B

POWER DISTRIBUTION & PROTECTION


MJT720


NCN232A


NRN320


NRN440

Type		MV	MJT	MA	NF/NFN	HLF	NGN	HMD	NCN	HMC	NRN	HMK
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	1, 2, 3, 4
Width per Pole in 17.5 mm		1	1	1	1	1.5	1	1.5	1	1.5	1	1.5
Rated Current (A)		6 - 40A	6 - 40A	0.5 - 63A	0.5 - 63A	80 - 125A	0.5 - 63A	80 - 125A	0.5 - 63A	80 - 125A	0.5 - 63A	80 - 125A
Breaking capacity		3kA	6kA	6kA	10kA	10kA	10kA	15kA	15kA	15kA	15 - 25kA	30kA
Tripping Curve		C	C	C	C	C	D	D	C	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	230/400
DC Application *(refer **Annex-9**)*		Yes	No	Yes	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	50/60
Add on Block *(Earth Leakage)*		No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Connecting Capacity (conductor)	Flexible (mm²)	16 mm²	10 mm²	16 mm²	25 mm²	50 mm²	25 mm²	50 mm²	25 mm²	50 mm²	25 mm²	50 mm²
	Rigid (mm²)	25 mm²	16 mm²	25 mm²	35 mm²	70 mm²	35 mm²	70 mm²	35 mm²	70 mm²	35 mm²	70 mm²
Isolation		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
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MV116Z

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:			**3 kA**	SANS/IEC 60947-2, SANS 556		
• Does not accept clip-on accessories.						
Single pole						
MV106Z	6A	1	3 kA	miniature circuit breaker	1	**80.51**
MV110Z	10A	1	3 kA	miniature circuit breaker	1	**80.51**
MV116Z	16A	1	3 kA	miniature circuit breaker	1	**80.51**
MV120Z	20A	1	3 kA	miniature circuit breaker	1	**80.51**
MV125Z	25A	1	3 kA	miniature circuit breaker	1	**80.51**
MV132Z	32A	1	3 kA	miniature circuit breaker	1	**80.51**
MV140Z	40A	1	3 kA	miniature circuit breaker	1	**80.51**

MJT series — C curve *(5-10 In)*

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

- Accepts clip-on: *(see page **B-7**)*
  - auxiliary/alarm contacts
  - shunt trip
  - undervoltage
  - overvoltage
- Accepts **BDC240F** earth leakage a compact device which simply clips on the side *(see page **B-9**)*
- Trip indication - yellow flag on toggle indicates either "overload" or "short circuit" trip


MJT720

1 Ph+N *in one module*

MJT702	2A	1+N	6 kA	miniature circuit breaker	1	**353.07**
MJT706	6A	1+N	6 kA	miniature circuit breaker	1	**274.86**
MJT710	10A	1+N	6 kA	miniature circuit breaker	1	**274.86**
MJT716	16A	1+N	6 kA	miniature circuit breaker	1	**274.86**
MJT720	20A	1+N	6 kA	miniature circuit breaker	1	**274.86**
MJT725	25A	1+N	6 kA	miniature circuit breaker	1	**274.86**
MJT732	32A	1+N	6 kA	miniature circuit breaker	1	**274.86**
MJT740	40A	1+N	6 kA	miniature circuit breaker	1	**274.86**


MA163Z

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 page **B-21 or Annex-5**)*
- Suitable for isolation

Voltage rating: 230/400V 50-60Hz
Current rating: 0.5 - 63A

Field fittable clip-on accessories *(see page **B-7**)*

- auxiliary/alarm contacts
- shunt trip device
- undervoltage release
- overvoltage release
- earth leakage *(see page **B-9**)*


MA216Z


MA325Z


MA416Z

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						
MA100Z	0.5A	1	6kA	miniature circuit breaker	1	**200.11**
MA101Z	1A	1	6kA	miniature circuit breaker	1	**186.31**
MA102Z	2A	1	6kA	miniature circuit breaker	1	**186.31**
MA103Z	3A	1	6kA	miniature circuit breaker	1	**186.31**
MA106Z	6A	1	6kA	miniature circuit breaker	1	**104.66**
MA110Z	10A	1	6kA	miniature circuit breaker	1	**104.66**
MA116Z	16A	1	6kA	miniature circuit breaker	1	**104.66**
MA120Z	20A	1	6kA	miniature circuit breaker	1	**104.66**
MA125Z	25A	1	6kA	miniature circuit breaker	1	**104.66**
MA132Z	32A	1	6kA	miniature circuit breaker	1	**104.66**
MA140Z	40A	1	6kA	miniature circuit breaker	1	**104.66**
MA150Z	50A	1	6kA	miniature circuit breaker	1	**128.81**
MA163Z	63A	1	6kA	miniature circuit breaker	1	**134.56**
Two pole						
MA201Z	1A	2	6kA	miniature circuit breaker	2	**516.37**
MA202Z	2A	2	6kA	miniature circuit breaker	2	**516.37**
MA203Z	3A	2	6kA	miniature circuit breaker	2	**516.37**
MA206Z	6A	2	6kA	miniature circuit breaker	2	**346.17**
MA210Z	10A	2	6kA	miniature circuit breaker	2	**346.17**
MA216Z	16A	2	6kA	miniature circuit breaker	2	**346.17**
MA220Z	20A	2	6kA	miniature circuit breaker	2	**346.17**
MA225Z	25A	2	6kA	miniature circuit breaker	2	**346.17**
MA232Z	32A	2	6kA	miniature circuit breaker	2	**346.17**
MA240Z	40A	2	6kA	miniature circuit breaker	2	**346.17**
MA250Z	50A	2	6kA	miniature circuit breaker	2	**432.42**
MA263Z	63A	2	6kA	miniature circuit breaker	2	**440.47**
Three pole						
MA301Z	1A	3	6kA	miniature circuit breaker	3	**832.63**
MA302Z	2A	3	6kA	miniature circuit breaker	3	**832.63**
MA303Z	3A	3	6kA	miniature circuit breaker	3	**832.63**
MA306Z	6A	3	6kA	miniature circuit breaker	3	**466.92**
MA310Z	10A	3	6kA	miniature circuit breaker	3	**466.92**
MA316Z	16A	3	6kA	miniature circuit breaker	3	**466.92**
MA320Z	20A	3	6kA	miniature circuit breaker	3	**466.92**
MA325Z	25A	3	6kA	miniature circuit breaker	3	**466.92**
MA332Z	32A	3	6kA	miniature circuit breaker	3	**466.92**
MA340Z	40A	3	6kA	miniature circuit breaker	3	**466.92**
MA350Z	50A	3	6kA	miniature circuit breaker	3	**547.42**
MA363Z	63A	3	6kA	miniature circuit breaker	3	**547.42**
Four pole						
MA406Z	6A	4	6kA	miniature circuit breaker	4	**1 066.09**
MA410Z	10A	4	6kA	miniature circuit breaker	4	**1 077.59**
MA416Z	16A	4	6kA	miniature circuit breaker	4	**1 077.59**
MA420Z	20A	4	6kA	miniature circuit breaker	4	**1 077.59**
MA425Z	25A	4	6kA	miniature circuit breaker	4	**1 097.14**
MA432Z	32A	4	6kA	miniature circuit breaker	4	**1 097.14**
MA440Z	40A	4	6kA	miniature circuit breaker	4	**1 097.14**
MA450Z	50A	4	6kA	miniature circuit breaker	4	**1 238.59**
MA463Z	63A	4	6kA	miniature circuit breaker	4	**1 238.59**


NFN163


NFN263


HLF290S


NFN363

For the protection and control of circuits against overload and short circuits.

Field fittable clip-on accessories *(see page* **B-7***)*
- auxiliary/alarm contacts - shunt trip device
- undervoltage release - earth leakage *(see page* **B-9***)*

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

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						
NF100A	0.5A	1	10kA	miniature circuit breaker	1	**216.21**
NF101A	1A	1	10kA	miniature circuit breaker	1	**203.56**
NF102A	2A	1	10kA	miniature circuit breaker	1	**203.56**
NF103A	3A	1	10kA	miniature circuit breaker	1	**203.56**
NF106A	6A	1	10kA	miniature circuit breaker	1	**121.91**
NF110A	10A	1	10kA	miniature circuit breaker	1	**121.91**
NF116A	16A	1	10kA	miniature circuit breaker	1	**121.91**
NF120A	20A	1	10kA	miniature circuit breaker	1	**121.91**
NF125A	25A	1	10kA	miniature circuit breaker	1	**124.21**
NF132A	32A	1	10kA	miniature circuit breaker	1	**124.21**
NF140A	40A	1	10kA	miniature circuit breaker	1	**135.71**
NFN150	50A	1	10kA	miniature circuit breaker	1	**208.16**
NFN163	63A	1	10kA	miniature circuit breaker	1	**208.16**
HLF180S	80A	1	10kA	miniature circuit breaker	1.5	**736.03**
HLF190S	100A	1	10kA	miniature circuit breaker	1.5	**786.63**
HLF199S	125A	1	10kA	miniature circuit breaker	1.5	**1 135.09**
Two pole						
NF202A	2A	2	10kA	miniature circuit breaker	2	**644.03**
NF203A	3A	2	10kA	miniature circuit breaker	2	**644.03**
NF206A	6A	2	10kA	miniature circuit breaker	2	**468.07**
NF210A	10A	2	10kA	miniature circuit breaker	2	**468.07**
NF216A	16A	2	10kA	miniature circuit breaker	2	**468.07**
NF220A	20A	2	10kA	miniature circuit breaker	2	**468.07**
NF225A	25A	2	10kA	miniature circuit breaker	2	**527.87**
NF232A	32A	2	10kA	miniature circuit breaker	2	**527.87**
NF240A	40A	2	10kA	miniature circuit breaker	2	**527.87**
NFN250	50A	2	10kA	miniature circuit breaker	2	**650.93**
NFN263	63A	2	10kA	miniature circuit breaker	2	**658.98**
HLF280S	80A	2	10kA	miniature circuit breaker	3	**1 375.45**
HLF290S	100A	2	10kA	miniature circuit breaker	3	**1 493.90**
HLF299S	125A	2	10kA	miniature circuit breaker	3	**2 093.07**
Three pole						
NF302A	2A	3	10kA	miniature circuit breaker	3	**1 024.69**
NF303A	3A	3	10kA	miniature circuit breaker	3	**1 024.69**
NF306A	6A	3	10kA	miniature circuit breaker	3	**776.28**
NF310A	10A	3	10kA	miniature circuit breaker	3	**776.28**
NF316A	16A	3	10kA	miniature circuit breaker	3	**776.28**
NF320A	20A	3	10kA	miniature circuit breaker	3	**776.28**
NF325A	25A	3	10kA	miniature circuit breaker	3	**783.18**
NF332A	32A	3	10kA	miniature circuit breaker	3	**783.18**
NF340A	40A	3	10kA	miniature circuit breaker	3	**783.18**
NFN350	50A	3	10kA	miniature circuit breaker	3	**845.28**
NFN363	63A	3	10kA	miniature circuit breaker	3	**860.23**
HLF380S	80A	3	10kA	miniature circuit breaker	4.5	**1 840.06**
HLF390S	100A	3	10kA	miniature circuit breaker	4.5	**2 093.07**
HLF399S	125A	3	10kA	miniature circuit breaker	4.5	**3 140.75**
Four pole						
NF406A	6A	4	10kA	miniature circuit breaker	4	**1 138.54**
NF410A	10A	4	10kA	miniature circuit breaker	4	**1 138.54**
NF416A	16A	4	10kA	miniature circuit breaker	4	**1 138.54**
NF420A	20A	4	10kA	miniature circuit breaker	4	**1 138.54**
NF425A	25A	4	10kA	miniature circuit breaker	4	**1 186.84**
NF432A	32A	4	10kA	miniature circuit breaker	4	**1 186.84**
NF440A	40A	4	10kA	miniature circuit breaker	4	**1 186.84**
NFN450	50A	4	10kA	miniature circuit breaker	4	**1 322.55**
NFN463	63A	4	10kA	miniature circuit breaker	4	**1 324.85**
HLF480S	80A	4	10kA	miniature circuit breaker	6	**4 451.79**
HLF490S	100A	4	10kA	miniature circuit breaker	6	**4 710.55**
HLF499S	125A	4	10kA	miniature circuit breaker	6	**6 279.20**


NGN116


NGN216


NGN363


NGN410

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 page **B-7**)*

- auxiliary/alarm contacts
- shunt trip device
- undervoltage release
- earth leakage *(see page **B-9**)*

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						
NGN101	1A	1	10kA	miniature circuit breaker	1	**311.66**
NGN102	2A	1	10kA	miniature circuit breaker	1	**311.66**
NGN103	3A	1	10kA	miniature circuit breaker	1	**311.66**
NGN104	4A	1	10kA	miniature circuit breaker	1	**311.66**
NGN106	6A	1	10kA	miniature circuit breaker	1	**186.31**
NGN110	10A	1	10kA	miniature circuit breaker	1	**186.31**
NGN116	16A	1	10kA	miniature circuit breaker	1	**186.31**
NGN120	20A	1	10kA	miniature circuit breaker	1	**186.31**
NGN125	25A	1	10kA	miniature circuit breaker	1	**190.91**
NGN132	32A	1	10kA	miniature circuit breaker	1	**190.91**
NGN140	40A	1	10kA	miniature circuit breaker	1	**210.46**
NGN150	50A	1	10kA	miniature circuit breaker	1	**279.46**
NGN163	63A	1	10kA	miniature circuit breaker	1	**287.51**
HMD180	80A	1	15kA	miniature circuit breaker	1.5	**1 047.69**
HMD190	100A	1	15kA	miniature circuit breaker	1.5	**1 222.49**
HMD199	125A	1	15kA	miniature circuit breaker	1.5	**2 007.97**
Two pole						
NGN202	2A	2	10kA	miniature circuit breaker	2	**739.48**
NGN203	3A	2	10kA	miniature circuit breaker	2	**739.48**
NGN206	6A	2	10kA	miniature circuit breaker	2	**570.42**
NGN210	10A	2	10kA	miniature circuit breaker	2	**570.42**
NGN216	16A	2	10kA	miniature circuit breaker	2	**570.42**
NGN220	20A	2	10kA	miniature circuit breaker	2	**570.42**
NGN225	25A	2	10kA	miniature circuit breaker	2	**642.88**
NGN232	32A	2	10kA	miniature circuit breaker	2	**642.88**
NGN240	40A	2	10kA	miniature circuit breaker	2	**642.88**
NGN250	50A	2	10kA	miniature circuit breaker	2	**770.53**
NGN263	63A	2	10kA	miniature circuit breaker	2	**770.53**
HMD280	80A	2	15kA	miniature circuit breaker	3	**2 301.23**
HMD290	100A	2	15kA	miniature circuit breaker	3	**2 465.68**
HMD299	125A	2	15kA	miniature circuit breaker	3	**3 837.68**
Three pole						
NGN306	6A	3	10kA	miniature circuit breaker	3	**975.24**
NGN310	10A	3	10kA	miniature circuit breaker	3	**961.44**
NGN316	16A	3	10kA	miniature circuit breaker	3	**961.44**
NGN320	20A	3	10kA	miniature circuit breaker	3	**961.44**
NGN325	25A	3	10kA	miniature circuit breaker	3	**975.24**
NGN332	32A	3	10kA	miniature circuit breaker	3	**975.24**
NGN340	40A	3	10kA	miniature circuit breaker	3	**980.99**
NGN350	50A	3	10kA	miniature circuit breaker	3	**1 017.79**
NGN363	63A	3	10kA	miniature circuit breaker	3	**1 045.39**
HMD380	80A	3	15kA	miniature circuit breaker	4.5	**3 313.26**
HMD390	100A	3	15kA	miniature circuit breaker	4.5	**3 837.68**
HMD399	125A	3	15kA	miniature circuit breaker	4.5	**4 796.81**
Four pole						
NGN406	6A	4	10kA	miniature circuit breaker	4	**1 536.45**
NGN410	10A	4	10kA	miniature circuit breaker	4	**1 536.45**
NGN416	16A	4	10kA	miniature circuit breaker	4	**1 536.45**
NGN420	20A	4	10kA	miniature circuit breaker	4	**1 536.45**
NGN425	25A	4	10kA	miniature circuit breaker	4	**1 585.90**
NGN432	32A	4	10kA	miniature circuit breaker	4	**1 585.90**
NGN440	40A	4	10kA	miniature circuit breaker	4	**1 585.90**
NGN450	50A	4	10kA	miniature circuit breaker	4	**1 687.11**
NGN463	63A	4	10kA	miniature circuit breaker	4	**1 687.11**
HMD480	80A	4	15kA	miniature circuit breaker	6	**4 473.65**
HMD490	100A	4	15kA	miniature circuit breaker	6	**7 762.75**
HMD499	125A	4	15kA	miniature circuit breaker	6	**8 634.48**


NCN116A


NCN232A


NCN320A


NCN440A

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 page **B-7**)*

- auxiliary/alarm contacts
- shunt trip device
- undervoltage release
- overvoltage release
- earth leakage *(see page **B-9**)*

type	current rating	poles	breaking capacity	description	width in 17.5 mm	price
NCN / HMC series			**C curve** *(5-10 In)*			
Breaking capacity:			**15kA**	SANS/IEC 60947-2, SANS 556		
Single pole						
NCN106A	6A	1	15kA	miniature circuit breaker	1	**213.91**
NCN110A	10A	1	15kA	miniature circuit breaker	1	**213.91**
NCN116A	16A	1	15kA	miniature circuit breaker	1	**213.91**
NCN120A	20A	1	15kA	miniature circuit breaker	1	**213.91**
NCN125A	25A	1	15kA	miniature circuit breaker	1	**221.96**
NCN132A	32A	1	15kA	miniature circuit breaker	1	**221.96**
NCN140A	40A	1	15kA	miniature circuit breaker	1	**238.06**
NCN150A	50A	1	15kA	miniature circuit breaker	1	**292.11**
NCN163A	63A	1	15kA	miniature circuit breaker	1	**292.11**
HMC180	80A	1	15kA	miniature circuit breaker	1.5	**1 308.75**
HMC190	100A	1	15kA	miniature circuit breaker	1.5	**1 441.00**
HMC199	125A	1	15kA	miniature circuit breaker	1.5	**1 570.95**
Two pole						
NCN206A	6A	2	15kA	miniature circuit breaker	2	**570.42**
NCN210A	10A	2	15kA	miniature circuit breaker	2	**570.42**
NCN216A	16A	2	15kA	miniature circuit breaker	2	**570.42**
NCN220A	20A	2	15kA	miniature circuit breaker	2	**570.42**
NCN225A	25A	2	15kA	miniature circuit breaker	2	**616.42**
NCN232A	32A	2	15kA	miniature circuit breaker	2	**616.42**
NCN240A	40A	2	15kA	miniature circuit breaker	2	**657.83**
NCN250A	50A	2	15kA	miniature circuit breaker	2	**770.53**
NCN263A	63A	2	15kA	miniature circuit breaker	2	**770.53**
HMC280	80A	2	15kA	miniature circuit breaker	3	**2 964.80**
HMC290	100A	2	15kA	miniature circuit breaker	3	**3 054.50**
HMC299	125A	2	15kA	miniature circuit breaker	3	**3 140.75**
Three pole						
NCN306A	6A	3	15kA	miniature circuit breaker	3	**1 009.74**
NCN310A	10A	3	15kA	miniature circuit breaker	3	**1 009.74**
NCN316A	16A	3	15kA	miniature circuit breaker	3	**1 009.74**
NCN320A	20A	3	15kA	miniature circuit breaker	3	**1 009.74**
NCN325A	25A	3	15kA	miniature circuit breaker	3	**1 079.89**
NCN332A	32A	3	15kA	miniature circuit breaker	3	**1 079.89**
NCN340A	40A	3	15kA	miniature circuit breaker	3	**1 079.89**
NCN350A	50A	3	15kA	miniature circuit breaker	3	**1 176.49**
NCN363A	63A	3	15kA	miniature circuit breaker	3	**1 176.49**
HMC380	80A	3	15kA	miniature circuit breaker	4.5	**3 313.26**
HMC390	100A	3	15kA	miniature circuit breaker	4.5	**3 837.68**
HMC399	125A	3	15kA	miniature circuit breaker	4.5	**4 796.81**
Four pole						
NCN406A	6A	4	15kA	miniature circuit breaker	4	**1 842.36**
NCN410A	10A	4	15kA	miniature circuit breaker	4	**1 842.36**
NCN416A	16A	4	15kA	miniature circuit breaker	4	**1 842.36**
NCN420A	20A	4	15kA	miniature circuit breaker	4	**1 842.36**
NCN425A	25A	4	15kA	miniature circuit breaker	4	**1 842.36**
NCN432A	32A	4	15kA	miniature circuit breaker	4	**1 842.36**
NCN440A	40A	4	15kA	miniature circuit breaker	4	**1 842.36**
NCN450A	50A	4	15kA	miniature circuit breaker	4	**2 006.82**
NCN463A	63A	4	15kA	miniature circuit breaker	4	**2 006.82**
HMC480	80A	4	15kA	miniature circuit breaker	6	**5 233.82**
HMC490	100A	4	15kA	miniature circuit breaker	6	**5 583.43**
HMC499	125A	4	15kA	miniature circuit breaker	6	**6 542.56**

HMK180

NRN232

NRN320

NRN440

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 page **B-7**)*

- auxiliary/alarm contacts
- shunt trip device
- undervoltage release
- earth leakage *(see page **B-9**)*

type	current rating	poles	breaking capacity	description	width in 17.5 mm	price
NRN / HMK series		**C curve** *(5-10 In)*				
Breaking capacity:				SANS/IEC 60947-2, SANS 556		
	6 - 25A		25kA			
	32 - 40A		20kA			
	50 - 63A		15kA			
	80 - 125A		30kA			
Single pole						
NRN106	6A	1	25kA	miniature circuit breaker	1	**461.17**
NRN110	10A	1	25kA	miniature circuit breaker	1	**461.17**
NRN116	16A	1	25kA	miniature circuit breaker	1	**461.17**
NRN120	20A	1	25kA	miniature circuit breaker	1	**461.17**
NRN125	25A	1	25kA	miniature circuit breaker	1	**461.17**
NRN132	32A	1	20kA	miniature circuit breaker	1	**522.12**
NRN140	40A	1	20kA	miniature circuit breaker	1	**522.12**
NRN150	50A	1	15kA	miniature circuit breaker	1	**542.82**
NRN163	63A	1	15kA	miniature circuit breaker	1	**542.82**
HMK180	80A	1	30kA	miniature circuit breaker	1.5	**2 244.88**
HMK190	100A	1	30kA	miniature circuit breaker	1.5	**2 417.38**
HMK199	125A	1	30kA	miniature circuit breaker	1.5	**2 762.39**
Two pole						
NRN206	6A	2	25kA	miniature circuit breaker	2	**868.28**
NRN210	10A	2	25kA	miniature circuit breaker	2	**868.28**
NRN216	16A	2	25kA	miniature circuit breaker	2	**868.28**
NRN220	20A	2	25kA	miniature circuit breaker	2	**868.28**
NRN225	25A	2	25kA	miniature circuit breaker	2	**868.28**
NRN232	32A	2	20kA	miniature circuit breaker	2	**868.28**
NRN240	40A	2	20kA	miniature circuit breaker	2	**954.53**
NRN250	50A	2	15kA	miniature circuit breaker	2	**954.53**
NRN263	63A	2	15kA	miniature circuit breaker	2	**954.53**
HMK280	80A	2	30kA	miniature circuit breaker	3	**4 286.19**
HMK290	100A	2	30kA	miniature circuit breaker	3	**4 517.35**
HMK299	125A	2	30kA	miniature circuit breaker	3	**4 926.76**
Three pole						
NRN306	6A	3	25kA	miniature circuit breaker	3	**1 388.10**
NRN310	10A	3	25kA	miniature circuit breaker	3	**1 388.10**
NRN316	16A	3	25kA	miniature circuit breaker	3	**1 388.10**
NRN320	20A	3	25kA	miniature circuit breaker	3	**1 388.10**
NRN325	25A	3	25kA	miniature circuit breaker	3	**1 388.10**
NRN332	32A	3	20kA	miniature circuit breaker	3	**1 388.10**
NRN340	40A	3	20kA	miniature circuit breaker	3	**1 475.50**
NRN350	50A	3	15kA	miniature circuit breaker	3	**1 475.50**
NRN363	63A	3	15kA	miniature circuit breaker	3	**1 475.50**
HMK380	80A	3	30kA	miniature circuit breaker	4.5	**4 985.13**
HMK390	100A	3	30kA	miniature circuit breaker	4.5	**5 494.88**
HMK399	125A	3	30kA	miniature circuit breaker	4.5	**5 724.88**
Four pole						
NRN406	6A	4	25kA	miniature circuit breaker	4	**2 692.24**
NRN410	10A	4	25kA	miniature circuit breaker	4	**2 692.24**
NRN416	16A	4	25kA	miniature circuit breaker	4	**2 692.24**
NRN420	20A	4	25kA	miniature circuit breaker	4	**2 692.24**
NRN425	25A	4	25kA	miniature circuit breaker	4	**2 951.00**
NRN432	32A	4	20kA	miniature circuit breaker	4	**2 951.00**
NRN440	40A	4	20kA	miniature circuit breaker	4	**2 951.00**
NRN450	50A	4	15kA	miniature circuit breaker	4	**3 992.93**
NRN463	63A	4	15kA	miniature circuit breaker	4	**3 992.93**
HMK480	80A	4	30kA	miniature circuit breaker	6	**9 204.89**
HMK490	100A	4	30kA	miniature circuit breaker	6	**9 576.35**
HMK499	125A	4	30kA	miniature circuit breaker	6	**9 621.21**

Type		MV	MJT	MA	NF/NFN	NGN	NCN	NRN	HLF	HMD	HMC	HMK
Auxiliary contacts	1NO + 1NC	–	MZ201	MZ201	MZ201	MZ201	MZ201	MZ201	MZ201	MZ201	MZ201	MZ201
Alarm contacts	1NO + 1NC	–	MZ202	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	MZ203
Shunt trip device	12-48 VDC 24-48 VAC	–	MZ204	MZ204	MZ204	MZ204	MZ204	MZ204	MZ204	MZ204	MZ204	MZ204
Under voltage release	230 VAC	–	MZ206	MZ206	MZ206	MZ206	MZ206	MZ206	MZ206	MZ206	MZ206	MZ206
Over voltage release	230 VAC	–	MZ212	MZ212	MZ212	MZ212	MZ212	MZ212	MZ212	MZ212	MZ212	MZ212
Terminal Cover		–	–	–	–	–	–	–	MZN175	MZN175	MZN175	MZN175
Phase separator		–	–	–	–	–	–	–	MZN131	MZN131	MZN131	MZN131


MZ201


MZ202


MZ203


KB163P


KB190C


KB263C


KB363C


KF83B


KF83C


MZN175


MZN130


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	**431.27**
Alarm contacts						
Indicates fault condition - MCB "tripped" on overload or short-circuit						
MZ202	alarm	contact block	1NO + 1NC	6A 230 VAC	0.5	**595.72**
Shunt trip device						
Permits remote tripping of the protection device						
MZ203	shunt	shunt trip device	110 - 130 VDC / 230 - 415 VAC		1	**777.43**
MZ204	shunt	shunt trip device	12 - 48 VDC / 24 - 48VAC		1	**652.08**
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	**777.43**
Over voltage release - *(trips the protection device in case of overvoltage)*						
MZ212	overvolt	over voltage release		230 VAC	1	**777.43**

Connection and MCB accessories

type	mm²	current rating	poles	description	no. ways	price
KB163P	10 mm²	63A	1 pole	brown ins. busbar	13	**67.86**
KB163N	10 mm²	63A	1 pole	blue ins. busbar	13	**67.86**
KB190C	20 mm²	100A	1 pole	insulated busbar	24	**266.81**
KB263C	10 mm²	63A	2 pole	insulated busbar	24	**562.37**
KB363C	10 mm²	63A	3 pole	insulated busbar	24	**618.72**
KB380B	16 mm²	80A	3 pole	insulated busbar	57	**1 123.59**
KB463C	10 mm²	63A	4 pole	insulated busbar	24	**999.39**
KZ022		end protection caps for busbar		KB263C	–	**52.91**
KZ023A		end protection caps for busbar		KB363C, KB380B	–	**104.66**
KZ024		end protection caps for busbar		KB463C	–	**54.06**
KF84A	25 mm²	enlarged terminal		*(lateral connection)*	–	**42.56**
KF83B	2 x 25 mm²	enlarged terminal		*(lateral connection)*	–	**115.01**
KF83C	25 mm²	enlarged terminal		*(top or lateral connection)*	–	**62.11**
Accessories for MCBs						
JP024	blanking	MCB blanking strip *(with breakable sections)*			24	**71.31**
LZ060	dummy	module or heat dissipation insert between devices			0.5	**11.04**
MZN175	padlock	attachment for locking MCB toggle in on/off position			1	**217.36**
MZN130	cover	terminal cover for HLF, HMC, HMD, HMK MCBs			1.5	**117.31**
MZN131	separator	phase separator for HLF, HMC, HMD, HMK MCBs			*(set of 3)*	**173.66**


SBN132

SBN series - Modular isolators *(switch disconnectors)*

SB series modular isolators *(switch disconnectors)* SBN range of modular DIN rail mountable switch disconnectors provide state-of-the-art comfort and a high degree of safety, complimenting the standard range of Miniature Circuit Breakers (MCBs). Available with 1, 2, 3 and 4 pole versions with rated currents 32A, 63A, 100A and 125A providing disconnect properties according to IEC/EN60947-3.

- Complies with IEC/EN 60947-3
- For use as a switch disconnector in all types of circuits
- **MZN175** padlocking kit allows to lock in the ON or OFF position
- Green/red (I/O) indication on handle provides positive contact indication

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


SBN232


SBN399

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	**118.46**
SBN163	63A	on - off	1 pole	modular isolator switch	1	**157.56**
SBN190	100A	on - off	1 pole	modular isolator switch	1	**197.81**
SBN199	125A	on - off	1 pole	modular isolator switch	1	**355.37**
2 pole disconnect switches						
SBN232	32A	on - off	2 pole	modular isolator switch	1	**166.76**
SBN263	63A	on - off	2 pole	modular isolator switch	2	**249.56**
SBN290	100A	on - off	2 pole	modular isolator switch	2	**290.96**
SBN299	125A	on - off	2 pole	modular isolator switch	2	**580.77**
3 pole disconnect switches						
SBN332	32A	on - off	3 pole	modular isolator switch	2	**249.56**
SBN363	63A	on - off	3 pole	modular isolator switch	3	**332.37**
SBN390	100A	on - off	3 pole	modular isolator switch	3	**415.17**
SBN399	125A	on - off	3 pole	modular isolator switch	3	**918.88**
4 pole disconnect switches						
SBN432	32A	on - off	4 pole	modular isolator switch	2	**430.12**
SBN463	63A	on - off	4 pole	modular isolator switch	4	**599.17**
SBN490	100A	on - off	4 pole	modular isolator switch	4	**1 661.81**
SBN499	125A	on - off	4 pole	modular isolator switch	4	**1 818.21**
Auxiliary contact for above isolators						
ESC080	6A	1NO + 1NC		clip-on auxiliary for above switches	0.5	**389.87**


SFH125

Changeover switches *(modular DIN rail mount)*

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 such as of supply from mains network to a standby generator supply.

