



## Ferrites and Accessories

**Series/Type:**        **RM 4**

The following products presented in this data sheet are being withdrawn.

| Ordering Code   | Substitute Product | Date of Withdrawal | Deadline Last Orders | Last Shipments |
|-----------------|--------------------|--------------------|----------------------|----------------|
| B65803A0000R026 | B65803A0000R048    | 2002-08-02         | 2002-12-31           | 2003-03-31     |

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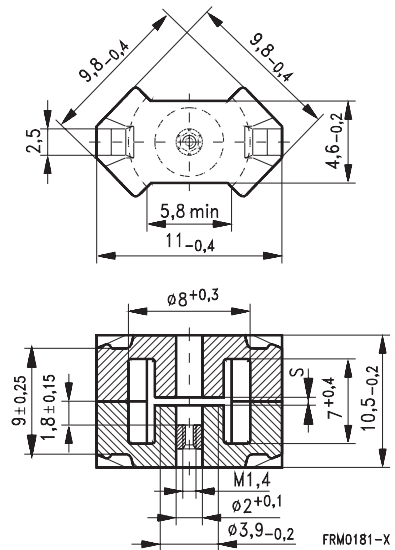
- In accordance with IEC 60431
- Core without center hole for transformer applications
- RM cores are supplied in sets

**Magnetic characteristics** (per set)

|              | with center hole | without center hole |                  |
|--------------|------------------|---------------------|------------------|
| $\Sigma l/A$ | 1,9              | 1,7                 | mm <sup>-1</sup> |
| $l_e$        | 21               | 22                  | mm               |
| $A_e$        | 11               | 13                  | mm <sup>2</sup>  |
| $A_{min}$    | —                | 11,3                | mm <sup>2</sup>  |
| $V_e$        | 232              | 286                 | mm <sup>3</sup>  |

**Approx. weight** (per set)

| $m$ | 1,45 | 1,65 | g |
|-----|------|------|---|
|     |      |      |   |


**Gapped**

| Material | $A_L$ value | $s$<br>approx.<br>mm | $\mu_e$ | Ordering code 1)<br>-A with center hole<br>-N with threaded sleeve |
|----------|-------------|----------------------|---------|--|
|          | nH          |                      |         |  |
| K1       | 16 ± 3 %    | 1,0                  | 24,2    | B65803--+16-A1   |
|          | 25 ± 3 %    | 0,40                 | 37,8    | B65803--+25-A1   |
| M33      | 40 ± 3 %    | 0,36                 | 60,4    | B65803--+40-A33  |
|          | 63 ± 3 %    | 0,18                 | 95      | B65803--+63-A33  |
| N48      | 63 ± 3 %    | 0,16                 | 95      | B65803--+63-A48  |
|          | 100 ± 3 %   | 0,10                 | 151     | B65803--+100-A48   |
|          | 160 ± 3 %   | 0,06                 | 242     | B65803--+160-A48   |

1) Replace the + by the code letter "A" or "N" for the required version.

**Ungapped**

| Material          | $A_L$ value<br>nH | $\mu_e$ | $A_{L1min}$<br>nH | $P_V$<br>W/set                      | Ordering code<br>-J w/o center hole |
|-------------------|-------------------|---------|-------------------|-------------------------------------|-------------------------------------|
| N30               | 1900 + 30/- 20 %  | 2570    |                   |                                     | B65803-J-R30                        |
| T35               | 2800 + 40/- 30 %  | 3790    |                   |                                     | B65803-J-Y35                        |
| T38               | 3700 + 40/- 30 %  | 5000    |                   |                                     | B65803-J-Y38                        |
| T57 <sup>1)</sup> | 1600 + 30/- 20 %  | 2200    |                   |                                     | B65803-J-R57                        |
| N49               | 750 + 30/- 20 %   | 1010    | 450               | < 0,04<br>(50 mT, 500 kHz, 100 °C)  | B65803-J-R49                        |
| N87               | 1100 + 30/- 20 %  | 1480    | 650               | < 0,20<br>(200 mT, 100 kHz, 100 °C) | B65803-J-R87                        |
| N97 <sup>1)</sup> | 1100 + 30/- 20 %  | 1480    | 650               | < 0,15<br>(200 mT, 100 kHz, 100 °C) | B65803-J-R97                        |

