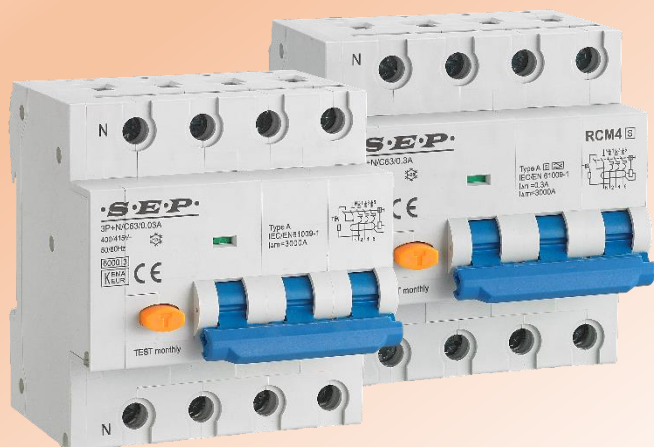


# RCBO RCM4 – 50/63A

## Data Sheet V1.0



The RCM4 RCBO's (residual current-breaker with overload protection) in 3p+n with a nominal current of 50 and 63 Ampère is specially developed for the growing demand of higher level RCBO's. This 3p+n RCBO has a width of 81mm (4,5 modules) and in combination with a high breaking capacity of 6kA makes it a unique product for the market and a valuable addition to the RCM4 series. The series ensures the best possible safety for people and equipment.



RCM4 50/63A residual current breaker with overcurrent protection

RCM4 is a RCBO compliant to product standard IEC/EN 61009 and with the following main technical features

- Breaking capacity 6kA
- Electromagnetic (IEC/EN 61009-2-1)
- Type A, A[S], A[G]
- Sensitivity 30, 100, 300 mA
- Tripping characteristics B – C
- 3p+n rated current 50A and 63A

### Application benefits

- Supply possible from top and bottom
- Fork type busbar connection (above and below) up to 16mm<sup>2</sup> and cable connection up to 35mm<sup>2</sup> cables.
- Toggle can be sealable in ON-OFF positions true a position inside attribute
- Family feeling in the SEP RCM4 range 1p+n and 3p+n RCBO's

CE

UK  
CA

CB

KEMA  
EUR

RoHS

# RCBO's RCM4 – 50/63A

## Technical Data



Electrical features	Type			RCM4
	Standards			IEC/EN 61009-1; IEC/EN 61009-2-1
	Certification			CE, UKCA, CB, KEMA KEUR
	Country of origin			CN
	RoHS Compliance Status			Compliant, No Exemption
	Type (wave form of the earth leakage sensed)			A – A[S]
	Number of poles			3p+n
	Rated current	In	A	50 ≤ In ≤ 63
	Rated sensitivity	IΔn	A	0.03 - 0.1 - 0.3
	Rated voltage	Ue	V	230 / 400
	Operating time	Type A		instantaneous
		Type A[G]		10ms delay (special order)
		Type A[S]		40ms delay
	Insulation voltage	Ui	V	500 V AC
	Overvoltage category			III
	Pollution degree			2
	Operating voltage of circuit test		V	230 - 485
	Rated frequency		Hz	50 - 60
	Rated breaking capacity acc. to IEC/EN 61009-1	Icu	A	6.000
	Rated breaking capacity acc. to IEC/EN 60947-2 (only referring to short circuit test)	Ultimate Icu	kA	6 - (10*)
		Service Ics	kA	4.5 - (50% Icn*)
	Rated residual breaking capacity IΔm according to EN 61009-1	IΔm	A	3.000
	Rated impulse withstand voltage (1.2/50) Uimp		kV	4
	Dielectric test voltage at ind. freq. for 1 min.		kV	2.5 kV (50 / 60Hz, 1 min.)
	Thermomagnetic release – characteristics	B: 3 In ≤ In ≤ 5 In		■
		C: 5 In ≤ In ≤ 10 In		■
	Energy limiting class acc. to EN 61009-1			3
	Surge current resistance (wave 8/20)			3000
Mechanical features	Housing			Insulation group I - II, RAL 7035
	Toggle			Insulation group II, RAL 5017
	Test button			Insulation group II, RAL 2000
	Contact position indication			Green / Red window
	Earth fault trip indication			White window
	Electrical life	operations		4.000
	Mechanical life	operations		10.000
	Protection degree acc. to EN 60529	housing		IP4X
		terminals		IP2X
	Shock resistance acc. to IEC/EN 60068-2-27			25g - 2 shocks - 13ms
	Vibration resistance acc. to IEC/EN 60068-2-6			0.1 mm or 1 g - 20 cycles at 5...150...5 Hz
	Environmental conditions (damp heat) acc. to IEC/EN 60068-2-30	°C/RH		28 cycles with 55°C/90-96% and 25°C/95-100%
	Reference temperature for setting of thermal element	°C		30
	Ambient temperature (with daily average ≤ +35 °C)	°C		-25... +40
	Storage temperature	°C		-40... +70