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


SFH225

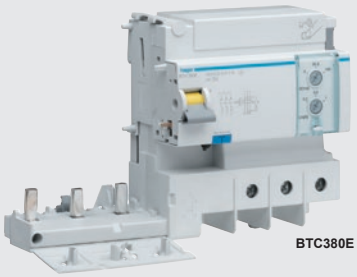
SFH series - Changeover switches - 2 way (I - II)						
SFH125	25A	on - on	1 pole	2 way changeover switch	1	**198.96**
SFH225	25A	on - on	2 pole	2 way changeover switch	2	**463.47**
SFT series - Changeover switches *(with centre off)* **- 3 way (I - O - II)**						
SFT125	25A	on - off - on	1 pole	centre off changeover switch	1	**227.71**
SFT140	40A	on - off - on	1 pole	centre off changeover switch	1	**227.71**
SFT240	40A	on - off - on	2 pole	centre off changeover switch	2	**463.47**
SFT440	40A	on - off - on	4 pole	centre off changeover switch	4	**895.88**
SF263	63A	on - off - on	2 pole	centre off changeover switch	4	**663.58**
SF463	63A	on - off - on	4 pole	centre off changeover switch	8	**1 790.61**

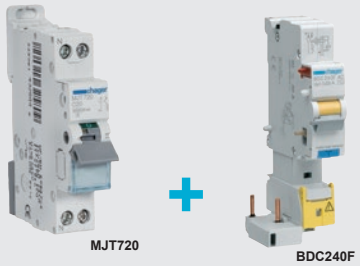
Note: *The incoming of the changeover must be protected with an appropriate MCB against short circuits*

Auxiliary contact for above changeovers						
ESC080	6A	1NO + 1NC		clip-on auxiliary for above switches	0.5	**389.87**

Type	Poles	Sensitivity	MV	MJT	MA	NF/NFN	NGN	NCN	NRN	HLF	HMD	HMC	HMK
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	Yes
BDC380E	3 P	30 mA	–	–	–	–	–	–	–	Yes	Yes	Yes	Yes
BDC480E	4 P	30 mA	–	–	–	–	–	–	–	Yes	Yes	Yes	Yes
BTC280E	2 P	300 mA	–	–	–	–	–	–	–	Yes	Yes	Yes	Yes
BTC380E	3 P	300 mA	–	–	–	–	–	–	–	Yes	Yes	Yes	Yes
BTC480E	4 P	300 mA	–	–	–	–	–	–	–	Yes	Yes	Yes	Yes
BDC240F	2 P	30 mA	–	Yes	–	–	–	–	–	–	–	–	–


BD264


BTC380E


MJT720 + BDC240F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Add-on earth leakage devices for MCBs

For connection to all MCBs to be mounted to the right side of 2, 3, 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 domestic, 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
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	**1 570.95**
BD364	63A	30 mA	3 pole	add-on earth leakage device	3	**1 833.16**
BD464	63A	30 mA	4 pole	add-on earth leakage device	3	**2 269.03**
• BF fixed sensitivity 300 mA for equipment protection						
BF264	63A	300 mA	2 pole	add-on earth leakage device	2	**2 179.32**
BF364	63A	300 mA	3 pole	add-on earth leakage device	3	**2 352.98**
BF464	63A	300 mA	4 pole	add-on earth leakage device	3	**3 482.31**
Add-on earth leakage devices - for **HLF - HMC - HMD - HMK** circuit breakers						
BDC series - fixed sensitivity 30mA for human protection						
BDC280E	125A	30 mA	2 pole	add-on earth leakage device	6	**3 054.50**
BDC380E	125A	30 mA	3 pole	add-on earth leakage device	6	**3 402.96**
BDC480E	125A	30 mA	4 pole	add-on earth leakage device	6	**3 665.17**
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	**3 489.21**
BTC380E	125A	0.3/0.5/1A	3 pole	add-on earth leakage device	6	**3 837.68**
BTC480E	125A	0.3/0.5/1A	4 pole	add-on earth leakage device	6	**4 273.54**
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	**1 316.80**
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*		**6 kA**		SANS/IEC 60947-2		
MJT702	2A	6 kA	1+N	miniature circuit breaker	1	**353.07**
MJT706	6A	6 kA	1+N	miniature circuit breaker	1	**274.86**
MJT710	10A	6 kA	1+N	miniature circuit breaker	1	**274.86**
MJT716	16A	6 kA	1+N	miniature circuit breaker	1	**274.86**
MJT720	20A	6 kA	1+N	miniature circuit breaker	1	**274.86**
MJT725	25A	6 kA	1+N	miniature circuit breaker	1	**274.86**
MJT732	32A	6 kA	1+N	miniature circuit breaker	1	**274.86**
MJT740	40A	6 kA	1+N	miniature circuit breaker	1	**274.86**


CD241J


CD464J


HR500


HR520


HR700


HR743

Residual current devices (RCDs) *without overload protection*

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 page **B-7**)*

- shunt trip device
- undervoltage release
- overervoltage release

} *Requires **CZ001** interface auxiliary*

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

Mechanical life: 40 000 operations

type	overload rating (A)	sensitivity (mA)	poles	description	width in 17.5 mm	price
Earth leakage units (RCDs) *(Type AC)*						
30mA sensitivity						
• For human protection						
CD226J	25A	30 mA	2 pole	earth leakage device	2	**661.28**
CD241J	40A	30 mA	2 pole	earth leakage device	2	**661.28**
CD264J	63A	30 mA	2 pole	earth leakage device	2	**763.63**
CDC584Z*	100A	30 mA	2 pole	earth leakage device	2	**2 050.52**
CD464J	63A	30 mA	4 pole	earth leakage device	4	**1 227.09**
CDC684Z*	100A	30 mA	4 pole	earth leakage device	4	**2 949.85**
100/300mA sensitivity *(selective type)*						
• For equipment protection						
CE264J	63A	100 mA	2 pole	earth leakage device	2	**1 147.74**
CF264J	63A	300 mA	2 pole	earth leakage device	2	**1 368.55**
CFC584Z*	100A	300 mA	2 pole	earth leakage device	4	**2 052.82**
CF464J	63A	300 mA	4 pole	earth leakage device	4	**2 822.19**
CFC684Z*	100A	300 mA	4 pole	earth leakage device	4	**5 086.61**
* *Does not require **CZ001***						
Auxiliaries for RCDs						
CZ001	1NO + 1NC			auxiliary + alarm contact for above RCDs	2	**718.78**
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	**2 444.98**
HR502	230V	300 mA	4 pole	entry level e/leakage relay	1	**2 359.88**
Adjustable sensitivity and trip delay						
• Selectable In threshold: 0.03/0.1/0.3/0.4/0.5/1/3/10A (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	**3 287.96**
HR520	as above with fault current indication and 50% pre-alarm output				3	**3 791.67**
Note: *Barregraph indicates continuously on* **HR520**						

Separate torroid sensors *for electronic earth leakages*

type	hole	diameter Ø (mm)		description	mount	price
HR700	round	30 mm	–	standard torroidal t/former	DIN rail	**1 518.05**
HR742	round	70 mm	–	standard torroidal t/former	chassis	**1 600.86**
HR743	round	105 mm	–	standard torroidal t/former	chassis	**2 949.85**
HR745	round	210 mm	–	standard torroidal t/former	chassis	**5 897.39**
HR830	rectangular	70 x 175	–	standard torroidal t/former	chassis	**14 743.47**


ESC225


ESC425


ERC216


ERC418


ERC425S


ESC463S


ESC080


EPN503


EPN051


EPN053

Contactors are power devices necessary for remote switching and control of power circuits. It is recommended to associate them 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	coil voltage	description	contact config.	width in 17.5 mm	price
Modular contactors						
Standard contactors *(230 VAC 50/60 Hz)*						
ESC225	25A	230 VAC	modular standard contactor	2NO	1	**523.27**
ESC226	25A	230 VAC	modular standard contactor	2NC	1	**523.27**
ESC227	25A	230 VAC	modular standard contactor	1NO + 1NC	1	**531.32**
ESC425	25A	230 VAC	modular standard contactor	4NO	2	**747.53**
ESC427	25A	230 VAC	modular standard contactor	2NO + 2NC	2	**762.48**
ESC240	40A	230 VAC	modular standard contactor	2NO	3	**972.94**
ESC241	40A	230 VAC	modular standard contactor	2NC	3	**972.94**
ESC440	40A	230 VAC	modular standard contactor	4NO	3	**1 174.19**
ESC442	40A	230 VAC	modular standard contactor	2NO + 2NC	3	**1 174.19**
ESC263	63A	230 VAC	modular standard contactor	2NO	3	**1 271.94**
ESC463	63A	230 VAC	modular standard contactor	4NO	3	**1 485.85**
ESC464	63A	230 VAC	modular standard contactor	4NC	3	**1 355.90**
ESC465	63A	230 VAC	modular standard contactor	2NO + 2NC	3	**1 511.15**
Relays and contactors *with manual override facility*						
ERC216	16A	230 VAC	modular rail mount relay	2NO	1	**420.92**
ERC218	16A	230 VAC	modular rail mount relay	1NO + 1NC	1	**420.92**
ERC416	16A	230 VAC	modular rail mount relay	4NO	2	**833.78**
ERC418	16A	230 VAC	modular rail mount relay	2NO + 2NC	2	**833.78**
ERC225	25A	230 VAC	modular standard contactor	2NO	1	**523.27**
ERC240	40A	230 VAC	modular standard contactor	2NO	3	**972.94**
ERC263	63A	230 VAC	modular standard contactor	2NO	3	**1 430.65**
Modular "low noise" contactors						
• No humming while energised / low switching noise						
ERC225S*	25A	230 VAC	low noise modular contactor	2NO	1	**580.77**
ERC425S*	25A	230 VAC	low noise modular contactor	4NO	2	**953.38**
ESC440S	40A	230 VAC	low noise modular contactor	4NO	3	**1 430.65**
ESC463S	63A	230 VAC	low noise modular contactor	4NO	3	**1 669.86**
ERL625SDC*	25A	12 VDC	low noise modular contactor	2NO	2	**501.42**
ERL425SDC*	25A	12 VDC	low noise modular contactor	4NO	2	**938.43**
ESL440S	40A	12 VDC	low noise modular contactor	4NO	3	**1 430.65**
ESL463S	63A	12 VDC	low noise modular contactor	4NO	3	**1 669.86**
ERD225SDC*	25A	24 VDC	low noise modular contactor	2NO	1	**548.57**
ESD425SDC*	25A	24 VDC	low noise modular contactor	4NO	2	**953.38**
ESD440S	40A	24 VDC	low noise modular contactor	4NO	3	**1 288.05**
ESD463S	63A	24 VDC	low noise modular contactor	4NO	3	**1 669.86**
* *With manual override control*						
Contactor accessories						
Auxiliary contact for all above contactors						
Auxiliaries are not compatible with low noise contactors ***ERC225S, ERD225SDC***						
ESC080	Ith 6A	–	clip-on auxiliary contact	1NO + 1NC	0.5	**389.87**
NB: *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	**11.04**
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	**420.92**
EPN503	16A	48 VAC/24 VDC	modular stepping relay	1NO + 1NC	1	**503.72**
EPN518	16A	24 VAC/12 VAC	modular stepping relay	1NO + 1NC	1	**420.92**
EPN519	16A	12 VAC	modular stepping relay	1NO + 1NC	1	**420.92**
EPN521	16A	12 VAC	modular stepping relay	2NO	1	**420.92**
Auxiliary for above stepping relays						
EPN051	Ith 6A	–	clip-on auxiliary contact	1NO + 1NC	0.5	**361.12**
EPN053	Ith 6A	converts maintained contact into a pulsed one		1 C/over	0.5	**361.12**


EH010


EH211


EH111


EH191


EG103E


EG004


EG005


EG493E


EZN006

Modular time switches

Time switches control lighting, pumps, heating, household appliances, shop windows and many other devices according to pre-defined programming.

General features:

- Supply voltage: 230 VAC
- Mounting: Modular DIN rail
- Output: 16A 250V AC1 *(voltage free changeover contact)*
- To improve comfort and save energy
- Manual override possible

Note: *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
Analogue time switches *(electro-mechanical)* *16A 250V*							
Slimline 1 module wide *(17.5 mm)*							
EH010	24 hr	15 min	no	1 NO	time switch	1	**641.73**
EH011	24 hr	15 min	200 hrs	1 NO	time switch	1	**672.78**
Standard 2/3 module wide - *clock hands indicate real time (except **EH109**)*							
EH210	24 hr	30 min	no	1 c/over	time switch	2	**844.13**
EH211	24 hr	30 min	200 hrs	1 c/over	time switch	2	**1 337.50**
EH109	24 hr	15 min	no	1 c/over	time switch	3	**690.03**
EH110	24 hr	15 min	no	1 c/over	time switch	3	**846.43**
EH111	24 hr	15 min	200 hrs	1 c/over	time switch	3	**1 336.35**
EH171	7 day	2 hr	200 hrs	1 c/over	time switch	3	**1 575.55**
Dual dial *(1 dial 7 day / 1 dial 24hr)*							
EH191	7 day / 24 hr	15 min / 2 hr	200 hrs	1 c/over	time switch	5	**2 271.33**
Digital time switches *(programmable via buttons or via PC programmable key)*							
• Up to 56 program steps							
• Indicates date and time *(pre-programmed at factory)*							
• Visualisation of daily profile via incorporated bar-graph display							
• Programmable via front keypad *(even without supply)* or program key **"EG005"**							
Basic version *(programming key to be ordered separately) 230 VAC*							
EG103B	7 day	1 min	5 years	1 c/over	time switch	2	**1 714.14**
Exclusive version *(supplied with programming key) 230 VAC*							
Impulse time switch *(suitable for school-bell ringing - lunch/tea break)*							
• Programmable pulses of 1 sec - 30 min duration							
• "Holiday" mode programmable *(between two dates)*							
• Backlit display *(for indication in badly illuminated locations)*							
EG103E	7 day	1 sec	5 years	1 c/over	time switch	2	**2 641.64**
EG203E	7 day + 7 day	1 sec	5 years	2 c/over	time switch	2	**2 921.10**
12 / 24VAC/DC version *(supplied with programming key)*							
EG103V	7 day	1 sec	5 years	1 c/over	time switch	2	**2 696.84**
4 Channel yearly time switch *(300 program steps)*							
EG493E	week	1 min	10 years	2 CO + 2 NO	time switch	4	**12 535.40**
Accessories for time switches							
EG004	Locking key *(for disabling front keypad)*						**223.11**
EG005	Programming key *(for down/up loading of program)*					EG103/203E	**343.87**
EG007	Programming key *(for down/up loading of program)*					EG493E	**1 263.89**
Modular electronic timers - *(8A 230V changeover)*							
• Multi-time range: 0.1s - 10h							
• Multi-voltage: 12 - 230 VAC +-10% / 12 - 48 VDC +-10%							
• 8A 230V changeover output							
• Modular DIN rail mounting							
EZN001	On-delay multi-range *(modular timer)*				electronic timer	1	**1 474.35**
EZN002	Delay-off de-energisation *(modular timer)*				electronic timer	1	**1 682.51**
EZN003	Interval/off delay *(modular timer)*				electronic timer	1	**1 474.35**
EZN004	Pulse controlled interval *(modular timer)*				electronic timer	1	**1 657.21**
EZN006	Multi-function on-delay / off-delay / interval / repeat				electronic timer	1	**1 838.91**


ST314

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	**870.58**
ST314	230V	12/24V	40VA	modular safety transformer	4	**979.84**
ST315	230V	12/24V	63VA	modular safety transformer	6	**1 315.65**
ST303	230V	8/12V	8VA	modular bell transformer	2	**543.97**
ST305	230V	8/12V	16VA	modular bell transformer	3	**906.23**

Note: *Bell transformers are short-circuit protected*


SU213

Audible devices *(modular DIN rail mount)*

- Bells/buzzers max. continuous duty < 30 minutes

SU213	230V	–	6.5VA	85 dBA	modular bell	1	**361.12**
SU214	8/12 VAC	–	4.0VA	78 dBA	modular buzzer	1	**330.07**
SU215	230V	–	6.5VA	78 dBA	modular buzzer	1	**361.12**


LSN502

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-44-48**)*

LSN501	32A	1 pole	modular cylindrical fuse holder	1	**73.61**
LSN502	32A	2 pole	modular cylindrical fuse holder	2	**182.86**

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	**223.11**
SVN122	230 VAC	red	modular LED indicating light	1	**223.11**
SVN123	230 VAC	amber	modular LED indicating light	1	**223.11**
SVN126	230 VAC	grn+red	modular LED indicating light	1	**313.96**
SVN223	230 VAC	red/wht/blu	modular LED p/light for phase indication	1	**400.22**
SVN131	12 - 48 VAC/DC	green	modular LED indicating light	1	**223.11**
SVN132	12 - 48 VAC/DC	red	modular LED indicating light	1	**223.11**
SVN351	1NO + 1NC	green	modular momentary pushbutton	1	**313.96**
SVN391	1NO + 1NC	grn+red	double pushbutton (grn NO / red NC)	1	**311.66**
SVN411	1NO	green	modular pushbutton + green pilot light	1	**290.96**


SVN.....

SCAME electrical solutions

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)*


654.0091

type	description	no. of modules	price
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			
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 page **I-10** for pricing.*


654.0092 + 101.6414.G


SPN802R


SPN240D


SPN440R


SPN040D


ECP180D


ECP310D


ECP300C

Modular surge protection devices

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	poles	Up	Iimp 10/350 µs	Imax 8/20 µs	description	width in 17.5 mm	price
Class 1 and class 2 combined surge protection device							
• Lightning and surge-voltage protection in one device • Replaceable plug-in cartridges • Integrated fault indicator in the plug-in modules • With remote signalling contact for monitoring							
SPN802R	3ph + N	≤ 1.5kV	100kA	–	class 1+2 surge protector	8	**15 203.48**
Class 2 surge protection *(modular plug-in)*							
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. • SPD's can be used in any supply system e.g. TNC, TNCS, TNS, TT • Protection for domestic, industrial and commercial buildings • Replaceable plug-in cartridges							
Imax 40kA (8/20µs)							
SPN140D	1P	≤ 1.5kV	–	40kA	class 2 surge protector	1	**1 641.11**
SPN140R*	1P	≤ 1.5kV	–	40kA	class 2 surge protector	1	**2 807.24**
SPN240D	1ph + N	≤ 1.5kV	–	40kA	class 2 surge protector	2	**3 292.39**
SPN240R*	1ph + N	≤ 1.5kV	–	40kA	class 2 surge protector	2	**3 999.83**
SPN440D	3ph + N	≤ 1.5kV	–	40kA	class 2 surge protector	4	**6 076.53**
SPN440R*	3ph + N	≤ 1.5kV	–	40kA	class 2 surge protector	4	**7 916.93**
* *With remote signalling contact for monitoring*							
Replacement cartridges *for above surge protection devices*							
SPN040D	phase	replacement cartridge	for protectors	SPN240/440		1	**1 362.80**
SPN040N	neutral	replacement cartridge	for protectors	SPN2/4		1	**1 542.20**

Energy meters (kWh meters) *(modular DIN rail mounting)*

- Accuracy: 1%
- Pulse output
- Backlit LCD display
- "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)*					
• Displays consumption of active energy and instantaneous power consumption					
ECP180D	80A	direct	single-phase kWh meter	2	**4 103.33**
Three-phase kWh meters 80/125A *(direct reading)*					
• Protected against phase/neutral inversion • Displays consumption of active energy and instantaneous power consumption					
ECP380D	80A	direct	three-phase kWh meter	4	**5 368.37**
ECP310D	125A	direct	three-phase kWh meter	6	**6 815.12**
Three-phase kWh meters up to 6000A *(connection via CT)*					
• Displays instantaneous power consumption • Displays consumption of active energy and reactive energy • Note: Requires neutral to be operational					
ECP300C	6000A	CT / 5A	three-phase kWh meter	4	**5 019.91**

Note: *For CTs, see page* ***E-19...24***

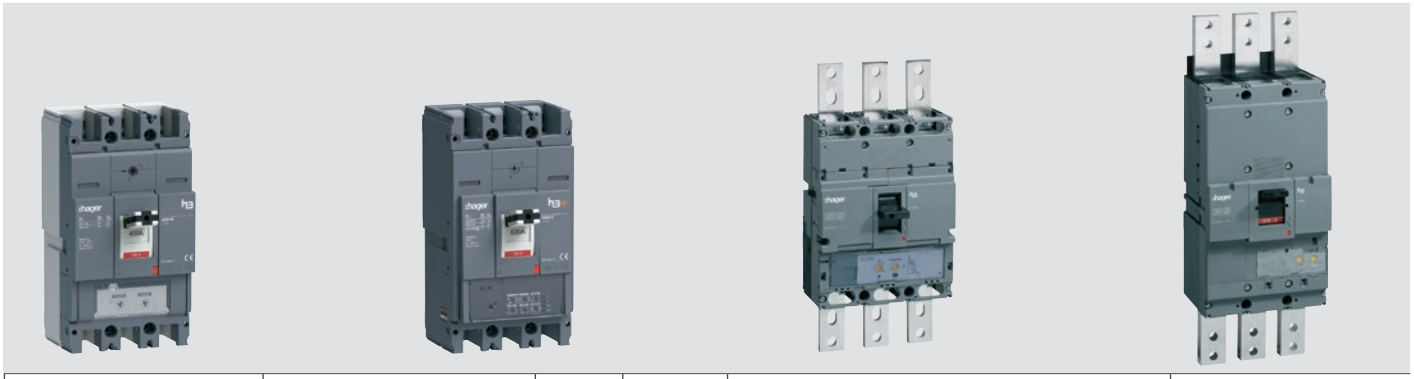
Hager moulded case circuit breakers conform to IEC/EN 60947-2 standards and to all major international standards and performance categories.

- Calibrated at 50ºC
- 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	16-160	250	200/250	250
Rated service voltage, (AC)	Ue	[V]		220-690			220-690	
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
(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								
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 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: LSnI (electronic) Non-adjustable Megnetic								–
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*



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	1000		1600		
320 - 630		400 - 630			320,400	500, 630, 800	800, 1000	800, 1000		1250-1600		
220-690		220-690			415		220-690			220-690		
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	–	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**
12	12	–	–	–	–	–	–	30	30	–	45	50
24	24	–	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		–	A		–	A	
TM			Electronic		TM			Electronic			Electronic	
30/50°C		–	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		–	ok		–		–			–		
0.63 - 0.8 - 1 x In		–	0.63 - 0.8 - 1 x In		–		–			–		
(400A) 5-6-7-8-9-10 (630)4-5-6-7-8		(400A) 5-6-7-8-9-10 (630)4-5-6-7-8			–		–			–		
–			–		–		–					
–		–	ok		–		–	ok		–	ok	
–		–	–		–		–	0.4 to 1 x Ir		–	0.4 to 1 x In	
–		–	–		–		–	2.5 to 10 x Ir (800A)2.5 to 8 x Ir (1000A)		–	2.5 to 10 x Ir	
–		–	–		–		–	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		


HHA125Z


HND400P


HNB250U

new


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 **B-19...20**)*
- 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 25/50 kA						
Fixed: Thermal 1 x In / magnetic >10 x In						
HHA016Z	16A	25kA	3 pole	moulded case CB	x160	**2 217.27**
HHA020Z	20A	25kA	3 pole	moulded case CB	x160	**2 217.27**
HHA025Z	25A	25kA	3 pole	moulded case CB	x160	**2 217.27**
HHA032Z	32A	25kA	3 pole	moulded case CB	x160	**2 217.27**
HHA040Z	40A	25kA	3 pole	moulded case CB	x160	**2 217.27**
HHA050Z	50A	25kA	3 pole	moulded case CB	x160	**2 217.27**
HHA063Z	63A	25kA	3 pole	moulded case CB	x160	**2 217.27**
HHA080Z	80A	25kA	3 pole	moulded case CB	x160	**2 217.27**
HHA100Z	100A	25kA	3 pole	moulded case CB	x160	**2 217.27**
HHA125Z	125A	25kA	3 pole	moulded case CB	x160	**2 348.38**
HHA160Z	160A	25kA	3 pole	moulded case CB	x160	**2 870.49**
HHB200Z	200A	25kA	3 pole	moulded case CB	x250	**4 787.60**
HHB250Z	250A	25kA	3 pole	moulded case CB	x250	**4 934.81**
H3e series	economical, cost-efficient					
• Not compatible with Quadro enclosure system						
Fixed: Thermal 1.05 to 1.3 x In / magnetic >10 x In						
HND320P	320A	50kA	3 pole	moulded case CB	h400e	**7 572.99**
HND400P	400A	50kA	3 pole	moulded case CB	h400e	**7 572.99**
HNE500P	500A	50kA	3 pole	moulded case CB	h800e	**12 466.40**
HNE630P	630A	50kA	3 pole	moulded case CB	h800e	**12 466.40**
HNE800P	800A	50kA	3 pole	moulded case CB	h800e	**12 466.40**
***Note:** 4 pole available on request*						
Adjustable thermal / magnetic trip 40/50 kA						
• Window indicating presence of: - Auxiliary/alarm contacts, shunt trip, UV release						
TM: Adjustable thermal 0.63 - 0.8 - 1 x In / fixed magnetic >10 x In						
HNA025U	16 - 25A	40kA	3 pole	moulded case CB	x160	**2 443.83**
HNA040U	25 - 40A	40kA	3 pole	moulded case CB	x160	**2 443.83**
HNA063U	40 - 63A	40kA	3 pole	moulded case CB	x160	**2 443.83**
HNA100U	63 - 100A	40kA	3 pole	moulded case CB	x160	**2 443.83**
HNA125U	80 - 125A	40kA	3 pole	moulded case CB	x160	**2 443.83**
HNA160U	101 - 160A	40kA	3 pole	moulded case CB	x160	**2 968.25**
HNA026U	16 - 25A	40kA	4 pole	moulded case CB	x160	**3 298.31**
HNA041U	25 - 40A	40kA	4 pole	moulded case CB	x160	**3 298.31**
HNA064U	40 - 63A	40kA	4 pole	moulded case CB	x160	**3 298.31**
HNA101U	63 - 100A	40kA	4 pole	moulded case CB	x160	**3 298.31**
HNA126U	80 - 125A	40kA	4 pole	moulded case CB	x160	**3 298.31**
HNA161U	101 - 160A	40kA	4 pole	moulded case CB	x160	**4 004.43**
TM: Adjustable thermal 0.63 - 0.8 - 1 x In / adjustable magnetic 5-7-9-11 x In						
HNB250U	160 - 250A	40kA	3 pole	moulded case CB	x250	**6 728.87**
HNB251U	160 - 250A	40kA	4 pole	moulded case CB	x250	**8 360.77**
TM: Adjustable thermal 0.63 - 0.8 - 1 x In / adjustable magnetic 6-12 x In						
HMJ320DR	202-320A	50kA	3 pole	moulded case CB	x630	**10 261.78**
HMJ400DR	252-400A	50kA	3 pole	moulded case CB	x630	**11 019.65**
HMJ630DE	397-630A	50kA	3 pole	moulded case CB	x630	**12 086.88**
HMJ321DR	202-320A	50kA	4 pole	moulded case CB	x630	**13 731.43**
HMJ401DR	252-400A	50kA	4 pole	moulded case CB	x630	**14 904.47**
HMJ631DE	397-630A	50kA	4 pole	moulded case CB	x630	**17 101.04**
Adjustable thermal / magnetic trip 70 kA						
HEJ320DR	202-320A	70kA	3 pole	moulded case CB	x630	**11 227.81**
HEJ400DR	252-400A	70kA	3 pole	moulded case CB	x630	**12 132.88**
HEJ630DE	397-630A	70kA	3 pole	moulded case CB	x630	**13 374.92**
HEJ321DR	202-320A	70kA	4 pole	moulded case CB	x630	**14 455.96**
HEJ401DR	252-400A	70kA	4 pole	moulded case CB	x630	**15 859.00**
HEJ631DE	397-630A	70kA	4 pole	moulded case CB	x630	**17 365.55**
***Note:** x/P630 supplied without links.*						


HNE970H


HEW630JR

new


HCW630AR


HCF990H

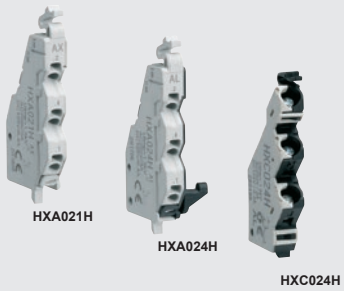
- Mechanical “test” button on the front
- Integrated padlock facility on toggle
- Cascading with MCBs *(see chart **Annex 5**)*
- Lockable thermal/magnetic settings
- Standards: SANS / IEC 60947-2

