



ECOFIT™

Medium & Low Voltage Distribution
Modernisation of switchboards
Catalogue 2017



Standard solutions Index

Medium Voltage ECOFIT™ standard solutions

How to find an ECOFIT™ solution?



①		②		③			
Original Brand	MV CB or Contactor or Disconnector	MV Panel	MV Cradle to Cradle	Panel type	Original device type	New device type	Page
Square D	✓			5-15kV MC switchgear	VAD2-3	Magnum CB	A-2
Siemens	✓			8BD1	3AC - H515	EasyPact EXE	A-3
AEG, Alsthom, Alstom	✓			AHA	ECA	HVX-O²	A-4
Other brand	✓			All with fixed CB	All fixed CB types	HVXUW	A-5
Alsthom	✓			Alliance	FP - GFA	FP - GFA	A-58
Merlin Gerin	✓			Belledonne B200-B400	DSE22 to DSE78	LF2 - LF3 - SF1 - Evolis	A-6
Merlin Gerin	✓			Belledonne B200G	DSE22K-DSE23K	LF1 - Evolis	A-7
Merlin Gerin	✓			Belledonne B650	DIS	LF1 - R400 - R400D - Evolis	A-8
Merlin Gerin	✓			Belledonne B900	DIS	SF1	A-9
AEI, GEC Alsthom	✓			BVP 17	BVP 17	VMX	A-10
CEM	✓			Cemabloc CB	CB	FP - HVX	A-11
CEM	✓			Cemafluor C26.0 C26.1	CS - CX	FPR	A-12
CEM	✓			Cemafluor C26.2	FPR	FPR	A-59
Nuova Magrini Galileo	✓			Composit	MG	SF1	A-13
VEB Otto Buchwitz	✓			CSIM 1-12 & 3-12	SCI-4	VEIVACUUM F	A-14
VEB Otto Buchwitz	✓			CSIM 1-12 & 3-12	SCI-4	VA	A-15
Alsthom	✓			DNF4-2E	FP - GFA	LF2 - HVX - CVX	A-16
Alsthom	✓			DNF4 MI&FI	FP	FP	A-60
Alsthom	✓			DNF4 MI&FI	FP	HVX	A-17
Alsthom	✓			DNF5/DNF5-2B	FP	FP	A-61
Alsthom	✓			DNF5/DNF5-2B	FP	HVX	A-18
Alsthom	✓			DNF6	FP	FP	A-62
Alsthom	✓			DNF6	FP	HVX	A-19
Alsthom	✓			DNF7	FP	FP	A-63
Alsthom	✓			DNF7	FP	HVX-O²	A-20
Nuova Magrini Galileo	✓			Epoclad	DHF -F	LF1 - LF2 - LF3 - SF1	A-21
Merlin Gerin	✓			Fluair F100-F200	FG1 - FG2	LF2 - LF3 - Evolis - Easypact EXE	A-22
Merlin Gerin	✓			Fluair F100C	R400-R400D	R400 - R400D	A-64
Merlin Gerin	✓			Fluair F300	FG3	HVXO² or SF1 - SF2	A-23
Merlin Gerin	✓			Fluair F400C	FC4	SF2	A-24
Merlin Gerin	✓			Fluair F400G	FG4	SF1 - SF2	A-25
GEC, GEC Alstom, Alstom	✓			Fluokit M24	FP	FP	A-65
GEC, GEC Alstom, Alstom	✓			Fluokit M24 +	FP	FP	A-66
GEC, GEC Alstom, Alstom	✓			Fluokit M36	FP	FP	A-67
AEG	✓			GS-10	GE	VA - VAA	A-26
GEC Alstom	✓			HMC400 & HMC410	HMC 400 - HMC 410	HMC 400 - HMC 410	A-68
GEC Alstom	✓			HMC1072	HMC 1072	HMC 1072	A-69
GEC Alstom	✓			HMC1172	HMC 1172	HMC 1172	A-70
Concordia Sprecher	✓			HP	HP-W-TW-TM	HVX	A-27
GEC, GEC Alstom, Alstom, Areva	✓			HWX	HWX	HWX	A-71
GOST standard	✓			K104	K104	LF1 - Evolis	A-28

NEW

NEW

1				2		3	
Original Brand	MV CB or Contactor or Disconnecter	MV Panel	MV Cradle to Cradle	Panel type	Original device type	New device type	Page
GEC, GEC Alsthom, Alstom	✓			KAD	KAD	VMX-540	A-29
GOST standard	✓			KRU 2-10	KRU 2-10	LF1 - Evolis	A-30
Federal Pioneer	✓			Metalclad switchgear	DST 2 & 5	DST 2V & 5V	A-31
Merlin Gerin	✓			Motorstart P50D	C - CD	R400 - R400D - CTV1	A-32
Merlin Gerin	✓			Motorstart P500D	C1 - CD1	R400 - R400D - CTV1	A-33
GEC Alstom	✓			MX 51 & MX 81	MX 51 - MX 81	MX 51 - MX 81	A-72
Delle Alsthom	✓			Normabloc N13xx	HL	HVX - FPX	A-34
Alsthom	✓			Normaclad PX12-24	FPX	FPX	A-73
GEC, GEC Alstom, Alstom	✓			PIX SF6	GFX - FPX	GFX - FPX	A-74
AEG	✓			PNX 36	HVX 36	HVX 36	A-75
AEG	✓			R	VA - VAA	VA - VAA	A-76
AEG	✓			R	M - MC - IMC - E - AL - ALF - BAL - FAL - IFAL - TG	VA - VAA - Contactor	A-35
GOST standard	✓			RSW	RSW	LF1 - Evolis	A-36
Ansaldo	✓			Siclad	MAG II	LF1 - LF2	A-37
Square D	✓			Solenarc DSE Metal-Clad switchgear	DSE	Magnum CB	A-38
Nuova Magrini Galileo	✓			Venus	GI-GL	LF1-LF3	A-39
GEC, GEC Alsthom, Alstom	✓			VISAX	BLV	BLV	A-77
Merlin Gerin	✓			VM6 DM12	FB4	SF1	A-40
GEC, GEC Alsthom, Alstom	✓			VMX	VMX	VMX	A-78
AEG	✓			WBA	VA - VAA	VA - VAA	A-79
AEG	✓			WBA	ECA - BAL - AL	VA - VAA - Contactor	A-41
AEG	✓			WBB	VA - VAA	VA - VAA	A-80
AEG	✓			WBB	ECA - BAL - AL	VA - VAA - Contactor	A-42
AEG	✓			WBD	VA - VAA	VA - VAA	A-81
AEG	✓			WBD	HVX-C	VA - VAA	A-43
AEG	✓			WK (A/B/C/D/E/F)	VA - VAA	VA - VAA	A-82
AEG	✓			WK (A/B/C/D/E/F)	MC - AL - BAL - TG	VAA - Contactor	A-44
Yorkshire Switchgear	✓			YSF6	YSF6	YSF6 Evolis	A-45
AEG, Alsthom, Areva		✓		AHA	AHA panel	AHA panel	A-83
Alsthom		✓		DNF7	DNF7 panel	DNF7 panel	A-84
Merlin Gerin		✓		F100/200	F100/200 panel	F100/200 panel	A-85
Alstom		✓		Normaclad PX 12-24	PX 12-24 panel	PX 12-24 panel	A-86
Alstom		✓		PIX	PIX SF6 panel	PIX SF6 panel	A-87
Areva		✓		PNX36	PNX36 panel	PNX36 panel	A-88
AEG		✓		R	R panel	R panel	A-89
GEC Alstom		✓		VISAX	VISAX panel	VISAX panel	A-90
GEC, GEC Alstom, Alstom		✓		VMX	VMX panel	VMX panel	A-91
AEG		✓		WBA	WBA panel	WBA panel	A-92
AEG		✓		WBB	WBB panel	WBB panel	A-93
AEG		✓		WBD	WBD panel	WBD panel	A-94
AEG		✓		WK	WK panel	WK panel	A-95
Other brand			✓	All	All breaker types	Evolis MC Cassette	A-46
Other brand			✓	All	All breaker types	F400 Cassette	A-47

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Medium Voltage ECOFIT standard solutions

How to find an ECOFIT™ solution?



①		②		③			
Original Brand	MV CB or Contactor or Disconnector	MV Panel	MV Cradle to Cradle	Panel type	Original device type	New device type	Page
EIB	✓			All EIB and open air insulated switchgears	A – frontal circuit breaker	HVX - VA	A-48 NEW
EIB	✓			All EIB and open air insulated switchgears	A – lateral circuit breaker	SF1	A-49 NEW
BBC, EIB	✓			All EIB and open air insulated switchgears	DB – frontal circuit breaker	HVX - VA	A-50 NEW
EIB, AEG, Alstom	✓			All EIB, AEG, Alstom and open air insulated switchgears	DPI L (CRR1000)	SFset	A-51 NEW
EIB, AEG, Alstom	✓			All EIB, AEG, Alstom and open air insulated switchgears	VB L (CRR1000)	SF1	A-52 NEW
EIB, AEG, Alstom, Areva	✓			All EIB, AEG, Alstom, Areva and open air insulated switchgears	VB – frontal circuit breaker	HVX	A-53 NEW
EIB	✓			Modulec CT	Modulec CT panel	SM6	A-96 NEW
EIB, AEG, Alstom	✓			Modulec9	Modulec9 panel	SM6	A-97 NEW

* Not current ECOFIT™ reference centre

Low Voltage ECOFIT™ standard solutions

How to find an ECOFIT™ solution?



①		②		③			
Original Brand	LV CB or Contactor	LV Drawer	Panel type	Original device type	New device type	Page	
Nuova Magrini Galileo	✓		NA	B Control	Masterpact NW	B-2	
Merlin Gerin	✓		NA	Compact C801-C1251	Compact NS	B-3	
Merlin Gerin	✓		NA	DA	Masterpact NW	B-4	
Square D	✓		NA	DS	Masterpact NW	B-5	
Federal Pioneer	✓		NA	H series	Masterpact NT - NW	B-6	
Merlin Gerin	✓		NA	Masterpact M	Masterpact NW	B-7	
Merlin Gerin	✓		NA	Masterpact M	Masterpact MTZ2 08 – MTZ2 63	B-8	NEW
Square D, Westinghouse	✓		NA	SE	Masterpact NW	B-9	
Merlin Gerin	✓		NA	Selpact	Masterpact NT - NW	B-10	
Merlin Gerin	✓		NA	LV Circuit Breaker associated offers		B-11/B-12	NEW
Merlin Gerin		✓	T140	T140 drawers	T140 drawers	B-13	
Merlin Gerin		✓	MB400	MB400 drawers	MB400 drawers	B-14	

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Protection relays ECOFIT™ standard solutions

How to find an ECOFIT™ solution?



	①	②	③		
Original Brand	Protection relay	Panel type	Original device type	New device type	Page
GE	✓	All	CO	MiCOM P111/115	C-3
ABB	✓	All	DPU 445	MiCOM P123	C-4
ABB	✓	All	HCB	MiCOM P521	C-5
GE	✓	All	IAC	MiCOM P122	C-6
GEC Alstom, Areva	✓	All	KCGG 122 & 142	MiCOM P123R	C-7
Areva or older	✓	All / draw out	MCAG	MiCOM P126	C-8 NEW
Areva or older	✓	All / draw out	M range - MCGG 11, 21 & 22	MiCOM P120H	C-9
Areva or older	✓	All / draw out	M range - MCTI 39-40	MiCOM P821MF	C-10
Alstom	✓	All	MCGG 62	MiCOM P126	C-11
Alstom	✓	All	MVTR 51	MiCOM P123	C-12 NEW
Merlin Gerin	✓	All	Sepam 2000	Sepam 60/80	C-13
Merlin Gerin	✓	RM6 ⁺	VIP	VIP + ECOFIT™ kit	C-14

Substation automation ECOFIT™ standard solutions

How to find an ECOFIT™ solution?



