

DIN-fuse-links



DIN fuse-links are used for the protection of electrical installations and equipment and are common for a wide area of applications.

Standardised characteristics, technical data and dimensions offer adapted solutions without complex individual calculations.

Utilisation category gG 500VAC with combi indicator



SM000

Notes: DIN000 Fuses are suitable for mounting in DIN00 holders



SM00



SM1



SM2



SM3



SM4A

Size	Rating (A)	Power Dissipation (W)	Part No.
DIN 000	4A		SM000-GL/004
	6A		SM000-GL/006
Refer Notes	10A		SM000-GL/010
	16A		SM000-GL/016
	20A		SM000-GL/020
	25A		SM000-GL/025
	32A		SM000-GL/032
	35A		SM000-GL/035
	40A		SM000-GL/040
	50A		SM000-GL/050
	63A		SM000-GL/063
	80A		SM000-GL/080
DIN 00	100A		SM000-GL/100
	125A		SM00-GL/125
	160A		SM00-GL/160
DIN 1	63A		SM1-GL/063
	80A		SM1-GL/080
	100A		SM1-GL/100
	125A		SM1-GL/125
	160A		SM1-GL/160
	200A		SM1-GL/200
	224A		SM1-GL/224
	250A		SM1-GL/250
DIN 2	63A		SM2-GL/063
	80A		SM2-GL/080
	100A		SM2-GL/100
	125A		SM2-GL/125
	160A		SM2-GL/160
	200A		SM2-GL/200
	250A		SM2-GL/250
	315A		SM2-GL/315
	355A		SM2-GL/355
	400A		SM2-GL/400
DIN 3	315A		SM3-GL/315
	400A		SM3-GL/400
	500A		SM3-GL/500
	630A		SM3-GL/630
	800A		SM3-GL/800
DIN 4a	250A		SM4A-GL/250
	315A		SM4A-GL/315
	400A		SM4A-GL/400
	500A		SM4A-GL/500
	630A		SM4A-GL/630
	800A		SM4A-GL/800
	1000A		SM4A-GL/1000
	1250A		SM4A-GL/1250
	1600A		SM4A-GL/1600



SM00-GL/125K

Utilisation category gG 500VAC with striker

Size	Rating (A)	Power Dissipation (W)	Part No.
DIN 000	6A		SM000-GL/006K
	10A		SM000-GL/010K
	16A		SM000-GL/016K
	20A		SM000-GL/020K
	25A		SM000-GL/025K
	32A		SM000-GL/032K
	40A		SM000-GL/040K
	50A		SM000-GL/050K
	63A		SM000-GL/063K
	80A		SM000-GL/080K
DIN 00	100A		SM000-GL/100K
	125A		SM00-GL/125K
DIN 00	160A		SM00-GL/160K
	100A		SM1-GL/100K
	125A		SM1-GL/125K
DIN 1	160A		SMI-GL/160K
	200A		SM1-GL/200K
	250A		SM1-GL/250K
DIN 2	315A		SM2-GL/315K
	400A		SM2-GL/400K
DIN 3	500A		SM3-GL/500K
	630A		SM3-GL/630K



SM2-UF/315

Utilisation category aR 690VAC - üf1 (very fast acting)

Size	Rating (A)	Power Dissipation (W)	Part No.
DIN 000	16A		SM000-UF/016
	20A		SM000-UF/020
	25A		SM000-UF/025
	32A		SM000-UF/032
	40A		SM000-UF/040
	50A		SM000-UF/050
	63A		SM000-UF/063
	80A		SM000-UF/080
	100A		SM000-UF/100
	125A		SM000-UF/125
DIN 1	160A		SM000-UF/160
	200A		SM1-UF/200
DIN 2	250A		SM1-UF/250
	315A		SM2-UF/315
DIN 3	400A		SM2-UF/400
	500A		SM3-UF/500
	630A		SM3-UF/630

TRANSFORMER FUSE RANGE

NH fuse-links utilization category gTr for transformer protection 400VAC



SM3-GTR/910

Size	Rating (A)	Sn (kVA)	Blow Indicator	Power Dissipation (W)	Part No.
DIN 2	144A	100	Top	9.5	SM2-TT/145
DIN 2	289A	200	Top	18.8	SM2-TT/289
DIN 3	455A	315	Top	30.5	SM3-TT/455
DIN 3	722A	500	Top	49	SM3-GTR/722
DIN 3	909A	630	Top	58	SM3-GTR/910
DIN 4a	722A	500	Top	50.5	SM4A-TT/722
DIN 4a	909A	630	Top	61	SM4A-TT/910
DIN 4a	1443A	1000	Top	98	SM4A-TT/1443



M**aM**

Utilization category aM for motor protection 690V Combi Indicator

Size	Rating (A)	Power Dissipation (W)	Part No.
DIN 000	2A		SM000-aM/002/69
	4A		SM000-aM/004/69
	6A		SM000-aM/006/69
	10A		SM000-aM/010/69
	16A		SM000-aM/016/69
	20A		SM000-aM/020/69
	25A		SM000-aM/025/69
	32A		SM000-aM/032/69
	35A		SM000-aM/035/69
	40A		SM000-aM/040/69
DIN 00	50A		SM00-aM/050/69
	63A		SM00-aM/063/69
	80A		SM00-aM/080/69
	100A		SM00-aM/100/69
	125A		SM00-aM/125/69
	160A		SM00-aM/160/69
DIN 1	63		SM1-aM/063/69
	80		SM1-aM/080/69
	100		SM1-aM/100/69
	125		SM1-aM/125/69
	160		SM1-aM/160/69
	200		SM1-aM/200/69
	224		SM1-aM/224/69
	250		SM1-aM/250/69
DIN 2	160		SM2-aM/160/69
	200		SM2-aM/200/69
	224		SM2-aM/224/69
	250		SM2-aM/250/69
	300		SM2-aM/300/69
	315		SM2-aM/315/69
	355		SM2-aM/355/69
	400		SM2-aM/400/69
DIN 3	400		SM3-aM/400/69
	425		SM3-aM/425/69
	500		SM3-aM/500/69
	630		SM3-aM/630/69
DIN 4a	800		SM4a-aM/800/69
	1000		SM4a-aM/1000/69