"Clip-in" accessories *(see **B-19...20**)*
- 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: Adjustable thermal 0.4 - 1 x In / adjustable magnetic 2.5 - 8 x Ir / time 0.1 - 0.2sec						
HMW400JR*	252-400A	50kA	3 pole	moulded case CB	P630	**17 434.55**
HMW630JR*	397-630A	50kA	3 pole	moulded case CB	P630	**18 527.08**
HNE800H	320-800A	50kA	3 pole	moulded case CB	h1000	**28 256.39**
HNE970H	400-1000A	50kA	3 pole	moulded case CB	h1000	**37 836.19**
HNF980H	500-1250A	50kA	3 pole	moulded case CB	h1600	**47 105.48**
HNF990H	640-1600A	50kA	3 pole	moulded case CB	h1600	**60 008.88**
HMW401JR*	252-400A	50kA	4 pole	moulded case CB	P630	**20 217.64**
HMW631JR*	397-630A	50kA	4 pole	moulded case CB	P630	**23 702.25**
HNE801H	320-800A	50kA	4 pole	moulded case CB	h1000	**38 871.22**
HNE971H	400-1000A	50kA	4 pole	moulded case CB	h1000	**51 073.10**
HNF981H	500-1250A	50kA	4 pole	moulded case CB	h1600	**63 585.50**
HNF991H	640-1600A	50kA	4 pole	moulded case CB	h1600	**76 546.40**
Adjustable thermal / magnetic trip 70 kA						
LSI: Adjustable thermal 0.4 - 1 x In / fixed magnetic 2.5 - 8 x Ir / time 0.1 - 0.2sec						
HEW400JR*	252-400A	70kA	3 pole	moulded case CB	P630	**20 263.64**
HEW630JR*	397-630A	70kA	3 pole	moulded case CB	P630	**22 000.19**
HEE800H	320-800A	70kA	3 pole	moulded case CB	h1000	**30 544.96**
HEE970H	400-1000A	70kA	3 pole	moulded case CB	h1000	**42 401.83**
HEF980H	500-1250A	70kA	3 pole	moulded case CB	h1600	**52 418.65**
HEF990H	640-1600A	70kA	3 pole	moulded case CB	h1600	**73 234.30**
HEW401JR*	252-400A	70kA	4 pole	moulded case CB	P630	**21 206.67**
HEW631JR*	397-630A	70kA	4 pole	moulded case CB	P630	**25 277.80**
HEE801H	320-800A	70kA	4 pole	moulded case CB	h1000	**35 846.63**
HEE971H	400-1000A	70kA	4 pole	moulded case CB	h1000	**57 283.30**
HEF981H	500-1250A	70kA	4 pole	moulded case CB	h1600	**70 773.22**
HEF991H	640-1600A	70kA	4 pole	moulded case CB	h1600	**98 868.60**
* *Links not included.*						
Load break switches *(switch disconnectors / isolators)*						
HCA125Z	125A	–	3 pole	load break switch	x160	**1 343.25**
HCA160Z	160A	–	3 pole	load break switch	x160	**1 397.30**
HCB250Z	250A	–	3 pole	load break switch	x250	**3 500.71**
HCW400AR	400A	–	3 pole	load break switch	P400	**8 702.33**
HCW630AR	630A	–	3 pole	load break switch	P630	**10 809.19**
HCE800H	800A	–	3 pole	load break switch	h1000	**23 909.25**
HCE970H	1000A	–	3 pole	load break switch	h1000	**36 306.64**
HCF980H	1250A	–	3 pole	load break switch	h1600	**53 120.17**
HCF990H	1600A	–	3 pole	load break switch	h1600	**55 822.75**
HCA126Z	125A	–	4 pole	load break switch	x160	**1 765.31**
HCA161Z	160A	–	4 pole	load break switch	x160	**1 888.36**
HCB251Z	250A	–	4 pole	load break switch	x250	**3 997.53**
HCW401AR	400A	–	4 pole	load break switch	P400	**9 878.81**
HCW631AR	630A	–	4 pole	load break switch	P630	**15 398.99**
HCE801H	800A	–	4 pole	load break switch	h1000	**32 281.52**
HCE971H	1000A	–	4 pole	load break switch	h1000	**49 014.54**
HCF981H	1250A	–	4 pole	load break switch	h1600	**71 716.25**
HCF991H	1600A	–	4 pole	load break switch	h1600	**71 808.25**

***Note:** x/P630 supplied without links.*

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	**381.82**
HXC021H	1NO + 1NC	auxiliary	contact	1NO+1NC for circuit breakers	h1000, h1600	**937.28**
HXD022P	2NO + 2NC	auxiliary	contact	2NO+2NC for circuit breakers	h400e	**1 158.09**
HXE022P	2NO + 2NC	auxiliary	contact	2NO+2NC for circuit breakers	h800e	**1 423.75**
HXA024H	1NO + 1NC	alarm	contact	1NO+1NC for circuit breakers	x160-x/P630	**395.62**
HXC024H	1NO + 1NC	alarm	contact	1NO+1NC for circuit breakers	h1000, h1600	**937.28**
HXD024P	1NO + 1NC	alarm	contact	1NO+1NC for circuit breakers	h400e	**580.77**
HXE024P	1NO + 1NC	alarm	contact	1NO+1NC for circuit breakers	h800e	**748.68**
Shunt trip units (SH)						
HXA00*H	shunt	(SH)	shunt trip device for circuit breakers		x160-x/P630	**921.18**
HXC00*H	shunt	(SH)	shunt trip device for circuit breakers		h1000	**986.74**
HXF00*H	shunt	(SH)	shunt trip device for circuit breakers		h1600	**1 714.71**
* ***1*** *= 24 VDC,* ***3*** *= 110 VAC,* ***4*** *= 230 VAC,* ***5*** *= 400 VAC*						
HXD00*P	shunt	(SH)	shunt trip device for circuit breakers		h400e	**1 363.95**
HXE00*P	shunt	(SH)	shunt trip device for circuit breakers		h800e	**1 562.90**
* ***6*** *= 24 VDC,* ***4*** *= 230 VAC,* ***5*** *= 400 VAC*						
Undervoltage release (UV)						
HXA014H	230 VAC	(UV)	undervolt release for circuit breakers		x160-x/P630	**1 150.04**
HXA015H	440 VAC	(UV)	undervolt release for circuit breakers		x160-x/P630	**1 297.25**
HXD014P	230 VAC	(UV)	undervolt release for circuit breakers		h400e	**1 544.50**
HXD015P	380 VAC	(UV)	undervolt release for circuit breakers		h400e	**1 544.50**
HXE014P	230 VAC	(UV)	undervolt release for circuit breakers		h800e	**1 677.91**
HXE015P	380 VAC	(UV)	undervolt release for circuit breakers		h800e	**1 826.26**
HXE014H	230 VAC	(UV)	undervolt release for circuit breakers		h1000-1600	**1 677.91**
HXE015H	440 VAC	(UV)	undervoltage release for circuit breakers		h1000-1600	**1 826.26**
Rotary handles						
• Direct mounting • Padlockable in “off” position						
HXA030H	direct mount		front mount rotary handle for circuit breakers		x160	**1 749.21**
HXB030H	direct mount		front mount rotary handle for circuit breakers		x250	**1 749.21**
HXW030H	direct mount		front mount rotary handle for circuit breakers		x630/P630	**1 650.31**
HXE030H	direct mount		front mount rotary handle for circuit breakers		h1000	**2 854.39**
HXF030H	direct mount		front mount rotary handle for circuit breakers		h1600	**3 933.13**
Rotary handles						
• Vari-depth door interlocking						
HXA031H	vary-depth	200mm	door interlocking rotary handle and shaft		x160	**2 312.73**
HXB031H	vary-depth	200mm	door interlocking rotary handle and shaft		x250	**2 312.73**
HXW031H	vary-depth		door interlocking rotary handle and shaft		x630/P630	**3 540.97**
HXD031P	vary-depth		door interlocking rotary handle and shaft		h400e	**1 544.50**
HXE031P	vary-depth		door interlocking rotary handle and shaft		h800e	**1 929.77**
HXE031H	vary-depth		door interlocking rotary handle and shaft		h1000	**9 108.29**
HXF031H	vary-depth		door interlocking rotary handle and shaft		h1600	**11 308.31**

Undervoltage		Rotary handles		Motor operators					
230V AC	440V AC	Direct	Vary-depth	Auto reset 230V-240V AC	Auto reset 110V-240V AC	NON Auto reset 110V-240V AC	Auto reset 230V-240V AC	NON Auto reset 230V-240V AC	220V AC
HXA014H	HXA015H	HXA030H	HXA031H	–	–	–	–	–	–
HXA014H	HXA015H	HXB030H	HXB031H	HXB042H	–	–	–	–	–
HXA014H	HXA015H	HXW030H	HXW031H	–	HXW042H	HXW044H	–	–	–
HXA014H	HXA015H	HXW030H	HXW031H	–	HXW042H	HXW044H	–	–	–
HXE014H	HXE015H	HXE030H	HXE031H	HXE042H	–	–	–	–	–
HXE014H	HXE015H	HXF030H	HXF031H	HXF042H	–	–	–	–	–
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	**11 484.26**
HXW042H	110 - 230 VAC	motor operator for remote operation of MCCB	x630/P630	**14 444.46**
HXW044H*	110 - 230 VAC	motor operator for remote operation of MCCB	x630/P630	**14 467.46**
HXE042H	230 VAC	motor operator for remote operation of MCCB	h1000	**25 450.30**
HXF042H	230 VAC	motor operator for remote operation of MCCB	h1600	**25 749.31**
HXD042P	230 VAC	motor operator for remote operation of MCCB	h400e	**6 805.92**
HXE042P	230 VAC	motor operator for remote operation of MCCB	h800e	**8 026.11**
* *Non auto reset*				
Terminals and mounting accessories				
Adaptors				
HYA033H	adaptor	DIN rail mounting adaptor	x160	**146.06**
HYB033H	adaptor	DIN rail mounting adaptor	x250	**362.27**
Terminals				
HYB001H	set of 3	150 mm² collar terminals for cables	x250	**3 083.25**
HYW001H	set of 3	300 mm² collar terminals for cables	x630/P630	**2 810.69**
HYA014H	3 pole	spreader link extended terminals	x160	**364.57**
HYB011H	3 pole	spreader link extended terminals	x250	**456.57**
HYW014H	3 pole	spreader link extended terminals	x630/P630	**1 914.81**
HYA015H	4P	spreader link extended terminals	x160	**435.87**
HYB012H	4P	spreader link extended terminals	x250/P250	**653.23**
HYW015H	4P	spreader link extended terminals	x630/P630	**2 542.73**
Shrouds				
HYA027H	3 pole	terminal shrouds	x160	**694.63**
HYB021H	3 pole	extended terminal shrouds	x250	**694.63**
HYW023H	3 pole	extended terminal shrouds	x630/P630	**815.38**
HYE021H	3 pole	extended terminal shrouds	h1000	**2 159.77**
HYA028H	4P	terminal shrouds	x160	**323.17**
HYB022H	4P	terminal shrouds	x250	**362.27**
HYW024H	4P	terminal shrouds	x630/P630	**903.93**
HYE025H	4P	terminal shrouds	h1000	**2 361.03**
Phase barriers				
HYA019H	3 per set	spare interphase barriers	x160	**332.37**
HYB019H	3 per set	spare interphase barriers	x250	**318.56**
HYW019H	3 per set	spare interphase barriers	x630/P630	**125.36**
HYD019H	3 per set	spare interphase barriers	h1000/h1600	**330.07**

Special "contained palm" cable lugs for MCCBs

type	cable size	lug width	hole Ø	description	for MCCB	price
A24B-M8/19	120 mm²	19.0 mm	M8	contained palm cable lug (ea)	x250	**154.11**
A30B-M8/19	150 mm²	19.0 mm	M8	contained palm cable lug (ea)	x250	**189.76**
A37B-M10/24.5	185 mm²	24.5 mm	M10	contained palm cable lug (ea)	250/400/630	**209.31**
A48-M10/31	240 mm²	31.0 mm	M10	contained palm cable lug (ea)	400/630	**273.71**

Cascading according to IEC 60947-2 MCCB x160, x250, x630, P630, h1000, h1600

Cascading value in kA according to IEC 60947-2. Network: 3 phases + neutral, 380-415 VAC

Upstream Circuit Breaker

Downstream Circuit Breaker

MCBs

				Reference	MJT	MA	NF	NFN	NGN	NCN	NRN			HLF	HMD	HMC	HMK
				IEC 60947-2	6kA	6kA	10kA	10kA	10kA	15kA	25kA	20kA	15kA	10kA	15kA	15kA	30kA
			IN MAX		40A	63A	40A	63A	63A	63A	6-25A	32/40A	50/63A	125A	125A	125A	125A
				Curve	C	C	C	C	D	C	C	C	C	C	D	C	C
MJT	6kA		40A	C				10	10	15	25	20	15	12	12	12	12
MA	6kA		63A	C				10	10	15	25	20	15	10	12	12	12
NF	10kA		40A	C						15	25	20	15	10			
NFN	10kA		63A	C						15	25	20	15	15	15	15	30
NGN	10kA		63A	D						15	25	20	15	15	15	15	30
NCN	15kA		63A	C							25	20	15				30
NRN	25kA		6-25A	C													30
	20kA		32/40A	C													30
	15kA		50/63A	C													30
HLF	10kA		125A	C													30
HMD	15kA		125A	D													30
HMC	15kA		125A	C													30
HMK	30kA		125A	C													
HHA	25kA	x160	160A	Thermal Magnetic													
HNA	40kA																
HHB	25kA	x250	250A														
HNB	40kA																
HMJ	50kA	x630	630A														
HEJ	70kA																
HMW	50kA	P630	630A	Electronic													
HEW	70kA																
HNE	50kA	h1000	1000A														
HEE	70kA																
HNF	50kA	h1600	1600A														
HEF	70kA																

MCCBs

HHA	HNA	HHB	HNB	HMJ	HEJ	HMW	HEW	HNE	HEE	HNF	HEF
25kA	40kA	25kA	40kA	50kA	70kA	50kA	70kA	50kA	70kA	50kA	70kA
x160	x160	x250	x250	x630		P630		h1000		h1600	
160A	160A	250A	250A	630A		630A		1000A		1600A	
Thermal Magnetic						Electronic					
16	16	16	16								
25	40	25	39.3	15	15	15	15	15	15	15	15
25	40	25	39.3	15	15	15	15	15	15	15	15
25	40	25	40	20	20	20	20	20	20	15	15
25	40	25	40	20	20	20	20	20	20	15	15
25	40	25	40	20	20	20	20	20	20	15	15
	40		40	30	30	30	30	30	30	28	28
25	40	25	40	25	25	25	25	30	30	20	20
25	40	25	40	20	20	20	20	20	20	15	15
25	40	25	40	28	28	30	30	17	17	15	15
25	40	25	40	28	28	30	30	17	17	15	15
25	40	25	40	28	28	30	30	17	17	15	15
	40		40	50	70	50	70	50	60	35	35
		25		50	70	50	70	45	45	28	28
				50	70	50	70	50	70	50	50
				50	70	50	70	45	45	28	28
				50	70	50	70	50	70	50	50
				50	70	50	70	50	70	50	70
					70		70		70		70
				50	70	50	70	50	70	50	70
					70		70		70		70
								50	70	50	70
									70		70
										50	70
											70

Note: Cascading table based on 3Ph 415V networks. MJT - only for 230V networks.

Hager ACBs conform to IEC/EN 60947-2 standards and to all major international standards and performance categories.

- High breaking capacity: full range Icu=Ics
- Optimised and compact panel size: same height and depth
- Terminal conversion horizontal – vertical *(up to 3200A)*
- Quick and easy mounting of accessories
- OCR: LCD display, pre-trip alarm, fault/event recording, integrated communication, remote reset, ZSI, temperature alarm
- Advanced protection: low load, unbalance voltage, reserve power, low/over voltage protection
- Advanced metering: ammeter, voltage, power, energy, demand…

Type					**HWAN**		**HWBS**				**HWCP**
Frame					A		B				C
Rated uninterrupted current	40°C			A	1250	1600	–	2500	3200	4000	5000
No. of poles					3/4						
Rated operational voltage	50/60Hz	Ue		V	690						
Rated insulation voltage	50/60Hz	Ui		V	1000						
Rated impulse withstand voltage		Uimp		kV	12						
Current setting range (…x In max)				Ir	0.4 ~ 1.0						
Compliance					EN60947-2, IEC60947-2, GB14048-2						
Rated breaking capacity	220/380/415 AC	Icu		KA	65		85				100
	550/600/690 AC				50		65				85
Rated service breaking capacity	220/380/415 AC	Ics		(% Icu)	100%						
	550/600/690 AC										
Rated short-time capacity	1 Sec	Icw		KA	65		85				85
	3 Sec				36		55				65
Rated making capacity (kA peak)	415/380/220 AC	Icm		kA	143		187				220
	550/600/690 AC				105		143				187
Utilization category	IEC 60947-2				B						
Time											
Maximum total breaking time				ms	40						
Closing operating time		motor charging		s	5						
		max. closing time		ms	40						
Protection											
Long time overload protection LTD	Ict	In=Ictx…			0.5-0.63-0.7-0.8-0.9-1						
	current setting	Ir = In x...		A	0.8-0.83-0.85-0.88-0.9-0.93-0.95-0.98-1-non						
	time delay	tr at (6 x Ir)		sec	0.5-1.25-2-2.5-5-10-15-20-25-30						
Short time STD	current setting	Isd = In x...		A	1.0-1.5-2-2.5-3-4-6-8-10-non						
	time delay at 10xIn	tsd	I^2t off	sec	0.05-0.1-0.2-0.3-0.4-0.5						
			I^2t on	sec	0.05-0.1-0.2-0.3-0.4-0.5						
		I^2t off	min. trip time	ms	20-80-160-260-360-460						
			max. trip time	ms	80-140-240-340-440-540						
Instantaneous INST	current setting	Ii = Inx...		A	2-3-4-6-8-10-12-15-non						
	trip time			ms	below 50						
Pre trip alarm PTA	current setting	Ip = Inx...		A	0.6-0.65-0.7-0.75-0.8-0.85-0.9-0.95-1-non						
	time delay	tp at (Ipx1.2)		sec	5-10-15-20-40-60-80-120-160						
Mechanical life	with maintenance	no. of cycles			30 000		20 000				20 000
Electrical life	with maintenance	no. of cycles			10 000		10 000				5 000
Dimensions											
Dimensions	width 3 pole	Fixed		mm	296		367				592
	width 4 pole			mm	381		523				762
	depth			mm	296 *(without terminals)*						
	height			mm	404						
	width 3 pole	Draw-out		mm	328		399				624
	width 4 pole			mm	413		514				794
	depth			mm	368 *(without terminals)*						
	height			mm	466						
Pitch	Ph-Ph			mm	85		–	115	115	152.5	190.5
Terminal width				mm	50		–	75	90	100	125
Weight	3 pole	Fixed		kg	34		–	44	44	61	76
	4 pole			kg	44		–	55	55	81	81
	3 pole	Draw-out		kg	63		–	87	87	107	145
	4 pole			kg	80		–	130	130	161	173

HWAN316EFCZ

HWAN416EDCZ

Air Circuit Breakers (ACB)

- 3 frame sizes: A - 500A - 1600A
  B - 1000A - 4000A
  C - 2000A - 5000A
- Terminals easily convert from horizontal to vertical (up to 3200A)
- Compact dimensions
- Same panel cut-out for all sizes
- Quick and easy mounting of accessories

Air circuit breakers are supplied standard with the following:

	fixed	draw-out
Auxiliary contacts (4NO + 4NC)	•	•
RTC *(ready to close)* contact for “spring loaded” indication	•	•
OCR - LSI Amp - microprocessor protection and control unit *(with LCD digital display)*	•	•
Internal components to easily mount mechanical interlock facility	•	•
Panel door ingress seal *(flange for compartment door)*	•	•
Cradle of draw-out circuit breaker		•
Operation *(racking)* crank handle		•
Safety shutters *(padlockable top and bottom)*		•

Current setting Ir + In x…	**A**	0.4-0.5-0.6-0.7-0.8-0.85-0.9-0.95-1
Time delay at 6x Ir	**s**	0.5-1.25-2-2.5-5-10-15-20-25-30
Short circuit Is = In x…	**A**	1.0-1.5-2-2.5-3-4-6-8-10-non
Time delay Ts 10xIr - I^2t	**ms**	20-80-160-260-360-460
Instantaneous trip Ip = In x…	**A**	2-3-4-6-8-10-12-15-non

type	thermal adjustment (A)	breaking capacity 415V (rms)	poles	mount	description	frame size	price
Fixed-type air circuit breaker							
Three pole							
HWAN312EFCZ	500 - 1250	65kA	3 pole	fixed	air circuit breaker	A	**62 228.45**
HWAN316EFCZ	640 - 1600	65kA	3 pole	fixed	air circuit breaker	A	**65 851.07**
HWBS325EFCZ	1000 - 2500	85kA	3 pole	fixed	air circuit breaker	B	**89 311.80**
HWBS332EFCZ	1280 - 3200	85kA	3 pole	fixed	air circuit breaker	B	**95 648.50**
HWBS340EFCZ	1600 - 4000	85kA	3 pole	fixed	air circuit breaker	B	**112 393.02**
HWCP350EFCZ	2000 - 5000	100kA	3 pole	fixed	air circuit breaker	C	**158 129.95**
Four pole							
HWAN416EFCZ	640 - 1600	65kA	4 pole	fixed	air circuit breaker	A	**75 879.38**
HWBS425EFCZ	1000 - 2500	85kA	4 pole	fixed	air circuit breaker	B	**105 423.81**
HWBS432EFCZ	1280 - 3200	85kA	4 pole	fixed	air circuit breaker	B	**112 577.03**
HWBS440EFCZ	1600 - 4000	85kA	4 pole	fixed	air circuit breaker	B	**137 544.31**
HWCP450EFCZ	2000 - 5000	100kA	4 pole	fixed	air circuit breaker	C	**193 896.07**
Draw-out air circuit breakers	*supplied complete with cradle and crank handle*						
Three pole							
HWAN312EDCZ	500 - 1250	65kA	3 pole	draw-out	air circuit breaker	A	**80 146.01**
HWAN316EDCZ	640 - 1600	65kA	3 pole	draw-out	air circuit breaker	A	**84 803.66**
HWBS325EDCZ	1000 - 2500	85kA	3 pole	draw-out	air circuit breaker	B	**121 098.80**
HWBS332EDCZ	1280 - 3200	85kA	3 pole	draw-out	air circuit breaker	B	**136 049.26**
HWBS340EDCZ	1600 - 4000	85kA	3 pole	draw-out	air circuit breaker	B	**158 934.98**
HWCP350EDCZ	2000 - 5000	100kA	3 pole	draw-out	air circuit breaker	C	**201 256.30**
Four pole							
HWAN416EDCZ	640 - 1600	65kA	4 pole	draw-out	air circuit breaker	A	**97 511.56**
HWBS425EDCZ	1000 - 2500	85kA	4 pole	draw-out	air circuit breaker	B	**142 374.46**
HWBS432EDCZ	1280 - 3200	85kA	4 pole	draw-out	air circuit breaker	B	**165 145.17**
HWBS440EDCZ	1600 - 4000	85kA	4 pole	draw-out	air circuit breaker	B	**198 841.23**
HWCP450EDCZ	2000 - 5000	100kA	4 pole	draw-out	air circuit breaker	C	**250 247.84**

HWX524

HWX554

HWX514


HWY502


HWY638

HWY649

Air circuit breaker (ACB) accessories

- Quick and easy mounting of accessories

type		description	voltage	price
Shunt opening release SH *(trip coils)*				
HWX504	SH	shunt opening release for all air circuit breakers	220 VAC/DC	**1 124.74**
HWX505	SH	shunt opening release for all air circuit breakers	380 - 415 VAC	**1 124.74**
HWX501	SH	shunt opening release for all air circuit breakers	24 VDC	**1 478.95**
Secondary trip coil sSH *(shunt release)*		*only if not using UV release*		
HWX524	sSH	shunt closing release for all air circuit breakers	220 VAC/DC	**1 505.40**
HWX525	sSH	shunt closing release for all air circuit breakers	380 - 415 VAC	**1 505.40**
HWX521	sSH	shunt closing release for all air circuit breakers	24 VDC	**1 843.51**
Closing coils *(CC)*				
HWX554	CC	shunt closing release for all air circuit breakers	220 VAC/DC	**1 124.74**
HWX555	CC	shunt closing release for all air circuit breakers	380 - 415 VAC	**1 518.05**
HWX551	CC	shunt closing release for all air circuit breakers	24 VDC	**1 478.95**
Under voltage release *(UVT) release 70% of UV*				
HWX514	UVT	undervoltage release for all air circuit breakers	220/250 VAC/DC	**1 817.06**
HWX515	UVT	undervoltage release for all air circuit breakers	380 - 415 VAC	**1 580.15**
HWX534	UVT	undervoltage release time delay controller	220/250 VAC/DC	**3 919.33**
HWX535	UVT	undervoltage release time delay controller	380 - 415 VAC	**4 165.44**
Motor operators *(MO)*		*electric charging device*		
HWX544	MO	motor for automatic charging of closing spring	220 VAC/DC	**4 216.04**
HWX541	MO	motor for automatic charging of closing spring	24 VDC	**4 216.04**
Mechanical interlocks *(MI)*				
Up to three circuit breakers fixed/draw-out/mixed versions can be mechanically interlocked in horizontal or vertical configurations. *(Supplied standard with 2 meter cables)*				
HWY502	2 way	mechanical Interlock mech. with cables	fixed/drawout	**18 366.08**
HWY503	3 way	mechanical Interlock mech. with cables	fixed/drawout	**33 857.06**
HWY509	5 meter	cable for mechanical interlocks	fixed/drawout	**2 581.84**
Arc shields *(for installing drawout ACB into panels with restricted space)*				
HWY670	3 pole	arc shield for drawout type ACB	1000 - 1600A	**655.53**
HWY671	4 pole	arc shield for drawout type ACB	1000 - 1600A	**734.88**
HWY672	3 pole	arc shield for drawout type ACB	2000 - 4000A	**779.73**
HWY673	4 pole	arc shield for drawout type ACB	2000 - 4000A	**941.88**
HWY674	3 pole	arc shield for drawout type ACB	5000A	**1 064.94**
HWY675	4 pole	arc shield for drawout type ACB	5000A	**1 304.15**
Accessories				
HWY648		lifting lugs for all Air Circuit Breakers		**382.97**
HWY641	*(IP30)*	spare panel door ingress seal *(flange for compartment door)*		**449.67**
HWY642	*(IP54)*	hinged transparent dust cover for front door		**11 388.81**
HWY632		ON/OFF pushbutton protection cover *(padlockable)*		**93.16**
HWY637		control terminals protection cover for all ACB		**115.01**
HWY630	3 pole	*(2 units)* phase insulation barrier for all ACB		**710.73**
HWY631	4 pole	*(3 units)* phase insulation barrier for all ACB		**926.93**
HWY638		mechanical operation counter for all ACB		**1 320.25**
Key lock devices				
HWY701	Ronis	key lock in open position for all ACB	Ronis 1-K1L1/12	**1 185.69**
HWY702	Ronis	key lock in open position for all ACB	Ronis 2-K2L2/12/23	**1 185.69**
HWY703	Ronis	key lock in open position for all ACB	Ronis 3-K3L3/23	**1 185.69**
HWY706	Castel	key lock in open position for all ACB	Castel 1 - A	**2 924.55**
HWY707	Castel	key lock in open position for all ACB	Castel 2 - B	**2 924.55**
HWY708	Castel	key lock in open position for all ACB	Castel 3 - A - B	**2 924.55**
HWY633		key cylinder lock in open position	type 1	**610.67**
HWY697		adaptor kit for Ronis locks		**791.23**
HWY698		adaptor kit for Castel locks		**768.23**
OCR portable checker instrument				
HWY649	OCR	portable OCR checker instrument	all ACB	**44 770.91**

83575

90130

100540

100544

100550

DC Miniature circuit breakers (MCBs)

Photovoltaic applications are widely used as an alternative energy source, stimulating development of a new generation of DC circuit breakers. Tripping of DC currents is more complicated than in AC as the arc between contacts can simply be interrupted when reaching zero value. DC applications 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
Ex9BP-JX(+) series			**250/1000 VDC**			
General purpose DC miniature circuit breakers Ex9BP-JX are designed for general direct current applications. Due to their polarity dependence it is necessary to respect the polarity of the current. • Tested according to IEC / EN 60947-2 • Rated short circuit breaking capacity 10 kA • General purpose DC miniature circuit breakers • Rated operating voltage Ue of 250 VDC per pole						
1 pole, 250 VDC			**K curve** *(14-20 In)*			
83575	2A	1	10 kA	DC miniature circuit breaker	1	**248.41**
83577	4A	1	10 kA	DC miniature circuit breaker	1	**248.41**
83578	6A	1	10 kA	DC miniature circuit breaker	1	**248.41**
83579	10A	1	10 kA	DC miniature circuit breaker	1	**248.41**
83580	16A	1	10 kA	DC miniature circuit breaker	1	**248.41**
83581	20A	1	10 kA	DC miniature circuit breaker	1	**248.41**
83582	25A	1	10 kA	DC miniature circuit breaker	1	**255.31**
83583	32A	1	10 kA	DC miniature circuit breaker	1	**255.31**
83584	40A	1	10 kA	DC miniature circuit breaker	1	**255.31**
83585	50A	1	10 kA	DC miniature circuit breaker	1	**255.31**
83586	63A	1	10 kA	DC miniature circuit breaker	1	**255.31**
Ex9BP series			**500/1000 DC** *(mainly for PV installations)*			
DC miniature circuit breakers Ex9BP are designed for direct current applications, their polarity independency make them suitable for photovoltaic applications. • Tested according to IEC / EN 60947-2 • Rated short circuit breaking capacity 6 kA • Rated operating voltage Ue of 250 VDC per pole • Non-polarized, suitable for photovoltaic applications						
2 pole, 500 VDC			**K curve** *(14-20 In)*			
90118	10A	2	6 kA	DC miniature circuit breaker	2	**409.42**
90119	13A	2	6 kA	DC miniature circuit breaker	2	**409.42**
90120BP	16A	2	6 kA	DC miniature circuit breaker	2	**409.42**
90121	20A	2	6 kA	DC miniature circuit breaker	2	**409.42**
90122	25A	2	6 kA	DC miniature circuit breaker	2	**457.72**
90123	32A	2	6 kA	DC miniature circuit breaker	2	**457.72**
90124	40A	2	6 kA	DC miniature circuit breaker	2	**457.72**
90125	50A	2	6 kA	DC miniature circuit breaker	2	**457.72**
90126	63A	2	6 kA	DC miniature circuit breaker	2	**457.72**
4 pole, 1000 VDC *(2 + 2 poles in series)*			**K curve** *(14-20 In)*			
90127	10A	4	6 kA	DC miniature circuit breaker	4	**853.33**
90128	13A	4	6 kA	DC miniature circuit breaker	4	**853.33**
90129	16A	4	6 kA	DC miniature circuit breaker	4	**853.33**
90130	20A	4	6 kA	DC miniature circuit breaker	4	**853.33**
90131	25A	4	6 kA	DC miniature circuit breaker	4	**941.88**
90132	32A	4	6 kA	DC miniature circuit breaker	4	**941.88**
90133	40A	4	6 kA	DC miniature circuit breaker	4	**941.88**
90134	50A	4	6 kA	DC miniature circuit breaker	4	**941.88**
90135	63A	4	6 kA	DC miniature circuit breaker	4	**941.88**
Accessories for DC MCBs *(above)*						
Auxiliaries						
100540	AX3111	1 CO		auxiliary contact	0.5	**154.11**
100541	AL3111	1 CO		alarm contact	0.5	**158.71**
100543	AXL31	2 CO		1 x auxiliary + 1 x alarm contact	0.5	**195.51**
Shunt trip release						
100544	SHT31	110 - 415 VAC/110-130 VDC		shunt trip release	1	**234.61**
100545	SHT31	48 VAC/DC		shunt trip release	1	**277.16**
100546	SHT31	12 - 24 VAC/DC		shunt trip release	1	**277.16**
Under voltage release						
100550	UVT31	220 VAC		undervoltage release	1	**660.13**

new

852557

DC Moulded case circuit breakers (MCCBs)

DC moulded case circuit breakers (MCCBs) Ex9MD TM are intended mainly for battery storage and photovoltaic applications. Testing according to IEC / EN 60947-2 standards ensures functions and reliability for a wide variety of DC applications including isolation.

