

■ Datasheet: Residual current circuit breaker, series BCF0, 10kA



■ SCHRACK-INFO

- Contact position indicator
- Not dependent on position
- Power supply on top or bottom

■ Technical data

Standards	IEC/EN 61008-1, IEC/EN 61008-2-1 G: ÖVE E 8601
Poles	2, 4
Type	AC
Tripping-type	Main voltage independent
Delay-type	undelayed
Rated current I_n	25 A, 40 A, 63 A, 100 A
Rated residual current $I_{\Delta n}$	0,03A, 0,1A, 0,3A
Rated voltage U_e	230/400 V-AC 4-pole
Rated insulation voltage U_i	440 V
Rated frequency (AC):	50/60 Hz
Main supply side	top or bottom
Rated impulse withstand voltage U_{imp}	4 kV
Short-circuit current I_{nc}	10.000 A

Max. back-up fuse as short circuit protection (SCPD)		25 A - type	63 A gG
		40 A - type	63 A gG
		63 A - type	63 A gG
		100 A - type	63 A gG
Max. back-up fuse as overload protection (OPCD)		25 A - type	25 A gG
		40 A - type	25 A gG
		63 A - type	40 A gG
		100 A - type	63 A gG
Rated residual making and breaking capacity I _m , I _{Δm}		25 A - type	500 A
		40 A - type	500 A
		63 A - type	630 A
		100 A - type	1000 A
Tripping time	undelayed	IΔn	≤ 300ms
		2 x IΔn	≤ 150ms
		≥ 5 x IΔn	≤ 40ms
No tripping residual current		≤ 0,5 IΔn	
Rated voltage of test circuit		2 pole	195,5 - 250 V-AC
		4 pole	195,5 - 440 V-AC
Prevents nuisance tripping caused by swit-		undelayed	with commercially available ballast according to the manufacturer max. 20 EVG each phase, max. 60 each RCCB
Power loss		according to the following diagram	
Electrical endurance		> 4.000 cycles	
Mechanical endurance		> 20.000 cycles	
Position indicator		yes (red /green)	
Polution degree		2	
Protection degree			IP 20
		in panel	IP 40
Finger and hand touch safe		according to BGV A3, ÖVE-EN 6	
Ambient operating temperature		-25 °C bis +40 °C	
Max. ambient temperature		-25°C bis +60°C (except 25A)	
Terminals		open mouthed terminal and lift clamps both sides	
Terminal-screws		Pozidriv PZ2	
Wire-material		Cu	
Terminal capacity		1 x 1,5 - 35mm² single wire	
		2 x 16 mm² stranded	
		more information in the following diagram	

Material thickness busbar		0,8 - 2 mm
Torque		2 - 2,4 Nm
Dimension and weight	2-pole	W x H x D: 35 x 80 x 63 mm
		0,22 kg
	4-pole	W x H x D: 70 x 80 x 63 mm
		0,32 kg
Mounting		Fast clip device on DIN-rail EN 60715 (35mm)

Note

The test button "T" must be operated once every 6 months (enclosed information sticker). Under non-household-type conditions (e.g. humid or dusty environment), it is recommended to carry out the test at shorter (monthly) intervals.

Pressing the test button "T" only tests the function of the residual current (RC) circuit breaker. This test does not replace the earthing resistance measurement (RE) nor the proper protective conductor test that must be performed separately.

Influence of ambient temperature on the maximum permissible continuous current

2-pole

Ambient- temperature	Rated current			
	25 A	40 A	63 A	100 A
40°	25 A	40 A	63 A	100 A
45°	21 A	37 A	59 A	95 A
50°	18 A	33 A	55 A	90 A
55°	14 A	30 A	50 A	85 A
60°	-	26 A	45 A	80 A

4-pole

Ambient- temperature	Rated current		
	25 A	40 A	63 A
40°	25 A	40 A	63 A
45°	22 A	37 A	59 A
50°	19 A	34 A	55 A
55°	16 A	31 A	50 A
60°	-	27 A	45 A

Note: It must be ensured that these values are not exceeded.
25A RCCB can not be used at 60°C.