Solid links 690VAC



TM

Size	Rating (A)	Gripping Lugs	Power Dissipation (W)	Part No.
DIN 00	160A	Insulated	2.0	TM00-ISM
DIN 1	250A	Insulated	5.0	TM1-ISM
DIN 2	400A	Insulated	10.0	TM2-ISM
DIN 3	630A	Insulated	21.0	TM3-ISM
	1250A	Insulated	24.0	TM3-1250-ISM
DIN 4a	1250A	Live	21.0	TM4A-1250
	1600A	Live	22.0	TM4A-1600

Accessories



GPSHE



GP 1200



HP-SE/L

Description	Part No.
For fitting and removal of DIN 000, 00, 1, 2, 3 fuse links	GPSHE
NH Fuse Handle for inserting and removing of NH fuse-links sizes NH1, NH2, NH3, NH1XL, NH2XL and NH3L, as well as solid links and fuse-base covers.	GP 1200
Piggy Bank Fuse Adaptor for temporary power supply 100 amp max	HP-SE/L

D-Type fuse links utilisation category gG 500VAC



GLD

Size	Rating (A)	For thread	Power Dissipation (W)	Part No.
DII	10A	E27	2.1	GLD2/10
	16A	E27	2.5	GLD2/16
	20A	E27	2.6	GLD2/20
DIII	25A	E27	3.3	GLD2/25
	35A	E33	4.4	GLD3/35
	50A	E33	6.0	GLD3/50
	63A	E33	6.2	GLD3/63



SKR

22 X 58 Cylindrical fuse links (house service fuses) gG

Size	Rating (A)	Voltage	Power Dissipation (W)	Part No.
22 x 58mm	32A	690V	3.7	SKR-GL/032
22 x 58mm	40A	690V	4.5	SKR-GL/040
22 x 58mm	50A	690V	5.2	SKR-GL/050
22 x 58mm	63A	690V	6.9	SKR-GL/063
22 x 58mm	80A	690V	7.8	SKR-GL/080
22 x 58mm	100A	690V	8.6	SKR-GL/100

10 X 38 CYLINDRICAL FUSES

Z type gG 400/500 VAC



Z10

Size	Rating (A)	Voltage	Part No.
10 x 38mm	2A	AC500V	Z10GL2
10 x 38mm	4A	AC500V	Z10GL4
10 x 38mm	6A	AC500V	Z10GL6
10 x 38mm	10A	AC500V	Z10GL10
10 x 38mm	12A	AC500V	Z10GL12
10 x 38mm	16A	AC500V	Z10GL16
10 x 38mm	20A	AC400V	Z10GL20/4
10 x 38mm	25A	AC400V	Z10GL25/4
10 x 38mm	32A	AC400V	Z10GL32/4

Z type PV 1000 VDC



Z10DC

Size	Rating (A)	Voltage	Part No.
10 x 38mm	2A	DC1000V	Z10DC2/1000V
10 x 38mm	4A	DC1000V	Z10DC4/1000V
10 x 38mm	6A	DC1000V	Z10DC6/1000V
10 x 38mm	10A	DC1000V	Z10DC10/1000V
10 x 38mm	12A	DC1000V	Z10DC12/1000V
10 x 38mm	16A	DC1000V	Z10DC16/1000V
10 x 38mm	20A	DC1000V	Z10DC20/1000V
10 x 38mm	25A	DC1000V	Z10DC25/1000V

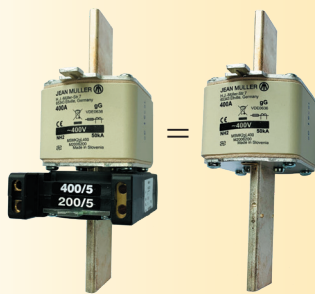
Z type PV cylindrical fuse disconnecter



Z10-TL

Size	Rating (A)	Voltage	Indicator	Part No.
1 pole	20A	DC1000V	None	Z10-TL1/DC1000V
2 pole	20A	DC1000V	None	Z10-TL2/DC1000V
1 pole	20A	DC1000V	LED	Z10-TL1/DC1000V LED
2 pole	20A	DC1000V	LED	Z10-TL2/DC1000V LED

NH metering fuse-links



Truncated size with additional feature

- Truncated isolating body with rated voltage AC400V
- Dimensions in conjunction with attached current transformer

Attachable current transformers

- Dedicated current transformers offer two measuring ranges
- Current transformers allow open-ended operation

Bimetallic current meters

- Dedicated bimetallic current meters with two measuring ranges and slave pointer

Application in switchgear

- JEAN MÜLLER fuse disconnects are prepared to accept metering fuse-links

Metering fuse links utilisation category gG 400VAC

	Size	Rating (A)	Power Dissipation (W)	Part No.
	DIN2	200	12.0	SMCT2-GL/200
		250	17.0	SMCT2-GL/250
		315	20.0	SMCT2-GL/315
		400	24.0	SMCT2-GL/400
	DIN3	400	24.0	SMCT3-GL/400
		630	32.0	SMCT3-GL/630

Current transformers for metering fuse links

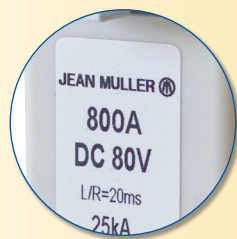
Size	Primary Current (A)	Secondary Current (A)	Power (VA)	Class	Part No.
DIN2	400/200	5	5/3.5	3	MSMK2/400/5
DIN3	400/200	5	5/3.5	3	MSMK3/400/5
DIN3	600/300	5	5/3.5	3	MSMK3/600/5
Circlip for securing CTs					SIBZ-R

Bimetallic meters for metering fuse links (MDIs)

	Size	Scale (A)	Measuring Range (A)	Part No.
	DIN 1,2,3	400/200	0-5	SL-MDI-400
	DIN 1,2,3	600/300	0-5	SL-MDI-600



NH fuse-links for DC applications



Compact dimensions DC80V

- High current carrying capacity up to 800A
- Compact size NH00
- Suitable NH fuse-switch-disconnectors available

Compact dimensions DC250V

- High current carrying capacity up to 315A
- Compact size NH00
- Suitable NH fuse-switch-disconnectors available