- Ii fixed 10 × In
- Ics = Icu = 25 kA at 750/1000 VDC
- Ir adjustable in steps (0.8-0.9-1.0) × In
- Supplied with mounting screws, interconnecting busbars and phase barriers

type	current rating	poles	breaking capacity	description	frame size	price
Ex9MD1 series - DC moulded case circuit breakers						
3 pole, 750 VDC *(3 poles in series)*						
50 - 125A	Ii fixed 10 × In		*(H) 140 x (W) 90 x (D) 82 mm*			
852557	50.4-63A	3 pole	25 kA	DC moulded case CB	M1	**5 359.17**
852558	64-80A	3 pole	25 kA	DC moulded case CB	M1	**4 649.60**
852559	80-100A	3 pole	25 kA	DC moulded case CB	M1	**4 648.45**
852560	100-125A	3 pole	25 kA	DC moulded case CB	M1	**5 678.88**
Larger sizes available on request.						
4 pole, 1000 VDC *(2 + 2 poles in series)*						
50 - 125A	Ii fixed 10 × In		*(H) 140 x (W) 120 x (D) 82 mm*			
852568	50.4-63A	4 pole	25 kA	DC moulded case CB	M1	**6 832.37**
852569	64-80A	4 pole	25 kA	DC moulded case CB	M1	**6 995.67**
852570	80-100A	4 pole	25 kA	DC moulded case CB	M1	**7 112.98**
852571	100-125A	4 pole	25 kA	DC moulded case CB	M1	**7 238.33**
Larger sizes available on request.						

852568

Accessories for Ex9M DC circuit breakers *(above)*					
852508	AX21	1 CO	auxiliary contact	M1	**273.71**
852936	EC21	1 NO	early-make auxiliary contact	M1	**327.77**
852509	AL21	1 CO	alarm contact	M1	**273.71**
20290	SHT21	220-240 VAC	shunt trip release	M1	**1 140.84**
101400	SHT21	380-415 VAC	shunt trip release	M1	**1 141.99**
101401	SHT21	24 VDC	shunt trip release	M1	**1 087.94**
Ex9MV2S - PV series DC moulded case circuit breaker *(for PV applications)*					
3 pole, 1500 VDC *(3 poles in series)*					

DC moulded case circuit breakers (MCCBs) Ex9MV2S-PV are intended mainly for photovoltaic applications. Testing according to IEC / EN 60947-2 standards ensures functions and reliability for wide variety of applications including isolation.

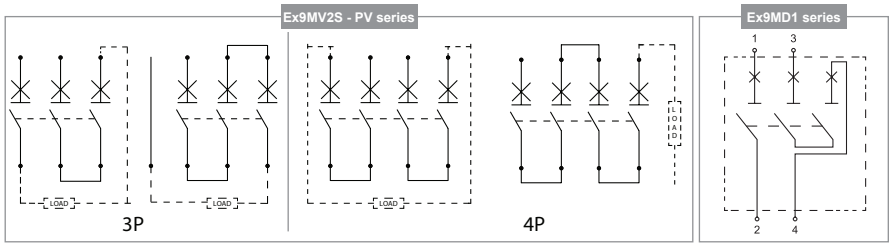
- Fixed version
- Rated voltage 1500 V DC
- Thermomagnetic releases
- Rated ultimate short circuit breaking capacity Icu = 15 kA, Ics = 100 % Icu

125 - 250A	Ii fixed 10 × In		*(H) 140 x (W) 90 x (D) 82 mm*			
99048	125A	3 pole	15 kA	DC moulded case CB	MV2	**6 289.55**
99047	160A	3 pole	15 kA	DC moulded case CB	MV2	**6 382.70**
99046	200A	3 pole	15 kA	DC moulded case CB	MV2	**6 535.66**
99045	225A	3 pole	15 kA	DC moulded case CB	MV2	**6 649.51**
99044	250A	3 pole	15 kA	DC moulded case CB	MV2	**6 780.62**

99048

Accessories for MV2 DC circuit breakers *(above)*					
110199	AX22V	1 CO	auxiliary	MV2	**443.92**
852937	AX+AL22V	2 CO	1 x alarm 1 x auxiliary contact	MV2	**709.58**
101421	SHT22VR	48 VDC	shunt trip release	MV2	**944.18**
99059	SHT22VR	380-415 VAC	shunt trip release	MV2	**944.18**
99058	SHT22VR	24 VDC	shunt trip release	MV2	**1 075.29**

Wiring diagram:




2200 3005


2200 3011


2200 3016


1473 1111


1474 1111


1413 2111


1407 0520


2299 0001


2299 0011

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/EN 60947-3 / IS13947-3 / UL / KEMA / RINA

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	7.5kW	3	M1	load break switch	68	45	75	**351.92**
2200 3002	25A	11.0kW	3	M1	load break switch	68	45	75	**403.67**
2200 3003	32A	15.0kW	3	M1	load break switch	68	45	75	**454.27**
2200 3004	40A	18.5kW	3	M1	load break switch	68	45	75	**464.62**
2200 3005	63A	22.0kW	3	M1	load break switch	68	45	75	**625.62**
2200 3006	63A	30.0kW	3	M2	load break switch	76	53	75	**893.58**
2200 3008	80A	37.0kW	3	M2	load break switch	76	53	75	**1 028.14**
2200 3010	100A	45.0kW	3	M3	load break switch	125	78	75	**1 176.49**
2200 3011	125A	55.0kW	3	M3	load break switch	125	78	75	**1 423.75**
SIRCO MV series load break switches				160A	*(visual double break contacts)*				
2200 3016	160A	75.0kW	3	MV	load break switch	125	109	75	**2 909.60**
2200 4016	160A	75.0kW	4	MV	load break switch	125	135	75	**3 514.52**

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	colour	handle size	description	for switch frame	(A)	price
Handles for switches - *external operation*						
1473 1111	black	S00	external operating handle for switches	M1/2	16 - 80A	**184.01**
1474 1111	red/yellow	S00	external operating handle for switches	M1/2	16 - 80A	**193.21**
1483 1111	black	S0	external operating handle for switches	M3	100 - 125A	**263.36**
1484 1111	red/yellow	S0	external operating handle for switches	M3	100 - 125A	**263.36**
1493 0111	black	S0	external operating handle for switches	MV	160A	**303.61**
1413 2111	black	S1	external operating handle for switches	MV	160A	**434.72**
141D 2911	black	S1	as above *(with metal connection)*	MV	160A	**790.08**
Extension shafts for switches		(mm □)				
1407 0520	L 200mm	S000\S00\S0	5 mm extension shaft for switch	M1-3	16 - 125A	**98.91**
1407 0532	L 320mm	S000\S00\S0	5 mm extension shaft for switch	M1-3	16 - 125A	**115.01**
1409 0632	L 320mm	S00\S0	6 mm ext. shaft for (S0) handle	MV	160A	**147.21**
1401 0632	L 320mm	S1	6 mm ext. shaft for (S1) handle	MV	160A	**486.47**
1419 0000	guide	*(permits engaging of misaligned shaft with handle)*		M1-3	16 - 125A	**104.66**
1429 0000	guide	*(permits engaging of misaligned shaft with handle)*		MV	160A	**143.76**
Direct mount handles		*(mounts directly onto front of switch - no shaft required)*				
2299 5012	blue	M00	5 mm direct switch mount handle	M1/2	16 - 80A	**25.53**
2299 5032	blue	M01	5 mm direct switch mount handle	M3	100 - 125A	**78.21**
2299 5042	blue	M0b	6 mm direct switch mount handle	MV	160A	**115.01**

Auxiliary contacts for M/MV switches

2299 0001	1NO + 1NC	M type	side mount auxiliary contact	M/MV	16 - 160A	**299.01**
2299 0011	2NO	M type	side mount auxiliary contact	M/MV	16 - 160A	**299.01**
3999 0701	1NO	U type	internal mounting auxiliary contact	MV	160A	**239.21**
3999 0702	1NC	U type	internal mounting auxiliary contact	MV	160A	**239.21**

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

*Alternatively refer to page **B-32** for pre-assembled units*


2209 6009


1407 0532


1473 1111


2200 1005


2200 1011


2294 3005

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

Sirco M switches can be converted to 3 or 4 pole changeover switches with the addition of 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
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	**585.37**
2209 6011	I-O-II		changeover mechanism between two switches	M3	100 - 125A	**1 146.59**
Handles and shafts for changeover switches						
1473 1113	I-O-II	handle (S00)	for above changeover switches	M1/2	16 - 80A	**247.26**
1473 0113	I-O-II	handle (S00)	for above changeover switches	M3	100 - 125A	**325.47**
1407 0532	shaft	320 mm	5 mm extension shaft for switch	M1/2	16 - 80A	**115.01**
1409 0632	shaft	320 mm	6 mm extension shaft for switch	M3	100 - 125A	**147.21**
Bridging kit for changeover switches						
2299 3005	bridge	3 pole	bridging kit for ch/over switches	M1	16 - 40A	**844.13**
2299 4005	bridge	4 pole	bridging kit for ch/over switches	M1	16 - 40A	**993.64**
2299 3009	bridge	3 pole	bridging kit for ch/over switches	M2	63 - 80A	**1 407.65**
2299 4009	bridge	4 pole	bridging kit for ch/over switches	M2	63 - 80A	**1 699.76**
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	**585.37**
2269 6011	I-O	6/8 pole	conversion kit between two switches	M3	100 - 125A	**1 147.74**
Handles and shafts for above parallel attachments *(IP65)*						
1473 1111	I-O	handle	ext. operating handle for switches	M1/2	16 - 80A	**184.01**
1493 0111	I-O	handle	ext. operating handle for switches	M3	100 - 125A	**303.61**
1407 0532	shaft	320 mm	5mm extension shaft for switch	M1-3	16 - 125A	**115.01**
1409 0632	shaft	320 mm	6mm ext. shaft for (S00) handle	M3/V	100 - 125A	**147.21**
Note: *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	**173.66**
2200 1005	63A	1 pole	attachable 4th pole module	M1	63A	**220.81**
2200 1008	80A	1 pole	attachable 4th pole module	M2	63 - 80A	**301.31**
2200 1011	125A	1 pole	attachable 4th pole module	M3	100 - 125A	**471.52**
Door mount kit						
• For direct door or side panel mounting of Sirco M switches						
2299 3409			door mounting kit *(direct door mounting of switch)*	M1/2	16 - 80A	**164.46**
2299 3609			door mounting kit *(direct door mounting of switch)*	M3	100-125A	**1 300.70**
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	**60.96**
2294 3005	shroud	3 pole	t/parent terminal protection shroud	M1	16 - 63A	**109.26**
2294 1009	shroud	1 pole	t/parent terminal protection shroud	M2	63 - 80A	**70.16**
2294 3009	shroud	3 pole	t/parent terminal protection shroud	M2	63 - 80A	**162.16**
2294 1011	shroud	1 pole	t/parent terminal protection shroud	M3	100 - 125A	**78.21**
2294 3016	shroud	3 pole	t/parent terminal protection shroud	MV	160A	**200.11**
2294 3016	shroud	3 pole	t/parent terminal protection shroud	M3	100 - 125A	**200.11**
2294 4016	shroud	4 pole	t/parent terminal protection shroud	MV	160A	**249.56**


26AC 3025


26AC 3063


1423 2111


1400 1032


2699 0031

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 / UL / KEMA / RINA

type	AC-22 A 415V (A)	AC-23 A 400V	No. poles	frame size	description	dimensions (mm) (H)	(W)	(D)	price
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	63kW	3	B3	load break switch	135	140	115	**1 391.55**
2600 3017	160A	80kW	3	B3	load break switch	135	140	115	**1 595.10**
26AC 3020	200A	100kW	3	B4	load break switch	160	180	115	**3 322.46**
26AC 3025	250A	132kW	3	B4	load break switch	160	180	115	**3 490.36**
26AC 3031	315A	160kW	3	B4	load break switch	160	180	115	**4 117.13**
26AC 3040	400A	220kW	3	B5	load break switch	235	230	165	**6 283.80**
26AC 3050	500A	280kW	3	B5	load break switch	235	230	165	**7 974.35**
26AC 3063	630A	280kW	3	B5	load break switch	260	230	165	**8 605.72**
26AC 3080	800A	450kW	3	B6	load break switch	321	280	166	**10 985.15**
26AC 3100	1000A	560kW	3	B6	load break switch	321	280	166	**18 274.08**
26AC 3121	1250A	710kW	3	B7	load break switch	288	372	166	**21 919.69**
26AC 3160	1600A	710kW	3	B7	load break switch	288	372	166	**29 256.92**
2600 3200	2000A	710kW	3	B8	load break switch	380	372	226	**37 652.18**
2600 3250	2500A	710kW	3	B8	load break switch	380	372	226	**48 669.53**
2600 3320	3200A	710kW	3	B8	load break switch	380	372	226	**63 470.49**
4 pole switches									
26AC 4025	250A	132kW	4	B4	load break switch	160	230	115	**4 739.30**
26AC 4040	400A	220kW	4	B5	load break switch	235	290	160	**8 074.41**
26AC 4063	630A	280kW	4	B5	load break switch	260	290	160	**10 900.05**
26AC 4080	800A	450kW	4	B6	load break switch	321	360	166	**16 204.01**
26AC 4121	1250A	710kW	4	B7	load break switch	288	492	166	**31 695.00**
Larger sizes (up to 5000A) available on request.									

type	handle	colour		description	for switch	price
Operating handles and shafts for above switches				**IP65**		
External front operated door interlocking, padlockable in "off" position *(3 padlocks)*						
1423 2111	S2	black		pistol grip ext. operating handle	125 - 630A	**440.47**
1443 3111	S4	black		"T" grip ext. operating handle	800 - 1600A	**1 263.89**
1453 8111	S5	black		"T" grip ext. operating handle	2000 - 3200A	**4 198.79**
142D 2911	S2	black		as above *(with metal connection)*	125 - 630A	**784.33**
144D 3911	S4	black		as above *(with metal connection)*	800 - 1600A	**1 756.11**
1400 1032	S2	320 mm	☐ 10	extension shaft	125 - 630A	**224.26**
1400 1050	S2	500 mm	☐ 10	extension shaft	125 - 630A	**443.92**
1401 1532	S4	320 mm	☐ 15	extension shaft	800 - 1600A	**470.37**
1401 1540	S4	400 mm	☐ 15	extension shaft	800 - 1600A	**893.58**
2799 3018	S5	320 mm	☐ 30	extension shaft	2000 - 3200A	**1 205.24**
1429 0000	guide	*(permits engaging of misaligned shaft with handle)*			*(all sizes)*	**143.76**
Direct mount handles *(mounts directly onto front of switch)*						
2699 5042	B1	black	☐ 10	direct switch mount handle	125 - 160A	**411.72**
1112 1111	J1	black	☐ 10	direct switch mount handle	200 - 630A	**388.72**
1142 1111	J4	black	☐ 15	direct switch mount handle	800 - 1600A	**1 369.70**
2799 7042	S5	black	☐ 30	direct switch mount handle	2000 - 3200A	**2 098.82**
Auxiliary contacts for switches						
2699 0031	1 C/Over	aux		auxiliary contact and support	125 - 3200A	**209.31**
2699 0032	1 C/Over	aux		additional auxiliary contact	125 - 3200A	**526.72**
Inter-phase barriers						
Safe isolation between terminals, essential for use at 690VAC or in a polluted or dusty atmosphere.						
2998 0033	barriers	–		phase barriers for switches *(2pcs)*	B3 125-160A	**349.62**
2998 0023	barriers	–		phase barriers for switches *(2pcs)*	B4 200- 250A	**416.32**
2998 0013	barriers	–		phase barriers for switches *(2pcs)*	B5 315 - 6300A	**481.87**


21PV 3722
+
2119 1012

SIRCO PV series - Manually operated photovoltaic switches

Photovoltaic energy producers demand equipment which offer high production output together with consistent reliability and safety with low maintenance costs. Equipment has to support specific technical constraints of solar applications and the severe environments they operate in.

- Up to 1500 VDC
- Fully visualised breaking
- Patented switching technology
- Conformity to: IEC/EN 60947-3/VDE 0660-107 / IEC 60364-4-410 / IEC364-7-712

type	current	poles/ config.	volts DC	description	dimensions (mm) (H)	(W)	(D)	price
SIRCO MC PV		Load break switches for photovoltaic applications						
• DIN Rail or back plate mounting • Single PV circuit								
21PV 3722	25A	2P+, 1P-	1000 VDC	photovoltaic switch	78	52	55	**1 621.56**
21PV 4754	40A	2P+, 2P-	1000 VDC	photovoltaic switch	78	63	55	**2 142.52**
SIRCO PV		Load break switches for photovoltaic applications						
• Back plate mounting								
26PV 2010	100A	1P+, 1P-	1000 VDC	photovoltaic switch	160	180	95	**2 697.99**
26PV 2016	160A	1P+, 1P-	1000 VDC	photovoltaic switch	160	180	95	**2 741.69**
26PV 2025	250A	1P+, 1P-	1000 VDC	photovoltaic switch	160	180	95	**3 190.20**
26PV 2031	315A	1P+, 1P-	1000 VDC	photovoltaic switch	160	180	95	**3 616.87**
26PV 4040	400A	2P+, 2P-	1000 VDC	photovoltaic switch	170	230	91	**4 794.51**
26PV 4050	500A	2P+, 2P-	1000 VDC	photovoltaic switch	170	230	91	**6 764.52**
26PV 4063	630A	2P+, 2P-	1000 VDC	photovoltaic switch	260	290	131	**9 392.35**
26PV 3026	275A	2P+, 1P-	1500 VDC	photovoltaic switch	250	230	147	**7 521.03**
26PV 3032	315A	2P+, 1P-	1500 VDC	photovoltaic switch	250	230	147	**7 916.93**
26PV 3041	400A	2P+, 1P-	1500 VDC	photovoltaic switch	250	230	147	**10 011.07**
Available on request:		- *larger sizes up to 2000A*						
		- *Double switches (to switch two different PV circuits simultaneously)*						


26PV 2025

Accessories *for above switches*			**IP65**
Handle - *direct mount*			
2119 1012	MC01	direct switch mounting handle for 1000V switches	25 - 40A	**307.06**
1112 1111	J1	direct switch mounting handle for 1000V switches	100 - 630A	**388.72**
1122 1111	J2	direct switch mounting handle for 1500V switches	275 - 630A	**427.82**


1423 2111

Handles - *external mount*

- Door interlocking
- External front operated
- Padlockable in "off" position *(3 padlocks)*
- Black handle

2119 3312	MC01	external mount door interlocking handle for switches	25 - 40A	**558.92**
1423 2111	S2	external mount door interlocking handle for switches	100 - 630A	**440.47**
2107 0516	165 mm	extension shaft for externally operated switches	25 - 40A	**243.81**
1400 1032	320 mm	extension shaft for externally operated switches	100 - 630A	**224.26**
2119 0001	NO + NC	side mount auxiliary contact for switches	25 - 40A	**670.48**
2699 0031	1 Ch/Over	side mount auxiliary contact for switches	100 - 2000A	**209.31**


2119 0001

Motorised load-break switches

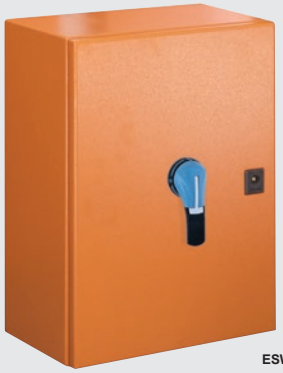
- Ideal contactor replacement for high current switching applications
- Reliable, robust AC-23A switching
- Manual override facility *(handle supplied)*

type	AC-22A 400V	AC-23A 400V	description	dimensions (mm) (H)	(W)	(D)	price
9915 3016	160A	75kW	3 pole motorised load break switch	135	267	244	**13 075.91**
9915 3025	250A	132kW	3 pole motorised load break switch	160	328	244	**16 135.01**
9915 3040	400A	220kW	3 pole motorised load break switch	170	328	244	**22 264.70**
9915 3063	630A	280kW	3 pole motorised load break switch	260	377	321	**27 531.87**
9915 3080	800A	450kW	3 pole motorised load break switch	321	504	292	**42 459.33**
9915 3120	1250A	710kW	3 pole motorised load break switch	330	504	292	**49 911.57**
9915 3160	1600A	710kW	3 pole motorised load break switch	288	596	292	**66 610.09**
9915 4063	630A	280kW	4 pole motorised load break switch	260	437	321	**38 744.72**
9915 4080	800A	450kW	4 pole motorised load break switch	321	584	292	**59 376.36**
9915 4120	1250A	710kW	4 pole motorised load break switch	330	584	292	**70 439.71**


9915 3063


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	7.5kW	3	enclosed load-break switch	90	64	58	**561.22**
2115 3403	32A	11.0kW	3	enclosed load-break switch	152	100	81	**724.53**
2115 3404	40A	18.5kW	3	enclosed load-break switch	152	100	81	**749.83**
2115 3406	63A	22.0kW	3	enclosed load-break switch	152	100	81	**1 248.94**
2115 4401	20A	7.5kW	4	enclosed load-break switch	90	64	58	**604.92**
2115 4404	40A	18.5kW	4	enclosed load-break switch	152	100	81	**870.58**
2115 4406	63A	22.0kW	4	enclosed load-break switch	152	100	81	**1 378.90**
Auxiliary contacts for above enclosed switches								
2113 4001	NO + NC	auxiliary		contact for enclosed switches			32 - 50A	**203.56**
2113 4002	2 NO	auxiliary		contact for enclosed switches			33 - 50A	**286.36**
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	18.5kW	3	enclosed load-break switch	350	250	170	**2 809.54**
ESW3006M	63A	30kW	3	enclosed load-break switch	350	250	170	**2 961.35**
ESW3012M	125A	63kW	3	enclosed load-break switch	350	250	170	**3 873.33**
ESW3016M	160A	80kW	3	enclosed load-break switch	350	250	170	**5 527.08**
ESW3025M	250A	132kW	3	enclosed load-break switch	550	400	220	**7 239.48**
ESW3040M	400A	220kW	3	enclosed load-break switch	550	400	220	**10 260.63**
ESW3063M	630A	280kW	3	enclosed load-break switch	550	400	220	**11 111.65**
ESW3080M	800A	450kW	3	enclosed load-break switch	950	700	270	**20 723.65**
ESW3100M	1000A	560kW	3	enclosed load-break switch	950	700	270	**28 152.89**
ESW3125M	1250A	710kW	3	enclosed load-break switch	950	700	270	**30 487.46**

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	**173.66**
2200 1008	80A	1 pole	attachable 4th pole module	M2	63A	**301.31**
2200 1011	125A	1 pole	attachable 4th pole module	M3	125A	**301.31**

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 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:

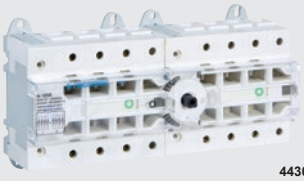
- Operator safety
- Quick and easy implementation
- Operating continuity
- Inductive load breaking (AC23)

The solution for:

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

type	motor rating 400 VAC	motor rating 525 VAC	current rating	No. poles	description	dimensions (mm) (H)	(W)	(D)	price
Safety enclosures					Colour: RAL 7035 and RAL 7032				
32LC 3105	15kW	9kW	50A	3	K1 safety encl. switch	300	200	150	**22 057.70**
32LC 3108	25kW	15kW	80A	3	K1 safety encl. switch	300	200	150	**22 724.72**
32LC 3120	110kW	63kW	200A	3	K1 safety encl. switch	400	300	200	**49 566.56**
32LC 3140	160kW	157kW	400A	3	K1 safety encl. switch	700	400	250	**60 284.89**
32LC 3163	270kW	250kW	630A	3	K1 safety encl. switch	900	500	300	**99 328.61**
32LC 3608	15kW	25kW	80A	6	K2 safety encl. switch	300	400	200	**26 117.32**


2230 3004EM


4430 4012


1413 2113


41AC 3063


1433 3113

SIRCO series - Changeover switches

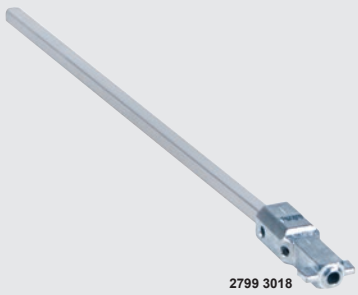
SIRCO manual changeover switches provide switching, source inversion and changeover under load for two power circuits with safety isolation double breaking per pole.

- 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) (H)	(W)	(D)	price
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	M1	modular changeover switch	68	98	89	**1 352.45**
2230 3002EM	25A	3	M1	modular changeover switch	68	98	89	**1 459.40**
2230 3004EM	40A	3	M1	modular changeover switch	68	98	89	**1 588.20**
2230 3006EM	63A	3	M1	modular changeover switch	76	105	89	**1 926.32**
2230 3008EM	80A	3	M2	modular changeover switch	76	105	89	**2 773.89**
2230 3010EM	100A	3	M3	modular changeover switch	125	159	100	**3 672.07**
2230 3011EM	125A	3	M3	modular changeover switch	125	159	100	**4 190.74**
*4th pole can be added to above switches (see page **B-28**)*								
Accessories for changeover switches								
1473 1113	handle	I-O-II		external for ch/over switches	M1/2	16 - 80A		**247.26**
1473 0113	handle	I-O-II		external for ch/over switches	M3	100 - 125A		**325.47**
1407 0532	shaft	320 mm		*(5 mm)* ext. shaft for switch	M1/2	16 - 80A		**115.01**
1409 0632	shaft	320 mm		*(6 mm)* ext. shaft for switch	M3	100 - 125A		**147.21**
2299 3005	bridge	3 pole		bridging kit for ch/over switches	M1	16 - 40A		**844.13**
2299 4005	bridge	4 pole		bridging kit for ch/over switches	M1	16 - 40A		**993.64**
2299 3009	bridge	3 pole		bridging kit for ch/over switches	M2	63 - 80A		**1 407.65**
2299 4009	bridge	4 pole		bridging kit for ch/over switches	M2	63 - 80A		**1 699.76**
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	**4 344.84**
4430 4012	125A	4 pole		modular changeover switch	95	215	97	**5 246.47**
4499 4006	bridge	4 pole		insulated 4P bridging bar set	for VM1 switches			**2 142.52**
4439 5012	handle	I-O-II		direct switch mount handle	for VM1 switches			**393.32**
1413 2113	handle	I-O-II		external door interlock handle	for VM1 switches			**649.78**
1402 0832	shaft	320 mm		extension shaft	for VM1 switches			**506.02**
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		manual changeover switch	135	221	173	**7 697.20**
41AC 3020	200A	3 pole		manual changeover switch	135	221	173	**8 966.84**
41AC 3025	250A	3 pole		manual changeover switch	160	262	173	**10 568.84**
41AC 3040	400A	3 pole		manual changeover switch	170	262	173	**16 905.53**
41AC 3063	630A	3 pole		manual changeover switch	260	319	225	**22 862.72**
41AC 3080	800A	3 pole		manual changeover switch	321	386	298	**34 535.59**
41AC 3100	1000A	3 pole		manual changeover switch	321	386	298	**40 159.26**
41AC 3120	1250A	3 pole		manual changeover switch	330	386	298	**43 908.38**
41AC 3160	1600A	3 pole		manual changeover switch	228	478	298	**79 467.49**
41AC 4016	160A	4 pole		manual changeover switch	135	251	173	**10 368.73**
41AC 4025	250A	4 pole		manual changeover switch	160	312	173	**14 846.97**
41AC 4040	400A	4 pole		manual changeover switch	170	312	173	**26 117.32**
41AC 4063	630A	4 pole		manual changeover switch	260	379	225	**29 038.41**
41AC 4080	800A	4 pole		manual changeover switch	320	466	298	**50 486.59**
41AC 4120	1250A	4 pole		manual changeover switch	330	466	298	**61 975.45**
41AC 4160	1600A	4 pole		manual changeover switch	288	598	298	**112 979.54**
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		160 - 630A		**922.33**
1443 3113	S4	black		I-O-II ext. operating handle		800 - 1600A		**2 348.38**
1400 1032	shaft	320 mm		☐ 10 ext. shaft for switch		160 - 630A		**224.26**
1401 1532	shaft	320 mm		☐ 15 ext. shaft for switch		800 - 1600A		**470.37**
1122 1111	J2	black		direct switch mounting handle		160 - 630A		**427.82**
1132 1111	J3	black		direct switch mounting handle		800 - 1600A		**1 369.70**


41AC 7063


1433 3113


2799 3018


4109...


2694 4051

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)*

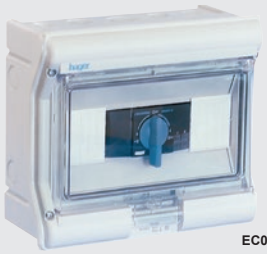
type	AC-23 A 415V (A)	No. poles	description	dimensions (mm) (H)	(W)	(D)	price
SIRCOVER series - Manual bypass switches					**160-1600A**		
3 pole manual bypass switches							
41AC 7016	160A	3 pole	manually operated bypass switch	135	221	268	**16 365.02**
41AC 7020	200A	3 pole	manually operated bypass switch	135	221	268	**20 815.66**
41AC 7025	250A	3 pole	manually operated bypass switch	160	262	268	**24 679.78**
41AC 7040	400A	3 pole	manually operated bypass switch	170	262	268	**34 593.09**
41AC 7063	630A	3 pole	manually operated bypass switch	260	319	387	**45 311.42**
41AC 7080	800A	3 pole	manually operated bypass switch	320	386	508	**62 826.47**
41AC 7120	1250A	3 pole	manually operated bypass switch	320	386	508	**105 469.81**
41AC 7160	1600A	3 pole	manually operated bypass switch	288	478	508	**140 189.39**
4 pole manual bypass switches							
41AC 9016	160A	4 pole	manually operated bypass switch	135	251	268	**19 136.60**
41AC 9025	250A	4 pole	manually operated bypass switch	160	312	268	**25 990.82**
41AC 9040	400A	4 pole	manually operated bypass switch	170	312	268	**37 088.67**
41AC 9063	630A	4 pole	manually operated bypass switch	260	379	387	**56 110.26**
41AC 9080	800A	4 pole	manually operated bypass switch	320	466	508	**83 849.13**
41AC 9120	1250A	4 pole	manually operated bypass switch	320	466	508	**136 739.29**
41AC 9160	1600A	4 pole	manually operated bypass switch	288	598	508	**150 999.73**
Handles and shafts for bypass switches - *(door interlocking padlockable in "O" position)*							
1423 2113	S2	black	I-O-II	ext. operating handle		160 - 200A	**922.33**
1433 3113	S3	black	I-O-II	ext. operating handle		250 - 630A	**1 856.16**
4199 7146	V2	black	I-O-II	ext. operating handle		800 - 1600A	**6 712.77**
1400 1032	shaft	320 mm	□10	extension shaft for switch		160 - 200A	**224.26**
1401 1532	shaft	320 mm	□15	extension shaft for switch		250 - 630A	**470.37**
2799 3018	shaft	320 mm	□30	extension shaft for switch		800 - 1600A	**1 205.24**
1429 0000	guide	*(permits engaging of misaligned shaft with handle)*				*(all sizes)*	**143.76**
4199 5012	J2	black		direct switch mounting handle		160 - 200A	**625.62**
1132 1111	J3	black		direct switch mounting handle		250 - 630A	**1 369.70**
1142 1111	J4	black		direct switch mounting handle		800 - 1600A	**1 369.70**

Accessories for all changeover and bypass switches

type	poles	description	for switch	price
Bridging bar sets for changeover and bypass switches				
4109 0019	bridge	1 pole	bridging bar for ch/over switches	160/200A	**347.32**
4109 0025	bridge	1 pole	bridging bar for ch/over switches	250A	**399.07**
4109 0039	bridge	1 pole	bridging bar for ch/over switches	400A	**499.12**
4109 0063	bridge	1 pole	bridging bar for ch/over switches	630A	**983.29**
4109 0080	bridge	1 pole	bridging bar for ch/over switches	800/1000A	**1 434.10**
4109 0120	bridge	1 pole	bridging bar for ch/over switches	1250A	**2 333.43**
4109 0160	bridge	1 pole	bridging bar for ch/over switches	1600A	**3 233.91**
Terminal shrouds for changeover and bypass switches					
2694 3014	shroud	3 pole	t/parent terminal protection shroud	160/200A	**543.97**
2694 3021	shroud	3 pole	t/parent terminal protection shroud	250/400A	**614.12**
2694 3051	shroud	3 pole	t/parent terminal protection shroud	630A	**916.58**
2694 4014	shroud	4 pole	t/parent terminal protection shroud	160/200A	**662.43**
2694 4021	shroud	4 pole	t/parent terminal protection shroud	250/400A	**834.93**
2694 4051	shroud	4 pole	t/parent terminal protection shroud	630A	**1 224.79**
1509 3080	screen	3 pole	t/parent terminal protection screen	800/1250A	**1 813.61**
1509 4080	screen	4 pole	t/parent terminal protection screen	800/1250A	**2 090.77**
1509 3160	screen	3 pole	t/parent terminal protection screen	1600A	**2 231.07**
1509 4160	screen	4 pole	t/parent terminal protection screen	1600A	**2 561.14**

- 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

Note: *For 3 pole device order 3 bridging bars, for a 4 pole device order 4 bridging bars*



EC03009P

ECO...

