

1 Product overview

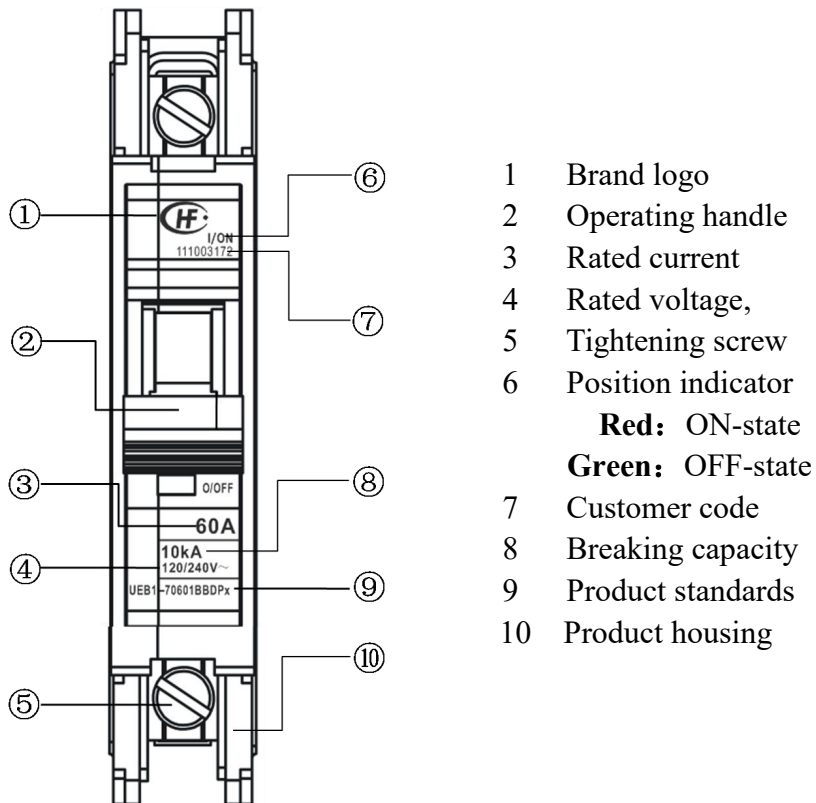
1.1 Scope of application

The UEB1-70 series Miniature Circuit Breakers (MCB) are designed to operate with AC 50Hz/60Hz. They meet the rigorous requirements of UL 489, providing the equipment with the protection of over-current in AC electrical systems. The products have current ratings from 5 amps to 60 amps and operational voltages up to 240 V/AC.

1.2 Product features

- Fast short circuit current trip time to provide better protection
- Short-circuit protection operated in wide ambient temperature range
- Optional accessory to provide flexibility to customers
- QC terminal is designed to provide reliable wire connection

1.3 Product structure



1.4 Standard

UL 489	UL Standard for Safety Molded-Case Circuit Breakers, Molded-Case Switches and Circuit-Breaker Enclosures
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2 Standard working environment and installation conditions

- Operating temperature range: -10°C~+60°C (14°F~140°F)
- Storage temperature range: -40°C~+70°C (-40°F~158°F)
- Relative Humidity : 90%~95% RH (below 40°C/104°F)
- Altitude: ≤2000m (6562 feet)

3 Product code

	UE	B	1	-70	5	H	1	BB	D	X
Manufacturer code UE: Xiamen Hongfa Electrical Safety & Controls Co. Ltd.										
Product category code B: MCB										
Design Series Number. 1: Series 1										
Frame size 70: 70A.										
Rated Current 5: 5A; 10: 10A; 15: 15A; 20: 20A; 25: 25A; 30: 30A; 35: 35A; 40: 40A; 50: 50A 60: 60A										
Omitted: 120/240 V/AC, 10kA 短路电流 H: 240 V/AC, 10kA 短路电流										
Number of poles 1: 1P, 2: 2P, 3: 3P										
Wire connection terminal BB: Box lug and Box lug; BQ: Box lug and QC terminal;										
Mounting type: D: DIN rail S: Mounting bracket										
Customization code										
Salt spray test code X: Meet 500 h Salt Spray Test requirement										

4 Main technical parameters

Type	UEB 1-70
Rated short-circuit current	10kA
Rated voltage U_e	AC120V/ AC 240V (1P/2P) ; AC240V (2P/3P)
Rated insulation voltage U_i	690V/AC
Rated frequency	50Hz/60Hz
Mechanical life cycles	10,000
Electrical life cycles	6,000

5 Connecting capacity

Terminal current in Amperes			5	10	15	20	25	30	35	40	45	50	60
Copper conductor	Size AWG or kcmil	60°C	14	14	14	12	10	10	8	8	6	6	4
		75°C	14	14	14	12	10	10	8	8	8	8	6

Notes:

- Tightening torque for M8 screw:
 Recommended tightening torque: 3.5 N·m ~ 4.5 N·m (311 bf-in ~ 401 bf-in)
 Maximum tightening torque : 5.1 N·m (451 bf-in)
- Standard 0.25 in. Insulated Quick Connectors available for per terminal
 (30A max per connector, Wire size: up to AWG#10)

6 Selection table & Wiring diagram

Circuit breakers

1. Number of poles: 1, 2, 3;
2. Mounting Type: Din-rail;
3. Terminal

Line side: Box lug;

Load side: Box lug;

Selection table

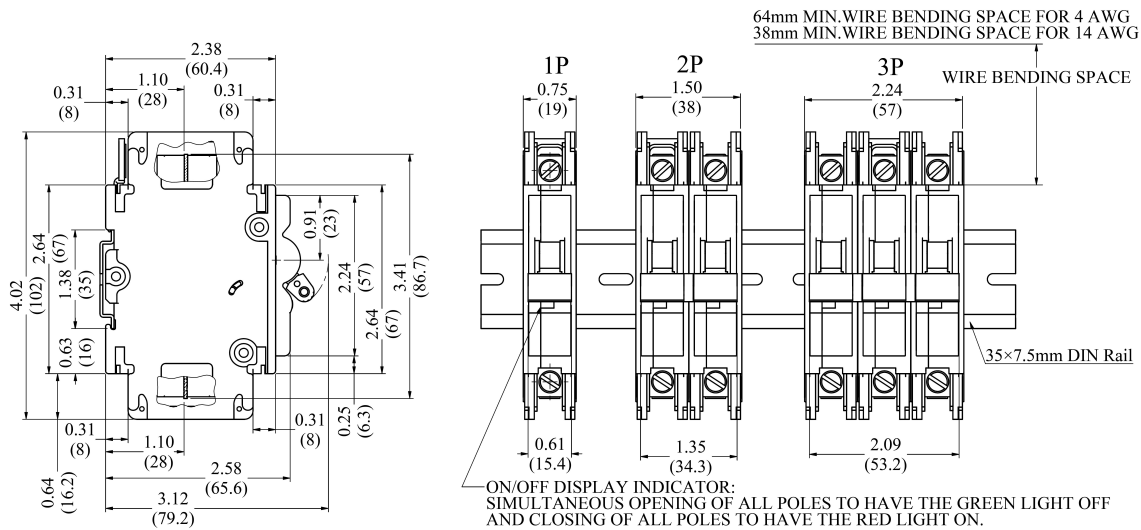
Rated Currents	Rated Voltages			
	120/240V/AC, 1Pole	120/240V/AC, 2 Pole	240V/AC, 2 Pole	240V/AC, 3 Pole
5A	UEB1-70051BBDx	UEB1-70052BBDx	UEB1-7005H2BBDx	UEB1-7005H3BBDx
10A	UEB1-70101BBDx	UEB1-70102BBDx	UEB1-7010H2BBDx	UEB1-7010H3BBDx
15A	UEB1-70151BBDx	UEB1-70152BBDx	UEB1-7015H2BBDx	UEB1-7015H3BBDx
20A	UEB1-70201BBDx	UEB1-70202BBDx	UEB1-7020H2BBDx	UEB1-7020H3BBDx
25A	UEB1-70251BBDx	UEB1-70252BBDx	UEB1-7025H2BBDx	UEB1-7025H3BBDx
30A	UEB1-70301BBDx	UEB1-70302BBDx	UEB1-7030H2BBDx	UEB1-7030H3BBDx
35A	UEB1-70351BBDx	UEB1-70352BBDx	UEB1-7035H2BBDx	UEB1-7035H3BBDx
40A	UEB1-70401BBDx	UEB1-70402BBDx	UEB1-7040H2BBDx	UEB1-7040H3BBDx
45A	UEB1-70451BBDx	UEB1-70452BBDx	UEB1-7045H2BBDx	UEB1-7045H3BBDx
50A	UEB1-70501BBDx	UEB1-70502BBDx	UEB1-7050H2BBDx	UEB1-7050H3BBDx
60A	UEB1-70601BBDx	UEB1-70602BBDx	UEB1-7060H2BBDx	UEB1-7060H3BBDx

