



B

Power Distribution & Protection

Interactive Catalogue



Power Distribution & Protection

B1 Miniature Circuit Breakers & Accessories



Miniature circuit
breakers
B-1...7/10



Earth leakage
protection
B-8...9/11...12

B2 Moulded Case Circuit Breakers & Air Circuit Breakers



Moulded case circuit
breakers
B-18...24



Air circuit
breakers
B-26...30

B3 Load break & Changeover Switches



Load break
switches
B-31...35



Changeover
switches
B-36...43

B4 Fuse gear



Fuse links
& Holders
B-45...57/62



Fuse switch
disconnectors
B-44/59...61

B5 Surge Protection Devices



Surge protection
devices
B-63...64/66...67



Photovoltaic (PV)
surge protection
devices
B-65/68

B6 Power Supplies



Power supplies
(AC-DC)
B-69...72



Control and safety
transformers
B-73



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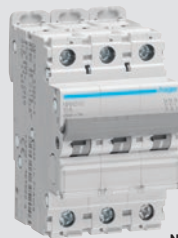
Miniature circuit breakers 3/6kA



MJT720



NCN232A



NRN320



NRN440

Type	MV	MJT	MA	NF/NFN	HLF	NGN	HMD	NCN	HMC	NRN
Poles	1	1 + N	1, 2, 3, 4	1, 2, 3, 4	1, 2, 3, 4	1, 2, 3, 4	1, 2, 3, 4	1, 2, 3, 4	1, 2, 3, 4	1, 2, 3, 4
Width per Pole in 17.5 mm	1	1	1	1	1.5	1	1.5	1	1.5	1
Rated Current (A)	6 - 40A	2 - 40A	2 - 63A	2 - 63A	80 - 125A	2 - 63A	80 - 125A	6 - 63A	80 - 125A	6 - 63A
Breaking capacity	3kA	6kA	6kA	10kA	10kA	10kA	15kA	15kA	15kA	15 - 25kA
Tripping Curve	C	C	C	C	C	D	D	C	C	C
Rated AC Voltage (V)	230	230	230/400	230/400	230/400	230/400	230/400	230/400	230/400	230/400
DC Application (refer Annex-9)	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Frequency (Hz)	50/60	50/60	50	50/60	50/60	50/60	50/60	50/60	50/60	50/60
Add on Block (Earth Leakage)	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Connecting Capacity (conductor)	Flexible (mm ²)	16 mm ²	10 mm ²	16 mm ²	25 mm ²	50 mm ²	25 mm ²	50 mm ²	25 mm ²	50 mm ²
	Rigid (mm ²)	25 mm ²	16 mm ²	25 mm ²	35 mm ²	70 mm ²	35 mm ²	70 mm ²	35 mm ²	70 mm ²
Isolation	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Page	B-1	B-1, B-8	B-2	B-3	B-3	B-4	B-4	B-5	B-5	B-6



MV116Z



MJT720

MV series C curve (5-10 In)

Protection and control of circuits against overload and short circuits.
Suitable for residential and commercial installations.

type	current rating	poles	breaking capacity	description	width in 17.5 mm	price
Breaking capacity:			3kA	SANS/IEC 60947-2, SANS 556		
• Does not accept clip-on accessories.						
Single pole						
MV106Z	6A	1	3kA	miniature circuit breaker	1	90.00
MV110Z	10A	1	3kA	miniature circuit breaker	1	90.00
MV116Z	16A	1	3kA	miniature circuit breaker	1	90.00
MV120Z	20A	1	3kA	miniature circuit breaker	1	90.00
MV125Z	25A	1	3kA	miniature circuit breaker	1	90.00
MV132Z	32A	1	3kA	miniature circuit breaker	1	90.00
MV140Z	40A	1	3kA	miniature circuit breaker	1	90.00

MJT series C curve (5-10 In)

Breaking capacity: **6kA** SANS/IEC 60947-2, SANS 556

- Accepts clip-on: (see MCB accessories)
 - auxiliary/alarm contacts
 - shunt trip
 - undervoltage
 - overvoltage
- Accepts **BDC240F** earth leakage a compact device which simply clips on the side (see accessories)
- Trip indication - yellow flag on toggle indicates either "overload" or "short circuit" trip

1 Ph+N in one module

MJT702	2A	1+N	6kA	miniature circuit breaker	1	383.00
MJT706	6A	1+N	6kA	miniature circuit breaker	1	299.00
MJT710	10A	1+N	6kA	miniature circuit breaker	1	299.00
MJT716	16A	1+N	6kA	miniature circuit breaker	1	299.00
MJT720	20A	1+N	6kA	miniature circuit breaker	1	299.00
MJT725	25A	1+N	6kA	miniature circuit breaker	1	299.00
MJT732	32A	1+N	6kA	miniature circuit breaker	1	299.00
MJT740	40A	1+N	6kA	miniature circuit breaker	1	299.00

Miniature circuit breakers 6kA



MA163Z



MA206Z + MZ202



MA325Z



MA416Z

MA series - Miniature circuit breakers (MCBs)

For the protection and control of circuits against overload and short circuits. Suitable for residential, commercial and industrial installations.

- Compatible with DC voltage applications (see chart **Annex-6**)
- Cascading with MCCBs (see chart **Annex-5**)
- Suitable for isolation

Voltage rating: 230/400V 50-60Hz

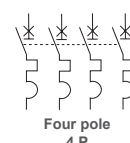
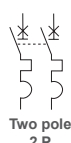
Current rating: 2 - 63A

Field fittable clip-on accessories (see *MCB accessories*)

- auxiliary/alarm contacts
- shunt trip device
- undervoltage release
- overvoltage release
- earth leakage (see *accessories*)

type	current rating	poles	breaking capacity	description	width in 17.5 mm	price
MA series		C curve (5-10 In)				
Breaking capacity:			6kA	SANS/IEC 60947-2, SANS 556		
Single pole						
MA102Z	2A	1	6kA	miniature circuit breaker	1	200.00
MA106Z	6A	1	6kA	miniature circuit breaker	1	115.00
MA110Z	10A	1	6kA	miniature circuit breaker	1	115.00
MA116Z	16A	1	6kA	miniature circuit breaker	1	115.00
MA120Z	20A	1	6kA	miniature circuit breaker	1	115.00
MA125Z	25A	1	6kA	miniature circuit breaker	1	120.00
MA132Z	32A	1	6kA	miniature circuit breaker	1	120.00
MA140Z	40A	1	6kA	miniature circuit breaker	1	120.00
MA150Z	50A	1	6kA	miniature circuit breaker	1	170.00
MA163Z	63A	1	6kA	miniature circuit breaker	1	180.00
Two pole						
MA202Z	2A	2	6kA	miniature circuit breaker	2	560.00
MA206Z	6A	2	6kA	miniature circuit breaker	2	380.00
MA210Z	10A	2	6kA	miniature circuit breaker	2	380.00
MA216Z	16A	2	6kA	miniature circuit breaker	2	380.00
MA220Z	20A	2	6kA	miniature circuit breaker	2	380.00
MA225Z	25A	2	6kA	miniature circuit breaker	2	400.00
MA232Z	32A	2	6kA	miniature circuit breaker	2	400.00
MA240Z	40A	2	6kA	miniature circuit breaker	2	400.00
MA250Z	50A	2	6kA	miniature circuit breaker	2	450.00
MA263Z	63A	2	6kA	miniature circuit breaker	2	470.00
Three pole						
MA302Z	2A	3	6kA	miniature circuit breaker	3	900.00
MA306Z	6A	3	6kA	miniature circuit breaker	3	510.00
MA310Z	10A	3	6kA	miniature circuit breaker	3	510.00
MA316Z	16A	3	6kA	miniature circuit breaker	3	510.00
MA320Z	20A	3	6kA	miniature circuit breaker	3	510.00
MA325Z	25A	3	6kA	miniature circuit breaker	3	530.00
MA332Z	32A	3	6kA	miniature circuit breaker	3	530.00
MA340Z	40A	3	6kA	miniature circuit breaker	3	530.00
MA350Z	50A	3	6kA	miniature circuit breaker	3	600.00
MA363Z	63A	3	6kA	miniature circuit breaker	3	615.00
Four pole						
MA406Z	6A	4	6kA	miniature circuit breaker	4	1 100.00
MA410Z	10A	4	6kA	miniature circuit breaker	4	1 100.00
MA416Z	16A	4	6kA	miniature circuit breaker	4	1 100.00
MA420Z	20A	4	6kA	miniature circuit breaker	4	1 100.00
MA425Z	25A	4	6kA	miniature circuit breaker	4	1 130.00
MA432Z	32A	4	6kA	miniature circuit breaker	4	1 130.00
MA440Z	40A	4	6kA	miniature circuit breaker	4	1 130.00
MA450Z	50A	4	6kA	miniature circuit breaker	4	1 160.00
MA463Z	63A	4	6kA	miniature circuit breaker	4	1 160.00

MCB poles



Miniature circuit breakers 10kA



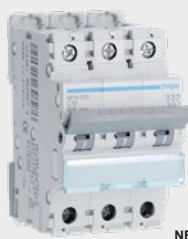
NFN163



NFN263



HLF290S



NFN363

NF / NFN / HLF series - Miniature circuit breakers (MCBs)

For the protection and control of circuits against overload and short circuits.
Suitable for residential, commercial and industrial installations.

- Compatible for DC voltage applications (see chart **Annex-6**)

Field fittable clip-on accessories (see **MCB accessories**)

- auxiliary/alarm contacts
- shunt trip device
- undervoltage release
- earth leakage

type	current rating	poles	breaking capacity	description	width in 17.5 mm	price
NF / NFN / HLF series		C curve (5-10 In)				
Breaking capacity:			10kA	SANS / IEC 60947-2, SANS 556		
Single pole						
NF102A	2A	1	10kA	miniature circuit breaker	1	220.00
NF106A	6A	1	10kA	miniature circuit breaker	1	150.00
NF110A	10A	1	10kA	miniature circuit breaker	1	150.00
NF116A	16A	1	10kA	miniature circuit breaker	1	150.00
NF120A	20A	1	10kA	miniature circuit breaker	1	150.00
NF125A	25A	1	10kA	miniature circuit breaker	1	160.00
NF132A	32A	1	10kA	miniature circuit breaker	1	160.00
NF140A	40A	1	10kA	miniature circuit breaker	1	160.00
NFN150	50A	1	10kA	miniature circuit breaker	1	200.00
NFN163	63A	1	10kA	miniature circuit breaker	1	210.00
HLF180S	80A	1	10kA	miniature circuit breaker	1.5	790.00
HLF190S	100A	1	10kA	miniature circuit breaker	1.5	810.00
HLF199S	125A	1	10kA	miniature circuit breaker	1.5	1 050.00
Two pole						
NF202A	2A	2	10kA	miniature circuit breaker	2	700.00
NF206A	6A	2	10kA	miniature circuit breaker	2	510.00
NF210A	10A	2	10kA	miniature circuit breaker	2	510.00
NF216A	16A	2	10kA	miniature circuit breaker	2	510.00
NF220A	20A	2	10kA	miniature circuit breaker	2	510.00
NF225A	25A	2	10kA	miniature circuit breaker	2	570.00
NF232A	32A	2	10kA	miniature circuit breaker	2	570.00
NF240A	40A	2	10kA	miniature circuit breaker	2	570.00
NFN250	50A	2	10kA	miniature circuit breaker	2	680.00
NFN263	63A	2	10kA	miniature circuit breaker	2	700.00
HLF280S	80A	2	10kA	miniature circuit breaker	3	1 480.00
HLF290S	100A	2	10kA	miniature circuit breaker	3	1 500.00
HLF299S	125A	2	10kA	miniature circuit breaker	3	1 860.00
Three pole						
NF302A	2A	3	10kA	miniature circuit breaker	3	1 080.00
NF306A	6A	3	10kA	miniature circuit breaker	3	810.00
NF310A	10A	3	10kA	miniature circuit breaker	3	810.00
NF316A	16A	3	10kA	miniature circuit breaker	3	810.00
NF320A	20A	3	10kA	miniature circuit breaker	3	810.00
NF325A	25A	3	10kA	miniature circuit breaker	3	830.00
NF332A	32A	3	10kA	miniature circuit breaker	3	830.00
NF340A	40A	3	10kA	miniature circuit breaker	3	830.00
NFN350	50A	3	10kA	miniature circuit breaker	3	880.00
NFN363	63A	3	10kA	miniature circuit breaker	3	900.00
HLF380S	80A	3	10kA	miniature circuit breaker	4.5	1 880.00
HLF390S	100A	3	10kA	miniature circuit breaker	4.5	2 150.00
HLF399S	125A	3	10kA	miniature circuit breaker	4.5	2 850.00
Four pole						
NF406A	6A	4	10kA	miniature circuit breaker	4	1 180.00
NF410A	10A	4	10kA	miniature circuit breaker	4	1 180.00
NF416A	16A	4	10kA	miniature circuit breaker	4	1 180.00
NF420A	20A	4	10kA	miniature circuit breaker	4	1 180.00
NF425A	25A	4	10kA	miniature circuit breaker	4	1 230.00
NF432A	32A	4	10kA	miniature circuit breaker	4	1 230.00
NF440A	40A	4	10kA	miniature circuit breaker	4	1 230.00
NFN450	50A	4	10kA	miniature circuit breaker	4	1 380.00
NFN463	63A	4	10kA	miniature circuit breaker	4	1 420.00
HLF480S	80A	4	10kA	miniature circuit breaker	6	4 800.00
HLF490S	100A	4	10kA	miniature circuit breaker	6	5 000.00
HLF499S	125A	4	10kA	miniature circuit breaker	6	6 670.00

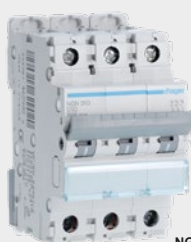
Miniature circuit breakers 10/15kA



NGN116



NGN216



NGN363



NGN410

NGN / HMD series - Miniature circuit breakers (MCBs)

For the protection and control of circuits against overload and short circuits.
Suitable for commercial and industrial installations.

- Compatible for DC voltage applications (see chart **Annex-6**)

Field fittable clip-on accessories (see *MCB accessories*)

- auxiliary/alarm contacts
- shunt trip device
- undervoltage release
- overvoltage release
- earth leakage

Voltage rating: 230/400V 50-60Hz

type	current rating	poles	breaking capacity	description	width in 17.5 mm	price
NGN / HMD series D curve (10-20 In)						
Breaking capacity:		NGN:10kA / HMD: 15kA		SANS/IEC 60947-2, SANS 556		
Single pole						
NGN102	2A	1	10kA	miniature circuit breaker	1	339.00
NGN104	4A	1	10kA	miniature circuit breaker	1	339.00
NGN106	6A	1	10kA	miniature circuit breaker	1	202.00
NGN110	10A	1	10kA	miniature circuit breaker	1	202.00
NGN116	16A	1	10kA	miniature circuit breaker	1	202.00
NGN120	20A	1	10kA	miniature circuit breaker	1	202.00
NGN125	25A	1	10kA	miniature circuit breaker	1	208.00
NGN132	32A	1	10kA	miniature circuit breaker	1	208.00
NGN140	40A	1	10kA	miniature circuit breaker	1	229.00
NGN150	50A	1	10kA	miniature circuit breaker	1	304.00
NGN163	63A	1	10kA	miniature circuit breaker	1	313.00
HMD180	80A	1	15kA	miniature circuit breaker	1.5	1 120.00
HMD190	100A	1	15kA	miniature circuit breaker	1.5	1 300.00
HMD199	125A	1	15kA	miniature circuit breaker	1.5	2 140.00
Two pole						
NGN202	2A	2	10kA	miniature circuit breaker	2	804.00
NGN206	6A	2	10kA	miniature circuit breaker	2	619.00
NGN210	10A	2	10kA	miniature circuit breaker	2	619.00
NGN216	16A	2	10kA	miniature circuit breaker	2	619.00
NGN220	20A	2	10kA	miniature circuit breaker	2	619.00
NGN225	25A	2	10kA	miniature circuit breaker	2	699.00
NGN232	32A	2	10kA	miniature circuit breaker	2	699.00
NGN240	40A	2	10kA	miniature circuit breaker	2	699.00
NGN250	50A	2	10kA	miniature circuit breaker	2	838.00
NGN263	63A	2	10kA	miniature circuit breaker	2	838.00
HMD280	80A	2	15kA	miniature circuit breaker	3	2 450.00
HMD290	100A	2	15kA	miniature circuit breaker	3	2 620.00
HMD299	125A	2	15kA	miniature circuit breaker	3	4 080.00
Three pole						
NGN306	6A	3	10kA	miniature circuit breaker	3	1 060.00
NGN310	10A	3	10kA	miniature circuit breaker	3	1 050.00
NGN316	16A	3	10kA	miniature circuit breaker	3	1 050.00
NGN320	20A	3	10kA	miniature circuit breaker	3	1 050.00
NGN325	25A	3	10kA	miniature circuit breaker	3	1 060.00
NGN332	32A	3	10kA	miniature circuit breaker	3	1 060.00
NGN340	40A	3	10kA	miniature circuit breaker	3	1 070.00
NGN350	50A	3	10kA	miniature circuit breaker	3	1 110.00
NGN363	63A	3	10kA	miniature circuit breaker	3	1 140.00
HMD380	80A	3	15kA	miniature circuit breaker	4.5	2 480.00
HMD390	100A	3	15kA	miniature circuit breaker	4.5	4 080.00
HMD399	125A	3	15kA	miniature circuit breaker	4.5	5 100.00
Four pole						
NGN406	6A	4	10kA	miniature circuit breaker	4	1 680.00
NGN410	10A	4	10kA	miniature circuit breaker	4	1 680.00
NGN416	16A	4	10kA	miniature circuit breaker	4	1 680.00
NGN420	20A	4	10kA	miniature circuit breaker	4	1 680.00
NGN425	25A	4	10kA	miniature circuit breaker	4	1 730.00
NGN432	32A	4	10kA	miniature circuit breaker	4	1 730.00
NGN440	40A	4	10kA	miniature circuit breaker	4	1 730.00
NGN450	50A	4	10kA	miniature circuit breaker	4	1 840.00
NGN463	63A	4	10kA	miniature circuit breaker	4	1 840.00
HMD480	80A	4	15kA	miniature circuit breaker	6	5 280.00
HMD490	100A	4	15kA	miniature circuit breaker	6	8 240.00
HMD499	125A	4	15kA	miniature circuit breaker	6	9 170.00

Miniature circuit breakers 15kA



NCN116A



NCN232A



NCN320A



NCN440A

NCN / HMC series - Miniature circuit breakers (MCBs)

For the protection and control of circuits against overload and short circuits.
Suitable for commercial and industrial installations.

- Compatible for DC voltage applications (see chart **Annex-6**)

Voltage rating: 230/400V 50-60Hz

Field fittable clip-on accessories (see **MCB accessories**)

- auxiliary/alarm contacts
- shunt trip device
- undervoltage release
- overvoltage release
- earth leakage

type	current rating	poles	breaking capacity	description	width in 17.5 mm	price
NCN / HMC series			C curve (5-10 In)			
Breaking capacity:			15kA	IEC 60947-2		
Single pole						
NCN106A	6A	1	15kA	miniature circuit breaker	1	232.00
NCN110A	10A	1	15kA	miniature circuit breaker	1	232.00
NCN116A	16A	1	15kA	miniature circuit breaker	1	232.00
NCN120A	20A	1	15kA	miniature circuit breaker	1	232.00
NCN125A	25A	1	15kA	miniature circuit breaker	1	241.00
NCN132A	32A	1	15kA	miniature circuit breaker	1	241.00
NCN140A	40A	1	15kA	miniature circuit breaker	1	259.00
NCN150A	50A	1	15kA	miniature circuit breaker	1	318.00
NCN163A	63A	1	15kA	miniature circuit breaker	1	318.00
HMC180	80A	1	15kA	miniature circuit breaker	1.5	1 390.00
HMC190	100A	1	15kA	miniature circuit breaker	1.5	1 530.00
HMC199	125A	1	15kA	miniature circuit breaker	1.5	1 670.00
Two pole						
NCN206A	6A	2	15kA	miniature circuit breaker	2	620.00
NCN210A	10A	2	15kA	miniature circuit breaker	2	620.00
NCN216A	16A	2	15kA	miniature circuit breaker	2	620.00
NCN220A	20A	2	15kA	miniature circuit breaker	2	620.00
NCN225A	25A	2	15kA	miniature circuit breaker	2	670.00
NCN232A	32A	2	15kA	miniature circuit breaker	2	670.00
NCN240A	40A	2	15kA	miniature circuit breaker	2	715.00
NCN250A	50A	2	15kA	miniature circuit breaker	2	838.00
NCN263A	63A	2	15kA	miniature circuit breaker	2	838.00
HMC280	80A	2	15kA	miniature circuit breaker	3	3 150.00
HMC290	100A	2	15kA	miniature circuit breaker	3	3 250.00
HMC299	125A	2	15kA	miniature circuit breaker	3	3 340.00
Three pole						
NCN306A	6A	3	15kA	miniature circuit breaker	3	1 100.00
NCN310A	10A	3	15kA	miniature circuit breaker	3	1 100.00
NCN316A	16A	3	15kA	miniature circuit breaker	3	1 100.00
NCN320A	20A	3	15kA	miniature circuit breaker	3	1 100.00
NCN325A	25A	3	15kA	miniature circuit breaker	3	1 180.00
NCN332A	32A	3	15kA	miniature circuit breaker	3	1 180.00
NCN340A	40A	3	15kA	miniature circuit breaker	3	1 180.00
NCN350A	50A	3	15kA	miniature circuit breaker	3	1 280.00
NCN363A	63A	3	15kA	miniature circuit breaker	3	1 280.00
HMC380	80A	3	15kA	miniature circuit breaker	4.5	3 520.00
HMC390	100A	3	15kA	miniature circuit breaker	4.5	4 080.00
HMC399	125A	3	15kA	miniature circuit breaker	4.5	5 100.00
Four pole						
NCN406A	6A	4	15kA	miniature circuit breaker	4	2 010.00
NCN410A	10A	4	15kA	miniature circuit breaker	4	2 010.00
NCN416A	16A	4	15kA	miniature circuit breaker	4	2 010.00
NCN420A	20A	4	15kA	miniature circuit breaker	4	2 010.00
NCN425A	25A	4	15kA	miniature circuit breaker	4	2 010.00
NCN432A	32A	4	15kA	miniature circuit breaker	4	2 010.00
NCN440A	40A	4	15kA	miniature circuit breaker	4	2 010.00
NCN450A	50A	4	15kA	miniature circuit breaker	4	2 180.00
NCN463A	63A	4	15kA	miniature circuit breaker	4	2 180.00
HMC480	80A	4	15kA	miniature circuit breaker	6	5 560.00
HMC490	100A	4	15kA	miniature circuit breaker	6	5 930.00
HMC499	125A	4	15kA	miniature circuit breaker	6	6 950.00

Miniaturation circuit breakers 15/20/25kA



NRN110



NRN232



NRN320



NRN440

NRN series - Miniature circuit breakers (MCBs)

For the protection and control of circuits against overload and short circuits.
Suitable for commercial and industrial installations.

- Compatible for DC voltage applications (see chart Annex-6)

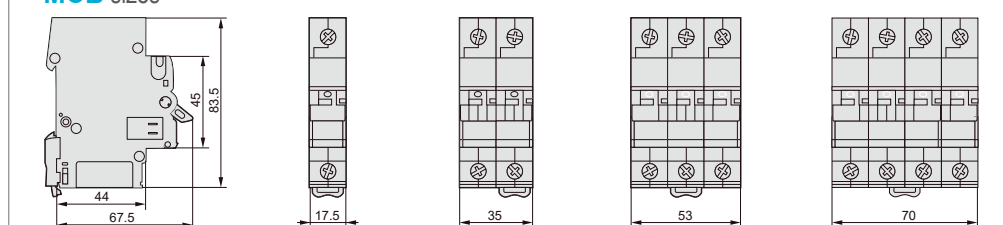
Voltage rating: 230/400V 50-60Hz

Field fittable clip-on accessories (see MCB accessories)

- auxiliary/alarm contacts
- shunt trip device
- undervoltage release
- overvoltage release
- earth leakage

type	current rating	poles	breaking capacity	description	width in 17.5 mm	price
NRN series C curve (5-10 In)						
Breaking capacity:			IEC 60947-2			
	6 - 25A		25kA			
	32 - 40A		20kA			
	50 - 63A		15kA			
Single pole						
NRN106	6A	1	25kA	miniature circuit breaker	1	501.00
NRN110	10A	1	25kA	miniature circuit breaker	1	501.00
NRN116	16A	1	25kA	miniature circuit breaker	1	501.00
NRN120	20A	1	25kA	miniature circuit breaker	1	501.00
NRN125	25A	1	25kA	miniature circuit breaker	1	501.00
NRN132	32A	1	20kA	miniature circuit breaker	1	567.00
NRN140	40A	1	20kA	miniature circuit breaker	1	567.00
NRN150	50A	1	15kA	miniature circuit breaker	1	590.00
NRN163	63A	1	15kA	miniature circuit breaker	1	590.00
Two pole						
NRN206	6A	2	25kA	miniature circuit breaker	2	943.00
NRN210	10A	2	25kA	miniature circuit breaker	2	943.00
NRN216	16A	2	25kA	miniature circuit breaker	2	943.00
NRN220	20A	2	25kA	miniature circuit breaker	2	943.00
NRN225	25A	2	25kA	miniature circuit breaker	2	943.00
NRN232	32A	2	20kA	miniature circuit breaker	2	943.00
NRN240	40A	2	20kA	miniature circuit breaker	2	1 040.00
NRN250	50A	2	15kA	miniature circuit breaker	2	1 040.00
NRN263	63A	2	15kA	miniature circuit breaker	2	1 040.00
Three pole						
NRN306	6A	3	25kA	miniature circuit breaker	3	1 510.00
NRN310	10A	3	25kA	miniature circuit breaker	3	1 510.00
NRN316	16A	3	25kA	miniature circuit breaker	3	1 510.00
NRN320	20A	3	25kA	miniature circuit breaker	3	1 510.00
NRN325	25A	3	25kA	miniature circuit breaker	3	1 510.00
NRN332	32A	3	20kA	miniature circuit breaker	3	1 510.00
NRN340	40A	3	20kA	miniature circuit breaker	3	1 610.00
NRN350	50A	3	15kA	miniature circuit breaker	3	1 610.00
NRN363	63A	3	15kA	miniature circuit breaker	3	1 610.00
Four pole						
NRN406	6A	4	25kA	miniature circuit breaker	4	2 930.00
NRN410	10A	4	25kA	miniature circuit breaker	4	2 930.00
NRN416	16A	4	25kA	miniature circuit breaker	4	2 930.00
NRN420	20A	4	25kA	miniature circuit breaker	4	2 930.00
NRN425	25A	4	25kA	miniature circuit breaker	4	3 210.00
NRN432	32A	4	20kA	miniature circuit breaker	4	3 210.00
NRN440	40A	4	20kA	miniature circuit breaker	4	3 210.00
NRN450	50A	4	15kA	miniature circuit breaker	4	4 340.00
NRN463	63A	4	15kA	miniature circuit breaker	4	4 340.00

MCB sizes



Miniature circuit breaker accessories

Type		MV	MJT	MA	NF/NFN	NGN	NCN	NRN	HLF	HMD	HMC
Auxiliary contacts	1NO + 1NC	—	MZ201	MZ201	MZ201	MZ201	MZ201	MZ201	MZ201	MZ201	MZ201
Alarm contacts	1NO + 1NC	—	MZ202	MZ202	MZ202	MZ202	MZ202	MZ202	MZ202	MZ202	MZ202
Shunt trip device	110-130 VDC 230-415 VAC	—	MZ203	MZ203	MZ203	MZ203	MZ203	MZ203	MZ203	MZ203	MZ203
Shunt trip device	12-48 VDC 24-48 VAC	—	MZ204	MZ204	MZ204	MZ204	MZ204	MZ204	MZ204	MZ204	MZ204
Under voltage release	230 VAC	—	MZ206	MZ206	MZ206	MZ206	MZ206	MZ206	MZ206	MZ206	MZ206
Over voltage release	230 VAC	—	MZ212	MZ212	MZ212	MZ212	MZ212	MZ212	MZ212	MZ212	MZ212
Terminal Cover	—	—	—	—	—	—	—	—	MZN130	MZN130	MZN130
Phase separator	—	—	—	—	—	—	—	—	MZN131	MZN131	MZN131

Auxiliaries and tripping devices for MCBs and RCDs

All auxiliaries are common to both single and multi-pole circuit breakers.
Auxiliaries are fitted to the left side of the protection device.

Shunt trips and undervoltage releases are fitted with a flag indicator that indicates the automatic / remote tripping of the device.

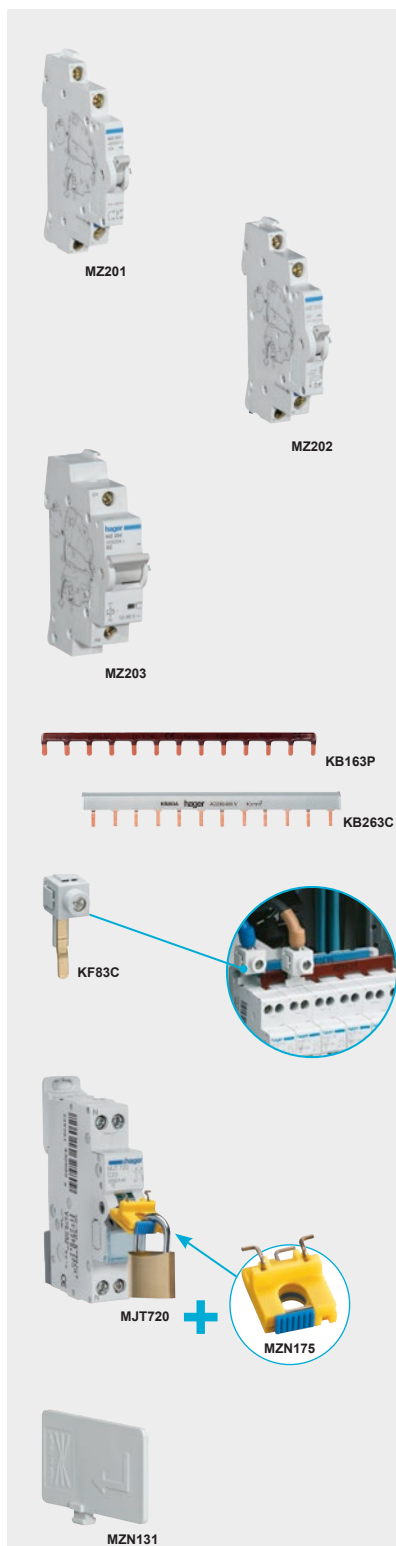
type	function	description			width in 17.5 mm	price
Auxiliary contacts						
Indication of MCB main contact status						
MZ201	auxiliary	contact block	1NO + 1NC	6A 230 VAC	0.5	469.00
Alarm contacts						
Indicates fault condition - MCB "tripped" on overload or short-circuit						
MZ202	alarm	contact block	1NO + 1NC	6A 230 VAC	0.5	647.00
Shunt trip device						
Permits remote tripping of the protection device						
MZ203	shunt	shunt trip device	110 - 130 VDC / 230 - 415 VAC		1	845.00
MZ204	shunt	shunt trip device	12 - 48 VDC / 24 - 48 VAC		1	708.00
Under voltage release						
MCB can only close when voltage is above 70% of Un						
Automatically trips when voltage drops below 35% of Un						
MZ206	undervolt	under voltage release		230 VAC	1	845.00
Over voltage release - (trips the protection device in case of overvoltage)						
Monitoring the voltage between phase and neutral						
Automatically trips when an overvoltage is detected						
MZ212	overvolt	over voltage release		230 VAC	1	845.00

Connection and MCB accessories

type	mm ²	current rating	poles	description	no. ways	price
KB163P	10 mm ²	63A	1-pole	brown ins. busbar	13	73.00
KB163N	10 mm ²	63A	1-pole	blue ins. busbar	13	73.00
KB190C	20 mm ²	100A	1-pole	insulated busbar	24	290.00
KB263C	10 mm ²	63A	2-pole	insulated busbar	24	611.00
KB363C	10 mm ²	63A	3-pole	insulated busbar	24	673.00
KB380B	16 mm ²	80A	3-pole	insulated busbar	57	1 230.00
KB463C	10 mm ²	63A	4-pole	insulated busbar	24	1 090.00
KZ022		end protection caps for busbar		KB263C	(10 pcs)	57.00
KZ023A		end protection caps for busbar		KB363C, KB380B	(10 pcs)	113.00
KZ024		end protection caps for busbar		KB463C	(10 pcs)	59.00
KF84A	25 mm ²	enlarged terminal		(lateral connection)	—	46.00
KF83B	2 x 25 mm ²	enlarged terminal		(lateral connection)	—	125.00
KF83C	25 mm ²	enlarged terminal		(top or lateral connection)	—	68.00

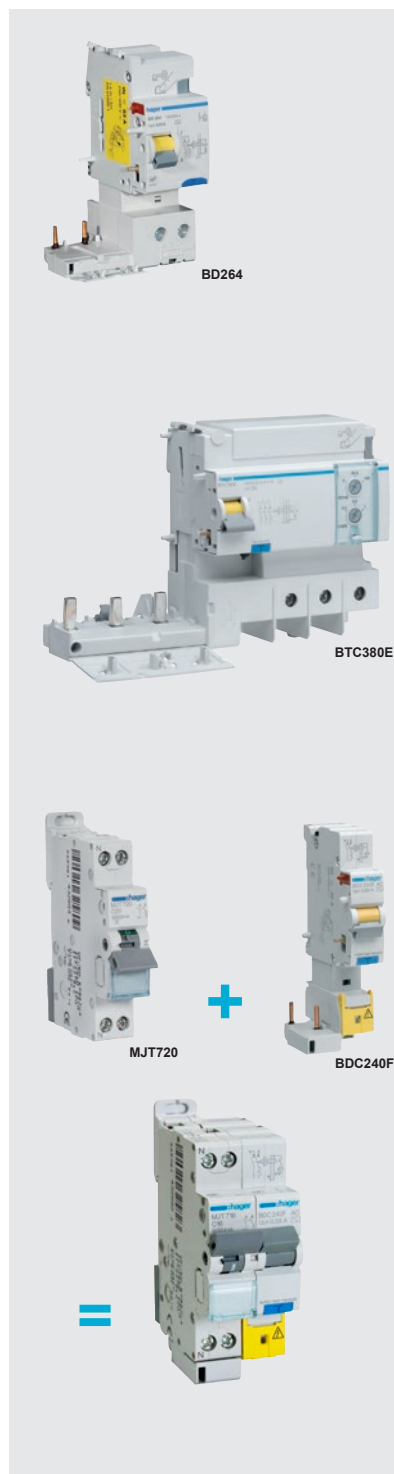
Accessories for MCBs

JP024	blanking	MCB blanking strip (with breakable sections)	24	82.00
LZ060	dummy	module or heat dissipation insert between devices	0.5	12.20
MZN175	padlock	attachment for locking MCB toggle in on/off position	—	236.00
MZN130	cover	terminal cover for HLF, HMC, HMD MCBs	—	127.00
MZN131	separator	phase separator for HLF, HMC, HMD MCBs	(set of 3)	188.00



Miniature circuit breaker accessories

Type	Poles	Sensitivity	MV	MJT	MA	NF/NFN	NGN	NCN	NRN	HLF	HMD	HMC
BD264	2 P	30 mA	—	—	Yes	Yes	Yes	Yes	Yes	—	—	—
BD364	3 P	30 mA	—	—	Yes	Yes	Yes	Yes	Yes	—	—	—
BD464	4 P	30 mA	—	—	Yes	Yes	Yes	Yes	Yes	—	—	—
BF264	2 P	300 mA	—	—	Yes	Yes	Yes	Yes	Yes	—	—	—
BF364	3 P	300 mA	—	—	Yes	Yes	Yes	Yes	Yes	—	—	—
BF464	4 P	300 mA	—	—	Yes	Yes	Yes	Yes	Yes	—	—	—
BDC280E	2 P	30 mA	—	—	—	—	—	—	—	Yes	Yes	Yes
BDC380E	3 P	30 mA	—	—	—	—	—	—	—	Yes	Yes	Yes
BDC480E	4 P	30 mA	—	—	—	—	—	—	—	Yes	Yes	Yes
BTC280E	2 P	0.3 / 0.5 / 1 A	—	—	—	—	—	—	—	Yes	Yes	Yes
BTC380E	3 P	0.3 / 0.5 / 1 A	—	—	—	—	—	—	—	Yes	Yes	Yes
BTC480E	4 P	0.3 / 0.5 / 1 A	—	—	—	—	—	—	—	Yes	Yes	Yes
BDC240F	2 P	30 mA	—	Yes	—	—	—	—	—	—	—	—



Add-on earth leakage devices for MCBs

For connection to all MCBs to be mounted to the right side of 2, 3 or 4 pole circuit breakers. The combined unit provides effective protection against overload, short circuit as well as earth leakage faults. Features independent indication of "earth fault" or "overload" when tripped.

Description: To automatically open a circuit in the event of an earth leakage fault
Suitable for residential, commercial and industrial installations

Nuisance Tripping: Hager earth leakage devices are protected against nuisance tripping caused by transient leakage currents

Nominal Voltage: (2-pole) 240V 50Hz
(4-pole) 400V 50Hz

type	current rating	sensitivity	poles	description	width in 17.5 mm	price
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Add-on earth leakage devices - for MA - NF - NFN - NGN - NCN - NRN circuit breakers

- BD fixed sensitivity 30 mA for human protection

BD264	63A	30 mA	2-pole	add-on earth leakage device	2	1 710.00
BD364	63A	30 mA	3-pole	add-on earth leakage device	3	2 000.00
BD464	63A	30 mA	4-pole	add-on earth leakage device	3	2 470.00

- BF fixed sensitivity 300 mA for equipment protection

BF264	63A	300 mA	2-pole	add-on earth leakage device	2	2 370.00
BF364	63A	300 mA	3-pole	add-on earth leakage device	3	2 560.00
BF464	63A	300 mA	4-pole	add-on earth leakage device	3	3 790.00

Add-on earth leakage devices - for HLF - HMC - HMD circuit breakers

BDC series - fixed sensitivity 30mA for human protection

BDC280E	125A	30 mA	2-pole	add-on earth leakage device	6	3 250.00
BDC380E	125A	30 mA	3-pole	add-on earth leakage device	6	3 620.00
BDC480E	125A	30 mA	4-pole	add-on earth leakage device	6	3 890.00

BTC series - adjustable sensitivity - 300mA - 500mA - 1A for equipment protection

Adjustable trip delay:		0/60/150ms				
BTC280E	125A	0.3/0.5/1A	2-pole	add-on earth leakage device	6	3 710.00
BTC380E	125A	0.3/0.5/1A	3-pole	add-on earth leakage device	6	4 080.00
BTC480E	125A	0.3/0.5/1A	4-pole	add-on earth leakage device	6	4 540.00

Add-on earth leakage device - for MJT series (1 module) circuit breakers only

BDC240F is a compact (1 module) earth leakage device which simply clips onto the **MJT series** (MCBs 1P+N) offering additional earth leakage protection to the attached MCB.

BDC240F	40A	30mA	2-pole	add-on earth leakage device	1	1 440.00
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Combination MCB/RCD - provides effective protection against overload/short circuit protection as well as earthleakage faults achieved by attaching **BDC240F** (above) to MJT series MCBs (below).

- Provides separate indication of "e/leakage" - "overload" - short circuit" fault

1 Ph+N in one module		6kA	SANS/IEC 60947-2			
MJT702	2A	6kA	1+N	miniature circuit breaker	1	383.00
MJT706	6A	6kA	1+N	miniature circuit breaker	1	299.00
MJT710	10A	6kA	1+N	miniature circuit breaker	1	299.00
MJT716	16A	6kA	1+N	miniature circuit breaker	1	299.00
MJT720	20A	6kA	1+N	miniature circuit breaker	1	299.00
MJT725	25A	6kA	1+N	miniature circuit breaker	1	299.00
MJT732	32A	6kA	1+N	miniature circuit breaker	1	299.00
MJT740	40A	6kA	1+N	miniature circuit breaker	1	299.00

Earth leakage protection



CD241J



CD464J



HR500



HR520



HR700



HR743

Residual current devices (RCDs) without overload protection

The compact device provides earth leakage protection (*against electrical shocks by direct or indirect contact*) to open automatically in the event of an earth fault between phase and earth and/or neutral and earth.

Hager earth leakage devices are protected against nuisance tripping caused by transient leakage currents.

- Earth fault indicator on the product
- Test button

Field fittable accessories (see MCB accessories)

- shunt trip device
- undervoltage release
- overvoltage release

} Requires **CZ001**
interface auxiliary

Nominal voltage: (2-pole) 240V 50Hz
(4-pole) 400V 50Hz

Mechanical life: 40 000 operations

type	current rating (A)	sensitivity (mA)	poles	description	width in 17.5 mm	price
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Earth leakage units (RCDs) (Type AC)**30mA sensitivity**

For human protection - The primary function is to safeguard people from electric shock. This sensitivity level is designed to detect small leakage currents that can be dangerous to humans.

CD226J	25A	30 mA	2-pole	earth leakage device	2	672.00
CD241J	40A	30 mA	2-pole	earth leakage device	2	672.00
CD264J	63A	30 mA	2-pole	earth leakage device	2	776.00
CDC584Z*	100A	30 mA	2-pole	earth leakage device	2	2 230.00
CD464J	63A	30 mA	4-pole	earth leakage device	4	1 340.00
CDC684Z*	100A	30 mA	4-pole	earth leakage device	4	3 210.00

100/300mA sensitivity (selective type)

For equipment protection - These devices are typically used to protect electrical installations and equipment from damage caused by earth faults. Commonly found in larger commercial and industrial installations where the primary focus is on safeguarding equipment.

