

High Voltage Fuses

German DIN Standard

For Air & Gas Insulated Switchgear
Indoor and Outdoor Application



Design and construction

SIBA HV Fuse-links have parallel connected pure silver fuse-elements. The design and method of production of the elements ensure narrow tolerances of time-current characteristics.

The fuse elements are wound on a ceramic support and are attached to the silver plated connection caps by means of spot-welding. The connection caps are fitted inside the silver plated copper end caps by spot welding. The copper end caps themselves are press-fitted onto the porcelain tube, which is glazed inside and outside. The end caps are mechanically fixed to the porcelain tube and additionally sealed by a durable elastic sealing medium. This sealing method has been proven over many decades of positive field experience and ensures tightness against ingress of humidity.

Striker pin

SIBA HV Fuse-links are available with striker pins of force:

- 80 N (Part No. 30 ... 13 for basic-type) and
- 120 N (Part No. 30 ... 14 for variant-type)

The characteristics of both striker pins correspond to IEC 60282-1, VDE 0670 Part 4, and are of the energy-category "medium".

The striker pin system is connected by means of a high resistance parallel conductor. After melting the main fuse elements, the striker pin indicates the operating status of the fuse and actuates a microswitch for remote indication, and/or triggers a load break switch or a circuit breaker to open.

The temperature limiting function of the fuse striker pin

SIBA HV Fuse-links up to and including 160 A with a striker pin of 80 N are equipped with an integrated temperature limiter as standard. The temperature limiter is fitted inside the striker pin system. The SIBA striker pin system therefore includes the following functions:

- thermal protection of adjacent equipment, especially SF6 insulated switchgear
- limitation of failure current at the overload region
- improved properties for the switch-fuse combinations according to IEC 62271-105

The integrated temperature limiter avoids unacceptably high temperatures – no matter why they are generated – in gas-insulated switchgear or narrow switchgears enclosures. By means of a melting activator, temperatures inside the fuse link enclosure are limited to below 100°C. This design especially considers continuity of current supply for the end user for as long as possible. The system reacts in such a way that short time overloads do not cause the fuse to interrupt the circuit unnecessarily. Only when inadmissible values are exceeded, the fuse will open the switch via the striker pin.

Higher temperatures on plastic fuse enclosures in SF6-insulated switchgear can be caused by:

- selection of a fuse rating too low for proper transformer protection
- fuses loaded with fault currents below the minimum breaking current
- deterioration of fuse links caused by transient fault currents (e.g. lightning strike)
- transformer fault currents (e.g. winding short-circuit)
- additional temperature rise because of poor clip fitting

Fuse-links with an integrated temperature limiter are compatible with standard fuse links. All coordination schedules can be used.

Further information on our temperature limiter, design and construction, can be obtained from our website: www.siba.de



High Voltage Fuses

German DIN Standard

For Air & Gas Insulated Switchgear
Indoor and Outdoor Application

Selection Guide

Rated Voltage AC [kV]	DIN Size E [mm]	Class	Part No.	Selection Guide [Page]	Techn. Data [Page]
3/7.2	192 *	Back-up	30 002 13	HHD 5	HHD 23
3/7.2	192 *	Back-up	30 010 13	HHD 5	HHD 23
3/7.2	192 *	Back-up	30 018 13	HHD 5	HHD 23
3/7.2	192 *	Back-up	30 018 14	HHD 5	HHD 23
3/7.2	292	Back-up	30 098 13	HHD 6	HHD 23
3/7.2	292	Back-up	30 099 13	HHD 6	HHD 23
3/7.2	292	Back-up	30 100 13	HHD 6	HHD 23
3/7.2	292	Back-up	30 100 14	HHD 6	HHD 23
3/7.2	442	Back-up	30 109 13	HHD 7	HHD 24
3/7.2	442	Back-up	30 110 13	HHD 7	HHD 24
3/7.2	442	Back-up	30 110 14	HHD 7	HHD 24
6/12	192	Back-up	30 119 13	HHD 8	HHD 25
6/12	192	Back-up	30 267 13	HHD 8	HHD 25
6/12	292 *	Back-up	30 004 13	HHD 9	HHD 25
6/12	292 *	Back-up	30 012 13	HHD 9	HHD 25
6/12	292 *	Back-up	30 020 13	HHD 9	HHD 25
6/12	292 *	Back-up	30 020 14	HHD 9	HHD 25
6/12	442	Back-up	30 101 13	HHD 10	HHD 26
6/12	442	Back-up	30 102 13	HHD 10	HHD 26
6/12	442	Back-up	30 103 13	HHD 10	HHD 26
6/12	442	Back-up	30 103 14	HHD 10	HHD 26
6/12	537	Back-up	30 211 13	HHD 11	HHD 26
6/12	537	Back-up	30 211 14	HHD 11	HHD 26
10/17.5	292	Back-up	30 255 13	HHD 12	HHD 27
10/17.5	292	Back-up	30 221 13	HHD 12	HHD 27
10/17.5	292	Back-up	30 222 13	HHD 12	HHD 27
10/17.5	367 *	Back-up	30 176 13	HHD 13	HHD 27
10/17.5	367 *	Back-up	30 177 13	HHD 13	HHD 27
10/17.5	367 *	Back-up	30 178 13	HHD 13	HHD 27
10/17.5	367 *	Back-up	30 178 14	HHD 13	HHD 27
10/17.5	442	Back-up	30 231 13	HHD 14	HHD 28
10/17.5	442	Back-up	30 232 13	HHD 14	HHD 28
10/17.5	442	Back-up	30 233 13	HHD 14	HHD 28

* Standard size



High Voltage Fuses

German DIN Standard

For Air & Gas Insulated Switchgear
Indoor and Outdoor Application

Selection Guide

Rated Voltage AC [kV]	DIN Size E [mm]	Class	Part No.	Selection Guide [Page]	Techn. Data [Page]	
10/24	292	Back-up	30 180 13	HHD 15	HHD 29	
10/24	292	Back-up	30 225 13	HHD 15	HHD 29	
10/24	442 *	Back-up	30 006 13	HHD 16	HHD 29	
10/24	442 *	Back-up	30 014 13	HHD 16	HHD 29	
10/24	442 *	Back-up	30 022 13	HHD 16	HHD 29	
10/24	537	Back-up	30 203 13	HHD 17	HHD 30	
10/24	537	Back-up	30 204 13	HHD 17	HHD 30	
10/24	537	Back-up	30 196 13	HHD 17	HHD 30	
10/24	537	Back-up	30 196 14	HHD 17	HHD 30	
20/36	442	Back-up	30 181 13	HHD 18	HHD 31	
20/36	537 *	Back-up	30 008 13	HHD 19	HHD 31	
20/36	537 *	Back-up	30 016 13	HHD 19	HHD 31	
20/36	537 *	Back-up	30 024 13	HHD 19	HHD 31	
38,5	537	Back-up	30 337 13	HHD 19	HHD 31	
38,5	537	Back-up	30 338 13	HHD 19	HHD 31	
38,5	537	Back-up	30 338 13	HHD 19	HHD 31	
6/12	292	General-purpose	30 004 93	HHD 21	HHD 32	
6/12	292	General-purpose	30 012 93	HHD 21	HHD 32	
6/12	292	General-purpose	30 020 93	HHD 21	HHD 32	
10/24	442	General-purpose	30 006 93	HHD 22	HHD 32	
10/24	442	General-purpose	30 014 93	HHD 22	HHD 32	
10/24	442	General-purpose	30 022 93	HHD 22	HHD 32	

*Standard size

Selection Guide Fuse-Bases

Article	Rated Voltage AC [kV]	DIN-Size E [mm]	Part No.	Techn. Data [Page]	
Indoor Fuse-bases	7.2	192	31 001 02	HHD 40	
	12	292	31 003 02	HHD 40	
	24	442	31 005 02	HHD 40	
	36	537	31 007 02	HHD 40	
	24	292	31 221 01	HHD 40	
Outdoor Fuse-bases	7.2	192	31 002 01	HHD 41	
	12	292	31 004 01	HHD 41	
	24	292	31 006 01	HHD 41	
	36	537	31 008 01	HHD 41	



High Voltage Fuses

German DIN Standard

For Air & Gas Insulated Switchgear
Indoor and Outdoor Application

Selection Guide Microswitch Fitting

Article	Length [mm]	Part No.	Techn. Data [Page]	
Micro switch	250	31 001 16	HHD 42	
	660	31 001 10	HHD 42	
	900	31 001 14	HHD 42	
	1 200	31 001 17	HHD 42	
Contact Clip		34 002 01	HHD 43	
Distance Plate		31 002 01.3	HHD 43	

Selection Guide Accessories

Article	Rated Voltage [kV]	Part No.	Techn. Data [Page]	
Extension Adapter	12/24	34 006 01	HHD 44	
Test Fuse-link for gas insulated switchgear	24	33 010 03	HHD 45	
Contact Clip 200 A indoor and outdoor		31 003 02.20	HHD 46	
Contact Clip heavy duty		34 001 01.20	HHD 46	
Storage Holder	12	33 004 01	HHD 47	
	24	33 006 01	HHD 47	
	36	33 008 01	HHD 47	



High Voltage Fuses

German DIN Standard

For Air & Gas Insulated Switchgear
Indoor and Outdoor Application

DIN
E=192 mm

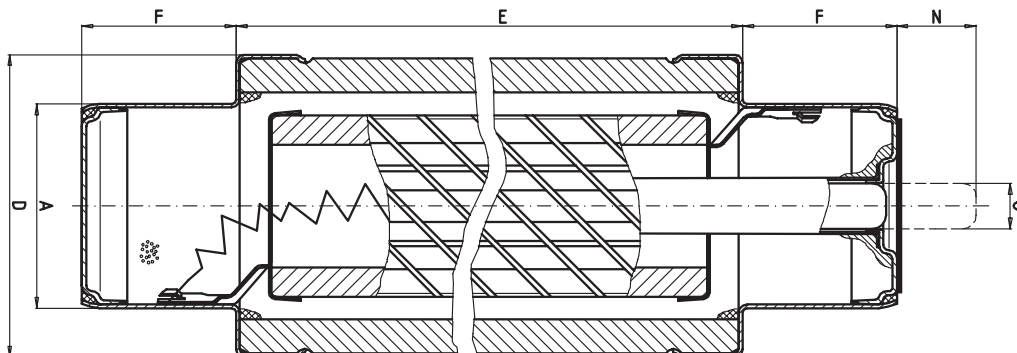
Rated Voltage
AC 3/7.2 kV

Class
Back-up

Standard
DIN 43625 · IEC 60282-1

Rated Current [A]	Part No.	D = Diameter		Rated Breaking Current [kA]	Weight [kg/1]	Pack	
		[inch]	[mm]				
6.3	30 002 13.6.3	2.10	53	63	1.2	1	
10	30 002 13.10	2.10	53	63	1.2	1	
16	30 002 13.16	2.10	53	63	1.2	1	
20	30 002 13.20	2.10	53	63	1.2	1	
25	30 002 13.25	2.10	53	63	1.2	1	
31.5	30 002 13.31.5	2.10	53	63	1.2	1	
40	30 002 13.40	2.10	53	63	1.2	1	
50	30 002 13.50	2.10	53	63	1.2	1	
63	30 010 13.63	2.64	67	63	1.5	1	
80	30 010 13.80	2.64	67	63	1.5	1	
100	30 010 13.100	2.64	67	63	1.5	1	
125	30 010 13.125	2.64	67	63	1.5	1	
160	30 018 13.160	3.35	85	63	2.9	1	
200	30 018 14.200	3.35	85	50	2.9	1	

Preferred Standard Size 3/7.2 kV



A	1.77" (45 mm)
F	1.30" (33 mm)
O	0.40" (10 mm)
N	1.38" (35 mm)



High Voltage Fuses

German DIN Standard

For Air & Gas Insulated Switchgear
Indoor and Outdoor Application

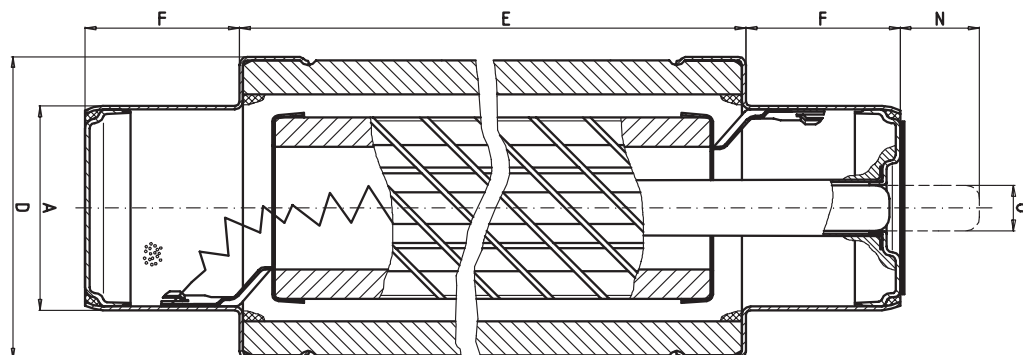
DIN
E= 292 mm

Rated Voltage
AC 3/7.2 kV

Class
Back-up

Standard
DIN 43625 · IEC 60282-1

Rated Current [A]	Part No.	D = Diameter		Rated Breaking Current [kA]	Weight [kg/1]	Pack	
		[inch]	[mm]				
6.3	30 098 13.6.3	2.10	53	63	1.6	1	
10	30 098 13.10	2.10	53	63	1.6	1	
16	30 098 13.16	2.10	53	63	1.6	1	
20	30 098 13.20	2.10	53	63	1.6	1	
25	30 098 13.25	2.10	53	63	1.6	1	
31.5	30 098 13.31.5	2.10	53	63	1.6	1	
40	30 098 13.40	2.10	53	63	1.6	1	
50	30 098 13.50	2.10	53	63	1.6	1	
63	30 099 13.63	2.64	67	63	2.0	1	
80	30 099 13.80	2.64	67	63	2.0	1	
100	30 099 13.100	2.64	67	63	2.0	1	
125	30 099 13.125	2.64	67	63	2.0	1	
160	30 100 13.160	3.35	85	50	3.8	1	
200	30 100 14.200	3.35	85	50	3.8	1	
250	30 100 14.250	3.35	85	50	3.8	1	
315	30 100 14.315	3.35	85	50	3.8	1	
355	30 100 14.355	3.35	85	50	3.8	1	



A	1.77" (45 mm)
F	1.30" (33 mm)
O	0.40" (10 mm)
N	1.38" (35 mm)



High Voltage Fuses

German DIN Standard

For Air & Gas Insulated Switchgear
Indoor and Outdoor Application

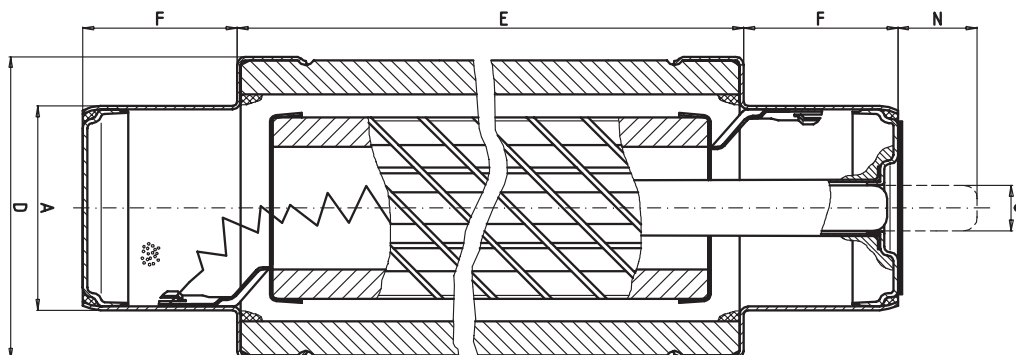
DIN
E= 442 mm

Rated Voltage
AC 3/7.2 kV

Class
Back-up

Standard
DIN 43625 · IEC 60282-1

Rated Current [A]	Part No.	D = Diameter		Rated Breaking Current [kA]	Weight [kg/1]	Pack	
		[inch]	[mm]				
100	30 109 13.100	2.64	67	63	2.9	1	
125	30 109 13.125	2.64	67	63	2.9	1	
160	30 110 13.160	3.35	85	63	5.4	1	
200	30 110 14.200	3.35	85	50	5.4	1	
250	30 110 14.250	3.35	85	50	5.4	1	
315	30 110 14.315	3.35	85	50	5.4	1	
355	30 110 14.355	3.35	85	50	5.4	1	
400	30 110 14.400	3.35	85	50	5.4	1	
500	30 110 14.500	3.35	85	50	5.4	1	



