

## Residual Current Circuit Breaker



FAMC

Model		HRC63, 63 AF	HRC100, 100 AF
Reference Standard		IEC/EN 61008-1	IEC/EN 61008-1
Number of Poles		2P (1P+N), 4P (3P+N)	2P (1P+N), 4P (3P+N)
Rated Current	(In)	16, 25, 40, 50, 63 A	80, 100 A
Rated Voltage	(Ue)	AC 240/415 V	AC 240/415 V
Rated Frequency	(Hz)	50/60	50/60
Rated Conditional Short Circuit Current	(Inc)	10 kA	10 kA
Rated Residual Operating Current	(I∆n)	30, 100, 300	30, 100, 300
Rated Making Breaking Capacity	(lm)	630 A or 10 ln whichever is greater	630 A or 10 In whichever is greater
Rated Insulation Voltage	(Ui)	500 V	500 V
Rated Impulse Voltage	(Uimp)	4 kV	4 kV
Operating Characteristics in Presen Residual Current with d.c Compone		'A' Type & 'AC' Type	'A' Type & 'AC' Type
Trip Time		1 I∆n < 300 ms, 5 I∆n < 40 ms	1 I∆n < 300 ms, 5 I∆n < 40 ms
Dielectric Strength		2.5 kV	2.5 kV
Electrical/Mechanical Endurance (no. of operations) Minimum		10,000/20,000	10,000/20,000
Busbar Connections		Pin/Fork Type	Pin/Fork Type
Auxiliary Contacts		0	×

### Standard HRC Type

Model		HRC63S, 63 AF	HRC100S, 100 AF
Reference Standard		IEC/EN 61008-1	IEC/EN 61008-1
Number of Poles		2P (N+1P), 4P (N+3P)	2P (N+1P), 4P (N+3P)
Rated Current	(In)	16, 25, 32, 40, 50, 63 A	80, 100 A
Rated Voltage	(Ue)	AC 240/415 V	AC 240/415 V
Rated Frequency	(Hz)	50/60	50/60
Rated Conditional Short Circuit Current	(Inc)	6 kA	6 kA
Rated Residual Operating Current	(I∆n)	30, 100, 300, 500 mA	30, 100, 300, 500 mA
Rated Making Breaking Capacity	(lm)	500 A or 10 In whichever is greater	500 A or 10 In whichever is greater
Rated Insulation Voltage	(Ui)	690 V	690 V
Rated Impulse Voltage	(Uimp)	4 kV	4 kV
Operating Characteristics in Presen Residual Current with d.c Compone		'A' Туре & 'AC' Туре	'A' Туре & 'AC' Туре
Trip Time		1 IΔn < 300 ms, 5 IΔn < 40 ms	1 IΔn < 300 ms, 5 IΔn < 40 ms
Dielectric Strength		2.5 kV	2.5 kV
Electrical/Mechanical Endurance (no. of operations) Minimum		10,000/20,000	10,000/20,000
Busbar Connections		Pin/Fork Type	Pin/Fork Type
Auxiliary Contacts		×	×

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22 | LV & MV Circuit Breakers and Contactors



# Residual Current Circuit Breaker with Overcurrent Protection

#### **RCD** Type

Model				
Model		HRO63S, 63 AF, 4.5 kA	HRO63M, 63 AF, 6 kA	HRO63P, 63 AF, 10 kA
Reference Standard		IEC/EN 61009-1	IEC/EN 61009-1	IEC/EN 61009-1
Number of Poles		1P+N	1P+N, 2P ,3P, 3P+N, 4P	1P+N, 2P ,3P, 3P+N, 4P
N Phase Position		Right	Right	Right
Rated Current	(In)	1, 2, 3, 4, 5, 6, 10, 16, 20, 25, 32, 40, 50, 63 A	1, 2, 3, 4, 5, 6, 10, 16, 20, 25, 32, 40, 50, 63 A	1, 2, 3, 4, 5, 6, 10, 16, 20, 25, 32, 40, 50, 63 A
Rated Voltage	(Ue)	AC 240 V	AC 240/415 V	AC 240/415 V
Rated Frequency	(Hz)	50/60	50/60	50/60
Rated Short Circuit Current	(Icn)	4.5 kA (Ics = 100 % Icn)	6 kA (Ics = 100 % Icn)	10 kA (Ics = 75 % Icn)
Rated Residual Operating Current	(I∆n)	10, 30, 100, 300, 500 mA	10, 30, 100, 300, 500 mA	10, 30, 100, 300, 500 mA
Rated Residual Making Breaking Capacity	(l∆m)	3 kA	3 kA	3 kA
Rated Insulation Voltage	(Ui)	500 V	500 V	500 V
Rated Impulse Voltage	(Uimp)	4 kV	4 kV	4 kV
Magnetic Release Setting		(3-5)In - B Curve (5-10)In - C Curve (10-20)In - D Curve	(3-5)In - B Curve (5-10)In - C Curve (10-20)In - D Curve	(3-5)In - B Curve (5-10)In - C Curve (10-20)In - D Curve
Operating Characteristics in Preser Residual Current with d.c Compone		'A' Туре & 'AC' Туре	'A' Туре & 'AC' Туре	'A' Type & 'AC' Type
Trip Time		1 I∆n < 300 ms, 5 I∆n < 40 ms	1 I∆n < 300 ms, 5 I∆n < 40 ms	1 I∆n < 300 ms, 5 I∆n < 40 ms
Dielectric Strength		2.5 kV	2.5 kV	2.5 kV
Electrical/Mechanical Endurance (no. of operations) Minimum		10,000/20,000	10,000/20,000	10,000/20,000
Busbar Connections		-	-	-
AUX/ALT/SHT/UVT		0	0	0

