

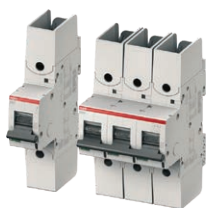


1000V Products Range

For mining applications



CONTENTS



MINIATURE CIRCUIT BREAKERS

4kA Circuit Breakers	04
----------------------	----



MOULDED CASE CIRCUIT BREAKERS

Technical Data	05
Sace Isomax and Tmax	06
Accessories	07



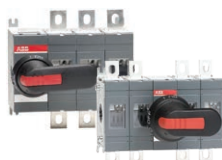
AIR CIRCUIT BREAKERS

Technical Data	09
3 Pole Fixed ACB	10
3 Pole Moving Part + Cradle ACB	10
Accessories	10



ARC GUARD SYSTEM

Overview and features	11
ARC Monitor	12
Accessories	12



LOAD BREAK SWITCHES

3 Pole - Front Operated (160 to 800A)	14
4 Pole - Front Operated (160 to 800A)	14
Accessories	15



SURGE PROTECTION

Surge Arrestor - DEHN	17
Surge Arrestor - Hitachi ABB	18

CONTENTS



FUSES & FITTINGS

1200V Fuse Links	19
1500V Fuse Links	19
Din Fuse Links 1200V AC / 1000V DC	20
DIN Fuse Bases 1500V	20
DIN Disconnecter 1200V	20



CONTACTORS & OVERLOADS

AF Contactors	21
AF Contactor Electronic Overloads	22
Accessories	23
Safety Contactors	25



MOTOR BREAKERS

Universal Motor Controller	27
Accessories	29



Soft Starters

EMX4i Soft Starter 1000V/1200V	31
Accessories	31

MINIATURE CIRCUIT BREAKERS

4kA CIRCUIT BREAKERS

27mm Pole Width - K Curve

Features and Ratings:

- Protection against short circuit and thermal overload.
- 1P K Curve up to 63A: 4kA @ 580VAC to AS/NZS60947.2
- 1P K Curve: 80 – 125A: 3kA @ 1000VAC to AS/NZS60947.2
- 2P K Curve up to 63A: 4kA @ 580VAC to AS/NZS60947.2
- 2P K Curve: 80 – 125A: 3kA @ 1000VAC to AS/NZS60947.2
- 3P K Curve up to 63A: 4kA @ 580VAC to AS/NZS60947.2

Current Rating (A)	1 Pole	2 Pole	3 Pole
6	S801HVK6	S802HVK6	S803HVK6
10	S801HVK10	S802HVK10	S803HVK10
16	S801HVK16	S802HVK16	S803HVK16
20	S801HVK20	S802HVK20	S803HVK20
24	S801HVK25	S802HVK25	S803HVK25
32	S801HVK32	S802HVK32	S803HVK32
40	S801HVK40	S802HVK40	S803HVK40
50	S801HVK50	S802HVK50	S803HVK50
63	S801HVK63	S802HVK63	S803HVK63
80	S801HVK80	S802HVK80	S803HVK80
100	S801HVK100	S802HVK100	S803HVK100
125	S801HVK125	S802HVK125	S803HVK125



S801S



S803S



MOULDED CASE CIRCUIT BREAKERS

TECHNICAL DATA

Circuit-Breakers for Applications at 1000 V AC



Isomax S range		S3L	S3X	S4	S4X	S5L	S6L	S6X
Icu (1000V AC)	[kA]	6	30	8	30	8	12	30
Poles	[NR.]	3		3		3	3	
Iu	[A]	160	125	160-250	250	400	630-800	630

Circuit-breakers for use up to 1150 V AC and 1000 V DC



Tmax range		T4	T5	T6
Icu max	1000 V AC	20	20	12
	1150 V AC	12	12	
	1000 V DC (4 poles in series)	40	40	40
Size	[A]	250	400/630	630/800
Poles	[NR]	3/4	3/4	3/4



MOULDED CASE CIRCUIT BREAKERS

SACE ISOMAX AND TMAX

Features:

- Fixed versions supplied with Front terminals (F) as standard.
- T4V can also perform 12kA up to 1150V AC.
- S3L can also perform 40kA up to 1000V DC.



1SDA050436R1

Thermal Magnetic

Type	Current Rating In (A)	Thermal I1 0.7 to 1 x In (A)	Magnetic I3 (A)	Part No.
3 Pole				
6kA S3L	32	22.4-32	320	1SDA050436R1
	50	35-50	500	1SDA050437R1
	80	56-80	800	1SDA050438R1
	100	70-100	1000	1SDA050439R1
	125	87.5-125	1250	1SDA050441R1
	160	112-160	1600	1SDA050442R1
20kA T4V	32	22.4-32	320	1SDA064205R1
	50	35-50	500	1SDA064206R1
	80	56-80	400-800	1SDA064207R1
	100	70-100	500-1000	1SDA064208R1
	125	87.5-125	625-1250	1SDA064209R1
	160	112-160	800-1600	1SDA064210R1
	200	140-200	1000-2000	1SDA066086R1
250	175-250	1250-2500	1SDA066087R1	
30kA S3X	32	22.4-32	320	1SDA050451R1
	50	35-50	500	1SDA050452R1
	80	56-80	800	1SDA050453R1
	100	70-100	1000	1SDA050454R1
	125	87.5-125	1250	1SDA050455R1
	160	112-160	1600	1SDA053215R1

Features:

- Fixed versions supplied with Front terminals (F) as standard.
- T4...T5: PR222DS/P LSI trip unit version.
- S4...S6: PR212/P LSI trip unit version.
- T4V-T5V can also perform 12kA up to 1150V AC.



1SDA050470R1

Electronic Trip Unit

Type	Current Rating In (A)	L - I1 (A)	S- I2 (A)	I - I3 (A)	Part No.	
3 Pole						
8kA S4L	250	100-250	250-2500	375-3000	1SDA050461R1	
	400	160-400	400-4000	600-4800	1SDA050583R1	
	400	160-400	240-4000	600-4800	1SDA064215R1	
12kA S6L	630	252-630	630-6300	945-7560	1SDA050470R1	
	800	320-800	800-8000	1200-9600	1SDA050535R1	
20kA T4V	100	40-100	60-1000	150-1200	1SDA064211R1	
	250	100-250	150-2500	375-3000	1SDA064213R1	
	400	160-400	240-4000	600-4800	1SDA064219R1	
	630	252-630	378-6300	945-7560	1SDA064221R1	
	S4X	250	100-250	250-2500	375-3000	1SDA050464R1
	S6X	630	252-630	630-6300	945-7560	1SDA050473R1

- T4..T5: L - I1 (A) = 0.4 - 1 x In; S - I2 (A) = 0.6 - 10 x In; I - I3 (A) = 1.5 - 12 x In
 - S4..S6: L - I1 (A) = 0.4 - 1 x In; S - I2 (A) = 1 - 10 x In; I - I3 (A) = 1.5 - 12 x In

MOULDED CASE CIRCUIT BREAKER ACCESSORIES



1SDA054926R1



1SDA054930R1

Rotary Handle Operating Mechanism

Suit for	Part No. Direct	Part No. Extended
	1SDA054926R1	-
T4...T5	-	1SDA054929R1
	-	1SDA054930R1
S3...S5	-	1SDA013869R1
S6	-	1SDA014028R1



1SDA054938R1

IP54 Protection Cover

Suit for	Part No.
T4...T5	1SDA054938R1
S3...S6	1SDA013891R1

Front Flange

Suit for	Part No.
S3...S5	1SDA013889R1
S6	1SDA014035R1



1SDA051369R1

Auxiliary Contacts

Suit for	Voltage	Description	Part No.
T4...T5	250V AC/DC	1Q+1SY	1SDA051368R1
		3Q+1SY	1SDA051369R1
S3...S5	24V DC	3Q+1SY	1SDA054914R1
		2Q	1SDA013856R1
S6	24V DC	1Q + 1 SY	1SDA013575R1
		2Q	1SDA023366R1
S6	24V DC	1Q + 1 SY	1SDA023332R1

Connectors for auxiliary contacts (AUX)

