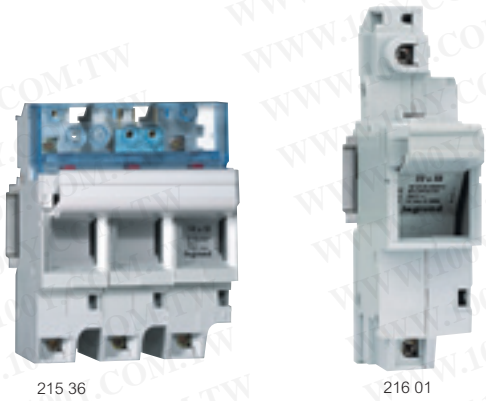


SP fuse carriers
with protected terminals

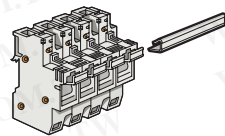
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SP fuse carriers
with protected terminals



Conform to IEC 60269-2
 Veritas approved
 Height under front plate 44 mm
 Mixed socket screw head for easier cable clamping
 Screw or rail and mounting

Pack	Cat.Nos	SP 51 for HRC fuses 14 x 51	
5 1 1 1 1	215 01 215 03 215 04 215 05	Without microswitch	Connection 1 x 35 mm ² or 2 x 16 mm ² No of modules 1.5 3 4.5 6
		1P	
		2P	
		3P	
		3P + equipped neutral	
1	215 36	3P	With 5 A - 250 V \sim changeover micro-switch Cartridge presence, prebreak and device against single-phase operation 1 x 35 mm ² or 2 x 16 mm ² 4.5
		SP 58 for HRC fuses 22 x 58	
3 1 1	216 01 216 04 216 05	Without microswitch	Connection 1 x 50 mm ² or 2 x 25 mm ² No of modules 2 6 8
		1P	
		3P	
		3P + equipped neutral	
		With 5 A - 250 V \sim changeover micro-switch Cartridge presence, prebreak and device against single-phase operation	
1	216 36	3P	1 x 50 mm ² or 2 x 25 mm ² 6
		Link handle	
5	216 96	For SP 51 or SP 58 Length 300 mm, can be cut to required length	



Spacing unit (p. 179)

Choice of equipment

Type	Rated current	Maximum cartridge rating					
		400 V \sim		500 V \sim		690 V \sim	
		gG	aM	gG	aM	gG	aM
SP 51	50 A	50	50	50	40	25	25
SP 58	100 A (125 A in 400 V)	125	125	100	100	50	50

These values are standardized according to IEC 60269-2/2-1
 They can be reduced or increased under certain specific applications

Index of protection: IP 2X - IP 2XC - under front plate

Equipment derating

Recommended for equipment exposed to high temperatures:

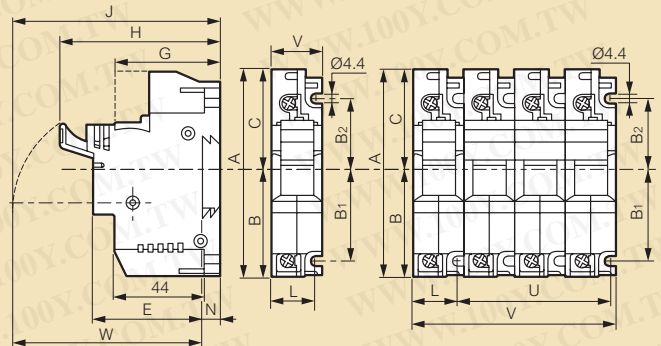
- Ambient temperature over 35 °C: derate fuse by one rating per 10 °C (UTE C 20-051 / IEC 60943)
- Side-by-side equipment and simultaneous function

2 - 3 devices	0.9 x I _n
4 - 5 devices	0.8 x I _n
6 - 7 - 8 - 9 devices	0.7 x I _n
≥ 10 devices	0.6 x I _n

This coefficient is to be applied on the nominal rating of the base (IEC 60439-1)

- Uninterrupted usage: it may be necessary to upgrade the bases by one size

Dimensions (mm)



	A	B	B ₁	B ₂	C	E	G	H	J
SP 51	106	54.5	45	35	1.5	55	53	1P 2P/3P	1P 96
SP 58	140	74	65	45	66	59	53	81 87	84 90

	J	L	N	U	V	W
SP 51	99	20.7	9	26.5 53	79.5 26.5	53 106
SP 58	114	27	9	36 72	108 36	72 108

SPX and SPX-V selection chart

SPX blade type isolators (p. 120)

Mounting on plate

	Type	Cat.Nos	Nominal current In	Size (blade type cartridge fuses)
	SPX 000 125-3P	6052 00	125 A	000 (OOC)
	SPX 00 160-3P	6052 02	160 A	00
	SPX 1 250-3P	6052 04	250 A	1
	SPX 2 400-3P	6052 06	400 A	2
	SPX 3 630-3P	6052 08	630 A	3

Mounting on 60 mm collector rail

	Type	Cat.Nos	Nominal current In	Size (blade type cartridge fuses)
	SPX 000 125-3P	6052 01	125 A	000 (OOC)
	SPX 00 160-3P	6052 03	160 A	00
	SPX 1 250-3P	6052 05	250 A	1
	SPX 2 400-3P	6052 07	400 A	2
	SPX 3 630-3P	6052 09	630 A	3

SPX-V isolators with vertical blades (p. 122)

Mounting on collector rail support

	Type	Cat.Nos	Nominal current In	Size (blade type cartridge fuses)
	SPX-V 00 160-3P	6052 14	160 A - 60 mm rail	00
	SPX-V 00 160-3P ⁽¹⁾	6052 10	160 A - 100 mm rail	00
	SPX-V 1 250-3P	6052 11	250 A - 185 mm rail	1
	SPX-V 2 400-3P	6052 12	400 A - 185 mm rail	2
	SPX-V 3 630-3P	6052 13	630 A - 185 mm rail	3

(1) Isolators SPX-V 00 160 can be mounted on 185 mm collector rail by adding the 6052 50 (single) or 6052 51 (double) adaptators

SPX AND SPX-V

Protection plus on-load breaking

Fuse carriers for blade type fuses, designed to protect against short-circuits and overloads, connect and disconnect electric circuit parts without load or at full load.



SPX-V fuse carrier

SPX fuse carrier

► **Fuse carriers in two versions:**

- SPX in-line fuse carriers
- SPX-V vertical fuse carriers

► **Allow maintain switching selectivity**

► **Two connection systems:** terminals or collector rail

SPX

isolators with blade type cartridge fuses, for DIN rail plate or 60 mm distance collector rail



- ⊕ Accessories (p. 121)
- ⊕ Technical characteristics (p. 123)
- ⊕ Dimensions (p. 125-126)

Pack	Cat.Nos		SPX blade type isolators		
			Conform to standard IEC/EN 60947-3 – enables safe handling while energised – protection against accidental contact – fuse can be checked through transparent window – voltage control via small opening in window – sealable cover – simultaneous switching on all poles, 1600 mechanical operations – cover position indicated by auxiliary contact (accessory) – screw connection for lug – interchangeable connection accessories 4 types of connection possible: – flush-mounted terminals (SPX 000) – with lugs (SPX 00-3) – flat connections (included with the SPX 000, as an accessory for SPX 00-3) – prism connections (as accessory for SPX 00-3) Mounting: – on plate – on DIN rail – on 60 mm collector rail: <ul style="list-style-type: none"> • on 5 or 10 mm thick rails for models SPX 000, SPX 00 • on 10 mm rails for models SPX 1, SPX 2, SPX 3 • with installation kit 6052 48 for models SPX 1 and SPX 2, mounting on 5 mm thick rails possible Interchangeable outgoing line, via top or bottom The blade type fuses are available separately		
	Mounting on plate	Mounting on collector rail	Nominal current In	Size	Connection
1	6052 00	6052 01	125 A	000	Connection cr-sect. 1.5-50 mm ²
1	6052 02	6052 03	160 A	00	With M8 sleeve
1	6052 04	6052 05	250 A	1	With M10 sleeve
1	6052 06	6052 07	400 A	2	With M10 sleeve
1	6052 08	6052 09	630 A	3	With M12 sleeve

Blade type cartridge fuses (p. 134)

XL³ mounting accessories (p. 203, 219 and 233)

SPX and SPX-V accessories



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Dimensions (p. 126)