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3. Terminal

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Load side: Box lug;



Circuit breakers

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2. Mounting Type: Mounting bracket
3. Terminal

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Load side: Box lug;

Selection table

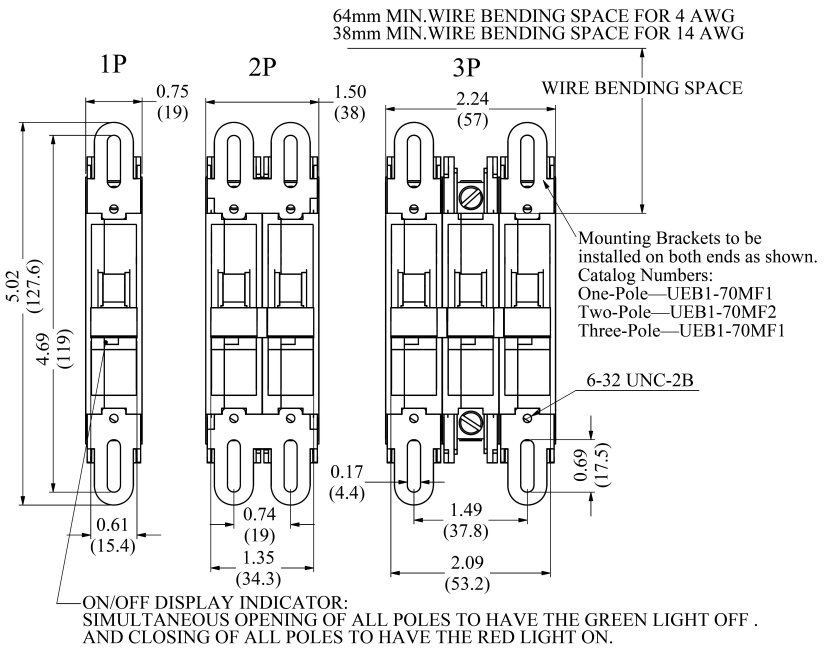
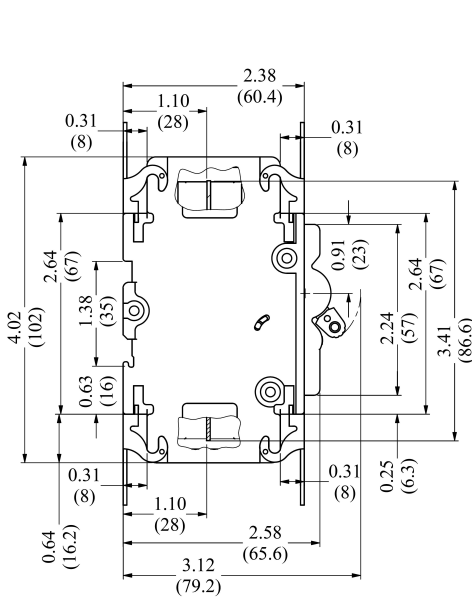
Rated Currents	Rated Voltages			
	120/240V/AC, 1 Pole	120/240V/AC, 2 Pole	240V/AC, 2 Pole	240V/AC, 3 Pole
5A	UEB1-70051BBSx	UEB1-70052BBSx	UEB1-7005H2BBSx	UEB1-7005H3BBSx
10A	UEB1-70101BBSx	UEB1-70102BBSx	UEB1-7010H2BBSx	UEB1-7010H3BBSx
15A	UEB1-70151BBSx	UEB1-70152BBSx	UEB1-7015H2BBSx	UEB1-7015H3BBSx
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45A	UEB1-70451BBSx	UEB1-70452BBSx	UEB1-7045H2BBSx	UEB1-7045H3BBSx
50A	UEB1-70501BBSx	UEB1-70502BBSx	UEB1-7050H2BBSx	UEB1-7050H3BBSx
60A	UEB1-70601BBSx	UEB1-70602BBSx	UEB1-7060H2BBSx	UEB1-7060H3BBSx

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Circuit breakers

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- 2. Mounting Type: Din-rail
- 3. Terminal

Line side: Box lug;

Load side: QC

Selection table

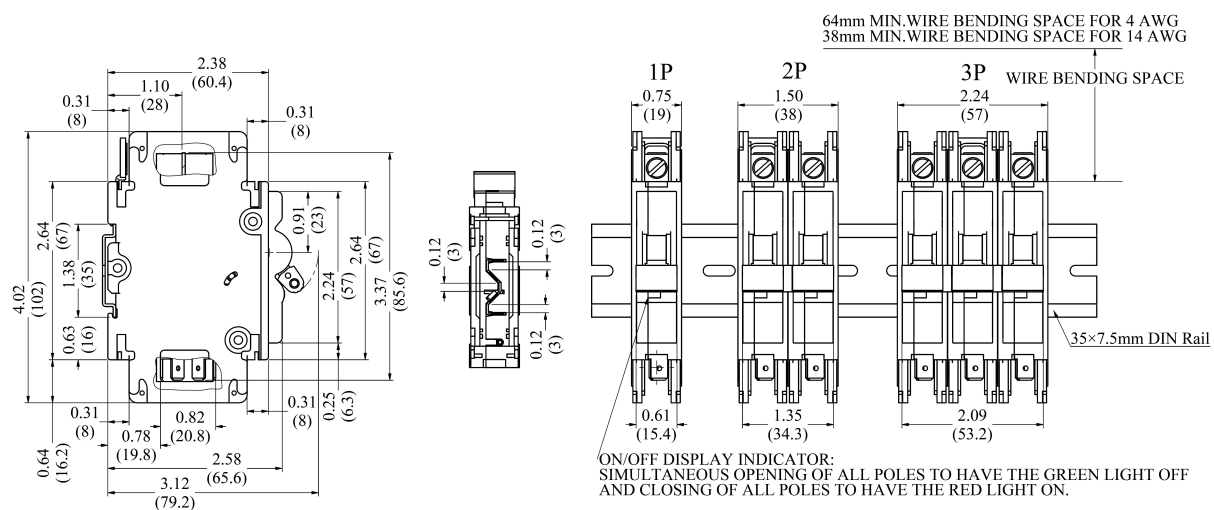
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25A	UEB1-70251BQDx	UEB1-70252BQDx	UEB1-7025H2BQDx	UEB1-7025H3BQDx
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Selection table

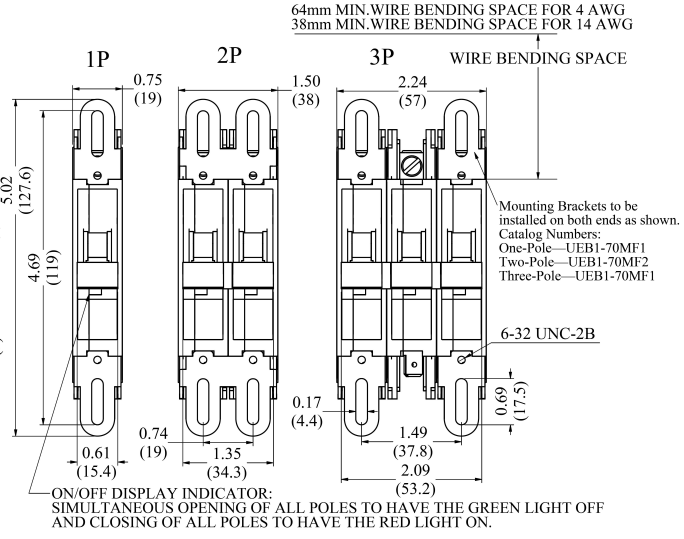
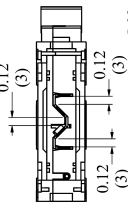
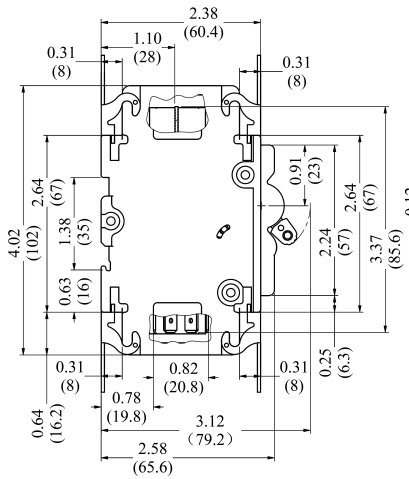
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15A	UEB1-70151BQSx	UEB1-70152BQSx	UEB1-7015H2BQSx	UEB1-7015H3BQSx
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25A	UEB1-70251BQSx	UEB1-70252BQSx	UEB1-7025H2BQSx	UEB1-7025H3BQSx
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50A	UEB1-70501BQSx	UEB1-70502BQSx	UEB1-7050H2BQSx	UEB1-7050H3BQSx
60A	UEB1-70601BQSx	UEB1-70602BQSx	UEB1-7060H2BQSx	UEB1-7060H3BQSx

