

Sigma
elektrik

2018



LOW VOLTAGE PRODUCTS

ORDER CATALOG



Company Profile



Sigma Elektrik® located in İstanbul, is one of the leading company, focuses on designing, manufacturing and marketing of low voltage switchgear components such as MCCB, MCB, RCCB, Contactors, Current Transformers, Motor Protection switches e.g since 1993 in Turkey. The key figure of the company's growth strategies are its subsidiaries in Turkey and abroad and close cooperation with selected strategic partners. Its products are being distributed through 5 different continents over the World.

Consequence of overachievements of Sigma Elektrik®, it expanded business operation and distribution channel by foreign Joint Venture investment from Netherland in 2009. Currently, %50 of its shares belongs to a Dutch company. Sigma Elektrik® is a leading supplier of solutions and services for low voltage products in residential and commercial buildings as well as for switchgear applications in industrial projects. The quality of the products and services are constantly aimed at achieving customer's satisfaction and corresponding business excellence.

In Sigma Elektrik® considering quality is an indispensable principle at each step of manufacturing, all work processes are completed according to ISO Quality Management System and awarded by ISO 9001:2008, ISO 14001 certificates. All products are manufactured according to applicable EN, IEC, UKRSEPRO, GOST and CE Conformance Certificates from international accredited laboratories.

Sigma Elektrik® has a modern moulding room equipped with modern workbenches. We use Uni-graphics NX software which is advanced for design, modelling, production, engineering analyse, improvement, integrated with CAD / CAM / CAE applications, and this is one of the most popular software in aviation, automation, defence, mechanical, plastic and moulding industries. We provide you large scale of solution for your LV Electro mechanical component requirements by using these assets and create extra value for solution.



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LV MCCB, Thermal-Magnetic Adjustable Type - Technical Specifications

Type				C160	K 160		M160	K 250		M 250		S 250
Standard				IEC / EN 60947-2	IEC / EN 60947-2		IEC / EN 60947-2	IEC/EN 60947-2		IEC / EN 60947-2		IEC / EN 60947-2
Rated Current In (at 40°C)	A			16, 20, 25, 32, 40, 50, 63, 80, 100, 125, 160	16, 20, 25, 32, 40, 50, 63, 80, 100, 125, 160		40, 50, 63, 80, 100, 125, 160	63, 80, 100, 125, 160, 200, 250		32, 40, 50, 63, 80, 100, 125, 160, 200, 250		100, 125, 160, 200, 250
No of Poles				3	3	4	3	3	4	3	4	3
Frequency			Hz	50-60	50-60		50-60	50-60		50-60		50-60
Rated Operating Voltage	Ue	V	AC	400	415		400	400		400		400
Rated Insulation Voltage	Ui	V	AC	690	750		750	690		750		750
Power Frequency Withstand Test at 1 Minute		V	AC	3000	3000		3000	3000		3000		3000
Rated Impulse Withstand Voltage	Uimp	kV	AC	8	8		8	8		8		8
Rated Ultimate Short Circuit Breaking Capacity	Icu	kA	690 V AC	5	8		10	8		10		16
			500 V AC	7	9		18	9		18		42
			440 V AC	15	22		42	22		42		50
			415 V AC	25	36		50	36		50		70
			240 V AC	35	50		65	50		65		100
			250 V DC (3 poles serial)	10	15		25	15		25		30
Rated Service Short Circuit Breaking Capacity	Ics	kA	690 V AC	5	8		8	8		10		8
			500 V AC	7	9		14	9		18		21
			440 V AC	10	22		32	22		42		25
			415 V AC	18	50		50	18		50		52
			240 V AC	25	50		50	50		65		50
			250 V DC (3 poles serial)	5	10		19	10		25		23
Category (IEC/EN 60947-2)				A	A		A	A		A		A
Pollution Degree				3	3		3	3		3		3
Electrical Life (Operation)	ON - OFF		415 V	5000	8000		8000	8000		8000		8000
Mechanical Life (Operation)	ON - OFF			15000	20000		20000	20000		20000		20000
Protection Unit				Thermal Adjustable Magnetic Fixed				Thermal Magnetic Adjustable				
Protection Unit (Power & NetworkSystem Protection)				Ir: (0,8-1)xIn ; Im: 10xIn	Ir: (0,7-1)xIn ; Im: 10xIn		Ir: (0,8-1)xIn ; Im: 10xIn	Ir: (0,7-1)xIn ; Im: (5-10)xIn		Ir: (0,7-1)xIn ; Im: (5-10)xIn		Ir: (0,8-1)xIn ; Im: (5-10)xIn
Protection Unit (AC Motors Protection)				Ir: (0,8-1)xIn ; Im: 15xIn	Ir: (0,7-1)xIn ; Im: 15xIn		Ir: (0,8-1)xIn ; Im: 15xIn	Ir: (0,7-1)xIn ; Im: (10-15)xIn		Ir: (0,7-1)xIn ; Im: (10-15)xIn		Ir: (0,8-1)xIn ; Im: (10-15)xIn
Ambient Operation Temperature	°C			-20 to +60	-20 to +60		-20 to +60	-20 to +60		-20 to +60		-20 to +60
Ambient Storage Temperature	°C			-40 to +80	-40 to +80		-40 to +80	-40 to +80		-40 to +80		-40 to +80
Dimensions	Width		mm	90	105	140	90	105	140	105	140	105
	Length		mm	141	178	169	138	178	161	178	161	161
	Depth		mm	75	89	89	89	89	89	89	89	89
Accessories												
Shunt Trip Release				√	√		√	√		√		√
Under Voltage Release				√	√		√	√		√		√
Auxiliary Contact				√	√		√	√		√		√
Alarm Contact				√	√		√	√		√		√
Motor Operator				—	√		—	√		√		—
Ext. Rotary Handle				—	√		√	√		√		√
Connection Clamp				Standard	√		—	√		√		—
Mechanical Lock Ped				√	√		—	√		√		—
Extention Bus Bar				—	√		√	√		√		√

U250		K 400	M 400	S 400		K 630	M 630	S 630		M800	S800	U1600
IEC / EN 60947-2		IEC / EN 60947-2	IEC / EN 60947-2	IEC / EN 60947-2		IEC / EN 60947-2	IEC / EN 60947-2	IEC / EN 60947-2		IEC / EN 60947-2	IEC / EN 60947-2	IEC / EN 60947-2
100, 160, 250		315, 400	315, 400	315, 400		500, 630	500, 630	500, 630		800	800	800, 1000, 1250, 1600
3	4	3	3	3	4	3	3	3	4	3	3	3
50-60		50-60	50-60	50-60		50-60	50-60	50-60		50-60	50-60	50-60
400		400	400	400		400	400	400		400	400	415
750		690	750	690		690	750	750		750	750	690
3000		3000	3000	3000		3000	3000	3000		3000	3000	3000
8		8	8	8		8	8	8		8	8	8
8		12	17	16		12	17	16		22	16	25
9		20	25	42		20	25	42		35	42	35
22		25	35	50		25	35	50		42	50	50
36		36	50	70		36	50	70		50	70	70
50		65	50	100		65	80	100		100	100	85
15		25	30	30		25	30	30		30	30	—
8		12	17	8		12	17	8		22	8	25
9		20	25	21		20	25	21		35	21	35
22		25	35	25		25	35	25		42	25	50
36		18	50	52		18	50	35		36	35	35
50		36	80	50		36	50	50		50	50	65
10		20	23	23		23	23	23		23	23	—
A		A	A	A		A	A	A		A	A	B
3		3	3	3		3	3	3		3	3	3
8000		6000	6000	6000		5000	5000	5000		5000	5000	4000
20000		15000	15000	15000		15000	15000	15000		10000	10000	8000
Electronic		Thermal Magnetic Adjustable										Electronic
Ir: (0,4-1)xIn ; Im: (2-10)xIn		Ir: (0,8-1)xIn ; Im: (5-10)xIn	Ir: (0,8-1)xIn ; Im: (5-10)xIn	Ir: (0,8-1)xIn ; Im: (5-10)xIn		Ir: (0,8-1)xIn ; Im: (5-10)xIn	Ir: (0,8-1)xIn ; Im: (5-10)xIn	Ir: (0,8-1)xIn ; Im: (5-10)xIn		Ir: (0,8-1)xIn ; Im: (5-10)xIn	Ir: (0,8-1)xIn ; Im: (5-10)xIn	Ir: (0,4-1)xIn ; Im: (2-10)xIn
Ir: (0,4-1)xIn ; Im: (2-10)xIn		Ir: (0,8-1)xIn ; Im: (8-12)xIn	Ir: (0,8-1)xIn ; Im: (8-12)xIn	Ir: (0,8-1)xIn ; Im: (10-15)xIn		Ir: (0,8-1)xIn ; Im: (8-12)xIn	Ir: (0,8-1)xIn ; Im: (8-12)xIn	Ir: (0,8-1)xIn ; Im: (10-15)xIn		Ir: (0,8-1)xIn ; Im: (10-15)xIn	Ir: (0,8-1)xIn ; Im: (10-15)xIn	Ir: (0,4-1)xIn ; Im: (2-10)xIn
-20 to +60		-20 to +60	-20 to +60	-20 to +60		-20 to +60	-20 to +60	-20 to +60		-20 to +60	-20 to +60	-20 to +60
-40 to +80		-40 to +80	-40 to +80	-40 to +80		-40 to +80	-40 to +80	-40 to +80		-40 to +80	-40 to +80	-40 to +80
105	140	140	140	140	188	140	140	140	188	210	210	210
178	161	267	267	263	263	267	267	263	263	280	280	408
89	89	104	104	117	117	104	104	117	117	107	107	143
√		√	√	√		√	√	√		√	√	√
√		√	√	√		√	√	√		√	√	√
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√		√	√	—		√	√	—		√	√	√
√		√	√	√		√	√	√		√	√	√
√		—	—	—		—	—	—		—	—	—
√		√	√	—		√	√	—		—	—	—
√		√	√	—		Standard	Standard	—		Standard	Standard	Standard

LV MCCB, Thermal-Magnetic Fixed Type - Technical Specifications

Type				KM200	A125	A160	A250	A400	A160N	A250N	A400N	A630N	A800N
Standard				IEC / EN 60947-2	IEC / EN 60947-2	IEC / EN 60947-2	IEC / EN 60947-2	IEC / EN 60947-2	IEC / EN 60947-2	IEC / EN 60947-2	IEC / EN 60947-2	IEC / EN 60947-2	IEC / EN 60947-2
Rated Current In (at 40°C)		A		16, 20, 25, 32, 40, 50, 63, 80, 100, 125, 160, 200	20, 25, 32, 40, 50, 63, 80, 100, 125	20, 25, 32, 40, 50, 63, 80, 100, 125, 160	160, 200, 250	315, 400	20, 25, 32, 40, 50, 63, 80, 100, 125, 160	200, 250	315, 400	500, 630	800
No of Poles				1	2	3	3	3	4	4	4	4	4
Frequency			Hz	50-60	50-60	50-60	50-60	50-60	50-60	50-60	50-60	50-60	50-60
Rated Operating Voltage	Ue	V	AC	400	400	415	400	415	415	415	415	415	415
Rated Insulation Voltage	Ui	V	AC	750	750	750	750	750	750	750	750	750	750
Power Frequency Withstand Test at 1 Minute		V	AC	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000
Rated Impulse Withstand Voltage	Uimp	kV		8	8	8	8	8	8	8	8	8	8
Rated Ultimate Short Circuit Breaking Capacity	Icu	kA	400/415 V AC	36	20	25	25	36	25	36	36	36	36
Rated Service Short Circuit Breaking Capacity	Ics	kA	400/415 V AC	18	10	18	12,5	27	18	27	27	27	27
Pollution Degree				3	3	3	3	3	3	3	3	3	3
Electrical Life (Operation)	ON-OFF		400/415 V AC	4000	4000	5000	4000	3000	5000	4000	3000	2000	1500
Mechanical Life (Operation)	ON-OFF			10000	8000	12000	10000	7000	12000	10000	7000	6000	5000
Thermal Adjustment				Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed
Magnetic Adjustment				Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed
Ambient Temperature		°C		-20 to +60	-20 to +60	-20 to +60	-20 to +60	-20 to +60	-20 to +60	-20 to +60	-20 to +60	-20 to +60	-20 to +60
Storage Temperature		°C		-40 to +80	-40 to +80	-40 to +80	-40 to +80	-40 to +80	-40 to +80	-40 to +80	-40 to +80	-40 to +80	-40 to +80
Dimensions	Width	mm		35	50	75	90	105	140	140	185	280	280
	Length	mm		158	130	135	159	170	265	159	170	265	281
	Depth	mm		89	60	65	74	74	110	74	74	110	110
Accessories													
Shunt Trip Release				–			✓	✓	✓	✓	✓	✓	✓
Under Voltage Release				–			✓	✓	✓	✓	✓	✓	✓
Auxiliary Contact				–			✓	✓	✓	✓	✓	✓	✓
Alarm Contact				–			✓	✓	✓	✓	✓	✓	✓
Motor Operator				–			–	–	–	–	–	–	–
Ext. Rotary Handle				–			✓	✓	✓	✓	✓	✓	✓
Extension Bus Bar				–			✓	✓	✓	✓	✓	✓	✓

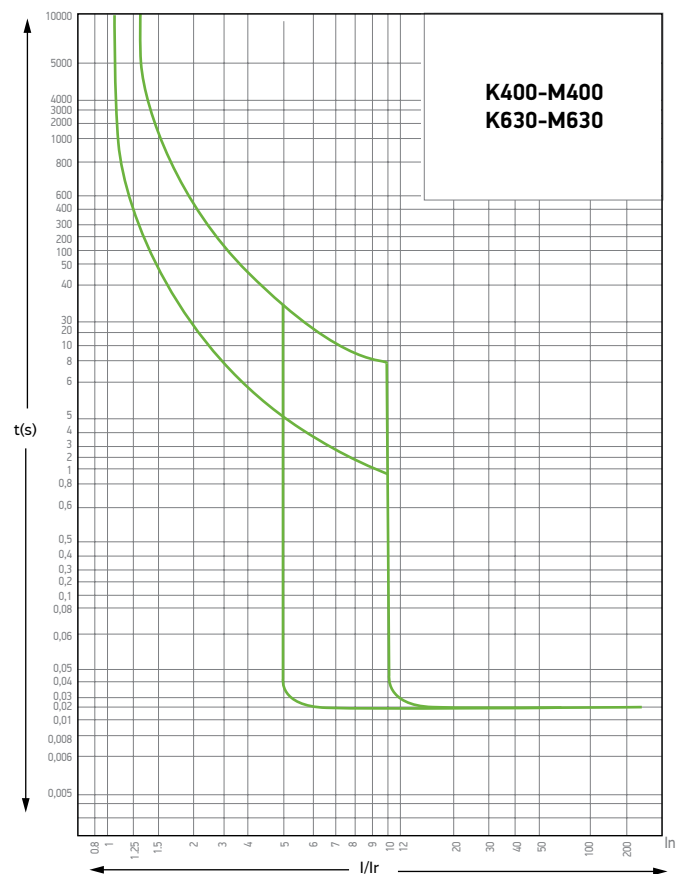
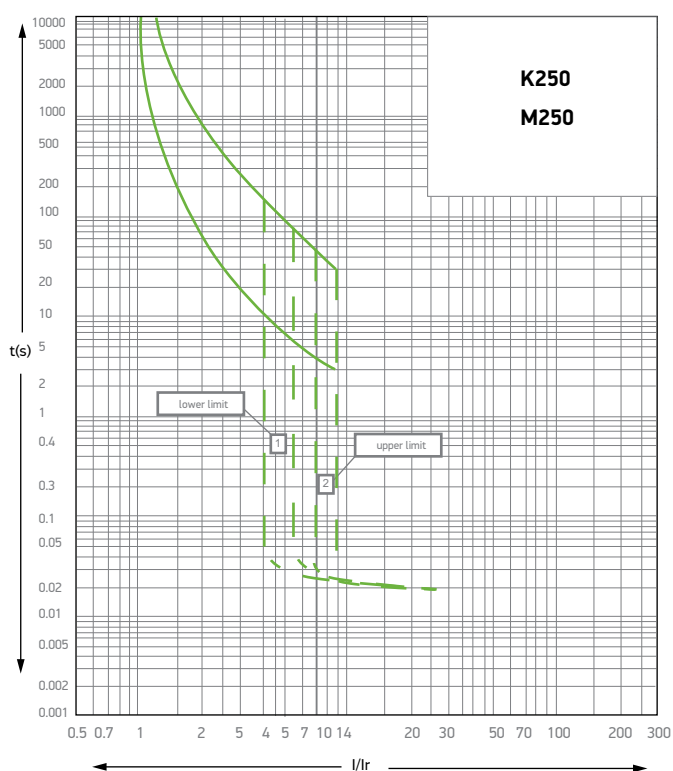
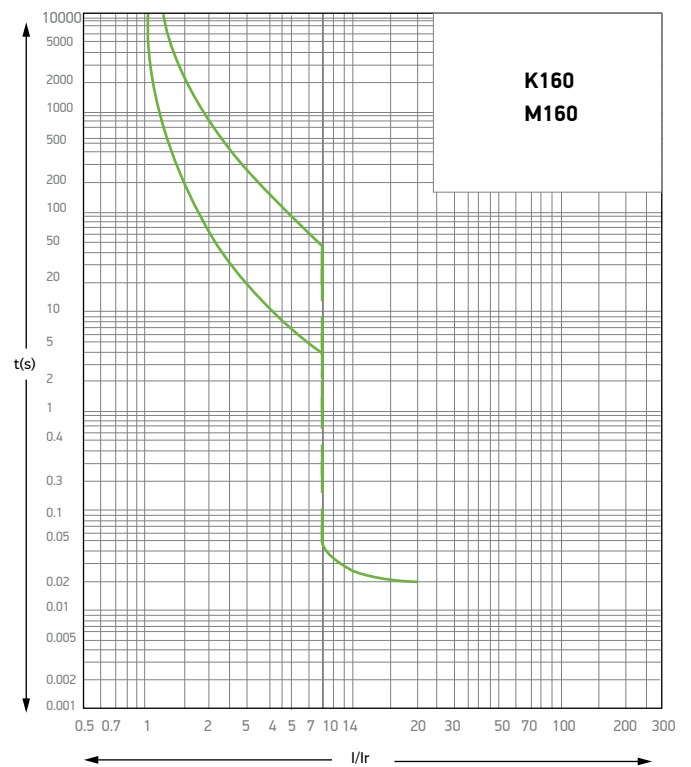
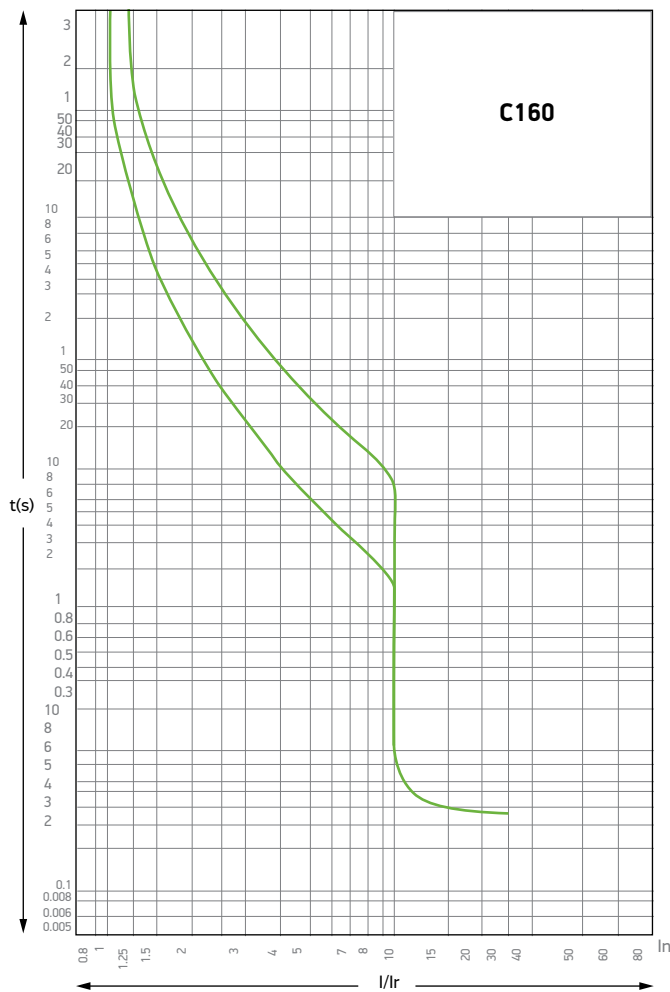


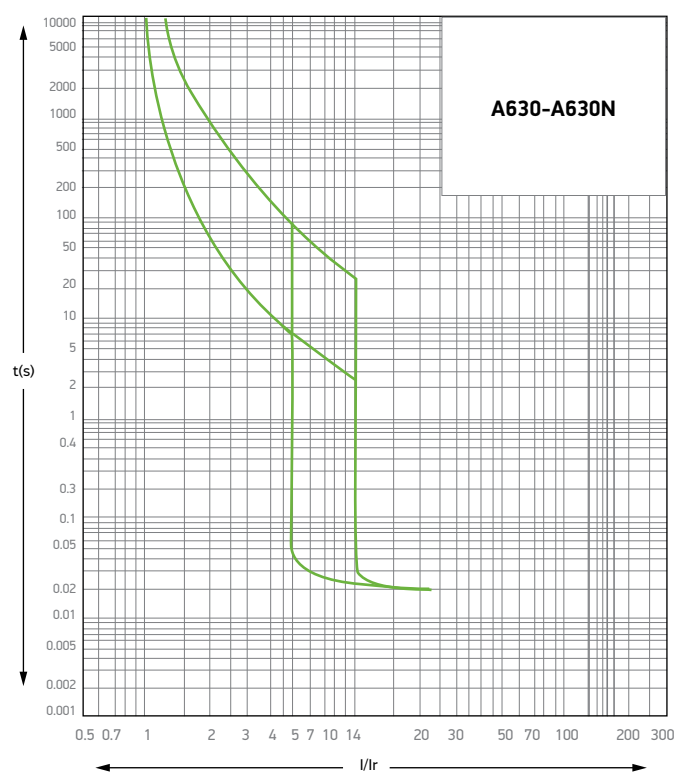
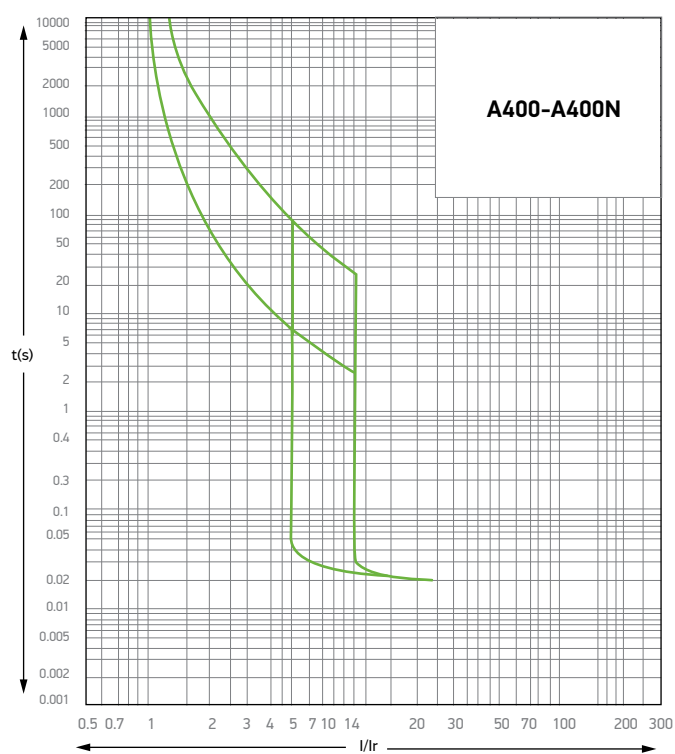
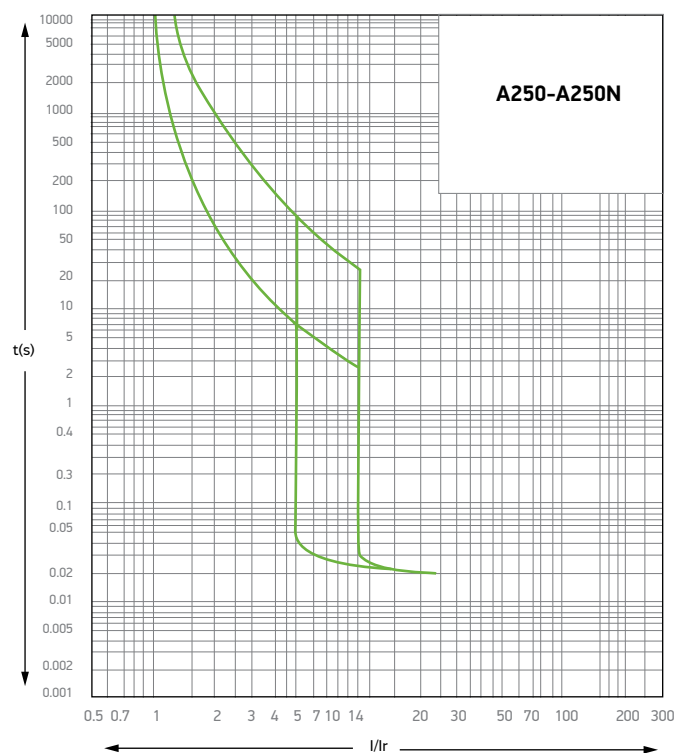
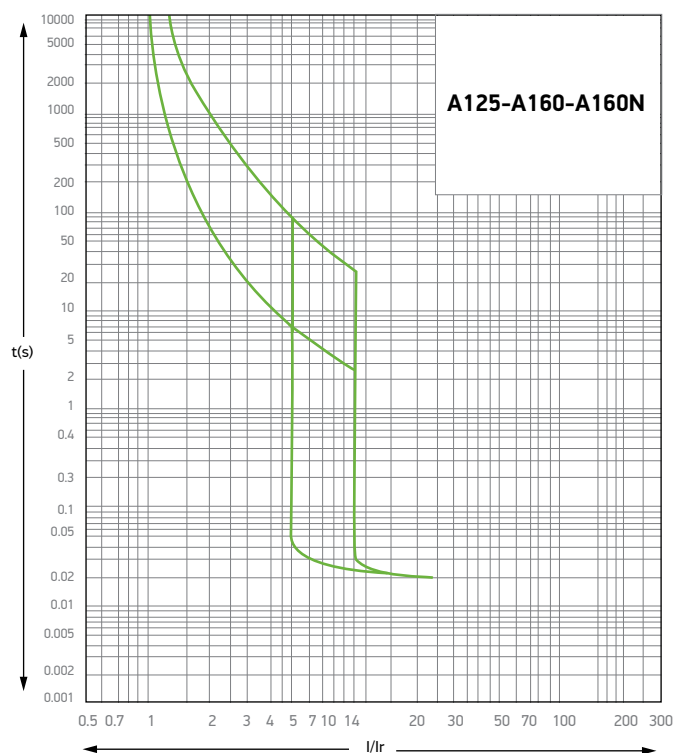
Earth Leakage Circuit Breakers - Technical Specifications

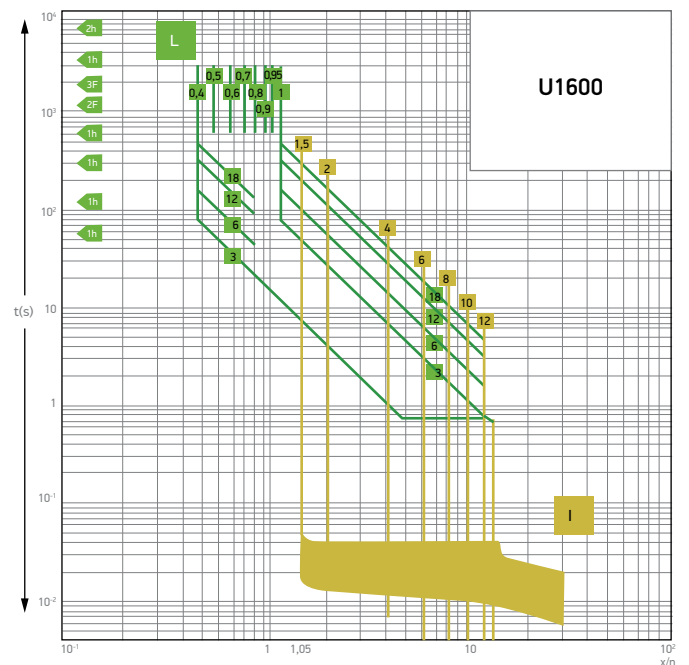
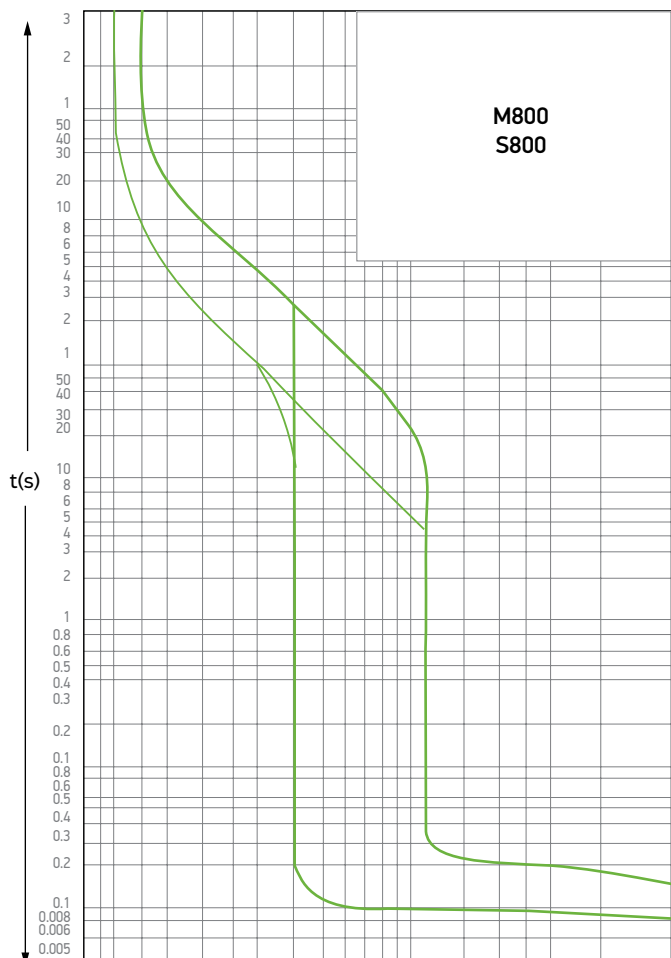
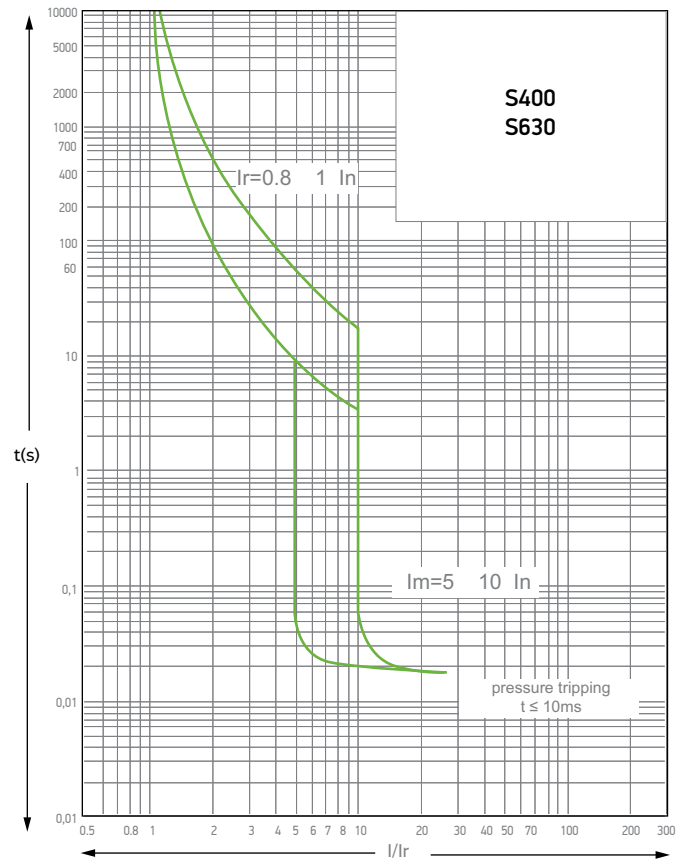
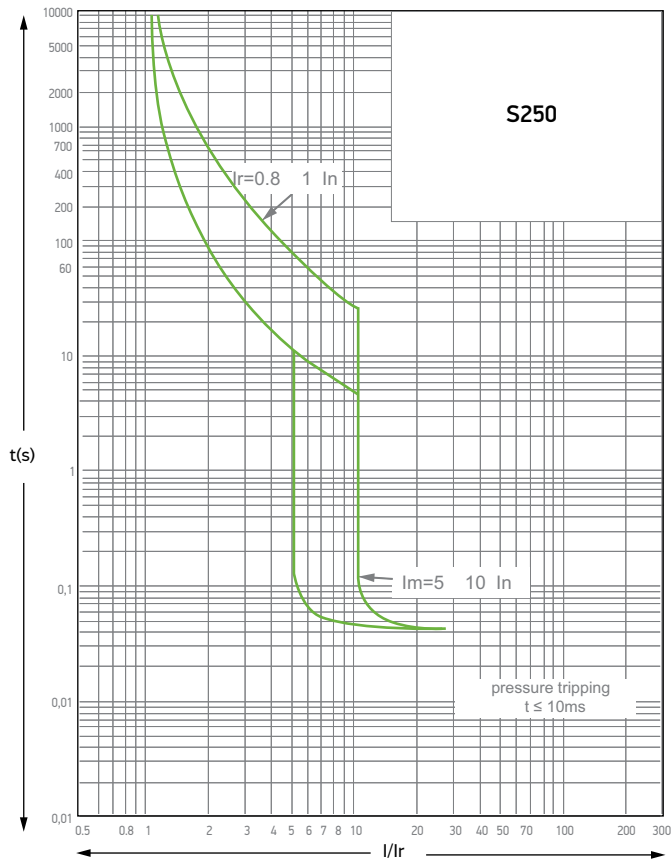
Type				F250	D100	D250	D400	D630
No of Poles				3	4	4	4	4
Frequency			Hz	50-60	50-60	50-60	50-60	50-60
Rated Current In (at 40°C)	A			40, 50, 63, 80, 100, 125, 160, 200, 250	40, 50, 63, 80, 100	125, 160, 200, 250	250, 315, 400	630
Rated Threshold Current	mA			30, 300, 500, 1000, 3000	30, 100, 300, 500	30, 100, 300, 500	100, 200, 300, 500	100, 200, 300, 500
Threshold Tripping Time (Adjustable)	mili second			100, 500, 1000	100, 300, 500, 1000	100, 300, 500, 1000	100, 300, 500, 1000	100, 300, 500, 1000
Instantaneous Tripping Time (Adjustable)	mili second			<200	<200	<200	<200	<200
Rated Operating Voltage	Ue	V	AC	400	400	400	400	400
Rated Insulation Voltage	Ui	V	AC	750	750	750	750	750
Rated Impulse Withstand Voltage	Uimp	kV	AC	8	8	8	8	8
Rated Ultimate Short Circuit Breaking Capacity	Icu	kA	400/415V AC	36	36	36	50	50
Rated Service Short Circuit Breaking Capacity	Ics	kA	400/415V AC	18	18	18	25	25
Pollution Degree				3	3	3	3	3
Electrical Life (Operation)	ON - OFF		400/415 V AC	5000	5000	5000	5000	4000
Mechanical Life Operation)	ON - OFF			15000	15000	15000	15000	10000
Overload Protection				>1.3xIn	>1.3xIn	>1.3xIn	>1.3xIn	>1.3xIn
Rated Short Circuit Breaking Protection				8xIn	8xIn	8xIn	8xIn	8xIn
Threshold Current Protection				(30-3000 mA)	(30-500 mA)	(30-500 mA)	(100-500 mA)	(100-500 mA)
Deactivation of Threshold Current Protection				Available	Available	Available	Available	Available
Ambient Temperature	°C			-20 to +60	-20 to +60	-20 to +60	-20 to +60	-20 to +60
Storage Temperature	°C			-40 to +80	-40 to +80	-40 to +80	-40 to +80	-40 to +80
Dimensions	Width	mm		105	120	140	184	280
	Length	mm		252	203	221	302	347
	Depth	mm		89	68	86	103	103

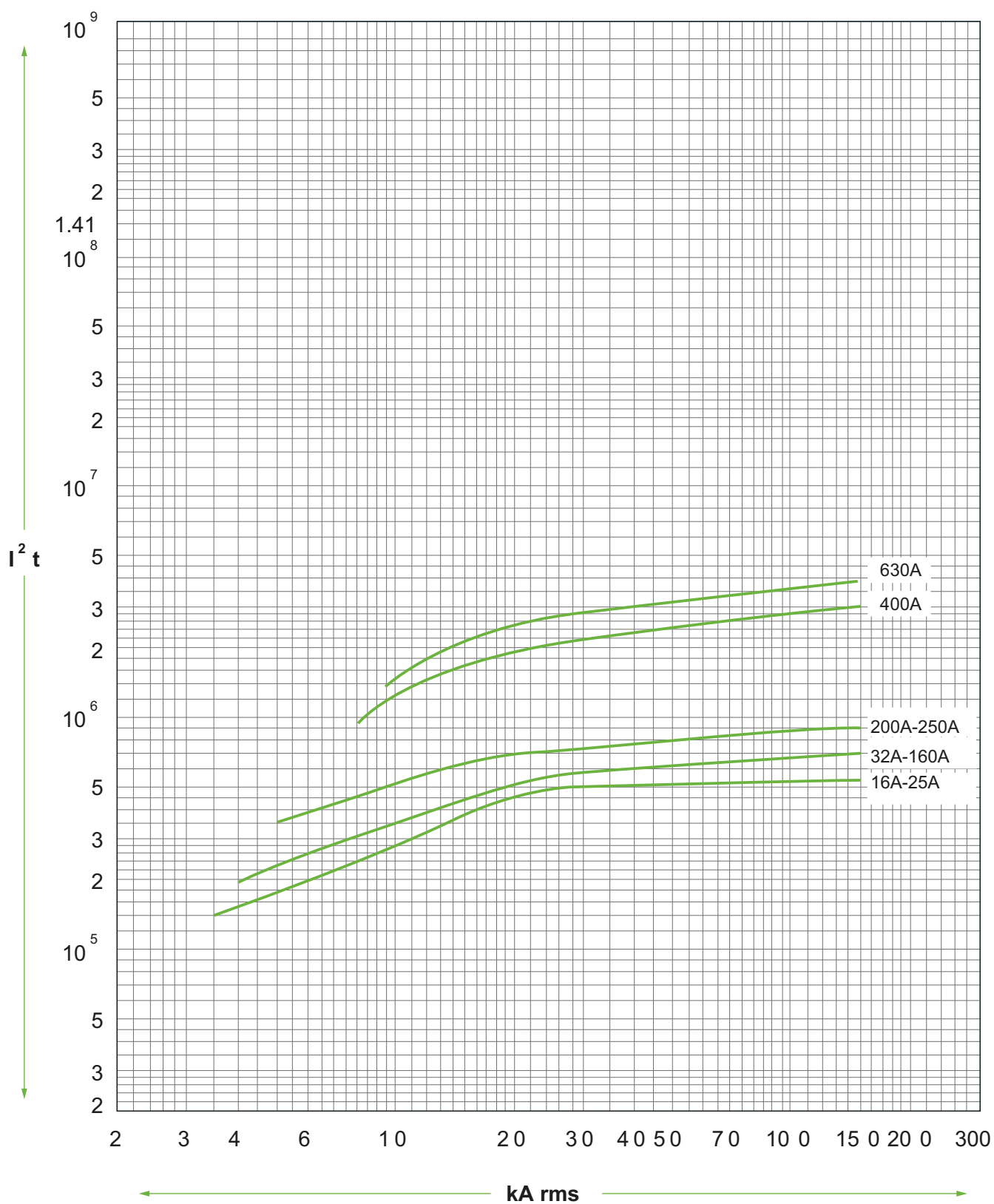


Time-Current Characteristic



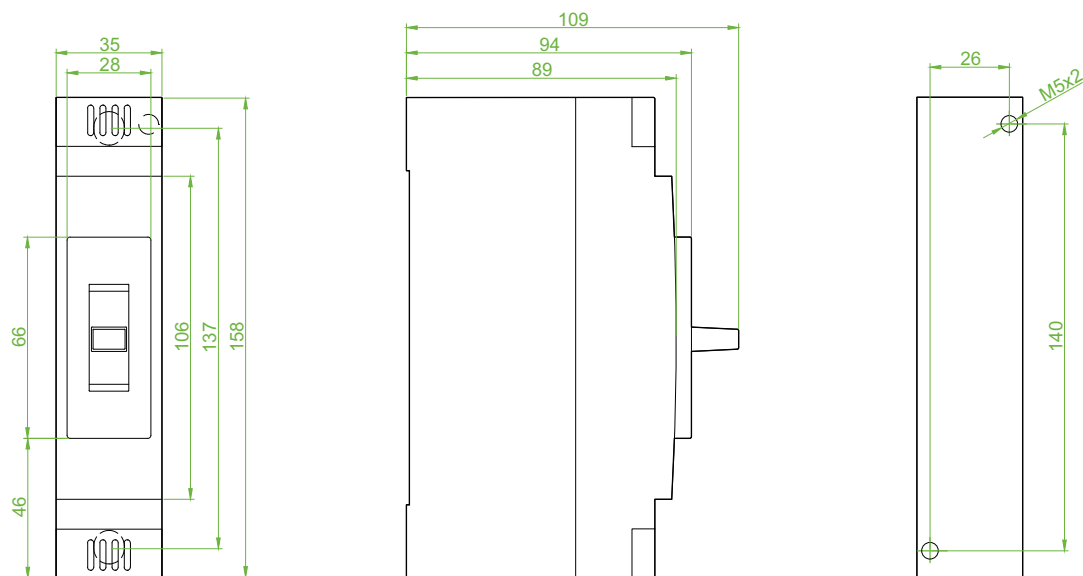




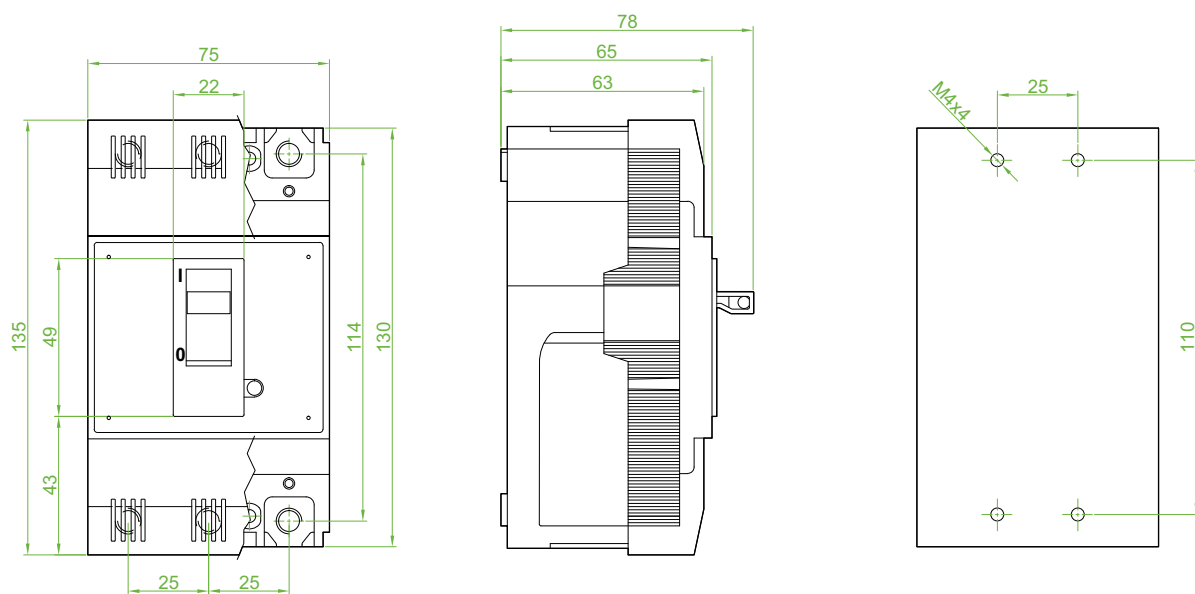
MCCB I^2t 

Dimensions

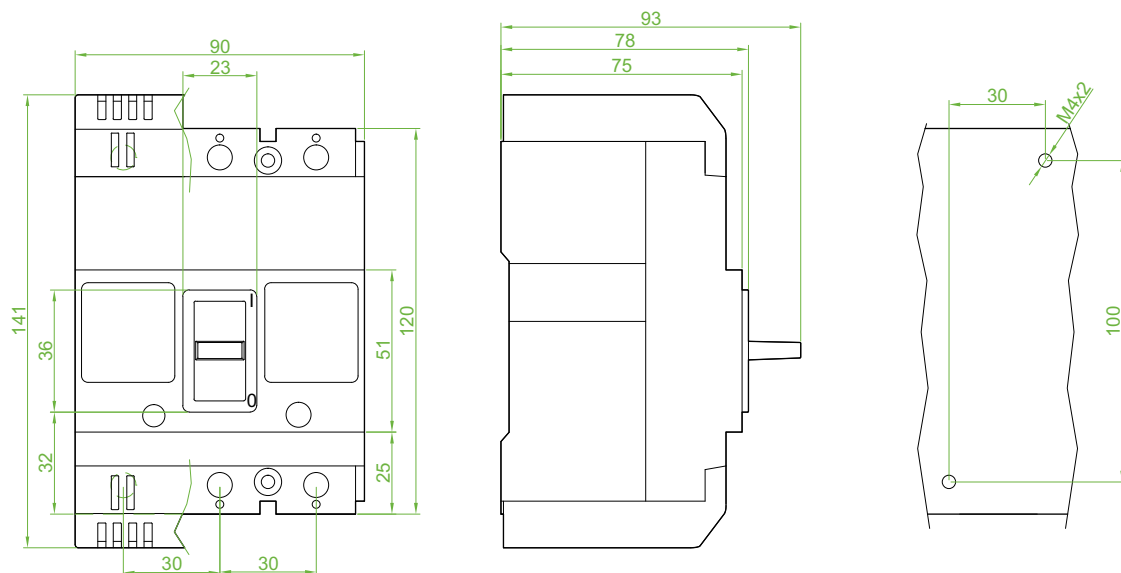
KM200



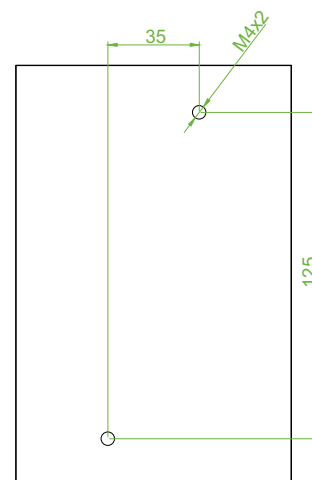
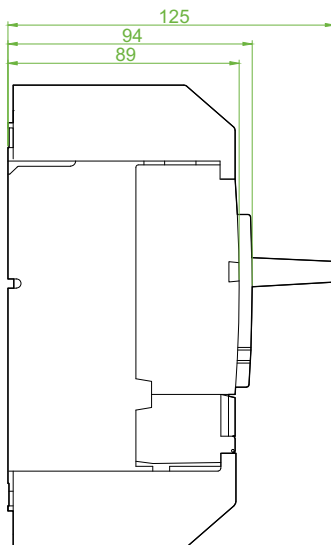
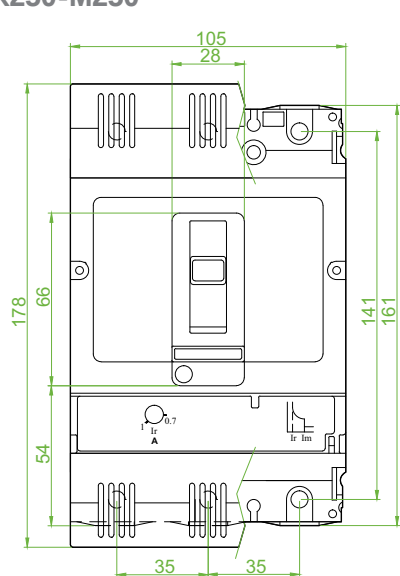
A125



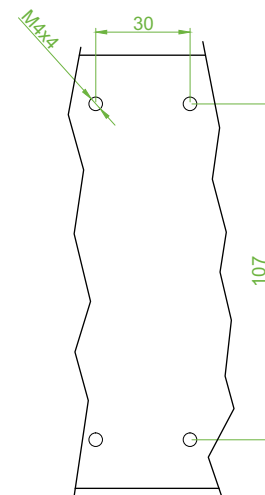
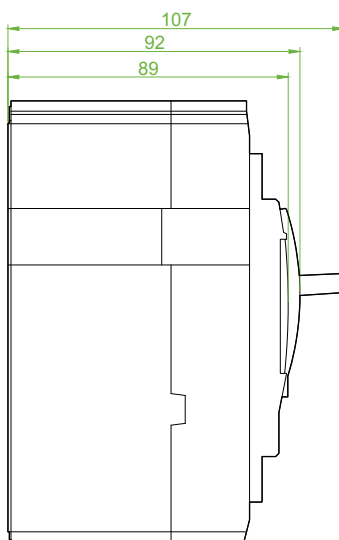
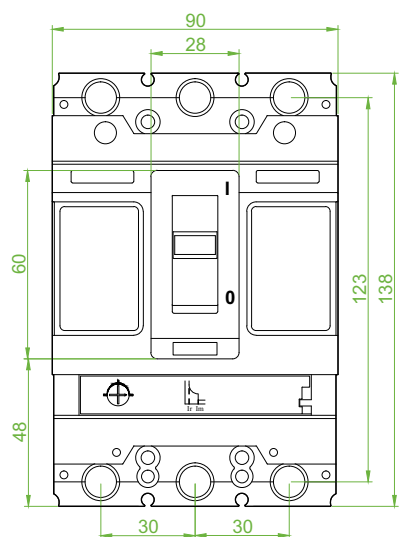
C160