Pack	Cat.Nos	Cage terminals for SPX and SPX-V		
Flat terminals for flexible copper rail				
Conductor: flexible or rigid multicore copper cables				
Cross-section				
		Conductor (mm ²)	Flexible rail (mm)	SPX size
3	6052 18	1.5-70	12 x 10	00
3	6052 19	70-150	18 x 7-18	1
3	6052 20	120-240	21 x 5-19	2
3	6052 21	150-300	25 x 7-20	3
Prism terminals for flexible copper rail				
Conductor: flexible or rigid multicore copper and aluminium cables				
Cross-section				
		Conductor (mm ²)	Flexible rail (mm)	SPX size
3	6052 22	16-70	12 x 8	00
3	6052 23	70-150	18 x 10	1
3	6052 24	120-240	21 x 15	2
3	6052 25	150-300	25 x 20	3
Extension connector with 3 inputs				
Fix with M8 screws				
3	6052 26	3 inputs for 1.5-16 mm ² wires		SPX size 00
Terminals shields				
Fix at top or bottom of isolator				
Output				
				SPX size
2	6052 49	With installation plate		00
1	6052 31	With collector rail		00
1	6052 32	For all types		1
1	6052 33	For all types		2
1	6052 34	For all types		3

Pack	Cat.Nos	Connection terminals to feed the bars, for SPX and SPX-V (continued)		
Universal connection terminals for flexible copper rail				
Conductor: flexible or rigid multicore copper and aluminium cables				
		Conductor (mm)	Bar thickness (mm)	In (A)
100	6052 63	1.5-1.6	5	180
50	6052 64	4-35	5	270
25	6052 65	16-70	10	400
25	6052 66	16-120	10	440
Signalling contact for SPX and SPX-V				
To indicate the status of the cover				
Changeover contact				
1	6052 30	5 A 250 V AC; 4 A 30 V DC		SPX size 000, 00, 1, 2, 3
Lockable faceplate for SPX				
In closed position, the cover can be locked				
For 4-7 mm padlocks				
SPX size				
10	6052 35			000
10	6052 36			00
10	6052 37			1, 2, 3
Kit for fixing on TH 35 for SPX				
1	6052 45	For 1 isolator		SPX size 000

Pack	Cat.Nos	Connection terminals to feed the bars, for SPX and SPX-V		
Collector rail system: 60, 100 and 185 mm				
Prism terminals for longitudinal feed				
For flexible copper rail				
Conductor: flexible or rigid multicore copper and aluminium cables				
Cross-section				
		Conductor (mm ²)	Bar (mm)	
3	6052 78	70-150	15 x 5	
3	6052 79	120-240	20 x 5	
3	6052 80	150-300	25 x 5	
Flat terminals for flat bars				
For copper and aluminium rigid or fl exible fl at bars				
		Size (mm)	Bar thickness (mm)	In (A)
10	6052 68	25 x 20	20	250
10	6052 69	30 x 20	20	400
10	6052 73	35 x 30	20	600
6	6052 74	50 x 32	30	600
3	6052 75	63 x 40	30	800
3	6052 76	63 x 50	30	1000
3	6052 77	80 x 60	30	1250

Pack	Cat.Nos	Collector rail supports for 60 mm phase offset		
Isolating support for 12, 15, 20, 25, 30 x 510 mm flat rigid copper rails				
For installing SPX isolators on 60 mm collector rail				
Can be installed in XL ³ 400/800/4000 distribution				
using vertical adaptors for uprights				
Tightening torque: Md = 4 Nm				
The internal strengthening uprights provide the necessary support				
Maximum temperature: Tmax = 120 °C				
10	6052 46	3P		SPX size 000, 00, 1, 2, 3

SPX-V vertical isolators with blade type cartridge fuse

for 60, 100 or 185 mm collector rails

SPX-V accessories



6052 62 + 6052 10 + 6052 11 + 6052 12 + 6052 13



6052 14



6052 50



6052 18



6052 24



6052 30



6052 62

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Accessories (p. 121)
 Technical characteristics (p. 124)
 Dimensions (p. 127)

Pack	Cat.Nos	SPX-V isolators with vertical blades																																		
		Conform to standard IEC/EN 60947-3 – enables safe handling while energised Protection against accidental contact – fuse can be checked through transparent window – voltage control via small opening in window – sealable cover – simultaneous switching on all poles, 1600 mechanical operations – cover position indicated by auxiliary contact (accessory) – screw connection for lug – Interchangeable connection accessories 3 types of connection possible: – plate/lug (SPX-V 00-3) – flat connection terminals (accessory) – prism connection terminals (accessory) Vertical installation Fix on 60 mm collector rail: – directly on 5 or 10 mm thick rail for SPX-V-00 Fix on 100 mm collector rail: – directly on 5 or 10 mm thick rail for SPX-V-00 Fix on 185 mm collector rail: / 5 or 10 mm: – with adaptor (6052 50 or 6052 51) for SPX-V-00 – directly for SPX-V-1-3 interchangeable top or bottom connection The blade type fuse carriers are available separately																																		
		<table border="1"> <thead> <tr> <th>Collector rail</th> <th>Nominal current In</th> <th>Size</th> <th>Connection</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>6052 14</td> <td>60 mm</td> <td>160 A</td> <td>00</td> <td>With M8 lug</td> </tr> <tr> <td>1</td> <td>6052 10⁽¹⁾</td> <td>100 mm</td> <td>160 A</td> <td>00</td> <td>With M8 lug</td> </tr> <tr> <td>1</td> <td>6052 11</td> <td>185 mm</td> <td>250 A</td> <td>1</td> <td>With M10 lug</td> </tr> <tr> <td>1</td> <td>6052 12</td> <td>185 mm</td> <td>400 A</td> <td>2</td> <td>With M10 lug</td> </tr> <tr> <td>1</td> <td>6052 13</td> <td>185 mm</td> <td>630 A</td> <td>3</td> <td>With M12 lug</td> </tr> </tbody> </table>	Collector rail	Nominal current In	Size	Connection	1	6052 14	60 mm	160 A	00	With M8 lug	1	6052 10 ⁽¹⁾	100 mm	160 A	00	With M8 lug	1	6052 11	185 mm	250 A	1	With M10 lug	1	6052 12	185 mm	400 A	2	With M10 lug	1	6052 13	185 mm	630 A	3	With M12 lug
Collector rail	Nominal current In	Size	Connection																																	
1	6052 14	60 mm	160 A	00	With M8 lug																															
1	6052 10 ⁽¹⁾	100 mm	160 A	00	With M8 lug																															
1	6052 11	185 mm	250 A	1	With M10 lug																															
1	6052 12	185 mm	400 A	2	With M10 lug																															
1	6052 13	185 mm	630 A	3	With M12 lug																															

Blade type cartridge fuses (p. 134)

XL³ mounting accessories (p. 233)

Pack	Cat.Nos	Collector rail adaptor																		
		For installation of SPX-V 00 100 mm version Cat.No 6052 10 on 185 mm collector rail system Nominal current In Output SPX V size 160 A Single 00 2 x 160 A Double 00																		
		Cage terminals for SPX and SPX V Flat terminals for flexible copper rail Conductor: flexible or rigid multicore copper cables <table border="1"> <thead> <tr> <th>Conductor (mm²)</th> <th>Cross-section Flexible rail (mm)</th> <th>SPX V size</th> </tr> </thead> <tbody> <tr> <td>1.5-70</td> <td>12 x 10</td> <td>00</td> </tr> <tr> <td>120-240</td> <td>21 x 5-19</td> <td>1, 2, 3</td> </tr> </tbody> </table> Prism connection for flexible copper rail Conductor: flexible or rigid multicore copper and aluminium cables <table border="1"> <thead> <tr> <th>Conductor (mm²)</th> <th>Cross-section Flexible rail (mm)</th> <th>SPX V size</th> </tr> </thead> <tbody> <tr> <td>16-70</td> <td>12 x 8</td> <td>00</td> </tr> <tr> <td>120-240</td> <td>21 x 15</td> <td>1, 2, 3</td> </tr> </tbody> </table>	Conductor (mm ²)	Cross-section Flexible rail (mm)	SPX V size	1.5-70	12 x 10	00	120-240	21 x 5-19	1, 2, 3	Conductor (mm ²)	Cross-section Flexible rail (mm)	SPX V size	16-70	12 x 8	00	120-240	21 x 15	1, 2, 3
Conductor (mm ²)	Cross-section Flexible rail (mm)	SPX V size																		
1.5-70	12 x 10	00																		
120-240	21 x 5-19	1, 2, 3																		
Conductor (mm ²)	Cross-section Flexible rail (mm)	SPX V size																		
16-70	12 x 8	00																		
120-240	21 x 15	1, 2, 3																		
		Signalling contact for SPX and SPX-V To indicate the status of the cover Changeover contact <table border="1"> <thead> <tr> <th>SPX size</th> <th>SPX size</th> </tr> </thead> <tbody> <tr> <td>5 A 250 V AC</td> <td>000, 00, 1, 2, 3</td> </tr> <tr> <td>4 A 30 V DC</td> <td></td> </tr> </tbody> </table>	SPX size	SPX size	5 A 250 V AC	000, 00, 1, 2, 3	4 A 30 V DC													
SPX size	SPX size																			
5 A 250 V AC	000, 00, 1, 2, 3																			
4 A 30 V DC																				