\* IEC/EN 60947-2 certificate and test-report are not available at present, the use of these values is the responsibility of the user

## RCBO's RCM4 – 50/63A

### Technical Data



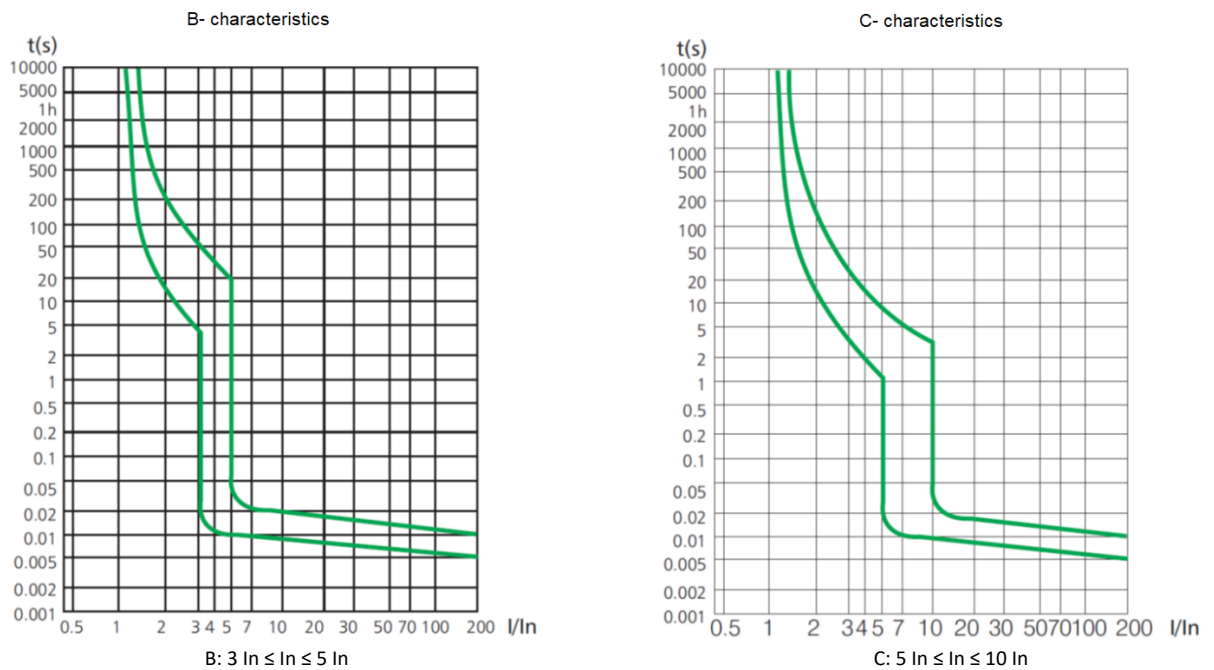
Type			RCM4		
Installation	Terminal type	bottom / top	Twin-purpose terminal (lift / open-mouthed)		
	Terminal size for cables	bottom / top	mm <sup>2</sup>	25/35	
	Terminal size for PIN busbar	bottom / top	mm <sup>2</sup>	10/16	
	Terminal size for FORK busbar	bottom / top	mm <sup>2</sup>	M6 - 10/16	
	Solid /stranded wiring			1x 1mm <sup>2</sup> - 35mm <sup>2</sup> 2 x 1mm <sup>2</sup> - 16mm <sup>2</sup> *	
	Flexible wires with or without ferrules			1x 1mm <sup>2</sup> - 25mm <sup>2</sup> 2 x 1mm <sup>2</sup> - 10mm <sup>2</sup> *	
	Tightening torque	bottom / top		2 Nm	
	Stripping length of the cable			10mm	
	Mounting			on DIN rail EN 60715 (35mm) by means of mounting clip	
	Mounting position			Any	
	Supply from			Top / bottom terminals	
	Dimensions (H x W x D)			mm	85 x 81 x 72
	Weight			kg	0,47
Packing	Packing A	QTY		1	
		Dimensions (H x W x D)	mm	92 x 83 x 77	
		Weight	kg	0,48	
	Packing B (x A)	QTY		2	
		Dimensions (H x W x D)	mm	182 x 100 x 88	
		Weight	kg	1	
	Packing C (x B)	QTY		20	
		Dimensions (H x W x D)	mm	505 x 195 x 95	
		Weight	kg	11,4	
	CN-code			85362010	
Combination with auxiliary elements	Auxiliary contact			Yes)	
	Signal contact / auxiliary contact			Yes	
	Shunt trip			NA	
	Auxiliary contact for bottom fitting			NA	
	Undervoltage release			NA	
	Overvoltage release			NA	
	Motor operating device			NA	