S3...S6	for Fixed versions, L=1m	1SDA013863R1
	for Fixed versions, L=2m	1SDA037522R1



Shunt Open Release

Shunt Opening Release

Suit for	Voltage	Part No.
T4...T5	24...30V AC/DC	1SDA054863R1
	110...120V AC/DC	1SDA054865R1
	220...240V AC - 220...250V DC	1SDA054866R1
S3...S5	24V AC/DC	1SDA013781R1
	110...120V AC/DC	1SDA013783R1
	220...240V AC - 220...250V DC	1SDA013785R1
S6	24V AC/DC	1SDA014136R1
	110...120V AC/DC	1SDA014138R1
	220...240V AC - 220...250V DC	1SDA014140R1

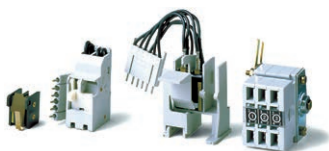
MOULDED CASE CIRCUIT BREAKER ACCESSORIES



Undervoltage Release

Undervoltage Release

Suit for	Voltage	Part No.
T4...T5	24...30V AC/DC	1SDA054880R1
	110...120V AC/DC	1SDA054883R1
	220...240V AC – 220...250V DC	1SDA054884R1
S3...S5	24V AC	1SDA013842R1
	24V DC	1SDA013833R1
	110...127V AC	1SDA013844R1
	220...250V AC	1SDA013846R1
	24V AC	1SDA014188R1
S6	24V DC	1SDA014179R1
	110...127V AC	1SDA014190R1
	220...250V AC	1SDA014192R1



Connectors for Service Releases

Connectors for Service Releases (SOR and UVR)

Suit for	Description	Part No.
S3...S6	for Fixed versions, L=1m	1SDA013865R1
	for Fixed versions, L=2m	1SDA037523R1
	for Plug-in or Withdrawable versions, L=1m	1SDA013866R1



1SDA054896R1

Motor Operator

Suit for	Voltage	Part No.
T4...T5	24V DC	1SDA054894R1
	110...125V AC/DC	1SDA054896R1
	220...250V AC/DC	1SDA054897R1
S3...S5	220...240V AC – 220...250V DC	1SDA013876R1
S6	110V AC/DC	1SDA023349R1
	220...250V AC/DC	1SDA014032R1

Connectors for Motor Operating mechanism and auxiliary contacts

S3...S6	for Fixed versions, L=1m	1SDA013857R1
---------	--------------------------	--------------



1SDA054976R1



1SDA055000R1



1SDA055004R1



1SDA054980R1

Connection Terminals






Suit for	Description	Part No. 3-Piece Kit
T4	Front terminals	1SDA054976R1
	Extended front terminals	1SDA055000R1
	Spreaded extended front terminals	1SDA055004R1
	Front terminals for Copper cables	1SDA054980R1
T5	Front terminals	1SDA055012R1
	Extended front terminals	1SDA055036R1
	Spreaded extended front terminals	1SDA055040R1
S3	Front terminals	1SDA055016R1
	Front terminals	1SDA043341R1
	Front terminals for Copper cables	1SDA023354R1
S3-S4	Front terminals for Copper cables	1SDA023360R1
S4	Front terminals	1SDA043461R1
S5 (max. 400A)	Front terminals	1SDA043464R1
S5 (max. 630A)	Front terminals	1SDA052941R1
S6	Front terminals	1SDA044748R1
	Rear terminals	1SDA023382R1
S6 (max. 630)	Extended front terminals	1SDA023379R1
S6 (max. 800)	Extended front terminals	1SDA023383R1
S6 upper kit	Spreaded extended front terminals	1SDA050692R1
S6 lower kit	Spreaded extended front terminals	1SDA050704R1
S6 (2x240mm ²)	Front terminals for Copper/Aluminum cables	1SDA023380R1


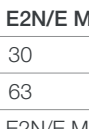

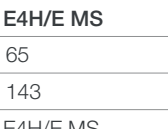
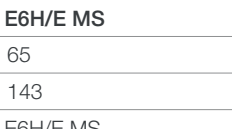
AIR CIRCUIT BREAKERS

TECHNICAL DATA

Overview of the SACE Emax family

Fields of application

Automatic circuit-breakers for applications up to 1150V AC							
Emax range			E2	E2	E3	E4	E6
			E2B/E	E2N/E	E3H/E	E4H/E	E6H/E
Icu	(1150V)	[kA]	20	30	30 (*)	65	65
Ics	(1150V)	[kA]	20	30	30 (*)	65	65
Icw	(1s)	[kA]	20	30	30 (*)	65	65
Poles		[No.]	3 - 4	3 - 4	3 - 4	3 - 4	3 - 4
Size	(40 °C)	[A]	1600-2000	1250-1600-2000	1250-1600-2000-2500-3200	3200-4000	4000-5000-6300
Ue		[V~]	1150	1150	1150	1150	1150
Icu	(1150V)	[kA]	20	30	30 (*)	65	65
Ics	(1150V)	[kA]	20	30	30 (*)	65	65
Icw	(1s)	[kA]	20	30	30 (*)	65	65

Switch-disconnectors for applications up to 1150V AC							
Emax range			E2B/E MS	E2N/E MS	E3H/E MS	E4H/E MS	E6H/E MS
Icw	(1s)	[kA]	20	30	50	65	65
Icm	(1000V)	[kA]	40	63	105	143	143
Emax range			E2B/E MS	E2N/E MS	E3H/E MS	E4H/E MS	E6H/E MS
Poles		[No.]	3 - 4	3 - 4	3 - 4	3 - 4	3 - 4
Size	(40 °C)	[A]	1600-2000	1250-1600-2000	1250-1600-2000	3200-4000	4000-5000-6300
Ue		[V~]	1150	1150	1150	1150	1150



AIR CIRCUIT BREAKERS

Automatic Air Circuit Breakers 1000V AC - 3Pole Fixed



1SDA076322R1

Frame	In (A) 1000V AC	Trip unit	Terminal	Icu (kA) 1000V AC	Icw (1s) (kA)	Part No.
E2N/E	1250	PR121/P LSI	H/REAR	30	30	1SDA076322R1

- L - I1 (A) = 0.4 - 1 x In; S - I2 (A) = 0.6 - 10 x In; I - I3 (A) = 1.5 - 15 x In
 - Higher current ratings available. Please contact IPD.

Automatic Air Circuit Breakers 1000V AC - 3Pole Moving Part + Cradle

Frame	In (A) 1000V AC	Trip unit	Terminal	Icu (kA) 1000V AC	Icw (1s) (kA)	Part No. Moving Part	Part No. Cradle
E2N/E	1250	PR121/P LSI	H/REAR	30	30	1SDA076323R1	1SDA059667R1

- L - I1 (A) = 0.4 - 1 x In; S - I2 (A) = 0.6 - 10 x In; I - I3 (A) = 1.5 - 15 x In
 - Higher current ratings available. Please contact IPD.

Accessories

Shunt Opening Release



1SDA038286R1

Frame	Voltage	Description	Part No.
E2N/E	24 V DC	Shunt Open	1SDA038286R1
	110...120 V AC/DC		1SDA038290R1

Shunt Closing Release



1SDA038296R1

Frame	Voltage	Description	Part No.
E2N/E	24 V DC	Shunt Close	1SDA038296R1
	110...120 V AC/DC		1SDA038300R1

Motor Operator



1SDA038321R1

Frame	Voltage	Description	Part No.
E2N/E	24 V DC	Geared Motor Device	1SDA038321R1
	110...120 V AC/DC		1SDA038323R1

- The motor is always supplied with a limit switch contact S33 M/2 which signals the status of the springs.
 - Other voltages are available. Please contact IPD.