Pack	Cat.Nos	Collector rail support for a phase distance of 185 mm			
		Collector rail support for a phase distance of 185 mm Isolating support for 30-60 x 5-10 mm rigid flat copper rails For SPX-V isolators Can be installed XL ³ 4000 enclosures by using vertical adaptors for uprights (Cat.No 206 92) Tightening torque of the fixing screws: Md = 20 Nm Held in place by the internal uprights Maximum temperature: Tmax = 120 °C <table border="1"> <thead> <tr> <th>SPX size</th> </tr> </thead> <tbody> <tr> <td>3P</td> </tr> <tr> <td>00, 1, 2, 3</td> </tr> </tbody> </table>	SPX size	3P	00, 1, 2, 3
SPX size					
3P					
00, 1, 2, 3					

(1) Fix on 185 mm collector rail by adding a 6052 50 or 6052 51 adaptor

SPX

isolator with blade type cartridge fuses

Electrical characteristics

Type	SPX 000	SPX 00	SPX 1	SPX 2	SPX 3
Size	000	00	1	2	3
Nominal current I _n	125 A	160 A	250 A	400 A	630 A
Type of current	AC (50-60 Hz) DC	AC (50-60 Hz) DC	AC (50-60 Hz) DC	AC (50-60 Hz) DC	AC (50-60 Hz) DC
Nominal voltage U _n	690 V AC 250 V DC	690 V AC 250 V DC	690 V AC 440 V DC	690 V AC 440 V DC	690 V AC 440 V DC
Rated insulating voltage U _e	800 V	800 V	800 V	800 V	800 V
Rated impulse withstand voltage U _{imp}	6 kV	6 kV	6 kV	6 kV	6 kV
Category of use EN 60947-3	400 V~	AC 23 B	AC 23 B	AC 23 B	AC 23 B
	500 V~	AC 22 B	AC 22 B, AC 23 B (125 A)	AC 23 B	AC 23 B
	690 V~	AC 21 B	AC 22 B	AC 23 B	AC 23 B
	220 V=	DC 21 B; DC 22 B (100 A)	DC 22 B (160 A)	DC 22B	DC 22B
	440 V=	DC 21 B (80 A); DC 22 B (63 A)	DC 21 B (160 A); DC 22 B (125 A)	DC 22B	DC 22B
Conditional rated short-circuit current (with gG/gL fuses)	50 kA (peak 105 kA)	50 kA (peak 105 kA)	50 kA (peak 105 kA)	50 kA (peak 105 kA)	50 kA (peak 105 kA)
Power dissipated per pole, with blade type fuse carrier ⁽¹⁾	9 W	12 W	23 W	34 W	48 W

Connection characteristics

Type		SPX 000	SPX 00	SPX 1	SPX 2	SPX 3
Lug mounting	Connection	-	M 8	M 10	M 10	M 12
	Tensile strength	-	12-14 Nm	30-35 Nm	30-35 Nm	35-40 Nm
Flat fixing for flexible copper rail, for flexible or rigid copper and multi-core cables	Connection	-	1.5-70 mm ²	70-150 mm ²	120-240 mm ²	150-300 mm ²
	Tensile strength	-	3 Nm	5-6 Nm	6-8 Nm	6-8 Nm
Prism fixing for flexible copper rail, for flexible or rigid multicore copper and aluminium cables	Connection	-	16-70 mm ²	70-150 mm ²	120-240 mm ²	150-300 mm ²
	Tensile strength	-	3 Nm	5-6 Nm	6-8 Nm	6-8 Nm
Other fixings	Connection	Cage terminals 1.5-50 mm ²	3 inputs connector Cat.No 6052 26 3 x 1.5-16 mm ²	-	-	-
	Tensile strength	4 Nm	3 Nm	-	-	-

(1) Fuse carrier nominal current according to standard DIN 43620

SPX-V

vertical isolators with blade type cartridge fuses for 60 or 185 mm collector rails

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Electrical characteristics

Type	SPX-V 00 60 mm	SPX-V 00 100 mm	SPX-V 1	SPX-V 2	SPX-V 3
Size	00	00	1	2	3
Nominal current In	160 A	160 A	250 A	400 A	630 A
Type of current	AC (50-60 Hz)	AC (50-60 Hz)	AC (50-60 Hz)	AC (50-60 Hz)	AC (50-60 Hz)
Nominal voltage Un	690 V AC	690 V AC	690 V AC	690 V AC	690 V AC
Rated insulating voltage Ue	800 V	800 V	1000 V	1000 V	1000 V
Rated impulse withstand voltage Uimp	6 kV	6 kV	12 kV	12 kV	12 kV
Category of use EN 60947-3	400 V	AC 23 B	AC 23 B		
	500 V	AC 23 B (120 A)	AC 23 B (125 A)	AC 23 B	AC 23 B
	690 V	AC 22 B	AC 22 B	AC 22 B	AC 22 B
Conditional rated short-circuit current (with gG/gL fuses)	50 kA (peak 105 kA)	50 kA (peak 105 kA)	100 kA (peak 220 kA)	100 kA (peak 220 kA)	100 kA (peak 220 kA)
Power dissipated per pole, with blade type fuse carrier ⁽¹⁾	12 W	12 W	23 W	34 W	48 W

Connection characteristics

Type		SPX-V 00 60 mm	SPX-V 00 100 mm	SPX-V 1	SPX-V 2	SPX-V 3
Lug mounting	Connection	M 8	M 8	M 10	M 10	M 12
	Tensile strength	12-14 Nm	12-14 Nm	30-35 Nm	30-35 Nm	35-40 Nm
Flat fixing for flexible copper rail, for flexible or rigid copper and multi-core cables	Connection	1,5-70 mm ²	1,5-70 mm ²	120-240 mm ²	120-240 mm ²	120-240 mm ²
	Tensile strength	3 Nm	3 Nm	6-8 Nm	6-8 Nm	6-8 Nm
Prism fixing for flexible copper rail, for flexible or rigid multicore copper and aluminium cables	Connection	16-70 mm ²	16-70 mm ²	120-240 mm ²	120-240 mm ²	120-240 mm ²
	Tensile strength	3 Nm	3 Nm	6-8 Nm	6-8 Nm	6-8 Nm

(1) Nominal current intensity according to standard DIN 43620

SPX

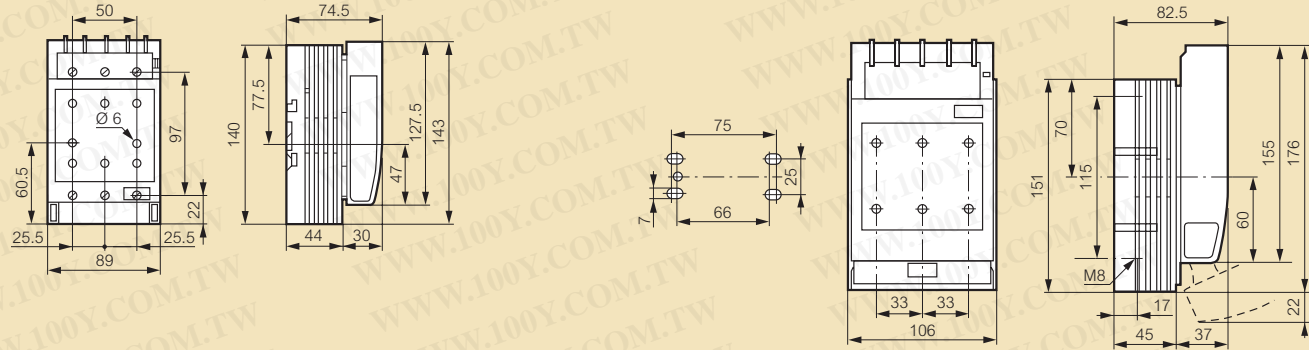
isolators with blade type cartridge fuses

■ Dimensions (mm)