CE264J	63A	100 mA	2-pole	earth leakage device	2	1 250.00
CF264J	63A	300 mA	2-pole	earth leakage device	2	1 490.00
CFC584H*	100A	300 mA	2-pole	earth leakage device	4	2 370.00
CF464J	63A	300 mA	4-pole	earth leakage device	4	3 070.00
CFC684Z*	100A	300 mA	4-pole	earth leakage device	4	5 530.00

* Does not require **CZ001**

Auxiliaries for RCDs

CZ001	1NO + 1NC	auxiliary + alarm contact for above RCDs	2	781.00
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Industrial electronic earth leakage relay (with separate torroid)

- Reset button
- Test button
- Torroid sensor to be ordered separately
- Fault indicator:
 - On when fault occurs
 - Intermittent when there is a break between relay and toroid

Fixed sensitivity, instantaneous trip

HR500	230V	30 mA	4-pole	entry level e/leakage relay	1	2 600.00
HR502	230V	300 mA	4-pole	entry level e/leakage relay	1	2 510.00

Adjustable sensitivity and trip delay

- Selectable In threshold: 0.03/0.1/0.3/0.5/1/3/10A (30mA - 10A)
- Selectable trip delay: 0/0.1/0.3/0.4/0.5/1/3sec (0-3sec)

HR510	230V	selectable	4-pole	earth leakage relay	3	3 490.00
HR520	as above	with fault current indication and 50% pre-alarm output			3	4 030.00

Barregraph indicates continuously on **HR520**

Separate toroid sensors for electronic earth leakages

type	hole	diameter Ø (mm)		description	mount	price
HR700	round	30 mm	-	standard toroidal t/former	DIN-rail	1 620.00
HR742	round	70 mm	-	standard toroidal t/former	chassis	1 700.00
HR743	round	105 mm	-	standard toroidal t/former	chassis	3 130.00
HR745	round	210 mm	-	standard toroidal t/former	chassis	6 260.00
HR830	rectangular	70 x 175	-	standard toroidal t/former	chassis	15 700.00

DC Miniature circuit breakers 10kA

New



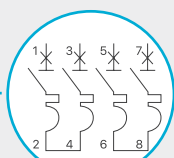
MD63SK02



MD63DK06



MD63FK06



Bridged configuration



MD630F



MD63S/230

DC - Miniature circuit breakers

Photovoltaic applications are widely used as an alternative energy source, stimulating the development of a new generation of DC circuit breakers. Tripping of DC currents is more complicated than in AC where the arc between contacts can be interrupted when reaching zero value. DC applications (*on the other hand*) require higher tripping speeds, force and the fact that voltages can typically be up to 1000 VDC.

type	current rating	poles	breaking capacity	description	width in 18 mm	price
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MD series - DC miniature circuit breakers *mainly for PV installations*

MD series DC miniature circuit breakers are designed for direct current applications, their polarity independency makes them suitable for photovoltaic applications.

Designed for protection against overloads and short circuits of cables between each PV module string as well as the PV inverter.

- Not polarity sensitive: (+) and (-) wires can be inversed without any risk
- Suitability for isolation according to IEC/EN 60947-2 standard
- Contact position indication (*flag indication on face of circuit breaker*)
- Suitable for multi-string photovoltaic applications
- Rated operating voltage U_e of 250 V DC per pole
- Rated short circuit breaking capacity 10 kA
- Tested according to IEC/EN 60947-2, GB 14048.2

1-pole, 250 VDC

			K curve (8-12 In)			
MD63SK02	2A	1-pole	10kA	DC miniature circuit breaker	1	187.00
MD63SK04	4A	1-pole	10kA	DC miniature circuit breaker	1	187.00
MD63SK05	6A	1-pole	10kA	DC miniature circuit breaker	1	187.00
MD63SK06	10A	1-pole	10kA	DC miniature circuit breaker	1	187.00
MD63SK08	16A	1-pole	10kA	DC miniature circuit breaker	1	187.00
MD63SK09	20A	1-pole	10kA	DC miniature circuit breaker	1	187.00
MD63SK10	25A	1-pole	10kA	DC miniature circuit breaker	1	187.00
MD63SK11	32A	1-pole	10kA	DC miniature circuit breaker	1	187.00
MD63SK12	40A	1-pole	10kA	DC miniature circuit breaker	1	187.00
MD63SK13	50A	1-pole	10kA	DC miniature circuit breaker	1	187.00
MD63SK14	63A	1-pole	10kA	DC miniature circuit breaker	1	187.00

2-pole, 500 VDC

			K curve (8-12 In)			
MD63DK06	10A	2-pole	10kA	DC miniature circuit breaker	2	375.00
MD63DK08	16A	2-pole	10kA	DC miniature circuit breaker	2	375.00
MD63DK09	20A	2-pole	10kA	DC miniature circuit breaker	2	375.00
MD63DK10	25A	2-pole	10kA	DC miniature circuit breaker	2	375.00
MD63DK11	32A	2-pole	10kA	DC miniature circuit breaker	2	375.00
MD63DK12	40A	2-pole	10kA	DC miniature circuit breaker	2	375.00
MD63DK13	50A	2-pole	10kA	DC miniature circuit breaker	2	375.00
MD63DK14	63A	2-pole	10kA	DC miniature circuit breaker	2	375.00

4 pole, 1000 VDC (2 + 2-poles in series)

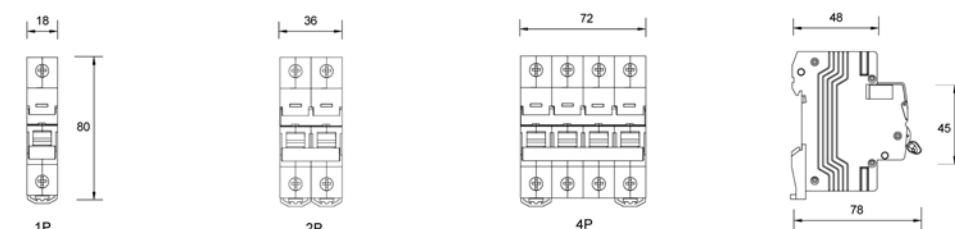
			K curve (8-12 In)			
MD63FK06	10A	4-pole	10kA	DC miniature circuit breaker	4	806.00
MD63FK08	16A	4-pole	10kA	DC miniature circuit breaker	4	806.00
MD63FK09	20A	4-pole	10kA	DC miniature circuit breaker	4	806.00
MD63FK10	25A	4-pole	10kA	DC miniature circuit breaker	4	806.00
MD63FK11	32A	4-pole	10kA	DC miniature circuit breaker	4	806.00
MD63FK12	40A	4-pole	10kA	DC miniature circuit breaker	4	806.00
MD63FK13	50A	4-pole	10kA	DC miniature circuit breaker	4	806.00
MD63FK14	63A	4-pole	10kA	DC miniature circuit breaker	4	806.00

4P DC MCBs - Bridged configuration as per the wiring diagram

Accessories for DC MCBs (above)

MD630F	AUX11	1 CO	auxiliary contact	0.5	180.00
MD63S/230	SHT	230 VAC	shunt trip release	1	225.00
MD63S/024	SHT	24 VDC	shunt trip release	1	225.00
MD63S/048	SHT	48 VDC	shunt trip release	1	225.00
MD63UO/230	UVT	230 VAC	under/over voltage release	1	450.00

MCB sizes





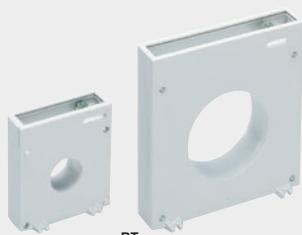
New



PMVF81



R4D 415



RT...



RC80 415

Photovoltaic (PV) interface protection unit

(modular DIN-rail mount)

The **PMVF81** is an interface protection relay intended for use within grid-tied PV systems to monitor and protect the grid.

Designed to ensure that the PV system operates within the required safety parameters and disconnects the system from the grid if any anomalies are detected.

These devices continuously monitor the voltage and frequency of the electrical utility and when either the voltage or the frequency are out of the admissible limits, they step in by de-energising a relay output so that an interface switch (IS) (e.g. *contactor*) opens, isolating the PV system from the grid.

Operational characteristics:

- 5 digital inputs: Interface switch feedback
R.O.C.O.F./Vector shift delay
Disabling tripping
Remote tripping
Programmable
- Auxiliary voltage: 24...240 VAC/DC
- Voltage inputs: 100 - 500000 VAC (with VT)
- 3 relay outputs: Interface switch opening/closing
Standby device opening/closing
Programmable
- Programmable voltage rating, voltage thresholds, frequency and delays
- Supports EXM series expansion modules (USB, RS-232, RS-485 and Ethernet), see **Category E**
- Compliant standards: VDE-AR-N , VDE-AR-N 4110, VDE-AR-N 4120x, IEC/EN 61010-1, IEC/EN 61000-6-2, IEC/EN 61000-6-4

Photovoltaic (PV) interface protection unit

(modular DIN-rail mount)

type	aux. power supply	inputs	outputs	description	width in 18 mm	price
PMVF81	24 - 240 VAC/DC	5	3	PV grid protection module	4	18 000.00

Industrial electronic earth leakage relays

- LED indication (Green – Power "ON") (Red – TRIP)
- Front "TEST" and "RESET" buttons
- Configurable automatic or manual reset
- Configurable tripping set-point ($I_{\Delta n}$): 0.025 - 0.25A / 0.25 - 2.5A / 2.5 - 25A
- Configurable tripping time delay (t): 0.02 - 0.5s / 0.2 - 5s
- Reference standards: IEC/EN 60947-2

type	supply voltage	relays	description	price
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Panel mount earth leakage relays - (96 x 96 mm)

Require toroidal current transformers (*listed below*)

R1D 1 operational threshold

R1D 415	110 - 240 - 415V	1	earth leakage 1 operational threshold	4 350.00
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R2D 2 operational thresholds (configurable for 2 tripping or 1 + alarm)

R2D 415	110 - 240 - 415V	2	earth leakage 2 operational threshold	10 600.00
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R4D 2 operational thresholds (configurable for 2 tripping or 1 + alarm)

- Flag indicator "trip memory"
- Digital fault current measurement and display with configurable tripping value

R4D 415	110 - 240 - 415V	2	earth leakage 2 operational threshold	15 600.00
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Toroidal current transformers for above earth leakage relays

type	supply voltage	hole size	description	price
RT60	toroid	60 mm	toroidal transformer for above relays	1 990.00
RT80	toroid	80 mm	toroidal transformer for above relays	2 440.00
RT110	toroid	110 mm	toroidal transformer for above relays	2 560.00
RT210	toroid	210 mm	toroidal transformer for above relays	6 570.00
RTA110	toroid	110 mm	split-core toroidal transformers	6 930.00
RTA210	toroid	210 mm	split-core toroidal transformers	8 750.00

Earth leakage relay incorporating toroidal transformer

RC60 48	24 - 48 VAC/DC	60 mm	earth leakage and toroidal combinations	9 950.00
RC60 415	110 - 240 - 415V	60 mm	earth leakage and toroidal combinations	6 070.00
RC80 415	110 - 240 - 415V	80 mm	earth leakage and toroidal combinations	6 650.00
RC110 415	110-240-415V	110 mm	earth leakage and toroidal combinations	7 110.00

Earth leakage protection



4941 3723



4941 3724



4942 3723



4950 6080

RESYS M40 - Earth leakage protection

RESYS M40 earth leakage relays associated with a remote trip breaking device (*automatic power breaking*), provide the following functions:

- Protection against indirect contact
- Limitation of leakage currents

They also preventively monitor electrical installations via a (*configurable*) pre-alarm function or when used as a signalling relay.

- Positive or negative security
- Modular DIN-rail mountable (*same format as MCBs*) 44mm wide
- 2 relays with configurable function (*alarm or pre-alarm at 50% (I_{Δn})*)
- Adjustment of I_{Δn}: 0.03 - 0.1 - 0.3 - 0.5 - 1 - 3 - 5 - 10 - 30A
- Time delay: 0 - 0.06 - 0.15 - 0.30 - 0.50 - 0.80 - 1 - 4 - 10 sec
- Tripping accuracy by TRMS measurement (*improves immunity to nuisance tripping*)
- LED bargraph provides real-time display of leakage currents

type	current setting I _{Δn}	time delay (sec)	power supply	description	price
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RESYS M40 - Type A differential relay

(H)85 x (W)44 x (D)63

4941 3723	0.03 - 30A	0 - 10	115/230 VAC	electronic earth leakage relay	4 300.00
4941 3740	0.03 - 30A	0 - 10	400 VAC	electronic earth leakage relay	4 300.00
4941 3602	0.03 - 30A	0 - 10	12 - 125 VDC	electronic earth leakage relay	4 810.00

RESYS M40R - With automatic reclosing

M40R relay recloses the system up to six consecutive times after preselected time intervals. If the fault is still present after the sequence of six reclosing attempts, the relay is locked in alarm mode and a manual intervention will be required.

- Time delay between two reclosings: 7.5 - 15 - 30 - 60 - 120 - 240 sec

4941 3724	0.03 - 30A	0 - 10	115/230 VAC	reclosing earth leakage relay	4 500.00
4941 3741	0.03 - 30A	0 - 10	400 VAC	reclosing earth leakage relay	4 500.00

RESYS P40 - Panel mounting (48 x 48 mm)

As per **RESYS M40** (above) but in panel mounting version

4942 3723	0.03 - 30A	0 - 10	230 VAC	panel-mount earth leakage relay	5 910.00
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Core balance transformers (toroidal transformers) - type A

Active conductors pass through the aperture of the core balance transformer, providing a differential summation of vector currents, enabling detection of leakage currents.

type	aperture Ø diameter	description	dimensions (mm)			price
			(H)	(W)	(D)	
4950 6030	30 mm	core balance transformer for e/leakages	104	92	26	1 980.00
4950 6050	50 mm	core balance transformer for e/leakages	125	103	26	2 470.00
4950 6080	80 mm	core balance transformer for e/leakages	143	116	26	2 770.00
4950 6120	120 mm	core balance transformer for e/leakages	183	163	26	3 860.00
4950 6200	200 mm	core balance transformer for e/leakages	274	253	51	8 940.00

Larger aperture sizes available on request

Accessories for above

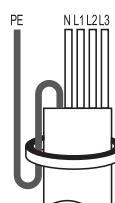
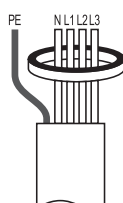
Cable locator

Enables cables passing through toroids to be centred (*for direct cable mounting*)

4950 0011	30 mm	for directly mounting transformers onto cables	497.00
4950 0012	50 mm	for directly mounting transformers onto cables	872.00
4950 0013	80 mm	for directly mounting transformers onto cables	1 670.00
4950 0014	120 mm	for directly mounting transformers onto cables	1 920.00
4950 0031	DIN-rail clip (<i>for DIN-rail mounting core balance transformers</i>)		173.00

Implementation (Installation of the detection toroids)

- All of the active conductors must be passed through the detection toroid's aperture
- The protective conductor must pass on the outside of the toroid or pass once for each direction



Modular isolators & Changeover switches



SBN132



SBN232



SBN399



SFH125



SFH225

SBN series - Modular isolators (switch disconnectors)

The SBN range of modular DIN-rail mountable switch disconnectors provide state-of-the-art comfort and a high degree of safety, complementing the standard range of Miniature Circuit Breakers (MCBs).

- For use as a switch disconnector in all types of circuits
- **MZN175** padlocking kit allows to lock in the ON or OFF position (see *MCB accessories*)
- Green/red (I/O) indication on handle provides positive contact indication

SANS - IEC 60947-3**Utilisation category:** AC 22A

type	current rating (A)	switching	poles	description	width in 17.5 mm	price
Modular isolators (modular DIN-rail mount)						
1-pole disconnect switches						
SBN132	32A	on - off	1-pole	modular isolator switch	1	129.00
SBN163	63A	on - off	1-pole	modular isolator switch	1	171.00
SBN190	100A	on - off	1-pole	modular isolator switch	1	214.00
SBN199	125A	on - off	1-pole	modular isolator switch	1	384.00
2-pole disconnect switches						
SBN232	32A	on - off	2-pole	modular isolator switch	1	171.00
SBN263	63A	on - off	2-pole	modular isolator switch	2	256.00
SBN290	100A	on - off	2-pole	modular isolator switch	2	299.00
SBN299	125A	on - off	2-pole	modular isolator switch	2	595.00
3-pole disconnect switches						
SBN332	32A	on - off	3-pole	modular isolator switch	2	256.00
SBN363	63A	on - off	3-pole	modular isolator switch	3	341.00
SBN390	100A	on - off	3-pole	modular isolator switch	3	425.00
SBN399	125A	on - off	3-pole	modular isolator switch	3	942.00
4-pole disconnect switches						
SBN432	32A	on - off	4-pole	modular isolator switch	2	464.00
SBN463	63A	on - off	4-pole	modular isolator switch	4	649.00
SBN490	100A	on - off	4-pole	modular isolator switch	4	1 800.00
SBN499	125A	on - off	4-pole	modular isolator switch	4	1 970.00
Auxiliary contact for above isolators						
ESC080	6A	1NO + 1NC		clip-on auxiliary for above switches	0.5	422.00

Changeover switches (modular DIN-rail mount)

The **SF series** changeover switches are manually operated 1, 2 or 4 pole modular transfer switches with positive break indication. They provide on-load transfer between two sources for any low voltage power circuit, as well as safety isolation.

Ideal for manual changeover applications (*mains supply ↔ generator supply*)

- Complies with IEC/EN 60947-3
- Inductive and resistive loads
- Utilisation category: AC 22A (25 - 40A) AC 21A (63A)

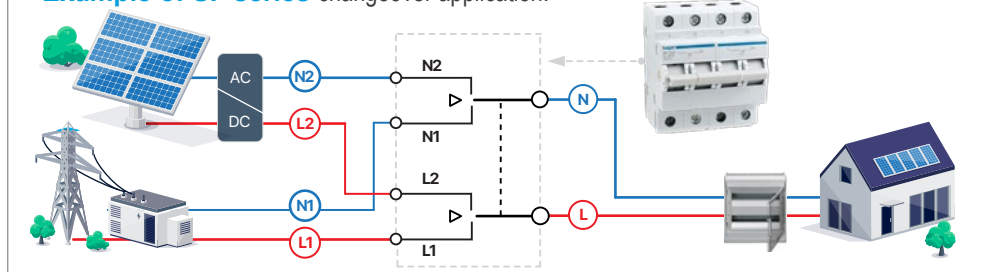
SFH series - Changeover switches - 2 way (I - II)

SFH125	25A	on - on	1-pole	2-way changeover switch	1	211.00
SFH225	25A	on - on	2-pole	2-way changeover switch	2	492.00

SFT series - Changeover switches (with centre off) - 3 way (I - O - II)

SFT125	25A	on - off - on	1-pole	centre off changeover switch	1	241.00
SFT140	40A	on - off - on	1-pole	centre off changeover switch	1	241.00
SFT240	40A	on - off - on	2-pole	centre off changeover switch	2	450.00
SFT440	40A	on - off - on	4-pole	centre off changeover switch	4	900.00
SF263	63A	on - off - on	2-pole	centre off changeover switch	4	620.00
SF463	63A	on - off - on	4-pole	centre off changeover switch	8	1 800.00

The incoming of the changeover must be protected with an appropriate MCB against short circuits

Example of SF series changeover application:

Modular contactors & Step relays



ESC225



ESC425



ERC216



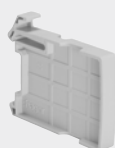
ERC425S



ESC463S



ESC080



LZ060



EPN503



EPN051



EPN053

Modular contactors / Step relays

Contactors are power devices necessary for remote switching and control of power circuits. It is recommended that they be associated with command and energy management devices.

- Modular DIN-rail mounting (*same cutout as MCBs*)
- Feature economic low consumption, low heat dissipation coils

type	contact rating (AC1)	coil voltage	description	contact config.	width in 17.5 mm	price
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Modular contactors

Standard contactors (230 VAC 50/60 Hz)

ESC225	25A	230 VAC	modular standard contactor	2NO	1	566.00
ESC226	25A	230 VAC	modular standard contactor	2NC	1	566.00
ESC227	25A	230 VAC	modular standard contactor	1NO + 1NC	1	550.00
ESC425	25A	230 VAC	modular standard contactor	4NO	2	809.00
ESC427	25A	230 VAC	modular standard contactor	2NO + 2NC	2	824.00
ESC240	40A	230 VAC	modular standard contactor	2NO	3	1 060.00
ESC241	40A	230 VAC	modular standard contactor	2NC	3	1 060.00
ESC440	40A	230 VAC	modular standard contactor	4NO	3	1 270.00
ESC442	40A	230 VAC	modular standard contactor	2NO + 2NC	3	1 270.00
ESC263	63A	230 VAC	modular standard contactor	2NO	3	1 380.00
ESC463	63A	230 VAC	modular standard contactor	4NO	3	1 610.00
ESC464	63A	230 VAC	modular standard contactor	4NC	3	1 470.00
ESC465	63A	230 VAC	modular standard contactor	2NO + 2NC	3	1 580.00

Relays and contactors with manual override facility

ERC216	16A	230 VAC	modular rail mount relay	2NO	1	455.00
ERC218	16A	230 VAC	modular rail mount relay	1NO + 1NC	1	455.00
ERC416	16A	230 VAC	modular rail mount relay	4NO	2	902.00
ERC418	16A	230 VAC	modular rail mount relay	2NO + 2NC	2	902.00
ERC225	25A	230 VAC	modular standard contactor	2NO	1	566.00
ERC240	40A	230 VAC	modular standard contactor	2NO	3	1 060.00
ERC263	63A	230 VAC	modular standard contactor	2NO	3	1 550.00

Modular "low noise" contactors (No humming while energised / low switching noise)

ERC225S*	25A	230 VAC	low noise modular contactor	2NO	1	629.00
ERC425S*	25A	230 VAC	low noise modular contactor	4NO	2	1 040.00
ESC440S	40A	230 VAC	low noise modular contactor	4NO	3	1 550.00
ESC463S	63A	230 VAC	low noise modular contactor	4NO	3	1 810.00
ERL625SDC*	25A	12 VDC	low noise modular contactor	2NO	2	543.00
ERL425SDC*	25A	12 VDC	low noise modular contactor	4NO	2	1 020.00
ESL440S	40A	12 VDC	low noise modular contactor	4NO	3	1 550.00
ESL463S	63A	12 VDC	low noise modular contactor	4NO	3	1 810.00
ERD225SDC*	25A	24 VDC	low noise modular contactor	2NO	1	593.00
ESD425SDC*	25A	24 VDC	low noise modular contactor	4NO	2	1 040.00
ESD440S	40A	24 VDC	low noise modular contactor	4NO	3	1 550.00
ESD463S	63A	24 VDC	low noise modular contactor	4NO	3	1 810.00

* With manual override control

Contactors accessories

Auxiliary contact for all above contactors

Auxiliaries are not compatible with low-noise contactors **ERC225S**, **ERD225SDC**

ESC080	1th 6A	—	clip-on auxiliary contact	1NO + 1NC	0.5	422.00
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Avoid overheating when installed side by side, insert a heat dissipation module **LZ060** between contactors

LZ060	heat dissipation insert for mounting between contactors				0.5	12.20
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Modular latching / step relays

- Pulsing the relay changes the contact status until pulsed again
- Max. pulse duration: 60 seconds
- With manual override facility

EPN515	16A	230 VAC	modular stepping relay	1NO + 1NC	1	457.00
EPN503	16A	48 VAC/24 VDC	modular stepping relay	1NO + 1NC	1	544.00
EPN518	16A	24 VAC/12 VDC	modular stepping relay	1NO + 1NC	1	455.00
EPN519	16A	12 VAC	modular stepping relay	1NO + 1NC	1	455.00
EPN521	16A	12 VAC	modular stepping relay	2NO	1	457.00

Auxiliary for above stepping relays

EPN051	2A	—	clip-on auxiliary contact	1NO + 1NC	0.5	393.00
EPN053	2A	converts maintained contact into a pulsed one		1 C/over	0.5	391.00

Modular time switches



EHN011

New



EHN110



EGN103



EGN003



EGN100



EGN200



EZM100

Modular time switches

Time switches are used to control lighting, pumps, heating, household appliances, and many other applications according to pre-defined programming, to improve comfort and save energy.

General features:

- Supply voltage: 230 VAC
- Output: AC1 10A 230V (**EGN100**) / 16A 230V (**EGN103/EGN200/EGN400**) / 16A 250V (**EHNxxx**)
- Mounting: Modular DIN-rail
- Manual override possible

For higher current ratings it is recommended to use time switches in conjunction with contactors

type	time range	min. setting	reserve	contact config.	description	width in 17.5 mm	price
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Analogue time switches (electro-mechanical)

Slimline 1 module wide (17.5 mm)

EHN010	24 hr	15 min	no	1 NO	time switch	1	880.00
EHN011	24 hr	15 min	120 hrs	1 NO	time switch	1	810.00

Standard 3 module wide - clock hands indicate real time

EHN110	24 hr	15 min	no	1 c/over	time switch	3	780.00
EHN111	24 hr	15 min	120 hrs	1 c/over	time switch	3	1 400.00
EHN171	7 day	2 hrs	120 hrs	1 c/over	time switch	3	1 960.00

Digital time switches

Basic version (weekly time switch)

For less complex switching tasks, the time switch is a single channel digital clock with daily or weekly electronic programming that automatically controls different loads.

- Programmable by day or group of days
- 56 programmable steps
- ON or OFF control
- Indicates date and time (pre-programmed at factory)
- Programmable via front keypad or via Bluetooth with the **EGN003** (even without supply)

EGN103	7 day	1 min	5 years	1 c/over	time switch	2	2 240.00
EGN003	Programming Bluetooth key for EGN103						1 810.00

Advanced versions (multi-function time switches)

Combine all functions of a modern time switch and feature daily, weekly and yearly programmable cycles for the automatic control of different loads.

- Built-in astronomical clock
- 1, 2 or 4 channel options available
- 100/200/400 programmable steps (version dependent)
- ON, OFF or Pulse (1-60s) control
- Programmable wired input for variance or forcing
- Long power reserve with accuracy +/-90s/year
- Programmable via Bluetooth or via front keypad (**EGN200/400**)

EGN100	week/annual	1 sec	10 years	1 c/over	time switch	1	4 140.00
EGN200	week/annual	1 sec	10 years	2 c/over	time switch	2	4 600.00
EGN400	week/annual	1 sec	10 years	4 c/over	time switch	4	6 460.00

Modular electronic timers

Delay timer devices are used to control a variety of processes where the requirement is for switching circuits on, off or delaying the on or off switching for a pre-set period of time.

- Multi-time range: 0.05s - 100h
- Multi-voltage: 24-240V AC/DC
- 8A 230V changeover output

EZD100	On-delay multi-range (modular timer)	electronic timer	1	1 610.00
EZF100	Off-delay multi-range (modular timer)	electronic timer	1	1 840.00
EZM100	Multi-function on-delay / off-delay / interval / repeat	electronic timer	1	1 610.00

Bluetooth programming



Easy programming
via Hager Mood app.

- 01 Synchronise the program with the timer
- 02 Create programs
- 03 Select the timer



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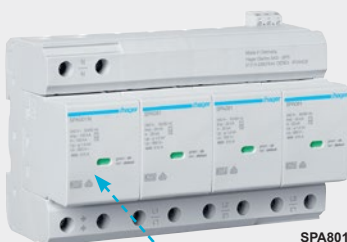
Modular surge protection devices



ECP180D



ECP300C



SPA801



SPA081 (On request)



SPB140D



SPB440D

SPB040D

Energy meters (kWh meters)

(modular DIN-rail mounting)

The 4 quadrants pulse energy meters measure the active and reactive energy used in an electrical installation. Capable of managing dual tariffs, the meters are equipped with LCD backlight and 3 push-button keys to read Energies, V, I, PF, F, P, Q and to configure some parameters.

- Accuracy: 1%
- Pulse output
- Backlit LCD
- "Total" counter and "Partial" (resettable) counter
- Class 1 according to IEC 62 053-21 and EN 50470
- LED indication blinks according to consumption (1000/kWh)

type	current	operation	description	width	price
Single-phase kWh meter 80A (direct reading)					
ECP180D	80A	direct	single-phase kWh meter	2	4 480.00
Three-phase kWh meters 80/125A (direct reading)					
ECP380D	80A	direct	three-phase kWh meter	4	5 860.00
ECP310D	125A	direct	three-phase kWh meter	6	7 440.00
Three-phase kWh meters up to 6000A (connection via CT)					
ECP300C	6000A	CT / 5A	three-phase kWh meter	4	5 480.00

For CTs, see page E-20...25

Surge protection devices (SPDs) Class 1 and 2

(modular DIN-rail mounting)

For the protection of low-voltage equipment against transient voltages and current surges from atmospheric origins (lightning) as well as transients produced by switching characteristics such as switching of distribution networks, transformers, motors, etc.

- Complies with SANS/IEC 61643-11

type	limp L-N (10/350us)	In L-N (8/20us)	I _{max} (8/20us)	U _c max voltage	U _p protection voltage	config.	width in 17.5 mm	price
Class 1 and class 2 combined surge protection device (for TT or TNS-Networks)								
The combined surge protection devices offer an all-in-one solution to protect against lightning and surge-voltage in one device.								
- Compliance with to EN 61643-11, requirement class type 1+2								
- Replaceable plug-in modules								
- Integrated fault indicator in the plug-in modules								
- SPDs with separate auxiliary contact								
SPA801*	25kA	25kA	50kA	350V	≤ 1.5 kV	3ph + N	8	32 500.00
SPN802R*	25kA	25kA	50kA	350V	≤ 1.5 kV	3ph + N	8	12 000.00

Surge protection devices (SPDs) Class 2

(modular DIN-rail mounting)

Class 2 surge protection devices are designed to provide reliable protection against transient overvoltages, typically caused by lightning strikes or switching operations in the network. Suitable for second-level protection in distribution panels where type 1 protectors are installed or areas not exposed to direct lightning strikes and with no external lightning protection system.

- Can be used in any supply system TNC/TNCS/TNS/TT
- Replaceable plug-in modules
- Integrated fault indicator in the plug-in modules

I_{max} 40kA (8/20μs)

SPB140D	—	20kA	40kA	275V	≤ 1.5 kV	1P	1	1 780.00
SPB240D	—	20kA	40kA	275V	≤ 1.5 kV	1ph + N	2	3 830.00
SPB240R*	—	20kA	40kA	275V	≤ 1.5 kV	1ph + N	2	4 330.00
SPB440D	—	20kA	40kA	275V	≤ 1.5 kV	3ph + N	4	7 070.00
SPB440R*	—	20kA	40kA	275V	≤ 1.5 kV	3ph + N	4	9 210.00

* With remote signalling contact for monitoring

Replacement cartridges for the above surge protection devices

Replacement cartridges keep your surge protection effective without needing a full device replacement.

SPB040D	phase	replacement cartridge	for protectors	SPB140/240/440	—	2 410.00
SPB040N	neutral	replacement cartridge	for protectors	SPB240/440	—	1 670.00

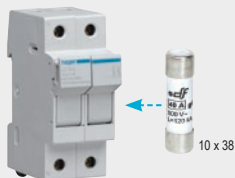
Modular accessories



ST312



SU213



LSN502



SVN....



654.0091



101.6414.G

654.0092 +
101.6414.G**Control transformers** (modular DIN-rail mount)

- Transformers ensure an electrical separation between primary and secondary circuits

type	supply voltage	output voltage	power (VA)	description	width in 17.5 mm	price
ST312	230V	12/24V	25VA	modular safety transformer	4	941.00
ST314	230V	12/24V	40VA	modular safety transformer	4	1 060.00
ST315	230V	12/24V	63VA	modular safety transformer	6	1 430.00
ST303	230V	8/12V	8VA	modular bell transformer	2	589.00
ST305	230V	8/12V	16VA	modular bell transformer	3	980.00

Bell transformers are short-circuit protected

Audible devices (modular DIN-rail mount)

- Bells/buzzers max. continuous duty < 30 minutes

SU213	230V	—	6.5VA	85 dB	modular bell	1	359.00
SU214	8/12 VAC	—	4.0VA	78 dB	modular buzzer	1	359.00
SU215	230V	—	6.5VA	78 dB	modular buzzer	1	359.00

Fuse holders (modular DIN-rail mount)

- For protection and control of circuits against overloads and short circuits
- Short-circuit resistance with 10 x 38 mm fuse-link: 80kA
- For 10 x 38 mm cylindrical fuses (see page **B-45...50**)

LSN501	32A	1-pole		modular cylindrical fuse holder	1	80.00
LSN502	32A	2-pole		modular cylindrical fuse holder	2	199.00

Control and indicating devices (modular DIN-rail mount)**LED indicating lights** (100 000hrs)

- With integrated label holder

SVN121	230VAC	green		modular LED indicating light	1	243.00
SVN122	230 VAC	red		modular LED indicating light	1	243.00
SVN123	230 VAC	amber		modular LED indicating light	1	243.00
SVN126	230 VAC	grn+red		modular LED indicating light	1	341.00
SVN223	230 VAC	red/wht/blu		modular LED p/light for phase indication	1	435.00
SVN131	12 - 48 VAC/DC	green		modular LED indicating light	1	241.00
SVN132	12 - 48 VAC/DC	red		modular LED indicating light	1	243.00
SVN351	1NO + 1NC	—		modular momentary pushbutton	1	341.00
SVN391	1NO + 1NC	grn+red		double pushbutton (grn NO / red NC)	1	339.00
SVN411	1NO	green		modular pushbutton + green pilot light	1	316.00

I - Plugs & Sockets

SCAME
feeling connected

SCAME DIN modular domestic sockets for distribution boards

Permits the mounting of domestic switches and/or sockets into standard DIN distribution boards to provide an electrical connection for tools, power supplies or recording instruments.

- DIN-rail mounting housing/support for domestic switches or sockets
- Mounts into standard distribution boards with same dimensions and cut-out as MCBs
- Two modular widths: One module (18 mm) and two module (36 mm)

type	description	no. of modules	price
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DIN-rail support for Evolution series

654.0091	DIN-rail support for Evolution series switches or sockets	1	
654.0092	DIN-rail support for Evolution series switches or sockets	2	

Evolution series switches and sockets for (above) supports

- Simply clips into DIN-rail mount housing (above)

101.6414.G	15A	2P+E	South African std socket for housings	2	
101.6403.G	16A	2P+E	European/Italian socket for housings	1	
101.6303.G	16A	1-pole	switch for housings (I-O)	1	
101.6311.G	16A	2-pole	changeover switch for housings (I-O-II)	1	

see
Cat I for
pricing.

DC Moulded case circuit breakers



HJM5DC250/2-200



HJM5DC800/2-500



HJM5HU800/3-800

DC - Moulded case circuit breakers

HJM5DC dedicated DC circuit breaker in a 2 pole (+ / -) version can be applied to DC underground systems, negative or neutral grounding systems and meet environmental requirements of photovoltaic applications.

Application scenarios include DC power distribution, photovoltaic, energy storage, data centres etc.

General features:

- Two pole design, compact dimensions with high performance ratings
- Superior insulating performance, clearance and creepage distance meets UL489, IEC 60947-2 standards
- Non-polarity, reverse current and reverse incoming reliably protected
- Zero arcing: True zero arcing avoiding secondary system failure due to arc spray on breaking standards

type	rated current	no. poles	nominal voltage	breaking capacity		dimensions (mm)			price
				1000V	1500V	(H)	(W)	(D)	
				(τ = 5ms)					

DC moulded case circuit breakers

HJM5DC series features:

- Rated voltage 1000, 1500 VDC
- Rated insulation voltage 1500V
- Rated impulse withstand voltage 12kV

HJM5DC250/2-125	125A	2-pole	1000 VDC	50kA	15kA	200	81	100	3 070.00
HJM5DC250/2-160	160A	2-pole	1000 VDC	50kA	15kA	200	81	100	3 070.00
HJM5DC250/2-200	200A	2-pole	1000 VDC	50kA	15kA	200	81	100	3 070.00
HJM5DC250/2-250	250A	2-pole	1000 VDC	50kA	15kA	200	81	100	3 070.00
HJM5DC250/2-320	320A	2-pole	1000 VDC	50kA	15kA	200	81	100	3 070.00
HJM5DC800/2-325	325A	2-pole	1500 VDC	35kA	20kA	280	124	135	7 720.00
HJM5DC800/2-400	400A	2-pole	1500 VDC	35kA	20kA	280	124	135	7 720.00
HJM5DC800/2-500	500A	2-pole	1500 VDC	35kA	20kA	280	124	135	7 720.00
HJM5DC800/2-630	630A	2-pole	1500 VDC	35kA	20kA	280	124	135	7 720.00
HJM5DC800/2-800	800A	2-pole	1500 VDC	35kA	20kA	280	124	135	8 550.00

AC moulded case circuit breakers (high voltage 1000 VAC)

In recent years the increasing demand for high service voltage protection devices in industrial plants has prompted the introduction of circuit breakers for use in 800/1000 VAC applications. Hence the introduction of the **HJM5HU** special series for up to 1140 VAC rated operational voltage.

Suitable for use under special environmental conditions in mines, road and railway tunnels, electrical transport, refineries, chemical plants for high performance and general industrial power supply with long supply lines.

HJM5HU series features:

Rated working voltage 50/60Hz:	Ue	525, 690, 800, 1000, 1140 VAC
Rated insulated voltage:	Ui	1250V
Rated impulse withstand volts:	Uimp	12 kV
Standards:		GB/T14048.2, IEC/EN60947-2, UL489

type	rated current	no. poles	nominal voltage	breaking capacity		dimensions (mm)			price
				800V	1000V	(H)	(W)	(D)	
HJM5HU250/3-125	125A	3-pole	1000 VAC	50kA	15kA	200	81	100	4 000.00
HJM5HU250/3-160	160A	3-pole	1000 VAC	50kA	15kA	200	81	100	4 000.00
HJM5HU250/3-200	200A	3-pole	1000 VAC	50kA	15kA	200	81	100	4 000.00
HJM5HU250/3-250	250A	3-pole	1000 VAC	50kA	15kA	200	81	100	4 000.00
HJM5HU250/3-320	320A	3-pole	1000 VAC	50kA	15kA	200	81	100	4 000.00
<i>Available in lower rated currents - 40, 50, 63, 80, 100A (same frame) on request</i>									
HJM5HU630/3-630	630A	3-pole	1000 VAC	50kA	15kA	258	150	115	10 790.00
HJM5HU800/3-630	630A	3-pole	1000 VAC	50kA	15kA	280	182	135	12 300.00
HJM5HU800/3-800	800A	3-pole	1000 VAC	50kA	15kA	280	182	135	13 500.00

Accessories for above circuit breakers HJM5DC and HJM5HU

HJM5AUX320	aux	auxiliary + alarm contact for	HJM5-320 MCCB	260.00
HJM5AUX630	aux	auxiliary + alarm contact for	HJM5-630 MCCB	260.00
HJM5AUX800	aux	auxiliary + alarm contact for	HJM5-800 MCCB	260.00
HJM5SHT300/*	shunt	shunt release for	HJM5-320 MCCB	530.00
HJM5SHT630/*	shunt	shunt release for	HJM5-630/800 MCCB	530.00

* Specify voltage required: **02** = 24VDC, **11** = 110VAC, **23** = 230VAC,
For 230 VAC shunt, see ordering example **HJM5SHT300/23**

Moulded case circuit breakers - Selection chart

Hager moulded case circuit breakers conform to IEC/EN 60947-2 standards and to all major international standards and performance categories.

