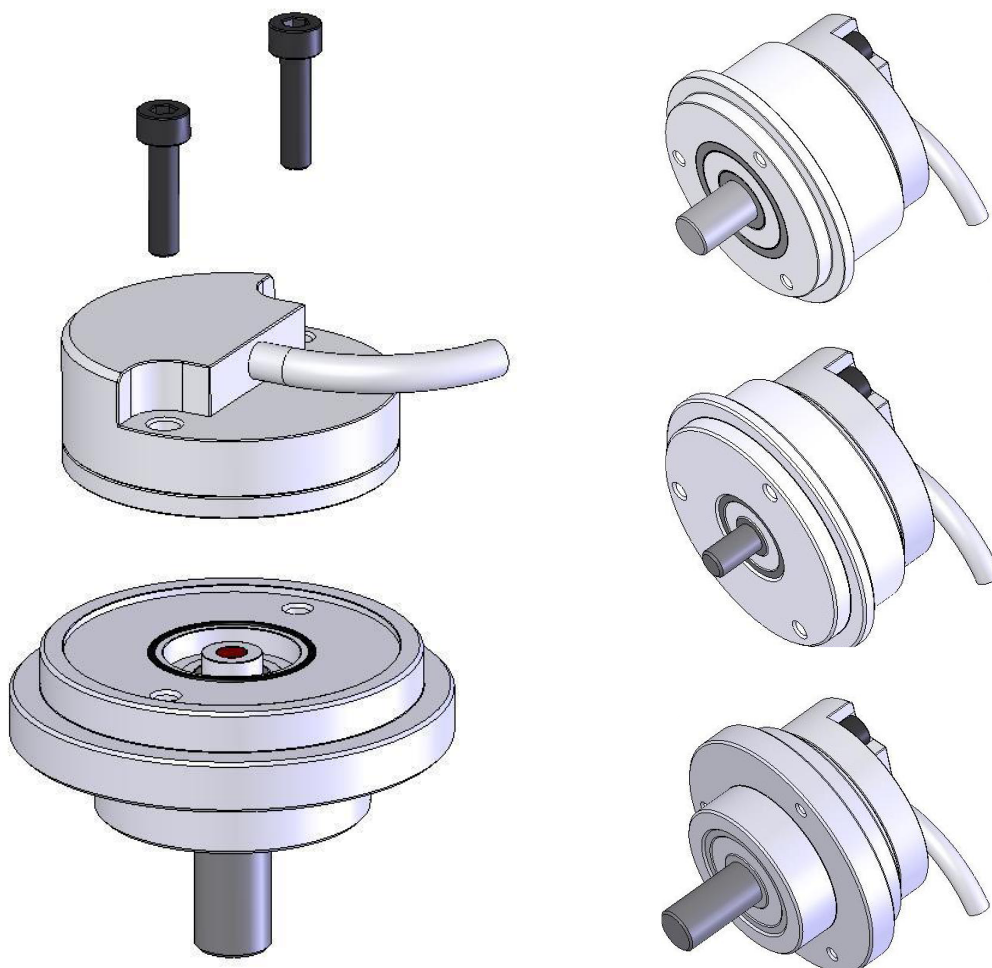


RE58 encoder flanges



General description

The RE58 is a modular bearing/shaft encoder system that has been designed for easy integration to existing 58 mm syncro flange and clamp applications.

The modular design combines the benefits of the non-contact OnAxis™ magnetic encoder technology with existing industrial encoder designs. The non-contact RM44 encoder used on the back of the bearing/shaft assembly provides ultimate reliability in harsh environmental conditions

where other encoders would fail. Even if the bearing/shaft fails it can be easily replaced without damaging the RM44 encoder.