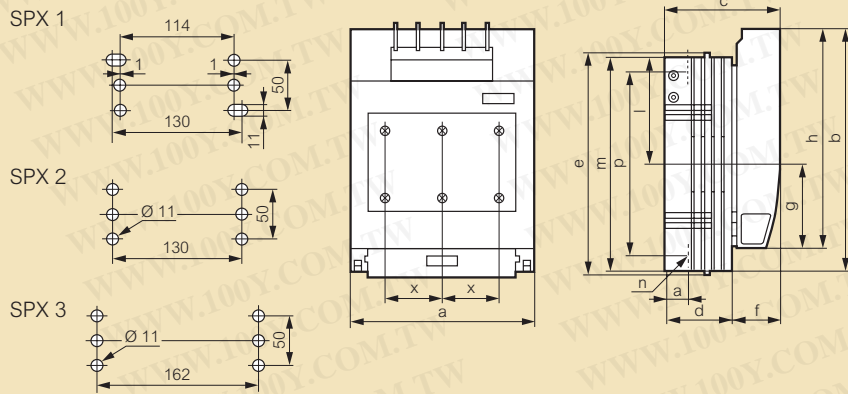
For installing SPX on plate

SPX 000 Cat.No 6052 00

SPX 00 Cat.No 6052 02



SPX 1 Cat.No 6052 04, SPX 2 Cat.No 6052 06, SPX 3 Cat.No 6052 08

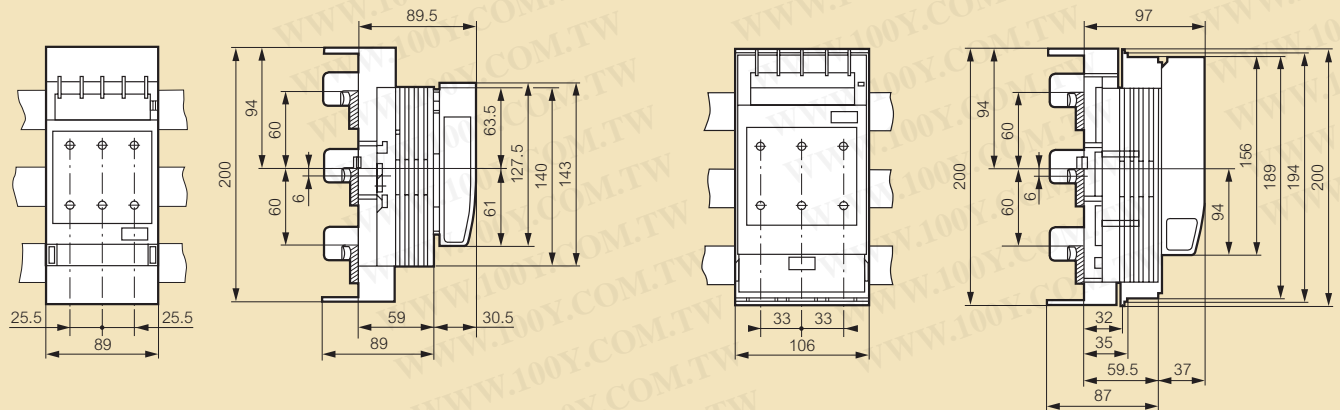


Cat.Nos	a	b	c	d	e	f	g	h	l	m	p	q	r	x
6052 04	184	243	111.5	66	220	45.5	84	220	107	214.5	185	21.5	M10	57
6052 06	210	288	128	80	-	48	92	249	124	255	210	25	M10	65
6052 08	256	300	142.5	94.5	-	48	98.5	259	127.5	267	210	30	M12	81

Installing SPX on 60 mm collector rail

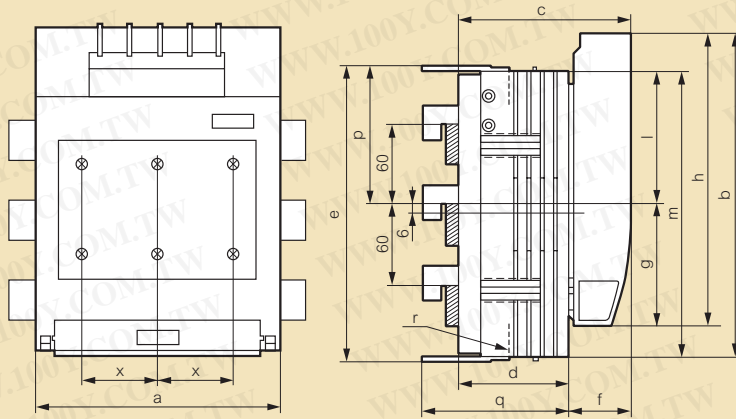
SPX 000 Cat.No 6052 01

SPX 00 Cat.No 6052 03



SPX
isolators with blade type cartridge fuses (continued)

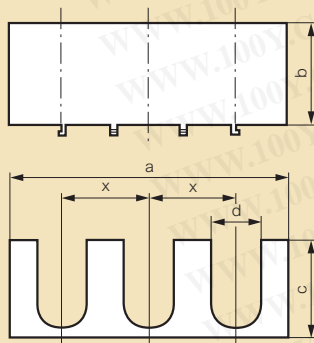
SPX 1 Cat.No 6052 05, SPX 2 Cat.No 6052 07, SPX 3 Cat.No 6052 09



Cat.Nos	a	b	c	d	e	f	g	h	l	m	p	q	r	x
6052 05	184	243	128.5	83	221	45.5	90	220	101	214.5	104.5	110.5	M10	57
6052 07	210	288	145	97	228	48	98	249	118	255	128	124.5	M10	65
6052 09	256	300	159.5	111.5	285	48	104.5	259	121.5	267	136.5	139	M12	81

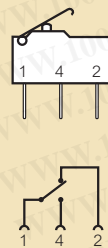
■ Accessories

Cover for fixing accessories

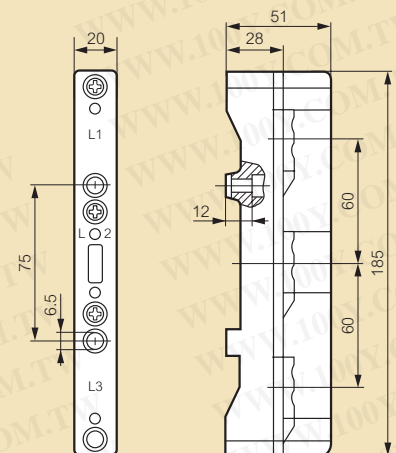


Cat.Nos	a	b	c	d	x
6052 31	105	34	46	22	33
6052 32	182.5	68	65	33	57
6052 33	208.5	51.5	79	43	65
6052 34	254	48	93.5	43	81

Signalling contact Cat.No 6052 30

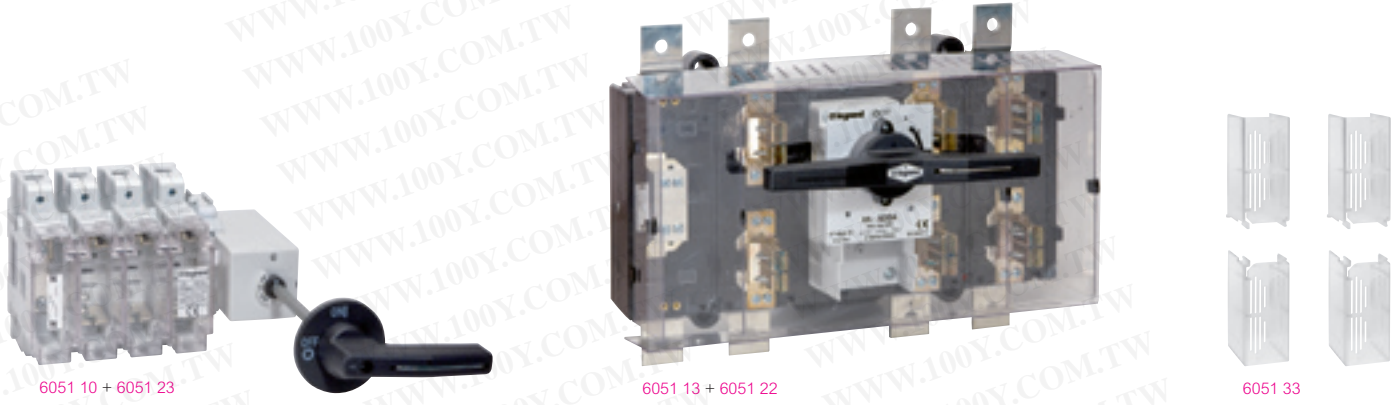


Collector rail support for a 60 mm phase distance Cat.No 6052 46



SPX-D fuse isolating switches
160 to 630 A

勝特力材料 886-3-5753170
勝特力电子(上海) 86-21-34970699
勝特力电子(深圳) 86-755-83298787
Http://www.100y.com.tw



Technical characteristics and dimensions (p. 129 to 131)