Undervoltage Release



1SDA038306R1

Frame	Voltage	Description	Part No.
E2N/E	24 V DC	Undervoltage Release	1SDA038306R1
	110...120 V AC/DC		1SDA038310R1

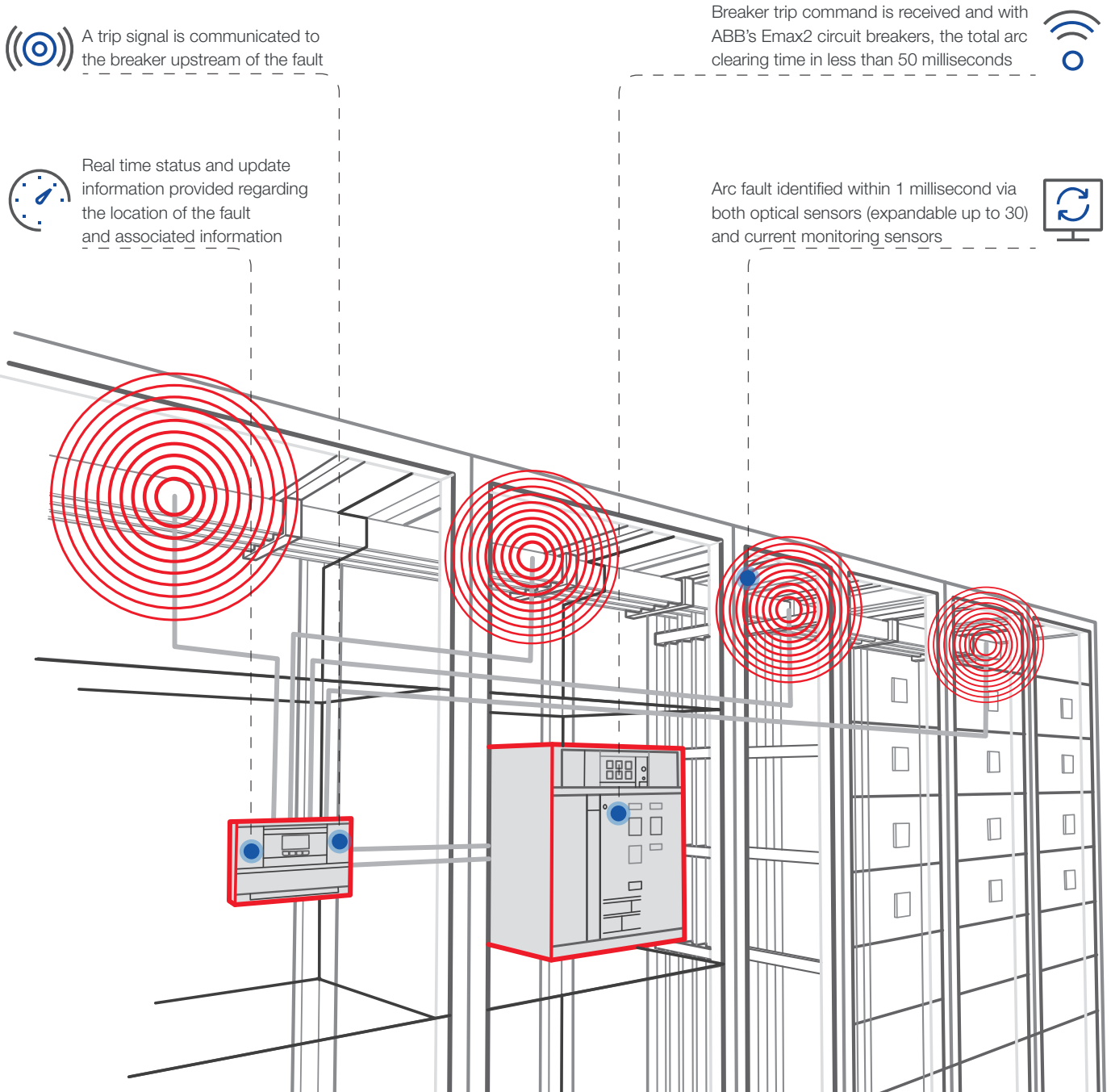
ARC GUARD SYSTEM™

Arc fault in medium voltage or low voltage switchgear is one of the most devastating fault types in Electrical switchboards. Most often the accident occurs when someone is working in the switchgear for maintenance or installation. The consequences after these accidents are often severe resulting in serious injuries or death. In addition, arc fault occurrences have significant impact on plant and machinery, with long downtimes and destroyed equipment. For this reason, it is crucial to build up a robust safety solution that works every time.

PROTECT YOUR VALUABLE RESOURCES

with TVOC-2, ABB's Arc Guard System

SIL-2 certified according to IEC 61508 and IEC 62062




DATA CENTERS


COMMERCIAL BUILDINGS


HOSPITALS


INDUSTRIAL BUILDINGS


MINING APPLICATIONS

ARC GUARD SYSTEM™

Features:

- IP54 Protection.
- Panel door mounted HMI Touchscreen.
- Up to 30 optical sensors.
- Remote monitoring
- Less than 1ms reaction time.
- Communication with Modbus RTU.
- User-friendly start-up menu.
- DIN-rail or wall-mounted.



TVOC-2-48



TVOC-2-E1



TVOC-2-COM



TVOC-2-H1



TVOC-2-DP1



CSU-2LV



RC120-05

ARC Monitor

Description	Supply Voltage (Uc)		Part No.
	V (AC)	V (DC)	
ARC monitor c/w 1 X HMI & door mounting accessories	–	24...48	TVOC-2-48
	100...240	100...250	TVOC-2-240
ARC monitor c/w 1 X Com.Mod. & door mounting accessories	–	24...48	TVOC-2-48-C
	100...240	100...250	TVOC-2-240-C

Accessories Extension

Description	Part No.
10 optical I/P	TVOC-2-E1
10 optical I/P for cable TVOC-2-DP60 only	TVOC-2-E3

COM. Module

Description	Part No.
COM Module c/w modbus RTU & door mounting acc.	TVOC-2-COM

HMI (Human Machine Interface)

Description	Part No.
HMI Kit (Additional)	TVOC-2-H1

Detectors

Cable Length	Part No.
1m	TVOC-2-DP1
2m	TVOC-2-DP2
4m	TVOC-2-DP4
6m	TVOC-2-DP6
8m	TVOC-2-DP8
10m	TVOC-2-DP10
15m	TVOC-2-DP15
20m	TVOC-2-DP20
25m	TVOC-2-DP25
30m	TVOC-2-DP30
60m	TVOC-2-DP60*

*Only to be used with TVOC-2-E3

Current Sensing Unit (CSU)

Description	Part No.
Low voltage current sensing unit	CSU-2LV
Medium voltage current sensing unit	CSU-2MV

Rogowski coil current sensors for low voltage applications

Cable Length	Part No. 120mm	Part No. 200mm
5m	RC120-05	RC200-05
10m	RC120-10	RC200-10
15m	RC120-15	RC200-15
30m	RC120-30	RC200-30

ARC GUARD SYSTEM™ ACCESSORIES



TVOC-1T02-OP1



TVOC-2-OP05



TVOC-2-CP05



TVOC-2-MK1



TVOC-2-MTGK600



TVOC-2-LABEL

Optical Cable

Cable Length	Part No.
Optical Cable Between TVOC-2 ARC Monitor and CSU	
1m	TVOC-1T02-OP1
2m	TVOC-1T02-OP2
4m	TVOC-1T02-OP4
5m	TVOC-1T02-OP05
6m	TVOC-1T02-OP6
8m	TVOC-1T02-OP8
10m	TVOC-1T02-OP10
15m	TVOC-1T02-OP15
20m	TVOC-1T02-OP20
25m	TVOC-1T02-OP25
30m	TVOC-1T02-OP30
Optical Cable Between 2 X TVOC-2 ARC Monitors	
0.5m	TVOC-2-OP05
1m	TVOC-2-OP1
2m	TVOC-2-OP2
4m	TVOC-2-OP4
6m	TVOC-2-OP6
8m	TVOC-2-OP8
10m	TVOC-2-OP10
15m	TVOC-2-OP15
20m	TVOC-2-OP20
25m	TVOC-2-OP25
30m	TVOC-2-OP30
Optical Cable Between CSU and CSU	
0.5m	TVOC-2-CP05
1m	TVOC-2-CP1
2m	TVOC-2-CP2
4m	TVOC-2-CP4
6m	TVOC-2-CP6
8m	TVOC-2-CP8
10m	TVOC-2-CP10
15m	TVOC-2-CP15
20m	TVOC-2-CP20
25m	TVOC-2-CP25
30m	TVOC-2-CP30

Other Accessories

Description	Part No.
Cable Straps	
Cable Straps 1set incl.50pcs	TVOC-2-MK1
Cable Straps	TVOC-2-MK600
Mounting Kit and Bracket	
Mounting Kit 600mm	TVOC-2-MTGK600
Mounting Kit 800/1000mm	TVOC-2-MTGK1000
Mounting Bracket 5 X BRKT 10 Cable Ties	TVOC-2-MB
Label	
Information label 1 set for ARC guard system 10 pcs	TVOC-2-LABEL

LOAD BREAK SWITCHES

160 TO 800A

Features:

- Complete with Shaft & Handle.
- Handle interlock defeatable.
- Up to 3 Padlocks.
- Can be locked "ON" (with modification).
- Optional wide phase centres.



