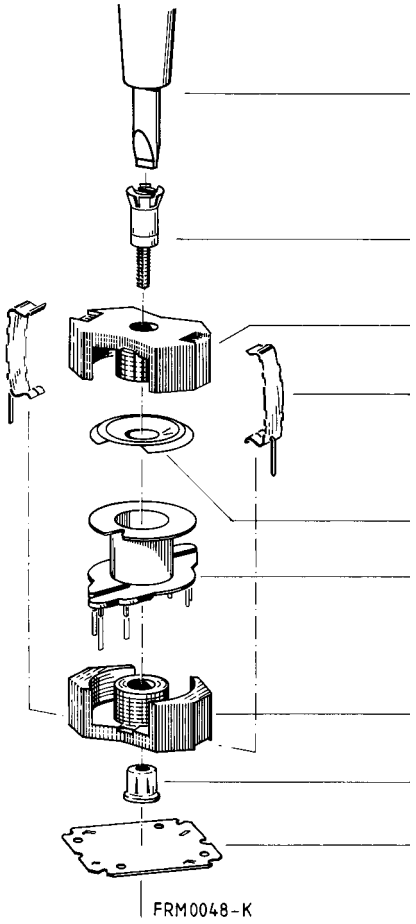


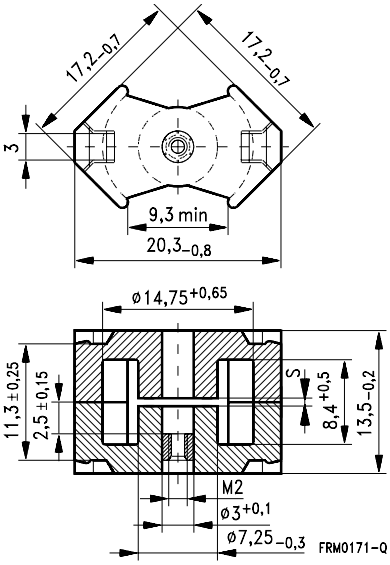
Example of an assembly set

Individual parts	Part no.	Page
Adjusting screwdriver (for assembly only)	B63399	232
Matching handle	B63399	232
Adjusting screw	B65659	232
Core	B65819	228
Clamps	B65820	231
Insulating washer 1	B65820	231
Coil former	B65820	230
Core	B65819	228
Threaded sleeve (glued-in)		
Insulating washer 2	B65820	231

Also available:

RM 7 low profile core	B65819-P	235
Coil former	B65820	236

- 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	
$\Sigma l/A$	0,74	0,7	mm^{-1}
l_e	29,8	30,4	mm
A_e	40	43	mm^2
A_{min}	—	39	mm^2
V_e	1 200	1 340	mm^3

Approx. weight (per set)

m	6,5	7,2	g

Gapped

Material	A_L value nH	*s* approx. mm	μ_e	Ordering code[1)] -A with center hole -N with threaded sleeve -J without center hole
N48	250 ± 3 %	0,16	147	B65819-+250-A48
	315 ± 3 %	0,12	186	B65819-+315-A48
N41	160 ± 5 %	0,30	89	B65819-J160-J41
	250 ± 5 %	0,18	139	B65819-J250-J41