Pack	Cat.Nos	Fuse isolating switches	Pack	Cat.Nos	Accessories for SPX-D isolating switches
		For on-load circuit breaking To be equipped with blade type cartridge fuses for protection against overloads and short-circuits Double-break contacts with positive forced opening and closing Conform to IEC 60947-3 Category of use AC 23 A Interlocking: - Fuse cover in ON position - Door/panel in ON position Padlocking: - Handles in OFF position (up to 3 padlocks) Handles, auxiliary contacts and terminal shields not supplied			Direct handles
		160 A To be equipped with blade type cartridge fuses size 00 (p. 134) Cage terminals 3P	1/10	6051 20	For 160 A isolating switches
1	6051 00		1/10	6051 21	For 250 A and 400 A isolating switches
1	6051 10	3P+N (neutral not protected)	1/10	6051 22	For 630 A isolating switches
		250 A To be equipped with blade type cartridge fuses size 1 (p. 134) Connection with lugs 3P	1/10	6051 23	External handles
1	6051 01		1/10	6051 24	For 160 A isolating switches Panel depth 129 - 246 mm
1	6051 11	3P+N (neutral not protected)	1/10	6051 25	For 250 A and 400 A isolating switches Panel depth 210 - 278 mm
		400 A To be equipped with blade type cartridge fuses size 2 (p. 134) Connection with lugs 3P	1/10	6051 28	For 630 A isolating switches Panel depth 229 - 278 mm
1	6051 02		1/10	6051 29	Extended shafts for external handles
1	6051 12	3P+N (neutral not protected)	1/10	6051 30	For external handle Cat.No 6051 23 Panel depth 129 - 393 mm
		630 A To be equipped with blade type cartridge fuses size 3 (p. 134) Connection with lugs 3P	1/10	6051 26	For external handle Cat.No 6051 24 Panel depth 210 - 428 mm
1	6051 03		1/10	6051 27	For external handle Cat.No 6051 25 Panel depth 229 - 428 mm
1	6051 13	3P+N (neutral not protected)	1/10	6051 32	Auxiliary contacts
			1/10	6051 33	2 NO + 2 NC For isolating switches 160 A Cat.Nos 6051 00/10
					2 NO + 2 NC For isolating switches 250 A, 400 A and 630 A Cat.Nos 6051 01/02/03/11/12/13
					Terminal shields
					For isolating switches 250 A and 400 A Cat.Nos 6051 01/02/11/12, kit of 4 shields
					For isolating switches 630 A Cat.Nos 6051 03/13, kit of 4 shields

XL³ mounting accessories (p. 219 and 233)

SPX-D fuse isolating switches

160 to 630 A

勝特力材料 886-3-5753170

勝特力电子(上海) 86-21-34970699

勝特力电子(深圳) 86-755-83298787

[Http://www.100y.com.tw](http://www.100y.com.tw)

Technical characteristics according to IEC 60947-3

SPX-D fuses isolating switches		160 A	250 A	400 A	630 A	
Fuses NH		Size 00	Size 1	Size 2	Size 3	
Mounting on		DIN Rail/Plate	Plate	Plate	Plate	
Rated insulation voltage U_i (V)		800	1000	1000	1000	
Rated dielectric strength 50 Hz 1 min (V)		6000	8000	8000	8000	
Rated impulse withstand voltage U_{imp} (kV)		8	12	12	12	
Rated thermal current I_{th} (40 °C) (A)		160	250	400	630	
Rated thermal current in enclosure I_{the} (A)		160	250	400	630	
Power dissipation with cartridge fuses ⁽¹⁾ (W)		13.5	18.7	30	48	
"AC rated operational current I_e (A) (Rated frequency 50/60 Hz)"	400 V	AC21A	160	250	400	630
	400 V	AC22A	160	250	400	630
	400 V	AC23A	160	250	400	630
	500 V	AC21A	160	250	400	630
	500 V	AC22A	160	250	400	630
	500 V	AC23A	160	250	400	630
	690 V	AC21A	160	250	400	630
	690 V	AC22A	160	250	400	630
	690 V	AC23A	125	200	315	400
	1000 V	AC20A	-	250	400	630
AC rated operational power P_e (kW)	3 x 400 V	AC23A	90	132	220	355
	3 x 500 V	AC23A	110	160	250	370
	3 x 690 V	AC23A	110	160	250	370
Rated capacitor power (kVA _r)	400 V	60	115	200	250	
Rated breaking capacity (A)	400 V; $\cos \phi=0.35^{*}0.45$	1280	2000	3200	5100	
Rated making capacity (A)	400 V; $\cos \phi=0.45$	1600	2500	4000	6300	

Conditional short-circuit current

SPX-D fuses isolating switches		160 A	250 A	400 A	630 A
Short-circuit withstand current (rms value) ⁽²⁾ (kA rms)		100	100	100	100
Short-circuit making current (rms value) ⁽²⁾ (kA rms)		100	100	100	100
Maximum cut-off current (peak value) (kA)		26.3	43.3	43.3	60.8
Maximum power dissipation I^2t (A ² s x 10 ⁻²)		478	1600	1600	4600
Minimum number of mechanical operations	cycles	10000	10000	10000	5000
Minimum number of electrical operations 400 V-AC23	cycles	1000	1000	1000	1000
Maximum weight (3/4 poles) (kg)		3.1/4	6.6/8	6.6/8	13/15

Connecting capacity

SPX-D fuses isolating switches		160 A	250 A	400 A	630 A
Rigid cable (Cu) max. (mm ²)		95	240	240	2 x 185
Bar (Thickness/Width) max. (mm)		3/25	6/40	6/40	2 x 7/50
Tightening torque (Nm)		13	24	24	45

(1) Power dissipation values of cartridge fuses used in type test

(2) With a protective device limiting the cut-off current and the joule integral to the indicated values

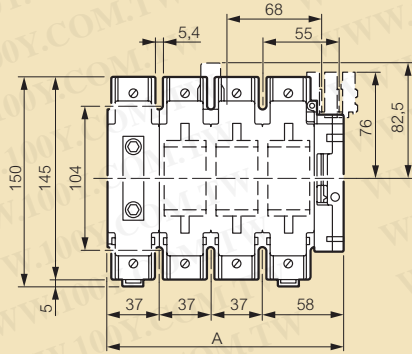
SPX-D fuse isolating switches

160 to 630 A (continued)

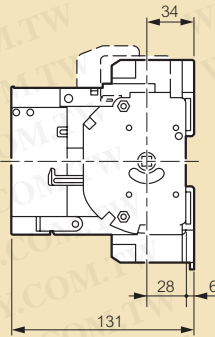
■ Dimensions 160 A fuse isolating switches Cat.Nos 6051 00/10

Without handle

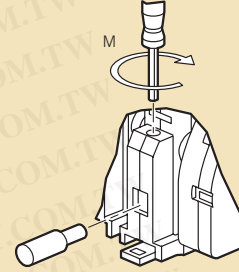
Front view



Side view



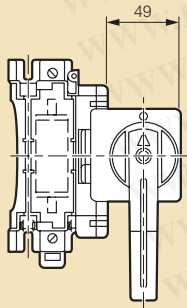
Connection



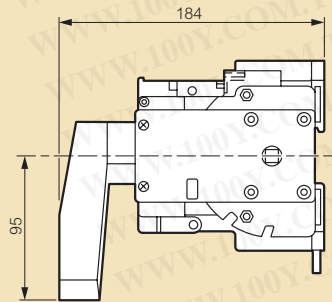
Dimension (mm)		A	M (Nm)	S max Cu (mm ²)
160 A	3P	132	4	95
	3P+N	169	4	95

With direct handle

Front view

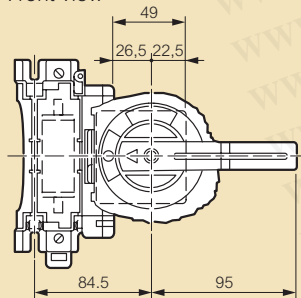


Side view

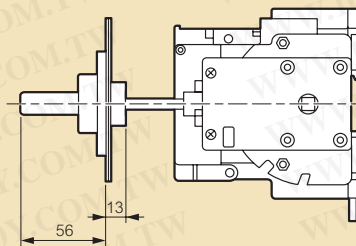


With external handle

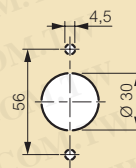
Front view



Side view



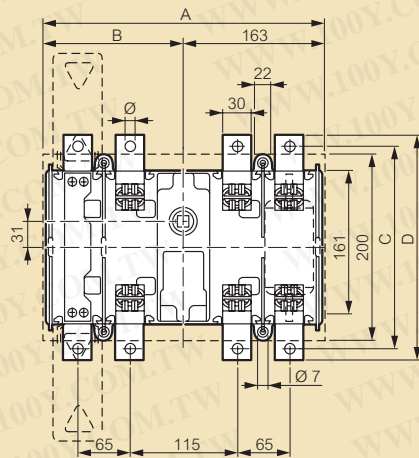
Panel drilling



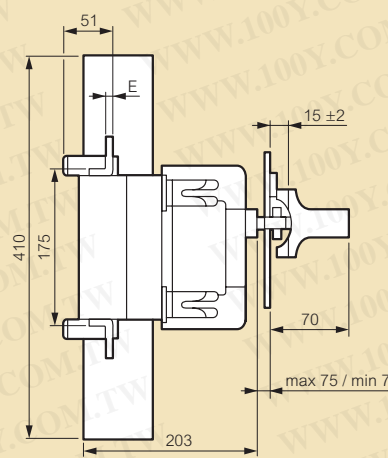
■ Dimensions 250 A and 400 A fuse isolating switches Cat.Nos 6051 01/02/11/12

