

RX VIVIENDA MCB 6000 A 1P+N up to 40 A

Cat.Nos: 4 349 90 to 4 349 95



CONTENTS	PAGE
1. Use	1
2. Range	1
3. Technical characteristics	1
4. Dimensions and weights	2
5. Fixing and connection	2
6. Auxiliaries and accessories	3
7. Marking	3
8. Standards and regulations	3
9. Other information	4

1. USE

Legrand RX VIVIENDA thermal-magnetic circuit breaker (MCB) with positive contact indication for control, protection against short-circuits and overloads, and isolation of electrical circuits.

When the handle is at the bottom position, the MCB is released.

2. RANGE

Cat.Nos	Nb of pole	In (A)	Curve
4 349 90	1P+N	10	C
4 349 91		16	
4 349 92		20	
4 349 93		25	
4 349 94		32	
4 349 95		40	

3. TECHNICAL CHARACTERISTICS

■ 3.1 Technology

Magnetic and thermal tripping.

■ 3.2 Electrical characteristics

Polarity	1P+N
Rated current (In)	10 / 16 / 20 / 25 / 32 / 40 A
Magnetic tripping curves	C Curve (between 5 and 10 In)
Thermal threshold according to IEC/EN 60898-1	Non operating current (Inf): 1.13 In Operating current (If): 1.45 In.
Rated Voltage and Frequency	230 V ~ / 240 V ~ 50 / 60 Hz with standard tolerances
Minimum operating voltage	12 V ~
Maximum operating voltage	250 V ~ with possible derating of the breaking capacity
Breaking capacity	6000A in accordance with standard EN/IEC 60898-1
Width	1 module per pole. Each pole is 17.8 mm
Rated insulation voltage Ui	250 V
Degree of pollution	2
Impulse withstand voltage Uimp	4 kV
Load to close and to open a pole through the handle:	0.11 Nm per pole to close 0.045 Nm per pole to open

Neutral earthing system	TT, TN, IT systems
Mechanical endurance: Conforms to standard EN/IEC 60898-1	20 000 operations without load 10000 operations with load (under In with cos φ = 0.9)

Short-circuit breaking capacity:

Alternate current 50/60Hz in accordance with standard: EN/IEC 60898-1

Un	Icn	1P+N
230V~		6000 A

Short-circuit breaking capacity of only one pole

Icn1	Ics
4500 A	100% Icn

■ 3.3 Power dissipated

Power dissipated per pole (W):

Circuit breaker C curve

In (A)	10	16	20	25	32	40
1P+N	1.9	4.4	5.2	5.3	4.9	8.4

$$\text{Impedance per pole } (\Omega) = \frac{P \text{ dissipated}}{I_n^2}$$

■ 3.4 Mechanical characteristics

Device heat and fire resistance

Resistance to incandescent wire tests at 960 °C, in accordance with standard IEC/EN 60898-1.

Classification V0, in accordance with standard UL94

Plastic materials

Parts made of Polyamide

Halogens-free plastic materials.

Marking of parts according to ISO 11469 and ISO 1043.

Precious metal

Silver: < 0.04 g per pole.

No gold.

Protection classes:

Terminals protected against direct contact: IP20 (wired device)

Front side protected against direct contact: IP40

Class II in relation to metallic conductive parts

Protection against impacts: IK04

3. TECHNICAL CHARACTERISTICS (continued)

3.5 Climatic characteristics

Ambient temperature:
Operating: - 25 °C / + 60 °C
Storage: - 40 °C / + 70 °C

Appropriate to operate in humid atmosphere and polluted by a chlorinated environment (pool-type).

3.6 Derating

Temperature derating

The nominal characteristics of a circuit breaker are modified according to the ambient temperature inside the cabinet or the enclosure where the circuit breaker is located.