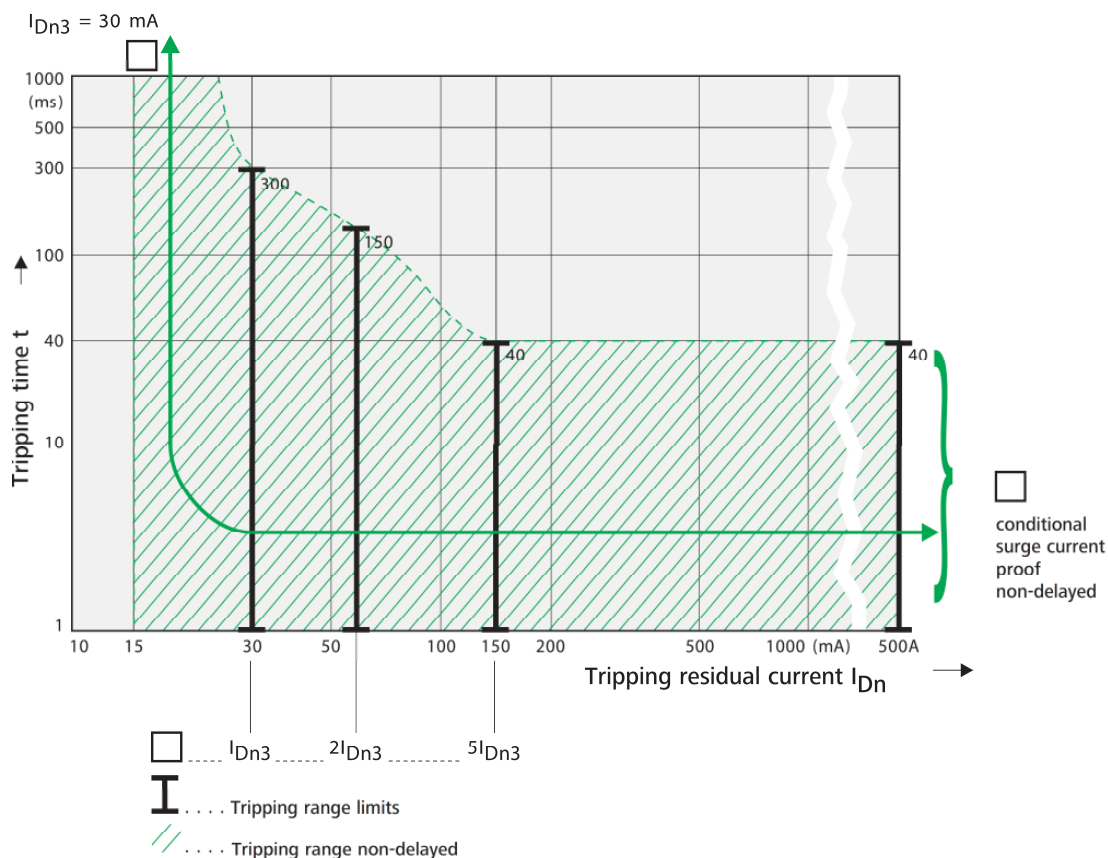
Power loss

Pole	I_N	$I_{\Delta n}$	Type	Power loss
2-pole	25 A	30mA	AC	1,3 W
2-pole	40 A	30mA	AC	5,8 W
2-pole	40 A	100mA, 300mA	AC	5,4 W
2-pole	63 A	30mA	AC	9,7 W
2-pole	63 A	100mA, 300mA	AC	7,2 W
2-pole	100 A	100mA, 300mA	AC	9,6 W

