

HHOZ-G

High Voltage Fuses Special Purpose

Application Range Types

Fuses for protection of oil insulated transformer mains

SIBA HHOZ-G series of special purpose fuses are current-limiting "General-Purpose" class for protection use inside of oil filled transformers that are so called "intrinsically safe transformers". The fuses provide cut off of the widest possible range of fault currents for the desired protection of the transformer against tank rupture. Fuses equipped with a striker provide a means of fault detection.

The fuses fulfill all requirements regarding oil tightness during the manufacturing phase of the transformer and also during its service operation. The fuses incorporate M8 threaded holes the ends of the contact caps for easy installation inside the transformer.

The fuses are designed for decades of reliable usage and available in voltage ranges of 12kV, 17.5kV and 24kV.

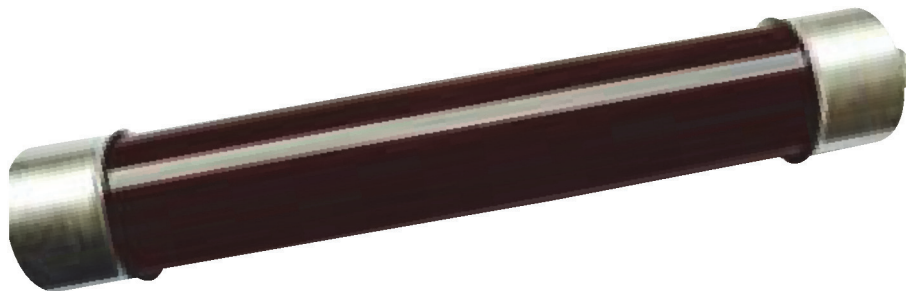


Selection Guide

HHOZ-G, Current-Limiting, General-Purpose, Oil Insulated Transformer Protection

Current ratings [A]; 8, 10, 12, 16, 20, 22, 40, 50, 63

| L1=360mm | Page | L1=440mm | Page | | | | |
|-----------------|------|-----------------|------|--|--|--|------------------------|
| 12kV | | | | | | | |
| 3031091.8 - 63 | 164 | | | | | | M8 / M8 -No Striker |
| 3031096.8 - 63 | 164 | | | | | | M8 / G 1/8" w/ Striker |
| 17.5kV | | | | | | | |
| 3031191.10 - 20 | 166 | | | | | | M8 / M8 -No Striker |
| 3031196.10 - 20 | 166 | | | | | | M8 / G 1/8" w/ Striker |
| 24kV | | | | | | | |
| 3031291.8 - 20 | 168 | | | | | | M8 / M8 -No Striker |
| 3031296.8 - 20 | | | | | | | M8 / G 1/8" w/ Striker |
| | 168 | 3031391.25 - 40 | 170 | | | | M8 / M8 -No Striker |
| | | 3031396.25 - 40 | 170 | | | | M8 / G 1/8" w/ Striker |



HHOZ-G
12kV - Rated Voltage[U_n]