1) Preliminary data

**Coil former**

Material: GFR thermosetting plastic (UL 94 V-0, insulation class to IEC 60085:  
H  $\geq$  max. operating temperature 180 °C), color code blue

Solderability: to IEC 60068-2-20, test Ta, method 1 (aging 3): 235 °C, 2 s

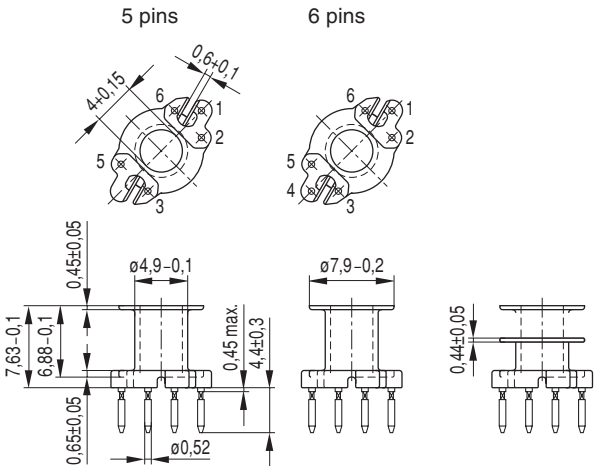
Resistance to soldering heat: to IEC 60068-2-20, test Tb, method 1B: 350 °C, 3,5 s

Winding: see "Processing Notes", page 153

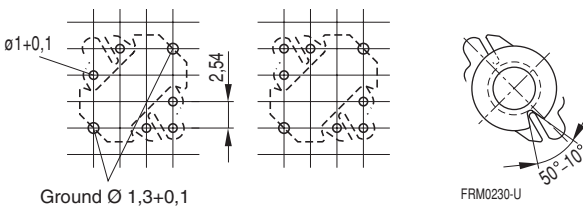
Pins squared in the start-of-winding area

For matching clamp and insulating washers see page 187

| Sections | $A_N$<br>mm <sup>2</sup> | $l_N$<br>mm | $A_R$ value<br>$\mu\Omega$ | Pins | Ordering code   |
|----------|--------------------------|-------------|----------------------------|------|-----------------|
| 1        | 7,7                      | 20          | 89                         | 5    | B65804-K1005-D1 |
|          |                          |             |                            | 6    | B65804-K1006-D1 |
| 2        | 7,3                      | 20          | 94                         | 5    | B65804-K1005-D2 |
|          |                          |             |                            | 6    | B65804-K1006-D2 |



Hole arrangement  
View in mounting direction



|             |        |
|-------------|--------|
| RM 4        | B65804 |
| Accessories | B65806 |

### Clamp

- With ground terminal, made of stainless spring steel (tinned), 0,335 mm thick
- Solderability to IEC 60068-2-20, test Ta, method 1 (aging 3): 235 °C, 2 s
- Also available as strip clamp on reels

### Insulating washer 1 between core and coil former

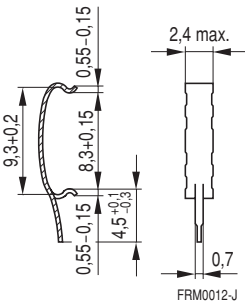
- For tolerance compensation and for insulation
- Made of polycarbonate (UL 94 V-0, insulation class to IEC 60085: E  $\geq$  120 °C), 0,06 mm thick