- Calibrated at 50°C
- Load break switches
- Thermal magnetic and electronic release
- Quick, easy and safe mounting of accessories
- Safety for low voltage electrical circuit protector
- Suitable for co-ordinated installations in all applications
- Wide range of rated current ratings and breaking capacities

Cascading with MCBs (see cascading chart **Annex-5**)



Frame			x160			x250		
Product			Switch	MCCB		Switch	MCCB	
Reference			HCA	HHA	HNA	HCB	HHB	HNB
Number of poles		[No.]	3/4	3	3/4	3/4	3	3/4
Electrical characteristics								
Rated current	In	[A]	160			250		
Current rated range		[A]	125 - 160	16 - 160	25 - 160	250	200 - 250	250
Rated service voltage (AC)	Ue	[V]	220 - 415			220 - 415		
Frequency	f	[Hz]	50/60			50/60		
Rated insulation voltage	Ui	[V]	690			800		
Rated impulse withstand voltage	Uimp	[kV]	8			8		
Suitability for insulation			Yes			Yes		
Rated ultimate short-circuit-breaking capacity	(Icu)							
(AC) 50-60 Hz 220/230 V	Icu	[kA]	—	35	85	—	35	85
(AC) 50-60 Hz 380/415 V	Icu	[kA]	—	25	40	—	25	40
(AC) 50-60 Hz 480/500/525 V	Icu	[kA]	—	7.5	12.5	—	—	10
(AC) 50-60 Hz 660/690 V	Icu	[kA]	—	4	6	—	—	4
(DC) 250 V - 2-poles in series	Icu	[kA]	—	20	25	—	25	25
Rated service short-circuit-breaking capacity,	(Ics)							
(AC) 50-60 Hz 220/230 V	Ics	[kA]	—	25	40	—	25	40
(AC) 50-60 Hz 380/415 V	Ics	[kA]	—	20	20	—	20	20
(AC) 50-60 Hz 480/500/525 V	Ics	[kA]	—	4	7.5	—	—	7.5
(AC) 50-60 Hz 660/690 V	Ics	[kA]	—	—	3	—	—	2
(DC) 250 V - 2-poles in series	Ics	[kA]	—	10	13	—	13	13
Rated short-circuit making capacity	Icm	[kA]	2.8	—	—	6	—	—
Rated short-time withstand current for 1s	Icw	[kA]	2	—	—	3	—	—
Category of use (EN 60947-2)			—	A		—	A	
Trip unit			—	TM		—	TM	
Calibration temperature			—	50°C		—	50°C	
Derating	40°C		—	100%		—	100%	
	50°C		—	100%		—	100%	
	55°C		—	95%		—	94%	
	60°C		—	93%		—	91%	
	65°C		—	90%		—	88%	
Electric endurance in the number of cycles			10 000			10 000		
Mechanical endurance in number of operations			20 000			20 000		
Operating temperature			-25 to +70°C			-25 to +70°C		
Storage temperature			-35 to +70°C			-35 to +70°C		
Power loss (at In for 3P)		[W]	39			60		
Reference standard			IEC 60947-3	IEC 60947-2	IEC 60947-2	IEC 60947-3	IEC 60947-2	IEC 60947-2
Releases: switch			ok	—	—	ok	—	—
Releases: TM (thermomagnetic)			—	ok	ok	—	ok	ok
T fixed, M fixed			—	ok	—	—	ok	—
T adjustable, M fixed			—	—	ok	—	—	—
T adjustable, M adjustable			—	—	—	—	—	ok
Thermal adjustment value			—	—	0.63 to 1 x In	—	—	0.63 - 0.8 - 1 x In
Magnetic adjustment value			—	—	—	—	—	5-7-9-11 x In
Releases: LSI (electronic) Non-adjustable magnetic			—	—	—	—	—	—
Releases: LSI (electronic)			—	—	—	—	—	—
Long delay			—	—	—	—	—	—
Short delay			—	—	—	—	—	—
Time delay			—	—	—	—	—	—
Connection								
Standard terminal type			cage			lugs		
Terminal width		mm	13			25		
Terminal shields			optional			optional		
Cage terminal			integrated			ok		
Extended connections			optional			optional		
Rear connections			no			optional		
Dimensions								
Height		mm	130			165		
Width	3P	mm	75			105		
	4P	mm	100			140		
Depth		mm	68			68		
Weight	3P	kg	0.715			1.3		
	4P	kg	0.95			1.6		

* Without links/with straight links

Moulded case circuit breakers - Selection chart



x630		P630			h400e		h800e		h1000			h1600		
MCCB		Switch	MCCB		ECONO MCCB		Switch	MCCB			Switch	MCCB		
HMJ	HEJ	HCW	HMW	HEW	HND	HNE	HCE	HNE	HEE	HCF	HNF	HEF		
3/4		3/4			3/4		3/4			3/4				
630		630			400		800		1000			1600		
320 - 630		400 - 630			320 - 400		500 - 800		800 - 1000			1250 - 1600		
220 - 690		220 - 690			415				220 - 415			220 - 415		
50/60		50/60			50				50/60			50/60		
800		800			690				800			800		
8		8			8				8			8		
Yes		Yes			Yes				Yes			Yes		
85	100	—	85	100	—	—	—	85 (800A), 75 (1000A)		100	—	100	100	
50	70	—	50	70	50	50	—	50		70	—	50	70	
—	—	—	—	—	—	—	—	30		30	—	45	65	
—	—	—	12	12	—	—	—	20		20	—	25	45	
6	8	—	—	—	—	—	—	—		—	—	—	—	
85	100	—	85	100	—	—	—	85 (800A), 75 (1000A)		100 (800A), 75 (1000A)		—	75	75
50	70	—	50	70	36	36	—	50		50	—	50	50	
—	—	—	—	—	—	—	—	30		30	—	45	50	
—	—	—	12	12	—	—	—	20		20	—	25	34	
6	8	—	—	—	—	—	—	—		—	—	—	—	
—	—	7.5/13	—	—	—	—	20	—		—	45	—	—	
—	—	5/7.6	—	—	—	—	10 (0.3s)	—		—	20 (0.3s)	—	—	
A		—	A		A		—	B (800A), A (1000A)			—	B		
TM		—	Electronic		TM		—	Electronic			—	Electronic		
30°C (630A), 50°C (≤500A)		—	50°C		40°C		—	50°C			—	50°C		
100%		—	100%		100%	100%	—	100%			—	100%		
95%		—	95%		92%	94%	—	95%			—	95%		
90%		—	90%		88%	86%	—	90%			—	90%		
80%		—	80%		83%	82%	—	80%			—	80%		
80%		—	80%		—		—	80%			—	80%		
6 000/4 000		6 000/4 000			2000	1500	4 500			4500				
15 000		30 000			4000	4000	15 000			15000				
-25 to +70°C		-25 to +70°C			-5 to +60°C		-25 to +70°C			-25 to +70°C				
-35 to +70°C		-35 to +70°C			-25 to +70°C		-35 to +70°C			-35 to +70°C				
176.3		175.8					153.6			187.5				
IEC 60947-2		IEC 60947-3	IEC 60947-2		IEC 60947-2		IEC 60947-3	IEC 60947-2			IEC 60947-3	IEC 60947-2		
—		ok	—		—		ok	—			ok	—		
ok		—			ok		—			—				
—		—			ok		—			—				
—		—			—		—			—				
ok		—			—		—			—				
0.63 - 0.8 - 1 x I _n		—			—		—			—				
(400A) 5-6-7-8-9-10 (630)4-5-6-7-8		—			—		—			—				
—		—			—		—			—				
—		—	ok		—		—	ok			—	ok		
—		—	0.4 to 1 x I _r		—		—	0.4 to 1 x I _r			—	0.4 to 1 x I _n		
—		—	1.5 to 10 x I _r		—		—	2.5 to 10 x I _r (800A), 2.5 to 8 x I _r (1000A)			—	2.5 to 10 x I _r		
—		—	0.05 - 0.4s		—		—	0.1 - 0.2s			—	0.1 - 0.2s		
lugs		lugs			lugs		lugs			lugs				
32		32			—		45			45				
optional		optional			—		optional			optional				
optional		optional			—		—			—				
optional		optional			integrated		integrated			integrated				
optional		optional			optional		optional			—				
260		260			257	275	273/433*			370/570*				
140		140			140	210	210			210				
185		185			184	280	280			280				
150		150			155	155	99.5			140				
5.8		4.8	5.8		4.3	6.6	11			27				
7.6		6.4	7.6		5.2	8.9	14.8			31				

Moulded case circuit breakers 25/50/70kA



HHA125Z



HND400P



HNB250U



HMJ400DR



HEJ630DE

- Mechanical "test" button on the front
- Integrated padlock facility on toggle
- Cascading with MCBs (see chart Annex-5)
- Lockable thermal/magnetic settings
- Standards: SANS / IEC 60947-2

"Clip-in" accessories (see MCCB accessories)

- Auxiliary contacts
- Alarm contacts
- Shunt trip device
- Undervoltage release

type	thermal current	rated kA 415V (Icu)	poles	description	frame	price
Fixed-type thermal / magnetic trip 25 kA						
Fixed: Thermal 1 x I _n / magnetic >10 x I _n						
HHA016Z	16A	25 kA	3-pole	moulded case CB	x160	2 420.00
HHA020Z	20A	25 kA	3-pole	moulded case CB	x160	2 420.00
HHA025Z	25A	25 kA	3-pole	moulded case CB	x160	2 420.00
HHA032Z	32A	25 kA	3-pole	moulded case CB	x160	2 420.00
HHA040Z	40A	25 kA	3-pole	moulded case CB	x160	2 420.00
HHA050Z	50A	25 kA	3-pole	moulded case CB	x160	2 420.00
HHA063Z	63A	25 kA	3-pole	moulded case CB	x160	2 420.00
HHA080Z	80A	25 kA	3-pole	moulded case CB	x160	2 420.00
HHA100Z	100A	25 kA	3-pole	moulded case CB	x160	2 420.00
HHA125Z	125A	25 kA	3-pole	moulded case CB	x160	2 570.00
HHA160Z	160A	25 kA	3-pole	moulded case CB	x160	3 130.00
HHB200Z	200A	25 kA	3-pole	moulded case CB	x250	5 290.00
HHB250Z	250A	25 kA	3-pole	moulded case CB	x250	5 290.00
H3e series economical, cost-efficient						
• Not compatible with Quadro enclosure system						
Fixed: Thermal 1.05 to 1.3 x I _n / magnetic >10 x I _n						
HND320P	320A	50 kA	3-pole	moulded case CB	h400e	8 190.00
HND400P	400A	50 kA	3-pole	moulded case CB	h400e	8 190.00
HNE500P	500A	50 kA	3-pole	moulded case CB	h800e	12 900.00
HNE630P	630A	50 kA	3-pole	moulded case CB	h800e	13 200.00
HNE800P	800A	50 kA	3-pole	moulded case CB	h800e	13 500.00
4 pole available on request						
Adjustable thermal / magnetic trip 40/50 kA						
• Window indicating the presence of: Auxiliary/alarm contacts, shunt trip, UV release						
TM: Adjustable thermal 0.63 - 0.8 - 1 x I _n / fixed magnetic 5-10 x I _n (320-400A) and 4-8 x I _n (630A)						
HNA025U	16 - 25A	40kA	3-pole	moulded case CB	x160	2 690.00
HNA040U	25 - 40A	40kA	3-pole	moulded case CB	x160	2 650.00
HNA063U	40 - 63A	40kA	3-pole	moulded case CB	x160	2 650.00
HNA100U	63 - 100A	40kA	3-pole	moulded case CB	x160	2 650.00
HNA125U	80 - 125A	40kA	3-pole	moulded case CB	x160	2 650.00
HNA160U	101 - 160A	40kA	3-pole	moulded case CB	x160	3 100.00
HNA026U	16 - 25A	40kA	4-pole	moulded case CB	x160	3 570.00
HNA041U	25 - 40A	40kA	4-pole	moulded case CB	x160	3 570.00
HNA064U	40 - 63A	40kA	4-pole	moulded case CB	x160	3 570.00
HNA101U	63 - 100A	40kA	4-pole	moulded case CB	x160	3 570.00
HNA126U	80 - 125A	40kA	4-pole	moulded case CB	x160	3 570.00
HNA161U	101 - 160A	40kA	4-pole	moulded case CB	x160	4 330.00
TM: Adjustable thermal 0.63 - 0.8 - 1 x I _n / adjustable magnetic 5-7-9-11 x I _n						
HNB250U	160 - 250A	40kA	3-pole	moulded case CB	x250	7 280.00
HNB251U	160 - 250A	40kA	4-pole	moulded case CB	x250	9 040.00
TM: Adjustable thermal 0.63 - 0.8 - 1 x I _n / adjustable magnetic 6-12 x I _n						
HMJ320DR	202 - 320A	50kA	3-pole	moulded case CB	x630	11 900.00
HMJ400DR	252 - 400A	50kA	3-pole	moulded case CB	x630	12 000.00
HMJ630DE	397 - 630A	50kA	3-pole	moulded case CB	x630	14 200.00
HMJ321DR	202 - 320A	50kA	4-pole	moulded case CB	x630	15 900.00
HMJ401DR	252 - 400A	50kA	4-pole	moulded case CB	x630	16 100.00
HMJ631DE	397 - 630A	50kA	4-pole	moulded case CB	x630	18 500.00
Adjustable thermal / magnetic trip 70 kA						
HEJ320DR	202 - 320A	70kA	3-pole	moulded case CB	x630	13 200.00
HEJ400DR	252 - 400A	70kA	3-pole	moulded case CB	x630	13 600.00
HEJ630DE	397 - 630A	70kA	3-pole	moulded case CB	x630	15 700.00
HEJ321DR	202 - 320A	70kA	4-pole	moulded case CB	x630	16 900.00
HEJ401DR	252 - 400A	70kA	4-pole	moulded case CB	x630	17 700.00
HEJ631DE	397 - 630A	70kA	4-pole	moulded case CB	x630	20 300.00

Frame size x/P630 with direct connection

Moulded case circuit breakers 50/70kA



HNE970H



HEW630JR



HCW630AR



HCF990H

- Mechanical "test" button on the front
- Integrated padlock facility on toggle
- Cascading with MCBs (see chart **Annex-5**)
- Lockable thermal/magnetic settings
- Standards: SANS / IEC 60947-2

"Clip-in" accessories (see MCCB accessories)

- Auxiliary contacts
- Alarm contacts
- Shunt trip device
- Undervoltage release

type	thermal current	rated kA 415V (Icu)	poles	description	frame	price
------	-----------------	---------------------	-------	-------------	-------	-------

Adjustable electronic release (LSI) 50 kA

LSI: P630: $I_r = (0.4...1 \times I_n) \times (0.91...1) / I_{sd} = \text{OFF} / I_r \times 1.5...10 / t_d = 0.05...0.4s$
h1000: $I_r = (0.4...1 \times I_n) / I_{sd} = I_r \times 2.5...10 (800A) / I_r \times 2.5...8 (1000A) / t_d = 0.1...0.2s$
h1600: $I_r = (0.4...1 \times I_n) / I_{sd} = I_r \times 2.5...10 / t_d = 0.1...0.2s$

HMW400JR	146 - 400A	50 kA	3-pole	moulded case CB	P630	18 700.00
HMW630JR	230 - 630A	50 kA	3-pole	moulded case CB	P630	19 600.00
HNE800H	320 - 800A	50 kA	3-pole	moulded case CB	h1000	27 100.00
HNE970H	400 - 1000A	50 kA	3-pole	moulded case CB	h1000	42 900.00
HNF980H	500 - 1250A	50 kA	3-pole	moulded case CB	h1600	50 900.00
HNF990H	640 - 1600A	50 kA	3-pole	moulded case CB	h1600	64 900.00
HMW401JR	146 - 400A	50 kA	4-pole	moulded case CB	P630	24 200.00
HMW631JR	230 - 630A	50 kA	4-pole	moulded case CB	P630	27 600.00
HNE801H	320 - 800A	50 kA	4-pole	moulded case CB	h1000	40 100.00
HNE971H	400 - 1000A	50 kA	4-pole	moulded case CB	h1000	55 200.00
HNF981H	500 - 1250A	50 kA	4-pole	moulded case CB	h1600	68 700.00
HNF991H	640 - 1600A	50 kA	4-pole	moulded case CB	h1600	87 500.00

Adjustable electronic release (LSI) 70 kA

HEW400JR	146 - 400A	70 kA	3-pole	moulded case CB	P630	21 900.00
HEW630JR	230 - 630A	70 kA	3-pole	moulded case CB	P630	23 800.00
HEE800H	320 - 800A	70 kA	3-pole	moulded case CB	h1000	28 800.00
HEE970H	400 - 1000A	70 kA	3-pole	moulded case CB	h1000	45 800.00
HEF980H	500 - 1250A	70 kA	3-pole	moulded case CB	h1600	56 700.00
HEF990H	640 - 1600A	70 kA	3-pole	moulded case CB	h1600	79 200.00
HEW401JR	146 - 400A	70 kA	4-pole	moulded case CB	P630	26 400.00
HEW631JR	230 - 630A	70 kA	4-pole	moulded case CB	P630	29 400.00
HEE801H	320 - 800A	70 kA	4-pole	moulded case CB	h1000	38 800.00
HEE971H	400 - 1000A	70 kA	4-pole	moulded case CB	h1000	61 900.00
HEF981H	500 - 1250A	70 kA	4-pole	moulded case CB	h1600	76 500.00
HEF991H	640 - 1600A	70 kA	4-pole	moulded case CB	h1600	107 000.00

Load break switches (switch disconnectors / isolators)

HCA125Z	125A	—	3-pole	load break switch	x160	1 460.00
HCA160Z	160A	—	3-pole	load break switch	x160	1 520.00
HCB250Z	250A	—	3-pole	load break switch	x250	3 790.00
HCW400AR	400A	—	3-pole	load break switch	P630	9 860.00
HCW630AR	630A	—	3-pole	load break switch	P630	12 800.00
HCE800H	800A	—	3-pole	load break switch	h1000	22 500.00
HCE970H	1000A	—	3-pole	load break switch	h1000	34 200.00
HCF980H	1250A	—	3-pole	load break switch	h1600	50 000.00
HCF990H	1600A	—	3-pole	load break switch	h1600	57 500.00
HCA126Z	125A	—	4-pole	load break switch	x160	1 910.00
HCA161Z	160A	—	4-pole	load break switch	x160	2 050.00
HCB251Z	250A	—	4-pole	load break switch	x250	4 330.00
HCW401AR	400A	—	4-pole	load break switch	P630	12 300.00
HCW631AR	630A	—	4-pole	load break switch	P630	16 700.00
HCE801H	800A	—	4-pole	load break switch	h1000	30 400.00
HCE971H	1000A	—	4-pole	load break switch	h1000	48 300.00
HCF981H	1250A	—	4-pole	load break switch	h1600	67 500.00
HCF991H	1600A	—	4-pole	load break switch	h1600	77 600.00

Frame size x/P630 with direct connection

MCCB accessories



Auxiliaries



Undervoltage



Rotary handles



Motor operators

MCCB accessories

MCCB Accessories Chart			Auxiliary contacts		Alarm contacts	Shunt trip			
			1NO+1NC	2NO+2NC	1NO+1NC	24V DC	110V AC	230V AC	400V AC
Frame size	x160	HHA / HNA	HXA021H	–	HXA024H	HXA001H	HXA003H	HXA004H	HXA005H
	x250	HHB / HNB	HXA021H	–	HXA024H	HXA001H	HXA003H	HXA004H	HXA005H
	x630 H3	HMJ / HEJ / HMW / HEW	HXA021H	–	HXA024H	HXA001H	HXA003H	HXA004H	HXA005H
	P630 H3+	HMJ / HEJ / HMW / HEW	HXA021H	–	HXA024H	HXA001H	HXA003H	HXA004H	HXA005H
	h1000	HNE	HXC021H	–	HXC024H	HXC001H	HXC003H	HXC004H	HXC005H
	h1600	HNF	HXC021H	–	HXC024H	HXF001H	HXF003H	HXF004H	HXF005H
	h400e	HNDxxxP	–	HXD022P	HXD024P	HXD006P	–	HXD004P	HXD005P
	h800e	HNExxxP	–	HXE022P	HXE024P	HXE006P	–	HXE004P	HXE005P



type	voltage		description		frame	price
Accessories for MCCBs and load break switches						
Auxiliary contacts						
HXA021H	1NO + 1NC	auxiliary	contact	1NO+1NC for circuit breakers	x160-x/P630	303.00
HXC021H	1NO + 1NC	auxiliary	contact	1NO+1NC for circuit breakers	h1000/h1600	1 020.00
HXD022P	2NO + 2NC	auxiliary	contact	2NO+2NC for circuit breakers	h400e	1 260.00
HXE022P	2NO + 2NC	auxiliary	contact	2NO+2NC for circuit breakers	h800e	1 540.00
HXA024H	1NO + 1NC	alarm	contact	1NO+1NC for circuit breakers	x160-x/P630	427.00
HXC024H	1NO + 1NC	alarm	contact	1NO+1NC for circuit breakers	h1000/h1600	1 020.00
HXD024P	1NO + 1NC	alarm	contact	1NO+1NC for circuit breakers	h400e	627.00
HXE024P	1NO + 1NC	alarm	contact	1NO+1NC for circuit breakers	h800e	809.00
Shunt trip units (SH)						
HXA00*H	shunt	(SH)	shunt trip device for circuit breakers		x160-x/P630	1 080.00
HXC00*H	shunt	(SH)	shunt trip device for circuit breakers		h1000	1 070.00
HXF00*H	shunt	(SH)	shunt trip device for circuit breakers		h1600	1 880.00
* 1 = 24 VDC, 3 = 110 VAC, 4 = 230 VAC, 5 = 400 VAC						
HXD00*P	shunt	(SH)	shunt trip device for circuit breakers		h400e	1 480.00
HXE00*P	shunt	(SH)	shunt trip device for circuit breakers		h800e	1 690.00
* 6 = 24 VDC, 4 = 230 VAC, 5 = 400 VAC						
Undervoltage release (UV)						
HXA014H	230 VAC	(UV)	undervolt release for circuit breakers		x160-x/P630	1 250.00
HXA015H	380 VAC	(UV)	undervolt release for circuit breakers		x160-x/P630	1 410.00
HXD014P	230 VAC	(UV)	undervolt release for circuit breakers		h400e	1 670.00
HXD015P	380 VAC	(UV)	undervolt release for circuit breakers		h400e	1 670.00
HXE014P	230 VAC	(UV)	undervolt release for circuit breakers		h800e	1 820.00
HXE015P	380 VAC	(UV)	undervolt release for circuit breakers		h800e	1 870.00
HXE014H	230 VAC	(UV)	undervolt release for circuit breakers		h1000/1600	1 820.00
HXE015H	380 VAC	(UV)	undervoltage release for circuit breakers		h1000/1600	1 980.00
Direct rotary handles						
• Direct mounting						
• Padlockable in “off” position						
HXA030H	direct mount		front mount rotary handle for circuit breakers		x160	1 890.00
HXB030H	direct mount		front mount rotary handle for circuit breakers		x250	1 890.00
HXW030H	direct mount		front mount rotary handle for circuit breakers		x630/P630	1 790.00
HXE030H	direct mount		front mount rotary handle for circuit breakers		h1000	3 090.00
HXF030H	direct mount		front mount rotary handle for circuit breakers		h1600	4 250.00
Extended rotary handles						
• Vari-depth door interlocking						
HXA031H	vary-depth	200 mm	door interlocking rotary handle and shaft		x160	2 500.00
HXB031H	vary-depth	200 mm	door interlocking rotary handle and shaft		x250	2 500.00
HXW031H	vary-depth		door interlocking rotary handle and shaft		x630/P630	3 830.00
HXD031P	vary-depth		door interlocking rotary handle and shaft		h400e	1 670.00
HXE031P	vary-depth		door interlocking rotary handle and shaft		h800e	2 090.00
HXE031H	vary-depth		door interlocking rotary handle and shaft		h1000	11 000.00
HXF031H	vary-depth		door interlocking rotary handle and shaft		h1600	13 600.00

MCCB accessories

Undervoltage		Rotary handles		Motor operators		Terminals and mounting			
230V AC	440V AC	Direct	Vary-depth	Auto reset 230 VAC	NO Auto reset 230 VAC	Adaptors	Shrouds 3P	Shrouds 4P	Phase barriers
HXA014H	HXA015H	HXA030H	HXA031H	–	–	HYA033H	HYA027H	HYA028H	HYA019H
HXA014H	HXA015H	HXB030H	HXB031H	HXB042H	–	HYB033H	HYB021H	HYB022H	HYB019H
HXA014H	HXA015H	HXW030H	HXW031H	HXW042H	HXW044H	–	HYW023H	HYW024H	HYW019H
HXA014H	HXA015H	HXW030H	HXW031H	HXW042H	HXW044H	–	HYW023H	HYW024H	HYW019H
HXE014H	HXE015H	HXE030H	HXE031H	HXE042H	–	–	HYE021H	HYE022H	HYD019H
HXE014H	HXE015H	HXF030H	HXF031H	HXF042H	–	–	–	–	HYD019H
HXD014P	HXD015P	–	HXD031P	HXD042P	–	–	–	–	–
HXE014P	HXE015P	–	HXE031P	HXE042P	–	–	–	–	–



HXB042H



HYA033H



HYA014H



HYA027H

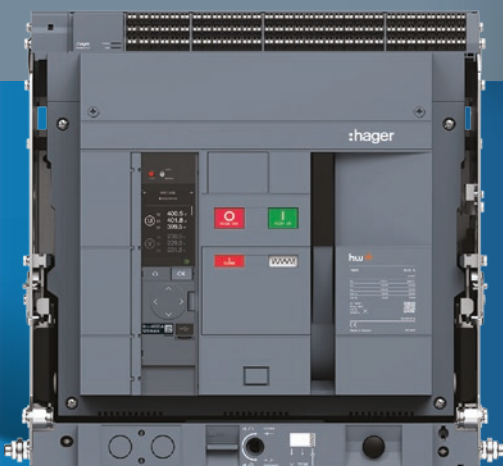
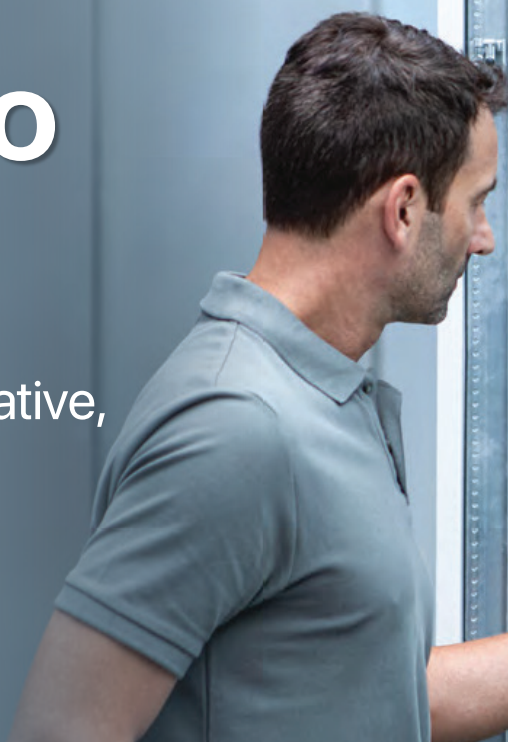


A48-M10/31

type	voltage	description		frame	price	
Motor operators for MCCBs						
HXB042H	230 VAC	motor operator for remote operation of MCCB		x250	13 600.00	
HXW042H	110 - 230 VAC	motor operator for remote operation of MCCB		x630/P630	19 100.00	
HXW044H*	110 - 230 VAC	motor operator for remote operation of MCCB		x630/P630	19 100.00	
HXE042H	230 VAC	motor operator for remote operation of MCCB		h1000	30 700.00	
HXF042H	230 VAC	motor operator for remote operation of MCCB		h1600	31 000.00	
HXD042P	230 VAC	motor operator for remote operation of MCCB		h400e	7 840.00	
HXE042P	230 VAC	motor operator for remote operation of MCCB		h800e	8 880.00	
* Non auto reset						
Terminals and mounting accessories						
Adaptors						
HYA033H	adaptor	DIN-rail mounting adaptor		x160	158.00	
HYB033H	adaptor	DIN-rail mounting adaptor		x250	392.00	
HYA036H	DIN-rail raiser	MCBs to match MCCBs on DIN-rail		(3 pcs)	251.00	
Terminals						
HYB001H	set of 3	150 mm² collar terminals for cables		x250	3 340.00	
HYW001H	set of 3	300 mm² collar terminals for cables		x630/P630	3 040.00	
HYA014H	3-pole	spreader link extended terminals		x160	394.00	
HYB011H	3-pole	spreader link extended terminals		x250	493.00	
HYW014H	3-pole	spreader link extended terminals		x630/P630	2 070.00	
HYA015H	4-pole	spreader link extended terminals		x160	443.00	
HYB012H	4-pole	spreader link extended terminals		x250/P250	705.00	
HYW015H	4-pole	spreader link extended terminals		x630/P630	2 750.00	
Shrouds						
HYA027H	3-pole	terminal shrouds		x160	751.00	
HYB021H	3-pole	extended terminal shrouds		x250	751.00	
HYW023H	3-pole	extended terminal shrouds		x630/P630	881.00	
HYE021H	3-pole	extended terminal shrouds		h1000	2 340.00	
HYA028H	4-pole	terminal shrouds		x160	281.00	
HYB022H	4-pole	terminal shrouds		x250	392.00	
HYW024H	4-pole	terminal shrouds		x630/P630	977.00	
HYE022H	4-pole	terminal shrouds		h1000	3 170.00	
Phase barriers						
HYA019H	set of 3	spare interphase barriers		x160	306.00	
HYB019H	set of 3	spare interphase barriers		x250	345.00	
HYW019H	set of 3	spare interphase barriers		x630/P630	226.00	
HYD019H	set of 3	spare interphase barriers		h1000/h1600	356.00	
Special "contained palm" cable lugs for MCCBs						
AM range of cable lugs by Cembre are designed to obtain the most efficient electrical conductivity and mechanical strength to resist vibration and pull out.						
type	cable size	lug width	hole Ø	description	for MCCB	price (ea)
A24B-M8/19	120 mm²	19.0 mm	M8	contained palm cable lug (ea)	x250	180.00
A30B-M8/19	150 mm²	19.0 mm	M8	contained palm cable lug (ea)	x250	222.00
A37B-M10/24.5	185 mm²	24.5 mm	M10	contained palm cable lug (ea)	250/400/630	246.00
A48-M10/31	240 mm²	31.0 mm	M10	contained palm cable lug (ea)	400/630	322.00

Say hello to hw+

Explore the new innovative,
easy-to-install ACB
range from Hager.



A new era in protection

Introducing Hager's new hw+ range of compact and reliable Air Circuit Breakers and Switch Disconnectors.

- Ideal for residential, commercial and industrial applications, the range offers robust protection against overloads, short circuits and ground faults
- Flexible connection options and a comprehensive set of accessories ensure seamless integration into your electrical system

Experience **smart**, **safe**, and **simple** power protection with Hager

Features



Easy commissioning
via software



Easy and safe mounting
of accessories



Plug & play
rating plug



Simple locking
and interlocking



Output alarm
contacts



Warnings and
trip alarms



Secure & easy-to-use
trip units

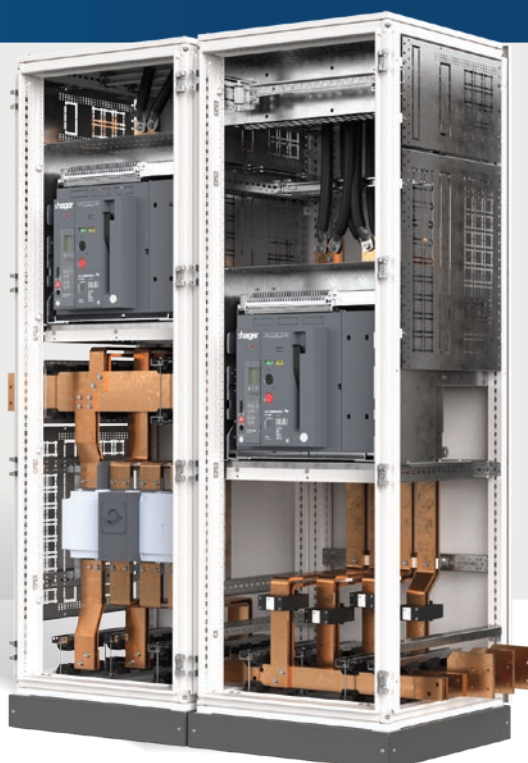


Compact dimensions

:hager



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Air circuit breakers



hw+ air circuit breakers and switch disconnectors

Frame			HW1		HW2		HW4	
Product			ACB	switch	ACB	switch	ACB	switch
Version			fixed / draw-out		fixed / draw-out		fixed / draw-out	
Number of poles			3 / 4		3 / 4		3 / 4	
Rated current @ 50 deg C		In	1250-1600A		2500A		3200-4000A	
Rated operational voltage		Ue	690 VAC		690 VAC		690 VAC	
Rated insulation voltage		Ui	1000 VAC		1000 VAC		1000 VAC	
Rated impulse withstand voltage		Uimp	12 kV		12 kV		12 kV	
Standards compliance			IEC 60947-2	IEC 60947-3	IEC 60947-2	IEC 60947-3	IEC 60947-2	IEC 60947-3
Selectivity category according to IEC 60947-2			B	—	B	—	B	—
Pollution degree according to IEC 60947-1			3	—	3	—	3	—
Utilization category according to IEC 60947-3			—	AC-23A	—	AC-23A	—	AC-23A
Rated ultimate short-circuit breaking capacity:	380-415 VAC	Icu	66 kA	—	66 kA	—	85 kA	—
	440 VAC		66 kA	—	66 kA	—	85 kA	—
	500-525 VAC		42 kA	—	55 kA	—	75 kA	—
	690 VAC		42 kA	—	55 kA	—	75 kA	—
Rated making capacity:	380-415 VAC	Icm	145 kA	121 kA	145 kA	145 kA	187 kA	187 kA
	440 VAC		145 kA	121 kA	145 kA	145 kA	187 kA	187 kA
	500-525 VAC		88 kA	88 kA	121 kA	145 kA	165 kA	187 kA
	690 VAC		88 kA	88 kA	121 kA	145 kA	165 kA	187 kA
Short-time withstand current rating capacity 1s	400 VAC	Icw	55 kA		66 kA		85 kA	
Break time between tripping order and arc extinction			< 25 ms		< 25 ms		< 25 ms	
Closing time			< 50 ms		< 50 ms		< 50 ms	
Mechanical durability	cycles x 1000		12.5		12.5		10	
Electrical endurance at In	cycles x 1000		8		8		6	
Tripping unit			sentinal electronic LSIG		sentinal electronic LSIG		sentinal electronic LSIG	
Connection:	Fixed	Front*	yes		—		—	
		Rear	yes		yes		yes	
	Draw-out	Front*	yes		—		—	
		Rear	yes		yes		yes	
Dimensions H(mm) x W(mm) x D(mm):	Fixed	3-pole	313 x 276 x 227		416 x 385 x 373		416 x 478 x 373	
		4-pole	313 x 346 x 227		416 x 480 x 373		416 x 604 x 373	
	Draw-out	3-pole	322 x 284 x 328		450 x 400 x 465		450 x 493 x 465	
		4-pole	322 x 349 x 328		450 x 495 x 465		450 x 619 x 465	

* Front connection for HW1 fixed / draw-out ACB optional

Sentinal Electronic LSIG tripping unit

hw+ air circuit breakers are equipped with a LSIG sentinel electronic trip unit used to protect cable lines and equipment against overloads, short circuits and earth faults.

Dynamic LCD and settings dials accessible from the front of the hw+ circuit breakers, permitting precise indication and adjustment of protection settings.

LTD Long Time Delay protection ①

Overload protection, fine setting of Ir (A) is done using two dials Ir1 and Ir2, the time delay tr (s) can be set via a dial from 0.5 to 25 s.

STD Short Time Delay Protection ②

Short-circuit protection, Isd (x Ir) current adjusted using a dial from 1 to 10 times the protection of the Ir or can be deactivated (OFF).

The time delay tsd (s) adjustable via a dial from 50 to 600 ms with the option of including an inverse time curve (I²t OFF or ON).

INST Instantaneous protection ③

Instantaneous protection against short-circuits, Ii (x In) can be set using a dial from 1.5 to 15 times rated current value In or can be deactivated (OFF).

GF earth fault protection ④

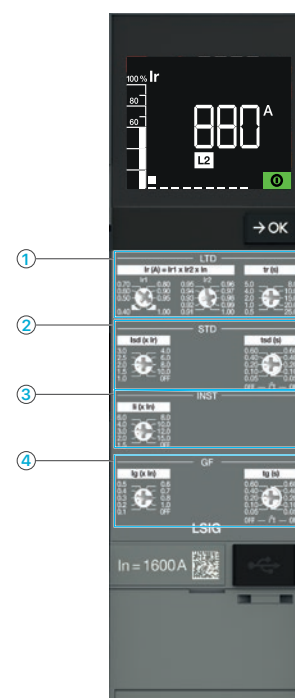
Phase-to-earth fault protection, Ig (x In) is set using a dial from 0.1 to 1 times the rated current In or can be deactivated (OFF).

The time delay tg (s) adjustable via a dial from 50 to 600 ms with the option of including an inverse time curve (I²t OFF or ON).

Neutral protection N

Factory-installed on 4-pole circuit breakers, it is necessary if the neutral conductor cross section is less than that of the phases or is heavily loaded.

It uses the LTD, STD and INST protection parameters.



Air circuit breakers - Fixed

**Air circuit breakers (fixed)**

- Terminals easily converted from horizontal to vertical orientation
- Compact dimensions
- Quick and easy mounting of accessories
- 3 frame sizes: **HW1** 1250 - 1600A
HW2 2500A
HW4 3200 - 4000A

Fixed circuit breakers are supplied standard with the following:

- Auxiliary contacts (4 C/O) / HW4 (6C/O)
- Fault indication contact (*not on switch-disconnectors*)
- RTC (ready to close) contact for "spring loaded" indication
- Door mounting frame/flange
- OCR - LSIG microprocessor protection and control unit (*with colour LCD*)

New

HW1E312FB

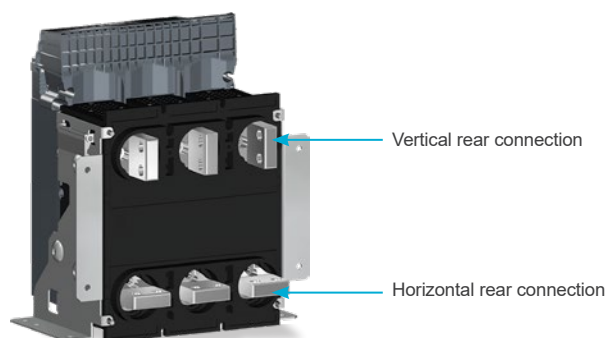


HW2W325FS

type	thermal adjustment (A)	breaking capacity 415V (rms)	poles	mount	description	frame size	price
Fixed-type air circuit breaker							
Three-pole air circuit breakers							
HW1E312FB	455 - 1250A	66kA	3-pole	fixed	air circuit breaker	HW1	70 000.00
HW1E316FB	583 - 1600A	66kA	3-pole	fixed	air circuit breaker	HW1	72 900.00
HW2E325FB	910 - 2500A	66kA	3-pole	fixed	air circuit breaker	HW2	98 700.00
HW4S332FB	1165 - 3200A	85kA	3-pole	fixed	air circuit breaker	HW4	116 000.00
HW4S340FB	1456 - 4000A	85kA	3-pole	fixed	air circuit breaker	HW4	136 000.00
Four-pole air circuit breakers							
HW1E412FB	455 - 1000A	66kA	4-pole	fixed	air circuit breaker	HW1	83 500.00
HW1E416FB	583 - 1600A	66kA	4-pole	fixed	air circuit breaker	HW1	91 400.00
HW2E425FB	910 - 2500A	66kA	4-pole	fixed	air circuit breaker	HW2	122 000.00
HW4S432FB	1165 - 3200A	85kA	4-pole	fixed	air circuit breaker	HW4	136 000.00
HW4S440FB	1456 - 4000A	85kA	4-pole	fixed	air circuit breaker	HW4	166 000.00
Switch-disconnectors Utilization category according to IEC 60947-3							
type	rated current (A)	short-time withstand I _{cw} (1s)	poles	mount	description	frame size	price
Three-pole switch-disconnectors							
HW1W312FS	1250A	55kA	3-pole	fixed	switch-disconnector	HW1	53 000.00
HW1W316FS	1600A	55kA	3-pole	fixed	switch-disconnector	HW1	56 100.00
HW2W325FS	2500A	66kA	3-pole	fixed	switch-disconnector	HW2	83 500.00
HW4W332FS	3200A	85kA	3-pole	fixed	switch-disconnector	HW4	93 900.00
HW4W340FS	4000A	85kA	3-pole	fixed	switch-disconnector	HW4	115 000.00
Four-pole switch-disconnectors							
HW1W412FS	1250A	55kA	4-pole	fixed	switch-disconnector	HW1	62 200.00
HW1W416FS	1600A	55kA	4-pole	fixed	switch-disconnector	HW1	70 100.00
HW2W425FS	2500A	66kA	4-pole	fixed	switch-disconnector	HW2	101 000.00
HW4W432FS	3200A	85kA	4-pole	fixed	switch-disconnector	HW4	115 000.00
HW4W440FS	4000A	85kA	4-pole	fixed	switch-disconnector	HW4	145 000.00

→ **Draw-out type** 3-pole circuit breaker outside its chassis:

1. Terminal blocks TB
2. Lifting handle
3. Front cover
4. Electronic trip unit
5. Charging handle

→ **Terminal connections:**

Air circuit breakers - Draw-out

New



HW2E325DB



HW2E325DB

Air circuit breakers (Draw-out)

- Terminals easily converted from horizontal to vertical orientation
- Compact dimensions
- Quick and easy mounting of accessories
- 3 frame sizes: **HW1** 1250 - 1600A
HW2 2500A
HW4 3200 - 4000A

Draw-out circuit breakers are supplied with the following:

- Auxiliary contacts (4 C/O) / HW4 (6C/O)
- Fault indication contact (not on switch-disconnectors)
- RTC (ready to close) contact for "spring loaded" indication
- OCR - LSiG microprocessor protection and control unit (with colour LCD)
- Panel door ingress seal (flange for compartment door)
- Cradle/chassis of draw-out circuit breaker
- Operation (racking) crank handle
- Safety shutters (padlockable top and bottom)

type	thermal adjustment (A)	breaking capacity 415V (rms)	poles	mount	description	frame size	price
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Draw-out air circuit breaker

Three-pole air circuit breakers

HW1E312DB	455 - 1250A	66kA	3-pole	draw-out	air circuit breaker	HW1	93 200.00
HW1E316DB	583 - 1600A	66kA	3-pole	draw-out	air circuit breaker	HW1	96 300.00
HW2E325DB	910 - 2500A	66kA	3-pole	draw-out	air circuit breaker	HW2	134 000.00
HW4S332DB	1165 - 3200A	85kA	3-pole	draw-out	air circuit breaker	HW4	150 000.00
HW4S340DB	1456 - 4000A	85kA	3-pole	draw-out	air circuit breaker	HW4	175 000.00

Four-pole

HW1E412DB	455 - 1250A	66kA	4-pole	draw-out	air circuit breaker	HW1	113 000.00
HW1E416DB	583 - 1600A	66kA	4-pole	draw-out	air circuit breaker	HW1	115 000.00
HW2E425DB	910 - 2500A	66kA	4-pole	draw-out	air circuit breaker	HW2	157 000.00
HW4S432DB	1165 - 3200A	85kA	4-pole	draw-out	air circuit breaker	HW4	195 000.00
HW4S440DB	1456 - 4000A	85kA	4-pole	draw-out	air circuit breaker	HW4	228 000.00

Switch-disconnectors Utilization category according to IEC 60947-3

type	rated current (A)	short-time withstand Icw (1s)	poles	mount	description	frame size	price
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Three-pole switch-disconnectors

HW1W312DS	1250A	55kA	3-pole	draw-out	switch-disconnector	HW1	71 900.00
HW1W316DS	1600A	55kA	3-pole	draw-out	switch-disconnector	HW1	75 000.00
HW2W325DS	2500A	66kA	3-pole	draw-out	switch-disconnector	HW2	113 000.00
HW4W332DS	3200A	85kA	3-pole	draw-out	switch-disconnector	HW4	129 000.00
HW4W340DS	4000A	85kA	3-pole	draw-out	switch-disconnector	HW4	154 000.00

Four-pole

HW1W412DS	1250A	55kA	4-pole	draw-out	switch-disconnector	HW1	91 400.00
HW1W416DS	1600A	55kA	4-pole	draw-out	switch-disconnector	HW1	93 200.00
HW2W425DS	2500A	66kA	4-pole	draw-out	switch-disconnector	HW2	136 000.00
HW4W432DS	3200A	85kA	4-pole	draw-out	switch-disconnector	HW4	174 000.00
HW4W440DS	4000A	85kA	4-pole	draw-out	switch-disconnector	HW4	206 000.00

ACB draw-out version

Chassis (fixed part)



- The chassis (fixed part) is installed in the enclosure

Body (moving part)



- The body (moving part) is mounted inside the chassis

ACB



- Once installed. Body can be moved to any of the 3 available positions: Connected / Test / Disconnected