High Voltage Current-Limiting Fuses
Oil Insulated-Transformers

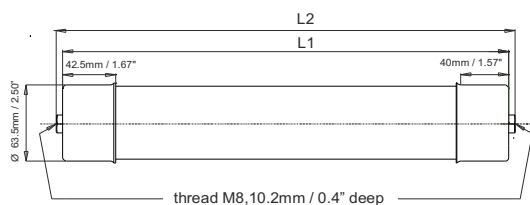
Standard(s)
IEC 60282-1



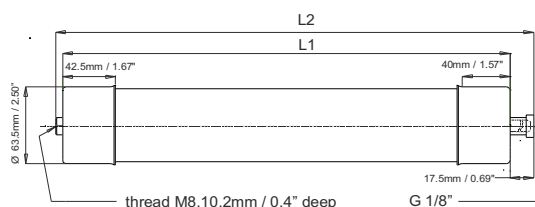
Size L1=360mm **Class**
General-Purpose

| Rated Current I _n [A] | Article Number | Diameter | Weight [kg/1] | Rated Breaking Current I ₁ [kA] | Minimum Breaking Current I ₃ [A] | Pre-arcing I ² t [A ² s] | Total I ² t @ 0.87U _n [A ² s] | Power Loss [W] | Cold Resistance [mΩ] | |
|----------------------------------|----------------|-------------|---------------|--|---|--|--|----------------|----------------------|---|
| | | D [in/mm] | | | | | | | | |
| L2=371mm W/O Striker | | | | | | | | | | |
| 8 | 3031091.8 | 2.50 / 63.5 | 2.6 | 63 | 25 | 172 | — | 1 800 | 8 | — |
| 10 | 3031091.10 | 2.50 / 63.5 | 2.6 | 63 | 29 | 250 | — | 2 800 | 11 | — |
| 16 | 3031091.16 | 2.50 / 63.5 | 2.6 | 63 | 37 | 340 | — | 3 800 | 13 | — |
| 20 | 3031091.20 | 2.50 / 63.5 | 2.6 | 63 | 42 | 830 | — | 9 200 | 17 | — |
| 25 | 3031091.25 | 2.50 / 63.5 | 2.6 | 63 | 60 | 1 730 | — | 17 300 | 20 | — |
| 31.5 | 3031091.32 | 2.50 / 63.5 | 2.6 | 63 | 67 | 2 260 | — | 22 600 | 12 | — |
| 40 | 3031091.43 | 2.50 / 63.5 | 2.6 | 63 | 80 | 3 530 | — | 35 500 | 35 | — |
| 50 | 3031091.50 | 2.50 / 63.5 | 2.6 | 63 | 96 | 5 490 | — | 55 000 | 46 | — |
| 63 | 3031091.63 | 2.50 / 63.5 | 2.6 | 63 | 123 | 9 030 | — | 90 000 | 62 | — |
| L2=383mm With 50N Striker | | | | | | | | | | |
| 8 | 3031096.8 | 2.50 / 63.5 | 2.6 | 63 | 25 | 172 | — | 1 800 | 8 | — |
| 10 | 3031096.10 | 2.50 / 63.5 | 2.6 | 63 | 29 | 250 | — | 2 800 | 11 | — |
| 16 | 3031096.16 | 2.50 / 63.5 | 2.6 | 63 | 37 | 340 | — | 3 800 | 13 | — |
| 20 | 3031096.20 | 2.50 / 63.5 | 2.6 | 63 | 42 | 830 | — | 9 200 | 17 | — |
| 25 | 3031096.25 | 2.50 / 63.5 | 2.6 | 63 | 60 | 1 730 | — | 17 300 | 20 | — |
| 31.5 | 3031096.31.5 | 2.50 / 63.5 | 2.6 | 63 | 67 | 2 260 | — | 22 600 | 12 | — |
| 40 | 3031096.40 | 2.50 / 63.5 | 2.6 | 63 | 80 | 3 530 | — | 35 500 | 35 | — |
| 50 | 3031096.50 | 2.50 / 63.5 | 2.6 | 63 | 96 | 5 490 | — | 55 000 | 46 | — |
| 63 | 3031096.63 | 2.50 / 63.5 | 2.6 | 63 | 123 | 9 030 | — | 90 000 | 62 | — |