Various applications

- DC80V especially for short circuit protection in power supply systems for telecommunication
- DC250V and DC440V for protection against overload and short circuit in common DC applications

DIN00 fuse links 80VDC for telecommunication applications

	Size	Rating (A)	Power Dissipation (W)	Part No.
	DIN00	100	8.0	SM00-DC100
		160	9.0	SM00-DC160
		250*	12.0	SM00-DC250
		400*	18.0	SM00-DC400
		630*	28.0	SM00-DC630
		800*	39.0	SM00-DC800

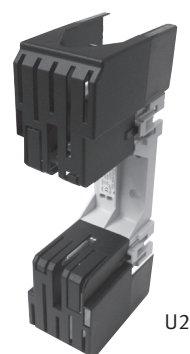
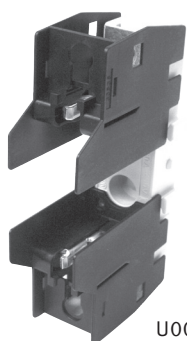
DIN00 fuse links 250VDC

	Size	Rating (A)	Power Dissipation (W)	Part No.
	DIN00	63	7.5	SM00-DC063/250
		100	9.4	SM00-DC100/250
		160	13.8	SM00-DC160/250
		200*	18.9	SM00-DC200/250
		250*	21.2	SM00-DC250/250
		315*	23.5	SM00-DC315/250

* only for use with JEAN MÜLLER fuse disconnects type LTT.

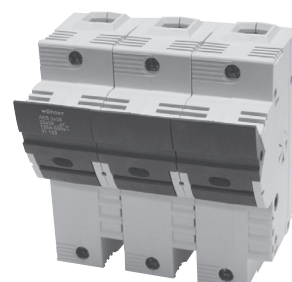
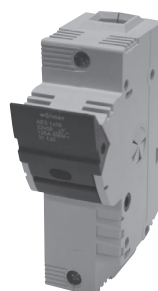
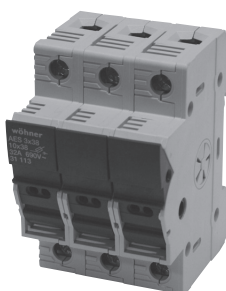
Fuse bases for DIN fuses

Size	For Fuses	Current Rating (A)	Terminal	Connection Capacity (mm ²)	Part No.
00	DIN000 & DIN00	160	Flat Terminal M8	max. 95	U00-1IGZ/H
1	DIN1	250	Flat Terminal M10	max. 150	U1-1IGZ/H
2	DIN2	400	Flat Terminal M12	max. 240	U2-1IGZ/H



Fuse bases for cylindrical fuses

For Fuses	Current Rating (A)	Switch width (mm)	Terminal	Connection Capacity (mm ²)	Part No.
10 x 38mm	32	18	Clamp	0.75 - 25	WH-AMB1/10
10 x 38mm	32	54	Clamp	0.75 - 25	WH-AMB3/10
22 x 58mm	100	36	Clamp	4 - 50	WH-AMB1/22
22 x 58mm	100	108	Clamp	4 - 50	WH-AMB3/22



TECHNICAL INFORMATION

Type	Standard DIN and Striker Fuses	Semiconductor Fuses	Motor Rated Fuses	CT Mount Fuses	D-Type Fuses	Cylindrical House Service Fuses
Reference	SM...-GL/... SM...-GL/...K	SM...-UF/...	SM...-AM/...	SMCT...-GL/...	GLD...-	SKR...
Utilisation	Cable and Line protection	Semiconductor protection	Motor protection	Cable and Line protection	Cable and Line protection	Cable and Line protection
Protection Type	Full Range	Short Circuit only	Short Circuit only	Full Range	Full Range	Full Range
Characteristic	gG	aR	aM	gG	gG	gG
Rated Voltage	500 VAC	690 VAC	690 VAC	400 VAC	500 VAC	690 VAC (100A 500V) (125A 400V)
Maximum Voltage	500 VAC	725 VAC	725 VAC			
Rated Breaking Capacity						
at 500 VAC	120 kA	100 kA	120 kA NH000/100KA	50 kA	50 kA	
Construction						
Body		Steatite Ali - oxide ceramic for semi-conductor fuses			-	-
Blade Contacts		Silver Plated Copper Alloy or Copper			-	-
Fuse Element		Silver or Copper melting element			-	-
Fuse Blown Indication		Combi/top indicator			None	None
Type	M ₂ GTR(TT) ...			M ₃ GTR(TT) ...		
Size	-	-	NH2	NH3		
Rated voltage	U _n	V	AC400	AC400		
Rated current	I _n	A	72-361	72-361	455-577	722-909
Transformer rating	S _n	kVA	50-250	50-250	315-400	500-630
Rated breaking capacity	-	kA	100	100		
Utilization category	-	-	gTr	gTr		
Standards	-	-	IEC/EN 60269-1 DIN VDE 0636-2011			

Notes :

Characteristics/Standards

gG IEC60269

aR IEC60269-4

Fuses for motor protection

1. Fuses with aM characteristic

The rated fuse current must be \geq rated motor current.

2. Fuses with gG characteristic

The following table shows fuse ratings for short circuit protection of 3 phase motors, 1500 rpm and internal or surface cooling

Direct Starting : max start current 6 x rated motor current, max start time 5 seconds

Star/Delta Starting : max start current 2 x rated motor current, max start time 15 seconds