	①	②			
Original Brand	Control System	Original device type	New device type	Ref. ECOFIT™ centre	Page
Schneider Electric	✓	ADVC2	ADVC2.2	FR EAC Lattes*	D-3 NEW
AREVA or older	✓	Bay Controller BM9x00	MiCOM C624	FR EAC Lattes*	D-4
General Electric	✓	GE FANUC	Quantum PLC & EcoSUI EWS	AU Plant Eagle Farm*	D-5 NEW
AREVA or older	✓	PACIS OI (V3.x up to V4.6)	PACiS EcoSUI	FR EAC Lattes*	D-6
AREVA or older	✓	PSCN3020 HMI	EcoSUI HMI	FR EAC Lattes*	D-7
Schneider Electric	✓	Seefox HMI	EcoSUI HMI	FR EAC Lattes*	D-8

* Not current ECOFIT™ reference centre

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Customised solutions Index

Medium Voltage ECOFIT™ customised solutions

Those solutions have been manufactured and installed all over the world to answer specific customer request.
Schneider Electric can help you to identify the right solution to modernise your installation, with a site visit if required.

Original Brand	Panel type	Original device type	Un (kV)	In (A)	Isc (kA)	New device type	
ABB	AIS	E7512/10	10	1250	40	HWX	
ABB	AIS	EKU5012/10	10	1250	50	HWX	
ABB	AIS	EKU5016/10	10	1600	50	HWX	
ABB	AIS	EKU5025/10	10	2500	50	HWX	
ABB	AIS	GR256	12	630	13.1	HWX	
ABB	AIS	HB12-12-40	24	1600	25	Evolis	
ABB	VHE800	HKK12/1226	12	1250	26.3	HWX	
ABB	VHE800	HKK12/1240	12	1250	40	HWX	
ABB	VHE950	HKK12/3140	12	2500	40	HWX	
ABB	AIS	JVE301	12	400	40	HWX	
ABB	AIS	MS 2	12	1250	40	HWX	
ABB	AIS	MS 3	12	1600	40	HWX	
ABB	AIS	MT1	12	1250	26.3	HWX	
ABB	AIS	MT2	12	1250	26.3	HWX	
ABB	AIS	OD1M	12	400	26.3	HWX	
ABB	AIS	S F ASG	12-16	1250 to 2500	26 - 40	HWX	
ABB	VHA-12S	VRC	7.2	400	25	LF	
ABB	HA3zc	GCB	12	630 to 2500	40	LF	
AEG	FKCM4/24-2	VA/VAA/LTRI/AL	24kV	up to 1250	up to 25	VA/VAA	
AEG	FKCM5/12-2	VA/VAA/LTRI/AL	12kV	up to 1250	up to 25	VA/VAA	
AEG	FKEM4/24-2/721	VA/VAA/LTRI/AL	24kV	up to 1250	up to 25	VA/VAA	
AEG	FKEM4/24-2/723	VA/VAA/LTRI/AL	24kV	up to 1250	up to 25	VA/VAA	
ALIND	AIS	HL430	12	1250	40	HWX	
Allis-Chalmers & Siemens-Allis	AIS	FA	4.16	3000	41	Magnum	
Allis-Chalmers & Siemens-Allis	AIS	MA	4.16	1200, 2000	40 & 50	Magnum	
Allis-Chalmers & Siemens-Allis	AIS	FB	7.2 & 13.8	1200, 2000	18	Magnum	
Allis-Chalmers & Siemens-Allis	AIS	FC, MC	13.8	1200, 2000, 3000	18 - 28	Magnum	
Allis-Chalmers & Siemens-Allis	AIS	FC	13.8	1200, 2000	37	Magnum	
ALSTHOM	NORMABLOC-DNL4	HL	12	2500	40	FPX	
ALSTHOM	WBS	VB6	24	1250A	25KA	HVX-O2	
ALSTOM	GMA Version 1	GMA	12	2000	25	GMA Version 2	
ALSTOM	NORMAFUOR-DNF4	FP	17.5	2500	25	HVX	
ALSTOM	AHA	ECA	up to 17.5	1250	31.5	HVXO²	
ALSTOM / AREVA / Schneider Electric	Fluokit M9	DPI L (CRR1-2)	12 - 17.5	630 - 800	up to 25	SFSet	NEW
ALSTOM / AREVA / Schneider Electric	Fluokit M9	VB L (CRR1-2)	12 - 17.5	630 - 800	up to 25	SF1	NEW
ARTECHE	AIS	HAF6142-4	24	1250	25	Evolis	NEW
ASEA	VHE-800	HKK	12	1600	40	Evolis	
CGL	AIS	SFG-40S	7.2	1250	31.5	Rollarc	
Calor Emag	AIS	OD3	12	630 to 1250	31.5	Evolis	
Calor Emag	AIS	OD4	12	630 to 1250	31.5	Evolis	
CONCORDIA SPRECHER	PIC-106	HP	12-24	up to 1600	up to 25	HVX	
CONCORDIA SPRECHER	PID 104/105/106	HP	12-24	up to 1600	up to 25	HVX	
CONCORDIA SPRECHER	SC - SD 204/206	HVTW(z)	12-24	up to 1600	up to 25	HVX	
CONCORDIA SPRECHER	SCC 204/206	HPCTW	12-24	up to 1600	up to 25	HVX	
CONCORDIA SPRECHER	SCD 204	HPDTW	12-24	up to 1600	up to 25	HVX	
DELLE	NORMABLOC-DN6S	HG	24	2500	25	FP	
DELLE	NORMABLOC-DN6S	HL	24	1250	25	FP	
DELLE	NORMABLOC-DNL4	HK & HL	12	2500	40	HVX	
DELLE	NORMABLOC-DNTL	HL	12	1250	40	FPX	
DELLE	NORMABLOC-DNTC	CHT	7.2	200	25	GFA	
DELLE	NORMABLOC-DNTG	HL	7.2	3200	40	FP	
DELLE	NORMABLOC-N142	RA	17.5	400	25	GFA or FP	
DELLE	NORMABLOC-N143	HK	17.5	630	16	FP	
DELLE	NORMABLOC-N340	FJ	23	400	12.5	FP	
DELLE	NORMABLOC-N342	RA	23	200	12.5	FP	
DELLE	NORMABLOC-N1147	HL	12	1250	40	FPX	
DELLE	NORMABLOC-ND3	HG or HK or HL	7.2	1250	12.5	FP	
DELLE	NORMABLOC-ND5	HG	17.5	1250	12.5	FP	
DELLE	NORMASEPT-N740	HL	24	400	14.5	FP	
DELLE	NORMASEPT-N1742	RA	24	200	16	FP	
DELLE	FLUOMATIC-N962	SFC	7.2	400	12.5	GFA	
EIB	All EIB and other AIS	A-frontal circuit breaker	up to 36	up to 2500	up to 31.5	HVX - VA	NEW
EIB	All EIB and other AIS	A-lateral circuit breaker	up to 24	up to 1250	up to 25	SF1	NEW
EIB / BBC	All EIB and other AIS	DB-frontal circuit breaker	up to 36	up to 2500	up to 50	HVX - VA	NEW
EIB / AEG / ALSTOM / AREVA	All EIB and other AIS	VB-frontal circuit breaker	up to 24	up to 3150	up to 40	HVX	NEW
EIB / AEG / ALSTOM	Modulec9 and other AIS	DPI L (CRR1000)	up to 24	up to 1250	up to 25	SFSet	NEW
EIB / AEG / ALSTOM	Modulec9 and other AIS	VB L (CRR1000)	up to 24	up to 1250	up to 25	SF1	NEW
Federal Pacific	AIS	DST-DST2	4.16	1200, 2000, 3000	29 - 41	Magnum	
Federal Pacific	AIS	DST-DST2	13.8	1200, 2000	18 - 28	Magnum	
FUJI	HF55	OCB	7.2	600A	25KA	Evolis	
GEC	BVX	KAD	12	400 to 1250	up to 20	VMX	
General Electric	AIS	AM	4.16	400	Fused	Magnum	
General Electric	AIS	AM	4.16	1200, 2000, 3000	40	Magnum	
General Electric	AIS	AM	7.2	1200, 2000, 3000	33	Magnum	
General Electric	AIS	AM	13.8	1200, 2000	18 up to 37	Magnum	
General Electric	AIS	AM-7.2	7.2	1200, 2000, 3000	33	Magnum	
General Electric	AIS	AM-13.8 Tall-Boy	13.8	3000	37	Magnum	
General Electric	AIS	AM-4.16	4.16	600, 1200	20	Magnum	
General Electric	AIS	AMH	4.76	1200, 2000	29	Magnum	

Medium Voltage ECOFIT™ customised solutions

Those solutions have been manufactured and installed all over the world to answer specific customer request.

Schneider Electric technician will require a visit to customer premises to validate the solution.

Original Brand	Panel type	Original device type	Un (kV)	In (A)	Isc (kA)	New device type
General Electric	AIS	AMH-4.76	4.76	1200, 2000	29	Magnum
ITE	AIS	5-HV	4.16	1200, 2000	29 to 40	Magnum
ITE / ABB	AIS	5-HK	4.16	1200, 2000, 3000	40 to 50	Magnum
ITE / ABB	AIS	7.5-HK	7.2	1200, 2000	33	Magnum
ITE / ABB	AIS	15-HK	13.8	1200, 2000, 3000	18 to 37	Magnum
JYOTI	AIS	MT2-1208-20	12	1250	25	Evolis
LG	AIS	GVB	7.2	630	31.5	Evolis
McGraw	AIS	PSD	13.8	1200, 2000	18	Magnum
McGraw	AIS	WSA	13.8	1200, 2000	18	Magnum
Merlin Gerin	V23-60	DIS23-D3	24kV	630A	25	SF
Merlin Gerin / Lorenzetti Inebraska	Flurin	FG1	17.5	1250	25	LF
Merlin Gerin / Lorenzetti Inebraska	Lorin	FG1, FG2	17.5	1250	25	LF
Merlin Gerin / Lorenzetti Inebraska	Flurin	FG2	17.5	1250	25	LF
Merlin Gerin / Lorenzetti Inebraska	CCM III	VC TOYO	7.2	400	50	Rollarc
Merlin Gerin / Lorenzetti Inebraska	CCM II	C1	7.2	400	50	Rollarc
Mitsubishi	AIS	VF/ FM	12	1250A	31.5	Evolis
Mitsubishi	AIS	6 DHE 32 M	4.76	1200 to 2000	29	LF
NGEF	AIS	E7512	12	1600	25	Evolis
NGEF	AIS	E7525	12	1250	40	Evolis
NGEF	AIS	EKU5012	12	2500	40	Evolis
NGEF	AIS	EKU5016	12	2500	40	Evolis
NGEF	AIS	EKU5025	7.2	2500	40	Evolis
NGEF	AIS	EKU5025	12	1250	40	Evolis
NGEF	AIS	EKU5025/10	10	2500	50	Evolis
NGEF	AIS	EKU-GR256	12	1250	31.5	Evolis
NGEF	AIS	EKU 5012/10	6.6	1250A	30.6	Evolis
NGEF	AIS	GR256	12	1250	31.5	Evolis
NISSIN	AIS	VSR	7.2	400A	4	CTV
NMG	AIS	10 MG 500	7.2	630A	25	LF
SACE	AIS	D6	17.5	1250	25	LF
SACE	DIARC	DR 17.5-50	17.5	800, 1250, 3150	20	HVX
SIEMENS	8BD1	3AC	7.2	630	40	Evolis
SIEMENS	8BD1	3AC	12	1250 to 2500	40	HWX
SIEMENS	AIS	H512/H515	12	1250	31.5	Evolis
SIEMENS	AIS	3TL / 1BF	7.2	450	6	CVX
SIEMENS	8BD1	3AC	7.2	630 to 2000	25	Evolis
SIEMENS	8BD1	CB	7.2	630 to 2000	40	Evolis
Square D	AIS	DSE	4.16	1200	29	Magnum
Square D	AIS	DSE23	4.16	2000	29	Magnum
Square D	AIS	DSE25	4.16	3000	41	Magnum
Square D	AIS	DSE-65	13.8	1200	up to 28	Magnum
Square D	AIS	DSE-68	13.8	3000	37	Magnum
Square D	AIS	VAD2	4.16	1200	up to 41	Magnum
Square D	AIS	VAD2	13.8	1200, 3000	37	Magnum
Square D	AIS	VAD3	4.16	1200, 2000	up to 41	Magnum
Square D	AIS	VAD3	13.8	1200, 2000	up to 28	Magnum
VOLTAS	AIS	BMTT	12	1250	26.3	HWX
VOLTAS	AIS	BE	12	1250	40	HWX
VOLTAS	AIS	BEC	12	1250	40	HWX
VOLTAS	AIS	BMTT	12	1250	40	HWX
VOLTAS	AIS	FB4	24	2000	25	Evolis
VOLTAS	AIS	FB4	36	1250	25	SF
VOLTAS	AIS	FB4 Kiosk	22	630	25	Evolis
VOLTAS	AIS	FG2	12	1250	40	Evolis or LF
VOLTAS	AIS	FG2	7.2	2000, 2500, 3150	40	Evolis or LF
VOLTAS	AIS	FG2	7.2	1250	31.5/ 40	Evolis or LF
VOLTAS	AIS	FG2	12	1250	40	Evolis or LF
VOLTAS	AIS	FG2	12	1250	40	HWX
VOLTAS	AIS	FP	12	1250	40	HWX
VOLTAS	AIS	GHM	12	1250	40	Evolis
VOLTAS	AIS	HF	12	1250	40	Evolis
VOLTAS	AIS	HKK	12	1250	40	HWX
VOLTAS	AIS	HKO	12	1250	40	HWX
VOLTAS	AIS	HL	12	1250	40	Evolis
Westinghouse	AIS	50-DH	4.16	1200, 2000	29 / 41	Magnum
Westinghouse	AIS	75-DH	7.2	1200, 2000	33	Magnum
Westinghouse	AIS	150-DH	13.8	1200, 2000	18 / 28	Magnum
Westinghouse	AIS	150-DH	13.8	1200, 2000, 3000	37	Magnum
Westinghouse	AIS	50-DH	4.16	1200, 2000	29 / 41	Magnum
Westinghouse	AIS	50-DHP	4.16	1200, 2000, 3000	41	Magnum
Westinghouse	AIS	75-DHP	7.2	1200, 2000, 3000	33	Magnum
Westinghouse	AIS	75-DHP	7.2	320	Fused	Magnum
Westinghouse	AIS	150-DHP	13.8	1200, 2000	18 / 28	Magnum
Westinghouse	AIS	150-DHP	13.8	3000	33	Magnum
Westinghouse	AIS	5WYB	4.16	1200, 2000, 3000	41	Magnum
Westinghouse	AIS	8WYB	7.2	1200, 2000, 3000	33	Magnum
Westinghouse	AIS	15WYB	13.8	1200, 2000	18 / 28	Magnum
Westinghouse	AIS	15WYB	13.8	3000	33	Magnum