With direct handle

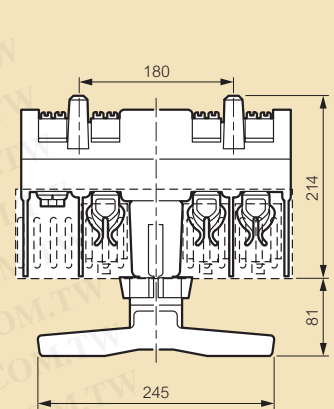
Front view



Side view



Upper view

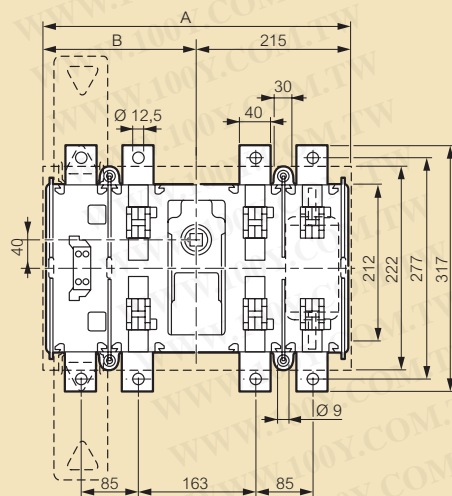


Dimension (mm)		A	B	C	D	E	Ø	Ø T
250 A	3P	274	111	216	246	4	10.5	M10
	3P+N	329	166	216	246	4	10.5	M10
400 A	3P	274	111	216	246	5	10.5	M10
	3P+N	329	166	216	246	5	10.5	M10

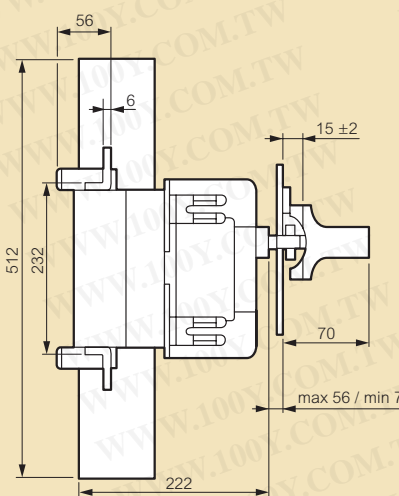
■ Dimensions 630 A fuse isolating switches Cat.Nos 6051 03/13

With direct handle

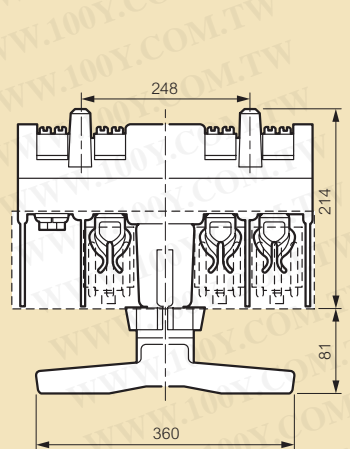
Front view



Side view



Upper view



Dimension (mm)		A	B	Ø T
630 A	3P	381	166	M12
	3P+N	426	211	M12

HRC cartridge fuses

勝特力材料 886-3-5753170
 勝特力电子(上海) 86-21-34970699
 勝特力电子(深圳) 86-755-83298787
 Http://www.100y.com.tw



Technical data and dimensions (p. 135 to 137)

Pack	Cat.Nos		Cylindrical type gG			Pack	Cat.Nos		Cylindrical type aM (motor rated)					
			Conform to EN 60269-1, IEC 60269-1, and 2 Veritas approved						Conform to EN 60269-1, IEC 60269-1 and 2 Veritas approved					
			8 x 32 (previously 8.5 x 31.5)						8 x 32 (previously 8.5 x 31.5)					
	Without indicator	With indicator	Rating (Amps)	Voltage ~ (Volts)	Rupture capacity (Amps)		Without indicator	Rating (Amps)	Voltage ~ (Volts)	Rupture capacity (Amps)				
10	123 01		1	400	20000	10	120 04	4	400	20000				
10	123 02	124 02	2											
10	123 04	124 04	4											
10	123 06	124 06	6											
10/100	123 10		10											
10		124 10	10											
10/100	123 16	124 16	16											
	Without indicator	With indicator	10 x 38 HRC				Without indicator	10 x 38 HRC						
10	133 94		0.5	500	100000	10	130 95	0.50	500	100000				
10	133 01		1											
10	133 02	134 02	2											
10	133 04	134 04	4											
10	133 06	134 06	6											
10	133 08	134 08	8											
10	133 10	134 10	10											
10	133 16	134 16	16											
10	133 20	134 20	20											
10	133 25	134 25	25											
	Without striker	With striker	14 x 51 HRC				Without striker	14 x 51 HRC						
10	143 06		6	500	100000	10	141 02	2	500	100000				
10	143 10		10											
10	143 16	145 16	16											
10	143 20	145 20	20											
10	143 25	145 25	2											
10	143 32	145 32	32											
10	143 40	145 40	40											
10	143 50 ⁽¹⁾	145 50 ⁽¹⁾	50											
	Without striker	With striker	22 x 58 HRC				Without striker	22 x 58 HRC						
10	153 16		16			500	100000	10			150 25	151 25	500	100000
10	153 20		20											
10	153 25		25											
10	153 32		32											
10	153 40		40											
10	153 50	155 50	50											
10	153 63	155 63	63											
10	153 80	155 80	80											
10	153 96	155 96	100											
10	153 97 ⁽¹⁾	155 97 ⁽¹⁾	125	400				150 97	151 97	125	400			

Pack	Cat.Nos	Neutral links
10	123 00	8 x 32 (previously 8.5 x 31.5)
10	133 00	10 x 38
10	143 00	14 x 51
10	153 00	22 x 58

Isolating fuse carriers 8.5 x 32 and 10 x 38 (p. 167)

(1) Overrating described by standards
 (2) Overrating not described by standards

HRC blade type cartridge fuses
 gG/aM type

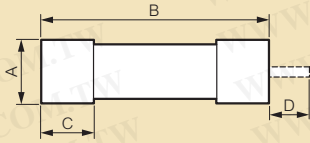


Technical data and dimensions (p. 135 to 137)

Pack	Cat.Nos		Type gG (IEC) / gL (VDE)		
			Conform to EN 60269-1 IEC 60269-1, 2 and VDE 0636-1 Veritas approved Fully insulated end plate and handle lugs		
	With indicator	With striker	Rating (Amps)	Voltage ~ (Volts)	Rupture capacity (Amps)
	Size 00				
10	163 18		25	500	120000
10	163 20		32		
10	163 22		35		
10	163 25		40		
10	163 30		50		
10	163 35		63		
10	163 40		80		
10	163 45		100		
10	163 50		125		
10	163 55		160		
	Size 0				
3	168 35		63	500	120000
3	168 40		80		
3	168 45		100		
3	168 50		125		
3	168 55		160		
	Size 1				
3	173 50		125	500	120000
3	173 55		160		
3	173 60		200		
3	173 65		250		
	Size 2				
3	178 60		200	500	120000
3	178 65		250		
3	178 70		315		
3	178 75		400		
	Size 3				
3	181 25		500	500	120000
3	181 30		630		
	Size 4				
1	185 80		630	500	120000
1	185 85		800		
1	185 90		1000		
1	185 95		1250		

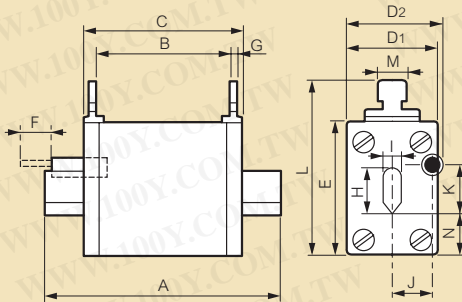
Pack	Cat.Nos		Type aM (motor rated)		
			Conform to EN 60269-1 IEC 60269-1, 2 and VDE 0636-1 Veritas approved Fully insulated end plate and handle lugs		
	With indicator	With striker	Rating (Amps)	Voltage ~ (Volts)	Rupture capacity (Amps)
	Size 00				
3	160 35		63	500	120000
3	160 40		80		
3	160 45		100		
3	160 50		125		
	Size 0				
3		166 35	63	500	120000
3		166 40	80		
3		166 45	100		
3		166 50	125		
3		166 55	160		
	Size 1				
3		171 50	125	500	120000
3		171 55	160		
3		171 60	200		
3		171 65	250		
	Size 2				
3		176 60	200	500	120000
3		176 65	250		
3		176 70	315		
3		176 75	400		
	Size 3				
3		180 75	500	500	120000
3		180 80	630		
	Size 4				
1		184 80	630	500	120000
1		184 85	800		
1		184 90	1000		