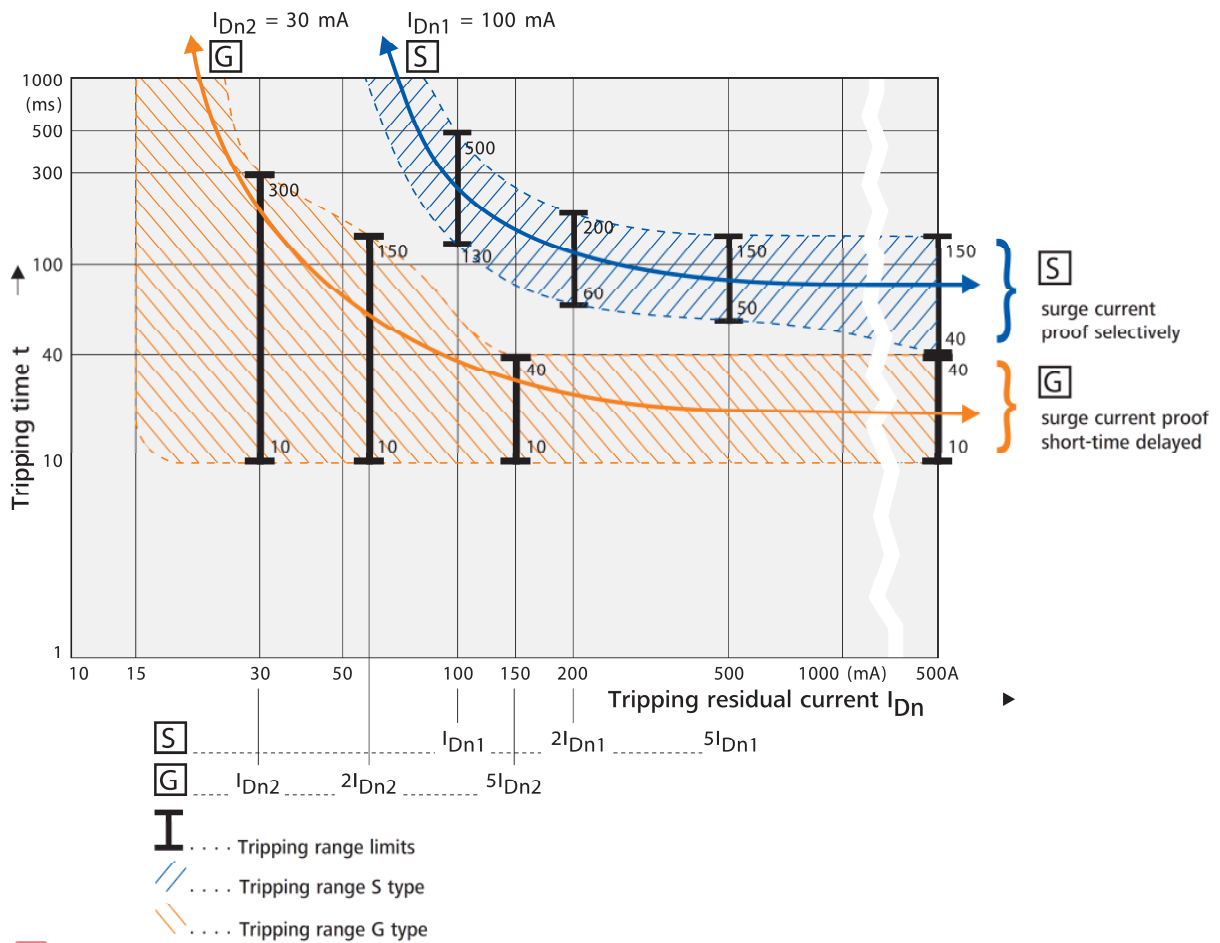
Pole	I_N	$I_{\Delta n}$	Type	Power loss
4-pole	25 A	30mA	AC	3,1 W
4-pole	40A	30mA	AC	9,6 W
4-pole	40A	100mA, 300mA	AC	8,4 W
4-pole	63A	30mA	AC	13,4 W
4-pole	63A	100mA, 300mA	AC	10,5 W