NEW

Low Voltage ECOFIT™ customised solutions

Those solutions have been manufactured and installed all over the world to answer specific customer request. Schneider Electric technician will require a visit to customer premises to validate the solution.

Original Brand	Range	Original device type	In (A)	New device type	
Allis Chalmers	LA-600 / LA-800	LASB1-D2	800	Masterpact NT	
Allis Chalmers	LAF-600 / LAF-800	LASB2-D2	800	Masterpact NT	
Allis Chalmers	LAF-800	LASB2	800	Masterpact NT	
Allis Chalmers	LA-1600	LASB3	1600	Masterpact NW	
ABB	Novomax	G2	1250-2000	Masterpact NW	NEW
ABB	Novomax	G3	1600-2000	Masterpact NW	NEW
ABB	Novomax	G5	4500	Masterpact NW	NEW
ASEA/ABB	VMG	ALG08	800	Masterpact NT	
ASEA/ABB	VMG	ALG12	1250	Masterpact NT	
ASEA/ABB	VMG	ALG16	1600	Masterpact NT	
ASEA/ABB	VMG	ALG20	2000	Masterpact NW	
ASEA/ABB	VMG	ALG25	2500	Masterpact NW	
ASEA/ABB	VMG	ALG32	3200	Masterpact NW	
Federal Pacific	FM-600 Fused	LFSB9	600	Masterpact NW	
Federal Pacific	FM-1600 Fused	LFSB8	1600	Masterpact NW	
Federal Pacific	FP-25 / FPS-25	LFSB4	800	Masterpact NT	
Federal Pacific	FPS-30	LFSB7	800	Masterpact NW	
Federal Pacific	FP-50	LFSB5	1600	Masterpact NW	
Federal Pacific	FP-50-H3, 14" Frame (IEC)	SE Can	800	Masterpact NT	
Federal Pacific	FP-50-H3, 21" Frame (ANSI)	SE Can	800	Masterpact NW	
Federal Pacific	FP-50-H3, 21" Frame (IEC & ANSI)	SE Can	2000	Masterpact NW	
Federal Pacific	FP-75	LFSB6	3200	Masterpact NW	
Federal Pioneer	25HL-2	SE Can	800	Masterpact NT	
Federal Pioneer	25HL-2	SE Can	600	Masterpact NT	
Federal Pioneer	35HL-2	LFSB1	800	Masterpact NW	
Federal Pioneer	50HL-2	SE Can	1600	Masterpact NW	
Federal Pioneer	65HL-2	SE Can	2000	Masterpact NW	
Federal Pioneer	75HL-2	SE Can	3000	Masterpact NW	
General Electric	AE-1B (M.O.)	LGSB18	800	Masterpact NT	
General Electric	AK-(1/2/3/4/5)-15/25	LGSB6	800	Masterpact NT	
General Electric	AK-(2A/3A/4A/5A)-15/25	LGSB1/7/11	800	Masterpact NT	
General Electric	AK-(1/2/3/4/5)-50	LGSB10	1600	Masterpact NW	
General Electric	AK-(2A/3A/4A/5A)-50	LGSB4	1600	Masterpact NW	
General Electric	AKR-30 (AKD-6 swgr)	LGSB2D	800	Masterpact NW	
General Electric	AKR-30 (AKD-6 swgr)	LGSB13	800	Masterpact NT	
General Electric	AKR-30 DC	LGSB5	800	Masterpact NW	
General Electric	AKR-30 (Powell swgr)	LGSB8	800	Masterpact NT	
General Electric	AKR/AKRT-30 (AKD-8 swgr)	LGSB2C	800	Masterpact NW	
General Electric	AKR with Contactor	LGSC2	540	Masterpact	
General Electric	AKRU-30 (1 Position)	LGSB14	800	Masterpact NW	
General Electric	AKR-50 (AKD-6 swgr)	LGSB2	1600	Masterpact NW	
General Electric	AKR/AKRT-50 (AKD-8 swgr)	LGSB2C	1600-2000	Masterpact NW	
General Electric	AKR-50 (Powell swgr)	LGSB9/9A	2000	Masterpact NW	
General Electric	AKR-50 DC (Hatch swgr)	LGSB22	2000	Masterpact NW	
General Electric	AKRU-50 (1 Position)	LGSB17	1600	Masterpact NW	
General Electric	AKR-75 (3 Pos./Ver. Bus)	LGSB12	3200	Masterpact NW	
General Electric	AL-2-50 (M.O.)	LGSB19	1600	Masterpact NW	
ITE / ABB / BBC	K-225	LISB9	225	Masterpact NT	
ITE / ABB / BBC	K-600 / K-800	LISBA1	800	Masterpact NT	
ITE / ABB / BBC	K-600 / K-800 with MOC/TOC	LISB8	800	Masterpact NT	
ITE / ABB / BBC	K-Don 600/800	LISB11	800	Masterpact NT	
ITE / ABB / BBC	K-Don 1600	LISB12	1600	Masterpact NW	
ITE / ABB / BBC	K-1600 / K-1600S	LISB2	1600	Masterpact NW	
ITE / ABB / BBC	K-2000 / K-2000S with TOC	LISB5	2000	Masterpact NW	
ITE / ABB / BBC	KB	LISB3	600	Masterpact NT	
ITE / ABB / BBC	KC	LISB4	1600	Masterpact NW	
ITE / ABB / BBC	MB-8 / MBE-8	LBSB1	800	Masterpact NT	
ITE / ABB / BBC	MB-16 / MBE-16	LBSB2	1600	Masterpact NW	
ITE / ABB / BBC	LKE-8	LISB6	800	Masterpact NT	
KAFK	KAFK	SFBY	250	Compact NSX	

Low Voltage ECOFIT™ customised solutions

Those solutions have been manufactured and installed all over the world to answer specific customer request.
Schneider Electric technician will require a visit to customer premises to validate the solution.

Original Brand	Range	Original device type	In (A)	New device type
KAFKAK	KAFKAK	SFBY	630	Compact NSX
Merlin Gerin	Compact CM	CM 1250 3P Fixed Front	1250	Compact NS
Merlin Gerin	Compact CM	CM 1600 4P HH Fixed	1600	Masterpact NW
Merlin Gerin	Interpact IN	IN2500A 3P Fixed	2500	Interpact INS
Siemens	SBS	1200	1200	Masterpact NT
Siemens	SBS	800	800	Masterpact NT
Square D	MP-08 / MP-16	LSSB2	800 - 1600	Masterpact NW
Square D	MP-20	LSSB3	2000	Masterpact NW
Square D	MP-25 / MP-30	LSSB4	2500 - 3000	Masterpact NW
Square D	SED	LSSB1	800 - 3000	Masterpact NW
Square D	SEM (SED-M)	LSS5B	800 - 2000	Masterpact NW
Square D	DS-206	LWSB7	800	Masterpact NT
Square D	DS-206H	LWSB9	800	Masterpact NW
Square D	DS-206E	LWSB9	800	Masterpact NW
Square D	DS-416	LWSB9	1600	Masterpact NW
Square D	DS-416S	LWSB9	1600	Masterpact NW
Square D	DS-416H	LWSB9	1600	Masterpact NW
Square D	DS-420	LWSB9	2000	Masterpact NW
Square D	DSII-308	LWSB8	800	Masterpact NW
Square D	DSII-508	LWSB8	800	Masterpact NW
Square D	DSII-608	LWSB8	800	Masterpact NW
Square D	DSII-516	LWSB8	1600	Masterpact NW
Square D	DSII-616	LWSB8	1600	Masterpact NW
Square D	DSII-620	LWSB8	2000	Masterpact NW
Westinghouse / Cutler Hammer / Eaton	DB-15 Three Position (in DB-25 cell)	LWSB6	225	Masterpact NT
Westinghouse / Cutler Hammer / Eaton	DB-25 Three Position	LWSB1	800	Masterpact NT
Westinghouse / Cutler Hammer / Eaton	DB-25 Single Position	LWSB5	800	Masterpact NT
Westinghouse / Cutler Hammer / Eaton	DBL-25 Three Position	LWSB2	800	Masterpact NT
Westinghouse / Cutler Hammer / Eaton	DB-50 Single Position	LWSB4	1600	Masterpact NW
Westinghouse / Cutler Hammer / Eaton	DB-50 Three Position	LWSB3	1600	Masterpact NW
Westinghouse / Cutler Hammer / Eaton	DS-206	LWSB7	800	Masterpact NT
Westinghouse / Cutler Hammer / Eaton	DS-206H	LWSB9	800	Masterpact NW
Westinghouse / Cutler Hammer / Eaton	DS-206E	LWSB9	800	Masterpact NW
Westinghouse / Cutler Hammer / Eaton	DS-416	LWSB9	1600	Masterpact NW
Westinghouse / Cutler Hammer / Eaton	DS-416S	LWSB9	1600	Masterpact NW
Westinghouse / Cutler Hammer / Eaton	DS-416H	LWSB9	1600	Masterpact NW
Westinghouse / Cutler Hammer / Eaton	DS-420	LWSB9	2000	Masterpact NW
Westinghouse / Cutler Hammer / Eaton	DSII-308	LWSB8	800	Masterpact NW
Westinghouse / Cutler Hammer / Eaton	DSII-508	LWSB8	800	Masterpact NW
Westinghouse / Cutler Hammer / Eaton	DSII-608	LWSB8	800	Masterpact NW
Westinghouse / Cutler Hammer / Eaton	DSII-516	LWSB8	1600	Masterpact NW
Westinghouse / Cutler Hammer / Eaton	DSII-616	LWSB8	1600	Masterpact NW
Westinghouse / Cutler Hammer / Eaton	DSII-620	LWSB8	2000	Masterpact NW