Circuit breakers

1. Number of poles: 1, 2, 3;
2. Mounting Type: Mounting bracket;
3. Terminal

Line side: Box lug;

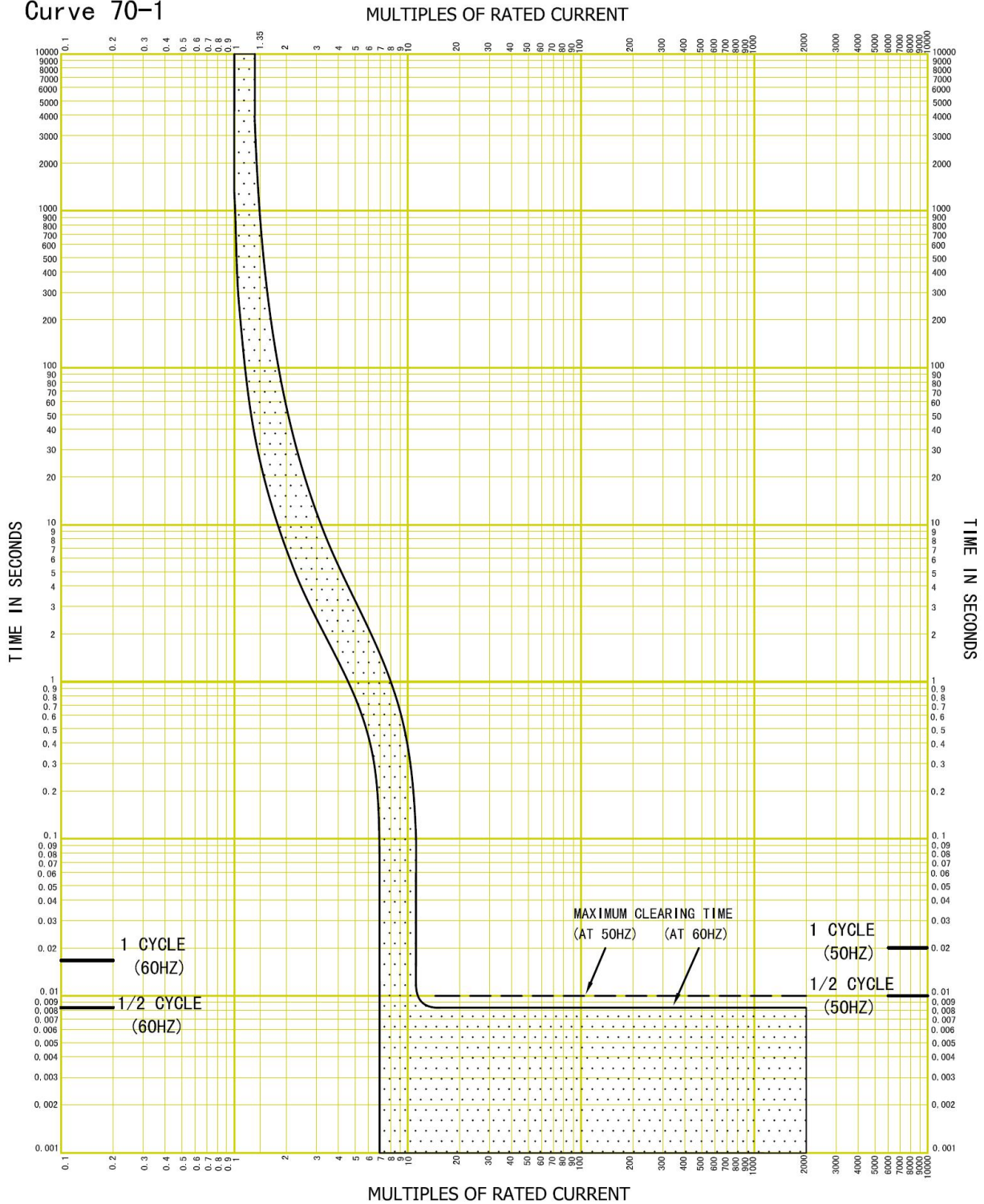
Load side: QC



7 Tripping curves

Rated Current: 5A
 Rated Voltage: 1P, 2P-120/240Vac
 2P, 3P-240Vac
 Frequency: 50/60Hz
 Operation Temperature: $25 \pm 3^{\circ}\text{C}$

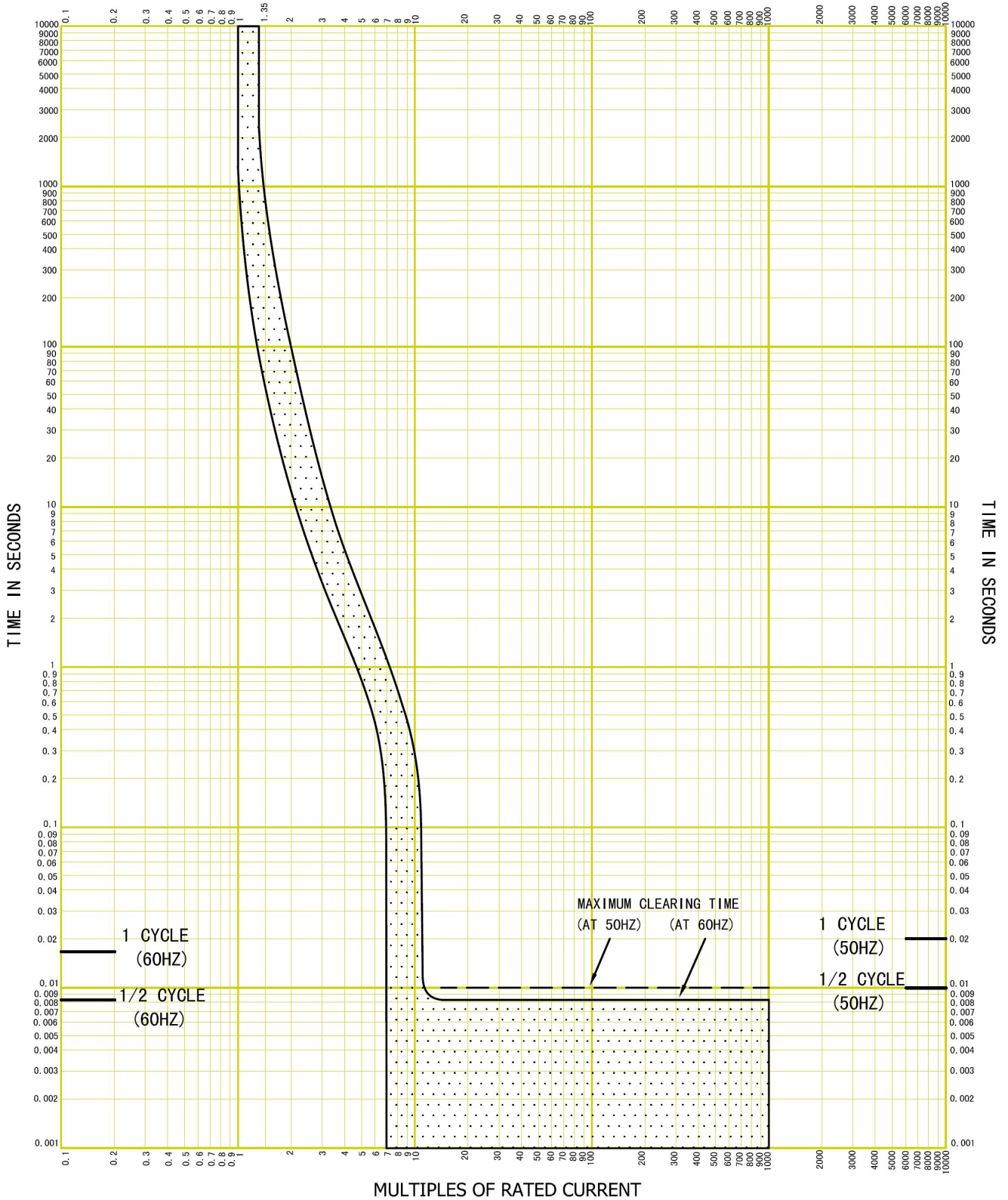
Curve 70-1



Rated Current: 10A
 Rated Voltage: 1P, 2P-120/240Vac
 2P, 3P-240Vac
 Frequency: 50/60Hz
 Operation Temperature: $25 \pm 3^\circ\text{C}$