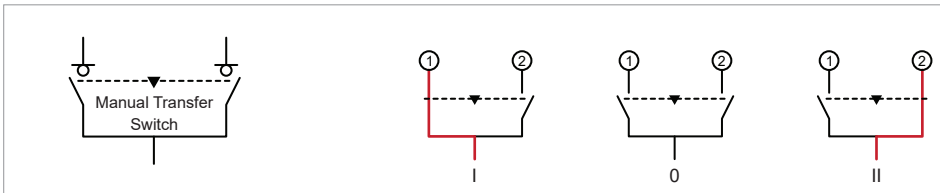
Enclosed manual changeover switches *(IP65)*

type	AC-31 B 415V (A)	enclosure	no. poles	description	dimensions (mm) (H)	(W)	(D)	price
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	**2 103.42**
ECO3004P	40A	polycarb	3 pole	enclosed ch/over switch	210	237	114	**2 232.22**
ECO3006P	63A	polycarb	3 pole	enclosed ch/over switch	210	237	114	**2 570.34**
ECO3009P	100A	polycarb	3 pole	enclosed ch/over switch	302	310	151	**4 602.45**
ECO3012P	125A	polycarb	3 pole	enclosed ch/over switch	302	310	151	**5 093.51**
Sheet metal enclosed *(IP65)*								
• With external door interlocking padlockable handle								
ECO3004M	40A	metal	3 pole	enclosed ch/over switch	350	250	170	**4 400.04**
ECO3006M	63A	metal	3 pole	enclosed ch/over switch	350	250	170	**4 738.15**
ECO3009M	100A	metal	3 pole	enclosed ch/over switch	350	250	170	**6 168.80**
ECO3012M	125A	metal	3 pole	enclosed ch/over switch	350	250	170	**7 653.49**
*4 pole switches can be made by adding clip-on 4th poles (see page **B-28**)*								
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	**13 351.92**
ECO3025M	250A	metal	3 pole	enclosed ch/over switch	550	400	220	**16 526.02**
ECO3040M	400A	metal	3 pole	enclosed ch/over switch	850	600	270	**26 174.82**
ECO3063M	630A	metal	3 pole	enclosed ch/over switch	850	600	270	**34 420.58**
ECO3080M	800A	metal	3 pole	enclosed ch/over switch	900	600	450	**56 880.79**
ECO3125M	1250A	metal	3 pole	enclosed ch/over switch	900	600	450	**69 554.18**
ECO3160M	1600A	metal	3 pole	enclosed ch/over switch	900	600	450	**111 427.00**
ECO4016M	160A	metal	4 pole	enclosed ch/over switch	550	400	220	**16 514.52**
ECO4025M	250A	metal	4 pole	enclosed ch/over switch	550	400	220	**22 287.70**
ECO4040M	400A	metal	4 pole	enclosed ch/over switch	850	600	270	**36 375.64**
ECO4063M	630A	metal	4 pole	enclosed ch/over switch	850	600	270	**41 930.32**
ECO4080M	800A	metal	4 pole	enclosed ch/over switch	900	600	450	**75 131.86**
ECO4125M	1250A	metal	4 pole	enclosed ch/over switch	900	600	450	**90 967.85**
ECO4160M	1600A	metal	4 pole	enclosed ch/over switch	900	600	450	**152 149.80**

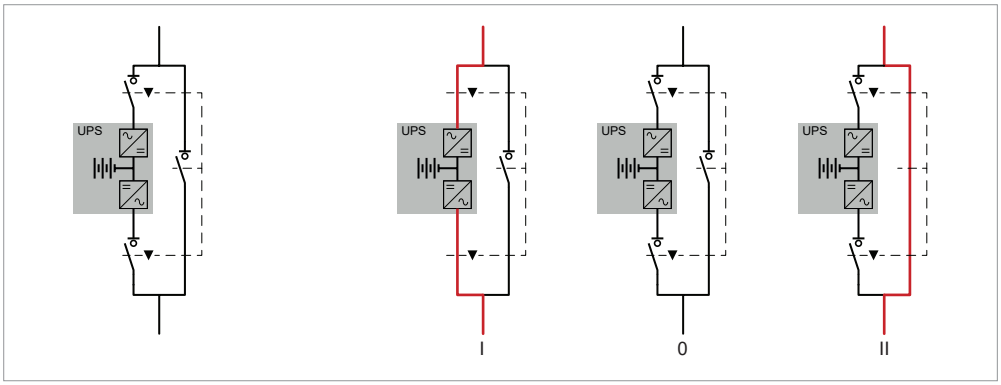
Note: For enclosed automatic changeover panels, see page **B-39**

Operating principle

SIRCOVER Changeover I-0-II



SIRCOVER Bypass I-0-II

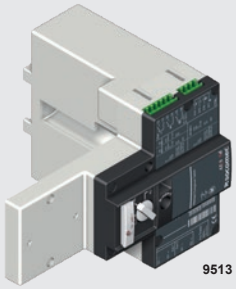



9503 4008


9505 4008


9509 4013


9594 4012


9513 5012

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, or an external automatic controller, using 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.

- 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 ±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
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	**6 788.67**
9503 4006	63A	4 pole	230 VAC	motorised changeover switch	**7 464.89**
9503 4008	80A	4 pole	230 VAC	motorised changeover switch	**9 146.24**
9503 4010	100A	4 pole	230 VAC	motorised changeover switch	**10 190.47**
9503 4012	125A	4 pole	230 VAC	motorised changeover switch	**11 534.87**
12 VDC power supply					
9505 4004	40A	4 pole	12 VDC	motorised changeover switch	**4 915.26**
9505 4006	63A	4 pole	12 VDC	motorised changeover switch	**4 915.26**
9505 4008	80A	4 pole	12 VDC	motorised changeover switch	**8 617.22**
9505 4010	100A	4 pole	12 VDC	motorised changeover switch	**10 342.28**
9505 4012	125A	4 pole	12 VDC	motorised changeover switch	**11 360.06**
24/48 VDC power supply					
9506 4004	40A	4 pole	24/48 VDC	motorised changeover switch	**6 689.76**
9506 4006	63A	4 pole	24/48 VDC	motorised changeover switch	**7 022.12**
9506 4008	80A	4 pole	24/48 VDC	motorised changeover switch	**8 617.22**
9506 4010	100A	4 pole	24/48 VDC	motorised changeover switch	**9 878.81**
9506 4012	125A	4 pole	24/48 VDC	motorised changeover switch	**10 850.59**
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	**8 406.77**
9513 4006	63A	4 pole	2 x 230 VAC	motorised changeover switch	**9 698.26**
9513 4008	80A	4 pole	2 x 230 VAC	motorised changeover switch	**9 748.86**
9513 4010	100A	4 pole	2 x 230 VAC	motorised changeover switch	**10 714.89**
9513 4012	125A	4 pole	2 x 230 VAC	motorised changeover switch	**13 075.91**
Accessories for ATyS S switches					
Bridging bars					
9509 4013	bridge	4 pole		power terminal bridging bar *(top or bottom)*	**417.47**
Voltage tap					
9599 4001	terminal			control voltage tapping kit *(from power terminals)*	**409.42**
Terminal shroud					
9594 4012	shroud	4 pole		supply side terminal protection shrouds	**359.97**
9594 9012	shroud	4 pole		load side terminal protection shrouds	**377.22**
Spare motor units					
9503 5012	motor		230 VAC	spare motor for above switches	**7 898.45**
9505 5012	motor		12 VDC	spare motor for above switches	**7 770.80**
9506 5012	motor		24/48 VDC	spare motor for above switches	**7 770.80**
9513 5012	motor		2 x 230 VAC	spare motor for above switches	**10 304.33**


9323 4006

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.

- 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
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	**13 064.41**
9323 2008	80A	2 pole	230 VAC	motorised changeover switch	**14 053.44**
9323 4006	63A	4 pole	230 VAC	motorised changeover switch	**15 318.48**
9323 4008	80A	4 pole	230 VAC	motorised changeover switch	**16 089.01**
9323 4010	100A	4 pole	230 VAC	motorised changeover switch	**17 641.56**
9323 4012	125A	4 pole	230 VAC	motorised changeover switch	**18 515.58**
9323 4016	160A	4 pole	230 VAC	motorised changeover switch	**21 689.68**

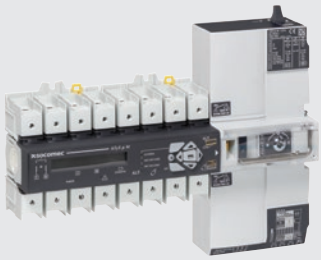

9323 4012

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 from 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	**19 999.13**
9353 2008	80A	2 pole	230 VAC	automatic changeover switch	**20 792.66**
9354 4006	63A	4 pole	230 VAC	automatic changeover switch	**24 058.76**
9354 4008	80A	4 pole	230 VAC	automatic changeover switch	**24 817.78**
9354 4010	100A	4 pole	230 VAC	automatic changeover switch	**25 404.30**
9354 4012	125A	4 pole	230 VAC	automatic changeover switch	**27 301.86**
9354 4016	160A	4 pole	230 VAC	automatic changeover switch	**30 889.97**

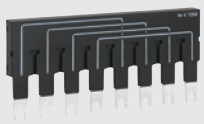

9364 4012

ATyS p M - Automatic transfer 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	**31 649.00**
9364 4008	80A	4 pole	230 VAC	automatic changeover switch	**35 858.13**
9364 4010	100A	4 pole	230 VAC	automatic changeover switch	**37 732.69**
9364 4012	125A	4 pole	230 VAC	automatic changeover switch	**40 044.26**
9364 4016	160A	4 pole	230 VAC	automatic changeover switch	**41 941.82**


1309 4006

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	**1 352.45**
1309 4006	63-125A	4 pole	plug-in	fully insulated plug-in bridging bar	**2 242.58**
1309 4016	160A	4 pole	plug-in	fully insulated plug-in bridging bar	**3 389.16**
1399 4006	tap	1 pole		tap-off terminal for power supply	**955.68**
2294 4016	shroud	2 pole		terminal protection shroud	**249.56**
1309 1001	auxiliary	contact	1NO+1NC	for each position (I-O-II)	**2 139.07**


1309 1001


1309 4006


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.

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

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

type	AC-31 B 415V (A)	poles	description	dimensions (mm) (H)	(W)	(D)	price
9523 3016	160A	3 pole	motorised changeover switch	135	287	244	**16 744.53**
9523 3025	250A	3 pole	motorised changeover switch	160	328	244	**19 056.10**
9523 3040	400A	3 pole	motorised changeover switch	170	328	244	**30 510.46**
9523 3063	630A	3 pole	motorised changeover switch	260	377	321	**33 339.55**
9523 3080	800A	3 pole	motorised changeover switch	370	504	440	**54 040.20**
9523 3100	1000A	3 pole	motorised changeover switch	370	504	440	**56 374.77**
9523 3120	1250A	3 pole	motorised changeover switch	370	504	440	**64 643.53**
9523 3160	1600A	3 pole	motorised changeover switch	380	596	440	**94 728.47**
9523 3200	2000A	3 pole	motorised changeover switch	380	596	569	**137 659.31**
9523 3250	2500A	3 pole	motorised changeover switch	380	596	569	**160 200.02**
9523 3320	3200A	3 pole	motorised changeover switch	380	596	569	**220 576.91**

4 pole switches

9523 4016	160A	4 pole	motorised changeover switch	135	317	244	**18 331.58**
9523 4025	250A	4 pole	motorised changeover switch	160	395	244	**21 747.19**
9523 4040	400A	4 pole	motorised changeover switch	170	395	244	**37 008.16**
9523 4063	630A	4 pole	motorised changeover switch	260	454	321	**45 138.92**
9523 4080	800A	4 pole	motorised changeover switch	321	584	440	**66 184.58**
9523 4100	1000A	4 pole	motorised changeover switch	321	584	440	**69 680.69**
9523 4120	1250A	4 pole	motorised changeover switch	330	584	440	**79 893.01**
9523 4160	1600A	4 pole	motorised changeover switch	288	716	440	**131 909.13**
9523 4200	2000A	4 pole	motorised changeover switch	380	716	569	**163 765.13**
9523 4250	2500A	4 pole	motorised changeover switch	380	716	569	**204 016.39**
9523 4320	3200A	4 pole	motorised changeover switch	380	716	569	**283 138.87**

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.

- Integrated dual power supply *(2 independent supplies within the switch)*
- Integrated generator on-load and off-load test function

ATyS g automatic changeover switches

3 pole switches

9553 3016	160A	3 pole	automatic changeover switch	135	287	244	**33 523.55**
9553 3025	250A	3 pole	automatic changeover switch	160	328	244	**41 263.30**
9553 3040	400A	3 pole	automatic changeover switch	170	328	244	**49 325.05**
9553 3063	630A	3 pole	automatic changeover switch	260	377	321	**57 179.79**
9553 3080	800A	3 pole	automatic changeover switch	321	504	392	**95 372.49**
9553 3100	1000A	3 pole	automatic changeover switch	321	504	392	**102 525.71**
9553 3120	1250A	3 pole	automatic changeover switch	330	504	392	**112 749.53**
9553 3160	1600A	3 pole	automatic changeover switch	288	596	392	**137 199.30**

4 pole switches

9553 4016	160A	4 pole	automatic changeover switch	135	317	244	**38 859.72**
9553 4025	250A	4 pole	automatic changeover switch	160	395	244	**48 819.03**
9553 4040	400A	4 pole	automatic changeover switch	170	395	244	**64 528.52**
9553 4063	630A	4 pole	automatic changeover switch	260	454	321	**71 394.24**
9553 4080	800A	4 pole	automatic changeover switch	321	584	392	**132 599.16**
9553 4100	1000A	4 pole	automatic changeover switch	321	584	392	**137 659.31**
9553 4120	1250A	4 pole	automatic changeover switch	330	584	392	**146 859.60**
9553 4160	1600A	4 pole	automatic changeover switch	288	716	392	**185 615.82**

Larger sizes (up to 3200A) available on request.

4109...

Accessories for ATyS changeover switches

Bridging bars for switches

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

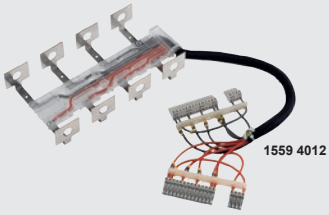
type		poles	description	for switch	price
4109 0019	bridge	1 pole	bridging bar for ch/over switches	160A	**347.32**
4109 0025	bridge	1 pole	bridging bar for ch/over switches	250A	**399.07**
4109 0039	bridge	1 pole	bridging bar for ch/over switches	400A	**499.12**
4109 0063	bridge	1 pole	bridging bar for ch/over switches	630A	**983.29**
4109 0080	bridge	1 pole	bridging bar for ch/over switches	800 - 1000A	**1 434.10**
4109 0120	bridge	1 pole	bridging bar for ch/over switches	1250A	**2 333.43**
4109 0160	bridge	1 pole	bridging bar for ch/over switches	1600A	**3 233.91**

Note: *For 3 pole device order 3 bridging bars, for a 4 pole device order 4 bridging bars*

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 4012

1559 3012	harness	3 pole	voltage sense and p/supply harness	160A	**2 213.82**
1559 3025	harness	3 pole	voltage sense and p/supply harness	250A	**2 589.89**
1559 3040	harness	3 pole	voltage sense and p/supply harness	400A	**2 938.35**
1559 3063	harness	3 pole	voltage sense and p/supply harness	630A	**3 138.45**
1559 3080	harness	3 pole	voltage sense and p/supply harness	800 - 1000A	**3 798.57**
1559 3120	harness	3 pole	voltage sense and p/supply harness	1250A	**3 874.48**
1559 3160	harness	3 pole	voltage sense and p/supply harness	1600A	**3 921.63**
1559 4012	N-right	4 pole	voltage sense and p/supply harness	160A	**2 319.63**
1559 4025	N-right	4 pole	voltage sense and p/supply harness	250A	**2 714.09**
1559 4040	N-right	4 pole	voltage sense and p/supply harness	400A	**3 181.00**
1559 4063	N-right	4 pole	voltage sense and p/supply harness	630A	**3 363.86**
1559 4080	N-right	4 pole	voltage sense and p/supply harness	800 - 1000A	**4 083.78**
1559 4120	N-right	4 pole	voltage sense and p/supply harness	1250A	**4 109.08**
1559 4160	N-right	4 pole	voltage sense and p/supply harness	1600A	**4 130.93**

Power supplies

1599 5112	24 VDC - 230 VAC power supply to operate switches with DC	all ATyS r/g/p	**13 524.43**
1599 4001	dual power supply permits remote transfer to any position	all ATyS r	**3 177.55**

Spare motor units

9509 5120

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	ATyS 125 - 200A	**15 030.98**
9509 5040	spare motor for ATyS switches	ATyS 250 - 400A	**17 515.05**
9509 5063	spare motor for ATyS switches	ATyS 500 - 630A	**23 127.23**
9509 5120	spare motor for ATyS switches	ATyS 800 - 1250A	**35 582.12**
9509 5160	spare motor for ATyS switches	ATyS 2000 - 3200A	**37 801.69**

Auxiliary contacts for switches

- Pre-breaking and signalling of positions I and II

4109 0021	1 C/Over	aux	auxiliary contact for switches	*(all sizes)*	**449.67**

Terminal shrouds and mounting accessories

Terminal shrouds

2694 4051

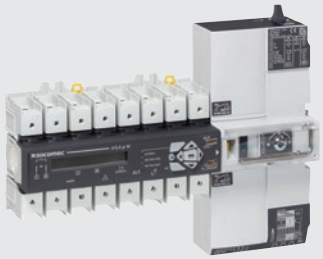
2694 3014	shroud	3 pole	terminal protection shroud	160A	**543.97**
2694 3021	shroud	3 pole	terminal protection shroud	250 - 400A	**614.12**
2694 3051	shroud	3 pole	terminal protection shroud	630A	**916.58**
2694 4021	shroud	4 pole	terminal protection shroud	250 - 400A	**834.93**
2694 4051	shroud	4 pole	terminal protection shroud	630A	**1 224.79**

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

1529 0012	frame	3/4 pole	door protective frame for switches	ATyS r 160-630A	**883.23**
1529 0080	frame	3/4 pole	door protective frame for switches	ATyS r 800-3200A	**1 002.84**
1539 0012	frame	3/4 pole	door protective frame for switches	ATyS g 160-630A	**1 407.65**
1539 0080	frame	3/4 pole	door protective frame for switches	ATyS g 800-3200A	**1 493.90**
1509 0001	10 mm		mounting spacers *(stackable)* to raise switch	*(2 per set)*	**461.17**

Enclosed automatic changeover panels

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



ATyS p M - Enclosed automatic changeover panels 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) H	W	D	price
• A complete product delivered as a fully assembled and tested solution							
• An inherent failsafe mechanical interlock							
• Built in padlocking facility (configurable).							
• Colour: BS/EN06 E53 (electric orange)							
EAC4006P	63 A	4	enclosed ch/over switch	550	400	220	**40 768.78**
EAC4008P	80 A	4	enclosed ch/over switch	550	400	220	**45 184.92**
EAC4010P	100 A	4	enclosed ch/over switch	550	400	220	**47 151.48**
EAC4016P	160 A	4	enclosed ch/over switch	550	400	220	**52 786.66**

EAC4040G

ATyS g - Enclosed automatic changeover panels 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.

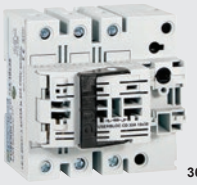
The changeover is done in open transition and with minimum supply interruption during transfer ensuring full compliance with IEC 60947-6-1, GB 14048-11 and other international TSE standards as listed.

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 ensure:

- Integrated and robust switch disconnection
- Integrated switch position auxiliary contacts
- Intuitive HMI for emergency / local operation
- Constant pressure on the contacts non 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) H	W	D	price
• A complete product delivered as a fully assembled and tested solution							
• An inherent failsafe mechanical interlock							
• Built in padlocking facility (configurable).							
• Colour: BS/EN06 E53 (electric orange)							
EAC4025G	250 A	4	enclosed ch/over switch	950	700	330	**64 678.03**
EAC4040G	400 A	4	enclosed ch/over switch	950	700	330	**81 595.06**
EAC4063G	630 A	4	enclosed ch/over switch	1200	900	600	**105 918.30**
EAC4080G	800 A	4	enclosed ch/over switch	1200	900	600	**172 160.40**
EAC4100G	1000 A	4	enclosed ch/over switch	1200	900	600	**177 335.60**
EAC4125G	1250 A	4	enclosed ch/over switch	1200	900	600	**190 791.00**
EAC4160G	1600 A	4	enclosed ch/over switch	1200	900	600	**235 297.40**


3631 3003


3841 3003


3831 3015


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.

- 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

type	AC-22 A 415V (A)	AC-23 A 400V	fuse type	description	dimensions (mm) (H)	(W)	(D)	price
Fuse combination switches - *3 pole*								
NFC cylindrical fuses								
3631 3003	CD32A	15kW	10 x 38	fuse combination switch	98	96	65	**1 976.92**
3831 3005	50A	25kW	14 x 51	fuse combination switch	118	121	100	**2 370.23**
3831 3011	125A	63kW	22 x 58	fuse combination switch	162	148	135	**3 723.82**
DIN pattern fuses								
3831 3006	63A	30kW	000	fuse combination switch	118	136	125	**2 712.94**
3831 3012	125A	63kW	00	fuse combination switch	162	148	135	**3 984.88**
3831 3015	160A	80kW	00	fuse combination switch	162	148	135	**4 663.40**
3831 3024	250A	132kW	1	fuse combination switch	195	234	154	**6 795.57**
3831 3038	400A	220kW	2	fuse combination switch	240	256	188	**9 199.14**
3811 3063	630A	355kW	3	fuse combination switch	300	364	265	**18 607.59**
3811 3080	800A	450kW	3	fuse combination switch	304	364	265	**21 816.19**
3811 3120	1250A	560kW	4	fuse combination switch	304	442	289	**41 171.29**
BS88 pattern fuses								
3641 3001	CD32A	15kW	A1	fuse combination switch	98	96	102	**2 193.12**
3841 3003	32A	15kW	A1	fuse combination switch	118	121	100	**2 472.58**
3841 3006	63A	30kW	A2 - A3	fuse combination switch	118	136	125	**2 847.49**
3841 3010	100A	51kW	A4	fuse combination switch	162	148	135	**3 370.76**
3841 3015	160A	80kW	A4	fuse combination switch	162	190	145	**4 716.30**
3841 3021	200A	100kW	B1-B2	fuse combination switch	195	234	154	**6 136.60**
3841 3024	250A	132kW	B1-B2-B3	fuse combination switch	195	234	154	**6 670.21**
3841 3031	315A	160kW	B1-B2-B3	fuse combination switch	240	256	188	**8 973.74**
3841 3038	400A	220kW	B2-B3-B4	fuse combination switch	240	256	188	**9 001.34**
3821 3063	630A	355kW	C1-C2	fuse combination switch	300	364	265	**19 148.10**
3821 3080	800A	450kW	C1-C2-C3	fuse combination switch	300	364	265	**22 356.70**
3821 3120	1250A	560kW	D1	fuse combination switch	300	442	304	**39 860.25**

Operating handles and shafts for above switches **IP65**

- 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	32 - 63A	**393.32**
1423 2115	S2	black		pistol grip external operating handle	100 - 400A	**488.77**
1433 3111	S3	black		pistol grip external operating handle	630 - 800A	**1 003.99**
1443 3111	S4	black		"T" grip external operating handle	1250A	**1 263.89**
1401 0532	S1	320 mm	☐ 5	extension shaft for switch	CD32A	**437.02**
1401 0540	S1	400 mm	☐ 5	extension shaft for switch	CD32A	**483.02**
1400 1020	S2	200 mm	☐ 10	extension shaft for switch	32 - 400A	**198.96**
1400 1032	S2	320 mm	☐ 10	extension shaft for switch	32 - 400A	**224.26**
1400 1050	S2	500 mm	☐ 10	extension shaft for switch	32 - 400A	**443.92**
1400 1232	S3/4	320 mm	☐ 12	extension shaft for switch	630-1250A	**609.52**
1400 1250	S3/4	500 mm	☐ 12	extension shaft for switch	630-1250A	**1 177.64**
1429 0000	guide		*(permits engaging of misaligned shaft with handle)*		*(all sizes)*	**143.76**
Auxiliary contacts for switch fuses						
3999 0701	1 NO			auxiliary contact and support for switches	CD32-1250A	**239.21**
3999 0702	1 NC			additional auxiliary contact fuse switches	CD32-1250A	**239.21**
3999 0710	holder			contact holder for additional auxiliary contacts	CD32A	**686.58**
3999 0600	holder			contact holder for additional auxiliary contacts	32-400A	**897.03**
Terminal shrouds			*(also provides phase separation for switches)*			
3998 3016	shroud	3 pole		terminal protection shroud for switches	100 - 160A	**508.32**
3998 3025	shroud	3 pole		terminal protection shroud for switches	250A	**673.93**
3898 3040	shroud	3 pole		terminal protection shroud for switches	400A	**634.82**
3898 3080	shroud	3 pole		terminal protection shroud for switches	630 - 800A	**1 821.66**
3898 3120	shroud	3 pole		terminal protection shroud for switches	1250A	**2 148.27**

STATYS

Static transfer system range up to 4000 A
providing high availability and system flexibility

Data center and telecommunication systems can not afford outages causing data and financial losses. In hospitals and medical facilities the security and availability of the power supply is a priority to sustain life.

Whatever your critical application, STATYS have the right fail-safe solution to make your power supply reliable and available.

The perfect solution for:

- Finance, banking and insurance
- Healthcare sector
- Telecom & Broadcasting
- Data centers
- Industry
- Power generation plants
- Transport

Benefits

- Redundant power supply
- No load fault propagation
- Network fault protection
- Plant segmentation
- System flexibility

High availability

High flexibility

Compact design

ease of use

Protection for your critical applications

socomec
Innovative Power Solutions

Static Transfer Systems (STS)

Static Transfer Systems (STS) are intelligent switches providing increased supply availability, automatically transferring loads to alternative power sources when the primary power source fails or is not available.

Suitable for critical infrastructure in many sectors such as data centres, finance, banking, healthcare, telecommunications and media broadcasting, industry, power plants and transportation.

The solution for • **Rack servers** • **IT networking** • **Hubs & routers**

Easy rack integration:

- Easy installation in 19" rack cabinets. *(compact enclosure saving valuable cabinet rack space)*
- Easy and quick connection of the loads via multiple IEC 320 outlets
- Integrated backfeed protection

Agile and easy-to-use:

- LCD display of all input and output values, intuitive control and easy management
- Source selection from the front panel without modifying the cabling
- Synchronized and non-synchronised source management
- Automatic and manual transfer

Flexible remote management:

- Remote management via LAN networks (SNMP) real-time monitoring (RS-485)
- Configurable dry contacts communication port via local setup connection
- USB port & RS-232 port for STATYS XS local monitoring

Standards IEC60950-1, CEI/EN 62310-2

3310016001

3310032001

3310032002

type	rated current	rated voltage	description	dimensions (mm) (H)	(W)	(D)	price
STATYS XS			*reliable STS for redundant power supply - 16 and 32 A*				
Ensured power continuity			*230V single phase 2 wire 2 pole switching*				
Single phase			Rated voltage: 200/208/220/230/240V (±10%)				
3310016001	16A	200/20/30/40	1U - static transfer system	44	440	285	**19 596.62**
3310032001	32A	200/20/30/40	2U - static transfer system	88	440	360	**37 376.17**
Accessories for above static transfer switches							
3300000002			RS-485 serial link board for STATYS XS	60	210	160	**5 302.82**
3300000001			WEB interface SNMP board for STATYS XS slot	60	210	160	**5 888.19**
STATYS Hot-Swappable			*Static Transfer System (STS) from 32 to 100 A*				
Note: STATYS Hot-Swappable units ***(only available on request)***							
General features:							
Single phase			rated voltage: 120-127/220-240/254V (±10%)				
3310032002	32A	220/240/254	2U - static transfer system	89	483	747	**49 946.07**
3210063001*	63A	220/240/254	2U - static transfer system	89	483	747	**189 640.94**
Three phase			rated voltage: 208-220/380-415/440V				
3230063003*	63A	380-415/440	9U - static transfer system	400	483	648	**373 186.69**
3230100003*	100A	380-415/440	9U - static transfer system	400	483	648	**404 812.68**
Accessories for above Static transfer system							
3200000010			RS-485/422 and RS-232 isolated serial link	35	82	168	**4 914.11**
1C-OP-C-MODTCP*			Modbus TCP interface card for above	35	82	168	**17 227.54**

- *All WEB interfaces already included*

- PC class without fuses
- 220/240V single phase, 2 wire, 2 pole switching
- CB class with UR fuses
- 380/415V three phase 4 wire, 4 pole switching


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
- Provide protection 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	**54.29**
5120050	0.50A	250V	35A	(F) fast acting cylindrical glass fuse	20 x 5	**54.29**
5120063	0.63A	250V	35A	(F) fast acting cylindrical glass fuse	20 x 5	**71.43**
5120100	1.0A	250V	35A	(F) fast acting cylindrical glass fuse	20 x 5	**42.86**
5120125	1.25A	250V	35A	(F) fast acting cylindrical glass fuse	20 x 5	**48.58**
5120160	1.6A	250V	35A	(F) fast acting cylindrical glass fuse	20 x 5	**62.86**
5120200	2.0A	250V	35A	(F) fast acting cylindrical glass fuse	20 x 5	**42.86**
5120250	2.5A	250V	35A	(F) fast acting cylindrical glass fuse	20 x 5	**48.58**
5120315	3.15A	250V	35A	(F) fast acting cylindrical glass fuse	20 x 5	**48.58**
5120400	4.0A	250V	10 x In	(F) fast acting cylindrical glass fuse	20 x 5	**42.86**
5120500	5.0A	250V	10 x In	(F) fast acting cylindrical glass fuse	20 x 5	**42.86**
5120630	6.3A	250V	10 x In	(F) fast acting cylindrical glass fuse	20 x 5	**42.86**
5021000	10A	250V	10 x In	(F) fast acting cylindrical glass fuse	20 x 5	**42.86**
5021600	16A	250V	10 x In	(F) fast acting cylindrical glass fuse	20 x 5	**65.72**

Fuse holders for 20 x 5 mm glass fuses

- Protection against electric shock: I-II
- Impulse withstand bet. Terminals: > 4.0 kV
- Admissable 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
PCB mount fuse holders						
PTF/78	6.3A	250V	PCB	PCB mount fuse holder	20 x 5	**3.57**
BS232VE	cover			protection cover for above PTF/78 fuse holder		**1.50**
PTF/45	10A	250V	PCB	PCB vertical mounting fuse holder	20 x 5	**14.27**
PTF/50	10A	250V	PCB	PCB horizontal mounting fuse holder	20 x 5	**15.54**
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	**20.14**
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	**21.86**
In-line shock safe fuse holder						
PTF/80A	6.3A	250V	in-line	in-line shock safe fuse holder	20 x 5	**17.72**

421...