Maximum Torque 132lb•in / 15N•m



3031091



3031096

SIBA LLC

29 Fairfield Place
West Caldwell, New Jersey 07006

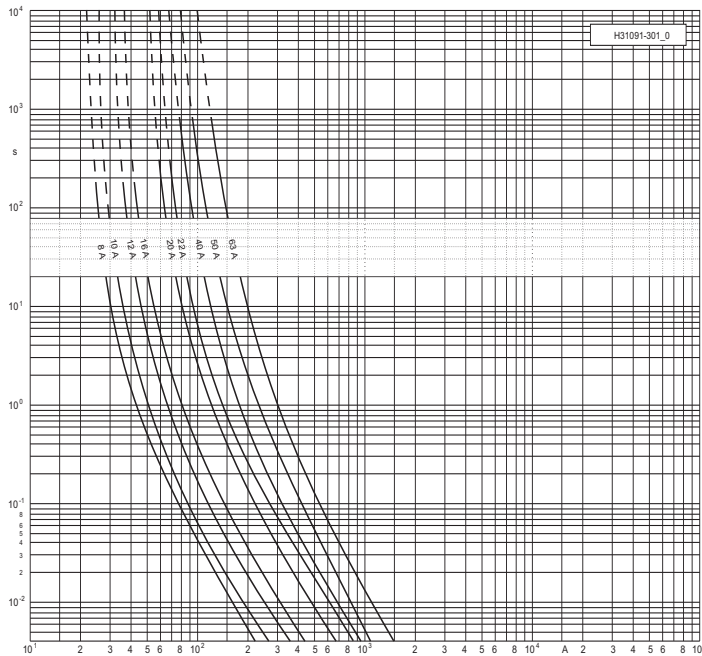
Phone 1-973-575-7422
Fax 1-973-575-5858

e-mail: info@sibafuse.com
www.siba-fuses.us

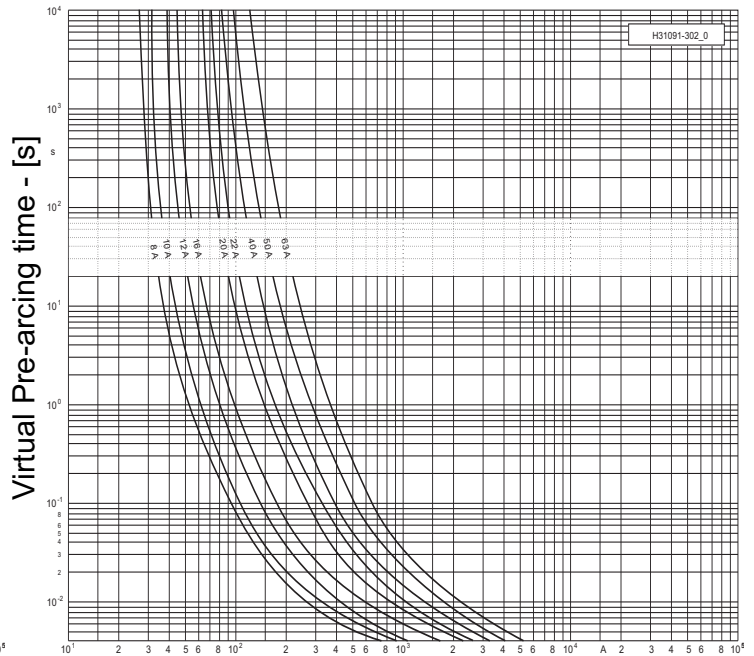
**HHOZ-G Time-Current Characteristics - Minimum Melting and Total Clearing
Cut-Off Current Diagram
Current-Limiting, General-Purpose, 12kV, L1 = 360mm (6.3A - 63A)**

3031091.8 - 63, 3031096.8 - 63

Minimum Melting

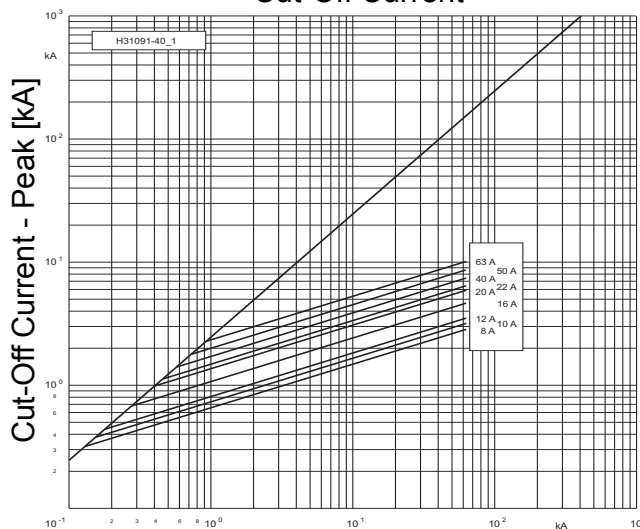


Total Clearing



R.M.S. Prospective Current [A]

Cut-Off Current



Prospective Short Circuit Current [kA] - (Symmetrical r.m.s.)

HHOZ-G

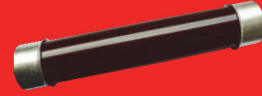
17.5kV - Rated Voltage[U_n]

High Voltage Current-Limiting Fuses

Oil Insulated Transformers

Standard(s)