### Insulating washer 2 for double-clad PCBs

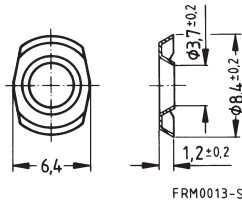
- Made of polycarbonate (UL 94 V-0, insulation class to IEC 60085: E  $\geq$  120 °C), 0,3 mm thick

|   | Ordering code |
|---|---------------|
| Clamp (ordering code per piece, 2 are required) | B65806-A2203  |
| Insulating washer 1 (reel packing, PU = 1 reel) | B65804-A5000  |
| Insulating washer 2 (bulk)                      | B65804-C2005  |

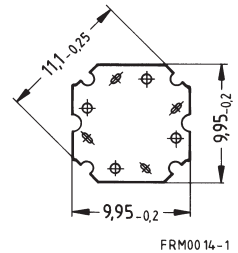
### Clamp



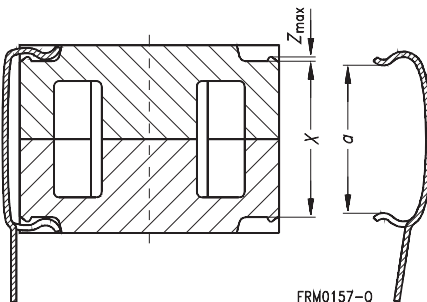
### Insulating washer 1



### Insulating washer 2



### Clamping forces for RM 4



$F_{min}$ : Extension of clamp from  $a$  to  $a_2 = X_{min}$   
 $F_{max}$ : Extension of clamp from  $a$  to  $a_1 = X_{max}$

|                              |                                  |
|------------------------------|----------------------------------|
| Clamp opening $a$ (mm)       | 8,3 + 0,15                       |
| Core nose $Z_{max}$ (mm)     | 0,15                             |
| Height of core pair $X$ (mm) | $X_{min}$ 8,75<br>$X_{max}$ 9,25 |
| Clamping force $F$ (N)       | $F_{min}$ 5<br>$F_{max}$ 40      |

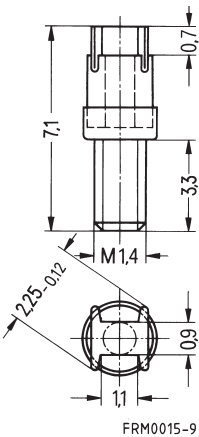
|                    |               |
|--------------------|---------------|
| <b>RM 4</b>        | <b>B65539</b> |
| <b>Accessories</b> | <b>B63399</b> |

### Adjusting screw

- Tube core with thread and core brake made of GFR polyterephthalate
- Plastic **adjusting screwdriver** (not shown)
- Plastic **handle** for adjusting screwdriver (not shown)

| Core RM 4                    |                         | Adjusting screw         |          |            | Min. adjusting range % | Ordering code     |
|------------------------------|-------------------------|-------------------------|----------|------------|------------------------|-------------------|
| Material                     | A <sub>L</sub> value nH | Tube core Ø × length mm | Material | Color code |                        |                   |
| K 1                          | 16                      | 1,81 × 2,0              | Si 1     | black      | 20                     | B65539-C1003-X101 |
|                              | 25                      | 1,81 × 2,0              | K 1      | yellow     | 21                     | B65539-C1003-X1   |
| M 33                         | 40                      | 1,81 × 2,0              | Si 1     | black      | 17                     | B65539-C1003-X101 |
|                              | 63                      | 1,81 × 2,0              | K 1      | yellow     | 21                     | B65539-C1003-X1   |
| N 48                         | 63                      | 1,81 × 2,0              | Si 1     | black      | 12                     | B65539-C1003-X101 |
|                              | 100                     | 1,81 × 2,0              | K 1      | yellow     | 17                     | B65539-C1003-X1   |
|                              | 160                     | 1,81 × 2,7              | N 22     | red        | 12                     | B65539-C1002-X22  |
| <b>Adjusting screwdriver</b> |                         |                         |          |            |                        | B63399-B4         |
| <b>Handle</b>                |                         |                         |          |            |                        | B63399-B5         |

### Adjusting screw



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