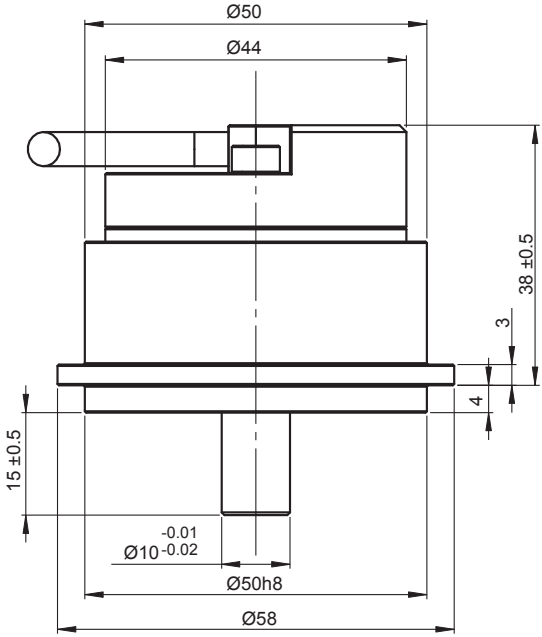
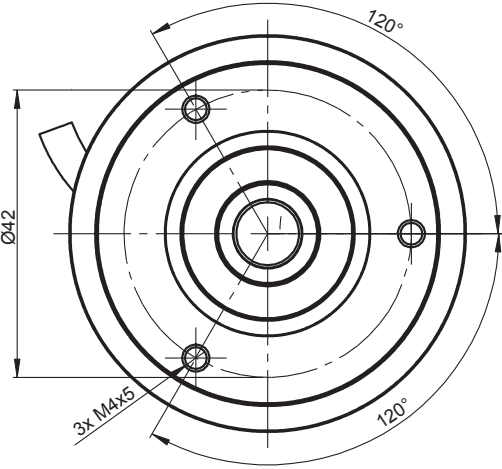
The RM44 encoder offers a wide range of output options including incremental, absolute and analogue protocols with up to 13 bit (8192 counts per rev) resolution.

System features

- Standard 58 mm diameter flange options
- Robust modular design
- Industry standard absolute, incremental and analogue output options
- Resolutions to 13 bit (8192 counts per rev)
- Easy to service
- Low cost of ownership

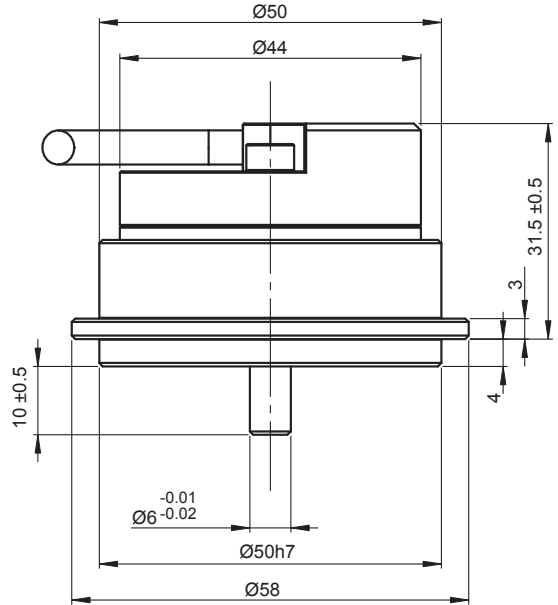
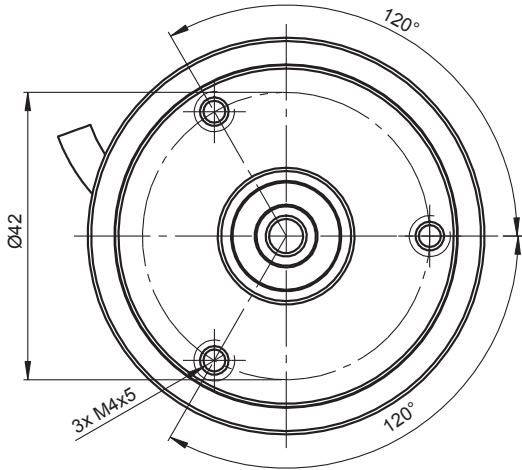
RE58A10 dimensions