OT315E03P



OT250E12P

3 Pole - Front Operated Including Door Handle and Operating Shaft

Open air thermal current (I _{th}) (A)	Rated Operational Current			Short CCT Rating RMS 1.0 sec	Cable Section Enclosed @ Rated Current (mm ²)	Part No.
	AC21A 1000V AC	AC22A 1000V AC	AC23A 1000V AC			
Base Mount - Mechanism on the Left						
200	160	160	135	8	70	OT160EV03P
200	200	200	135	8	95	OT200E03P
250	250	250	135	8	120	OT250E03P
315	315	315	200	15	185	OT315E03P
400	400	400	200	15	240	OT400E03P
630	630	630	400	20	2 x 185	OT630E03P
800	800	800	400	20	2 x 240	OT800E03P
Base Mount - Mechanism Between Poles						
200	160	160	135	8	70	OT160EV12P
200	200	200	135	8	95	OT200E12P
250	250	250	135	8	120	OT250E12P
315	315	315	200	15	185	OT315E12P
400	400	400	200	15	240	OT400E12P
630	630	630	400	20	2 x 185	OT630E12P
800	800	800	400	20	2 x 240	OT800E12P

Features:

- Complete with Shaft & Handle.
- Handle interlock defeatable.
- Up to 3 Padlocks.
- Can be locked "ON" (with modification).
- Optional wide phase centres.



OT250E04P



OT250E22P

4 Pole - Front Operated Including Door Handle and Operating Shaft

Open air thermal current (I _{th}) (A)	Rated Operational Current			Short CCT Rating RMS 1.0 sec	Cable Section Enclosed @ Rated Current (mm ²)	Part No.
	AC21A 1000V AC	AC22A 1000V AC	AC23A 1000V AC			
Base Mount - Mechanism on the Left						
200	160	160	135	8	70	OT160EV04P
200	200	200	135	8	95	OT200E04P
250	250	250	135	8	120	OT250E04P
315	315	315	200	15	185	OT315E04P
400	400	400	200	15	240	OT400E04P
630	630	630	400	20	2 x 185	OT630E04P
800	800	800	400	20	2 x 240	OT800E04P
Base Mount - Mechanism Between Poles						
200	160	160	135	8	70	OT160EV22P
200	200	200	135	8	95	OT200E22P
250	250	250	135	8	120	OT250E22P
315	315	315	200	15	185	OT315E22P
400	400	400	200	15	240	OT400E22P
630	630	630	400	20	2 x 185	OT630E22P
800	800	800	400	20	2 x 240	OT800E22P

LOAD BREAK SWITCH ACCESSORIES



OA1G10

Auxiliary Contact Blocks

Suitable Switches	Description	Part No.
OT160EV...4000	1 N.O.	OA1G10 ⁽¹⁾
	1 N.C.	OA3G01 ⁽²⁾

(1) Early break contact.

(2) Early make contact.



OEA28

Additional Auxiliary Contact Case

Suitable Switches	Description	Part No.
OT160EV...4000	Max. 8 additional auxiliary contact blocks inside the OEA28 module	OEA28

Features:

- Indication I-O-TEST/ON-OFF-TEST.
- 3 padlocks in O-OFF position.



OTV250EK

Direct Mounted Pistol Handle

Suitable Switches	Handle Length (mm)	Indication	Colour	Part No.
OT160G	72	Test-OFF-ON/Test-O-I	Black	OHBS16
OT160EV...250E	65		Black	OTV250EK
OT315...400E	95		Black	OTV400EK
OT630...800E	125		Black	OTV800EK
OT1000...4000E	274		Black	OTV1000EK

- Includes a shaft and a mechanism cover.



OXP6X

Shafts for Pistol Handles

Suitable Switches	Shaft		Part No.
	length(mm)	Dia(mm)	
OT160EV...250E	150	6	OXP6X150
	290	6	OXP6X290
	360	6	OXP6X360
OT315...4000E	325	12	OXP12X325
	395	12	OXP12X395
	535	12	OXP12X535



OXP12X166

Features:

- Grey plastic.



OTS1600G1L/3

Terminal Shrouds

Suitable for	Description	No of mod.	Part No.
Snap-On Mounting, Grey			
OT160G, 3P	Long type	3	OTS160G1L/3
OT160EV...250E, 3P	Long type	3	OTS250G1L/3
	Short type	3	OTS250G1S/3
OT315...400E, 3P	Long type	3	OTS400G1L/3
	Short type	3	OTS400G1S/3
OT630...800E, 3P	Long type	3	OTS800G1L/3
	Short type	3	OTS800G1S/3
OT1000...1600E, 3P	Long type	3	OTS1600G1L/3
	Short type	3	OTS1600G1S/3



OTB800/6

Phase Separators

Suitable Switches	Description	Part No.
OT630...800E, 3P & 4P	Snap-on mounting , Grey	OTB800/6
OT1000...2500E, 3P & 4P		OTB1600/6

LOAD BREAK SWITCH ACCESSORIES



OXN250

Neutral links

Suitable for	I_{th} (A)	Part No.
OT160EV...250E	250	OXN250
OT315...400E	400	OXN400
OT630...800E	800	OXN800T
OT1000...4000E	1250	OXN1250T



OESAZW2

6 and 8 Pole Switch Mechanism

Suitable Switches	Shaft Distance (mm)	Part No.
OT160EV...250E	45+(0...13)x15 mm	OESAZW2
OT315...800E	60+(0...19)x20 mm	OETLZW9



OTZW10

Mechanical Interlock Mechanism - (Transformer Earthing)

Suitable Switches	Shaft Distance (mm)	Part No.
OT160EV...250E	190	OTZW10
OT315...400E	250	OETLZW14
OT315...800E	300	OETLZW3
OT315...4000E	500	OETLZW15



OHZX4



OETLZW5

Locking Accessories

Suit for	Description	Part No.
OH_45...275 Pistol Handle	Door interlock handle	OHZX4
OT16...160 Switches	Cam Attachment	OETLZW16
OT315...4000 Switches	Cam Attachment	OETLZW5



OETLZX95

Other Accessories

Descriptions	Part No.
Change-Over Switch mechanism Suit OT630...800E	OETLZW12
Shaft Extension Socket Shaft Dia.12mm For OT/OTM	OETLZX95

SURGE PROTECTION

Features:

- $U_c \leq 1000V$ a.c. r.m.s (IEC 61643-11).
- Compact single-pole surge arrester specifically designed for high system voltages.
- High discharge capacity due to heavy-duty zinc oxide varistor.
- High reliability due to "Thermo Dynamic Control" disconnecter.



DG1000

Surge Arrester (DEHN)

I _{max} (8/20μsec)	In (8/20μsec) Nominal Discharge current	Max. overcurrent protection	Max. continuous operating voltage (a.c.) (U _c)	Voltage protection level (U _p)	TOV (U _T)		Operating state/fault indication	Type of remote signalling contact	Part No.
					With stand	Safe Failure			
SPD according to EN 61643-11 / IEC 61643-11: Type 2 / Class II									
30 kA	15 kA	100 A aM	1000 V (50/60Hz)	≤4.2 kV	1205V / 5 sec.	1580V / 120 min.	Green / Red	-	DG1000

Features:

- $U_c \leq 1000V$ a.c. r.m.s (IEC 61643-11).
- Compact single-pole surge arrester specifically designed for high system voltages.
- High discharge capacity due to heavy-duty zinc oxide varistor.
- High reliability due to "Thermo Dynamic Control" disconnecter.