Tripping characteristics

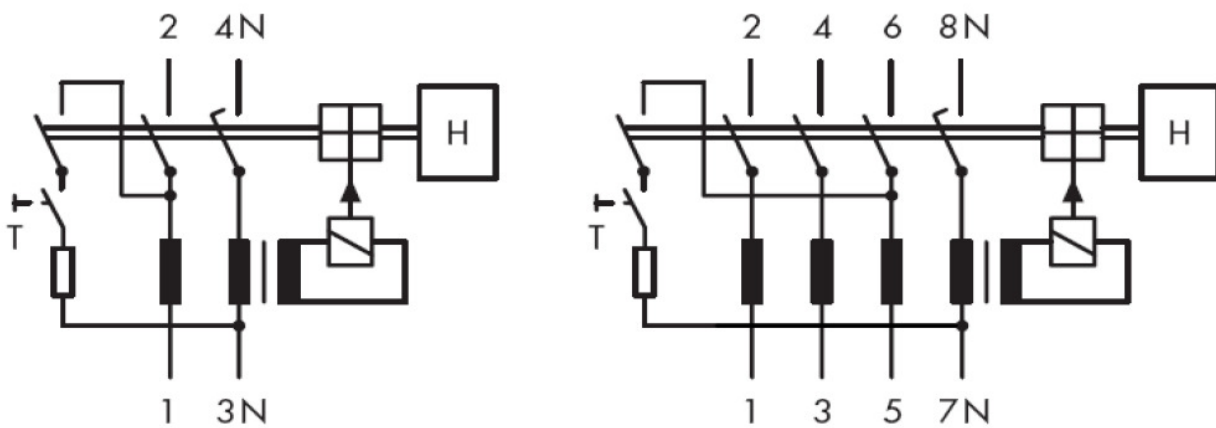
Typical residual current circuit breaker tripping characteristic, non-delayed



Typical residual current circuit breaker tripping characteristics **S** **G**, delayed



Wiring diagram test circuit



 Possible connections

Conductor cross-section	Number of single conductors, rigid, single-wire Cu conductors					
[mm ²]	1	2	3	4	5	6
1.5	+	+	+	+	+	-
2.5	+	+	+	+	-	-
4	+	+	+	+	-	-
6	+	+	+	+	-	-
10	+	+	+	-	-	-
16	+	+	-	-	-	-
25	+	-	-	-	-	-
35	+	-	-	-	-	-

Conductor cross-section	Number of single conductors, rigid, multi-wire Cu conductors					
[mm ²]	1	2	3	4	5	6
10	+	+	+	-	-	-
16	+	+	-	-	-	-
25	+	-	-	-	-	-
35	+	-	-	-	-	-

+ permissible
 - not permissible

Conductor cross-section	Number of single-conductors, flexible Cu conductors					
[mm ²]	1**	2*	3*	4*	5*	6*
1.5	+	-	-	-	+	-
2.5	+	-	+	+	-	-
4	+	+	+	+	-	-
6	+	+	+	+	-	-
10	+	+	-	-	-	-
16	+	+	-	-	-	-
25	+	-	-	-	-	-
35	+	-	-	-	-	-

*) Only without wire end and sleeve

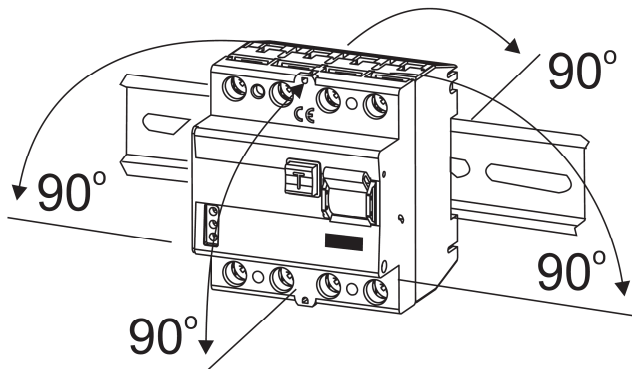
**) Only with wire end and sleeve

Conductor cross-section	Combinations of different cross-sections of flexible Cu conductors with each other								
[mm ²]	Permissible variations (without wire end sleeves)								
1.5	+	-	-	-	-	-	-	-	-
2.5	+	+	-	-	-	+	-	-	-
4	-	+	+	-	-	-	+	-	-
6	-	-	+	+	-	+	-	+	-
10	-	-	-	+	+	-	+	-	+
16	-	-	-	-	+	-	-	+	-
25	-	-	-	-	-	-	-	-	+
35	-	-	-	-	-	-	-	-	-