Curve 70-2

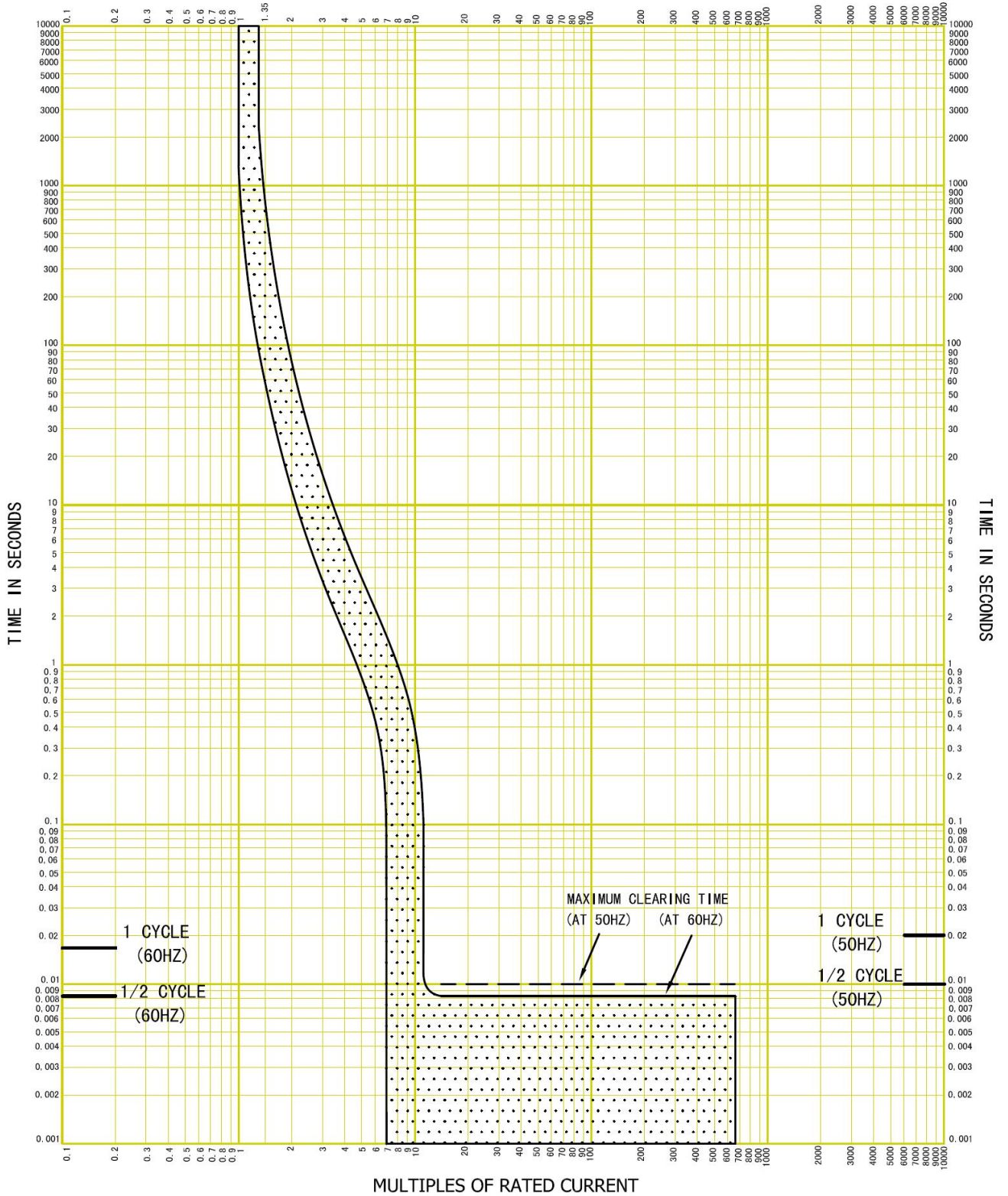
MULTIPLES OF RATED CURRENT



Rated Current: 15A
 Rated Voltage: 1P, 2P-120/240Vac
 2P, 3P-240Vac
 Frequency: 50/60Hz
 Operation Temperature: $25 \pm 3^{\circ}\text{C}$