DGSEH1000VAFM

I _{max} (8/20μsec)	In (8/20μsec) Nominal Discharge current	Max. overcurrent protection	Max. continuous operating voltage (a.c.) (U _c)	Voltage protection level (U _p)	TOV (U _T)		Operating state/fault indication	Type of remote signalling contact	Part No.
					With stand				
SPD according to EN 61643-11 / IEC 61643-11: Type 2 / Class II									
40 kA	15 kA	100 A gG	1000 V (50/60Hz)	≤5 kV	1550V / 5 sec.	1320V / 120 min.	Green / Red	C/O contact	DGSEH1000VAFM

Accessories

Description	Part No.
Earthing Clip 3 Pole DG1000FM (x3)	EBDG100013
Earthing Clip 4 Pole DG1000FM (x4)	EB149
Earthing Clip 3 Pole DGSEH1000VAFM (x3)	EB131.5
Earthing Clip 4 Pole DGSEH1000VAFM (x4)	B141.5



EBDG100013



EB131.5

SURGE PROTECTION

Surge Arrestor (Hitachi ABB)

Features:

- $U_c > 1000V$ a.c. r.m.s (IEC 60099-4).
- Metal-oxide (MO) surge arrester without spark gap.
- Direct moulded PUR housing for environmental robustness.
- High quality and reliable, maintenance free.
- For alternating current (AC) systems.
- For indoor and outdoor installations.

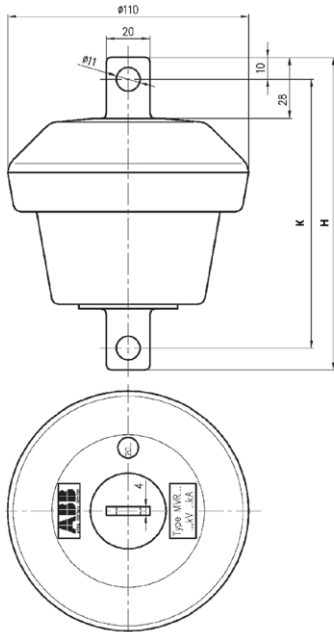
Especially recommended for overvoltage protection of:

- Motors.
- Cable sheaths.
- Further high voltage apparatuses.

In (8/20 μ sec) Nominal Discharge current	High current impulse (4/10 μ s) (I_{hc})	Part No.
10 kA (peak)	100 kA (peak)	MVR1.8G10

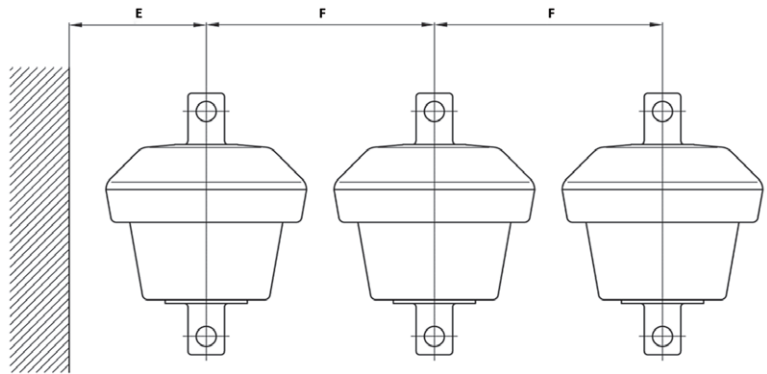


MVR1.8G10



Standard dimensions without accessories

Dimensions



Dimensions according to outline drawing HAMM480705
Outline drawings with accessories on request

Continuous operating voltage U_c (kV _{rms})	Recommended Clearances		Height	
	E (mm)	F (mm)	H (mm)	K (mm)
1.0	65	125	106	86
1.8	65	125	125	105

Electrical data

Continuous operating voltage	Rated voltage	Residual voltage U_{res} at specified impulse current									
		wave 1/... μ s		wave 8/20 μ s				wave 30/60 μ s			
U_c	U_r	5 kA	10 kA	1 kA	2.5 kA	5 kA	10 kA	20 kA	125 A	250 A	500 A
kV _{rms}	kV _{rms}	kV _{peak}	kV _{peak}	kV _{peak}	kV _{peak}	kV _{peak}	kV _{peak}	kV _{peak}	kV _{peak}	kV _{peak}	kV _{peak}
1.0	1.25	4.2	4.9	3.0	3.2	3.4	3.5	4.0	2.7	2.7	2.8
1.8	2.25	6.9	7.8	5.3	5.6	5.9	6.2	7.1	4.7	4.8	5.0

MV FUSE FITTINGS & LINKS

Features:

- Standards: AS1033, BS2692.
- 1200V AC/750V DC. (1200VAC Only for RSL63PH).
- Shrouded terminals IP20.
- Non hydroscopic material.



RSL63H

Features:

- Standards: BS2692, BS88-1.
- 63kA 1200V, TAC & TSC.
- 63kA 1500V, TFC & TLC, 50kA 660V DC.



TAC10

Features:

- Suitable for 1,000V DC.
- Striker for trip indication.
- 100kA @ 1,000V DC.



127x20

Features:

- Good thermal and Mechanical strength.
- Blown Fuse indication.
- Insulation rating 1,500 or 2,500V.



PSI 20x127

Fuse Links for Industrial & General Applications – 1200V

Rated Current (A)	To Suit Fuse Link	Type	Pack Qty	Part No.
63	TAC, TSC	FRONT WIRE	1	RSL63H
	TAC, TSC	FRONT/1 STUD	1	RSL63PH
	TAC, TSC	2 STUD	1	RSL63P

Rated Current (A)	Fixing Centres (mm)	Tag Type	Pack Qty	Part No.
2	124	OFF-SET	10	TAC2
4		OFF-SET		TAC4
6		OFF-SET		TAC6
10		OFF-SET		TAC10
16		OFF-SET		TAC16
20		OFF-SET		TAC20
25	124	OFF-SET	10	TAC25
32		OFF-SET		TAC32
35		OFF-SET		TSC35
50		OFF-SET		TSC50
63		OFF-SET		TSC63
80		OFF-SET		TFC80
100	168	OFF-SET	1	TFC100
125		OFF-SET		TFC125
160		OFF-SET		TFC160
200		OFF-SET		TFC200

Fuse Links for Industrial & General Applications – 1500V

Rated Current(A)	Size (mm)	Voltage Rating	Watts	Part No.
		DC		
6	127 x 20	1000	3.5	Z088020
8	127 x 20	1000	3.8	T088774
10	127 x 20	1000	4.2	A089493
12	127 x 20	1000	5.3	B089494
16	127 x 20	1000	6.6	C089495
20	127 x 20	1000	7.7	D089496
25	127 x 20	1000	9.0	E089497
32	127 x 20	1000	10.5	F089498
40	127 x 20	1000	13.2	S086795
50	127 x 20	1000	15.5	F086186
63	127 x 20	1000	17.4	F083656*

* Max rating 56A when used in Fuse Disconnectors.

Rated Current(A)	Description	No. Poles	Part No.
63	Fuse Disconnecter 1500V	1	F097203
63	Fuse Disconnecter 1500V	2	G097227
63	Fuse Disconnecter 1500V	3	H097228
63	Fuse Disconnecter + Micro Switch	1	H097205
63	Fuse Disconnecter + Micro Switch	2	D097293
63	Fuse Disconnecter + Micro Switch	3	E097294
Terminal Covers, twin pack			F097226

MV FUSE FITTINGS & LINKS

Features:

- Designed to DIN 43620, VDE 0636/21.
- Silver plated blades.
- Up to 1200V AC, Utilisation category gG.
- Top visual trip indicator.
- Optional 'K' type striker versions available on request.