A	1.77" (45 mm)
F	1.30" (33 mm)
O	0.40" (10 mm)
N	1.38" (35 mm)



High Voltage Fuses

German DIN Standard

For Air & Gas Insulated Switchgear
Indoor and Outdoor Application

DIN

E= 192 mm

Rated Voltage

AC 6/12 kV

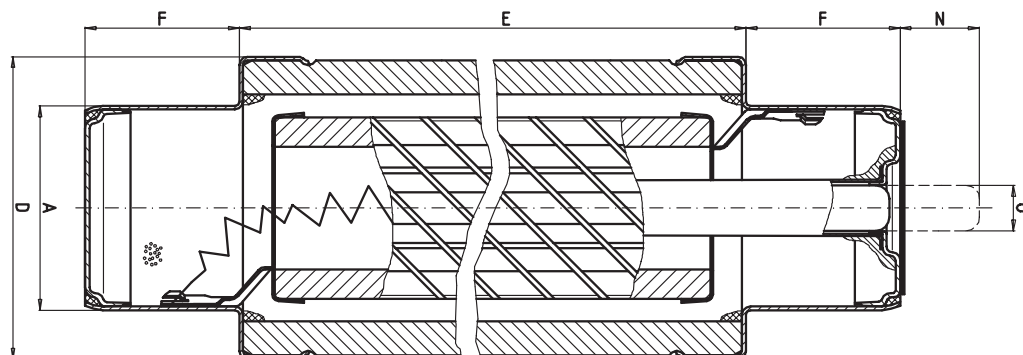
Class

Back-up

Standard

DIN 43625 · IEC 60282-1

Rated Current [A]	Part No.	D = Diameter		Rated Breaking Current [kA]	Weight [kg/1]	Pack	
		[inch]	[mm]				
6.3	30 119 13.6.3	2.10	53	63	1.2	1	
10	30 119 13.10	2.10	53	63	1.2	1	
16	30 119 13.16	2.10	53	63	1.2	1	
20	30 267 13.20	2.64	67	63	1.5	1	
25	30 267 13.25	2.64	67	63	1.5	1	
31.5	30 267 13.31.5	2.64	67	63	1.5	1	
40	30 267 13.40	2.64	67	63	1.5	1	
50	30 267 13.50	2.64	67	63	1.5	1	
63	30 267 13.63	2.64	67	63	1.5	1	



A 1.77" (45 mm)

F 1.30" (33 mm)

O 0.40" (10 mm)

N 1.38" (35 mm)



High Voltage Fuses

German DIN Standard

For Air & Gas Insulated Switchgear
Indoor and Outdoor Application

DIN
E= 292 mm

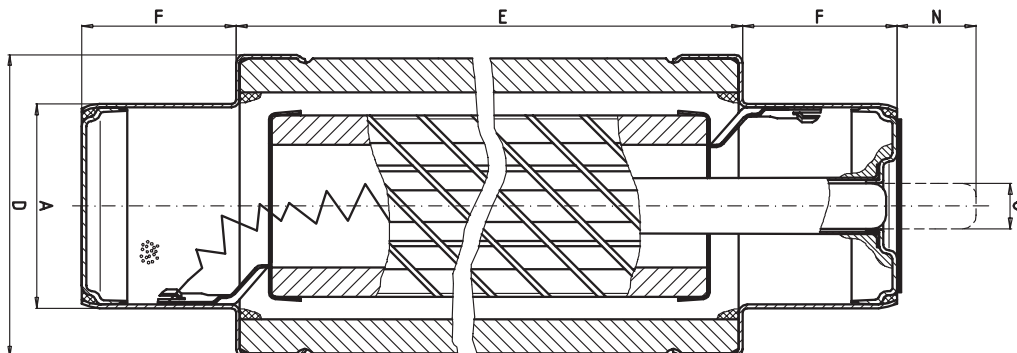
Rated Voltage
AC 6/12 kV

Class
Back-up

Standard
DIN 43625 · IEC 60282-1

Rated Current [A]	Part No.	D = Diameter		Rated Breaking Current [kA]	Weight [kg/1]	Pack	
		[inch]	[mm]				
6.3	30 004 13.6.3	2.10	53	63	1.6	1	
10	30 004 13.10	2.10	53	63	1.6	1	
16	30 004 13.16	2.10	53	63	1.6	1	
20	30 004 13.20	2.10	53	63	1.6	1	
25	30 004 13.25	2.10	53	63	1.6	1	
31.5	30 004 13.31.5	2.10	53	63	1.6	1	
40	30 004 13.40	2.10	53	63	1.6	1	
50	30 004 13.50	2.10	53	63	1.6	1	
63	30 012 13.63	2.64	67	63	2.0	1	
80	30 012 13.80	2.64	67	63	2.0	1	
100	30 012 13.100	2.64	67	63	2.0	1	
125	30 012 13.125	2.64	67	63	2.0	1	
160	30 020 13.160	3.35	85	63	3.8	1	
200	30 020 14.200	3.35	85	50	3.8	1	

Preferred Standard Size 6/12 kV



A	1.77" (45 mm)
F	1.30" (33 mm)
O	0.40" (10 mm)
N	1.38" (35 mm)



High Voltage Fuses

German DIN Standard

For Air & Gas Insulated Switchgear
Indoor and Outdoor Application

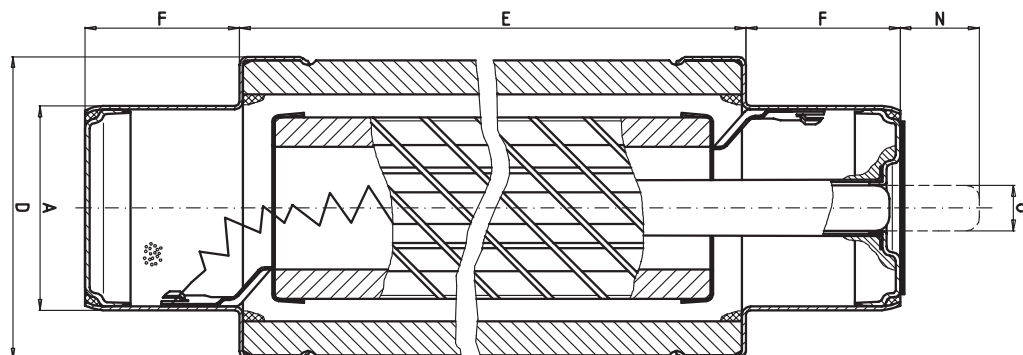
DIN
E= 442 mm

Rated Voltage
AC 6/12 kV

Class
Back-up

Standard
DIN 43625 · IEC 60282-1

Rated Current [A]	Part No.	D = Diameter		Rated Breaking Current [kA]	Weight [kg/1]	Pack	
		[inch]	[mm]				
6.3	30 101 13.6.3	2.10	53	63	2.2	1	
10	30 101 13.10	2.10	53	63	2.2	1	
16	30 101 13.16	2.10	53	63	2.2	1	
20	30 101 13.20	2.10	53	63	2.2	1	
25	30 101 13.25	2.10	53	63	2.2	1	
31.5	30 101 13.31.5	2.10	53	63	2.2	1	
40	30 101 13.40	2.10	53	63	2.2	1	
50	30 101 13.50	2.10	53	63	2.2	1	
63	30 102 13.63	2.64	67	63	2.9	1	
80	30 102 13.80	2.64	67	63	2.9	1	
100	30 102 13.100	2.64	67	63	2.9	1	
125	30 102 13.125	2.64	67	63	2.9	1	
160	30 103 13.160	3.35	85	63	5.4	1	
200	30 103 14.200	3.35	85	50	5.4	1	
250	30 103 14.250	3.35	85	50	5.4	1	



A	1.77" (45 mm)
F	1.30" (33 mm)
O	0.40" (10 mm)
N	1.38" (35 mm)



High Voltage Fuses

German DIN Standard

For Air & Gas Insulated Switchgear
Indoor and Outdoor Application

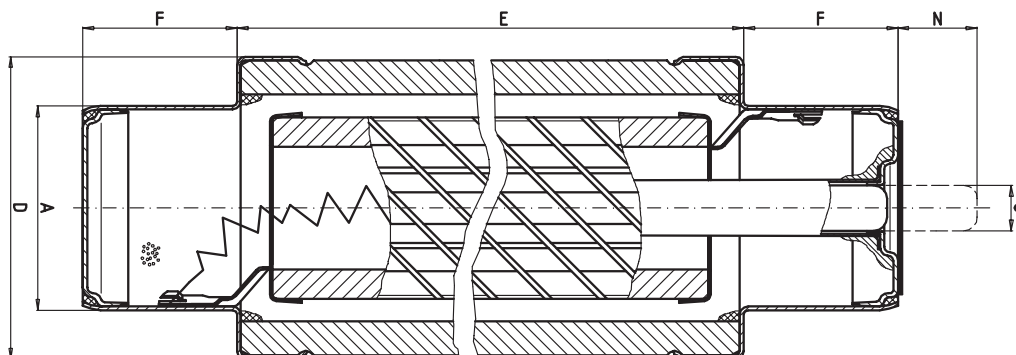
DIN
E= 537 mm

Rated voltage
AC 6/12 kV

Class
Back-up

Standard
DIN 43625 · IEC 60282-1

Rated Current [A]	Part No.	D = Diameter		Rated Breaking Current [kA]	Weight [kg/1]	Pack	
		[inch]	[mm]				
100	30 211 13.100	3.35	85	63	6.8	1	
125	30 211 13.125	3.35	85	63	6.8	1	
160	30 211 13.160	3.35	85	63	6.8	1	
200	30 211 14.200	3.35	85	50	6.8	1	
250	30 211 14.250	3.35	85	50	6.8	1	



A	1.77" (45 mm)
F	1.30" (33 mm)
O	0.40" (10 mm)
N	1.38" (35 mm)



High Voltage Fuses

German DIN Standard

For Air & Gas Insulated Switchgear
Indoor and Outdoor Application

DIN

E= 292 mm

Rated Voltage

AC 10/17.5 kV

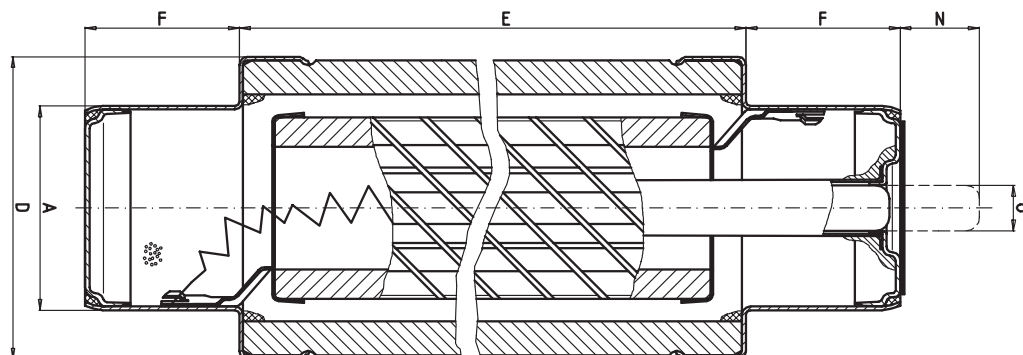
Class

Back-up

Standard

DIN 43625 · IEC 60282-1

Rated Current [A]	Part No.	D = Diameter		Rated Breaking Current [kA]	Weight [kg/1]	Pack	
		[inch]	[mm]				
6.3	30 255 13.6.3	2.10	53	63	1.6	1	
10	30 255 13.10	2.10	53	63	1.6	1	
16	30 255 13.16	2.10	53	63	1.6	1	
20	30 221 13.20	2.64	67	63	2.0	1	
25	30 221 13.25	2.64	67	63	2.0	1	
31.5	30 221 13.31.5	2.64	67	63	2.0	1	
40	30 221 13.40	2.64	67	63	2.0	1	
50	30 221 13.50	2.64	67	63	2.0	1	
63	30 221 13.63	2.64	67	63	2.0	1	
80	30 222 13.80	3.35	85	63	3.8	1	
100	30 222 13.100	3.35	85	63	3.8	1	
125	30 222 13.125	3.35	85	63	3.8	1	



A 1.77" (45 mm)

F 1.30" (33 mm)

O 0.40" (10 mm)

N 1.38" (35 mm)



High Voltage Fuses

German DIN Standard

For Air & Gas Insulated Switchgear
Indoor and Outdoor Application

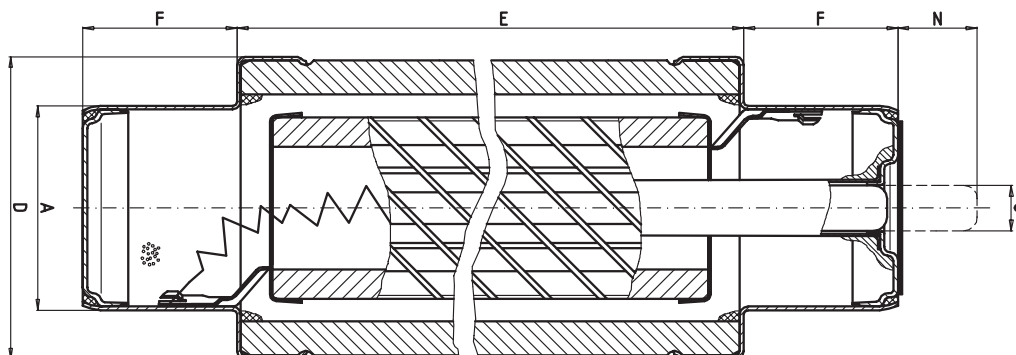
DIN
E= 367 mm

Rated Voltage
AC 10/17.5 kV

Class
Back-up

Standard
DIN 43625 · IEC 60282-1

Rated Current [A]	Part No.	D = Diameter		Rated Breaking Current [kA]	Weight [kg/1]	Pack	
		[inch]	[mm]				
6.3	30 176 13.6.3	2.10	53	63	2.0	1	
10	30 176 13.10	2.10	53	63	2.0	1	
16	30 176 13.16	2.10	53	63	2.0	1	
20	30 176 13.20	2.10	53	63	2.0	1	
25	30 176 13.25	2.10	53	63	2.0	1	
31.5	30 177 13.31.5	2.64	67	63	3.0	1	
40	30 177 13.40	2.64	67	63	3.0	1	
50	30 177 13.50	2.64	67	63	3.0	1	
63	30 177 13.63	2.64	67	63	3.0	1	
80	30 178 13.80	3.35	85	63	4.8	1	
100	30 178 13.100	3.35	85	63	4.8	1	
125	30 178 13.125	3.35	85	63	4.8	1	
160	30 178 13.160	3.35	85	63	4.5	1	



A	1.77" (45 mm)
F	1.30" (33 mm)
O	0.40" (10 mm)
N	1.38" (35 mm)