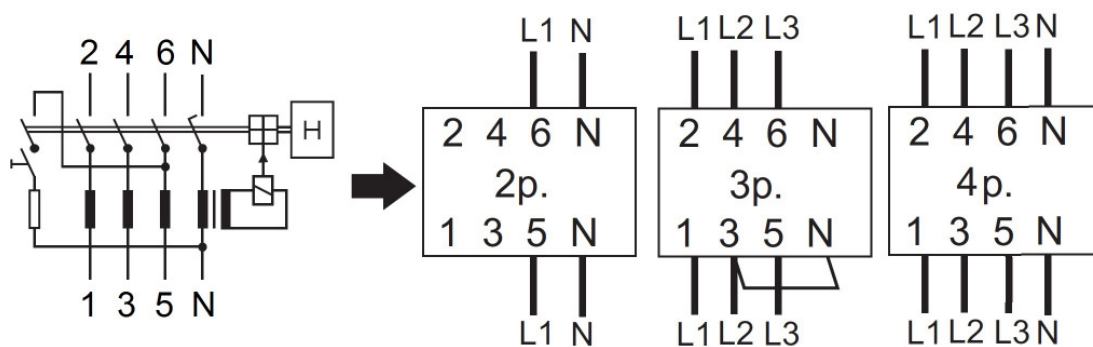
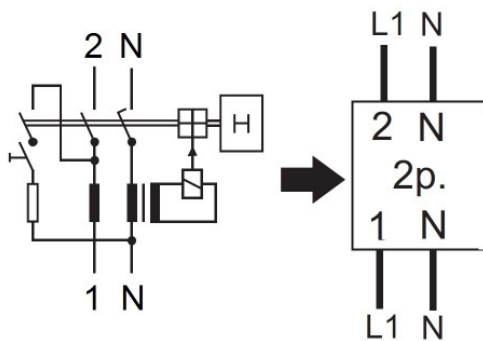
+ permissible
- not permissible

No combinations are permissible for rigid single- and multi-wire Cu conductors!