IEC 60282-1



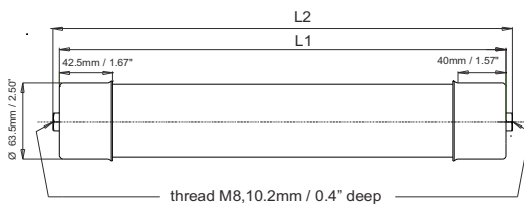
Class

General-Purpose

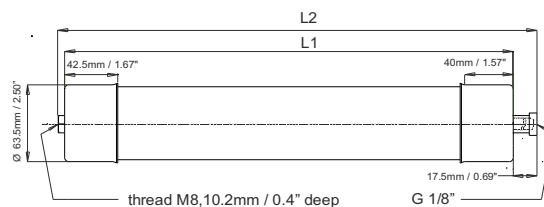
Size L1=360mm

| Rated Current I _n [A] | Article Number | Diameter D | Weight [kg/1] | Rated Breaking Current I ₁ [kA] | Minimum Breaking Current I ₃ [A] | Pre-arcing I ² t [A ² s] | Total I ² t @ | | Power Loss [W] | Cold Resistance [mΩ] |
|--|----------------|---------------|------------------|---|--|---|--|--------|-------------------|-------------------------|
| | | [in/mm] | | | | | 0.87U _n [A ² s] | | | |
| L2=371mm W/O Striker | | | | | | | | | | |
| 10 | 3031191.10 | 2.50 / 63.5 | 2.6 | 63 | 33 | 250 | — | 2 400 | 16 | — |
| 16 | 3031191.16 | 2.50 / 63.5 | 2.6 | 63 | 41 | 1 100 | — | 12 000 | 18 | — |
| 20 | 3031191.20 | 2.50 / 63.5 | 2.6 | 63 | 57 | 1 700 | — | 13 500 | 18 | — |
| L2=383mm With 50N Striker | | | | | | | | | | |
| 10 | 3031196.10 | 2.50 / 63.5 | 2.6 | 63 | 33 | 250 | — | 2 400 | 16 | — |
| 16 | 3031196.16 | 2.50 / 63.5 | 2.6 | 63 | 41 | 1 100 | — | 12 000 | 18 | — |
| 20 | 3031196.20 | 2.50 / 63.5 | 2.6 | 63 | 57 | 1 700 | — | 13 500 | 18 | — |

Maximum Torque 132lb•in / 15N•m



3031191



3031196

SIBA LLC

29 Fairfield Place
West Caldwell, New Jersey 07006

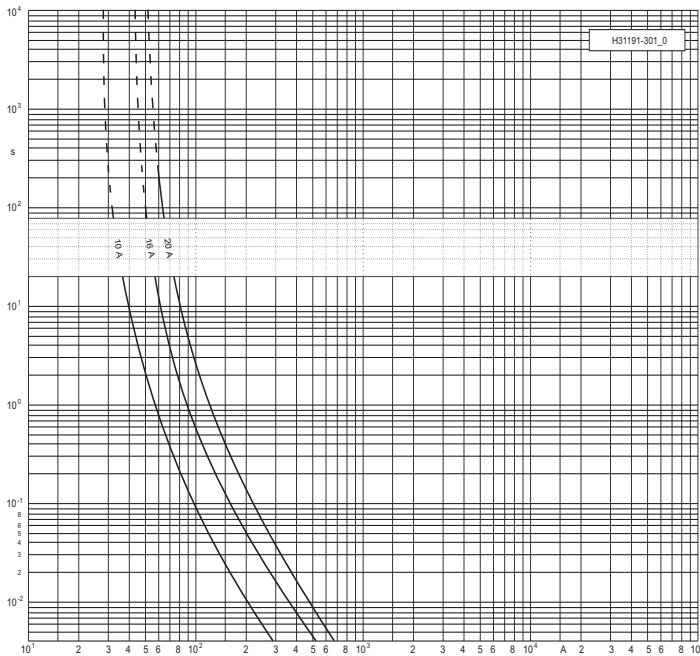
Phone 1-973-575-7422
Fax 1-973-575-5858

e-mail: info@sibafuse.com
www.siba-fuses.us

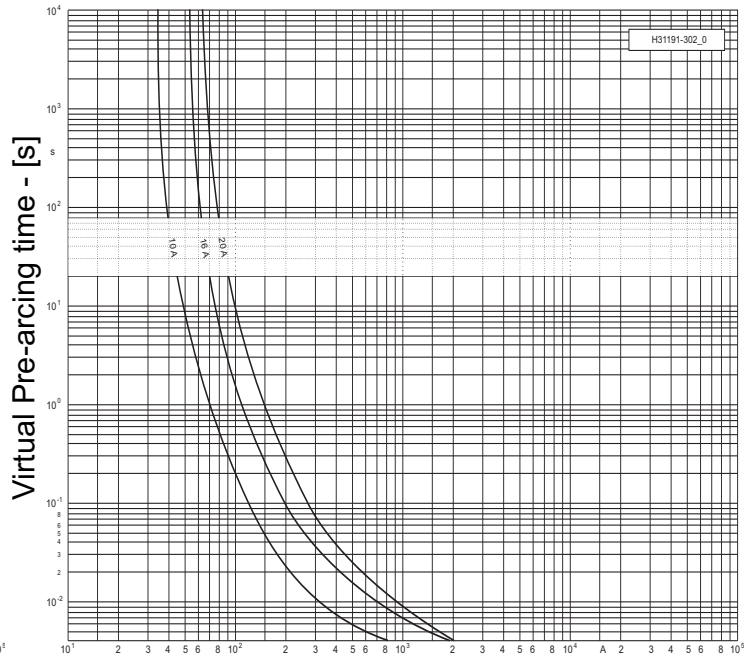
**HHOZ-G Time-Current Characteristics - Minimum Melting and Total Clearing
Cut-Off Current Diagram**
Current-Limiting, General-Purpose, 17.5kV, L1 = 360mm (10A - 20A)

