
<i>Presentation</i>	2
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Residual-current protection relays or monitoring relays	433E5100/4
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Residual-current relay RH10E



Protection against direct and indirect contact + fire
 Network BT 50/60 Hz
 Sensitivity 0.03 or 0.3 A
 Time delay 0 s

RH10E			
		$I_{\Delta n} = 30 \text{ mA}$	$I_{\Delta n} = 300 \text{ mA}$
Single phase auxiliary power supply (V)	48 V AC 50/60 Hz	50450	50453
	48 to 120 V DC		
	110 to 130 V AC 50/60 Hz	50449	50452
	220 to 240 V AC 50/60 Hz	50451	50454
	380 to 415 V AC 50/60 Hz	50621	50623

Residual-current relay RH240E



Protection against direct and indirect contact + fire
 Network BT 50/60 Hz
 Sensitivity 0.03 to 25 A
 Time delay 0 s

RH240E			
Single phase auxiliary power supply (V)	48 V AC 50/60 Hz		50456
	48 to 120 V DC		
	110 to 130 V AC 50/60 Hz		50455
	220 to 240 V AC 50/60 Hz		50457
	380 to 415 V AC 50/60 Hz		50628

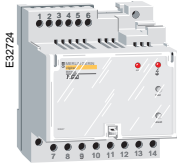
Residual-current relay RH248E



Protection against direct and indirect contact + fire + motor
 Network BT 50/60 Hz
 Sensitivity 0.03 to 25 A
 Time delay 0 to 1 s

RH248E			
Single phase auxiliary power supply (V)	48 V AC 50/60 Hz		50459
	48 to 120 V DC		
	110 to 130 V AC 50/60 Hz		50458
	220 to 240 V AC 50/60 Hz		50460
	380 to 415 V AC 50/60 Hz		50633

Residual-current relay RH10A



Protection against direct and indirect contact + fire
 Network BT 50/60/400 Hz
 Sensitivity 0.03 to 0.3 A
 Time delay 0 s

RH10A			
		$I_{\Delta n} = 30 \text{ mA}$	$I_{\Delta n} = 300 \text{ mA}$
Single phase auxiliary power supply (V)	48 V AC 50/60 Hz	50733	50736
	48 to 120 V DC		
	110 to 130 V AC 50/60 Hz	50732	50735
	220 to 240 V AC 50/60 Hz	50734	50737
	380 to 415 V AC 50/60 Hz	50638	50641
	440 to 480 V AC 50/60 Hz	50639	50642

Residual-current relay RH320A



Protection against direct and indirect contact + fire + earth conductor
 Network BT 50/60/400 Hz
 Sensitivity 0.03 to 250 A
 Time delay 0 s

RH320A			
Single phase auxiliary power supply (V)	48 V AC 50/60 Hz		50739
	48 to 120 V DC		
	110 to 130 V AC 50/60 Hz		50738
	220 to 240 V AC 50/60 Hz		50740
	380 to 415 V AC 50/60 Hz		50647
	440 to 480 V AC 50/60 Hz		50648

Residual-current relay RH328A



Protection against direct and indirect contact + fire + earth conductor + motor

Network BT 50/60/400 Hz
Sensitivity 0.03 to 250 A
Time delay 0 to 1 s

RH328A		Standard latched relay + fail safe latched relay	Standard unlatched relay + fail safe unlatched relay
Single phase auxiliary power supply (V)	12 V DC	50661	
	24 V DC	50662	
	48 V AC 50/60 Hz	50743	50746
	48 to 120 V DC		
	110 to 130 V AC 50/60 Hz	50742	50745
	220 to 240 V AC 50/60 Hz	50744	50747
	380 to 415 V AC 50/60 Hz	50653	50657
440 to 480 V AC 50/60 Hz	50654	50658	
500 to 525 V AC 50/60 Hz	50655	50659	

Residual-current relay RH10AP



Protection against indirect contact + fire

Network BT 50/60/400 Hz
Sensitivity 0.3 or 1 A + warning
Time delay 0 s

RH10AP		I _{Δn} = 300 mA	I _{Δn} = 1 A
Single phase auxiliary power supply (V)	220 to 240 V AC 50/60 Hz	50663	50666
	380 to 415 V AC 50/60 Hz	50664	50667
	440 to 480 V AC 50/60 Hz	50665	50668

Residual-current relay RH320AP



Protection against direct and indirect contact + fire + earth conductor

Network BT 50/60/400 Hz
Sensitivity 0.03 to 250 A + warning
Time delay 0 s

RH320AP		
Single phase auxiliary power supply (V)	220 to 240 V AC 50/60 Hz	50672
	380 to 415 V AC 50/60 Hz	50673
	440 to 480 v AC 50/60 hz	50674
	500 to 525 V AC 50/60 Hz	50675

