

HHBM-BM

High Voltage Fuses for Motor Applications

Application Range Types

Fuses for protection motor circuits

SIBA HHBM-BM series of fuses are current-limiting "Back-Up" class for protection of motor circuits and comply with the following standards;

- IEC 60282-1
- BS 2692-1
- ESI 12-8

This series type of fuses to British Standard for motor protection are designed and constructed to well proven concepts developed by SIBA to deal with cyclic loads typical for motor circuits with lower power losses compared to commonly used HV fuses.

The fuses are designed for decades of reliable usage and available in voltage ranges of 3.6kV and 7.2kV and 24kV.



Selection Guide

HHBM-BM, British Style, Current-Limiting, Back-Up

Current ratings [A]; 25, 31.5, 40, 50, 63, 80, 100, 125, 160, 200, 224, 250, 315, 355, 400, 450

A=254mm	Page	A=403mm	Page	A=587mm					
3.6kV									
3026956.50 - 355	128					Bracket			
3027056.400 - 450	128								
7.2kV									
		3027156.25 - 250	130			Bracket			
		3027256.315 - 450	130						
12kV									
				3027456.50 - 200	132	Bracket			
				3027556.224 - 400	132				

HHBM-BM
3.6kV - Rated Voltage[U_n]

High Voltage Current-Limiting Fuses

Motor Applications
with Striker - 50N
Class



Standard(s)
DIN 43 625
IEC 60282-1
IEC 606644
BS 2692-1

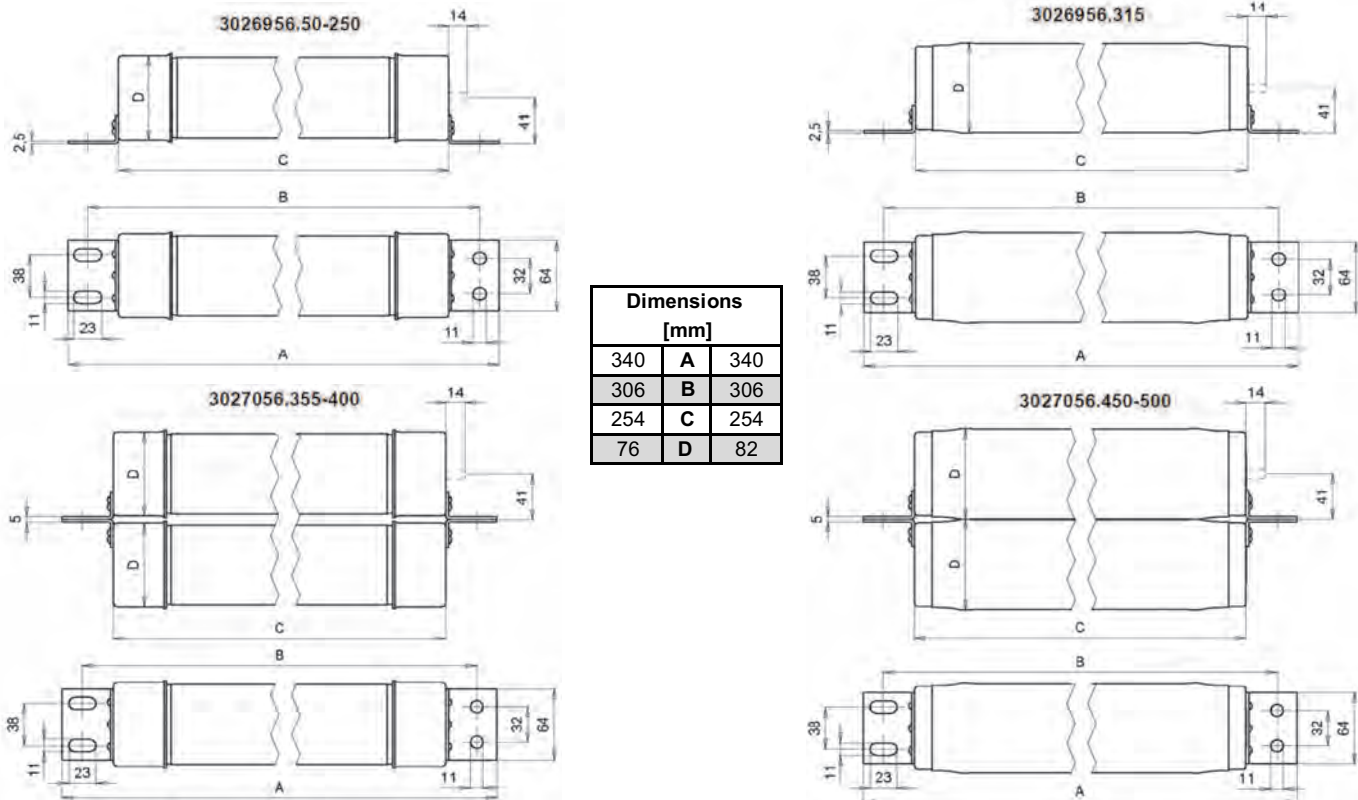
Size "A"=254mm, Double Bracket(T2A)