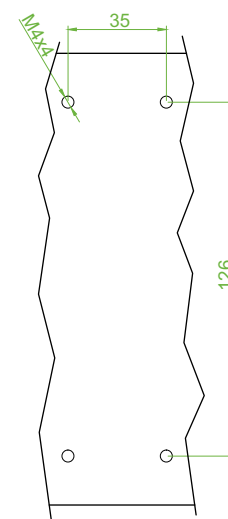
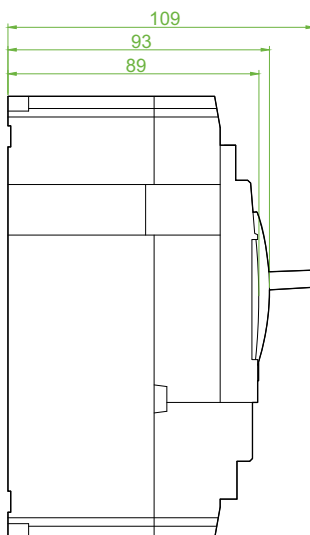
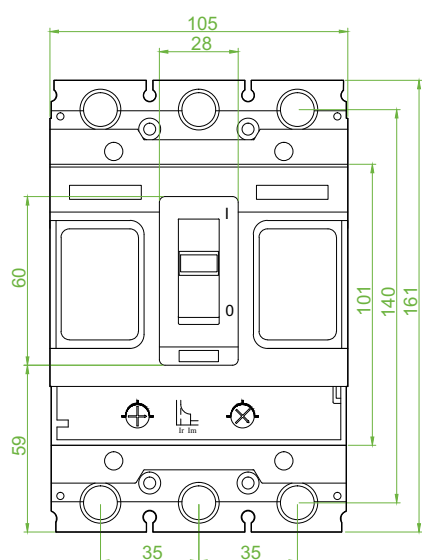
K160-K250-M250



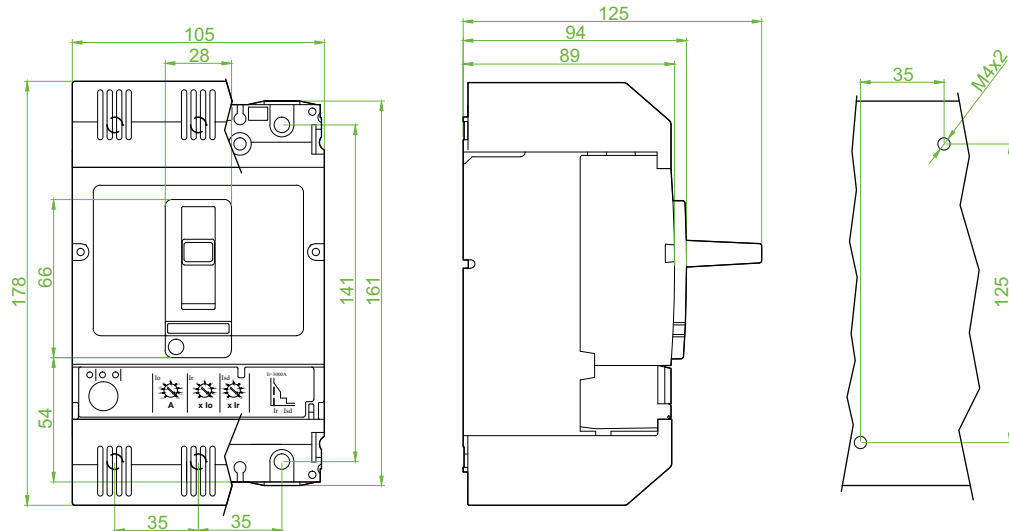
M160



S250

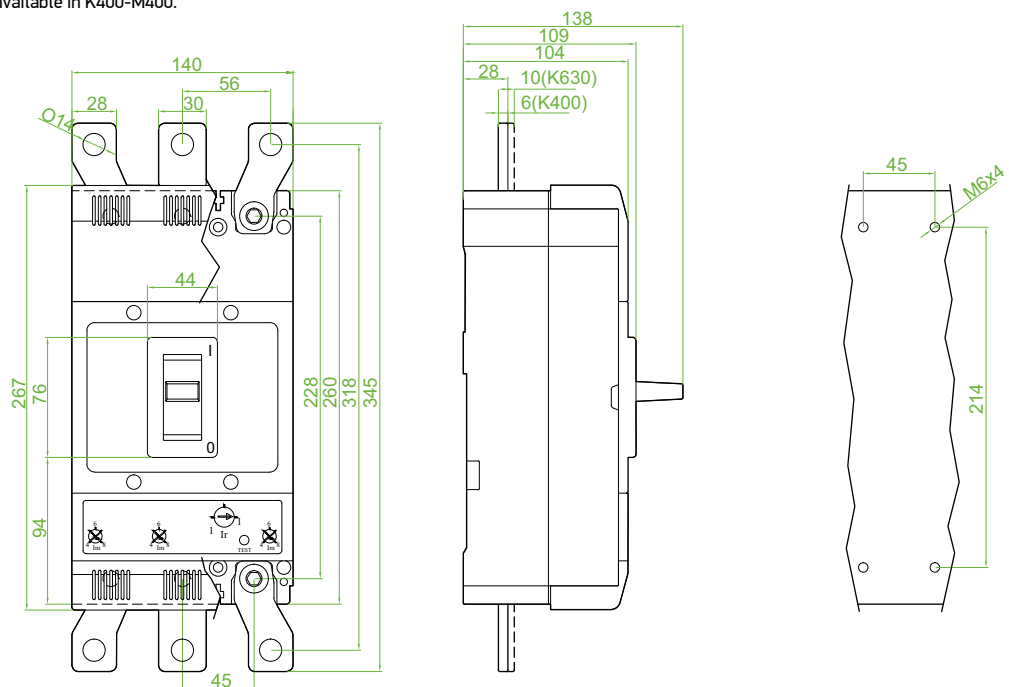


U250

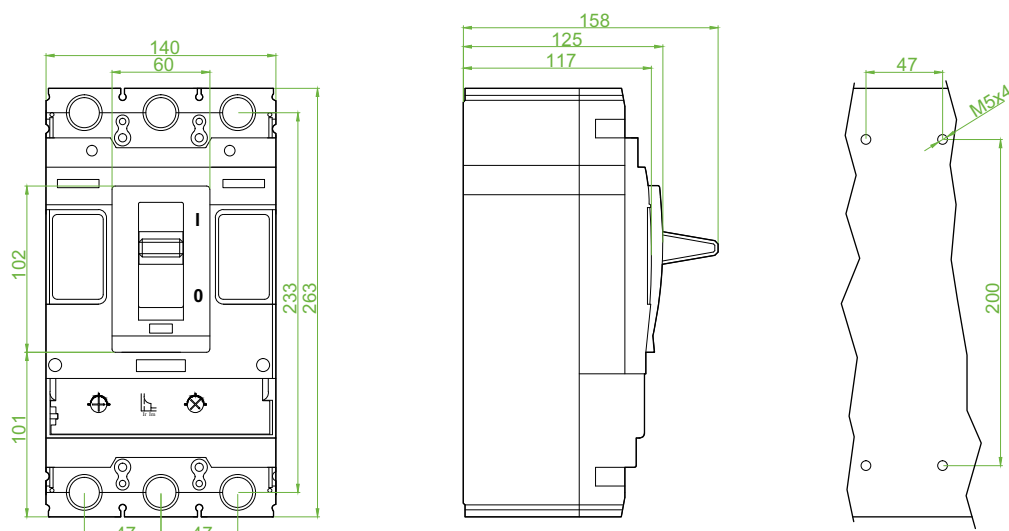


K400-K630-M400-M630

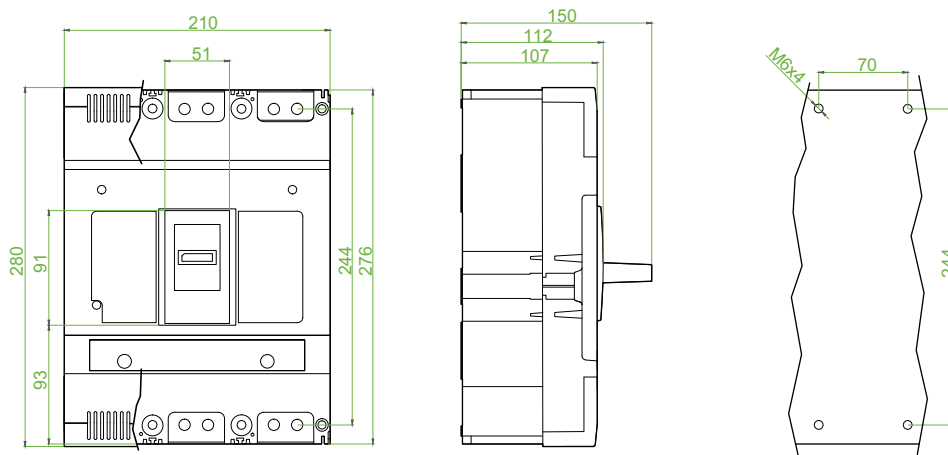
Extension bars are not available in K400-M400.



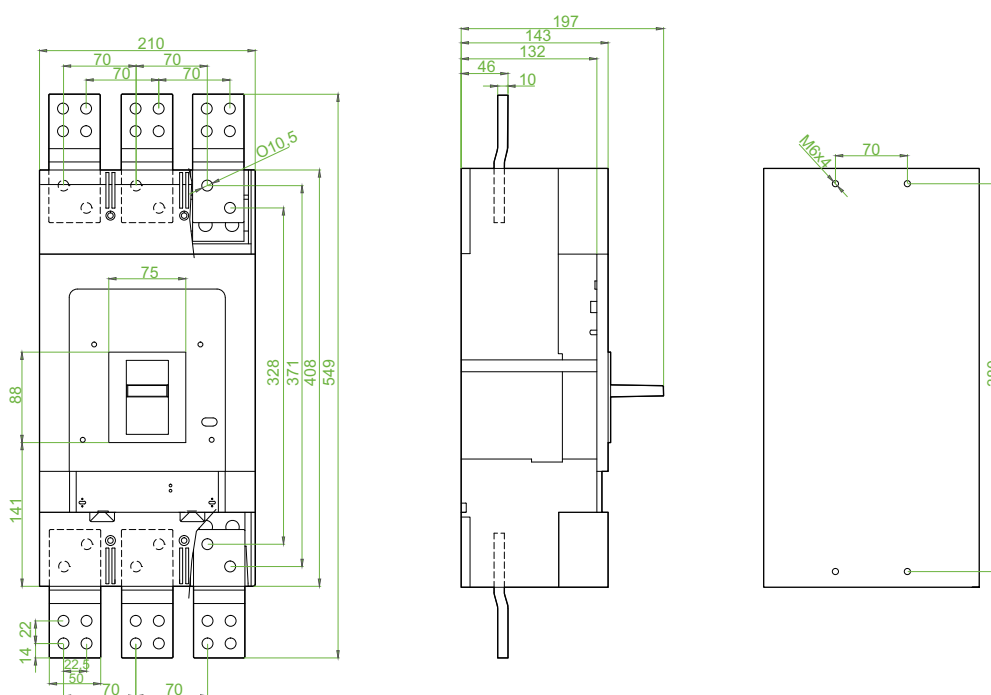
S400-S630



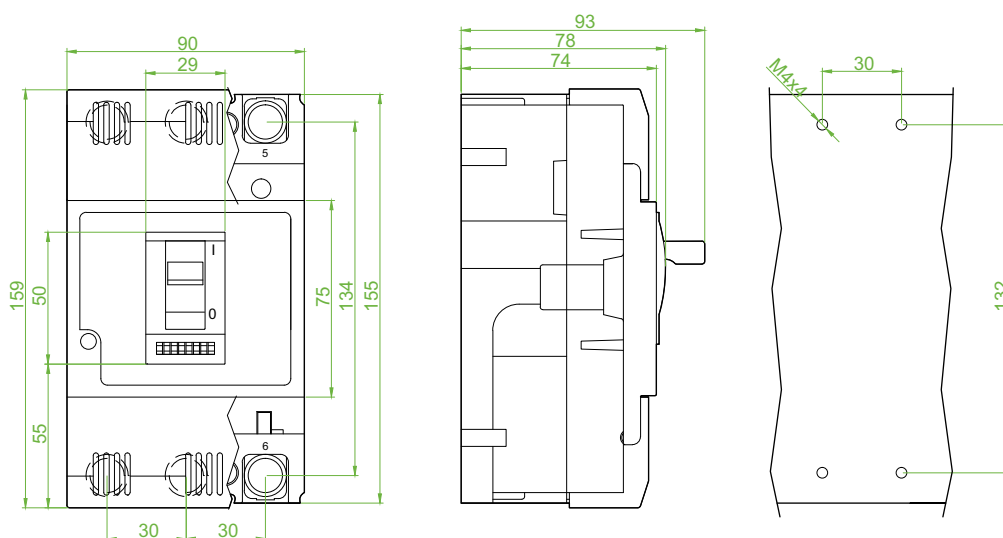
M800-S800



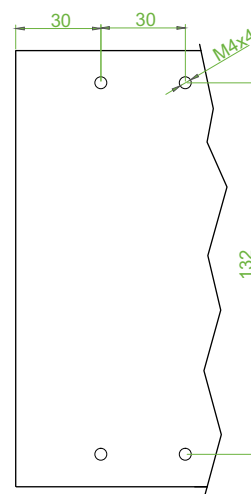
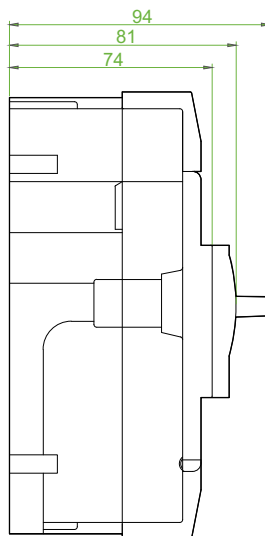
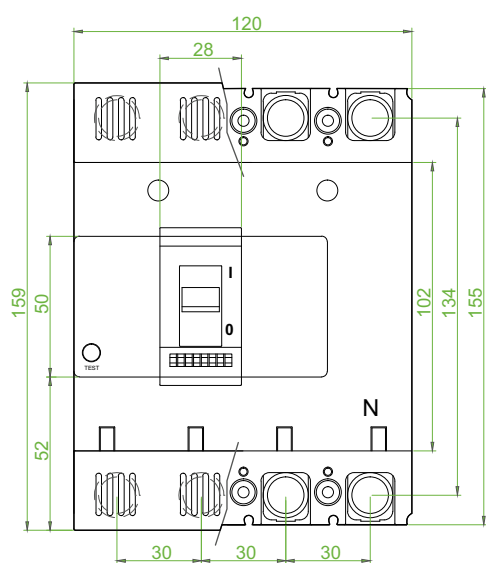
U1600



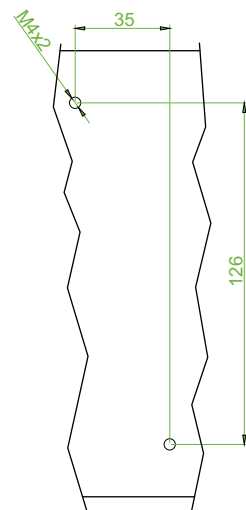
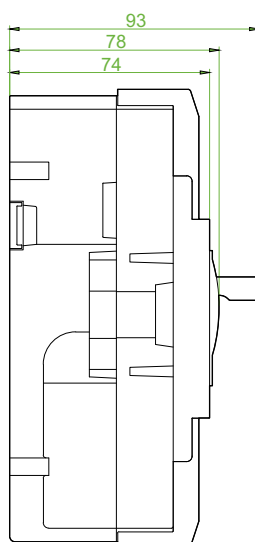
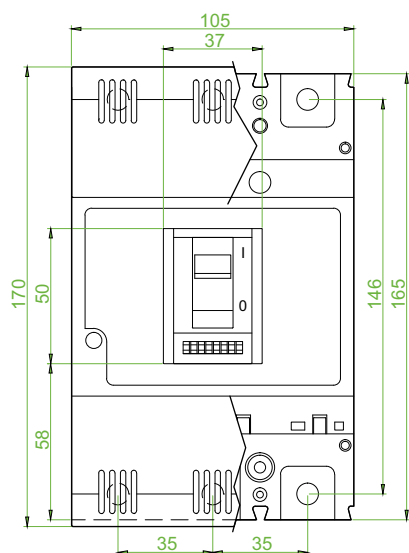
A160



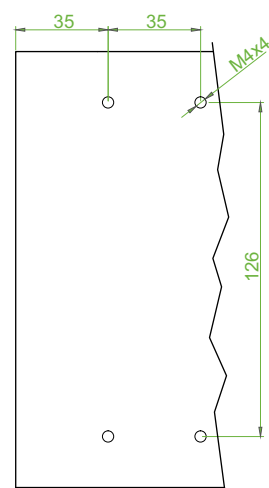
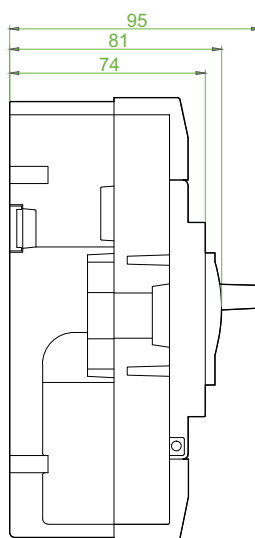
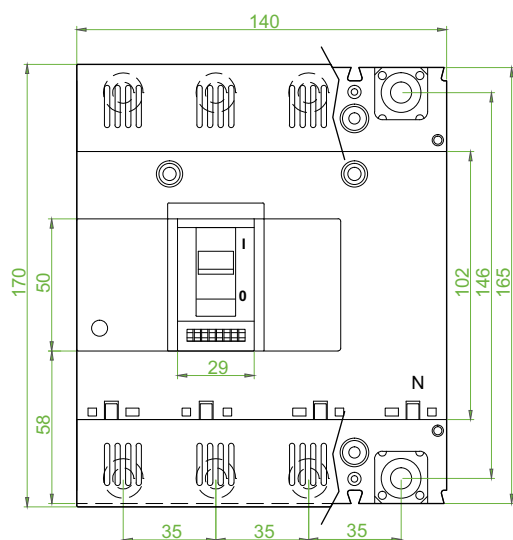
A160N



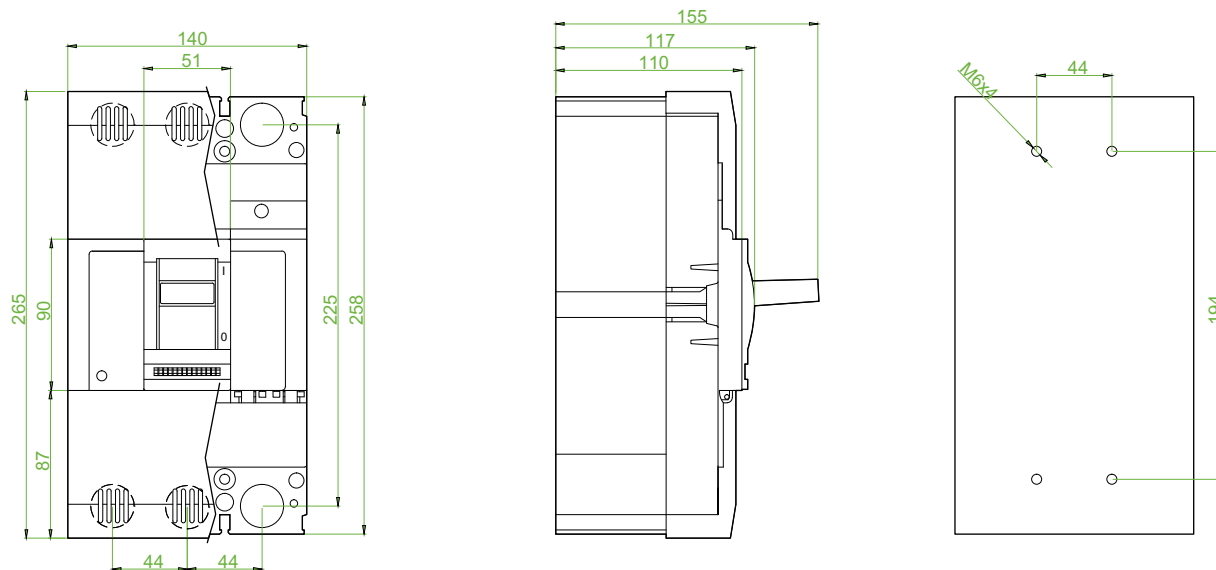
A250



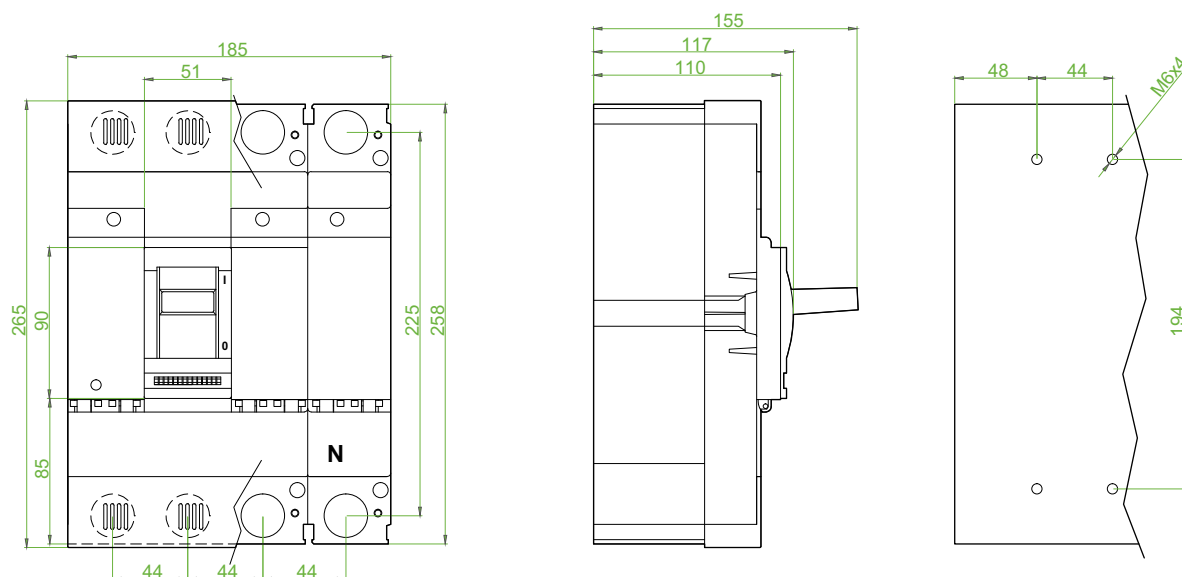
A250N



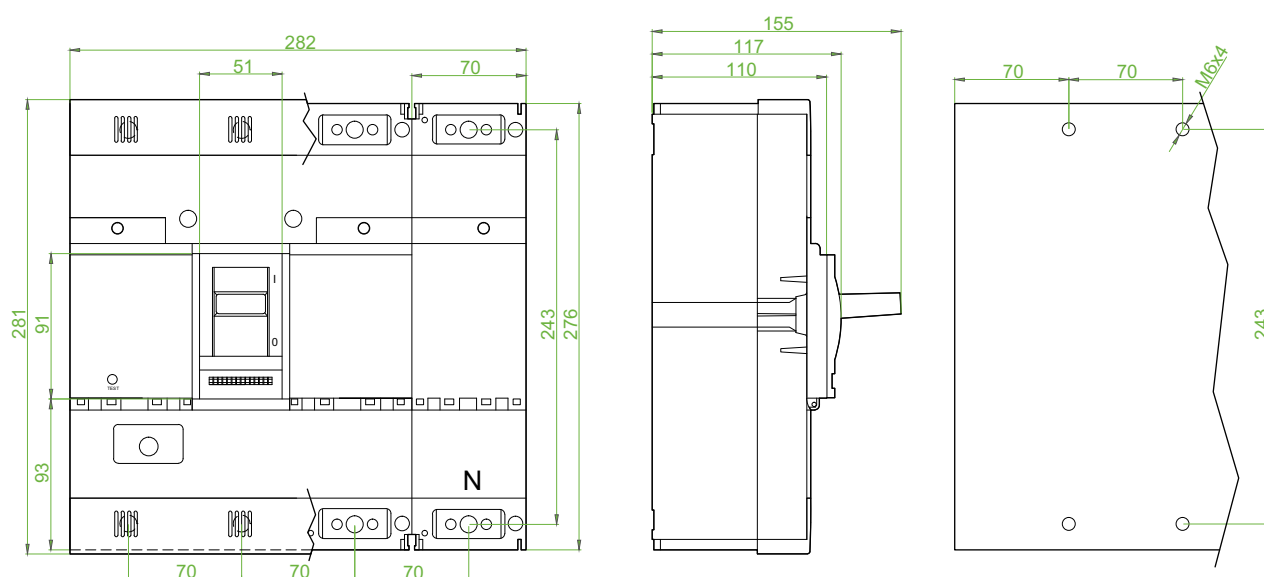
A400



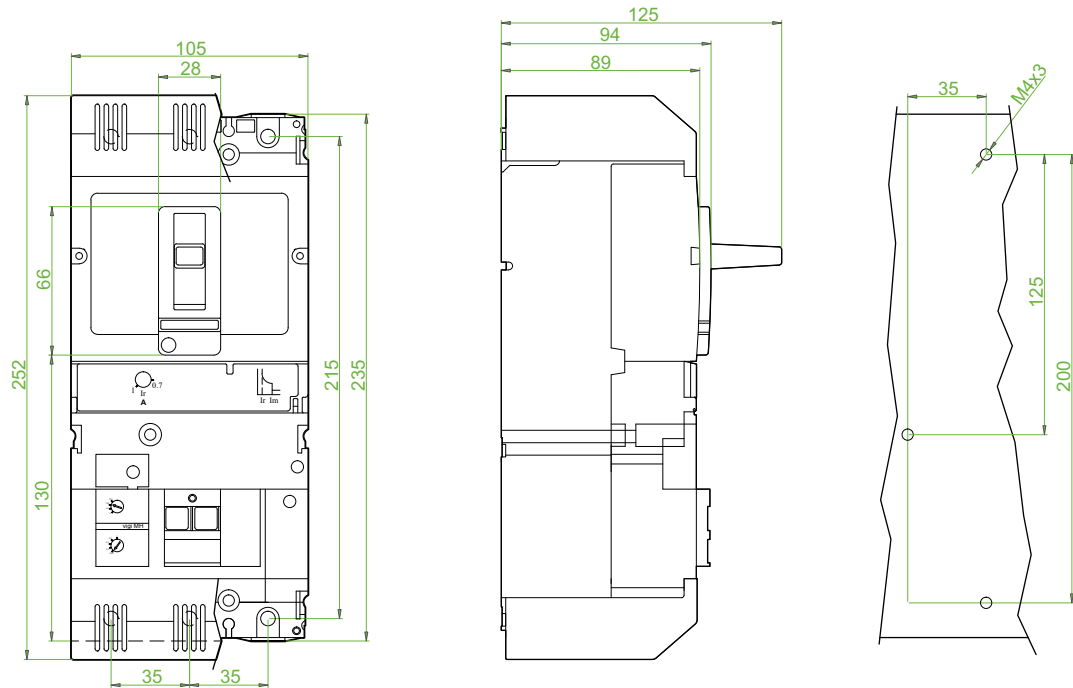
A400N



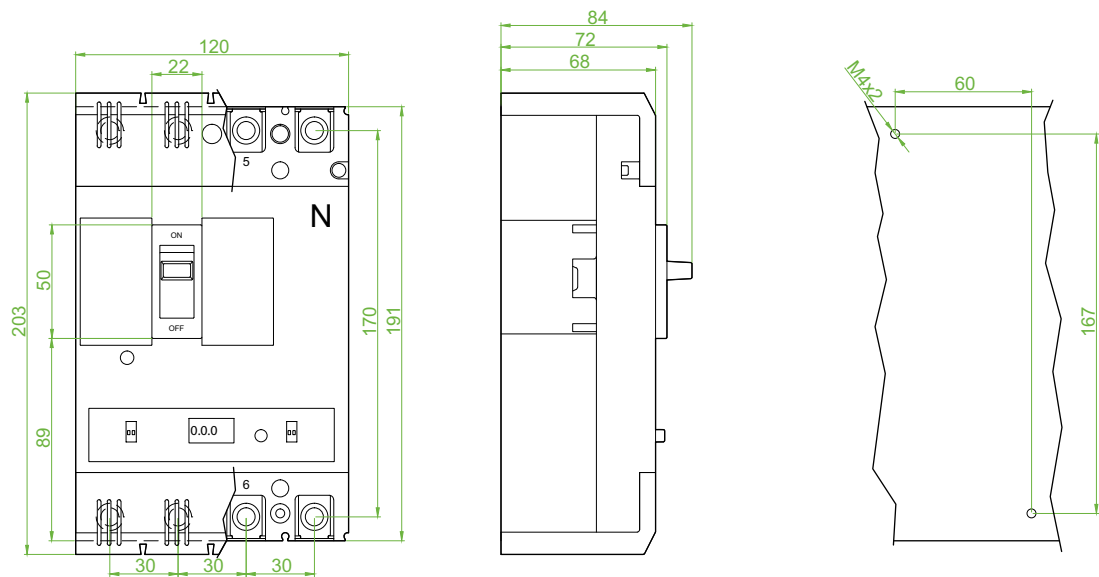
A630N-A800N



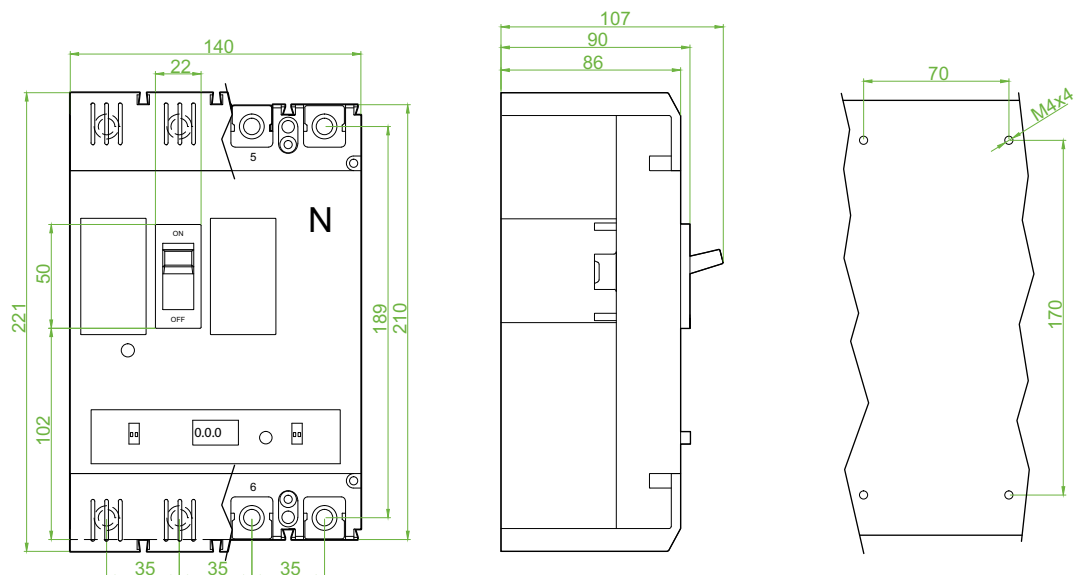
F250



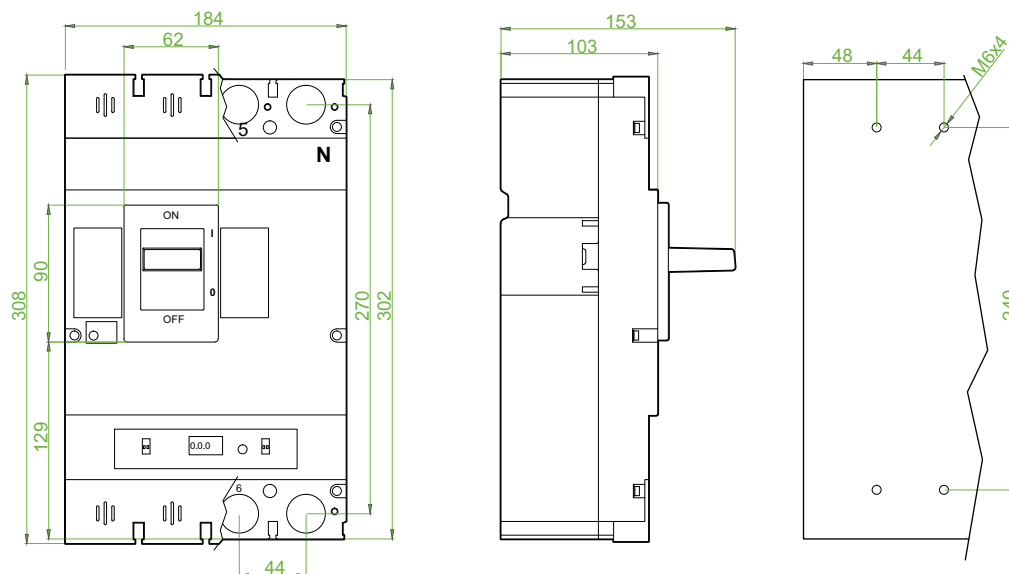
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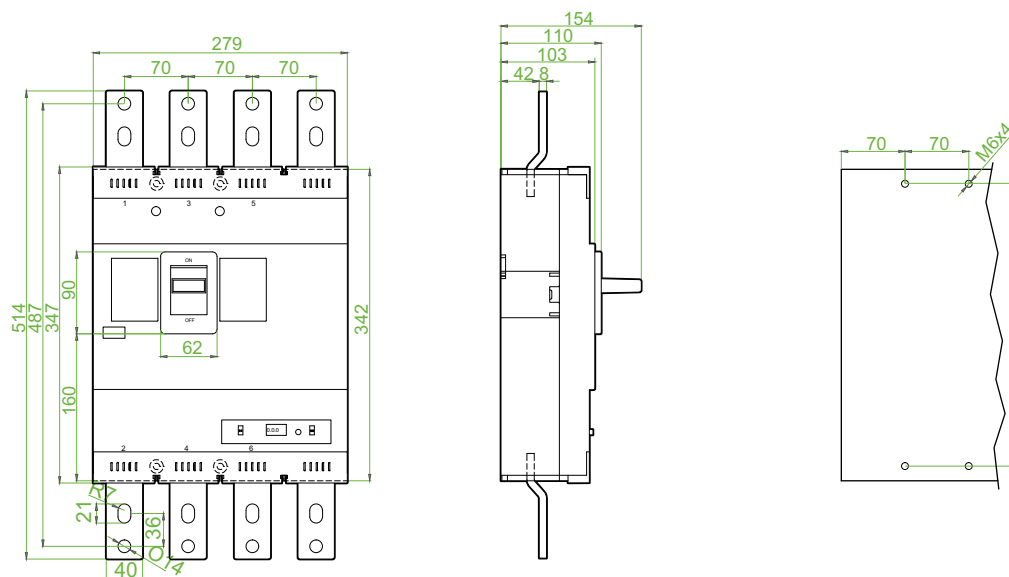
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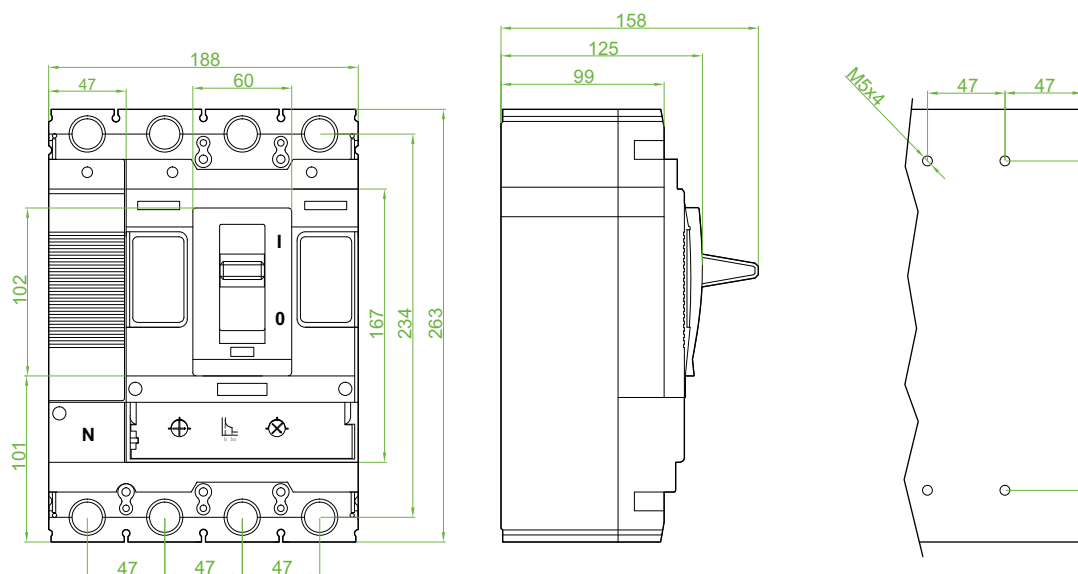
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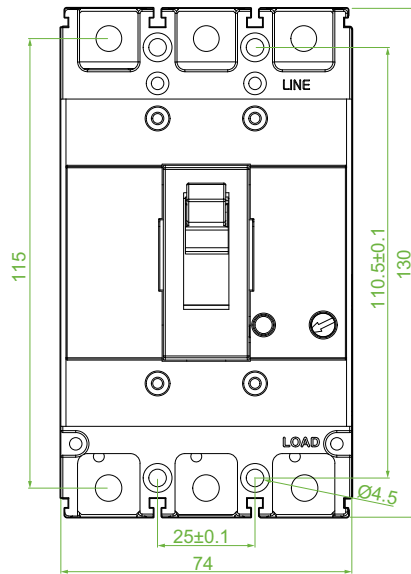
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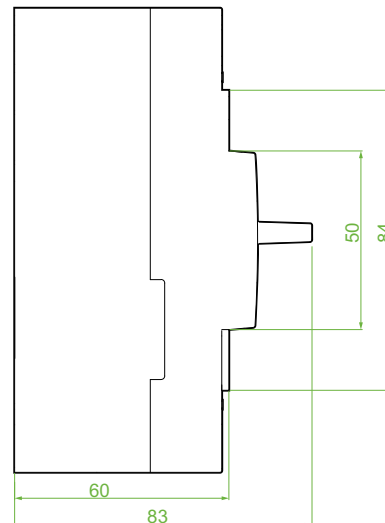
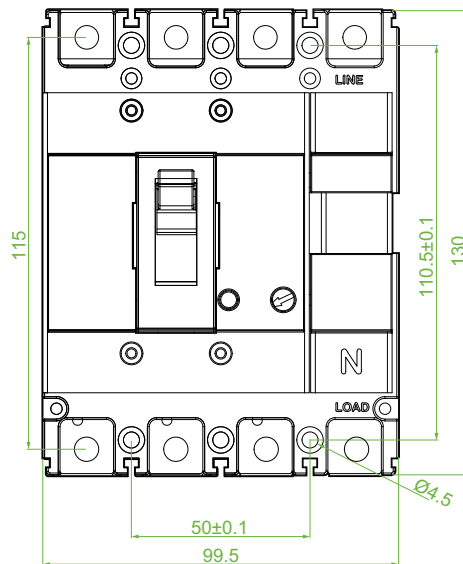
S630N



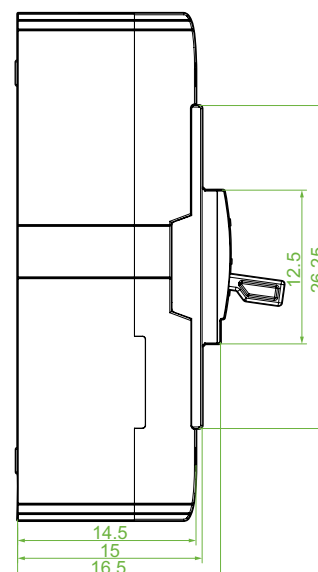
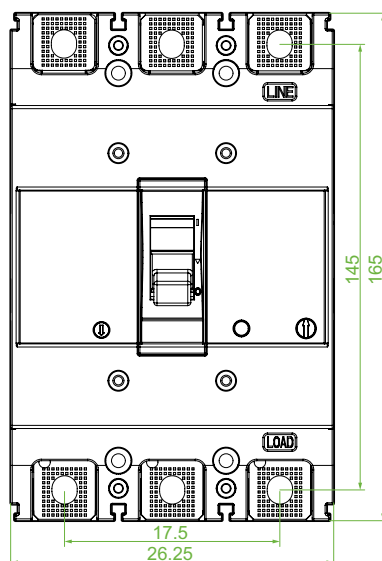
B100



B100N

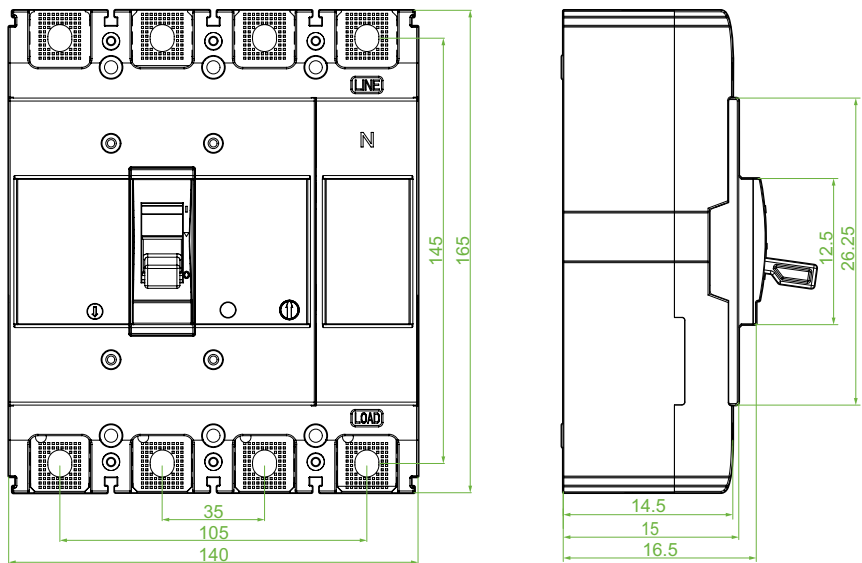


B250

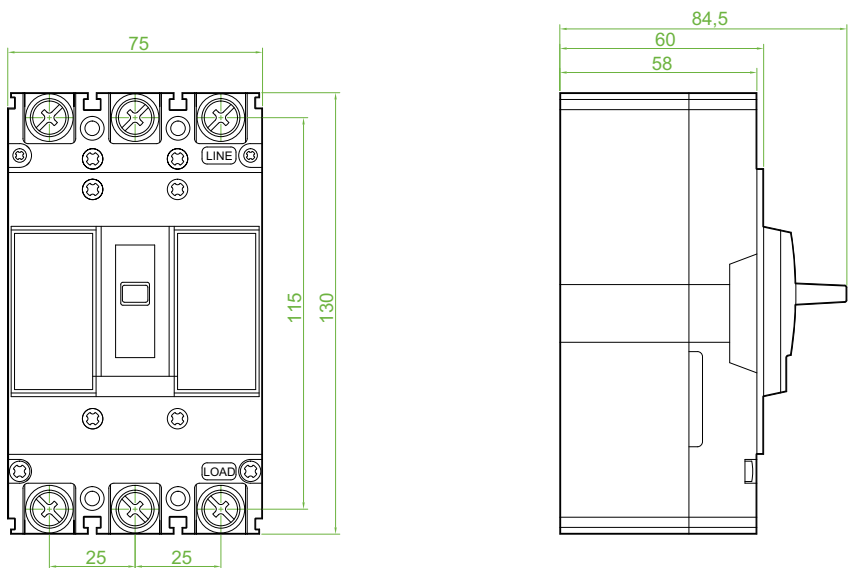


LV Moulded Case Circuit Breakers

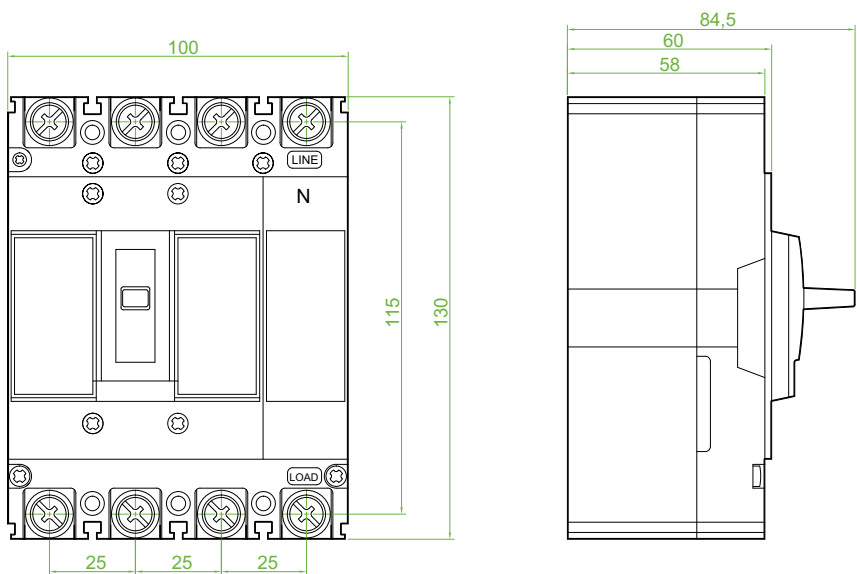
B250N



H125



H125N

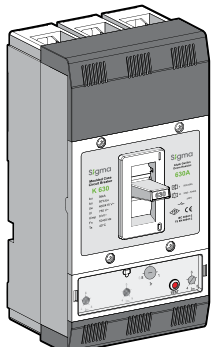
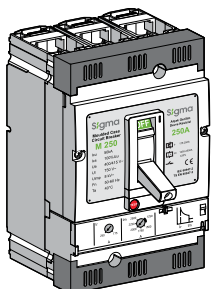
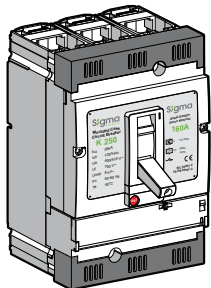
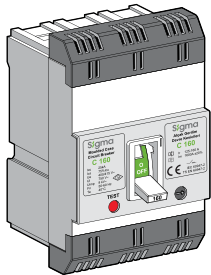


3 Poles, Thermal-Magnetic Adjustable Type, MCCB (Protection for Power Distribution & Network)

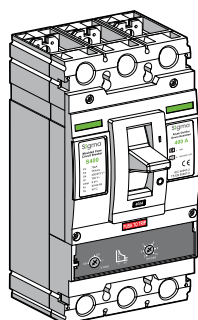
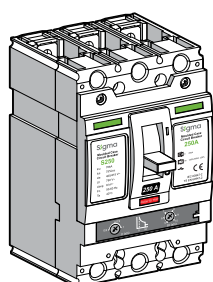
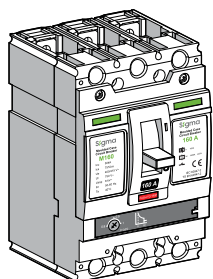
Type Code	Rated Current In (A)	Thermal Adj. Current Range Ir (A)	Instantaneous Tripping Current (Im)	Breaking Capacity Icu (kA)	Number in Cartoon	Order Code
B160	25	20-25	10xIn	25	8	3B160025
	32	25-32	10xIn	25	8	3B160032
	40	32-40	10xIn	25	8	3B160040
	50	40-50	10xIn	25	8	3B160050
	63	50-63	10xIn	25	8	3B160063
	80	63-80	10xIn	25	8	3B160080
	100	80-100	10xIn	25	8	3B160100
	125	100-125	10xIn	25	8	3B160125
B250	160	125-160	10xIn	25	8	3B160160
	200	160-200	10xIn	36	4	3B250200
C160	250	200-250	10xIn	36	4	3B250250
	16	10-16	15xIn	25	8	3C160016
	20	16-20	12xIn	25	8	3C160020
	25	20-25	12xIn	25	8	3C160025
	32	25-32	10xIn	25	8	3C160032
	40	32-40	10xIn	25	8	3C160040
	50	40-50	10xIn	25	8	3C160050
	63	50-63	10xIn	25	8	3C160063
	80	63-80	10xIn	25	8	3C160080
	100	80-100	10xIn	25	8	3C160100
	125	100-125	10xIn	25	8	3C160125
	160	125-160	10xIn	25	8	3C160160
K160	25	18-25	10xIn	36	6	3K160025
	32	23-32	10xIn	36	6	3K160032
	40	28-40	10xIn	36	6	3K160040
	50	35-50	10xIn	36	6	3K160050
	63	44-63	10xIn	36	6	3K160063
	80	56-80	10xIn	36	6	3K160080
	100	70-100	10xIn	36	6	3K160100
	125	88-125	10xIn	36	6	3K160125
	160	112-160	10xIn	36	6	3K160160
K250	63	44-63	(5-10)xIn	36	6	3K250063
	80	56-80	(5-10)xIn	36	6	3K250080
	100	70-100	(5-10)xIn	36	6	3K250100
	125	88-125	(5-10)xIn	36	6	3K250125
	160	112-160	(5-10)xIn	36	6	3K250160
	200	140-200	(5-10)xIn	36	6	3K250200
	250	175-250	(5-10)xIn	36	6	3K250250
K400	315	250-315	(5-10)xIn	36	2	3K400315
	400	315-400	(5-10)xIn	36	2	3K400400
K630	500	400-500	(5-10)xIn	36	2	3K630500
	630	500-630	(5-10)xIn	36	2	3K630630

NEW PRODUCT

NEW PRODUCT

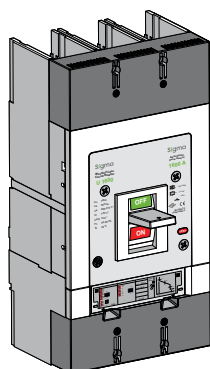


3 Poles, Thermal-Magnetic Adjustable Type, MCCB (Protection for Power Distribution & Network)



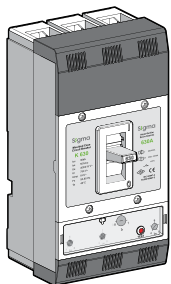
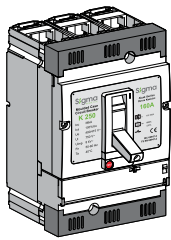
Type Code	Rated Current In (A)	Thermal Adj. Current Range Ir (A)	Instantaneous Tripping Current (Im)	Breaking Capacity Icu (kA)	Number in Cartoon	Order Code
M160	40	32-40	10xIn	50	6	3M160040
	50	40-50	10xIn	50	6	3M160050
	63	50-63	10xIn	50	6	3M160063
	80	63-80	10xIn	50	6	3M160080
	100	80-100	10xIn	50	6	3M160100
	125	100-125	10xIn	50	6	3M160125
	160	125-160	10xIn	50	6	3M160160
M250	63	44-63	(5-10)xIn	50	6	3M250063
	80	56-80	(5-10)xIn	50	6	3M250080
	100	70-100	(5-10)xIn	50	6	3M250100
	125	88-125	(5-10)xIn	50	6	3M250125
	160	112-160	(5-10)xIn	50	6	3M250160
	200	140-200	(5-10)xIn	50	6	3M250200
	250	175-250	(5-10)xIn	50	6	3M250250
M400	315	250-315	(5-10)xIn	50	2	3M400315
	400	315-400	(5-10)xIn	50	2	3M400400
M630	500	400-500	(5-10)xIn	50	2	3M630500
	630	500-630	(5-10)xIn	50	2	3M630630
M800	800	630-800	(5-10)xIn	50	2	3M800800
S250	100	80-100	(5-10)xIn	70	6	3S250100
	125	100-125	(5-10)xIn	70	6	3S250125
	160	125-160	(5-10)xIn	70	6	3S250160
	200	160-200	(5-10)xIn	70	6	3S250200
	250	200-250	(5-10)xIn	70	6	3S250250
S400	315	250-315	(5-10)xIn	70	2	3S400315
	400	315-400	(5-10)xIn	70	2	3S400400
S630	500	400-500	(5-10)xIn	70	2	3S630500
	630	500-630	(5-10)xIn	70	2	3S630630
S800	800	630-800	(5-10)xIn	70	2	3S800800