M1GL125/1200V

Din Fuse Links - 1200V AC / 1000V DC

Rating Amp (A)	DIN Fuse Size	Carton Qty	Part No.
DIN Blade Fuse-links			
6	NH1XL	1	M1GL6/1200V
10			M1GL10/1200V
16			M1GL16/1200V
20			M1GL20/1200V
25			M1GL25/1200V
32			M1GL32/1200V
35			M1GL35/1200V
40			M1GL40/1200V
50			M1GL50/1200V
63			M1GL63/1200V
80			M1GL80/1200V
100			M1GL100/1200V
125			M1GL125/1200V
160			M1GL160/1200V
200	M1GL200/1200V		
100	NH2XL	1	M2GL100/1200V
125			M2GL125/1200V
160			M2GL160/1200V
200			M2GL200/1200V
250			M2GL250/1200V
315	M2GL315/1200V		
100	NH3XL	1	M3GL100/1200V
125			M3GL125/1200V
160			M3GL160/1200V
200			M3GL200/1200V
250			M3GL250/1200V
315			M3GL315/1200V
400	M3GL400/1200V		
500	M3GL500/1200V		



U1XL-1IGZ/1500/H

DIN Fuse Bases – 1500V

Rated Current (A)	Fuse Size	Pack QTY	Part No.
250	NH1XL	1	U1XL-1IGZ/1500/H
400	NH2XL	1	U2XL-1IGZ/1500/H
630	NH3XL	1	U3XL-1IGZ/1500/H

Features:

- Up to 150mm² cable or 30 x 10mm Cu bar.
- 1 Pole 250A switching, IP20.
- 1200V AC, 1000V DC.
- Optional fuse monitoring.



TL1-1/1200

DIN Disconnecter - 1200V

Current Rating (A)	DIN Fuse Size	Terminal Size	Part No.
250	1	M10	TL1-1/9/1200V

AF CONTACTORS

35 TO 630kW

Features:

- 3 Pole.
- Add-on auxiliary contact.
- Built-in surge suppression.
- Reduced panel energy consumption.
- Very distinct closing and opening.
- DIN or Panel mounting.



AF963000...

3 Pole - 3NO Contactors

1000V AC-3 (kW)	1000V AC-3 (A)	Auxiliary		Part No.
		NO	NC	
35	25	0	0	AF803000 <input type="checkbox"/>
40	30	0	0	AF963000 <input type="checkbox"/>

Features:

- 3 Pole.
- Add-on auxiliary contact.
- Built-in surge suppression.
- Reduced panel energy consumption.
- Very distinct closing and opening.
- Can withstand short voltage dips and voltage sags.
- For connection with built-in cable clamps.
- Panel mounting.



AF1463011....



AF3703011...

1000V AC-3 (kW)	1000V AC-3 (A)	1000V AC-1 (A)	Auxiliary		Part No.
			NO	NC	
75	60	225	1	1	AF1463011 <input type="checkbox"/>
110	85	250	1	1	AF1903011 <input type="checkbox"/>
132	100	275	1	1	AF2053011 <input type="checkbox"/>
160	113	350	1	1	AF2653011 <input type="checkbox"/>
185	131	375	1	1	AF3053011 <input type="checkbox"/>
200	141	400	1	1	AF3703011 *
220	155	600	1	1	AF4003011 *
280	200	700	1	1	AF4603011 *
355	250	800	1	1	AF5803011 *
400	300	1000	1	1	AF7503011 *
560	375	1350	1	1	AF13503011 *
600	400	1650	1	1	AF16503011 *
630	425	2050	1	1	AF20503011 *

To complete Part Number, add the required voltage code:

Code	11	12
Control Voltages	24-60 V AC/DC	48-130 V AC/DC
Code	13	14
Control Voltages	100-250 V AC/DC	250-500 V AC/DC
* Code	70	
Control Voltages	100-250 V AC/DC	

- Built-in PLC interface version available.

- Other coil voltages and auxiliary contact arrangements available.

- AF400 ... AF2650 are equipped with low voltage inputs for control, for example by a PLC. For example, a 240V AC supply can be permanently on A1 and A2 which allows the contactor to be switched with a 24V DC signal from a PLC.

AF CONTACTOR OVERLOADS

Features:

- Manual or automatic reset selectable.
- TEST and STOP function – Trip indication on the front.
- High accuracy.
- Temperature compensation.
- Trip contact (N.C.), signal contact (N.O.),
- Tripping class 10E, 20E, 30E.



EF65

Electronic Overloads

To Suit	Separate mounting kit	Current setting		Part No.
		A (Min.)	A (Max.)	
AF40, AF52, AF65	DB65	20	56	EF65-56
		25	70	EF65-70
AF80, AF96	DB96	20	56	EF96-56
		36	100	EF96-100
AF116, AF140, AF146	Not required	54	150	EF146-150
AF145, AF185, AF190, AF205		63	210	EF205
AF210, AF260, AF300, AF305, AF370		115	380	EF370
AF400, AF460		150	500	EF460-500
AF580, AF750		250	800	EF750-800

- The EOL can be used with any contactors by wiring (EF65 and EF96 requires separate mounting kit)

- Auxiliary circuit is up to 600 V AC/DC



AF CONTACTOR ACCESSORIES

Auxiliary Contacts



CAL411



CA410

Suitable for	Auxiliary		Part No.
	NO	NC	
Side-mounted instantaneous auxiliary contact blocks			
AF09 ... AF96	1	1	CAL411
AF400 ... AF2850	1	1	CAL1811
AF116 ... AF370	1	1	CAL19-11
	1	1	CAL19-11B*
Front-mounted instantaneous auxiliary contact blocks			
AF09 ... AF96	1	0	CA410
	0	1	CA401
AF09 ... AF16	2	2	CA422M
AF26 ... AF96	2	2	CA422E
AF09 ... AF16	2	2	CA422U
AF09 ... AF80	3	1	CA431E
AF09 ... AF16	4	0	CA440E
	0	4	CA404E
Front-mounted auxiliary contact blocks with N.O. leading contact and N.C. lagging contact			
AF09 ... AF96	1	0	CC410
	0	1	CC401

*Second block for mounting in addition to a first CAL ...-11 block.

Mechanical Interlock Unit



VM19

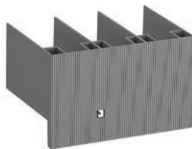


VM140/190

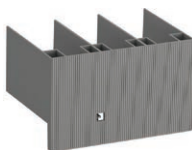
Suitable for	Mounting	Part No.
Mechanical interlock units for two contactors mounted side by side		
AF40 ... AF96		VM96-4
AF116 ... AF146, AF190, AF205, AF265 ... AF370		VM19
AF116 ... AF146, AF190, AF205		VM140/190
AF190, AF205, AF265 ... AF370		VM205/265
AF265 ... AF370 and AF400 ... AF460		VM370/400
AF400 ... AF1250	PN.. mounting plate to be ordered separately	VM750H
AF1350 ... AF2650	Plate included	VM1650H
Mechanical interlock units for two contactors mounted one above the other		
AF400 ... AF1250	Additional plate (not supplied)	VM750V

- VM750V: for two contactors mounted one above the other.

Terminal Shrouds



LT6530



LT20540C

Suitable for	Part No.
3-Pole Contactors	
AF40 ... AF65	LT6530
AF80 ... AF96	LT9630
A210...A300	LT300AL
AF190, AF205, with cable clamps	LT20530C
AF265 ... AF370, with cable clamps	LT37030C
AF116 ... AF146, with compression lugs	LT14030L
AF190, AF205, with compression lugs	LT20530L
AF265 ... AF370, with compression lugs	LT37030L
AF190, AF205, with shorting bar or between contactor and TOL/EOL in DOL-starters	LT20530Y
AF265 ... AF370, with shorting bar or between contactor and TOL/EOL in DOL-starters	LT37030Y
AF265 ... AF370, for use with extending cable clamps	LT37030D
4-Pole Contactors	
AF190 ... AF205, with cable clamps	LT20540C
AF265 ... AF370, with cable clamps	LT37040C
AF116 ... AF140, with compression lugs	LT14040L
AF190 ... AF205, with compression lugs	LT20540L
AF265 ... AF370, with compression lugs	LT37040L

1000V Range

AF CONTACTOR ACCESSORIES



LW460



LW20540

Terminal Enlargements

Suitable for	Dimensions		Part No.
	hole Ø (mm)	bar (mm)	
3-Pole Contactors			
AF116...AF146	6.5	13 x 3	LW140
AF190...AF205	10.5	17.5 x 5	LW205
AF265...AF370	10.5	25 x 5	LW370
4-Pole Contactors			
AF190 ... AF205	10.5	20 x 5	LW20540
AF265 ... AF370	10.5	25 x 5	LW37040



LX140

Terminal Extension

Suitable for	Dimensions		Part No.
	hole Ø (mm)	bar (mm)	
3-Pole Contactors			
AF116...AF146	6.5	13 x 3	LX140
AF190...AF205	8.5	17.5 x 5	LX205
AF265...AF370	10.5	20 x 5	LX370



TEF4-ON

Electronic Timer with Screw Terminals

Suitable for	Time delay range	Delay type	Auxiliary		Part No.
			NO	NC	
AF09 ... AF96	0.1...1 s	ON-delay	1	1	TEF4-ON
	1...10 s		OFF-delay	1	1
	10...100 s				

- Rated control circuit voltage U_c 24...240 V 50/60 Hz or DC.