Back-Up

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 ¹ [W]	Cold Resistance [mΩ]
		[in/mm]					0.87U _n [A ² s]	[A ² s]		
Single Barrel										
50	3026956.50	3.00 / 76	3.9	50	140	3 400	—	16 000	23	7
63	3026956.63	3.00 / 76	3.9	50	165	5 400	—	25 000	31	5.7
80	3026956.80	3.00 / 76	3.9	50	200	6 200	—	29 000	36	4
100	3026956.100	3.00 / 76	3.9	50	285	14 000	—	65 000	39	3
125	3026956.125	3.00 / 76	3.9	50	375	25 000	—	115 000	44	2.5
160	3026956.160	3.00 / 76	3.9	50	490	64 000	—	295 000	46	1.5
200	3026956.200	3.00 / 76	3.9	50	690	121 000	—	559 000	54	1.1
224	3026956.224	3.00 / 76	3.9	50	790	144 000	—	665 000	57	1
250	3026956.250	3.00 / 76	3.9	50	1 050	307 000	—	1 414 000	61	0.7
315 ²	3026956.315	3.23 / 82	3.9	50	1 500	615 000	—	2 828 000	70	0.6
Double Barrel										
355	3027056.355	3.00 / 76	3.9	50	2 130	732 000	—	3 700 000	89	1
400	3027056.400	3.00 / 76	7.8	50	2 400	1 060 000	—	4 400 000	108	0.9
450 ²	3027056.450	3.23 / 82	7.8	50	2 700	1 230 000	—	6 000 000	120	0.8

¹ = Power loss measured at Rated current according to IEC60 282-1

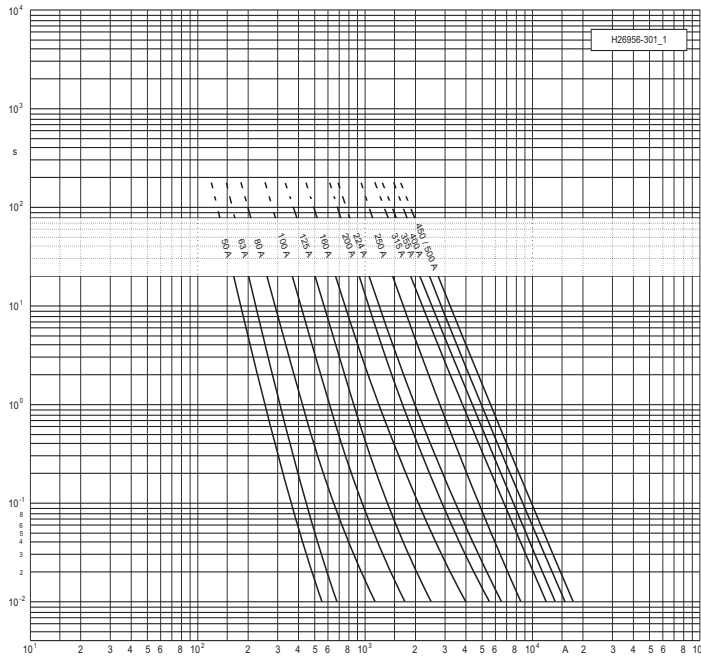
² = The continuous operating temperature on the plastic surface of taping is limited to 100° C maximum. (special attention in cases of encapsulation and/or higher ambient temperature, etc necessary)