3 Poles, Electronic Type, MCCB



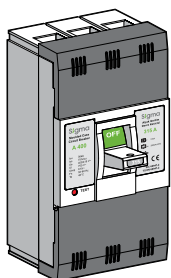
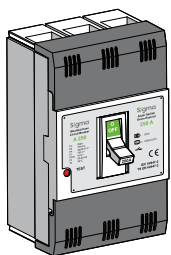
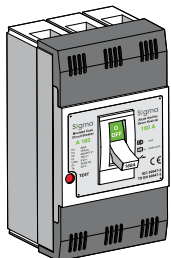
Type Code	Rated Current In (A)	Thermal Adj. Current Range Ir (A)	Instantaneous Tripping Current (Im)	Breaking Capacity Icu (kA)	Number in Cartoon	Order Code
U250	100	40-100	(1,5-10)xIn	36	6	3U250100
	160	64-160	(1,5-10)xIn	36	6	3U250160
	250	100-250	(1,5-10)xIn	36	6	3U250250
U1600	800	320-800	(1,5-10)xIn	36	6	3U160008
	1000	400-1000	(1,5-12)xIn	70	1	3U160010
	1250	500-1250	(1,5-12)xIn	70	1	3U160012
	1600	640-1600	(1,5-12)xIn	70	1	3U160016

3 Poles, Thermal-Magnetic Adjustable Type, MCCB (For Motor Protection)



Type Code	Rated Current In (A)	Thermal Adj. Current Ir(A)	Instantaneous Tripping Current (Im)	Breaking Capacity Icu (kA)	Number in Cartoon	Order Code
K160	25	18-25	15xIn	36	8	MK160025
	32	23-32	15xIn	36	8	MK160032
	40	28-40	15xIn	36	8	MK160040
	50	35-50	15xIn	36	8	MK160050
	63	44-63	15xIn	36	8	MK160063
	80	56-80	15xIn	36	8	MK160080
	100	70-100	15xIn	36	8	MK160100
	125	88-125	15xIn	36	8	MK160125
K250	160	112-160	15xIn	36	8	MK160160
	200	140-200	(10-15)xIn	36	6	MK250200
K400	250	175-250	(10-15)xIn	36	6	MK250250
	315	250-315	(8-12)xIn	36	4	MK400315
K630	400	315-400	(8-12)xIn	36	4	MK400400
	500	400-500	(8-12)xIn	36	2	MK630500
	630	500-630	(8-12)xIn	36	2	MK630630

3 Poles, Thermal-Magnetic Fixed Type, MCCB (Protection for Power Distribution & Network)



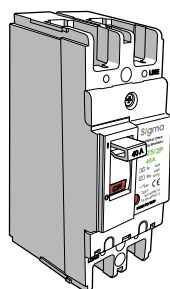
Type Code	Rated Current In (A)	Thermal Adj. Current Ir(A)	Instantaneous Tripping Current (Im)	Breaking Capacity Icu (kA)	Number in Cartoon	Order Code
A125	20	Fixed	10xIn	20	8	3A125020
	25	Fixed	10xIn	20	8	3A125025
	32	Fixed	10xIn	20	8	3A125032
	40	Fixed	10xIn	20	8	3A125040
	50	Fixed	10xIn	20	8	3A125050
	63	Fixed	10xIn	20	8	3A125063
	80	Fixed	10xIn	20	8	3A125080
	100	Fixed	10xIn	20	8	3A125100
A160	125	Fixed	10xIn	20	8	3A125125
	20	Fixed	10xIn	25	6	3A160020
	25	Fixed	10xIn	25	6	3A160025
	32	Fixed	10xIn	25	6	3A160032
	40	Fixed	10xIn	25	6	3A160040
	50	Fixed	10xIn	25	6	3A160050
	63	Fixed	10xIn	25	6	3A160063
	80	Fixed	10xIn	25	6	3A160080
A250	100	Fixed	10xIn	25	6	3A160100
	125	Fixed	10xIn	25	6	3A160125
A400	160	Fixed	10xIn	25	6	3A160160
	200	Fixed	10xIn	36	6	3A250200
A630	250	Fixed	10xIn	36	6	3A250250
	315	Fixed	10xIn	36	2	3A400315
A630	400	Fixed	10xIn	36	2	3A400400
	500	Sabit	10xIn	36	2	3A630500
	630	Sabit	10xIn	36	2	3A630630

1 Pole, Fixed Type, MCCB



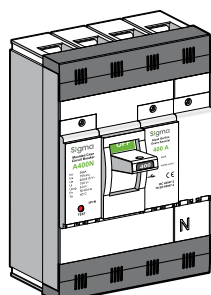
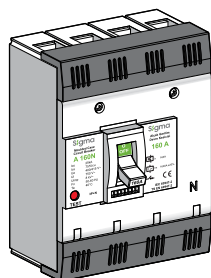
Type Code	Rated Current In (A)	Thermal Adj. Current Ir (A)	Instantaneous Tripping Current (Im)	Breaking Capacity Icu (kA)	Number in Cartoon	Order Code
KM200	16	Fixed	12xIn	36	20	1K200016
	20	Fixed	12xIn	36	20	1K200020
	25	Fixed	12xIn	36	20	1K200025
	32	Fixed	10xIn	36	20	1K200032
	40	Fixed	10xIn	36	20	1K200040
	50	Fixed	10xIn	36	20	1K200050
	63	Fixed	10xIn	36	20	1K200063
	80	Fixed	10xIn	36	20	1K200080
	100	Fixed	10xIn	36	20	1K200100
	125	Fixed	10xIn	36	20	1K200125
	160	Fixed	10xIn	36	20	1K200160
	200	Fixed	10xIn	36	20	1K200200

2 Poles, Thermal-Magnetic Fixed Type, MCCB



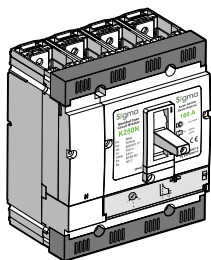
Type Code	Rated Current In (A)	Thermal Adj. Current Ir (A)	Instantaneous Tripping Current (Im)	Breaking Capacity Icu (kA)	Number in Cartoon	Order Code
A125/2P	20	Fixed	10xIn	20	24	2A125020
	25	Fixed	10xIn	20	24	2A125025
	32	Fixed	10xIn	20	24	2A125032
	40	Fixed	10xIn	20	24	2A125040
	50	Fixed	10xIn	20	24	2A125050
	63	Fixed	10xIn	20	24	2A125063
	80	Fixed	10xIn	20	24	2A125080
	100	Fixed	10xIn	20	24	2A125100
	125	Fixed	10xIn	20	24	2A125125

4 Poles, Thermal-Magnetic Fixed Type, MCCB (Protection for Power Distribution & Network)

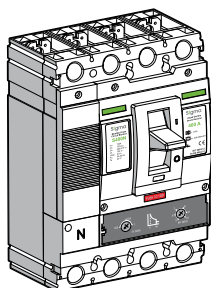


Type Code	Rated Current In (A)	Thermal Adj. Current Ir (A)	Instantaneous Tripping Current (Im)	Breaking Capacity Icu (kA)	Number in Cartoon	Order Code
A160N	25	Fixed	10xIn	25	6	4A160025
	32	Fixed	10xIn	25	6	4A160032
	40	Fixed	10xIn	25	6	4A160040
	50	Fixed	10xIn	25	6	4A160050
	63	Fixed	10xIn	25	6	4A160063
	80	Fixed	10xIn	25	6	4A160080
	100	Fixed	10xIn	25	6	4A160100
	125	Fixed	10xIn	25	6	4A160125
	160	Fixed	10xIn	25	6	4A160160
A250N	200	Fixed	10xIn	36	6	4A250200
	250	Fixed	10xIn	36	6	4A250250
A400N	315	Fixed	10xIn	36	2	4A400315
	400	Fixed	10xIn	36	2	4A400400
A630N	500	Fixed	10xIn	36	2	4A630500
	630	Fixed	10xIn	36	2	4A630630
A800N	800	Fixed	10xIn	36	1	4A800800

4 Poles, Thermal-Magnetic Adjustable Type, MCCB (Protection for Power Distribution & Network)



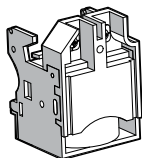
**NEW
PRODUCT**



**NEW
PRODUCT**

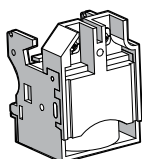
Type Code	Rated Current I _n (A)	Thermal Adj. Current I _r (A)	Instantaneous Trip- ping Current (I _m)	Breaking Capa- city I _{cu} (kA)	Number in Cartoon	Order Code
B160N	25	20-25	10xI _n	25	4	4B160025
	32	25-32	10xI _n	25	4	4B160032
	40	32-40	10xI _n	25	4	4B160040
	50	40-50	10xI _n	25	4	4B160050
	63	50-63	10xI _n	25	4	4B160063
	80	63-80	10xI _n	25	4	4B160080
	100	80-100	10xI _n	25	4	4B160100
	125	100-125	10xI _n	25	4	4B160125
K160N	160	125-160	10xI _n	25	4	4B160160
	16	11-16	15xI _n	36	4	4K160016
	20	14-20	12xI _n	36	4	4K160020
	25	18-25	10xI _n	36	4	4K160025
	32	23-32	10xI _n	36	4	4K160032
	40	28-40	10xI _n	36	4	4K160040
	50	35-50	10xI _n	36	4	4K160050
	63	44-63	10xI _n	36	4	4K160063
	80	56-80	10xI _n	36	4	4K160080
	100	70-100	10xI _n	36	4	4K160100
	125	88-125	10xI _n	36	4	4K160125
	160	112-160	10xI _n	36	4	4K160160
B250N	100	80-100	10xI _n	36	4	4B250100
	125	100-125	10xI _n	36	4	4B250125
	160	125-160	10xI _n	36	4	4B250160
	200	160-200	10xI _n	36	4	4B250200
	250	200-250	10xI _n	36	4	4B250250
K250N	200	140-200	(5-10)xI _n	36	4	4K250200
	250	175-250	(5-10)xI _n	36	4	4K250250
M250N	100	70-100	(5-10)xI _n	50	4	4M250100
	125	88-125	(5-10)xI _n	50	4	4M250125
	160	112-160	(5-10)xI _n	50	4	4M250160
	200	140-200	(5-10)xI _n	50	4	4M250200
	250	175-250	(5-10)xI _n	50	4	4M250250
S400N	315	250-315	(5-10)xI _n	70	2	4S400315
	400	315-400	(5-10)xI _n	70	2	4S400400
S630N	500	400-500	(5-10)xI _n	70	2	4S630500
	630	500-630	(5-10)xI _n	70	2	4S630630

Shunt Trip Release



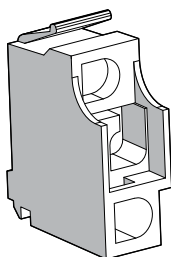
Applicable MCCB	Coil Voltage (V)	Order Code
C160	230 AC	C0160AB230AC
K160 - K250 - M250 - K160N - K250N - M250N - U250	230 AC	K0250AB230AC
K160 - K250 - M250 - K160N - K250N - M250N - U250	24- 30 DC	K0250AB030DC
M160 - S250 - S400 - S630 - S400N - S630N	230 AC	S0630AB230AC
K400 - M400 - K630 - M630	230 AC	K0630AB230AC
A160 - A160N	230 AC	A0160AB230AC
A250 - A250N	230 AC	A0250AB230AC
A400 - A400N - A630N - M800 - S800 - A800N	230 AC	A0800AB230AC
U1600	230 AC	U1600AB230AC
B160 - B160N	230 AC	B0160AB230AC
B250 - B250N	230 AC	B0160AB230AC

Under Voltage Release



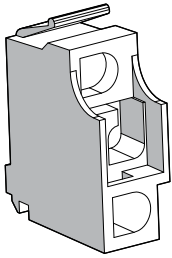
Applicable MCCB	Coil Voltage (V)	Order Code
C160	400 AC	C0160DG400AC
K160 - K250 - M250 - K160N - K250N - M250N - U250	400 AC	K0250DG400AC
M160 - S250 - S400 - S630 - S400N - S630N	400 AC	S0630DG400AC
K400 - M400 - K630 - M630	400 AC	K0630DG400AC
A160 - A160N	400 AC	A0160DG400AC
A250 - A250N	400 AC	A0250DG400AC
A400 - A400N - A630N - M800 - S800 - A800N	400 AC	A0800DG400AC
U1600	400 AC	U1600DG400AC

Auxiliary Contact



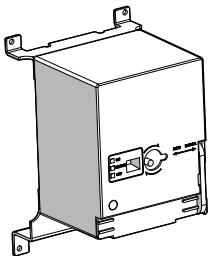
Applicable MCCB	Auxiliary Contact	Order Code
C160	1NO+1NC	C0160YK
C160	2NO+2NC	C0160YL
K160 - K250 - M250 - K160N - K250N - M250N - U250	1NO+1NC	K0250YK
M160 - S250 - S400 - S630 - S400N - S630N	1NO+1NC	S0630YK
K400 - M400 - K630 - M630	1NO+1NC	K0630YK
A160 - A160N	1NO+1NC	A0160YK
A250 - A250N	1NO+1NC	A0250YK
A400 - A400N - A630N - M800 - S800 - A800N	1NO+1NC	A0800YK
U1600	1NO+1NC	U1600YK
B160 - B160N - B250 - B250N	1NO+1NC	B0250YK
B160 - B160N - B250 - B250N	2NO+2NC	B0250YL

Alarm Contact



Applicable MCCB	Auxiliary Contact	Order Code
C160	1NO+1NC	C0160AK
K160 - K250 - M250 - K160N - K250N - M250N - U250	1NO+1NC	K0250AK
M160 - S250 - S400 - S630 - S400N - S630N	1NO+1NC	S0630AK
K400 - M400 - K630 - M630	1NO+1NC	K0630AK
A160 - A160N	1NO+1NC	A0160AK
A250 - A250N	1NO+1NC	A0250AK
A400 - A400N - A630N - M800 - S800 - A800N	1NO+1NC	A0800AK
U1600	1NO+1NC	U1600AK
B160 - B160N	1NO+1NC	B0250AK

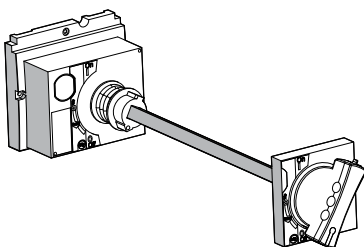
Motor Operator



**NEW
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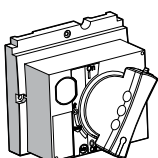
Applicable MCCB	Coil Voltage (V)	Order Code
K160 - K250 - M250 - K160N - K250N - M250N - U250	230 AC	K0250MM
K400 - M400 - K630 - M630	230 AC	K0630MM
S250	230 AC	S0250MM
S400-S630	230 AC	S0400MM
M160	230 AC	M0160MM
A160 - A160N	230 AC	A0160MM
A250 - A250N	230 AC	A0250MM
A400 - A400N	230 AC	A0400MM
A630N - M800 - S800 - A800N	230 AC	M0800MM
U1600	230 AC	U1600MM

Extension Rotary Handle (with extension shaft)



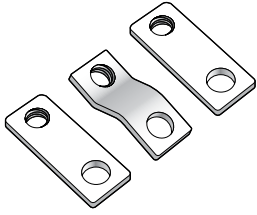
Applicable MCCB	Order Code
K160 - K250 - M250 - K160N - K250N - M250N	K0250DK
M160	M0160DK
S250	S0250DK
K400 - M400 - K630 - M630	K0630DK
A160 - A160N	A0160DK
A250 - A250N	A0250DK
A400 - A400N	A0400DK
A630N - M800 - S800 - A800N	M0800DK
U1600	U1600DK

Rotary Handle (Direct Assembly)



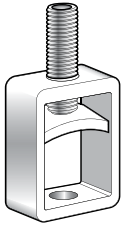
Applicable MCCB	Order Code
K160 - K250 - M250 - K160N - K250N - M250N - U250	K0250DU
M160	M0160DU
S250	S0250DU

Extension Bus Bar Set (6 Pcs/Set)



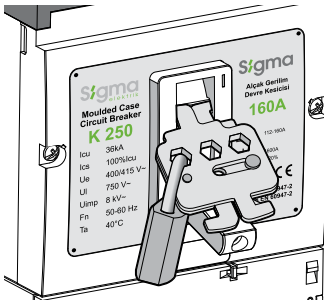
Applicable MCCB	Number in Cartoon (Pcs)	Order Code
K160 - K250 - M250 - S250 - A250 - U250	6	K0250UB
K160N - K250N - M250N - A250N	8	K0250UN
A160 - M160	6	A0160UB
A160N	8	A0160UN
A400 - S400	6	A0400UB
A400N - S400N	8	A0400UN
S630	6	S0630UB
S630N	8	S0630UN
U1600	6	U1600UB
B160	6	B0160UB
B160N	8	B0160UN

Connection Terminals



Applicable MCCB	Piece	Order Code
K160 - K250 - M250 - U250	6	K0250BK
A160-B160	6	A3160BK
A160N-B160N	8	A4160BK
B250	6	B3250BK
B250N	8	B4250BK

Mechanical Pad Lock

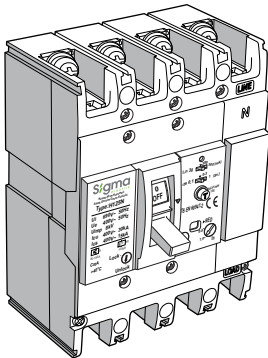


Applicable MCCB	Order Code
KM160 - C160 - K160 - K250 - M250 - K400 - M400 - K630 - M630 - U250 K160N - K250N - M250N - S400N - S630N	SEMK101

Note: Padlock is not included offered price.



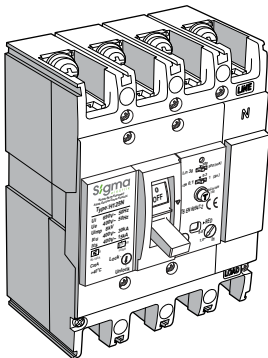
4 Poles Earth Leakage Circuit Breakers, Thermal Adjustable



Type Code	Rated Current In (A)	No of Poles	Residual Current I _{Δn} (mA)	Threshold Tripping Time (s)	Order Code
H125N	40	4	30-300-500	0.1-0.3-1	4H125040
	50				4H125050
	63				4H125063
	80				4H125080
	100				4H125100
	125				4H125125
H250N	160	4	30-300-500	0.1-0.3-1	4H250160
	200				4H250200
	250				4H250250

Note: Please ask delivery period for 160-200-250 A.

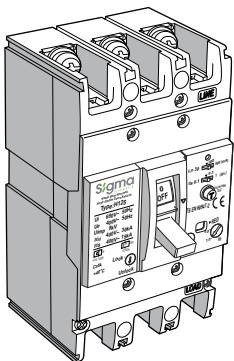
4 Poles Earth Leakage Circuit Breakers, Thermal Adjustable (with Shunt Trip Release)



Type Code	Rated Current In (A)	No of Poles	Residual Current I _{Δn} (mA)	Threshold Tripping Time (s)	Order Code
H125N	40	4	30-300-500	0.1-0.3-1	4J125040
	50				4J125050
	63				4J125063
	80				4J125080
	100				4J125100
	125				4J125125
H250N	160	4	30-300-500	0.1-0.3-1	4J250160
	200				4J250200
	250				4J250250

Note: Please ask delivery period for 160-200-250 A.

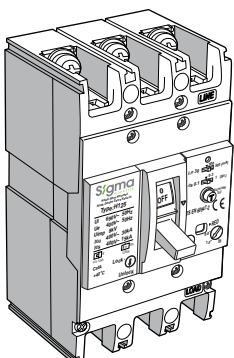
3 Poles Earth Leakage Circuit Breakers, Thermal Adjustable



Type Code	Rated Current In (A)	No of Poles	Residual Current I _{Δn} (mA)	Threshold Tripping Time (s)	Order Code
H125	40	3	30-300-500	0.1-0.3-1	3H125040
	50				3H125050
	63				3H125063
	80				3H125080
	100				3H125100
	125				3H125125
H250	160	3	30-300-500	0.1-0.3-1	3H250160
	200				3H250200
	250				3H250250

Note: Please ask delivery period for 160-200-250 A.

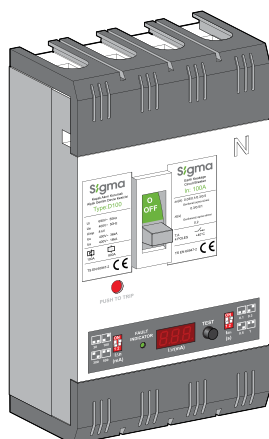
3 Poles Earth Leakage Circuit Breakers, Thermal Adjustable (with Shunt Trip Release)



Type Code	Rated Current In (A)	No of Poles	Residual Current I _{Δn} (mA)	Threshold Tripping Time (s)	Order Code
H125	40	3	30-300-500	0.1-0.3-1	3J125040
	50				3J125050
	63				3J125063
	80				3J125080
	100				3J125100
	125				3J125125
H250	160	3	30-300-500	0.1-0.3-1	3J250160
	200				3J250200
	250				3J250250

Note: Please ask delivery period for 160-200-250 A.

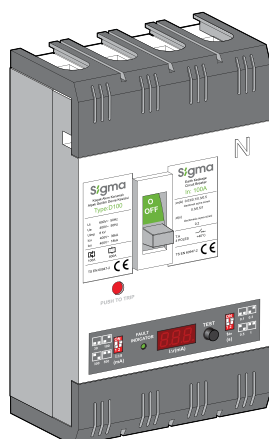
4 Poles, Earth Leakage Circuit Breakers



Type Code	Rated Current In (A)	Breaking Capacity Icu (kA)	Threshold Current (mA)	Threshold Trip-time (sec)	Number in Carton	Order Code
D100	40	36	0,03-0,1-0,3-0,5	0,1-0,3-0,5-1	4	4D100040
	50	36	0,03-0,1-0,3-0,5	0,1-0,3-0,5-1	4	4D100050
	63	36	0,03-0,1-0,3-0,5	0,1-0,3-0,5-1	4	4D100063
	80	36	0,03-0,1-0,3-0,5	0,1-0,3-0,5-1	4	4D100080
	100	36	0,03-0,1-0,3-0,5	0,1-0,3-0,5-1	4	4D100100
D250	125	36	0,03-0,1-0,3-0,5	0,1-0,3-0,5-1	2	4D250125
	160	36	0,03-0,1-0,3-0,5	0,1-0,3-0,5-1	2	4D250160
	200	36	0,03-0,1-0,3-0,5	0,1-0,3-0,5-1	2	4D250200
	250	36	0,03-0,1-0,3-0,5	0,1-0,3-0,5-1	2	4D250250
D400	250	50	0,1-0,2-0,3-0,5	0,1-0,3-0,5-1	2	4D400250
	315	50	0,1-0,2-0,3-0,5	0,1-0,3-0,5-1	2	4D400315
	400	50	0,1-0,2-0,3-0,5	0,1-0,3-0,5-1	2	4D400400
D630	630	50	0,1-0,2-0,3-0,5	0,1-0,3-0,5-1	1	4D630630

Note: D400 and D630 type LV Circuit breakers are dispatched with bus bars as standard.
Please ask delivery period for D250 250A LV MCCB.

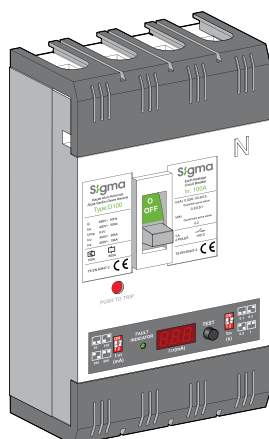
4 Poles, Earth Leakage Circuit Breakers (with Shunt Trip Release)



Type Code	Rated Current In (A)	Breaking Capacity Icu (kA)	Threshold Current (mA)	Threshold Trip-time (sec)	Number in Carton	Order Code
D100	40	36	0,03-0,1-0,3-0,5	0,1-0,3-0,5-1	4	4E100040
	50	36	0,03-0,1-0,3-0,5	0,1-0,3-0,5-1	4	4E100050
	63	36	0,03-0,1-0,3-0,5	0,1-0,3-0,5-1	4	4E100063
	80	36	0,03-0,1-0,3-0,5	0,1-0,3-0,5-1	4	4E100080
	100	36	0,03-0,1-0,3-0,5	0,1-0,3-0,5-1	4	4E100100
D250	125	36	0,03-0,1-0,3-0,5	0,1-0,3-0,5-1	2	4E250125
	160	36	0,03-0,1-0,3-0,5	0,1-0,3-0,5-1	2	4E250160
	200	36	0,03-0,1-0,3-0,5	0,1-0,3-0,5-1	2	4E250200
	250	36	0,03-0,1-0,3-0,5	0,1-0,3-0,5-1	2	4E250250
D400	250	50	0,03-0,1-0,3-0,5	0,1-0,3-0,5-1	2	4E400250
	315	50	0,1-0,2-0,3-0,5	0,1-0,3-0,5-1	2	4E400315
	400	50	0,1-0,2-0,3-0,5	0,1-0,3-0,5-1	2	4E400400
D630	630	50	0,1-0,2-0,3-0,5	0,1-0,3-0,5-1	1	4E630630

Note: D400 and D630 type LV Circuit breakers are dispatched with bus bars as standard.
Please ask delivery period for D250 250A

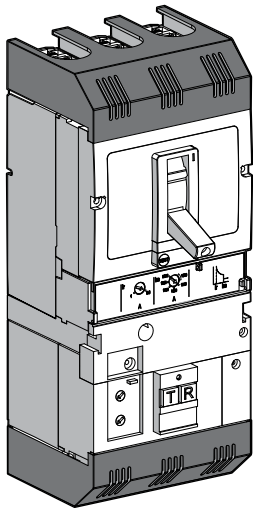
4 Poles, Earth Leakage Circuit Breakers (Shunt Trip Release +Auxiliary Contacts)



Type Code	Rated Current In (A)	Breaking Capacity Icu (kA)	Threshold Current (mA)	Threshold Trip-time (sec)	Number in Carton	Order Code
D100	40	36	0,03-0,1-0,3-0,5	0,1-0,3-0,5-1	4	4F100040
	50	36	0,03-0,1-0,3-0,5	0,1-0,3-0,5-1	4	4F100050
	63	36	0,03-0,1-0,3-0,5	0,1-0,3-0,5-1	4	4F100063
	80	36	0,03-0,1-0,3-0,5	0,1-0,3-0,5-1	4	4F100080
	100	36	0,03-0,1-0,3-0,5	0,1-0,3-0,5-1	4	4F100100
D250	125	36	0,03-0,1-0,3-0,5	0,1-0,3-0,5-1	2	4F250125
	160	36	0,03-0,1-0,3-0,5	0,1-0,3-0,5-1	2	4F250160
	200	36	0,03-0,1-0,3-0,5	0,1-0,3-0,5-1	2	4F250200
	250	36	0,03-0,1-0,3-0,5	0,1-0,3-0,5-1	2	4F250250
D400	250	50	0,03-0,1-0,3-0,5	0,1-0,3-0,5-1	2	4F400250
	315	50	0,1-0,2-0,3-0,5	0,1-0,3-0,5-1	2	4F400315
	400	50	0,1-0,2-0,3-0,5	0,1-0,3-0,5-1	2	4F400400
D630	630	50	0,1-0,2-0,3-0,5	0,1-0,3-0,5-1	1	4F630630

Note: D400 and D630 type LV Circuit breakers are dispatched with bus bars as standard.
Please ask delivery period for D250 250A

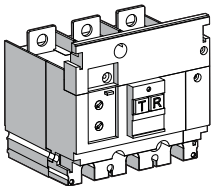
3 Poles, Earth Leakage Circuit Breakers



Type Code	Rated Current In (A)	Breaking Capacity Icu (kA)	Threshold Current (mA)	Threshold Tripping Time (sec)	Number in Cartoon	Order Code
F250	25	36	0,03-0,3-0,5-1-3	0-0,1-0,5-1	4	3F250025
	32	36	0,03-0,3-0,5-1-3	0,1-0,3-0,5-1	4	3F250032
	40	36	0,03-0,3-0,5-1-3	0,1-0,3-0,5-1	4	3F250040
	50	36	0,03-0,3-0,5-1-3	0,1-0,3-0,5-1	4	3F250050
	63	36	0,03-0,3-0,5-1-3	0,1-0,3-0,5-1	4	3F250063
	80	36	0,03-0,3-0,5-1-3	0,1-0,3-0,5-1	4	3F250080
	100	36	0,03-0,3-0,5-1-3	0,1-0,3-0,5-1	4	3F250100
	125	36	0,03-0,3-0,5-1-3	0,1-0,3-0,5-1	2	3F250125
	160	36	0,03-0,3-0,5-1-3	0,1-0,3-0,5-1	2	3F250160
	200	36	0,03-0,3-0,5-1-3	0,1-0,3-0,5-1	2	3F250200
	250	36	0,03-0,3-0,5-1-3	0,1-0,3-0,5-1	2	3F250250

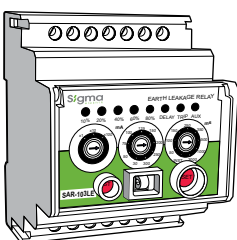
Type Code	Rated Current In (A)	Breaking Capacity Icu (kA)	Threshold Current (mA)	Threshold Tripping Time (sec)	Number in Cartoon	Order Code
F250 (With Shunt Trip Release)	25	36	0,03-0,3-0,5-1-3	0,1-0,3-0,5-1	4	3G250025
	32	36	0,03-0,3-0,5-1-3	0,1-0,3-0,5-1	4	3G250032
	40	36	0,03-0,3-0,5-1-3	0,1-0,3-0,5-1	4	3G250040
	50	36	0,03-0,3-0,5-1-3	0,1-0,3-0,5-1	4	3G250050
	63	36	0,03-0,3-0,5-1-3	0,1-0,3-0,5-1	4	3G250063
	80	36	0,03-0,3-0,5-1-3	0,1-0,3-0,5-1	4	3G250080
	100	36	0,03-0,3-0,5-1-3	0,1-0,3-0,5-1	4	3G250100
	125	36	0,03-0,3-0,5-1-3	0,1-0,3-0,5-1	2	3G250125
	160	36	0,03-0,3-0,5-1-3	0,1-0,3-0,5-1	2	3G250160
	200	36	0,03-0,3-0,5-1-3	0,1-0,3-0,5-1	2	3G250200
	250	36	0,03-0,3-0,5-1-3	0,1-0,3-0,5-1	2	3G250250

Earth Leakage Module



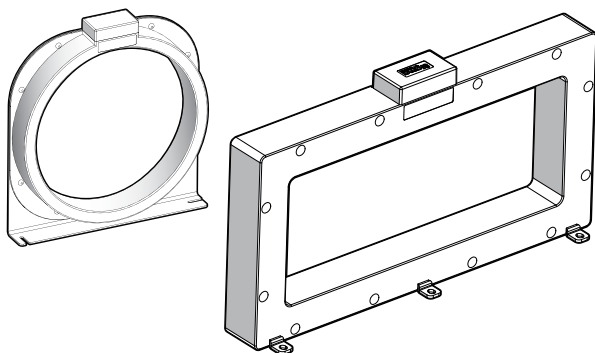
Applicable MCCB	Threshold Current (mA)	Threshold Tripping Time (sec)	Order Code
K160 - K250 - M250 - U250	0,03-0,3-0,5-1-3	0-0,1-0,5-1	3F250

Earth Leakage Protection Relay



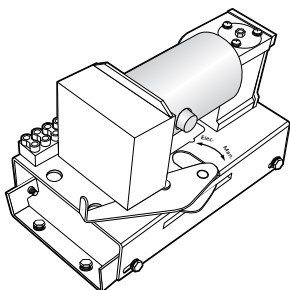
Threshold Current (mA)	Threshold Tripping Time (sec)	Order Code
0,03 - 30	0,03-3	SAR103LE

Toroidal Current Transformer



Type	Inner Diameter Φ (mm)	Order Code
ST-80	80	ST080
ST-110	110	ST110
ST-160	160	ST160
ST-210	210	ST210
ST-300	300	ST300
STA-110	110	STA110
STA-210	210	STA210
ST-280x115 (Rectangle)	280x115	STD280
ST-470x160 (Rectangle)	470x160	STD470

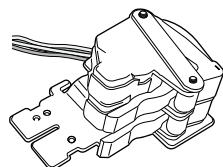
Motor Operator



Applicable MCCB	Coil Voltage (V)	Order Code
D100	230 AC	D0100MM
D250	230 AC	D0250MM
D400	230 AC	D0400MM
D630	230 AC	D0630MM

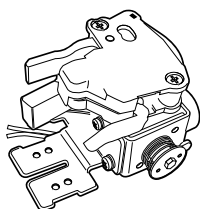
Note: Ask delivery time for Motor Mechanism to be used in D Type AG Circuit Breakers.

Auxiliary Contacts



Applicable MCCB	Auxiliary Contact	Order Code
D100	1NO+1NC	D0100YK
D250	1NO+1NC	D0250YK
D400	1NO+1NC	D0400YK
D630	1NO+1NC	D0630YK
F250	1NO+1NC	K0250YK

Shunt Trip Release



Applicable MCCB	Coil Voltage (V)	Order Code
D100	230 AC	D0100AB
D250	230 AC	D0250AB
D400	230 AC	D0400AB
D630	230 AC	D0630AB
F250	230 AC	K0250AB

Shunt Trip Release



Type Code	Rated Current In (A)	Applicable MCCB	Order Code
H125AB	230	40-250 A	H125AB
H250AB	230	40-250 A	H250AB

LV Air Circuit Breakers - Technical Specifications

Type				SDA-2000/ SFA-2000	SDA-3200/ SFA-3200	SDA-4000/ SFA-4000	SDA-6300
Type Of Structure				Draw-Out/Fixed	Draw-Out/Fixed	Draw-Out/Fixed	Draw-Out/Fixed
No of Poles				3/4	3/4	3/4	3/4
Electrical Specifications							
Rated Current (at 40°C)		A		630, 800, 1000, 1250, 1600, 2000	2500, 3200	4000	5000, 6300
Rated Operating Voltage	Ue	V	AC	415	415	415	415
Rated Insulation Voltage	Ui	V		1000	1000	1000	1000
Rated Impulse Withstand Voltage	Uimp	kV		8	8	8	8
Disconnecting Capacity							
Rated Ultimate Short Circuit Breaking Capacity	Icu	kA	690 V AC	50	65	65	65
			415 V AC	80	100	100	100
Rated Service Short Circuit Breaking Capacity	Ics	kA	690 V AC	40	50	50	50
			415 V AC	50	65	65	65
Utilization Category				A, B	A, B	A, B	A, B
Pollution Degree				3	3	3	3
Electrical Life	ON-OFF		415 V	1000	500	500	500
Mechanical Life	ON-OFF			10000	10000	8000	8000
Protection Unit				Electronic	Electronic	Electronic	Electronic
Long Time Delay Current	Ir1	A		(0,4-1)xIn	(0,4-1)xIn	(0,4-1)xIn	(0,4-1)xIn
Long Time Delay Time	t1	sn		0-480	0-480	0-480	0-480
Short Time Delay Current	Ir2	A		(0,4-15)xIn	(0,4-15)xIn	(0,4-15)xIn	(0,4-15)xIn
Short Time Delay Time	t1	sn		0,1-1	0,1-1	0,1-1	0,1-1
Instantaneous Breaking Current	Ir3	A		In...50 kA +OFF	In...50 kA +OFF	In...50 kA +OFF	In...50 kA +OFF
Earth Fault Current	Ir4	A		(0,2-0,8)xIn+OFF	(0,2-0,8)xIn+OFF	(0,2-0,8)xIn.OFF	(0,2-0,8)xIn.OFF
Ambient Temperature							
Max. Operational Ambient Temperature		°C		-25 to +70	-25 to +70	-25 to +70	-25 to +70
Max. Storage Temperature		°C		-40 to +80	-40 to +80	-40 to +80	-40 to +80
Accessories							
Shunt Trip Coil (230 V AC)				On Request	On Request	On Request	On Request
Under Voltage Coil (230 V AC)				On Request	On Request	On Request	On Request
Delay Type Under Voltage Coil (230 V AC)				On Request	On Request	On Request	On Request
Closing Coil (230 V AC)				On Request	On Request	On Request	On Request
Auxiliary Contact (2NO+2NC)				standard	standard	standard	standard
Motor Operator (230 V AC)				On Request	On Request	On Request	On Request
Mechanical Interlock				On Request	On Request	On Request	On Request

Protection Properties for Air Circuit Breakers

Long-Time Delay Overcurrent Protection

Setting Current (Ir1)	Error	Current	Tripping Time (s)						Time Error
(0.4~1)xIn	±%10	1.05xIr1	<2h non-tripping						
		1.30xIr1	<1h trip						
		1.5x Ir1 (t1)	15 sn	30 sn	60 sn	120 sn	240 sn	480 sn	±10%
		2.0xIr1	8.4 sn	16.9 sn	33.7 sn	67.5 sn	135 sn	270 sn	±10%

Short-Time Delay Overcurrent Protection

Setting Current (Ir1)	Error	Current	Tripping Time (s)						Time Error
(0.4~15)xIr2	±%10	≤0.9xIr2	<2h non-tripping						
		>1.1xIr2	<1h trip						
		Delay setting (ts)	0.1 sn	0.2 sn	0.3 sn	0.4 sn			±15%
		>8xIr2	0.06 sn	0.14 sn	0.23 sn	0.35 sn			±15%

Instantaneous Tripping Protection

Setting Current (Ir1)	Error	Current	Time Error
1.0 In~50kA	±%15	≤0.85Ir3	non-tripping
		>1.15Ir3	trip

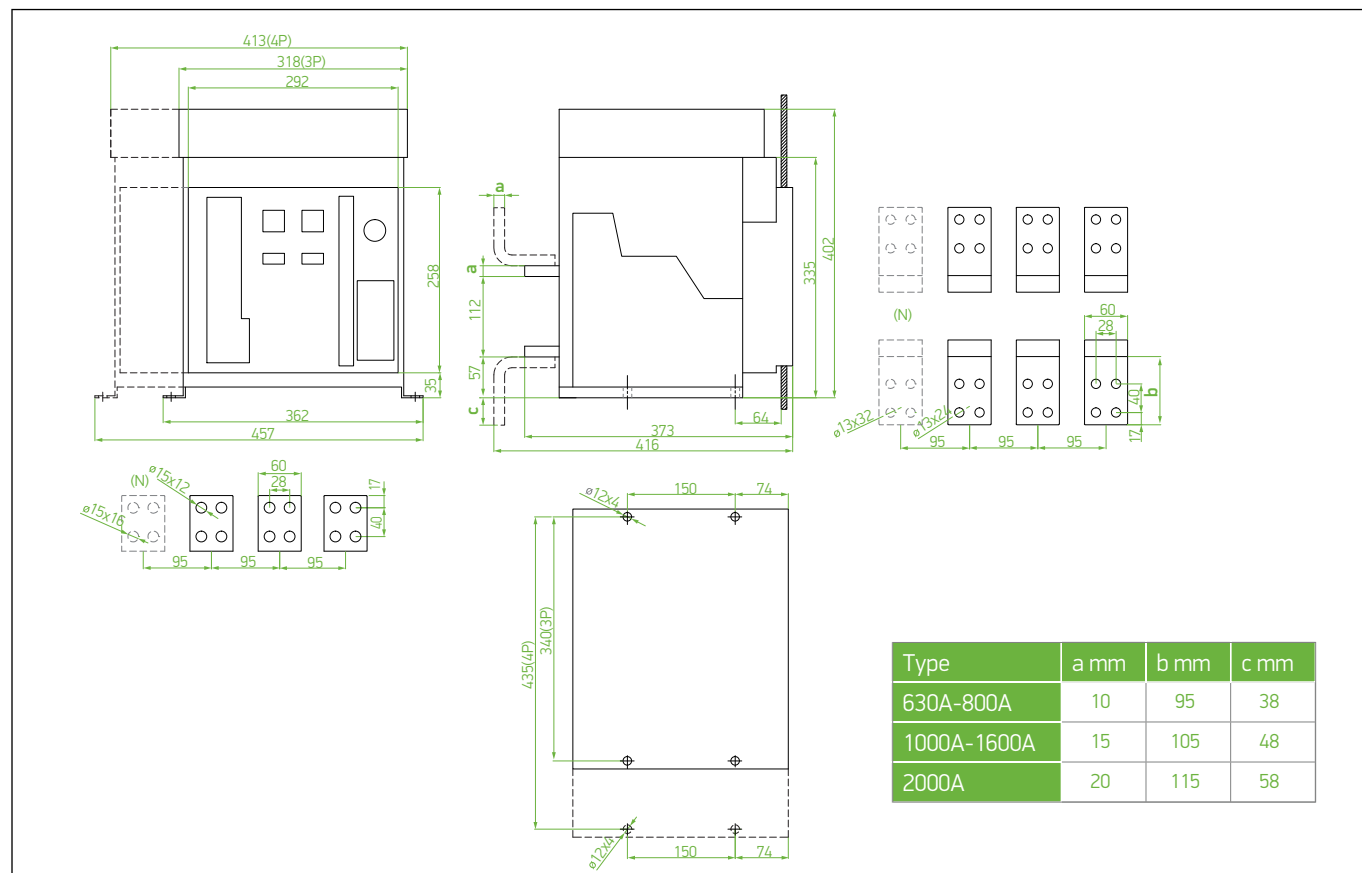
Earthing Fault Protection

Setting Current (Ir1)	Error	Current	Tripping Time (s)						Time Error
(0.2~0.8)Ir4	±%10	≤0.9xIr4	non-tripping						
		>1.10Ir4	Tripping Time (sec)						
		Tripping time (TG)	0.1 sn	0.2 sn	0.3 sn	0.4 sn			±15%

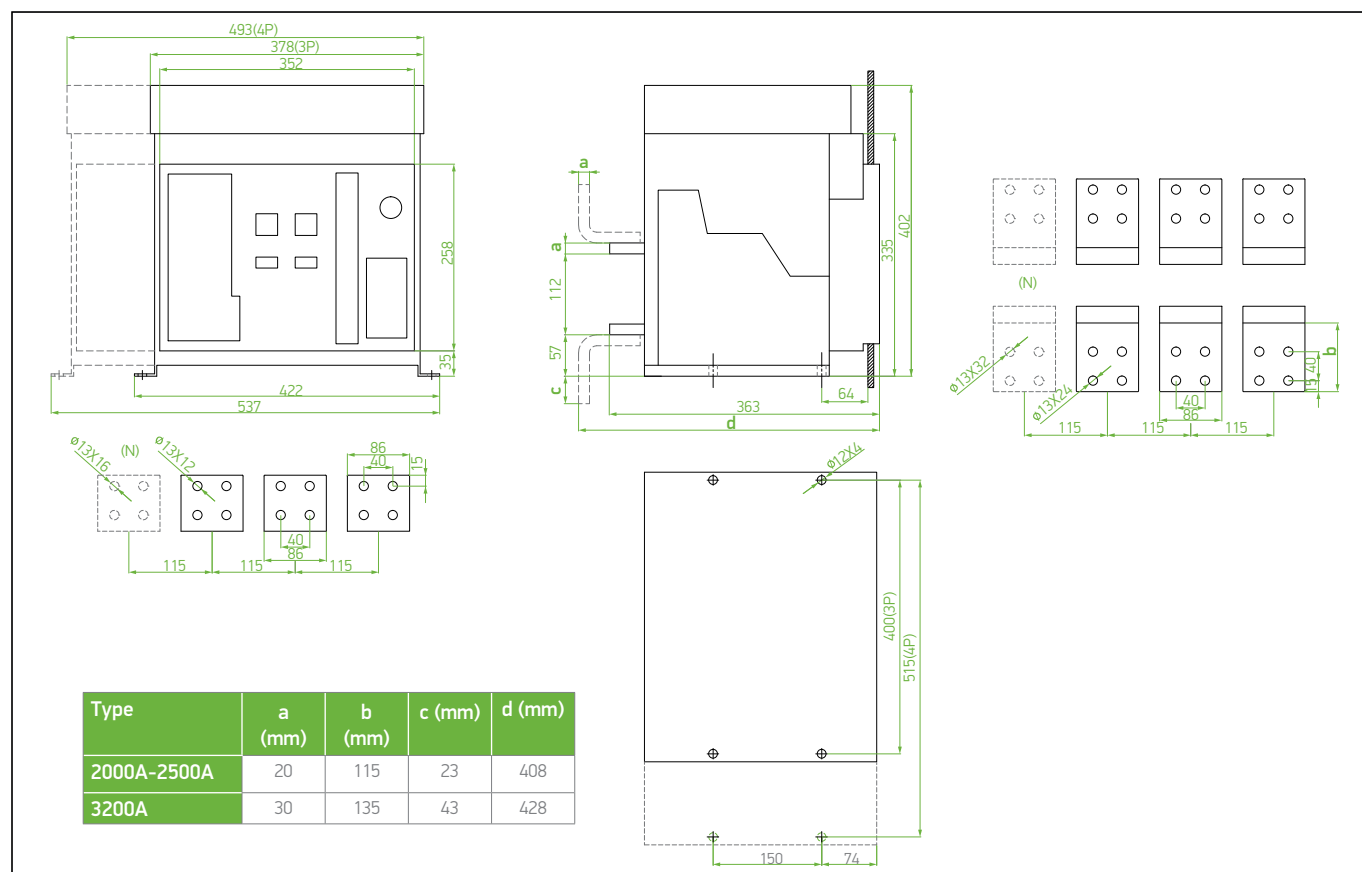


Dimensions

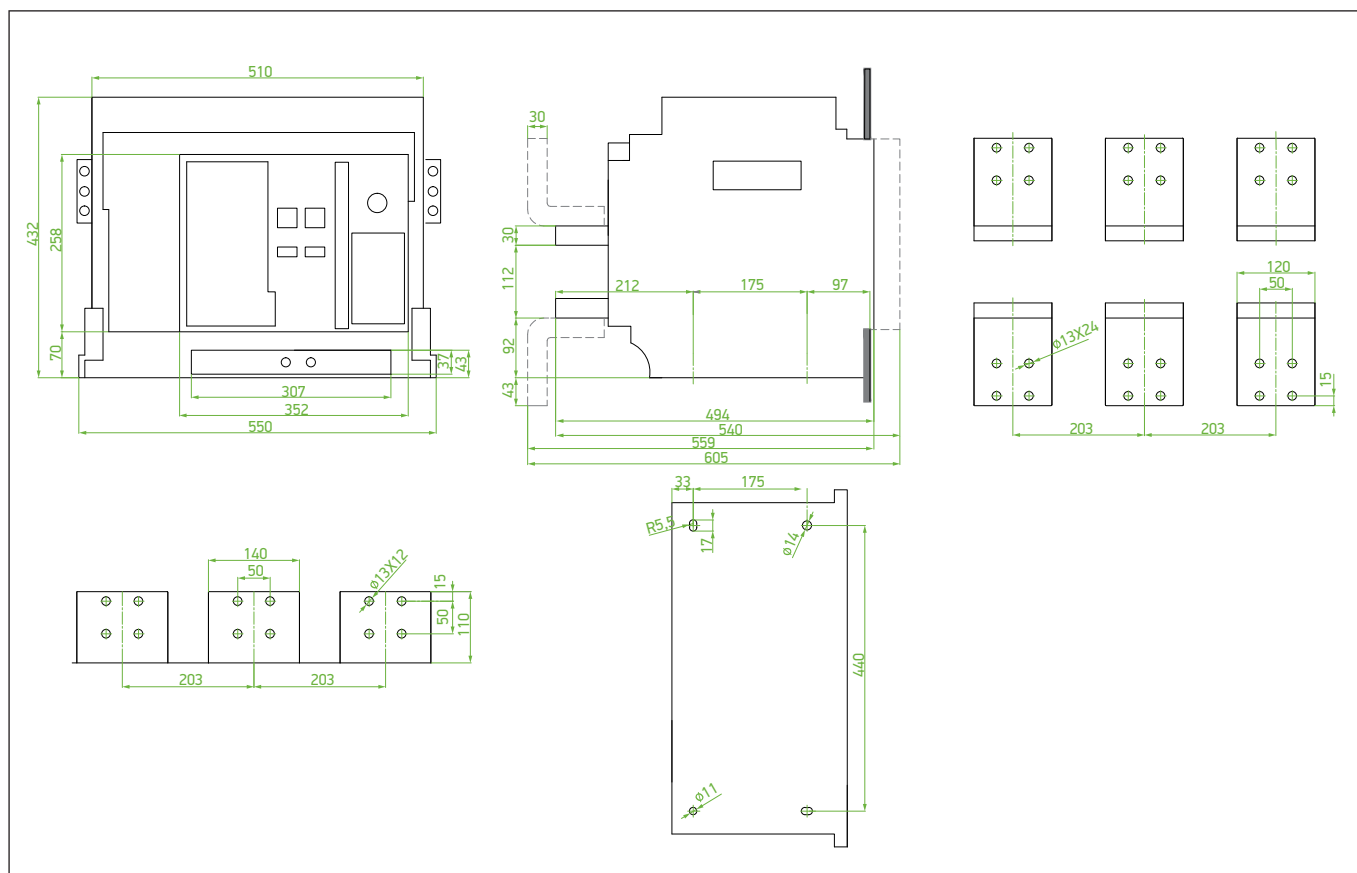
SFA-2000 SFA-2000(N)