Contents

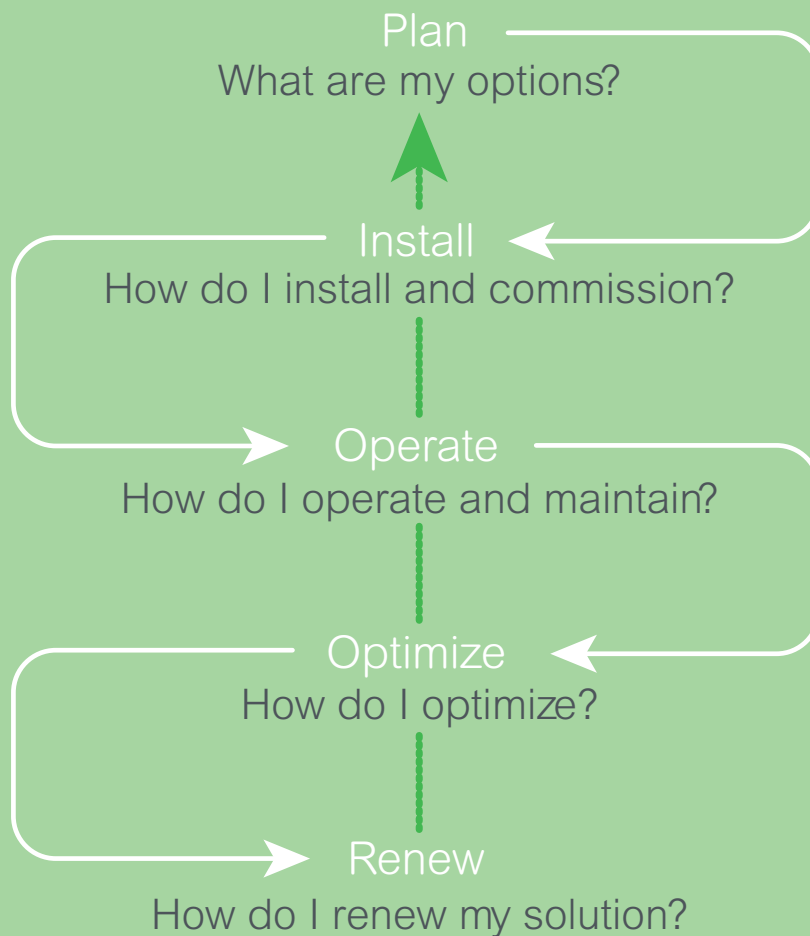
Medium Voltage Distribution	A-1
• Retrofit	A-1
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Protection relays	C-1
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Substation automation	D-1
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Life Cycle Services

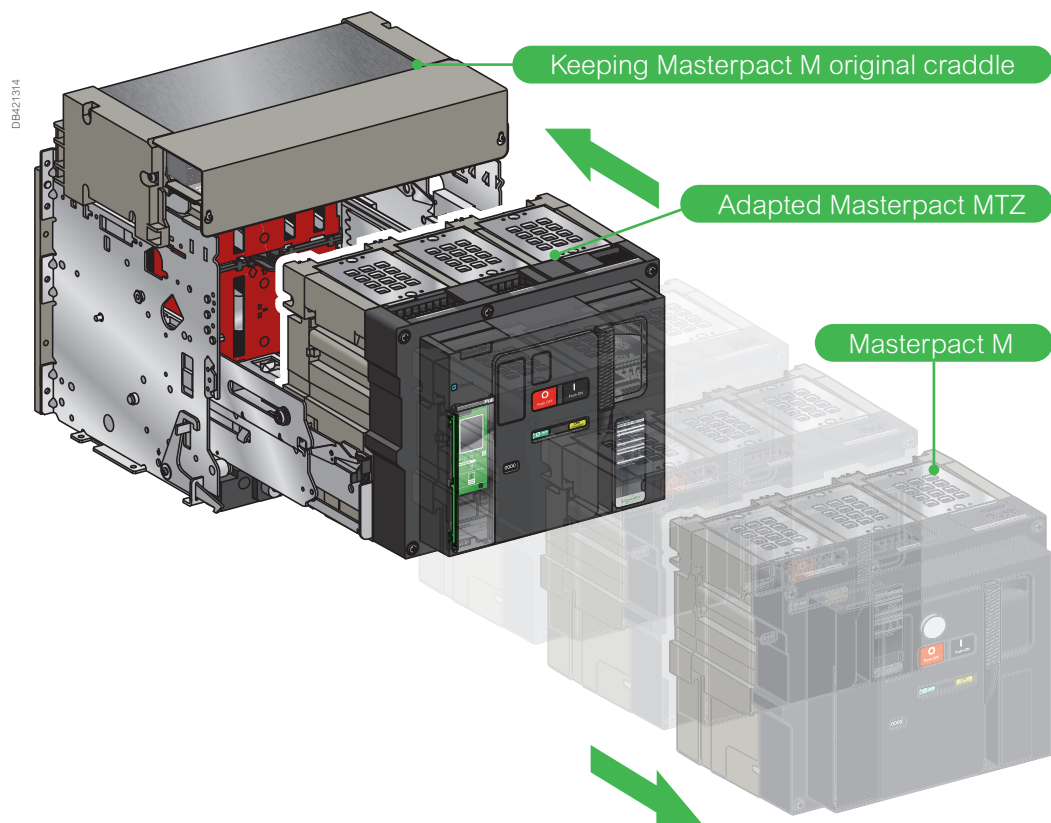


Schneider Electric specialists are available to provide assistance for your Services need throughout your electrical installation life cycle:

- Electrical installation assessment
- Installation, testing, commissioning
- Technical training
- Maintenance
- Services contracts
- SF6 recovery

Schneider Electric is helping you to get the most of your equipment and installations

Schneider Electric helps you define and implement the best solution evolution, increasing performance and flexibility, while controlling aging infrastructures associated costs.



ECOFIT™ is the economical complement to maintenance operations



For
which benefits?

There are two main possibilities when considering modernization

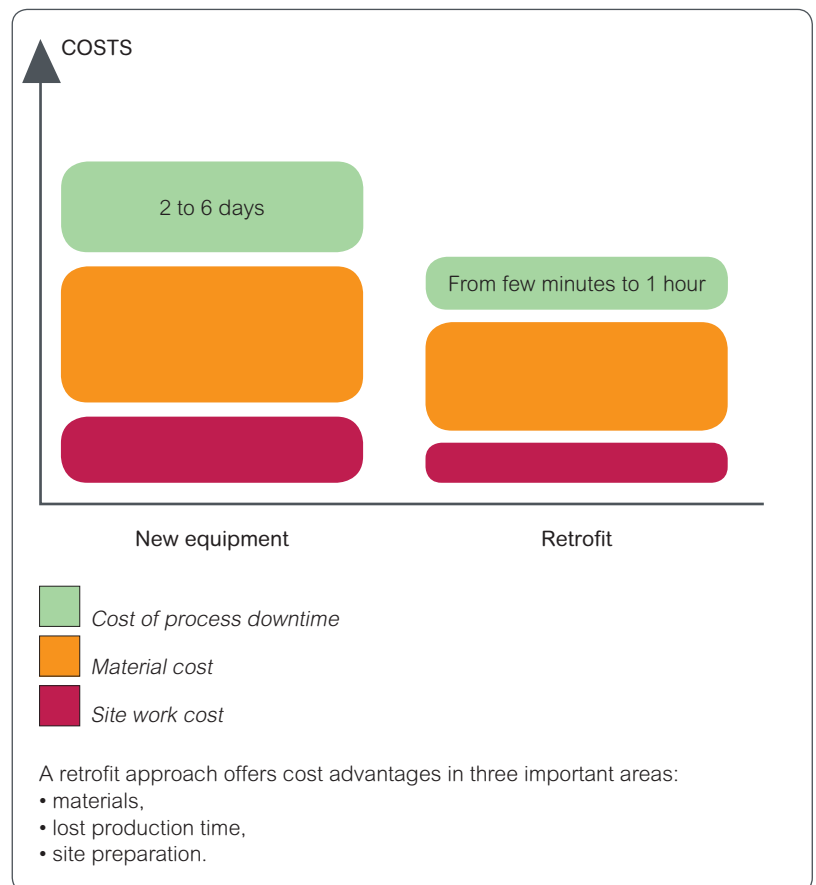
The first one:

Completely replace existing electrical installation with new equipments. This solution might not be the most cost effective.

The second option:

Replace only active components, while leaving switchgear structure intact. Retrofit or retrofitting is the general term that is used to define this process.

Several different retrofit solutions exist for adapting modern circuit breakers into existing switchgear.



- Enhances your process dependability.
- Optimizes your maintenance service costs & limits your investments.
- Maintains compliance with evolving industry standards and legislation.
- Ensures the safety of your personnel and surrounding equipment by using the latest technology.
- Access to Energy Management.



Modernization solutions

The main advantages of implementing a retrofit solution

Optimisation of assets

The life of existing electrical equipment is extended by increasing the return on investment.

Reduced production stoppage

A retrofit full panel replacement will take anywhere from only a few minutes to one hour. When considering whether to maintain equipment or replace it, facility managers must take into account the initial capital cost, along with potential disruption to the facility's processes and workflow during the course of changing out the equipment. Unless process loads can be rerouted temporarily during the demolition of old equipment and installation of the new switchgear, the cost of lost production can be substantial.

Improved cash flow

A full retrofit of an industrial site could spread over several years. Often when new equipment is purchased, the on-site physical plant also needs to be modified to accommodate the new equipment, which adds to the cost.

Reduced risk

Installing new switchgear involves more cabling (the existing cabling above and below the equipment must be moved). In some cases, cabling may need to be replaced or spliced, which introduces a higher element of risk.

Peace of Mind

Pre-tested solutions from established manufacturers provide a high degree of confidence in a retrofit solution. Established players like Schneider Electric have managed thousands of switchgear retrofit projects and have an extensive library of lessons learned. Qualified personnel and up-to-date tools reduce the risk of accidents and delays. Accompanying safety improvements and updated warranties also contribute to overall power network peace of mind.

Digitization

Retrofit solutions also open the door to enhanced equipment connectivity. This then allows access to more detailed levels of energy management data which enables better monitoring of energy consumption.

Less environmental impact

Since a retrofit solution replaces only a portion of the existing electrical equipment, fewer waste materials need to be processed if a complete replacement occurs.



Why modernize?

Electrical Distribution equipment obsolescence and limited availability of spare parts

The only solution to extend Electrical Distribution (ED) equipment life cycle is by carrying out an intense maintenance while planning a modernisation solution thanks to ECOFIT™ solution.

There are three major phases in the product life cycle:

1. Commercialization period:

The product is launched onto the market and is included in the Schneider Electric catalogue.

2. Full spare parts availability period:

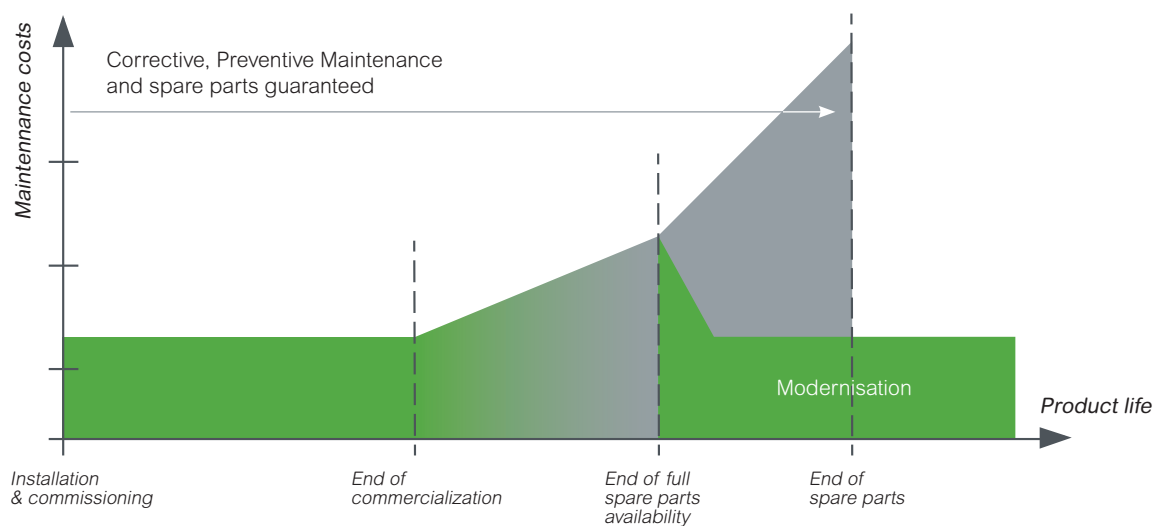
The product is withdrawn from the market. Schneider Electric continues to supply spare parts for a period of time. Generally speaking, the average full spare part supply period after the end of commercialization is :

- Medium Voltage equipment: 12 years.
- Low Voltage equipment: 10 years.