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

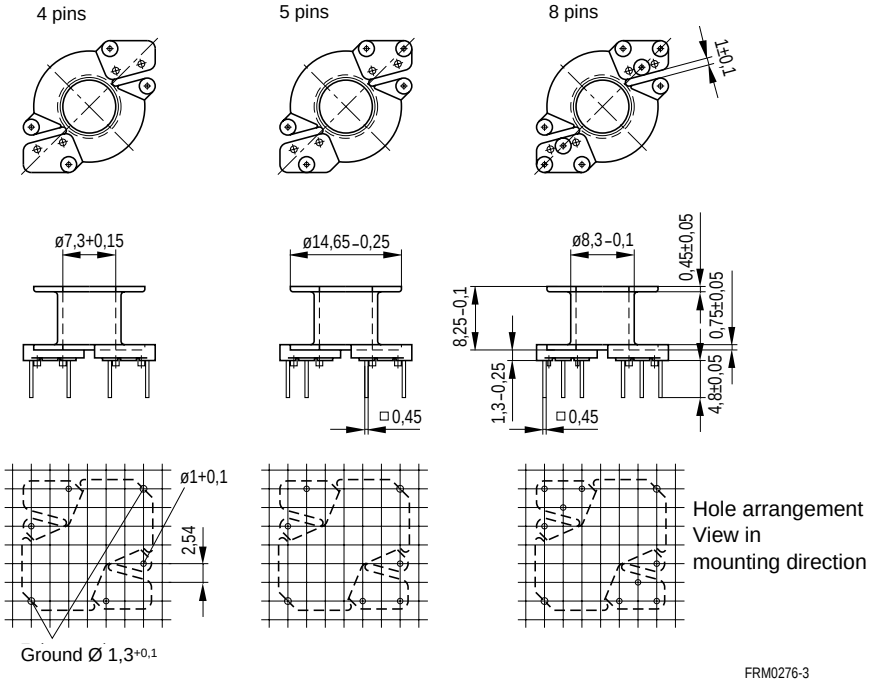
Ungapped

Material	A_L value nH	μ_e	A_{L1min} nH	P_V W/set	Ordering code -J w/o center hole
N30	5000 + 30/– 20 %	2780			B65819-J-R30
T38	10000 +40/– 30 %	5570			B65819-J-Y38
N49	1900 + 30/– 20 %	1070	1070	0,22 (50 mT, 500 kHz, 100 °C)	B65819-J-R49
N87	2700 + 30/– 20 %	1510	1600	0,77 (200 mT, 100 kHz, 100 °C)	B65819-J-R87

Coil former

Material: GFR thermosetting plastic (UL 94 V-0, insulation class to IEC 60085:
F ≙ max. operating temperature 155 °C), color code green
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 page 152
Squared pins
For matching clamp and insulating washers see page 231

Sections	A_N mm²	l_N mm	A_R value μΩ	Pins	Ordering code
1	21,4	35,6	56	4	on request
	21,4	35,6	56	5	on request
	21,4	35,6	56	8	B65820-B1008-D1
2	with 4 or 8 pins on request				



Clamp

- With ground terminal, made of stainless spring steel (tinned), 0,4 mm thick
- Solderability to IEC 60068-2-20, test Ta, method 1 (aging 3): 235 °C, 2 s

Insulating washer 1 between core and coil former

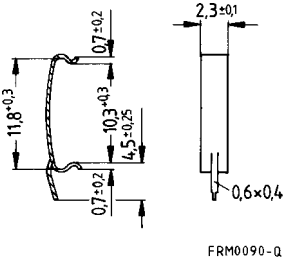
- For tolerance compensation and for insulation
- Made of polycarbonate (UL 94 V-0, insulation class to IEC 60085: E ≙ 120 °C), 0,06 mm thick

Insulating washer 2 for double-clad PCBs

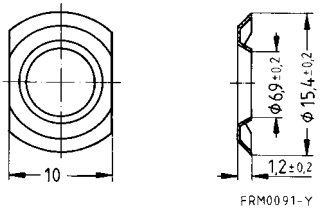
- Made of polycarbonate (UL 94 V-0, insulation class to IEC 60085: E ≙ 120 °C), 0,3 mm thick

	Ordering code
Clamp (ordering code per piece, 2 are required)	B65820-B2001
Insulating washer 1 (reel packing, PU = 1 reel)	B65820-A5000
Insulating washer 2 (bulk)	B65820-C2005

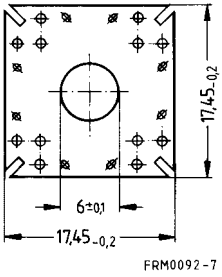
Clamp



Insulating washer 1



Insulating washer 2



Adjusting screw

● Tube core with thread and core brake made of GFR polyterephthalate

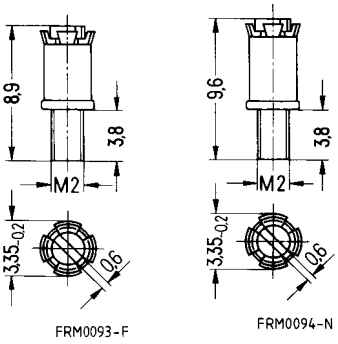
Plastic **adjusting screwdriver** (not shown)