Reference temperature: 30 °C in accordance with EN/IEC 60898-1

Ambient Temperature/In (°C)									
In (A)	- 25	- 10	0	10	20	30	40	50	60
10	12.5	12	11.5	11	10.5	10.0	9.5	9.0	8.5
16	20.0	19.2	18.4	17.6	16.8	16.0	15.2	14.4	13.6
20	25.0	24.0	23.0	22.0	21.0	20.0	19.0	18.0	17.0
25	31.25	30.0	28.7	27.5	26.2	25.0	23.7	22.5	21.2
32	40.0	38.4	36.8	35.2	33.6	32.0	30.4	28.8	27.2
40	50.0	48.0	46.0	44.0	42.0	40.0	38.0	36.0	34.0

Derating of MCBs function of the number of devices side by side:

When several MCBs are juxtaposed and operate simultaneously, the thermal evacuation of the poles is limited. This results in an increase in operating temperature of the circuit breakers which can cause unwanted tripping. It is recommended to apply the following coefficients to the rated currents

Number of circuit breakers side by side	Coefficient
2-3	0.9
4-5	0.8
6-9	0.7
≥ 10	0.6

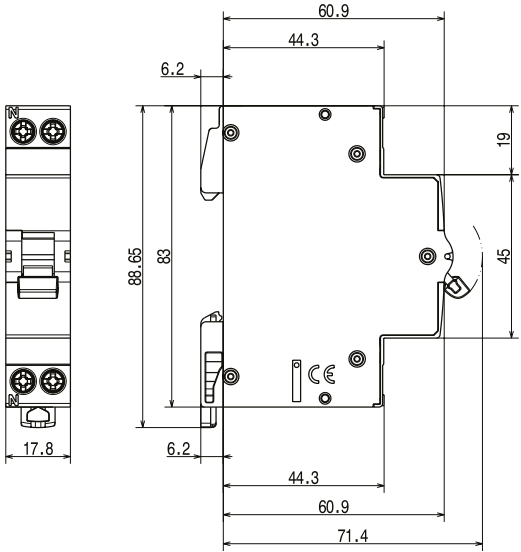
These values are provided by recommendation IEC 61439-1 and the standards NF C 63421 and EN 61439-1.

In order to avoid having to use these coefficients there must be good ventilation and the devices must be kept apart using the spacing elements Cat.No 4 063 07 (0.5 module).

Influence of the altitude

	≤ 2000 m	3000 m	4000 m
Dielectric strength	2000 V	1750 V	1250 V
Maxi. operational Voltage	230 V	230 V	230 V
Derating at 30 °C	none	none	none

4. DIMENSIONS AND WEIGHTS



Weight: 0.110 kg

Packaged volume and quantity:

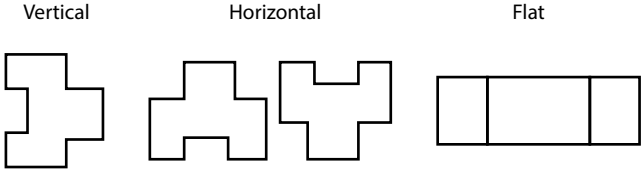
	Volume (dm³)	Packaging
For all catalogue numbers	1.195	per unit

5. FIXING AND CONNECTION

5.1 Fixing

On symmetrical rail EN/IEC 60715 or DIN 35 symmetrical rail.

Mounting options:



Recommended tool for rail mounting: Flat screwdriver 5.5 mm (6.5 mm maximum).

5.2 Connection

Power supply	Top or bottom terminals
Type of terminals	Inputs and outputs via screw terminals Cage terminals with disengageable or captive screws, Terminals fitted with flaps
Terminal depth	14 mm
Terminal capacity	16 mm²
Screw head	Mixed head, slotted head and Pozidrive n°2
Tools required	Pozidrive n°2 / Philips n° 2 screwdriver 5.5 mm/6.5 mm maximum blade screwdriver recommended
Tightening torque	Recommended 2.5 Nm (mini. 1.2 Nm - maxi. 3.5 Nm)

5. FIXING AND CONNECTION (continued)

■ 5.2 Connection (continued)

Here are the sections accepted by the screw terminal for connecting copper conductors:

	Without ferrule	With ferrule
Rigid cable	1 x 0.75 to 16 mm ² or 2 x 0.75 to 6 mm ²	-
Flexible cable	1 x 0.75 to 10 mm ² or 2 x 0.75 to 4 mm ²	1 x 0.75 to 10 mm ²

Manual actuation of the MCB:

Ergonomic 2-position handle
Handle upward: Device closed
Handle downward: Device open

Contact status display:

By marking on the front face of the device
- "I ^ ON" = contacts closed
- "O v OFF" = contacts open

6. AUXILIARIES AND ACCESSORIES

Wiring accessories

Pin busbar HX² traditional

Possible combinations of MCB's and auxiliaries: No auxiliary is associable to the MCB