High Voltage Fuses

German DIN Standard

For Air & Gas Insulated Switchgear
Indoor and Outdoor Application

DIN

E= 442 mm

Rated Voltage

AC 10/17.5 kV

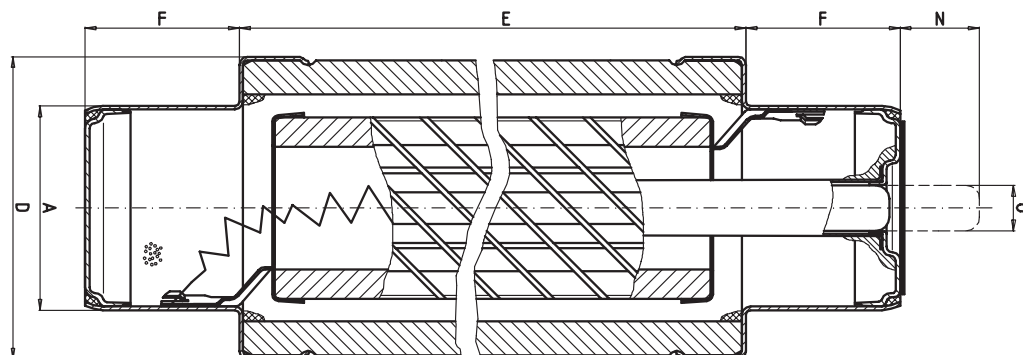
Class

Back-up

Standard

DIN 43625 · IEC 60282-1

Rated Current [A]	Part No.	D = Diameter		Rated Breaking Current [kA]	Weight [kg/1]	Pack	
		[inch]	[mm]				
6.3	30 231 13.6.3	2.10	53	63	2.2	1	
10	30 231 13.10	2.10	53	63	2.2	1	
16	30 231 13.16	2.10	53	63	2.2	1	
20	30 231 13.20	2.10	53	63	2.2	1	
25	30 231 13.25	2.10	53	63	2.2	1	
31.5	30 231 13.31.5	2.10	53	63	2.2	1	
40	30 231 13.40	2.10	53	63	2.2	1	
50	30 232 13.50	2.64	67	63	2.9	1	
63	30 232 13.63	2.64	67	63	2.9	1	
80	30 232 13.80	2.64	67	63	2.9	1	
100	30 233 13.100	3.35	85	63	5.4	1	
125	30 233 13.125	3.35	85	63	5.4	1	
160	30 233 13.160	3.35	85	63	5.4	1	

**A** 1.77" (45 mm)**F** 1.30" (33 mm)**O** 0.40" (10 mm)**N** 1.38" (35 mm)



High Voltage Fuses

German DIN Standard

For Air & Gas Insulated Switchgear
Indoor and Outdoor Application

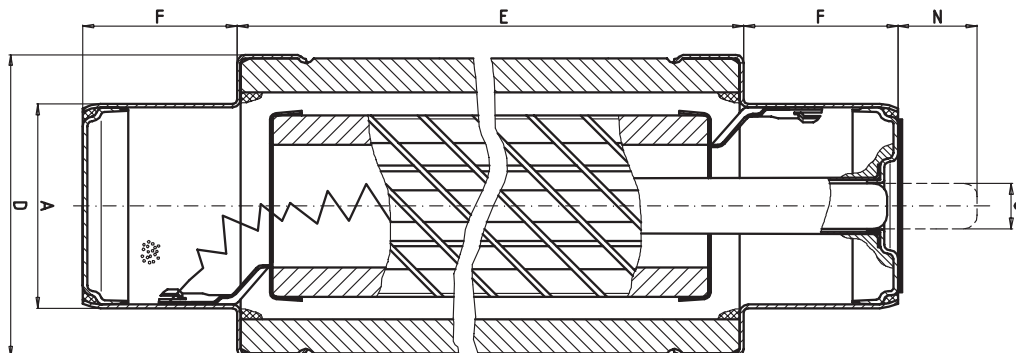
DIN
E= 292 mm

Rated Voltage
AC 10/24 kV

Class
Back-up

Standard
DIN 43625 · IEC 60282-1

Rated Current [A]	Part No.	D = Diameter		Rated Breaking Current [kA]	Weight [kg/1]	Pack	
		[inch]	[mm]				
6.3	30 180 13.6.3	2.10	53	31.5	1.6	1	
10	30 180 13.10	2.10	53	31.5	1.6	1	
16	30 180 13.16	2.10	53	31.5	1.6	1	
20	30 225 13.20	2.64	67	31.5	2.0	1	
25	30 225 13.25	2.64	67	31.5	2.0	1	
31.5	30 225 13.31.5	2.64	67	31.5	2.0	1	
40	30 225 13.40	2.64	67	31.5	2.0	1	
50	30 225 13.50	2.64	67	31.5	2.0	1	
63	30 225 13.63	2.64	67	31.5	2.0	1	



A	1.77" (45 mm)
F	1.30" (33 mm)
O	0.40" (10 mm)
N	1.38" (35 mm)



High Voltage Fuses

German DIN Standard

For Air & Gas Insulated Switchgear
Indoor and Outdoor Application

DIN
E= 442 mm

Rated Voltage
AC 10/24 kV

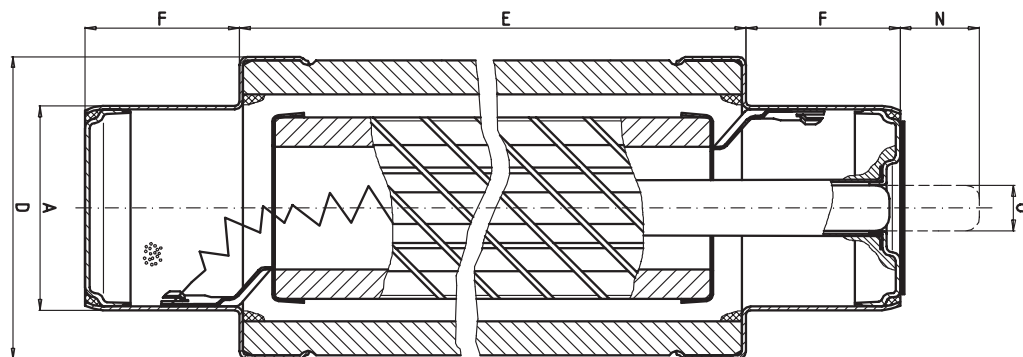
Class
Back-up

Standard
DIN 43625 · IEC 60282-1

Rated Current [A]	Part No.	D = Diameter		Rated Breaking Current [kA]	Weight [kg/1]	Pack	
		[inch]	[mm]				
6.3	30 006 13.6.3	2.10	53	63	2.2	1	
10	30 006 13.10	2.10	53	63	2.2	1	
16	30 006 13.16	2.10	53	63	2.2	1	
20	30 006 13.20	2.10	53	63	2.2	1	
25	30 006 13.25	2.10	53	63	2.2	1	
31.5	30 006 13.31.5	2.10	53	63	2.2	1	
40	30 006 13.40	2.10	53	63	2.2	1	
50	30 014 13.50	2.64	67	63	2.9	1	
63	30 014 13.63	2.64	67	63	2.9	1	
80	30 014 13.80	2.64	67	63	2.9	1	
100	30 022 13.100	3.35	85	63	5.4	1	
125	30 022 13.125	3.35	85	40	5.4	1	
160	30 022 13.160	3.35	85	31.5	5.4	1	

Preferred Standard Size 10/24 kV

A	1.77" (45 mm)
F	1.30" (33 mm)
O	0.40" (10 mm)
N	1.38" (35 mm)





High Voltage Fuses

German DIN Standard

For Air & Gas Insulated Switchgear
Indoor and Outdoor Application

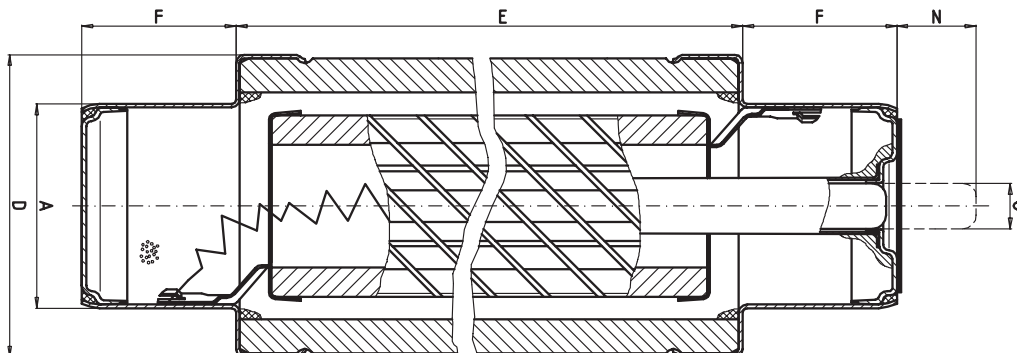
DIN
E= 537 mm

Rated Voltage
AC 10/24 kV

Class
Back-up

Standard
DIN 43625 · IEC 60282-1

Rated Current [A]	Part No.	D = Diameter		Rated Breaking Current [kA]	Weight [kg/1]	Pack	
		[inch]	[mm]				
6.3	30 203 13.6.3	2.10	53	63	2.8	1	
10	30 203 13.10	2.10	53	63	2.8	1	
16	30 203 13.16	2.10	53	63	2.8	1	
20	30 203 13.20	2.10	53	63	2.8	1	
25	30 203 13.25	2.10	53	63	2.8	1	
31.5	30 203 13.31.5	2.10	53	63	2.8	1	
40	30 203 13.40	2.10	53	63	2.8	1	
50	30 204 13.50	2.64	67	63	3.7	1	
63	30 204 13.63	2.64	67	63	3.7	1	
80	30 204 13.80	2.64	67	63	3.7	1	
100	30 196 13.100	3.35	85	63	6.8	1	
125	30 196 13.125	3.35	85	40	6.8	1	
160	30 196 13.160	3.35	85	31.5	6.8	1	



A	1.77" (45 mm)
F	1.30" (33 mm)
O	0.40" (10 mm)
N	1.38" (35 mm)



High Voltage Fuses

German DIN Standard

For Air & Gas Insulated Switchgear
Indoor and Outdoor Application

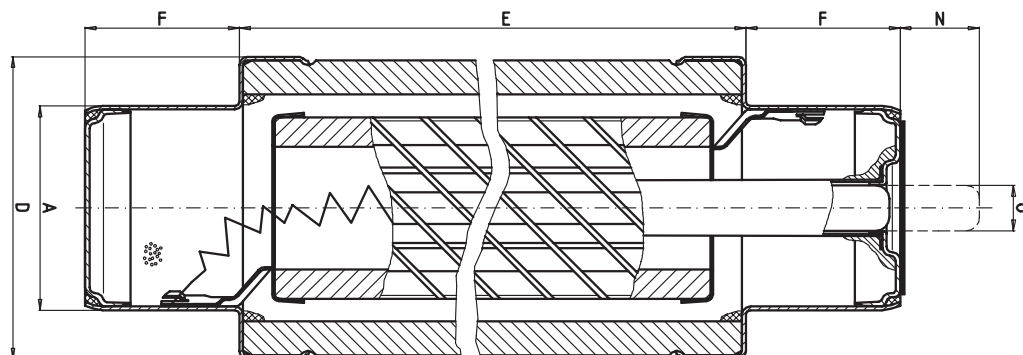
DIN
E= 442 mm

Rated Voltage
AC 20/36 kV

Class
Back-up

Standard
DIN 43625 · IEC 60282-1

Rated Current [A]	Part No.	D = Diameter		Rated Breaking Current [kA]	Weight [kg/1]	Pack
		[inch]	[mm]			
6.3	30 181 13.6.3	2.10	53	20	2.2	1
10	30 181 13.10	2.10	53	20	2.2	1
16	30 181 13.16	2.10	53	20	2.2	1



A	1.77" (45 mm)
F	1.30" (33 mm)
O	0.40" (10 mm)
N	1.38" (35 mm)



High Voltage Fuses

German DIN Standard

For Air & Gas Insulated Switchgear
Indoor and Outdoor Application

DIN
E= 537 mm

Rated Voltage
AC 20/36 kV

Class
Back-up

Standard
DIN 43625 · IEC 60282-1

Rated Current [A]	Part No.	D = Diameter		Rated Breaking Current [kA]	Weight [kg/1]	Pack	
		[inch]	[mm]				
6.3	30 008 13.6.3	2.10	53	40	2.6	1	
10	30 008 13.10	2.10	53	40	2.6	1	
16	30 008 13.16	2.10	53	40	2.6	1	
20	30 008 13.20	2.10	53	40	2.6	1	
25	30 008 13.25	2.10	53	40	2.6	1	
31.5	30 016 13.31.5	2.64	67	40	3.5	1	
40	30 016 13.40	2.64	67	40	3.5	1	
50	30 024 13.50	3.35	85	40	6.0	1	
63	30 024 13.63	3.35	85	40	6.0	1	
80	30 024 13.80	3.35	85	40	6.0	1	
100	30 024 13.100	3.35	85	40	6.0	1	

Preferred Standard Size 20/36 kV

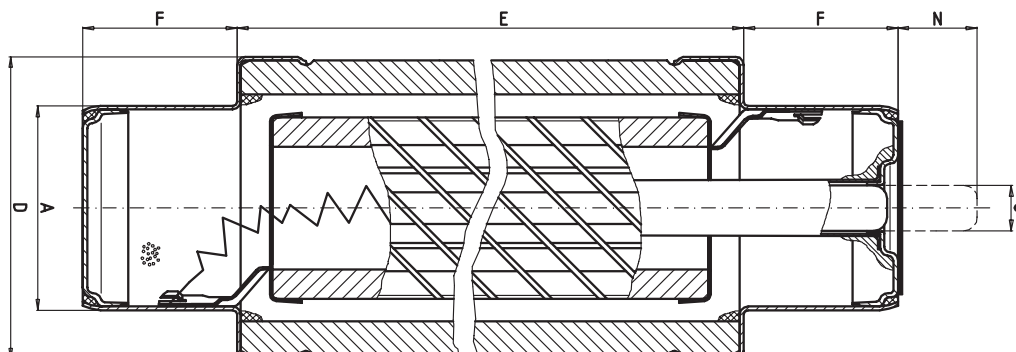
DIN
E= 537 mm

Rated Voltage
AC 38,5 kV

Class
Back-up

Standard
DIN 43625 · IEC 60282-1

Rated Current [A]	Part No.	D = Diameter		Rated Breaking Current [kA]	Weight [kg/1]	Pack	
		[inch]	[mm]				
6.3	30 337 13.6.3	2.10	53	40	2.6	1	
10	30 337 13.10	2.10	53	40	2.6	1	
16	30 338 13.16	2.64	67	40	3.5	1	
20	30 338 13.20	2.64	67	40	3.5	1	
25	30 338 13.25	2.64	67	40	3.5	1	
31.5	30 338 13.31.5	2.64	67	40	3.5	1	
40	30 339 13.40	3.35	85	40	6.0	1	
50	30 339 13.50	3.35	85	40	6.0	1	
63	30 339 13.63	3.35	85	40	6.0	1	



A	1.77" (45 mm)
F	1.30" (33 mm)
O	0.40" (10 mm)
N	1.38" (35 mm)

High Voltage Fuses

German DIN Standard – General-Purpose

For Air & Gas Insulated Switchgear
Indoor and Outdoor Application

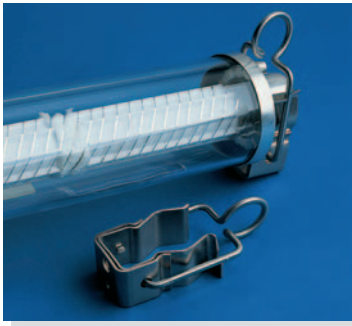


VS-Protector for the overload and short-circuit range

▶ According IEC 60 282-1 and VDE 0670 Part 4, a general-purpose fuse interrupts fault currents between the rated breaking current and the current, which causes melting within one hour. The protection range of the SIBA-VS-protector extends this basic demand. The minimum breaking current starts at some rated currents at 1.5 times the rated current. In combination with the temperature released striker pin and the 3pol. trip-free release of the switchgear a full range protection is possible. Additional feature is the small powerloss of the VS-Protector. It is up to 40 % lower than the standard DIN-fuse.

▶ The dimensions of the VS-Protector are according to DIN 43625. The rated voltages 12 and 24 kV and also the available current ratings allow protection of transformers up to 630 kVA.

▶ The function of the VS-Protector is comparable to a typical back-up fuse-link. The melting elements of pure silver are wound inside onto a ceramic support. A short section in the center of the fuse is designed as a “heat chamber”. Inside this chamber the elements are made of silver-alloy. At overload this generates a certain temperature level that brings the fuse to switch off after corresponding time. Below the rated current the fuse shows an ageing free behaviour also in encapsulated switchgear.