\* Check local installation rules, this type of connection is not advised. Special add-on terminals are available.

## RCBO's RCM4 – 50/63A

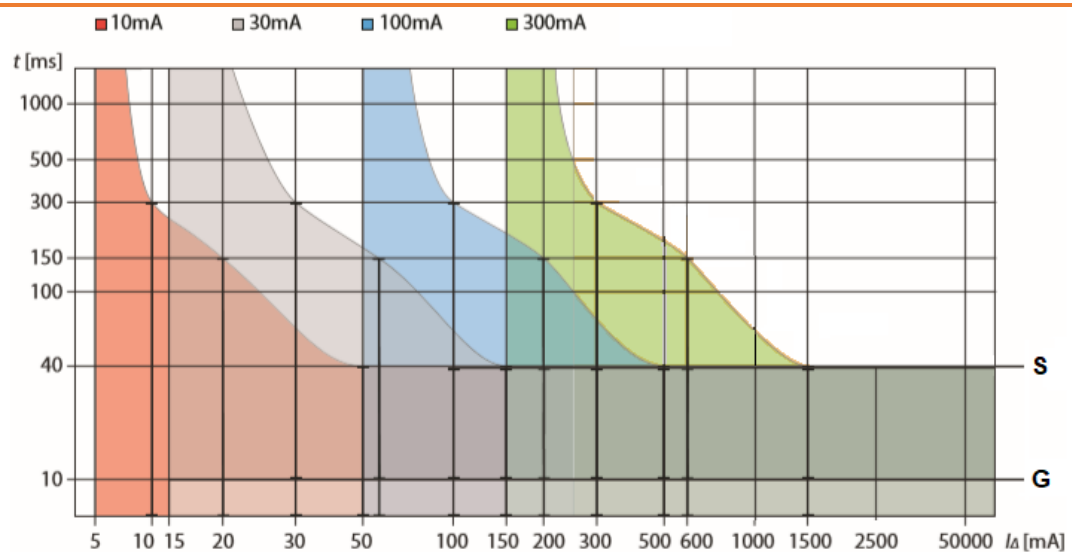
### Technical Data

#### Tripping characteristics



#### Tripping Characteristics (IEC/EN 61008)

Tripping characteristics, tripping time range and selectivity of instantaneous and surge current-proof – selective [S] residual current devices (surge current-proof [G] – only on special order available for RCM4).



## RCBO's RCM4 – 50/63A

### Technical Data

#### Performance in altitude\*

Elevation [m]	2000	3000	4000	5000	6000
Rated current [A]	1 x In	0,95 x In	0,92 x In	0,90 x In	0,88 x In
Rated voltage [V]	1 x Un	0,85 x Un	0,75 x Un	0,65 x Un	0,55 x Un

\* the RCBO is designed for standard level operations, performance information on higher altitude is not available

#### Derating in temperature RCM4

Max operating current depending on the ambient temperature (daily average  $\leq +35$  °C) of characteristics type B and C.