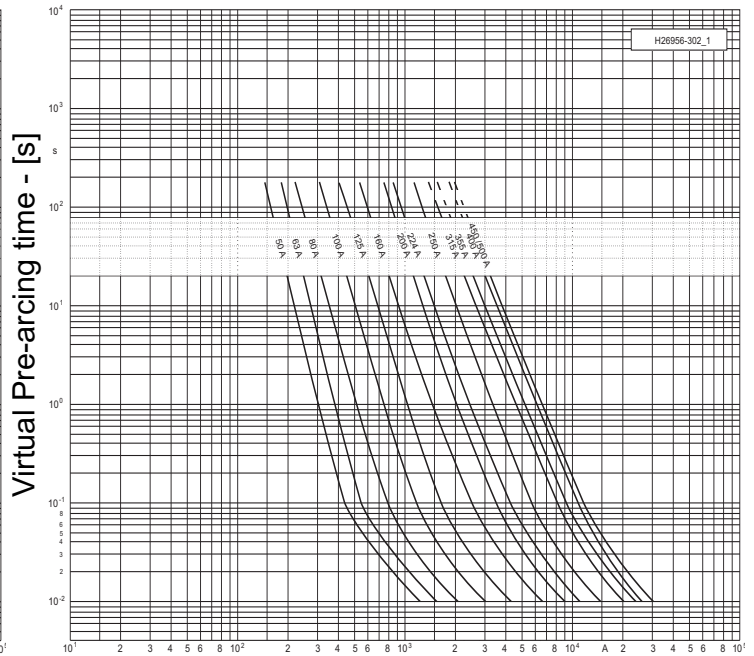
**HHBM-BM Time-Current Characteristics - Minimum Melting and Total Clearing
Cut-Off Current Diagram
Current-Limiting, Back-Up, 3.6kV, "A" = 254mm (50A - 450A)**

3026956.50 - 355, 3027056.400 - 450

Minimum Melting

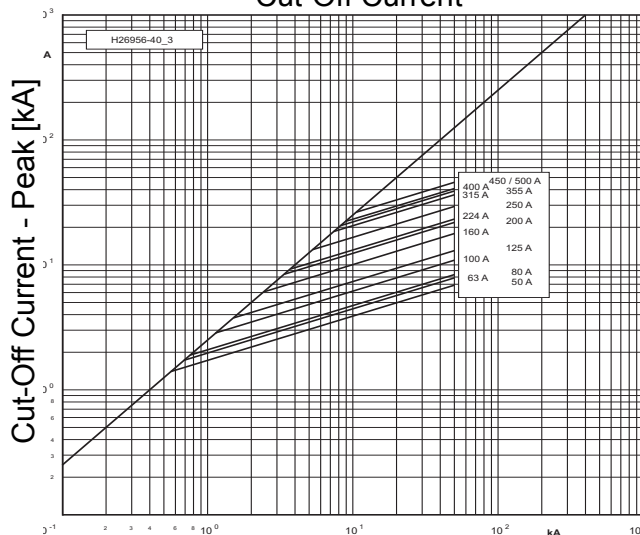


Total Clearing



R.M.S. Prospective Current [A]

Cut-Off Current



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

HHBM-BM
7.2kV - Rated Voltage[U_n]

High Voltage Current-Limiting Fuses

Motor Applications
with Striker - 50N
Class



Standard(s)
DIN 43 625
IEC 60282-1
IEC 60664
BS 2692-1

Size "A"=403mm, Double Bracket(T4A)