High Voltage Fuses

German DIN Standard

For Air & Gas Insulated Switchgear
Indoor and Outdoor Application

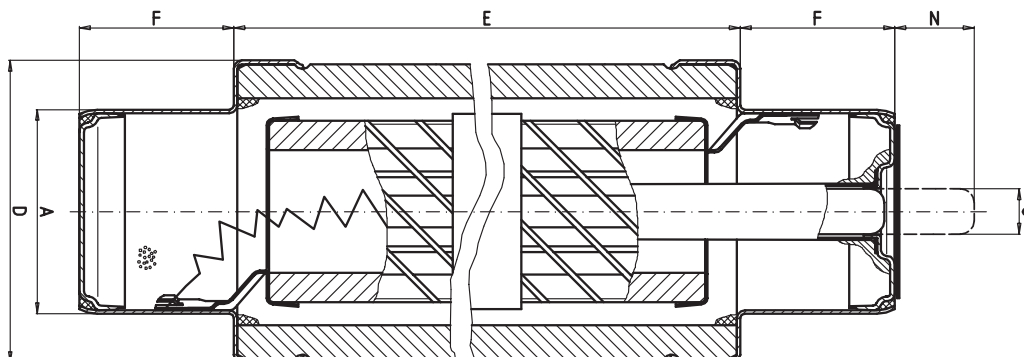
DIN
E= 292 mm

Rated Voltage
AC 6/12 kV

Class
General-Purpose

Standard
DIN 43625 · IEC 60282-1

Rated Current [A]	Part No.	D = Diameter		Rated Breaking Current [kA]	Weight [kg/1]	Pack	
		[inch]	[mm]				
6.3	30 004 93.6.3	2.10	53	63	1.6	1	
8	30 012 13.8	2.64	67	63	2.0	1	
10	30 012 93.10	2.64	67	63	2.0	1	
16	30 012 93.16	2.64	67	63	2.0	1	
20	30 012 93.20	2.64	67	63	2.0	1	
25	30 012 93.25	2.64	67	63	2.0	1	
31.5	30 012 93.31.5	2.64	67	63	2.0	1	
40	30 012 93.40	2.64	67	63	2.0	1	
50	30 020 93.50	3.35	85	63	3.8	1	
63	30 020 93.63	3.35	85	63	3.8	1	
80	30 020 93.80	3.35	85	63	3.8	1	
100	30 020 93.100	3.35	85	63	3.8	1	



A	1.77" (45 mm)
F	1.30" (33 mm)
O	0.40" (10 mm)
N	1.38" (35 mm)

High Voltage Fuses

German DIN Standard

For Air & Gas Insulated Switchgear
Indoor and Outdoor Application



DIN
E= 442 mm

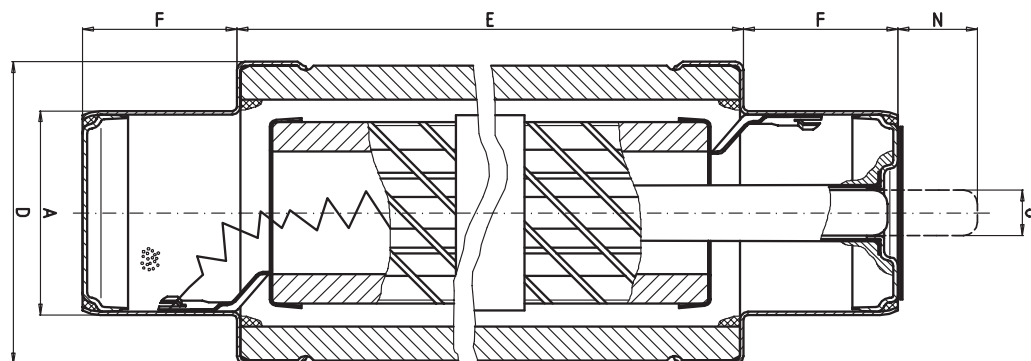
Rated Voltage
AC 10/24 kV

Class
General-purpose

Standard
DIN 43625 · IEC 60282-1

Rated Current [A]	Part No.	D = Diameter		Rated Breaking Current [kA]	Weight [kg/1]	Pack	
		[inch]	[mm]				
6.3	30 006 93.6.3	2.10	53	40	2.2	1	
10	30 014 93.10	2.64	67	40	2.9	1	
16	30 014 93.16	2.64	67	40	2.9	1	
20	30 014 93.20	2.64	67	40	2.9	1	
25	30 014 93.25	2.64	67	40	2.9	1	
31.5	30 022 93.31.5	3.35	85	40	5.4	1	
40	30 022 93.40	3.35	85	40	5.4	1	

A	1.77" (45 mm)
F	1.30" (33 mm)
O	0.40" (10 mm)
N	1.38" (35 mm)



DIN
E= 192 mm

Rated Voltage
AC 3/7.2 kV

Class
Back-up

Rated Current [A]	Part No.	Rated Breaking Current [kA]	Minimum Breaking Current [A]	Cold Resistance [mOhm]	Power Loss [W]	Pre-arcing I ² t-value [A ² s]	Total I ² t-value	
							@ 3 kV [A ² s]	@ 7.2 kV [A ² s]
6.3	30 002 13.6.3	63	22	178.0	10	45	210	360
10	30 002 13.10	63	34	113.0	17	75	350	560
16	30 002 13.16	63	56	50.0	17	250	1 100	2 000
20	30 002 13.20	63	70	27.0	13	640	2 900	4 800
25	30 002 13.25	63	90	21.0	16	1 050	4 700	7 500
31.5	30 002 13.31.5	63	110	17.0	21	1 700	6 600	12 000
40	30 002 13.40	63	140	13.0	27	2 900	12 000	19 000
50	30 002 13.50	63	170	9.3	30	5 700	20 000	33 000
63	30 010 13.63	63	210	6.8	38	10 700	40 000	66 000
80	30 010 13.80	63	280	4.8	47	21 000	78 000	140 000
100	30 010 13.100	63	320	3.8	64	33 000	130 000	210 000
125	30 010 13.125	63	390	3.3	98	47 000	180 000	390 000
160	30 018 13.160	63	600	2.4	124	90 000	330 000	570 000
200	30 018 14.200	50	800	1.9	146	230 000	480 000	704 000

DIN
E= 292 mm

Rated Voltage
AC 3/7.2 kV

Class
Back-up

Rated Current [A]	Part No.	Rated Breaking Current [kA]	Minimum Breaking Current [A]	Cold Resistance [mOhm]	Power Loss [W]	Pre-arcing I ² t-value [A ² s]	Total I ² t-value	
							@ 3 kV [A ² s]	@ 7.2 kV [A ² s]
6.3	30 098 13.6.3	63	22	178.0	10	45	210	360
10	30 098 13.10	63	34	113.0	17	75	350	560
16	30 098 13.16	63	56	50.0	17	250	1 100	2 000
20	30 098 13.20	63	70	27.0	13	640	2 900	4 800
25	30 098 13.25	63	90	21.0	16	1 050	4 700	7 500
31.5	30 098 13.31.5	63	110	17.0	21	1 700	6 600	12 000
40	30 098 13.40	63	140	13.0	27	2 900	12 000	19 000
50	30 098 13.50	63	170	9.3	30	5 700	20 000	33 000
63	30 099 13.63	63	210	6.8	38	10 700	40 000	66 000
80	30 099 13.80	63	280	4.8	47	21 000	78 000	140 000
100	30 099 13.100	63	320	3.8	64	33 000	130 000	210 000
125	30 099 13.125	63	390	3.3	98	47 000	180 000	390 000
160	30 100 13.160	63	600	2.3	103	90 000	330 000	570 000
200	30 100 14.200	50	800	1.9	134	230 000	480 000	704 000
250	30 100 14.250	50	1 000	1.6	191	371 000	750 000	1 101 000
315	30 100 14.315	50	1 260	1.2	281	545 000	1 066 000	1 616 000
355	30 100 14.355	50	1 420	1.1	336	825 000	1 420 000	2 225 000

**Time-current characteristics and cut-off current diagram
please refer to pages HHD 33 and HHD 35**

DIN
E= 442 mm

 Rated Voltage
AC 3/7.2 kV

 Class
Back-up

Rated Current [A]	Part No.	Rated Breaking Current [kA]	Minimum Breaking Current [A]	Cold Resistance [mOhm]	Power Loss [W]	Pre-arcing I ² t-value [A ² s]	Total I ² t-value	
							@ 3 kV [A ² s]	@ 7.2 kV [A ² s]
100	30 109 13.100	63	320	3.8	64	33 000	130 000	210 000
125	30 109 13.125	63	390	3.3	98	47 000	180 000	390 000
160	30 110 13.160	63	600	2.3	85	90 000	330 000	570 000
200	30 110 14.200	50	800	2.1	155	230 000	480 000	704 000
250	30 110 14.250	50	1.000	1.8	233	371 000	750 000	1 101 000
315	30 110 14.315	50	1.260	1.5	281	545 000	1 066 000	1 616 000
355	30 110 14.355	50	1.420	1.3	320	825 000	1 420 000	2 225 000
400	30 110 14.400	50	1.600	1.1	347	1 000 000	1 900 000	2 528 000
500	30 110 14.500	50	2.000	0.85	430	1 668 000	3 162 000	4 500 000

**Time-current characteristics and cut-off current diagram
please refer to pages HHD 33 and HHD 35**

DIN
E= 192 mm

 Rated Voltage
AC 6/12 kV

 Class
Back-up

Rated Current [A]	Part No.	Rated Breaking Current [kA]	Minimum Breaking Current [A]	Cold Resistance [mOhm]	Power Loss [W]	Pre-arcing I ² t-value [A ² s]	Total I ² t-value	
							@ 6 kV [A ² s]	@ 12 kV [A ² s]
6.3	30 119 13.6.3	63	22	297	16	45	210	360
10	30 119 13.10	63	34	189	28	75	350	560
16	30 119 13.16	63	56	87	28	250	1 100	2 000
20	30 267 13.20	63	70	46	23	640	2 900	4 800
25	30 267 13.25	63	90	36	29	1 050	4 700	7 500
31.5	30 267 13.31.5	63	110	29	38	1 700	6 600	12 000
40	30 267 13.40	63	140	22	50	2 900	12 000	19 000
50	30 267 13.50	63	170	16	56	5 700	20 000	33 000
63	30 267 13.63	63	210	12	63	10 700	40 000	66 000

 DIN
E= 292 mm

 Rated Voltage
AC 6/12 kV

 Class
Back-up

Rated Current [A]	Part No.	Rated Breaking Current [kA]	Minimum Breaking Current [A]	Cold Resistance [mOhm]	Power Loss [W]	Pre-arcing I ² t-value [A ² s]	Total I ² t-value	
							@ 6 kV [A ² s]	@ 12 kV [A ² s]
6.3	30 004 13.6.3	63	22	297.0	16	45	210	360
10	30 004 13.10	63	34	189.0	28	75	350	560
16	30 004 13.16	63	56	84.0	28	250	1 100	2 000
20	30 004 13.20	63	70	45.0	23	640	2 900	4 800
25	30 004 13.25	63	90	34.0	29	1 050	4 700	7 500
31.5	30 004 13.31.5	63	110	28.0	38	1 700	6 600	12 000
40	30 004 13.40	63	140	22.0	50	2 900	12 000	19 000
50	30 004 13.50	63	170	16.0	56	5 700	20 000	33 000
63	30 012 13.63	63	210	12.0	63	10 700	40 000	66 000
80	30 012 13.80	63	280	8.5	76	21 000	78 000	140 000
100	30 012 13.100	63	320	6.5	104	33 000	130 000	210 000
125	30 012 13.125	63	390	5.5	159	47 000	180 000	390 000
160	30 020 13.160	63	600	3.9	173	90 000	330 000	570 000
200	30 020 14.200	50	800	3.0	234	230 000	480 000	704 000

**Time-current characteristics and cut-off current diagram
please refer to pages HHD 33 and HHD 35**

DIN
E= 442 mm

 Rated Voltage
AC 6/12 kV

 Class
Back-up

Rated Current [A]	Part No.	Rated Breaking Current [kA]	Minimum Breaking Current [A]	Cold Resistance [mOhm]	Power Loss [W]	Pre-arcing I ² t-value [A ² s]	Total I ² t-value	
							@ 6 kV [A ² s]	@ 12 kV [A ² s]
6.3	30 101 13.6.3	63	22	297.0	16	45	210	360
10	30 101 13.10	63	34	189.0	28	75	350	560
16	30 101 13.16	63	56	87.0	19	250	1 100	2 000
20	30 101 13.20	63	70	46.0	22	640	2 900	4 800
25	30 101 13.25	63	90	36.0	28	1 050	4 700	7 500
31.5	30 101 13.31.5	63	110	29.0	37	1 700	6 600	12 000
40	30 101 13.40	63	140	22.0	48	2 900	12 000	19 000
50	30 101 13.50	63	170	16.0	54	5 700	20 000	33 000
63	30 102 13.63	63	210	12.0	58	10 700	40 000	66 000
80	30 102 13.80	63	280	8.5	70	21 000	78 000	140 000
100	30 102 13.100	63	320	6.5	96	33 000	130 000	210 000
125	30 102 13.125	63	390	5.5	147	47 000	180 000	390 000
160	30 103 13.160	63	600	3.9	172	90 000	330 000	570 000
200	30 103 14.200	50	800	2.9	193	230 000	480 000	704 000
250	30 103 14.250	50	1 000	2.6	269	371 000	750 000	1 101 000

 DIN
E= 537 mm

 Rated Voltage
AC 6/12 kV

 Class
Back-up

Rated Current [A]	Part No.	Rated Breaking Current [kA]	Minimum Breaking Current [A]	Cold Resistance [mOhm]	Power Loss [W]	Pre-arcing I ² t-value [A ² s]	Total I ² t-value	
							@ 6 kV [A ² s]	@ 12 kV [A ² s]
100	30 211 13.100	63	320	6.5	96	33 000	130 000	210 000
125	30 211 13.125	63	390	5.5	147	47 000	180 000	390 000
160	30 211 13.160	63	600	3.9	172	90 000	330 000	570 000
200	30 211 14.200	50	800	3.2	193	230 000	480 000	704 000
250	30 211 14.250	50	1 000	2.6	274	371 000	750 000	1 101 000
315	30 211 14.315	50	1 260	2.2	382	545 000	1 066 000	1 616 000

**Time-current characteristics and cut-off current diagram
please refer to pages HHD 33 and HHD 35**

DIN
E= 292 mm

 Rated Voltage
AC10/17.5 kV

 Class
Back-up

Rated Current [A]	Part No.	Rated Breaking Current [kA]	Minimum Breaking Current [A]	Cold Resistance [mOhm]	Power Loss [W]	Pre-arcing I ² t-value [A ² s]	Total I ² t-value	
							@ 10 kV [A ² s]	@ 17.5 kV [A ² s]
6.3	30 255 13.6.3	63	22	397.0	21	45	210	360
10	30 255 13.10	63	34	252.0	38	75	350	560
16	30 255 13.16	63	56	116.0	37	250	1 100	2 000
20	30 221 13.20	63	70	62.0	40	640	2 900	4 800
25	30 221 13.25	63	90	48.0	56	1 050	4 700	7 500
31.5	30 221 13.31.5	63	110	39.0	65	1 700	6 600	12 000
40	30 221 13.40	63	140	29.0	84	2 900	12 000	19 000
50	30 221 13.50	63	170	21.0	101	5 700	20 000	33 000
63	30 222 13.63	63	210	16.0	106	10 700	40 000	66 000
80	30 222 13.80	63	280	11.0	137	21 000	78 000	140 000
100	30 222 13.100	63	320	8.7	182	33 000	130 000	210 000
125	30 222 13.125	63	390	7.5	235	47 000	180 000	390 000