BX4CA

Protective Covers

Suitable for	Part No.
Suit for 4P CA4 auxiliary contact blocks and TEF4 electronic timer	BX4CA

Overload Relay Accessories

Remote Reset Control



DRS-F-01

To Suit	Description	Part No.
	Remote reset coil 24 - 30 V AC/DC	DRS-F-01
TF42-TF96	Remote reset coil 48 - 60 V AC/DC	DRS-F-02
EF19-EF750	Remote reset coil 110 -127 V AC/DC	DRS-F-03
	Remote reset coil 220 - 240 V AC/DC	DRS-F-04

SAFETY CONTACTORS

35 TO 75kW

Features:

- AC/DC Operated.
- Safety with AF technology.
- Front-mounted auxiliary contact block (Yellow-Permanently fixed.).
- The built-in auxiliary contact elements are mechanically linked (side-marked symbol) and the N.C. auxiliary contacts are mirror contacts.
- Reduced panel energy consumption.
- For connection with built-in cable clamps.
- Din or Panel mount.



AFS093022...



AFS963022...

Features:

- Safety with AF technology.
- Side-mounted auxiliary contact block (Yellow-Permanently fixed.).
- The built-in auxiliary contact elements are mechanically linked (side-marked symbol) and the N.C. auxiliary contacts are mirror contacts.
- Reduced panel energy consumption.
- For connection with built-in cable clamps.
- Din or Panel mount.



AFS1163012*

3 Pole – 3NO Safety Contactors - AC/DC Operated

1000V AC-3 (kW)	1000V AC-3 (A)	Auxiliary		Part No.
		NO	NC	
35	25	2	2	AFS803022 <input type="checkbox"/>
40	30	2	2	AFS963022 <input type="checkbox"/>

To complete Part Number, add the required voltage code:

Code	11	13
Voltages V AC/DC	24...60	100...250

- Version with built in PLC interface is available, please contact IPD.

3 Pole - 3NO Safety Contactors - AC/DC Operated

1000V AC-3 (kW)	1000V AC-3 (A)	1000V AC-1 (A)	Auxiliary		Part No.
			NO	NC	
For connection with built-in cable clamps					
75	60	225	1	2	AFS1463012 <input type="checkbox"/>
With bar connections					
75	60	225	1	2	AFS1463012B <input type="checkbox"/>

To complete Part Number, add the required voltage code

Code	11	12	13	33 ⁽¹⁾	34 ⁽¹⁾
Voltage AC 50/60Hz	24...60	48...130	100...250	100...250	250...500
Voltage DC	20...60	48...130	100...250	100...250	250...500

- For other auxiliary contacts arrangements, please contact IPD.

(1) With built in PLC interface

SAFETY CONTACTORS

110 TO 400kW



AFS190-30-12-1...

3 Pole - 3NO Safety Contactors - AC/DC Operated

1000V AC-3 (kW)	1000V AC-3 (A)	1000V AC-1 (A)	Auxiliary		Part No.
			NO	NC	
110	85	250	1	2	AFS1903012 <input type="checkbox"/>
132	100	275	1	2	AFS2053012 <input type="checkbox"/>
160	113	350	1	2	AFS2653012 <input type="checkbox"/>
185	131	375	1	2	AFS3053012 <input type="checkbox"/>
200	141	400	1	2	AFS3703012 <input type="checkbox"/>

To complete Part Number, add the required voltage code

Code	11	12	13	33 ⁽¹⁾	34 ⁽¹⁾
Voltage AC 50/60Hz	24...60	48...130	100...250	100...250	250...500
Voltage DC	20...60	48...130	100...250	100...250	250...500

(1) With built in PLC interface



AFS400-30-12-...

3 Pole - 3NO Safety Contactors - AC/DC Operated

1000V AC-3 (kW)	1000V AC-3 (A)	1000V AC-1 (A)	Auxiliary		Part No.
			NO	NC	
220	155	600	1	2	AFS4003012 <input type="checkbox"/>
280	200	700	1	2	AFS4603012 <input type="checkbox"/>
355	250	800	1	2	AFS5803012 <input type="checkbox"/>
400	300	1000	1	2	AFS7503012 <input type="checkbox"/>

To complete Part Number, add the required voltage code

Code	68 ⁽¹⁾	69	70
Voltage AC 50/60Hz	-	48...130	100...250
Voltage DC	24...60	48...130	100...250

(1) The connection polarities indicated close to the coil terminals must be respected: A1 for the positive pole and A2 for the negative pole.

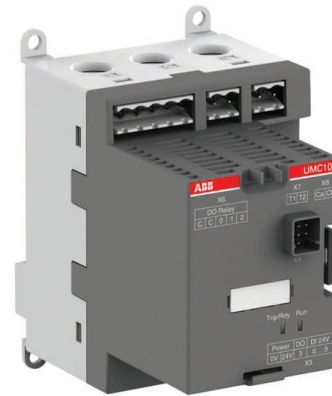
(2) Up to 850 V DC for AFS580, AFS750.

UNIVERSAL MOTOR CONTROLLER

- Main voltage: max 1000V AC.
- Built-in 0.24 up to 63A current measuring system.
- Above 63A external CT available (up to 850A).
- Embedded 6 DI, 4 DO, 1 PTC. Extra IO module available.

COMPREHENSIVE MOTOR PROTECTION

- Overload protection.
- Selectable tripping classes: 5E, 10E, 20E, 30E, 40E.
- Locked rotor protection.
- Phase failure, asymmetry and sequence protection.
- Under-/overcurrent protection.
- Thermistor motor protection.
- Ground leakage detection (internally calculation or using earth leakage sensor).
- Limitation of motor starts per time.



UMC100.3DC

MOTOR CONTROL

- Direct, reversing, star-delta starters.
- Pole changing Dahlander/Actuator mode.
- Inching/jog mode.
- Adjustable restart strategy (load shedding).

METERING, MONITORING & DIAGNOSIS

- Rapid, comprehensive diagnostics and operating status.
- Direct mount or panel mount.



UMC100.3-PAN

UNIVERSAL MOTOR CONTROLLER

Features:

- IP20 rating.
- Max. 1000 VAC motor voltage.
- Suitable for single and three-phase motors.
- Rated motor current from 0.24 to 63A. (without external CT).
- Tripping classes 5, 10, 20, 30, 40 acc. EN/IEC 60947-4-1.
- Flexible mounting of communication interfaces.
- Standard fieldbus connection and wiring.
- DIN-rail (EN 50022-35) or with four screws M4.



UMC100.3DC



UMC100.3-PAN



UMCPAN-CAB.070



UMCIO-CAB.030

Universal Motor Controller

Supply Control Voltage	Description	Part No.
24 V AC		UMC100.3AC24L
24 V DC	UMC 3P, 63A, 6 DI, 4 DO, 1 PTC input	UMC100.3DC
110-240 VAC/DC		UMC100.3UC

Operating Panel

Description	Cable length (m)	Part No.
Operating panel		
LCD HMI panel with USB	-	UMC100.3-PAN
Control panel connection		
	0.7	UMCPAN-CAB.070
Ext. cable with door mounting set	1.5	UMCPAN-CAB.150
	3	UMCPAN-CAB.300
Modules connection		
UMC100 - I/O module connection cable	0.3	UMCIO-CAB.030
IO-module - IO-module connection cable	0.3	IOIO-CAB.030

Features:

- Up to 4 expansion-modules can be connected to one UMC100:
- 1 digital expansion module DX111 or DX122.
- 1 voltage expansion module VI150 or VI155.
- Up to 2 analog/temperature expansion modules AI111.