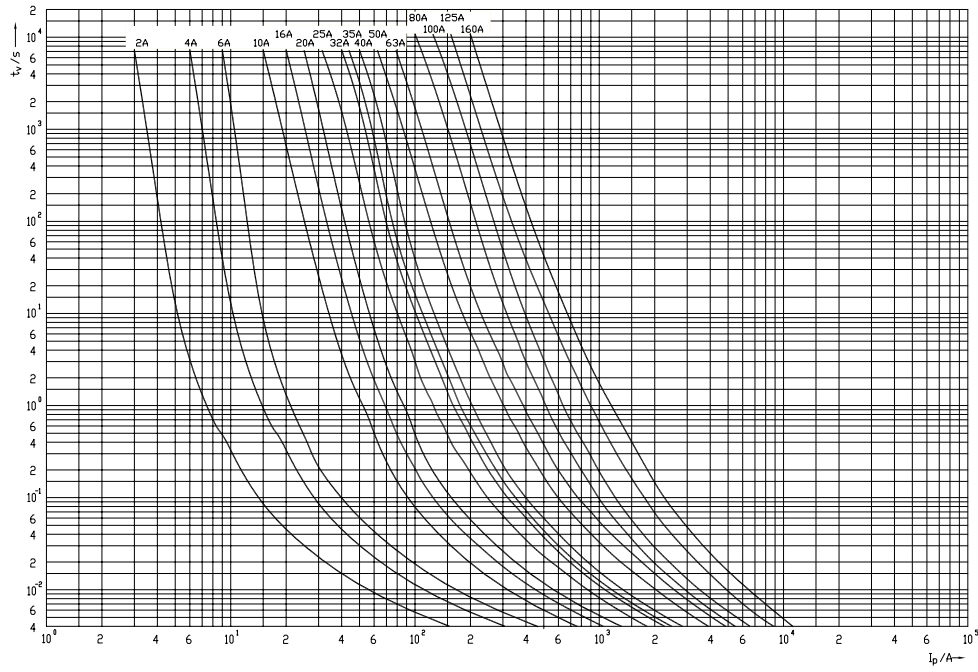
Ratings for Star/Delta starting also apply for 3 phase slip-ring motors

kW	Motor Rating @ 400V			Fuse Rating aM (Amps)		Fuse Rating gG (Amps)	
	cos ϕ	Eff %	Rated Motor Current Amps	D.O.L Start	D.O.L Start	Star-Delta Start	
0.18	0.7	62	0.6	2	2	-	
0.25	0.7	62	0.83	2	4	2	
0.55	0.75	69	1.5	2	4	2	
0.75	0.8	74	1.8	4	6	2	
1.1	0.83	77	2.5	4	6	4	
2.2	0.83	81	4.7	6	10	6	
3.0	0.84	81	6.4	10	16	10	
4.0	0.84	82	8.4	10	20	10	
7.5	0.86	85	14.8	16	32	16	
11	0.86	87	21.2	25	50	25	
15	0.86	87	28.9	32	63	32	
22	0.87	89	41	50	80	50	
30	0.87	90	55	63	100	63	
37	0.87	90	68	80	125	80	
55	0.88	91	99	125	200	100	
75	0.88	91	135	160	200	160	
90	0.88	92	160	200	250	160	
110	0.88	92	196	250	315	200	
132	0.88	92	235	250	400	250	
160	0.88	93	282	315	400	315	
200	0.88	93	353	400	500	400	