Residual-current relay RH328AP



Protection against direct and indirect contact + fire + earth conductor + motor

Network BT 50/60/400 Hz
Sensitivity 0.03 to 250 A + warning
Time delay 0 to 1 s

RH328AP		Latched relay	Unlatched relay
Single phase auxiliary power supply (V)	220 to 240 V AC 50/60 Hz	50679	50683
	380 to 415 V AC 50/60 Hz	50680	50684
	440 to 480 V AC 50/60 Hz	50681	50685
	500 to 525 V AC 50/60 Hz	50682	50686

Residual-current relay RH328AF



Protection against direct contact (30 mA)

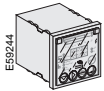
Specific for command motor by Telemecanique ATV66 variable speed controller

RH328AF		
Single phase auxiliary power supply (V)	220 to 240 V AC 50/60 Hz	50055

Residual-current relay RHU

Protection against direct and indirect contact + fire + earth conductor + motor

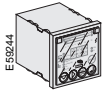
Network BT 50/60/400 Hz
Sensitivity 1 or 100 mA + warning
Time delay 0 to 5 s



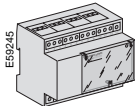
RHU		
Single phase auxiliary power supply (V)	220 to 240 V AC 50/60 Hz	28560

Earth leakage monitor RMH + multiplexer RM12T

Network BT 50/60/400 Hz
Sensitivity 1 or 100 mA + warning
Time delay 0 to 5 s



RMH		
Single phase auxiliary power supply (V)	220 to 240 V AC 50/60 Hz	28563



RM12T		28566
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Accessories

IP55 front cover for RHU/RMH

	28567
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Toroid-relay link

Screened cable (cable size 0.22 mm²)		
	1 conductor	2 conductors
Roll of 20 m	50157	50137
Roll of 100 m	50158	50136

Toroids for RH10A/AP - RH320A/AP - RH328A/AP - RHU - RMH + RM12T



Closed toroid, type A		
Type	Ø (mm)	
TA	30	50437
PA	50	50438
IA	80	50439
MA	120	50440
SA	200	50441
GA	300	50442



Opening toroid, type OA		
Type	Ø (mm)	
POA	46	50485
GOA	110	50486

Toroids for RH10E - RH240E - RH248E

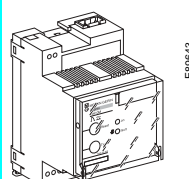


Closed toroid, type E		
Type	Ø (mm)	
TE30	30	50430
PE50	50	50431
IE80	80	50432
ME120	120	50433
SE200	200	50434

RH10 with local manual fault reset

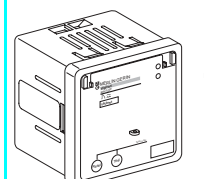
System to be protected LV ≤ 1000 V

RH10M



DIN-rail mount.

RH10P



Front-panel mount.

Sensitivity 0.03 A - instantaneous

Power supply	12 to 24 V AC - 12 to 48 V DC	50/60 Hz	56100	56200
	48 V AC	50/60 Hz	56110	56210
	110 to 130 V AC	50/60 Hz	56120	56220
	220 to 240 V AC	50/60/400 Hz	56130	56230
	380 to 415 V AC	50/60 Hz	56140	56240
	440 to 525 V AC	50/60 Hz	56150	56250

Sensitivity 0.05 A - instantaneous

Power supply	12 to 24 V AC - 12 to 48 V DC	50/60 Hz	56101	56201
	48 V AC	50/60 Hz	56111	56211
	110 to 130 V AC	50/60 Hz	56121	56221
	220 to 240 V AC	50/60/400 Hz	56131	56231
	380 to 415 V AC	50/60 Hz	56141	56241
	440 to 525 V AC	50/60 Hz	56151	56251

Sensitivity 0.1 A - instantaneous

Power supply	12 to 24 V AC - 12 to 48 V DC	50/60 Hz	56102	56202
	48 V AC	50/60 Hz	56112	56212
	110 to 130 V AC	50/60 Hz	56122	56222
	220 to 240 V AC	50/60/400 Hz	56132	56232
	380 to 415 V AC	50/60 Hz	56142	56242
	440 to 525 V AC	50/60 Hz	56152	56252