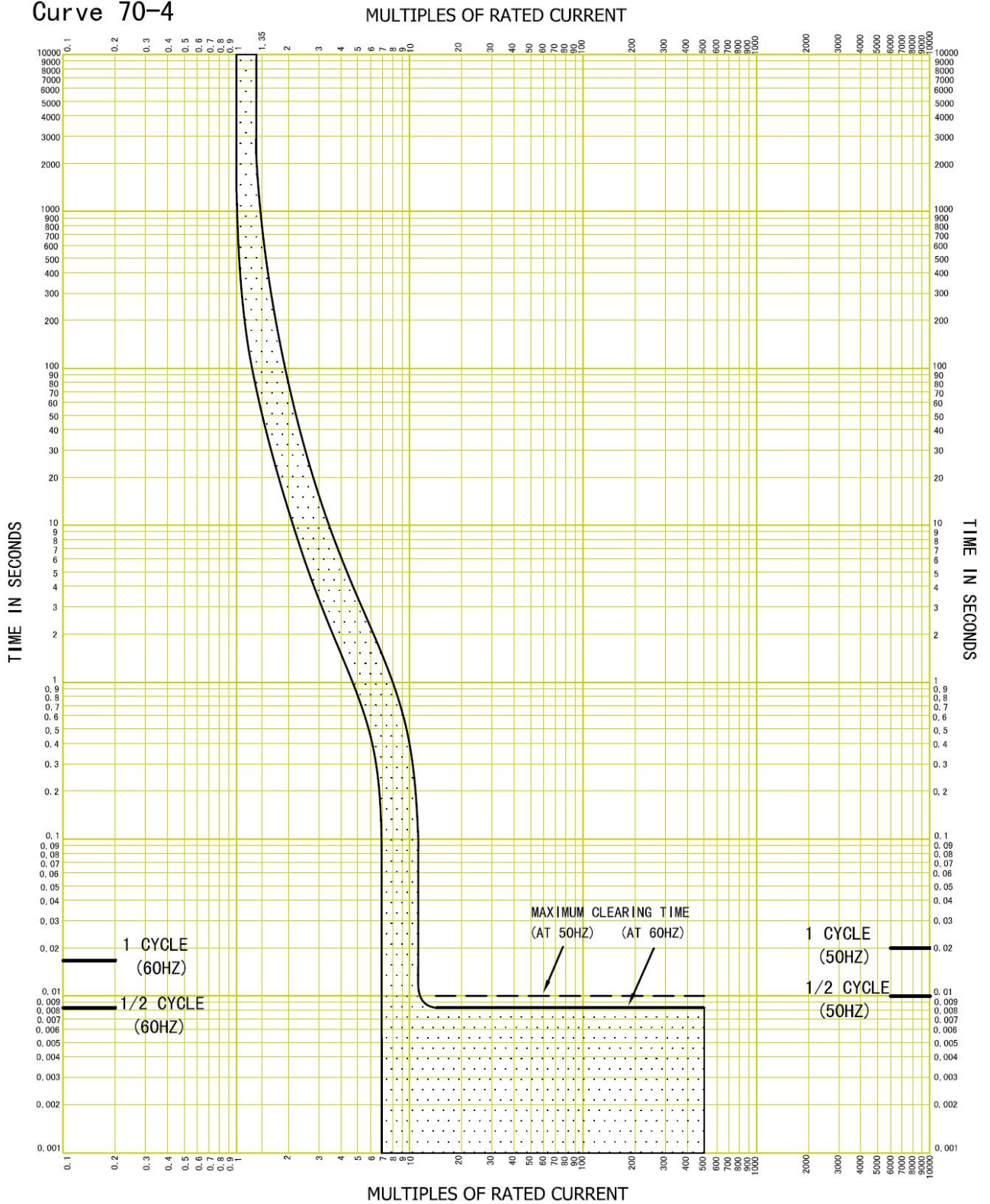
Curve 70-3

MULTIPLES OF RATED CURRENT



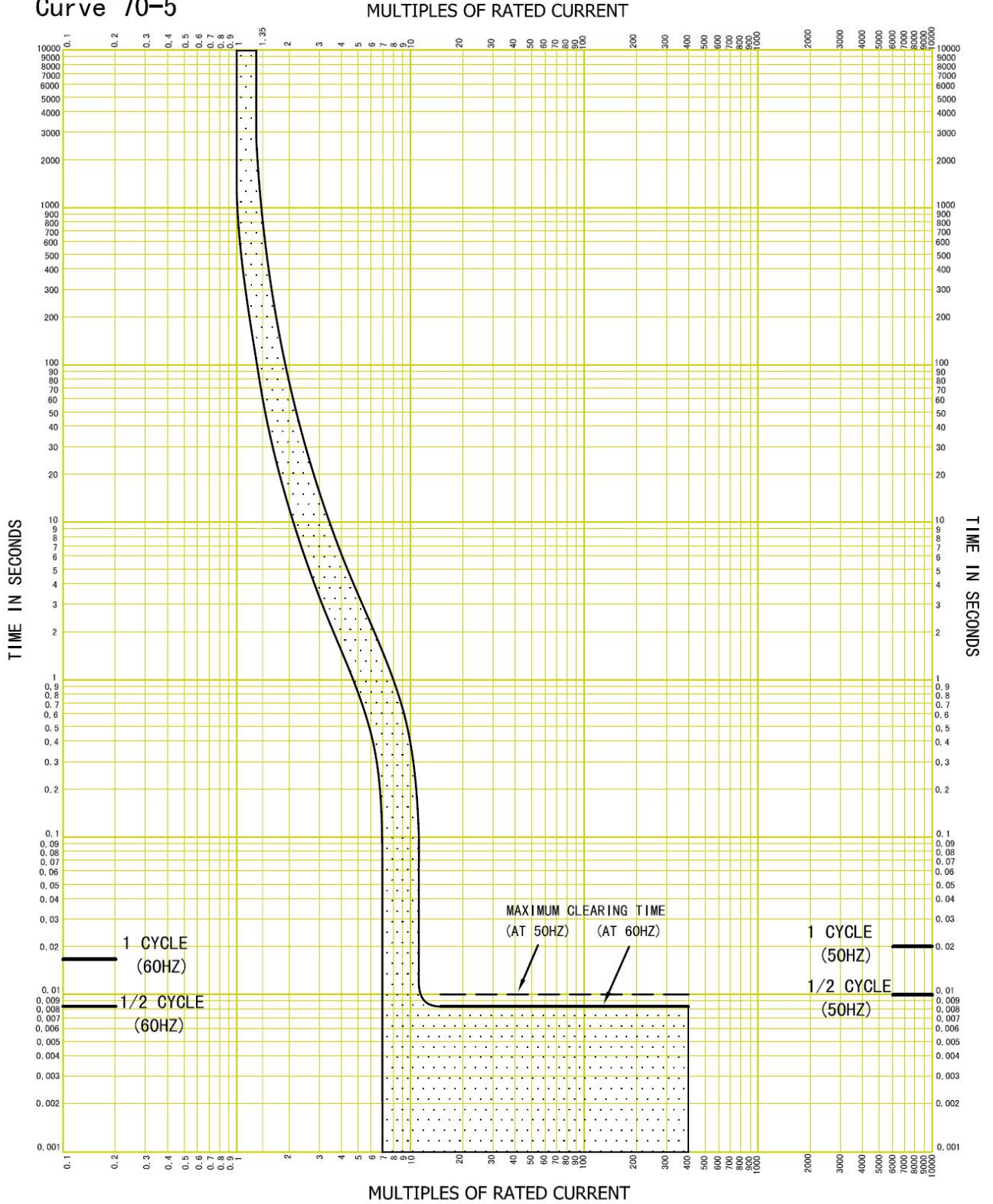
Rated Current: 20A
 Rated Voltage: 1P, 2P-120/240Vac
 2P, 3P-240Vac
 Frequency: 50/60Hz
 Operation Temperature: 25±3°C

Curve 70-4



Rated Current: 25A
 Rated Voltage: 1P, 2P-120/240Vac
 2P, 3P-240Vac
 Frequency: 50/60Hz
 Operation Temperature: 25±3°C

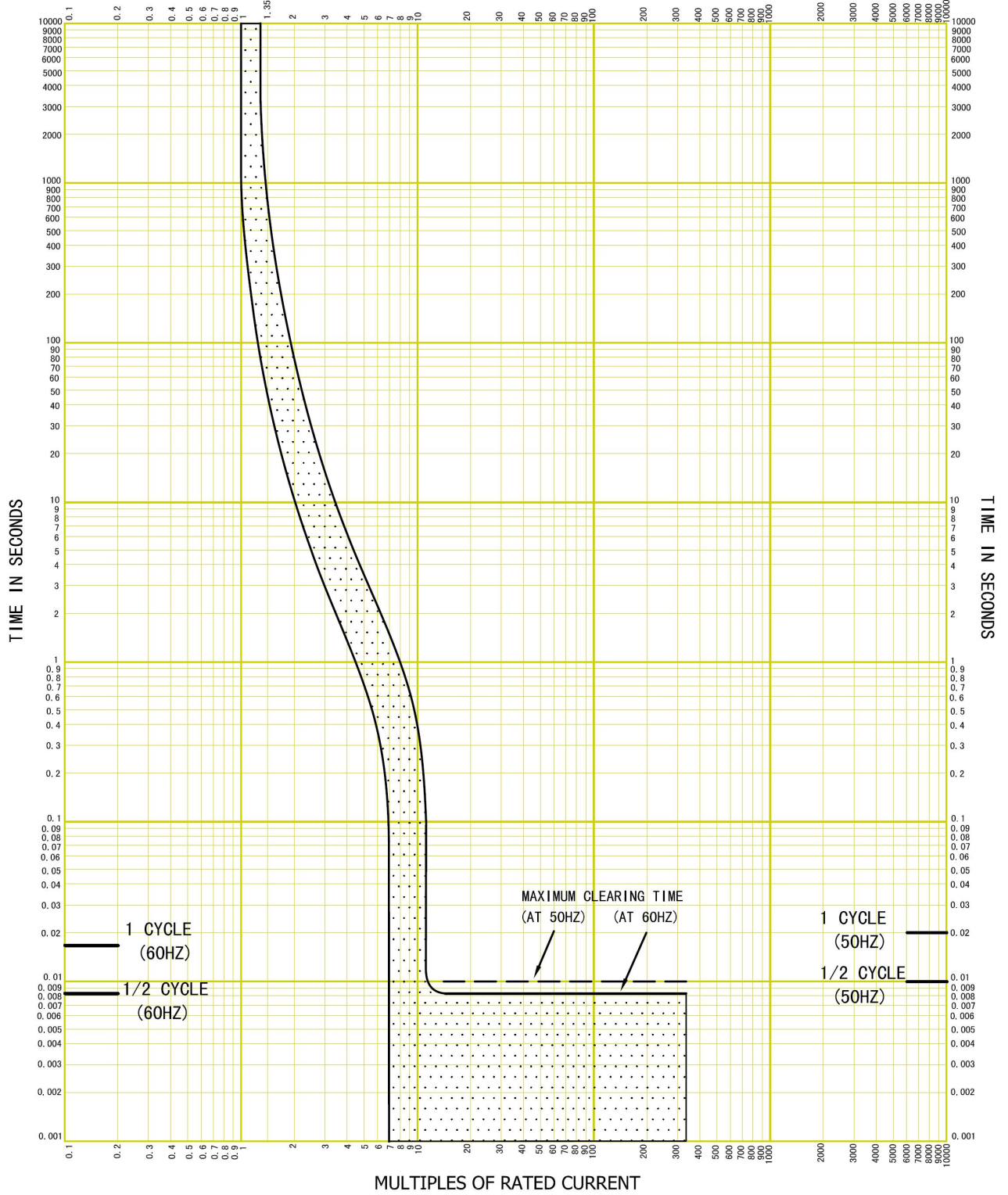
Curve 70-5



Rated Current: 30A
 Rated Voltage: 1P, 2P-120/240Vac
 2P, 3P-240Vac
 Frequency: 50/60Hz
 Operation Temperature: 25±3°C