Installation-direction

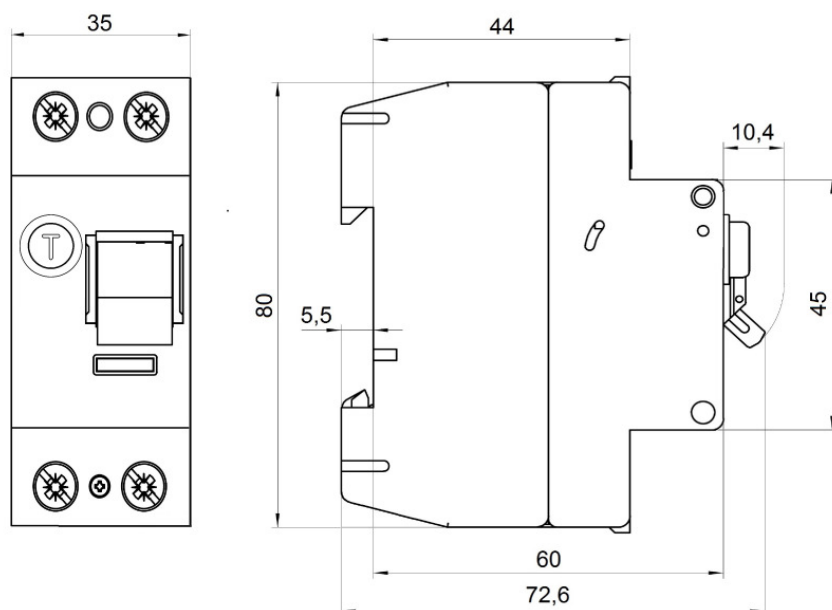


Wiring diagram

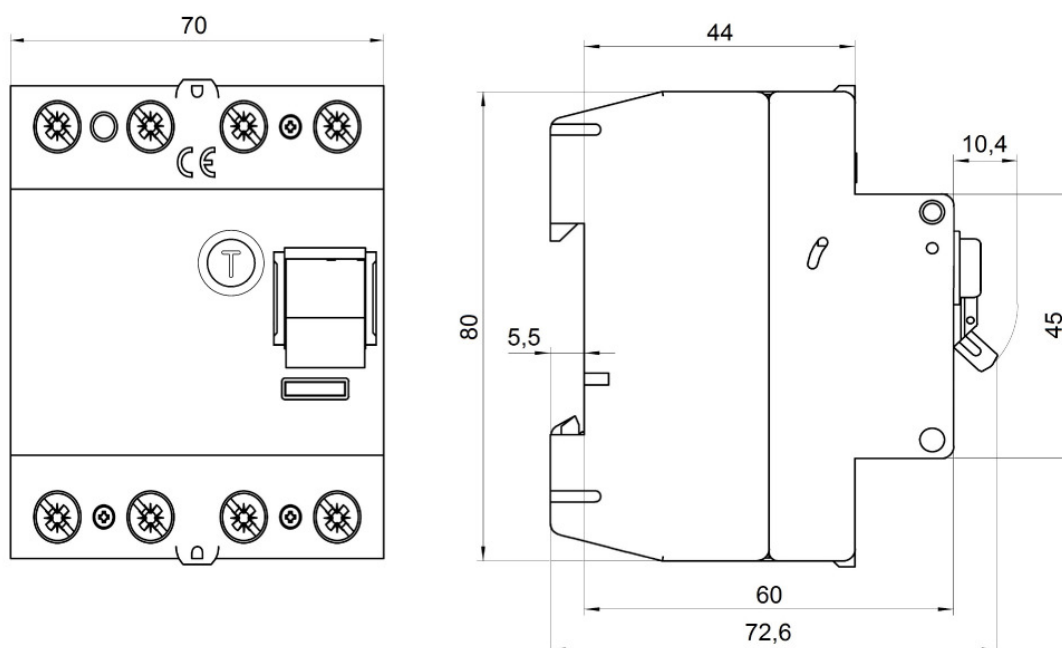


 Dimensiones

2-pole



4-pole



 Articles

RCCB Residual Current Circuit Breaker series BCF0, 10kA, type AC, Middle East

RCCB Residual Current Circuit Breaker series BCF0, 10kA, type AC, ME, 30mA

Description	Order no.
2-pole	
25A / 2 / 0,03A	BC002203ME
40A / 2 / 0,03A	BC004203ME
63A / 2 / 0,03A	BC006203ME
4-pole	
25A / 4 / 0,03A	BC002103ME
40A / 4 / 0,03A	BC004103ME
63A / 4 / 0,03A	BC006103ME

RCCB Residual Current Circuit Breaker series BCF0, 10kA, type AC, ME, 100mA

Description	Order no.
2-pole	
40A / 2 / 0,1A	BC004210ME
63A / 2 / 0,1A	BC006210ME
4-pole	
40A / 4 / 0,1A	BC004110ME
63A / 4 / 0,1A	BC006110ME

RCCB Residual Current Circuit Breaker series BCF0, 10kA, type AC, ME, 300mA

Description	Order no.
2-pole	
40A / 2 / 0,3A	BC004230ME
63A / 2 / 0,3A	BC006230ME
100A / 2 / 0,03A	BC000230ME
4-pole	
40A / 4 / 0,3A	BC004130ME
63A / 4 / 0,3A	BC006130ME