New



HWX024HSA



HWX030HSA



HWX014HSA



HWX040HSA



HWY952HSA



HWY224H



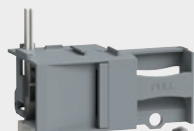
HWY218H

Air circuit breaker (ACB) accessories

- Quick and easy mounting of all accessories
- SH, CC, UVT, MO, AX - require **HWY950HSA** terminal block (below)

type	ref.	description	supply voltage	for ACB	price
Shunt trip (opening release) to remotely open the circuit breaker					
HWX020HSA	SH	shunt opening release	24-30V AC/DC	all ACB	1 920.00
HWX022HSA	SH	shunt opening release	100-130V AC/DC	all ACB	1 600.00
HWX023HSA	SH	shunt opening release	200-250V AC/DC	all ACB	1 600.00
HWX024HSA	SH	shunt opening release	380-480V AC	all ACB	1 600.00
Shunt closing release to remotely close the circuit breaker					
HWX025HSA	CC	shunt closing release	24-30V AC/DC	all ACB	1 920.00
HWX027HSA	CC	shunt closing release	100-130V AC/DC	all ACB	1 600.00
HWX028HSA	CC	shunt closing release	200-250V AC/DC	all ACB	1 600.00
HWX029HSA	CC	shunt closing release	380-480V AC	all ACB	1 600.00
Under voltage release to remotely open the circuit breaker					
HWX030HSA	UVT	under voltage release	24-30V AC/DC	all ACB	2 230.00
HWX032HSA	UVT	under voltage release	100-130V AC/DC	all ACB	1 920.00
HWX033HSA	UVT	under voltage release	200-250V AC/DC	all ACB	1 920.00
HWX034HSA	UVT	under voltage release	380-480V AC	all ACB	1 920.00
Motor operators to automatically recharge the closing spring					
HWX004HSA	MO	for charging of closing spring	200-250V AC	HW1	5 100.00
HWX005HSA	MO	for charging of closing spring	380-400V AC	HW1	5 100.00
HWX014HSA	MO	for charging of closing spring	200-250V AC	HW2/4	5 420.00
HWX015HSA	MO	for charging of closing spring	380-400V AC	HW2/4	5 420.00
HWX011HSA	MO	for charging of closing spring	24V DC	HW1	5 740.00
HWX011HSA	MO	for charging of closing spring	24V DC	HW2/4	6 060.00
Auxiliary contacts for remote signalling of "open" or "closed" status of ACB					
HWX040HSA	AX	auxiliary contact for ACB	1 CO	HW1	1 920.00
HWX042HSA	AX	auxiliary contact for ACB	1 CO	HW2/4	1 920.00
Output alarm contacts module integrates into the ACB without external accessories					
The OAC output module has 5 alarm output contacts assigned to the following events:					
- LTD tripping - Overload pre-alarm - Tripping due to a critical system alarm - STD / INST / MCR tripping - GF tripping					
HWX090HSA*	OAC	output alarm contacts module	1 CO	all ACB	9 560.00
* Requires HWY952HSA terminal block (below)					
Terminal block connection terminal for terminating accessories in the ACB					
HWY950HSA	TB	connection terminal block	type A 6/3	all ACB	637.00
HWY952HSA	TB	connection terminal block	type C 2x 6/3	all ACB	956.00
Mechanical interlock to mechanically interlock two circuit breakers					
HWY224H*	MI	mechanical interlock for	fixed	HW1	4 460.00
HWY226H*	MI	mechanical interlock for	fixed	HW2/4	7 650.00
HWY225H*	MI	mechanical interlock for	draw-out	HW1	5 740.00
HWY227H*	MI	mechanical interlock for	draw-out	HW2/4	9 560.00
* One required for each circuit breaker					
Cable set - for interlocks 1 x set = 2x cables (only one set required for two ACB)					
HWY218H	MI	cable set for mech. interlocks	1.5 meter	all ACB	2 550.00
HWY228H	MI	cable set for mech. interlocks	3 meter	all ACB	3 830.00
Door frame (spare) supplied standard with all ACB					
- Protects the protruding front face of the ACB and the cut edge of the panel door - Includes clamps at the back enabling quick, tool-free installation					
HWY280H	DF	door frame for fixed ACB	fixed	HW1	1 280.00
HWY281H	DF	door frame for draw-out ACB	draw-out	HW1	1 280.00
HWY284H	DF	door frame for fixed ACB	fixed	HW2	1 600.00
HWY285H	DF	door frame for draw-out ACB	draw-out	HW2	1 600.00
HWY288H	DF	door frame for fixed ACB	fixed	HW4	1 600.00
HWY289H	DF	door frame for draw-out ACB	draw-out	HW4	1 600.00

New



HWY265HSA



HWY261HSA



HWY089HSA



HWY041HSA



HWY240HSA

Air circuit breaker (ACB) accessories

- Quick and easy mounting of all accessories

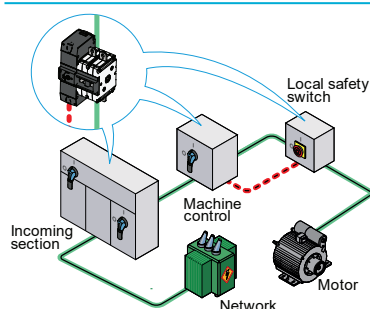
type	ref.	description	poles	for ACB	price
Locking device adaptor <i>for locking circuit breaker in "OFF" position</i>					
HWY269HSA	OLP	adaptor for using padlocks	3/4-pole	HW1	1 600.00
HWY265HSA	OLP	adaptor for using padlocks	3/4-pole	HW2/4	1 600.00
HWY260HSA	OLK	adaptor for using key locks	3/4-pole	HW1	1 600.00
HWY261HSA	OLK	adaptor for using key locks	3/4-pole	HW2/4	1 600.00
<i>Keylocks and padlocks to be purchased separately</i>					
HWY701	—	Ronis type key lock - type 1	K1 - L1/L4	all ACB	884.00
HWY702	—	Ronis type key lock - type 2	K2 - L2/L4/L5	all ACB	1 260.00
HWY703	—	Ronis type key lock - type 3	K3 - L3/L5	all ACB	1 260.00
HWY704	—	Ronis type key lock - type 4	K4 - L4	all ACB	1 340.00
HWY705	—	Ronis type key lock - type 5	K5 - L5	all ACB	1 340.00
Arc chute cover <i>for fixed circuit breakers with front facing connections</i>					
HWY958H		chamber cover for fixed	3-pole	HW1	3 190.00
HWY959H		chamber cover for fixed	4-pole	HW1	3 190.00
Pushbutton cover <i>to lock out access to the circuit breaker push buttons</i>					
HWY089HSA	PBC	pushbutton cover	3/4-pole	HW1	1 600.00
HWY090HSA	PBC	pushbutton cover	3/4-pole	HW2/4	1 600.00
Accessories for draw-out breakers <i>for draw-out version ACB</i>					
Position contact <i>indicates one of the three positions of ACB within the chassis</i>					
HWX050HSA	PS	position contact for	draw-out	ACB	1 280.00
Racking interlock <i>prevents insertion of racking handle when enclosure door is open</i>					
HWY238H	RI	door racking interlock for	draw-out	HW1	510.00
HWY239H	RI	door racking interlock for	draw-out	HW2/4	510.00
Connection accessories <i>for air circuit breakers</i>					
All circuit breakers are supplied standard with rear horizontal terminals that can easily be converted to vertical orientation. Connection kits (<i>below</i>) permit conversion to other forms of termination such as Spreader, Front connection or for Vertical connection.					
Spreader links for circuit breaker <i>top (or) bottom</i>					
HWY001H	SP	spreader link kit	3-pole	HW1	9 560.00
HWY002H	SP	spreader link kit	4-pole	HW1	12 800.00
Front connection kit for circuit breaker <i>top (or) bottom</i>					
HWY040HSA	FC	front connection for fixed	3-pole	HW1	6 370.00
HWY041HSA	FC	front connection for fixed	4-pole	HW1	9 560.00
HWY044HSA	FC	front connection for draw-out	3-pole	HW1	9 560.00
HWY045HSA	FC	front connection for draw-out	4-pole	HW1	12 800.00
Vertical connector conversion kit <i>top (or) bottom</i>					
HWY005H	VCA	vertical connector kit	3-pole	HW1	12 800.00
HWY006H	VCA	vertical connector kit	4-pole	HW1	16 000.00
Interphase barrier set - highly recommended for voltages above 500V					
HWY240HSA	IB	ph barriers for fixed/draw-out	3-pole	HW1	3 190.00
HWY241HSA	IB	ph barriers for fixed/draw-out	4-pole	HW1	4 780.00
HWY246HSA	IB	phase barriers for fixed	3-pole	HW2/4	3 830.00
HWY247HSA	IB	phase barriers for fixed	4-pole	HW2/4	5 740.00
HWY248HSA	IB	phase barriers for draw-out	3-pole	HW2/4	3 830.00
HWY249HSA	IB	phase barriers for draw-out	4-pole	HW2/4	5 740.00



Scan the QR Code ▶
for How To Tutorial videos for the
new HW+ ACB range



Load break switches



SIRCO M and MV manually operated switches

SIRCO modular switches make and break under load conditions and provide safety isolation for any low voltage circuit, particularly for machine control circuits.

Within a single product, **SIRCO M** offers front or side operation. The highly functional design enables the switch to be easily transformed from a load break switch to a changeover switch, offering a highly innovative modular solution for numerous applications.

General features:

- Modular DIN-rail mounting (*fits into standard distribution board 45 mm cut-out*)
- External front (*or side*) operating handle and shaft (*to be ordered separately-see below*)
- Severe load duty categories (AC-22 and AC-23)
- Conformity to standards: IEC 60947-3

type	AC-22 A 415V (A)	AC-23 A 400V (kW)	No. poles	frame size	description	dimensions (mm) (H) (W) (D)			price
SIRCO M series - Load break switches					16 - 125A				
2200 3000	16A	7.5 kW	3	M1	load break switch	68	45	75	381.00
2200 3002	25A	11.0 kW	3	M1	load break switch	68	45	75	437.00
2200 3003	32A	15.0 kW	3	M1	load break switch	68	45	75	492.00
2200 3004	40A	18.5 kW	3	M1	load break switch	68	45	75	503.00
2200 3005	63A	22.0 kW	3	M1	load break switch	68	45	75	678.00
2200 3006	63A	30.0 kW	3	M2	load break switch	76	53	75	944.00
2200 3008	80A	37.0 kW	3	M2	load break switch	76	53	75	1 120.00
2200 3010	100A	45.0 kW	3	M3	load break switch	125	78	75	1 280.00
2200 3011	125A	55.0 kW	3	M3	load break switch	125	78	75	1 550.00
SIRCO MV series - Load break switches					160A	<i>(visual double break contacts)</i>			
2200 3016	160A	75.0 kW	3	MV	load break switch	125	109	75	3 160.00
2200 4016	160A	75.0 kW	4	MV	load break switch	125	135	75	3 810.00

Operating handles and shafts for above switches

IP65

- External front operated, door interlocking, padlockable in "off" position (*up to 3 padlocks*)
- Defeatable interlocking mechanism

type	handle size	colour	description		for switch frame (A)		price
Handles for switches - external operation							
1473 1111	S00	black	external operating handle for switches		M1 - 2	16 - 80A	199.00
1474 1111	S00	red/yellow	external operating handle for switches		M1 - 2	16 - 80A	209.00
1483 1111	S0	black	external operating handle for switches		M3	100 - 125A	285.00
1484 1111	S0	red/yellow	external operating handle for switches		M3	100 - 125A	285.00
1493 0111	S0	black	external operating handle for switches		MV	160A	328.00
1413 2111	S1	black	external operating handle for switches		MV	160A	469.00
141D 2911	S1	black	as above (with metal padlocking mech.)		MV	160A	854.00
Extension shafts for switches							
1407 0520	S000/S00/S0	200 mm	□ 5	extension shaft for switch	M1 - 3	16 - 125A	107.00
1407 0532	S000/S00/S0	320 mm	□ 5	extension shaft for switch	M1 - 3	16 - 125A	125.00
1409 0632	S00/S0	320 mm	□ 6	extension shaft for switch	MV	160A	160.00
1401 0632	S1	320 mm	□ 6	extension shaft for switch	MV	160A	526.00
1419 0000	guide	(permits engaging of misaligned shaft with handle)			S000/S00/S0		113.00
1429 0000	guide	(permits engaging of misaligned shaft with handle)			S1		155.00
Direct mount handles (mounts directly onto front of switch - no shaft required)							
2299 5012	M00	blue	direct switch mount handle		M - 2	16 - 80A	27.40
2299 5032	M01	blue	direct switch mount handle		M3	100 - 125A	84.00
2299 5042	M0b	blue	direct switch mount handle		MV	160A	124.00

Auxiliary contacts for M/MV switches

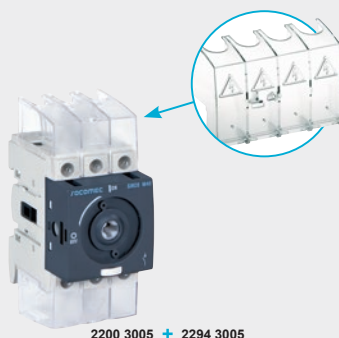
2299 0001	1NO + 1NC	M type	side mount auxiliary contact	M/MV	16 - 160A	323.00
2299 0011	2NO	M type	side mount auxiliary contact	M/MV	16 - 160A	323.00
3999 0701	1NO	U type	internal mounting auxiliary contact	MV	160A	259.00
3999 0702	1NC	U type	internal mounting auxiliary contact	MV	160A	259.00

Example: To build up 63A 3-pole changeover with direct handle
Combine 2 x **2200 3005** and 1 x **2209 6009**

Alternatively: Refer to page **B-36** for pre-assembled units



Load break switch accessories



Conversion kits for Sirco M switches (mechanical interlock / parallel attachment)

Sirco M switches can be converted to 3 or 4-pole changeover switches with conversion kits. A mechanical interlock module simply clips onto two identical 3-pole switches to provide a changeover facility.

- 4th poles clip onto 3-pole switches for 4-pole applications

type	info	no. of poles	description	for switch frame (A)	price
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Changeover mechanism (mechanically interlocks two switches)

Supplied with direct mounting operating handle. Handle and shaft to be ordered separately for externally mounted applications.

2209 6009	I-O-II	changeover mechanism between two switches	M1 - 2	16 - 80A	633.00
2209 6011	I-O-II	changeover mechanism between two switches	M3	100 - 125A	1 240.00

Handles and shafts for changeover switches

1473 1113	S00	I-O-II	for above changeover switches	M1 - 2	16 - 80A	267.00
1473 0113	S00	I-O-II	for above changeover switches	M3	100 - 125A	353.00
1407 0532	S00	320 mm	□ 5 extension shaft for switch	M1 - 2	16 - 80A	125.00
1409 0632	S00	320 mm	□ 6 extension shaft for switch	M3	100 - 125A	160.00

Bridging kit for changeover switches

2299 3005	bridge	3-pole	bridging kit for ch/over switches	M1	16 - 40A	913.00
2299 4005	bridge	4-pole	bridging kit for ch/over switches	M1	16 - 40A	1 080.00
2299 3009	bridge	3-pole	bridging kit for ch/over switches	M2	63 - 80A	1 530.00
2299 4009	bridge	4-pole	bridging kit for ch/over switches	M2	63 - 80A	1 840.00

Parallel attachments

A mechanical module simply clips onto two identical 3/4-pole switches to provide a 6/8 pole switch that switches simultaneously.

2269 6009	I-O	6/8-pole	conversion kit between two switches	M1 - 2	16 - 80A	634.00
2269 6011	I-O	6/8-pole	conversion kit between two switches	M3	100 - 125A	1 250.00

Handles and shafts for above parallel attachments (IP65)

1473 1111	S00	I-O	ext. operating handle for switches	M1 - 2	16 - 80A	199.00
1473 0111	S0	I-O	ext. operating handle for switches	M3	100 - 125A	319.00
1407 0532	S000/S00/S0	320 mm	□ 5 extension shaft for switch	M1 - 2	16 - 80A	125.00
1409 0632	S00/S0	320 mm	□ 6 extension shaft for switch	M3	125A	160.00

Handle and shaft to be ordered separately for externally mounted applications

Attachable 4th pole module

- Clips onto either side of 3-pole switches

2200 1004	40A	1-pole	attachable 4th pole module	M1	16 - 40A	188.00
2200 1005	63A	1-pole	attachable 4th pole module	M1	63A	239.00
2200 1008	80A	1-pole	attachable 4th pole module	M2	63 - 80A	326.00
2200 1011	125A	1-pole	attachable 4th pole module	M3	100 - 125A	509.00

Door mount kit

- For direct door or side panel mounting of Sirco M switches
- Compatible with 3/4-pole switches with S00 type handles only

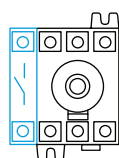
2299 3409	door mounting kit (direct door mounting of switch)	M1 - 2	16 - 80A	178.00
2299 3609	door mounting kit (direct door mounting of switch)	M3	100 - 125A	1 410.00

Terminal shrouds

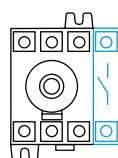
- Top (or) bottom terminal protection (two required for total protection)

2294 1005	shroud	1-pole	t/parent terminal protection shroud	M1	16 - 63A	56.00
2294 3005	shroud	3-pole	t/parent terminal protection shroud	M1	16 - 63A	118.00
2294 1009	shroud	1-pole	t/parent terminal protection shroud	M2	63 - 80A	76.00
2294 3009	shroud	3-pole	t/parent terminal protection shroud	M2	63 - 80A	175.00
2294 1011	shroud	1-pole	t/parent terminal protection shroud	M3	100 - 125A	84.00
2294 3016	shroud	3-pole	t/parent terminal protection shroud	M3/MV	100 - 160A	217.00
2294 4016	shroud	4-pole	t/parent terminal protection shroud	MV	160A	270.00

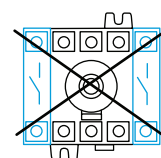
Additional 4th pole configuration



Right mounting



Left mounting



Unachievable

Load break switches



SIRCO series - Manually operated switches

SIRCO switches make and break under load conditions and provide safety isolation for any low voltage circuit.

- External front operating handle and shaft (*to be ordered separately - see below*)
- Severe load duty categories (AC-22 and AC-23)
- Position indicator located on the sliding bar mechanism, ensures visibility in all circumstances
- High thermal and dynamic withstand
- High electrical and mechanical endurance
- Conformity to standards: IEC/EN 60947-3 / IS13947-3 / KEMA / RINA

type	AC-22 A 415V (A)	AC-23 A 400V	No. poles	frame size	description	dimensions (mm) (H) (W) (D)			price
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SIRCO AC series - Load break switches

125 - 3200A

SIRCO double break per pole achieved through its sliding bar contact system offers very high durability and short-circuit withstand.

3-pole switches

2600 3014	125A	63 kW	3	B3	load break switch	135	140	115	1 510.00
2600 3017	160A	80 kW	3	B3	load break switch	135	140	115	1 730.00
26AC 3020	200A	110 kW	3	B4	load break switch	160	180	115	3 600.00
26AC 3025	250A	110 kW	3	B4	load break switch	160	180	115	3 780.00
26AC 3031	315A	160 kW	3	B4	load break switch	160	180	115	4 460.00
26AC 3040	400A	220 kW	3	B5	load break switch	235	230	165	6 800.00
26AC 3050	500A	295 kW	3	B5	load break switch	235	230	165	8 630.00
26AC 3063	630A	375 kW	3	B5	load break switch	260	230	165	9 310.00
26AC 3080	800A	475 kW	3	B6	load break switch	321	280	166	11 900.00
26AC 3100	1000A	600 kW	3	B6	load break switch	321	280	166	20 200.00
26AC 3121	1250A	750 kW	3	B7	load break switch	288	372	166	23 700.00
26AC 3160	1600A	600 kW	3	B7	load break switch	288	372	166	30 200.00
2600 3200	2000A	710 kW	3	B8	load break switch	380	372	226	44 300.00
2600 3250	2500A	900 kW	3	B8	load break switch	380	372	226	53 100.00
2600 3320	3200A	900 kW	3	B8	load break switch	380	372	226	73 500.00

4-pole switches

26AC 4025	250A	132 kW	4	B4	load break switch	160	230	115	5 130.00
26AC 4040	400A	220 kW	4	B5	load break switch	235	290	160	8 740.00
26AC 4063	630A	280 kW	4	B5	load break switch	260	290	160	11 800.00
26AC 4080	800A	450 kW	4	B6	load break switch	321	360	166	17 600.00
26AC 4121	1250A	710 kW	4	B7	load break switch	288	492	166	34 300.00

Larger sizes (up to 5000A) available on request

Operating handles and shafts for above switches

IP65

type	handle	colour	description	frame	(A)	price
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External front operated door interlocking, padlockable in "off" position (3 padlocks)

1423 2111	S2	black	pistol grip ext. operating handle	B3 - 5	125 - 630A	477.00
1443 3111	S4	black	"T" grip ext. operating handle	B6 - 7	800 - 1600A	1 370.00
1453 8111	S5	black	"T" grip ext. operating handle	B8	2000 - 3200A	4 550.00
142D 2911	S2	black	as above (with metal padlock mech.)	B3 - 5	125 - 630A	849.00
144D 3911	S4	black	as above (with metal padlock mech.)	B6 - 7	800 - 1600A	1 900.00
1400 1032	S2	320 mm	extension shaft	B3 - 5	125 - 630A	243.00
1400 1050	S2	500 mm	extension shaft	B3 - 5	125 - 630A	480.00
1401 1532	S4	320 mm	extension shaft	B6 - 7	800 - 1600A	509.00
1401 1540	S4	400 mm	extension shaft	B6 - 7	800 - 1600A	966.00
2799 3018	S5	320 mm	extension shaft	B8	2000 - 3200A	1 310.00
1429 0000	guide	(permits engaging of misaligned shaft with handle)			S2/S4/S5	155.00

Direct mount handles (mounts directly onto front of switch)

2699 5042	B1	black	direct switch mount handle	B3	125 - 160A	375.00
1112 1111	J1	black	direct switch mount handle	B4 - 5	200 - 630A	421.00
1142 1111	J4	black	direct switch mount handle	B6 - 8	800 - 3200A	1 490.00
2799 7042	S5	black	direct switch mount handle	B8	2000 - 3200A	2 270.00

Auxiliary contacts for switches

2699 0031	1 C/Over	aux	auxiliary contact and support	B3 - 8	125 - 3200A	226.00
2699 0032	1 C/Over	aux	additional auxiliary contact	B3 - 8	125 - 3200A	570.00

Inter-phase barriers

(essential for use at 690VAC or in a polluted or dusty atmosphere)

2998 0033	barriers	—	phase barriers for switches (2pcs)	B3	125-160A	378.00
2998 0023	barriers	—	phase barriers for switches (2pcs)	B4	200- 315A	451.00
2998 0013	barriers	—	phase barriers for switches (2pcs)	B5	315 - 630A	521.00

Photovoltaic load break switches



21PV 3722
2119 1012



26PV 2016
1112 1111

DC-PV2

New



86P2 2100

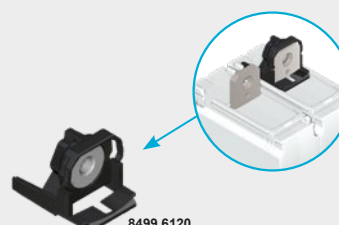


1423 2111

2119 3312



2119 0001



8499 6120

Load break switches for DC and PV applications

Can also be used for emergency power switching applications. INOSYS load break switches incorporate patented technology providing a breaking capacity of 1500 VDC in just 2-poles.

type	rated current	poles/ config.	nominal voltage	utilization cat. DC-21B PV2	frame size	description	price
SIRCO MC PV series - PV load break switches							
DC-21B							
21PV 3722	25A	2P+, 1P-	1000 VDC	• —	MC	DC load-break switch	1 540.00
21PV 4754	40A	2P+, 2P-	1000 VDC	• —	MC	DC load-break switch	2 040.00

SIRCO PV series - PV load break switches							
DC-21B							
26PV 2010	100A	1P+, 1P-	1000 VDC	• —	B4	DC load-break switch	2 920.00
26PV 2016	160A	1P+, 1P-	1000 VDC	• —	B4	DC load-break switch	3 240.00
26PV 2025	250A	1P+, 1P-	1000 VDC	• —	B4	DC load-break switch	3 770.00
26PV 2031	315A	1P+, 1P-	1000 VDC	• —	B4	DC load-break switch	4 270.00
26PV 4040	400A	2P+, 2P-	1000 VDC	• —	B4	DC load-break switch	5 930.00

INOSYS LBS series - PV load break switches

DC-21B and DC-PV2

INOSYS LBS DC a range of manually controlled load break switches can also be used for emergency power switching applications. INOSYS load break switches incorporate patented technology providing a breaking capacity of 750 VDC per pole and 1500 VDC in just 2-poles, significantly limiting power dissipation, in an exceptionally compact device.

INOSYS range meets or exceeds industry standards and certifications, ensuring compliance with all electrical safety regulations and guidelines.

- High performance power switching in a compact frame
- Safe & reliable operation
- Designed for harsh environments
- No derating up to 55°C, functional from -40 to +70°C
- Conformity to standards: IEC 60947-3, DC-21B & DC-PV2
- Direct position indication on the bar and visible contact with containment of the electrical arc
- Switching is independent on the speed of operation, ensuring safe operation under all conditions



Scan to watch

Single switch poles - on either side of operating mechanism

86P1 1017	160A	1P+, 1P-	1500 VDC	• •	F2	DC load-break switch	5 420.00
86P1 1026	250A	1P+, 1P-	1500 VDC	• •	F2	DC load-break switch	6 830.00
86P1 1032	315A	1P+, 1P-	1500 VDC	• •	F2	DC load-break switch	8 160.00
86P1 1041	400A	1P+, 1P-	1500 VDC	• •	F3	DC load-break switch	11 500.00
86P1 1064	630A	1P+, 1P-	1500 VDC	• •	F3	DC load-break switch	16 300.00

Double switch poles - on either side of operating mechanism

86P2 2081	800A	2P+, 2P-	1500 VDC	• •	F3	DC load-break switch	17 900.00
86P2 2100	1000A	2P+, 2P-	1500 VDC	• •	F3	DC load-break switch	20 400.00
86P2 2125	1250A	2P+, 2P-	1500 VDC	• —	F3	DC load-break switch	29 200.00
86P2 2160	1600A	2P+, 2P-	1500 VDC	• —	F3	DC load-break switch	37 600.00

Bridge pieces to couple up poles in series **8409 1600** supplied separately (see below)

Accessories - for above switches

Handles and shafts for above switches - external operation						frame size	(A)	
2119 3312	MC1	black	external operating handle			MC	25 - 40A	604.00
1423 2111	S2	black	door interlock/padlockable in OFF			B4	160 - 315A	477.00
742F 2111	S2	black	door interlock/padlockable in OFF			F2	160 - 630A	701.00
14AF 2111	S2L	black	door interlock/padlockable in OFF			F3	800 - 1600A	555.00
2107 0516	MC1	165 mm	□ 5	extension shaft		MC	25 - 40A	264.00
1400 1032	S2	320 mm	□ 10	extension shaft		B4/F2 - 3	160 - 1600A	243.00

Direct mount handles (mounts directly onto front of switch - no shaft required)

2119 1012	MC01	blue	direct switch mounting handle for			MC	25 - 40A	332.00
1112 1111	J1	black	direct switch mount handle for			B4	160-315A	421.00
8499 5022	E2	black	direct switch mounting handle for			F2	160 - 630A	272.00
8499 5032	E3	black	direct switch mounting handle for			F3	800 - 1600A	310.00

Auxiliary contacts for switches

2119 0001	aux.	1NO+1NC	auxiliary contact block for			MC	25 - 40A	726.00
2699 0031	aux.	1CO	auxiliary contact block for			B4	160 - 315A	226.00
8499 0001	aux.	1NO+1NC	auxiliary contact block for			F2 - 3	160 - 1600A	622.00

Terminal accessories

8499 6120	nut	support	retaining captive nut for switch			F2	(12 pack)	1 160.00
8499 6130	nut	support	retaining captive nut for switch			F3	(12 pack)	2 290.00
8409 1600	bridge	bar	to couple poles for switch (2 pcs)			F3	800 - 1600A	3 830.00

Enclosed isolator switches



2115 3401



2115 3403



ESW3080M



32LC 3163

Enclosed isolator switches (manually operated)

Socomec **COMO** series enclosed isolators are supplied in robust, heavy-duty ABS enclosures.

- Red/yellow handle, interlocked with front cover in ON position, padlockable (3 padlocks) in OFF position

type	AC-23A ≤ 400V	AC-23A ≤ 525V	poles	description	dimensions (mm) (H) (W) (D)			price
Enclosed isolator switches (manually operated)				ABS enclosure	IP65			
2115 3401	20A	7.5 kW	3	enclosed load-break switch	90	64	58	576.00
2115 3403	32A	11.0 kW	3	enclosed load-break switch	152	100	81	743.00
2115 3404	40A	18.5 kW	3	enclosed load-break switch	152	100	81	769.00
2115 3406	63A	22.0 kW	3	enclosed load-break switch	152	100	81	1 290.00
2115 4401	20A	7.5 kW	4	enclosed load-break switch	90	64	58	620.00
2115 4404	40A	18.5 kW	4	enclosed load-break switch	152	100	81	893.00
2115 4406	63A	22.0 kW	4	enclosed load-break switch	152	100	81	1 420.00

Auxiliary contacts (for above) enclosed switches

2113 4001	NO + NC	auxiliary	contact for enclosed switches	32 - 50A	220.00
2113 4002	2 NO	auxiliary	contact for enclosed switches	33 - 50A	309.00

Sheet metal enclosure Colour: BS/EN06 E53 (electric orange) IP65

- IP65 sheet metal enclosed load-break switches
- Door interlocking in "ON" position, padlockable (3 padlocks) in "OFF" position

3-pole switches

ESW3004M	40A	18.5 kW	3	enclosed load-break switch	350	250	170	2 720.00
ESW3006M	63A	30 kW	3	enclosed load-break switch	350	250	170	2 880.00
ESW3012M	125A	63 kW	3	enclosed load-break switch	350	250	170	3 810.00
ESW3016M	160A	80 kW	3	enclosed load-break switch	350	250	170	5 510.00
ESW3025M	250A	132 kW	3	enclosed load-break switch	550	400	220	7 270.00
ESW3040M	400A	220 kW	3	enclosed load-break switch	550	400	220	10 300.00
ESW3063M	630A	280 kW	3	enclosed load-break switch	550	400	220	11 100.00
ESW3080M	800A	450 kW	3	enclosed load-break switch	950	700	270	20 600.00
ESW3100M	1000A	560 kW	3	enclosed load-break switch	950	700	270	28 300.00
ESW3125M	1250A	710 kW	3	enclosed load-break switch	950	700	270	30 800.00

Larger sizes available on request

4-pole switches - 4th pole can be attached to above 40/63/125A switches (see below)

2200 1004	40A	1-pole	attachable 4th pole module	M1	40A	188.00
2200 1008	80A	1-pole	attachable 4th pole module	M2	63A	326.00
2200 1011	125A	1-pole	attachable 4th pole module	M3	125A	326.00

Safety enclosures Steel enclosures 50 - 630A IP65

Safety enclosed switches provide emergency stop and safety breaking for any low voltage electric circuit. They break "ON" and "OFF" load and provide safety isolation, for mechanical maintenance and safety isolation in the vicinity of any low-voltage final circuit.

General features:

- Made of Zinc galvanised sheet metal enclosure (2 mm thick) with chrome-plated Zamak hinges
- Bottom mounted gland plate and 2 internal + 1 external earthing connection
- Metallic side-mounted operating handle (red colour) padlockable in "OFF" position (3 padlocks)
- Equipped with a double locking system (door can also be padlocked closed in the "OFF" position)
- Visible breaking facility provided through a triplex window (made of 2 layer 3mm thick safety glass)
- Mechanical flag indicator (visible through triplex window) for indication of switch position status
- 2 sets of terminated auxiliary contacts NO + NC mounted on the double locking system internally
- Supplied with 2 hooded pushbuttons on right side of enclosure: (green 1NO / red 2NC contacts)
- Compliance with standards: IEC 603947-3

Advantages:

- Operator safety
- Quick and easy implementation
- Operating continuity
- Inductive load breaking (AC23)

The solution for:

- Iron, steel and mining industry
- Cement plants
- Paper / Saw mills
- Hydraulic power packs

type	motor rating		current rating	No. poles	description	dimensions (mm)			price
	400 VAC	525 VAC				(H)	(W)	(D)	
Safety enclosures		Colour: RAL 9001 and RAL 7032							
32LC 3105	15 kW	9 kW	50A	3	K1 safety encl. switch	300	200	150	19 800.00
32LC 3108	25 kW	15 kW	80A	3	K1 safety encl. switch	300	200	150	21 300.00
32LC 3120	110 kW	63 kW	200A	3	K1 safety encl. switch	400	300	200	49 300.00
32LC 3140	160 kW	157 kW	400A	3	K1 safety encl. switch	700	400	250	65 200.00
32LC 3163	270 kW	250 kW	630A	3	K1 safety encl. switch	900	500	300	91 200.00
32LC 3608	15 kW	25 kW	80A	3	K2 safety encl. switch	300	400	200	28 300.00

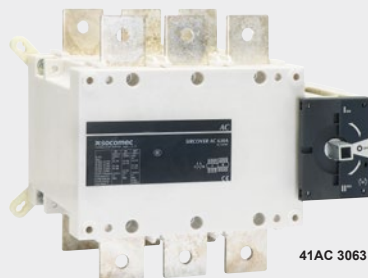
Changeover switches



2230 3004EM



4430 4012



41AC 3063



1443 3113



1132 1111

SIRCO series - Changeover switches

SIRCO manual changeover switches provide switching, source inversion and changeover under load for two power circuits with safety isolation double breaking per pole.

- Severe load duty categories (AC-23 AND AC-33)
- Conformity to Standards: IEC/EN 60947-3, IEC 60947-6-1, IS13947-3, UL, KEMA, RINA
- External front operating handle and shaft (*to be ordered separately*)

type	AC-23 A 415V (A)	no. of poles	frame size	description	dimensions (mm)			price
					(H)	(W)	(D)	

SIRCO M - Changeover switches

16A - 125A

- Modular DIN-rail mounting (*fits into standard distribution board with 45 mm cut-out*)
- Supplied with internal direct mount handle for external mount handle, (see accessories below)

2230 3001EM	16A	3-pole	M1	modular changeover switch	68	98	89	1 390.00
2230 3002EM	25A	3-pole	M1	modular changeover switch	68	98	89	1 500.00
2230 3004EM	40A	3-pole	M1	modular changeover switch	68	98	89	1 630.00
2230 3006EM	63A	3-pole	M1	modular changeover switch	76	105	89	1 980.00
2230 3008EM	80A	3-pole	M2	modular changeover switch	76	105	89	2 850.00
2230 3010EM	100A	3-pole	M3	modular changeover switch	125	159	100	3 770.00
2230 3011EM	125A	3-pole	M3	modular changeover switch	125	159	100	4 310.00

4th pole can be added to above switches (see page B-32)

Accessories for changeover switches

1473 1113	S00	I-O-II		external for ch/over switches	M1 - 2	16 - 80A		267.00
1473 0113	S00	I-O-II		external for ch/over switches	M3	100 - 125A		353.00
1407 0532	shaft	320 mm	□ 5	external shaft for switch	M1 - 2	16 - 80A		125.00
1409 0632	shaft	320 mm	□ 6	external shaft for switch	M3	100 - 125A		160.00
2299 3005	bridge	3-pole		bridging kit for ch/over switches	M1	16 - 40A		913.00
2299 4005	bridge	4-pole		bridging kit for ch/over switches	M1	16 - 40A		1 080.00
2299 3009	bridge	3-pole		bridging kit for ch/over switches	M2	63 - 80A		1 530.00
2299 4009	bridge	4-pole		bridging kit for ch/over switches	M2	63 - 80A		1 840.00

SIRCO VM1 - Changeover switches

100A - 125A

- DIN-rail, chassis or modular panel mounting
- Double visible breaking

4430 4010	100A	4-pole		modular changeover switch	95	215	97	5 130.00
4430 4012	125A	4-pole		modular changeover switch	95	215	97	6 200.00
4499 4006	bridge	4 pole		insulated 4P bridging bar set		for VM1 switches		2 320.00
4439 5012	handle	I-O-II		direct switch mount handle		for VM1 switches		425.00
1413 2113	handle	I-O-II		external door interlock handle		for VM1 switches		703.00
1402 0832	shaft	320 mm		extension shaft		for VM1 switches		548.00

SIRCOVER - Manual changeover switches

125A - 3200A

- High thermal and dynamic withstand, high electrical and mechanical endurance
- Severe utilization categories (AC-22 and AC-23)
- Handles and shafts (*to be ordered separately-see below*)

41AC 3016	160A	3-pole	B3	manual changeover switch	135	221	173	9 090.00
41AC 3020	200A	3-pole	B3	manual changeover switch	135	221	173	10 600.00
41AC 3025	250A	3-pole	B4	manual changeover switch	160	262	173	12 500.00
41AC 3040	400A	3-pole	B4	manual changeover switch	170	262	173	20 000.00
41AC 3063	630A	3-pole	B5	manual changeover switch	260	319	225	26 300.00
41AC 3080	800A	3-pole	B6	manual changeover switch	321	386	298	37 400.00
41AC 3100	1000A	3-pole	B6	manual changeover switch	321	386	298	43 500.00
41AC 3120	1250A	3-pole	B6	manual changeover switch	330	386	298	47 500.00
41AC 3160	1600A	3-pole	B7	manual changeover switch	228	478	298	87 800.00
41AC 4016	160A	4-pole	B3	manual changeover switch	135	251	173	12 300.00
41AC 4025	250A	4-pole	B4	manual changeover switch	160	312	173	17 600.00
41AC 4040	400A	4-pole	B4	manual changeover switch	170	312	173	30 900.00
41AC 4063	630A	4-pole	B5	manual changeover switch	260	379	225	34 300.00
41AC 4080	800A	4-pole	B6	manual changeover switch	320	466	298	54 700.00
41AC 4120	1250A	4-pole	B6	manual changeover switch	330	466	298	67 100.00
41AC 4160	1600A	4-pole	B7	manual changeover switch	288	598	298	125 000.00

Larger sizes up to 3200A available on request

Operating handles and shafts for above changeover switches

1423 2113	S2	black	I-O-II	ext. operating handle	B3-5	160 - 630A		997.00
1443 3113	S4	black	I-O-II	ext. operating handle	B6-7	800 - 1600A		2 540.00
1400 1032	S2	320 mm	□ 10	ext. shaft for switch	B3-5	160 - 630A		243.00
1401 1532	S4	320 mm	□ 15	ext. shaft for switch	B6-7	800 - 1600A		509.00
1122 1111	J2	black		direct switch mounting handle	B3-5	160 - 630A		462.00
1132 1111	J3	black		direct switch mounting handle	B6-5	800 - 1600A		1 490.00

Bypass switches

SIRCOVER series - Manual bypass switches

SIRCOVER Bypass are a combination of three interlocked switches enabling the use with 3+6 or 4+8 poles from 160A to 1600A.

General features:

- Severe load duty categories (AC-23 AND AC-33)
- Conformity to Standards: IEC/EN 60947-3, IEC 60947-6-1, IS13947-3, UL, KEMA, RINA
- External IP65 front operating handle and shaft (*to be ordered separately*)

type	AC-23 A 415V (A)	No. poles	frame size	description	dimensions (mm) (H) (W) (D)			price
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SIRCOVER series - Manual bypass switches

160-1600A

3-pole manual bypass

41AC 7016	160A	3-pole	B3	man. operated bypass switch	15	221	268	17 700.00
41AC 7020	200A	3-pole	B3	man. operated bypass switch	135	221	268	22 600.00
41AC 7025	250A	3-pole	B4	man. operated bypass switch	160	262	268	26 700.00
41AC 7040	400A	3-pole	B4	man. operated bypass switch	170	262	268	37 500.00
41AC 7063	630A	3-pole	B5	man. operated bypass switch	260	319	387	49 100.00
41AC 7080	800A	3-pole	B6	man. operated bypass switch	320	386	508	68 000.00
41AC 7120	1250A	3-pole	B6	man. operated bypass switch	320	386	508	115 000.00
41AC 7160	1600A	3-pole	B7	man. operated bypass switch	288	478	508	152 000.00

4 pole manual bypass switches

41AC 9016	160A	4-pole	B3	man. operated bypass switch	135	251	268	20 700.00
41AC 9025	250A	4-pole	B4	man. operated bypass switch	160	312	268	28 200.00
41AC 9040	400A	4-pole	B4	man. operated bypass switch	170	312	268	40 200.00
41AC 9063	630A	4-pole	B5	man. operated bypass switch	260	379	387	60 700.00
41AC 9080	800A	4-pole	B6	man. operated bypass switch	320	466	508	90 700.00
41AC 9120	1250A	4-pole	B6	man. operated bypass switch	320	466	508	148 000.00
41AC 9160	1600A	4-pole	B7	man. operated bypass switch	288	598	508	164 000.00

Handles and shafts for bypass switches - (door interlocking padlockable in "O" position)

1423 2113	S2	black	I-O-II	ext. operating handle	B3	160 - 200A	997.00
1433 3113	S3	black	I-O-II	ext. operating handle	B4-5	250 - 630A	2 010.00
4199 7146	V2	black	I-O-II	ext. operating handle	B6-7	800 - 1600A	7 270.00
1400 1032	S2	320 mm	□ 10	extension shaft for switch	B3	160 - 200A	243.00
1401 1532	S3	320 mm	□ 15	extension shaft for switch	B4-5	250 - 630A	509.00
2799 3018	V2	320 mm	□ 30	extension shaft for switch	B6-7	800 - 1600A	1 310.00
1429 0000	guide	(permits engaging of misaligned shaft with handle)				S2/S3	155.00
1122 1111	J2	black		direct switch mounting handle	B3	160 - 200A	462.00
1132 1111	J3	black		direct switch mounting handle	B4-5	250 - 630A	1 490.00
1142 1111	J4	black		direct switch mounting handle	B6-7	800 - 1600A	1 490.00

Accessories for all changeover and bypass switches

type	poles	description	frame size	(A)	price
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Auxiliary contacts for switches

4109 0021	1 C/Over	aux	auxiliary contact for switches	(all sizes)	487.00
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Bridging bar sets for changeover and bypass switches

- For creating a common connection between source I & II, on top or bottom side of the SIRCOVER
- For SIRCOVER bypass, two sets of bridging bars are required

4109 0019	bridge	1-pole	bridging bar for ch/over switches	B3	100/200A	341.00
4109 0025	bridge	1-pole	bridging bar for ch/over switches	B4	250A	392.00
4109 0039	bridge	1-pole	bridging bar for ch/over switches	B4	400A	490.00
4109 0063	bridge	1-pole	bridging bar for ch/over switches	B5	630A	968.00
4109 0080	bridge	1-pole	bridging bar for ch/over switches	B6	800/1000A	1 420.00
4109 0120	bridge	1-pole	bridging bar for ch/over switches	B6	1250A	2 300.00
4109 0160	bridge	1-pole	bridging bar for ch/over switches	B7	1600A	3 190.00

For 3-pole device order 3 bridging bars, for a 4-pole device order 4 bridging bars

For optimal performance, it is recommended to use original bridging bars from Socomec

Terminal shrouds for changeover and bypass switches

2694 3014	shroud	3-pole	t/parent terminal protection shroud	B3	160/200A	588.00
2694 3021	shroud	3-pole	t/parent terminal protection shroud	B4	250/400A	664.00
2694 3051	shroud	3-pole	t/parent terminal protection shroud	B5	630A	991.00
2694 4014	shroud	4-pole	t/parent terminal protection shroud	B3	160/200A	717.00
2694 4021	shroud	4-pole	t/parent terminal protection shroud	B4	250/400A	903.00
2694 4051	shroud	4-pole	t/parent terminal protection shroud	B5	630A	1 330.00
1509 3080	screen	3-pole	t/parent terminal protection screen	B6	800/1250A	1 970.00
1509 4080	screen	4-pole	t/parent terminal protection screen	B6	800/1250A	2 270.00
1509 3160	screen	3-pole	t/parent terminal protection screen	B7	1600A	2 420.00
1509 4160	screen	4-pole	t/parent terminal protection screen	B7	1600A	2 780.00



41AC 7063



1433 3113



2799 3018



4109...