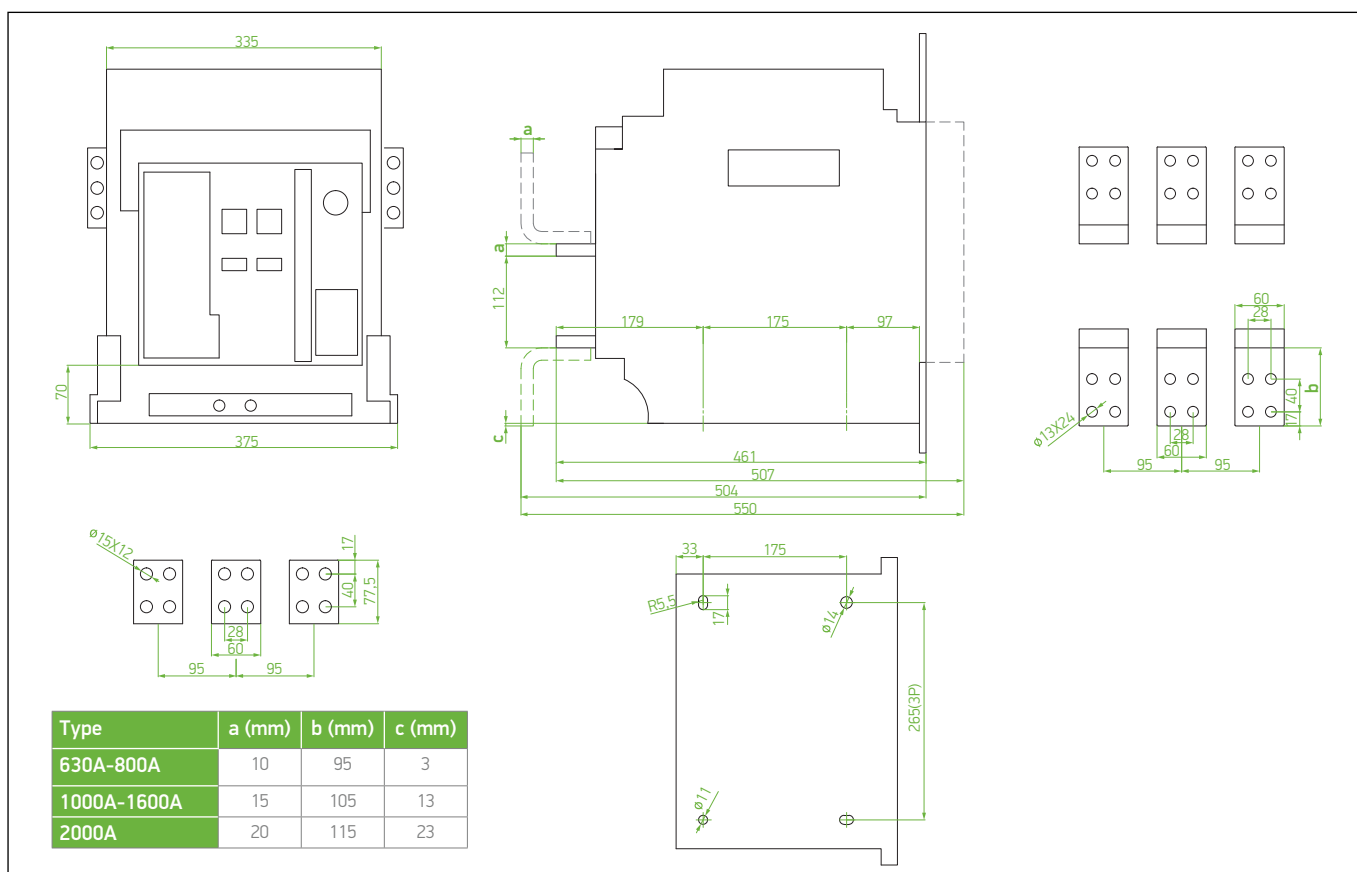
SFA-3200 SFA-3200(N)



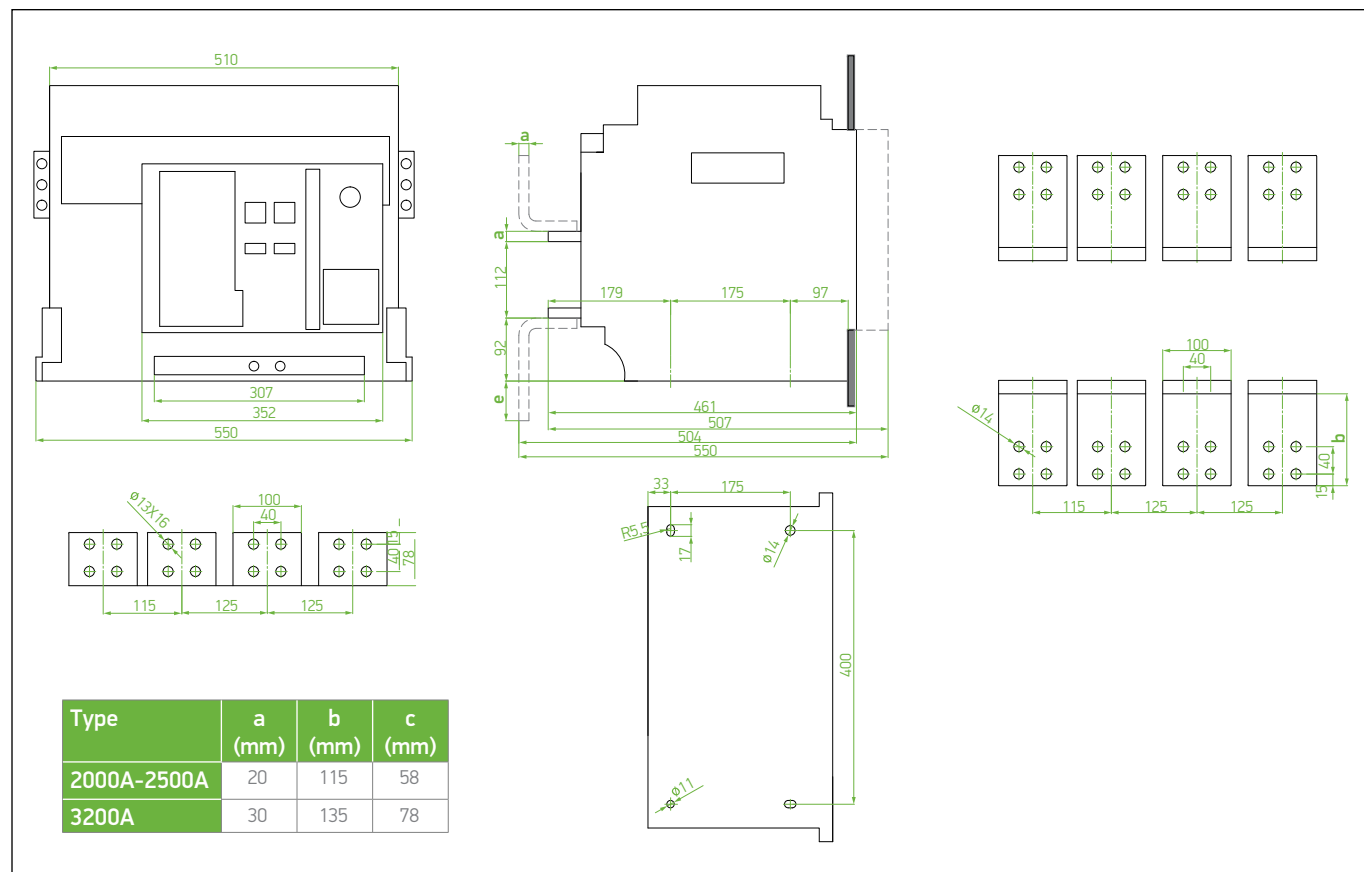
SFA-4000



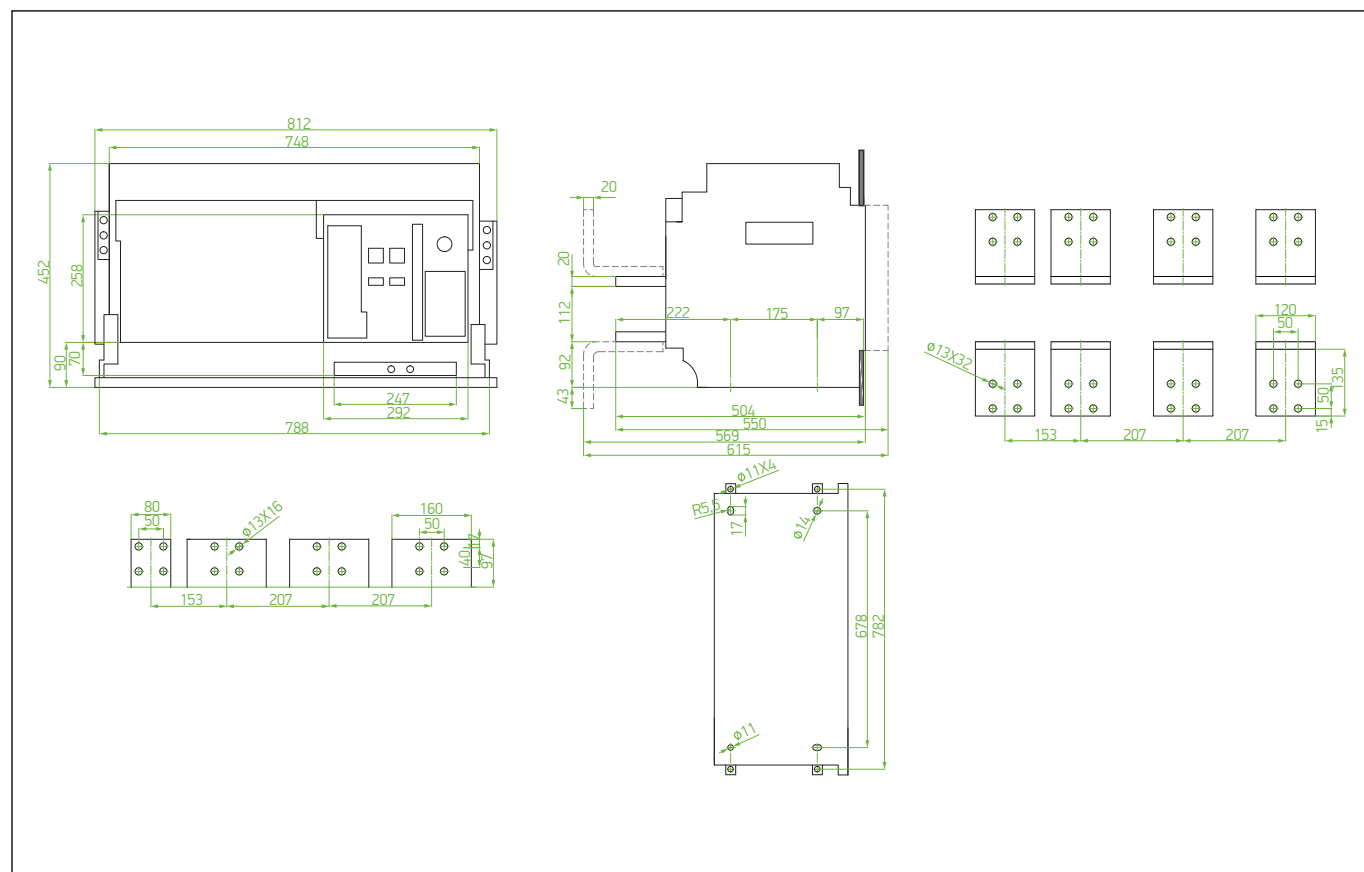
SDA-2000



SDA-3000

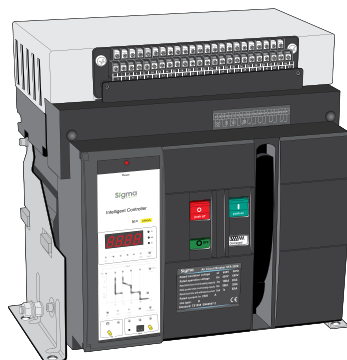


SDA-4000



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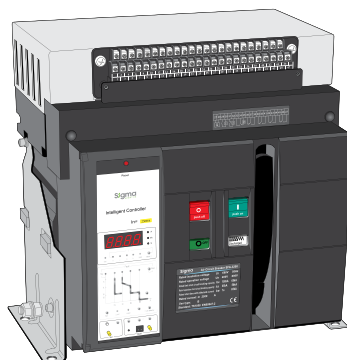
3 Poles, Fixed Type, Air Circuit Breakers



Type Code	Rated Current In (A)	Rated Current Adjustment (Ir1)	Breaking Capacity Icu (kA)	Operation Mechanism	Order Code
SFA-1600	630	252-630	80	Manuel	SFA0630H3
	800	320-800	80	Manuel	SFA0800H3
	1000	400-1000	80	Manuel	SFA1000H3
	1250	500-1250	80	Manuel	SFA1250H3
	1600	640-1600	80	Manuel	SFA1600H3
SFA-2000	2000	1200-2000	80	Manuel	SFA2000H3
SFA-2500	2500	1000-2500	100	Manuel	SFA2500H3
SFA-3200	3200	1280-3200	100	Manuel	SFA3200H3
SFA-4000	4000	1600-4000	100	Manuel	SFA4000H3
SFA-1600	630	252-630	80	Motorized	SFA0630M3
	800	320-800	80	Motorized	SFA0800M3
	1000	400-1000	80	Motorized	SFA1000M3
	1250	500-1250	80	Motorized	SFA1250M3
	1600	640-1600	80	Motorized	SFA1600M3
SFA-2000	2000	1200-2000	80	Motorized	SFA2000M3
SFA-2500	2500	1000-2500	100	Motorized	SFA2500M3
SFA-3200	3200	1280-3200	100	Motorized	SFA3200M3
SFA-4000	4000	1600-4000	100	Motorized	SFA4000M3

Note: All Acbs have 4NO+4NC auxiliary contacts as standard product.

4 Poles, Fixed Type, Air Circuit Breakers



Type Code	Rated Current In (A)	Breaking Capacity Icu (kA)	Operation Mechanism	Order Code
SFA-1600	400-1000	80	Manuel	SFA1000H4
	500-1250	80	Manuel	SFA1250H4
	640-1600	80	Manuel	SFA1600H4
SFA-2000	1200-2000	80	Manuel	SFA2000H4
SFA-2500	1000-2500	100	Manuel	SFA2500H4
SFA-3200	1280-3200	100	Manuel	SFA3200H4
(*)SDA-4000	1600-4000	100	Manuel	SDA4000H4
SFA-1600	400-1000	80	Motorized	SFA1000M4
	500-1250	80	Motorized	SFA1250M4
	640-1600	80	Motorized	SFA1600M4
SFA-2000	1200-2000	80	Motorized	SFA2000M4
SFA-3200	1000-2500	100	Motorized	SFA2500M4
SFA-3200	1280-3200	100	Motorized	SFA3200M4
(**)SDA-4000	1600-4000	100	Motorized	SDA4000M4

Note: (*) All Acbs have 4NO+4NC auxiliary contacts as standard product.

(**) 4 Poles 4000 A ACBs are Draw Out Type.

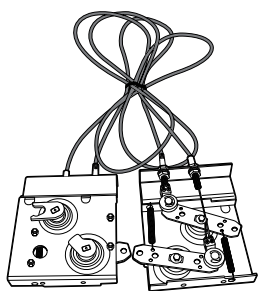
3 Poles Draw-Out Type Air Circuit Breakers



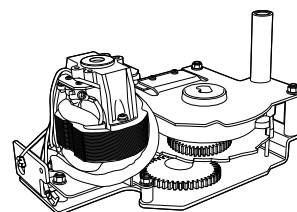
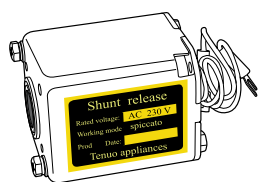
Type Code	Rated Current In (A)	Rated Current Adjustment (Ir1)	Breaking Capacity Icu (kA)	Operation Mechanism	Order Code
SDA-1000	1000	400-1000	80	Manuel	SDA1000H3
SDA-1250	1250	500-1250	80	Manuel	SDA1250H3
SDA-1600	1600	640-1600	80	Manuel	SDA1600H3
SDA-2000	2000	1200-2000	80	Manuel	SDA2000H3
SDA-2500	2500	1000-2500	100	Manuel	SDA2500H3
SDA-3200	3200	1280-3200	100	Manuel	SDA3200H3
SDA-4000	4000	1600-4000	100	Manuel	SDA4000H3
SDA-5000	5000	2000-5000	100	Manuel	SDA5000H3
SDA-6300	6300	2560-6300	100	Manuel	SDA6300H3
SDA-1000	1000	400-1000	80	Motorized	SDA1000M3
SDA-1250	1250	500-1250	80	Motorized	SDA1250M3
SDA-1600	1600	640-1600	80	Motorized	SDA1600M3
SDA-2000	2000	1200-2000	80	Motorized	SDA2000M3
SDA-2500	2500	1000-2500	100	Motorized	SDA2500M3
SDA-3200	3200	1280-3200	100	Motorized	SDA3200M3
SDA-4000	4000	1600-4000	100	Motorized	SDA4000M3
SDA-5000	5000	2000-5000	100	Motorized	SDA5000M3
SDA-6300	6300	2560-6300	100	Motorized	SDA6300M3

Note: (*) All Acbs have 4NO+4NC auxiliary contacts as standard product.

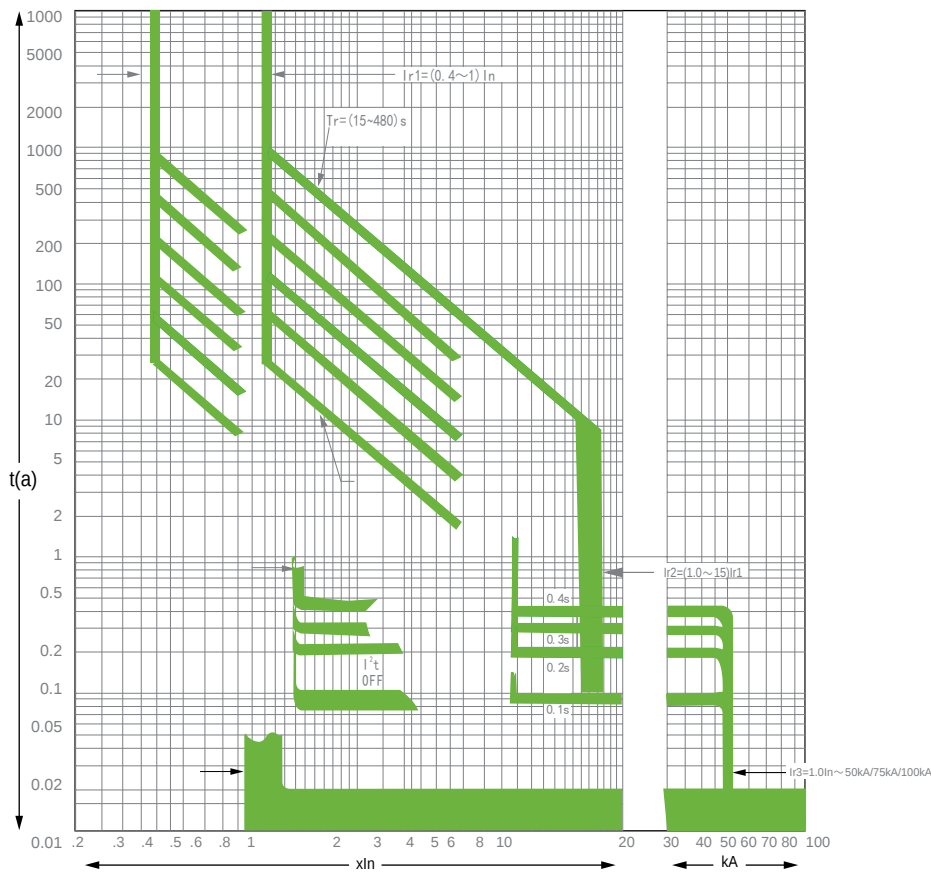
Accessories for Air Circuit Breakers



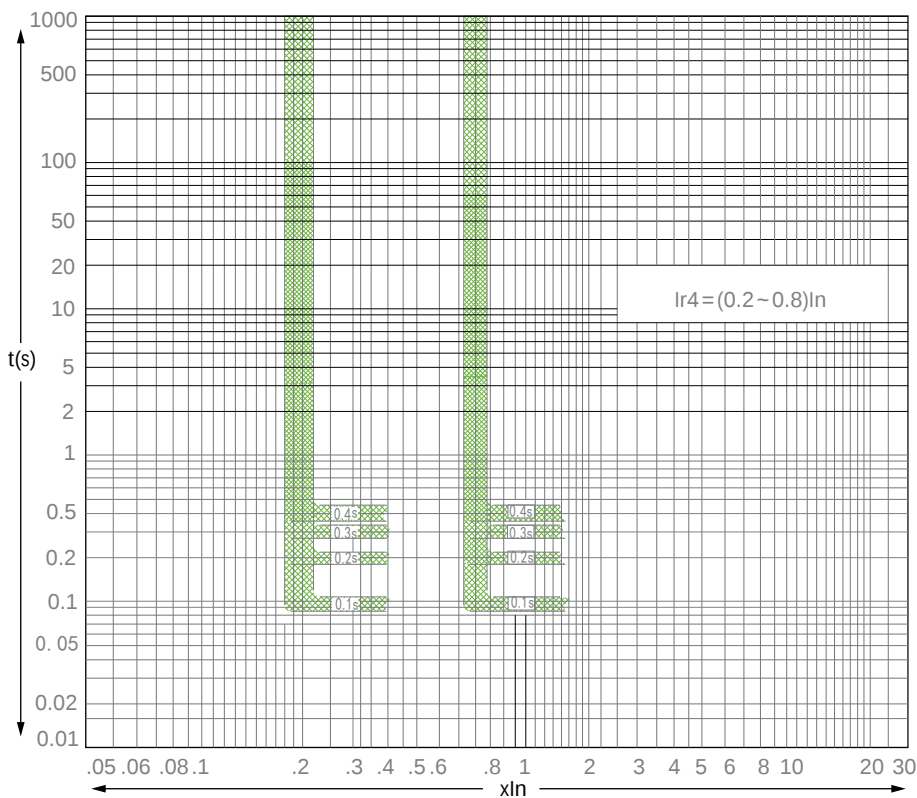
Type Code	Description	Features	Order Code
SADG	Under Voltage Release - Without Delay	230 V AC	SADG230
	Under Voltage Release - Without Delay	380 V AC	SADG380
SAGDG	Under Voltage Release - With Delay	230 V AC	SAGDG230
	Under Voltage Release - With Delay	380 V AC	SAGDG380
SAAB	Shunt Trip Coil	230 V AC	SAAB
SAKB	Closing Coil	230 V AC	SAKB
SAMM-1	Motor Operator (630...2000 A)	230 V AC	SAM1
SAMM-2	Motor Operator (2500...6300 A)	230 V AC	SAM2
SAMK	Mechanical Interlock	Wire Type	SAMK



Overload Current Time-Current Characteristic for ACB



Earth Fault Protection Time-Current Characteristic for ACB



Automatic Transfer Switches - Technical Specifications

Type	SATS-100	SATS-250				SATS-400	SATS-630	SATS-800
Nominal current I _{th} (40°C)	100 A	125 A	160 A	200 A	250 A	400 A	630 A	800 A
Ambient operating temperature range	-5°C~+40°C							
Ambient storage temperature range	-20°C~+60°C							
Altitude	2000m							
Contamination degree	3							
Nominal operating voltage (U _e)	400VAC 50Hz							

Electrical Specifications								
Number of poles	4P	4P	4P	4P	4P	4P	4P	4P
Nominal current I _{th} (40°C)	100 A	125 A	160 A	200 A	250 A	400 A	630 A	800 A
Nominal insulation voltage U _i (V)	800	800	800	800	800	800	1000	1000
Nominal lightning impulse voltage U _{imp} (kV)	8	8	8	8	8	8	12	12
Nominal short circuit breaking capacity (I _{cu}) (kA)	35	35	35	50	50	70	70	70
Short circuit protection	10xI _n	10xI _n	10xI _n	10xI _n	10xI _n	10xI _n	10xI _n	10xI _n
Over load protection	>1.3xI _n	>1.3xI _n	>1.3xI _n	>1.3xI _n	>1.3xI _n	>1.3xI _n	>1.3xI _n	>1.3xI _n

Switching Time								
UN-UR or UR-UN switching time (s)	3.2s	3.5s	3.6s	3.6s	4s	4s	5s	5s
UN-0 or UR-0 switching time (s)	2s	2s	2s	2s	2,2s	2,2s	2,5s	2,5s

Mechanical Properties								
Mechanical service life	6000	6000	6000	6000	4000	4000	3000	3000
Protection degree	IP30 (Other than Terminals)							
Weight (kg)								

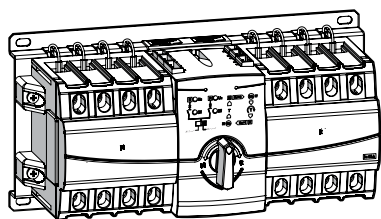
Electrical Connection								
Minimum copper bar section (mm ²)	■	■	■	■	■	■	■	■
Maximum copper cable section (mm ²)	35	35	50	85	95	185	2x150	2x240
Tightening torque min / max (Nm)	9/13	9/13	9/13	20/26	20/26	20/26	20/26	20/26

Control Unit Properties								
Nominal application voltage	230V							
Power consumption	10W							
Installation mode	Fixed Type							
Connection mode	Frontal							
Operating frequency	50/60Hz							
Auxiliary power supply	24VDC (-10%, +15%)							

Automatic Transfer Switches - (Motorized Switch Fuse)

I _{th}	MATS-100	MATS-250	MATS-630
I _n (A)	100	250	630
U _i (V)	500	500	500
(V)	5000	5000	5000
U _{imp} kV	8	8	12
(A) AC-33iB	100	250	630
I _{cw} (kA Rms) 0.1S/1S	9/5	12/25	50/25
(A Rms) AC-33iB 380V	800	2000	5000
(A Rms) AC-33iB 380V	1000	2500	6300
	0.5	1.1	1.2
	0.3	0.7	0.8
3 poles	4.45	10.4	19
4 poles	4.5	11.3	22
	AC-33iB (PC)		

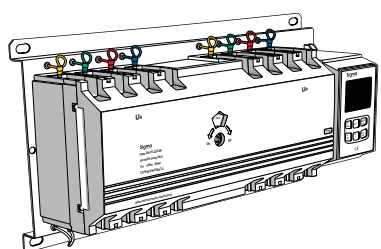
Automatic Transfer Switches (with MCB)



Type Code	Rated Current In (A)	Breaking Capacity Icu (kA)	Order Code
SATS-32	32	6	SATS032
SATS-40	40	6	SATS040
SATS-50	50	6	SATS050
SATS-63	63	6	SATS063

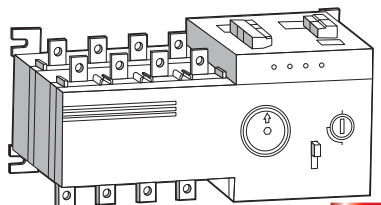
Note: Automatic transferring and protection between 32A and 63A are made by using MCB.

Automatic Transfer Switches (with MCCB)



Type Code	Rated Current In (A)	Breaking Capacity Icu (kA)	Order Code
SATS-100	100	25	SATS100
SATS-125	125	36	SATS125
SATS-160	160	36	SATS160
SATS-200	200	36	SATS200
SATS-250	250	36	SATS250
SATS-400	400	36	SATS400
SATS-630	630	36	SATS630
SATS-800	800	36	SATS800

Automatic Transfer Switches (Motorized Switch Fuse)

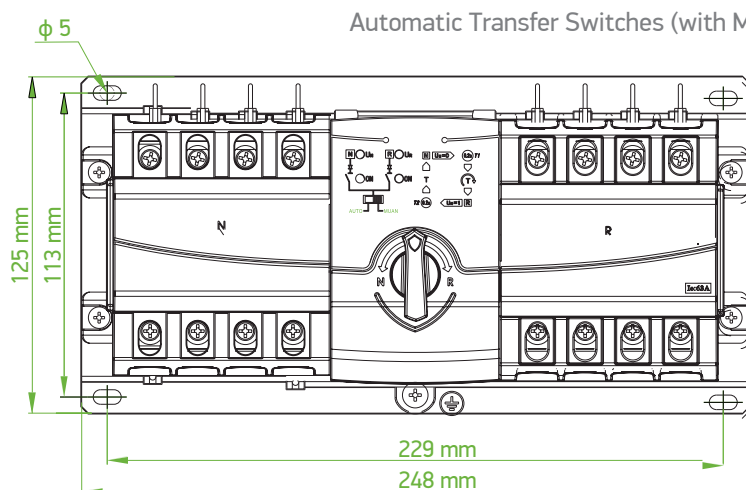


**NEW
PRODUCT**

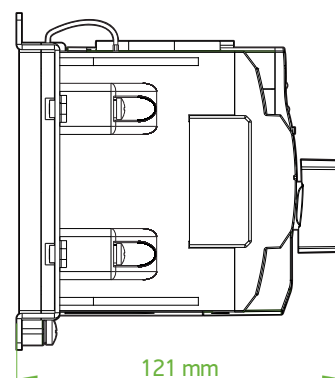
Type Code	Rated Current In (A)	Short Circuit Resistance Capacity Icw (kA/1sn)	Order Code
MATS-100	100		MATS100
MATS-250	250		MATS250
MATS-630	630		MATS630
MATS-1000	1000		MATS1000
MATS-1600	1600		MATS1600
MATS-2000	2000		MATS2000

Note: There are no thermal and magnetic protection function in MATS type Automatic Transfer switch.

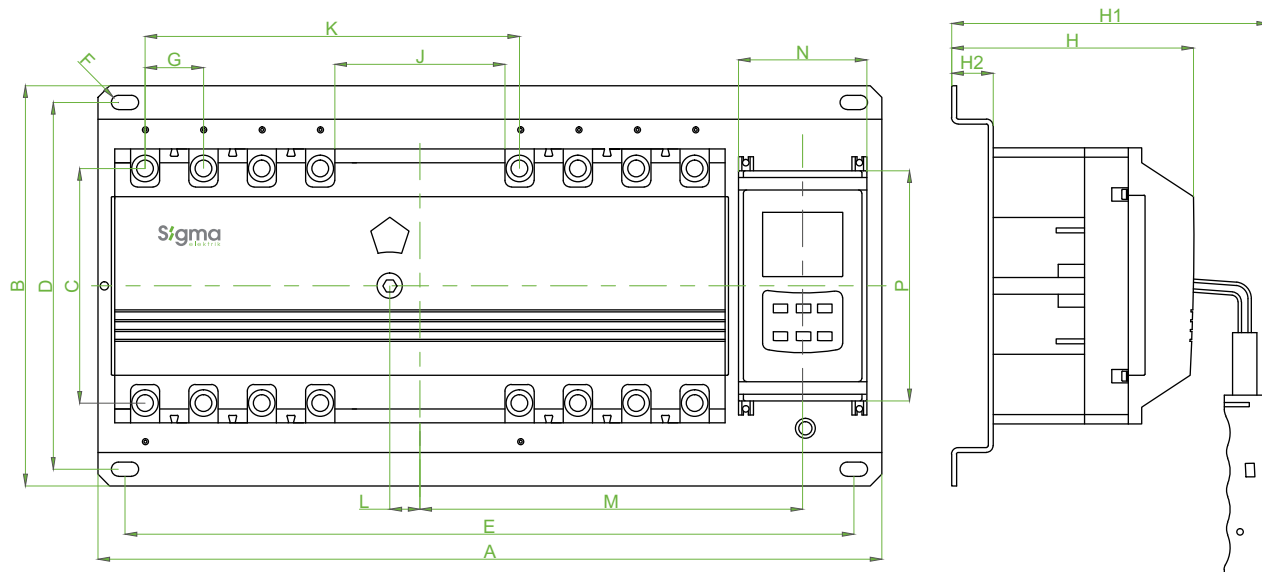
Dimensions



Automatic Transfer Switches (with MCB)

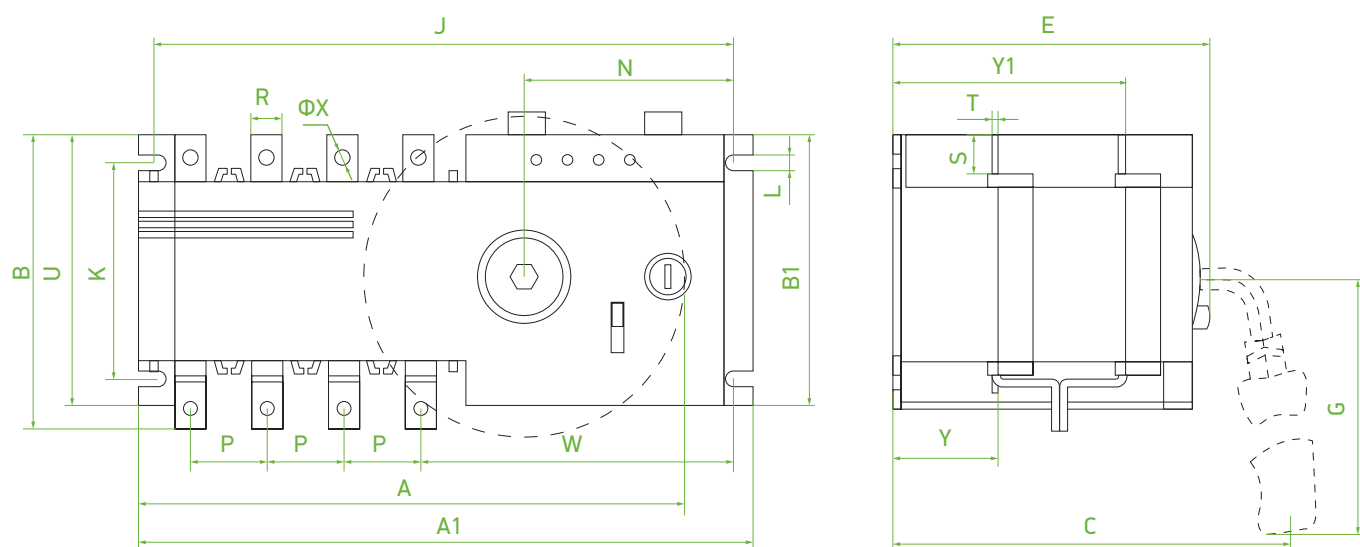


Automatic Transfer Switches (with MCCB)



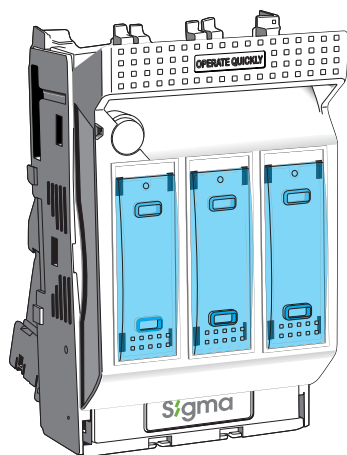
Type	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G (mm)	J (mm)	K (mm)	L (mm)	M (mm)	N (mm)	P (mm)	H (mm)	H1 (mm)	H2 (mm)
SATS 100	420	240	135	220	387	M8	30	86	194	16	205	77	140	145	190	25
SATS 125-250	470	240	141	220	437	M8	35	102	225	18	230	77	140	145	190	25
SATS 400	615	330	224	300	555	M10	48	133	303	25	303	82	260	200	235	24
SATS 630	740	330	234	300	680	M10	58	180	385	34	360	82	260	200	259	24
SATS 800	790	350	243	320	735	M10	70	155	395	38	390	82	260	200	262	24

Automatic Transfer Switches (Motorized Switch Fuse)



Rated Current In	Dimensions (mm)																			
	A (mm)	A1 (mm)	B (mm)	B1 (mm)	C (mm)	E (mm)	G (mm)	J (mm)	K (mm)	L (mm)	N (mm)	P (mm)	R (mm)	S (mm)	T (mm)	U (mm)	W (mm)	ΦX (mm)	Y (mm)	Y1 (mm)
100 A	330	244	115	107	182	125	174	228	85	6.5	83	30	12	18	(2.5)5	99	125	6.2	42	92
250 A	436	373	178	134	240	198	174	344	108	7	99	50	24	30	(3.5)7	148	173	11	72	157
630 A	502	433	260	222	282	244	174	416	180	9	101	65	40	50	(5)10	222	185	12	83	193
1000 A	760	633	357	250	363	350	443	613	220	11	87	120	60	69	8	250	207	12.5	109	255
1600 A	760	633	357	250	363	350	443	613	220	11	87	120	80	69	10	250	207	13	110	255
2000 A	800	633	460	-	542	-	447	610	-	-	84.5	-	80	120	10	-	-	13	-	169

Fuse Switch Disconnectors - Technical Specifications



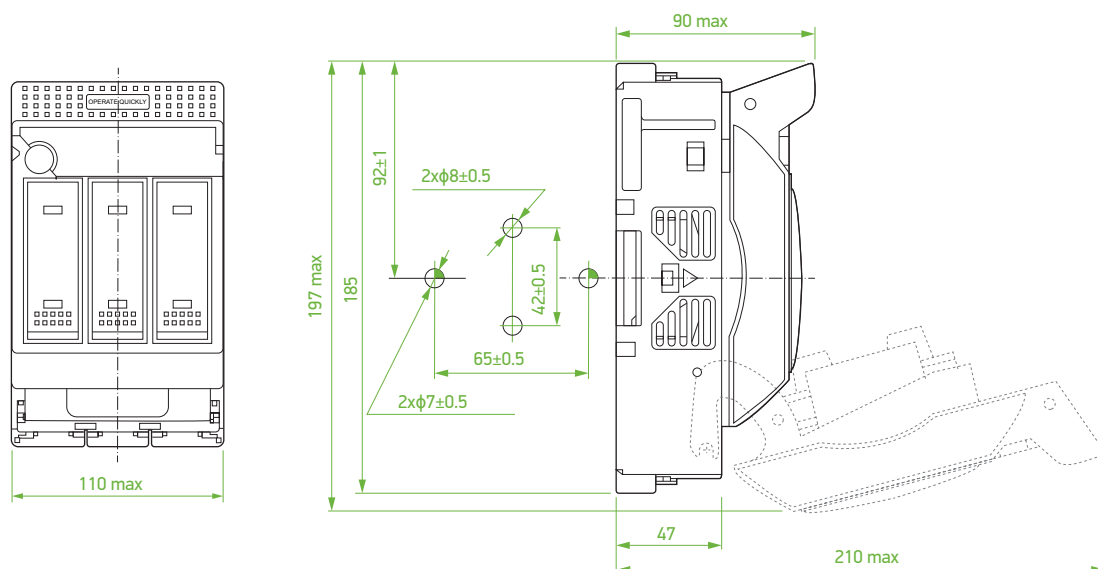
Type		SFH 160	SFH 250	SFH 400
Standard		TS EN 60947-3, EN 60947-3		
NH Fuse Link Size		NH00C- NH00	NH1	NH2
No of Poles		3	3	3
Rated Operational Current	A	160	250	400
Rated Voltage	V	690	690	690
Rated Insulation Voltage	V	800	800	800
Breaking Capacity of Fuse Link	kA	120	120	120
Utilization Category		AC23B	AC23B	AC23B
Weight	kg	0,7	1,5	3,3

Size	Rated Current In (A)	Fuse Size	Minimum Order (pcs)	Number in Cartoon (pcs)	Order Code
SFH-160	160	NH00C/NH00	1	9	SFH160
SFH-250	250	NH1	1	3	SFH250
SFH-400	400	NH2	1	1	SFH400

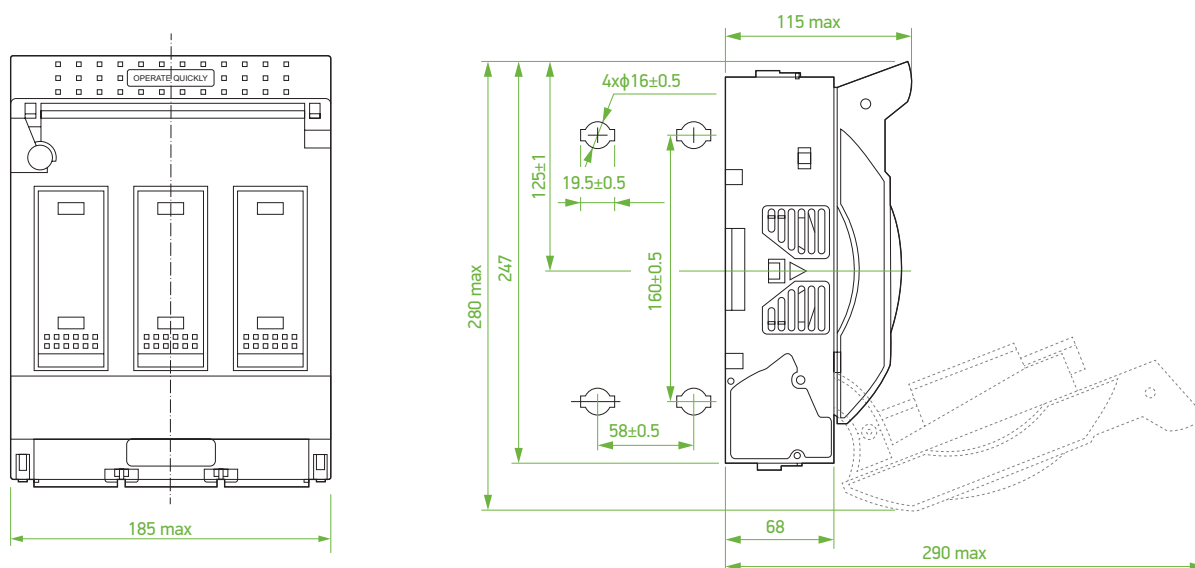


Dimensions

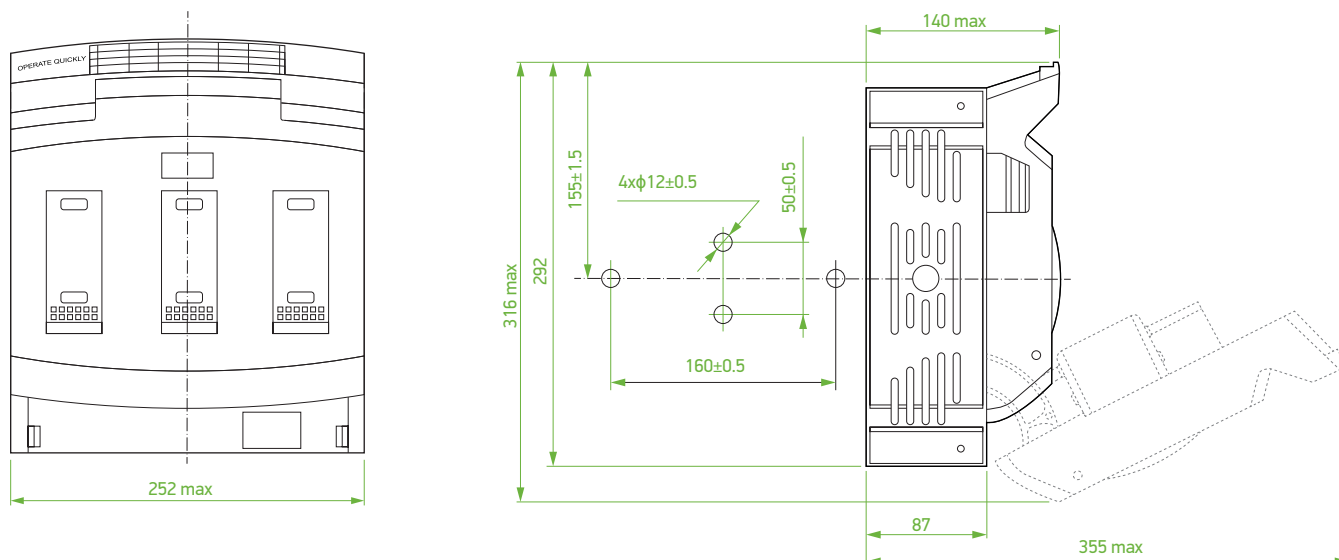
SFH160



SFH250

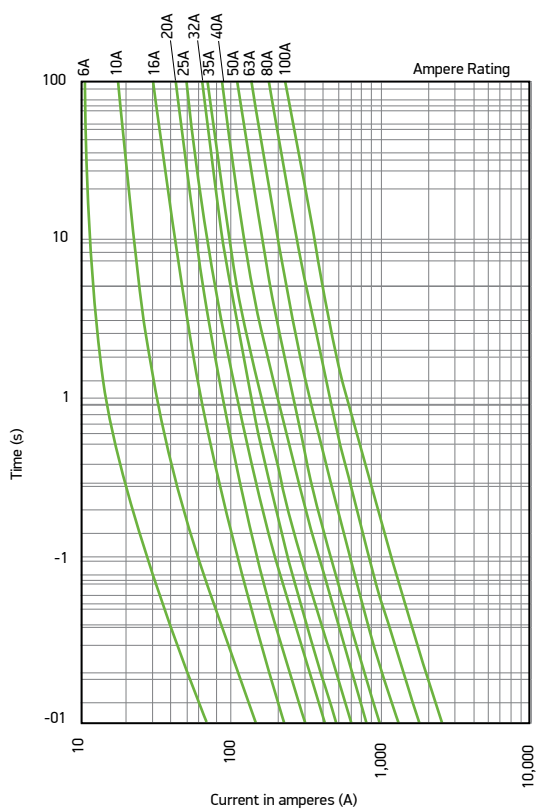


SFH400

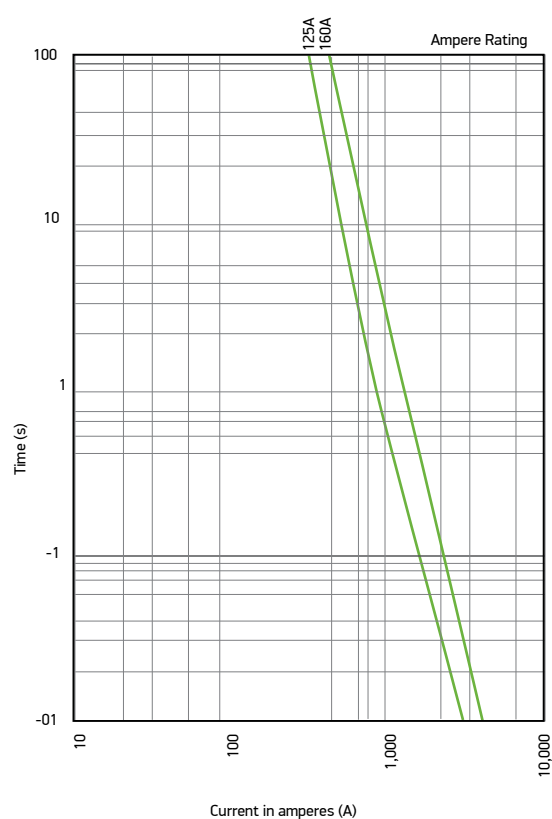


Time-Current Curves

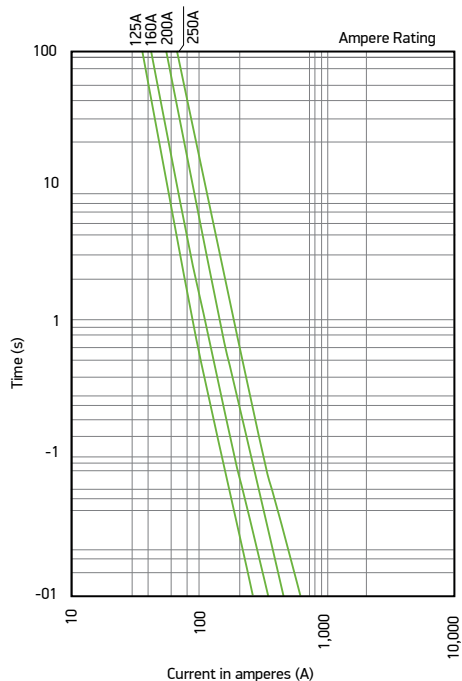
NH00C



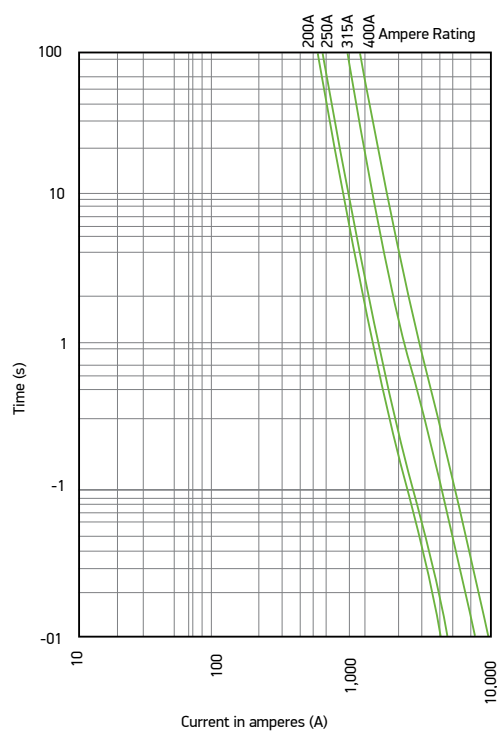
NH00



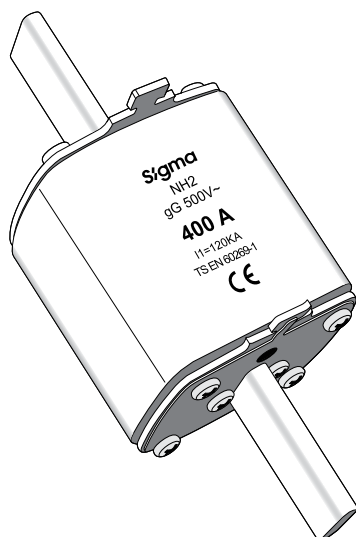
NH1



NH2

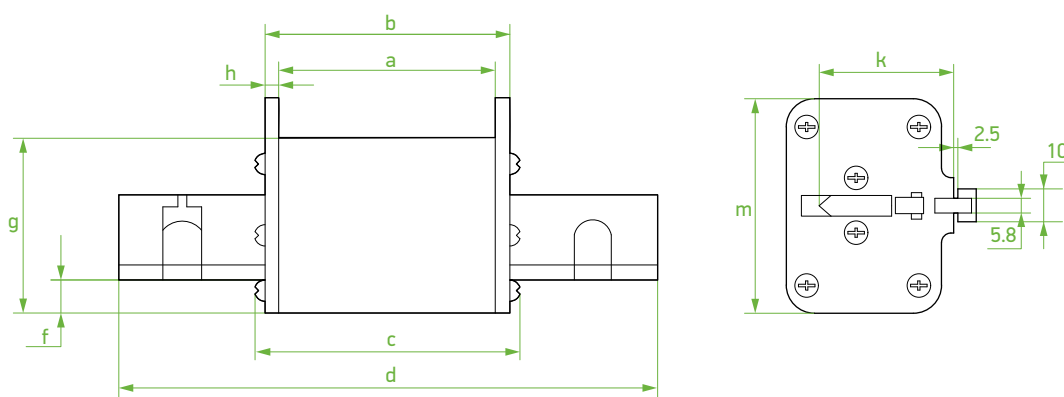


NH (H.R.C) Fuse Links (Steatit Body)



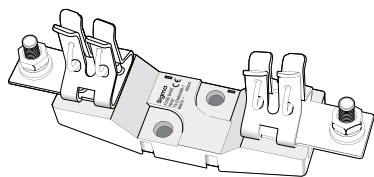
Size	Rated Current In (A)	Breaking Cap. (kA)	Minimum Order	Number in Cartoon	Order Code
NHC00	6	120	3	180	SNH00006
	10	120	3	180	SNH00010
	16	120	3	180	SNH00016
	20	120	3	180	SNH00020
	25	120	3	180	SNH00025
	32	120	3	180	SNH00032
	40	120	3	180	SNH00040
	50	120	3	180	SNH00050
	63	120	3	180	SNH00063
	80	120	3	180	SNH00080
NH00	100	120	3	180	SNH00100
	125	120	3	96	SNH00125
NH1	160	120	3	96	SNH00160
	125	120	3	36	SNH10125
	160	120	3	36	SNH10160
	200	120	3	36	SNH10200
NH2	250	120	3	36	SNH10250
	200	120	3	24	SNH20200
	250	120	3	24	SNH20250
	315	120	3	24	SNH20315
	400	120	3	24	SNH20400

Dimensions



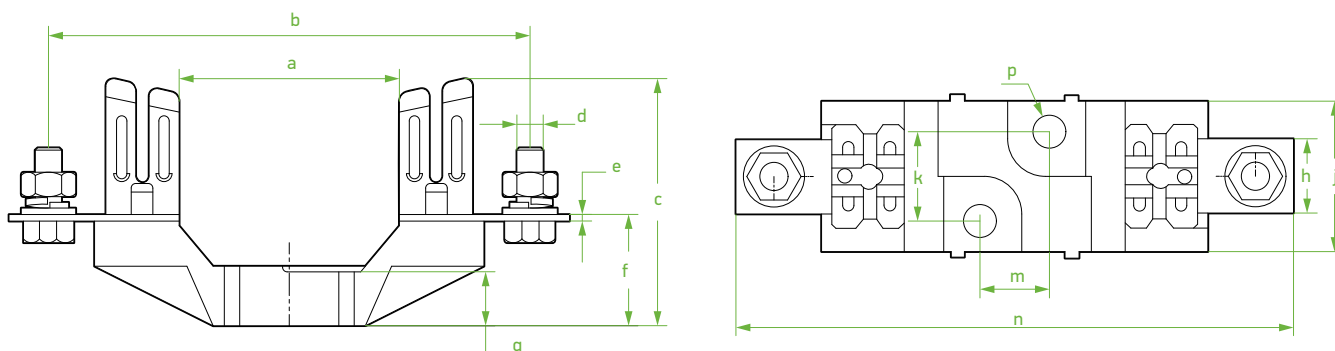
Type	a	b	c	d	e	f	g	h	k	m
NH00C	45	48	52	79	15	6	36	1,5	35	21
NH000	47	50	54	79	15	12	45	1,5	35	29
NH01	62	66	72	135	20	11	48	2	40	48
NH02	62	66	72	150	25	14	58	2	48	58

NH (H.R.C.) Fuse Base



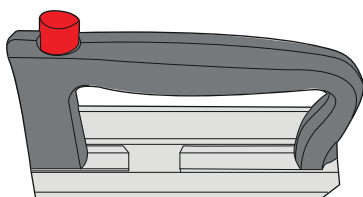
Size	Rated Current In (A)	Body Material	Minimum Order	Box Qty	Order Code
NH00	160	Steatit	5	60	SNB00
NH1	250	BMC	5	60	SNB01
NH2	400	BMC	5	60	SNB02

Dimensions



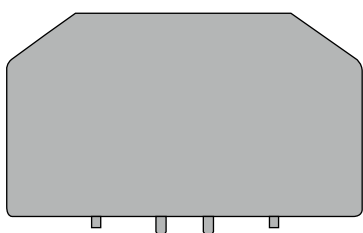
Size	a	b	c	d	e	f	g	h	j	k	m	n	p
NH00	59	102	56	M8	2	23	13	21	32	0	25	118	7,5
NH1	82	175	82	M10	2	36	19	25	50	30	25	199	10,5
NH2	82	200	96	M10	2,5	37	19	31	50	30	25	225	10,5

NH Fuse Handle



Type Code	Rated Voltage	Order Code
SNHE	1000	SNHE

NH Fuse Base Separator



Size	Order Code
NH00	SNBS

Note: When used 3 pcs NH00 Fuse Base together, it is used for isolation between Phases.