4212...

422...

4222...

gG class - Cylindrical fuse links

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.

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

type	rated current	rated voltage	breaking capacity	class	description	dimension (mm)	price
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	**11.62**
420001	1A	500V	120kA	gG	cylindrical fuse link	10 x 38	**10.36**
420002	2A	500V	120kA	gG	cylindrical fuse link	10 x 38	**10.36**
420004	4A	500V	120kA	gG	cylindrical fuse link	10 x 38	**10.36**
420006	6A	500V	120kA	gG	cylindrical fuse link	10 x 38	**10.36**
420010	10A	500V	120kA	gG	cylindrical fuse link	10 x 38	**10.36**
420016	16A	500V	120kA	gG	cylindrical fuse link	10 x 38	**10.36**
420020	20A	500V	120kA	gG	cylindrical fuse link	10 x 38	**10.36**
420025	25A	500V	120kA	gG	cylindrical fuse link	10 x 38	**11.62**
420032	32A	400V	120kA	gG	cylindrical fuse link	10 x 38	**11.62**
14 x 51 mm cylindrical fuses							
421010	10A	690V	80kA	gG	cylindrical fuse link	14 x 51	**17.37**
421016	16A	690V	80kA	gG	cylindrical fuse link	14 x 51	**17.37**
421020	20A	690V	80kA	gG	cylindrical fuse link	14 x 51	**17.94**
421025	25A	690V	80kA	gG	cylindrical fuse link	14 x 51	**17.94**
421032	32A	500V	120kA	gG	cylindrical fuse link	14 x 51	**17.94**
421040	40A	500V	120kA	gG	cylindrical fuse link	14 x 51	**18.63**
421050	50A	400V	120kA	gG	cylindrical fuse link	14 x 51	**18.63**
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	**63.26**
421204	4A	500V	120kA	gG	fuse link with striker	14 x 51	**66.71**
421206	6A	500V	120kA	gG	fuse link with striker	14 x 51	**66.71**
421210	10A	500V	120kA	gG	fuse link with striker	14 x 51	**66.71**
421216	16A	500V	120kA	gG	fuse link with striker	14 x 51	**66.71**
421220	20A	500V	120kA	gG	fuse link with striker	14 x 51	**66.71**
421225	25A	500V	120kA	gG	fuse link with striker	14 x 51	**66.71**
421232	32A	500V	120kA	gG	fuse link with striker	14 x 51	**70.16**
421240	40A	500V	120kA	gG	fuse link with striker	14 x 51	**70.16**
421250	50A	400V	120kA	gG	fuse link with striker	14 x 51	**70.16**
22 x 58 mm cylindrical fuses							
422032	32A	690V	80kA	gG	cylindrical fuse link	22 x 58	**64.49**
422040	40A	690V	80kA	gG	cylindrical fuse link	22 x 58	**64.49**
422050	50A	690V	80kA	gG	cylindrical fuse link	22 x 58	**64.49**
422063	63A	690V	80kA	gG	cylindrical fuse link	22 x 58	**59.12**
422080	80A	500V	120kA	gG	cylindrical fuse link	22 x 58	**59.12**
422000	100A	500V	120kA	gG	cylindrical fuse link	22 x 58	**59.12**
422015	125A	400V	120kA	gG	cylindrical fuse link	22 x 58	**59.12**
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	**98.91**
422240	40A	690V	80kA	gG	fuse link with striker	22 x 58	**98.91**
422250	50A	690V	80kA	gG	fuse link with striker	22 x 58	**102.36**
422263	63A	690V	80kA	gG	fuse link with striker	22 x 58	**102.36**
422280	80A	500V	120kA	gG	fuse link with striker	22 x 58	**110.41**
422200	100A	500V	120kA	gG	fuse link with striker	22 x 58	**110.41**
422215	125A	400V	120kA	gG	fuse link with striker	22 x 58	**110.41**

DC application - for DF gG fuse-links

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

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	


440...


441...


442...


415040


485701


433...


432...


431...

Cylindrical fuse links **aM class** are intended for short circuit protection of motors, transformers and other loads with high inrush currents. Excellent 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 disconnector. Made of ceramic tube with high withstand internal pressure and thermal shock, offering high breaking capacity in a reduced dimension. Melting elements are silver plated to avoid the aging, keep 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	120kA	aM	cylindrical fuse link	10 x 38	**10.94**
440001	1A	500V	120kA	aM	cylindrical fuse link	10 x 38	**10.94**
440002	2A	500V	120kA	aM	cylindrical fuse link	10 x 38	**10.94**
440004	4A	500V	120kA	aM	cylindrical fuse link	10 x 38	**10.94**
440006	6A	500V	120kA	aM	cylindrical fuse link	10 x 38	**10.94**
440010	10A	500V	120kA	aM	cylindrical fuse link	10 x 38	**10.94**
440016	16A	500V	120kA	aM	cylindrical fuse link	10 x 38	**10.94**
440020	20A	400V	120kA	aM	cylindrical fuse link	10 x 38	**10.94**
440025	25A	400V	120kA	aM	cylindrical fuse link	10 x 38	**10.94**
440032	32A	400V	120kA	aM	cylindrical fuse link	10 x 38	**10.94**
14 x 51 mm cylindrical fuses							
441020	20A	690V	80kA	aM	cylindrical fuse link	14 x 51	**17.84**
441025	25A	690V	80kA	aM	cylindrical fuse link	14 x 51	**17.84**
441032	32A	500V	120kA	aM	cylindrical fuse link	14 x 51	**17.84**
441040	40A	500V	120kA	aM	cylindrical fuse link	14 x 51	**18.99**
441050	50A	400V	120kA	aM	cylindrical fuse link	14 x 51	**18.99**
22 x 58 mm cylindrical fuses							
442032	32A	690V	80kA	aM	cylindrical fuse link	22 x 58	**35.66**
442040	40A	690V	80kA	aM	cylindrical fuse link	22 x 58	**36.81**
442050	50A	690V	80kA	aM	cylindrical fuse link	22 x 58	**36.81**
442063	63A	690V	80kA	aM	cylindrical fuse link	22 x 58	**39.11**
442080	80A	500V	120kA	aM	cylindrical fuse link	22 x 58	**40.26**
442000	100A	500V	120kA	aM	cylindrical fuse link	22 x 58	**40.26**
442015	125A	400V	120kA	aM	cylindrical fuse link	22 x 58	**42.56**
Medium voltage (MV) fuse links for public lighting 1500V							

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	20kA	g	MV cylindrical fuse-link	10 x 85	**361.12**
415015	4A	1500V	20kA	g	MV cylindrical fuse-link	10 x 85	**340.42**
415020	5A	1500V	20kA	g	MV cylindrical fuse-link	10 x 85	**340.42**
415025	6.3A	1500V	20kA	g	MV cylindrical fuse-link	10 x 85	**340.42**
415030	8A	1500V	20kA	g	MV cylindrical fuse-link	10 x 85	**340.42**
415035	10A	1500V	20kA	g	MV cylindrical fuse-link	10 x 85	**340.42**
415040	12A	1500V	20kA	g	MV cylindrical fuse-link	10 x 85	**388.72**

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

PML series MV fuse holder	1000 VAC/1500 VDC			*(H) 130 x (W) 24 x (D) 58 mm*			
10/14 x 85 mm fuse holder							
485701	32A	1500V	1 pole		industrial MV cylindrical fuseholder	10/14 x 85	**162.16**
Accessories for above MV fuse holder							
480005	pin				body pins for multi-pole assembly of fuse holders		**2.42**
485050	ties				handle ties for multi-pole assembly of fuse holders		**2.42**
Solid neutral links *(cylindrical)*							
431000	32A	–	–	gG/aM	solid neutral link	10 x 38	**9.09**
432000	50A	–	–	gG/aM	solid neutral link	14 x 51	**15.76**
433000	125A	–	–	gG/aM	solid neutral link	22 x 58	**27.49**


491610


492225


492262


10 x 85


485...


10/14 x 85

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 silver plated copper and melting elements are of pure silver to avoid the aging and maintain electric characteristics over time.

Standards: gPV class according to IEC60269-6 and UL248-19

type	rated current	rated voltage	breaking capacity	class	description	dimension (mm)	price
gPV photovoltaic cylindrical fuse links		**600/1000VDC**					
gPV 10 x 38 and 14 x 51 cylindrical fuse links have been developed to offer compact, safety and economical protection of photovoltaic modules *(array protection)* with voltages up to 1000V DC. They provide protection against overloads and short-circuit.							
491601	1A	1000 VDC	30kA	gPV	photovoltaic fuse link	10 x 38	**60.96**
491602	2A	1000 VDC	30kA	gPV	photovoltaic fuse link	10 x 38	**60.96**
491604	3A	1000 VDC	30kA	gPV	photovoltaic fuse link	10 x 38	**60.96**
491605	4A	1000 VDC	30kA	gPV	photovoltaic fuse link	10 x 38	**60.96**
491606	5A	1000 VDC	30kA	gPV	photovoltaic fuse link	10 x 38	**60.96**
491610	6A	1000 VDC	30kA	gPV	photovoltaic fuse link	10 x 38	**60.96**
491615	8A	1000 VDC	30kA	gPV	photovoltaic fuse link	10 x 38	**60.96**
491620	10A	1000 VDC	30kA	gPV	photovoltaic fuse link	10 x 38	**60.96**
491625	12A	1000 VDC	30kA	gPV	photovoltaic fuse link	10 x 38	**60.96**
491630	16A	1000 VDC	30kA	gPV	photovoltaic fuse link	10 x 38	**67.86**
491635	20A	1000 VDC	30kA	gPV	photovoltaic fuse link	10 x 38	**67.86**
491940	25A	600 VDC	30kA	gPV	photovoltaic fuse link	10 x 38	**81.66**
491945	32A	600 VDC	30kA	gPV	photovoltaic fuse link	10 x 38	**81.66**
Above fuse links we recommend the utilization of 10 x 38 PV fuse holders **485150/485152/485151**							
491650	25A	1000 VDC	30kA	gPV	photovoltaic fuse link	14 x 51	**126.51**
491655	32A	1000 VDC	30kA	gPV	photovoltaic fuse link	14 x 51	**139.16**
Above fuse fuse links we recommend the utilization of 14 x 51 PV fuse holders **485250**							
***Note:** For ambient temperatures higher than 25ºC it is necessary to apply a derating in maximum current.*							
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	30kA	gPV	photovoltaic fuse link	10 x 85	**102.36**
492205	4A	1500 VDC	30kA	gPV	photovoltaic fuse link	10 x 85	**102.36**
492210	6A	1500 VDC	30kA	gPV	photovoltaic fuse link	10 x 85	**102.36**
492215	8A	1500 VDC	30kA	gPV	photovoltaic fuse link	10 x 85	**102.36**
492220	10A	1500 VDC	30kA	gPV	photovoltaic fuse link	10 x 85	**102.36**
492225	12A	1500 VDC	30kA	gPV	photovoltaic fuse link	10 x 85	**102.36**
492230	16A	1500 VDC	30kA	gPV	photovoltaic fuse link	10 x 85	**102.36**
492250	20A	1500 VDC	10kA	gPV	photovoltaic fuse link	10/14 x 85	**177.11**
492255	25A	1500 VDC	10kA	gPV	photovoltaic fuse link	10/14 x 85	**177.11**
492262	32A	1500 VDC	10kA	gPV	photovoltaic fuse link	10/14 x 85	**177.11**
Above fuse links we recommend the utilization of **485701** fuse holders							
***Note:** For ambient temperatures higher than 25ºC it is necessary to apply a derating in maximum current.*							

Fuse holders for Photovoltaic applications 1000/1500 VDC

- Fuse holder for cylindrical fuse link size 10 x 85 gVP 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	**78.21**
485152*	32A	1000 VDC	1 pole	gPV	photovoltaic fuse holder	10 x 38	**112.71**
485151	32A	1000 VDC	2 pole	gPV	photovoltaic fuse holder	10 x 38	**161.01**
485250	50A	1000 VDC	1 pole	gPV	photovoltaic fuse holder	14 x 51	**169.06**
485701	32A	1500 VDC	1 pole	gPV	photovoltaic fuse holder	10/14 x 85	**162.16**

* *Indicator*


492004


492123


492139

new


451260 + 451275

Semiconductor cylindrical fuse links

Semi-conductor fuse links intended to clearing 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 application 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
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	200kA	gR	semiconductor fuse link	10 x 38	**59.81**
492004	6A	690V	200kA	gR	semiconductor fuse link	10 x 38	**59.81**
492006	10A	690V	200kA	gR	semiconductor fuse link	10 x 38	**59.81**
492008	16A	690V	200kA	gR	semiconductor fuse link	10 x 38	**59.81**
492009	20A	690V	200kA	gR	semiconductor fuse link	10 x 38	**59.81**
492010	25A	690V	200kA	gR	semiconductor fuse link	10 x 38	**59.81**
492011	32A	690V	200kA	gR	semiconductor fuse link	10 x 38	**59.81**
14 x 51mm gR cylindrical fuses							
492022	32A	690V	200kA	gR	semiconductor fuse link	14 x 51	**102.36**
492023	40A	690V	200kA	gR	semiconductor fuse link	14 x 51	**102.36**
492024	50A	690V	200kA	gR	semiconductor fuse link	14 x 51	**102.36**
With "striker" - *for use with fuse holder micro switch for remote "fuse blown" indication*							
492117	10A	690V	200kA	gR	SC fuse linkwith striker	14 x 51	**154.11**
492118	12A	690V	200kA	gR	SC fuse linkwith striker	14 x 51	**154.11**
492119	16A	690V	200kA	gR	SC fuse linkwith striker	14 x 51	**154.11**
492120	20A	690V	200kA	gR	SC fuse linkwith striker	14 x 51	**154.11**
492121	25A	690V	200kA	gR	SC fuse linkwith striker	14 x 51	**154.11**
492122	32A	690V	200kA	gR	SC fuse linkwith striker	14 x 51	**154.11**
492123	40A	690V	200kA	gR	SC fuse linkwith striker	14 x 51	**154.11**
492124	50A	690V	200kA	gR	SC fuse linkwith striker	14 x 51	**154.11**
22 x 58 mm gR cylindrical fuses							
492037	50A	690V	200kA	gR	semiconductor fuse link	22 x 58	**125.36**
492038	63A	690V	200kA	gR	semiconductor fuse link	22 x 58	**184.01**
492039	80A	690V	200kA	gR	semiconductor fuse link	22 x 58	**184.01**
492040	100A	690V	200kA	gR	semiconductor fuse link	22 x 58	**184.01**
With "striker" - *for use with fuse holder micro switch for remote "fuse blown" indication*							
492137	50A	690V	200kA	gR	semiconductor fuse link	22 x 58	**194.36**
492138	63A	690V	200kA	gR	semiconductor fuse link	22 x 58	**253.01**
492139	80A	690V	200kA	gR	semiconductor fuse link	22 x 58	**253.01**
492140	100A	690V	200kA	gR	semiconductor fuse link	22 x 58	**253.01**

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
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	**78.21**
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	**234.61**
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	**205.86**
"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	**100.06**


491155


491770


491835


485120

Semiconductor cylindrical fuse links

RAPIDPLUS aR fuse links are intended to clearing 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
RAPIDPLUS aR high speed fuse links for semiconductors							
10 x 38 mm aR cylindrical fuses							
491107	2A	690V	200kA	aR	semiconductor fuse link	10 x 38	**73.61**
491110	3A	690V	200kA	aR	semiconductor fuse link	10 x 38	**73.61**
491113	4A	690V	200kA	aR	semiconductor fuse link	10 x 38	**73.61**
491115	6A	690V	200kA	aR	semiconductor fuse link	10 x 38	**73.61**
491120	8A	690V	200kA	aR	semiconductor fuse link	10 x 38	**73.61**
491125	10A	690V	200kA	aR	semiconductor fuse link	10 x 38	**73.61**
491130	12A	690V	200kA	aR	semiconductor fuse link	10 x 38	**73.61**
491135	16A	690V	200kA	aR	semiconductor fuse link	10 x 38	**73.61**
491140	20A	690V	200kA	aR	semiconductor fuse link	10 x 38	**73.61**
491145	25A	690V	200kA	aR	semiconductor fuse link	10 x 38	**73.61**
491155	32A	690V	200kA	aR	semiconductor fuse link	10 x 38	**73.61**
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	200kA	aR	semiconductor fuse link	14 x 51	**253.01**
491735	10A	690V	200kA	aR	semiconductor fuse link	14 x 51	**253.01**
491737	12A	690V	200kA	aR	semiconductor fuse link	14 x 51	**253.01**
491741	16A	690V	200kA	aR	semiconductor fuse link	14 x 51	**253.01**
491745	20A	690V	200kA	aR	semiconductor fuse link	14 x 51	**276.01**
491750	25A	690V	200kA	aR	semiconductor fuse link	14 x 51	**276.01**
491760	32A	690V	200kA	aR	semiconductor fuse link	14 x 51	**276.01**
491765	40A	690V	200kA	aR	semiconductor fuse link	14 x 51	**354.22**
491770	50A	690V	200kA	aR	semiconductor fuse link	14 x 51	**407.12**
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	200kA	aR	semiconductor fuse link	22 x 58	**428.97**
491825	63A	690V	200kA	aR	semiconductor fuse link	22 x 58	**474.97**
491830	80A	690V	200kA	aR	semiconductor fuse link	22 x 58	**529.02**
491835	100A	690V	200kA	aR	semiconductor fuse link	22 x 58	**575.02**

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
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	**59.81**
485108	32A	10 x 38	1 pole	with 120~690V neon indication	1	**105.81**
485120	32A	10 x 38	1 pole+N	industrial cylindrical fuse holder	1	**100.06**
485104	32A	10 x 38	2 pole	industrial cylindrical fuse holder	2	**136.86**
485105	32A	10 x 38	3 pole	industrial cylindrical fuse holder	3	**201.26**
485107	32A	10 x 38	4 pole	industrial cylindrical fuse holder	4	**269.11**

Note: *For 14 x 51 mm, 22 x 58 mm fuse holders, see page* ***B-49***


485120


485205


485305


485356


480005


485359


485360


483530

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			690VAC / 750VDC	*(H) 88.8 x (D) 58 mm*		
485101	32A	10 x 38	1 pole	industrial cylindrical fuse holder	1	**59.81**
485108	32A	10 x 38	1 pole	with 120~690V neon indication	1	**105.81**
485120	32A	10 x 38	1 pole+N	industrial cylindrical fuse holder	1	**100.06**
485104	32A	10 x 38	2 pole	industrial cylindrical fuse holder	2	**136.86**
485105	32A	10 x 38	3 pole	industrial cylindrical fuse holder	3	**201.26**
485107	32A	10 x 38	4 pole	industrial cylindrical fuse holder	4	**269.11**
Accessories for 10 x 38 mm fuse holders						
480005	pin	10 x 38/85		body pins for multi-pole assembly of fuse holders		**2.42**
485050	ties	10 x 38/85		handle ties for multi-pole assembly of fuse holders		**2.42**
485051	lock	10 x 38/85		lock support to padlock fuse holders in "open" position		**20.93**
485053	barrier	10 x 38		phase separator accessory for fuse holders		**8.52**
485054	neon	10 x 38		fusing neon indicator 120~690V for fuse holders		**27.49**
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	**134.56**
485208	50A	14 x 51	1 pole	with 120~690V neon indication	1.5	**177.11**
485203	50A	14 x 51	1 pole+N	industrial cylindrical fuse holder	3	**293.26**
485205	50A	14 x 51	3 pole	industrial cylindrical fuse holder	4.5	**437.02**
Accessories for 14 x 51 mm fuse holders						
480005	pin	14 x 51		body pins for multi-pole assembly of fuse holders		**2.42**
485356	ties	14 x 51		handle ties for multi-pole assembly of fuse holders		**5.29**
485357	ties	14 x 51		handle ties for micro switch assembly of fuse holders		**8.28**
485258	lock	14 x 51		lock support to padlock fuse holders in "open" position		**12.54**
485259	micro	14 x 51	1 pole	micro switch for use with "striker" fuses		**106.96**
485260	micro	14 x 51	3 pole	micro switch for use with "striker" fuses		**132.26**
485262	micro	14 x 51	1 pole	micro sw extension for 2/4 pole requirements		**22.32**
485264	neon	14 x 51		fusing neon indicator 120~690V for fuse holders		**65.56**
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	**269.11**
485308	125A	22 x 58	1 pole	with 120~690V neon indication	2	**351.92**
485303	125A	22 x 58	1 pole+N	industrial cylindrical fuse holder	4	**600.32**
485305	125A	22 x 58	3 pole	industrial cylindrical fuse holder	6	**849.88**
*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		**2.42**
485356	ties	22 x 58		handle ties for multi-pole assembly of fuse holders		**5.29**
485357	ties	22 x 58		handle ties for micro switch assembly of fuse holders		**8.28**
485358	lock	22 x 58		lock support to padlock fuse holders in "open" position		**14.27**
485359	micro	22 x 58	1 pole	micro switch for use with "striker" fuses		**112.71**
485360	micro	22 x 58	3 pole	micro switch for use with "striker" fuses		**138.01**
485362	micro	22 x 58	1 pole	micro sw extension for 2/4 pole requirements		**23.93**
485364	neon	22 x 58		fusing neon indicator 120~690V for fuse holders		**56.36**
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	**62.11**
483534	32A	10 x 38	1 pole+N	compact cylindrical fuse holder	1	**100.06**
Accessories for compact 10 x 38 mm fuse holder						
483552	kit	10 x 38		PMC multi-pole assembly kit for fuse holders		**67.86**
PML series - MV fuse holder			1000 VAC/1500 VDC	*(H) 130 x (W) 24 x (D) 58 mm*		
10/14 x 85 mm fuse holder						
485701	32A	10 x 85	1 pole	industrial cylindrical fuse holder	*(24 mm)*	**162.16**
480005	pin	10 x 85		body pins for multi-pole assembly of fuse holders		**2.42**
485050	ties	10 x 85		handle ties for multi-pole assembly of fuse holders		**2.42**


381065


381270


381530


382370

NH industrial HRC fuse links for general applications

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

- 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	120kA	gG	NH000	DIN HRC fuse link	**87.41**
381015	10A	500V	120kA	gG	NH000	DIN HRC fuse link	**87.41**
381020	16A	500V	120kA	gG	NH000	DIN HRC fuse link	**87.41**
381025	20A	500V	120kA	gG	NH000	DIN HRC fuse link	**87.41**
381030	25A	500V	120kA	gG	NH000	DIN HRC fuse link	**87.41**
381035	32A	500V	120kA	gG	NH000	DIN HRC fuse link	**87.41**
381045	40A	500V	120kA	gG	NH000	DIN HRC fuse link	**87.41**
381050	50A	500V	120kA	gG	NH000	DIN HRC fuse link	**87.41**
381055	63A	500V	120kA	gG	NH000	DIN HRC fuse link	**87.41**
381060	80A	500V	120kA	gG	NH000	DIN HRC fuse link	**87.41**
381065	100A	500V	120kA	gG	NH000	DIN HRC fuse link	**87.41**
381070	125A	500V	120kA	gG	NH00	DIN HRC fuse link	**111.56**
381075	160A	500V	120kA	gG	NH00	DIN HRC fuse link	**111.56**
381255	160A	500V	120kA	gG	NHC1	DIN HRC fuse link	**173.66**
381260	200A	500V	120kA	gG	NH1	DIN HRC fuse link	**250.71**
381270	250A	500V	120kA	gG	NH1	DIN HRC fuse link	**250.71**
381280	315A	500V	120kA	gG	NH1	DIN HRC fuse link	**250.71**
381285	355A	500V	120kA	gG	NH1	DIN HRC fuse link	**250.71**
381370	315A	500V	120kA	gG	NH2	DIN HRC fuse link	**424.55**
381375	355A	500V	120kA	gG	NH2	DIN HRC fuse link	**435.30**
381380	400A	500V	120kA	gG	NH2	DIN HRC fuse link	**441.75**
381390	500A	500V	120kA	gG	NH2	DIN HRC fuse link	**562.13**
381465	500A	500V	120kA	gG	NH3	DIN HRC fuse link	**731.43**
381470	630A	500V	120kA	gG	NH3	DIN HRC fuse link	**772.83**
381475	800A	500V	120kA	gG	NH3	DIN HRC fuse link	**788.93**
381525	800A	500V	120kA	gG	NH4	DIN HRC fuse link	**1 829.71**
381530	1000A	500V	120kA	gG	NH4	DIN HRC fuse link	**1 829.71**
381535	1250A	500V	120kA	gG	NH4	DIN HRC fuse link	**2 112.62**
gG NH HRC fuse links 690V			*top indicator*				
382010	6A	690V	80kA	gG	NH000	DIN HRC fuse link	**158.71**
382015	10A	690V	80kA	gG	NH000	DIN HRC fuse link	**151.81**
382020	16A	690V	80kA	gG	NH000	DIN HRC fuse link	**151.81**
382025	20A	690V	80kA	gG	NH000	DIN HRC fuse link	**154.11**
382030	25A	690V	80kA	gG	NH000	DIN HRC fuse link	**156.41**
382035	32A	690V	80kA	gG	NH000	DIN HRC fuse link	**156.41**
382045	40A	690V	80kA	gG	NH000	DIN HRC fuse link	**156.41**
382050	50A	690V	80kA	gG	NH00	DIN HRC fuse link	**167.91**
382055	63A	690V	80kA	gG	NH00	DIN HRC fuse link	**167.91**
382060	80A	690V	80kA	gG	NH00	DIN HRC fuse link	**167.91**
382065	100A	690V	80kA	gG	NH00	DIN HRC fuse link	**167.91**
382250	125A	690V	80kA	gG	NH1	DIN HRC fuse link	**309.55**
382255	160A	690V	80kA	gG	NH1	DIN HRC fuse link	**314.92**
382260	200A	690V	80kA	gG	NH1	DIN HRC fuse link	**323.52**
382360	250A	690V	80kA	gG	NH2	DIN HRC fuse link	**442.77**
382370	315A	690V	80kA	gG	NH2	DIN HRC fuse link	**468.07**
382450	355A	690V	80kA	gG	NH3	DIN HRC fuse link	**632.52**
382455	400A	690V	80kA	gG	NH3	DIN HRC fuse link	**637.12**
382465	500A	690V	80kA	gG	NH3	DIN HRC fuse link	**647.48**
382520	630A	690V	80kA	gG	NH4	DIN HRC fuse link	**2 296.63**
382525	800A	690V	80kA	gG	NH4	DIN HRC fuse link	**2 296.63**

*Fuse bases and accessories for above fuse links (see page **B-54**)*

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**)*


384045


384065


384375

new


385435

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 690V AC. 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: 120/80kA
- 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	80kA	aM	NH000	DIN HRC fuse link	**166.76**
384015	10A	690V	80kA	aM	NH000	DIN HRC fuse link	**159.86**
384020	16A	690V	80kA	aM	NH000	DIN HRC fuse link	**159.86**
384025	20A	690V	80kA	aM	NH000	DIN HRC fuse link	**162.16**
384030	25A	690V	80kA	aM	NH000	DIN HRC fuse link	**162.16**
384035	32A	690V	80kA	aM	NH000	DIN HRC fuse link	**162.16**
384045	40A	690V	80kA	aM	NH000	DIN HRC fuse link	**162.16**
384050	50A	690V	80kA	aM	NH00	DIN HRC fuse link	**171.36**
384055	63A	690V	80kA	aM	NH00	DIN HRC fuse link	**172.51**
384060	80A	690V	80kA	aM	NH00	DIN HRC fuse link	**173.66**
384065	100A	690V	80kA	aM	NH00	DIN HRC fuse link	**186.31**
383070	125A	500V	120kA	aM	NH00	DIN HRC fuse link	**185.16**
383075	160A	500V	120kA	aM	NH00	DIN HRC fuse link	**190.91**
384260	200A	690V	80kA	aM	NH1	DIN HRC fuse link	**300.16**
383270	250A	500V	120kA	aM	NH1	DIN HRC fuse link	**316.26**
384370	315A	690V	80kA	aM	NH2	DIN HRC fuse link	**479.57**
384375	355A	690V	80kA	aM	NH2	DIN HRC fuse link	**497.97**
383380	400A	500V	120kA	aM	NH2	DIN HRC fuse link	**483.02**
384465	500A	690V	80kA	aM	NH3	DIN HRC fuse link	**1 024.29**
383470	630A	500V	120kA	aM	NH3	DIN HRC fuse link	**1 068.36**
383525	800A	500V	120kA	aM	NH4	DIN HRC fuse link	**2 699.90**
383530	1000A	500V	120kA	aM	NH4	DIN HRC fuse link	**2 764.39**
383535	1250A	500V	120kA	aM	NH4	DIN HRC fuse link	**3 469.46**

NH fuse links for output side of new generation of 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 80kA and low power dissipation values.