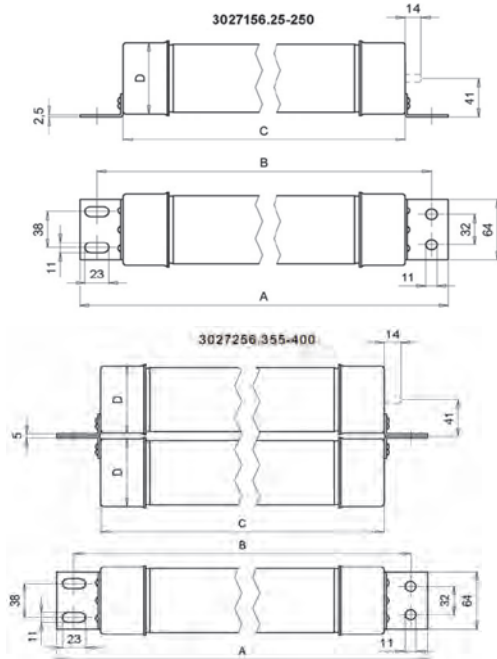
Back-Up

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 @ 0.87U _n [A ² s]	Power Loss ¹ [W]	Cold Resistance [mΩ]
		[in/mm]							
Single Barrel									
25	3027156.25	3.00 / 76	4.4	50	80	730	—	4 200	24
31.5	3027156.31.5	3.00 / 76	4.4	50	100	1 100	—	6 600	19
40	3027156.40	3.00 / 76	4.4	50	120	2 050	—	11 600	15
50	3027156.50	3.00 / 76	4.4	50	140	3 400	—	20 000	11.2
63	3027156.63	3.00 / 76	4.4	50	165	5 400	—	31 000	9
80	3027156.80	3.00 / 76	4.4	50	200	6 200	—	36 000	7
100	3027156.100	3.00 / 76	4.4	50	285	14 000	—	80 000	5
125	3027156.125	3.00 / 76	4.4	50	375	25 000	—	143 000	3.7
160	3027156.160	3.00 / 76	4.4	50	490	64 000	—	366 000	2.4
200	3027154.200	3.00 / 76	4.4	50	690	121 000	—	690 000	1.7
224	3027156.224	3.00 / 76	4.4	50	790	144 000	—	824 000	1.6
250	3027156.250	3.00 / 76	4.4	50	1 050	307 000	—	1 750 000	1.1
315 ²	3027156.315	3.22/ 82	4.4	50	1 900	627 000	—	3 200 000	0.9
Double Barrel									
355	3027256.355	3.00 / 76	8.8	50	2 130	760 000	—	4 500 000	0.7
400	3027256.400	3.00 / 76	8.8	50	2 400	1 060 000	—	5 100 000	0.6
450 ²	3027256.450	3.22 / 82	8.8	50	2 700	1 230 000	—	6 500 000	0.55
500 ²	3027256.500	3.22 / 82	8.8	50					

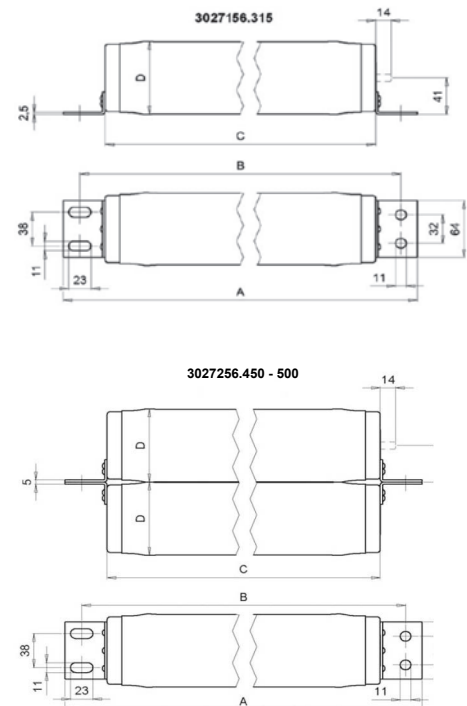
Contact SIBA

¹ = Power loss measured at Rated current according to IEC60 282-1

² = The continuous operating temperature on the plastic surface of taping is limited to 100° C maximum.
(special attention in cases of encapsulation and/or higher ambient temperature, etc necessary)