Maximum Power Dissipation for NH Fuse Links

Size	Rated Current In (A)	TS EN 60269-1	SIGMA
SNH00C	6	12 W	1.8 W
	10	12 W	2.1 W
	16	12 W	2.4 W
	20	12 W	2.7 W
	25	12 W	2.9 W
	32	12 W	3.7 W
	40	12 W	4.3 W
	50	12 W	4.7 W
	63	12 W	6 W
	80	12 W	6.8 W
SNH00	100	12 W	8.8 W
	125	12 W	10.2 W
SNH1	160	12 W	12 W
	125	23 W	10.2 W
	160	23 W	13.1 W
	200	23 W	17.6 W
SNH2	250	23 W	23 W
	200	34 W	17.8 W
	250	34 W	20.5 W
	315	34 W	25.4 W
	400	34 W	31 W



Miniature Circuit Breaker - Technical Specifications

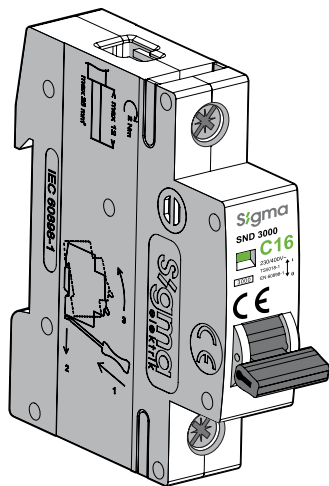
Type			SND 3000 SNB 3000				SND 4500				SND 6000 SNB 6000				SDC 6000		
No of Poles			1	2	3	4	1	2	3	4	1	2	3	4	1	2	
Rated Nominal Current (At 30°C)	In	A	2, 4, 6, 10, 16, 20, 25, 32, 40, 50, 63				1, 2, 3, 4, 5, 6, 10, 16, 20, 25, 32, 40, 50, 63				1, 2, 3, 4, 5, 6, 10, 16, 20, 25, 32, 40, 50,63				6, 10, 16, 20, 25, 32, 40, 50, 63		
Instantaneous Tripping Class			B : (3-5)xIn C : (5-10)xIn				B : (3-5)xIn C : (5-10)xIn D : (10-20)xIn				B : (3-5)xIn C : (5-10)xIn D : (10-20)xIn				C : (7-14)xIn		
Power Supply			AC												DC		
Rated Operating Voltage	Ue	AC (V)	230/400	400				230/400	400				230/400	400		250	500
Rated Insulation Voltage	Ui	V	690												440		
Rated Impulse Withstanding Voltage	Uimp	kV	6												4		
Rated Short Circuit Breaking Capacity	Ics	kA	3				4,5				6						
Energy Class			3														
Electrical Life (Operation)	op.	230 V	3000				4000				5000				3000		
Mechanical Life (Operation)	op.		20000														
Protection Class			IP 20														
Operation Temperature	°C		-30 to +60														
Storage Temperature	°C		-40 to +70														
Colour			RAL 7035														
Assembly (EN 60715)			35 mm. DIN Rail														
Min. max. Connection Section	mm²		1 – 25														
Min. max. Clamping Torque	Nm		2														



SLD 6000				SMD 10000				SND 10000				SLD 10000				SND 16000
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1
80, 100, 125				2, 4, 6, 10, 16, 20, 25, 32, 40, 50, 63				2, 4, 6, 10, 16, 20, 25, 32, 40, 50, 63				80, 100, 125				40, 50, 63, 80, 100, 125
C : (5-10)xIn				B : (3-5)xIn C : (5-10)xIn D : (10-20)xIn				B : (3-5)xIn C : (5-10)xIn D : (10-20)xIn				C : (5-10)xIn				C : (5-10)xIn
AC																
230 / 400	400			230 / 400	400			230 / 400	400			230 / 400	400			230 / 400
690																
6																
6				10												16
3																
4000				5000								4000				4000
20000															15000	
IP 20																
-30 to +60																
-40 to +70																
RAL 7035																
35 mm. DIN Rail																
25 – 50				1 – 25								25 – 50				10 – 50
3,5				2								3,5				3,5

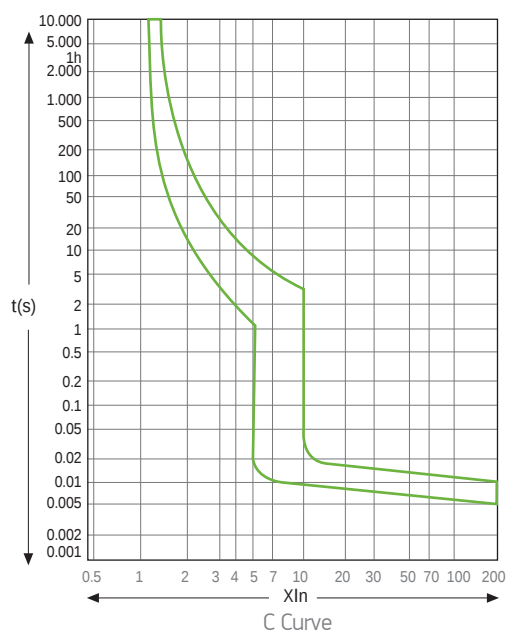
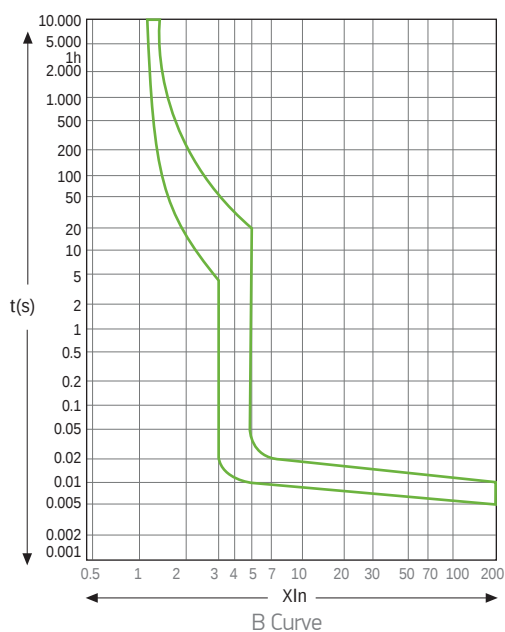


3 kA Miniature Circuit Breakers

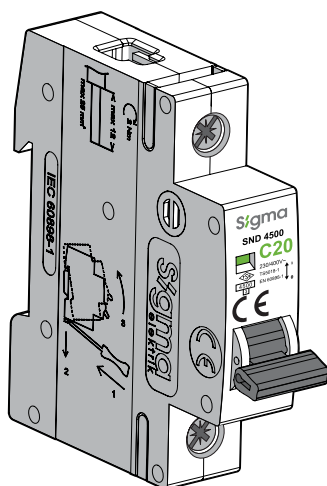


Type		SND 3000 / SNB 3000			
No of Poles		1	2	3	4
Rated Current (at 30°C)	A	2, 4, 6, 10, 16, 20, 25, 32, 40, 50, 63			
Rated Voltage (Ue)	AC (V)	230/400	400		
Rated Insulation Voltage	AC (V)	690			
Rated Impulse Voltage (Uimp)	kV	6			
Rated Breaking Capacity (Ics)	kA	3			
Frequency	Hz	50-60			
Energy Class		3			
Electrical Life (ope.)	230 V	3.000			
Mechanical Life (ope.)		20.000			
Protection Class		IP 20			
Ambient Operating Temperature	°C	-30 to +60			
Storage Temperature	°C	-40 to +70			
Colour		RAL 7035			
Assembly (EN 60715)		35 mm DIN Rail			
Connection Capacity (min - max)	mm²	1 – 25			
Max. Tightening Torque	Nm	2			

Time- Current Characteristic

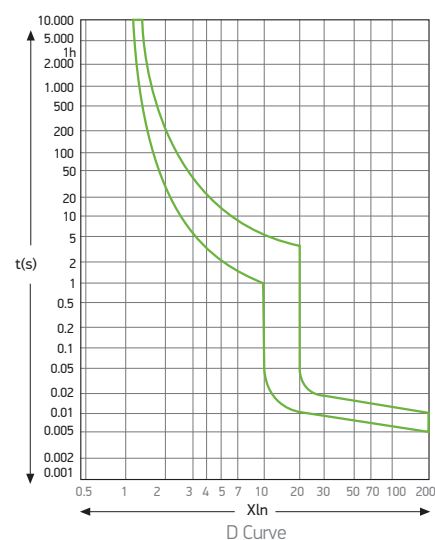
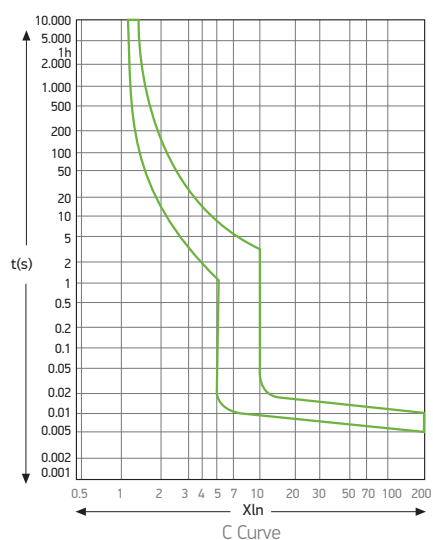
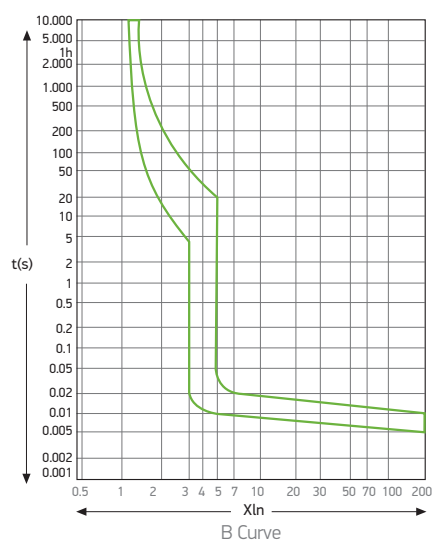


4,5 kA Miniature Circuit Breakers

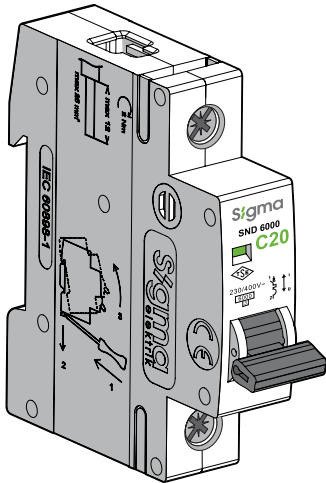


Type			SND 4500			
No of Poles			1	2	3	4
Rated Current (at 30°C)		A	1, 2, 3, 4, 5, 6, 10, 16, 20, 25, 32, 40, 50, 63			
Rated Voltage	Ue	AC (V)	230/400	400		
Rated Insulation Voltage	AC (V)		690			
Rated Impulse Voltage	Uimp	kV	6			
Rated Breaking Capacity	Ics	kA	4,5			
Frequency		Hz	50-60			
Energy Class			3			
Electrical Life	ope.	230 V	4.000			
Mechanical Life	ope.		20.000			
Protection Class			IP 20			
Ambient Operating Temperature		°C	-30 to +60			
Storage Temperature		°C	-40 to +70			
Colour			RAL 7035			
Assembly (EN 60715)			35 mm DIN Rail			
Connection Capacity (min - max)		mm²	1 – 25			
Max. Tightening Torque		Nm	2			

Time- Current Characteristic

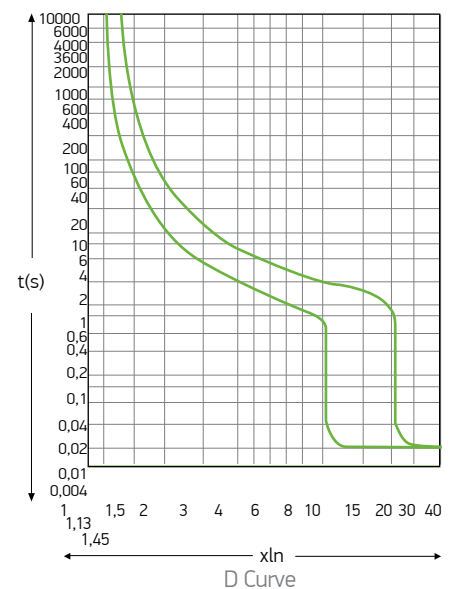
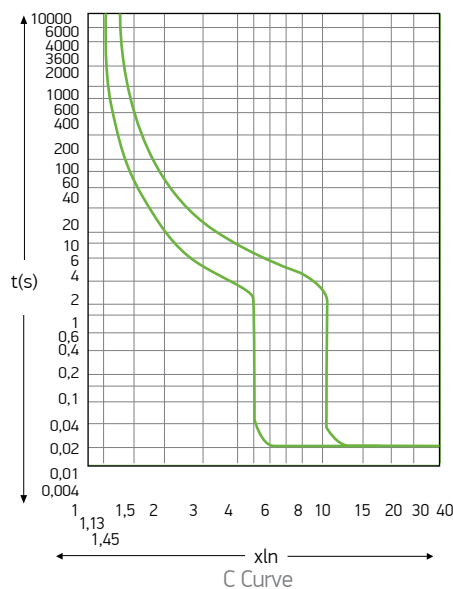
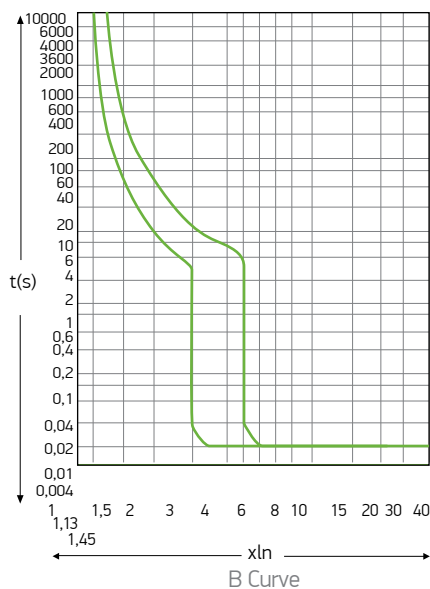


6 kA Miniature Circuit Breakers

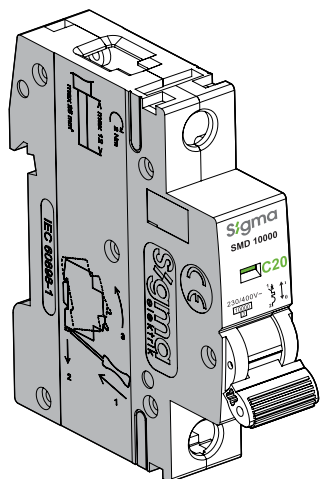


Type			SND 6000 / SNB 6000			
No of Poles			1	2	3	4
Rated Current (at 30°C)		A	2, 4, 6, 10, 16, 20, 25, 32, 40, 50, 63			
Rated Voltage	Ue	AC (V)	230/400	400		
Rated Insulation Voltage	AC (V)		690			
Rated Impulse Voltage	Uimp	kV	6			
Rated Breaking Capacity	Ics	kA	6			
Frequency		Hz	50-60			
Energy Class			3			
Electrical Life	ope.	230 V	5.000			
Mechanical Life	ope.		20.000			
Protection Class			IP 20			
Ambient Operating Temperature		°C	-30 to +60			
Storage Temperature		°C	-40 to +70			
Colour			RAL 7035			
Assembly (EN 60715)			35 mm DIN Rail			
Connection Capacity (min - max)		mm²	1 – 25			
Max. Tightening Torque		Nm	2			

Time- Current Characteristic

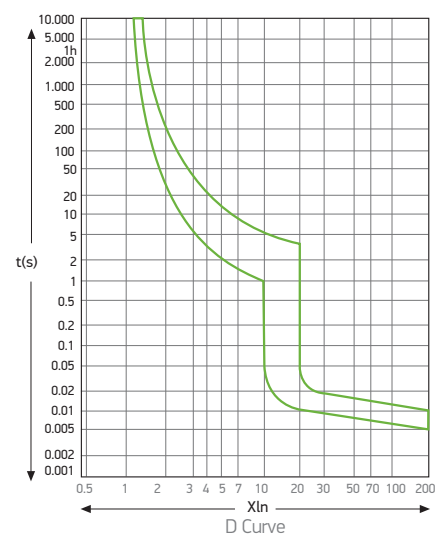
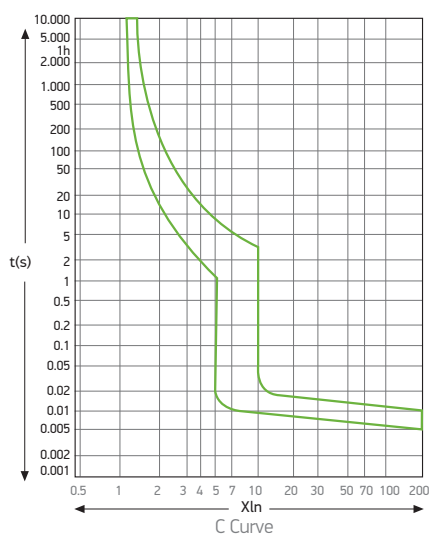
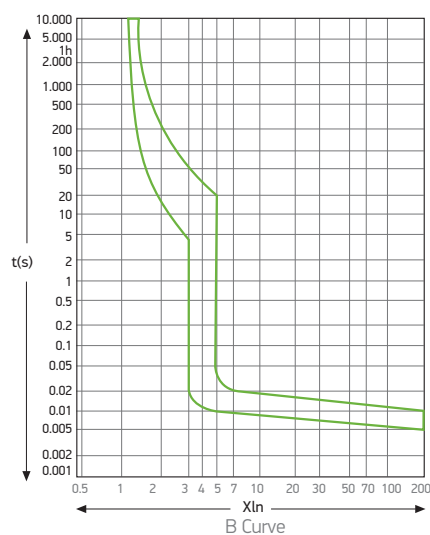


10 kA Miniature Circuit Breakers (SMD 10000)

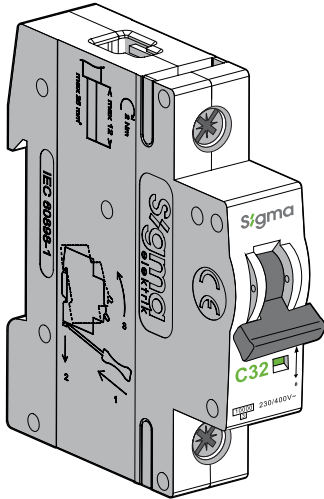


Type			SMD 10000 (TÜV Approved)			
No of Poles			1	2	3	4
Rated Current (at 30°C)		A	2, 4, 6, 10, 16, 20, 25, 32, 40, 50, 63			
Rated Voltage	Ue	AC (V)	230/400	400		
Rated Insulation Voltage	AC (V)		690			
Rated Impulse Voltage	Uimp	kV	6			
Rated Breaking Capacity	Ics	kA	10			
Frequency		Hz	50-60			
Energy Class			3			
Electrical Life	ope.	230 V	5.000			
Mechanical Life	ope.		20.000			
Protection Class			IP 20			
Ambient Operating Temperature		°C	-30 to +60			
Ambient Operating Temperature		°C	-40 to +70			
Colour			RAL 7035			
Assembly (EN 60715)			35 mm DIN Rail			
Connection Capacity (min - max)		mm²	1 – 25			
Max. Tightening Torque		Nm	2			

Time- Current Characteristic

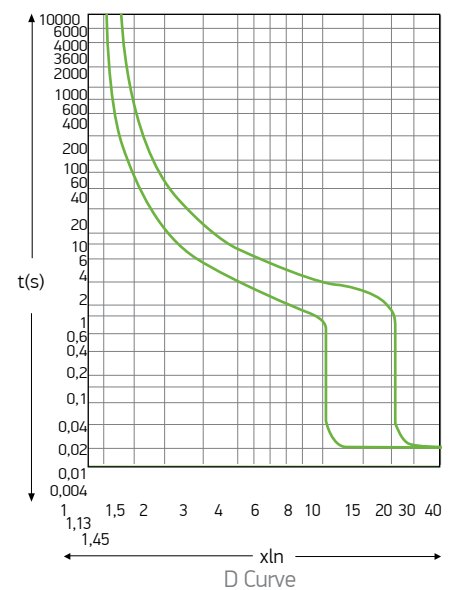
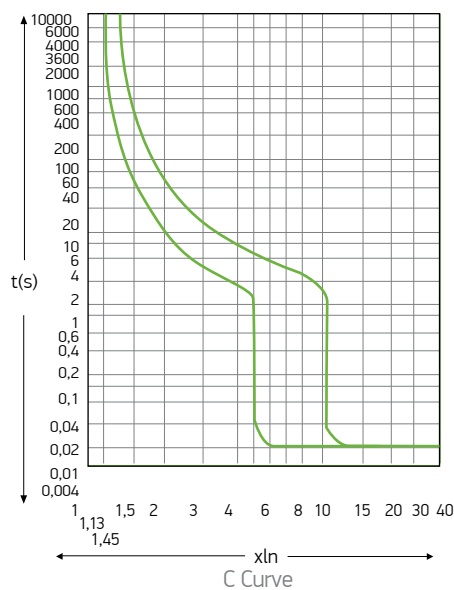
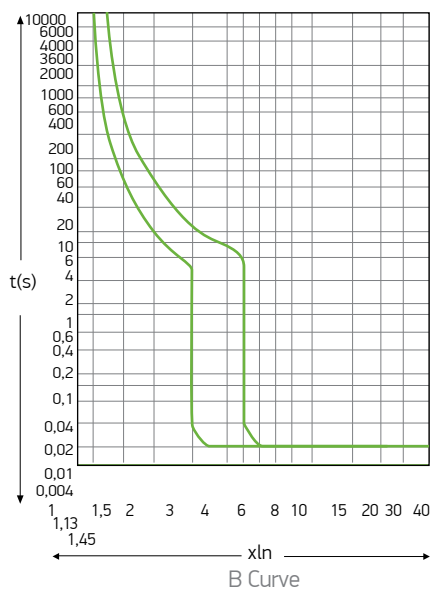


10 kA Miniature Circuit Breakers (SND 10000)

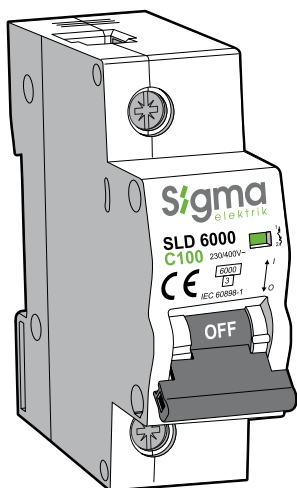


Type			SND 10000			
No of Poles			1	2	3	4
Rated Current (at 30°C)		A	2, 4, 6, 10, 16, 20, 25, 32, 40, 50, 63			
Rated Voltage	Ue	AC (V)	230/400	400		
Rated Insulation Voltage	AC (V)		690			
Rated Impulse Voltage	Uimp	kV	6			
Rated Breaking Capacity	Ics	kA	10			
Frequency		Hz	50-60			
Energy Class			3			
Electrical Life	ope.	230 V	5.000			
Mechanical Life	ope.		20.000			
Protection Class			IP 20			
Ambient Operating Temperature		°C	-30 to +60			
Storage Temperature		°C	-40 to +70			
Colour			RAL 7035			
Assembly (EN 60715)			35 mm DIN Rail			
Connection Capacity (min - max)		mm²	1 – 25			
Max. Tightening Torque		Nm	2			

Time- Current Characteristic

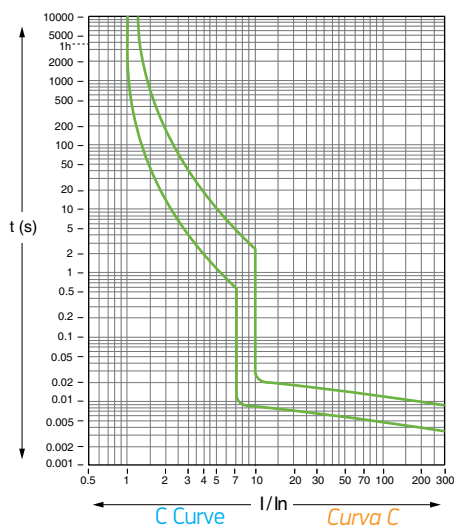


6 kA Miniature Circuit Breakers (80-100-125 A)

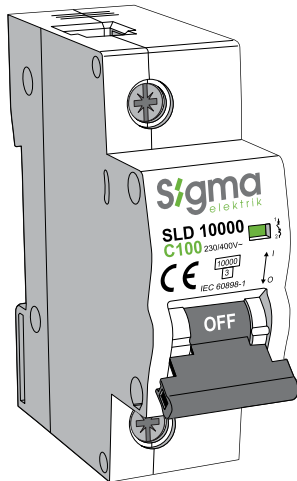


Type			SLD 6000			
No of Poles			1	2	3	4
Rated Current (at 30°C)		A	80, 100, 125			
Rated Voltage	Ue	AC (V)	230/400	400		
Rated Insulation Voltage	AC (V)		690			
Rated Impulse Voltage	Uimp	kV	6			
Rated Breaking Capacity	Ics	kA	6			
Frequency		Hz	50-60			
Energy Class			3			
Electrical Life	ope.	230 V	4.000			
Mechanical Life	ope.		20.000			
Protection Class			IP 20			
Ambient Operating Temperature		°C	-30 to +60			
Storage Temperature		°C	-40 to +70			
Colour			RAL 7035			
Assembly (EN 60715)			35 mm DIN Rail			
Connection Capacity (min - max)		mm²	25 – 50			
Max. Tightening Torque		Nm	3,5			

Time- Current Characteristic

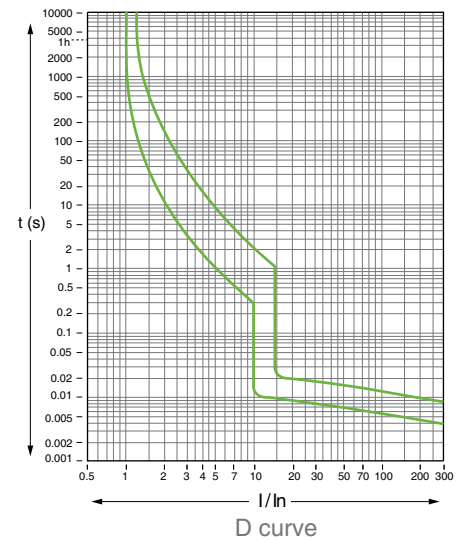
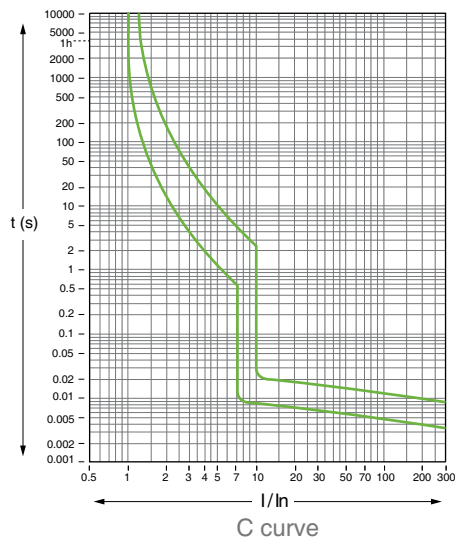
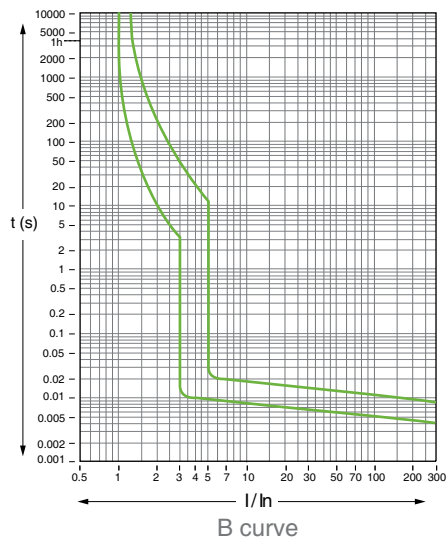


10 kA Miniature Circuit Breakers (80-100-125 A)

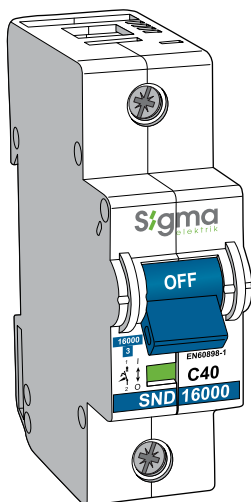


Type			SLD 10000			
No of Poles			1	2	3	4
Rated Current (at 30°C)		A	80, 100, 125			
Rated Voltage	Ue	AC (V)	230/400	400		
Rated Insulation Voltage	AC (V)		690			
Rated Impulse Voltage	Uimp	kV	6			
Rated Breaking Capacity	Ics	kA	10			
Frequency		Hz	50-60			
Energy Class			3			
Electrical Life	ope.	230 V	4.000			
Mechanical Life	ope.		20.000			
Protection Class			IP 20			
Ambient Operating Temperature		°C	-30 to +60			
Storage Temperature		°C	-40 to +70			
Colour			RAL 7035			
Assembly (EN 60715)			35 mm DIN Rail			
Connection Capacity (min - max)		mm²	25 – 50			
Max. Tightening Torque		Nm	3,5			

Time- Current Characteristic

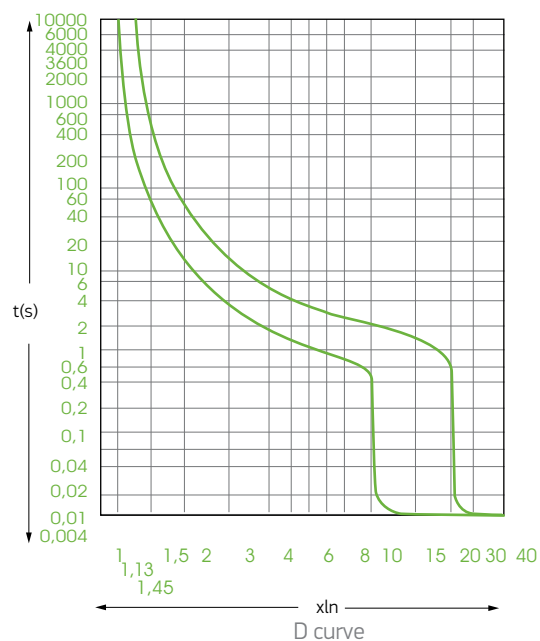
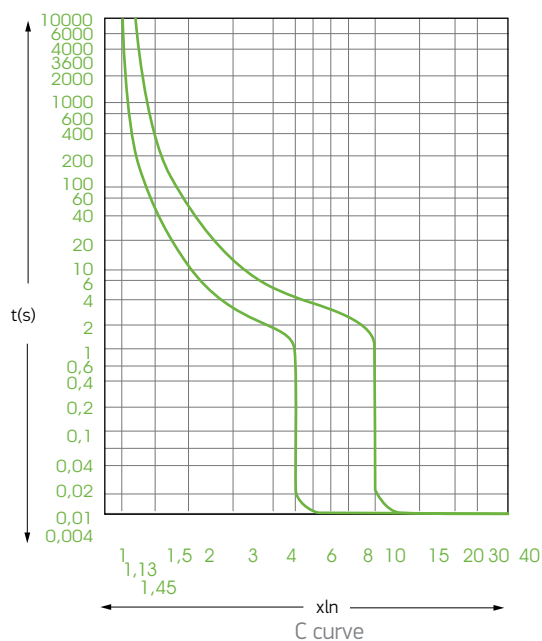


16 kA Miniature Circuit Breakers

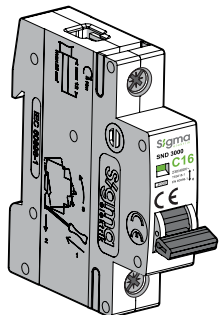


Type			SND 16000
No of Poles			1
Rated Current (at 30°C)		A	40, 50, 63, 80, 100, 125
Rated Voltage	Ue	AC (V)	230/400
Rated Insulation Voltage	AC (V)		690
Rated Impulse Voltage	Uimp	kV	6
Rated Breaking Capacity	Ics	kA	16
Frequency		Hz	50-60
Energy Class			3
Electrical Life	ope.	230 V	4,000
Mechanical Life	ope.		15,000
Protection Class			IP 20
Ambient Operating Temperature		°C	-30 to +60
Storage Temperature		°C	-40 to +70
Colour			RAL 7035
Assembly (EN 60715)			35 mm DIN Rail
Connection Capacity (min - max)		mm ²	10 – 50
Max. Tightening Torque		Nm	3,5

Time- Current Characteristic



3 kA / SNB 3000

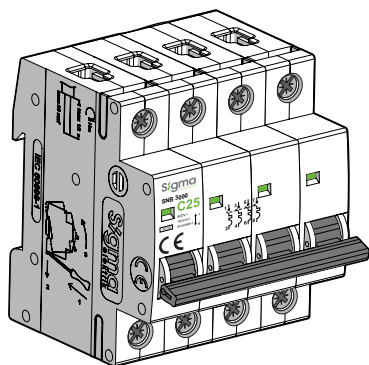
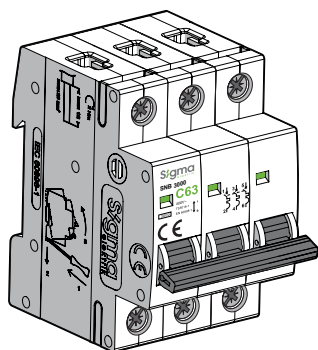
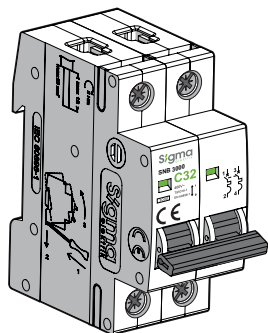
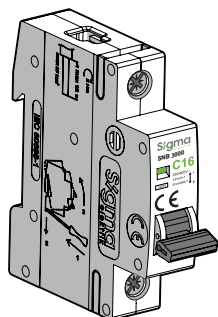


No of Poles	Rated Current In (A)	Min. Order Quantity	Number in Cartoon	Order Code for B Type
1P	2	12	240	3SM102B
	4	12	240	3SM104B
	6	12	240	3SM106B
	10	12	240	3SM110B
	16	12	240	3SM116B
	20	12	240	3SM120B
	25	12	240	3SM125B
	32	12	240	3SM132B
	40	12	240	3SM140B
	50	12	240	3SM150B
	63	12	240	3SM163B

Note: Pls kindly ask delivery time and prices for RoHS approved MCBs



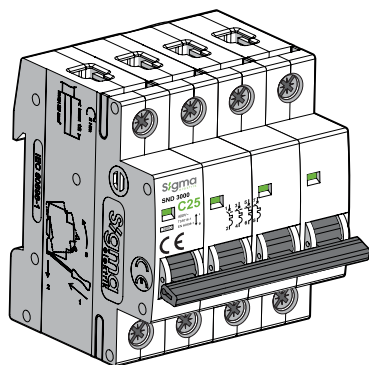
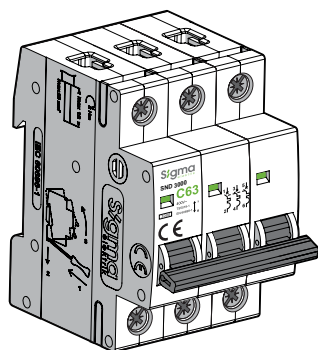
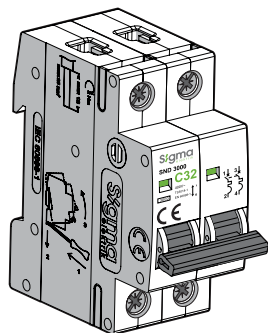
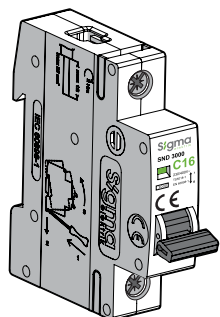
3 kA / SNB 3000



No of Poles	Rated Current In (A)	Min. Order Quantity	Number in Cartoon	Order Code for C Type
1P	2	12	240	3SB102C
	4	12	240	3SB104C
	6	12	240	3SB106C
	10	12	240	3SB110C
	16	12	240	3SB116C
	20	12	240	3SB120C
	25	12	240	3SB125C
	32	12	240	3SB132C
	40	12	240	3SB140C
	50	12	240	3SB150C
	63	12	240	3SB163C
2P	2	6	120	3SB202C
	4	6	120	3SB204C
	6	6	120	3SB206C
	10	6	120	3SB210C
	16	6	120	3SB216C
	20	6	120	3SB220C
	25	6	120	3SB225C
	32	6	120	3SB232C
	40	6	120	3SB240C
	50	6	120	3SB250C
	63	6	120	3SB263C
3P	2	4	80	3SB302C
	4	4	80	3SB304C
	6	4	80	3SB306C
	10	4	80	3SB310C
	16	4	80	3SB316C
	20	4	80	3SB320C
	25	4	80	3SB325C
	32	4	80	3SB332C
	40	4	80	3SB340C
	50	4	80	3SB350C
	63	4	80	3SB363C
4P	2	3	60	3SB402C
	4	3	60	3SB404C
	6	3	60	3SB406C
	10	3	60	3SB410C
	16	3	60	3SB416C
	20	3	60	3SB420C
	25	3	60	3SB425C
	32	3	60	3SB432C
	40	3	60	3SB440C
	50	3	60	3SB450C
	63	3	60	3SB463C

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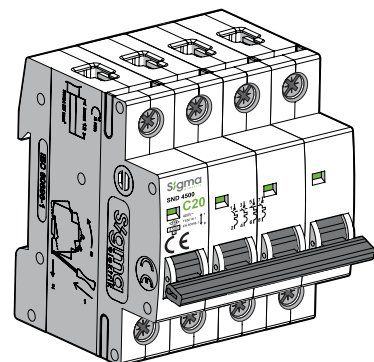
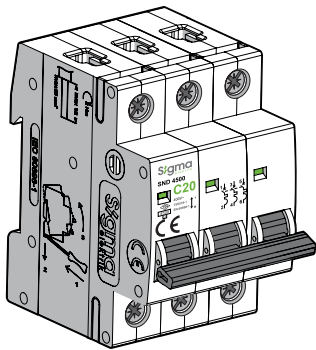
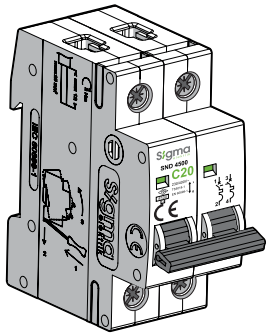
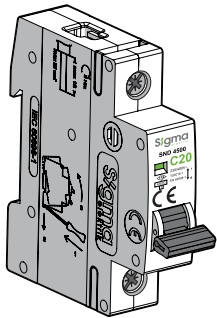
3 kA / SND 3000



No of Poles	Rated Current In (A)	Min. Order Quantity	Number in Cartoon	Order Code for C Type
1P	2	12	240	3SM102C
	4	12	240	3SM104C
	6	12	240	3SM106C
	10	12	240	3SM110C
	16	12	240	3SM116C
	20	12	240	3SM120C
	25	12	240	3SM125C
	32	12	240	3SM132C
	40	12	240	3SM140C
	50	12	240	3SM150C
	63	12	240	3SM163C
2P	2	6	120	3SM202C
	4	6	120	3SM204C
	6	6	120	3SM206C
	10	6	120	3SM210C
	16	6	120	3SM216C
	20	6	120	3SM220C
	25	6	120	3SM225C
	32	6	120	3SM232C
	40	6	120	3SM240C
	50	6	120	3SM250C
	63	6	120	3SM263C
3P	2	4	80	3SM302C
	4	4	80	3SM304C
	6	4	80	3SM306C
	10	4	80	3SM310C
	16	4	80	3SM316C
	20	4	80	3SM320C
	25	4	80	3SM325C
	32	4	80	3SM332C
	40	4	80	3SM340C
	50	4	80	3SM350C
	63	4	80	3SM363C
4P	2	3	60	3SM402C
	4	3	60	3SM404C
	6	3	60	3SM406C
	10	3	60	3SM410C
	16	3	60	3SM416C
	20	3	60	3SM420C
	25	3	60	3SM425C
	32	3	60	3SM432C
	40	3	60	3SM440C
	50	3	60	3SM450C
	63	3	60	3SM463C

Note: Pls kindly ask delivery time and prices for RoHS approved MCBs

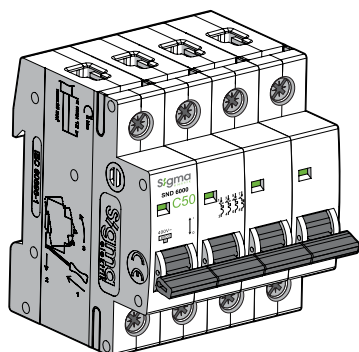
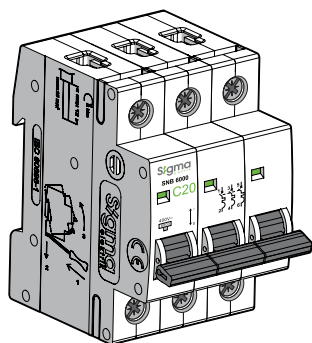
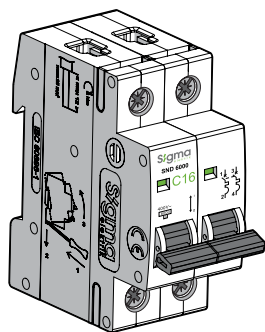
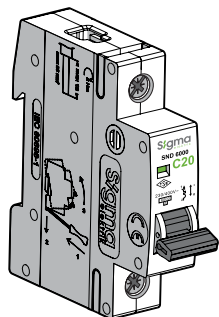
4,5 kA / SND 4500



No of Poles	Rated Current In (A)	Min. Order Quantity	Number in Cartoon	Order Code for B Type	Order Code for C Type	Order Code for D Type
1P	1	12	240	4SM101B	4SM101C	4SM101D
	2	12	240	4SM102B	4SM102C	4SM102D
	3	12	240	4SM103B	4SM103C	4SM103D
	4	12	240	4SM104B	4SM104C	4SM104D
	5	12	240	4SM105B	4SM105C	4SM105D
	6	12	240	4SM106B	4SM106C	4SM106D
	10	12	240	4SM110B	4SM110C	4SM110D
	16	12	240	4SM116B	4SM116C	4SM116D
	20	12	240	4SM120B	4SM120C	4SM120D
	25	12	240	4SM125B	4SM125C	4SM125D
	32	12	240	4SM132B	4SM132C	4SM132D
	40	12	240	4SM140B	4SM140C	4SM140D
	50	12	240	4SM150B	4SM150C	4SM150D
	63	12	240	4SM163B	4SM163C	4SM163D
2P	2	6	120		4SM202C	4SM202D
	4	6	120		4SM204C	4SM204D
	6	6	120		4SM206C	4SM206D
	10	6	120		4SM210C	4SM210D
	16	6	120		4SM216C	4SM216D
	20	6	120		4SM220C	4SM220D
	25	6	120		4SM225C	4SM225D
	32	6	120		4SM232C	4SM232D
	40	6	120		4SM240C	4SM240D
	50	6	120		4SM250C	4SM250D
	63	6	120		4SM263C	4SM263D
3P	2	4	80		4SM302C	4SM302D
	4	4	80		4SM304C	4SM304D
	6	4	80		4SM306C	4SM306D
	10	4	80		4SM310C	4SM310D
	16	4	80		4SM316C	4SM316D
	20	4	80		4SM320C	4SM320D
	25	4	80		4SM325C	4SM325D
	32	4	80		4SM332C	4SM332D
	40	4	80		4SM340C	4SM340D
	50	4	80		4SM350C	4SM350D
	63	4	80		4SM363C	4SM363D
4P	2	3	60		4SM402C	4SM402D
	4	3	60		4SM404C	4SM404D
	6	3	60		4SM406C	4SM406D
	10	3	60		4SM410C	4SM410D
	16	3	60		4SM416C	4SM416D
	20	3	60		4SM420C	4SM420D
	25	3	60		4SM425C	4SM425D
	32	3	60		4SM432C	4SM432D
	40	3	60		4SM440C	4SM440D
	50	3	60		4SM450C	4SM450D
	63	3	60		4SM463C	4SM463D

Note: Pls kindly ask delivery time and prices for RoHS approved MCBs

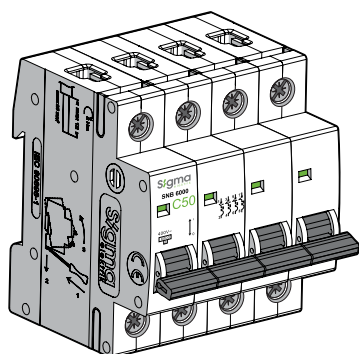
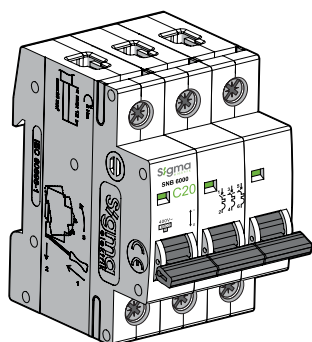
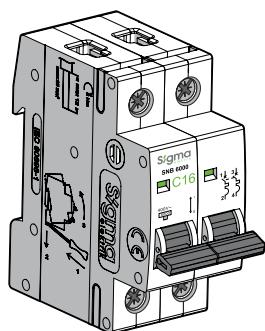
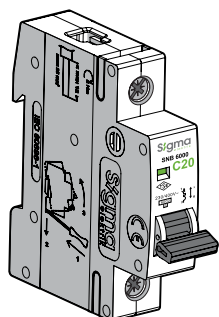
6 kA / SND 6000



No of Poles	Rated Current In (A)	Min. Order Quantity	Number in Cartoon	Order Code for B Type	Order Code for C Type	Order Code for D Type
1P	1	12	240	6SM101B	6SM101C	6SM101D
	2	12	240	6SM102B	6SM102C	6SM102D
	3	12	240	6SM103B	6SM103C	6SM103D
	4	12	240	6SM104B	6SM104C	6SM104D
	5	12	240	6SM105B	6SM105C	6SM105D
	6	12	240	6SM106B	6SM106C	6SM106D
	10	12	240	6SM110B	6SM110C	6SM110D
	16	12	240	6SM116B	6SM116C	6SM116D
	20	12	240	6SM120B	6SM120C	6SM120D
	25	12	240	6SM125B	6SM125C	6SM125D
	32	12	240	6SM132B	6SM132C	6SM132D
	40	12	240	6SM140B	6SM140C	6SM140D
	50	12	240	6SM150B	6SM150C	6SM150D
	63	12	240	6SM163B	6SM163C	6SM163D
2P	2	6	120		6SM202C	6SM202D
	4	6	120		6SM204C	6SM204D
	6	6	120		6SM206C	6SM206D
	10	6	120		6SM210C	6SM210D
	16	6	120		6SM216C	6SM216D
	20	6	120		6SM220C	6SM220D
	25	6	120		6SM225C	6SM225D
	32	6	120		6SM232C	6SM232D
	40	6	120		6SM240C	6SM240D
	50	6	120		6SM250C	6SM250D
	63	6	120		6SM263C	6SM263D
3P	2	4	80		6SM302C	6SM302D
	4	4	80		6SM304C	6SM304D
	6	4	80		6SM306C	6SM306D
	10	4	80		6SM310C	6SM310D
	16	4	80		6SM316C	6SM316D
	20	4	80		6SM320C	6SM320D
	25	4	80		6SM325C	6SM325D
	32	4	80		6SM332C	6SM332D
	40	4	80		6SM340C	6SM340D
	50	4	80		6SM350C	6SM350D
	63	4	80		6SM363C	6SM363D
4P	2	3	60		6SM402C	6SM402D
	4	3	60		6SM404C	6SM404D
	6	3	60		6SM406C	6SM406D
	10	3	60		6SM410C	6SM410D
	16	3	60		6SM416C	6SM416D
	20	3	60		6SM420C	6SM420D
	25	3	60		6SM425C	6SM425D
	32	3	60		6SM432C	6SM432D
	40	3	60		6SM440C	6SM440D
	50	3	60		6SM450C	6SM450D
	63	3	60		6SM463C	6SM463D