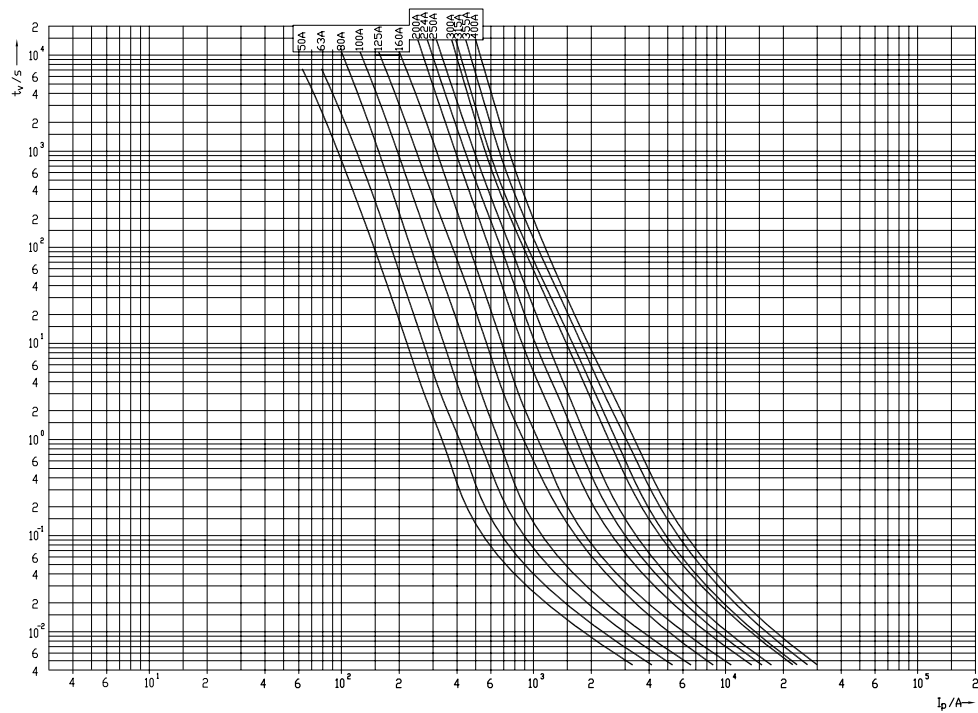
HRC DIN Fuses

NH fuse-links for general protection

NH000-NH00

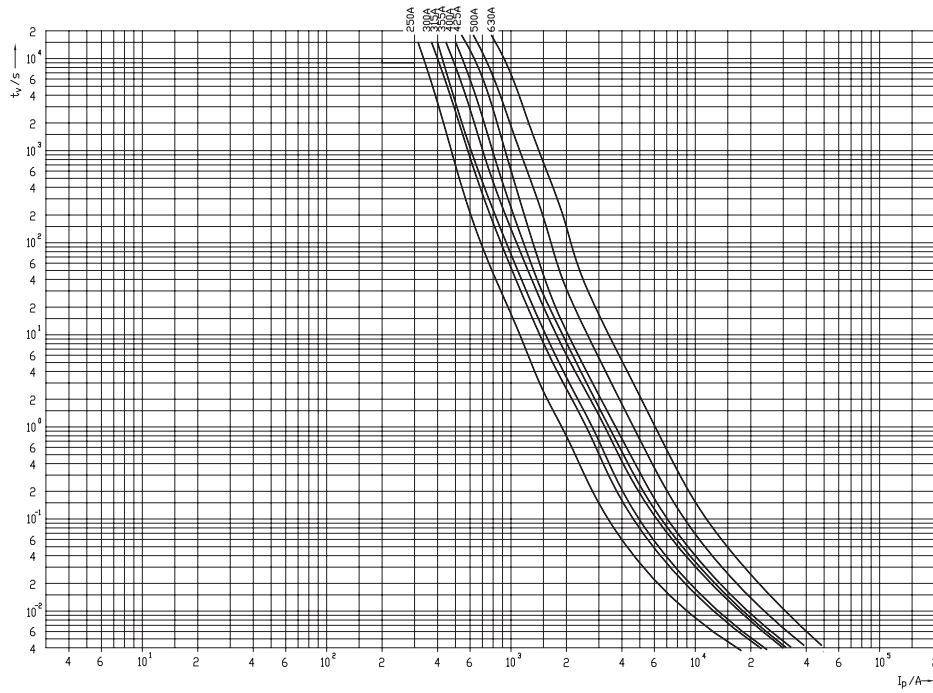


NH1+2

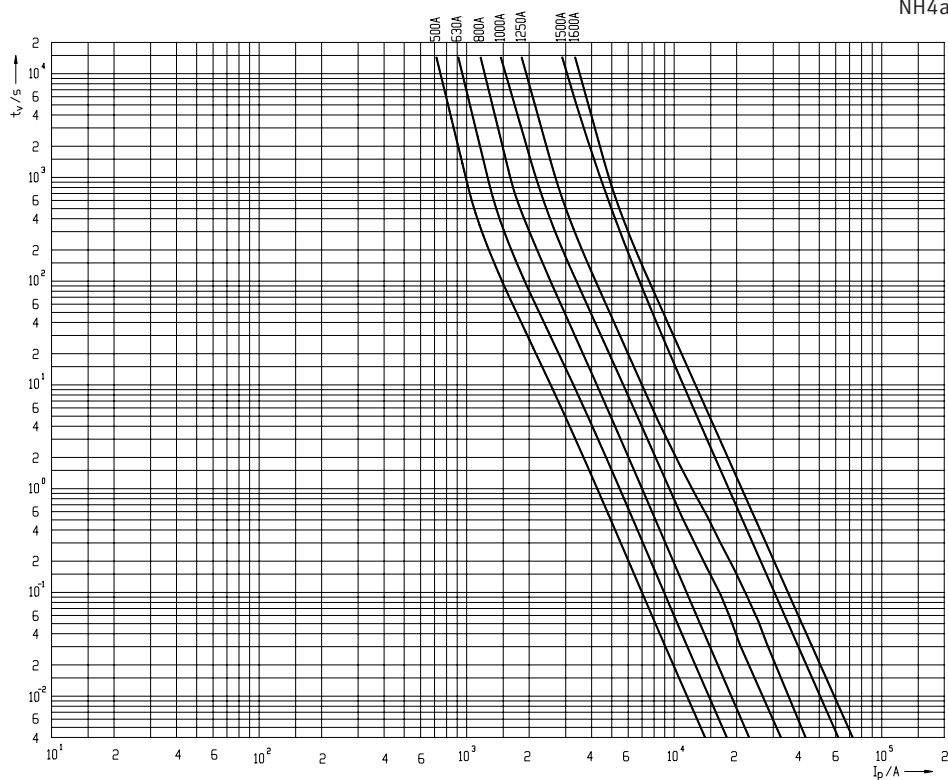


HRC DIN Fuses
Time/current characteristics curves

NH3



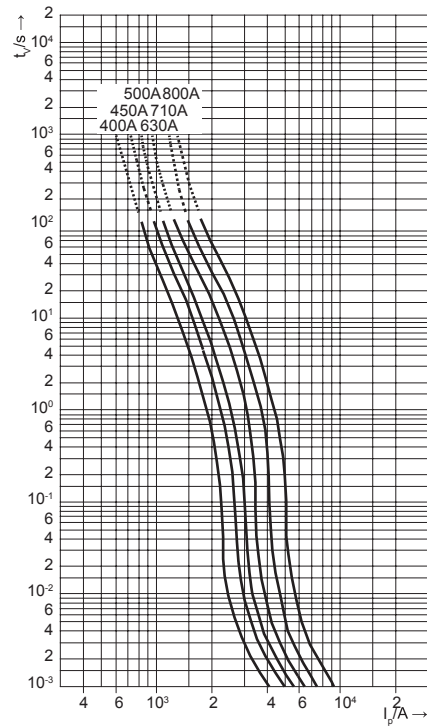
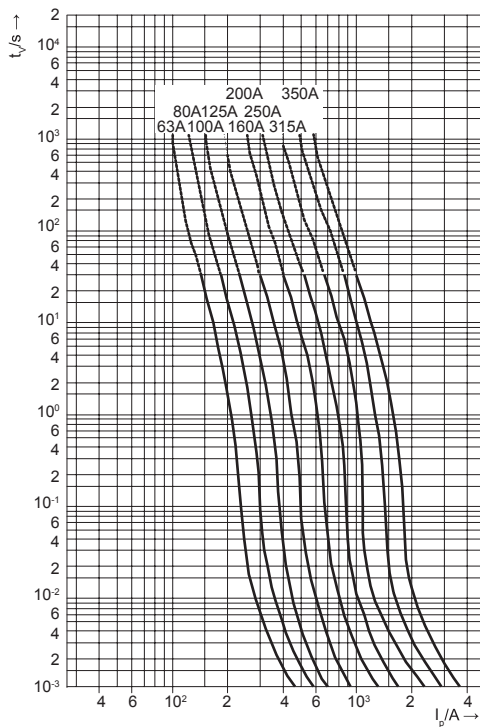
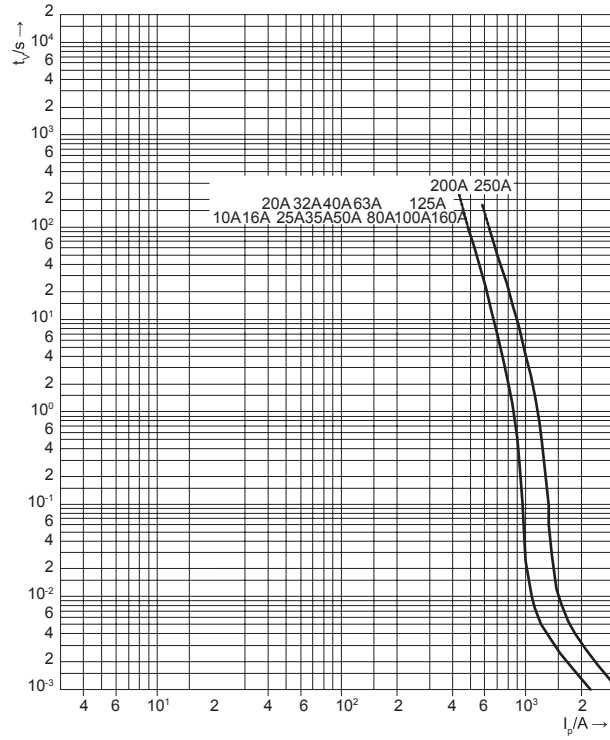
NH4a