3031191.10 - 20, 3031196.10 - 20

Minimum Melting

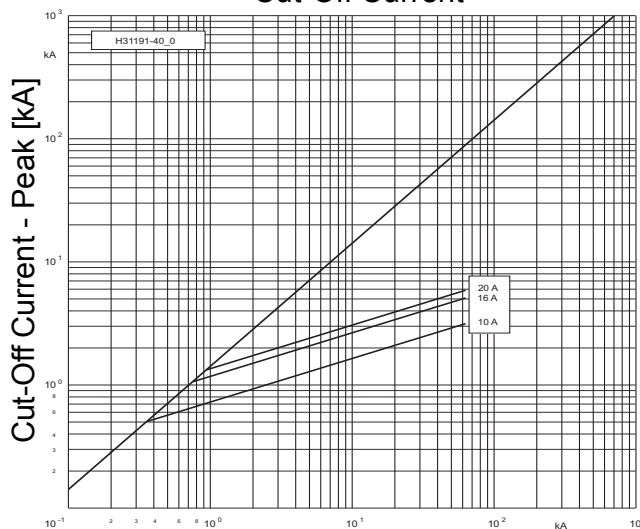


Total Clearing



R.M.S. Prospective Current [A]

Cut-Off Current

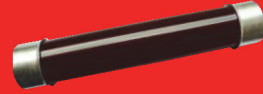


Prospective Short Circuit Current [kA] - (Symmetrical r.m.s.)

HHOZ-G
24kV - Rated Voltage [U_n]

High Voltage Current-Limiting Fuses
Oil Insulated Transformers

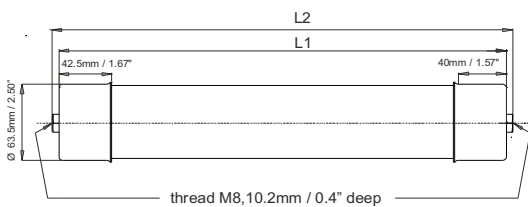
Standard(s)
IEC 60282-1



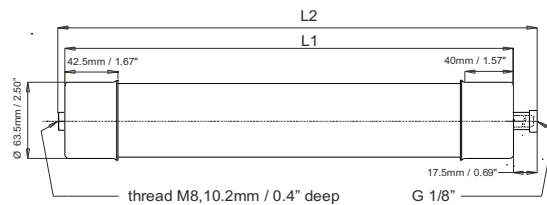
Size L1=360mm
Class
General-Purpose

| Rated Current I_n [A] | Article Number | Diameter D | Weight [kg/1] | Rated Breaking Current I_1 [kA] | Minimum Breaking Current I_3 [A] | Pre-arcing I^2t [A ² s] | Total I^2t @ 0.87 U_n [A ² s] | Power Loss [W] | Cold Resistance [mΩ] | |
|-------------------------------|----------------|----------------------|------------------|--------------------------------------|---------------------------------------|---|--|-------------------|-------------------------|---|
| | | [in/mm] | | | | | | | | |
| L2=371mm W/O Striker | | | | | | | | | | |
| 8 | 3031291.8 | 2.50 / 63.5 | 2.6 | 63 | 25 | 172 | — | 1 900 | 17 | — |
| 10 | 3031291.10 | 2.50 / 63.5 | 2.6 | 63 | 29 | 250 | — | 2 800 | 21 | — |
| 12 | 3031291.12 | 2.50 / 63.5 | 2.6 | 63 | 37 | 460 | — | 5 100 | 24 | — |
| 16 | 3031291.16 | 2.50 / 63.5 | 2.6 | 63 | 42 | 830 | — | 8 300 | 31 | — |
| 20 | 3031291.20 | 2.50 / 63.5 | 2.6 | 63 | 60 | 1 730 | — | 17 300 | 21 | — |
| L2=383mm With Striker | | | | | | | | | | |
| 8 | 3031296.8 | 2.50 / 63.5 | 2.6 | 63 | 25 | 172 | — | 1 900 | 17 | — |
| 10 | 3031296.10 | 2.50 / 63.5 | 2.6 | 63 | 29 | 250 | — | 2 800 | 21 | — |
| 12 | 3031296.12 | 2.50 / 63.5 | 2.6 | 63 | 37 | 460 | — | 5 100 | 24 | — |
| 16 | 3031296.16 | 2.50 / 63.5 | 2.6 | 63 | 42 | 830 | — | 8 300 | 31 | — |
| 20 | 3031296.20 | 2.50 / 63.5 | 2.6 | 63 | 60 | 1 730 | — | 17 300 | 21 | — |