DX111

Expansion Modules

Description	Part No.
I/O module 8 DI 24V DC, 4 Relay, 1AO 0/4-20mA or 0-10V	DX111
I/O module 8 DI 110/230V AC, 4 Relay, 1AO 0/4-20mA or 0-10V	DX122
3 phase voltage module for grounded networks c/w 1 relay output*	VI150
3 phase voltage module for all networks c/w 1 relay output*	VI155
Analog/temperature module 3 analogue inputs	AI111

* Voltage modules are up to 690V AC, and not suitable for 1kV application.

UNIVERSAL MOTOR CONTROLLER ACCESSORIES

Mounting Option :

- Direct mount on UMC100.3 No additional accessories are required.
- Remote mount from UMC100.3 for drawer application. Need accessories: 1 x SMK3.01 x CDP18.150, and 1 x CDP24.150.



PDP32.0



EIU32.0



CDP18.150



SMK3-X1.10



MTQ22.0



ETHTB-FBP.4

Interfaces

Description	Part No.
Fieldbus	
Profibus DP communication interface	PDP32.0
Modbus RTU communication interface	MRP31.0*
DeviceNet communication interface	DNP31.0*
Profibus DP active bus termination	PDR31.0
EtherNet/IP™ interface	EIU32.0

* Terminal block for fieldbus connection included.

Fieldbus Communication Interfaces for Drawer Application

Description	Part No.
Adapter for separate mounting communication interface	SMK3.0
Cable for use inside drawer, length 1.5 m	CDP18.150
Cable from SMK3.0 to drawer's outside, length 1.5 m	CDP24.150
Terminal block 2-pole for SMK3.0	SMK3-X2.10
Terminal block 5-pole for SMK3.0	SMK3-X1.10

- SMK3-X2.10 and SMK3-X1.10 are for making custom cables.

Ethernet Communication Interfaces

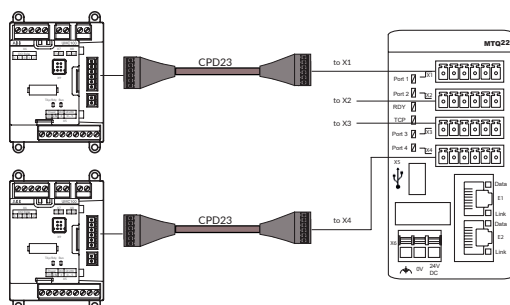
Description	Part No.
Ethernet Modbus TCP interface	MTQ22.0
Ethernet Profinet IO interface	PNQ22.0

Accessories

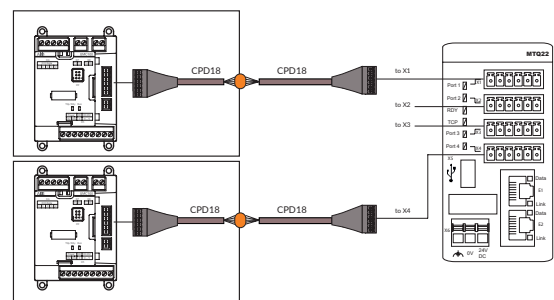
Description	Part No.
Cable for use inside drawer, length 1.5 m	CDP18.150
Cable from SMK3.0 to drawer's outside, length 1.5 m	CDP23.150
Cable Ethernet interface - UMC100.3,length 3 m	CDP23.300
Cable from SMK3.0 to drawer's outside, length 1.5 m	CDP24.150
Terminal blocks, 4pcs for Ethernet inter. and UMC100.3, 46X23X8 (LXWXH)MM	ETHTB-FBP.4

- ETHTB-FBP.4 is for making custom cables.

fix mounted application with solution MTQ22.0 / PNQ22.0



withdrawable application with MTQ22.0 / PNQ22.0



UNIVERSAL MOTOR CONTROLLER ACCESSORIES



CEM11-FBP.20

Earth Fault Monitors

Earth Fault Rating (mA)	Hole Dia. (mm)	Part No.
80 ¹⁾ - 1700	20	CEM11-FBP.20
100 ¹⁾ - 3400	35	CEM11-FBP.35
120 ¹⁾ - 6800	60	CEM11-FBP.60
300 ¹⁾ - 13600	120	CEM11-FBP.120

¹⁾ Lower values have higher inaccuracy.



CT4L185R/4

Current Transformers

Nominal current Range (A)	Current Ratio	Window Size (mm) H x W	Part No.
60...185	185/4	28.5 x 21	CT4L185R/4
180...310	310/4		CT4L310R/4
300...500	500/4	22 x 42	CT5L500R/4
500...850	850/4		CT5L850R/4



UTP22-FBP

Configuration Software

Description	Part No.
USB interface for PROFIBUS networks	UTP22-FBP

Connect PC to UMC100.3.

- Via Profibus network: UTP22-FBP.

- Via control panel UMC100-PAN: any micro-USB cable.

- Please contact IPD for details of Software FIM UMC Edition.



ADVANCED SMART SOFT STARTER - EMX4i SERIES

Features:

- Intelligent adaptive start/stop control.
- Extended motor protection functionality.
- USB port and QR trip code.
- Automation functions with optional smart card.
- IOS and Android support App.



S4

EMX4i Soft Starter - 1000V/1200V

Light	Current Rating (A)			IP Rating	Frame Size	Part No.
	Medium	Heavy	Severe			
202	165	140	121	IP00	S4	EMX4i0202EV12*
287	233	197	168			EMX4i0287EV12*
387	315	267	229			EMX4i0387EV12*
564	444	366	299			EMX4i0564EV12*
629	503	414	339			EMX4i0629EV12*
857	677	559	460			EMX4i0857EV12*
1092	865	716	591			EMX4i1092EV12*

- 2 starts per hour, 40°C, <1000m.
- MV soft starter (up to 15kV) is also available. Please contact IPD for details.
- Must be used with external bypass.
- Higher rating available on request- Please contact IPD.

* To complete Part Number, add the required voltage code:

Code	C1H	C2H
Control Voltages	110/240V AC	24V AC/DC

Duty Category: EMX4i-0202E~1092E

- Light : AC53b 3.0-10:1790 : 40°C, < 1000m
- Medium : AC53b 3.5-15:1785 : 40°C, < 1000m
- Heavy : AC53b 4.0-20:1780 : 40°C, < 1000m
- Severe : AC53b 4.5-30:1770 : 40°C, < 1000m

Accessories

Communication Cards for EMX4



PICDN01

Description	Part No.
DeviceNet Card	PICDN01
Ethernet IP CARD + Ground Fault	PICEI03
Modbus TCP Card + Ground Fault	PICMT03
Modbus RTU Card	PICMB01
Profibus Card	PICPB01
Profinet Card + Ground Fault	PICPN03

Remote Keypads for EMX4



KEYPAD

Description	Part No.
Remote, Keypad Card	PICRC01
Remote Keypad Card & Keypad	PICRC02
Remote Keypad	PICRK01

Note: The above 3 parts come with remote keypad mounting kit (c/w 3m interface cable).

Smart Cards for EMX4



SMART CARDS

Description	Part No.
Smart Card Pump Applicaton	SCCPC01

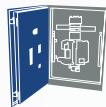
- The smart card come with 4xDI, 1xRTD/PT100, 3x4-20mA inputs for (depth, pressure or flow transducers).

EXPERIENCE BETTER

Over 10,000 customers trust us to deliver their solutions



End to End Service Capabilities



Custom DB Manufacturing Facility



National Customer Support



Dedicated Training Facility



National Customer Support Centre

43 Newton Rd, Wetherill Park NSW 2164
Tel: 1300 556 601 Fax: 1300 550 187
Email: customerservice@ipd.com.au
www.ipd.com.au