HRC DIN Fuses

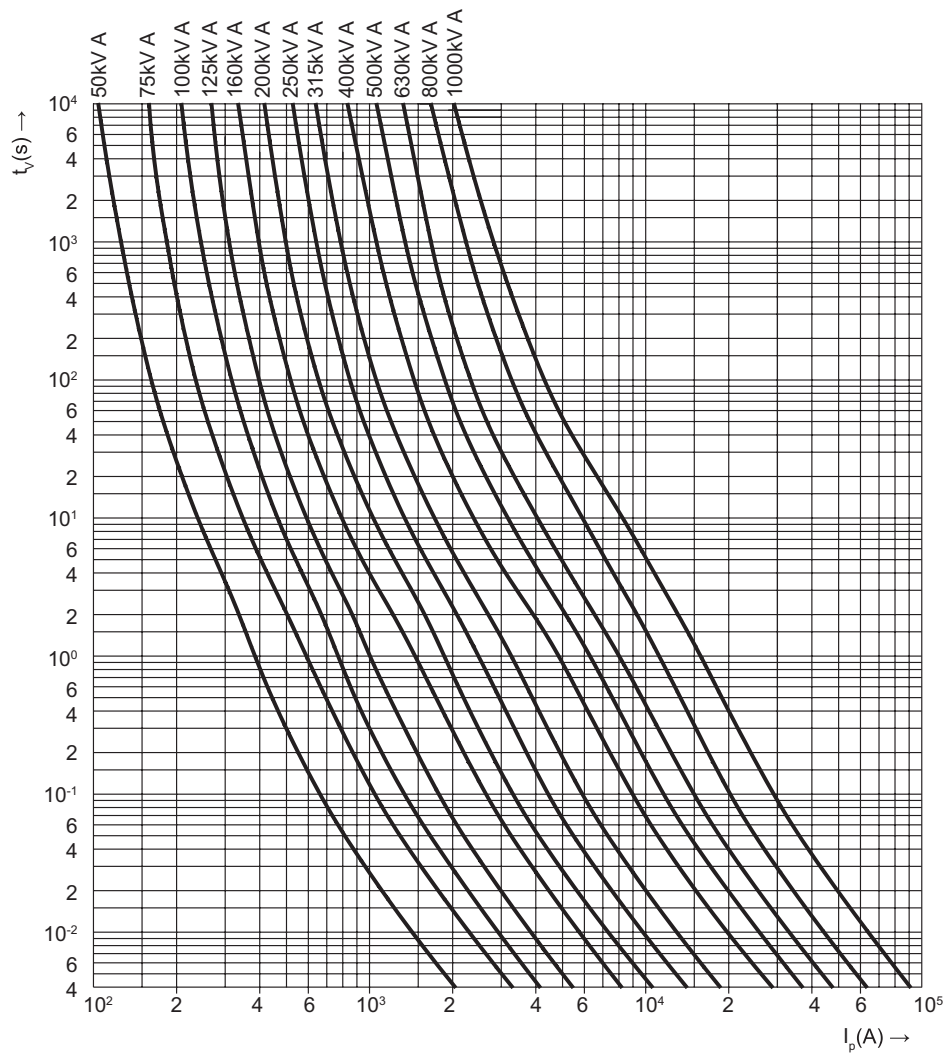
Time/current characteristics üf1

Very fast acting



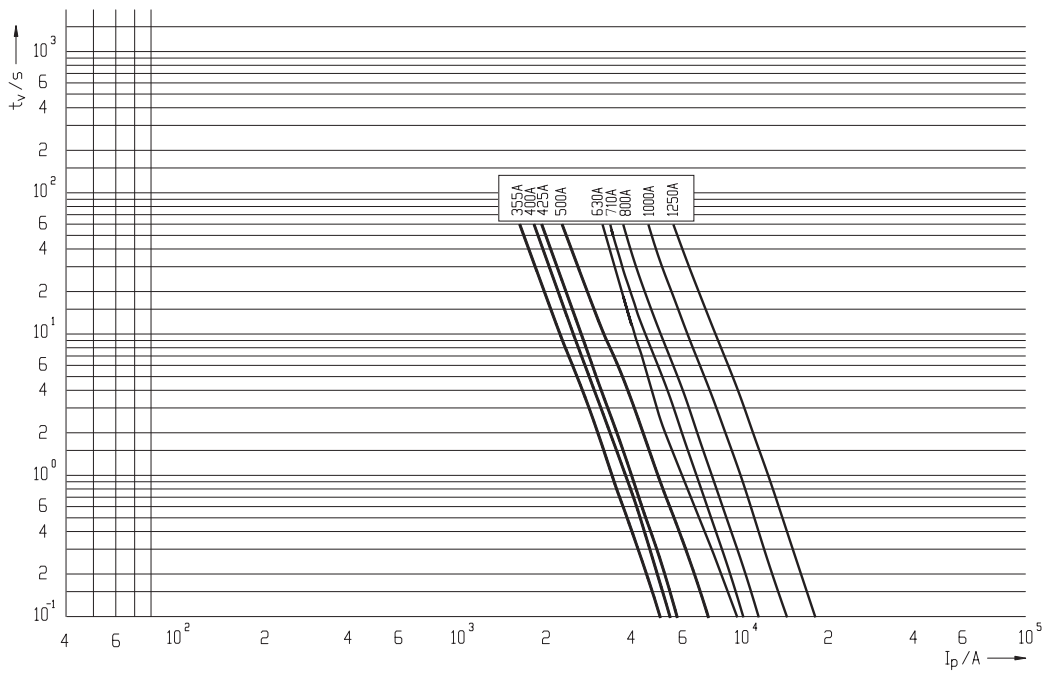
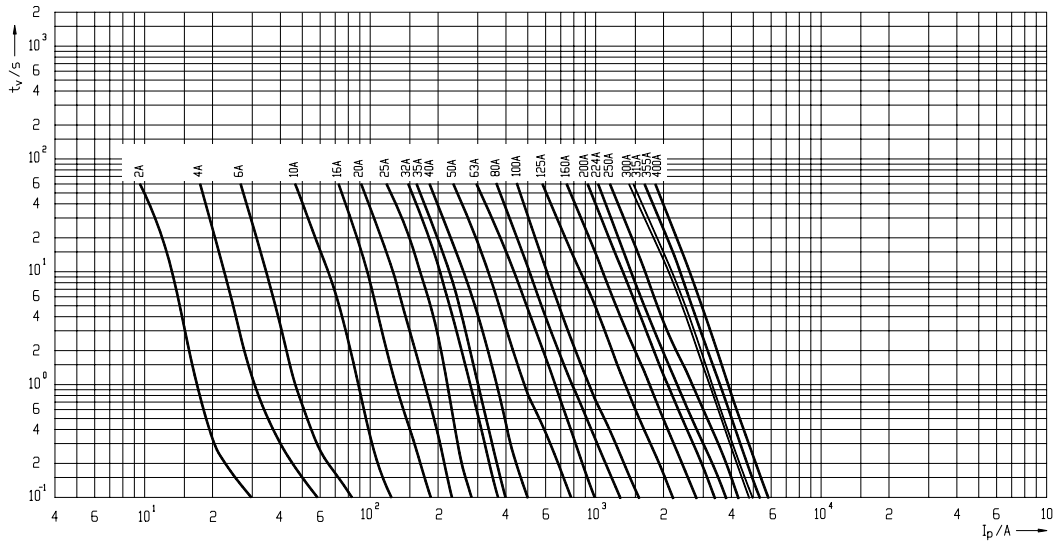
HRC DIN Fuses
Time/current characteristics gTr

Transformer range



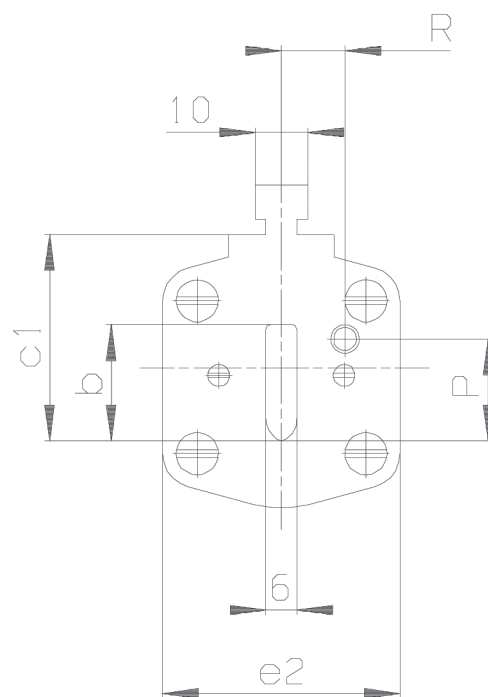
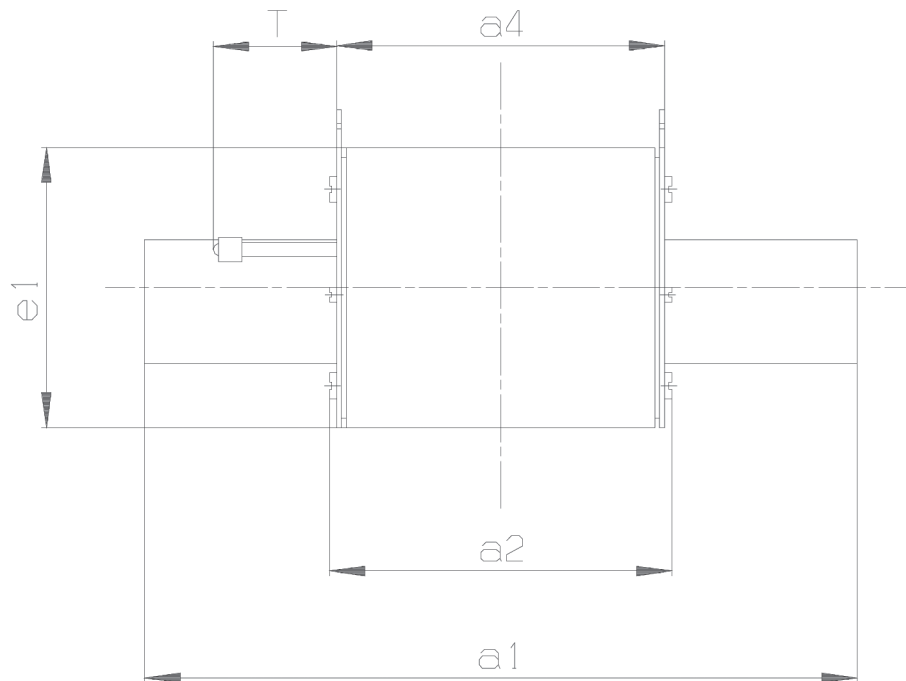
HRC DIN Fuses

Time/current characteristics gaM



DIMENSIONS

HRC fuses/ Striker fuses/aM fuses/Semiconductor



Gg fuses 500V

Type	SM000	SM00	SM1		SM2		SM3			SM4a	
A	4-100	125-160	6-160	200-250	50-250	315-400	50-400	425-500	630	50-1000	1250-1600
a1	78,5	78,5	135	135	150	150	150	150	150	200	200
a2	53	53	68	72	72	72	72	72	72	87	87
a4	50	50	67	67	67	67	67	67	67	90	90
b	15	15	15	20	20	26	26	32	37	50	50
c1	35	35	40	40	48	48	60	60	60	85	85
e1	40	47	50	55	50	59	59	69	69	95	106
e2	21	29	28	46	46	54	54	64	64	87	95
Striker fuses only											
T	17	17	26		*	26	*	26	26	26	26
R	0	0	13,7		*	16,2	*	17	17	24	24
P	20,5	20,5	20,5		*	27,3	*	35,6	35,6	49	49