In [A]	Ambient temperature [°C]										
	-25	-15	-5	10	30	40	45	55	60	65	70
50	63	60.8	57	55	50	47.2	45.3	44	42,8	41,5	40.1
63	78	74.2	70.3	65.2	63	60.2	58.6	57.2	55.8	53.9	50.6

#### Influence of adjacent devices

Number of devices	1	2-3	4-5	6-9	$\geq 10$
Correction factor	1	0,9	0,8	0,7	0,6

These values are provided by recommendation IEC 61439-1 and standards EN 61439-1. In order to avoid having to use these coefficients there must be good ventilation and the devices must be kept apart using the spacing element article number 2119000010 (0.5 module).

#### Power loss, resistance, voltage drop

RCM4 (3p+N)

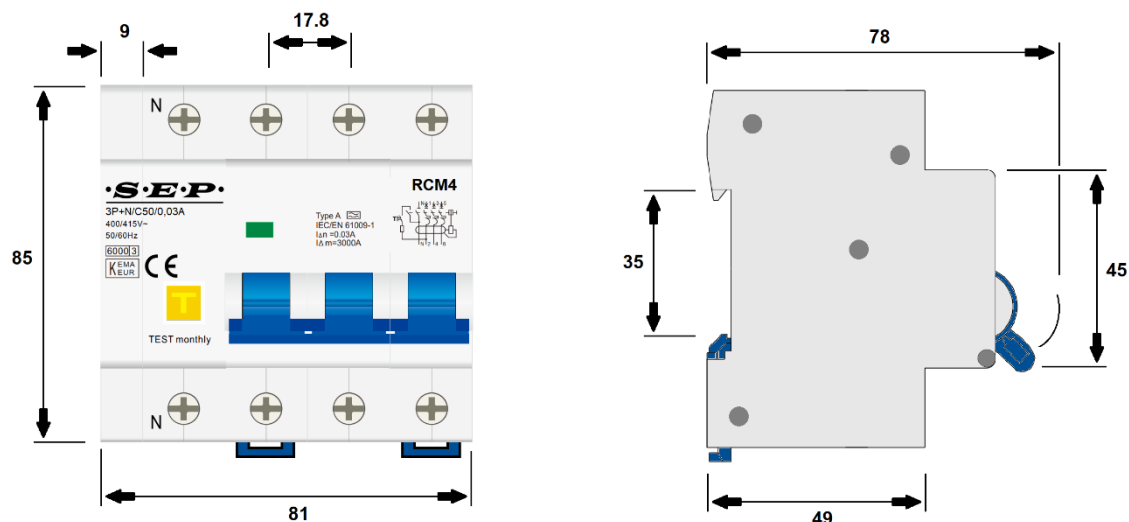
In [A]	Component resistance [mΩ]	Component voltage drop [V]	Component power loss [W]
50	10,1	0,5	25,1
63	9,5	0,6	37,5

## RCBO's RCM4 – 50/63A

### Technical Data

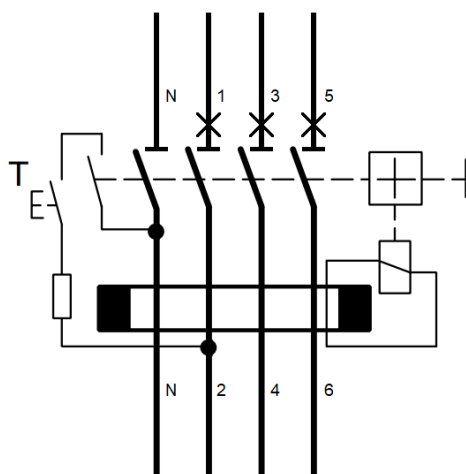
#### Overall dimensions

All measurements in mm



RCM1-4 (3p+N)