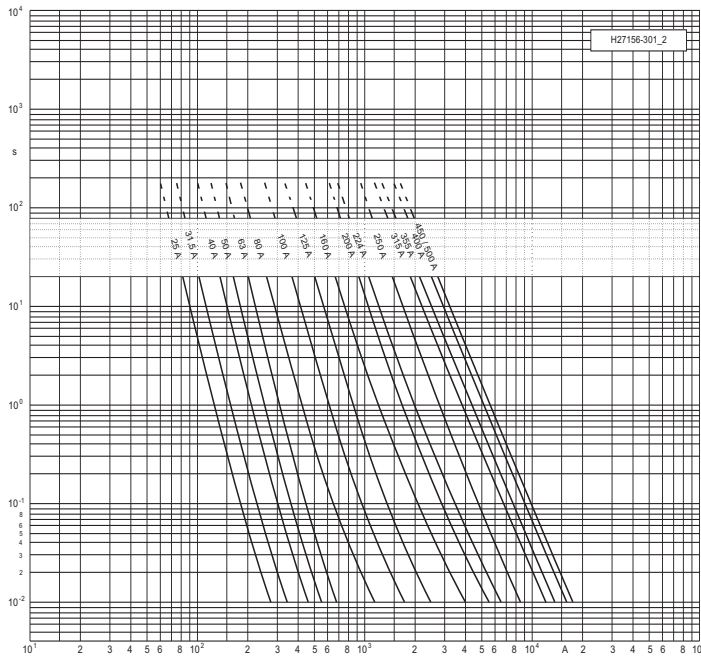
Dimensions [mm]		
489	A	489
455	B	455
403	C	403
76	D	82



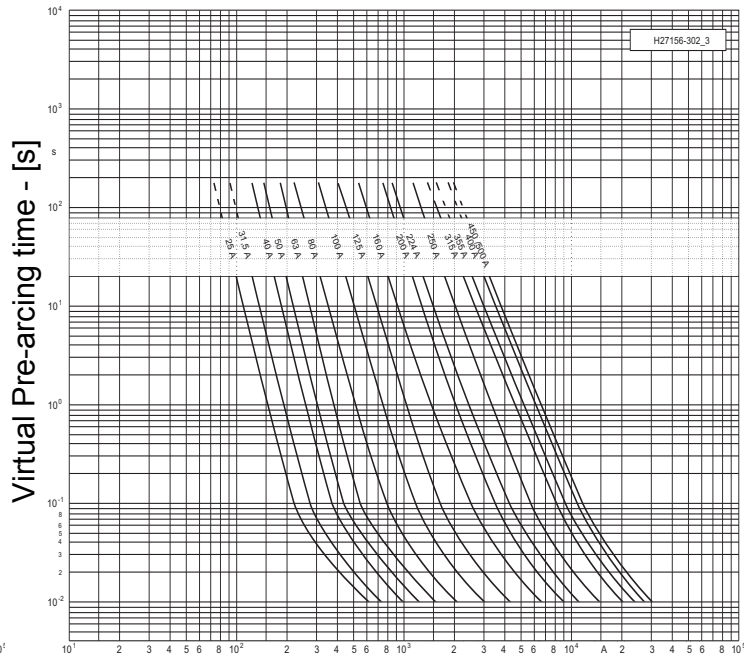
**HHBM-BM Time-Current Characteristics - Minimum Melting and Total Clearing
Cut-Off Current Diagram
Current-Limiting, Back-Up, 7.2kV, "A" = 403mm (25A - 500A)**

3027156.50 - 250, 3027256.315 - 500

Minimum Melting

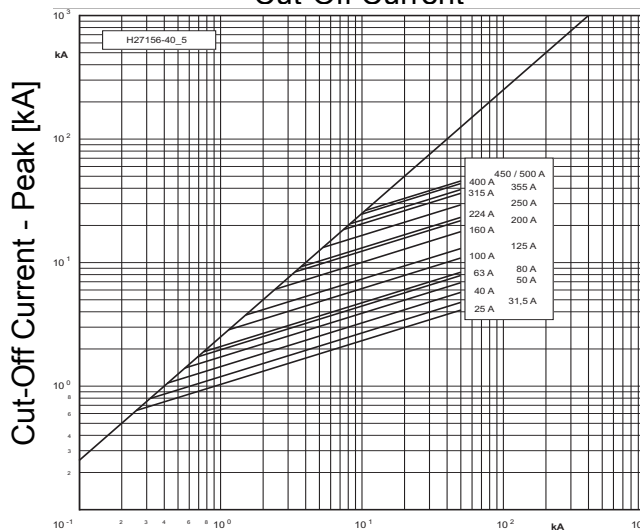


Total Clearing



R.M.S. Prospective Current [A]