Specification:

- Rated voltage: 800 VAC +10%
- Breaking capacity: 80kA
- 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	35A	800V	80kA	gS	NH00	DIN HRC fuse link	**397.92**
369045	40A	800V	80kA	gS	NH00	DIN HRC fuse link	**397.92**
369050	50A	800V	80kA	gS	NH00	DIN HRC fuse link	**397.92**
369055	63A	800V	80kA	gS	NH00	DIN HRC fuse link	**397.92**
369060	80A	800V	80kA	gS	NH00	DIN HRC fuse link	**397.92**
385245	100A	800V	80kA	gG	NH00	DIN HRC fuse link	**378.33**
385250	125A	800V	80kA	gG	NH1	DIN HRC fuse link	**378.33**
385255	160A	800V	80kA	gG	NH1	DIN HRC fuse link	**378.33**
385425	200A	800V	80kA	gG	NH3	DIN HRC fuse link	**909.68**
385435	250A	800V	80kA	gG	NH3	DIN HRC fuse link	**909.68**
385445	315A	800V	80kA	gG	NH3	DIN HRC fuse link	**909.68**
385450	355A	800V	80kA	gG	NH3	DIN HRC fuse link	**1 000.54**
385455	400A	800V	80kA	gG	NH3	DIN HRC fuse link	**1 000.54**

370065


370075

370380


357010


340001


341250

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 cylindrical fuse links					**1000 VDC**		
373215	32A	1000VDC	30kA	gPV	NH1	photovoltaic fuse link	**1 358.20**
373225	40A	1000VDC	30kA	gPV	NH1	photovoltaic fuse link	**1 358.20**
373230	50A	1000VDC	30kA	gPV	NH1	photovoltaic fuse link	**1 358.20**
373235	63A	1000VDC	30kA	gPV	NH1	photovoltaic fuse link	**1 358.20**
373240	80A	1000VDC	30kA	gPV	NH1	photovoltaic fuse link	**1 358.20**
373245	100A	1000VDC	30kA	gPV	NH1	photovoltaic fuse link	**1 358.20**
373250	125A	1000VDC	30kA	gPV	NH1	photovoltaic fuse link	**1 358.20**
373255	160A	1000VDC	30kA	gPV	NH1	photovoltaic fuse link	**1 358.20**
373260	200A	1000VDC	30kA	gPV	NH1	photovoltaic fuse link	**1 358.20**
373360	250A	1000VDC	30kA	gPV	NH2	photovoltaic fuse link	**1 698.61**
373425	200A	1000VDC	30kA	gPV	NH3	photovoltaic fuse link	**1 834.31**
373435	250A	1000VDC	30kA	gPV	NH3	photovoltaic fuse link	**1 834.31**
373445	315A	1000VDC	30kA	gPV	NH3	photovoltaic fuse link	**1 834.31**
373450	355A	1000VDC	30kA	gPV	NH3	photovoltaic fuse link	**2 037.87**
373455	400A	1000VDC	30kA	gPV	NH3	photovoltaic fuse link	**2 037.87**

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	440VDC	30kA	gBat	NH000	DIN HRC fuse link	**277.16**
370045	40A	440VDC	30kA	gBat	NH000	DIN HRC fuse link	**282.91**
370050	50A	440VDC	30kA	gBat	NH000	DIN HRC fuse link	**288.66**
370055	63A	440VDC	30kA	gBat	NH000	DIN HRC fuse link	**300.16**
370060	80A	440VDC	30kA	gBat	NH000	DIN HRC fuse link	**316.26**
370065	100A	440VDC	30kA	gBat	NH000	DIN HRC fuse link	**335.82**
370070	125A	440VDC	30kA	gBat	NH00	DIN HRC fuse link	**433.57**
370075	160A	440VDC	30kA	gBat	NH00	DIN HRC fuse link	**479.57**
370260	200A	550VDC	30kA	gBat	NH1	DIN HRC fuse link	**717.63**
370270	250A	550VDC	30kA	gBat	NH1	DIN HRC fuse link	**829.18**
370370	315A	550VDC	30kA	gBat	NH2	DIN HRC fuse link	**1 122.44**
370375	355A	550VDC	30kA	gBat	NH2	DIN HRC fuse link	**1 332.90**
370380	400A	550VDC	30kA	gBat	NH2	DIN HRC fuse link	**1 360.50**
370465	500A	550VDC	30kA	gBat	NH3	DIN HRC fuse link	**1 927.47**
370470	630A	550VDC	30kA	gBat	NH3	DIN HRC fuse link	**2 125.27**

Accessories for NH fuse links

Microswitch for NH fuses *(mounts directly onto fuse links)*

357010	5A	250VAC	1 pole	micro switch for all sizes NH fuses	**409.42**
340001	handle	universal fuse replace/removal handle		for all sizes NH fuses	**350.77**

ST fuse holders for NH PV fuse links - 1000 VDC

354172	250A	1000 VDC	1 pole	gPV	NH1	photovoltaic fuse base	**363.42**
354175	400A	1000 VDC	1 pole	gPV	NH2	photovoltaic fuse base	**779.73**
354180	500A	1000 VDC	1 pole	gPV	NH3	photovoltaic fuse base	**890.13**

Solid NH Neutral Links

341100	160A	690V	1 pole	NH000/00	neutral link blades	**126.51**
341250	250A	690V	1 pole	NH1	neutral link blades	**194.36**
341400	400A	690V	1 pole	NH2	neutral link blades	**230.01**
341630	630A	690V	1 pole	NH3	neutral link blades	**292.11**
340125	1250A	690V	1 pole	NH4	neutral link blades	**1 081.04**

371270

365070

365280

365395

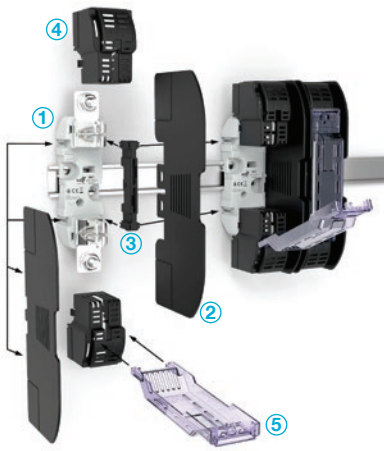
Semiconductor NH fuse links

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: 100kA
- 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*							
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	100kA	gS	NH000	semiconductor fuse link	**572.87**
371030	25A	690V	100kA	gS	NH000	semiconductor fuse link	**446.22**
371035	32A	690V	100kA	gS	NH000	semiconductor fuse link	**462.32**
371045	40A	690V	100kA	gS	NH000	semiconductor fuse link	**469.22**
371050	50A	690V	100kA	gS	NH000	semiconductor fuse link	**477.27**
371055	63A	690V	100kA	gS	NH000	semiconductor fuse link	**496.82**
371060	80A	690V	100kA	gS	NH000	semiconductor fuse link	**539.37**
371065	100A	690V	100kA	gS	NH000	semiconductor fuse link	**564.67**
371070	125A	690V	100kA	gS	NH00	semiconductor fuse link	**768.23**
371075	160A	690V	100kA	gS	NH00	semiconductor fuse link	**773.98**
371260	200A	690V	100kA	gS	NH1	semiconductor fuse link	**1 098.29**
371270	250A	690V	100kA	gS	NH1	semiconductor fuse link	**1 243.19**
371370	315A	690V	100kA	gS	NH2	semiconductor fuse link	**1 876.86**
371375	355A	690V	100kA	gS	NH2	semiconductor fuse link	**1 996.47**
371380	400A	690V	100kA	gS	NH2	semiconductor fuse link	**2 226.47**
371465	500A	690V	100kA	gS	NH3	semiconductor fuse link	**2 895.80**
371470	630A	690V	100kA	gS	NH3	semiconductor fuse link	**3 517.97**
*Fuse bases for above fuse links (see page **B-54**)*							
RAPIDPLUS NH aR - *high speed fuse links for semiconductors*							
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.							
365020	16A	690V	120kA	aR	NH000	semiconductor fuse link	**484.17**
365025	20A	690V	120kA	aR	NH000	semiconductor fuse link	**488.77**
365030	25A	690V	120kA	aR	NH000	semiconductor fuse link	**491.07**
365035	32A	690V	120kA	aR	NH000	semiconductor fuse link	**491.07**
365045	40A	690V	120kA	aR	NH000	semiconductor fuse link	**491.07**
365050	50A	690V	120kA	aR	NH000	semiconductor fuse link	**499.12**
365055	63A	690V	120kA	aR	NH000	semiconductor fuse link	**499.12**
365060	80A	690V	120kA	aR	NH000	semiconductor fuse link	**518.67**
365065	100A	690V	120kA	aR	NH000	semiconductor fuse link	**545.12**
365070	125A	690V	120kA	aR	NH000	semiconductor fuse link	**581.92**
365075	160A	690V	120kA	aR	NH000	semiconductor fuse link	**708.43**
365080	200A	690V	120kA	aR	NH000	semiconductor fuse link	**745.23**
365085	250A	690V	120kA	aR	NH000	semiconductor fuse link	**818.83**
365270	250A	690V	120kA	aR	NH1	semiconductor fuse link	**1 090.24**
365280	315A	690V	120kA	aR	NH1	semiconductor fuse link	**1 090.24**
365282	350A	690V	120kA	aR	NH1	semiconductor fuse link	**1 090.24**
365290	400A	690V	120kA	aR	NH1	semiconductor fuse link	**1 090.24**
365380	400A	690V	120kA	aR	NH2	semiconductor fuse link	**1 777.96**
365390	500A	690V	120kA	aR	NH2	semiconductor fuse link	**1 896.41**
365395	630A	690V	120kA	aR	NH2	semiconductor fuse link	**1 896.41**
365475	800A	690V	120kA	aR	NH3	semiconductor fuse link	**2 630.14**
365485	1000A	690V	120kA	aR	NH3	semiconductor fuse link	**2 771.59**
*For semi-conductor derating tables, see **Annex-7***							




353102


326250


325250


354115

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	**111.56**
352115*	160A	NH000/00	1 pole	industrial NH fuse base	1	**123.06**
352300	250A	NH1	1 pole	industrial NH fuse base	1	**317.41**
352400	400A	NH2	1 pole	industrial NH fuse base	1	**612.64**
352630	630A	NH3	1 pole	industrial NH fuse base	1	**782.46**
354125	1250A	NH4	1 pole	industrial NH fuse base	1	**3 062.11**
Three pole *(supplied with separating phase barriers between phases)* ①						
353102*	160A	NH000/00	3 pole	industrial NH fuse base	1	**357.67**
353300	250A	NH1	3 pole	industrial NH fuse base	1	**1 075.29**
353400	400A	NH2	3 pole	industrial NH fuse base	1	**2 042.12**
353630	630A	NH3	3 pole	industrial NH fuse base	1	**2 381.76**
* *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	**127.66**
334160	250A	NH1	1 pole	sectionable neutral terminal	1	**169.06**
334251	630A	NH3	1 pole	sectionable neutral terminal	1	**251.86**
Partition walls - *(NH00/1/2/3 require connectors to mount)* ②						
326100	160A	NH00		partition walls for fuse bases	2	**63.26**
326200	200A	NH1		partition walls for fuse bases	2	**110.41**
326250	250A	NH2		partition walls for fuse bases	2	**118.46**
326630	630A	NH3		partition walls for fuse bases	2	**141.46**
343125*	1250A	NH4		partition walls for fuse bases	1	**207.01**
* *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	**25.19**
325250	250A	NH1		separators for fuse bases	2	**54.82**
325400	400A	NH2		separators for fuse bases	2	**40.26**
325630	630A	NH3		separators for fuse bases	2	**71.31**
Terminal covers - *(to protect connection terminals of fuse holders)* ④						
325000	160A	NH00	1 pole	terminal cover for bases	6	**141.46**
325005	250A	NH1	1 pole	terminal cover for bases	6	**213.91**
325003	400A	NH2	1 pole	terminal cover for bases	6	**311.66**
325007	630A	NH3	1 pole	terminal cover for bases	6	**522.12**
Fuse-link covers - *(connects onto terminal covers)* ⑤						
325010	160A	NH00		hinged covers for fuse link	3	**102.36**
325018	160A	NH1		hinged covers for fuse link	3	**87.63**
325020	250A	NH2		hinged covers for fuse link	3	**154.11**
325025	630A	NH3		hinged covers for fuse link	3	**224.26**
Complete fuse base protection kits *(for fuse and terminal insulation protection IP20)*						
• Comprises - partition walls - terminal cover - fuse cover						
325009*	160A	NH00	3 pole	integral terminal cover	1	**111.56**
325030	160A	NH00	1 pole	IP20 full protection kit	1	**147.21**
325042	250A	NH1	3 pole	IP20 full protection kit	1	**525.57**
325046	400A	NH2	3 pole	IP20 full protection kit	1	**547.42**
325051	630A	NH3	3 pole	IP20 full protection kit	1	**1 040.79**

* Partition wall incorporated. *Fuse covers **325010** to be ordered separately.*


63-823191-021


63-823267-001


63-823234-041


63-001417-002

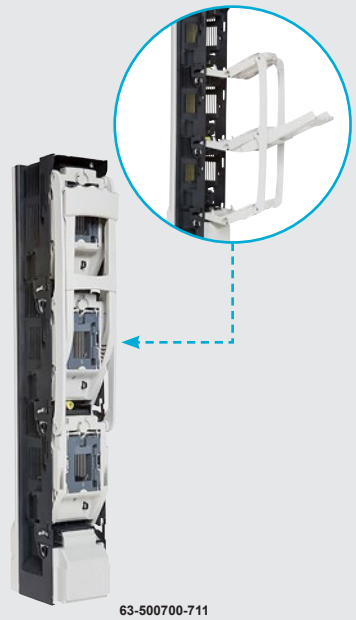
Horizontal fuse switch disconnectors

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 Un 690 V
- Insulation voltage Ui 1000 V
- Rated impulse withstand voltage Uimp 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

type	model	No. poles	fuse size	rated current	cable terminal	dimensions (mm) (H)	(W)	(D)	price
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	000	160A	M8	181	89	92	**832.63**
63-823256-121	RBK 00 pro-M	3	00	160A	M8	182	106	81	**746.99**
63-811748-021	RBK 1 pro-M	3	1	250A	M10	269	180	111	**2 828.88**
63-811685-061	RBK 2 pro-M	3	2	400A	M10	298	208	130	**3 388.01**
63-811761-021	RBK 3 pro-M	3	3	630A	M12	307	250	144	**4 776.10**
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 Uimp 6 kV									
63-823267-001	RBP 000 pro	3	000	125A	clamp	216	53	83	**939.58**
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 fibre glass reinforced, halogen free, flame retardant polyamide • Termination: Bottom of switch *(top terminals available on request)*									
63-823234-041	RBK 000-SD-M	3	000	160A	M8	191	89	112	**1 469.75**
63-823259-141	RBK 00 pro-SD-M	3	00	160A	M8	214	106	110	**1 374.30**
63-811750-061	RBK 1 pro-SD-M	3	1	250A	M10	243	180	140	**3 400.66**
63-811686-061	RBK 2 pro-SD-M	3	2	400A	M10	298	208	154	**5 056.71**
63-028802-003	RBK 3 pro-SD-M	3	3	630A	M12	307	250	137	**6 263.10**
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	000	125A	clamp	214	53	108	**1 238.59**
Accessories for above RBK fuse switch disconnectors									
1115296311T	Auxiliary contact	000/00			switch for door position status				**106.96**
1115296316	Auxiliary contact	1/2/3			switch for door position status				**143.76**
51-930160-011	extended cover	000			termination extended cover *(25 mm)*				**65.56**
51-930499-011	extended cover	00			termination extended cover *(25 mm)*				**65.56**
PBS - Vertical fuse rails for installation on 185 mm busbar system									
PBS fuse bases 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 fibre glass reinforced, halogen free, flame retardant polyamide • IP 20 touch protection with fuse link shrouds									
63-001417-002	PBS 00-SM	3	00	160A	M8	674	49	162.5	**1 505.40**
63-500600-601	PBS 1-M	3	1	250A	M12	657	100	144	**2 410.48**
63-500600-611	PBS 2-M	3	2	400A	M12	657	100	144	**2 640.49**
63-500600-621	PBS 3-M	3	3	630A	M12	657	100	144	**3 492.66**
Accessories for fuse rails									
51-001312-001	fuse link shroud	1	00		for PBS 00 fuse rail *(each)*				**55.21**
51-500600-108	fuse link shroud	1	1,2,3		for PBS 1/2/3 fuse rail *(each)*				**85.11**

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 Un	690 V
• Insulation voltage Ui	1000 V
• Rated impulse withstand voltage Uimp	8 kV
• Padlockable	in parked and closed position
• Voltage test facility	*(performed through test holes in fuselink 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) (H)	(W)	(D)	price
ARS pro - Vertical mounted fuse switch disconnectors									
ARS pro vertical fuse switch disconnectors 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	00	160A	M8	401	50	132	**2 060.87**
ARS 00/100 - Fuse switch disconnectors for installation on 100 mm busbar system									
63-811628-041	ARS 00/100 M-pro	3	00	160A	M8	423	50	127	**1 679.06**
ARS evo - Fuse switch disconnectors for installation on 185 mm busbar system									
The new ARS evo range of fuse switch disconnectors are designed incorporating latest technology and many years of switchgear manufacturing experience offering outstanding Safety, Functionality and Flexibility features									
Safety: Stable and safe power distribution network; Parking position; Fuse link removable without touching it; Improved heat dissipation									
Functionality: Simple to install; Non-paralell 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 Un	690 V								
• Insulation voltage Ui	1000 V								
• Rated impulse withstand voltage Uimp	8kV (ARS 00) 12kV (ARS2/3)								
63-500750-703	ARS 00-3-M evo	3	00	160A	M8	684	50	155	**1 883.76**
63-500700-711	ARS 2-6-M evo	3	2	400A	M12	667	100	174	**4 206.84**
63-500700-721	ARS 3-6-M evo	3	3	630A	M12	667	100	174	**5 376.15**
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 800V AC.									
• Rated operational voltage Un	800 V								
• Insulation voltage Ui	1000 V								
• Rated impulse withstand voltage Uimp	8kV (00) / 12kV (2/3)								
63-073821-001	smartARS 00 pro-PV	3	00	80A	M8	684	50	151	**2 626.69**
63-073822-003	smartARS 2-M pro-PV	3	1.2	200A	M12	686	99	19	**5 320.07**
63-073822-004	smartARS 3-M pro-PV	3	3	400A	M12	686	99	191	**5 652.43**
Accessories									
1115296318T	1 NO micro switch		2/3	–	–	–	–	–	**111.56**
1115296319T	1 NC micro switch		2/3	–	–	–	–	–	**111.56**
51-500700-109	terminal shroud		2/3	–	–	–	–	–	**371.47**


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	
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) (H)	(W)	(D)	price
NH - Fuse switch disconnector *(panel mounting)* **IP30**									
• Rated operational voltage: 690 V • Insulation voltage Ui: 1000 V • Rated impulse withstand Uimp: 8 kV									
NH00 - Fuse switch disconnector									
143017	1	00	160A	M8	fuse switch disconnector	184	42	84	**571.57**
143018	2	00	160A	M8	fuse switch disconnector	184	84	84	**995.94**
NH1 - Fuse switch disconnector									
143119	1	1	250A	M10	fuse switch disconnector	184	71	84	**1 411.10**
143118	2	1	250A	M10	fuse switch disconnector	184	142	84	**2 749.74**
Accessories for above switch disconnectors									
140149	1/2	00			cable termination cover for NH00 switches		*(2 pcs)*		**113.86**
140354	1/2	1			cable termination cover for NH1 switches		*(2 pcs)*		**250.71**
140155	1/2	00/1			cover sealing set for switch disconnector		sizes 00 & 1		**227.71**
140852	1/2				monitoring switch for door position status		all sizes		**258.76**
60 mm busbar system									
Busbar supports					*for busbars (W) 12 - 30 mm x (D) 5/10 mm*				
106300	3				busbar support for 12 - 30 mm x 5/10 mm bars	185	17	43	**334.27**
106302*	1				busbar support for 12 - 30 mm x 5/10 mm bars	77	17	43	**260.11**
* *1 pole unit can be attached to each other for two pole or a 3 pole to make a 4 pole support*									
Busbar terminal protection covers									
106096	3				busbar protection cover 16…50 mm²	201	54	44	**484.74**
106097	3				busbar protection cover 16…70 mm²	201	108	80	**551.38**
106098	3				busbar protection cover 16…185 mm²	201	108	80	**592.22**
Busbar mounting terminals									
116053	315A				5 mm terminal 10…50 mm²		for ***106096***		**50.61**
116054	400A				5 mm terminal 16…70 mm²		for ***106097***		**57.51**
116063	315A				10 mm terminal 16…70 mm²		for ***106096***		**58.66**
116064	400A				10 mm terminal 16…70 mm²		for ***106097***		**70.16**
116065	440A				10 mm terminal 16…120 mm²		for ***106098***		**118.46**
Component adaptors					*for direct mounting on 60 mm system busbars*				
106521	3	1 rail	25A	4 mm²	component adaptor	207	45		**554.32**
106523	3	2 rails	25A	4 mm²	component adaptor	260	45		**721.08**
106526	3	1 rail	32A	6 mm²	component adaptor	207	54		**662.43**
106528	3	2 rails	32A	6 mm²	component adaptor	260	54		**847.58**
106530	3	1 rail	32A	6 mm²	component adaptor	207	72		**838.38**
106531	3	2 rails	32A	6 mm²	component adaptor	260	72		**922.33**
106533	3	1 rail	63A	10 mm²	component adaptor	207	54		**760.18**
106535	3	2 rails	63A	10 mm²	component adaptor	260	54		**854.48**
106537	3	1 rail	63A	10 mm²	component adaptor	207	72		**857.93**
106538	3	2 rails	63A	10 mm²	component adaptor	260	72		**922.33**
106539	3	2 rails	63A	10 mm²	component adaptor	207	81		**999.39**
106544	3	2 rails	80A	16 mm²	component adaptor	260	72		**1 179.94**
Protection cover for 60 mm system									
126074	3				bar mounted cover support bracket				**159.86**
126075	3				panel front cover protection 1000 mm			2met	**905.08**
Busbar support for 100 and 185 mm system									
188100	3	100 mm			busbar support for 30 - 60 mm x 10 mm bars	324	28	50	**655.53**
188101	3	185 mm			busbar support for 30 - 120 mm x 10 mm bars	573	28	50	**837.23**
188102	1	100/185			busbar support for 30 - 120 mm x 10 mm bars	224	25	50	**617.57**


FGN...


FSA


FSS...


FSDCP...


FSFP...


FSK...

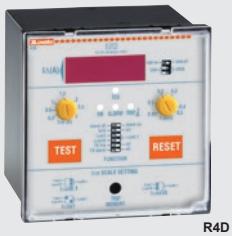

FMF...


FTM...

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	80kA	offset blade	14.2 mm	NS	**28.64**
FGN 04A	4A	F1/NP	500V	80kA	offset blade	14.2 mm	NS	**28.64**
FGN 06A	6A	F1/NP	500V	80kA	offset blade	14.2 mm	NS	**28.64**
FGN 10A	10A	F1/NP	500V	80kA	offset blade	14.2 mm	NS	**28.64**
FGN 16A	16A	F1/NP	500V	80kA	offset blade	14.2 mm	NS	**28.64**
FGN 20A	20A	F1/NP	500V	80kA	offset blade	14.2 mm	NS	**28.64**
FGN 25A	25A	F1/NP	500V	80kA	offset blade	14.2 mm	NS	**28.64**
FGN 32A	32A	F1/NP	500V	80kA	offset blade	14.2 mm	NS	**28.64**
Off-set bolted tag (A2)								
• Body length 86 mm								
FSA 02A	2A	A2	500V	80kA	73 mm	21.5 mm	TIA	**57.51**
FSA 04A	4A	A2	500V	80kA	73 mm	21.5 mm	TIA	**57.51**
FSA 06A	6A	A2	500V	80kA	73 mm	21.5 mm	TIA	**57.51**
FSA 10A	10A	A2	500V	80kA	73 mm	21.5 mm	TIA	**57.51**
FSA 16A	16A	A2	500V	80kA	73 mm	21.5 mm	TIA	**57.51**
FSA 20A	20A	A2	500V	80kA	73 mm	21.5 mm	TIA	**57.51**
FSA 25A	25A	A2	500V	80kA	73 mm	21.5 mm	TIA	**57.51**
FSA 32A	32A	A2	500V	80kA	73 mm	21.5 mm	TIA	**57.51**
Off-set bolted tag (A3)								
• Body length 90 mm								
FSS 40	40A	A3	500V	80kA	73 mm	21.5 mm	TIS	**67.86**
FSS 50	50A	A3	500V	80kA	73 mm	21.5 mm	TIS	**67.86**
FSS 63	63A	A3	500V	80kA	73 mm	21.5 mm	TIS	**67.86**
Off-set bolted tag (A4)								
• Body length 111 mm								
FSDCP 63	63A	A4	500V	80kA	94 mm	32 mm	TCP	**143.76**
FSDCP 80	80A	A4	500V	80kA	94 mm	32 mm	TCP	**143.76**
FSDCP 100	100A	A4	500V	80kA	94 mm	32 mm	TCP	**143.76**
Off-set bolted tag (A4)								
• Body length 111 mm								
FSFP 125	125A	A4a	500V	80kA	94 mm	39.5 mm	TFP	**209.31**
FSFP 160	160A	A4a	500V	80kA	94 mm	39.5 mm	TFP	**209.31**
FSFP 200	200A	A4a	500V	80kA	94 mm	39.5 mm	TFP	**209.31**
Central bolted tag (B2)								
• Body length 132 mm								
FSF 160	160A	B2	500V	80kA	111 mm	39.5 mm	TF	**196.66**
FSF 200	200A	B2	500V	80kA	111 mm	39.5 mm	TF	**201.26**
Central bolted tag (B3)								
• Body length 136 mm								
FSK 250	250A	B3	500V	120kA	111 mm	50.5 mm	TKF	**353.07**
FSK 315	315A	B3	500V	120kA	111 mm	50.5 mm	TKF	**353.07**
Central bolted tag (B4)								
• Body length 136 mm								
FMF 355	355A	B4	500V	80kA	111 mm	50.5 mm	TMF	**419.77**
FMF 400	400A	B4	500V	80kA	111 mm	50.5 mm	TMF	**419.77**
Central bolted tag (C2)								
• Body length 208 mm								
FTM 500	500A	C2	500V	80kA	133/184 mm	70.2 mm	TTM	**893.58**
FTM 600	600A	C2	500V	80kA	133/184 mm	70.2 mm	TTM	**893.58**



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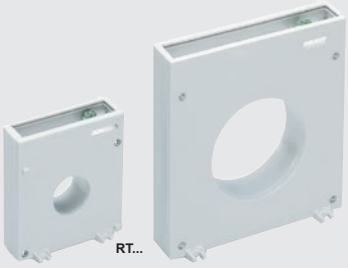
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RC80 415


G-CHECK 230

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 (IΔn): 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
Panel mount earth leakage relays - *(96 x 96 mm)*				
Require torroidal current transformers *(listed below)*				
R1D 1 operational threshold				
R1D 415	110 - 240 - 415V	1	earth leakage 1 operational threshold	**3 777.87**
R2D 2 operational thresholds		*(configurable for 2 tripping or 1 + alarm)*		
R2D 415	110 - 240 - 415V	2	earth leakage 2 operational threshold	**9 375.10**
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	**13 800.44**

Toroidal current transformers for above earth leakage relays

type	supply voltage	hole size	description	price
RT60	toroid	60 mm	torroidal transformer for above relays	**1 771.06**
RT80	toroid	80 mm	torroidal transformer for above relays	**2 173.57**
RT110	toroid	110 mm	torroidal transformer for above relays	**2 282.83**
RT210	toroid	210 mm	torroidal transformer for above relays	**5 869.79**
RTA110	toroid	110 mm	split-core torroidal transformers	**6 194.10**
RTA210	toroid	210 mm	split-core toroidal transformers	**7 823.70**
Earth leakage relay incorporating torroidal transformer				
RC60 48	24 - 48 VAC/DC	60 mm	earth leakage and torroidal combinations	**8 805.83**
RC60 415	110 - 240 - 415V	60 mm	earth leakage and torroidal combinations	**5 424.72**
RC80 415	110 - 240 - 415V	80 mm	earth leakage and torroidal combinations	**5 941.09**
RC110 415	110-240-415V	110 mm	earth leakage and torroidal combinations	**6 350.50**

CPT cirprotec

V-CHECK MR - Surge protection + POP + self reclose MCB in a single unit

- Automatic recloser - ideal for installation panels requiring continuity of service and for second homes

type	surge protection device		POP	MCB		general			price
	Imax L-N (kA)	Up L-N (kV)	Ua (V)	C curve (In)	break capacity	poles	config.	mod. (18 mm)	
• Self-reclose MCB *(automatically resets once fault is cleared)*									
• Power frequency Overvoltage Protection (POP) • Overload and short circuit protection									
V-Check 2MR-25	15 kA	1.5 kV	>275 V	25A	6 k A	2	1ph+N	5	**7 124.48**
V-Check 2MR-40	15 kA	1.5 kV	>275 V	40A	6 kA	2	1ph+N	5	**7 959.40**
V-Check 4MR-16	20 kA	1.5 kV	>275 V	16A	10 kA	4	3ph+N	9	**13 282.92**
V-Check 4MR-63	20 kA	1.5 kV	>275 V	63A	10 kA	4	3ph+N	9	**17 227.54**
V-Check RC - SPD+POP protection disconnecting the circuit via a contactor									
V-Check 4RC	40 kA	1.8 kV	>275 V	*(without MCB)*		4	3ph+N	4	**9 574.05**

G-Check earthing installation monitor

G-CHECK is a device for continuous monitoring of earthing system installations in DIN rail format for panel installations. Complies with standard IEC 61010-I.

type	voltage	frequency	alarm activation value	max. measured value	price
G-CHECK 230	230 V	50/60 Hz	adjustable	500 ohms	**10 476.83**


4941 3723

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% (IΔn)*
- Adjustment of IΔn: 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 IΔn	time delay (sec)	power supply	description	price
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	**4 153.94**
4941 3740	0.03 - 30A	0 - 10	400 VAC	electronic earth leakage relay	**3 967.63**
4941 3602	0.03 - 30A	0 - 10	12 - 125 VDC	electronic earth leakage relay	**4 237.89**


4941 3724

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	**4 153.94**
4941 3741	0.03 - 30A	0 - 10	400 VAC	reclosing earth leakage relay	**3 967.63**

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	**5 458.08**


4942 3723

Core balance transformers *(torroidal 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) (H)	(W)	(D)	price
4950 6030	30 mm	core balance transformer for e/leakages	104	92	26	**1 822.81**
4950 6050	50 mm	core balance transformer for e/leakages	125	103	26	**2 495.58**
4950 6080	80 mm	core balance transformer for e/leakages	143	116	26	**2 801.49**
4950 6120	120 mm	core balance transformer for e/leakages	183	163	26	**3 896.33**
4950 6200	200 mm	core balance transformer for e/leakages	274	253	51	**8 259.56**

Larger aperture sizes available on request.