When the end of the full spare part supply date is reached, the product is considered as at the end of its life.

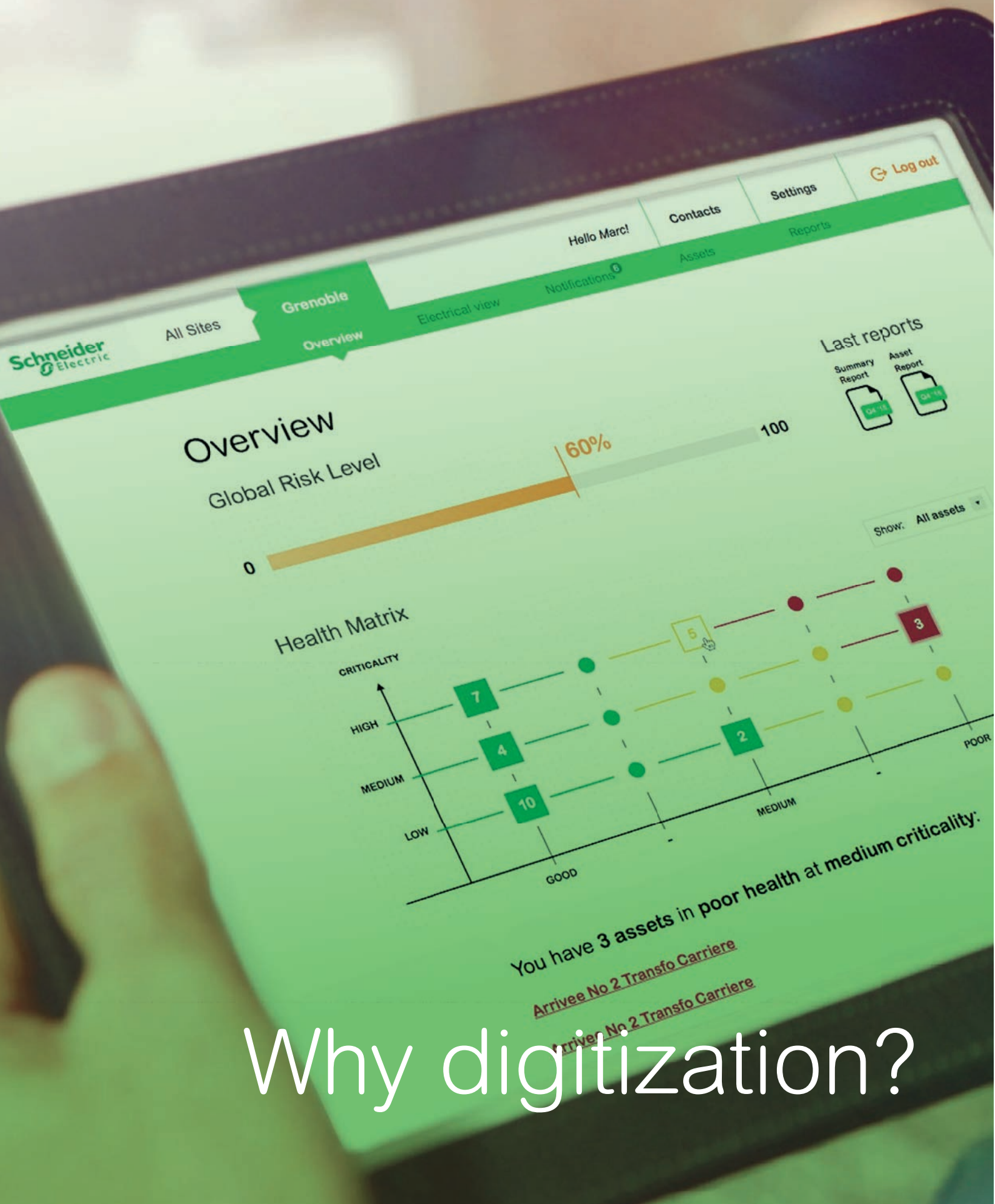
3. Modernisation period with ECOFIT™ solution:

When spare parts are no longer readily available, the continuity of service and support is at risk. If a device breaks down, no parts may be available to fix it. At this stage, launching ECOFIT™ solution is recommended.



ECOFIT™ spare parts

Schneider Electric provides spare parts or subassembly replacement associated to supplied ECOFIT™ equipments in order to ensure continuity of service.



Why digitization?

Having access to key data about your electrical distribution equipment whenever you need

Schneider Electric Solution Advantages

- We offer the only comprehensive Enterprise APM solution - from data sources, to advanced analytics, to work management, to the boardroom
- Implementation methodology is proven to reduce customer risk and improve satisfaction
- Predictive asset analytics provides early warning of impending equipment failures
- Unparalleled ease of use and access to contextual information for decision support on any device

How we can help you?

Maintenance managers across all businesses are increasingly struggling to make the most with their modernization budget to replace old equipment to move towards next generation features delivered by IoT and predictive insights enabling Condition Based maintenance.

Now, imagine having access to key data about your electrical distribution equipment whenever you need. Imagine having the aid of experienced professionals monitoring which equipment was close to impending failure and keeping you informed how they are performing and ageing, when assets need to be serviced. At the end of the day you would be able to make better informed decisions on your Electrical Distribution system.

What do we do?

At Schneider Electric, we are developing innovative services to leverage data from our customer's electrical equipment. We apply our equipment manufacturer knowledge and specific algorithms to transform data into actionable insights, then to help our customers answer the key question: "What are the actions I need to take to protect my installation and people on the field, as well as secure my critical processes?".

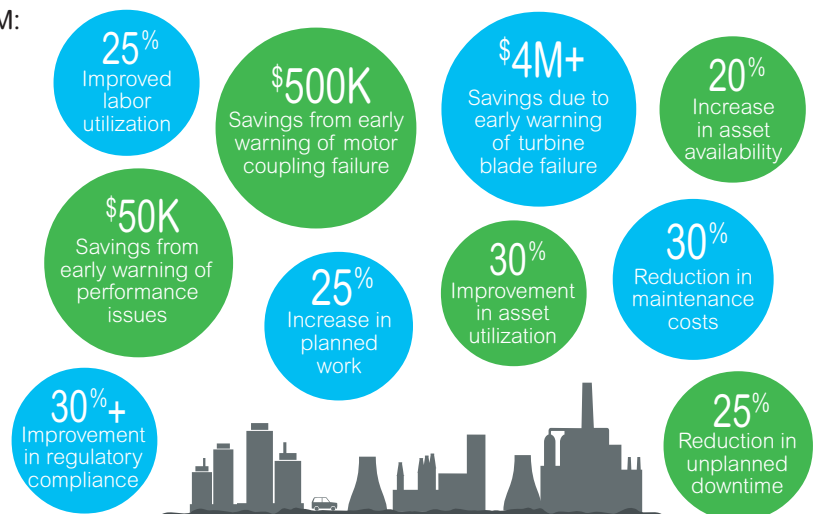
What do you get?

Asset Performance Management as-a-Service (APMaaS) is here to proactively identify and address issues inside electrical equipment to mitigate risks of electrical failure, taking into account their criticality for your processes.

With its innovative approach, APMaaS helps customers leverage advanced features from electrical equipment next generation, while removing complexity. Our Service Advisors provide our customers with actionable notifications –warnings, service request...- upon platform events validation, and reports to support operating expenses decisions and maintenance strategies.

All in all, the winning combination of our best-of-breed technological platform with proven Schneider Electric expertise in maintenance and electrical equipment manufacturing, are available through a user-friendly dashboard.

Actual Savings Achieved with Enterprise APM:





Smart Ready ECOFIT™

Move to the digital world when modernizing your installation

- Sensors are battery free
- Wireless communications
- In contact measuring point
- Serial or Ethernet Modbus
- Remote monitoring and alarming
- Asset Performance Management enabler

Key benefits

When it comes to modernization, think SMART READY:

- Prevent unscheduled downtimes (cf. Table 1)
- Increase safety (operators and installations)
- Condition based maintenance
- Maximize Service continuity, anticipate possible disruptions
- Protect the investment, maximizing the lifetime of the equipment

Why continuous thermal monitoring?

The power connections in the Medium Voltage products are one of the most critical points of the substations especially for those made on site like:

- MV Cable connections
- Busbars connections
- Withdrawable CB connections.

Loose and faulty connections cause an increase of resistance in localized points that will lead to thermal runaway until the complete destruction of the connections.... and potential fire hazard.

Preventive maintenance can be complicated due to limited accessibility and visibility of the contacts. Continuous thermal monitoring is an effective way for loose connections early detection.

Financial impact of one hour of downtime
(Source: Contingency Planning Research)

Application	Loss ⁽¹⁾ in €
Health establishment	Human lives....
Stock market transactions	6,500,000
Credit card sales	2,600,000
Petrochemical	100,000
Plane ticket booking system	90,000
Mobile phone network	40,000
Automobile	30,000
Pharmaceutical	30,000
Food processing	20,000
Cement	15,000

(1) Direct and indirect costs of non availability

Smart Ready ECOFIT™

Installed in existing installation during modernization project

Can be associated with local HMI for local display.

Connection allow:

- Remote SCADA connection and alarm through SMS
- Condition based maintenance contract
- Asset Performance Management supported by Schneider-Electric Service bureau

A photograph of four men in business attire working at computers in an office setting. The man in the foreground is a man of color, wearing a light pink shirt, resting his chin on his hand and looking intently at a computer screen. Behind him, three other men are also working at computers, slightly out of focus. The man behind him is wearing a white shirt and a patterned vest. The man further back is wearing a light pink shirt and a blue tie. The man on the far left is wearing a white shirt and a patterned vest. The overall atmosphere is professional and focused.

ECOFIT™ reference centers

Our main legacies and ECOFIT™ reference centers brand responsibilities

BRAND	FRANCE Grenoble	FRANCE Mâcon	GERMANY Regensburg	UK Warrington	USA West Chester	ITALY Stezzano*	CANADA Toronto*
	✓						
	✓						
AREVA		✓	✓	✓		✓	
ALSTOM		✓	✓				
CEM		✓					
DELLE		✓					
AEG			✓				
Sprecher + Schuh			✓				
Concordia Sprecher			✓				
VEM			✓				
GEC				✓			
GEC ALSTHOM		✓		✓			
AEI				✓			
				✓			
					✓		
						✓	
						✓	
							✓
Competitors**	✓	✓	✓	✓	✓	✓	✓