 DIN
E= 367 mm

 Rated Voltage
AC 10/17.5 kV

 Class
Back-up

Rated Current [A]	Part No.	Rated Breaking Current [kA]	Minimum Breaking Current [A]	Cold Resistance [mOhm]	Power Loss [W]	Pre-arcing I ² t-value [A ² s]	Total I ² t-value	
							@ 10 kV [A ² s]	@ 17.5 kV [A ² s]
6.3	30 176 13.6.3	63	22	397.0	21	45	210	360
10	30 176 13.10	63	34	252.0	38	75	350	560
16	30 176 13.16	63	56	116.0	37	250	1 100	2 000
20	30 176 13.20	63	70	62.0	40	640	2 900	4 800
25	30 176 13.25	63	90	48.0	56	1 050	4 700	7 500
31.5	30 177 13.31.5	63	110	39.0	65	1 700	6 600	12 000
40	30 177 13.40	63	140	29.0	84	2 900	12 000	19 000
50	30 177 13.50	63	170	21.0	101	5 700	20 000	33 000
63	30 177 13.63	63	210	16.0	106	10 700	40 000	66 000
80	30 178 13.80	63	280	11.0	137	21 000	78 000	140 000
100	30 178 13.100	63	320	8.7	182	33 000	130 000	210 000
125	30 178 13.125	63	390	7.5	235	47 000	180 000	390 000
160	30 178 13.160	63	600	5.5	200	90 000	330 000	570 000

**Time-current characteristics and cut-off current diagram
please refer to pages HHD 33 and HHD 35**

DIN
E= 442 mm

 Rated Voltage
AC 10/17.5 kV

 Class
Back-up

Rated Current [A]	Part No.	Rated Breaking Current [kA]	Minimum Breaking Current A]	Cold Resistance [mOhm]	Power Loss [W]	Pre-arcing I ² t-value [A ² s]	Total I ² t-value	
							@ 10 kV [A ² s]	@ 17.5 kV [A ² s]
6.3	30 231 13.6.3	63	22	397.0	21	45	210	360
10	30 231 13.10	63	34	252.0	38	75	350	560
16	30 231 13.16	63	56	116.0	37	250	1 100	2 000
20	30 231 13.20	63	70	62.0	42	640	2 900	4 800
25	30 231 13.25	63	90	48.0	56	1 050	4 700	7 500
31.5	30 231 13.31.5	63	110	39.0	60	1 700	6 600	12 000
40	30 231 13.40	63	140	29.0	84	2 900	12 000	19 000
50	30 232 13.50	63	170	21.0	101	5 700	20 000	33 000
63	30 232 13.63	63	210	16.0	106	10 700	40 000	66 000
80	30 232 13.80	63	280	11.0	137	21 000	78 000	140 000
100	30 233 13.100	63	320	8.7	182	33 000	130 000	210 000
125	30 233 13.125	63	390	7.5	235	47 000	180 000	390 000
160	30 233 13.160	63	600	5.2	290	90 000	330 000	570 000

**Time-current characteristics and cut-off current diagram
please refer to pages HHD 33 and HHD 35**

DIN
E= 292 mm

Rated Voltage
AC 10/24 kV

Class
Back-up

Rated Current [A]	Part No.	Rated Breaking Current [kA]	Minimum Breaking Current A	Cold Resistance [mOhm]	Power Loss [W]	Pre-arcing I ² t-value [A ² s]	Total I ² t-value	
							@ 10 kV [A ² s]	@ 24 kV [A ² s]
6.3	30 180 13.6.3	31.5	22	546	29	45	210	360
10	30 180 13.10	31.5	34	347	52	75	350	560
16	30 180 13.16	31.5	56	160	59	250	1,100	2,000
20	30 225 13.20	31.5	70	86	46	640	2,900	4,800
25	30 225 13.25	31.5	90	66	56	1,050	4,700	7,500
31.5	30 225 13.31.5	31.5	110	53	72	1,700	6,600	12,000
40	30 225 13.40	31.5	140	41	106	2,900	12,000	19,000
50	30 225 13.50	31.5	170	29	108	5,700	20,000	33,000
63	30 225 13.63	31.5	210	21	132	10,700	40,000	66,000

DIN
E= 442 mm

Rated Voltage
AC 10/24 kV

Class
Back-up

Rated Current [A]	Part No.	Rated Breaking Current [kA]	Minimum Breaking Current A	Cold Resistance [mOhm]	Power Loss [W]	Pre-arcing I ² t-value [A ² s]	Total I ² t-value	
							@ 10 kV [A ² s]	@ 24 kV [A ² s]
6.3	30 006 13.6.3	63	22	546	29	45	210	360
10	30 006 13.10	63	34	347	52	75	350	560
16	30 006 13.16	63	56	151	59	250	1.100	2.000
20	30 006 13.20	63	70	83	46	640	2.900	4.800
25	30 006 13.25	63	90	62	56	1.050	4.700	7.500
31.5	30 006 13.31.5	63	110	52	72	1.700	6.600	12.000
40	30 006 13.40	63	140	41	106	2.900	12.000	19.000
50	30 014 13.50	63	170	29	108	5.700	20.000	33.000
63	30 014 13.63	63	210	22	132	10.700	40.000	66.000
80	30 014 13.80	63	280	16	174	21.000	78.000	140.000
100	30 022 13.100	63	320	13	234	33.000	130.000	210.000
125	30 022 13.125	40	390	11	320	47.000	180.000	390.000
160	30 022 13.160	31.5	600	8	381	90.000	330.000	570.000

**Time-current characteristics and cut-off current diagram
please refer to pages HHD 33 and HHD 35**

DIN
E= 537 mm

 Rated Voltage
AC 10/24 kV

 Class
Back-up

Rated Current [A]	Part No.	Rated Breaking Current [kA]	Minimum Breaking Current A]	Cold Resistance [mOhm]	Power Loss [W]	Pre-arcing I ² t-value [A ² s]	Total I ² t-value	
							@ 10 kV [A ² s]	@ 24 kV [A ² s]
6.3	30 203 13.6.3	63	22	546.0	29	45	210	360
10	30 203 13.10	63	34	347.0	52	75	350	560
16	30 203 13.16	63	56	160.0	57	250	1 100	2 000
20	30 203 13.20	63	70	86.0	45	640	2 900	4 800
25	30 203 13.25	63	90	66.0	55	1 050	4 700	7 500
31.5	30 203 13.31.5	63	110	53.0	70	1 700	6 600	12 000
40	30 203 13.40	63	140	43.0	103	2 900	12 000	19 000
50	30 204 13.50	63	170	29.0	101	5 700	20 000	33 000
63	30 204 13.63	63	210	21.0	121	10 700	40 000	66 000
80	30 204 13.80	63	280	16.0	147	21 000	78 000	140 000
100	30 196 13.100	63	320	13.0	240	33 000	130 000	210 000
125	30 196 13.125	40	390	11.0	320	47 000	180 000	390 000
160	30 196 13.160	31.5	600	8.0	381	90 000	330 000	570 000

**Time-current characteristics and cut-off current diagram
please refer to pages HHD 33 and HHD 35**

DIN
E= 442 mm

 Rated Voltage
AC 20/36 kV

 Class
Back-up

Rated Current	Part No.	Rated Breaking Current	Minimum Breaking Current	Cold Resistance	Power Loss	Pre-arcing I ² t-value	Total I ² t-value	
[A]		[kA]	A	[mOhm]	[W]	[A ² s]	@ 20 kV	@ 36 kV
6.3	30 181 13.6.3	20	22	819	44	45	210	360
10	30 181 13.10	20	34	521	78	75	350	560
16	30 181 13.16	20	56	241	74	250	1 100	3 000

 DIN
E= 537 mm

 Rated Voltage
AC 20/36 kV

 Class
Back-up

Rated Current	Part No.	Rated Breaking Current	Minimum Breaking Current	Cold Resistance	Power Loss	Pre-arcing I ² t-value	Total I ² t-value	
[A]		[kA]	A	[mOhm]	[W]	[A ² s]	@ 20 kV	@ 36 kV
6.3	30 008 13.6.3	40	22	819	44	45	210	360
10	30 008 13.10	40	34	521	78	75	350	560
16	30 008 13.16	40	56	241	79	250	1 100	2 000
20	30 008 13.20	40	70	129	66	640	2 900	4 800
25	30 008 13.25	40	90	99	87	1 050	4 700	7 500
31.5	30 016 13.31.5	40	110	80	102	1 700	6 600	12 000
40	30 016 13.40	40	140	60	144	2 900	12 000	19 000
50	30 024 13.50	40	170	44	186	5 700	20 000	33 000
63	30 024 13.63	40	210	32	224	10 700	40 000	66 000
80	30 024 13.80	40	280	23	280	21 000	78 000	140 000
100	30 024 13.100	40	320	21	408	33 000	130 000	210 000

 DIN
E= 537 mm

 Rated Voltage
AC 38.5 kV

 Class
Back-up

Rated Current	Part No.	Rated Breaking Current	Minimum Breaking Current	Cold Resistance	Power Loss	Pre-arcing I ² t-value	Total I ² t-value @ 38.5 kV	
[A]		[kA]	A	[mOhm]	[W]	[A ² s]	[A ² s]	
6.3	30 337 13.6.3	40	22	943	51	45	360	
10	30 337 13.10	40	34	590	86	75	560	
16	30 338 13.16	40	56	293	85	250	2 000	
20	30 338 13.20	40	70	148	76	640	4 800	
25	30 338 13.25	40	90	114	100	1 050	7 500	
31.5	30 338 13.31.5	40	110	93	108	1 700	12 000	
40	30 339 13.40	40	140	70	152	2 900	19 000	
50	30 339 13.50	40	170	51	196	5 700	33 000	
63	30 339 13.63	40	210	30	236	10 700	66 000	

**Time-current characteristics and cut-off current diagram
please refer to pages HHD 33 and HHD 35**

DIN
E= 292 mm

 Rated Voltage
AC 6/12 kV

 Class
General-Purpose

Rated Current [A]	Part No.	Breaking Current [kA]	Cold Resistance [mOhm]	Power Loss [W]	Pre-arcing I ² t-value [A ² s]	Total I ² t-value @ 12 kV [A ² s]	
6.3	30 004 93.6.3	63	150	7	110	900	
8	30 012 93.8	63	120	9	180	1 400	
10	30 012 93.10	63	100	12	240	2 000	
16	30 012 93.16	63	40	12	530	4 400	
20	30 012 93.20	63	31	15	850	7 000	
25	30 012 93.25	63	25	18	1 330	11 000	
31.5	30 012 93.31.5	63	20	23	2 100	18 000	
40	30 012 93.40	63	16	29	3 400	28 000	
50	30 020 93.50	63	15	42	5 500	33 000	
63	30 020 93.60	63	12	54	8 500	68 000	
80	30 020 93.80	63	9	79	16 200	142 000	
100	30 020 93.100	63	7.7	108	23 500	183 000	

 DIN
E= 442 mm

 Rated Voltage
AC 10/24 kV

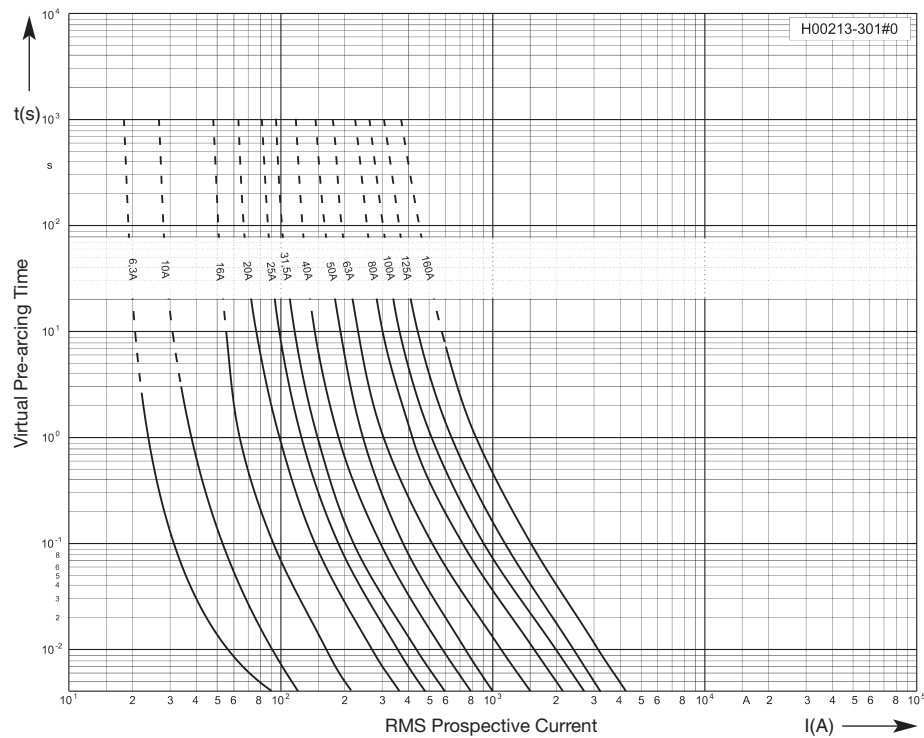
 Class
General-Purpose

Rated Current [A]	Part No.	Breaking Current [kA]	Cold Resistance [mOhm]	Power Loss [W]	Pre-arcing I ² t-value [A ² s]	Total I ² t-value @ 24 kV [A ² s]	
6.3	30 006 93.6.3	40	273	13	110	900	
8	30 014 93.8	40	220	17	180	1 400	
10	30 014 93.10	40	180	22	240	2 000	
16	30 014 93.16	40	70	19	530	4 400	
20	30 014 93.20	40	55	27	850	7 000	
25	30 014 93.25	40	45	38	1 330	11 000	
31.5	30 022 93.31.5	40	41	54	2 100	18 000	
40	30 022 93.40	40	33	77	3 400	28 000	

**Time-current characteristics and cut-off current diagram
please refer to page HHD 36**

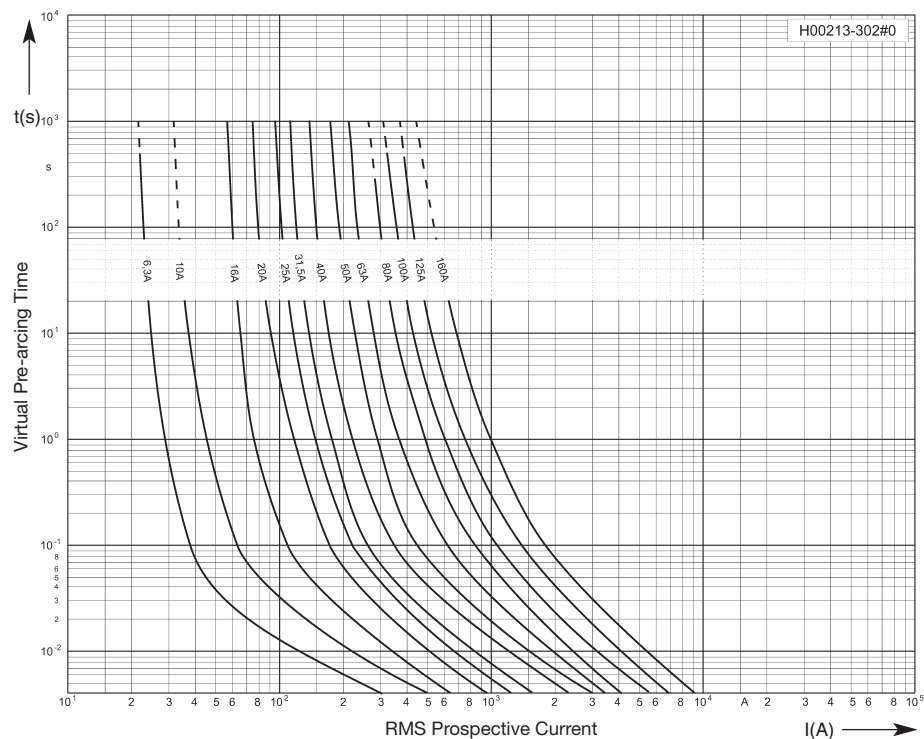
**Time-Current Characteristics
Minimum Melting**