2694 4051

Enclosed changeover switches



ECO3009P



ECO...

Enclosed manual changeover switches (IP65)

type	AC-31 B 415V (A)	enclosure	no. poles	description	dimensions (mm)			price
					(H)	(W)	(D)	

SIRCO-M - Changeover switches

Polycarbonate housing (IP65)

- Supplied with internal direct mount handle
- Distribution board style enclosure with transparent door

ECO3002P	25A	polycarb	3-pole	enclosed ch/over switch	210	237	114	2 210.00
ECO3004P	40A	polycarb	3-pole	enclosed ch/over switch	210	237	114	2 340.00
ECO3006P	63A	polycarb	3-pole	enclosed ch/over switch	210	237	114	2 690.00
ECO3009P	100A	polycarb	3-pole	enclosed ch/over switch	302	310	151	4 800.00
ECO3012P	125A	polycarb	3-pole	enclosed ch/over switch	302	310	151	5 300.00

Sheet metal enclosed (IP65)

- With external door interlocking padlockable handle

ECO3004M	40A	metal	3-pole	enclosed ch/over switch	350	250	170	4 330.00
ECO3006M	63A	metal	3-pole	enclosed ch/over switch	350	250	170	4 670.00
ECO3009M	100A	metal	3-pole	enclosed ch/over switch	350	250	170	6 170.00
ECO3012M	125A	metal	3-pole	enclosed ch/over switch	350	250	170	7 610.00

4 pole switches can be made by adding clip-on 4th poles (see page B-32)

SIRCOVER - Changeover switches

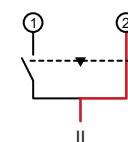
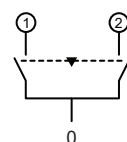
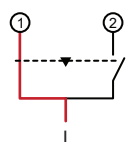
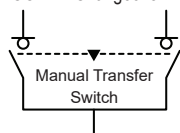
- With external door interlocking padlockable handle
- Supplied complete with bridge bars (output side)
- Sheet metal enclosed

ECO3016M	160A	metal	3-pole	enclosed ch/over switch	550	400	220	14 200.00
ECO3025M	250A	metal	3-pole	enclosed ch/over switch	550	400	220	17 700.00
ECO3040M	400A	metal	3-pole	enclosed ch/over switch	850	600	270	28 000.00
ECO3063M	630A	metal	3-pole	enclosed ch/over switch	850	600	270	36 200.00
ECO3080M	800A	metal	3-pole	enclosed ch/over switch	900	600	450	57 100.00
ECO3125M	1250A	metal	3-pole	enclosed ch/over switch	900	600	450	70 000.00
ECO3160M	1600A	metal	3-pole	enclosed ch/over switch	900	600	450	113 000.00
ECO4016M	160A	metal	4-pole	enclosed ch/over switch	550	400	220	17 700.00
ECO4025M	250A	metal	4-pole	enclosed ch/over switch	550	400	220	24 000.00
ECO4040M	400A	metal	4-pole	enclosed ch/over switch	850	600	270	39 300.00
ECO4063M	630A	metal	4-pole	enclosed ch/over switch	850	600	270	45 200.00
ECO4080M	800A	metal	4-pole	enclosed ch/over switch	900	600	450	75 800.00
ECO4125M	1250A	metal	4-pole	enclosed ch/over switch	900	600	450	91 900.00
ECO4160M	1600A	metal	4-pole	enclosed ch/over switch	900	600	450	164 000.00

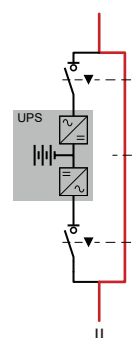
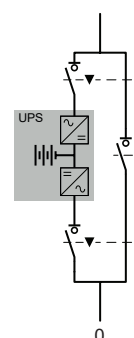
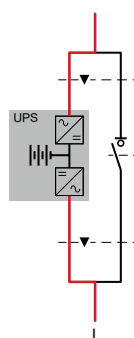
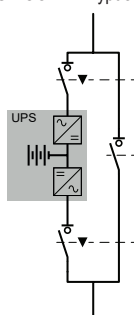
For enclosed automatic changeover panels, see page B-43

Operating principle

SIRCOVER Changeover I-0-II



SIRCOVER Bypass I-0-II



Motorised changeover switches



9505 4008



9513 4008



9509 4013



9594 4012

ATyS S - Motorised changeover switches (4-pole)

ATyS S is 4-pole remotely operated transfer switch with positive break indication, enabling the on-load transfer of two three-phase supplies via remote volt-free contacts, an external automatic controller, pulse logic, or a switch.

For use in low voltage power supply systems where a brief interruption of the load supply is acceptable during transfer.

Fully integrated cost-effective solution to switch between main and an alternative power supply for loads of up to 125A: <90kVA / 3 phase 415 VAC.

General features:

- Two switches mounted back to back, motorised (*easily replaceable motors*)
- Fail-safe mechanical interlock
- Padlockable in the "OFF" position
- Manual override facility (*handle supplied*)
- Wide-band AC control voltage $\pm 30\%$
- Can be configured for "impulse" or "contactor" logic
- Energy-efficient power consumption is minimal and only required during transfer operation
- Fully independent position auxiliary contacts one for each position (I / O / II)

AC 32B IEC 60947-6-1, GB 14048-11 (*transfer switch standards*)

AC 22A IEC60947-3 (*load break switch standard*)

type	AC-31 B 415V (A)	poles	supply voltage	description	price
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ATyS S - Motorised changeover switches (H) 144 x (W) 198 x (D) 181 mm

230 VAC power supply

9503 4004	40A	4-pole	230 VAC	motorised changeover switch	8 020.00
9503 4006	63A	4-pole	230 VAC	motorised changeover switch	8 450.00
9503 4008	80A	4-pole	230 VAC	motorised changeover switch	10 800.00
9503 4010	100A	4-pole	230 VAC	motorised changeover switch	12 100.00
9503 4012	125A	4-pole	230 VAC	motorised changeover switch	13 100.00

12 VDC power supply

9505 4006	63A	4-pole	12 VDC	motorised changeover switch	4 800.00
9505 4008	80A	4-pole	12 VDC	motorised changeover switch	9 320.00
9505 4010	100A	4-pole	12 VDC	motorised changeover switch	12 300.00
9505 4012	125A	4-pole	12 VDC	motorised changeover switch	12 600.00

24/48 VDC power supply

9506 4004	40A	4-pole	24/48 VDC	motorised changeover switch	6 920.00
9506 4006	63A	4-pole	24/48 VDC	motorised changeover switch	7 600.00
9506 4008	80A	4-pole	24/48 VDC	motorised changeover switch	10 700.00
9506 4010	100A	4-pole	24/48 VDC	motorised changeover switch	10 700.00
9506 4012	125A	4-pole	24/48 VDC	motorised changeover switch	11 800.00

ATyS d S - Dual power supply (2 x 230 VAC)

Incorporates supply redundancy without the need for additional wiring by integrating a double supply (2 *independent supplies*) directly within the product.

9513 4004	40A	4-pole	2 x 230 VAC	motorised changeover switch	8 790.00
9513 4006	63A	4-pole	2 x 230 VAC	motorised changeover switch	11 100.00
9513 4008	80A	4-pole	2 x 230 VAC	motorised changeover switch	11 700.00
9513 4010	100A	4-pole	2 x 230 VAC	motorised changeover switch	12 300.00
9513 4012	125A	4-pole	2 x 230 VAC	motorised changeover switch	15 700.00

Accessories for ATyS S switches

Bridging bars

9509 4013	bridge	4-pole	power terminal bridging bar (<i>top or bottom</i>)	436.00
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Voltage tap

9599 4001	terminal	control voltage tapping kit (<i>from power terminals</i>)	443.00
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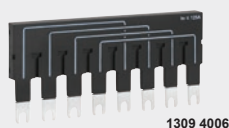
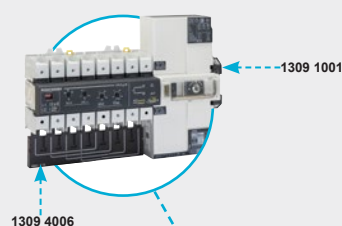
Terminal shroud

9594 4012	shroud	4-pole	supply side terminal protection shrouds	389.00
9594 9012	shroud	4-pole	load side terminal protection shrouds	389.00

Spare motor units

9505 5012	motor	12 VDC	spare motor for above switches	8 800.00
9506 5012	motor	24/48 VDC	spare motor for above switches	8 410.00
9513 5012	motor	2 x 230 VAC	spare motor for above switches	11 700.00

Automatic changeover switches



ATyS M - Motorised changeover switches

ATyS M modular motorised changeover switches with positive break indication enabling on-load changeover switching of two supply sources in automatic or manual mode.

General features:

- Modular format to easily mount into standard distribution boards
- Provide rapid switching (< 90ms) excellent dynamic withstand and long life
- Auto or manual operation (*with incorporated Allen key*) padlockable in "O" position
- Supply only active during transfer, unaffected by network voltage fluctuations
- Fully compliant with IEC 60947-6-1 (*standard governing transfer switches*)

type	AC-31 B 415V (A)	poles	supply voltage	description	price
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ATyS d M - Motorised changeover switches (H) 245 x (W) 2P 235/4P 340 x (D) 74 mm

9323 2006	63A	2-pole	230 VAC	motorised changeover switch	14 600.00
9323 2008	80A	2-pole	230 VAC	motorised changeover switch	15 700.00
9323 4006	63A	4-pole	230 VAC	motorised changeover switch	17 100.00
9323 4008	80A	4-pole	230 VAC	motorised changeover switch	17 900.00
9323 4010	100A	4-pole	230 VAC	motorised changeover switch	19 600.00
9323 4012	125A	4-pole	230 VAC	motorised changeover switch	20 600.00
9323 4016	160A	4-pole	230 VAC	motorised changeover switch	24 200.00

ATyS g M - Automatic changeover switches (H) 245 x (W) 2P 235/4P 340 x (D) 74 mm

The ATyS g M switch monitors the supply from both mains and generator. On mains failure, the switch provides an output to start generator and once the generator voltage reaches the correct level, switches over to the generator supply until mains is restored, causing the switch to change back to the mains supply and stop the generator.

Potentiometers for:

Nominal voltage configuration
Voltage and frequency threshold configuration
Operating cycle configuration

DIP- switches for:

50 or 60Hz, single or 3-phase
Delay in "O" position during I-O transfer cycles

LED indication of:

Supply source availability, automatic mode, fault

External command inputs:

Manual change of supply from emergency to main source
Remote test on-load (*or priority change*)
1NO output relay for generator start/stop command

9353 2006	63A	2-pole	230 VAC	automatic changeover switch	22 700.00
9353 2008	80A	2-pole	230 VAC	automatic changeover switch	23 100.00
9354 4006	63A	4-pole	230 VAC	automatic changeover switch	27 300.00
9354 4008	80A	4-pole	230 VAC	automatic changeover switch	27 600.00
9354 4010	100A	4-pole	230 VAC	automatic changeover switch	28 300.00
9354 4012	125A	4-pole	230 VAC	automatic changeover switch	30 400.00
9354 4016	160A	4-pole	230 VAC	automatic changeover switch	34 400.00

ATyS p M - Automatic changeover switch (digital display and settings)

As the ATyS g M above, but configurable for network/genset or network/network (*with or without priority*). Monitoring parameters configured via pushbuttons and a digital display.

- LED indicator: power on, supply status, position of switch, auto/manual/test mode, fault
- 3 configurable inputs and 3 x outputs
- 1 configurable bi-stable output relay for generator start/stop command

9364 4006	63A	4-pole	230 VAC	automatic changeover switch	35 200.00
9364 4008	80A	4-pole	230 VAC	automatic changeover switch	39 900.00
9364 4010	100A	4-pole	230 VAC	automatic changeover switch	42 700.00
9364 4012	125A	4-pole	230 VAC	automatic changeover switch	45 400.00
9364 4016	160A	4-pole	230 VAC	automatic changeover switch	46 700.00

Above range with RS-485 communication available on request

Accessories for all ATyS M switches

Bridging bars (plug-in) (for incoming or outgoing side of switch)

- Provides a common connection between switches I & II on the incoming or outgoing side of the ATyS M without reducing terminal capacity

1309 2006	63 - 125A	2-pole	plug-in	fully insulated plug-in bridging bar	1 470.00
1309 4006	63 - 125A	4-pole	plug-in	fully insulated plug-in bridging bar	2 430.00
1309 4016	160A	4-pole	plug-in	fully insulated plug-in bridging bar	3 670.00
1399 4006	tap	1-pole		tap-off terminal for power supply	1 040.00
2294 4016	shroud	2-pole		terminal protection shroud	270.00
1309 1001	auxiliary	contact	1NO+1NC	for each position (I-O-II)	2 210.00

Motorised & automatic changover switches



9523 3120



9523 4016



9553 4016



ATyS - Motorised and automatic changeover switches

Three-phase motorised changeover switches with positive break indication, enabling the on-load transfer of two different three-phase supplies.

General features:

- Wide-band AC control voltage $\pm 20\%$
- Fail-safe mechanical interlock
- Padlockable in the "OFF" position
- Fully independent position auxiliary contacts one for each position (I / O / II)

type	AC-31 B 415V (A)	poles	frame size	description	dimensions (mm)			price
					(H)	(W)	(D)	

ATyS r - Motorised changeover switches

supply: 230 VAC

Three-phase remotely operated motorised transfer switches, 3 or 4-poles, with positive break indication, enable the on-load transfer of two three-phase power supplies via remote volt-free contacts, from an external automatic controller using pulse logic, or a switch.

3-pole switches

9523 3016	160A	3-pole	B3	motorised ch/over switch	135	287	244	18 200.00
9523 3025	250A	3-pole	B4	motorised ch/over switch	160	328	244	20 700.00
9523 3040	400A	3-pole	B4	motorised ch/over switch	170	328	244	33 100.00
9523 3063	630A	3-pole	B5	motorised ch/over switch	260	377	321	36 100.00
9523 3080	800A	3-pole	B6	motorised ch/over switch	370	504	440	56 000.00
9523 3100	1000A	3-pole	B6	motorised ch/over switch	370	504	440	58 400.00
9523 3120	1250A	3-pole	B6	motorised ch/over switch	370	504	440	70 900.00
9523 3160	1600A	3-pole	B7	motorised ch/over switch	380	596	440	99 200.00
9523 3200	2000A	3-pole	B8	motorised ch/over switch	380	596	569	151 000.00
9523 3250	2500A	3-pole	B8	motorised ch/over switch	380	596	569	176 000.00
9523 3320	3200A	3-pole	B8	motorised ch/over switch	380	596	569	242 000.00

4-pole switches

9523 4016	160A	4-pole	B3	motorised ch/over switch	135	317	244	19 600.00
9523 4025	250A	4-pole	B4	motorised ch/over switch	160	395	244	23 200.00
9523 4040	400A	4-pole	B4	motorised ch/over switch	170	395	244	39 500.00
9523 4063	630A	4-pole	B5	motorised ch/over switch	260	454	321	48 200.00
9523 4080	800A	4-pole	B6	motorised ch/over switch	321	584	440	69 200.00
9523 4100	1000A	4-pole	B6	motorised ch/over switch	321	584	440	72 900.00
9523 4120	1250A	4-pole	B6	motorised ch/over switch	330	584	440	88 400.00
9523 4160	1600A	4-pole	B7	motorised ch/over switch	288	716	440	146 000.00
9523 4200	2000A	4-pole	B8	motorised ch/over switch	380	716	569	182 000.00
9523 4250	2500A	4-pole	B8	motorised ch/over switch	380	716	569	214 000.00
9523 4320	3200A	4-pole	B8	motorised ch/over switch	380	716	569	314 000.00

ATyS g - Automatic changeover switches

supply: 230 VAC

Automatic changeover switches for transformer/generator applications. An integrated controller provides all necessary functions, including monitoring the voltage and frequency of both sources providing on-load changeover switching between two power supply sources.

General features:

- Integrated generator on-load and off-load test function
- Integrated dual power supply (2 independent supplies within the switch)
- Optional remote monitoring via additional RS485 communication module (4825 0092), see B-42

ATyS g automatic changeover switches

3-pole switches

9553 3016	160A	3-pole	B3	automatic ch/over switch	135	287	244	38 000.00
9553 3025	250A	3-pole	B4	automatic ch/over switch	160	328	244	44 700.00
9553 3040	400A	3-pole	B4	automatic ch/over switch	170	328	244	53 400.00
9553 3063	630A	3-pole	B5	automatic ch/over switch	260	377	321	61 900.00
9553 3080	800A	3-pole	B6	automatic ch/over switch	321	504	392	104 000.00
9553 3100	1000A	3-pole	B6	automatic ch/over switch	321	504	392	111 000.00
9553 3120	1250A	3-pole	B6	automatic ch/over switch	330	504	392	122 000.00
9553 3160	1600A	3-pole	B7	automatic ch/over switch	288	596	392	149 000.00

4-pole switches

9553 4016	160A	4-pole	B3	automatic ch/over switch	135	317	244	42 100.00
9553 4025	250A	4-pole	B4	automatic ch/over switch	160	395	244	52 900.00
9553 4040	400A	4-pole	B4	automatic ch/over switch	170	395	244	69 900.00
9553 4063	630A	4-pole	B5	automatic ch/over switch	260	454	321	77 300.00
9553 4080	800A	4-pole	B6	automatic ch/over switch	321	584	392	137 000.00
9553 4100	1000A	4-pole	B6	automatic ch/over switch	321	584	392	149 000.00
9553 4120	1250A	4-pole	B6	automatic ch/over switch	330	584	392	159 000.00
9553 4160	1600A	4-pole	B7	automatic ch/over switch	288	716	392	192 000.00

Larger sizes (up to 3200A) available on request

Changeover switch accessories

Accessories for ATyS changeover switches

type	poles	description	for switch frame	(A)	price
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Bridging bars for switches

• Supplied with all mounting accessories for bridging power terminals on the outgoing side of the switch

4109 0019	bridge	1-pole	bridging bar for ch/over switches	B3	160A	341.00
4109 0025	bridge	1-pole	bridging bar for ch/over switches	B4	250A	392.00
4109 0039	bridge	1-pole	bridging bar for ch/over switches	B4	400A	490.00
4109 0063	bridge	1-pole	bridging bar for ch/over switches	B5	630A	968.00
4109 0080	bridge	1-pole	bridging bar for ch/over switches	B6	800 - 1000A	1 420.00
4109 0120	bridge	1-pole	bridging bar for ch/over switches	B6	1250A	2 300.00
4109 0160	bridge	1-pole	bridging bar for ch/over switches	B7	1600A	3 190.00

For 3-pole device order 3 bridging bars, for a 4-pole device order 4 bridging bars

For optimal performance, it is recommended to use original bridging bars from Socomec

Voltage sensing and power supply harness

The ATyS g voltage sensing kit is available as an accessory and is designed to tap directly off the power section on Switch I and Switch II terminals without the need to add protection fuses.

The sensing kit is designed with optimised cable lengths and utilises silicon conductors held safely in an isolated mechanical support. The kit can be fitted on the top or bottom of the switch.

1559 3012	harness	3-pole	voltage sense and p/supply harness	B3	160A	2 400.00
1559 3025	harness	3-pole	voltage sense and p/supply harness	B4	250A	2 810.00
1559 3040	harness	3-pole	voltage sense and p/supply harness	B4	400A	3 180.00
1559 3063	harness	3-pole	voltage sense and p/supply harness	B5	630A	3 400.00
1559 3080	harness	3-pole	voltage sense and p/supply harness	B6	800-1000A	4 110.00
1559 3120	harness	3-pole	voltage sense and p/supply harness	B6	1250A	4 200.00
1559 3160	harness	3-pole	voltage sense and p/supply harness	B7	1600A	4 250.00
1559 4012	N-right	4-pole	voltage sense and p/supply harness	B3	160A	2 510.00
1559 4025	N-right	4-pole	voltage sense and p/supply harness	B4	250A	2 940.00
1559 4040	N-right	4-pole	voltage sense and p/supply harness	B4	400A	3 450.00
1559 4063	N-right	4-pole	voltage sense and p/supply harness	B5	630A	3 640.00
1559 4080	N-right	4-pole	voltage sense and p/supply harness	B6	800-1000A	4 420.00
1559 4120	N-right	4-pole	voltage sense and p/supply harness	B6	1250A	4 450.00
1559 4160	N-right	4-pole	voltage sense and p/supply harness	B6	1600A	4 470.00

Power supplies

1599 5112	24 VDC - 230 VAC power supply to operate switches with DC	all ATyS r/g/p	14 700.00
1599 4001	dual power supply permits remote transfer to any position	all ATyS r	3 440.00

Spare motor units

The motor units of the ATyS r and g are easy to replace in case there is a problem, even when on-load.

9509 5020	spare motor for ATyS switches	B3	160A	16 300.00
9509 5040	spare motor for ATyS switches	B4	250-400A	19 000.00
9509 5063	spare motor for ATyS switches	B5	630A	25 100.00
9509 5120	spare motor for ATyS switches	B6	800-1250A	38 500.00
9509 5160	spare motor for ATyS switches	B7	1600A	40 900.00

Auxiliary contacts for switches

• Pre-breaking and signalling of positions I and II

1599 0502	1 C/O	aux	auxiliary contact for switches	B3-5	160-630A	2 170.00
1599 0532	1 C/O	aux	auxiliary contact for switches	B6-8	800-3200A	2 440.00

Terminal shrouds and mounting accessories

Terminal shrouds

2694 3014	shroud	3-pole	terminal protection shroud	B3	160A	588.00
2694 3021	shroud	3-pole	terminal protection shroud	B4	250 - 400A	664.00
2694 3051	shroud	3-pole	terminal protection shroud	B5	630A	991.00
2694 4014	shroud	4-pole	terminal protection shroud	B3	160A	717.00
2694 4021	shroud	4-pole	terminal protection shroud	B4	250 - 400A	903.00
2694 4051	shroud	4-pole	terminal protection shroud	B5	630A	1 330.00

Door mounting frame (to permit access to controller from front panel door)

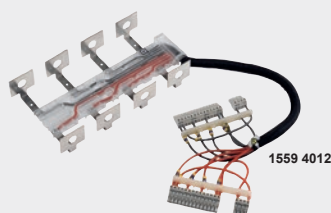
1529 0012	frame	3/4-pole	door protective frame for ATyS r	B3-5	160-630A	955.00
1529 0080	frame	3/4-pole	door protective frame for ATyS r	B6-8	800-3200A	1 090.00
1539 0012	frame	3/4-pole	door protective frame for ATyS g	B3-5	160-630A	1 530.00
1539 0080	frame	3/4-pole	door protective frame for ATyS g	B6-7	800-1600A	1 620.00
1509 0001	10 mm		mounting spacers (stackable) to raise switch		(2 per set)	499.00

Communication module

4825 0092			RS-485 MODBUS communication		for ATyS g	1 500.00
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4109...



1559 4012



9509 5120



2694 4051

Enclosed automatic changeover switches

Enclosed automatic changeover panels

All the features of the ATyS ranges of switches build into an IP65 enclosure, with all wiring, bridging bars and fuses for ease of installation and time-saving.

ATyS p M - Enclosed automatic changeover switches 63 - 160A

ATyS p M Automatic Transfer Switching Equipment (ATSE) is designed for use in power systems for the safe transfer of a load supply between a normal and an alternate source.

The changeover is done in open transition and with minimum supply interruption during transfer ensuring full compliance with IEC 60947-6-1 and other international TSE standards.

The ATyS p M is a full load break (*switch type*) derived transfer switching equipment where the main components are proven technology devices, also fulfilling requirements in IEC 60947-3 standards.

ATyS p M - Transfer switches ensure:

- Intuitive HMI for emergency / local operation
- Integrated and robust switch disconnection
- Programmable secure motorisation controls interface
- Constant pressure on the contacts non affected by network voltage
- Power control and safety between a normal and an alternate source
- Stable positions (I – 0 – II) non affected by typical vibration and shocks
- ATS configuration through a keypad as well as through EasyConfig programming software

type	AC-31 B 415V (A)	poles	description	dimensions (mm)			price
				(H)	(W)	(D)	
General features:							
• A complete product delivered as a fully assembled and tested solution • An inherent failsafe mechanical interlock • Built in padlocking facility (<i>configurable</i>) • Colour: BS/EN06 E53 (<i>electric orange</i>)							
EAC4006P	63A	4-pole	enclosed ch/over switch	550	400	220	44 600.00
EAC4008P	80A	4-pole	enclosed ch/over switch	550	400	220	49 500.00
EAC4010P	100A	4-pole	enclosed ch/over switch	550	400	220	51 400.00
EAC4016P	160A	4-pole	enclosed ch/over switch	550	400	220	57 900.00

ATyS g - Enclosed automatic changeover switches 250 - 1600A

ATyS g Automatic Transfer Switching Equipment (ATSE) is designed for use in power systems for the safe transfer of a load supply between a normal and an alternate source.

The changeover is done in open transition and with minimum supply interruption during transfer ensuring full compliance with IEC 60947-6-1, GB 14048-11 and other international TSE standards as listed.

The ATyS g is a full load break (*switch type*) derived transfer switching equipment where the main components are proven technology devices also fulfilling requirements in IEC 60947-3 standards.

ATyS g - Motorised source changeover switches:

- Integrated and robust switch disconnection
- Integrated switch position auxiliary contacts
- Intuitive HMI for emergency / local operation
- Constant pressure on the contacts is not effected by network voltage
- Minimal downtime with the possibility to perform easy maintenance
- Straightforward ATS configuration for easy and fast commissioning
- Power control and safety between a normal and an alternate source
- Stable positions (I – 0 – II) non affected by typical vibration and shocks
- Quick, easy and safe dual "on-load" emergency manual operation
(*Manual operation is functional with and without the motorization in place*)

type	AC-31 B 415V (A)	poles	description	dimensions (mm)			price
				(H)	(W)	(D)	
General features:							
• A complete product delivered as a fully assembled and tested solution • An inherent failsafe mechanical interlock • Built-in padlocking facility (<i>configurable</i>) • Colour: BS/EN06 E53 (<i>electric orange</i>)							
EAC4025G	250A	4-pole	enclosed ch/over switch	950	700	330	65 300.00
EAC4040G	400A	4-pole	enclosed ch/over switch	950	700	330	82 600.00
EAC4063G	630A	4-pole	enclosed ch/over switch	1200	900	600	107 000.00
EAC4080G	800A	4-pole	enclosed ch/over switch	1200	900	600	168 000.00
EAC4100G	1000A	4-pole	enclosed ch/over switch	1200	900	600	180 000.00
EAC4125G	1250A	4-pole	enclosed ch/over switch	1200	900	600	194 000.00
EAC4160G	1600A	4-pole	enclosed ch/over switch	1200	900	600	230 000.00



EAC4006P



EAC4040G

Fuse combination switches



3631 3003



3841 3003



3821 3063



1443 3111



1401 0540



3999 0600

FUSERBLOC - Fuse combination switches

FUSERBLOC are manually operated fuse combination switches. They make and break on load and provide safety isolation and protection against overcurrent in any low-voltage electrical circuit.

General features:

- Complete isolation of fuses with double breaking per pole (*top and bottom of fuse*) positive break indication
- "Test" position for testing control circuits without power (*enclosure door can be opened in "test" position*)
- External front operating handle and shaft (*to be ordered separately-see below*)
- IEC/EN 60947-3, IEC/EN 60269-1, IEC/EN 60269-2, VDE 0636-1, VDE 0660-107
- Consult product datasheet for DC utilisation category

type	AC-22 A 415V (A)	AC-23 A 400V	fuse type	description	dimensions (mm)			price
					(H)	(W)	(D)	

Fuse combination switches - 3-pole

NFC cylindrical fuses

3631 3003	CD32A	15 kW	10 x 38	fuse combination switch	98	96	65	2 140.00
3831 3005	50A	25 kW	14 x 51	fuse combination switch	118	121	100	2 690.00
3831 3011	125A	63 kW	22 x 58	fuse combination switch	162	148	135	4 220.00

DIN pattern fuses

3831 3006	63A	30 kW	000	fuse combination switch	118	136	125	3 070.00
3831 3012	125A	63 kW	00	fuse combination switch	162	148	135	4 510.00
3831 3015	160A	80 kW	00	fuse combination switch	162	148	135	5 050.00
3831 3024	250A	132 kW	1	fuse combination switch	195	234	154	7 350.00
3831 3038	400A	220 kW	2	fuse combination switch	240	256	188	9 950.00
3811 3063	630A	355 kW	3	fuse combination switch	300	364	265	20 200.00
3811 3080	800A	450 kW	3	fuse combination switch	304	364	265	23 600.00
3811 3120	1250A	560 kW	4	fuse combination switch	304	442	289	44 600.00

BS88 pattern fuses

3641 3001	CD32A	15 kW	A1	fuse combination switch	98	96	102	2 270.00
3841 3003	32A	15 kW	A1	fuse combination switch	118	121	100	2 680.00
3841 3006	63A	30 kW	A2 - A3	fuse combination switch	118	136	125	3 090.00
3841 3010	100A	51 kW	A4	fuse combination switch	162	148	135	3 660.00
3841 3015	160A	80 kW	A4	fuse combination switch	162	190	145	5 340.00
3841 3021	200A	100 kW	B1-B2	fuse combination switch	195	234	154	6 640.00
3841 3024	250A	132 kW	B1-B2-B3	fuse combination switch	195	234	154	7 220.00
3841 3031	315A	160 kW	B1-B2-B3	fuse combination switch	240	256	188	9 440.00
3841 3038	400A	220 kW	B2-B3-B4	fuse combination switch	240	256	188	9 740.00
3821 3063	630A	355 kW	C1-C2	fuse combination switch	300	364	265	20 800.00
3821 3080	800A	450 kW	C1-C2-C3	fuse combination switch	300	364	265	24 200.00
3821 3120	1250A	560 kW	D1	fuse combination switch	300	442	304	43 200.00

Operating handles and shafts for above switches

- External front operated, door interlocking, padlockable (3 padlocks) in "OFF" with "TEST" position

type	handle	colour	description	for switch	price
1413 2115	S1	black	pistol grip external operating handle	CD32 - 63A	425.00
1423 2115	S2	black	pistol grip external operating handle	100 - 400A	528.00
1433 3111	S3	black	pistol grip external operating handle	630 - 800A	1 090.00
1443 3111	S4	black	"T" grip external operating handle	1250A	1 370.00
1401 0532	S1	320 mm	□ 5 extension shaft for switch	CD32A	473.00
1401 0540	S1	400 mm	□ 5 extension shaft for switch	CD32A	523.00
1400 1020	S1/S2	200 mm	□ 10 extension shaft for switch	32 - 400A	215.00
1400 1032	S1/S2	320 mm	□ 10 extension shaft for switch	32 - 400A	243.00
1400 1050	S1/S2	500 mm	□ 10 extension shaft for switch	32 - 400A	480.00
1400 1232	S3/S4	320 mm	□ 12 extension shaft for switch	630 - 1250A	659.00
1400 1250	S3/S4	500 mm	□ 12 extension shaft for switch	630 - 1250A	1 280.00
1429 0000	guide		(permits engaging of misaligned shaft with handle)	(all sizes)	155.00

Auxiliary contacts for switch fuses

3999 0701	1 NO	U type	auxiliary contact and support for switches	CD32 - 1250A	259.00
3999 0702	1 NC	U type	additional auxiliary contact fuse switches	CD32 - 1250A	259.00
3999 0710	holder		contact holder for 4 additional auxiliary contacts	CD32A	743.00
3999 0600	holder		contact holder for 4 additional auxiliary contacts	32 - 400A	970.00

Terminal shrouds

(also provides phase separation for switches)

3998 3016	shroud	3-pole	terminal protection shroud for switches	100 - 160A	550.00
3998 3025	shroud	3-pole	terminal protection shroud for switches	200 - 250A	729.00
3998 3040	shroud	3-pole	terminal protection shroud for switches	315 - 400A	687.00
3998 3080	shroud	3-pole	terminal protection shroud for switches	630 - 800A	1 980.00
3998 3120	shroud	3-pole	terminal protection shroud for switches	1250A	2 330.00

Cylindrical fuse-links



5120025



5120315



PTF/78



PTF/45



PTF/50



PTF/30



PTF/35

Miniature glass fuses (20 x 5 mm)

- Miniature glass fuse-links with low breaking capacity, intended for small currents
- Protect against overloads and short circuits in electronic equipment, household, telecommunications and small transformers or motors
- Available with quick-acting (F) characteristics
- Manufactured according to IEC and EN standards with glass tube and nickel-plated copper alloy contact caps

type	rated current	rated voltage	breaking capacity	description	dimensions (mm)	price Per pack
Standard glass fuses 20 x 5mm						(10 pcs)
5120025	0.25A	250V	35A	(F) fast acting cylindrical glass fuse	20 x 5	56.00
5120050	0.50A	250V	35A	(F) fast acting cylindrical glass fuse	20 x 5	56.00
5120063	0.63A	250V	35A	(F) fast acting cylindrical glass fuse	20 x 5	74.00
5120100	1.0A	250V	35A	(F) fast acting cylindrical glass fuse	20 x 5	45.00
5120125	1.25A	250V	35A	(F) fast acting cylindrical glass fuse	20 x 5	51.00
5120160	1.6A	250V	35A	(F) fast acting cylindrical glass fuse	20 x 5	66.00
5120200	2.0A	250V	35A	(F) fast acting cylindrical glass fuse	20 x 5	45.00
5120250	2.5A	250V	35A	(F) fast acting cylindrical glass fuse	20 x 5	51.00
5120315	3.15A	250V	35A	(F) fast acting cylindrical glass fuse	20 x 5	51.00
5120400	4.0A	250V	10 x In	(F) fast acting cylindrical glass fuse	20 x 5	45.00
5120500	5.0A	250V	10 x In	(F) fast acting cylindrical glass fuse	20 x 5	45.00
5120630	6.3A	250V	10 x In	(F) fast acting cylindrical glass fuse	20 x 5	45.00
5021000	10A	250V	10 x In	(F) fast acting cylindrical glass fuse	20 x 5	45.00
5021600	16A	250V	10 x In	(F) fast acting cylindrical glass fuse	20 x 5	70.00

Fuse holders for 20 x 5 mm glass fuses

- Protection against electric shock: I-II
- Impulse withstand bet. Terminals: > 4.0 kV
- Admissible ambient temperature: -30°C to 85°C
- Pollution degree: 3
- Flame class rating: UL 94 VO

type	rated current	rated voltage	mounting	description	for fuse (mm)	price each
PTF/78	6.3A	250V	PCB	PCB mount fuse holder	20 x 5	4.20
BS232VE	cover			protection cover for above PTF/78 fuse holder		1.70
PTF/45	10A	250V	PCB	PCB vertical mounting fuse holder	20 x 5	16.70
PTF/50	10A	250V	PCB	PCB horizontal mounting fuse holder	20 x 5	18.20

Panel mount fuse holder

- Knurled knob access
- L 34.2 mm extends 11 mm outside panel

PTF/30	10A	250V	panel	panel mount Ø13 mm fuse holder	20 x 5	23.10
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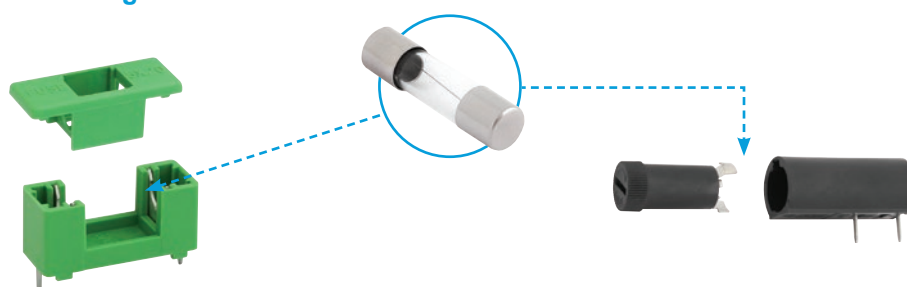
Panel mount fuse holder

- Flat blade access -
- L 37.5 mm extends 5.5 mm outside panel

PTF/35	10A	250V	panel	panel mount Ø12.7 mm fuse holder	20 x 5	25.60
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In-line shock safe fuse holder

PTF/80A	6.3A	250V	in-line	in-line shock safe fuse holder	20 x 5	19.40
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Standard glass fuse + holders

Cylindrical fuse-links

CYL

10x38

14x51

22x58

gG class - Cylindrical fuse-links

Standards: IEC/EN 60269-1, IEC/EN 60269-2

Cylindrical fuse-links with high withstand to internal pressure and thermal shock, permitting very high breaking capacities in a compact fuse design. Melting elements are designed to avoid ageing, thus maintaining their electrical characteristics over time.

type	rated current	rated voltage	breaking capacity	class	description	dimension (mm)	price
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gG Class cylindrical fuse-links

General protection of overloads and short circuits, protection of cables, power lines and equipment

10 x 38 mm cylindrical fuses

420000	0.5A	500V	120kA	gG	cylindrical fuse-link	10 x 38	13.50
420001	1A	500V	120kA	gG	cylindrical fuse-link	10 x 38	12.20
420002	2A	500V	120kA	gG	cylindrical fuse-link	10 x 38	12.20
420004	4A	500V	120kA	gG	cylindrical fuse-link	10 x 38	12.20
420006	6A	500V	120kA	gG	cylindrical fuse-link	10 x 38	12.20
420010	10A	500V	120kA	gG	cylindrical fuse-link	10 x 38	12.20
420016	16A	500V	120kA	gG	cylindrical fuse-link	10 x 38	12.20
420020	20A	500V	120kA	gG	cylindrical fuse-link	10 x 38	12.20
420025	25A	500V	120kA	gG	cylindrical fuse-link	10 x 38	13.50
420032	32A	400V	120kA	gG	cylindrical fuse-link	10 x 38	13.50

14 x 51 mm cylindrical fuses

421010	10A	690V	80kA	gG	cylindrical fuse-link	14 x 51	22.30
421016	16A	690V	80kA	gG	cylindrical fuse-link	14 x 51	22.30
421020	20A	690V	80kA	gG	cylindrical fuse-link	14 x 51	22.30
421025	25A	690V	80kA	gG	cylindrical fuse-link	14 x 51	22.30
421032	32A	500V	120kA	gG	cylindrical fuse-link	14 x 51	22.30
421040	40A	500V	120kA	gG	cylindrical fuse-link	14 x 51	23.60
421050	50A	400V	120kA	gG	cylindrical fuse-link	14 x 51	24.30

With striker - for use with fuse holder incorporating a micro switch for remote "fuse blown" indication

421202	2A	500V	120kA	gG	fuse-link with striker	14 x 51	71.00
421204	4A	500V	120kA	gG	fuse-link with striker	14 x 51	75.00
421206	6A	500V	120kA	gG	fuse-link with striker	14 x 51	75.00
421210	10A	500V	120kA	gG	fuse-link with striker	14 x 51	75.00
421216	16A	500V	120kA	gG	fuse-link with striker	14 x 51	75.00
421220	20A	500V	120kA	gG	fuse-link with striker	14 x 51	75.00
421225	25A	500V	120kA	gG	fuse-link with striker	14 x 51	75.00
421232	32A	500V	120kA	gG	fuse-link with striker	14 x 51	80.00
421240	40A	500V	120kA	gG	fuse-link with striker	14 x 51	80.00
421250	50A	400V	120kA	gG	fuse-link with striker	14 x 51	80.00

22 x 58 mm cylindrical fuses

422032	32A	690V	80kA	gG	cylindrical fuse-link	22 x 58	68.00
422040	40A	690V	80kA	gG	cylindrical fuse-link	22 x 58	68.00
422050	50A	690V	80kA	gG	cylindrical fuse-link	22 x 58	68.00
422063	63A	690V	80kA	gG	cylindrical fuse-link	22 x 58	62.00
422080	80A	500V	120kA	gG	cylindrical fuse-link	22 x 58	62.00
422000	100A	500V	120kA	gG	cylindrical fuse-link	22 x 58	62.00
422015	125A	500V	120kA	gG	cylindrical fuse-link	22 x 58	62.00

With striker - for use with fuse holder incorporating a micro switch for remote "fuse blown" indication

422232	32A	690V	80kA	gG	fuse-link with striker	22 x 58	111.00
422240	40A	690V	80kA	gG	fuse-link with striker	22 x 58	111.00
422250	50A	690V	80kA	gG	fuse-link with striker	22 x 58	116.00
422263	63A	690V	80kA	gG	fuse-link with striker	22 x 58	116.00
422280	80A	500V	120kA	gG	fuse-link with striker	22 x 58	125.00
422200	100A	500V	120kA	gG	fuse-link with striker	22 x 58	125.00
422215	125A	400V	120kA	gG	fuse-link with striker	22 x 58	125.00

DC application for DF gG fuse-links

(L/R = 15ms)

Fuses are generally suitable for both AC and DC applications, however voltage ratings will differ and therefore have to be taken into consideration.

For higher DC voltage application see photovoltaic fuse-links

Fuse size	rated current	maximum DC voltage	DC breaking capacity
10 x 38	0.5A...16A	250 VDC	15 kA
	20A...32A	80 VDC	
14 x 51	1A...25A	440 VDC	15 kA
	32A...40A	150 VDC	
	50A	48 VDC	
22 x 58	2A...63A	440 VDC	15 kA
	80A...100A	150 VDC	
	125A	48 VDC	

Cylindrical fuse-links

CYL

10x38

14x51

22x58

10x85

Cylindrical fuse-links **aM class** are intended for short circuit protection of motors, transformers and other loads with high inrush currents. Protection of switchgear (*contactor, thermal overload*) due to excellent current limiting capability and low I^2t values.