Note: Pls kindly ask delivery time and prices for RoHS approved MCBs

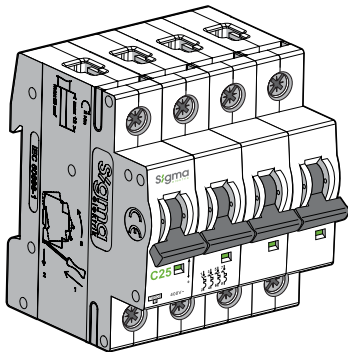
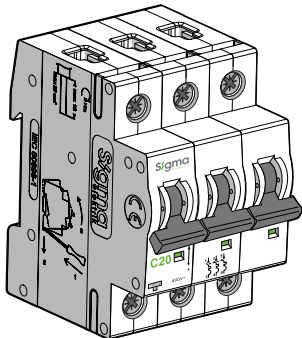
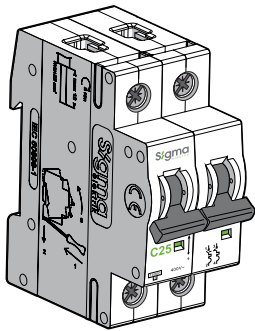
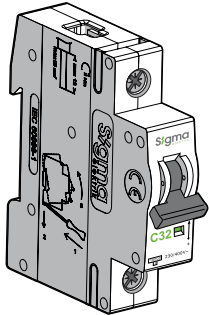
6 kA / SNB 6000

**NEW
PRODUCT**


No of Poles	Rated Current In (A)	Min. Order Quantity	Number in Cartoon	Order Code for C Type
1P	1	12	240	6SB101C
	2	12	240	6SB102C
	3	12	240	6SB103C
	4	12	240	6SB104C
	5	12	240	6SB105C
	6	12	240	6SB106C
	10	12	240	6SB110C
	16	12	240	6SB116C
	20	12	240	6SB120C
	25	12	240	6SB125C
	32	12	240	6SB132C
	40	12	240	6SB140C
	50	12	240	6SB150C
	63	12	240	6SB163C
2P	2	6	120	6SB202C
	4	6	120	6SB204C
	6	6	120	6SB206C
	10	6	120	6SB210C
	16	6	120	6SB216C
	20	6	120	6SB220C
	25	6	120	6SB225C
	32	6	120	6SB232C
	40	6	120	6SB240C
	50	6	120	6SB250C
	63	6	120	6SB263C
3P	2	4	80	6SB302C
	4	4	80	6SB304C
	6	4	80	6SB306C
	10	4	80	6SB310C
	16	4	80	6SB316C
	20	4	80	6SB320C
	25	4	80	6SB325C
	32	4	80	6SB332C
	40	4	80	6SB340C
	50	4	80	6SB350C
	63	4	80	6SB363C
4P	2	3	60	6SB402C
	4	3	60	6SB404C
	6	3	60	6SB406C
	10	3	60	6SB410C
	16	3	60	6SB416C
	20	3	60	6SB420C
	25	3	60	6SB425C
	32	3	60	6SB432C
	40	3	60	6SB440C
	50	3	60	6SB450C
	63	3	60	6SB463C

Note: Pls kindly ask delivery time and prices for RoHS approved MCBs

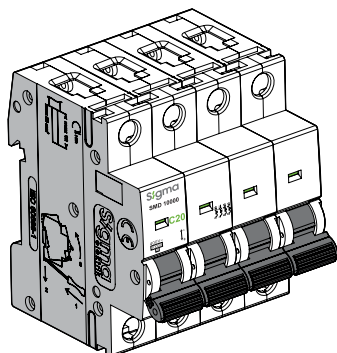
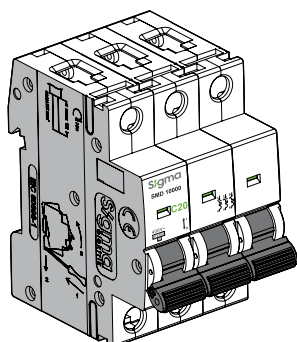
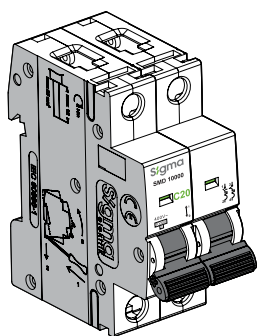
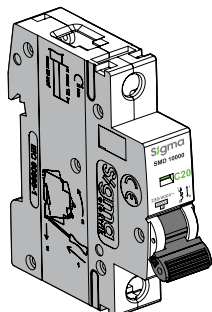
10 kA / SND 10000



No of Poles	Rated Current In (A)	Min. Order Quantity	Number in Cartoon	Order Code for B Type	Order Code for C Type	Order Code for D Type
1P	2	12	240	1SM102B	1SM102C	1SM102D
	4	12	240	1SM104B	1SM104C	1SM104D
	6	12	240	1SM106B	1SM106C	1SM106D
	10	12	240	1SM110B	1SM110C	1SM110D
	16	12	240	1SM116B	1SM116C	1SM116D
	20	12	240	1SM120B	1SM120C	1SM120D
	25	12	240	1SM125B	1SM125C	1SM125D
	32	12	240	1SM132B	1SM132C	1SM132D
	40	12	240	1SM140B	1SM140C	1SM140D
	50	12	240	1SM150B	1SM150C	1SM150D
	63	12	240	1SM163B	1SM163C	1SM163D
2P	2	6	120		1SM202C	1SM202D
	4	6	120		1SM204C	1SM204D
	6	6	120		1SM206C	1SM206D
	10	6	120		1SM210C	1SM210D
	16	6	120		1SM216C	1SM216D
	20	6	120		1SM220C	1SM220D
	25	6	120		1SM225C	1SM225D
	32	6	120		1SM232C	1SM232D
	40	6	120		1SM240C	1SM240D
	50	6	120		1SM250C	1SM250D
	63	6	120		1SM263C	1SM263D
3P	2	4	80		1SM302C	1SM302D
	4	4	80		1SM304C	1SM304D
	6	4	80		1SM306C	1SM306D
	10	4	80		1SM310C	1SM310D
	16	4	80		1SM316C	1SM316D
	20	4	80		1SM320C	1SM320D
	25	4	80		1SM325C	1SM325D
	32	4	80		1SM332C	1SM332D
	40	4	80		1SM340C	1SM340D
	50	4	80		1SM350C	1SM350D
	63	4	80		1SM363C	1SM363D
4P	2	3	60		1SM402C	1SM402D
	4	3	60		1SM404C	1SM404D
	6	3	60		1SM406C	1SM406D
	10	3	60		1SM410C	1SM410D
	16	3	60		1SM416C	1SM416D
	20	3	60		1SM420C	1SM420D
	25	3	60		1SM425C	1SM425D
	32	3	60		1SM432C	1SM432D
	40	3	60		1SM440C	1SM440D
	50	3	60		1SM450C	1SM450D
	63	3	60		1SM463C	1SM463D

Note: Pls kindly ask delivery time and prices for RoHS approved MCBs

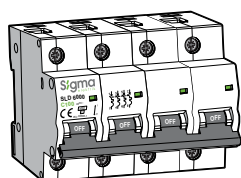
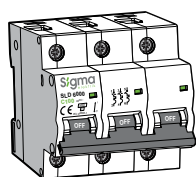
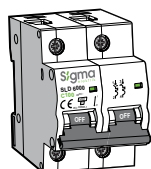
10 kA / SMD 10000 (TÜV Approved)



No of Poles	Rated Current In (A)	Min. Order Quantity	Number in Cartoon	Order Code for B Type	Order Code for C Type	Order Code for D Type
1P	2	12	240	1SMD102B	1SMD102C	1SMD102D
	4	12	240	1SMD104B	1SMD104C	1SMD104D
	6	12	240	1SMD106B	1SMD106C	1SMD106D
	10	12	240	1SMD110B	1SMD110C	1SMD110D
	16	12	240	1SMD116B	1SMD116C	1SMD116D
	20	12	240	1SMD120B	1SMD120C	1SMD120D
	25	12	240	1SMD125B	1SMD125C	1SMD125D
	32	12	240	1SMD132B	1SMD132C	1SMD132D
	40	12	240	1SMD140B	1SMD140C	1SMD140D
	50	12	240	1SMD150B	1SMD150C	1SMD150D
	63	12	240	1SMD163B	1SMD163C	1SMD163D
2P	2	6	120		1SMD202C	1SMD202D
	4	6	120		1SMD204C	1SMD204D
	6	6	120		1SMD206C	1SMD206D
	10	6	120		1SMD210C	1SMD210D
	16	6	120		1SMD216C	1SMD216D
	20	6	120		1SMD220C	1SMD220D
	25	6	120		1SMD225C	1SMD225D
	32	6	120		1SMD232C	1SMD232D
	40	6	120		1SMD240C	1SMD240D
	50	6	120		1SMD250C	1SMD250D
	63	6	120		1SMD263C	1SMD263D
3P	2	4	80		1SMD302C	1SMD302D
	4	4	80		1SMD304C	1SMD304D
	6	4	80		1SMD306C	1SMD306D
	10	4	80		1SMD310C	1SMD310D
	16	4	80		1SMD316C	1SMD316D
	20	4	80		1SMD320C	1SMD320D
	25	4	80		1SMD325C	1SMD325D
	32	4	80		1SMD332C	1SMD332D
	40	4	80		1SMD340C	1SMD340D
	50	4	80		1SMD350C	1SMD350D
	63	4	80		1SMD363C	1SMD363D
4P	2	3	60		1SMD402C	1SMD402D
	4	3	60		1SMD404C	1SMD404D
	6	3	60		1SMD406C	1SMD406D
	10	3	60		1SMD410C	1SMD410D
	16	3	60		1SMD416C	1SMD416D
	20	3	60		1SMD420C	1SMD420D
	25	3	60		1SMD425C	1SMD425D
	32	3	60		1SMD432C	1SMD432D
	40	3	60		1SMD440C	1SMD440D
	50	3	60		1SMD450C	1SMD450D
	63	3	60		1SMD463C	1SMD463D

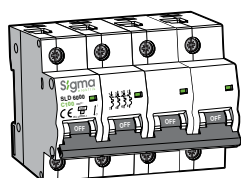
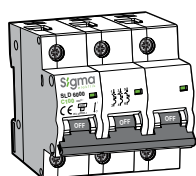
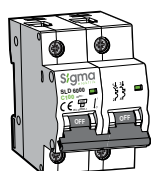
Note: Pls kindly ask delivery time and prices for RoHS approved MCBs

80-100-125A Miniature Circuit Breakers 6 kA / SLD 6000



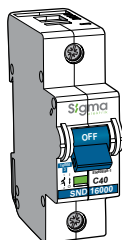
No of Poles	Rated Current In (A)	Min. Order Quantity	Number in Cartoon	Order Code
1P	80	12	120	6SL180C
	100	12	120	6SL100C
	125	12	120	6SL112C
2P	80	6	60	6SL280C
	100	6	60	6SL200C
	125	6	60	6SL212C
3P	80	4	40	6SL380C
	100	4	40	6SL300C
	125	4	40	6SL312C
4P	80	3	30	6SL480C
	100	3	30	6SL400C
	125	3	30	6SL412C

80-100-125A Miniature Circuit Breakers 10 kA / SLD 10000



No of Poles	Rated Current In (A)	Min. Order Quantity	Number in Cartoon	Order Code
1P	80	12	120	1SL180C
	100	12	120	1SL100C
	125	12	120	1SL112C
2P	80	6	60	1SL280C
	100	6	60	1SL200C
	125	6	60	1SL212C
3P	80	4	40	1SL380C
	100	4	40	1SL300C
	125	4	40	1SL312C
4P	80	3	30	1SL480C
	100	3	30	1SL400C
	125	3	30	1SL412C

16 kA / SND 16000



No of Poles	Rated Current In (A)	Min. Order Quantity	Order Code
1P	C40	1	5SM140C
	C50	1	5SM150C
	C63	1	5SM163C
	C80	1	5SM180C
	C100	1	5SM100C
	C125	1	5SM125C

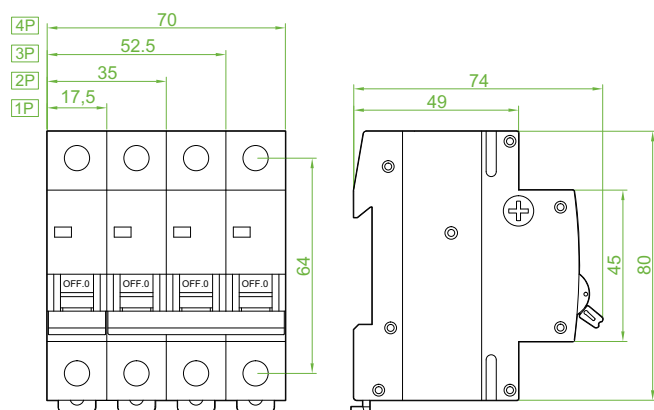
4.5 kA Phase-Neutral Miniature Circuit Breakers 1P+N (18 mm)



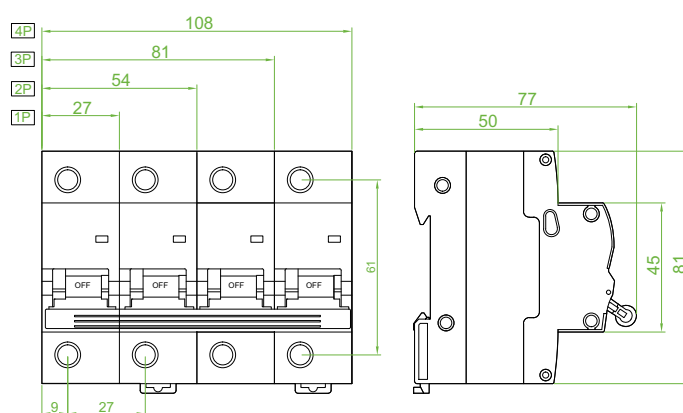
No of Poles	Rated Current In (A)	Min. Order Quantity	Number in Cartoon	Order Code
1P+N	6	12	240	4SN106C
	10	12	240	4SN110C
	16	12	240	4SN116C
	20	12	240	4SN120C
	25	12	240	4SN125C
	32	12	240	4SN132C

Dimensions

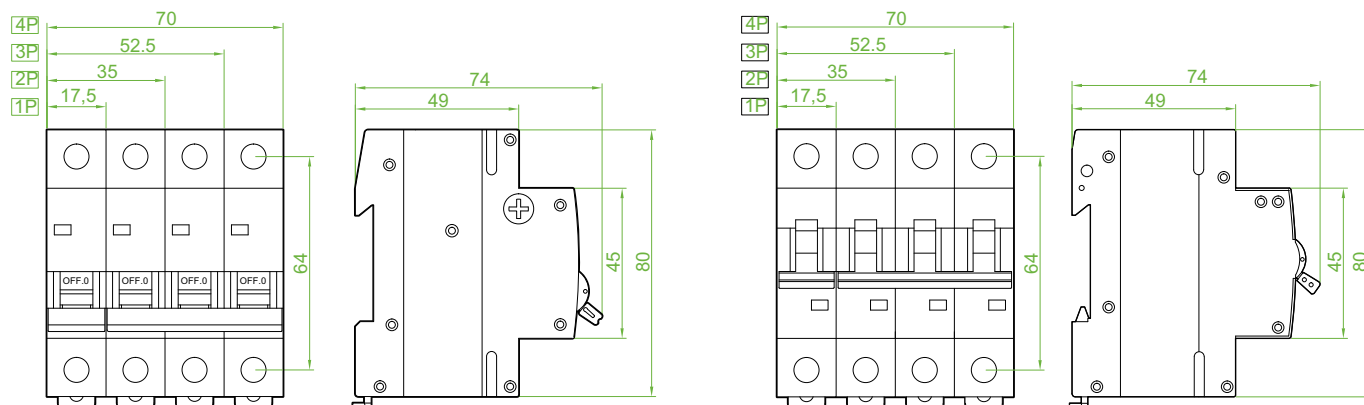
3 kA - 4,5 kA - 6 kA (1A-63A)



6kA - 10kA (80A-100A-125A)

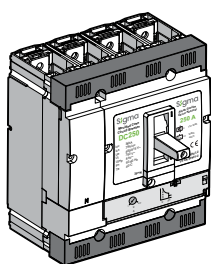


10 kA (2A-63A)



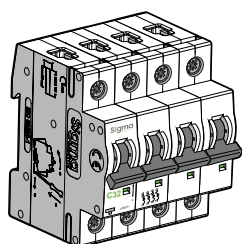
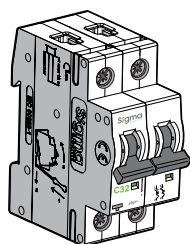
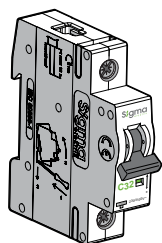


DC LV MCCB - 1000 V



Type Code	Rated Current In (A)	Thermal Adj. Current Ir(A)	Instantaneous Trip- ping Current (Im)	Breaking Capa- city Icu (kA)	Number in Cartoon	Order Code
DC160	16	11-16	15xIn	36	4	DC160016
	20	14-20	12xIn	36	4	DC160020
	25	18-25	10xIn	36	4	DC160025
	32	23-32	10xIn	36	4	DC160032
	40	28-40	10xIn	36	4	DC160040
	50	35-50	10xIn	36	4	DC160050
	63	44-63	10xIn	36	4	DC160063
	80	56-80	10xIn	36	4	DC160080
	100	70-100	10xIn	36	4	DC160100
	125	88-125	10xIn	36	4	DC160125
	160	112-160	10xIn	36	4	DC160160
DC250	200	140-200	(5-10)xIn	36	4	DC250200
	250	175-250	(5-10)xIn	36	4	DC250250

DC Miniature Circuit Breakers - 6 kA



No of Poles	Rated Current In (A)	Rated Operation Voltage DC (V)	Min. Order Quantity	Number in Cartoon	Order Code
1P	6	250	12	240	6SD106C
	10		12	240	6SD110C
	16		12	240	6SD116C
	20		12	240	6SD120C
	25		12	240	6SD125C
	32		12	240	6SD132C
	40		12	240	6SD140C
	50		12	240	6SD150C
	63		12	240	6SD163C
2P	6	500	6	120	6SD206C
	10		6	120	6SD210C
	16		6	120	6SD216C
	20		6	120	6SD220C
	25		6	120	6SD225C
	32		6	120	6SD232C
	40		6	120	6SD240C
	50		6	120	6SD250C
	63		6	120	6SD263C
4P	6	1000	3	60	6SD406C
	10		3	60	6SD410C
	16		3	60	6SD416C
	20		3	60	6SD420C
	25		3	60	6SD425C
	32		3	60	6SD432C
	40		3	60	6SD440C
	50		3	60	6SD450C
	63		3	60	6SD463C

DC Low Voltage Surge Arresters

Type	Un(V) AC	I _{max} (kA)	I _n (kA)	Up (kV)	Order Code
SP3-DC40	1000	40	20	<3	SP3-DC40

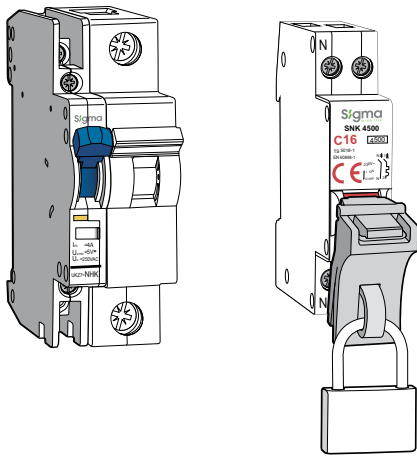
DC Cylindrical (Cartridge) Fuse Bases

Type	Rated Current (A)	Rated Voltage DC (V)	No of Poles	Cartridge (mm)	Min. Order Quantity	Number in Cartoon	Order Code
SDC-125	25	1000	1	10x38	12	360	SDC125

10x38 mm DC Cylindrical (Cartridge) Fuses

Type	Rated Current (A)	I ₁ (kA)	Rated Voltage DC (V)	Cartridge (mm)	Min. Order Quantity	Number in Cartoon	Order Code
DC systems protection	8	25	1000	10x38	10	2000	SFDC08
	20	25	1000	10x38	10	2000	SFDC20
	25	25	1000	10x38	10	2000	SFDC25

Accessories



**NEW
PRODUCT**

Type Code	Description	Order Code
SNAB	AC-DC 110-400 V Shunt Trip Release (For 4,5-6 kA Mcb)	SNAB220
	AC-DC 24-48 V Shunt Trip Release (For 4,5-6 kA Mcb)	SNAB024
SNYK	11NO+1NC Auxiliary Contact (For 4,5-6 Ka Mcb)	SNYK011
SMAB	110-415 V AC / 110-220 V DC Shunt Trip Release (For 10 kA Mcb)	SMAB220
	24 V AC Shunt Trip Release (For 10 kA Mcb)	SMAB024
SMYK	1NO+1NC Aux Contact + Alarm Contact (Ith:6 A, 250 V AC) (For 10 kA Mcb)	SMYK011
SMDAB	110-415 V AC/110-220 V DC Shunt Trip Release (For SMD 10000)	SMDAB
SMDYK	1NO+1NC Aux Contact (Ith:4 A, 250 V AC) (For SMD 10000)	SMDYK
SMDAK	1NO+1NC Alarm Contact (Ith:4 A, 250 V AC) (For SMD 10000)	SMDAK
SMEK	Safety Lock (For all type Mcb)*	SMEK
RD1	Motor operator (for 1 P SMD 10000)	SMDRD1
RD2	Motor operator (for 2 P SMD 10000)	SMDRD2
RD3	Motor operator (for 3 P SMD 10000)	SMDRD3
RD4	Motor operator (for 4 P SMD 10000)	SMDRD4

*Pedlock is NOT included our offer.

Required Data for Mcb Order

- Rated Current (1...125A)
- Rated Breaking Capacity (3kA - 4.5kA - 6kA - 10kA - 16kA)
- Required No of Poles (1P-2P-3P-4P)
- Tripping Curve Type (B-C-D)

Mcb Selection According to Instantaneous Tripping Curve

B Curve: It is used for protection of illumination of houses, plugs, heaters, PLC and control circuits.

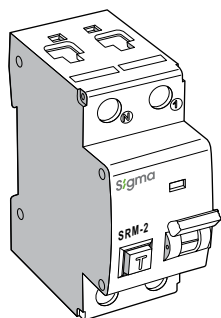
C Curve: It is used for protection of inductive loads like fluorescent lamps, transformers, power socket plugs, machines, lower power motors, air-conditions, cooling machines, power distribution panels.

D Curve: It is used for protection of motor starters, pumps, compressors, capacitors and welding machines.

Miniature Circuit Breakers Tripping and Non-Tripping Conditions

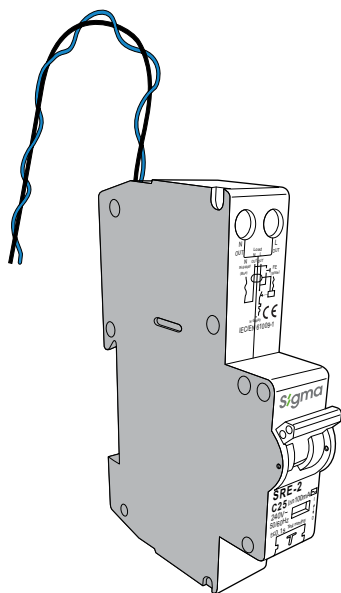
Tripping Curve	Rated Current	Applied Test Current	Tripping Time	Result (should be)
B, C, D	$I_n \leq 63$	$1.13 I_n$	$t \geq 3600s$	Non trip
B, C, D	$I_n \leq 63$	$1.45 I_n$	$t < 3600s$	Trip
B, C, D	$I_n > 63$	$1.13 I_n$	$t \geq 7200s$	Non trip
B, C, D	$I_n > 63$	$1.45 I_n$	$t < 7200s$	Trip
B, C, D	$I_n \leq 32$	$2.55 I_n$	$1s < t < 60s$	Trip
B, C, D	$I_n > 32$	$2.55 I_n$	$1s < t < 120s$	Trip
B	All	$3 I_n$	$t \geq 0.1s$	Non trip
B	All	$5 I_n$	$t < 0.1s$	Trip
C	All	$5 I_n$	$t \geq 0.1s$	Non trip
C	All	$10 I_n$	$t < 0.1s$	Trip
D	All	$10 I_n$	$t \geq 0.1s$	Non trip
D	All	$20 I_n$	$t < 0.1s$	Trip

RCBO - Residual Current Circuit Breaker with Over Current Protection



Type Code	No of Pole	Rated Current I_n (A)	Residual Current $I_{\Delta n}$ (mA)	Order Code
SRM-2	2	6	30mA	SRM2006030
		10		SRM2010030
		16		SRM2016030
		20		SRM2020030
		25		SRM2025030
		32		SRM2032030
		40		SRM2040030
		6	300mA	SRM2006300
		10		SRM2010300
		16		SRM2016300
		20		SRM2020300
		25		SRM2025300
		32		SRM2032300
		40		SRM2040300

RCBO - Residual Current Circuit Breaker with Over Current Protection (Wired)



Type Code	No of Pole	Rated Current I_n (A)	Residual Current $I_{\Delta n}$ (mA)	Order Code
SRE-2	2	6	30mA	SRE2006030
		10		SRE2010030
		16		SRE2016030
		20		SRE2020030
		25		SRE2025030
		32		SRE2032030
		40		SRE2040030
		6	100mA	SRE2006100
		10		SRE2010100
		16		SRE2016100
		20		SRE2020100
		25		SRE2025100
		32		SRE2032100
		40		SRE2040100
		6	300mA	SRE2006300
		10		SRE2010300
		16		SRE2016300
		20		SRE2020300
		25		SRE2025300
		32		SRE2032300
		40		SRE2040300

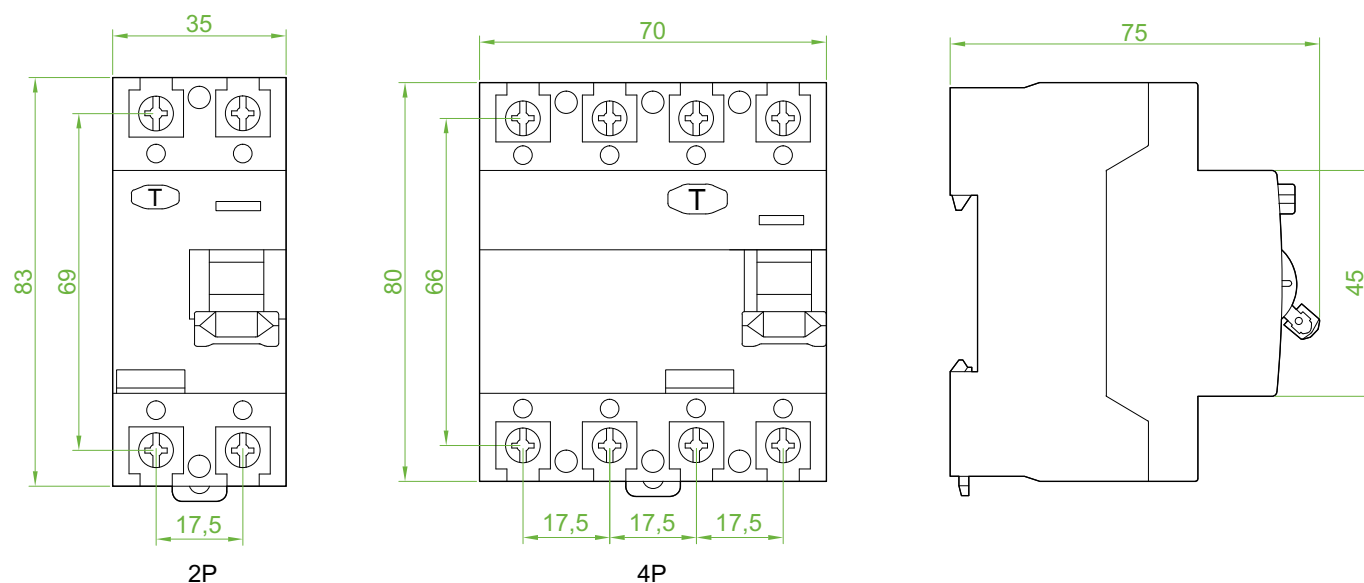
Residual Current Circuit Breakers - Technical Specification

Type			SGM-2	SGM-4	SFM-2	SFM-4	SHM-2	SHM-4	SDM-2	SDM-4
No of Poles			2	4	2	4	2	4	2	4
Rated Current	In	A	25, 40, 63, 80, 100							
Rated Residual Current	IΔ	mA	30, 300							
Rated Frequency		Hz	50-60							
Current Selectivity			AC		A		AC			
Tripping Unit			Electro-mechanic							
Tripping Time			0.5.....1 x IΔn		0.11.....1.4 x IΔn		0.5.....1 x IΔn			
Breaking Time at Residual Current (IΔn)		ms	< 200						130 < t < 500	
Delay Type according to Residual Current			General						Delay Time Selectivity	
Rated Operating Voltage	Ue	(AC) V	240	415	240	415	240	415	240	415
Rated Insulation Voltage	Ui	V	660							
Rated Impulse Withstand Voltage	Uimp	kV	6							
Rated Short Circuit Withstand current with Fuse (Inc/IΔc)		kA	10				6			
Electrical Life (Operation)	operation	(230 V)	6000							
Mechanical Life (Operation)	operation		20000							
Degree of Protection (After Assembly)			IP 20 (IP 40)							
Ambient Operation Temperature		°C	-25 to +60							
Max. Storage Temperature		°C	-40 to +70							
Dimensions	Width	mm	35	70	35	70	35	70	35	70
	Length	mm	80							
Colour			RAL 7035							
Assembly Type (EN 60715)			35 mm DIN Rail							
Min.. Max. Connection Section		mm²	1.5 - 35							

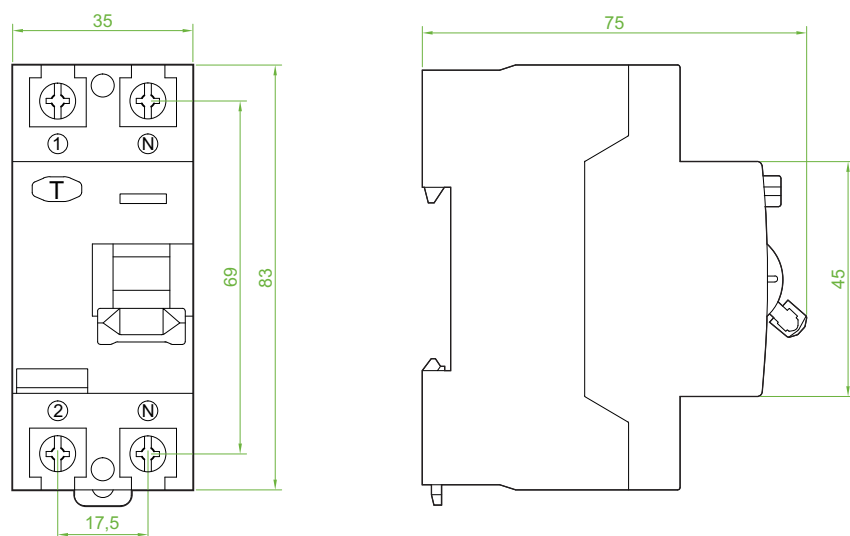


Dimensions

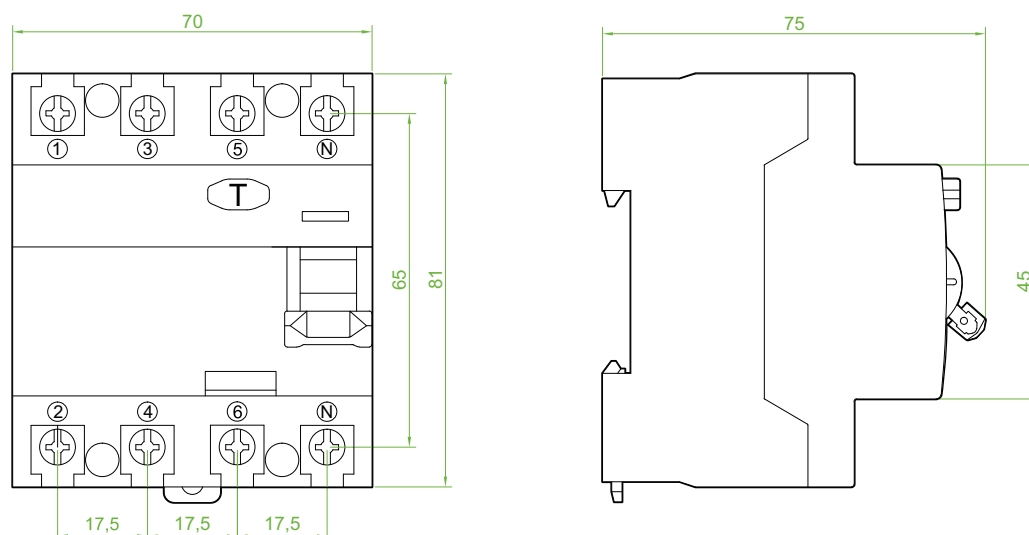
SGM-2 / SGM-4



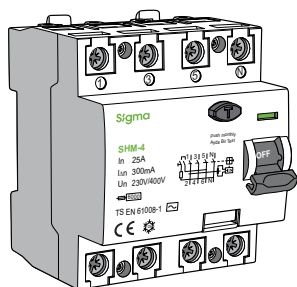
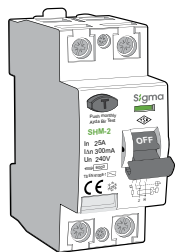
SHM-2



SHM-4

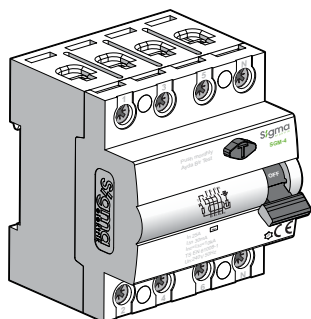
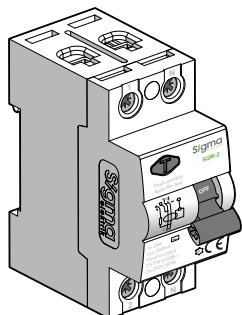


Residual Current Circuit Breakers (AC Type) 6 kA



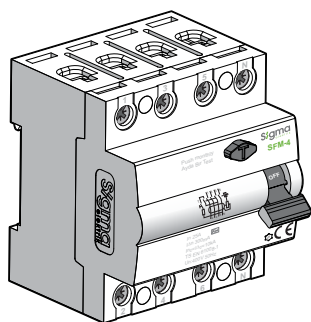
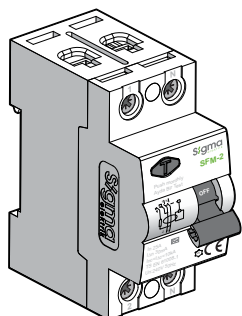
Type Code	Rated Current In (A)	No of Poles	Protection	Residual Current IΔn (mA)	Tripping Time at Residual Current (ms)	Number in Cartoon	Order Code
SHM-2	25	2	Life Protection	30	Instantaneously	100	SHM2025030
	40					100	SHM2040030
	63					100	SHM2063030
	80					100	SHM2080030
	25	2	Fire Protection	300	Instantaneously	100	SHM2025300
	40					100	SHM2040300
	63					100	SHM2063300
	80					100	SHM2080300
SHM-4	25	4	Life Protection	30	Instantaneously	50	SHM4025030
	40					50	SHM4040030
	63					50	SHM4063030
	80					50	SHM4080030
	100					50	SHM4100030
	25	4	Fire Protection	300	Instantaneously	50	SHM4025300
	40					50	SHM4040300
	63					50	SHM4063300
	80					50	SHM4080300
	100					50	SHM4100300
SDM-2 (Delay)	25	2	Fire Protection (Selectivity Option)	300	Min. 130 ms	100	SDM2025300
	32					100	SDM2032300
	40					100	SDM2040300
	63					100	SDM2063300
	80					100	SDM2080300
SDM-4 (Delay)	25	4				50	SDM4025300
	32					50	SDM4032300
	40					50	SDM4040300
	63					50	SDM4063300
	80					50	SDM4080300

Residual Current Circuit Breakers (AC Type) 10 kA



Type Code	Rated Current In (A)	No of Poles	Protection	Residual Current I _{Δn} (mA)	Tripping Time at Residual Current (ms)	Number in Cartoon	Sipariş Kodu
SGM-2	25	2	Life Protection	30	Instantaneously	100	SGM2025030
	32					100	SGM2032030
	40					100	SGM2040030
	63					100	SGM2063030
	80					100	SGM2080030
	100					100	SGM2100030
	125					100	SGM2125030
	25	2	Fire Protection	300	Instantaneously	100	SGM2025300
	32					100	SGM2032300
	40					100	SGM2040300
	63					100	SGM2063300
	80					100	SGM2080300
	100					100	SGM2100300
	125					100	SGM2125300
SGM-4	25	4	Life Protection	30	Instantaneously	50	SGM4025030
	32					50	SGM4032030
	40					50	SGM4040030
	63					50	SGM4063030
	80					50	SGM4080030
	100					50	SGM4100030
	125					50	SGM4125030
	25	4	Fire Protection	300	Instantaneously	50	SGM4025300
	32					50	SGM4032300
	40					50	SGM4040300
	63					50	SGM4063300
	80					50	SGM4080300
	100					50	SGM4100300
	125					50	SGM4125300

Residual Current Circuit Breakers (A Type) 10 kA



Type Code	Rated Current In (A)	No of Poles	Protection	Rated Residual Current I _{Δn} (mA)	Tripping Time in Rated Residual Current (ms)	Number in Cartoon	Order Code
SFM-2	25	2	Life Protection (Protection for AC and DC puls residual current).	30	Instantaneously	100	SFM2025030
	32					100	SFM2032030
	40					100	SFM2040030
	63					100	SFM2063030
	80					100	SFM2080030
	100					100	SFM2100030
	25	2	Fire Protection (Protection for AC and DC puls residual current).	300	Instantaneously	100	SFM2025300
	32					100	SFM2032300
	40					100	SFM2040300
	63					100	SFM2063300
	80					100	SFM2080300
	100					100	SFM2100300
SFM-4	25	4	Life Protection (Protection for AC and DC puls residual current).	30	Instantaneously	50	SFM4025030
	32					50	SFM4032030
	40					50	SFM4040030
	63					50	SFM4063030
	80					50	SFM4080030
	100					50	SFM4100030
	25	4	Fire Protection (Protection for AC and DC puls residual current).	300	Instantaneously	50	SFM4025300
	32					50	SFM4032300
	40					50	SFM4040300
	63					50	SFM4063300
	80					50	SFM4080300
	100					50	SFM4100300

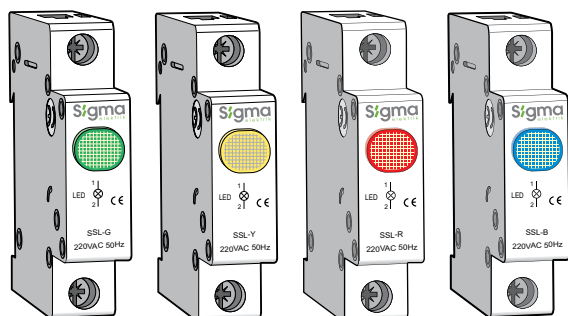
Note: A Type KAKS's are used to provide protection against residual currents of electronic devices including UPS, Power Supplies, Elevators, Thyristor and Diode

Residual Current Circuit Breakers Test Instrument

Residual Current Circuit Breakers Test Instrument Characteristics		Type Code
Residual Current Test Levels	15 - 30 - 50-100 - 150 -300 mA - adjustable:	SCT-100
Trip Time Measurement	Trip time measurement on the basis of ms at 15 - 30 - 50-100 - 150 -300 mA	
Max. Signal Application Period for the Test	1000ms	
Phase Measurement	It is possible to see on the screen with PWR Led light whether there is energy in the socket to be controlled.	
Product Operating Voltage	230VAC	
Screen	2x8 LCD screen	
Battery Life	Product may perform 1500 measurements with 9V charged battery.	

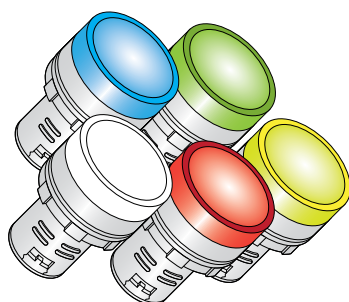


Din Rail Type Led Signal Indicators



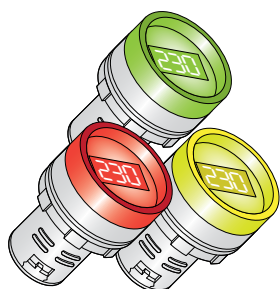
Colour	Rated Voltage (V)	Min. Order Quantity	Number in Cartoon	Order Code
Blue	220 V AC	12	120	SSL-B220A
	24 V AC	12	120	SSL-B024A
	24 V DC	12	120	SSL-B024D
Red	220 V AC	12	120	SSL-R220A
	24 V AC	12	120	SSL-R024A
	24 V DC	12	120	SSL-R024D
Green	220 V AC	12	120	SSL-G220A
	24 V AC	12	120	SSL-G024A
	24 V DC	12	120	SSL-G024D
Yellow	220 V AC	12	120	SSL-Y220A
	24 V AC	12	120	SSL-Y024A
	24 V DC	12	120	SSL-Y024D

Led Indicators



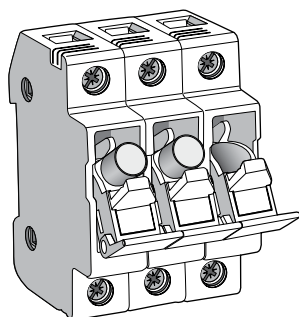
Type	Rated Voltage (V)	Dimensions (mm)	Colour	Number in Cartoon	Order Code
SL-22-22DS	220 V AC	22	Red	10	SL22-220DSR
			Green	10	SL22-220DSG
			Yellow	10	SL22-220DSY
			Blue	10	SL22-220DSB
			White	10	SL22-220DSW
	24 V AC/DC		Red	10	SL22-024DSR
			Green	10	SL22-024DSG
			Yellow	10	SL22-024DSY
			Blue	10	SL22-024DSB
			White	10	SL22-024DSW

Led Indicators with Voltmeter



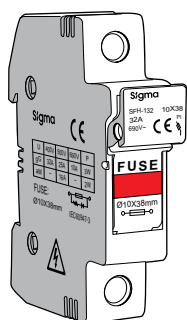
Type	Rated Voltage (V)	Dimensions (mm)	Colour	Number in Cartoon	Order Code
SL-22-22VM	12-500 V AC	22	Red	10	SL22-22VMR
			Green	10	SL22-22VMG
			Yellow	10	SL22-22VMY

Cylindrical (cartridge) Fuses



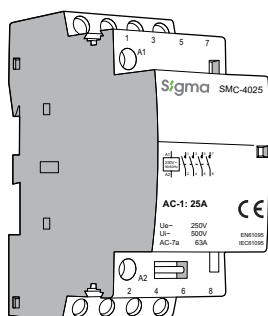
Type	Rated Current (A)	Cartridge Diameter (Øxmm)	Min. Order Quantity	Number in Cartoon	Order Code
gG Type cylindrical fuses (General protection of cables and electrical systems against overload and short circuit).	2	10x38	10	2000	SFLG02
	4	10x38	10	2000	SFLG04
	6	10x38	10	2000	SFLG06
	10	10x38	10	2000	SFLG10
	16	10x38	10	2000	SFLG16
	20	10x38	10	2000	SFLG20
	25	10x38	10	2000	SFLG25
	32	10x38	10	2000	SFLG32
	40	14x51	10	2000	SFNG040
	50	14x51	10	2000	SFNG050
	63	22x58	10	2000	SFMG063
	80	22x58	10	2000	SFMG080
	100	22x58	10	2000	SFMG100
aM Type cylindrical fuses (Protection of Motor systems against short circuits)	2	10x38	10	2000	SFLM02
	4	10x38	10	2000	SFLM04
	6	10x38	10	2000	SFLM06
	10	10x38	10	2000	SFLM10
	16	10x38	10	2000	SFLM16
	20	10x38	10	2000	SFLM20
	25	10x38	10	2000	SFLM25
	32	10x38	10	2000	SFLM32
aR Type high speed fuses (Protection against short-circuit of semi-conductor and power systems ; UPS, soft starter, inverter, converter, AC/DC starters e.g.)	2	10x38	10	2000	SFLR02
	4	10x38	10	2000	SFLR04
	6	10x38	10	2000	SFLR06
	10	10x38	10	2000	SFLR10
	16	10x38	10	2000	SFLR16
	20	10x38	10	2000	SFLR20
	25	10x38	10	2000	SFLR25
	32	10x38	10	2000	SFLR32

Cylindrical (cartridge) Fuse Holders



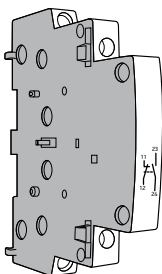
Type	Rated Current (A)	No of Poles	Cartridge Diameter (Øxmm)	Min. Order Quantity	Number in Cartoon	Order Code
SFH032	32	1	10x38	12	144	SFH132
	32	1P+N	10x38	6	72	SFH232
	32	3	10x38	4	48	SFH332
SFH050	50	1	14x51	1	50	SFH1050
	50	1P+N	14x51	1	50	SFH2050
	50	3	14x51	1	50	SFH3050
SFH100	100	1	22x58	1	60	SFH1100
	100	1P+N	22x58	1	60	SFH2100
	100	3	22x58	1	60	SFH3100

Modular Contactors



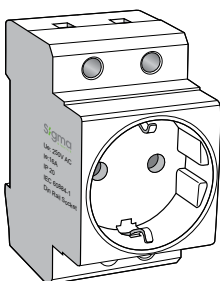
Type Code	Rated Current (A)	No of poles	Contact Structure	Coil Voltage (V)	Order Code
SMC-2025	25	2	2 NO	230	SMC-2025-2NO
SMC-2063	63	2	2 NO	230	SMC-2063-2NO
SMC-4025	25	4	4 NO	230	SMC-4025-4NO
SMC-4063	63	4	4 NO	230	SMC-4063-4NO
SMC-4100	100	4	4 NO	230	SMC-4100-4NO

Auxiliary Contact for Modular Contactor



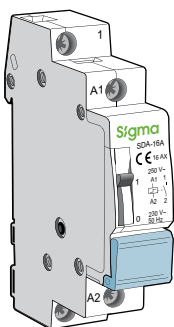
Type Code	Contact Structure	Order Code
SMC-YK	1 NO + 1 NC	SMCYK

Din Rail Type Socket for Panel boards



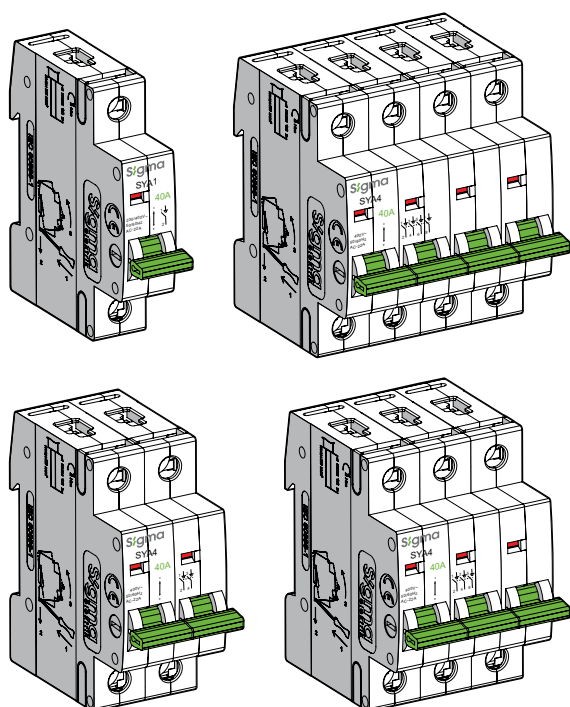
Specification	Min. Order Quantity	Number in Cartoon	Order Code
Socket 6 A 230 V	5	50	SPP-16T

Impulse Relay



Specification	Min. Order Quantity	Order Code
16 A 230 V 1NO	12	SDA-16A

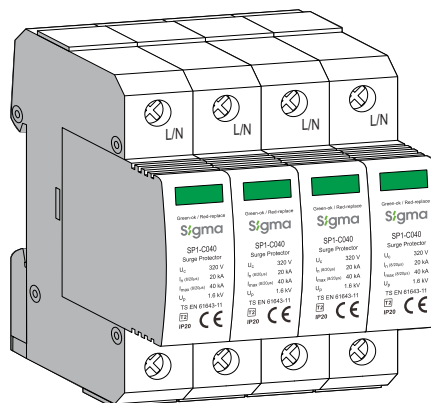
Isolator Switch (without Protection)



No of Poles	Rated Current In (A)	Min. Order Quantity	Number in Cartoon	Order Code
1P	40	12	240	SYA1040
	63	12	240	SYA1063
	80	12	240	SYA1080
	100	12	240	SYA1100
	125	12	240	SYA1125
2P	40	6	120	SYA2040
	63	6	120	SYA2063
	80	6	120	SYA2080
	100	6	120	SYA2100
	125	6	120	SYA2125
3P	40	4	80	SYA3040
	63	4	80	SYA3063
	80	4	80	SYA3080
	100	4	80	SYA3100
	125	4	80	SYA3125
4P	40	3	60	SYA4040
	63	3	60	SYA4063
	80	3	60	SYA4080
	100	3	60	SYA4100
	125	3	60	SYA4125



LV Surge Protection Devices



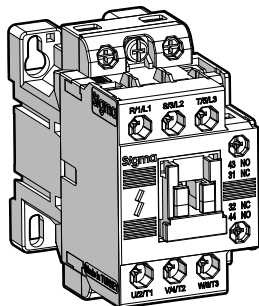
**NEW
PRODUCT**

Type	Description	No of Poles	Uc (V) AC	I _{max} (kA)	I _n (kA)	Up (kV)	Order Code
SP1-B100	Type 1 B Class use before the counter	1	255	50 (10/350μs)	100	<2.5	SP1-B100
SP4-B100	Type 1 B Class use before the counter	4	255	50 (10/350μs)	100	<2.5	SP4-B100
SP4-BC050	Type 1+Type 2 B-C Class use before the counter	4	385	50 (8/20μs)	50	<1.6	SP4-BC050
SP1-C040	Type 2 C Class use after the counter	1	275	40 (8/20μs)	20	<1.4	SP1-C040
SP2-C040	Type 2 C Class use after the counter	2	275	40 (8/20μs)	20	<1.4	SP2-C040
SP3-C040	Type 2 C Class use after the counter	3	275	40 (8/20μs)	20	<1.4	SP3-C040
SP4-C040	Type 2 C Class use after the counter	4	275	40 (8/20μs)	20	<1.4	SP4-C040
	Spare cartridge for C Class surge protection	1	275	40 (8/20μs)	20	<1.4	SP1-C040K
SP1-D005	Type 3 D Class use after the counter	1	275	5 (8/20μs)	3	<1	SP1-D005

Note: The LV Surge Protection devices are offered with signal contact except B type.