Plastic **handle** for adjusting screwdriver (not shown)

Core RM 7		**Adjusting screw**				Min. adjusting range	Ordering code
Material	A_L value nH	Fig.	Tube core ∅ × length mm	Material	Color code	%	
M33	63	a	2,60 × 3,7	Si 1	white	16	B65659-F1-X101
M48	250	a	2,60 × 3,7	N 22	red	12	B65659-F1-X23
	315	b	2,75 × 4,4	N 22	black	16	B65659-F3-X23
Adjusting screwdriver							B63399-B4
Handle							B63399-B5

Adjusting screws

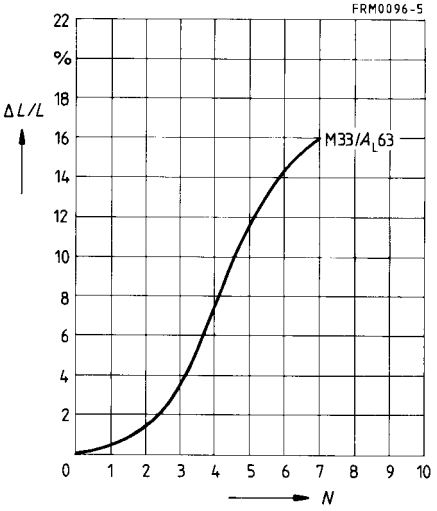
a b



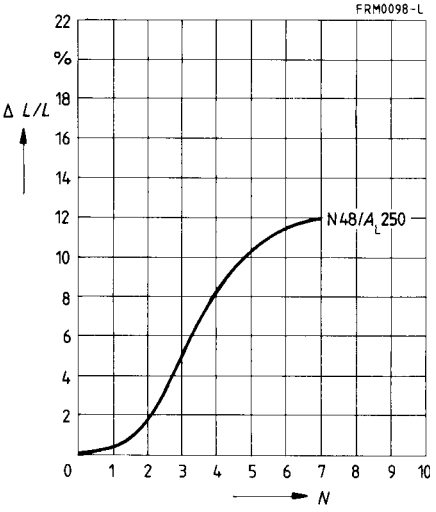
Inductance adjustment curves (nominal values)

Relative inductance change $\Delta L/L$ versus turns N of adjusting screw.
0 ≙ at least 2 turns engaged.

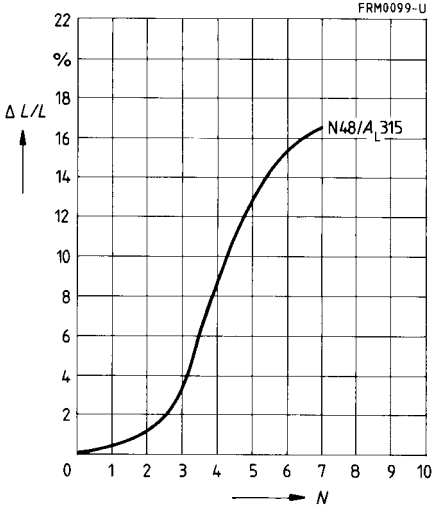
Adjusting screw B65659-F1-X101
Color code white