Accessories *for above*

Cable locator

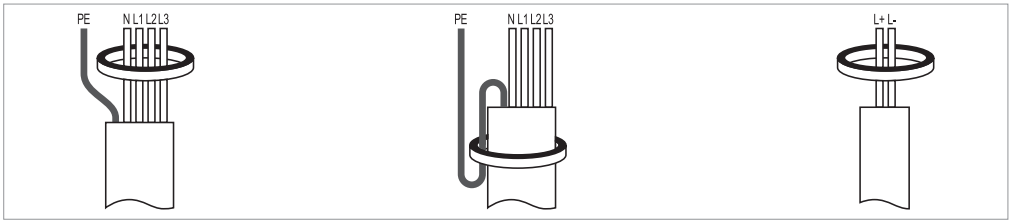
Enables cables passing through torroids to be centred *(for direct cable mounting)*

4950 0011	30 mm	for directly mounting transformers onto cables	**458.87**
4950 0012	50 mm	for directly mounting transformers onto cables	**806.18**
4950 0013	80 mm	for directly mounting transformers onto cables	**1 537.60**
4950 0014	120 mm	for directly mounting transformers onto cables	**1 822.81**
4950 0031		DIN-rail clip *(for DIN rail mounting core balance transformers)*	**159.86**


4950 6080

Implementation *(Installation of the detection torroids)*

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



PSM1-40/230

PSM2-40/230 TT

PSM4-40/400 TT

PSM-40/230

PSM2-40/230 SG

Modular plug-in surge protection devices (SANS/IEC 61643-11)

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 in switching of distribution networks, transformers, motors, etc.

- Provides protection for even most sensitive equipment (IEC 60634-4-443 category-1)
- Clear lifetime indication *(on front face)* and optional remote (IR) end of life signalling contact
- Meets all current international standards *(IEC 61643 / IEC 62305, etc.)*
- Plug-in cartridges for quick and easy replacement of damaged cartridges
- Suitable for all types of applications: residential, commercial and industrial

type	(8/20 µs) L-N (Imax)	max. volts L-N (Uc)	voltage protection (Up)	poles	config.	with signal contact	width in 18 mm	price
Type 2 / Class II surge protection devices								
Ability to discharge induced voltage surges (8/20 µs). Suitable for second level protection in supply distribution panels in which Type 1 protectors are installed, or first level of protection for applications not exposed to direct strikes and with no external lightning protection system. IEC 61643-11.								
• High discharge capacity tested with an 8/20 µs waveform: 20kA or 40 kA per phase • Provides protection for most sensitive equipment *(IEC 60634-4-443 category 1)*								
Imax 20kA (8/20µs)								
PSM1-20/230	20 kA	320 V	≤ 1.4 kV	1	1ph	–	1	
PSM1-20N	20 kA	265 V	≤ 1.5 kV	1	N	–	1	
PSM2-20/230 TT	20 kA	320 V	≤ 1.4 kV	2	1ph+N	–	2	
PSM2-20/230 TTIR	20 kA	320 V	≤ 1.4 kV	2	1ph+N	signal	2	
PSM4-20/400 TT	20 kA	320 V	≤ 1.4 kV	4	3ph+N	–	4	
PSM4-20/400 TTIR	20 kA	320 V	≤ 1.4 kV	4	3ph+N	signal	4	
Imax 40kA (8/20µs)								
PSM1-40/230	40 kA	275 V	≤ 1.3 kV	1	1ph	–	1	
PSM1-40N	40 kA	265 V	≤ 1.5 kV	1	N	–	1	
PSM2-40/230 TT	40 kA	275 V	≤ 1.3 kV	2	1ph+N	–	2	
PSM2-40/230 TTIR	40 kA	275 V	≤ 1.3 kV	2	1ph+N	signal	2	
PSM4-40/400 TT	40 kA	275 V	≤ 1.3 kV	4	3ph+N	–	4	
PSM4-40/400 TTIR	40 kA	275 V	≤ 1.3 kV	4	3ph+N	signal	4	
Class 2 surge protection devices for higher voltage applications (500 - 690V)								
• Rated varistor voltage Uc = 750 VAC / Imax 30kA (8/20µs) Un 690 VAC								
PSM1-30/750	30 kA	750 V	≤ 3.0 kV	1	1ph	–	1	
PSM1-30/750 IR	30 kA	750 V	≤ 3.0 kV	1	1ph	signal	1	
PSM3-30/750 TNC	30 kA	750 V	≤ 3.0 kV	3	3ph	–	1	
PSM3-30/750 TNCIR	30 kA	750 V	≤ 3.0 kV	3	3ph	signal	1	
Spare replacement plug-in cartridges for Type 2 surge arrestors								
PSM-20/230	20 kA	320 V	< 1.4 kV	–	PSM1/2/4-20 phase			
PSM-40/230	40 kA	275 V	< 1.3 kV	–	PSM1/2/4-40 phase			
PSM-30/750	30 kA	750 V	< 3.0 kV	–	PSM1/3-30 phase			
PSM-20N	20 kA	255 V	< 1.5 kV	–	PSM1/2/4-20 neutral			
PSM-40N	40 kA	255 V	< 1.5 kV	–	PSM1/2/4-40 neutral			
PSM SAFEGROUND								
DIN - rail device for monitoring the earthing system from within the actual surge protection device. SAFEGROUND technology is based on the loop impedance monitoring sending current pulses to check the status of the grounding system and provide information regarding the proper wiring of the device and the existence of an adequate path to ground for the SPD itself to protect effectively.								
• Confirms the device is properly installed and how effective the surge protection is • Indication of the status of the earth loop via multi-state LEDs • High discharge capacity with an 8/20 µs waveform. Imax: 40 kA - Green: Correct earth connection - Yellow: Poor earth connection - Red: No earth connection								
PSM2-40/230 SG	40 kA	275 V	≤ 1.3 kV	2	1ph+N	–	2	
PSM4-40/400 SG	40 kA	275 V	≤ 1.3 kV	4	3ph+N	–	4	

*see page **N-13** for pricing.*

PSC2-12.5/230 TT

PSC4-25/400 TTIR

PSM3-40/1000 PV

PSC 12.5/230

Modular plug-in surge protection devices (SANS/IEC 61643-11)

Type 1+2 / Class I+II lightning current and surge arrestor *(combined in a single device)*

Suitable for first level protection of incoming power supply panels in areas with greater exposure to lightning. For installations usually provided with external lightning protection systems. Able to discharge lightning currents (10/350 µs) and induced voltage surges (8/20 µs) IEC 61643-11

- Capable of protecting equipment from direct lightning strikes
- Discharges impulse currents with a 10/350 µs waveform. Iimp: 12.5 kA or 25 kA per phase
- Clear lifetime indication (on front face) and optional remote (IR) end of life signalling contact
- Provides protection for most sensitive equipment *(IEC 60634-4-443 category 1)*

type	10/350 µs L-N (Iimp)	(8/20 µs) L-N (Imax)	max. volts L-N (Uc)	voltage protection (Up)	poles	config.	width in 18 mm	price
Type 1+2 / Class I+II lightning current and surge arrestor *(combined in a single device)*								
limp (10/350) 12.5kA per phase, I total 25kA (2 pole) and 50kA (4 pole)								
PSC2-12.5/230 TT	12.5 kA	65 kA	275 V	≤ 1.3 kV	2	1ph+N	2	
PSC2-12.5/230 TTIR	12.5 kA	65 kA	275 V	≤ 1.3 kV	2	1ph+N	2	
PSC4-12.5/400 TT	12.5 kA	65 kA	275 V	≤ 1.3 kV	4	3ph+N	4	
PSC4-12.5/400 TTIR	12.5 kA	65 kA	275 V	≤ 1.3 kV	4	3ph+N	4	
limp (10/350) 25kA per phase, I total 50kA (2 pole) and 100kA (4 pole)								
PSC2-25/230 TT	25 kA	100 kA	275 V	≤ 1.5 kV	2	1ph+N	4	
PSC2-25/230 TTIR	25 kA	100 kA	275 V	≤ 1.5 kV	2	1ph+N	4	
PSC4-25/400 TT	25 kA	100 kA	275 V	≤ 1.5 kV	4	3ph+N	8	
PSC4-25/400 TTIR	25 kA	100 kA	275 V	≤ 1.5 kV	4	3ph+N	8	

***(IR)** last two digits - with signalling contacts for remote indication/monitoring of devices*

Surge protection devices for photovoltaic (PV) installations **1000/1500 VDC**

PSM PV is the range of devices for discharging induced transient overvoltages (Type 2 / Class II) for Photovoltaic installations, in accordance with EN 50539-11, UL 1449 certified.

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 electrical networks of buildings, surge protection is essential.

Type 2 / Class II - photovoltaic surge protection devices

Suitable for protection where no external protection is installed. Protection should be installed on the DC and AC side of an installation.

*see page **N-14** for pricing.*

- Clear lifetime indication *(on front face)* and optional remote (IR) end of life signalling contact
- Plug-in cartridges for quick and easy replacement of damaged ones
- Suitable for PV applications: large-scale, rooftop and self-consumption *(off-grid)* DC installations.
- No back-up fuse required due to dynamic thermal disconnect system - capacity of 10kA (Iscpv)

1000/1500 VDC photovoltaic surge protection device							
PSM3-40/1000 PV	–	40 kA	1060 V	≤ 4.0 kV	3	L+/PE/L-	3
PSM3-40/1000 PVIR	–	40 kA	1060 V	≤ 4.0 kV	3	L+/PE/L-	3
PSM3-40/1500 PV	–	40 kA	1500 V	≤ 5.0 kV	3	L+/PE/L-	3
PSM3-40/1500 PVIR	–	40 kA	1500 V	≤ 5.0 kV	3	L+/PE/L-	3

Type 1+2 / Class I+II photovoltaic surge protection devices *(combined in a single device)*

PSC PV is a combined device for discharging lightning currents *(Type 1 / Class I)* and protecting against induced transient overvoltages *(Type 2 / Class II)* for Photovoltaic installations, in accordance with EN 50539-11. DIN rail plug-in format.

- Protection for combiner boxes in areas with greater exposure to the atmosphere
- Exclusive device for photovoltaic systems according to EN 50539-11
- No back-up fuse required due to dynamic thermal disconnect system - capacity of 10kA (Iscpv)

1000 VDC photovoltaic surge protection device							
PSC3-5/1000 PV	5 kA	40 kA	1060 V	≤ 4.0 kV	3	L+/PE/L-	3
PSC3-5/1000 PVIR	5 kA	40 kA	1060 V	≤ 4.0 kV	3	L+/PE/L-	3

***(IR)** last two digits - with signalling contacts for remote indication/monitoring of devices*

Spare replacement plug-in cartridges for surge arrestors					type	
PSC 12.5/230	12.5 kA	65 kA	275 V	< 1.3 kV	1+2	PSC2/4 - 12.5 ph
PSC 25/230	25 kA	100 kA	275 V	< 1.5 kV	1+2	PSC2/4 - 25 ph
PSC 50N2	50 kA	65 kA	255 V	< 1.5 kV	1+2	PSC2 - 25 neutral
PSC 100N	100 kA	100 kA	255 V	< 1.5 kV	1+2	PSC4 - 25 neutral
PSM-40/1000 PV	–	40 kA	1170 V	< 2.0 kV	2	PSC3 - 40 PV
PSC-5/1000 PV	5 kA	40 kA	1060 V	≤ 4.0 kV	1+2	PSC3-12.5 PV

N - Safety


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	DEHN type	(10/350 µs) L-N (limp)	(8/20 µs) L-N (In)	max. volts L-N (Uc)	voltage protection (Up)	config	width in 18 mm	price
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	shield	12.5 kA	12.5 kA	255 V	≤ 1.5kV	1ph+N	2	
954115*	ventil M2	25 kA	25 kA	264 V	≤ 1.5kV	1ph+N	4	
941310	shield	12.5 kA	12.5 kA	255 V	≤ 1.5kV	3ph+N	4	
954315*	ventil M2	25 kA	25 kA	264 V	≤ 1.5kV	3ph+N	4	
DEHN Type 1+2 combined lightning current and surge protection *with integrated back up fuse*								
961200	ven CI	25 kA	–	255 V	≤ 1.5kV	ph	2	
961205*	ven CI	25 kA	25 kA	255 V	≤ 1.5kV	ph	2	
Type 1 lightning current protection *with integrated backup fuse*								
961146*	bloc maxi	35 kA	–	440 V	≤ 2.5kV	ph	3	
961176*	bloc maxi	35 kA	–	760 V	≤ 4kV	ph	3	
Type 1 lightning current protection *without integrated backup fuse*								
961145*	bloc	35 kA	–	440 V	≤ 2.5kV	ph	3	
DEHN N-PE								
961180	gap maxi	100 kA	–	255 V	≤ 1.5kV	N	2	
961185*	gap maxi	100 kA	–	255 V	≤ 1.5kV	N	2	
952030	gap	–	20 kA	255 V	≤ 1.5kV	N	1	
952035*	gap	–	20 kA	255 V	≤ 1.5kV	N	1	
* *With signalling contacts for remote indication/monitoring of devices*								
DEHN Type 2 surge protection devices *without integrated back up fuse*								
Minimum requirement as per SANS 10142-1:2008 Anex 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	guard	–	20 kA	275 V	≤ 1.5kV	ph	1	
952090*	guard	–	20 kA	275 V	≤ 1.5kV	ph	1	
952110	guard	12 kA	20 kA	275 V	≤ 1.5kV	1ph+N	2	
952115*	guard	12 kA	20 kA	275 V	≤ 1.5kV	1ph+N	2	
952310	guard	12 kA	20 kA	275 V	≤ 1.5kV	3ph+N	4	
952315*	guard	12 kA	20 kA	275 V	≤ 1.5kV	3ph+N	4	
* *With signalling contacts for remote indication/monitoring of devices*								
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	guard ACI	–	20 kA	275 V	<1.5 kV	3ph+N	4	
952121	guard ACI	–	20 kA	275 V	<1.5 kV	1ph+N	2	
952100	guard ACI	–	20 kA	275 V	<1.5 kV	ph	1	
DEHN Type 2 surge protection device *(non plug-in modules)*								
900453	basic	–	5 kA	340 V	≤ 1.2kV	1ph+N	2	
900454	basic	–	10 kA	340 V	≤ 1.3kV	1ph+N	2	
900463	basic	–	10 kA	340 V	≤ 1.3kV	3ph+N	4	
DEHN Type 2 with build in fault indicator								
900430	cord	–	5 kA	275 V	≤ 1.5kV	1ph+N	–	
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	rail		3 kA	255 V	1.25 kV	ph	1	
Contact EM for other Dehn surge protection device								

*see page **N-15** for pricing.*


900071


920300


920244

new


927244


929121


929 221

type	max. PV voltage (Ucpv)	(8/20 µs) DC+/DC- (Imax)	(10/350 µs) DC+/DC- (limp)	voltage protection (Up)	poles	config.	width in 18 mm	price
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.								
DEHNguard Type 1+2 PV (SPD)			**with SCI**				*(non-plug-in modules)*	
• Combined lightning current and surge arrestor for use in Photovoltaic systems								
900070	≤ 1200 V	6.25 kA	40 kA	≤ 3.8 kV	2	DC+/DC-	4	*see page* ***N-16*** *for pricing.*
900075*	≤ 1200 V	6.5 kA	20 kA	≤ 3.8 kV	2	DC+/DC-	4	
900071	≤ 1500 V	6.25 kA	40 kA	≤ 4.5 kV	2	DC+/DC-	4	
900076*	≤ 1500 V	6.5 kA	20 kA	≤ 4.5 kV	2	DC+/DC-	4	
DEHNguard Type 2 PV (SPD)			**with SCI**				*(non-plug-in modules)*	
• Short circuit interruption (SCI) technology for maximum safety in PV systems								
950530	1000 V	–	25 kA	≤ 4 kV	3	DC+/DC-	3	
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*	≤ 1000 V	–	25 kA	≤ 4 kV	3	DC+/DC-	3	
952520	1500V	–	12.5 kA	< 6 kV	3	DC+/DC-	4.5	
* *With signalling contacts for remote indication/monitoring of devices*								

type	nominal voltage line-line (Un)	voltage (Up)	(8/20 µs) per line (In)	(10/350 µs) per line (limp)	poles	config.	width (mm)	price
Surge protection devices for data networks								
BLITZDUCTOR – Protection modules								
BLITZDUCTOR surge arresters are pluggable multipole DIN rail mounting arresters. Universally used for protecting Data networks, control/measuring circuits, bus or telecom systems.								
• Permits easy replacement of modules *(no signal interruption when protection module removed)*								
• Universal surge arrester for two-pole, three-pole or four-pole interfaces								
920300	DIN rail mount socket to receive various protection modules for data networks							
BLITZDUCTOR XT – Protection modules								
Type 2 P1 surge protection device	high degree of protection for one pair							
• For installation in conformity with lightning protection zone concept from 0B -2 and higher								
926244	24 V	≤ 55 V	10 kA	–	4	line-PG	12 mm	*see page* ***N-16*** *for pricing.*
Type 1 P1 surge protection device	optimal protection of one pair and the cable shield							
• For installation in conformity with lightning protection zone concept from 0A -2 and higher								
927224	24 V	≤ 90 V	5 kA	1.5 kA	2	line-PG	6 mm	
927244	24 V	≤ 55 V	5 kA	1.5 kA	2	line-PG	6 mm	
920244	24 V	≤ 52 V	10 kA	2.5 kA	4	line-PG	12 mm	
DEHNpatch for Ethernet applications								
Universal arrester for Industrial Ethernet, Power over Ethernet (PoE+ acc. to IEEE 802.3at to 57V) and similar applications in structured cabling systems according to class E up to 250 MHz.								
929121	48 V	≤ 180 V	0.5 kA	0.5 kA	4	line-PG	19 mm	
DEHNpatch outdoor type 2 *(IP65)* UL, CSA								
Complete surge protection unit to protect surveillance camera's, PoE ++ 4PPoE and other GBit Ethernet applications from damage due to surges. The IP65 rated enclosure permits safe to use outdoor. Lighting current discharge capacity (10/350 µs)								
• Easy mounting: even at great heights *(universal brackets for poles and wall mounting)*								
929221	24 V	≤ 52 V	10 kA	2.5 kA	4	line-PG	12 mm	

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
- Conformal coating on PCBAs to protect against chemical and dust pollutants
- Certification: UL508, EN 60950, cULus 60950, EN 50178, EN 60204, GS, CCS Aus

type	input voltage	output voltage *(adj)*	rated load (W)	rated load (A)	housing	dimensions (mm) (H)	(W)	(D)	price
LYTE II series	DIN rail mounting, ultra slim power supplies for general applications.								
• Universal input range:	8...264 VAC				* DC input range 120...375 VDC				
• Efficiency:	up to 90.0% *(at 230 VAC)*								
• Op temperature:	-20°C to +70°C								
DRL-12V75W1AZ	85 - 264 VAC	12 VDC	75	6.3	plastic	124	27	102	**749.83**
DRL-12V120W1EN	85 - 264 VAC	12 VDC	120	10	alu.	124	30	118	**982.14**
DRL-12V240W1EN	85 - 264 VAC	12 VDC	240	20	alu.	124	40	118	**1 873.41**
DRL-24V75W1AZ	85 - 264 VAC	24 VDC	75	3.1	plastic	124	27	102	**565.82**
DRL-24V120W1EN	85 - 264 VAC	24 VDC	120	5	alu.	124	30	118	**930.38**
DRL-24V240W1EN	85 - 264 VAC	24 VDC	240	10	alu.	124	40	118	**1 731.96**
DRL-24V480W1AA*	85 - 264 VAC	24 VDC	480	20	alu.	124	86	129	**3 075.20**
DRL-48V75W1AZ	85 - 264 VAC	48 VDC	75	1.6	plastic	124	27	102	**749.83**
DRL-48V120W1EN	85 - 264 VAC	48 VDC	120	2.5	alu.	124	30	118	**1 006.29**
DRL-48V240W1EN	85 - 264 VAC	48 VDC	240	5	alu.	124	40	118	**1 873.41**

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)*								
• Op temperature:	-25°C to +80°C								
Single Phase	Input voltage range: 85 - 264 VAC				DC input range 120 - 375 VDC				
DRP024V060W1BN	85 - 264 VAC	24 VDC	60	2.5	alu.	121	32	125	**1 201.79**
DRP024V120W1BN	85 - 264 VAC	24 VDC	120	5	alu.	121	50	125	**1 744.61**
DRP024V240W1BN	85 - 264 VAC	24 VDC	240	10	alu.	121	85	125	**2 550.78**
DRP024V480W1BN	85 - 264 VAC	24 VDC	480	20	alu.	121	144	119	**3 933.13**
DRP048V120W1BN	85 - 264 VAC	48 VDC	120	2.5	alu.	121	50	125	**1 851.56**
DRP048V240W1BN	85 - 264 VAC	48 VDC	240	5	alu.	121	85	125	**2 707.19**
DRP048V480W1BN	85 - 264 VAC	48 VDC	480	10	alu.	121	144	119	**4 172.34**
Two Phase	Input voltage range: 2 × 180 - 550 VAC				DC input range 254 - 780 VDC				
DRP024V120W2BN	180-550 VAC	24 VDC	120	5	alu.	124	40	117	**2 064.32**
Three phase	Input voltage range: 3 × 320 - 600 VAC				DC input range 450 - 800 VDC				
DRP024V060W3BN	320 - 600 VAC	24 VDC	60	2.5	alu.	121	50	118	**1 979.22**
DRP024V120W3BN	320 - 600 VAC	24 VDC	120	5	alu.	121	50	118	**2 051.67**
DRP024V240W3BN	320 - 600 VAC	24 VDC	240	10	alu.	121	70	118	**3 230.46**
DRP024V480W3BN	320 - 600 VAC	24 VDC	480	20	alu.	121	140	118	**4 553.00**
DRP024V960W3BN	320 - 600 VAC	24 VDC	960	40	alu.	121	255	118	**8 150.31**

Sync series	DIN rail mounting, Slimline power supplies								
Ultra-compact, galvanic isolation, DIN rail mount power supplies, designed for general applications requiring a highly reliable power supply with restricted dimensions.									
• Input voltage range:	Input voltage range: 85...264VAC				DC input range 120...375 VDC				
• Efficiency:	up to 89.0% at 230 VAC								
• Op temperature:	-20°C to +70°C								
DRS-5V30W1NZ	85 - 264 VAC	5 VDC	30	3	plastic	75	21	90	**579.62**
DRS-12V50W1NZ	85 - 264 VAC	12 VDC	48	4	plastic	75	30	90	**809.63**
DRS-24V30W1NZ	85 - 264 VAC	24 VDC	30	1.25	plastic	75	21	90	**556.62**
DRS-24V50W1NZ	85 - 264 VAC	24 VDC	50	2.1	plastic	75	30	90	**809.63**
DRS-24V100W1NZ	85 - 264 VAC	24 VDC	96	4	plastic	75	45	100	**1 516.90**

CHROME

CHROME series *DIN rail mounting, modular Power Supplies, Class II*

Chrome DIN rail power supply is a compact, modular unit designed for compact cabinets, they feature a universal AC input range and are certified to international safety standards ITE and ICE

- Compact modular housing *(same profile and cut-out as standard MCBs)*
- Class II double insulation *(no earth connection required)*
- Safety approval to IEC/EN/UL 60950-1 (ITE standard) *and UL 508 (industrial standard)*

type	input voltage	output voltage *(adj)*	rated load (W)	rated load (A)	housing	dimensions (mm) (H)	(W)	(D)	price
Chrome DIN rail power supply									
Input voltage range:	90...264 VAC				* DC input range 125...375 VDC				
DRC-5V10W1AZ**	90 - 264 VAC	5 VDC	7.5	1.50	plastic	91	18	56	**425.52**
DRC-12V10W1AZ**	90 - 264 VAC	12 VDC	10	0.83	plastic	91	18	56	**401.37**
DRC-12V30W1AZ	90 - 264 VAC	12 VDC	25	2.10	plastic	91	53	56	**511.77**
DRC-12V60W1AZ*	90 - 264 VAC	12 VDC	54	4.50	plastic	91	71	56	**725.68**
DRC-24V10W1AZ	90 - 264 VAC	12 VDC	10	0.42	plastic	91	18	56	**401.37**
DRC-24V30W1AZ	90 - 264 VAC	24 VDC	30	1.25	plastic	91	53	56	**511.77**
DRC-24V60W1AZ	90 - 264 VAC	24 VDC	60	2.50	plastic	91	71	56	**725.68**
DRC-24V100W1AZ*	90 - 264 VAC	24 VDC	91.2	3.80	plastic	91	90	56	**1 085.64**

** *Non adjustable.*

Complementary modules - DIN rail mounting

Complementary modules

DC-UPS module *(without battery)* Suitable for 24V system

- 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 fail by relay contacts

DRU-24V40ABN	DC-UPS	23 - 28 VDC	960	40A	alu.	121	50	118	**1 454.80**
DRU-24V10ACZ*	DC-UPS mod.	24 - 28 VDC	240	10A	plastic	91	71	56	**890.13**

* *Modular design to be used in small cabinets where space is critical (DRU-24V10ACZ)*

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.

DRR-20N	22 - 60 VDC	22-60 VDC	20A	alu.	121	50	122	**868.28**
DRR-40N	22 - 60 VDC	22-60 VDC	40A	alu.	121	50	122	**1 069.54**

Buffer module *for protection against short power failures*

- Buffering time 250ms to 10s *(depending on load current)*
- Supports parallel connection for extended buffer time

DRB-24V020ABN	23 - 28.8 VDC	24 VDC	20A	alu.	121	50	120	**3 568.57**

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

PMT

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.

- Universal AC input voltage without power de-rating
- Conforms to harmonic current IEC/EN 61000-3-2, Class A
- Short Circuit / Overvoltage / Overload / Over Temperature Protection

PMT-5V350W1AM*	180 - 264 VAC	5 VDC	300	60	alu.	50	115	215	**1 454.80**
PMT-12V35W1AA	90 - 264 VAC	12 VDC	35	2.92	alu.	30	82	99	**431.27**
PMT-12V50W2BA	90 - 264 VAC	12 VDC	50.4	4.2	alu.	30	82	99	**396.77**
PMT-12V100W2BA	90 - 264 VAC	12 VDC	102	8.5	alu.	30	97	129	**575.02**
PMT-12V150W2BA*	180 - 264 VAC	12 VDC	150	12.5	alu.	30	97	159	**703.83**
PMT-24V35W1AA	90 - 264 VAC	12 VDC	35	1.46	alu.	38	98	98	**416.32**
PMT-24V50W2BA	90 - 264 VAC	12 VDC	53	2.2	alu.	30	82	99	**396.77**
PMT-24V100W2BA	90 - 264 VAC	12 VDC	108	4.5	alu.	30	97	129	**537.07**
PMT-24V150W2BA*	180 - 264 VAC	12 VDC	150	6.3	alu.	30	97	159	**679.68**
PMT-24V200W1AM*	180 - 264 VAC	12 VDC	211	8.8	alu.	50	115	215	**1 085.64**
PMT-24V350W1AK*	180 - 264 VAC	12 VDC	350	14.6	alu.	50	115	215	**1 316.80**

* *AC input voltage selectable 9...132 VAC (or) 170...264 VAC - via switch*


PSL1M...


PSL1...


PSL3...

PSL series - Power supplies

- Modular DIN rail mounting *(aligns with standard MCBs with 45 mm cut out)*
- Rated output voltage 12 VDC or 24 VDC
- High efficiency up to 89%
- Adjustable output voltage

type	input voltage	output voltage	rated load (A)	(W)	description	dimensions (mm) (H)	(W)	(D)	price
Modular DIN rail mount power supplies									
Protection:	- short circuit - overvoltage - input voltage peaks								
Single - phase 100 - 240 VAC *(insulated housing)*									
PSL1M02412	90 - 264 VAC	12 VDC	2	24	power supply	96	35	56	**1 002.84**
PSL1M03312	90 - 264 VAC	12 VDC	2.75	33	power supply	96	53	56	**1 194.89**
PSL1M05412	90 - 264 VAC	12 VDC	4.5	54	power supply	96	72	56	**1 386.95**
PSL1M07212	90 - 264 VAC	12 VDC	6	72	power supply	96	90	56	**1 892.96**
PSL1M02424	90 - 264 VAC	24 VDC	1	24	power supply	96	35	56	**1 002.84**
PSL1M03624	90 - 264 VAC	24 VDC	1.5	36	power supply	96	53	56	**1 194.89**
PSL1M06024	90 - 264 VAC	24 VDC	2.5	60	power supply	96	72	56	**1 386.95**
PSL1M10024	90 - 264 VAC	24 VDC	4.2	100	power supply	96	90	56	**1 892.96**
DIN rail mount industrial power supplies (IEC/EN 60715)									
• Rated output voltage 24 VDC • High efficiency up to 92% • Adjustable output voltage									
Single - phase (90 - 1324 VAC)									
PSL112024	90 - 132 VAC	24 VDC	5	120	power supply	124	64	124	**2 294.33**
PSL124024	90 - 132 VAC	24 VDC	10	240	power supply	124	84	124	**3 458.16**
PSL130024	90 - 132 VAC	24 VDC	12.5	300	power supply	124	84	124	**4 302.29**
Three phase (400 - 500 VAC)									
PSL312024	400 - 500 VAC	24 VDC	5	120	power supply	124	74	119	**2 894.65**
PSL324024	400 - 500 VAC	24 VDC	10	240	power supply	124	89	119	**4 110.23**
PSL348024	400 - 500 VAC	24 VDC	20	480	power supply	124	150	119	**6 117.05**


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) t_a **25°C**	power (VA) t_a 40°C	inrush VA	secondary voltage	dimensions (mm) (H)	(W)	(D)	weight kg	price
TR 28 - Secondary voltage: 12 - 24V									
- Primary voltage:	240V - 400V - 525V								
680040040	40	25	75	12-24V	113	84	96	1.17	**1 248.94**
680063040	63	40	120	12-24V	113	84	105	1.48	**1 303.00**
680100040	100	63	150	12-24V	113	84	112	1.83	**1 419.15**
680200040	200	160	350	12-24V	113	84	131	2.73	**1 825.11**
680320040	320	250	600	12-24V	135	108	138	4.45	**2 576.09**
680400040	400	320	800	12-24V	135	108	148	5.00	**2 823.34**
680630040	630	500	1275	12-24V	152	120	156	7.08	**3 601.92**
680800040	800	630	1700	12-24V	177	150	140	8.68	**5 297.07**
681000040	1000	800	2100	12-24V	177	150	160	11.50	**5 703.03**
681250040	1250	1000	3300	12-24V	177	150	183	14.40	**8 627.58**
TR 28 - Secondary voltage: 115 - 230V									
- Primary voltage:	240V - 400V - 525V								
680040042	40	25	75	115-230V	113	84	96	1.17	**1 265.04**
680063042	63	40	120	115-230V	113	84	105	1.48	**1 337.50**
680100042	100	63	150	115-230V	113	84	112	1.83	**1 442.15**
680130042	130	100	230	115-230V	113	84	116	1.83	**1 575.55**
680200042	200	160	350	115-230V	113	84	131	2.73	**1 828.56**
680320042	320	250	600	115-230V	135	108	138	4.45	**2 610.59**
680400042	400	320	800	115-230V	135	108	148	5.00	**2 834.84**
680630042	630	500	1275	115-230V	152	120	156	7.08	**3 667.47**
680800042	800	630	1700	115-230V	177	150	140	8.68	**5 230.37**
681000042	1000	800	2100	115-230V	177	150	160	11.50	**6 079.10**
681250042	1250	1000	3300	115-230V	177	150	183	14.40	**7 778.85**

DELTA HONTKO® Lovato electric