Curve 70-6

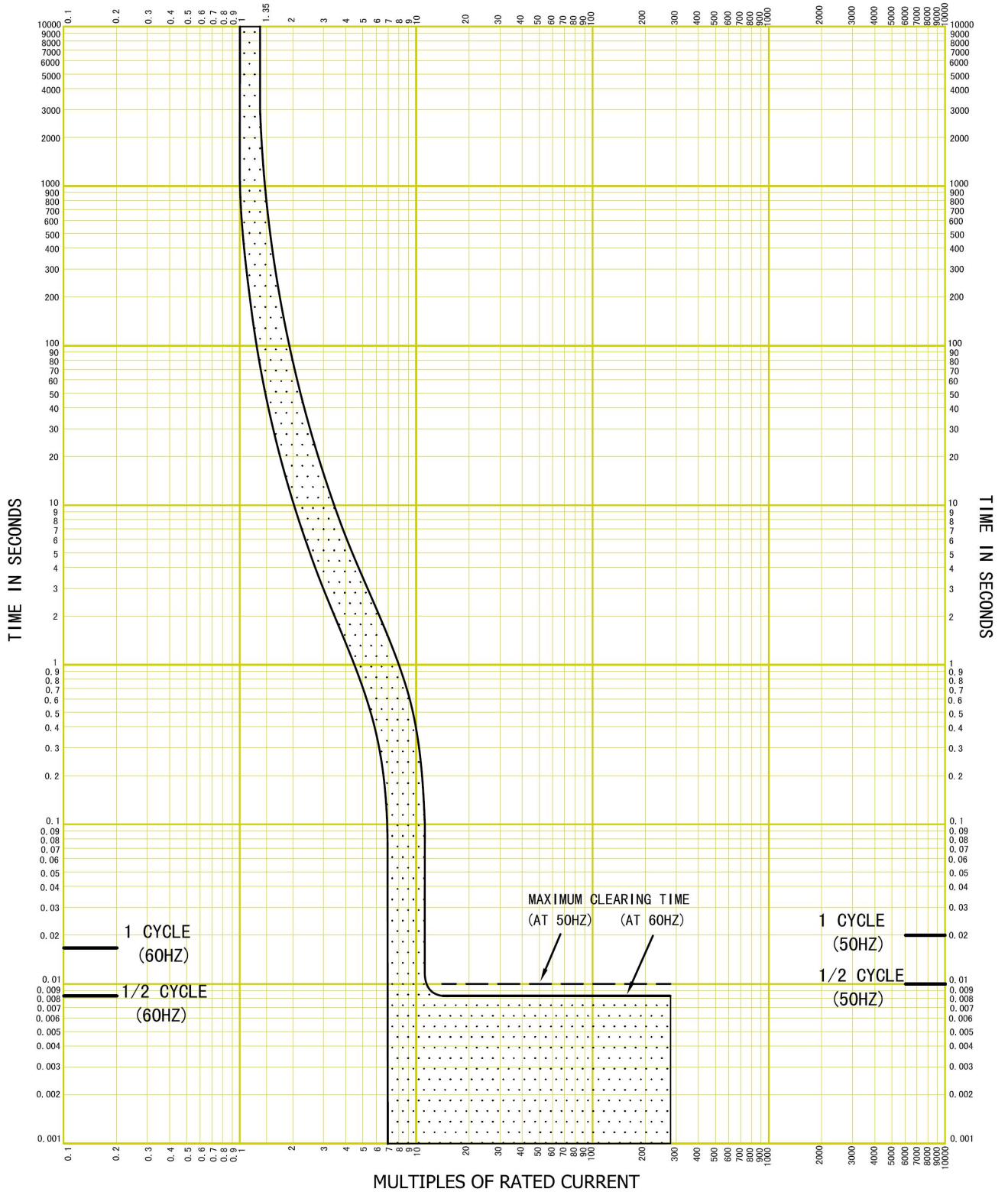
MULTIPLES OF RATED CURRENT



Rated Current: 35A
 Rated Voltage: 1P, 2P-120/240Vac
 2P, 3P-240Vac
 Frequency: 50/60Hz
 Operation Temperature: $25 \pm 3^{\circ}\text{C}$

Curve 70-7

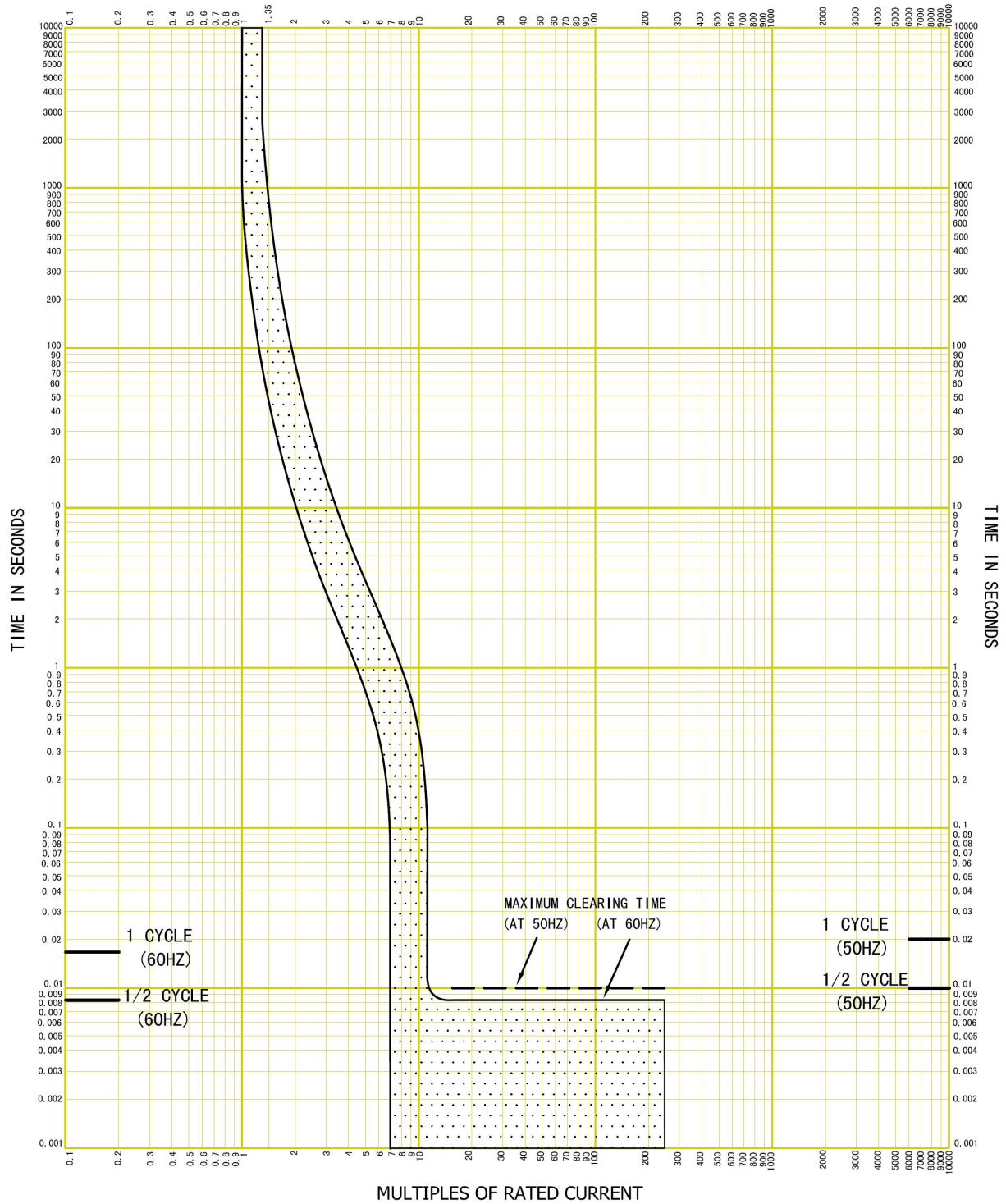
MULTIPLES OF RATED CURRENT



Rated Current: 40A
 Rated Voltage: 1P, 2P-120/240Vac
 2P, 3P-240Vac
 Frequency: 50/60Hz
 Operation Temperature: 25±3°C