Cut-Off Current



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

HHBM-BM
12kV - Rated Voltage[U_n]

High Voltage Current-Limiting Fuses

Motor Applications
with Striker - 50N

Class
Back-Up



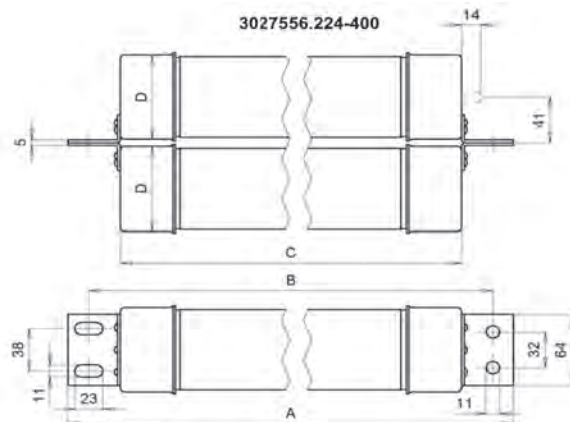
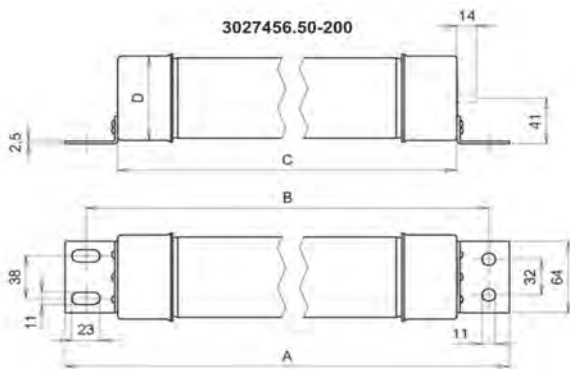
Standard(s)
BS 2692-1
IEC 60282-1

Size "A"=587mm, Double Bracket

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 ¹ [W]	Cold Resistance [mΩ]
		[in/mm]					0.87U _n [A ² s]	[A ² s]		
Single Barrel										
50	3027456.50	3.00 / 76		50	140	3 400	—	23 000	55	17
63	3027456.63	3.00 / 76		50	165	5 400	—	35 000	74	14
80	3027456.80	3.00 / 76		50	200	6 200	—	36 500	100	11
100	3027456.100	3.00 / 76		50	285	14 000	—	79 000	107	7.5
125	3027456.125	3.00 / 76		50	375	25 000	—	141 000	128	5.6
160	3027456.160	3.00 / 76		50	480	64 000	—	362 000	136	3.5
200	3027454.200	3.00 / 76		50	600	121 000	—	685 000	157	2.6
Double Barrel										
224	3027556.224	3.00 / 76		50	675	127 000	—	717 000	188	2.5
250	3027556.250	3.00 / 76		50	750	189 000	—	1 100 000	210	2.0
315 ²	3027556.315	3.22 / 82		50	960	257 000	—	1 450 000	270	1.8
355	3027556.355	3.00 / 76		50	1 050	325 000	—	1 840 000	305	1.6
400	3027556.400	3.00 / 76		50	1 200	486 000	—	2 740 000	325	1.3