NOTE: RM44 encoder is shown fitted to flange for clarity



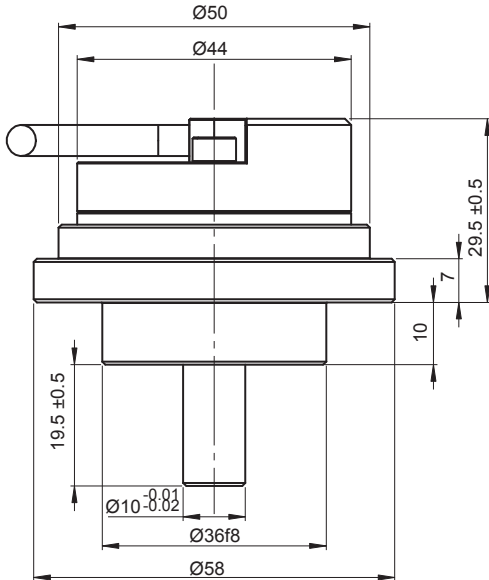
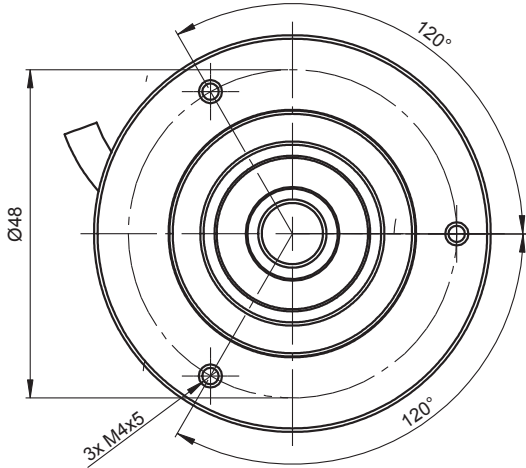
RE58B06 dimensions

NOTE: RM44 encoder is shown fitted to flange for clarity



RE58C10 dimensions

NOTE: RM44 encoder is shown fitted to flange for clarity



Tables of expected bearing life ratings in hours

RE58A10

| Speed (rpm) | Radial load 10 N | Radial load 20 N | Radial load 30 N | Radial load 40 N | Radial load 50N | Radial load 60N | Radial load 70N | Radial load 80N |
|-------------|------------------|------------------|------------------|------------------|-----------------|-----------------|-----------------|-----------------|
| 500 | 4,985,733 | 3,174,333 | 2,144,167 | 1,515,633 | 1,110,633 | 837,967 | 647,733 | 510,967 |
| 1,000 | 2,492,867 | 1,587,167 | 1,072,083 | 757,817 | 555,317 | 418,983 | 323,867 | 255,483 |
| 2,000 | 1,246,433 | 793,583 | 536,042 | 378,908 | 277,658 | 209,492 | 161,933 | 127,742 |
| 5,000 | 498,573 | 317,433 | 214,417 | 151,563 | 111,063 | 83,797 | 64,773 | 51,097 |
| 10,000 | 249,287 | 158,717 | 107,208 | 75,782 | 55,532 | 41,898 | 32,387 | 25,548 |
| 12,000 | 207,739 | 132,264 | 89,340 | 63,151 | 46,276 | 34,915 | 26,989 | 21,290 |

Maximum recommended shaft loads: radial 80N, axial 40N

RE58B06

| Speed (rpm) | Radial load 10 N | Radial load 15 N | Radial load 20 N | Radial load 25 N | Radial load 30N |
|-------------|------------------|------------------|------------------|------------------|-----------------|
| 500 | 1,697,000 | 1,041,367 | 684,300 | 473,500 | 341,100 |
| 1,000 | 848,500 | 520,683 | 342,150 | 236,750 | 170,550 |
| 2,000 | 424,250 | 260,342 | 171,075 | 118,375 | 85,275 |
| 5,000 | 169,700 | 104,137 | 68,430 | 47,350 | 34,110 |
| 10,000 | 84,850 | 52,068 | 34,215 | 23,675 | 17,055 |
| 15,000 | 56,567 | 34,712 | 22,810 | 15,783 | 11,370 |
| 20,000 | 42,425 | 26,034 | 17,108 | 11,838 | 8,528 |