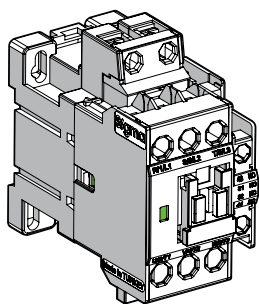


3 Poles Double Coil Connected Power Contactor - Coil Voltage: 230V AC



Type Code	Rated Power at (400 V) (kW)	Rated Current AC-3 (A)	Rated Current AC-1 (A)	Auxiliary Contact on Body	Min. Order Quantity	Number in Cartoon	Order Code
SCG-9	4	9	25	1NO+1NC	1	42	SCG009230
SCG-12	5,5	12	25	1NO+1NC	1	42	SCG012230
SCG-18	7,5	18	40	1NO+1NC	1	42	SCG018230
SCG-25	11	25	40	1NO+1NC	1	42	SCG025230
SCG-32	15	32	50	1NO+1NC	1	24	SCG032230
SCG-40	18,5	40	60	1NO+1NC	1	24	SCG040230
SCG-50	22	50	80	1NO+1NC	1	10	SCG050230
SCG-65	30	65	100	1NO+1NC	1	10	SCG065230
SCG-80	37	80	110	1NO+1NC	1	10	SCG080230
SCG-95	45	95	135	1NO+1NC	1	10	SCG095230

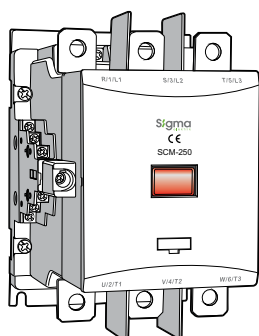
3 Poles Power Contactors - Coil Voltage: 230V AC



Type Code	Rated Power at (400 V) (kW)	Rated Current AC-3 (A)	Rated Current AC-1 (A)	Auxiliary Contact on Body	Min. Order Quantity	Number in Cartoon	Order Code
SCM-9	4	9	25	1NO+1NC	1	42	SCM009230
SCM-12	5,5	12	25	1NO+1NC	1	42	SCM012230
SCM-18	7,5	18	40	1NO+1NC	1	42	SCM018230
SCM-22	11	22	40	1NO+1NC	1	42	SCM022230
SCM-32	15	32	50	1NO+1NC	1	24	SCM032230
SCM-40	18,5	40	60	1NO+1NC	1	24	SCM040230
SCM-50	22	50	80	1NO+1NC	1	10	SCM050230
SCM-65	30	65	100	1NO+1NC	1	10	SCM065230
SCM-75	37	75	110	1NO+1NC	1	10	SCM075230
SCM-85	45	85	135	1NO+1NC	1	10	SCM085230
SCM-100	55	100	160	2NO+2NC	1	4	SCM100230
SCM-125	60	120	160	2NO+2NC	1	4	SCM125230
SCM-150	75	150	210	2NO+2NC	1	3	SCM150230
SCM-180	90	180	230	2NO+2NC	1	1	SCM180230
SCM-250	132	250	260	2NO+2NC	1	1	SCM250230
SCM-330	160	330	400	2NO+2NC	1	1	SCM330230
SCM-400	200	400	500	2NO+2NC	1	1	SCM400230
SCM-630	330	630	1000	2NO+2NC	1	1	SCM630230
SCM-800	400	800	1000	2NO+2NC	1	1	SCM800230

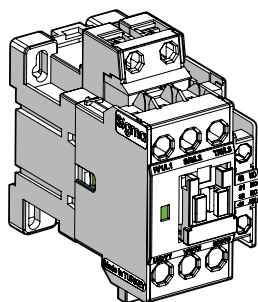


3 Poles Power Contactors - Coil Voltage: 100-240 V AC / 100-220 V DC (Common Coil)



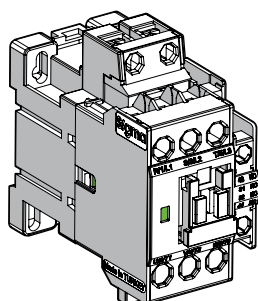
Type Code	Rated Power at (400 V) (kW)	Rated Current AC-3 (A)	Rated Current AC-1 (A)	Auxiliary Contact on Body	Min. Order Quantity	Number in Cartoon	Order Code
SCM-100	55	100	160	2NO+2NC	1	4	SCM100ADC
SCM-125	60	120	160	2NO+2NC	1	4	SCM125ADC
SCM-150	75	150	210	2NO+2NC	1	3	SCM150ADC
SCM-180	90	180	230	2NO+2NC	1	1	SCM180ADC
SCM-250	132	250	260	2NO+2NC	1	1	SCM250ADC

3 Poles Power Contactors - Coil Voltage: 24V DC



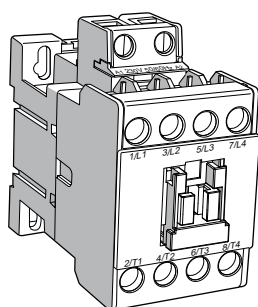
Type Code	Rated Power at (400 V) (kW)	Rated Current AC-3 (A)	Rated Current AC-1 (A)	Auxiliary Contact on Body	Min. Order Quantity	Number in Cartoon	Order Code
SDM-9	4	9	25	1NO+1NC	1	32	SDM009024
SDM-12	5,5	12	25	1NO+1NC	1	32	SDM012024
SDM-18	7,5	18	40	1NO+1NC	1	32	SDM018024
SDM-22	11	22	40	1NO+1NC	1	32	SDM022024
SDM-32	15	32	50	1NO+1NC	1	16	SDM032024
SDM-40	18,5	40	60	1NO+1NC	1	16	SDM040024

3 Poles Power Contactors - Coil Voltage: 48V DC



Type Code	Rated Power at (400 V) (kW)	Rated Current AC-3 (A)	Rated Current AC-1 (A)	Auxiliary Contact on Body	Min. Order Quantity	Number in Cartoon	Order Code
SDM-9	4	9	25	1NO+1NC	1	32	SDM009048
SDM-12	5,5	12	25	1NO+1NC	1	32	SDM012048
SDM-18	7,5	18	40	1NO+1NC	1	32	SDM018048
SDM-22	11	22	40	1NO+1NC	1	32	SDM022048
SDM-32	15	32	50	1NO+1NC	1	16	SDM032048
SDM-40	18,5	40	60	1NO+1NC	1	16	SDM040048

4 Poles (4NO) Power Contactors - Coil Voltage: 230V AC

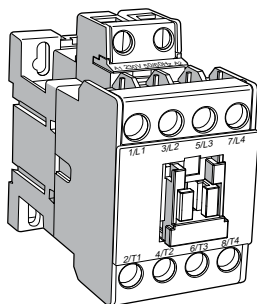


Type Code	Rated Power at (400 V) (kW)	Rated Current AC-3 (A)	Rated Current AC-1 (A)	Auxiliary Contact on Body	Min. Order Quantity	Number in Cartoon	Order Code
SCF-9	4	9	25	1NO+1NC	1	42	SCF009230
SCF-12	5,5	12	25	1NO+1NC	1	42	SCF012230
SCF-18	7,5	18	40	1NO+1NC	1	42	SCF018230
SCF-22	11	22	40	1NO+1NC	1	42	SCF022230
SCF-32	15	32	50	1NO+1NC	1	24	SCF032230
SCF-40	18,5	40	60	1NO+1NC	1	24	SCF040230
SCF-50	22	50	80	1NO+1NC	1	10	SCF050230
SCF-65	30	65	100	1NO+1NC	1	10	SCF065230
SCF-75	37	75	110	1NO+1NC	1	10	SCF075230
SCF-85	45	85	135	1NO+1NC	1	10	SCF085230
SCF-100	55	100	160	2NO+2NC	1	1	SCF100230
SCF-125	60	120	160	2NO+2NC	1	1	SCF125230
SCF-150	75	150	210	2NO+2NC	1	1	SCF150230
SCF-180	90	180	230	2NO+2NC	1	1	SCF180230
SCF-250	132	250	260	2NO+2NC	1	1	SCF250230
SCF-330	200	330	400	2NO+2NC	1	2	SCF330230
SCF-400	250	400	500	2NO+2NC	1	2	SCF400230
SCF-630	330	630	1000	2NO+2NC	1	2	SCF630230
SCF-800	400	800	1000	2NO+2NC	1	2	SCF800230



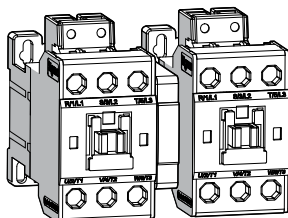
Note: Pls kindly ask delivery time for SCF-330 and above.

4 Poles (2NO+2NC) Power Contactors - Coil Voltage: 230V AC



Type Code	Rated Power at (400 V) (kW)	Rated Current AC-3 (A)	Rated Current AC-1 (A)	Auxiliary Contact on Body	Min. Order Quantity	Number in Cartoon	Order Code
SCH-9	4	9	25	2NO+2NC	1	42	SCH009230
SCH-12	5,5	12	25	2NO+2NC	1	42	SCH012230
SCH-18	7,5	18	40	2NO+2NC	1	42	SCH018230
SCH-22	11	22	40	2NO+2NC	1	42	SCH022230
SCH-32	15	32	50	2NO+2NC	1	24	SCH032230
SCH-40	18,5	40	60	2NO+2NC	1	24	SCH040230
SCH-50	22	50	80	2NO+2NC	1	10	SCH050230
SCH-65	30	65	100	2NO+2NC	1	10	SCH065230
SCH-75	37	75	110	2NO+2NC	1	10	SCH075230
SCH-85	45	85	135	2NO+2NC	1	10	SCH085230

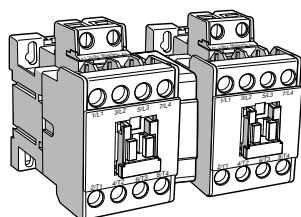
6 Poles Reversing Contactors - Coil Voltage: 230V AC



Type Code	Rated Power at (400 V) (kW)	Rated Current AC-3 (A)	Rated Current AC-1 (A)	Min. Order Quantity	Number in Cartoon	Order Code
SCR-9	4	9	25	1	10	SCR009230
SCR-12	5,5	12	25	1	10	SCR012230
SCR-18	7,5	18	40	1	10	SCR018230
SCR-25	11	25	40	1	10	SCR022230
SCR-32	15	32	50	1	10	SCR032230
SCR-40	18,5	40	60	1	10	SCR040230
SCR-50	22	50	80	1	4	SCR050230
SCR-65	30	65	100	1	4	SCR065230
SCR-80	37	80	110	1	4	SCR075230
SCR-95	45	95	135	1	4	SCR085230
SCR-100	55	100	160	1	1	SCR100230
SCR-125	60	125	160	1	1	SCR125230
SCR-150	75	150	210	1	1	SCR150230
SCR-180	90	180	230	1	1	SCR180230
SCR-250	132	250	260	1	1	SCR250230
SCR-330	160	330	400	1	1	SCR330230
SCR-400	200	400	500	1	1	SCR400230
SCR-630	330	630	1000	1	1	SCR630230
SCR-800	400	800	1000	1	1	SCR800230

**NEW
PRODUCT**

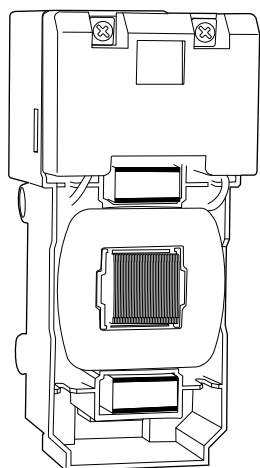
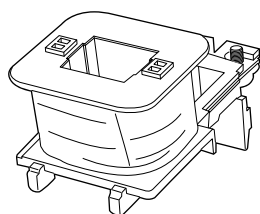
8 Poles Reversing Contactors - Coil Voltage: 230V AC



**NEW
PRODUCT**

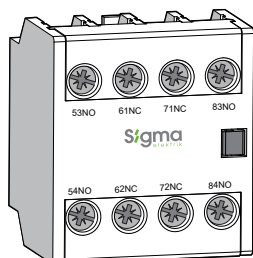
Type Code	Rated Power at (400 V) (kW)	Rated Current AC-3 (A)	Rated Current AC-1 (A)	Min. Order Quantity	Number in Cartoon	Order Code
SCT-9	4	9	25	1	10	SCT009230
SCT-12	5,5	12	25	1	10	SCT012230
SCT-18	7,5	18	40	1	10	SCT018230
SCT-22	11	22	40	1	10	SCT022230
SCT-32	15	32	50	1	10	SCT032230
SCT-40	18,5	40	60	1	10	SCT040230
SCT-50	22	50	80	1	4	SCT050230
SCT-65	30	65	100	1	4	SCT065230
SCT-75	37	75	110	1	4	SCT075230
SCT-85	45	85	135	1	4	SCT085230
SCT-100	55	100	160	1	1	SCT100230
SCT-125	60	120	160	1	1	SCT125230
SCT-150	75	150	210	1	1	SCT150230
SCT-180	90	180	230	1	1	SCT180230
SCT-250	132	250	260	1	1	SCT250230
SCT-330	200	330	400	1	1	SCT330230
SCT-400	250	400	500	1	1	SCT400230
SCT-630	330	630	1000	1	1	SCT630230
SCT-800	400	800	1000	1	1	SCT800230

Spare Coils



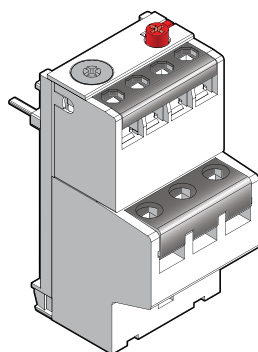
Type Code	Compatible with	Coil Voltage	Order Code
SYB-1	SCM-9....SCM-40	24 V AC 50/60 Hz.	SYB1-024AC
	SCM-9....SCM-40	42 V AC 50/60 Hz.	SYB1-042AC
	SCM-9....SCM-40	48 V AC 50/60 Hz.	SYB1-048AC
	SCM-9....SCM-40	110 V AC 50/60 Hz.	SYB1-110AC
	SCM-9....SCM-40	230 V AC 50/60 Hz.	SYB1-230AC
	SCM-9....SCM-40	400 V AC 50/60 Hz.	SYB1-400AC
	SCM-9....SCM-40	415 V AC 50/60 Hz.	SYB1-415AC
SYB-2	SCM-50....SCM-85	24 V AC 50/60 Hz.	SYB2-024AC
	SCM-50....SCM-85	42 V AC 50/60 Hz.	SYB2-042AC
	SCM-50....SCM-85	48 V AC 50/60 Hz.	SYB2-048AC
	SCM-50....SCM-85	110 V AC 50/60 Hz.	SYB2-110AC
	SCM-50....SCM-85	230 V AC 50/60 Hz.	SYB2-230AC
	SCM-50....SCM-85	400 V AC 50/60 Hz.	SYB2-400AC
	SCM-50....SCM-85	415 V AC 50/60 Hz.	SYB2-415AC
SYB-3	SCM-100....SCM-150	230 V AC 50/60 Hz.	SYB3-230AC
	SCM-100....SCM-150	400 V AC 50/60 Hz.	SYB3-400AC
	SCM-100....SCM-150	100-240 V AC / 100-220 V DC	SYB3-0ACDC
SYB-4	SCM180-SCM250	400 V AC 50/60 Hz.	SYB4-400AC
SYB-5	SCM330	400 V AC 50/60 Hz.	SYB5-400AC
SYB-6	SCM400	400 V AC 50/60 Hz.	SYB6-400AC
SYB-7	SCM630	400 V AC 50/60 Hz.	SYB7-400AC
SYD-1	SDM-9...SDM-40	24 V DC	SYD1-024DC
	SDM-9...SDM-40	48 V DC	SYD1-048DC
	SDM-9...SDM-40	60 V DC	SYD1-060DC
	SDM-9...SDM-40	110 V DC	SYD1-110DC

Auxiliary Contact Blocks



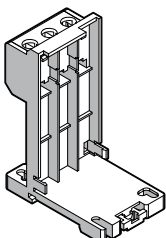
Type Code	Compatible with	Auxiliary Contact on Body	Type of Assembly	Order Code
SAC-1	SCM-9...SCM-85	1NO+1NC	side	SAC-1S11
SAC-100	SCM-100...SCM-250	1NO+1NC	side	SAC-1B11
SAC-2	SCM-9...SCM-85	1NO+1NC	Top	SAC-2S11
	SCM-9...SCM-85	2NO	Top	SAC-2S20
SAC-4	SCM-9...SCM-85	2NO+2NC	Top	SAC-4S22
	SCM-9...SCM-85	3NO+1NC	Top	SAC-4S31
	SCM-9...SCM-85	1NO+3NC	Top	SAC-4S13
	SCM-9...SCM-85	4NO	Top	SAC-4S40
	SCM-9...SCM-85	4NC	Top	SAC-4S04
SAC-5	SCM-330...SCM-630	2NO+2NC	Top	SAC-5S22

Thermal Overload Relays



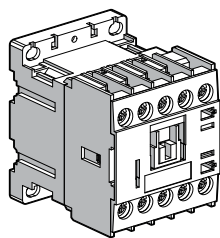
Type Code	Rated Current In (A)	Thermal Setting (A)	Type of Contactors	Min. Order Quantity	Number in Carton	Order Code
STRP-22	0.16	0.1-0.16	SCM-9...SCM-22	1	54	STRP22-016
	0.25	0.16-0.25	SCM-9...SCM-22	1	54	STRP22-025
	0.40	0.25-0.40	SCM-9...SCM-22	1	54	STRP22-040
	0.63	0.40-0.63	SCM-9...SCM-22	1	54	STRP22-063
	1	0.63-1	SCM-9...SCM-22	1	54	STRP22-1
	1.6	1-1.6	SCM-9...SCM-22	1	54	STRP22-1.6
	2.5	1.6-2.5	SCM-9...SCM-22	1	54	STRP22-2.5
	4	2.5-4	SCM-9...SCM-22	1	54	STRP22-4
	6	4-6	SCM-9...SCM-22	1	54	STRP22-6
	8	5-8	SCM-9...SCM-22	1	54	STRP22-8
	10	7-10	SCM-9...SCM-22	1	54	STRP22-10
	13	9-13	SCM-9...SCM-22	1	54	STRP22-13
	18	12-18	SCM-9...SCM-22	1	54	STRP22-18
STRP-40	26	18-26	SCM-32, SCM-40	1	36	STRP40-26
	36	24-36	SCM-32, SCM-40	1	36	STRP40-36
	40	28-40	SCM-32, SCM-40	1	36	STRP40-40
STRP-85	50	34-50	SCM-50...SCM-85	1	24	STRP85-50
	65	45-65	SCM-50...SCM-85	1	24	STRP85-65
	75	54-75	SCM-50...SCM-85	1	24	STRP85-75
	85	63-85	SCM-50...SCM-85	1	24	STRP85-85
STRP-100	100	65-100	SCM-100...SCM-125	1	1	STRP100-100
	125	85-125	SCM-100...SCM-125	1	1	STRP100-125
STRP-150	150	100-150	SCM-150	1	1	STRP150-150
STRP-220	180	120-180	SCM-250	1	2	STRP220-180
	240	160-240	SCM-251	1	2	STRP220-240

DIN RAIL Mounting Part for Thermal Overload Relays



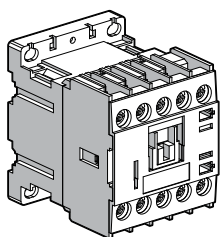
Type Code	Compatible with	Order Code
SDR-22	STRP-22	SDR-22
SDR-40	STRP-40	SDR-40
SDR-85	STRP-85	SDR-85

3 Poles Mini Contactors - Coil Voltage: 230V AC



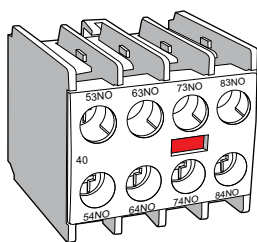
Type Code	Rated Power at (kW)	Rated Current AC-3 (A)	Rated Current AC-1 (A)	Auxiliary Contact on Body	Min. Order Quantity	Number in Cartoon	Order Code
SCM-6M	2.2	6	20	1NO	1	80	SCM0610230
	2.2	6	20	1NC	1	80	SCM0601230
SCM-9M	4	9	20	1NO	1	80	SCM0910230
	4	9	20	1NC	1	80	SCM0901230
SCM-12M	5.5	12	20	1NO	1	80	SCM1210230
	5.5	12	20	1NC	1	80	SCM1201230
SCM-16M	7.5	16	20	1NO	1	80	SCM1610230
	7.5	16	20	1NC	1	80	SCM1601230

3 Poles Mini Contactors - Coil Voltage: 24V DC



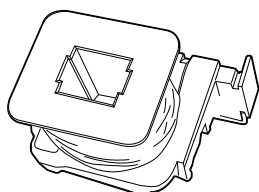
Type Code	Rated Power at (kW)	Rated Current AC-3 (A)	Rated Current AC-1 (A)	Auxiliary Contact on Body	Min. Order Quantity	Number in Cartoon	Order Code
SDM-6M	2.2	6	20	1NO	1	80	SDM0610024
	2.2	6	20	1NC	1	80	SDM0601024
SDM-9M	4	6	20	1NO	1	80	SDM0910024
	4	9	20	1NC	1	80	SDM0901024
SDM-12M	5.5	12	20	1NO	1	80	SDM1210024
	5.5	12	20	1NC	1	80	SDM1201024
SDM-16M	7.5	16	20	1NO	1	80	SDM1610024
	7.5	16	20	1NC	1	80	SDM1601024

Auxiliary Contact Blocks for Mini Contactors



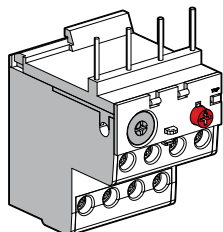
Type Code	Auxiliary Contact on Body	Type of Assembly	Order Code
SAC-4M	2NO+2NC	Top	SAC-4M22
	3NO+1NC	Top	SAC-4M31
	4NO	Top	SAC-4M40
	4NC	Top	SAC-4M04

Spare Coils for Mini Contactors



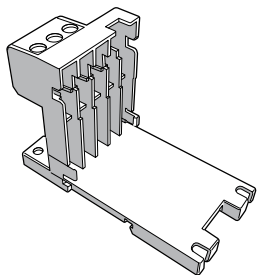
Type Code	Coil Voltage	Order Code
SYM-1	24 V AC 50/60 Hz.	SYM1-024AC
	42 V AC 50/60 Hz.	SYM1-042AC
	48 V AC 50/60 Hz.	SYM1-048AC
	110 V AC 50/60 Hz.	SYM1-110AC
	230 V AC 50/60 Hz.	SYM1-230AC
SMD-1	24 V DC	SMD1-024DC
	48 V DC	SMD1-048DC
	110 V DC	SMD1-110DC

Thermal Overload Relays for Mini Contactors



Type Code	Rated Current In (A)	Thermal Setting (A)	Min. Order Quantity	Number in Cartoon	Order Code
STRM-16	0.16	0.1-0.16	1	80	STRM16-0.16
	0.25	0.16-0.25	1	80	STRM16-0.25
	0.40	0.25-0.40	1	80	STRM16-0.40
	0.63	0.40-0.63	1	80	STRM16-0.63
	1	0.63-1	1	80	STRM16-1
	1.6	1-1.6	1	80	STRM16-1.6
	2.5	1.6-2.5	1	80	STRM16-2.5
	4	2.5-4	1	80	STRM16-4
	6	4-6	1	80	STRM16-6
	9	6-9	1	80	STRM16-9
	13	9-13	1	80	STRM16-13
	16	12-16	1	80	STRM16-16

DIN RAIL Mounting Part for Mini-Thermal Overload Relay



Type Code	Compatible Mini Thermal Relay	Order Code
SDR-16	STRM-16	SDR-16

Corresponding Sigma Contactors with other brands (AC-3 Class)

3 Phase Motor (380 V)		Sigma Elektrik	Federal Elektrik	Siemens	Telemecanique	ABB	Legrand	LG	General Electric	K. Moeller
kW	Hp									
4	5	SCM-9/SCG-9	FC-09D	3TF-40	LC1-D910	A9	CTX1 9A	GMC-9	CL00	DILM9
5.5	7.5	SCM-12/SCG-12	FC-12D	3TF-41	LC1-D1210	A12	CTX1 12A	GMC-12	CL01	DILM12
7.5	10	SCM-18/SCG-18	FC-18D	3TF-42	LC1-D1810	A16	CTX1 16A	GMC-18	CL02	DILM15
11	15	SCM-22/SCG-25	FC-25D	3TF-43	LC1-D2510	A26	CTX1 25A	GMC-22	CL025	DILM25
15	20	SCM-32/SCG-32	FC-32D	3TF-44	LC1-D3210	A30	CTX1 32A	GMC-32	CL04	DILM32
18.5	25	SCM-40/SCG-40	FC-40D	3TF-45	LC1-D4011	A40	CTX1 40A	GMC-40	CL45	DILM40
22	30	SCM-50/SCG-50	FC-50D	3TF-46	LC1-D5011	A50	CTX1 50A	GMC-50	CL06	DILM50
30	40	SCM-65/SCG-65	FC-65D	3TF-47	LC1-D6511	A63	CTX1 65A	GMC-65	CL07	DILM65
37	50	SCM-75/SCG-80	FC-80D	3TF-48	LC1-D8011	A75	CTX1 80A	GMC-75	CL08	DILM80
45	60	SCM-85/SCG-95	FC-95D	3TF-49	LC1-D9511	A95	CTX1 95A	GMC-85	CL09	DILM95
55	80	SCM-100	FC-115D	3TF-50	LC1-F115	A110	CTX1 110A	GMC-100	CL10	DILM115
75	100	SCM-150	FC-150D	3TF-51	LC1-F150	EH145	CTX2 150A	GMC-150	CK75	DILM150

Utilization Categories of Contactors

Utilization Category	Load Characteristic	Power Factor	Application Examples	Making Current (I)	Breaking Current (I _c)
AC-1	Non-Inductive loads	Cos ϕ =0.8	The most common example is heating system (When 3P contactors are used to control of 1P heating systems, contactor's pole should be serially connected. In case which 2 poles are serially connected, Rated Current (I _n) should be considered at 1,6 times of nominal current (I _e) and if 3 poles are serially connected, 2,25 times of nominal current (I _e).	I _e	I _e
AC-2	Driving Slip-Ring Motors, reversing, stepping operation	Cos ϕ =0.65	Lifting and metallurgy applications, wire drawing machines	2.5xI _e	8xI _e
AC-3	Driving Squirrel Cage asynchronous motors, motor stop in operation	Cos ϕ =0.45 for I _e <100 A Cos ϕ =0.35 for I _e >100 A	Compressors, pumps, fans, valves, elevators, conveyors, air conditioner.	6xI _e	8xI _e
AC-4	Driving Squirrel Cage asynchronous motors, reversing operation	Cos ϕ =0.45 for I _e <100 A Cos ϕ =0.35 for I _e >100 A	Printing press machines, wire drawing machines, stepping operation looms	6xI _e	8xI _e

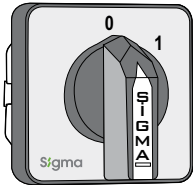
Contactors Selection According to Utilization Categories

Type Code	Rated Power at AC-3 (kW) (400-415 V)	Rated Current AC-3 (A) $\theta \leq 55^{\circ}\text{C}$	Rated Current AC-1 (A) $\theta \leq 40^{\circ}\text{C}$	Rated Current AC-1 (A) $\theta \leq 55^{\circ}\text{C}$	Rated Current AC-1 (A) (3 phases serie)	Rated Current AC-5a (A)	Mechanical Life (ope.)	Electrical Life (ope) AC-3 U _e ≤440 V
SCM-9/SCG-9	4	9	25	21	45	9	20.000.000	2.000.000
SCM-12/SCG-12	5,5	12	25	21	45	12	20.000.000	2.000.000
SCM-18/SCG-18	7,5	18	40	34	75	15	20.000.000	2.000.000
SCM-22/SCG-25	11	22	40	34	75	18	20.000.000	2.000.000
SCM-32/SCG-32	15	32	50	42	90	25	20.000.000	2.000.000
SCM-40/SCG-40	18,5	40	60	50	100	28	20.000.000	1.500.000
SCM-50/SCG-50	22	50	80	70	150	38	15.000.000	1.500.000
SCM-65/SCG-65	30	65	100	85	190	43	15.000.000	1.500.000
SCM-75/SCG-80	37	75	110	95	210	48	15.000.000	1.000.000
SCM-85/SCG/95	45	85	135	115	250	60	15.000.000	1.000.000
SCM-100	55	100	160	135	300	70	10.000.000	500.000
SCM-125	60	120	160	135	300	90	10.000.000	500.000
SCM-150	75	150	210	180	400	100	10.000.000	500.000
SCM-180	90	180	230	230	500		5.000.000	500.000
SCM-250	132	250	260	260	550		5.000.000	500.000
SCM-330	200	330	400	400	900		5.000.000	500.000
SCM-400	250	400	500	500	1100		3.000.000	300.000
SCM-630	400	630	1000	1000	2200		3.000.000	300.000

Utilization Categories According to IEC/EN 60947-4-1

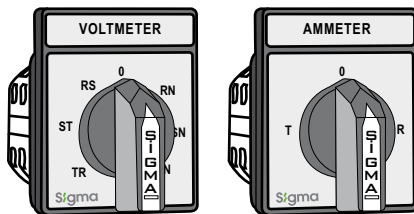
Utilization Category	Typical Use
AC-1	Non-Inductive or Slightly Inductive loads (heating systems, resistance furnace e.g..)
AC-2	Driving and/or stopping slip-ring motors. (Lifting and metallurgy applications, wire drawing machines e.g..)
AC-3	Driving Squirrel Cage asynchronous motors, motor stop in operation (Compressors, pumps, fans, valves, elevators, conveyors, air conditioner. e.g..)
AC-4	Stepping Drive Squirrel Cage asynchronous motors, reversing operation, (Printing press machines, wire drawing machines, stepping operation looms)
AC-5a	Switching of electrical discharge lamps (high or lower pressure sodium vapor lamps, mercury discharge lamps)
AC-5b	Switching of Incandescent lamps
AC-6a	Switching of Transformers
AC-6b	Switching of Capacitor groups
AC-8a	Controlling of Hermetic type compressor's motors which equipped with Manuel-reset thermal overload relays.
AC-8b	Controlling of Hermetic type compressor's motors which equipped with Auto-reset thermal overload relays.
DC-1	Non-Inductive or lower Inductive loads
DC-3	Driving of Shunt Motors, Stepping, reversing, motor stop in operation, dynamic breaking of DC motors
DC-5	Driving of Serial Motors, Stepping, reversing, motor stop in operation, dynamic breaking of DC motors

0 - 1 On - Off Cam Switches



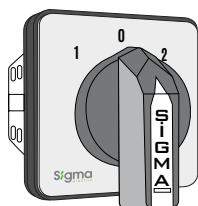
Type Code	No of Poles	Continuous Operating Current (Ith) A	Order Code
SPA1	1	10	SPA1-10
	1	16	SPA1-16
	1	20	SPA1-20
	1	25	SPA1-25
	1	32	SPA1-32
	1	63	SPA1-63
SPA3	3	10	SPA3-10
	3	16	SPA3-16
	3	20	SPA3-20
	3	25	SPA3-25
	3	32	SPA3-32
	3	63	SPA3-63

Instrument Selector Switches



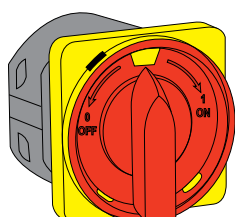
Type Code	Stages	Continuous Operating Current (Ith) A	Order Code
SPM-A	4 Stages	20	SPM-A
SPM-V	7 Stages	20	SPM-V

Change Over Switches (3 phase)



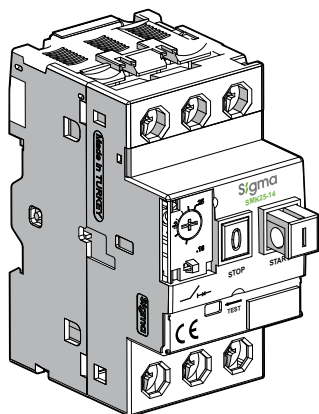
Type Code	No of Poles	Continuous Operating Current (Ith) A	Order Code
SPN1	1	16	SPN1-16
	1	25	SPN1-25
	1	32	SPN1-32
	1	63	SPN1-63
SPN3	3	16	SPN3-16
	3	25	SPN3-25
	3	32	SPN3-32
	3	63	SPN3-63

Locking Safety Switches (Red - Yellow)



Type Code	No of Poles	Continuous Operating Current (Ith) A	Order Code
SPE3	3	20	SPE3-16
	3	32	SPE3-25
	3	63	SPE3-32

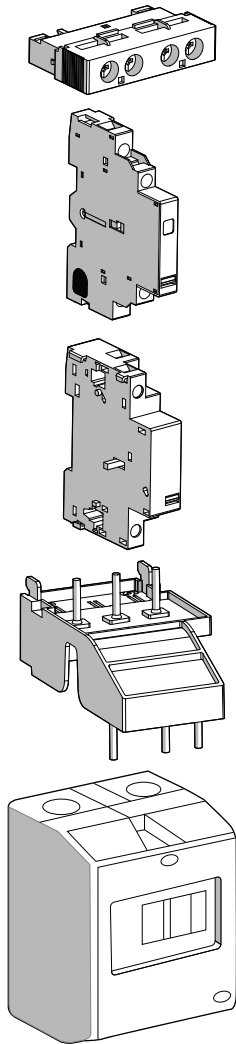
Motor Protection Switches



Type Code	Rated Power at AC3 400V (kW)	Thermal Adjusting Range (A)	Rated Short Circuit Breaking Capacity at 400V Icu (kA)	Min. Order Quantity	Number in Cartoon	Order Code
SMK-25	0,02	0.1-0.16	100	1	48	SMK25-0.16
	0,06	0.16-0.25	100	1	48	SMK25-0.25
	0,09	0.25-0.4	100	1	48	SMK25-0.4
	0,12	0.4-0.63	100	1	48	SMK25-0.63
	0,25	0.63-1	100	1	48	SMK25-1
	0,37	1-1.6	100	1	48	SMK25-1.6
	0,75	1.6-2.5	100	1	48	SMK25-2.5
	1,5	2.5-4	100	1	48	SMK25-4
	2,2	4-6.3	100	1	48	SMK25-6.3
	4	6-10	100	1	48	SMK25-10
	5,5	9-14	15	1	48	SMK25-14
	7,5	13-18	15	1	48	SMK25-18
	9	17-23	15	1	48	SMK25-23
	11	20-25	15	1	48	SMK25-25
	15	24-32	15	1	48	SMK25-32
SMK-80	18,5	25-40	15	1	24	SMK80-40
	22	36-50	15	1	24	SMK80-50
	30	40-63	15	1	24	SMK80-63
	40	56-80	15	1	24	SMK80-80



Accessories for Motor Protection Switches



Type Code	Accessories	Order Code
SMK25-F11	Auxiliary Contact 1NO+1NC (Front Mounting)	SMK25-F11
SMK25-F20	Auxiliary Contact 2NO (Front Mounting)	SMK25-F20
SMK25-L20	Auxiliary Contact 2NO (Front Mounting)	SMK25-L11
SMK25-L11	Auxiliary Contact 1NO+1NC (Side Mounting)	SMK25-L20

Type Code	Accessories	Order Code
SMK25-DG	Under Voltage Release 380 V	SMK25-DG
SMK25-AB	Shunt Trip Release 230 V	SMK25-AB

Type Code	Accessories	Order Code
SMK25-A	Combination Block for Contactor (SCM9-40)	SMK25-A

Type Code	Accessories	Order Code
SMK25-K	Enclosure for Motor Protection Switch	SMK25-K

Motor Starters with Enclosure (DOL)



Type Code	Rated Motor Power (kW) 380 V	Setting Range (A)	Coil Voltage (V) AC	Number in Carton	Order Code
SMS009230	0.37	1-1.6	230	1	SMS090037
	0.75	1.6-2.5	230	1	SMS090075
	1.5	2.5-4	230	1	SMS090115
	2.2	4-6	230	1	SMS090220
	3	5-8	230	1	SMS090300
	4	7-10	230	1	SMS090400
SMS012230	5.5	9-13	230	1	SMS0120550
SMS018230	7.5	12-18	230	1	SMS0180750
SMS022230	11	16-22	230	1	SMS0221110
SMS032230	15	24-36	230	1	SMS0321150
SMS040230	18.5	28-40	230	1	SMS0401185
SMS050230	22	34-50	230	1	SMS0501220
SMS065230	30	45-65	230	1	SMS0651300
SMS075230	37	54-75	230	1	SMS0751370
SMS085230	45	63-85	230	1	SMS0851450

Technical Specifications

Standard	IEC 60044-1/ 61869-2
Rated Operational Voltage (Un)	720V
Rated Frequency	50/60Hz (on demand 400 Hz)
Ambient Temperature	-20/75°C
Storage Temperature	-50/80°C
Operating Humidity	up to 95% relative humidity
Rated Thermal Continuous Current	1.2xIn
Rated Short Time Thermal Current (Ith)	60xIn / 1 sec. - 100xIn / 1 sec.
Rated Dynamic Current (Idyn)	2.5 x Ith / 1 sec.
Rated Power-Frequency Withstand Voltage	3kV eff. (50 Hz) / 1 min.
Thermal Class of Insulation	E (120 deg.C max.)
Casing	Non-flammable, self extinguishing, glass reinforced PA6
Degree of Protection	IP20
Instrument Security Factor(FS)	5
Secondary Terminals	Brass plated nickel M5 screws
Recommended Tightening Torque	2 Nm (for secondary terminals)
Accuracy Class	Metering: 0.2,0.2s,0.5,0.5s,1,3 ; Protection 5P, 10P
Burden	from 1 to 30VA
Rated Primary Current	up to 5000A
Rated Secondary Current	1 or 5 A

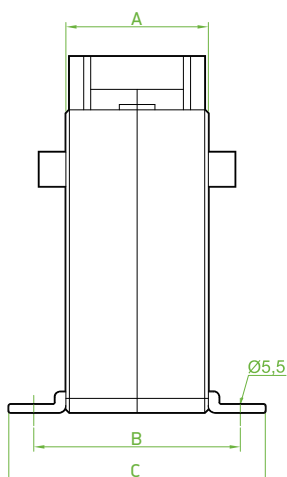
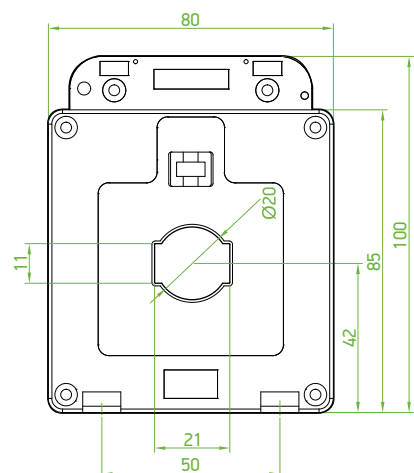
Main Dimensions

Type	Cable Diameter (mm)	Window (mm)	Busbar (mm)	Cable Section (mm ²)	Outer Dimensions (mm) wxhxd
S25BN	—	—	—	2,5.....50	80x100x40
S20	20	21x11	20x10	16.....95	80x100x(40-60)
S20M	20	21x11	20x10	25.....95	62x80x(30-45)
S30	24	31x11	30x10	35.....300	80x100x(40-60)
S30M	24	31x11	30x10	50.....300	62x80x(30-45)
S40	31	41x11	40x10	185.....400	80x100x(40-60)
S50	38	51x11	50x10	—	80x100x(40-60)
S60	46	62x31	60x10	—	107x132x45
S60D	30	61x31	60x10	—	82x134x60
S60A	30	61x31	60x10	—	102x145x40
S80	67	81x31	2x(80x10)	—	145x165x55
S100	62	102x11	100x10	—	145x165x55
S100D	70	101x72	4x(100x10)	—	128x193x61
S125	126	131x11	130x10	—	190x220x55
			3x(125x10)		



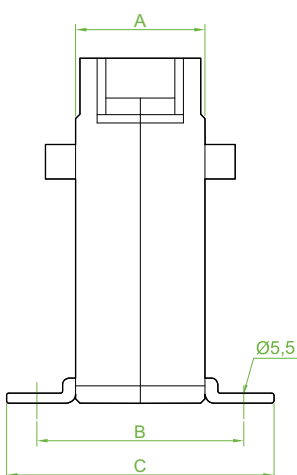
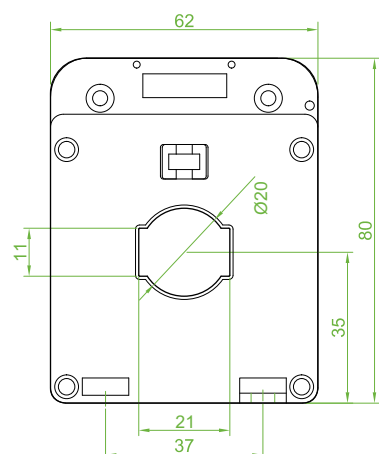
Dimensions

S20



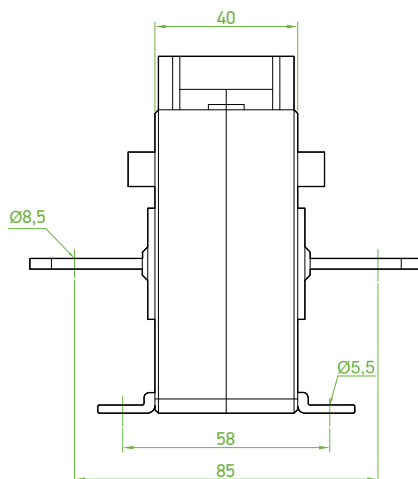
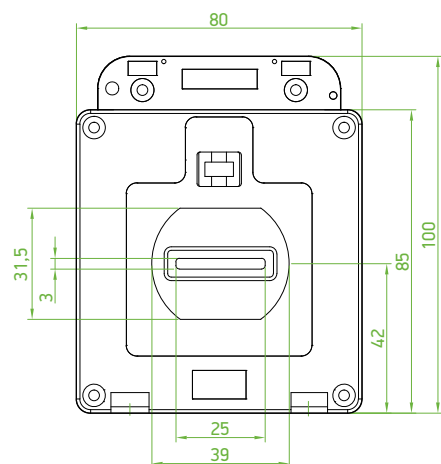
	A	B	C
S20	40	60	72
S20L	60	80	92

S20M

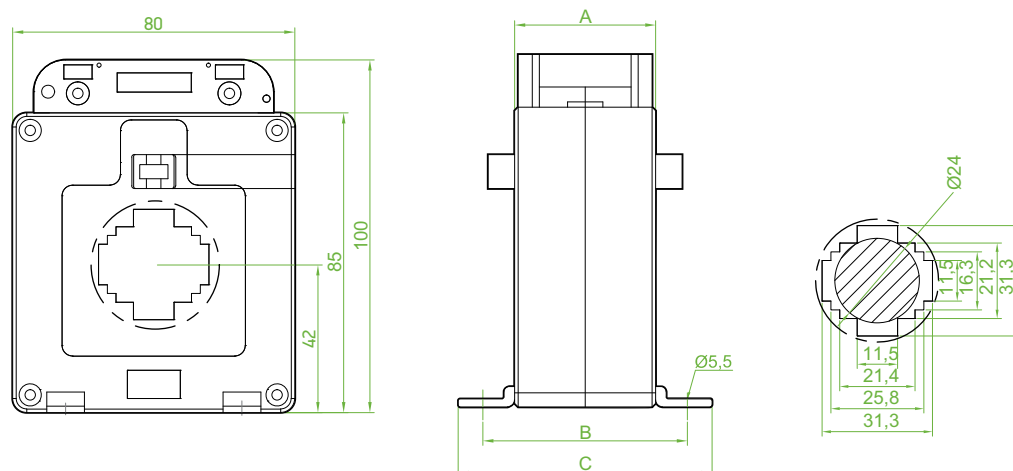


	A	B	C
S20M	30	50	62
S20ML	45	65	77

S25B

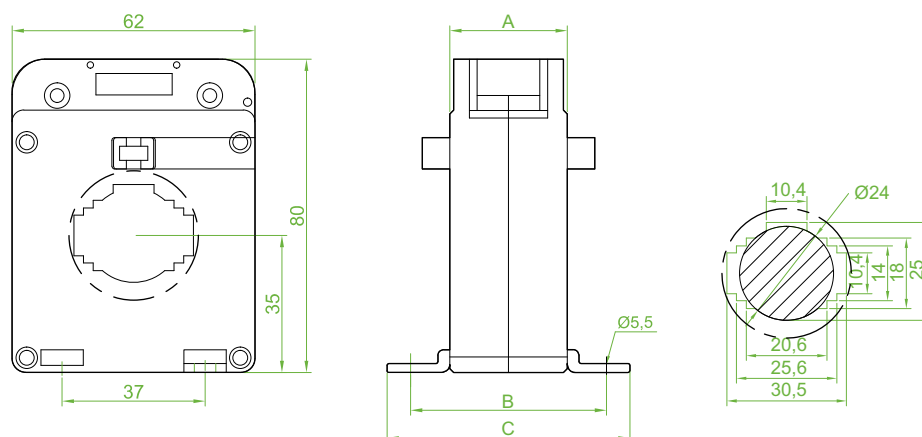


S30-S30L



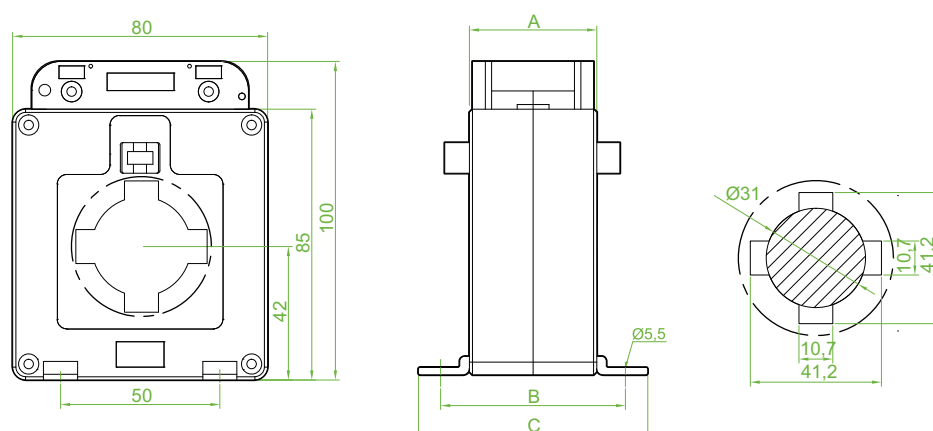
	A	B	C
S30	40	60	72
S30L	60	80	92

S30M-S30ML



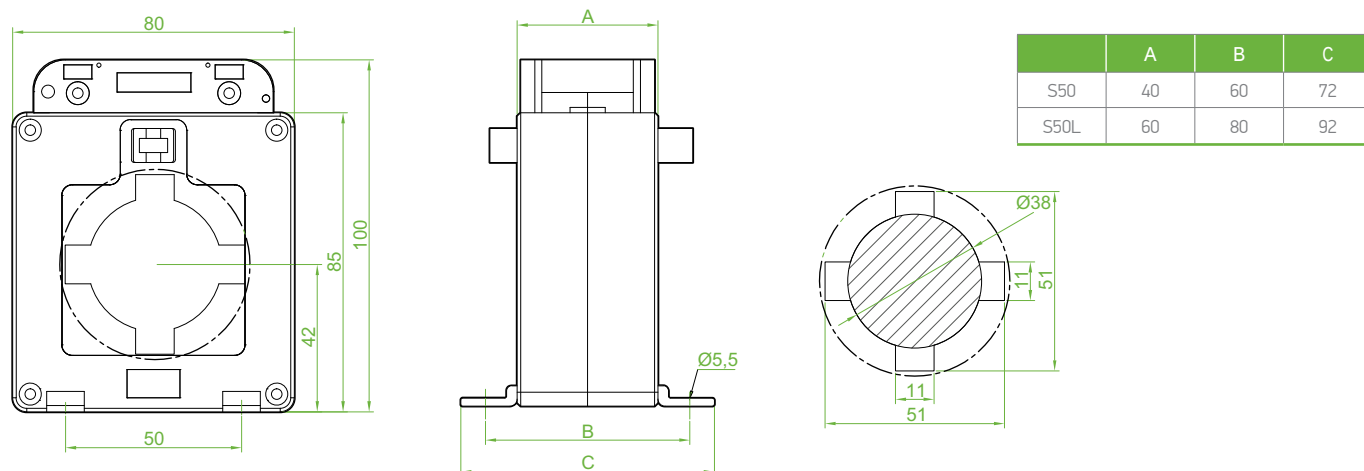
	A	B	C
S30M	30	50	62
S30ML	45	65	77

S40-S40L

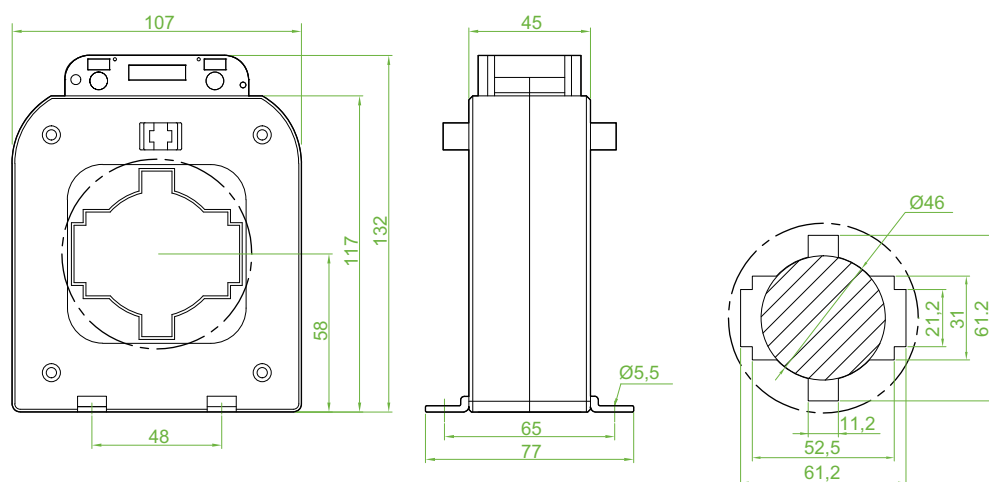


	A	B	C
S40	40	60	72
S40L	60	80	92

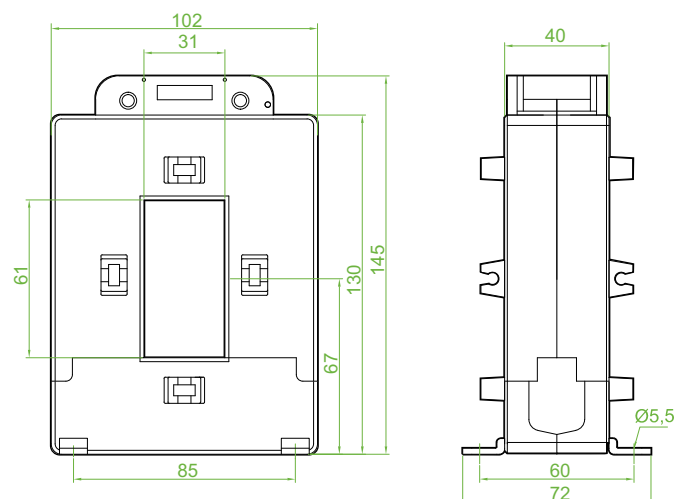
S50-S50L



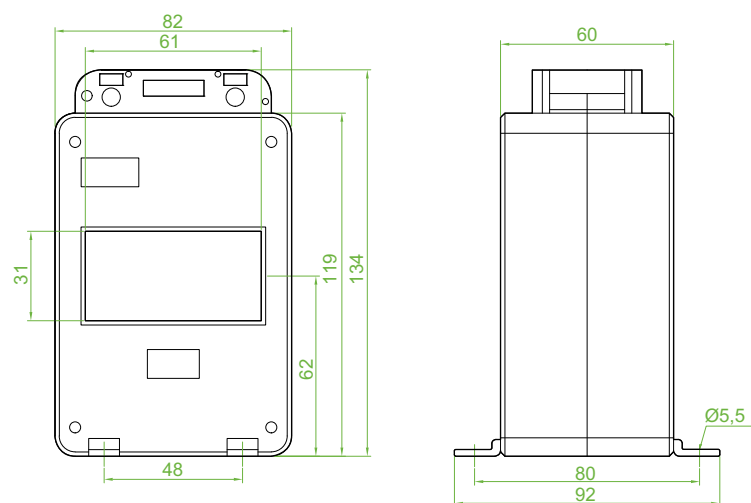
S60



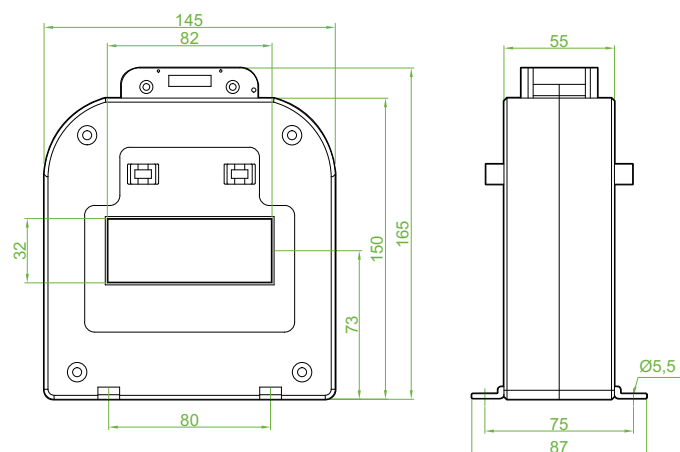
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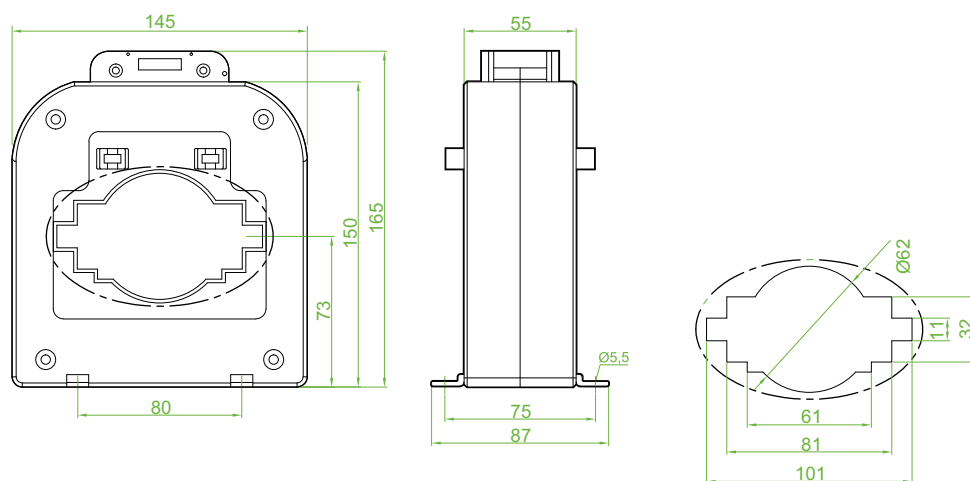
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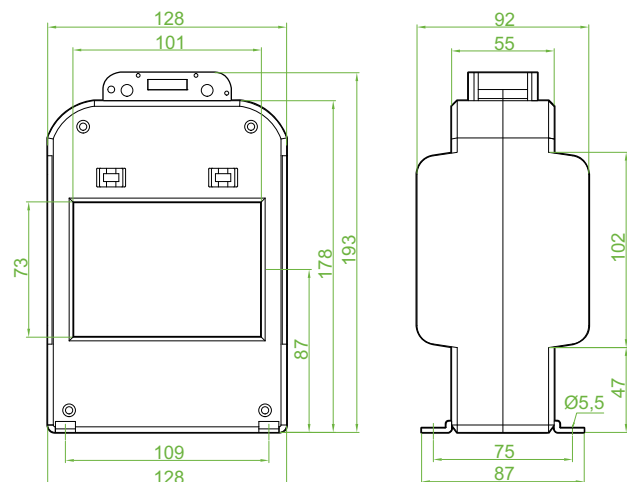
S80