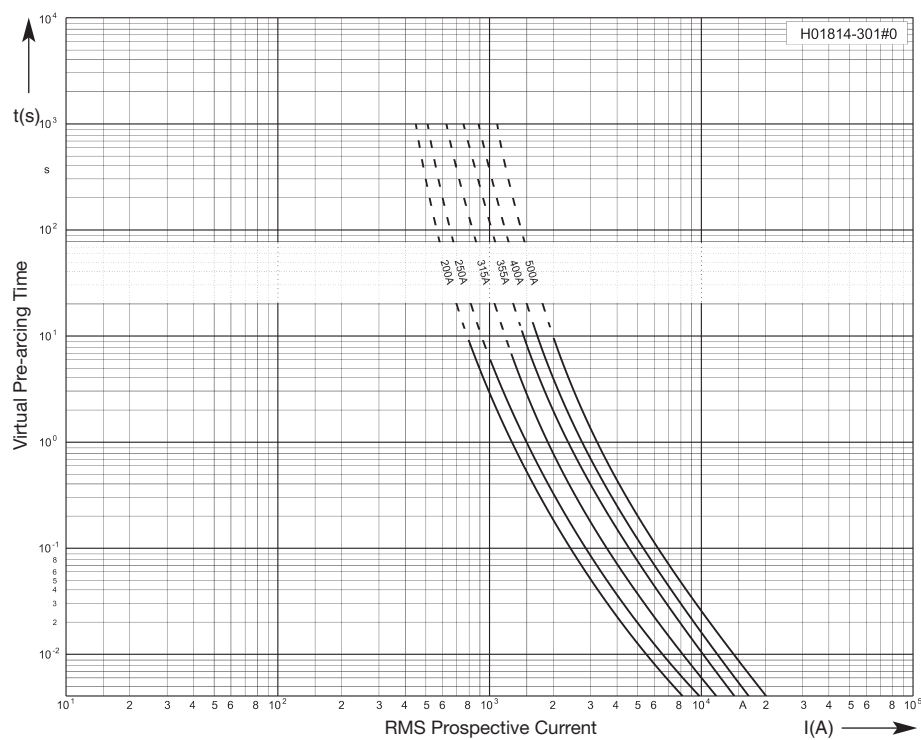
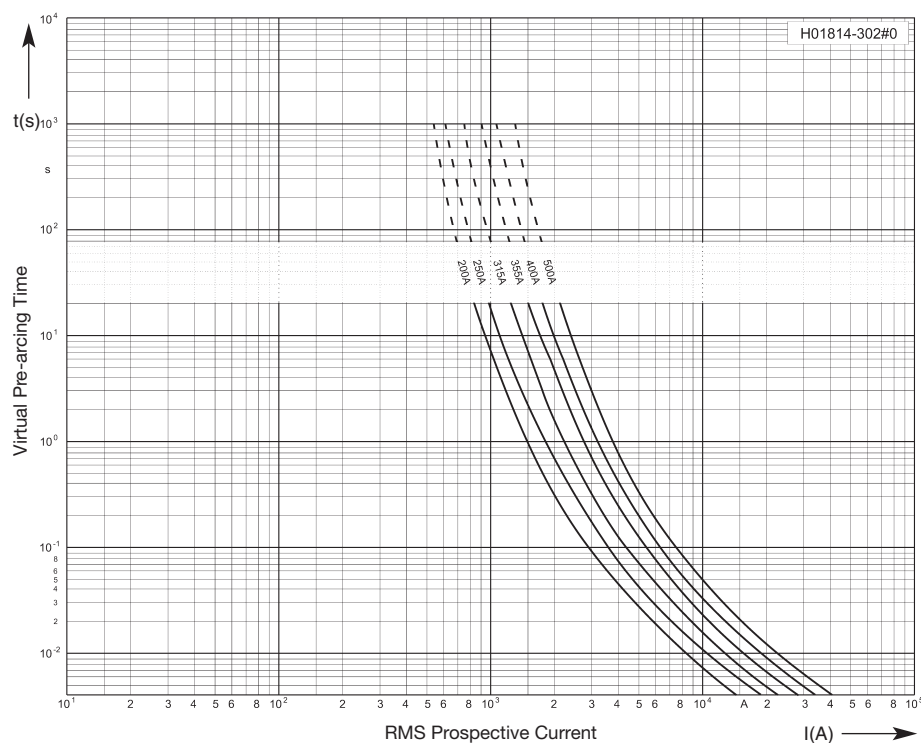
Back-up