Maximum Torque 132lb·in / 15N·m



3031291



3031296

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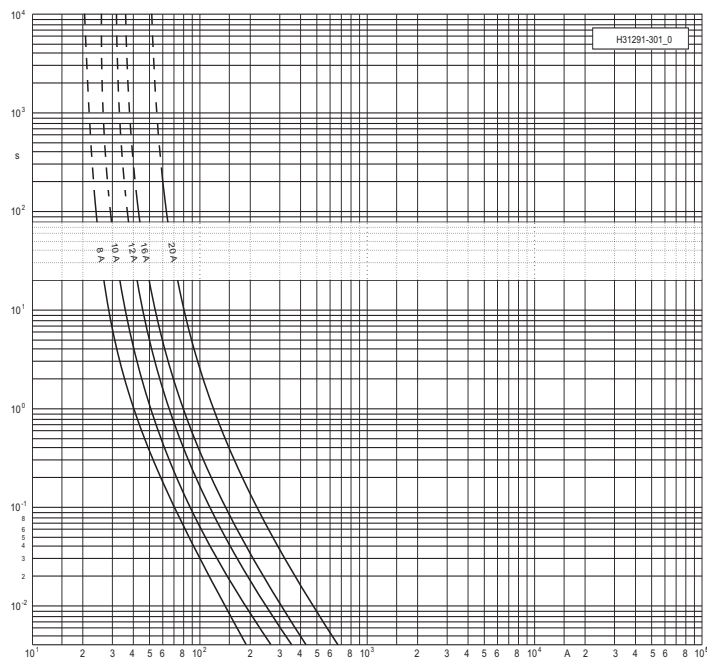
Phone 1-973-575-7422
Fax 1-973-575-5858

e-mail: info@sibafuse.com
www.siba-fuses.us

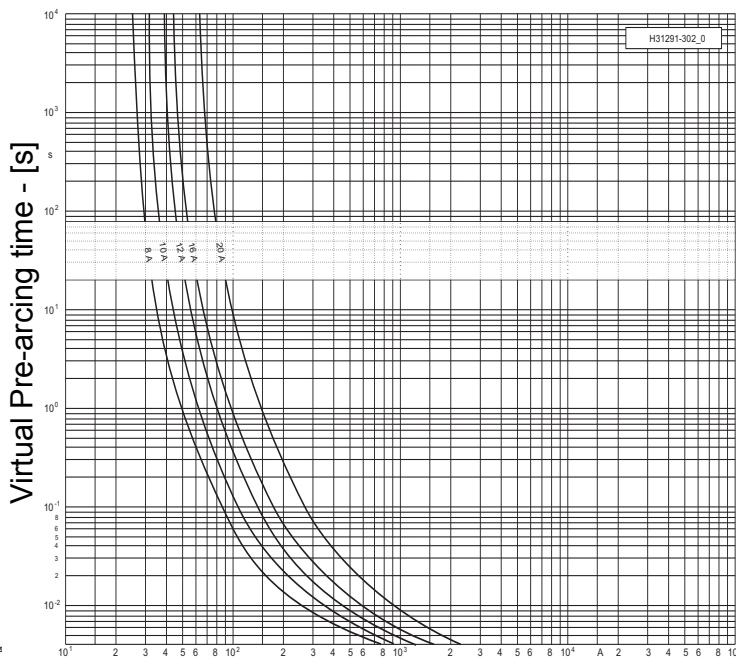
**HHOZ-G Time-Current Characteristics - Minimum Melting and Total Clearing
Cut-Off Current Diagram**
Current-Limiting, General-Purpose, 24kV, L1 = 360mm (8A - 20A)