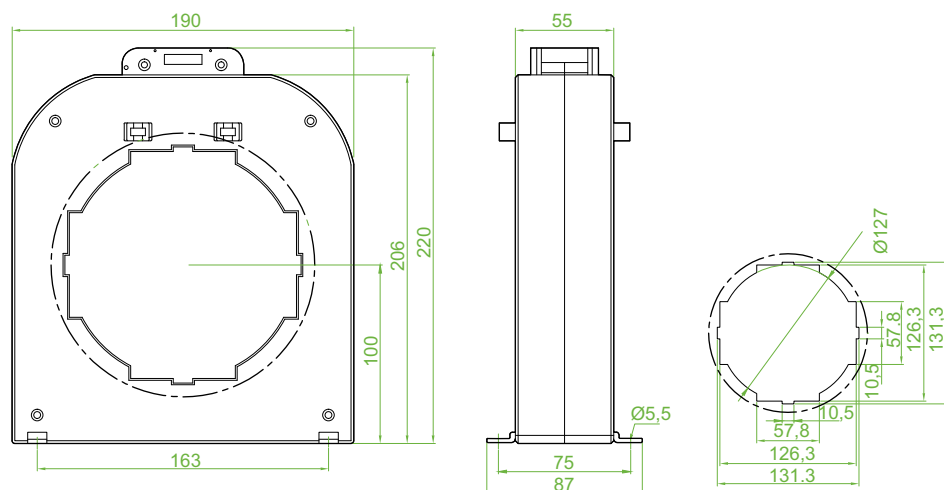
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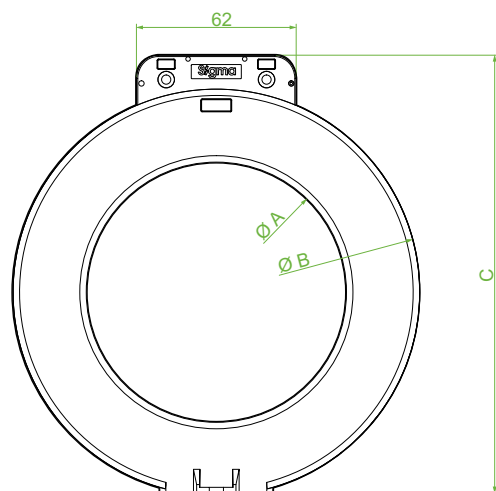
S100D



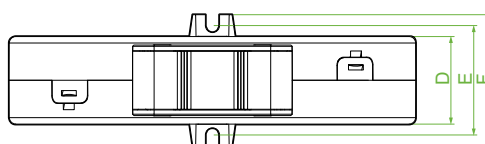
S125



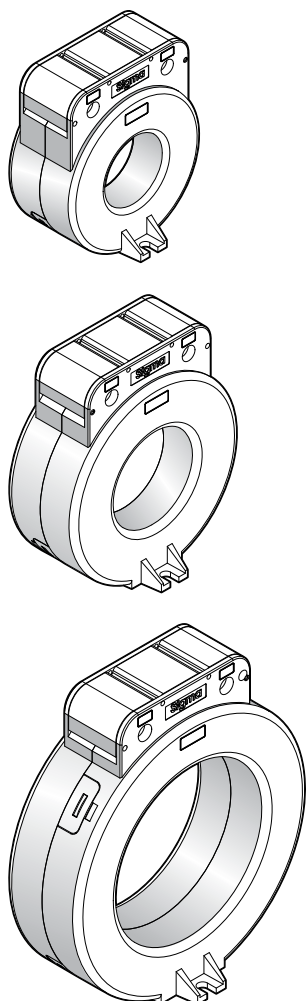
SMT 30-40-70-100



	A	B	C	D	E	F
SMT 30	31	68	79	34	44	52
SMT 40	41	84	95	34	44	52
SMT 70	70	110	122	34	44	52
SMT 100	101	158	170	34	43	51

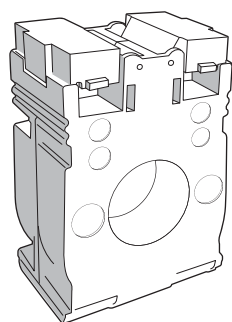


Round Type Current Transformers



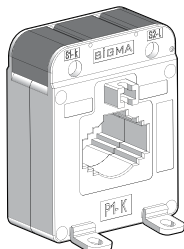
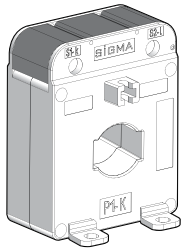
Type Code	Primary Current (A)	Burden Rate (VA)	Class (cl)	Bus Bar Dimensions (mm)	Min. Order Quantity	Number in Cartoon	Order Code
SMT30	50	1,5	3	30	3		SMT0300050301
	60	2,5	3	30	3		SMT0300060302
	75	2,5	3	30	3		SMT0300075302
	100	2,5	3	30	3		SMT0300100302
	125	2,5	3	30	3		SMT0300125302
	150	2,5	3	30	3		SMT0300150302
	200	5	1	30	3		SMT0300200105
	250	5	0,5	30	3		SMT0300250505
	300	5	0,5	30	3		SMT0300300505
SMT40	100	2,5	3	40	3		SMT0400100302
	150	2,5	3	40	3		SMT0400150302
	200	2,5	1	40	3		SMT0400200102
	400	5	0,5	40	3		SMT0400400505
	500	5	0,5	40	3		SMT0400500505
	600	5	0,5	40	3		SMT0400600505
SMT70	800	5	0,5	70	3		SMT0700800505
	1000	10	0,5	70	3		SMT0701000510
	1200	10	0,5	70	3		SMT0701200510
	1250	10	0,5	70	3		SMT0701250510
	1500	10	0,5	70	3		SMT0701500510
SMT100	800	5	0,5	100	3		SMT1000800505
	1000	5	0,5	100	3		SMT1001000505
	1250	10	0,5	100	3		SMT1001250510
	1600	15	0,5	100	3		SMT1001600515
	2000	15	0,5	100	3		SMT1002000515
	2500	15	0,5	100	3		SMT1002500515

Micro Type Current Transformers



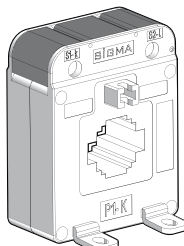
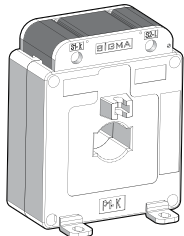
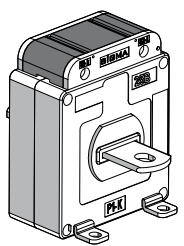
Type Code	Primary Current (A)	Rated Power at (VA)	Class (cl)	Bus Bar Dimensions (mm)	Min. Order Quantity	Number in Cartoon	Order Code
S20MC	60	1	1	20x10	3	51	S20MC00601000
	75	1	1	20x10	3	51	S20MC00751000
	80	1	1	20x10	3	51	S20MC00801000
	100	1,5	1	20x10	3	51	S20MC01001001
	125	1,5	1	20x10	3	51	S20MC01251001
	150	1,5	1	20x10	3	51	S20MC01501001
	200	2,5	1	20x10	3	51	S20MC02001002
	250	2,5	1	20x10	3	51	S20MC02501002
	300	3,75	1	20x10	3	51	S20MC03001003

Mini Type Current Transformers (Assembly to 35mm Din Rail)



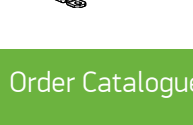
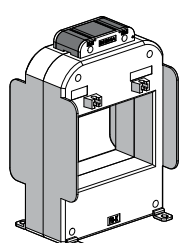
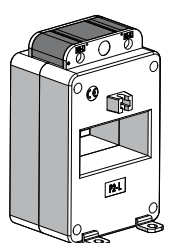
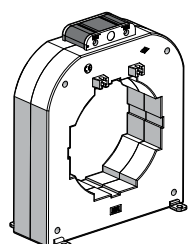
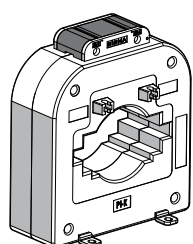
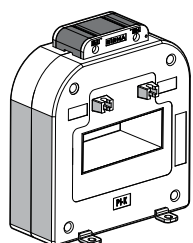
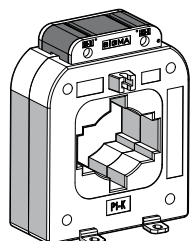
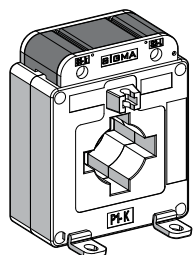
Type Code	Primary Current (A)	Rated Power at (VA)	Class (cl)	Bus Bar Dimensions (mm)	Min. Order Quantity	Number in Cartoon	Order Code
S20M	50	1,5	3	20x10	3	51	SM2000503001
	60	2,5	3	20x10	3	51	SM2000503002
	75	2,5	1	20x10	3	51	SM2000751002
	100	2,5	1	20x10	3	51	SM2001001002
	125	2,5	1	20x10	3	51	SM2001251002
	150	2,5	0,5	20x10	3	51	SM2001500502
	200	5	0,5	20x10	3	51	SM2002000503
	150	5	1	20x10	3	51	SM2001501005
	200	5	1	20x10	3	51	SM2002001005
S30ML	150	2,5	0,5	30X10	3	51	SM3001500502
	200	2,5	0,5	30X10	3	51	SM3002000502
	200	5	0,5	30X10	3	51	SM3002000505
	250	10	0,5	30X10	3	51	SM3002500510
	300	10	0,5	30X10	3	51	SM3003000510
	400	10	0,5	30X10	3	51	SM3004000510
	500	10	0,5	30X10	3	51	SM3005000510
	600	10	0,5	30X10	3	51	SM3006000510
S30M	150	5	1	30X10	3	51	SM3001501005
	200	5	1	30X10	3	51	SM3002001005
	250	5	1	30X10	3	51	SM3002501005
	300	5	1	30X10	3	51	SM3003001005
	400	5	1	30X10	3	51	SM3004001005
	500	5	1	30X10	3	51	SM3005001005
	600	5	1	30X10	3	51	SM3006001005

Current Transformers cl: 0.5



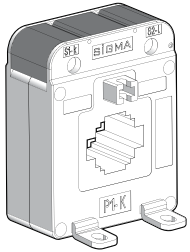
Type Code	Primary Current (A)	Burden Rate (VA)	Class (cl)	Bus Bar Dimensions (mm)	Min. Order Quantity	Number in Cartoon	Order Code
S25B	20	10	0,5	with bus bar	3	24	SS2500200510
	25	10	0,5	with bus bar	3	24	SS2500250510
	30	10	0,5	with bus bar	3	24	SS2500300510
	40	10	0,5	with bus bar	3	24	SS2500400510
	50	10	0,5	with bus bar	3	24	SS2500500510
	60	10	0,5	with bus bar	3	24	SS2500600510
	75	10	0,5	with bus bar	3	24	SS2500750510
	100	10	0,5	with bus bar	3	24	SS2501000510
	125	10	0,5	with bus bar	3	24	SS2501250510
	150	10	0,5	with bus bar	3	24	SS2501500510
S20	100	5	0,5	20X10	3	30	SS2001000505
	125	5	0,5	20X10	3	30	SS2001250505
	150	10	0,5	20X10	3	30	SS2001500510
S30	150	5	0,5	30 X 10	3	42	SS3001500505
	150	10	0,5	30 X 10	3	30	SS3001500510
	200	10	0,5	30 X 10	3	30	SS3002000510
	250	10	0,5	30 X 10	3	42	SS3002500510
	300	10	0,5	30 X 10	3	42	SS3003000510
	400	10	0,5	30 X 10	3	42	SS3004000510

Current Transformers cl: 0.5



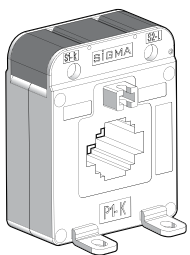
Type Code	Primary Current (A)	Burden Rate (VA)	Class (cl)	Bus Bar Dimensions (mm)	Min. Order Quantity	Number in Cartoon	Order Code
S40	300	10	0,5	40 X 10	3	42	SS4003000510
	400	10	0,5	40 X 10	3	42	SS4004000510
	500	10	0,5	40 X 10	3	42	SS4005000510
	600	10	0,5	40 X 10	3	42	SS4006000510
S50	500	10	0,5	50 X 10	3	42	SS5005000510
	600	10	0,5	50 X 10	3	42	SS5006000510
	750	10	0,5	50 X 10	3	42	SS5007500510
	800	15	0,5	50 X 10	3	42	SS5008000515
	1000	15	0,5	50 X 10	3	42	SS5001000515
S60	750	15	0,5	60 X 10	3	36	SS6007500515
	800	15	0,5	60 X 10	3	36	SS6008000515
	1000	15	0,5	60 X 10	3	36	SS6001000515
S80	750	10	0,5	80 X 10	3	18	SS8007500510
	800	10	0,5	80 X 10	3	18	SS8008000510
	1000	15	0,5	80 X 10	3	18	SS8001000515
	1200	15	0,5	80 X 10	3	18	SS8001200515
	1250	15	0,5	80 X 10	3	18	SS8001250515
	1500	15	0,5	80 X 10	3	18	SS8001500515
S100	1200	15	0,5	100 X 10	3	18	SS1001200515
	1250	15	0,5	100 X 10	3	18	SS1001250515
	1500	15	0,5	100 X 10	3	18	SS1001500515
	1600	15	0,5	100 X 10	3	18	SS1001600515
	2000	15	0,5	100 X 10	3	18	SS1002000515
	2000	30	0,5	100 X 10	3	18	SS1002000530
	2500	15	0,5	100 X 10	3	18	SS1002500515
	2500	30	0,5	100 X 10	3	18	SS1002500530
	3000	30	0,5	100 X 10	3	18	SS1003000530
S125	2000	15	0,5	3x (125 X 10)	3	12	SS1252000515
	2500	15	0,5	3x (125 X 10)	3	12	SS1252500515
	3000	30	0,5	3x (125 X 10)	3	12	SS1253000530
	4000	30	0,5	3x (125 X 10)	3	12	SS1254000530
	5000	30	0,5	3x (125 X 10)	3	12	SS1255000530
S60D (Narrow Type)	600	5	0,5	60X10	3	18	SD6006000505
	750	7,5	0,5	60X10	3	18	SD6007500507
	1000	10	0,5	60X10	3	18	SD6001000510
	1200	15	0,5	60X10	3	18	SD6001200515
	1250	15	0,5	60X10	3	18	SD6001250515
	1600	15	0,5	60X10	3	18	SD6001600515
S100D (Narrow Type)	600	5	0,5	4x(100x10)	3	12	SD1006000505
	800	7,5	0,5	4x(100x10)	3	12	SD1008000507
	1000	10	0,5	4x(100x10)	3	12	SD1001000510
	1200	15	0,5	4x(100x10)	3	12	SD1001200515
	1250	15	0,5	4x(100x10)	3	12	SD1001250515
	1600	15	0,5	4x(100x10)	3	12	SD1001600515
	2000	15	0,5	4x(100x10)	3	12	SD1002000515
	2500	15	0,5	4x(100x10)	3	12	SD1002500515
	3000	30	0,5	4x(100x10)	3	12	SD1003000530
	4000	30	0,5	4x(100x10)	3	12	SD1004000530

cl: 1



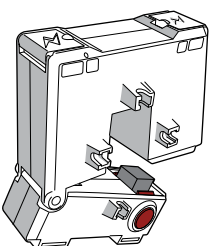
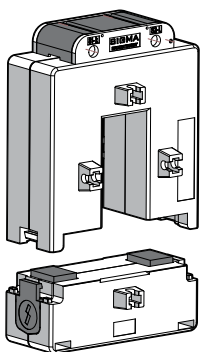
Type Code	Primary Current (A)	Rated Power at (VA)	Class (cl)	Bus Bar Dimensions (mm)	Min. Order Quantity	Number in Cartoon	Order Code
S30	100	5	1	30x10	3	42	SS3001001005
	150	5	1	30x10	3	42	SS3001501005
	200	5	1	30x10	3	42	SS3002001005
	250	5	1	30x10	3	42	SS3002501005
	300	5	1	30x10	3	42	SS3003001005
	400	5	1	30x10	3	42	SS3004001005
S40	400	5	1	40x10	3	42	SS4004001005
	500	5	1	40x10	3	42	SS4005001005
	600	5	1	40x10	3	42	SS4006001005

cl: 3



Type Code	Primary Current (A)	Rated Power at (VA)	Class (cl)	Bus Bar Dimensions (mm)	Min. Order Quantity	Number in Cartoon	Order Code
S30	50	2,5	3	30x10	3	42	SS300503002
	60	2,5	3	30x10	3	42	SS300603002
	75	2,5	3	30x10	3	42	SS300753002

Split-Core Type Current Transformers



Type Code	Primary Current (A)	Rated Power at (VA)	Class (cl)	Bus Bar Dimensions (mm)	Min. Order Quantity	Number in Cartoon	Order Code
S30A	200	1,5	1	30X10	3	18	SA3002001001
	250	2,5	1	30X10	3	18	SA3002501002
	300	2,5	1	30X10	3	18	SA3003001002
	400	3,75	1	30X10	3	18	SA3004001003
S60A	400	3,75	1	60x30	3	18	SA6004001003
	500	5	1	60x30	3	18	SA6005000505
	600	5	0,5	60x30	3	18	SA6006000505
	800	7,5	0,5	60x30	3	18	SA6008000507
	1000	10	0,5	60x30	3	18	SA6010000510
S120A	1200	10	0,5	30X10	3	18	SA12012000510
	1600	10	0,5	30X10	3	18	SA12016000510
	2000	15	0,5	30X10	3	18	SA12020000515
	2500	15	0,5	30X10	3	18	SA12025000515
	3000	15	0,5	30X10	3	18	SA12030000515
	4000	15	0,5	30X10	3	18	SA12040000515

Main Dimensions

Type Code	Cable Diameter (mm)	Window (mm)	Bus Bar Dimensions (mm)	Cable Section (mm ²)	Primer Current (A)	Rated Power at (VA)	Outer Dimensions WxHxD (mm)
S25B	—	—	—	—	20...150	2.5...30	80x100x40
S20	20	21x11	20x10	4...95	60...200	2.5...15	80x100x(40-50-60)
S20M	20	21x11	20x10	4...95	75...200	1...10	62x80x(30-45)
S30	24	31x11	30x10	4...150	100...600	1...30	80x100x(40-50-60)
S30M	24	31x11	30x10	4...150	150...600	1...15	62x80x(30-45)
S40	31	41x11	40x10	4...240	300...600	2.5...30	80x100x(40-50-60)
S50	38	51x11	50x10	4...300	500...1000	2.5...30	80x100x(40-50-60)
S60	46	62x31	60x10	4...300	500...1000	5...30	107x132x45
S60D	—	60x72	60x10	—	600...1600	5...15	82x134x60
S80	67	81x31	2x (80x10)	4...300	500...1500	5...30	145x165x55
S100	—	102x11	100x10	—	500...2500	5...30	145x165x55
S100D	—	101x72	4x (100x10)	—	600...5000	10...30	128x193x61
S125	126	126x11	3x (125x10)	4...300	2000...5000	15...60	190x220x55

Determination of Current Transformer's Power

The below formula can be used to determine current transformer's power. The most important matter is; determined power of current transformer should not exceed from maximum load of transformer power and not less than 1/4 of rated power. Otherwise, It may cause fault measuring or create fault protection signals.

$$P_s = P_A + P_K + P_T$$

P_s : Total Secondary Power (VA)

P_A : Secondary rated Power (VA)

P_K : Dielectric Cable Loss (VA)

P_T : Contact Loss (considered 0.5 VA)

$$P_K = (I_{sn}^2 \times 2L) / S \times 56$$

I_{sn} = Secondary Rated Current (A)

L = Length of the cable on secondary side (m)

S = Section of copper cable (mm²)

56 = Conductivity of Copper Cable (m/ohm x mm²)

Distance Between Current Transformer and Load (meter)	Cable Loss (P_K) According to Secondary Cable Section (VA)			
	2.5 mm ²	4 mm ²	6 mm ²	10 mm ²
1m	0.36	0.22	0.15	0.09
2m	0.71	0.45	0.3	0.18
3m	1.07	0.67	0.45	0.27
4m	1.43	0.89	0.6	0.36
5m	1.78	1.12	0.74	0.44
6m	2.14	1.34	0.89	0.54
7m	2.5	1.56	1.04	0.63
8m	2.86	1.79	1.19	0.71
9m	3.21	2.01	1.34	0.8
10m	3.57	2.24	1.49	0.89

****You can use this formula to calculate cable loss which apart from above mentioned cable length.**

Power of devices connected to current transformers (P_A)

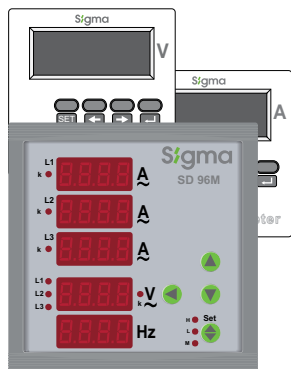
Device	Power (VA)
Ammeter	0,7 ... 1,5
Wattmeter	0,2 ... 5,0
CosØmeter	2,0 ... 6,0
Counters (active and reactivities)	0,4 ... 1,0
Reactive power control relays	0,5 ... 1,0
Over current relays	0,2 ... 6,0
Reverse current relays	1,0 ... 2,0
Secondary Thermal Relays	7,2 ... 9,0

Current error and Phase shifting limits (According to IEC 60044-1, IEC 385 class 0.1-0.2-0.5-1)

Accuracy Class	Current (proportion) error ± percentage for the rated currents given below				± Phase shifting for rated current percentages given below							
					Minutes				Centi-radians			
	%5	%20	%100	%120	%5	%20	%100	%120	%5	%20	%100	%120
0,1	0,4	0,2	0,1	0,1	15	5	5	5	0,45	0,24	0,15	0,15
0,2	0,75	0,35	0,2	0,2	30	10	10	10	0,9	0,45	0,3	0,3
0,5	1,5	0,75	0,5	0,5	90	30	30	30	2,7	1,35	0,9	0,9
1,0	3,0	1,5	1,0	1,0	180	90	60	60	5,4	2,7	1,8	1,8

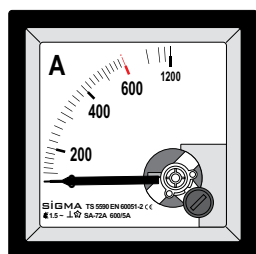
When current fault and phase shift at rated frequency varies between 1/1 and 1/4 of the secondary load, rated load, the values in the table should not be exceeded

Digital Measurement Devices



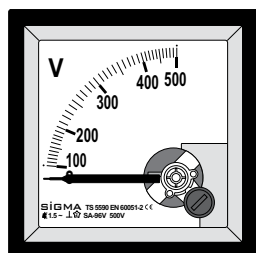
Type Code	Description	Diameter (mm)	Min. Order Quantity	Number in Cartoon	Order Code
SD 72A	Ammeter with Current Transformer 1-5000/5A	72x72	1	72	SD72A-5000
SD 96A	Ammeter with Current Transformer 1-5000/5A	96x96	1	72	SD96A-5000
SD 72V	Voltmeter 0-600 V AC	72x72	1	72	SD72V-0600
SD 96V	Voltmeter 0-600 V AC	96x96	1	72	SD96V-0600
SD 96M	I-V-Hz Multimeter	96x96	1	27	SD96M-0600

Analogue Ammeters



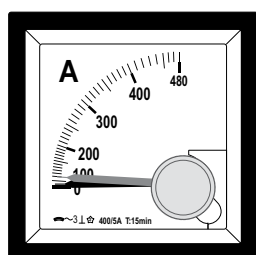
Type Code	Description	Diameter (mm)	Min. Order Quantity	Number in Cartoon	Order Code
SA 72A	Analogue Ammeter 30A, Direct Connection	72x72	1	48	SA72A-D030
	Analogue Ammeter 50A, Direct Connection	72x72	1	48	SA72A-D050
	Analogue Ammeter 100A, Direct Connection	72x72	1	48	SA72A-D100
	Ammeter for X/5 A Current Transformer	72x72	1	48	SA72A-X
SA 96A	Analogue Ammeter 30A, Direct Connection	96x96	1	27	SA96A-D030
	Analogue Ammeter 50A, Direct Connection	96x96	1	27	SA96A-D050
	Analogue Ammeter 100A, Direct Connection	96x96	1	27	SA96A-D100
	Ammeter for X/5 A Current Transformer	96x96	1	27	SA96A-X

Analogue Voltmeters



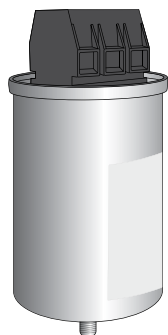
Type Code	Description	Diameter (mm)	Min. Order Quantity	Number in Cartoon	Order Code
SA 72V	Analogue Voltmeter 0-250 V AC	72x72	1	48	SA72V-0250
	Analogue Voltmeter 0-500 V AC	72x72	1	48	SA72V-0500
SA 96V	Analogue Voltmeter 0-250 V AC	96x96	1	27	SA96V-0250
	Analogue Voltmeter 0-500 V AC	96x96	1	27	SA96V-0500

Analogue Ammeters with Demandmeter



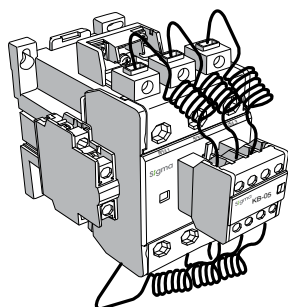
Type Code	Description	Diameter (mm)	Min. Order Quantity	Number in Cartoon	Order Code
SA 72D	Ammeter with Demand meter 250/5 A (15 min)	72x72	1	48	SA72D-0250
	Ammeter with Demand meter 400/5 A (15 min)	72x72	1	48	SA72D-0400
	Ammeter with Demand meter 600/5 A (15 min)	72x72	1	48	SA72D-0600
	Ammeter with Demand meter 1000/5 A (15 min)	72x72	1	48	SA72D-1000
SA 96D	Ammeter with Demand meter 250/5 A (15 min)	96x96	1	27	SA96D-0250
	Ammeter with Demand meter 400/5 A (15 min)	96x96	1	27	SA96D-0400
	Ammeter with Demand meter 600/5 A (15 min)	96x96	1	27	SA96D-0600
	Ammeter with Demand meter 1000/5 A (15 min)	96x96	1	27	SA96D-1000

LV Power Capacitors (Dry, cylindrical type, self healing, overpressure protection)



Type Code	Power (kVar) (230V)	Type	Voltage (V)	Diameters DxH (mm)	Min. Order Quantity	Number in Cartoon	Order Code
1SK230	0,25	1 Phase	230	63,5x75	3	16	1SK230-0.25
	0,5	1 Phase	230	63,5x75	3	16	1SK230-0.5
	1	1 Phase	230	63,5x87	3	16	1SK230-1
	1,5	1 Phase	230	63,5x145	3	16	1SK230-1.5
	2,5	1 Phase	230	63,5x145	3	16	1SK230-2.5
	5	1 Phase	230	75x205	3	16	1SK230-5
3SK400	1	3 Phases	400	63,5x87	3	16	3SK400-1
	1,5	3 Phases	400	63,5x95	3	16	3SK400-1.5
	2,5	3 Phases	400	63,5x95	3	16	3SK400-2.5
	5	3 Phases	400	75x145	3	16	3SK400-5
	7,5	3 Phases	400	75x145	3	16	3SK400-7.5
	10	3 Phases	400	75x205	3	16	3SK400-10
	12,5	3 Phases	400	85x205	3	12	3SK400-12.5
	15	3 Phases	400	85x205	3	12	3SK400-15
	20	3 Phases	400	95x210	3	9	3SK400-20
	25	3 Phases	400	116x247	3	9	3SK400-25
	30	3 Phases	400	116x247	3	4	3SK400-30
	40	3 Phases	400	116x247	3	4	3SK400-40
	50	3 Phases	400	136x247	3	4	3SK400-50
	10	Trifaze	525	85x210	3	12	3SK525-10
3SK525	15	Trifaze	525	95x210	3	9	3SK525-15
	20	Trifaze	525	95x247	3	6	3SK525-20
	25	Trifaze	525	116x247	3	4	3SK525-25
	30	Trifaze	525	116x247	3	4	3SK525-30

Contactors for Capacitor Bank - Coil Voltage: 230V AC

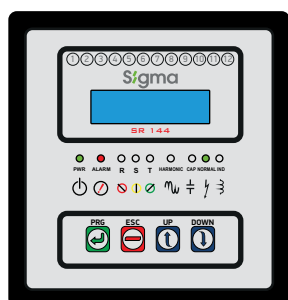


Type Code	Ac-6b (A)	Rated Capacitor Power at 220/240V (kVAr) $\Theta \leq 55^\circ\text{C}$	Rated Capacitor Power at 380/440V (kVAr) $\Theta \leq 55^\circ\text{C}$	Operation /hour	Electrical Life (Cycle)	Auxiliary Contact on Body	Min. Order Quantity	Number in Cartoon	Order Code
SCK-12	4	1,5	2,5	200 op/h	200.000	1NO+1NC	1	20	SCK012
SCK-18	8	3	5	200 op/h	200.000	1NO+1NC	1	20	SCK018
SCK-25	14	6	10	200 op/h	200.000	1NO+1NC	1	20	SCK025
SCK-32	22	8	15	200 op/h	200.000	1NO+1NC	1	14	SCK032
SCK-40	26	12	20	200 op/h	200.000	1NO+1NC	1	14	SCK040
SCK-50	36	15	25	100 op/h	100.000	1NO+1NC	1	8	SCK050
SCK-65	48	20	33,3	100 op/h	100.000	1NO+1NC	1	8	SCK065
SCK-80	66	22	40	100 op/h	100.000	1NO+1NC	1	8	SCK080
SCK-95	78	33,3	50	100 op/h	100.000	1NO+1NC	1	8	SCK095

LV Capacitor Bank Component Selection

400 V AC 3 Phases Capacitor			Cable	LV Circuit Breaker		MCB	Contactor for Capacitor Bank	Power Contactor
Type Code	Rated Power (kVAr)	Rated Current (A)	Section (mm ²)	Type	Rated Current (A)	Rated Current (A)	Type	Type
3SK400-1	1,0	1,4	2,5			C6	SCK-12	SCG-18
3SK400-1.5	1,5	2,16	2,5			C10	SCK-12	SCG-18
3SK400-2.5	2,5	3,6	2,5			C10	SCK-12	SCG-18
3SK400-5	5,0	7,2	2,5	C160, K160	20	C16	SCK-18	SCG-25
3SK400-7.5	7,5	10,80	2,5	C160, K160	20	C20	SCK-25	SCG-32
3SK400-10	10,00	14,40	4	C160, K160	32	C25	SCK-25	SCG-40
3SK400-12.5	12,5	18,00	6	C160, K160	40	C32	SCK-32	SCG-50
3SK400-15	15,0	21,60	6	C160, K160	40	C40	SCK-32	SCG-65
3SK400-20	20,0	28,80	10	C160, K160	50	C50	SCK-40	SCG-80
3SK400-25	25,0	36,00	16	C160, K160	63	C63	SCK-50	SCG-95
3SK400-30	30,0	43,20	25	C160, K160	80	C80	SCK-65	SCM-100
3SK400-40	40	57,6	35	C160, K160	100	C100	SCK-80	SCM-125
3SK400-50	50	72	35	C160, K160	125	C125	SCK-95	SCM-150

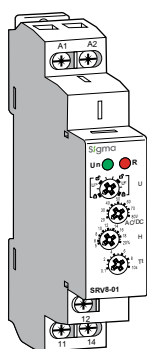
Reactive Power Control Relay



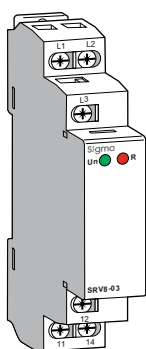
Type Code	Description	Diameter (mm)	Min. Order Quantity	Number in Cartoon	Order Code
SR144	Reactive Power Controller, 12 Steps, Digital, controlling monophase capacitors, Led Display showing each single phase	144x144	1	6	SR144-012

Relays

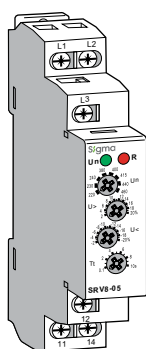
Type	Description	Explanation	Supply Voltage	Order Code
SRV8-01	Monitoring Voltage Relay	Over/High Voltage in Windows Mode	230 V AC	SRV801230
SRV8-03	Monitoring Voltage Relay	Phase sequence and Phase Failure Protection	220-460 V	SRV803460
SRV8-05	Monitoring Voltage Relay	Over Voltage Under Voltage Asymmetry Time Delay Phase Sequence Phase Failure	220-460 vV	SRV805460
SRT8-A30S	Single - Function Time Relay	0.1-30 Second Delay ON	230 V AC	SRT8A30S
SRT8-A60S	Single - Function Time Relay	0.1-60 Second Delay ON	230 V AC	SRT8A60S
SRT8-A10D	Multi-Function Time Relay	1×SPDT	230 V AC	SRT8A10D
SRT8-M1	Multi-Function Time Relay	2×SPDT	AC/DC 12V~240V	SRT8M1
SRT8-M2	Multi-Function Time Relay	0.1 s - 10 days, ON, OFF	AC/DC 12V~240V	SRT8M2
SRT8-STD	Delay On Star/Delta Relay	Range of time delay t1:0.1s -10min, Switch time t2:0.1s-1s	AC/DC 12V~240V	SRT8ST240
SRT8-STA	Delay On Star/Delta Relay	Range of time delay t1:0.1s -10min, Switch time t2:0.1s-1s	230 V AC	SRT8STA
SRT8-S1	Asymmetric Cycler Relay	0.1 s - 10 days	AC/DC 12V~240V	SRTSS1240
SRL8-01	Level Control Relay	2 level control mode	AC/DC 12V~240V	SRL801240
SRL8-LS	Staircase Switch	Delay off reacting to contact switching	230 V AC	SRT8LS230



SRV8-01



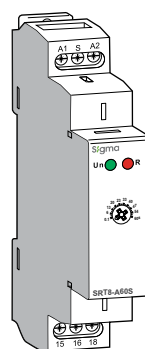
SRV8-03



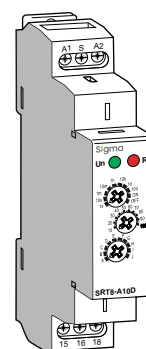
SRV8-05



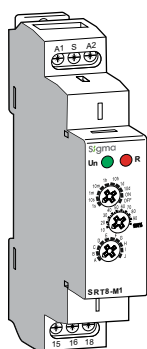
SRT8-A30S



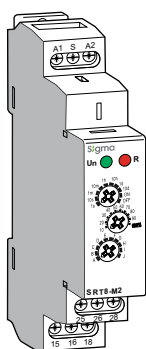
SRT8-A60S



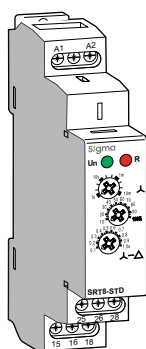
SRT8-A10D



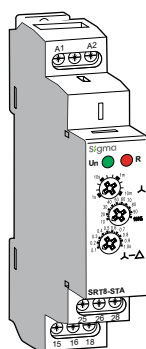
SRT8-M1



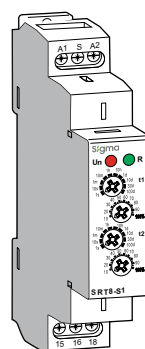
SRT8-M2



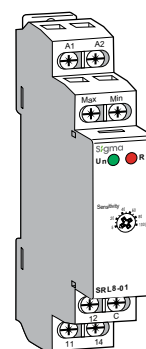
SRT8-STD



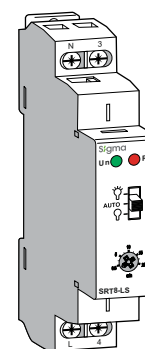
SRT8-STA



SRT8-S1



SRL8-01



SRL8-LS

Quality Certificates

ISO 9001

ISO 14001

OHSAS 18001

RoHS Certificates



ASTA Certificates

TÜV Certificates

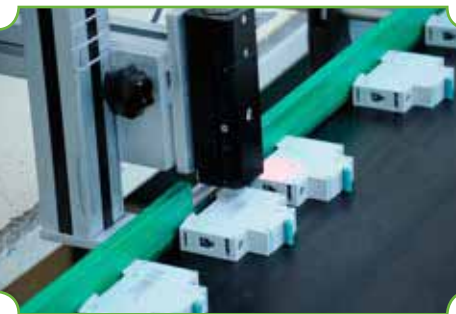


TSE Certificates



CE Certificate of Conformity







WIN İSTANBUL



IRAN



ETHIOPIA



NIGERIA



SOUTH AFRICA



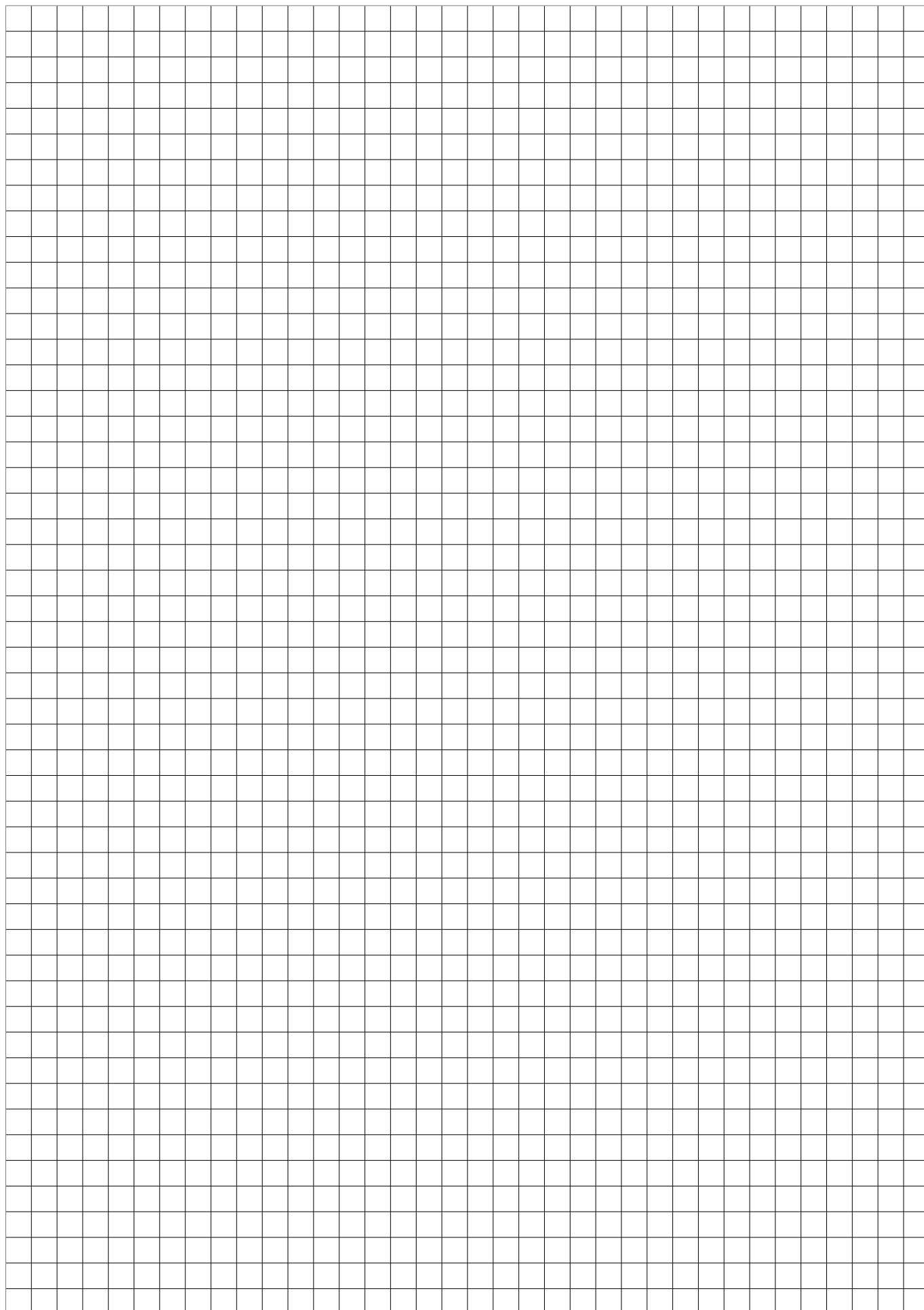
HANNOVER MESSE

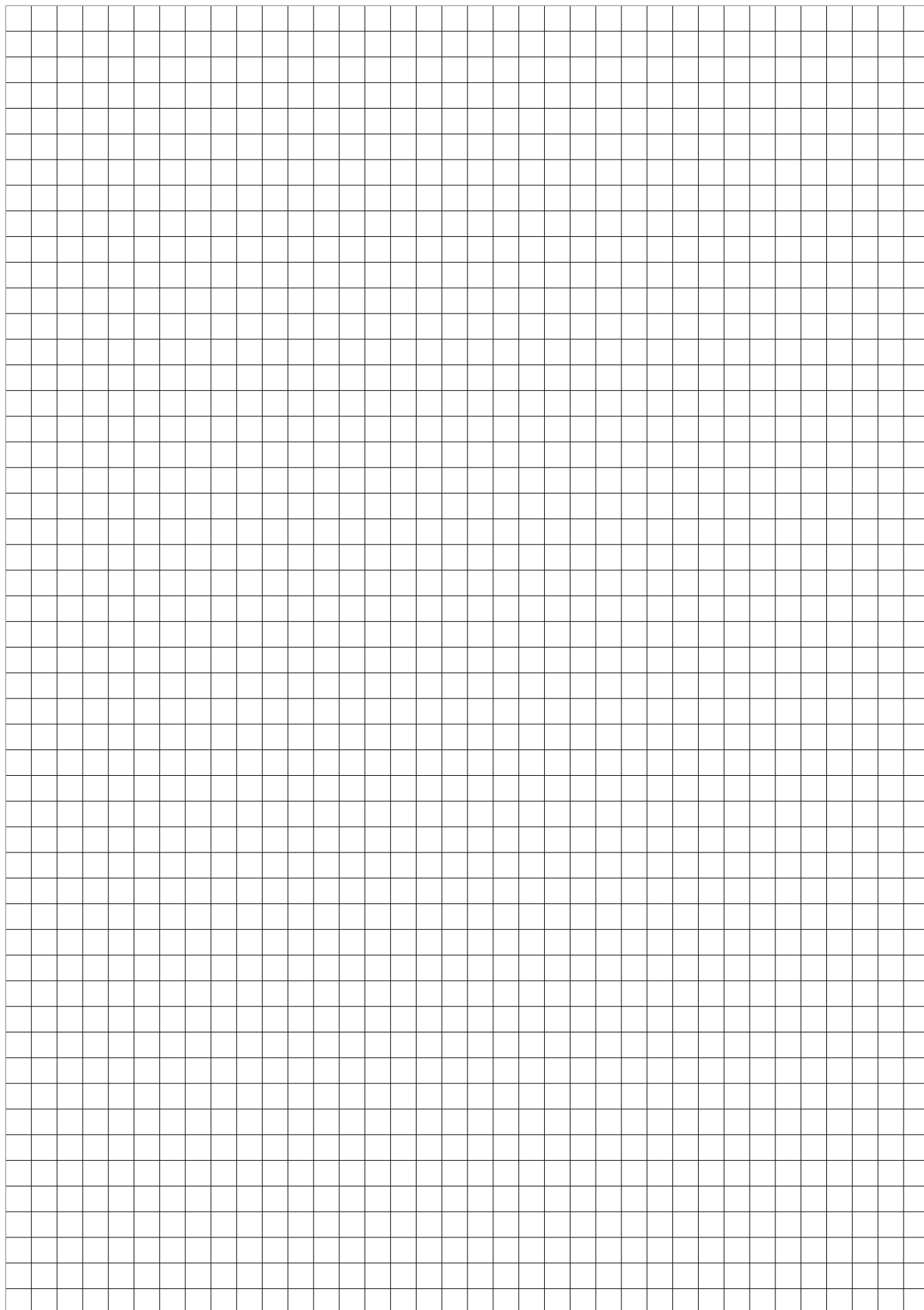


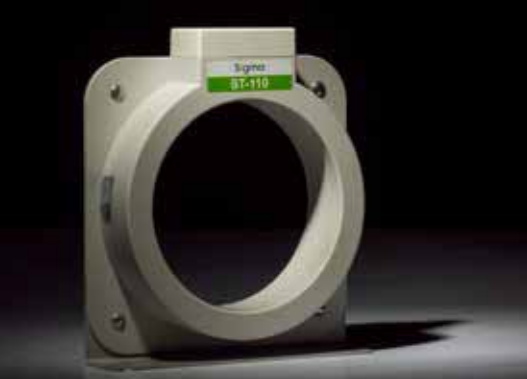
SPAIN



DUBAI MIDDLE EAST ELECTRICITY









Sigma elektrik

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