Sensitivity 0.15 A - instantaneous

Power supply	12 to 24 V AC - 12 to 48 V DC	50/60 Hz	56103	56203
	48 V AC	50/60 Hz	56113	56213
	110 to 130 V AC	50/60 Hz	56123	56223
	220 to 240 V AC	50/60/400 Hz	56133	56233
	380 to 415 V AC	50/60 Hz	56143	56243
	440 to 525 V AC	50/60 Hz	56153	56253

Sensitivity 0.25 A - instantaneous

Power supply	12 to 24 V AC - 12 to 48 V DC	50/60 Hz	56104	56204
	48 V AC	50/60 Hz	56114	56214
	110 to 130 V AC	50/60 Hz	56124	56224
	220 to 240 V AC	50/60/400 Hz	56134	56234
	380 to 415 V AC	50/60 Hz	56144	56244
	440 to 525 V AC	50/60 Hz	56154	56254

Sensitivity 0.3 A - instantaneous

Power supply	12 to 24 V AC - 12 to 48 V DC	50/60 Hz	56105	56205
	48 V AC	50/60 Hz	56115	56215
	110 to 130 V AC	50/60 Hz	56125	56225
	220 to 240 V AC	50/60/400 Hz	56135	56235
	380 to 415 V AC	50/60 Hz	56145	56245
	440 to 525 V AC	50/60 Hz	56155	56255

Sensitivity 0.5 A - instantaneous

Power supply	12 to 24 V AC - 12 to 48 V DC	50/60 Hz	56106	56206
	48 V AC	50/60 Hz	56116	56216
	110 to 130 V AC	50/60 Hz	56126	56226
	220 to 240 V AC	50/60/400 Hz	56136	56236
	380 to 415 V AC	50/60 Hz	56146	56246
	440 to 525 V AC	50/60 Hz	56156	56256

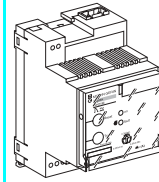
Sensitivity 1 A - instantaneous

Power supply	12 to 24 V AC - 12 to 48 V DC	50/60 Hz	56107	56207
	48 V AC	50/60 Hz	56117	56217
	110 to 130 V AC	50/60 Hz	56127	56227
	220 to 240 V AC	50/60/400 Hz	56137	56237
	380 to 415 V AC	50/60 Hz	56147	56247
	440 to 525 V AC	50/60 Hz	56157	56257

RH21 with local manual fault reset

System to be protected LV ≤ 1000 V

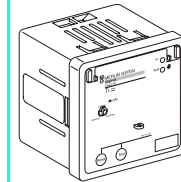
RH21M



EB9649

DIN-rail mount.

RH21P



EB9650

Front-panel mount.

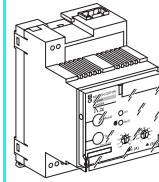
Sensitivity 0.03 A - instantaneous Sensitivity 0.3 A - instantaneous or with 0.06 s time delay

Power supply	12 to 24 V AC - 12 to 48 V DC	50/60 Hz	56160	56260
	48 V AC	50/60 Hz	56161	56261
	110 to 130 V AC	50/60 Hz	56162	56262
	220 to 240 V AC	50/60/400 Hz	56163	56263
	380 to 415 V AC	50/60 Hz	56164	56264
	440 to 525 V AC	50/60 Hz	56165	56265

RH99 with local manual fault reset

System to be protected LV ≤ 1000 V

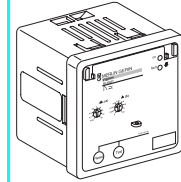
RH99M



EB9645

DIN-rail mount.

RH99P



EB9646

Front-panel mount.

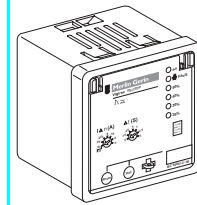
Sensitivity 0.03 A to 30 A - instantaneous or with 0 to 4.5 s time delay

Power supply	12 to 24 V AC - 12 to 48 V DC	50/60 Hz	56170	56270
	48 V AC	50/60 Hz	56171	56271
	110 to 130 V AC	50/60 Hz	56172	56272
	220 to 240 V AC	50/60/400 Hz	56173	56273
	380 to 415 V AC	50/60 Hz	56174	56274
	440 to 525 V AC	50/60 Hz	56175	56275

RH197P with local manual or automatic fault reset (1)

System to be protected LV ≤ 1000 V

RH197P



DE100864

Alarm: 50% of fault threshold - instantaneous Fault: sensitivity 30 mA to 30 A - instantaneous or with 0 to 4.5 s time delay

Single-phase power supply	48 V AC - 24 to 130 V DC	50/60 Hz	56505
	110 to 130 V AC	50/60 Hz	56506
	220 to 240 V AC	50/60/400 Hz	56507
	380 to 415 V AC	50/60 Hz	56508

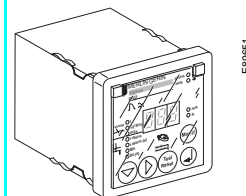
(1) Selected via a switch.