RCD add-on modules: No RCD add-on modules

Sealing

Possible in "Open" position (OFF) or "Close" position (ON)

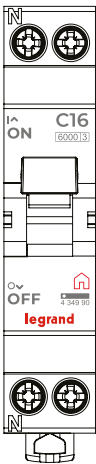
Locking

- | | |
|-------------------|-------------------|
| - 5 mm padlock | Cat. No. 4 063 13 |
| - 6 mm padlock | Cat. No. 0 227 97 |
| - Padlock support | Cat. No. 4 063 03 |

7. MARKING

Front face marking

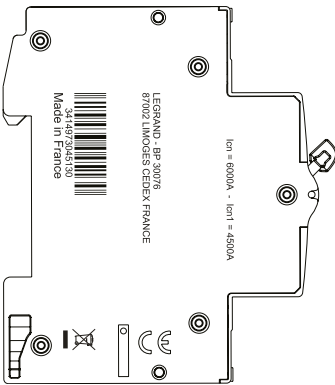
By permanent ink pad printing (legrand and red house logos) and laser marking



- Handle position indication: ON / OFF
- Breaking curve
- Rated current (in A)
- Icn (in A) rated breaking capacity in accordance with EN/IEC 60898-1 (in a box)
- Limiting class "3" (in a square)
- Legrand reference code and Logo
- "N" to identify Neutral pole

Left side marking

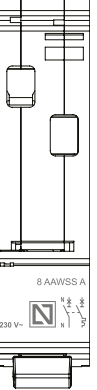
By laser.



- Legrand address
- Made in
- Icn (in A)
- Barcode

Upper side marking

By laser.



- Rated Voltage(s)
- Standard logo(s)
- Traceability information "year W week" (e.g. 25W15)
- Electrical scheme

Please note: The information provided in this section is for reference only. Actual data and marking layout may vary depending on the product version

8. STANDARDS AND REGULATIONS

Compliance with standards:

- EN/IEC 60898-1 with 6000 A breaking capacity
- EU guidelines: 2014/35/EU + 2014/30/EU

Usage in special conditions:

The performance of circuit breakers can be influenced by particular climates: hot dry, cold dry, hot humid, salt fog atmosphere Category C compliant (testing temperature of -25°C to +70°C, resistant to salt spray) in accordance with the classification defined in Appendix Q of standard IEC/EN 60947-1.

RoHS

Compliance with the 2011/65/EU Directive (RoHS), as modified by the 2015/863/EU Delegated Directive, on the restriction of the use of certain hazardous substances in electrical and electronic equipment.

REACH

The substances identified as SVHC (Substances of Very High Concern) according to the REACH Regulation (1907/2006), if present in the products at a concentration above 0.1% weight by weight, are declared inside the European SCIP database. At the date of publication of this document none of the substance listed in the annex XIV is found in this product.

8. STANDARDS AND REGULATIONS *(continued)*

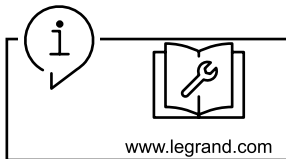
WEEE

WEEE Directive (2012/19/EU): the sale of this product includes a contribution to the appointed environmental bodies of each European country in charge of handling, at the end of their life, the products falling within the scope of the EU Directive on Electrical and Electronic Equipment Waste

Packaging:

Design and manufacture of packaging compliant with European Directive 94/62/CE.

9. OTHER INFORMATION



PEP: available on e-catalog

XLPro Calcul: Calculation notes creation software, addressed to installers, design office and maintenance operators. Definition of the electrical characteristics of a low voltage installation in compliance with the applicable standards.

XLPro³ Tool Selectivity and backup / Legrand Selectivity and backup: Software dedicated to installers, panelbuilders and design offices. Definition of the selectivity and backup values of an association of electrical devices and obtention of the tripping curves of the selected products.

XLPro Panels: Distribution panel design software, addressed to panelbuilders and electrical panel designers. Design of the electrical distribution of the panel, production of electrical diagrams, establishment of products and overall costing of the project.

For further technical information, please contact Legrand technical support.

Unless otherwise indicated, data reported in this document refers exclusively to test conditions according to product standards.

For different conditions of use of the product, inside electrical equipment or in any different installation context, refer to the regulatory requirements of the equipment, local regulations and design specifications of the system.