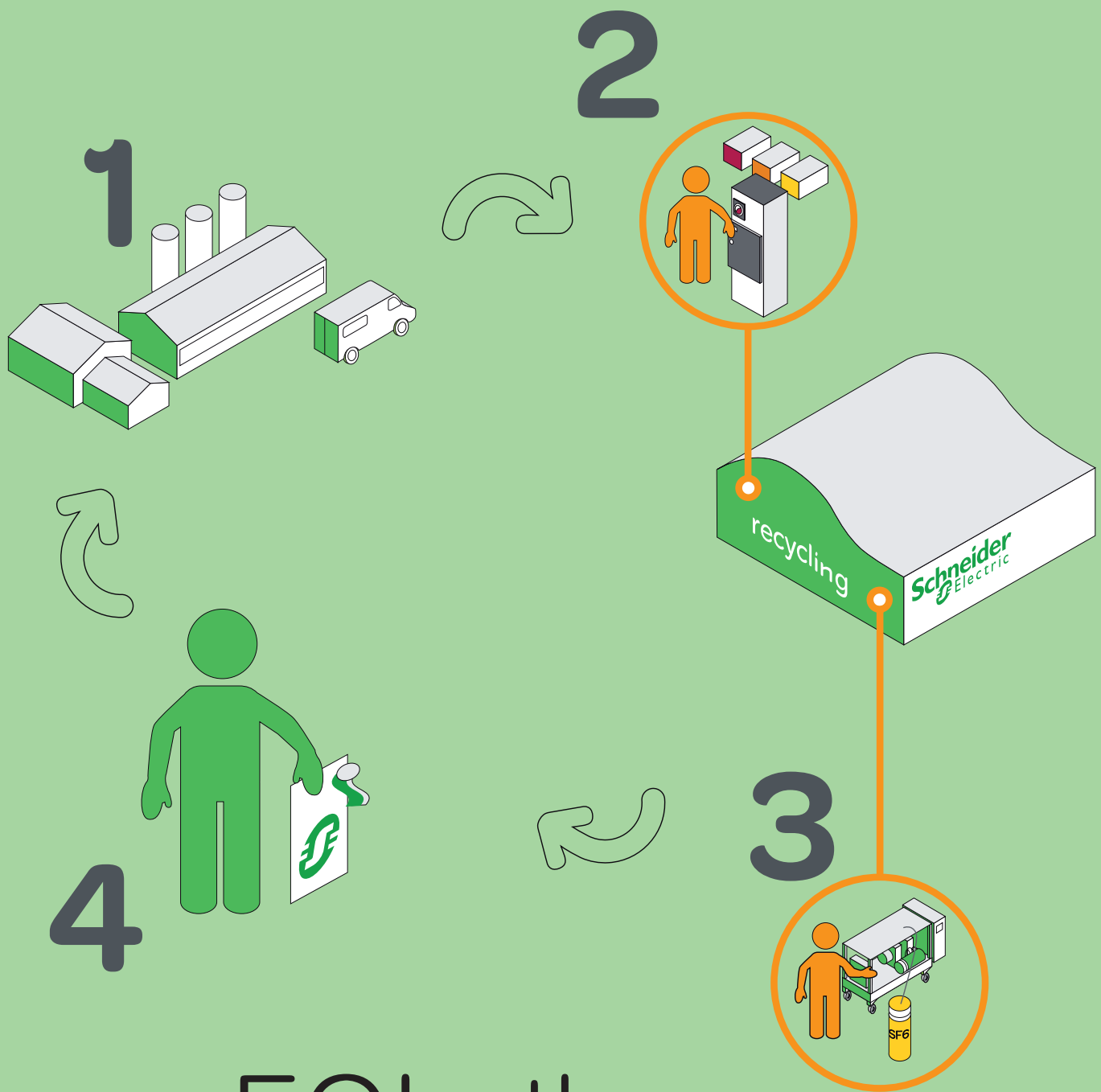
* Not current ECOFIT™ reference centre

** ABB, Ansaldo, General Electric, Otto Buchwitz, VEB, Westinghouse, Siemens...



ECOFIT™ Reference Centers are in charge of:

- Design and development of ECOFIT™ offers using Schneider Offer Creation Process methodology.
- Industrialise, manufacture and optimise ECOFIT™ offers to answer the customers' requests with optimum conditions.
- Test, validation and certification of ECOFIT™ offers using a standard quality directive procedure linked to international standards.



EOL, the complementary offer

End-of-life: environment in mind!



98%

of a medium-voltage cubicle
can be recycled.

A legal requirement

for the SF6 gas,

an environmental duty.

In Europe, it is mandatory

to recycle, reclaim or destroy

the SF6 gas contained

in electrical equipment

(regulation (EU) N°517/2014)

In complement to ECOFIT™, EOL is our environmental treatment package: recovery and recycling for re-use of all Medium Voltage equipment, including SF6 gas.

EOL's 4 steps

1. Collection of Medium Voltage equipment from your site.
2. Dismantling of the equipment. The different ferrous and non-ferrous materials (copper, aluminium, etc.) are separated and sent to specialised recycling centres.
3. The SF6 gas is evacuated until the residual pressure is less than 20 mbar, in accordance with IEC 62271-4, using adequate engineered tools. The gas is stored in bottles before being sent for recycling. The epoxy enclosure is crushed for recovery purposes.
4. A certificate of destruction compliant with the standard is sent to you.



Technical training

Technical training is a part of the answer...

They speak about it...

"Knowledge is a very special thing and when dealing with High Voltage equipment there is no room for error.

The skills and knowledge Schneider Electric have passed to our crews, here in Wafra, has helped keep them safe and improved the availability of our distribution and transmission networks"

Chevron International
Exploration & Production

... of your electrical installation reliability & efficiency, as well as your team's members safety.

Technical training is the other part of the answer.

Test and train your people knowledge and skills thanks to:

- Safety training
 - Operation & Maintenance training
- In your equipment ... according to your electrical installation... and your company stakes...
- e-Learning
 - Competency Management
 - Hands on training with real size equipment



Modernized
Equipment

+



Updated Skills

=



Operational
excellence



Schneider Electric know-how

Benefit from Schneider Electric image and know-how



Our common values

- Quality
- Safety
- Professionalism

Local support all over the world. There are always Schneider Electric people close to you:

6200

services people in more than

88

countries

5%

of sales devoted to R&D

More than

71,000

ECOFIT™ in services/delivered in various business segments

Schneider Electric's policy has always been to provide its customers with very close support in their daily activities to enable them to achieve operational excellence.

The experience of a world leader in Low & Medium Voltage

Schneider Electric has been manufacturing LV and MV products for more than 50 years and more than million installed products and devices. The Schneider Electric brand is known worldwide and recognized by the most demanding customers.

A long history of innovation for a global offer

Based on this experience as world leader, Schneider Electric has developed a large and comprehensive range of innovative devices. With one of the world leaders, you take benefit of a global leader experience and know-how in electric distribution, automation and Power & Control.

All the devices included in this overview have been designed and manufactured to incorporate the benefits of this extensive experience.

Manufactured as original

For Services purpose, the life of the following equipment is extended by rebuilding them according to their original design.

Schneider Electric, a brand you can trust!



Medium Voltage Distribution Retrofit

Contents

MV CB or contactor or disconnecter retrofit

5-15kV MC switchgear	A-2
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VB L (CRR1000)	A-52
VB - Frontal Circuit Breaker	A-53

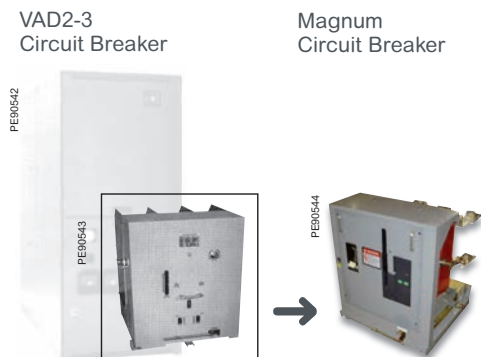
Order forms

Circuit Breaker & Panel Order Form	A-54
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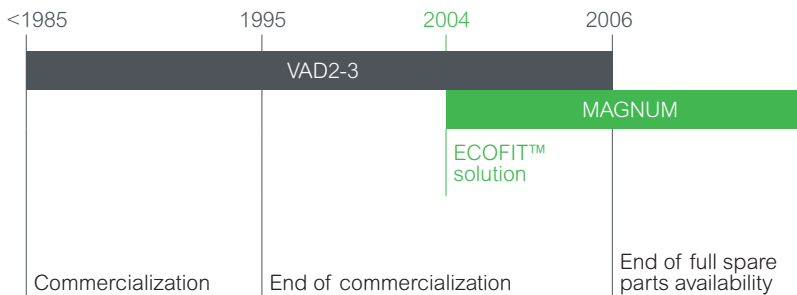
5 - 15 kV MC switchgear / VAD2- 3 by MAGNUM

Original brand: Square D

ECOFIT™ proposal



With ECOFIT™, a true extended life time



Main technical characteristics

	VAD2	VAD3	VAD2	VAD3
Rated current (Ir)	1200-3000 A			
Short circuit current (Isc)	29 kA	41 kA	18-28 kA	37 kA
Rated voltage Un (50/60 Hz)	5 kV		15 kV	

	Magnum 5SSB	Magnum 15SSB
Technology	Vacuum	Vacuum
Rated voltage Ur (kV)	5	15
Surge withstand voltage Up (kV)	60	95
Nominal frequency (Hz)	60	60

Magnum CB main characteristics

Built with totally new components and tested to ANSI standards, Magnum circuit breakers correctly interface with the existing breaker compartment components and maintain safety interlocks inherent in the original equipment design.

- New circuit breakers are installed in existing switchgear.
- Original footprint is left intact, saving time and money.
- Installation expense is a fraction of new equipment costs

	Magnum 5SSB	Magnum 15SSB
Rated current Ir (A)	1200 - 3000	1200 - 3000
Short circuit current Isc (kA)	29-41	18-28
Switching sequence	O-0.3 s-CO-15 s-CO	
Opening time (ms)	60	60

(Less down time for installation + Enhanced equipment reliability).

- Manufactured with new components.
- Undergoes complete factory testing.
- Backed by our standard equipment warranty.
- New, easy-to-maintain operating mechanism.
- No bulky arc chutes to handle and maintain.
- Reduced need for difficult to obtain spare parts.

Offer extension

Energy management: replacement of the old protection relay (Schneider Electric or competitors)



8BD1 / 3AC-H515 by EasyPact EXE

Original brand: Siemens

ECOFIT™ proposal

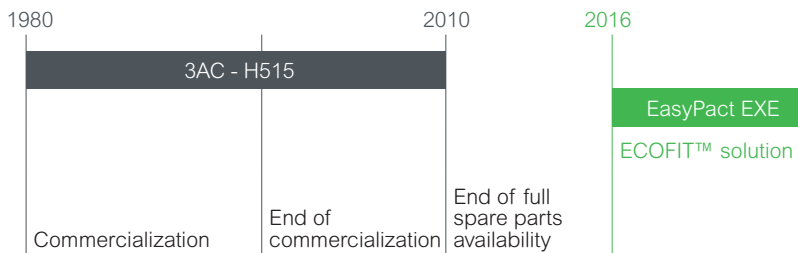
3AC, H515
Circuit Breaker

8BD1 with EasyPact
EXE Circuit Breaker

PE81038



With ECOFIT™, a true extended life time



Main technical characteristics

3AC - H515	
Rated current (Ir)	630 - 1250 - 2500A
Short circuit current (Isc)	25 - 31.5kA
Rated voltage Un (50/60 Hz)	12kV

	EasyPact EXE
Technology	Oil
Rated voltage Ur (kV)	12
Surge withstand voltage Up (kV)	75
Nominal frequency (Hz)	50 - 60
Rated current Ir (A)	up to 2500A
Short circuit current Isc (kA)	31.5
Short circuit duration Tk (s)	3

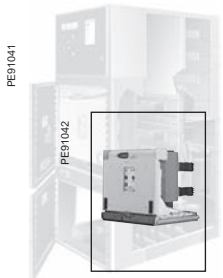
	EasyPact EXE
Switching sequence	O-0,3 s-CO-3 min-CO O-0,3 s -CO-15 s-CO O-3 min -CO-3 min -CO
Closing time (ms)	50
Opening time (ms)	
Number of switching operations	10000
Service temperature (°C)	-25/+40

AHA / ECA by HVX-O²

Original brand: AEG, Alstom, Areva

ECOFIT™ proposal

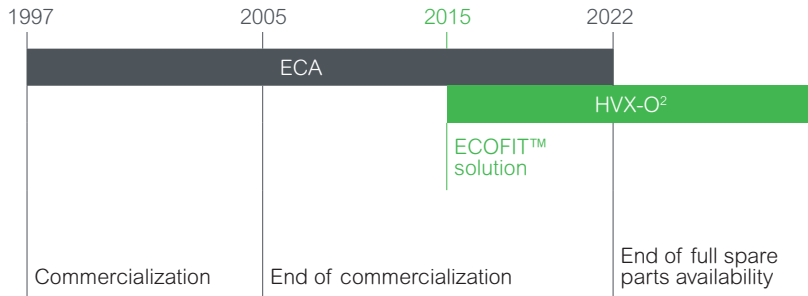
ECA
Circuit Breaker



HVX-O²
Circuit Breaker



With ECOFIT™, a true extended life time



Main technical characteristics

ECA	
Rated current (Ir)	630-1250 A
Short circuit current (Isc)	25-31.5 kA
Rated voltage Un (50/60 Hz)	12-17.5 kV

	HVXO ²
Technology	Vacuum
Rated voltage Ur (kV)	17.5
Surge withstand voltage Up (kV)	95
Nominal frequency (Hz)	50
Rated current Ir (A)	Up to 1250
Short circuit current Isc (kA)	31.5
Short circuit duration Tk (s)	3

	HVXO ²
Switching sequence	O-0.3 s-CO-3 min-CO
Closing time (ms)	35
Opening time (ms)	53
Number of switching operations	10000
Service temperature (°C)	-5/+40

Offer extension

Energy management: replacement of the old protection relay (Schneider Electric or competitors)



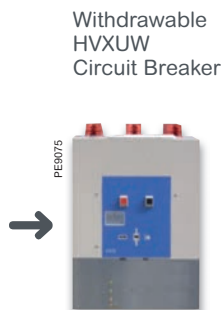
All with fixed CB / All fixed CB types by HVXUW

Original brand: all brands

ECOFIT™ proposal

All breaker types

Compatible with all open Air Insulated Switchgear legacy and no legacy cubicles with minimum inside panel width ≥ 650 mm



With ECOFIT™, a true extended life time

This solution consists in fitting a cradle inside an existing panel.