■ HRC cylindrical (p. 132)



Size (mm)	A	B	C	D
8 x 32	8.5	31.5	6.3	-
10 x 38	10.3	38	10	-
14 x 51	14.3	51	13	7.5
22 x 58	22.2	58	16	7.5

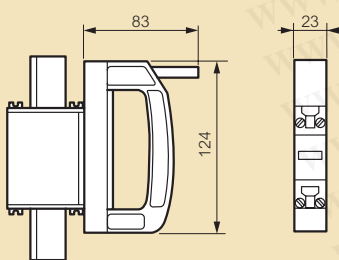
■ Blade type (p. 134)



Size (mm)	00	0	1	2	3	4
A	78	125	135	150	150	200
B	44	62	64	64	61	61
C	52	67	74	74	75	78
D1	30	36	47	50	70	90
D2	-	39	47	50	64	77
E	46	46	52	60	75	107
F	-	14	14	14	14	14
G	2.5	2.5	3	3	2.5	2.5
H	15	15	21	28	36	60
I	6	6	6	6	6	8
J	-	14.5	16	19	23	27
K	-	14.5	14.5	14.5	14.5	14.5
L	59	59	64	72	88	119
M	10	10	10	10	10	10
N	14.5	14.5	14.5	14.5	18	23

Note: Force of striker at the beginning of stroke 1.9 kg and 1 kg at the end according to NF C 63-213

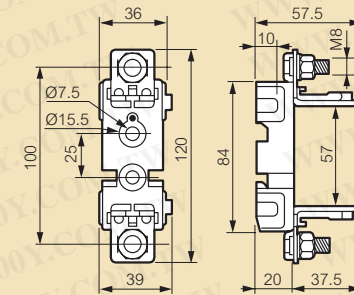
■ Removable handle (p. 133)



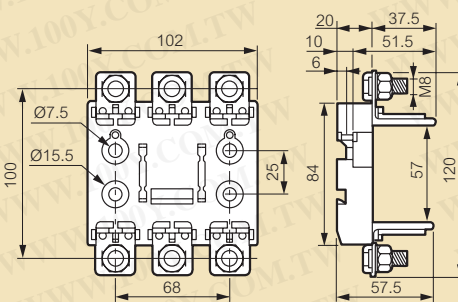
■ Bases for blade type (p. 133)

Size 00

Single pole Cat.Nos 160 01 - 162 00

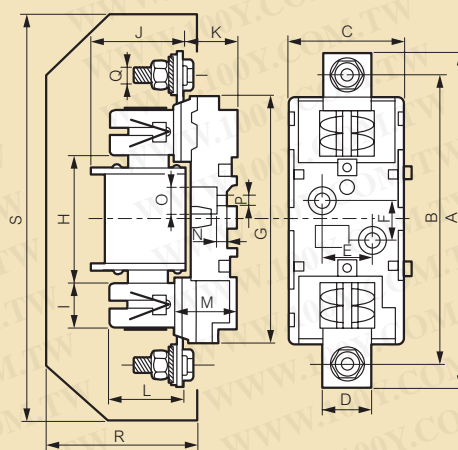


Triple pole Cat.Nos 160 05 - 162 04



Sizes 0 to 4

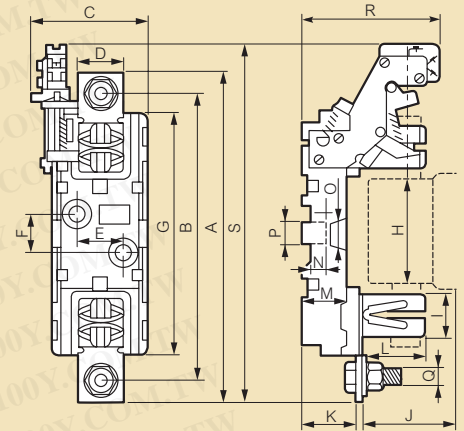
Single pole without micro-switch



Size (mm)	0	1	2	3	4
A	171	200	225	250	320
B	150	175	200	210	270
C	47	59	67	82	114
D	20	25	30	41	51
E	-	30	30	30	45
F	25	25	25	25	30
G	125	150	170	158	220
H	75	80	80	83	98
I	23	28	32	35	50
J	68	68	83	92	125
K	24	35	35	35	40
L	43	46	58	68	93
M	28	38	39	40	40
N	11.5	13.5	13.5	14	14
O	14	20	20	20	28
P	7.5	10.5	10.5	10.5	13
Q	8	10	10	12	16
R	96	107	121	110	138
S	180	224	240	266	336

Size 0 to 4 (continued)

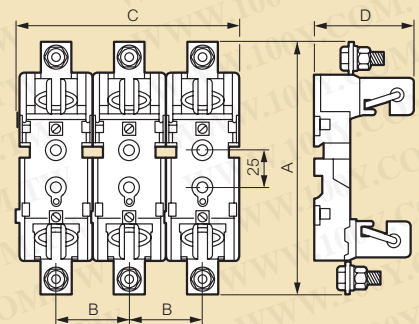
Single pole with micro-switch



Size (mm)	0	1	2	3	4
A	171	200	225	250	320
B	150	175	200	210	270
C	63	72	78	91	114
D	20	25	30	41	51
E	-	30	30	30	45
F	25	25	25	25	30
G	125	150	170	158	220
H	75	80	80	83	98
I	23	28	32	35	50
J	68	68	83	92	125
K	24	35	35	35	40
L	43	46	58	68	93
M	28	38	39	40	40
N	11.5	13.5	13.5	14	14
O	14	20	20	20	28
P	7.5	10.5	10.5	10.5	13
Q	8	10	10	12	16
R	75	85	90	94	105.5
S	198	215	229	242	280

Size 0 - 1 - 2

Triple pole



Size (mm)	0	1	2
A	171	200	225
B	48	62.5	68
C	144	180	204
D	67	81	93

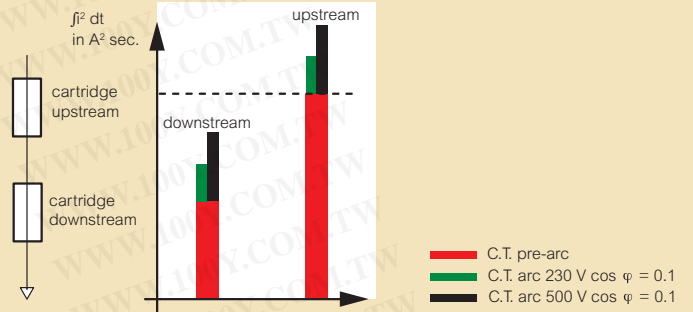
selection charts

■ How to select a protection system ?

Depending on the type of failure, overload or short-circuit, use 2 series of data

- ① Overloads: use the operating zone curves of the different protection devices. On the same row, the operating zones should not overlap
- ② Short-circuits: use the $f_i^2 t$ tables. The total $f_i^2 t$ of the protection system the furthest downstream must be less than the upstream protection pre-arc $f_i^2 t$

■ Example of good selection



■ Selection between cartridge fuses (according to IEC 60269-2-1)

Upstream rating gG cartridge fuse (A)	Downstream maximum rating determined according to class and voltage to obtain selection	
	aM	gG
2		
4	1	1
6	2	2
8	2	2
10	2	4
12	2	4
16	4	6
20	6	10
25	8	16
32	10	20
35	12	20
40	12	25
50	16	32
63	20	40
80	25	50
100	36	63
125	40	80
160	63	100
200	80	125
250	125	160
315	125	200
400	160	250
500	200	315
630	250	400
800	315	500
1000	400	630
1250	500	800

Upstream rating aM cartridge fuse (A)	Downstream maximum rating determined according to class and voltage to obtain selection	
	aM	gG
2	1	1
4	2	4
6	2	6
8	4	8
10	6	10
12	6	12
16	10	16
20	12	20
25	12	25
32	20	32
36	20	32
40	25	32
50	25	40
63	40	50
80	50	63
100	63	80
125	80	100
160	100	125
200	125	160
250	160	160
315	200	200
400	250	250
500	315	315
630	400	400
800	500	500
1000	630	500
1250	800	630