**Time-Current Characteristics
Total Clearing**

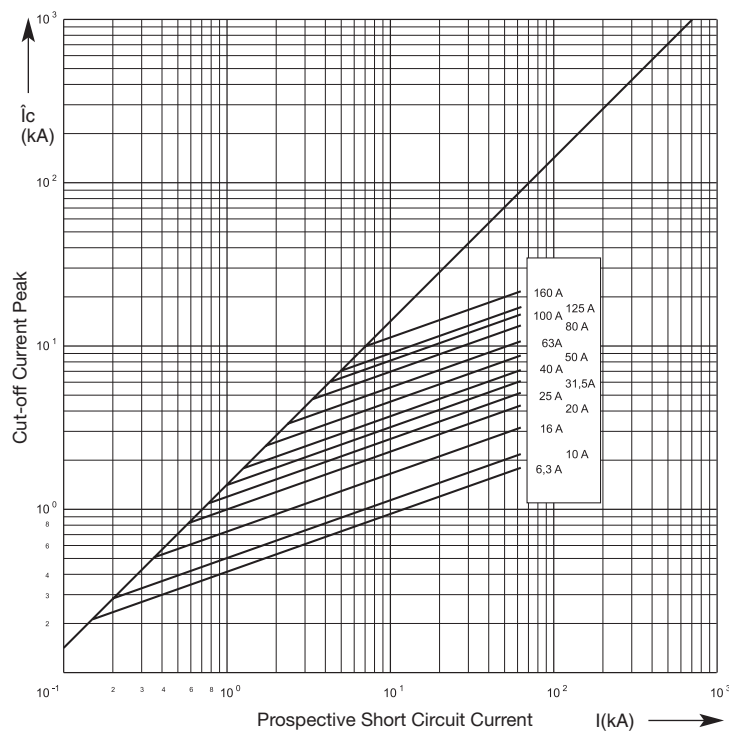
Back-up



**Time-Current Characteristics
Minimum Melting****Back-up****Time-Current Characteristics
Total Clearing****Back-up**

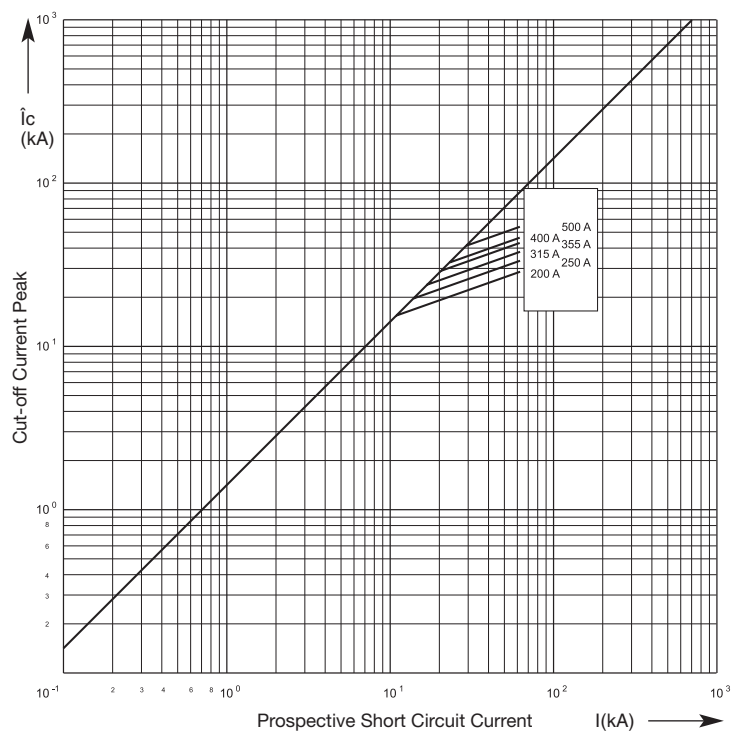
Cut-Off Current Diagram

Back-up



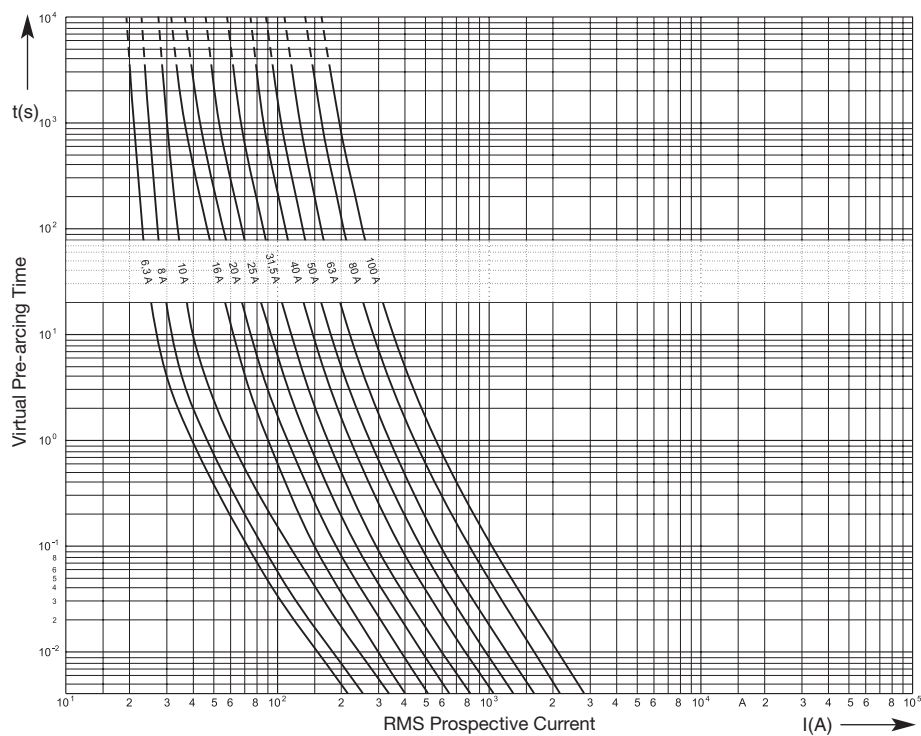
Cut-Off Current Diagram

Back-up



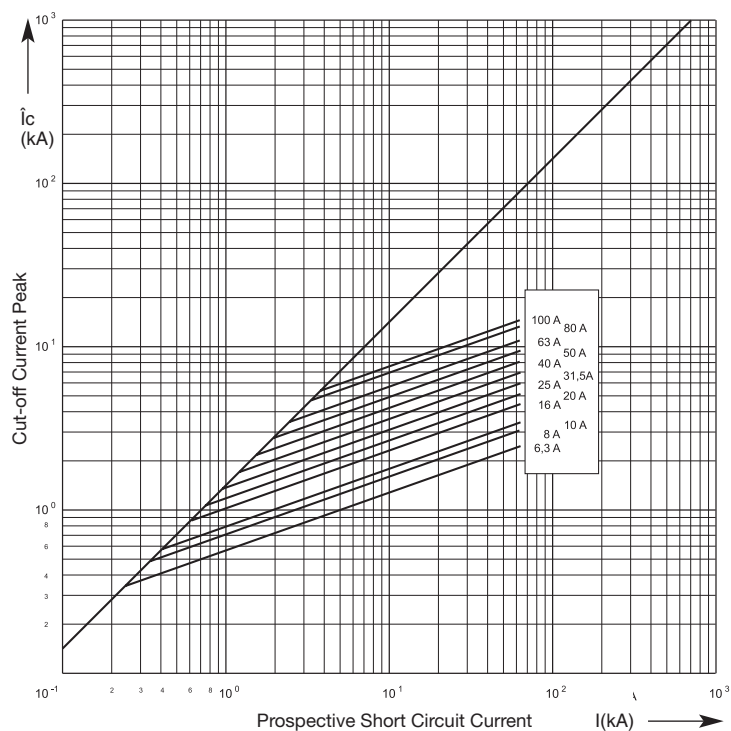
Time-Current Characteristics

General-Purpose



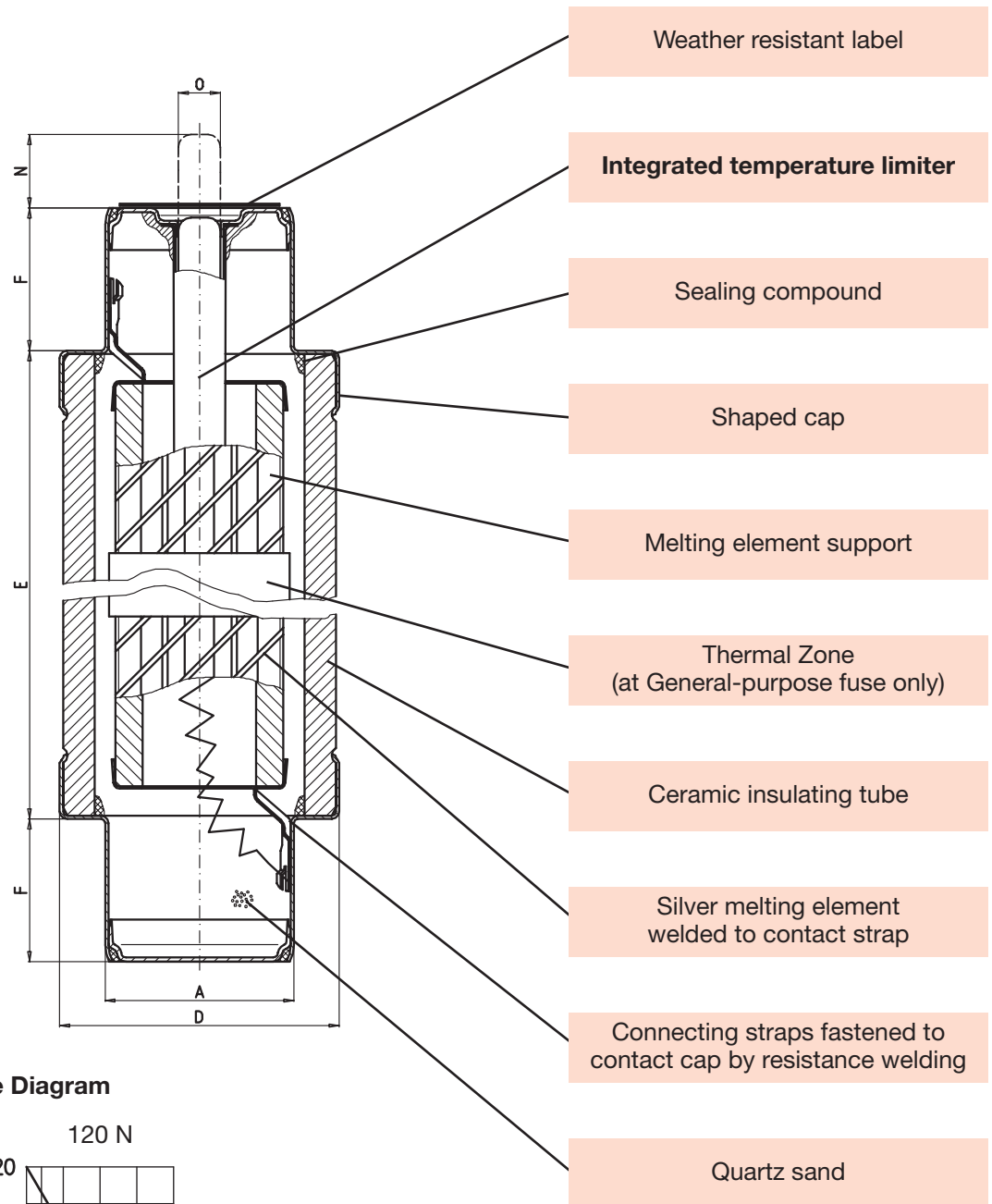
Cut-Off Current Diagram

General-Purpose

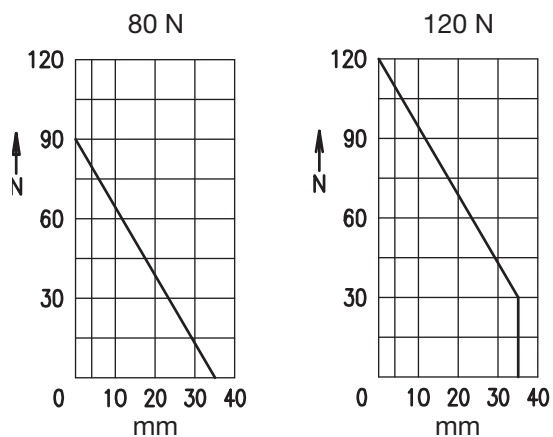


HV Fuse-link

Vertical Cross Section



Force / Distance Diagram



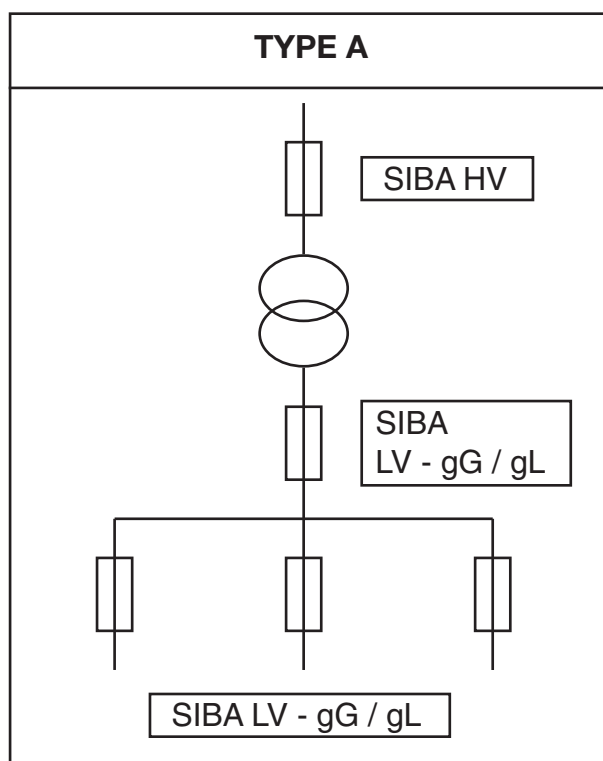
Recommendation for the Protection of Main Transformer with HV-Fuse-links DIN Standard

Protection using LV-Fuse-links* Operating Class gG / gL on the Low Voltage Site

Type A

Transformer Rated Capacity [kVA]	Line Voltage [kV]				LV-Fuse gG / gL [A]
	6 - 7.2	10 - 12 Rated Current of the HV-Fuse [A]	20 - 24	30 - 36	
50	10 - 16	10	6.3	4 - 6.3	63
100	20 - 31.5	16 - 20	10	6.3 - 10	125
125	25 - 40	16 - 25	10 - 16	10	160
160	31.5 - 50	20 - 31.5	16 - 20	10 - 16	200
200	40 - 63	25 - 40	16 - 20	16	250
250	50 - 80	31.5 - 50	20 - 25	16 - 20	315
315	63 - 100	40 - 50	20 - 25	20 - 25	400
400	80 - 100	50 - 80	25 - 40	20 - 25	500
500	100 - 125	63 - 80	31.5 - 50	25 - 31.5	630
630	125 - 160	80 - 125	40 - 63	31.5 - 40	800
800	160	100 - 125	63	40 - 50	1 000
1 000	160 - 200	125 - 160	63 - 80	40 - 50	1 250
1 250	250	160	80	50	–
1 600	2 x 160	200	100	63	–
2 000	2 x 200	250	125	80	–

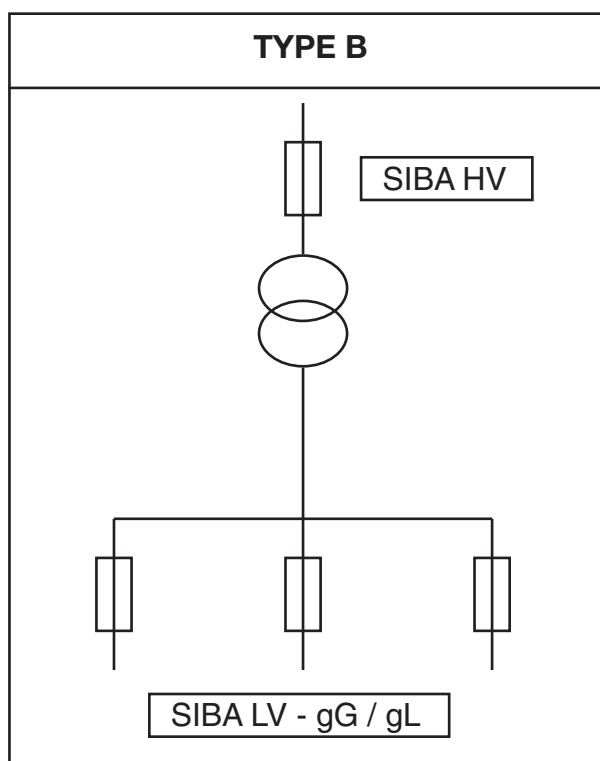
* Use of the recommended HV fuse-links in connection with LV fuse-links of other manufacturer must be checked before installation



Recommendation for the Protection of Main Transformer with HV-Fuse-links DIN Standard

Protection without using a common LV-Fuse-link on the Low Voltage Side; Type B
 the individual Cable exits are protected with a LV-Fuse-link
 Operating Class gG / gL

Transformer Rated Capacity [kVA]	Line Voltage [kV]				
	6 - 7.2	10 - 12	15 - 17.5	20 - 24	30 - 36
Rated Current of the HV-Fuse [A]					
50	10 - 16	10	6.3 - 10	6.3	4 - 6.3
100	16 - 31.5	16 - 25	16	10	6.3 - 10
125	20 - 40	16 - 31.5	20	10 - 16	6.3 - 10
160	31.5 - 50	20 - 31.5	20 - 25	16 - 20	10 - 16
200	31.5 - 63	25 - 40	20 - 31.5	16 - 20	10 - 16
250	40 - 80	25 - 40	25 - 31.5	16 - 25	10 - 20
315	50 - 100	31.5 - 50	31.5	16 - 25	16 - 25
400	63 - 100	40 - 63	31.5 - 50	20 - 40	16 - 25
500	80 - 125	50 - 80	31.5 - 63	25 - 50	20 - 31.5
630	100 - 160	63 - 100	40 - 80	31.5 - 63	20 - 40
800	125 - 160	80 - 125	63 - 100	40 - 63	25 - 50
1 000	160 - 200	100 - 160	63 - 100	50 - 80	31.5 - 50
1 250	250	160	100	80	50
1 600	2 x 160	200	125	100	63
2 000	2 x 200	250	160	125	80



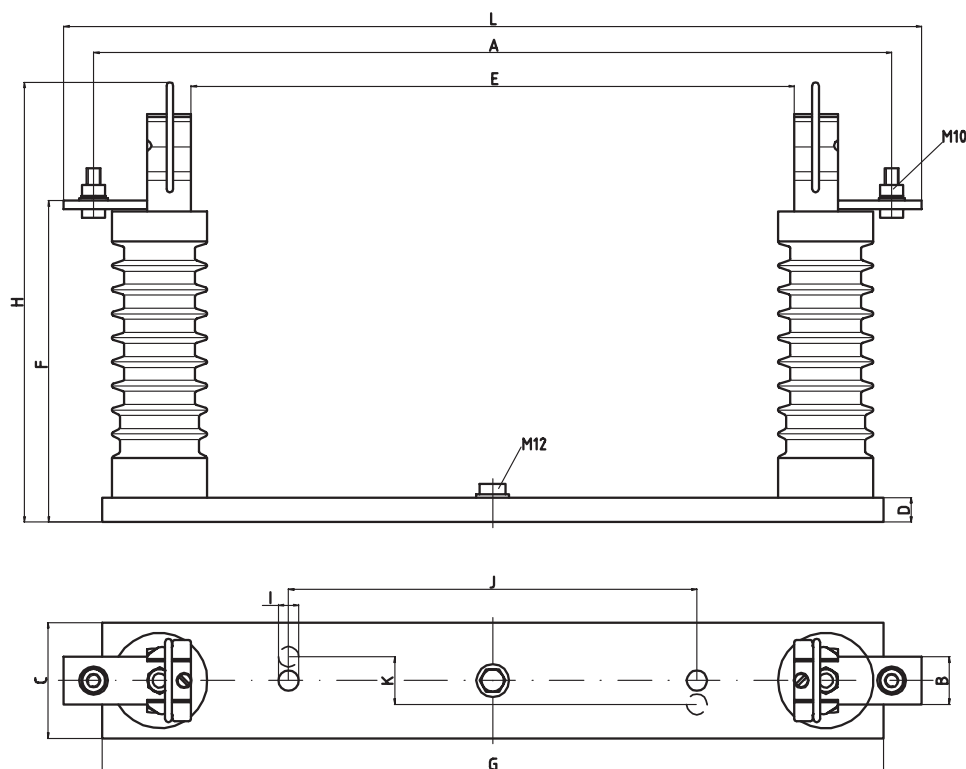
Application Recommendation for Protection of Capacitors with HV-Fuse-links DIN Standard

Assignment of Rated Currents of HV-Fuse-links acc. DIN Standard to Capacitor Rated Capacities

Capacitor Rated Capacity [kVA]	Line Voltage [kV]			
	6 - 7.2	10 - 12	20 - 24	
	Rated Current of the HV-Fuse [A]			
50	10	6.3	6.3	
100	20	10	6.3	
200	40	20	10	
250	50	25	16	
300	63	31.5	16	
400	80	40	20	
500	100	50	25	
750	160	80	40	
1 000	200	100	50	
1 250	250	125	63	
1 600	315	160	80	
2 000	315	200	100	

To control the occurring voltage during switch off Fuse link should be chosen from the next higher voltage range.
e.g. 10 kV Capacitor with 20 kV Fuse links. (See also IEC 549, Chapter II, § 3.2)

HV-Fuse-bases for Indoor Application



Rated Voltage **7.2 kV**
 Part No. **31 001 02**

A	13.78" (350 mm)
B	1.38" (35 mm)
C	3.35" (85 mm)
D	0.70" (18 mm)
E	7.60" (193 mm)
F	6.14" (156 mm)
G	12.20" (310 mm)
H	9.53" (242 mm)
I	0.60" (15 mm)
J	2.17" (55 mm)
K	1.38" (35 mm)
L	14.96" (380 mm)

Rated Voltage **12 kV**
 Part No. **31 003 02**

A	17.72" (450 mm)
B	1.38" (35 mm)
C	3.35" (85 mm)
D	0.70" (18 mm)
E	11.54" (293 mm)
F	6.14" (156 mm)
G	16.14" (410 mm)
H	9.53" (242 mm)
I	0.60" (15 mm)
J	7.10" (180 mm)
L	18.90" (480 mm)

Rated Voltage **24 kV**
 Part No. **31 005 02**

A	23.62" (600 mm)
B	1.38" (35 mm)
C	3.35" (85 mm)
D	0.70" (18 mm)
E	17.44" (443 mm)
F	9.30" (236 mm)
G	22.60" (574 mm)
H	12.68" (322 mm)
I	0.60" (15 mm)
J	11.80" (300 mm)
L	24.80" (630 mm)

Rated Voltage **36 kV**
 Part No. **31 007 02**

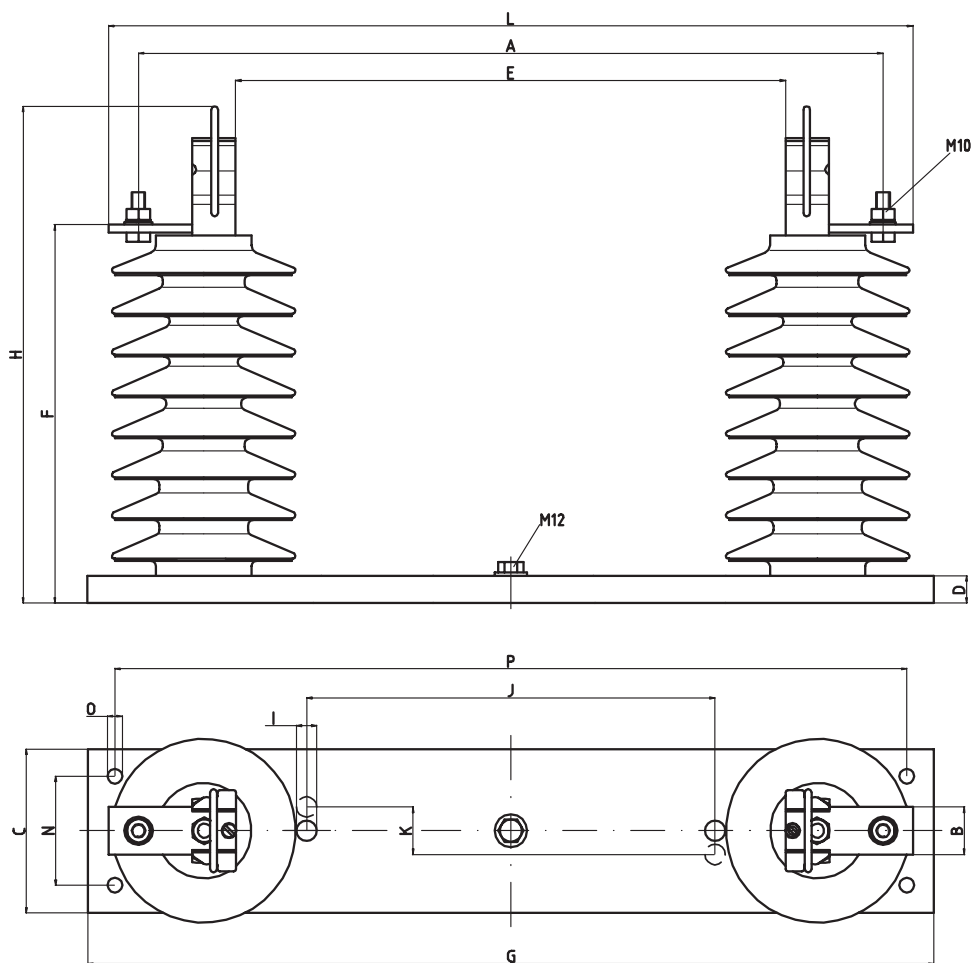
A	27.36" (695 mm)
B	1.38" (35 mm)
C	3.35" (85 mm)
D	0.70" (18 mm)
E	21.18" (538 mm)
F	12.83" (326 mm)
G	26.60" (676 mm)
H	16.22" (412 mm)
I	0.60" (15 mm)
J	14.96" (380 mm)
L	28.54" (725 mm)

Rated Voltage **24 kV**
 Part No. **31 221 01***

A	17.72" (450 mm)
B	1.38" (35 mm)
C	3.35" (85 mm)
D	0.70" (18 mm)
E	11.54" (293 mm)
F	9.30" (236 mm)
G	16.14" (410 mm)
H	12.68" (322 mm)
I	0.60" (15 mm)
J	7.10" (180 mm)
L	18.90" (480 mm)

* Reduced Length for 24 kV
 Fuse-links E= 292 mm

HV-Fuse-bases for Outdoor Application



Rated Voltage 7.2 kV
Part No. 31 002 01

A	13.78" (350 mm)
B	1.38" (35 mm)
C	4.72" (120 mm)
D	0.80" (20 mm)
E	7.60" (193 mm)
F	9.33" (237 mm)
G	16.14" (410 mm)
H	12.80" (325 mm)
I	0.60" (15 mm)
J	2.17" (55 mm)
K	1.38" (35 mm)
L	14.96" (380 mm)
N	3.15" (80 mm)
O	0.43" (11 mm)
P	14.57" (370 mm)

Rated Voltage 12 kV
Part No. 31 004 01

A	17.72" (450 mm)
B	1.38" (35 mm)
C	4.72" (120 mm)
D	0.80" (20 mm)
E	11.54" (293 mm)
F	9.33" (237 mm)
G	20.08" (510 mm)
H	12.80" (325 mm)
I	0.60" (15 mm)
J	7.10" (180 mm)
K	
L	18.90" (480 mm)
N	3.15" (80 mm)
O	0.43" (11 mm)
P	18.50" (470 mm)

Rated Voltage 24 kV
Part No. 31 006 01

A	23.62" (600 mm)
B	1.38" (35 mm)
C	4.72" (120 mm)
D	0.80" (20 mm)
E	17.44" (443 mm)
F	12.10" (307 mm)
G	25.98" (660 mm)
H	15.55" (395 mm)
I	0.60" (15 mm)
J	11.80" (300 mm)
K	
L	24.80" (630 mm)
N	3.15" (80 mm)
O	0.43" (11 mm)
P	24.40" (620 mm)

Rated Voltage 36 kV
Part No. 31 008 01

A	27.36" (695 mm)
B	1.38" (35 mm)
C	4.72" (120 mm)
D	0.80" (20 mm)
E	21.18" (538 mm)
F	15.24" (387 mm)
G	30.90" (785 mm)
H	18.70" (475 mm)
I	0.60" (15 mm)
J	14.96" (380 mm)
K	
L	28.54" (725 mm)
N	3.15" (80 mm)
O	0.43" (11 mm)
P	29.33" (745 mm)

Micro Switch Fitting to HV-Fuse-bases

L= 660 mm
 L= 900 mm
 L= 250 mm
 L= 1200 mm

Part No.