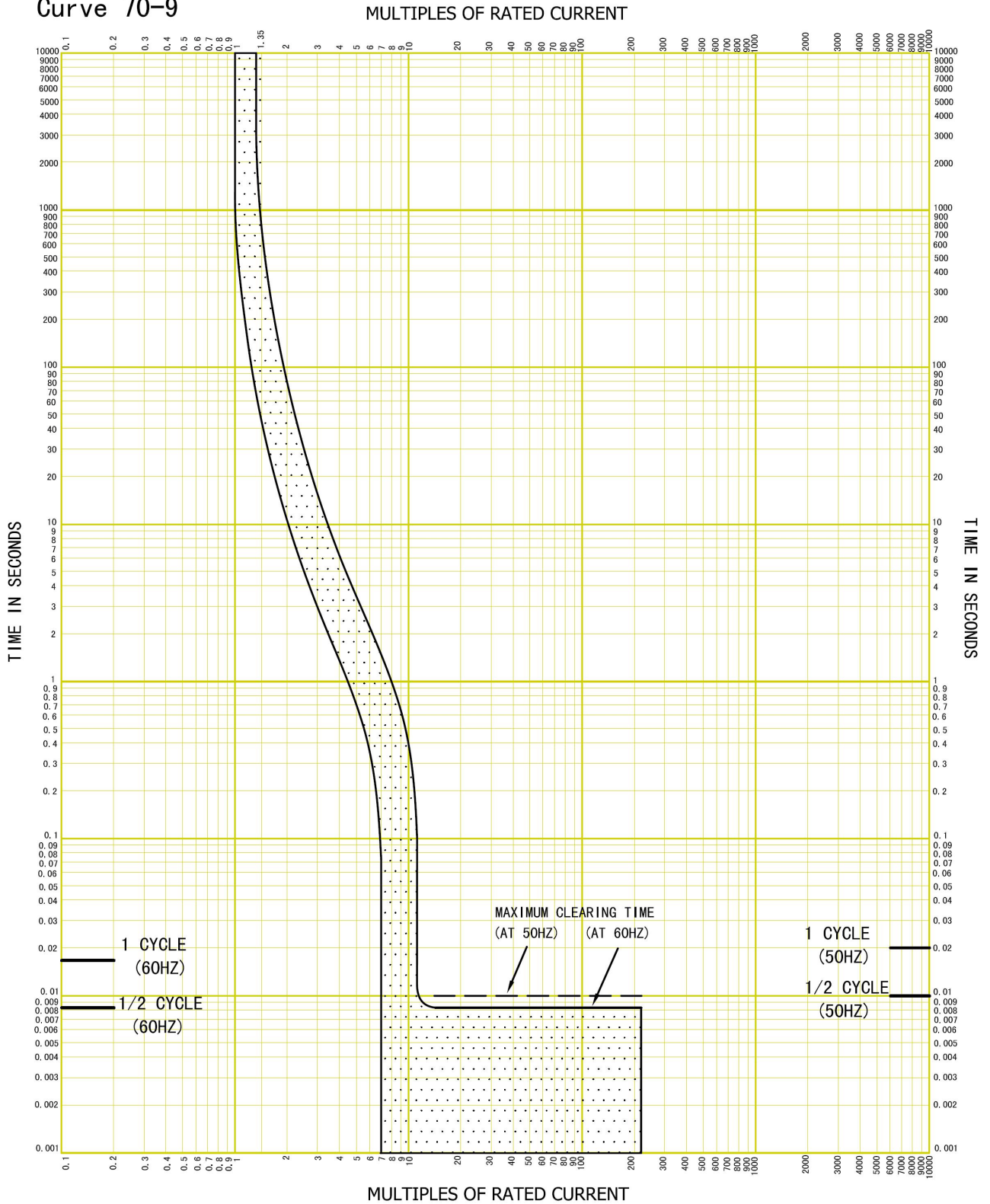
Curve 70-8

MULTIPLES OF RATED CURRENT



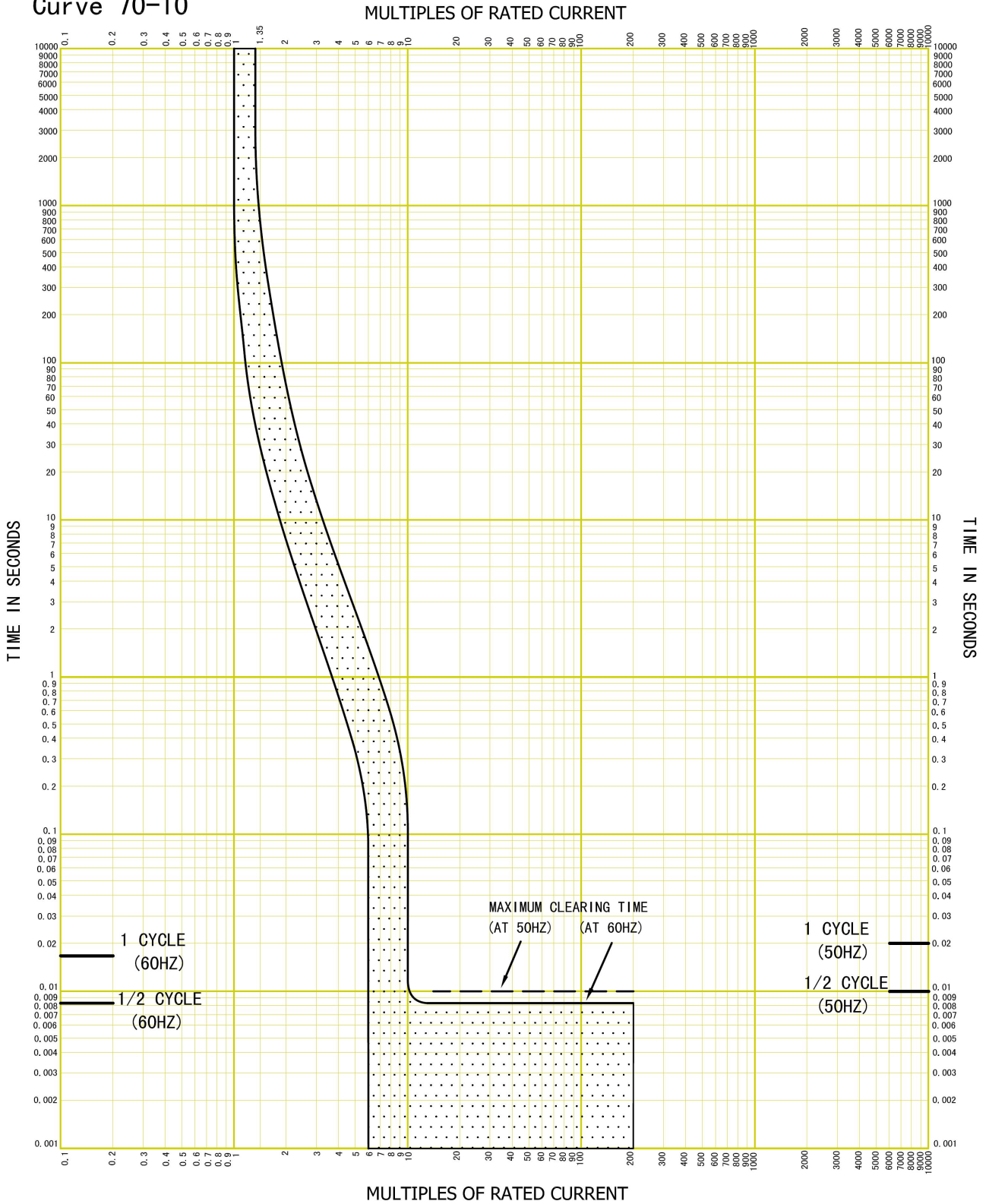
Rated Current: 45A
 Rated Voltage: 1P, 2P-120/240Vac
 2P, 3P-240Vac
 Frequency: 50/60Hz
 Operation Temperature: 25±3°C

Curve 70-9



Rated Current: 50A
 Rated Voltage: 1P, 2P-120/240Vac
 2P, 3P-240Vac
 Frequency: 50/60Hz
 Operation Temperature: $25 \pm 3^{\circ}\text{C}$