Residual-current protection relays

RHUs with local manual fault reset

System to be protected LV ≤ 1000 V

RHUs



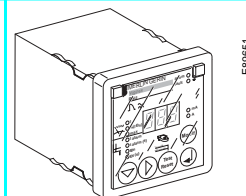
Alarm: sensitivity 15 mA to 30 A - instantaneous or with 0 to 4.5 s time delay
Fault: sensitivity 30 mA to 30 A - instantaneous or with 0 to 4.5 s time delay

Single-phase power supply	48 V AC	50/60 Hz	28576
	110 to 130 V AC	50/60 Hz	28575
	220 to 240 V AC	50/60/400 Hz	28573
	380 to 415 V AC	50/60 Hz	28574

RHU with local manual fault reset (communicating)

System to be protected LV ≤ 1000 V

RHU



Alarm: sensitivity 15 mA to 30 A - instantaneous or with 0 to 4.5 s time delay
Fault: sensitivity 30 mA to 30 A - instantaneous or with 0 to 4.5 s time delay

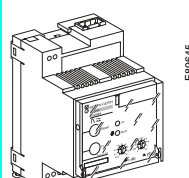
Single-phase power supply	48 V AC	50/60 Hz	28570
	110 to 130 V AC	50/60 Hz	28569
	220 to 240 V AC	50/60/400 Hz	28560
	380 to 415 V AC	50/60 Hz	28568

Monitoring relays

RH99 with automatic fault reset

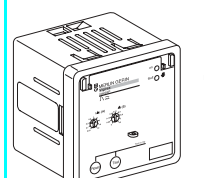
System to be protected LV ≤ 1000 V

RH99M



DIN-rail mount.

RH99P



Front-panel mount.

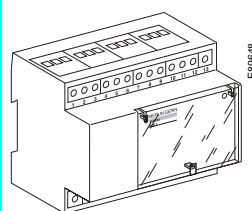
Sensitivity 0.03 A - instantaneous
Sensitivity 0.1 A to 30 A - instantaneous or with 0 s to 4.5 s time delay

Power supply	12 to 24 V AC - 12 to 48 V DC	50/60 Hz	56190	56290
	48 V AC	50/60 Hz	56191	56291
	110 to 130 V AC	50/60 Hz	56192	56292
	220 to 240 V AC	50/60/400 Hz	56193	56293
	380 to 415 V AC	50/60 Hz	56194	56294
	440 to 525 V AC	50/60 Hz	56195	56295

RMH and multiplexer RM12T (communicating)

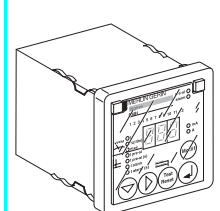
System to be monitored LV ≤ 1000 V

RM12T



DIN-rail mount.

RMH



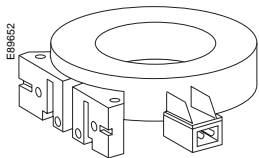
Front-panel mount.

Pre-Alarm: sensitivity 15 mA to 30 A - instantaneous or with 0 to 5 s time delay
Alarm: sensitivity 30 mA to 30 A - instantaneous or with 0 to 5 s time delay

Single-phase power supply	220 to 240 V AC	50/60/400 Hz	28566	28563
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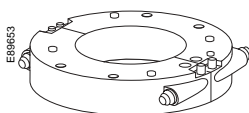
Sensors

Closed toroids, A-type



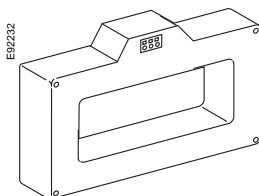
Type	Ie (A) rated operational current	Inside diameter (mm)	
TA30	65	30	50437
PA50	85	50	50438
IA80	160	80	50439
MA120	250	120	50440
SA200	400	200	50441
GA300	630	300	50442

Split toroids, OA-type



Type	Ie (A) rated operational current	Inside diameter (mm)	
POA	85	46	50485
GOA	250	110	50486

Rectangular sensors



Inside dimensions (mm)			
280 x 115	1600		56053
470 x 160	3200		56054

Note: sensor-relay link: twisted cable not supplied (see "Installation and connection" chapter).