تهران ، کیلومتر ۲۱ بزرگراه لشگری (جاده مخصوص کرج)

روبـروی پالایشگاه نفت پارس، پلاک ۱۲

# Residual Current Circuit Breaker with Overcurrent Protection

### Standard HRO Type

**FFIMC** هايپرمىنعت

Model		HRO40M, 40 AF, 6 kA	HRO40P, 40 AF, 10 kA	HRO40ML, 40 AF, 6 kA (with Cable)	HRO40PL, 40 AF, 10 kA (with Cable)
Reference Standard		IEC/EN 61009-1	IEC/EN 61009-1	IEC/EN 61009-1	IEC/EN 61009-1
Number of Poles		N+1P (1 module)	N+1P (1 module)	N+1P (1 module)	N+1P (1 module)
N Phase Position		Left	Left	Left	Left
Rated Current	(In)	6, 10, 13, 16, 20, 25, 32, 40 A	6, 10, 13, 16, 20, 25, 32, 40 A	6, 10, 13, 16, 20, 25, 32, 40 A	6, 10, 13, 16, 20, 25, 32, 40 A
Rated Voltage	(Ue)	AC 240 V	AC 240 V	AC 240 V	AC 240 V
Rated Frequency	(Hz)	50/60	50/60	50/60	50/60
Rated Short Circuit Current	(Icn)	6 kA (Ics = 100 % Icn)	10 kA (Ics = 75 % Icn)	6 kA (Ics = 100 % Icn)	10 kA (Ics = 75 % Icn)
Rated Residual Operating Current	(I∆n)	10, 30, 100, 300 mA			
Rated Residual Making Breaking Capacity	(l∆m)	3 kA	3 kA	3 kA	3 kA
Rated Insulation Voltage	(Ui)	500 V	500 V	500 V	500 V
Rated Impulse Voltage	(Uimp)	4 kV	4 kV	4 kV	4 kV
Magnetic Release Setting		(3-5)In - B Curve (5-10)In - C Curve			
Operating Characteristics in Preser Residual Current with d.c Compone		'A' Type & 'AC' Type			
Trip Time		1 I∆n < 300 ms, 5 I∆n < 40 ms	1 I∆n < 300 ms, 5 I∆n < 40 ms	1 I∆n < 300 ms, 5 I∆n < 40 ms	1 I∆n < 300 ms, 5 I∆n < 40 ms
Dielectric Strength		2.5 kV	2.5 kV	2.5 kV	2.5 kV
Electrical/Mechanical Endurance (no. of operations) Minimum		10,000/20,000	10,000/20,000	10,000/20,000	10,000/20,000
Busbar Connections		-	-	Pin/Fork Type	Pin/Fork Type
AUX/ALT/SHT/UVT		×	×	×	×

Model		HiRO40L, 40 AF, 6 kA (with Cable)	HiRO40T, 40 AF, 6 kA (with Cable)	HiRO40hT, 40 AF, 10 kA (with Cable)
Reference Standard		IEC/EN 61009-1	IEC/EN 61009-1	IEC/EN 61009-1
Number of Poles		1P+N (1 module)	1P+N (1 module)	1P+N (1 module)
N Phase Position		-	-	-
Rated Current	(In)	6, 10, 16, 20, 25, 32, 40 A	6, 10, 16, 20, 25, 32, 40 A	6, 10, 16, 20, 25, 32, 40 A
Rated Voltage	(Ue)	AC 240 V	AC 240 V	AC 240 V
Rated Frequency	(Hz)	50/60	50/60	50/60
Rated Short Circuit Current	(Icn)	6 kA (Ics = 100 % Icn)	6 kA (Ics = 100 % Icn)	10 kA (Ics = 75 % Icn)
Rated Residual Operating Current	(I∆n)	10, 30, 100, 300 mA	10, 30, 100, 300 mA	10, 30, 100, 300 mA
Rated Residual Making Breaking Capacity	(l∆m)	500 A	500 A	500 A
Rated Insulation Voltage	(Ui)	500 V	500 V	500 V
Rated Impulse Voltage	(Uimp)	4 kV	4 kV	4 kV
Magnetic Release Setting		(3-5)In - B Curve (5-10)In - C Curve	(3-5)In - B Curve (5-10)In - C Curve	(3-5)In - B Curve (5-10)In - C Curve
Operating Characteristics in Preser Residual Current with d.c Compone		'A' Type & 'AC' Type	'A' Type & 'AC' Type	'A' Туре & 'AC' Туре
Trip Time		1 I∆n < 300 ms, 5 I∆n < 40 ms	1 I∆n < 300 ms, 5 I∆n < 40 ms	1 I∆n < 300 ms, 5 I∆n < 40 ms
Dielectric Strength		2.5 kV	2.5 kV	2.5 kV
Electrical/Mechanical Endurance (no. of operations) Minimum		10,000/20,000	10,000/20,000	10,000/20,000
Busbar Connections		Pin/Fork Type	Pin/Fork Type	Pin/Fork Type
AUX/ALT/SHT/UVT		×	×	×

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