3031291.8 - 20, 3031296.8 - 20

Minimum Melting

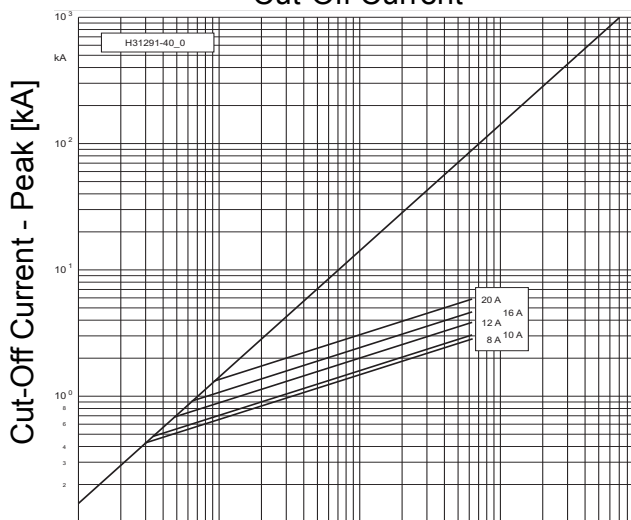


Total Clearing



R.M.S. Prospective Current [A]

Cut-Off Current

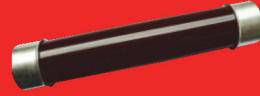


Prospective Short Circuit Current [kA] - (Symmetrical r.m.s.)

HHOZ-G
24kV - Rated Voltage [U_n]

High Voltage Current-Limiting Fuses
Oil Insulated Transformers

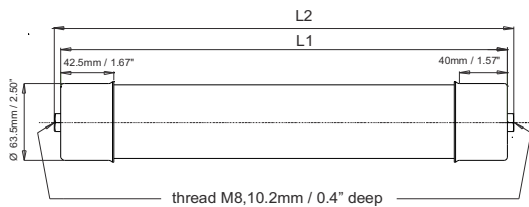
Standard(s)
IEC 60282-1



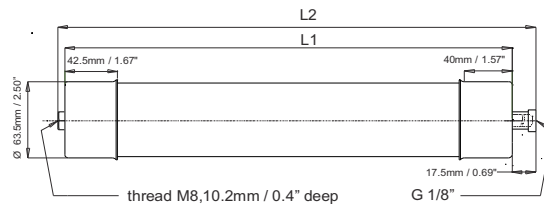
Size L1=440mm
Class
General-Purpose

| Rated Current I_n [A] | Article Number | Diameter D | Weight [kg/1] | Rated Breaking Current I_1 [kA] | Minimum Breaking Current I_3 [A] | Pre-arcing I^2t [A ² s] | Total I^2t @ | | Power Loss [W] | Cold Resistance [mΩ] |
|----------------------------------|----------------|----------------------|------------------|--------------------------------------|---------------------------------------|---|----------------------------------|--------------------|-------------------|-------------------------|
| | | [in/mm] | | | | | 0.87 U_n [A ² s] | [A ² s] | | |
| L2=451mm W/O Striker | | | | | | | | | | |
| 25 | 3031391.25 | 2.50 / 63.5 | 3.6 | 63 | 57 | 1 150 | — | 10 500 | 40 | — |
| 31.5 | 3031391.31.5 | 2.50 / 63.5 | 3.6 | 63 | 72 | 2 100 | — | 16 500 | 55 | — |
| 40 | 3031391.40 | 2.50 / 63.5 | 3.6 | 63 | 84 | 2 850 | — | 19 500 | 71 | — |
| L2=463mm With 50N Striker | | | | | | | | | | |
| 25 | 3031396.25 | 2.50 / 63.5 | 3.6 | 63 | 57 | 1 150 | — | 10 500 | 40 | — |
| 31.5 | 3031396.31.5 | 2.50 / 63.5 | 3.6 | 63 | 72 | 2 100 | — | 16 500 | 55 | — |
| 40 | 3031396.40 | 2.50 / 63.5 | 3.6 | 63 | 84 | 2 850 | — | 19 500 | 71 | — |