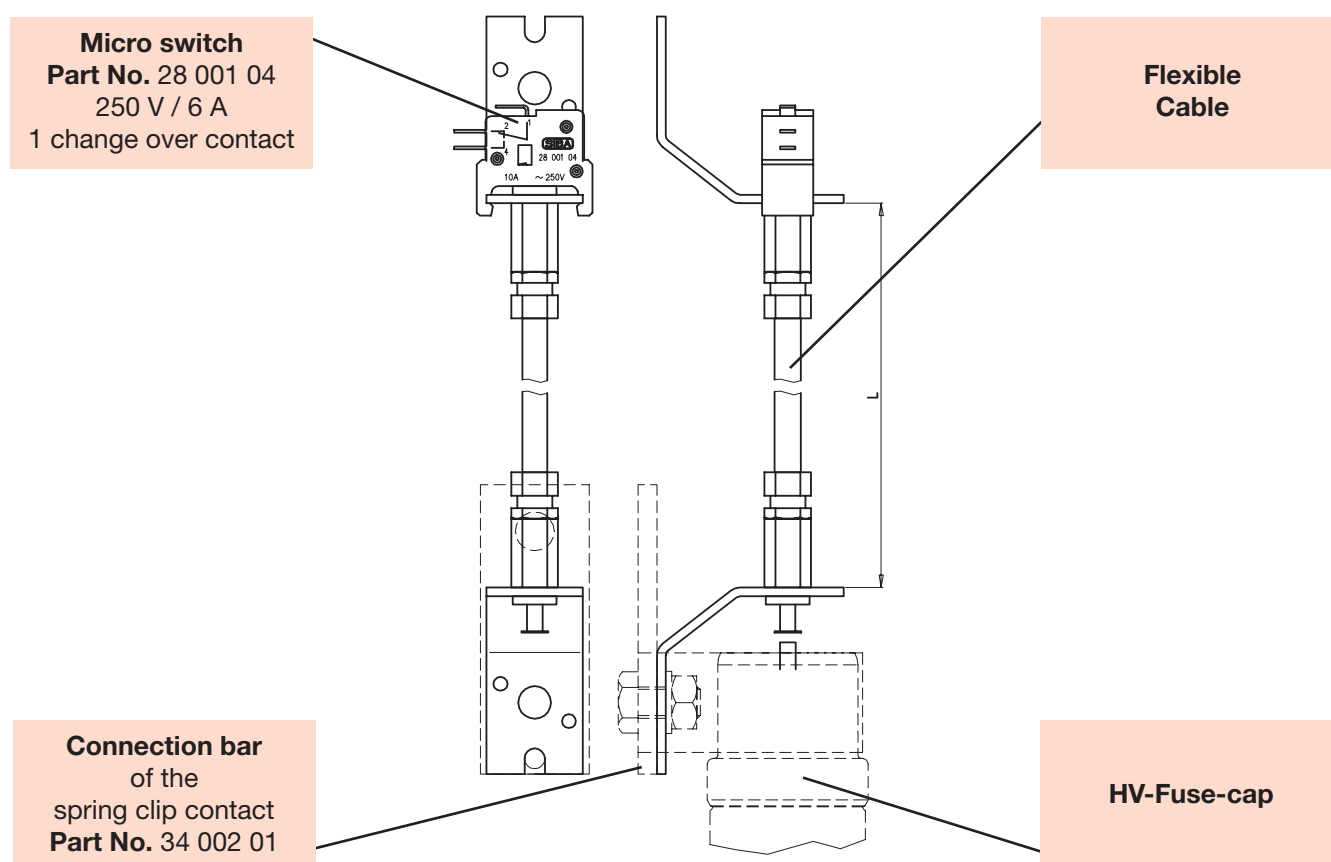
31 001 10
 31 001 14
 31 001 16
 31 001 17

The SIBA microswitch installation set for high voltage fuse-bases, allows supervision of the switching status of high voltage fuse-links. By means of a flexible bowden drive, the movement of the fuse-link striker will be transferred to a microswitch. The microswitch itself has a change over contact and is suitable for 250 V AC, 6 A.

The fitting accessories of this installation set match with the bolting holes of SIBA high voltage fuse-bases. Therefore, when such microswitch systems are added to SIBA high voltage fuse-bases later on, no additional drillings have to be done. Adaption to fuses-bases of other manufacturers is, however, possible. Furthermore, the set can also be fitted if only SIBA spring clip contacts part no. 3400201 are used, and not a complete fuse-base.

Depending on the service voltage of the high voltage fuse-link, the microswitch can be fitted within a maximum distance of "L" from the fuse-link. A minimum radius of the flexible bowden drive of 250 mm has to be observed.

If the panel builder only uses the spring clip contact part no. 3100302.20 (see catalogue HHD page 47), the spacer part no. 3100201.3 must be used instead of the connection tag part no. 3100302.2.



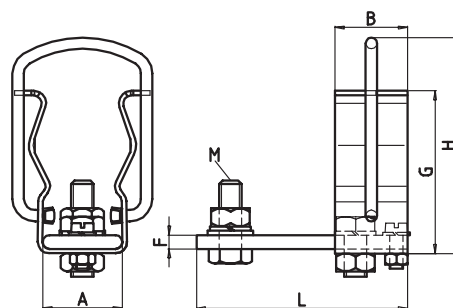
Fuse-Clip

HV-Spring Clip Contact with Connection Bar

Rated Fuse Current ≤ 200 A**Part No.**

34 002 01

A	1.38" (35 mm)
B	1.26" (32 mm)
F	0.24" (6 mm)
G	2.80" (71.5 mm)
H	3.74" (95 mm)
L	3.66" (93 mm)
M	M 10

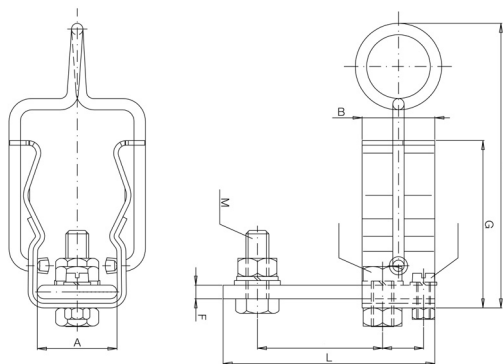
**Fuse-Clip**

HV-Spring Clip Contact with Connection Bar

Rated Fuse Current > 200 A**Part No.**

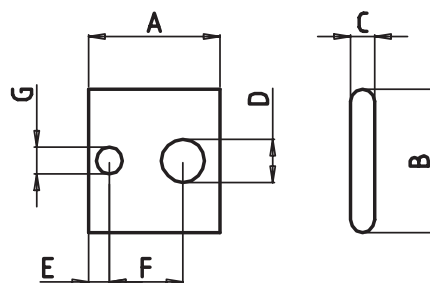
34 001 02

A	1.38" (35 mm)
B	1.26" (32 mm)
F	0.24" (6 mm)
G	2.90" (73.5 mm)
H	4.92" (125 mm)
L	3.66" (93 mm)
M	M 10

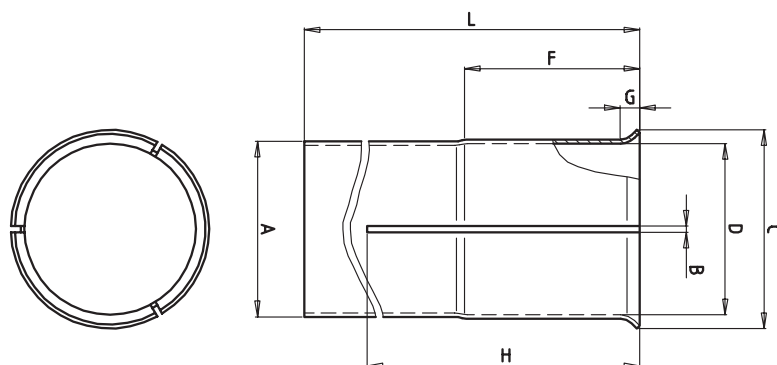
**Spacer****Part No.**

34 002 01.3

A	1.26" (32 mm)
B	1.38" (35 mm)
C	0.24" (6 mm)
D	0.40" (10.5 mm)
E	0.20" (5 mm)
F	0.70" (18 mm)
G	0.26" (6.5 mm)



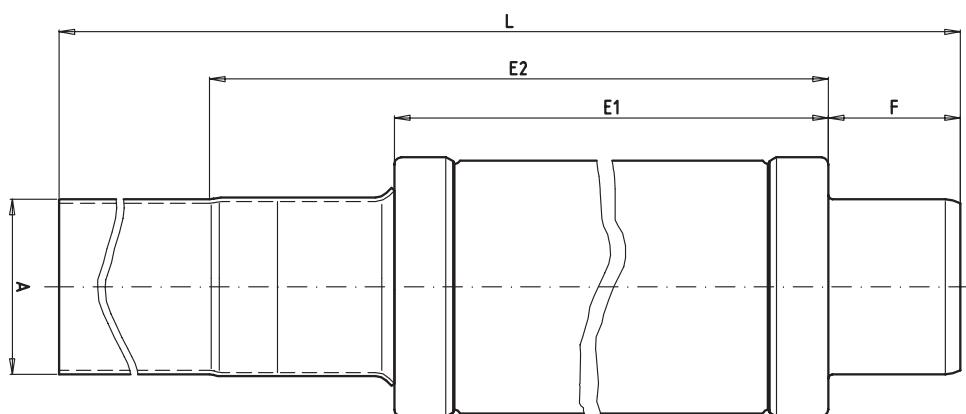
24 kV Extension Adapter for High Voltage Fuses 12kV



Part No.
34 006 01

A	1.77" (45 mm)
B	0.06" (1.5 mm)
C	2.00" (51 mm)
D	1.73" (44 mm)
F	1.77" (45 mm)
G	0.20" (5 mm)
H	2.76" (70 mm)
L	7.28" (185 mm)

HV-Fuse with 24 kV Extension Adapter



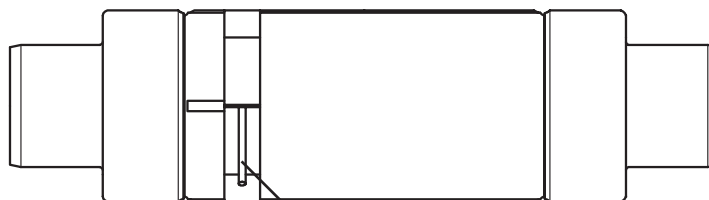
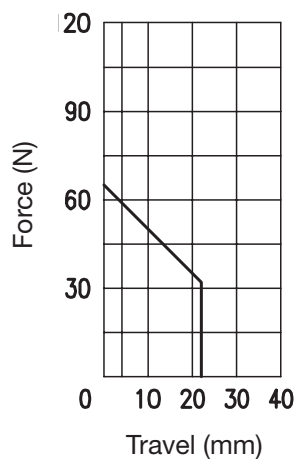
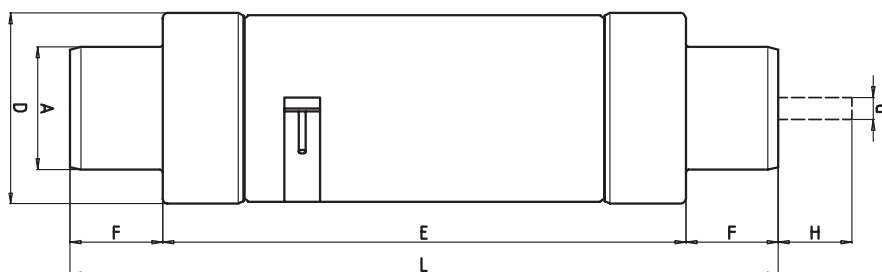
A	1.77" (45 mm)
E1	11.50" (292 mm)
E2	17.40" (442 mm)
F	1.30" (33 mm)
L	20.00" (508 mm)

Test-Fuse**With Time Delayed Release**

For Testing the Release Mechanism in Enclosed Medium Voltage Switchgear

Part No.
33 010 03

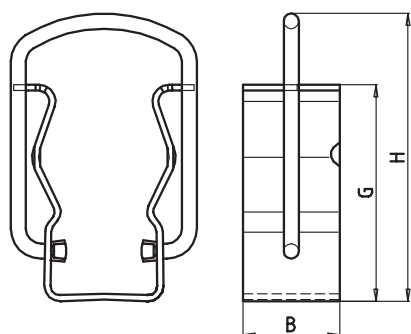
A	1.77"	(45 mm)
D	2.76"	(70 mm)
E	7.56"	(192 mm)
F	1.34"	(34 mm)
G	0.30"	(8 mm)
H	1.06"	(27 mm)
L	10.24"	(260 mm)

**Clamp lever**
for timer**To change E an adaptor is available**from 192 mm to 292 mm **Part No. 34 004 02**from 192 mm to 442 mm **Part No. 34 006 02**

HV-Contact Clip

Rated Fuse Current
 ≤ 200 A

For Indoor and Outdoor Application



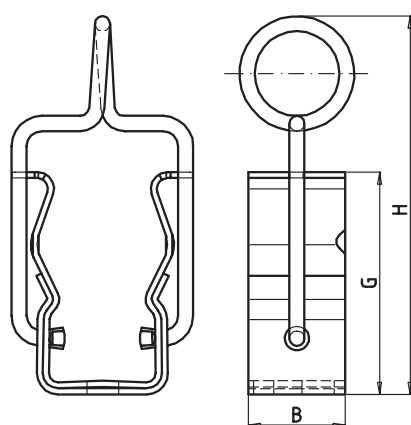
Part No.
31 003 02.20

B	1.26" (32 mm)
G	2.80" (71.5 mm)
H	3.74" (95 mm)

HV-Contact Clip

Rated Fuse Current
> 200 A

For Indoor and Outdoor Application



Part No.
34 001 01.20

B	1.26" (32 mm)
G	2.90" (73.5 mm)
H	4.92" (125 mm)

Storage Holder for HV- and LV-Fuse-links

Rated Voltage [kV]	Part No.	HV-Fuses	LV-Fuses	L		B		T		Weight
		[Pieces]	[Pieces]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	
12	33 004 01	3	6	11.96	304	16.06	408	4.13	105	1.0
24	33 006 01	3	6	17.87	454	16.06	408	4.13	105	1.4
36	33 008 01	3	6	21.65	550	16.06	408	4.13	105	1.9