Dimensions in mm

* Striker types (K) always have dimensions of the respective size

Semi conductor fuses 690V

Type	SM000	SM1	SM2	SM3
A	10-160	6-250	50-400	50-630
a1	78	135	150	150
a2	55	72	72	72
a4	48	65	65	65
b	15	24	30	37
c1	35	40	48	60
e1	49	52	61	74
e2	27	46	54	64

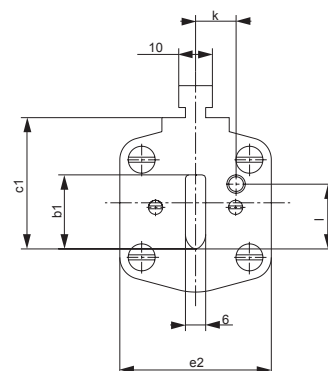
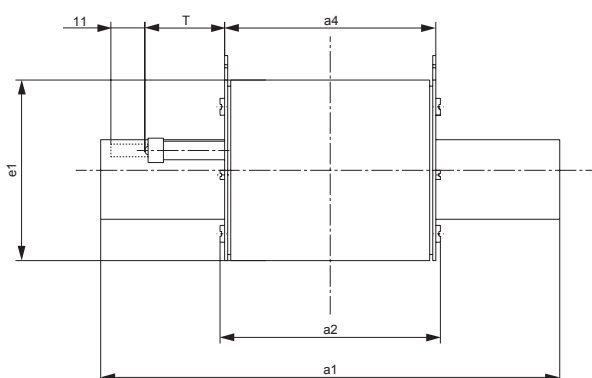
Dimensions in mm

aM fuses 690V

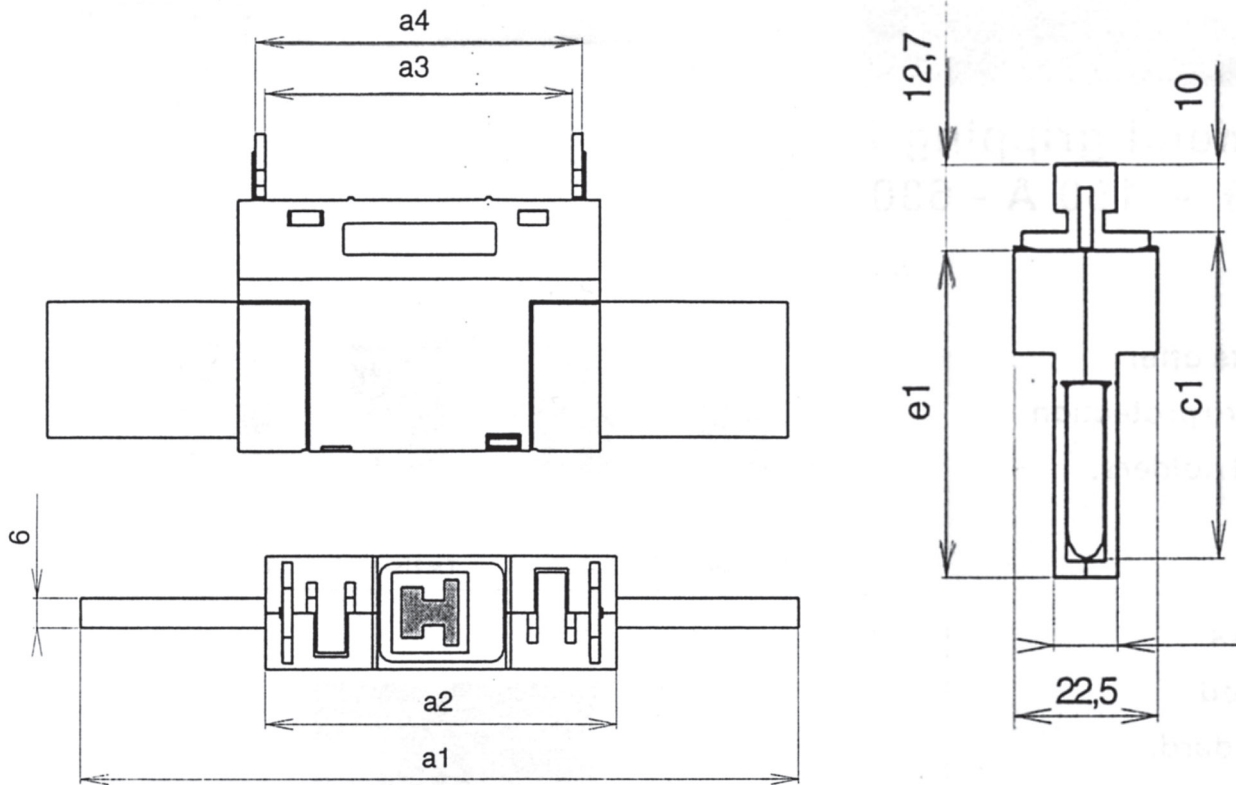
Type	SM000	SM00	SM1	SM2	SM3
A	16-63	80-160	125-250	200-400	500-630
a1	78.5	78.5	135	150	150
a2	53	53	72	72	72
a4	50	50	67	67	67
b	15	15	20	26	37
c1	35	35	40	48	60
e1	40	47	49	58	73
e2	21	29	46	54	73

Dimensions in mm

Type			M2GTR(TT) ...	M3GTR(TT) ...		
Dimensions	a1	mm	150	150	150	150
	a2		72	72	72	73
	a4		67	67	67	67
	b1		26	26	33	37
	c1		48	60	60	60
	e1		63	74	74	76
	e2		54	54	65	73
Weight	-	g	500	510	923	940



Solid link



DIN size	a1	a2	a3	a4	c1	e1
TM00-ISM	80	54	44.4	48.4	35	36
TM1-ISM	135	73.5	62.4	66.4	40	48.2
TM2-ISM	150	73.5	62.4	66.4	48	56.2
TM3-ISM	150	73.5	62.4	66.4	60	68.2