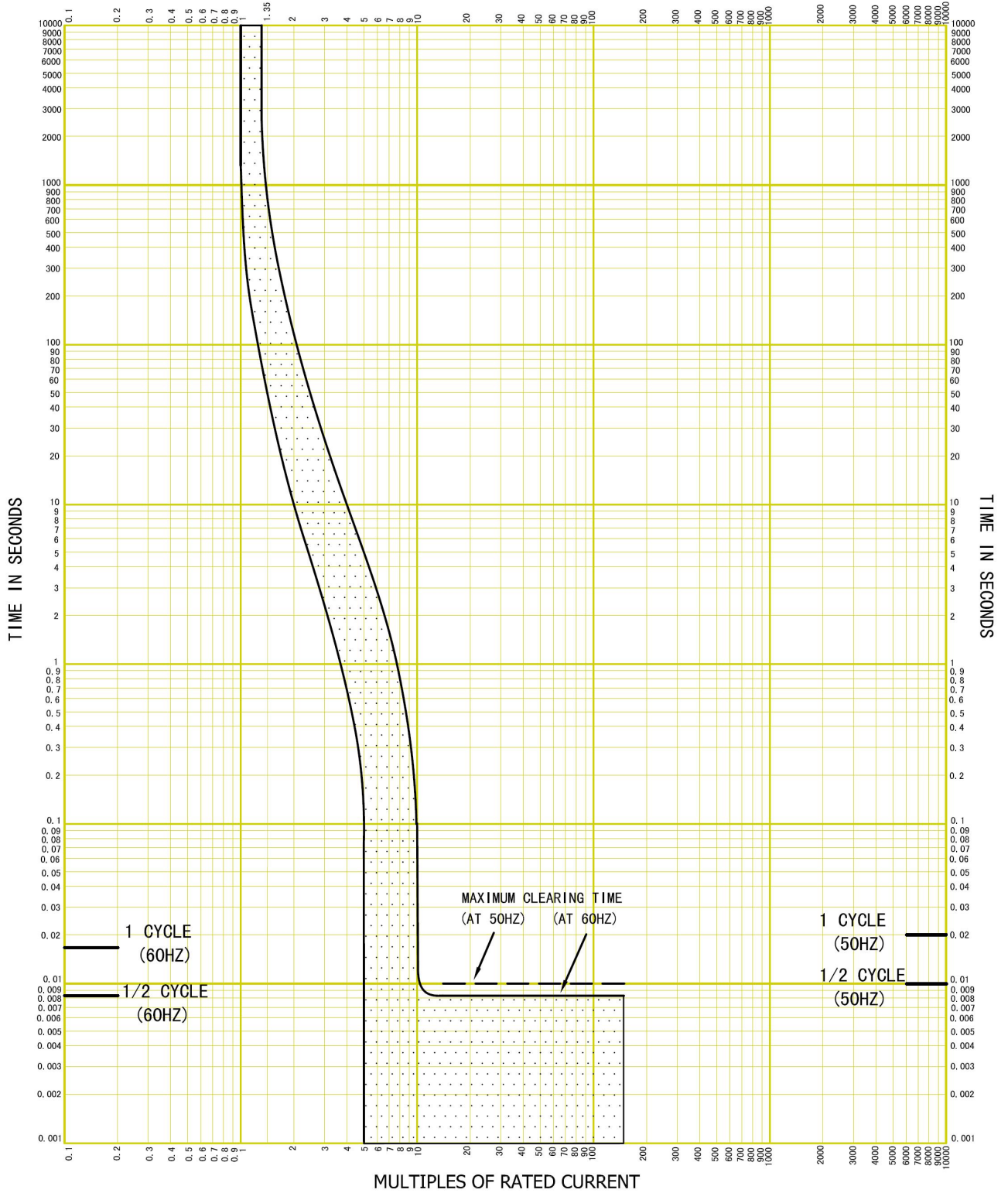
Curve 70-10



Rated Current: 60A
 Rated Voltage: 1P, 2P-120/240Vac
 2P, 3P-240Vac
 Frequency: 50/60Hz
 Operation Temperature: 25±3°C

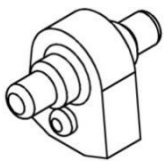
Curve 70-11

MULTIPLES OF RATED CURRENT



8 Accessory selection table

Accessory	Description	Catalog Number
Handle Tie	Tie two circuit breakers together.	UEB1-70HT
Mounting Feet	For mounting 1,2, 3-pole circuit breakers	UEB1-70MF1
	For mounting 2-pole circuit breakers(two mounting feet required per circuit breakers)	UEB1-70MF2
Quick Connectors	For forward or reverse wiring circuit breakers	UEB1-70QC1
	For end connection wiring circuit breakers	UEB1-70QC2
Ring Tongue Terminal Adapter	For ring tongue terminal wiring circuit breakers	UEB1-70QC3
Jumper Bar for 2-pole Low Ampere UEB1-70	4-pole, 100 A jumper bar base with front wiring	UEB1-701004BJPF
	4-pole, 100 A jumper bar base with left-side wiring	UEB1-701004BJPL
	4-pole, 100 A jumper bar base with right-side wiring	UEB1-701004BJPR
	4-pole, 100 A jumper bar cover	UEB1-701004CJP
	4-pole, 100 A jumper bar with front wiring, base, cover, and screw	UEB1-701004JPF
	4-pole, 100 A jumper bar with wiring, base, cover, and screw to left	UEB1-701004JPL
	4-pole, 100 A jumper bar with wiring, base, cover, and screw to right	UEB1-701004JPR
	6-pole, 150 A jumper bar base with front wiring	UEB1-701506BJPF
	6-pole, 150 A jumper bar base with left-side wiring	UEB1-701506BJPL
	6-pole, 150 A jumper bar base with right-side wiring	UEB1-701506BJPR
	6-pole, 150 A jumper bar cover	UEB1-701506CJP
	6-pole, 150 A jumper bar with wiring, base, cover, and screw to front	UEB1-701506JPF
	6-pole, 150 A jumper bar with wiring, base, cover, and screw to left	UEB1-701506JPL
	6-pole, 150 A jumper bar with wiring, base, cover, and screw to right	UEB1-701506JPR
Safe Cover	For 1-, 2-, and 3-pole circuit breakers (Two covers required per pole)	UEB1-70SC
Filler Plate	For load center cover	UEB1-70BC



UEB1-70HT
Handle Tie

Handle Tie

The handle tie accessory converts any adjacent 1-pole UEB1-70 circuit breaker to one independent multi-pole circuit breaker.



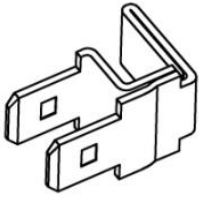
UEB1-70MF1
Mounting Feet



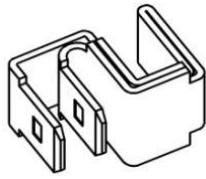
UEB1-70MF2
Mounting Feet

Mounting Feet

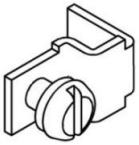
Mounting feet are available to mount 1-, 2-, and 3-pole circuit breakers.



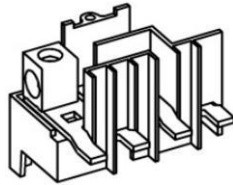
UEB1-70QC1
Quick Connectors



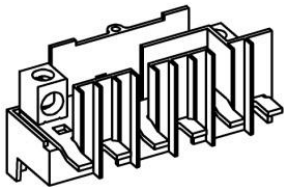
UEB1-70QC2
Quick Connectors



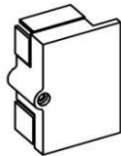
UEB1-70QC3
Ring Tongue Terminal Adapter



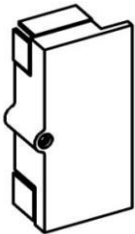
4P Jumper
Bar Base



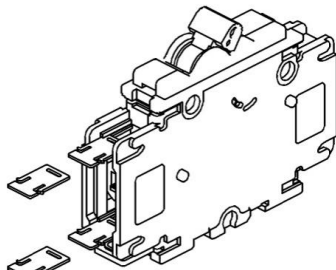
6P Jumper
Bar Base



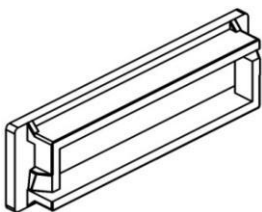
4P Jumper
Bar Cover



6P Jumper
Bar Cover



UEB1-70SC
Safe Cover



UEB1-70BC
Filler Plate

Quick Connectors

Quick connectors provide a convenient way to attach two wires using two standard 0.25 in. insulated quick connectors per terminal (30 A maximum per connector). Quick connectors are not furnished with the circuit breakers, but are commercially available. Connectors suitable for wire sizes up to AWG #10 can be selected for use with these circuit breakers.

Ring Tongue Terminal Adapter

Ring-tongue terminal adapters are available for ring tongue terminal wiring circuit breakers.

Jumper Bar

To promote wiring convenience, jumper bars are available for common connections to two 2-pole or three 2-pole 60 A maximum UEB1-70 circuit breakers. Jumper bars are available with front, left-side, or right-side wiring bases and covers.

Safe Covers

Safe covers are installed over the top or under the bottom of the terminal connections to prevent accidental contact with energized parts. Two covers are required per pole of each circuit breaker.

Filler Plate

Filler plate is used on load center cover to fill unused branch circuit breaker opening.