- It is particularly adapted for non Schneider Installed Base.
- ECOFIT™ solution with shutters and mechanical interlocks embedded.
- Only the fixed connections (between the cradle and existing busbar) are customized.
- No age condition of the existing equipment.
- Only the width of the existing panel has to be considered.

Main technical characteristics

All types		
Rated current (Ir)	630 - 2500 A	
Short circuit current (Isc)	Up to 31.5kA	Up to 31.5kA
Rated voltage Un (50/60 Hz)	12 kV	24kV

	HVXUW
Technology	SF6
Rated voltage Ur (kV)	12-24
Surge withstand voltage Up (kV)	75-125
Nominal frequency (Hz)	50-60
Rated current Ir (A)	630-2500
Short circuit current Isc (kA)	16-50
Short circuit duration Tk (s)	3

	HVXUW
Switching sequence	O-0.3 s-CO-3 min-CO
Closing time (ms)	45-63
Opening time (ms)	35-53
Number of switching operations	10000
Service temperature (°C)	-5/+40

Offer extension

Energy management: replacement of the old protection relay (Schneider Electric or competitors)



Belledonne B200-B400 / DSE22 to DSE78 by LF2 - LF3 - SF1 - Evolis

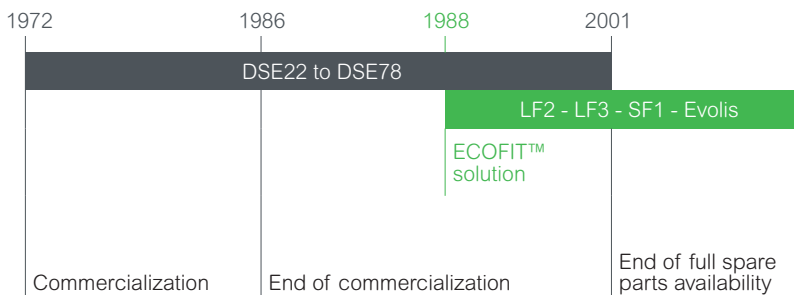
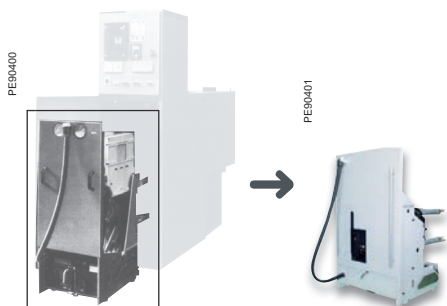
Original brand: Merlin Gerin

ECOFIT™ proposal

DSE22 to DSE78
Circuit Breaker

LF2 - LF3 - SF1 - Evolis
Circuit Breaker

With ECOFIT™, a true extended life time



Main technical characteristics

DSE to DSE78				
Rated current (Ir)	630-3500A	630-3150A		
Short circuit current (Isc)	29-50kA	24-48kA	15-46kA	10-29kA
Rated voltage Un (50/60 Hz)	7.2kV	12kV	17.5kV	24kV

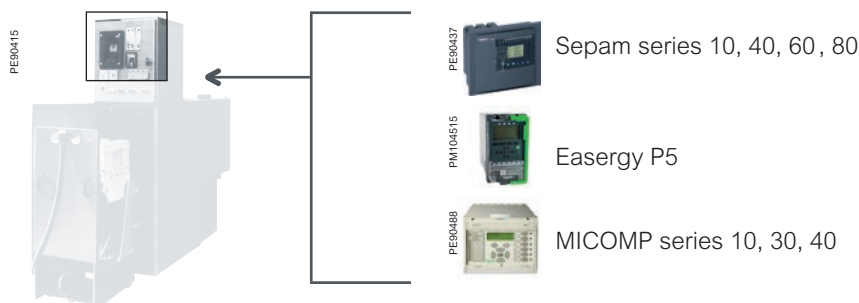
	LF2/LF3	LF2/LF3	SF1	Evolis
Technology	SF6	SF6	SF6	Vacuum
Rated voltage Ur (kV)	7.2-12	17.5	24	7.2-12-17.5
Surge withstand voltage Up (kV)	60-75	95	125	60-75-95
Nominal frequency (Hz)	50-60	50-60	50-60	50-60
Rated current Ir (A)	630-3150	630-3150	630-1250	630-2500
Short circuit current Isc (kA)	29-50	29-40	10-25	40
Short circuit duration Tk (s)	3	3	3	4

	LF2/LF3	LF2/LF3	SF1	Evolis
Switching sequence	O-3 min-CO-3 min-CO O-0.3 s-CO-3 min-CO O-0.3 s-CO-15 s-CO			
Closing time (ms)	<72		<65	<65
Opening time (ms)	<654		<50	<50
Number of switching operations	10000	10000	10000	10000*
Service temperature (°C)	-25/+40	-25/+40	-25/+40	-25/+40

* class MI: 2000 operations for Isc = 40 kA

Offer extension

Energy management: replacement of the old protection relay (Schneider Electric or competitors)



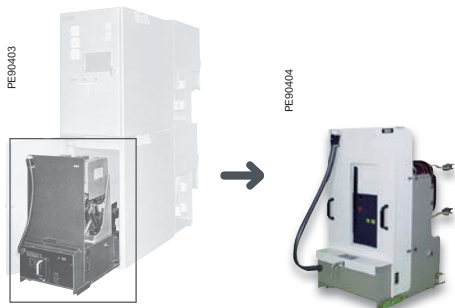
Belledonne B200G / DSE22K-DSE23K by LF1 - Evolis

Original brand: Merlin Gerin

ECOFIT™ proposal

DSE22K - DSE23K
Circuit Breaker

LF1 - Evolis
Circuit Breaker



With ECOFIT™, a true extended life time



Main technical characteristics

DSE22K - DSE23K		
Rated current (Ir)	630-1250 A	
Short circuit current (Isc)	25-31.5 kA	
Rated voltage Un (50/60 Hz)	7.2 kV	

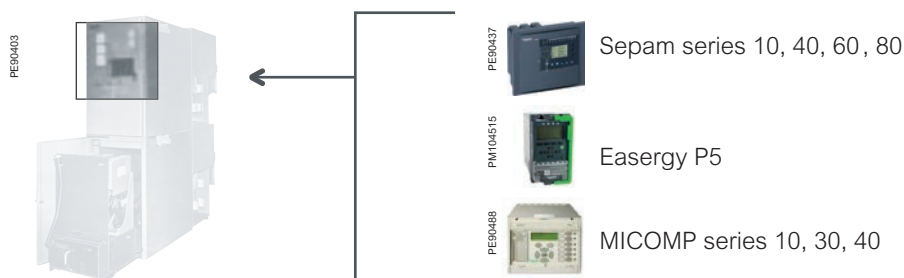
	LF1	Evolis
Technology	SF6	Vacuum
Rated voltage Ur (kV)	7.2	7.2
Surge withstand voltage Up (kV)	60	60
Nominal frequency (Hz)	50-60	50-60
Rated current Ir (A)	630-1250	630-1250
Short circuit current Isc (kA)	25 - 31.5	25 - 31.5
Short circuit duration Tk (s)	3	3

	LF1	Evolis
Switching sequence	O-3 min-CO-3 min-CO O-0.3 s-CO-3 min-CO O-0.3 s-CO-15 s-CO	
Closing time (ms)	< 72	< 65
Opening time (ms)	< 54	< 50
Number of switching operations	10000	2000* - 10000
Service temperature (°C)	-25/+40	-25/+40

* class MI: 2000 operations for Isc = 40 kA

Offer extension

Energy management: replacement of the old protection relay (Schneider Electric or competitors)



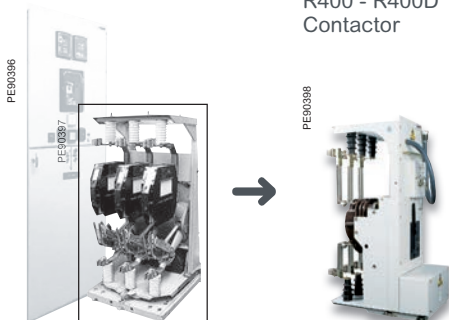
Belledonne B650 / DIS by LF1 - EVOLIS - R400 - R400D

Original brand: Merlin Gerin

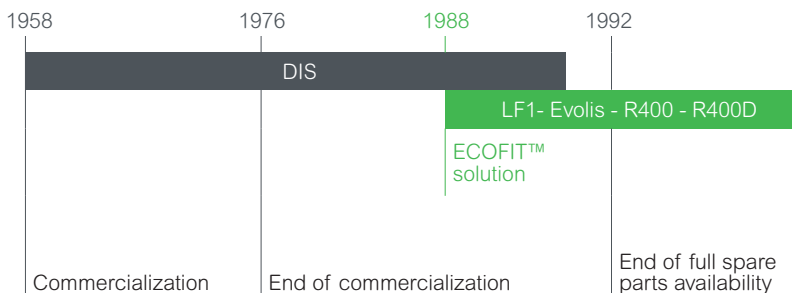
ECOFIT™ proposal

DIS
Circuit Breaker

LF1 - Evolis
Circuit Breaker
R400 - R400D
Contactor



With ECOFIT™, a true extended life time



Main technical characteristics

DIS	
Rated current (Ir)	400 - 1250 A
Short circuit current (Isc)	25 - 31.5 kA
Rated voltage Un (50/60 Hz)	7.2 kV

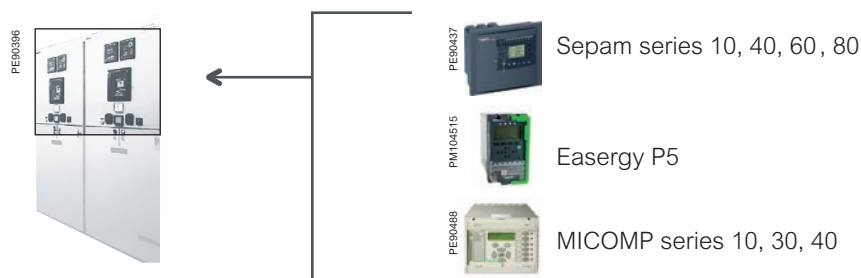
	LF1 - R400 - R400D - Evolis			
Technology	SF6	SF6	SF6	Vacuum
Rated voltage Ur (kV)	7.2	7.2	7.2	7.2
Surge withstand voltage Up (kV)	60	60	60	60
Nominal frequency (Hz)	50-60	50-60	50-60	50-60
Rated current Ir (A)	630-1250	80-250	80-250	630-2500
Short circuit current Isc (kA)	31.5	50*	50*	25-31.5
Short circuit duration Tk (s)	3	3	3	3

* With fuses

	LF1 - R400 - R400D - Evolis			
Switching sequence	O-3 min-CO-3 min-CO O-0.3 s-CO-3 min-CO O-0.3 s-CO-15 s-CO			
Closing time (ms)	< 72	75-155	75-155	< 65
Opening time (ms)	< 54	20-50	20-50	< 50
Number of switching operations	10000	300000	100000	10000
Service temperature (°C)	-25/+40	-25/+40	-25/+40	-25/+40