Maximum Torque 132lb•in / 15N•m



3031391



3031396

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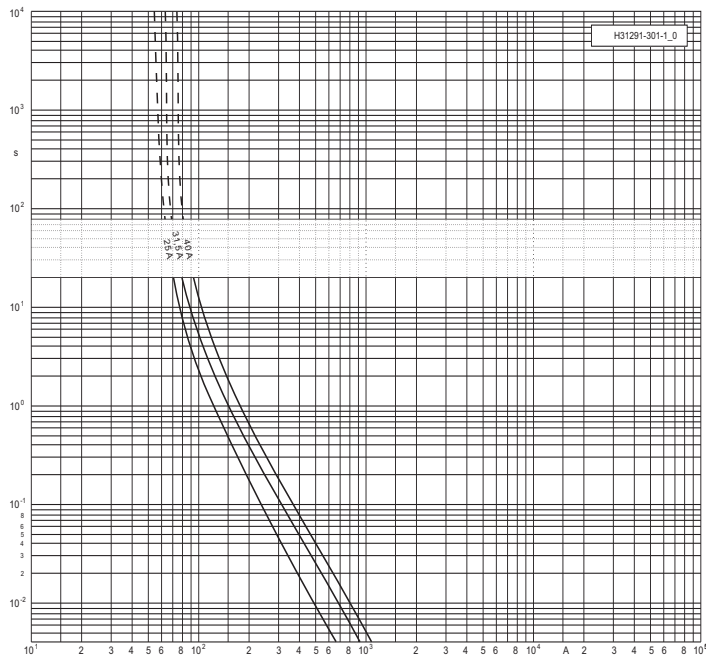
Phone 1-973-575-7422
Fax 1-973-575-5858

e-mail: info@sibafuse.com
www.siba-fuses.us

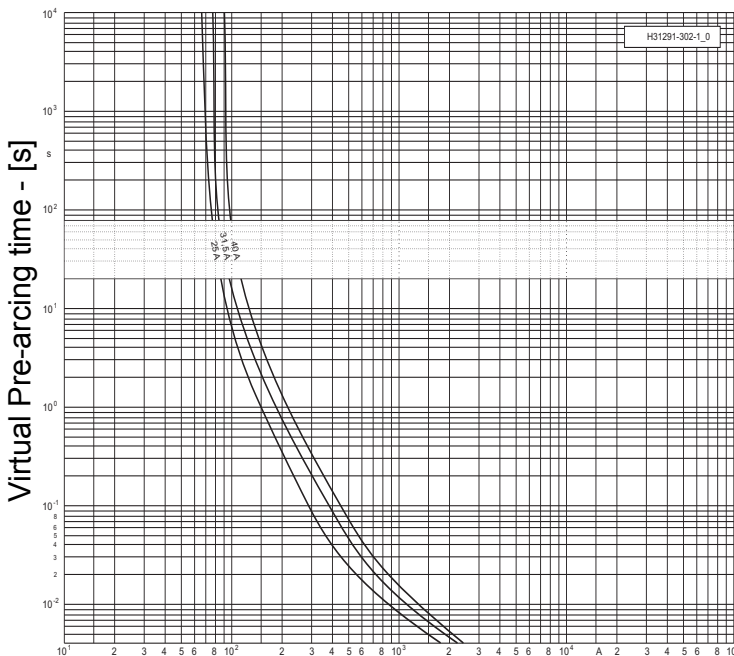
**HHOZ-G Time-Current Characteristics - Minimum Melting and Total Clearing
Cut-Off Current Diagram
Current-Limiting, General-Purpose, 24kV, L1 = 440mm (25A - 40A)**

3031391.25 - 40, 3031396.25 - 40

Minimum Melting

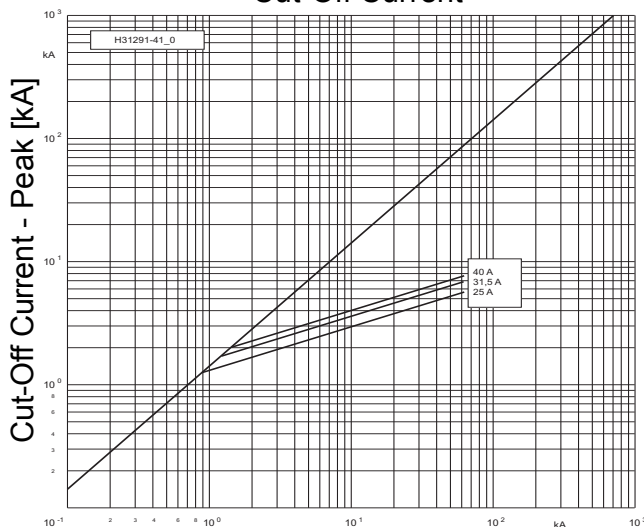


Total Clearing



R.M.S. Prospective Current [A]

Cut-Off Current



Prospective Short Circuit Current [kA] - (Symmetrical r.m.s.)