These fuse-links should be associated with a thermal overload protection device as a disconnecter. Made of ceramic tube with high withstand internal pressure and thermal shock, offering high breaking capacity in a reduced dimension. Melting elements are silverplated to avoid aging, keeping electric characteristics unchanged.

type	rated current	rated voltage	breaking capacity	class	description	dimension (mm)	price
aM (motor protection) fuse-links							
10 x 38 mm cylindrical fuses							
440000	0.5A	500V	120 kA	aM	cylindrical fuse-link	10 x 38	12.80
440001	1A	500V	120 kA	aM	cylindrical fuse-link	10 x 38	12.80
440002	2A	500V	120 kA	aM	cylindrical fuse-link	10 x 38	12.80
440004	4A	500V	120 kA	aM	cylindrical fuse-link	10 x 38	12.80
440006	6A	500V	120 kA	aM	cylindrical fuse-link	10 x 38	12.80
440010	10A	500V	120 kA	aM	cylindrical fuse-link	10 x 38	12.80
440016	16A	500V	120 kA	aM	cylindrical fuse-link	10 x 38	12.80
440020	20A	400V	120 kA	aM	cylindrical fuse-link	10 x 38	12.80
440025	25A	400V	120 kA	aM	cylindrical fuse-link	10 x 38	12.80
440032	32A	400V	120 kA	aM	cylindrical fuse-link	10 x 38	12.80

14 x 51 mm cylindrical fuses

441020	20A	690V	80 kA	aM	cylindrical fuse-link	14 x 51	27.00
441025	25A	690V	80 kA	aM	cylindrical fuse-link	14 x 51	27.00
441032	32A	500V	120 kA	aM	cylindrical fuse-link	14 x 51	27.00
441040	40A	500V	120 kA	aM	cylindrical fuse-link	14 x 51	25.00
441050	50A	400V	120 kA	aM	cylindrical fuse-link	14 x 51	29.00

22 x 58 mm cylindrical fuses

442032	32A	690V	80 kA	aM	cylindrical fuse-link	22 x 58	48.00
442040	40A	690V	80 kA	aM	cylindrical fuse-link	22 x 58	48.00
442050	50A	690V	80 kA	aM	cylindrical fuse-link	22 x 58	48.00
442063	63A	690V	80 kA	aM	cylindrical fuse-link	22 x 58	54.00
442080	80A	500V	120 kA	aM	cylindrical fuse-link	22 x 58	54.00
442000	100A	500V	120 kA	aM	cylindrical fuse-link	22 x 58	54.00
442015	125A	400V	120 kA	aM	cylindrical fuse-link	22 x 58	54.00

Medium voltage (MV) fuse-links for public lighting 1500 VAC

Public lighting systems in urban streets, roads, tunnels and motorways experience voltage drop problems and high energy losses leading to the use of high cross section conductors in very long lines.

To avoid this inconvenience, higher voltage supply networks are usually used by means of special transformers designed for this purpose which increase the voltage for transmission, then reducing to adequate levels at the destination.

It is necessary to use fuse links with adequate rated voltages, for protection of these networks on the medium voltage side.

415010	3.15A	1500V	20 kA	g	MV cylindrical fuse-link	10 x 85	408.00
415015	4A	1500V	20 kA	g	MV cylindrical fuse-link	10 x 85	385.00
415020	5A	1500V	20 kA	g	MV cylindrical fuse-link	10 x 85	385.00
415025	6.3A	1500V	20 kA	g	MV cylindrical fuse-link	10 x 85	385.00
415030	8A	1500V	20 kA	g	MV cylindrical fuse-link	10 x 85	385.00
415035	10A	1500V	20 kA	g	MV cylindrical fuse-link	10 x 85	385.00
415040	12A	1500V	20 kA	g	MV cylindrical fuse-link	10 x 85	439.00

Longer body fuses (150/180 mm) for higher voltages 2500, 3200, 5500V available on request

PMLe series MV fuse holder 1000 VAC/1500 VDC (H) 130 x (W) 24 x (D) 58 mm**10/14 x 85 mm fuse holder**

485705	32A	1500V	1-pole	industrial MV cylindrical fuseholder	10/14 x 85	141.00
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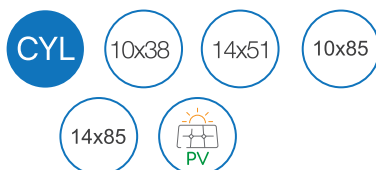
Accessories for above MV fuse holder

480005	pin	body pins for multi-pole assembly of fuse holders					4.80
485050	ties	handle ties for multi-pole assembly of fuse holders					3.40

Solid neutral links (cylindrical)

431000	32A	—	—	gG/aM	solid neutral link	10 x 38	10.80
432000	50A	—	—	gG/aM	solid neutral link	14 x 51	18.20
433000	125A	—	—	gG/aM	solid neutral link	22 x 58	31.00

Photovoltaic cylindrical fuse-links



gPV photovoltaic fuse-links

Made of ceramic tube with high withstand to internal pressure and thermal shock, permitting a high breaking capacity in a reduced physical space.

Contacts are made of silverplated copper and melting elements are of pure silver to avoid aging and maintain electric characteristics over time.

Standards: gPV class according to IEC60269-6

type	rated current	rated voltage	breaking capacity	class	description	dimension (mm)	price
gPV photovoltaic cylindrical fuse-links 600/1000 VDC							
gPV 10 x 38 and 14 x 51 cylindrical fuse-links have been developed to offer compact, safety and economic protection of photovoltaic modules (<i>array protection</i>) with voltages up to 1000 VDC. Provide protection against overloads and short-circuits.							
491601	1A	1000 VDC	30 kA	gPV	photovoltaic fuse-link	10 x 38	66.00
491602	2A	1000 VDC	30 kA	gPV	photovoltaic fuse-link	10 x 38	66.00
491604	3A	1000 VDC	30 kA	gPV	photovoltaic fuse-link	10 x 38	66.00
491605	4A	1000 VDC	30 kA	gPV	photovoltaic fuse-link	10 x 38	66.00
491606	5A	1000 VDC	30 kA	gPV	photovoltaic fuse-link	10 x 38	66.00
491610	6A	1000 VDC	30 kA	gPV	photovoltaic fuse-link	10 x 38	66.00
491615	8A	1000 VDC	30 kA	gPV	photovoltaic fuse-link	10 x 38	66.00
491620	10A	1000 VDC	30 kA	gPV	photovoltaic fuse-link	10 x 38	66.00
491625	12A	1000 VDC	30 kA	gPV	photovoltaic fuse-link	10 x 38	66.00
491630	16A	1000 VDC	30 kA	gPV	photovoltaic fuse-link	10 x 38	66.00
491635	20A	1000 VDC	30 kA	gPV	photovoltaic fuse-link	10 x 38	66.00
491940	25A	600 VDC	30 kA	gPV	photovoltaic fuse-link	10 x 38	75.00
491945	32A	600 VDC	30 kA	gPV	photovoltaic fuse-link	10 x 38	75.00

Above fuse-links we recommend the utilization of 10 x 38 PV fuse holders **485150/485152/485151**

491650	25A	1000 VDC	30 kA	gPV	photovoltaic fuse-link	14 x 51	143.00
491655	32A	1000 VDC	30 kA	gPV	photovoltaic fuse-link	14 x 51	157.00

Above fuse fuse-links we recommend the utilization of 14 x 51 PV fuse holders **485250**
For ambient temperatures higher than 25°C, a derating in maximum current must be applied

gPV photovoltaic cylindrical fuse-links 1200/1500 VDC

gPV 10 x 85 & 10/14 x 85 cylindrical fuse-links from DF Electric have been developed to offer a compact, safety and economic protection of photovoltaic modules (*array protection*) with voltages up to 1500 VDC.

492202	2A	1500 VDC	30 kA	gPV	photovoltaic fuse-link	10 x 85	105.00
492205	4A	1500 VDC	30 kA	gPV	photovoltaic fuse-link	10 x 85	105.00
492210	6A	1500 VDC	30 kA	gPV	photovoltaic fuse-link	10 x 85	105.00
492215	8A	1500 VDC	30 kA	gPV	photovoltaic fuse-link	10 x 85	105.00
492220	10A	1500 VDC	30 kA	gPV	photovoltaic fuse-link	10 x 85	105.00
492225	12A	1500 VDC	30 kA	gPV	photovoltaic fuse-link	10 x 85	105.00
492230	16A	1500 VDC	30 kA	gPV	photovoltaic fuse-link	10 x 85	105.00
492250	20A	1500 VDC	10 kA	gPV	photovoltaic fuse-link	10/14 x 85	165.00
492255	25A	1500 VDC	10 kA	gPV	photovoltaic fuse-link	10/14 x 85	165.00
492262	32A	1500 VDC	10 kA	gPV	photovoltaic fuse-link	10/14 x 85	165.00

Above fuse-links we recommend the utilization of **485705** fuse holders

For ambient temperatures higher than 25°C, a derating in maximum current must be applied

Fuse holders for Photovoltaic applications 1000/1500 VDC

- Fuse holder for cylindrical fuse-link size 10 x 85 gPV and 14 x 85
- Modern compact design
- Ventilation zones optimized for a improved heat dissipation
- Manufactured with a high quality materials
- Silver plated copper contacts
- Plastic materials with high temperature resistance and self-extinguishable

type	rated current	for fuse size (mm)	poles	description	price
485150	32A	1000 VDC	1-pole	gPV photovoltaic fuse holder	10 x 38 73.00
485152*	32A	1000 VDC	1-pole	gPV photovoltaic fuse holder	10 x 38 72.00
485151	32A	1000 VDC	2-pole	gPV photovoltaic fuse holder	10 x 38 151.00
485250	50A	1000 VDC	1-pole	gPV photovoltaic fuse holder	14 x 51 191.00
485705	32A	1500 VDC	1-pole	gPV photovoltaic fuse holder	10/14 x 85 141.00

* Indicator



Semiconductor cylindrical fuse-links

CYL

10x38

14x51

22x58



492004



492123



492139



451260 + 451275

Semiconductor cylindrical fuse-links

Semi-conductor fuse-links intended to clear short-circuits and have been designed with very low I^2t values and reduced arc voltages, guaranteeing optimum protection of semiconductors with exceptional cycling ability.

Typical applications are protection of semiconductors (*diodes, thyristors, triacs, etc*) used in power rectifiers, UPS, converters, motor drives, soft starters, solid state relays, photovoltaic and welding inverters and any application where necessary to protect semiconductor devices.

• Standards: IEC/EN 60269-1, IEC/EN 60269-4, UL248 standard (file Nr. E477155)

type	rated current	rated voltage	breaking capacity	class	description	dimension (mm)	price
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RAPIDPLUS gR high speed fuse-links for semiconductors

RAPIDPLUS gR fuse-links are capable of clearing all types of overcurrents, overloads and short-circuits, protecting semiconductors, cables and associated switchgear within the installation.

10 x 38mm gR cylindrical fuses

492003	4A	690V	200 kA	gR	semiconductor fuse-link	10 x 38	68.00
492004	6A	690V	200 kA	gR	semiconductor fuse-link	10 x 38	68.00
492006	10A	690V	200 kA	gR	semiconductor fuse-link	10 x 38	68.00
492008	16A	690V	200 kA	gR	semiconductor fuse-link	10 x 38	68.00
492009	20A	690V	200 kA	gR	semiconductor fuse-link	10 x 38	68.00
492010	25A	690V	200 kA	gR	semiconductor fuse-link	10 x 38	68.00
492011	32A	690V	200 kA	gR	semiconductor fuse-link	10 x 38	68.00

14 x 51mm gR cylindrical fuses

492022	32A	690V	200 kA	gR	semiconductor fuse-link	14 x 51	115.00
492023	40A	690V	200 kA	gR	semiconductor fuse-link	14 x 51	115.00
492024	50A	690V	200 kA	gR	semiconductor fuse-link	14 x 51	115.00

With "striker" - for use with fuse holder micro switch for remote "fuse blown" indication

492117	10A	690V	200 kA	gR	SC fuse-link with striker	14 x 51	174.00
492118	12A	690V	200 kA	gR	SC fuse-link with striker	14 x 51	174.00
492119	16A	690V	200 kA	gR	SC fuse-link with striker	14 x 51	174.00
492120	20A	690V	200 kA	gR	SC fuse-link with striker	14 x 51	174.00
492121	25A	690V	200 kA	gR	SC fuse-link with striker	14 x 51	174.00
492122	32A	690V	200 kA	gR	SC fuse-link with striker	14 x 51	174.00
492123	40A	690V	200 kA	gR	SC fuse-link with striker	14 x 51	202.00
492124	50A	690V	200 kA	gR	SC fuse-link with striker	14 x 51	202.00

22 x 58 mm gR cylindrical fuses

492037	50A	690V	200 kA	gR	semiconductor fuse-link	22 x 58	142.00
492038	63A	690V	200 kA	gR	semiconductor fuse-link	22 x 58	208.00
492039	80A	690V	200 kA	gR	semiconductor fuse-link	22 x 58	208.00
492040	100A	690V	200 kA	gR	semiconductor fuse-link	22 x 58	249.00

With "striker" - for use with fuse holder micro switch for remote "fuse blown" indication

492137	50A	690V	200 kA	gR	semiconductor fuse-link	22 x 58	220.00
492138	63A	690V	200 kA	gR	semiconductor fuse-link	22 x 58	285.00
492139	80A	690V	200 kA	gR	semiconductor fuse-link	22 x 58	285.00
492140	100A	690V	200 kA	gR	semiconductor fuse-link	22 x 58	303.00

BAC open-type fuse bases for cylindrical fuses

Industrial OPEN TYPE fuse bases for cylindrical fuse-links, suitable for semiconductor protection fuselinks with a high dissipated power, facilitate exceptional heat dissipation characteristics. Manufactured with high quality silver plated copper contacts and high temperature self-extinguishing plastic materials.

- DIN-rail or screw fix mounting
- Microswitch accessory for fuses with striker to monitor fusing

type	rated current	rated voltage	poles	description	for fuse size (mm)	price
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10 x 38 mm				(H) 75 x (W)22 x (D) 38 mm		
451250	32A	690V	1-pole	open type cylindrical fuse holder	10 x 38	89.00
14 x 51 mm				(H) 92 x (W)27 x (D) 50 mm		
451260	50A	690V	1-pole	open type cylindrical fuse holder	14 x 51	164.00
22 x 58 mm				(H) 118 x (W)36 x (D) 41 mm		
451270	100A	690V	1-pole	open type cylindrical fuse holder	22 x 58	232.00

"Fuse blown" indication micro switch - for 14 x 51 and 22 x 58 mm fuse-links

451275		micro switch	accessory used with fuses with "striker"		14 x 51/22 x 58	114.00
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Semiconductor cylindrical fuse-links



491155



491770



491835



485108



485120

Semiconductor cylindrical fuse-links

RAPIDPLUS aR fuse-links are intended to clear short-circuits, designed to have very low I^2t values and reduced arc voltages guaranteeing, optimum protection of semiconductors with excellent cycling abilities.

Made of ceramic high internal pressure withstand and thermal shock capabilities with silver-plated copper contacts.

Typical applications include protection of semiconductors (*diodes, thyristors, triacs, etc*) used in power rectifiers, UPS, converters, motor drives, soft starters, solid state relays, photovoltaic inverters, welding inverters and any application where necessary to protect semiconductor devices.

UL certification according to UL248 standard. UL file Nr. E477155

type	rated current	rated voltage	breaking capacity	class	description	dimension (mm)	price
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RAPIDPLUS aR high speed fuse-links for semiconductors

10 x 38 mm aR cylindrical fuses

491107	2A	690V	200 kA	aR	semiconductor fuse-link	10 x 38	83.00
491110	3A	690V	200 kA	aR	semiconductor fuse-link	10 x 38	83.00
491113	4A	690V	200 kA	aR	semiconductor fuse-link	10 x 38	83.00
491115	6A	690V	200 kA	aR	semiconductor fuse-link	10 x 38	83.00
491120	8A	690V	200 kA	aR	semiconductor fuse-link	10 x 38	83.00
491125	10A	690V	200 kA	aR	semiconductor fuse-link	10 x 38	83.00
491130	12A	690V	200 kA	aR	semiconductor fuse-link	10 x 38	83.00
491135	16A	690V	200 kA	aR	semiconductor fuse-link	10 x 38	83.00
491140	20A	690V	200 kA	aR	semiconductor fuse-link	10 x 38	83.00
491145	25A	690V	200 kA	aR	semiconductor fuse-link	10 x 38	83.00
491155	32A	690V	200 kA	aR	semiconductor fuse-link	10 x 38	83.00

14 x 51 mm aR cylindrical fuses with "striker"

- For use with fuse holder incorporating a micro switch for remote "fuse blown" indication

491730	8A	690V	200 kA	aR	semiconductor fuse-link	14 x 51	286.00
491735	10A	690V	200 kA	aR	semiconductor fuse-link	14 x 51	286.00
491737	12A	690V	200 kA	aR	semiconductor fuse-link	14 x 51	286.00
491741	16A	690V	200 kA	aR	semiconductor fuse-link	14 x 51	277.00
491745	20A	690V	200 kA	aR	semiconductor fuse-link	14 x 51	311.00
491750	25A	690V	200 kA	aR	semiconductor fuse-link	14 x 51	311.00
491760	32A	690V	200 kA	aR	semiconductor fuse-link	14 x 51	311.00
491765	40A	690V	200 kA	aR	semiconductor fuse-link	14 x 51	400.00
491770	50A	690V	200 kA	aR	semiconductor fuse-link	14 x 51	459.00

22 x 58 mm aR cylindrical fuses with "striker"

- For use with fuse holder incorporating a micro switch for remote "fuse blown" indication

491820	50A	690V	200 kA	aR	semiconductor fuse-link	22 x 58	484.00
491825	63A	690V	200 kA	aR	semiconductor fuse-link	22 x 58	536.00
491830	80A	690V	200 kA	aR	semiconductor fuse-link	22 x 58	597.00
491835	100A	690V	200 kA	aR	semiconductor fuse-link	22 x 58	649.00

PMX series - Modular fuse holders (for above fuses)

- Modular, compact fuse holder DIN-rail mountable for cylindrical fuses
- Incorporated, hinged transparent label holder for positive circuit identification
- Optimized ventilation zones for improved heat dissipation
- High temperature resistance, self-extinguishing-halogen free body / silver plated copper contacts
- Standards: IEC/EN 60269-1, IEC/EN 60269-2, IEC/EN 60947-3, CSA C22.2 4248-1, UL4248-1

type	rated current	for fuse size (mm)	poles	description	width in 17.5 (mm)	price
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10 x 38 mm fuse holders

690VAC / 750VDC (H) 88.8 x (D) 58 mm

485101	32A	10 x 38	1-pole	industrial cylindrical fuse holder	1	55.00
485108	32A	10 x 38	1-pole	with 120-690V neon indication	1	120.00
485120	32A	10 x 38	1-pole+N	industrial cylindrical fuse holder	1	113.00
485104	32A	10 x 38	2-pole	industrial cylindrical fuse holder	2	154.00
485105	32A	10 x 38	3-pole	industrial cylindrical fuse holder	3	228.00
485107	32A	10 x 38	4-pole	industrial cylindrical fuse holder	4	304.00

14 x 51 mm fuse holders

690 VAC (H) 110 x (D) 76 mm

485201	50A	14 x 51	1-pole	industrial cylindrical fuse holder	1.5	153.00
485208	50A	14 x 51	1-pole	with 120-690V neon indication	1.5	200.00
485203	50A	14 x 51	1-pole+N	industrial cylindrical fuse holder	3	331.00
485205	50A	14 x 51	3-pole	industrial cylindrical fuse holder	4.5	493.00

For 22 x 58 mm fuse holders, see next page

Cylindrical fuse holders



485120



485205



485305



485356



480005



485359



485360



483530



483534

PMX series - Modular fuse holders

- Modular, compact fuse holder DIN-rail mountable for cylindrical fuses
- Incorporated, hinged transparent label holder for positive circuit identification
- Optimized ventilation zones for improved heat dissipation
- High-temperature resistance, self-extinguishing-halogen free body / silver plated copper contacts
- Standards: IEC/EN 60269-1, IEC/EN 60269-2, IEC/EN 60947-3, CSA C22.2 4248-1, UL4248-1

type	rated current	for fuse size (mm)	poles	description	width in 17.5 (mm)	price
10 x 38 mm fuse holders			690 VAC / 750 VDC		(H) 88.8 x (D) 58 mm	
485101	32A	10 x 38	1-pole	industrial cylindrical fuse holder	1	55.00
485108	32A	10 x 38	1-pole	with 120-690V neon indication	1	120.00
485120	32A	10 x 38	1-pole+N	industrial cylindrical fuse holder	1	113.00
485104	32A	10 x 38	2-pole	industrial cylindrical fuse holder	2	154.00
485105	32A	10 x 38	3-pole	industrial cylindrical fuse holder	3	228.00
485107	32A	10 x 38	4-pole	industrial cylindrical fuse holder	4	304.00

Accessories for 10 x 38 mm fuse holders

480005	pin	10 x 38/85		body pins for multi-pole assembly of fuse holders		4.80
485050	ties	10 x 38/85		handle ties for multi-pole assembly of fuse holders		3.40
485051	lock	10 x 38/85		lock support to padlock fuse holders in "open" position		37.10
485053	barrier	10 x 38		phase separator accessory for fuse holders		9.50
485054	neon	10 x 38		fusing neon indicator 120-690V for fuse holders		31.00

14 x 51 mm fuse holders			690 VAC		(H) 110 x (D) 76 mm	
485201	50A	14 x 51	1-pole	industrial cylindrical fuse holder	1.5	153.00
485208	50A	14 x 51	1-pole	with 120-690V neon indication	1.5	200.00
485203	50A	14 x 51	1-pole+N	industrial cylindrical fuse holder	3	331.00
485205	50A	14 x 51	3-pole	industrial cylindrical fuse holder	4.5	493.00

Accessories for 14 x 51 mm fuse holders

480005	pin	14 x 51		body pins for multi-pole assembly of fuse holders		4.80
485356	ties	14 x 51		handle ties for multi-pole assembly of fuse holders		6.10
485357	ties	14 x 51		handle ties for micro switch assembly of fuse holders		9.50
485258	lock	14 x 51		lock support to padlock fuse holders in "open" position		24.30
485259	micro	14 x 51	1-pole	micro switch for use with "striker" fuses		120.00
485260	micro	14 x 51	3-pole	micro switch for use with "striker" fuses		149.00
485262	micro	14 x 51	1-pole	micro sw extension for 2/4 pole requirements		49.00
485264	neon	14 x 51		fusing neon indicator 120-690V for fuse holders		74.00

22 x 58 mm fuse holders			690 VAC		(H) 126.5 x (D) 76.5 mm	
485301	125A	22 x 58	1-pole	industrial cylindrical fuse holder	2	270.00
485308	125A	22 x 58	1-pole	with 120-690V neon indication	2	398.00
485303	125A	22 x 58	1-pole+N	industrial cylindrical fuse holder	4	600.00
485305	125A	22 x 58	3-pole	industrial cylindrical fuse holder	6	958.00

22 x 58 fuse holders are rated at **125A**, they are marked at **100A** to conform to IEC/EN 60269-2 requirements

Accessories for 22 x 58 mm fuse holders

480005	pin	22 x 58		body pins for multi-pole assembly of fuse holders		4.80
485356	ties	22 x 58		handle ties for multi-pole assembly of fuse holders		6.10
485357	ties	22 x 58		handle ties for micro switch assembly of fuse holders		9.50
485358	lock	22 x 58		lock support to padlock fuse holders in "open" position		28.30
485359	micro	22 x 58	1-pole	micro switch for use with "striker" fuses		127.00
485360	micro	22 x 58	3-pole	micro switch for use with "striker" fuses		155.00
485362	micro	22 x 58	1-pole	micro sw extension for 2/4 pole requirements		27.00
485364	neon	22 x 58		fusing neon indicator 120-690V for fuse holders		64.00

PMC series - "Compact" modular fuse holders (H) 82.7 x (D) 38.5 mm

Compact fuse holder with shallow dimension - for installation in low-profile enclosures

10 x 38 mm compact fuse holder - low profile (38.5 mm)

483530	32A	10 x 38	1-pole	compact cylindrical fuse holder	1	70.00
483534	32A	10 x 38	1-pole+N	compact cylindrical fuse holder	1	113.00

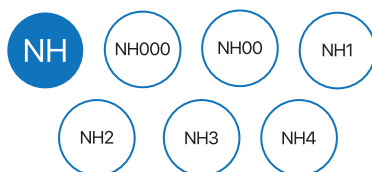
Accessories for compact 10 x 38 mm fuse holder

483552	kit	10 x 38		PMC multi-pole assembly kit for fuse holders		175.00
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PMLe series - MV fuse holder 1000 VAC/1500 VDC (H) 130 x (W) 24 x (D) 58 mm

10/14 x 85 mm fuse holder						
485705	32A	10 x 85	1-pole	industrial cylindrical fuse holder (24 mm)		141.00
480005	pin	10 x 85		body pins for multi-pole assembly of fuse holders		4.80
485050	ties	10 x 85		handle ties for multi-pole assembly of fuse holders		3.40

NH fuse-links



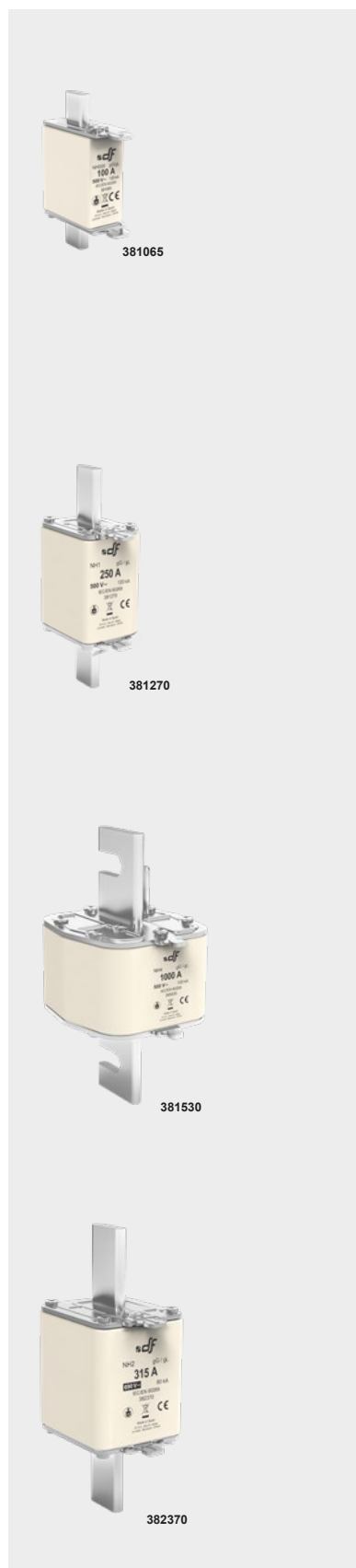
NH industrial HRC fuse-links for general applications

Designed to offer robust and reliable protection across a wide spectrum of electrical applications. These fuses are characterised by their high rupturing capacity (HRC) and are rated gG, making them suitable for both overload and short-circuit protection.

Class gG for general use with high breaking capacity for protection of cables, power lines and equipment.

Specification:

- gG class for use as general protection against overloads and short circuits
- For protection of cables, power lines and equipment
- Fusing indicator on top of fuse-link
- Standards: IEC/EN60269-1, IEC/EN 60269-2, VDE0636, DIN43620



type	rated current	rated voltage	breaking capacity	class size	fuse	description	price
gG NH HRC fuse-links 500V top indicator							
381010	6A	500V	120 kA	gG	NH000	DIN HRC fuse-link	82.00
381015	10A	500V	120 kA	gG	NH000	DIN HRC fuse-link	82.00
381020	16A	500V	120 kA	gG	NH000	DIN HRC fuse-link	82.00
381025	20A	500V	120 kA	gG	NH000	DIN HRC fuse-link	82.00
381030	25A	500V	120 kA	gG	NH000	DIN HRC fuse-link	70.00
381035	32A	500V	120 kA	gG	NH000	DIN HRC fuse-link	70.00
381045	40A	500V	120 kA	gG	NH000	DIN HRC fuse-link	70.00
381050	50A	500V	120 kA	gG	NH000	DIN HRC fuse-link	70.00
381055	63A	500V	120 kA	gG	NH000	DIN HRC fuse-link	70.00
381060	80A	500V	120 kA	gG	NH000	DIN HRC fuse-link	70.00
381065	100A	500V	120 kA	gG	NH000	DIN HRC fuse-link	70.00
381070	125A	500V	120 kA	gG	NH00	DIN HRC fuse-link	104.00
381075	160A	500V	120 kA	gG	NH00	DIN HRC fuse-link	104.00
381255	160A	500V	120 kA	gG	NHC1	DIN HRC fuse-link	138.00
381260	200A	500V	120 kA	gG	NH1	DIN HRC fuse-link	236.00
381270	250A	500V	120 kA	gG	NH1	DIN HRC fuse-link	236.00
381280	315A	500V	120 kA	gG	NH1	DIN HRC fuse-link	236.00
381285	355A	500V	120 kA	gG	NH1	DIN HRC fuse-link	236.00
381370	315A	500V	120 kA	gG	NH2	DIN HRC fuse-link	443.00
381375	355A	500V	120 kA	gG	NH2	DIN HRC fuse-link	455.00
381380	400A	500V	120 kA	gG	NH2	DIN HRC fuse-link	460.00
381390	500A	500V	120 kA	gG	NH2	DIN HRC fuse-link	586.00
381465	500A	500V	120 kA	gG	NH3	DIN HRC fuse-link	927.00
381470	630A	500V	120 kA	gG	NH3	DIN HRC fuse-link	971.00
381475	800A	500V	120 kA	gG	NH3	DIN HRC fuse-link	1 020.00
381525	800A	500V	120 kA	gG	NH4	DIN HRC fuse-link	2 720.00
381530	1000A	500V	120 kA	gG	NH4	DIN HRC fuse-link	2 840.00
381535	1250A	500V	120 kA	gG	NH4	DIN HRC fuse-link	3 540.00
gG NH HRC fuse-links 690V top indicator							
382010	6A	690V	80 kA	gG	NH000	DIN HRC fuse-link	179.00
382015	10A	690V	80 kA	gG	NH000	DIN HRC fuse-link	171.00
382020	16A	690V	80 kA	gG	NH000	DIN HRC fuse-link	171.00
382025	20A	690V	80 kA	gG	NH000	DIN HRC fuse-link	173.00
382030	25A	690V	80 kA	gG	NH000	DIN HRC fuse-link	176.00
382035	32A	690V	80 kA	gG	NH000	DIN HRC fuse-link	176.00
382045	40A	690V	80 kA	gG	NH000	DIN HRC fuse-link	176.00
382050	50A	690V	80 kA	gG	NH00	DIN HRC fuse-link	180.00
382055	63A	690V	80 kA	gG	NH00	DIN HRC fuse-link	180.00
382060	80A	690V	80 kA	gG	NH00	DIN HRC fuse-link	180.00
382065	100A	690V	80 kA	gG	NH00	DIN HRC fuse-link	180.00
382250	125A	690V	80 kA	gG	NH1	DIN HRC fuse-link	323.00
382255	160A	690V	80 kA	gG	NH1	DIN HRC fuse-link	329.00
382260	200A	690V	80 kA	gG	NH1	DIN HRC fuse-link	337.00
382360	250A	690V	80 kA	gG	NH2	DIN HRC fuse-link	500.00
382370	315A	690V	80 kA	gG	NH2	DIN HRC fuse-link	528.00
382450	355A	690V	80 kA	gG	NH3	DIN HRC fuse-link	807.00
382455	400A	690V	80 kA	gG	NH3	DIN HRC fuse-link	818.00
382465	500A	690V	80 kA	gG	NH3	DIN HRC fuse-link	856.00
382520	630A	690V	80 kA	gG	NH4	DIN HRC fuse-link	3 300.00
382525	800A	690V	80 kA	gG	NH4	DIN HRC fuse-link	3 340.00

Fuses are generally suitable for both AC and DC applications, however voltage ratings will differ and therefore have to be taken into consideration. (See **Annex-7**)

See accessory page for fuse bases and accessories

NH fuse-links for motor protection

NH

NH000

NH00

NH1

NH2

NH3

NH4

aM NH - HRC fuse-links (motor protection)

aM class (NH) high-breaking capacity fuse-links are intended for short circuit protection of motors, transformers and other loads with high inrush currents, with rated voltages up to 690 VAC.

Offers excellent protection of switchgear due to the excellent current limiting capability and low I^2t values.

Specification:

- Rated voltage: 500/690 VAC
- Breaking capacity: 120/80 kA
- Fusing indicator: Top of fuse-link
- Standards: IEC/EN 60269-1, IEC/EN 60269-2 and VDE43620

type	rated current	rated voltage	breaking capacity	class size	fuse	description	price
aM Class NH motor protection fuse-links 500/690V (top indicator)							
384010	6A	690V	80 kA	aM	NH000	DIN HRC fuse-link	188.00
384015	10A	690V	80 kA	aM	NH000	DIN HRC fuse-link	181.00
384020	16A	690V	80 kA	aM	NH000	DIN HRC fuse-link	181.00
384025	20A	690V	80 kA	aM	NH000	DIN HRC fuse-link	183.00
384030	25A	690V	80 kA	aM	NH000	DIN HRC fuse-link	183.00
384035	32A	690V	80 kA	aM	NH000	DIN HRC fuse-link	183.00
384045	40A	690V	80 kA	aM	NH000	DIN HRC fuse-link	183.00
384050	50A	690V	80 kA	aM	NH00	DIN HRC fuse-link	194.00
384055	63A	690V	80 kA	aM	NH00	DIN HRC fuse-link	194.00
384060	80A	690V	80 kA	aM	NH00	DIN HRC fuse-link	196.00
384065	100A	690V	80 kA	aM	NH00	DIN HRC fuse-link	210.00
383070	125A	500V	120 kA	aM	NH00	DIN HRC fuse-link	208.00
383075	160A	500V	120 kA	aM	NH00	DIN HRC fuse-link	216.00
384260	200A	690V	80 kA	aM	NH1	DIN HRC fuse-link	339.00
383270	250A	500V	120 kA	aM	NH1	DIN HRC fuse-link	357.00
384370	315A	690V	80 kA	aM	NH2	DIN HRC fuse-link	540.00
384375	355A	690V	80 kA	aM	NH2	DIN HRC fuse-link	562.00
383380	400A	500V	120 kA	aM	NH2	DIN HRC fuse-link	544.00
384465	500A	690V	80 kA	aM	NH3	DIN HRC fuse-link	1 050.00
383470	630A	500V	120 kA	aM	NH3	DIN HRC fuse-link	1 120.00
383525	800A	500V	120 kA	aM	NH4	DIN HRC fuse-link	2 820.00
383530	1000A	500V	120 kA	aM	NH4	DIN HRC fuse-link	2 880.00
383535	1250A	500V	120 kA	aM	NH4	DIN HRC fuse-link	3 620.00

NH fuse-links for output side of new generation photovoltaic inverters

Knife-type (NH) fuse-links with high breaking capacity intended for line protection on the output side of new generation photovoltaic string inverters.

Provides protection against overloads and short-circuits with rated voltages up to 800V +10% with a breaking capacity of 80 kA and low power dissipation values.

Specification:

- Rated voltage: 800 VAC +10%
- Breaking capacity: 80 kA
- Fusing indicator: Top of fuse-link
- Standards: IEC/EN60269-1, IEC/EN 60269-2

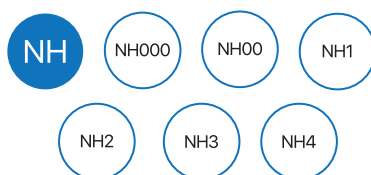
Gs/gG NH - HRC fuse-links 800V

(top indicator)

NH fuse-links 800V

369035	32A	800V	80 kA	gS	NH00	DIN HRC fuse-link	449.00
369045	40A	800V	80 kA	gS	NH00	DIN HRC fuse-link	449.00
369050	50A	800V	80 kA	gS	NH00	DIN HRC fuse-link	449.00
369055	63A	800V	80 kA	gS	NH00	DIN HRC fuse-link	449.00
369060	80A	800V	80 kA	gS	NH00	DIN HRC fuse-link	449.00
385245	100A	800V	80 kA	gG	NH00	DIN HRC fuse-link	395.00
385250	125A	800V	80 kA	gG	NH1	DIN HRC fuse-link	395.00
385255	160A	800V	80 kA	gG	NH1	DIN HRC fuse-link	395.00
385425	200A	800V	80 kA	gG	NH3	DIN HRC fuse-link	1 170.00
385435	250A	800V	80 kA	gG	NH3	DIN HRC fuse-link	1 170.00
385445	315A	800V	80 kA	gG	NH3	DIN HRC fuse-link	1 170.00
385450	355A	800V	80 kA	gG	NH3	DIN HRC fuse-link	1 170.00
385455	400A	800V	80 kA	gG	NH3	DIN HRC fuse-link	1 170.00

Photovoltaic NH fuse-links



gPV Class NH Photovoltaic fuse-links - 1000 VDC

NH gPV fuse-links for photovoltaic installations have been developed to offer a safety protection solution in sub-array, array or inverter DC input of photovoltaic installations. Providing protection against overloads as well as short circuits with a minimum fusing current of 1.35·In.

- Utilisation category: gPV
- Min. interrupt rating: 1.35 In
- Standards: IEC/EN 60269-1, IEC/EN60269-6, UL248-1, UL248-19, RoHS compliant

type	rated current	rated voltage	breaking capacity	class size	fuse	description	price
gPV photovoltaic NH fuse-links 1000 VDC							
373215	32A	1000 VDC	30 kA	gPV	NH1	photovoltaic fuse-link	1 240.00
373225	40A	1000 VDC	30 kA	gPV	NH1	photovoltaic fuse-link	1 240.00
373230	50A	1000 VDC	30 kA	gPV	NH1	photovoltaic fuse-link	1 240.00
373235	63A	1000 VDC	30 kA	gPV	NH1	photovoltaic fuse-link	1 240.00
373240	80A	1000 VDC	30 kA	gPV	NH1	photovoltaic fuse-link	1 240.00
373245	100A	1000 VDC	30 kA	gPV	NH1	photovoltaic fuse-link	1 240.00
373250	125A	1000 VDC	30 kA	gPV	NH1	photovoltaic fuse-link	1 240.00
373255	160A	1000 VDC	30 kA	gPV	NH1	photovoltaic fuse-link	1 240.00
373260	200A	1000 VDC	30 kA	gPV	NH1	photovoltaic fuse-link	1 240.00
373360	250A	1000 VDC	30 kA	gPV	NH2	photovoltaic fuse-link	1 920.00
373425	200A	1000 VDC	30 kA	gPV	NH3	photovoltaic fuse-link	2 070.00
373435	250A	1000 VDC	30 kA	gPV	NH3	photovoltaic fuse-link	2 070.00
373445	315A	1000 VDC	30 kA	gPV	NH3	photovoltaic fuse-link	2 070.00
373450	355A	1000 VDC	30 kA	gPV	NH3	photovoltaic fuse-link	2 300.00
373455	400A	1000 VDC	30 kA	gPV	NH3	photovoltaic fuse-link	2 300.00

Above NH fuses available at 1500V DC (XL-longer body) available on request

gBat Class - Battery storage protection NH fuse-links

NH gBat fuse-links are specifically designed for the protection of battery systems. Manufactured with similar techniques as semiconductor fuse-links, providing high speed operation and excellent performance under continuous charge/discharge cycles. Capable to clearing all types of overcurrents, overloads and short-circuits, protecting batteries, cables and installation switchgear.

- Utilisation category: gBAT
- Standards: IEC/EN 60269-1, IEC/EN60269-7, UL248-1, RoHS compliant

370035	32A	440 VDC	30 kA	gBat	NH000	DIN HRC fuse-link	313.00
370045	40A	440 VDC	30 kA	gBat	NH000	DIN HRC fuse-link	319.00
370050	50A	440 VDC	30 kA	gBat	NH000	DIN HRC fuse-link	326.00
370055	63A	440 VDC	30 kA	gBat	NH000	DIN HRC fuse-link	340.00
370060	80A	440 VDC	30 kA	gBat	NH000	DIN HRC fuse-link	357.00
370065	100A	440 VDC	30 kA	gBat	NH000	DIN HRC fuse-link	379.00
370070	125A	440 VDC	30 kA	gBat	NH00	DIN HRC fuse-link	490.00
370075	160A	440 VDC	30 kA	gBat	NH00	DIN HRC fuse-link	542.00
370260	200A	550 VDC	30 kA	gBat	NH1	DIN HRC fuse-link	809.00
370270	250A	550 VDC	30 kA	gBat	NH1	DIN HRC fuse-link	935.00
370370	315A	550 VDC	30 kA	gBat	NH2	DIN HRC fuse-link	1 270.00
370375	355A	550 VDC	30 kA	gBat	NH2	DIN HRC fuse-link	1 510.00
370380	400A	550 VDC	30 kA	gBat	NH2	DIN HRC fuse-link	1 540.00
370465	500A	550 VDC	30 kA	gBat	NH3	DIN HRC fuse-link	2 180.00
370470	630A	550 VDC	30 kA	gBat	NH3	DIN HRC fuse-link	2 400.00

Accessories for NH fuse-links

Microswitch for NH fuses				(mounts directly onto fuse-links)		
357010	5A	250 VAC	1-pole	micro switch for all sizes NH fuses		462.00
340001	handle	universal fuse replace/removal handle		for all sizes NH fuses		396.00

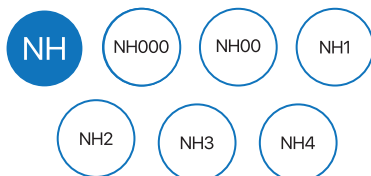
ST fuse holders for NH PV fuse-links - 1000 VDC

354172	250A	1000 VDC	1-pole	gPV	NH1	photovoltaic fuse base	435.00
354175	400A	1000 VDC	1-pole	gPV	NH2	photovoltaic fuse base	880.00
354180	500A	1000 VDC	1-pole	gPV	NH3	photovoltaic fuse base	1 010.00

Solid NH Neutral Links

341100	160A	690V	1-pole		NH000/00	neutral link blades	143.00
341250	250A	690V	1-pole		NH1	neutral link blades	219.00
341400	400A	690V	1-pole		NH2	neutral link blades	260.00
341630	630A	690V	1-pole		NH3	neutral link blades	330.00
340125	1250A	690V	1-pole		NH4	neutral link blades	1 220.00

NH semiconductor fuse-links



Semiconductor NH fuse-links

Semiconductor fuse-links designed for protection of semiconductors (*diodes, thyristors, triacs, etc*) used in power rectifiers, UPS, converters, motor drives, soft starters, solid state relays, photovoltaic inverters, welding inverters and any application where semiconductor protection is required.