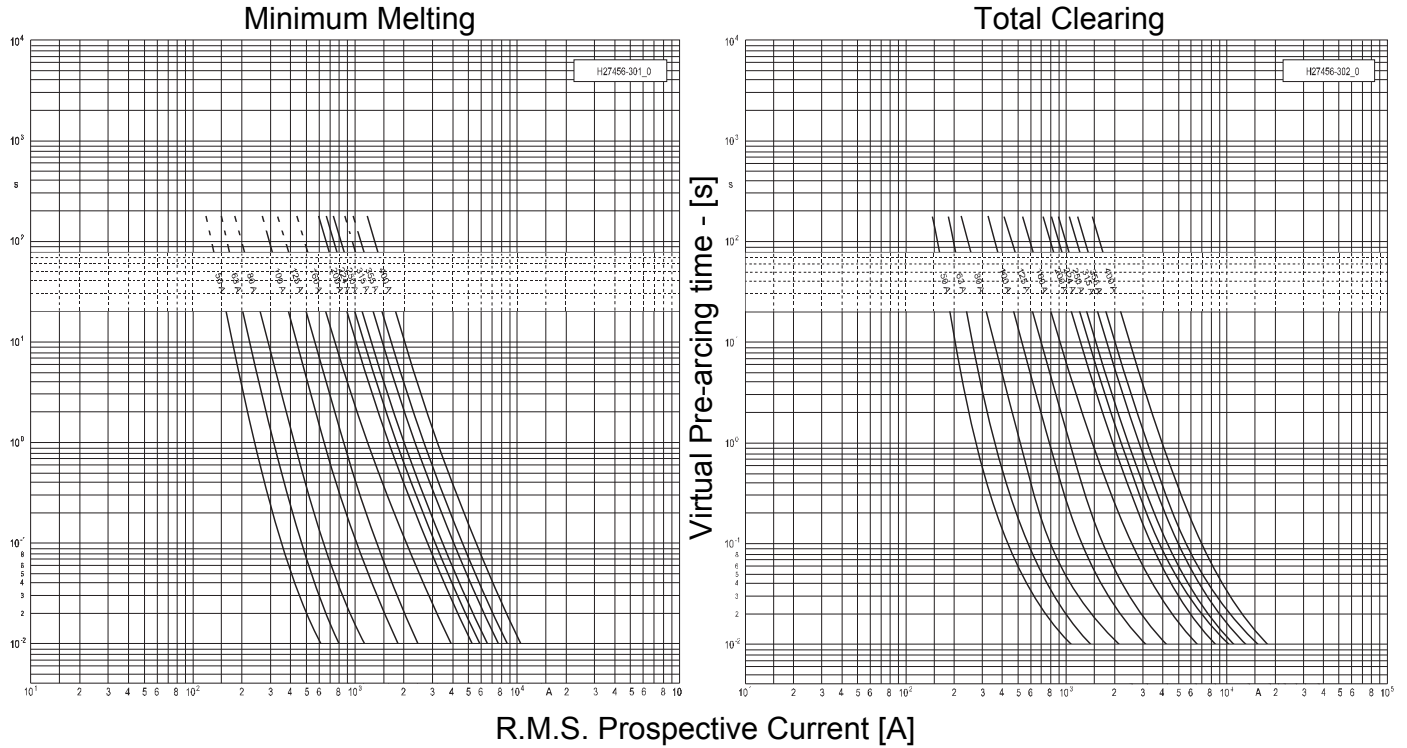
¹ = Power loss measured at Rated current according to IEC60 282-1

Dimensions [mm]		
587	A	587
553	B	553
501	C	501
76	D	76



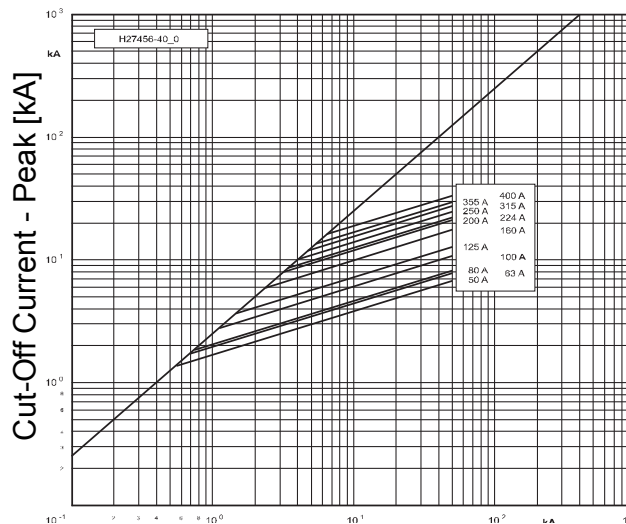
**HHBM-BM Time-Current Characteristics - Minimum Melting and Total Clearing
Cut-Off Current Diagram
Current-Limiting, Back-Up, 12kV, "A" = 587mm (50A - 400A)**

3027456.50 - 250, 3027556.224 - 400



R.M.S. Prospective Current [A]

Cut-Off Current



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