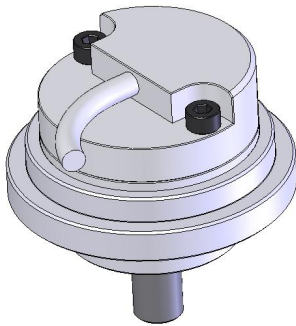
Maximum recommended shaft loads: radial 30N, axial 15N

RE58C10

| Speed (rpm) | Radial load 10 N | Radial load 20 N | Radial load 30 N | Radial load 40 N | Radial load 50N | Radial load 60N |
|-------------|------------------|------------------|------------------|------------------|-----------------|-----------------|
| 500 | 6,656,767 | 3,483,867 | 2,046,033 | 1,302,133 | 879,300 | 621,400 |
| 1,000 | 3,328,383 | 1,741,933 | 1,023,017 | 651,067 | 439,650 | 310,700 |
| 2,000 | 1,664,192 | 870,967 | 511,508 | 325,533 | 219,825 | 155,350 |
| 5,000 | 665,677 | 348,387 | 204,603 | 130,213 | 87,930 | 62,140 |
| 10,000 | 332,838 | 174,193 | 102,302 | 65,107 | 43,965 | 31,070 |
| 12,000 | 277,365 | 145,161 | 85,251 | 54,256 | 36,638 | 25,892 |

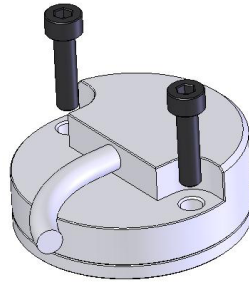
Maximum recommended shaft loads: radial 60N, axial 30N

RE58 encoder system



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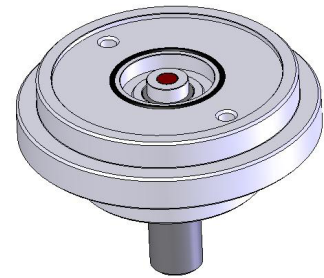
RM44 encoder



Encoder part numbering
eg **RM44IC0013B10F2F10**

+

RE58 flange



Flange part numbering
eg **RE58C10**

RE58 flange part numbering

RE58A10 - Ø58 mm 10 mm shaft
RE58B06 - Ø58 mm 6 mm shaft
RE58C10 - Ø58 mm 10 mm shaft

All RE58 flanges are supplied with required washer and M4 screws for RM44 encoder attachment.

RM44 encoder part numbering

Refer to RM44 datasheet for full product specifications.

RM44 IC 00 13B 10 F 2 F 10

Series ————

Output type ————

AC - Analogue sinusoidal, 5 V
IA - Incremental, push pull, 24 V
IB - Incremental, open collector NPN, 24 V
IC - Incremental, RS422A, 5 V
IE - Incremental, open collector, 5 V
SC - Absolute binary synchro-serial (SSI), RS422A, 5 V
SI - SSI + Incremental, RS422A, 5 V
V_x - 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

01S - one sine/cosine period per rev (for **AC** output only)
07B - 128 counts or positions per revolution (for output types **IE** and **IB**)
08B - 256 counts or positions per revolution (for output types **IE** and **IB**)
09B - 512 counts or positions per revolution (for output types **V_x** and **IB**)

For output types IC, IA, SC and SI:

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

Special requirements
10 - No special requirements (standard)
18 - Extended operating temperature (for output types **IC** and **SI** with **IP64** only)*

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

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

Connector options
F - Flying lead (no connector)

Cable length
10 - 1.0 meter (standard)

NOTE: Not all combinations are valid.

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Document issues

| Issue | Date | Page | Amendments done |
|-------|-------------|------|-----------------|
| 01 | 28. 2. 2008 | - | New document |
| 02 | 14. 1. 2009 | - | New layout |

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