Adjusting screw B65659-F1-X23
Color code red

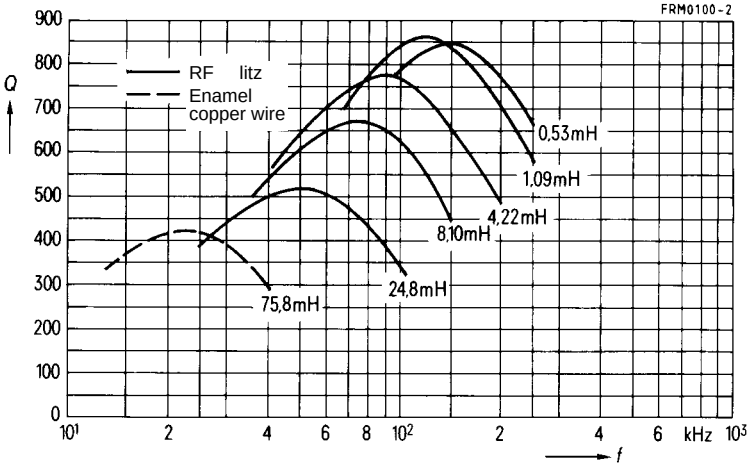


Adjusting screw B65659-F3-X23
Color code black

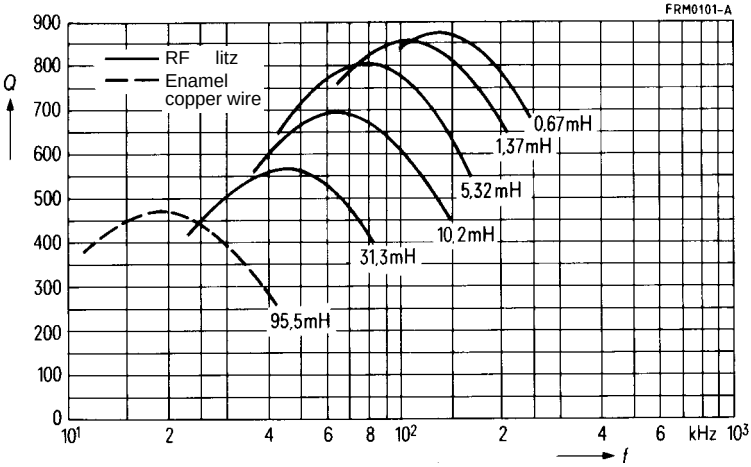


Q factor characteristics (typical values)
Flux density in the core $\hat{B}$ < 1 mT

Material	L (mH) for A_L = 250 nH	A_L = 315 nH	Turns	Wire; RF litz wire	Sections
N 48	75,80	95,50	550	0,18 CuL	1
	24,80	31,30	315	6 × 0,07 CuLS	1
	8,10	10,20	180	20 × 0,05 CuLS	1
	4,22	5,32	130	45 × 0,04 CuLS	1
	1,09	1,37	66	90 × 0,04 CuLS	1
	0,53	0,67	46	120 × 0,04 CuLS	1



N 48
A_L = 250 nH



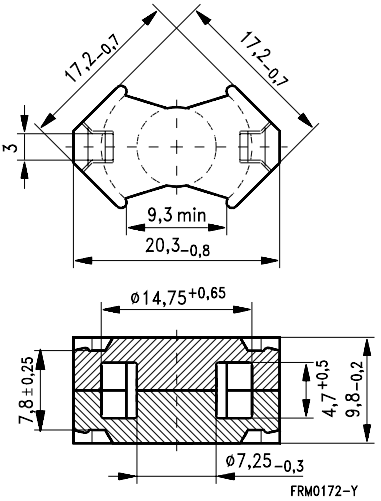
N 48
A_L = 315 nH

- For compact transformers
- Without center hole
- RM cores are supplied in sets

Magnetic characteristics (per set)

$\Sigma l/A$ = 0,52 mm^{-1}
l_e = 23,5 mm
A_e = 45,3 mm^2
A_{min} = 39,6 mm^2
V_e = 1 060 mm^3

Approx. weight 5,7 g/set



Ungapped

Material	A_L value nH	μ_e	A_{L1min} nH	P_V W/set	Ordering code
N30	5600 + 30/– 20 %	2310			B65819-P-R30
T38	11500 + 40/– 30 %	4740			B65819-P-Y38
N49	2400 + 30/– 20 %	990	1700	0,21 (50 mT, 500 kHz, 100 °C)	B65819-P-R49
N67	3300 + 30/– 20 %	1360	2200	0,71 (200 mT, 100 kHz, 100 °C)	B65819-P-R67
N87	3300 + 30/– 20 %	1360	2200	0,57 (200 mT, 100 kHz, 100 °C)	B65819-P-R87

Coil former

Material: GFR thermosetting plastic (UL 94 V-0, insulation class to IEC 60085:
F ≙ max. operating temperature 155 °C), color code green
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 page 152
Squared pins
For matching insulating washers see page 231

Sections	A_N mm²	l_N mm	A_R value μΩ	Pins	Ordering code
1	10,8	35,6	113	8	B65820-R1008-D1