■ Motor protection

Motor three-phase									Cartridges																	
230 V			400 V			500 V			10 x 38 ratings		14 x 51 ratings		22 x 58 ratings		S. 0 ratings		S. 0 ratings		S. 1 ratings		S. 2 ratings		S. 3 ratings		S. 4 ratings	
kW	Hp	In A	kW	Hp	In A	kW	Hp	In A	gG	aM	gG	aM	gG	aM	gG	aM	gG	aM	gG	aM	gG	aM	gG	aM	gG	aM
0.37	0.5	1.8	0.75	1	2	1.5	2	2.6	4	2	4	2														
0.75	1	3.5	1.5	2	3.5	2.2	3	3.8	8	4	8	4														
1.1	1.5	4.4	2.2	3	5	3.7	5	5.9	12	6	12	6														
1.8	2.5	7	3	4	6.6	4	5.5	6.5	16	8	16	8	16													
2.2	3	8.7	4	5.5	8.5	5.5	7.5	9	20	10	20	10	20													
3	4	11.5	5.5	7.5	11.5	7.5	10	12	25	12	25	12	25	25												
4	5.5	14.3	7.5	10	15.5	11	15	18.4		20 ⁽¹⁾	32	20	32	20	32	20										
5.5	7.5	20	11	15	22	15	20	23		20 ⁽¹⁾	50	25	50	25	50	25										
7.5	10	27	15	20	30	18.5	25	28.5			32	50	32	50	32											
10	13.5	35	18.5	25	37	25	34	39.4			40	63	40	63	40	63										
11	15	39	22	30	44	30	40	45			50 ⁽¹⁾	80	50	80	50	80										
15	20	52	25	34	51	40	54	60				100	63	100	63	100	63									
18.5	25	64	30	40	60	45	60	65					80	125	80	125	80	125								
22	30	75	37	50	72	51	70	75					80	125	80	125	80	125								
25	35	85	45	60	85	63	109	89					100	160	100	160	100	160								
30	40	103	55	75	105	80	110	112					125 ⁽¹⁾	200	125	200	125	200								
45	60	147	75	100	138	110	150	156							160	250	160	250								
55	75	182	90	125	170	132	180	187								200	315	200								
75	100	239	110	150	205	160	220	220								250	400	250								
80	160	260	132	180	245	220	300	310										315								
90	125	295	160	218	300													315								
110	150	356	200	270	370	250	340	360										400								
132	180	425	250	340	475	335	450	472																	500	
160	218	520	315	430	584	450	610	608																	630	
220	300	710	400	550	750	500	680	680																		800

(1) 400 V max.

勝特力材料 886-3-5753170
 勝特力电子(上海) 86-21-34970699
 勝特力电子(深圳) 86-755-83298787
 Http://www.100y.com.tw

blade cartridge fuses gG and aM types

The gG or aM types protect the conductors of electrical circuits in the event of overbad or short-circuit

gG cartridge fuses:

The selectivity ratio is 1.6 instead of 2

The breaking capacity of 120000 A provides full protection in the most critical situations

aM cartridge fuses:

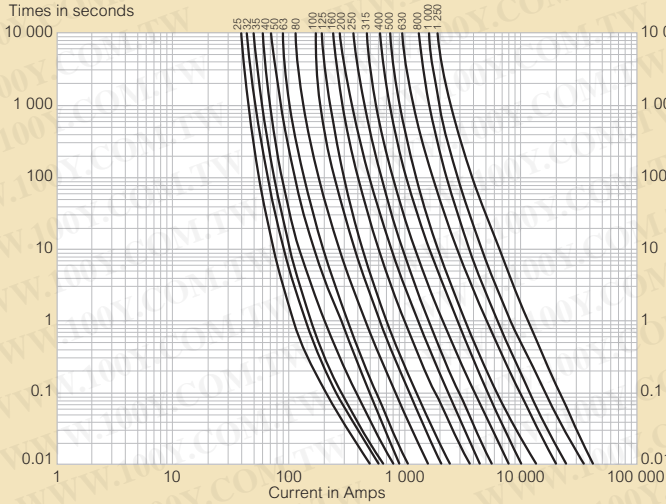
These cartridge fuses must be combined with a low-overload thermal protection device

The breaking capacity of 100000 A from size 10 x 38 upwards provides full protection in the most critical situations

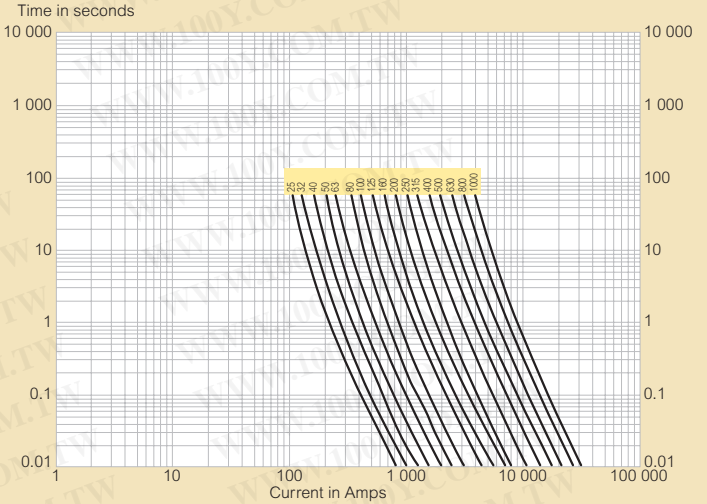
Cylindrical industrial cartridge fuses can be used to protect DC circuits supplied at up to 48 V max.

■ Rupture capacity curves

gG type

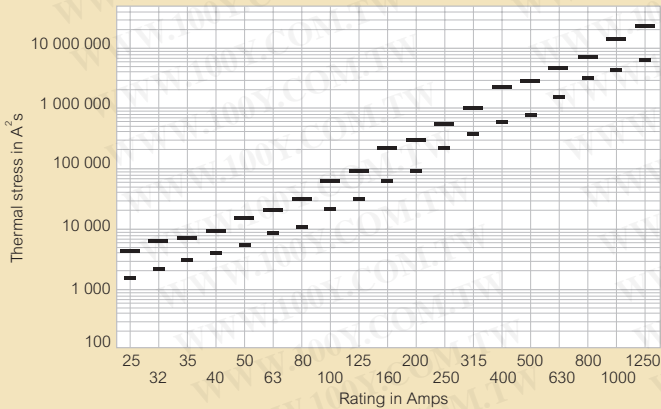


aM type



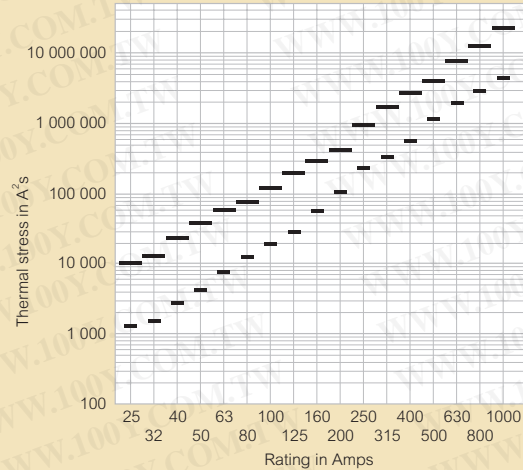
■ Thermal stresses (∫I²dt)

gG type (for 500 V~)

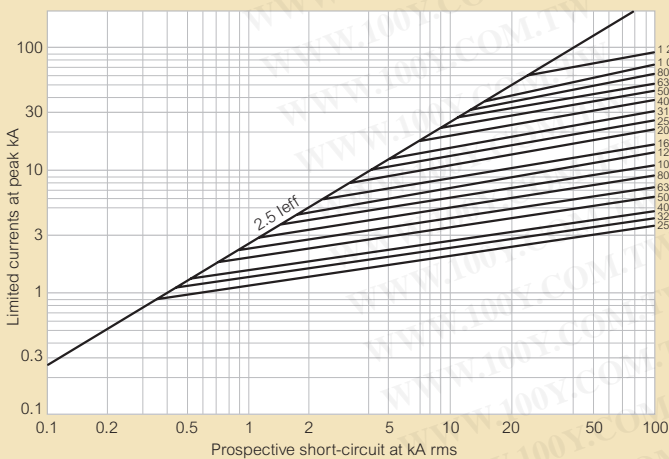


— Total maximum thermal stress for critical current
 - - Pre-arc thermal stress for critical current

aM type for 500 V~ - except 1250 A for 400 V



■ gG⁽¹⁾ type limitation curve



■ Consumption in watts when hot, at rated current

Fuse ratings (A)	Cartridge fuses			
	gG		aM	
	Size 00	Size 0 to 4	Size 00	Size 0 to 4
25	2.1		1.3	
32	3		1.8	
35	3			
40	3.3	4.2	2.5	
50	4.5	5.5	3	
63	6	6.5	3.6	3.9
80	7	8.5	5.2	5.5
100	7.5	9.5	6	6.5
125	13	12	7	8.5
160	15	15		11.5
200		19		13.5
250		23		17
315		24		24
400		33		28
500		36		34
630		45		41
800		51		49
1000		77		70
1250		80		75

(1) For aM cartridge fuses, see technical data sheets in the Legrand e-catalogue