#### Connection diagram



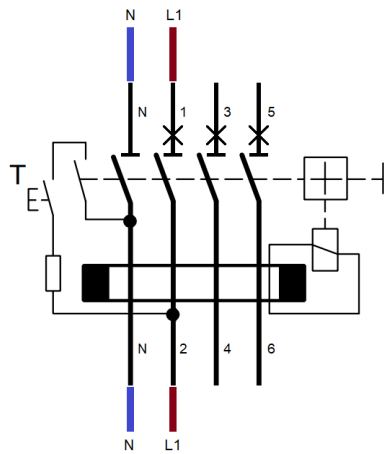
RCM1-4 (3p+n)

## RCBO's RCM4 – 50/63A

### Technical Data

#### Wiring options

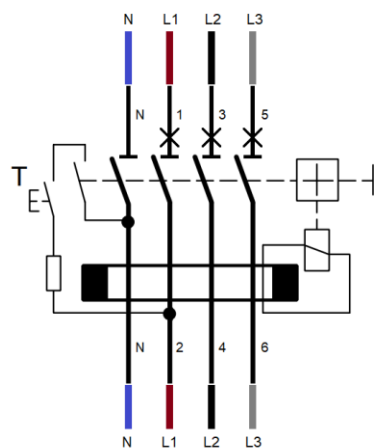
##### 1 Phase systems



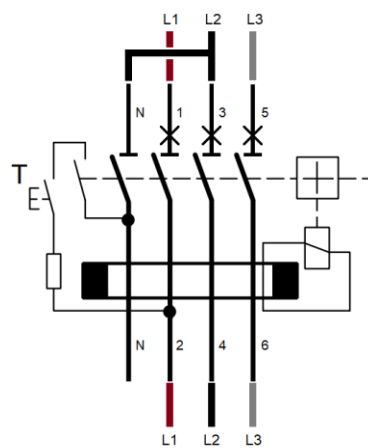
RCM4 (3p+n)

#### Wiring options

##### 3 Phase systems



3 Phase and Neutral



3 Phase + bridge\*

\* If there is no neutral, the RCBO will be connected normally but a bridge (article no. 2305181002) will need to be added across terminals N/3, as shown, will cause a voltage drop which leaves the test circuit at a suitable normal operation range.

## RCBO's RCM4 – 50/63A

### Order codes

RCM4



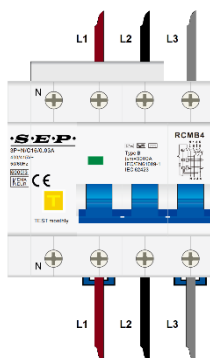
IΔn	Inom	B characteristics			C characteristics		
		A	A[G]*	A[S]	A	A[G]*	A[S]
30mA	50 A	3104640050			3104650050		
	63 A	3104640063			3104650063		
100mA	50 A	3104640250		3104645250	3104650250		3104655250
	63A	3104640263		3104645263	3104650263		3104655263
300mA	6 A	3104641050		3104645050	3104651050		3104655050
	63 A	3104641063		3104645063	3104651063		3104655063
Auxiliary contact 1CO		3104000010					
Alarming contact 1CO		3104000020					



\* Type A[G] – available through special order

### Bridge connector

#### Reference image



#### Description

BRIDGE connector for 3 phase systems without neutral.

#### Code


2305181002




## RCBO's RCM4 – 50/63A

### Order codes accessories


#### Add-on terminals

Reference image	Wire size	PIN		FORK	
		Grey	Blue	Grey	Blue
	1x50mm <sup>2</sup> solid/stranded 1x35mm <sup>2</sup> flexible	2115900060	2115900120	2115900090	2115900150
	2x25mm <sup>2</sup> solid/stranded 2x16mm <sup>2</sup> flexible	2115900070	2115900130	2115900100	2115900160
	3x16mm <sup>2</sup> solid/stranded 3x10mm <sup>2</sup> flexible	2115900080	2115900140	2115900110	2115900170

#### Marker - spacer

Reference image	Description	Code
	Component Spacer 0,5mm	2119000010

#### Lockout

Reference image	Description	Code
	Lockout set - complete	2115909099
	Locking devices adaptor	2115909015
	Locking device screw adaptor	2115909010
	Padlock with 2 identical keys	2115909020
	Warning tag (English)	2115909030

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