Specification:

- Rated voltage: 690 VAC
- Breaking capacity: 100 kA
- Standards: IEC/EN 60269-1, IEC/EN 60269-4, UL248 standard

type	rated current	rated voltage	breaking capacity	class size	fuse	description	price
RAPIDPLUS NH gS - high-speed fuse-links for semiconductors							
The NH gS series fuses are the optimal choice for ensuring the safety and reliability of electrical systems that require both semiconductor protection and full circuit coverage.							
RAPIDPLUS NH gS fuse-links are capable of clearing all types of overcurrents, overloads and short-circuits, protecting semiconductors, cables and associated switchgear in the installation.							
371025	20A	690V	100 kA	gS	NH000	semiconductor fuse-link	504.00
371030	25A	690V	100 kA	gS	NH000	semiconductor fuse-link	402.00
371035	32A	690V	100 kA	gS	NH000	semiconductor fuse-link	408.00
371045	40A	690V	100 kA	gS	NH000	semiconductor fuse-link	415.00
371050	50A	690V	100 kA	gS	NH000	semiconductor fuse-link	415.00
371055	63A	690V	100 kA	gS	NH000	semiconductor fuse-link	440.00
371060	80A	690V	100 kA	gS	NH000	semiconductor fuse-link	473.00
371065	100A	690V	100 kA	gS	NH000	semiconductor fuse-link	496.00
371070	125A	690V	100 kA	gS	NH00	semiconductor fuse-link	624.00
371075	160A	690V	100 kA	gS	NH00	semiconductor fuse-link	673.00
371260	200A	690V	100 kA	gS	NH1	semiconductor fuse-link	962.00
371270	250A	690V	100 kA	gS	NH1	semiconductor fuse-link	1 090.00
371370	315A	690V	100 kA	gS	NH2	semiconductor fuse-link	1 630.00
371375	355A	690V	100 kA	gS	NH2	semiconductor fuse-link	1 730.00
371380	400A	690V	100 kA	gS	NH2	semiconductor fuse-link	1 920.00
371465	500A	690V	100 kA	gS	NH3	semiconductor fuse-link	2 510.00
371470	630A	690V	100 kA	gS	NH3	semiconductor fuse-link	3 030.00

Fuse bases for above fuse-links (see next page)

RAPIDPLUS NH aR - high speed fuse-links for semiconductors

The NH aR series fuses are the go-to choice for ensuring the fast and reliable protection of semiconductor devices, offering specialized short-circuit protection in critical electrical systems.

RAPIDPLUS aR fuses Intended for clearing short-circuits, specifically designed to have very low I^2t values with reduced arc voltages, guaranteeing optimum semiconductor protection.

Specification:

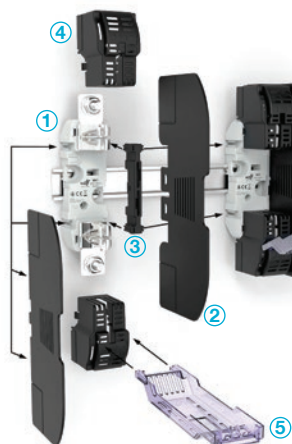
- Rated voltage: 690 VAC
- Breaking capacity: 120 kA
- Standards: IEC/EN 60269-1, IEC/EN 60269-4, UL248 standard

365020	16A	690V	120 kA	aR	NH000	semiconductor fuse-link	440.00
365025	20A	690V	120 kA	aR	NH000	semiconductor fuse-link	442.00
365030	25A	690V	120 kA	aR	NH000	semiconductor fuse-link	443.00
365035	32A	690V	120 kA	aR	NH000	semiconductor fuse-link	433.00
365045	40A	690V	120 kA	aR	NH000	semiconductor fuse-link	438.00
365050	50A	690V	120 kA	aR	NH000	semiconductor fuse-link	454.00
365055	63A	690V	120 kA	aR	NH000	semiconductor fuse-link	454.00
365060	80A	690V	120 kA	aR	NH000	semiconductor fuse-link	469.00
365065	100A	690V	120 kA	aR	NH000	semiconductor fuse-link	492.00
365070	125A	690V	120 kA	aR	NH000	semiconductor fuse-link	523.00
365075	160A	690V	120 kA	aR	NH000	semiconductor fuse-link	640.00
365080	200A	690V	120 kA	aR	NH000	semiconductor fuse-link	675.00
365085	250A	690V	120 kA	aR	NH000	semiconductor fuse-link	741.00
365270	250A	690V	120 kA	aR	NH1	semiconductor fuse-link	873.00
365280	315A	690V	120 kA	aR	NH1	semiconductor fuse-link	948.00
365282	350A	690V	120 kA	aR	NH1	semiconductor fuse-link	1 010.00
365290	400A	690V	120 kA	aR	NH1	semiconductor fuse-link	1 140.00
365380	400A	690V	120 kA	aR	NH2	semiconductor fuse-link	1 400.00
365390	500A	690V	120 kA	aR	NH2	semiconductor fuse-link	1 540.00
365395	630A	690V	120 kA	aR	NH2	semiconductor fuse-link	1 820.00
365475	800A	690V	120 kA	aR	NH3	semiconductor fuse-link	2 540.00
365485	1000A	690V	120 kA	aR	NH3	semiconductor fuse-link	2 970.00

For semi-conductor derating tables, see Annex-7



NH fuse-links accessories



ST series - Fuse bases for NH fuse-links

- Rated voltage: 690/800V
- Self-extinguishing polyamide body / silver-plated copper contacts
- Standards: IEC/EN 60269-1, IEC/EN 60269-2, DIN43620

type	rated current	for fuse size	poles	description	qty per pack	price (per pack)
ST series NH fuse bases						
Single pole ①						
354115	160A	NH000/00	1-pole	industrial NH fuse base	1	126.00
352115*	160A	NH000/00	1-pole	industrial NH fuse base	1	139.00
352300	250A	NH1	1-pole	industrial NH fuse base	1	371.00
352400	400A	NH2	1-pole	industrial NH fuse base	1	638.00
352630	630A	NH3	1-pole	industrial NH fuse base	1	815.00
354125	1250A	NH4	1-pole	industrial NH fuse base	1	3 190.00

Three pole (supplied with separating phase barriers between phases) ①

353102*	160A	NH000/00	3-pole	industrial NH fuse base	1	404.00
353300	250A	NH1	3-pole	industrial NH fuse base	1	1 170.00
353400	400A	NH2	3-pole	industrial NH fuse base	1	2 130.00
353630	630A	NH3	3-pole	industrial NH fuse base	1	2 480.00

* DIN-rail or chassis mountable

NH fuse holder accessories

Sectionable neutral NH bases

- Neutral link base (can be mounted directly onto sides of fuse base)

334103	160A	NH00	1-pole	sectionable neutral terminal	1	143.00
334160	250A	NH1	1-pole	sectionable neutral terminal	1	191.00
334251	630A	NH3	1-pole	sectionable neutral terminal	1	324.00

Partition walls - (NH00/1/2/3 require connectors to mount) ②

326100	160A	NH00		partition walls for fuse bases	2	71.00
326200	200A	NH1		partition walls for fuse bases	2	124.00
326250	250A	NH2		partition walls for fuse bases	2	133.00
326630	630A	NH3		partition walls for fuse bases	2	250.00
343125*	1250A	NH4		partition walls for fuse bases	1	233.00

* 343125 screws directly onto chassis plate (does not mount onto fuse base)

Connectors - (to connect two bases together - accepts partition wall) ③

325100	160A	NH00		separators for fuse bases	2	30.30
325250	250A	NH1		separators for fuse bases	2	57.00
325400	400A	NH2		separators for fuse bases	2	54.00
325630	630A	NH3		separators for fuse bases	2	80.00

Terminal covers - (to protect connection terminals of fuse holders) ④

325000	160A	NH00	1-pole	terminal cover for bases	6	160.00
325005	250A	NH1	1-pole	terminal cover for bases	6	241.00
325003	400A	NH2	1-pole	terminal cover for bases	6	352.00
325007	630A	NH3	1-pole	terminal cover for bases	6	590.00

Fuse-link covers - (connects onto terminal covers) ⑤

325010	160A	NH00		hinged covers for fuse-link	3	116.00
325018	160A	NH1		hinged covers for fuse-link	3	99.00
325020	250A	NH2		hinged covers for fuse-link	3	174.00
325025	630A	NH3		hinged covers for fuse-link	3	252.00

Complete fuse base protection kits (for fuse and terminal insulation protection IP20)

Fuse base kits offer a versatile and secure solution for mounting NH fuses, with comprehensive protection features that cater to a wide range of current ratings

- Comprises - partition walls - terminal cover - fuse cover

325009*	160A	NH00	3-pole	integral terminal cover	1	126.00
325030	160A	NH00	1-pole	IP20 full protection kit	1	167.00
325042	250A	NH1	3-pole	IP20 full protection kit	1	593.00
325046	400A	NH2	3-pole	IP20 full protection kit	1	618.00
325051	630A	NH3	3-pole	IP20 full protection kit	1	1 180.00

* Partition wall incorporated, fuse covers 325010 to be ordered separately



Energy storage system fuses - 1500 VDC

ESS fuses are designed specifically for DC networks with high voltage and short circuit levels. Developed to meet all requirements in Energy Storage applications, ensuring optimal protection, increased reliability and consistent performance over time, ensuring optimal protection of battery racks and connection panels against short circuits and overloads, surpassing protection and safety industry standards.

- For installations with potential short-circuit currents of up to 250kA and continuous voltages of up to 1500 VDC
- Silver-based composition protects from premature ageing, offering increased reliability ensuring consistent, premium performance over time for Energy Storage applications.

Conformity to standards: UL248-13, CSA C22.2 No. 248.1-11, IEC 60269-1 /-4/-7, GB/T 13539.4

type	rated current	rated voltage	breaking capacity	fuse class	fuse size	description	price
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Bolted blade fuses (with striker) 160 - 1200A**250kA high voltage 1500 VDC fuses**

HCHVT1500-160B-59E	160A	1500 VDC	250kA	aR	2	battery storage fuse	2 170.00
HCHVT1500-200B-59E	200A	1500 VDC	250kA	aR	2	battery storage fuse	2 280.00
HCHVT1500-250B-59E	250A	1500 VDC	250kA	aR	2	battery storage fuse	2 400.00
HCHVT1500-315B-59E	315A	1500 VDC	250kA	aR	2	battery storage fuse	2 570.00
HCHVT1500-350B-59E	350A	1500 VDC	250kA	aR	2	battery storage fuse	2 720.00
HCHVT1500-400B-59E	400A	1500 VDC	250kA	aR	2	battery storage fuse	2 890.00
HCHVT1500-500B-74E	500A	1500 VDC	250kA	aR	3	battery storage fuse	3 070.00
HCHVT1500-550B-74E	550A	1500 VDC	250kA	aR	3	battery storage fuse	3 170.00
HCHVT1500-630B-74E	630A	1500 VDC	250kA	aR	3	battery storage fuse	3 310.00
HCHVT1500-700B-74E	700A	1500 VDC	250kA	aR	3	battery storage fuse	3 590.00
HCHVT1500-800B-74E	800A	1500 VDC	250kA	aR	3	battery storage fuse	4 060.00
HCHVT1500-900B-74E	900A	1500 VDC	250kA	aR	3	battery storage fuse	5 360.00
HCHVT1500-1000B-74E	1000A	1500 VDC	250kA	aR	3	battery storage fuse	5 880.00
HCHVT1500-1100B-74E	1100A	1500 VDC	250kA	aR	3	battery storage fuse	6 390.00
HCHVT1500-1200B-74E	1200A	1500 VDC	250kA	aR	3	battery storage fuse	6 920.00

Flush end fuses (with striker) 1100 - 3000A**250kA high voltage 1500 VDC fuses**

HCHVT1500-1100S-105E	1100A	1500 VDC	250kA	aR	4	battery storage fuse	8 690.00
HCHVT1500-1250S-105E	1250A	1500 VDC	250kA	aR	4	battery storage fuse	9 360.00
HCHVT1500-1350S-105E	1350A	1500 VDC	250kA	aR	4	battery storage fuse	9 980.00
HCHVT1500-1500S-105E	1500A	1500 VDC	250kA	aR	4	battery storage fuse	10 600.00
HCHVT1500-1600S-105E	1600A	1500 VDC	250kA	aR	4	battery storage fuse	11 100.00
HCHVT1500-1800S-105E	1800A	1500 VDC	250kA	aR	4	battery storage fuse	12 100.00
HCHVT1500-2000A-159E	2000A	1500 VDC	250kA	aR	5	battery storage fuse	18 300.00
HCHVT1500-2500A-159E	2500A	1500 VDC	250kA	aR	5	battery storage fuse	22 100.00
HCHVT1500-3000A-159E	3000A	1500 VDC	250kA	aR	5	battery storage fuse	25 000.00

Micro switch for above fuses

Micro switch simply clips onto support on the fuse to provide remote trip indication.

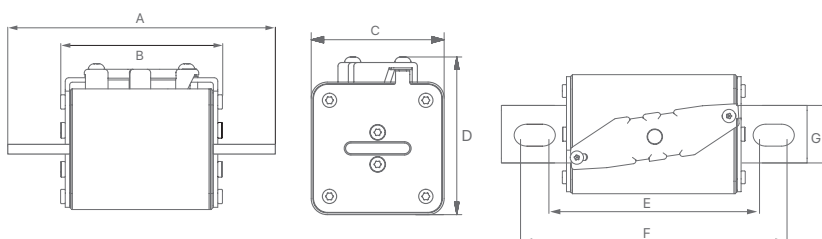
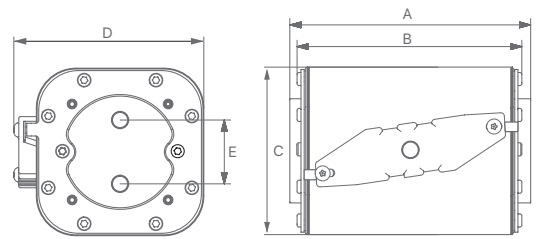
Rated current: 2A - 250 VAC

Dimensions: (H) 34 x (W) 40 x (D) 16 mm

HCMS02501	1 C/O	micro switch	fuse mounting	1 x changeover micro switch	86.00
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Dimensions:

Fuse Size	A	B	C	D	E	F	G
dimensions (mm)							
Bolted blade fuses (with striker)							
2	207	140	59	73	163	182	30
3	218	140	75	89	172	192	40
Flush end fuses (with striker)							
4	153	137	105	122	40	—	—
5	159	144	163	180	63	—	—

Dimensions:**Bolted - Mount****Flush - Mount**

INOSYS LBS Series

High-Performance Switches for Superior Safety

The INOSYS LBS Series offers advanced load break switches specifically designed for demanding DC applications, including renewable energy systems like photovoltaic (PV) and energy storage (ESS). These switches ensure reliable and safe disconnection of electrical circuits in high-voltage environments. Capable of handling up to 1500 VDC in just 2 poles, the INOSYS LBS stands out with its robust design, performing reliably even in extreme conditions. Ideal for critical power applications, and suited for the DC-PV2 utilisation.



High performance switching



Focus on Safety



Application tested design

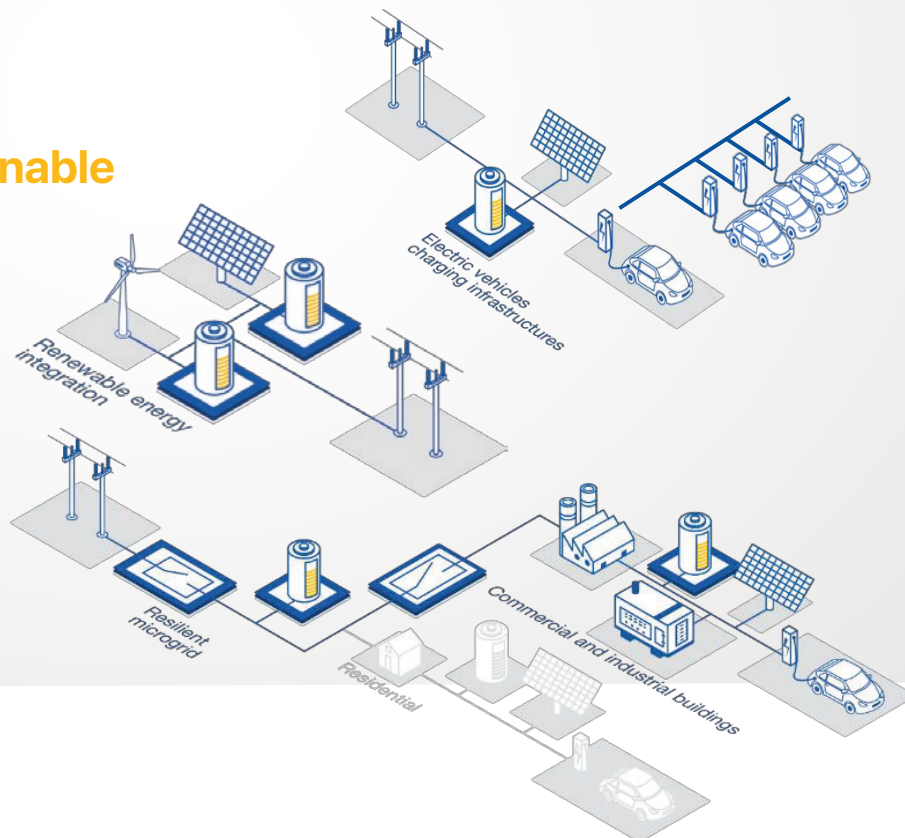


Easy integration & modular solution

For a future that will be more
⚡ **Electric**, more 🌱 **Sustainable**
and more focused on 🔋 **DC**

Typical applications

- Renewable energy (PV, Battery protection, Energy storage)
- DC process, Drives and Power Electronics
- DC distribution
- E-mobility (EV, Marine)



NH fuse switch disconnectors



63-823191-021



63-823267-001



63-823234-041



63-001417-002

Horizontal fuse switch disconnectors

RBK fuse switch disconnectors are designed for distribution of electricity and protection of electrical equipment against short circuits and overloads using industrial NH fuse-links. Intended for installation in low-voltage distribution boards, cable and metering cabinets.

- Rated operational voltage U_n : 690 V
- Insulation voltage U_i : 1000 V
- Rated impulse withstand voltage U_{imp} : 8 kV
- Lid lock and lid seal: (with optional accessories)
- Voltage test facility: (performed through test holes in fuselink cover)
- Protection degree: IP 20 - (IP30 for RBP and RBK 1 units)
- Standards: IEC/EN 60947-1, IEC/EN 60947-3
- Consult product datasheet for DC utilisation category

type	model	No. poles	fuse size	rated current	cable terminal	dimensions (mm)			price
						(H)	(W)	(D)	

RBK proS NH - Fuse switch disconnectors for installation on chassis plate

- Mounting on plate/chassis by screws
- Made of fibre glass reinforced, halogen-free flame-retardant polyamide

63-823191-021	RBK 000 pro-M	3-pole	000	160A	M8	181	89	92	837.00
63-823256-121	RBK 00 pro-M	3-pole	00	160A	M8	182	106	81	705.00
63-811748-021	RBK 1 pro-M	3-pole	1	250A	M10	269	180	111	2 850.00
63-811685-061	RBK 2 pro-M	3-pole	2	400A	M10	298	208	130	3 300.00
63-811761-021	RBK 3 pro-M	3-pole	3	630A	M12	307	250	144	4 540.00

RBP proS (53 mm wide) Compact fuse switch disconnectors 000

Slimline - width dimensions equal to half the width of RBK 00 pro, permitting more switches to be mounted in the same space.

- Rated impulse withstand voltage U_{imp} : 6 kV

63-823267-001	RBP 000 pro	3-pole	000	125A	clamp	216	53	83	972.00
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RBK proS - Fuse switch disconnectors for installation on 60 mm busbar system

- Mounting directly onto 60 mm busbar system - using hooked clamps within the fuse base
- Made of fibreglass reinforced, halogen-free, flame-retardant polyamide
- Termination: Bottom of switch (top terminals available on request)

63-823234-041	RBK 000-SD-M	3-pole	000	160A	M8	191	89	112	1 430.00
63-823259-141	RBK 00 pro-SD-M	3-pole	00	160A	M8	214	106	110	1 390.00
63-811750-061	RBK 1 pro-SD-M	3-pole	1	250A	M10	243	180	140	3 420.00
63-811686-061	RBK 2 pro-SD-M	3-pole	2	400A	M10	298	208	154	5 090.00
63-028802-003	RBK 3 pro-SD-M	3-pole	3	630A	M12	307	250	137	6 300.00

RBP proS - Slimline (53 mm wide) Compact fuse switch disconnectors 000

Slimline width dimensions equal to half the width of RBK 00 pro, permitting more switches to be mounted in the same space.

63-823427-002	RBP 000 pro-SD	3-pole	000	125A	clamp	214	53	108	1 290.00
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Accessories for above RBK fuse switch disconnectors

1115296311T	Auxiliary contact	000/00						switch for door position status	111.00
1115296316	Auxiliary contact	1/2/3						switch for door position status	149.00
51-930160-011	extended cover	000						termination extended cover (25 mm)	68.00
51-930499-011	extended cover	00						termination extended cover (25 mm)	68.00

PBS - Vertical fuse rails for installation on 185 mm busbar system

PBS fuse bases are designed for electrical distribution and protection against short circuits and overloads. Intended for direct installation on horizontal bus bar systems. Due to their modern, compact design installing is simple, providing exceptional space saving in distribution boards

- Made of fibreglass reinforced, halogen-free, flame-retardant polyamide
- IP 20 touch protection with fuse-link shrouds

63-001417-002	PBS 00-SM	3-pole	00	160A	M8	674	49	162.5	1 680.00
63-500600-601	PBS 1-M	3-pole	1	250A	M12	657	100	144	2 760.00
63-500600-611	PBS 2-M	3-pole	2	400A	M12	657	100	144	3 030.00
63-500600-621	PBS 3-M	3-pole	3	630A	M12	657	100	144	3 800.00

Accessories for fuse rails

51-001312-001	fuse-link shroud	1-pole	00					for PBS 00 fuse rail (each)	57.00
51-500600-108	fuse-link shroud	1-pole	1,2,3					for PBS 1/2/3 fuse rail (each)	94.00

NH fuse switch disconnectors



63-811628-041



63-500700-711



63-073821-001

ARS pro - Vertical fuse switch disconnectors

Vertical mounting fuse switch disconnectors are designed for distribution of electricity and protection against short circuits and overloads in three-phase alternative current circuits.

They are intended for direct installation on vertical busbar systems

- Making and breaking operations should be done with determined movement,
- Parallel moving, double contact system,
- Designed for installation on to 60 mm, 100 mm or 185 mm busbar systems
- Rated operational voltage U_n : 690 V
- Insulation voltage U_i : 1000 V
- Rated impulse withstand voltage U_{imp} : 8 kV
- Padlockable: in parked and closed position
- Voltage test facility: (performed through test holes in fuse-link cover)
- Protection degree: IP 30
- Standards: IEC/EN 60947-1, IEC/EN 60947-3

type	model	No. poles	fuse size	rated current	cable terminal	dimensions (mm)			price
						(H)	(W)	(D)	

ARS pro - Vertical mounted fuse switch disconnectors

ARS pro vertical fuse switch disconnectors are designed for electrical distribution and protection against short circuits and overloads in three-phase AC circuits. For direct installation on horizontal or vertical busbar systems in applications requiring reliability and safety for low voltage distribution boards, transformer substations, industrial assemblies and cable cabinets.

- Switching 3-poles simultaneously

ARS 00/60 - Fuse switch disconnectors for installation on 60 mm busbar system

63-002354-001	ARS 00/60 M-pro	3-pole	00	160A	M8	401	50	132	2 080.00
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ARS 00/100 - Fuse switch disconnectors for installation on 100 mm busbar system

63-811628-041	ARS 00/100 M-pro	3-pole	00	160A	M8	423	50	127	1 690.00
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ARS evo - Fuse switch disconnectors for installation on 185 mm busbar system

The ARS evo range of fuse switch disconnectors are designed to incorporate the latest technology and many years of switchgear manufacturing experience, offering outstanding safety, functionality and flexibility.

- Safety:**
- Stable and safe power distribution network
 - Parking position
 - Fuse-link removable without touching it
 - Improved heat dissipation
- Functionality:**
- Simple to install
 - Non-parallel disconnector
 - 3-pole simultaneous switching (*individual pole switching available on request*)
- Flexibility:**
- Retractable handle
 - Reversibility - top/bottom cable termination connection
 - Padlockable in open or closed position

- Rated operational voltage U_n : 690 V
- Insulation voltage U_i : 1000 V
- Rated impulse withstand voltage U_{imp} : 8kV (ARS 00) 12kV (ARS2/3)

63-500750-703	ARS 00-3-M evo	3-pole	00	160A	M8	684	50	155	2 140.00
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63-500700-711	ARS 2-6-M evo	3-pole	2	400A	M12	667	100	174	4 920.00
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63-500700-721	ARS 3-6-M evo	3-pole	3	630A	M12	667	100	174	5 410.00
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smartARS pro-PV AC 800V for installation on 185 mm busbar system - PV solution

New smartARS pro-PV switch fuse disconnector developed to meet protection requirements on the output side of new generation photovoltaic inverters with an output voltage of 800 VAC.

- Rated operational voltage U_n : 800 V
- Insulation voltage U_i : 1000 V
- Rated impulse withstand voltage U_{imp} : 8kV (00) / 12kV (2/3)

63-073821-001	smartARS 00 pro-PV	3-P	00	80A	M8	684	50	151	2 830.00
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63-073822-003	smartARS 2-M pro-PV	3-P	1.2	200A	M12	686	99	19	5 520.00
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63-073822-004	smartARS 3-M pro-PV	3-P	3	400A	M12	686	99	191	6 010.00
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Accessories

1115296318T	1 NO micro switch	2/3	—	—	—	—	—	—	116.00
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1115296319T	1 NC micro switch	2/3	—	—	—	—	—	—	116.00
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51-500700-109	terminal shroud	2/3	—	—	—	—	—	—	85.00
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NH fuse switch disconnectors



143017



143018



143119



106300



106538

MULTIBLOC series - NH-fuse switch disconnector (for panel mounting)

- Parking position of the switch cover (even with inserted fuse-links)
- Modular terminal covers can be extended as required
- Lid lock and lid seal (with optional accessories)

Utilization category to IEC/EN 60947-3

00	1
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Ue: AC 400V; Ie =	160A	250A	AC 23 B
Ue: AC 500V; Ie =	160A	250A	AC 22 B
Ue: AC 690V; Ie =	125A	200A	AC 21 B
Ue: DC 220V; Ie =	160A	250A	DC 22 B

type	No. poles	fuse size	max. current	cable terminal	description	dimensions (mm)			price
						(H)	(W)	(D)	

NH - Fuse switch disconnector (panel mounting)**IP30**

- Rated operational voltage: 690 V
- Rated impulse withstand Uimp: 8 kV
- Insulation voltage Ui: 1000 V

NH00 - Fuse switch disconnector

143017	1-pole	00	160A	M8	fuse switch disconnector	184	42	84	560.00
143018	2-pole	00	160A	M8	fuse switch disconnector	184	84	84	980.00

NH1 - Fuse switch disconnector

143119	1-pole	1	250A	M10	fuse switch disconnector	184	71	84	1 380.00
143118	2-pole	1	250A	M10	fuse switch disconnector	184	142	84	2 760.00

Accessories for above switch disconnectors

140149	1/2-pole	00	cable termination cover for NH00 switches				(2 pcs)		123.00
140354	1/2-pole	1	cable termination cover for NH1 switches				(2 pcs)		269.00
140155	1/2-pole	00/1	cover sealing set for switch disconnector				sizes 00 & 1		245.00
140852	1/2-pole		monitoring switch for door position status				all sizes		278.00

60 mm busbar system**Busbar supports for busbars (W) 12 - 30 mm x (D) 5/10 mm**

106300	3-pole	busbar support for 12 - 30 mm x 5/10 mm bars				185	17	43	312.00
106302*	1-pole	busbar support for 12 - 30 mm x 5/10 mm bars				77	17	43	243.00

* 1-pole unit can be attached for two pole or a 3-pole to make a 4-pole support

Busbar terminal protection covers

106096	3-pole	busbar protection cover		16...50 mm ²	201	54	44	452.00
106097	3-pole	busbar protection cover		16...70 mm ²	201	108	80	514.00
106098	3-pole	busbar protection cover		16...185 mm ²	201	108	80	552.00

Busbar mounting terminals

116053	315A	5 mm terminal		10...50 mm ²	for 106096		55.00
116054	400A	5 mm terminal		16...70 mm ²	for 106097		62.00
116063	315A	10 mm terminal		16...70 mm ²	for 106096		64.00
116064	400A	10 mm terminal		16...70 mm ²	for 106097		76.00
116065	440A	10 mm terminal		16...120 mm ²	for 106098		128.00

Component adaptors for direct mounting on 60 mm system busbars

106521	3-pole	1 rail	25A	4 mm ²	component adaptor	207	45	—	662.00
106523	3-pole	2 rails	25A	4 mm ²	component adaptor	260	45	—	863.00
106526	3-pole	1 rail	32A	6 mm ²	component adaptor	207	54	—	793.00
106528	3-pole	2 rails	32A	6 mm ²	component adaptor	260	54	—	1 020.00
106530	3-pole	1 rail	32A	6 mm ²	component adaptor	207	72	—	1 010.00
106531	3-pole	2 rails	32A	6 mm ²	component adaptor	260	72	—	1 110.00
106533	3-pole	1 rail	63A	10 mm ²	component adaptor	207	54	—	909.00
106535	3-pole	2 rails	63A	10 mm ²	component adaptor	260	54	—	1 030.00
106537	3-pole	1 rail	63A	10 mm ²	component adaptor	207	72	—	1 030.00
106538	3-pole	2 rails	63A	10 mm ²	component adaptor	260	72	—	1 110.00
106539	3-pole	2 rails	63A	10 mm ²	component adaptor	207	81	—	1 200.00
106544	3-pole	2 rails	80A	16 mm ²	component adaptor	260	72	—	1 420.00

Protection cover for 60 mm system

126074	3-pole	bar mounted cover support bracket							190.00
126075	3-pole	panel front cover protection 1000 mm				2 meter			1 090.00

Busbar support for 100 and 185 mm system

188100	3-pole	100 mm	busbar support for 30 - 60 mm x 10 mm bars			324	28	50	784.00
188101	3-pole	185 mm	busbar support for 30 - 120 mm x 10 mm bars			573	28	50	1 010.00
188102	1-pole	100/185	busbar support for 30 - 120 mm x 10 mm bars			224	25	50	739.00

Bolted type fuse-links

 FGN...	Industrial protection HRC fuses									
	Rated voltage:		500 VAC							
	Rated breaking capacity:		80 kA							
	Standards specification:		BS88-2, IEC 60269-2-1							
	Fuse class:		gG/Q1							
	type	rated current	BS88 ref.	rated voltage	breaking capacity	fixing centres	body dia. (mm)	type (GEC)	price	
	Off-set blade tag fuses (F1)									
	• Body length 60 mm									
	FGN 02A	2A	F1/NP	500V	80 kA	offset blade	14.2 mm	NS	32.20	
	FGN 04A	4A	F1/NP	500V	80 kA	offset blade	14.2 mm	NS	32.20	
FGN 06A	6A	F1/NP	500V	80 kA	offset blade	14.2 mm	NS	32.20		
FGN 10A	10A	F1/NP	500V	80 kA	offset blade	14.2 mm	NS	32.20		
FGN 16A	16A	F1/NP	500V	80 kA	offset blade	14.2 mm	NS	32.20		
FGN 20A	20A	F1/NP	500V	80 kA	offset blade	14.2 mm	NS	32.20		
FGN 25A	25A	F1/NP	500V	80 kA	offset blade	14.2 mm	NS	32.20		
FGN 32A	32A	F1/NP	500V	80 kA	offset blade	14.2 mm	NS	32.20		
 FSA	Off-set bolted tag (A2)									
	• Body length 86 mm									
	FSA 02A	2A	A2	500V	80 kA	73 mm	21.5 mm	TIA	55.00	
	FSA 04A	4A	A2	500V	80 kA	73 mm	21.5 mm	TIA	55.00	
	FSA 06A	6A	A2	500V	80 kA	73 mm	21.5 mm	TIA	55.00	
	FSA 10A	10A	A2	500V	80 kA	73 mm	21.5 mm	TIA	55.00	
	FSA 16A	16A	A2	500V	80 kA	73 mm	21.5 mm	TIA	55.00	
	FSA 20A	20A	A2	500V	80 kA	73 mm	21.5 mm	TIA	55.00	
	FSA 25A	25A	A2	500V	80 kA	73 mm	21.5 mm	TIA	55.00	
	FSA 32A	32A	A2	500V	80 kA	73 mm	21.5 mm	TIA	55.00	
 FSS...	Off-set bolted tag (A3)									
	• Body length 90 mm									
	FSS 40	40A	A3	500V	80 kA	73 mm	21.5 mm	TIS	64.00	
	FSS 50	50A	A3	500V	80 kA	73 mm	21.5 mm	TIS	64.00	
	FSS 63	63A	A3	500V	80 kA	73 mm	21.5 mm	TIS	64.00	
	Off-set bolted tag (A4)									
	• Body length 111 mm									
	FSDCP 63	63A	A4	500V	80kA	94 mm	32 mm	TCP	136.00	
	FSDCP 80	80A	A4	500V	80 kA	94 mm	32 mm	TCP	136.00	
	FSDCP 100	100A	A4	500V	80 kA	94 mm	32 mm	TCP	136.00	
 FSDCP...	Off-set bolted tag (A4)									
	• Body length 111 mm									
	FSFP 125	125A	A4a	500V	80 kA	94 mm	39.5 mm	TFP	199.00	
	FSFP 160	160A	A4a	500V	80 kA	94 mm	39.5 mm	TFP	199.00	
	FSFP 200	200A	A4a	500V	80 kA	94 mm	39.5 mm	TFP	199.00	
	Central bolted tag (B2)									
	• Body length 132 mm									
	FSF 160	160A	B2	500V	80 kA	111 mm	39.5 mm	TF	190.00	
	FSF 200	200A	B2	500V	80 kA	111 mm	39.5 mm	TF	190.00	
	 FSFP...	Central bolted tag (B3)								
• Body length 136 mm										
FSK 250		250A	B3	500V	120 kA	111 mm	50.5 mm	TKF	334.00	
FSK 315		315A	B3	500V	120 kA	111 mm	50.5 mm	TKF	334.00	
Central bolted tag (B4)										
• Body length 136 mm										
FMF 355		355A	B4	500V	80 kA	111 mm	50.5 mm	TMF	318.00	
FMF 400		400A	B4	500V	80 kA	111 mm	50.5 mm	TMF	318.00	
 FMF...		Central bolted tag (C2)								
		• Body length 208 mm								
	FTM 500	500A	C2	500V	80 kA	133/184 mm	70.2 mm	TTM	461.00	
	FTM 600	600A	C2	500V	80 kA	133/184 mm	70.2 mm	TTM	461.00	
	 FTM...									



EGA 1 275/1+1 IR

New



EGA 1 275/3+1 IR



PSC2-25/230 TT IR



PSC4-25/400 TT IR



EGARA 1 275

EGA 1 Power Line SPDs - DIN-rail - IEC TYPE 1+2

The new EGA 1 series of Type 1+2 / Class I+II surge protection devices are designed to protect electrical installations from lightning strikes (10/350 μ s) and induced voltage surges (8/20 μ s) in accordance with IEC/EN 61643-11 and IEC/EN 61643-12 standards.

Intended to be used as the first level of protection in main switchboards, particularly in areas with a high risk of lightning strikes and areas with high atmospheric exposure where external protection against direct lightning strikes are already provided.

Features

- Lightning impulse current (10/350 μ s): 12.5 kA per phase
- Nominal discharge current (8/20 μ s): 20 kA per phase
- Maximum discharge current (8/20 μ s): 50 kA
- Short-circuit current rating: 25 kA
- Network configuration: TT & TNS 230/400V
- Product standards: IEC/EN 61643-11, UL 1449 5th Edition
- Certifications: CE, Rohs, UKCA, KEMA-KEUR, ENEC
- Visual and remote end-of-life indication
- No back-up fuse required up to 315A
- Reinforced plug-in DIN-rail format
- Patented easy ergonomic cartridge plug-in and extraction mechanism
- Distributed PE & Equipotential EBB
- Shock withstand and vibration-proof remote microswitch and DIN-rail anchorage
- Advanced traceability and in-line automated quality controls of 100% of the SPDs

Applications

- Building
- Photovoltaic and BESS
- Water treatment
- E-Mobility - EV charging
- Telecom
- Industry

Type	limp L-N (10/350us)	In L-N (8/20us)	I _{max} (8/20us)	U _c max voltage	U _p protection voltage	config.	width in 18 mm	price
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EGA 1 series - Type 1+2 lightning current and surge arrestors

EGA 1 series limp (10/350) 12.5kA per phase - I total 25kA (2-pole) and 50kA (4 pole)

EGA 1 275/1+1	12.5 kA	20 kA	50 kA	275V	≤ 1.5 kV	1ph + N	2	4 640.00
EGA 1 275/1+1 IR	12.5 kA	20 kA	50 kA	275V	≤ 1.5 kV	1ph + N	2	5 990.00
EGA 1 275/3+1	12.5 kA	20 kA	50 kA	275V	≤ 1.5 kV	3ph + N	4	10 200.00
EGA 1 275/3+1 IR	12.5 kA	20 kA	50 kA	275V	≤ 1.5 kV	3ph + N	4	12 400.00

PSC 25 series - Type 1+2 lightning current and surge arrestors

The PCS 25 range of combined surge protection devices are designed to discharge lightning currents (10/350 μ s) and induced transient overvoltages (8/20 μ s).

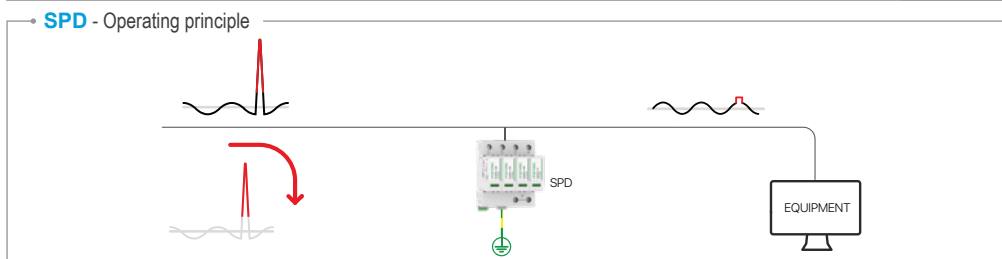
Suitable as the first level of protection in incoming power supply panels and areas with greater exposure to the atmosphere, where installations are usually provided with an external lightning protection system.

- Lightning impulse current (10/350 μ s): 25 kA
- Nominal discharge current (8/20 μ s): 25 kA
- Maximum discharge current (8/20 μ s): 100 kA
- Short-circuit current rating: 25 kA
- Network configuration: TT & TNS 230/400V
- Product standards: IEC/EN 61643-11

PSC2-25/230 TT	25 kA	25 kA	100 kA	275V	≤ 1.5 kV	1ph + N	4	8 790.00
PSC2-25/230 TT IR	25 kA	25 kA	100 kA	275V	≤ 1.5 kV	1ph + N	4	9 580.00
PSC4-25/400 TT	25 kA	25 kA	100 kA	275V	≤ 1.5 kV	3ph + N	8	16 300.00
PSC4-25/400 TT IR	25 kA	25 kA	100 kA	275V	≤ 1.5 kV	3ph + N	8	19 600.00

Spare replacement plug-in cartridges

EGARA 1 275	spare replacement cartridge for	EGA 1 phase	2 280.00
PSC-25/230	spare replacement cartridge for	PSC 25 phase	3 910.00
EGARA 1 N	spare replacement cartridge for	EGA 1 neutral	3 570.00
PSC-100N	spare replacement cartridge for	PSC 25 neutral	5 100.00



Surge protection devices



EGA 2 275/1+0

New



EGA 2 275/1+1 IR



EGA 2 275/3+1 IR



PSM2-20/230 TT IR



PSM3-30/750 TNC IR

EGA 2 Power Line SPDs - DIN-rail - IEC TYPE 2

The new EGA 2 series of Type 2 / Class II surge protection devices are designed to protect electrical installations from induced voltage surges (8/20 μ s) in accordance with the IEC/EN 61643-11 and IEC/EN 61643-12 standards.

These devices are typically used in one of two scenarios: as a secondary level of defence in electrical installations where Type 1 surge protection devices are installed upstream or as the first line of defence where the electrical installations are situated in areas that are not directly exposed to lightning strikes and do not have external lightning protection systems in place.

Features

- Maximum discharge current (8/20 μ s): 50 kA
- Nominal discharge current (8/20 μ s): 20 kA
- Short-circuit withstand: 25 kA
- Network configuration: TT & TNS 230/400V
- Product standards: IEC/EN 61643-11, UL 1449 5th Edition
- Certifications: CE, Rohs, UKCA, KEMA-KEUR, ENEC
- Visual and remote end-of-life indication
- No back-up fuse required up to 315A
- Reinforced plug-in DIN-rail format
- Patented easy ergonomic cartridge plug-in and extraction mechanism
- Distributed PE & Equipotential EBB
- Shock withstand and vibration-proof remote microswitch and DIN-rail anchorage
- Advanced traceability and in-line automated quality controls of 100% of the SPDs

Applications

- Building
- Photovoltaic and BESS
- Water treatment
- E-Mobility - EV charging
- Telecom
- Industry

Type	limp L-N (10/350us)	ln L-N (8/20us)	Imax (8/20us)	Uc max voltage	Up protection voltage	config.	width in 18 mm	price
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EGA 2 series - Type 2 surge protection devices

EGA 2 275/1+0	—	20 kA	50 kA	275V	≤ 1.5 kV	1P	1	923.00
EGA 2 N/0+1	—	50 kA	50 kA	255V	≤ 1.5 kV	N	1	1 170.00
EGA 2 275/1+1	—	20 kA	50 kA	275V	≤ 1.5 kV	1ph + N	2	1 740.00
EGA 2 275/1+1 IR	—	20 kA	50 kA	275V	≤ 1.5 kV	1ph + N	2	2 590.00
EGA 2 275/3+1	—	20 kA	50 kA	275V	≤ 1.5 kV	3ph + N	4	3 240.00
EGA 2 275/3+1 IR	—	20 kA	50 kA	275V	≤ 1.5 kV	3ph + N	4	4 250.00

PSM 20 series - Type 2+3 surge protection devices

The PSM 20 surge protection device range is designed to discharge induced transient overvoltages (type 2 + 3). Suitable the second and final steps of protection in panels where 2 protection devices are installed upstream. These devices should be installed as close as possible to the equipment being protected.

- Maximum discharge current (8/20 μ s): 20 kA
- Nominal discharge current (8/20 μ s): 10 kA
- Combined discharge voltage (Uoc): 10 kV
- Network configuration: TT & TNS 230/400V
- Product standards: IEC/EN 61643-11

PSM1-20/230	—	10 kA	20 kA	320V	≤ 1.4 kV	1P	1	792.00
PSM1-20N	—	10 kA	20 kA	255V	≤ 1.5 kV	N	1	895.00
PSM2-20/230 TT	—	10 kA	20 kA	320V	≤ 1.4 kV	1ph + N	2	1 370.00
PSM2-20/230 TT IR	—	10 kA	20 kA	320V	≤ 1.4 kV	1ph + N	2	2 060.00
PSM4-20/400 TT	—	10 kA	20 kA	320V	≤ 1.4 kV	3ph + N	4	2 670.00
PSM4-20/400 TT IR	—	10 kA	20 kA	320V	≤ 1.4 kV	3ph + N	4	3 920.00

PSM 30 series - Type 2 surge protection devices (higher voltage applications 500-690V)

Type 2 surge protection devices for protection of higher voltage electrical systems from induced transient overvoltages (8/20 μ s).

- Maximum continuous operating voltage: 750V
- Product standards: IEC/EN 61643-11

PSM1-30/750	—	15 kA	30 kA	750V	≤ 3 kV	1P	1	1 370.00
PSM1-30/750 IR	—	15 kA	30 kA	750V	≤ 3 kV	1P	1	1 550.00
PSM3-30/750 TNC	—	15 kA	30 kA	750V	≤ 3 kV	3P	3	3 490.00
PSM3-30/750 TNC IR	—	15 kA	30 kA	750V	≤ 3 kV	3P	3	4 540.00

Spare replacement plug-in cartridges

EGARA 2 275	—	—	—	—	—	—	—	673.00
PSM-20/230	—	—	—	—	—	—	—	577.00
PSM-30/750	—	—	—	—	—	—	—	1 010.00
EGARA 2 N	—	—	—	—	—	—	—	876.00
PSM-20N	—	—	—	—	—	—	—	652.00



New



PSC3-5/1000 PV IR



PSM3-40/600 PV IR

Surge protection devices (SPDs) for photovoltaic applications

Due to their location, solar panels and in many cases, the inverters and energy storage systems they are connected to are particularly exposed and prone to direct or indirect lightning strikes.

As PV systems are directly connected to electrical networks, surge protection devices are a critical component for protection against lightning and overvoltages, which not only ensures the safety of people, goods and equipment, but also ensures continuity of installation services.

Type	Iimp L-N (10/350us)	In L-N (8/20us)	I _{max} (8/20us)	U _c max voltage	U _p protection voltage	config.	width in 18 mm	price
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Type 1+2 photovoltaic surge protection devices

PSC 5 PV series - DIN-rail - IEC Type 1+2 PV

The PSC 5 PV range of combined Type 1+2 / Class I+II surge protection devices are intended for discharging lightning currents (10/350 μ s) and protection against induced voltage surges (8/20 μ s) within photovoltaic applications, in accordance with IEC 61643-31 standards.

These lightning current and surge protection devices are suitable for all photovoltaic applications: large-scale, rooftop and self-consumption (*off-grid*) DC installations, especially in facilities provided with external LPS.

- Lightning impulse current (10/350 μ s): 5 kA
- Maximum discharge current (8/20 μ s): 40 kA
- Nominal discharge current (8/20 μ s): 20 kA
- Maximum continuous operating voltage: 1060V & 1500V
- Short-circuit withstand: 10 kA (*no back-up fuse required*)
- Network configuration: PV
- Product standards: IEC 61643-31
- Plug-in DIN-rail format
- Visual and remote end of life indication
- Reversible chassis to allow cable entry from above or below
- Dynamic thermal disconnection system with high breaking capacity, optimised for DC voltages

PSC3-5/1000 PV	5 kA	20 kA	40 kA	1060V	≤ 4 kV	L+/PE/L-	3	2 830.00
PSC3-5/1000 PV IR	5 kA	20 kA	40 kA	1060V	≤ 4 kV	L+/PE/L-	3	3 250.00
PSC3-5/1500 PV	5 kA	20 kA	40 kA	1500V	≤ 5 kV	L+/PE/L-	3	3 060.00
PSC3-5/1500 PV IR	5 kA	20 kA	40 kA	1500V	≤ 5 kV	L+/PE/L-	3	3 490.00

Last two digits IR - with signalling contacts for remote indication/monitoring of devices

Type 2 photovoltaic surge protection devices

PSM 40 PV series - DIN-rail - IEC Type 2 PV

The PSM 40 PV range of Type 2 / Class II surge protection devices are intended for discharging induced voltage surges (8/20 μ s) within photovoltaic applications, in accordance with IEC 61643-31 standards.

These surge protection devices are suitable for all photovoltaic applications: large-scale, rooftop and self-consumption (*off-grid*) DC installations.

- Maximum discharge current (8/20 μ s): 40 kA
- Nominal discharge current (8/20 μ s): 20 kA
- Maximum continuous operating voltage: 660V, 1060V & 1500V
- Short-circuit withstand: 10 kA (*no back-up fuse required*)
- Network configuration: PV
- Product standards: IEC 61643-31
- Plug-in DIN-rail format
- Visual and remote end of life indication
- Reversible chassis to allow cable entry from above or below
- Dynamic thermal disconnection system with high breaking capacity, optimised for DC voltages

PSM3-40/600 PV	—	20 kA	40 kA	660V	≤ 2.6 kV	L+/PE/L-	3	1 640.00
PSM3-40/600 PV IR	—	20 kA	40 kA	660V	≤ 2.6 kV	L+/PE/L-	3	2 100.00
PSM3-40/1000 PV	—	20 kA	40 kA	1060V	≤ 4 kV	L+/PE/L-	3	2 430.00
PSM3-40/1000 PV IR	—	20 kA	40 kA	1060V	≤ 4 kV	L+/PE/L-	3	3 020.00
PSM3-40/1500 PV	—	15 kA	40 kA	1500V	≤ 5 kV	L+/PE/L-	3	2 860.00
PSM3-40/1500 PV IR	—	15 kA	40 kA	1500V	≤ 5 kV	L+/PE/L-	3	3 220.00

Spare replacement plug-in cartridges - for PV surge arrestors

PSC-5/1000 PV	spare replacement cartridge for	PSC3-5/1000	851.00
PSC-5/1500 PV	spare replacement cartridge for	PSC3-5/1500	925.00
PSM-40/600 PV	spare replacement cartridge for	PSM3-40/600	606.00
PSM-40/1000 PV	spare replacement cartridge for	PSM3-40/1000	655.00
PSM-40/1500 PV	spare replacement cartridge for	PSM3-40/1500	711.00

Overvoltage protection & ground monitoring devices



V-Check 4MR-63



V-Check 4RC



PSM4-40/230 SG



PSM4-40/400 SG

V-CHECK MR - Surge protection + POP + integrated self reclose MCB

V-CHECK MR devices are a range of combined surge and power frequency overvoltage protection devices (SPD + POP), complete with automatic reclosing MCB.

These units protect electrical networks against transient voltage spikes (8/20 μ s) as well as voltage increases which last for indefinite periods. Ideal for installation panels requiring continuity of service and for second homes.

- SPD type: Type 2 / Class II
- Network: 1-Phase + N / 3-Phase + N
- Actuation method: Integrated auto reclosing MCB
- Product standards: EN 50550; IEC 63052; EN 61643-11

type	type 2 surge protection			C-curve MCB			configuration	width in 18 mm	price
	In	Imax	Uc	Up	In	Icn			
	L-N (8/20us)	(8/20us)	max voltage	protection voltage	nominal current	breaking capacity			
V-Check 2MR-25	5 kA	20 kA	400V	≤ 1.8 kV	40A	10 kA	1ph + N	5	6 560.00
V-Check 2MR-40	5 kA	20 kA	400V	≤ 1.8 kV	40A	10 kA	1ph + N	5	7 320.00
V-Check 4MR-16	5 kA	20 kA	275V	≤ 1.5 kV	16A	6 kA	3ph + N	9	12 300.00
V-Check 4MR-63	5 kA	20 kA	275V	≤ 1.5 kV	63A	6 kA	3ph + N	9	15 900.00

V-Check RC - SPD+POP protection disconnecting the circuit via a contactor

V-Check 4RC	15 kA	40 kA	400V	≤ 1.8 kV	—	—	3ph + N	4	8 810.00
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G-CHECK - Ground monitoring device

The G-CHECK is a control device that continuously monitors the state of the ground connection to ensure proper operation of surge protection devices and the protection of personnel against indirect contacts. By the loop resistance calculation method, G-CHECK checks the impedance of the actual leakage path of an indirect contact, enabling it to detect:

- Deterioration of the ground connection
- Breakage or incorrect wiring of the neutral cable

type	Un rated voltage	frequency	alarm activation value	max measured value	outputs	output rated current	price
G-CHECK 230	230V	50Hz	adjustable	500 ohm	1	0.3A	9 640.00

SAFEGROUND® - Power line monitoring SPD with ground monitoring

The **SAFEGROUND®** series are Type 2 / Class II surge protection with integrated ground monitoring intended to protect against induced voltage surges (8/20 μ s) in accordance to IEC/EN 61643-11 standards.

The integrated ground monitoring feature, based on patented loop impedance technology:

- Confirms the device is properly installed
- Reports on the effectiveness of the surge protection
- Provides safety information in the event of indirect contact
- Indication of the status of the earth loop is displayed via a multi-state LED

type	limp L-N (10/350us)	In L-N (8/20us)	Imax (8/20us)	Uc max voltage	Up protection voltage	config.	width in 18 mm	price
PSM2-40/230 SG	—	20 kA	40 kA	275V	≤ 1.3 kV	1ph + N	2	5 170.00
PSM4-40/400 SG	—	20 kA	40 kA	275V	≤ 1.3 kV	3ph + N	4	7 060.00

SAFEGROUND® - Indications

Main indications

Steady	• Correct wiring • Surge protection operating at its maximum effectiveness
Flashing	• Incorrect wiring (single-phase)
Steady	• Surge protection is not operating at its maximum effectiveness
Steady	• Ineffective surge protection
Flashing	• Incorrect wiring • Without grounding connection and no surge protection • Check installation • Potential security risk

Additional indications

		• Permanent undervoltage < 195V
		• Permanent overvoltage > 275V
		• High potential neutral-ground

Surge protection devices



954315



961180



952070



952315



900453

For the protection of low voltage equipment against transient voltage and current surges mainly from atmospheric origin (*lightning*) and transient produced by switching characteristics such as in switching of distribution networks, transformers, motors, etc.

type	Iimp L-N (10/350us)	In L-N (8/20us)	I _{max} (8/20us)	U _c max voltage	U _p protection voltage	config.	width in 18 mm	price
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DEHN Type 1+2 combined lightning current and surge protection (in a single unit)

- Clamps voltage to less than 1500V as per SANS 10142-1:2008 table L1
- Prewired spark-gap-based type 1 and 2 combined lightning current and surge arrester

941110	12.5kA	12.5kA	25kA	255V	≤ 1.5 kV	1ph + N	2	6 560.00
951115*	25kA	25kA	50kA	264V	≤ 1.5 kV	1ph + N	4	23 300.00
941310	12.5kA	12.5kA	50kA	255V	≤ 1.5 kV	3ph + N	4	12 000.00
951315*	25kA	25kA	100kA	264V	≤ 1.5 kV	3ph + N	8	39 600.00

DEHN Type 1+2 combined lightning current and surge protection with integrated back up fuse

961200	25kA	25kA	25kA	255V	≤ 1.5 kV	1P	2	10 000.00
961205*	25kA	25kA	25kA	255V	≤ 1.5 kV	1P	2	10 900.00

Type 1 lightning current protection with integrated backup fuse

961146*	35kA	—	35kA	440V	≤ 2.5 kV	1P	3	15 400.00
961176*	35kA	—	35kA	760V	≤ 4 kV	1P	3	16 700.00

Type 1 lightning current protection without integrated backup fuse

961145*	35kA	—	35kA	440V	≤ 2.5 kV	1P	3	10 900.00
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DEHN N-PE

961180	100kA	—	100kA	255V	≤ 1.5 kV	N	2	9 050.00
961185*	100kA	—	100kA	255V	≤ 1.5 kV	N	2	9 790.00
952030	12kA	20kA	40kA	255V	≤ 1.5 kV	N	1	1 870.00
952035*	12kA	20kA	40kA	255V	≤ 1.5 kV	N	1	3 320.00

DEHN Type 2 surge protection devices without integrated back up fuse

Minimum requirement as per SANS 10142-1:2008 annex L for use in all electrical distribution boards and sub boards. For installation in conformity with the lightning protection zone.

- Replaceable plug-in modules
- Visual fault indication
- Clamps voltage to less than 1500V as per SANS 10142-1:2008 table L1

DEHN guard Type 2 surge protection device without integrated back up fuse

952070	—	20kA	40kA	275V	≤ 1.5 kV	1P	1	1 300.00
952090*	—	20kA	40kA	275V	≤ 1.5 kV	1P	1	2 170.00
952110	12kA	20kA	40kA	275V	≤ 1.5 kV	1ph + N	2	3 090.00
952115*	12kA	20kA	40kA	275V	≤ 1.5 kV	1ph + N	2	3 690.00
952310	12kA	20kA	40kA	275V	≤ 1.5 kV	3ph + N	4	5 450.00
952315*	12kA	20kA	40kA	275V	≤ 1.5 kV	3ph + N	4	6 250.00

DEHN S/M ACI 275 Type 2 arrester protection device ACI (Advanced Circuit Interruption)

With its new integrated switch/spark gap combination, ACI (*Advanced Circuit Interruption*) technology reduces complexity, improves system availability and saves time, space and material costs. Function reliably and systems are always available.

952341*	—	20kA	20kA	275V	≤ 1.5 kV	1ph + N	2	9 570.00
952121*	—	20kA	20kA	275V	≤ 1.5 kV	1ph + N	2	5 610.00
952100*	—	20kA	20kA	275V	≤ 1.5 kV	1P	1	2 520.00

* With signalling contacts for remote indication/monitoring of devices

DEHN Type 2 surge protection device (non plug-in modules)

900453	—	5kA	10kA	275V	≤ 1.2 kV	1ph + N	2	1 220.00
900454	—	10kA	20kA	275V	≤ 1.3 kV	1ph + N	2	1 310.00
900463	—	10kA	20kA	275V	≤ 1.3 kV	3ph + N	4	2 050.00

DEHN Type 2 with build in fault indicator

900430	—	5kA	10kA	275V	≤ 1.5 kV	1ph + N	—	1 760.00
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DEHNrail modular Type 3 surge protection devices

- Replaceable plug-in protection modules
- High discharge capacity due to heavy-duty oxide varistor / spark gap combination
- Energy coordination with other arrestors

953200	—	3kA	5kA	255V	≤ 1.25 kV	1ph + N	1	2 500.00
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Photovoltaic Surge Protection Devices

Due to their location, solar panels and in many cases, the inverters they are connected to are exposed to and particularly prone to direct or indirect lightning strikes. As PV systems are directly connected to the electrical networks of buildings surge protection is essential.

type	Iimp) L-N (10/350us)	In L-N (8/20us)	I _{max} (8/20us)	U _c max voltage	U _p protection voltage	config.	width in 18 mm	price
DEHNGuard Type 1+2 PV (SPD) with SCI (non-plug-in modules)								
• Combined lightning current and surge arrestor for use in Photovoltaic systems								
900070	6.25kA	20kA	40kA	1200V	≤ 3.8 kV	L+/PE/L-	4	2 990.00
900075*	6.25kA	20kA	40kA	1200V	≤ 3.8 kV	L+/PE/L-	4	3 430.00
900071	6.25kA	20kA	40kA	1500V	≤ 4.5 kV	L+/PE/L-	4	3 230.00
900076*	6.25kA	20kA	40kA	1500V	≤ 4.5 kV	L+/PE/L-	4	3 680.00

DEHNGuard Type 2 PV (SPD) with SCI (non-plug-in modules)								
• Short circuit interruption (SCI) technology for maximum safety in PV systems								
950531	—	12.5kA	25kA	600V	≤ 2.5 kV	L+/PE/L-	3	4 900.00
950530	—	12.5kA	25kA	1000V	≤ 4 kV	L+/PE/L-	3	5 040.00

DEHNGuard Type 2+3 PV (SPD) with SCI								
• Plug-in cartridges for easy replacement								
• Safe replacement of protection modules without arc formation due to integrated DC fuses								
952515*	—	12.5kA	25kA	1000V	≤ 4 kV	L+/PE/L-	3	4 300.00
952520	—	12.5kA	25kA	1500V	≤ 6 kV	L+/PE/L-	4.5	11 700.00

* With signalling contacts for remote indication/monitoring of devices

Surge protection devices for data networks

BLITZDUCTOR XT

The BLITZDUCTOR XT range are pluggable and universal multipole DIN-rail mounted lightning current and surge arresters for protecting measuring and control circuits, bus systems and telecommunication systems

- LifeCheck SPD monitoring function
- Optimal protection for one pair of unearthed balanced interfaces, with direct or indirect shield earthing

920244	2.5kA	10kA	20kA	33 VDC	≤ 52V	4P	2/3	2 370.00
920300	DIN-rail mount socket for above BLITZDUCTOR XT protection module							1 100.00

BLITZDUCTORconnect

The BLITZDUCTORconnect series of combined lightning current and surge arresters are designed for universal use and system protection in the field of automation or measuring and control technology.

- Space-saving, modular combined arrester with a width of 6 mm
- Push-in connection technology with status indication
- With signal disconnection for maintenance purposes

927224	1.5kA	5kA	20kA	33 VDC	≤ 90V	2P	1/3	2 600.00
927244*	1.5kA	5kA	20kA	36 VDC	≤ 57V	2P	1/3	2 600.00

* For unearthed balanced interfaces

DEHNpatch Type 2 SPD for Ethernet applications

The DEHNpatch is a universal arrester for Industrial Ethernet, Power over Ethernet (PoE+ according to IEEE 802.3at up to 57 V) and similar applications in structured cabling systems according to class E up to 250 MHz.

- Fully shielded adapter with sockets for DIN-rail mounting

929121	0.5kA	150A	10kA	48 VDC	≤ 180V	RJ45	1	2 720.00
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DEHNpatch outdoor Type 2 SPD IP66

Universal surge arrester for GBit Ethernet applications, Power over Ethernet (IEEE 802.3 compliant up to PoE++ / 4PPoE) and similar applications in structured cabling systems up to class E.

- IP66 rated enclosure permits outdoor use
- Universal mounting bracket for pole and wall mounting

929221	0.8kA	400A	10kA	8.5 VDC	≤ 170V	RJ45	—	5 340.00
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DIN-mount power supplies



LYTE II



CLIQ II



DRF-24V120W1GBA



DRF-24V480W3GBA

Industrial Power Supplies

Delta - the worlds leading power supply manufacturer offers state-of-the-art designs made to withstand harsh industrial environments in accordance with ATEX requirements. The rugged ultra-compact case is both shock and vibration-resistant according to IEC 60068-2.

Product features:

- DIN-rail mounting (*RoHS compliant*)
- Wide input voltage range 85 to 264 VAC (1 phase) / 320 to 600 VAC (3 phase)
- Provides - overload, overvoltage and thermal protection
- Power boost - (*enables reserve power for reliable start-up of loads with high inrush currents*)
- Conforms to harmonic current IEC/EN 61000-3-2, Class A
- Certification: UL508, EN 60950, cULus 60950, EN 50178, EN 60204, GS, CCS Aus

type	input voltage	output voltage (adj)	rated load		housing	dimensions (mm)			price
			(W)	(A)		(H)	(W)	(D)	

LYTE II series DIN-rail mounting, ultra slim power supplies for general applications

- Universal input range: 85...264 VAC
- Efficiency: up to 90.0% (at 230 VAC)
- Operating temperature: -20°C to +70°C
- Built-in constant current circuit for reactive loads

DRL-12V75W1AZ	85 - 264 VAC	12 VDC	75	6.3	plastic	124	27	102	660.00
DRL-12V120W1EN	90 - 264 VAC	12 VDC	120	10.0	aluminium	124	30	117	767.00
DRL-12V240W1EN	90 - 264 VAC	12 VDC	240	20.0	aluminium	124	40	117	1 940.00
DRL-24V75W1AZ	85 - 264 VAC	24 VDC	75	3.1	plastic	124	27	102	544.00
DRL-24V120W1EN	90 - 264 VAC	24 VDC	120	5.0	aluminium	124	30	117	656.00
DRL-24V240W1EN	90 - 264 VAC	24 VDC	240	10.0	aluminium	124	40	117	1 280.00
DRL-24V480W1EN	90 - 264 VAC	24 VDC	480	20.0	aluminium	124	56	117	3 070.00
DRL-48V75W1AZ	85 - 264 VAC	48 VDC	75	1.6	plastic	124	27	102	676.00
DRL-48V120W1EN	90 - 264 VAC	48 VDC	120	2.5	aluminium	124	30	117	1 110.00
DRL-48V240W1EN	90 - 264 VAC	48 VDC	240	5.0	aluminium	124	40	117	2 070.00

CLIQ II series DIN-rail mounting, high specification series power supplies

- Efficiency: High efficiency - up to 92.0% (at 230 VAC)
- Power boost: 150% for 5 seconds (480W: 200% for 2 seconds)
- Operating temp: -25°C to +80°C
- Full-corrosion resistant aluminium casing
- Conformal coating on PCBAs to protect against chemical and dust pollutants

Single-phase

Input voltage range: 85 - 264 VAC / 120 - 375 VDC

DRP024V060W1BN	85 - 264 VAC	24 VDC	60	2.5	aluminium	121	32	125	1 160.00
DRP024V120W1BN	85 - 264 VAC	24 VDC	120	5.0	aluminium	121	50	125	1 800.00
DRP024V240W1BN	85 - 264 VAC	24 VDC	240	10.0	aluminium	121	85	125	2 550.00
DRP024V480W1BN	85 - 264 VAC	24 VDC	480	20.0	aluminium	121	144	119	3 930.00
DRP048V120W1BN	85 - 264 VAC	48 VDC	120	2.5	aluminium	121	50	125	2 150.00
DRP048V240W1BN	85 - 264 VAC	48 VDC	240	5.0	aluminium	121	85	125	3 140.00
DRP048V480W1BN	85 - 264 VAC	48 VDC	480	10.0	aluminium	121	144	119	4 740.00

Two-phase

Input voltage range: 2 × 180 - 550 VAC DC input range 254 - 780 VDC

DRP024V120W2BN	180-550 VAC	24 VDC	120	5	aluminium	124	40	117	2 130.00
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Three-phase

Input voltage range: 3 × 320 - 600 VAC / 450 - 800 VDC

DRP024V060W3BN	320 - 600 VAC	24 VDC	60	2.5	aluminium	121	50	118	2 210.00
DRP024V120W3BN	320 - 600 VAC	24 VDC	120	5.0	aluminium	121	50	118	1 980.00
DRP024V240W3BN	320 - 600 VAC	24 VDC	240	10.0	aluminium	121	70	118	3 730.00
DRP024V480W3BN	320 - 600 VAC	24 VDC	480	20.0	aluminium	121	140	118	5 250.00
DRP024V960W3BN	320 - 600 VAC	24 VDC	960	40.0	aluminium	121	255	118	8 980.00

FORCE-GT series DIN-rail mounting, high specification series power supplies

- Efficiency: High efficiency - up to 95.0% (at 230 VAC)
- Operating temp: -30°C to +70°C
- Built-in constant current circuit for charging applications
- Conformal coating on PCBAs to protect against chemical and dust pollutants

Single-phase

Input voltage range: 90 - 264 VAC

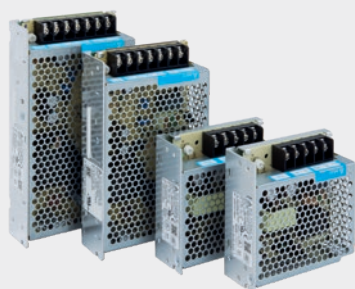
DRF-12V120W1GBA	90 - 264VAC	12 VDC	120	10.0	aluminium	124	30	117	1 700.00
DRF-24V120W1GBA	90 - 264VAC	24 VDC	120	5.0	aluminium	124	30	117	1 700.00
DRF-24V240W1GBA	90 - 264VAC	24 VDC	240	10.0	aluminium	124	40	117	2 320.00
DRF-24V480W1GBA	90 - 264VAC	24 VDC	480	20.0	aluminium	124	56	117	3 680.00

Three-phase

Input voltage range: 3 × 320 - 575 VAC

DRF-24V120W3GBA	320 - 575VAC	24 VDC	120	5.0	aluminium	124	38	126	2 500.00
DRF-24V240W3GBA	320 - 575VAC	24 VDC	240	10.0	aluminium	124	50	126	4 350.00
DRF-24V480W3GBA	320 - 575VAC	24 VDC	480	20.0	aluminium	124	65	128	6 280.00

Panel-mount power supplies



PMT



DRR-20N



DRU-24V40ABN

PMT2 series - Panel mounting (chassis type) enclosed power supplies (single phase)

PMT panel-mount power supplies with a wide operating temperature range, withstand shock and vibration according to IEC 60068-2. They offer overvoltage and over-current protection and meet price competitive demand without compromising quality of components and product specifications.

- Household appliance approvals to IEC/EN 60335-1, IEC/EN 61558-1 and IEC/EN 61558-2-16
- Low profile design: 30 mm height
- Over Voltage Category III, Pollution Degree 3
- Universal AC input voltage without power de-rating
- Short Circuit / Overvoltage / Overload / Over Temperature Protection

type	input voltage	output voltage (adj)	rated load		housing	dimensions (mm)			price
			(W)	(A)		(H)	(W)	(D)	
PMT-5V350W1AM	180 - 264 VAC	5 VDC	300	60	aluminium	50	115	215	1 560.00
PMT-12V35W2BA	90 - 264 VAC	12 VDC	36	3.0	aluminium	30	82	99	340.00
PMT-12V50W2BA	90 - 264 VAC	12 VDC	50	4.2	aluminium	30	82	99	360.00
PMT-12V100W2BA	90 - 264 VAC	12 VDC	102	8.5	aluminium	30	97	129	499.00
PMT-12V150W2BA	90 - 264 VAC	12 VDC	150	12.5	aluminium	30	97	159	614.00
PMT-24V35W2BA	90 - 264 VAC	24 VDC	36	1.5	aluminium	30	98	98	340.00
PMT-24V50W2BA	90 - 264 VAC	24 VDC	53	2.2	aluminium	30	82	99	425.00
PMT-24V100W2BA	90 - 264 VAC	24 VDC	108	4.5	aluminium	30	97	129	490.00
PMT-24V150W2BA	90 - 264 VAC	24 VDC	150	6.3	aluminium	30	97	159	719.00
PMT-24V200W2BR	90 - 264 VAC	24 VDC	211	8.8	aluminium	30	97	159	777.00
PMT-24V350W2BR	90 - 264 VAC	24 VDC	350	14.6	aluminium	30	115	215	1 190.00

Complementary modules

DIN-rail mounting

Redundancy module

built-in 2-channel DC OK signal and alarm relay contact

Redundancy modules provide additional protection against potential failure of the 24 VDC supply. Two power supplies are decoupled via a redundancy module, which continually monitors the feeding power supply units and when one unit fails, automatically switches to the other.

- Wide input and output range of 22 - 60 VDC
- Built-in 2-channel DC OK signal and alarm relay contact
- Conformal coating on PCBAs to protect against common dust and chemical pollutants

DRR-20N	22 - 60 VDC	22 - 60 VDC	—	20A	aluminium	121	50	122	886.00
DRR-40N	22 - 60 VDC	22 - 60 VDC	—	40A	aluminium	121	50	122	1 090.00

Buffer module

for protection against short power failures

Allows a system to continue operating during power disruptions lasting from milliseconds to seconds

- Buffering time 250ms to 10s (*depending on load current*)
- Supports parallel connection to extended buffering time
- Conformal coating on PCBAs to protect against common dust and chemical pollutants

DRB-24V020ABN	23 - 28.8 VDC	24 VDC	—	20A	aluminium	121	50	120	3 810.00
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DC-UPS module (without battery)

Suitable for 24V system up to 40A

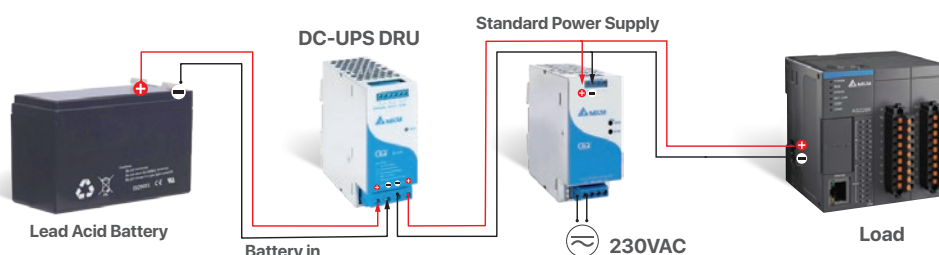
DC-UPS module in a modular DIN-rail mounting format occupy the same profile as standard miniature circuit breakers (MCBs), suited for mounting into distribution boards with a 45 mm frontal cutout.

- High MTBF > 500,000 hours per Telcordia SR-332
- Zero switch over time from loss of DC input to battery operation
- Built-in diagnostic monitoring for DC OK, discharge and battery failure by relay contacts
- LED indicator for DC OK, Battery Charging, Battery Discharging, Battery Fail and Battery Reverse Polarity
- Conformal coating on PCBAs to protect against common dust and chemical pollutants

DRU-24V10ACZ	DC-UPS	23 - 28 VDC	240	10A	plastic	91	71	56	903.00
DRU-24V40ABN	DC-UPS	23 - 28 VDC	960	40A	aluminium	121	50	118	1 410.00

Delta 24V DC power supply - Backup solution

– The Delta DRU UPS seamlessly integrates with a 24V DC power supply setup to ensure continuous operation during AC source interruptions or failures.





YSD15S...



YSD30S...

DIN-rail mounting power supplies

- Universal AC input range
- DC output voltage (*adjustable*)
- 100% full load burn-in test
- Safety standards: UL 508, IEC62368-1, BS/EN62368-1
- EMC standards: EN 55032, EN 61000-3-2,-3 EN61000-4-2,3,4,5,6,8,11

type	input voltage	DC output voltage (adj)	rated load		housing	dimensions (mm)			price
			(W)	(A)		(H)	(W)	(D)	

YSD..S series - Modular DIN-rail mounting power supplies

YSD..S series modular, DIN-rail mountable AC-DC power supply specifically designed to occupy the same profile as a standard miniature circuit breaker (MCB), making it perfect for installation in distribution boards with a 45mm frontal cutout. DIN-rail mounting permits easy installation alongside other control and protection devices, making it an ideal choice for industrial automation, telecommunications, and distribution board applications.

- Universal input range (90 - 264 VAC, 127 - 370 VDC)
- Class II isolation
- Overvoltage category III
- Protection: Short circuit / Overload / Overvoltage

YSD15S-0502400	90 - 264 VAC	5V	12	2.40	plastic	90	18	58	334.00
YSD15S-1201250	90 - 264 VAC	12V	15	1.25	plastic	90	18	58	334.00
YSD30S-1202000	90 - 264 VAC	12V	24	2.00	plastic	90	35	58	425.00
YSD60S-1204500	90 - 264 VAC	12V	54	4.50	plastic	90	52.5	58	648.00
YSD100S-1207100	90 - 264 VAC	12V	85	7.10	plastic	90	70	58	931.00
YSD15S-2400630	90 - 264 VAC	24V	15	0.63	plastic	90	18	58	334.00
YSD30S-2401500	90 - 264 VAC	24V	36	1.50	plastic	90	35	58	425.00
YSD60S-2402500	90 - 264 VAC	24V	60	2.50	plastic	90	52.5	58	648.00
YSD100S-2404170	90 - 264 VAC	24V	100	4.17	plastic	90	70	58	931.00
YSD150S-24	90 - 264 VAC	24V	150	6.25	plastic	90	105	58	1 290.00



YDL20L...

YSD..L series - Slim-line DIN-rail mounting power supplies

The YSD..L series features slim-line AC-DC power supplies designed for applications that demand both space efficiency and reliable power delivery. Classified as Class 2 and Pass LPS (Limited Power Source), these power supplies meet stringent safety standards, significantly reducing the risk of electric shock or fire.

- Universal input range (90 - 264 VAC, 127 - 370 VDC)
- Class 2/ Pass LPS
- Built-in "DC OK" relay contact and frontal LED indication
- Protection: Short circuit / Overload / Overvoltage

YSD20L-0503000	90 - 264 VAC	5V	15	3.00	plastic	92	23	100	481.00
YSD60L-0506000	90 - 264 VAC	5V	30	5.00	plastic	92	41	100	643.00
YSD20L-1201670	90 - 264 VAC	12V	20	1.67	plastic	92	23	100	481.00
YSD60L-1205000	90 - 264 VAC	12V	60	5.00	plastic	92	41	100	737.00
YSD20L-2401000	90 - 264 VAC	24V	24	1.00	plastic	92	23	100	481.00
YSD60L-24001700	90 - 264 VAC	24V	41	1.70	plastic	92	41	100	643.00
YSD60L-24002500	90 - 264 VAC	24V	60	2.50	plastic	92	41	100	737.00
YSD100L-2404000	90 - 264 VAC	24V	96	4.00	plastic	92	55	100	1 220.00
YSD60L-48001250	90 - 264 VAC	48V	60	1.25	plastic	92	41	100	737.00
YSD100L-4802000	90 - 264 VAC	48V	96	2.00	plastic	92	55	100	1 220.00



YSDW240-24

YSDW series - DIN-rail mounting power supplies (wide input voltage)

The YSDW series offers versatile and reliable wide input range AC-DC power supplies designed for demanding applications. Featuring a **built-in DC OK** relay contact for real-time voltage monitoring and a full corrosion-resistant aluminium casing for enhanced durability, these power supplies ensure stable DC output and long-lasting performance. Ideal for industrial automation, renewable energy systems, and remote locations

- Single and two-phase wide input range (180 - 550 VAC, 254 - 780 VDC)
- Built-in constant current limiting circuit
- Built-in "DC OK" relay contact and frontal LED indication
- Full corrosion-resistant aluminium casing
- Protection: Short circuit / Overload / Over voltage / Over temperature
- Safety standards: UL 61010, BS/IEC/EN 61010-1

YSDW60-12	180 - 550 VAC	12V	60	5.00	aluminium	125	32	114	1 250.00
YSDW60-24	180 - 550 VAC	24V	60	2.50	aluminium	125	32	114	1 250.00
YSDW120-24	180 - 550 VAC	24V	120	5.00	aluminium	125	40	126	2 020.00
YSDW240-24	180 - 550 VAC	24V	240	10.00	aluminium	125	63	126	3 830.00
YSDW120-48	180 - 550 VAC	48V	120	2.50	aluminium	125	40	126	2 020.00

DC-DC DIN-mount power supplies



YDD-120-12A



YDC100-27.6



YDC180-27.6



YSDU40-24

DIN-rail mounting power supplies

- DC output voltage (*adjustable*)
- 100% full load burn-in test
- Safety standards: UL 508, IEC62368-1, BS/EN62368-1
- EMC standards: EN 55032, EN 61000-3-2,-3 EN61000-4-2,3,4,5,6,8,11

type	input voltage	DC output voltage (adj)	rated load		housing	dimensions (mm)			price
			(W)	(A)		(H)	(W)	(D)	

YDD series - DIN-rail mounting power supplies

(DC - DC)

Versatile DC-DC converters offering stable DC output, ideal for critical telecommunications and industrial automation, ensuring reliable performance in sensitive environments.

- 150% peak load capability
- Protections: Short circuit / Over load / Over voltage / Input reverse polarity / under voltage protection
- DC output voltage adjustable

YDD-120-12A	9 - 18 VDC	12V	100	8.3	aluminium	126	32	98	2 430.00
YDD-120-12B	17 - 33.6 VDC	12V	120	10	aluminium	126	32	98	2 430.00
YDD-120-12C	33.6 - 67 VDC	12V	120	10	aluminium	126	32	98	2 430.00
YDD-120-24A	9 - 18 VDC	24V	100	4.2	aluminium	126	32	98	2 430.00
YDD-120-24B	17 - 33.6 VDC	24V	120	5	aluminium	126	32	98	2 430.00
YDD-120-24C	33.6 - 67 VDC	24V	120	5	aluminium	126	32	98	2 430.00

YDC series - DIN-rail mounting power supplies

(DC-UPS)

Power supply - UPS - Battery charger (*all-in-one*)

Provides UPS functionality with an external battery (*not supplied*). Automatically switches to battery during mains failure, maintaining uninterrupted DC output. A secondary DC output recharges the battery when mains power returns.

- Universal input range (90 - 264 VAC, 127 - 370 VDC)
- Protection: Short circuit / Overload / Over voltage / Battery low / Reverse polarity (*by fuse*)
- Alarm signal for "AC OK" and "Battery low" with frontal LED indication of "DC OK"

type	input voltage	DC output voltage (adj)	rated load		battery charger (A)	dimensions (mm)			price
			(W)	(A)		(H)	(W)	(D)	

12VDC systems

YDC40-13.8	90 - 264 VAC	13.8V	40	1.90	1.00	92	41	100	885.00
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24VDC systems

YDC40-27.6	90 - 264 VAC	27.6V	40	0.95	0.50	92	41	100	885.00
YDC60-27.6	90 - 264 VAC	27.6V	59	1.40	0.75	92	41	100	1 040.00
YDC100-27.6	90 - 264 VAC	27.6V	96	2.25	1.25	92	55	100	1 460.00
YDC180-27.6	90 - 264 VAC	27.6V	180	4.55	2.00	125	63	127	2 790.00

YSDU series - Uninterruptible DC-UPS controller

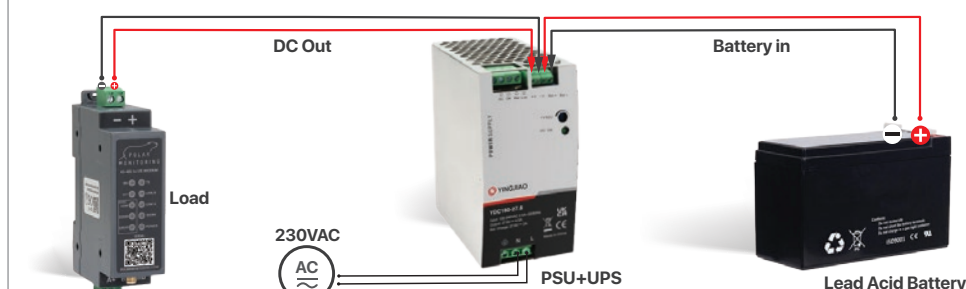
Combines power supply and battery (*not supplied*) backup, ensuring operational continuity during power loss. Ideal for automation and telecoms, with automatic battery charging when power is restored.

- Parallel connection to DC BUS
- Suitable for 24V systems, up to 40A
- 2A battery charging current
- Allows 4 - 135AH battery capacities
- LED signal status indicators
- Complete diagnostic and monitoring for DC BUS OK, battery discharge and battery failure

YSDU40-24	24 - 29 VDC	21-29V	—	40	2.00	125	63	127	1 200.00
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All-in-One Solution - DC Power Delivery and Backup

– The YDC series power supplies offer a comprehensive solution for both power delivery and backup.



TR28
2.2


680100040



680320042



680630042

TR28 series - Control and safety or isolating transformers

Control and safety or isolating single-phase transformers supply high instantaneous power for the correct operation of contactors and other control and switchgear.

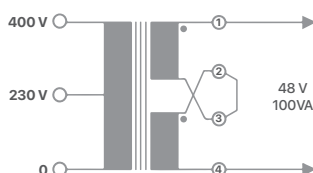
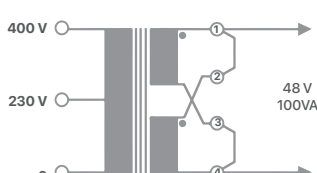
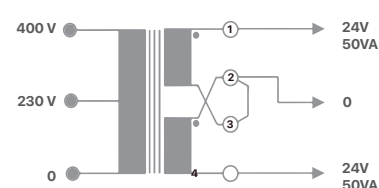
- DIN-rail mountable (*up to 400VA*)
- High flexibility - several primary rated voltages (with regulation taps +20V or -20V)
- Serial-parallel secondary bridge pieces for ease of connection
- High capacity clamp terminals (*10 mm² up to 400VA / 25 mm² up to 1250VA*)

Primary voltages: 240V - 400V - 525V (*with regulation taps + and - 20V*)
 Secondary voltages: 12 - 24V (or) 115 - 230V
 Protection degree: IP20 protection (*finger safe*)
 Thermal class: B (130°C)
 Class: Class I
 Frequency: 50/60 Hz
 Dielectric strength: Primary - secondary > 4.5kV
 Standards: IEC/EN 61558-1, IEC/EN 61558-2-2 /-2-4 /-2-6

type	power (VA)		inrush	secondary	dimensions (mm)			weight	price
	t _a 25°C	t _a 40°C	VA	voltage	(H)	(W)	(D)	kg	
TR 28 - Secondary voltage: 12 - 24V									
- Primary voltage:	240V - 400V - 525V								
680040040	40	25	75	12 - 24V	113	84	96	1.17	1 330.00
680063040	63	40	120	12 - 24V	113	84	105	1.48	1 380.00
680100040	100	63	150	12 - 24V	113	84	112	1.83	1 510.00
680200040	200	160	350	12 - 24V	113	84	131	2.73	1 930.00
680320040	320	250	600	12 - 24V	135	108	138	4.45	2 730.00
680400040	400	320	800	12 - 24V	135	108	148	5.00	2 990.00
680630040	630	500	1275	12 - 24V	152	120	156	7.08	3 820.00
680800040	800	630	1700	12 - 24V	177	150	140	8.68	5 610.00
681000040	1000	800	2100	12 - 24V	177	150	160	11.50	6 040.00
681250040	1250	1000	3300	12 - 24V	177	150	183	14.40	9 130.00
TR 28 - Secondary voltage: 115 - 230V									
- Primary voltage:	240V - 400V - 525V								
680040042	40	25	75	115 - 230V	113	84	96	1.17	1 340.00
680063042	63	40	120	115 - 230V	113	84	105	1.48	1 420.00
680100042	100	63	150	115 - 230V	113	84	112	1.83	1 530.00
680130042	130	100	230	115 - 230V	113	84	116	1.83	1 670.00
680200042	200	160	350	115 - 230V	113	84	131	2.73	1 940.00
680320042	320	250	600	115 - 230V	135	108	138	4.45	2 770.00
680400042	400	320	800	115 - 230V	135	108	148	5.00	3 000.00
680630042	630	500	1275	115 - 230V	152	120	156	7.08	3 880.00
680800042	800	630	1700	115 - 230V	177	150	140	8.68	5 540.00
681000042	1000	800	2100	115 - 230V	177	150	160	11.50	6 430.00
681250042	1250	1000	3300	115 - 230V	177	150	183	14.40	8 230.00

Secondary connection

* TRANSFORMER 0-230-400V // 24-48V 100VA
 REF 610100044

SERIAL CONNECTION**PARALLEL CONNECTION****WITH MIDDLE TAP**

Notes

[illegible]