Offer extension

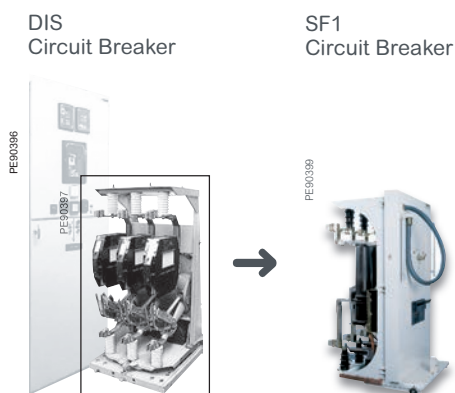
Energy management: replacement of the old protection relay (Schneider Electric or competitors)



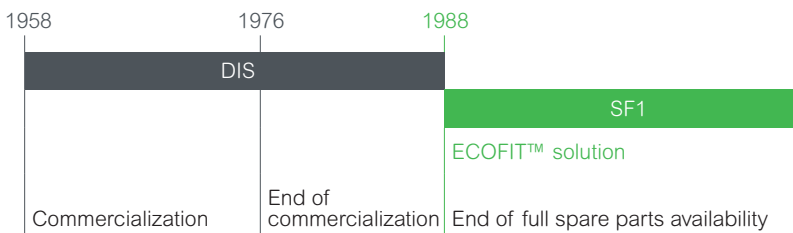
Belledonne B900 / DIS by SF1

Original brand: Merlin Gerin

ECOFIT™ proposal



With ECOFIT™, a true extended life time



Main technical characteristics

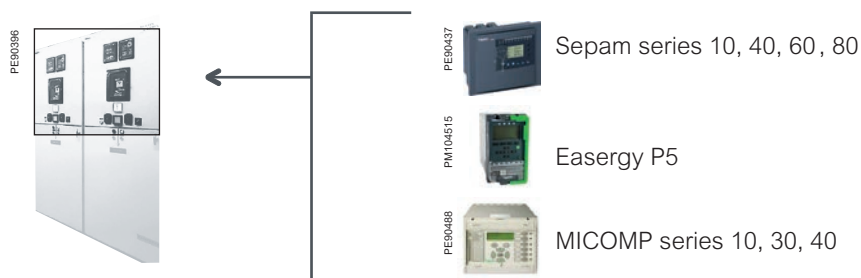
DIS	
Rated current (Ir)	400 - 1250 A
Short circuit current (Isc)	12.5 kA
Rated voltage Un (50/60 Hz)	23 kV

SF1	
Technology	SF6
Rated voltage Ur (kV)	24
Surge withstand voltage Up (kV)	125
Nominal frequency (Hz)	50-60
Rated current Ir (A)	630-1250
Short circuit current Isc (kA)	25
Short circuit duration Tk (s)	3

SF1	
Switching sequence	O-3 min-CO-3 min-CO O-0.3 s-CO-3 min-CO O-0.3 s-CO-15 s-CO
Closing time (ms)	< 65
Opening time (ms)	< 50
Number of switching operations	10 000
Service temperature (°C)	-25/+40

Offer extension

Energy management: replacement of the old protection relay (Schneider Electric or competitors)



BVP 17 / BVP 17 by VMX

Original brand: AEI, GEC, GEC Alsthom, Alstom, Areva

ECOFIT™ proposal

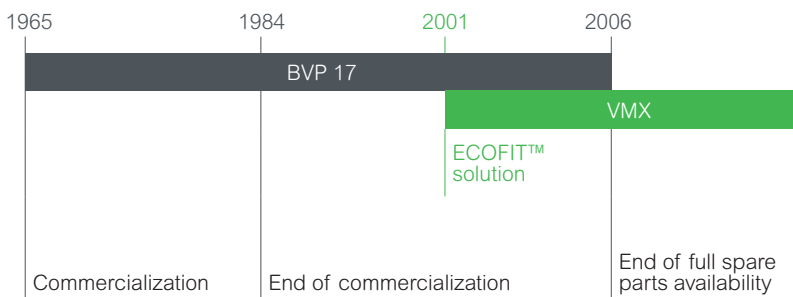
BVP 17
Circuit Breaker



VMX
Circuit Breaker



With ECOFIT™, a true extended life time



Main technical characteristics

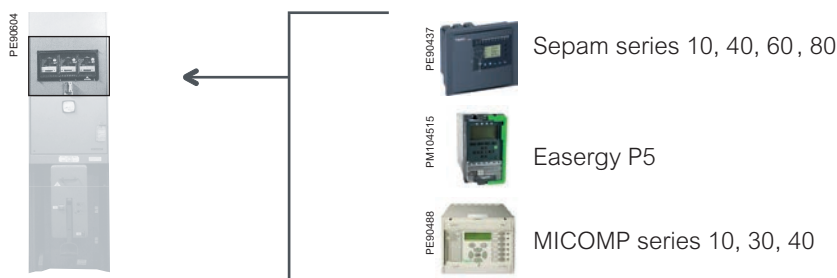
BVP 17	
Rated current (Ir)	400 - 1250 A
Short circuit current (Isc)	25 kA
Rated voltage Un (50/60 Hz)	11 kV

	VMX
Technology	Vacuum
Rated voltage Ur (kV)	11
Surge withstand voltage Up (kV)	Up to 75
Nominal frequency (Hz)	50-60
Rated current Ir (A)	400-1250
Short circuit current Isc (kA)	Up to 25
Short circuit duration Tk (s)	3

	VMX
Switching sequence	O-3 min-CO-3 min-CO O-0.3 s-CO-3 min-CO O-0.3 s-CO-15 s-CO
Closing time (ms)	< 52
Opening time (ms)	< 61
Number of switching operations	10 000
Service temperature (°C)	-25/+40

Offer extension

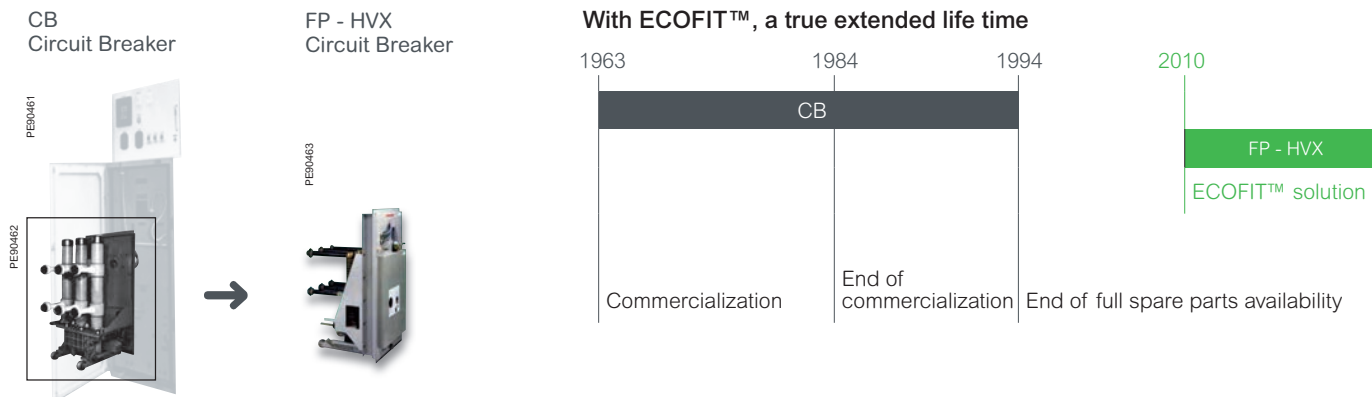
Energy management: replacement of the old protection relay (Schneider Electric or competitors)



Cemabloc CB by FP-HVX

Original brand: CEM

ECOFIT™ proposal



Main technical characteristics

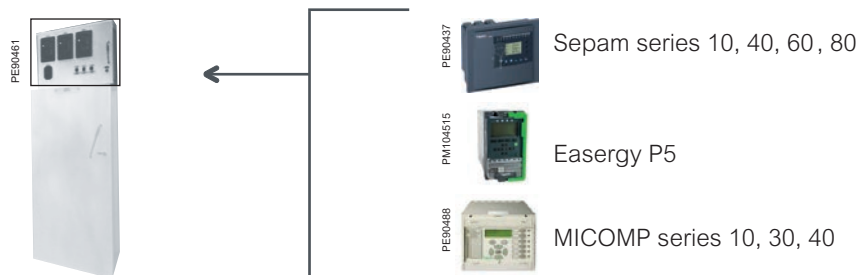
CB		
Rated current (Ir)	400 - 1250 - 2500A	
Short circuit current (Isc)	12.5 - 16/25 - 40kA	
Rated voltage Un (50/60 Hz)	Up to 23kV	

	FP	HVX
Technology	SF6	Vacuum
Rated voltage Ur (kV)	24	24
Surge withstand voltage Up (kV)	125	75
Nominal frequency (Hz)	50-60	50-60
Rated current Ir (A)	400-3150	630-2500
Short circuit current Isc (kA)	12.5-40	25-40
Short circuit duration Tk (s)	3	3

	FP	HVX
Switching sequence	O-3 min-CO-3 min-CO O-0.3 s-CO-3 min-CO O-0.3 s-CO-15 s-CO	
Closing time (ms)	50	35-53
Opening time (ms)	70	45-63
Number of switching operations	10000	10000
Service temperature (°C)	-5/+40	-5/+40

Offer extension

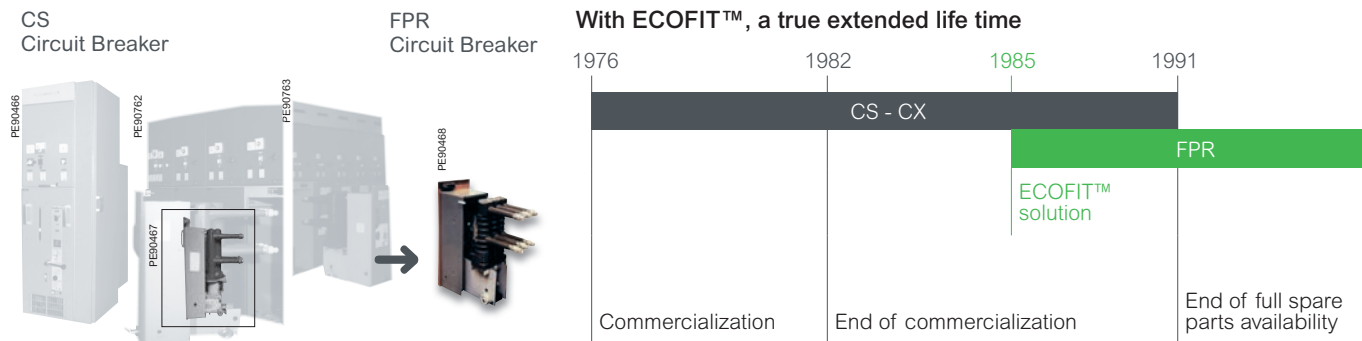
Energy management: replacement of the old protection relay (Schneider Electric or competitors)



Cemafluor-C26.0/CS by FPR and Cemafluor-C26.1/CX by FPR

Original brand: CEM

ECOFIT™ proposal



Main technical characteristics

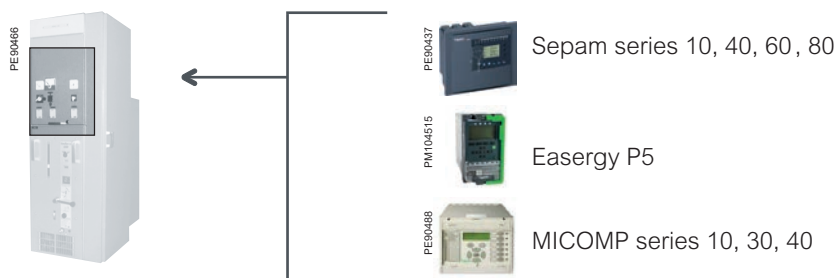
CS-CX	
Rated current (Ir)	400 - 1250 A
Short circuit current (Isc)	14.5 kA
Rated voltage Un (50/60 Hz)	24 kV

FPR	
Technology	SF6
Rated voltage Ur (kV)	24
Surge withstand voltage Up (kV)	125
Nominal frequency (Hz)	50 - 60
Rated current Ir (A)	400 - 1250
Short circuit current Isc (kA)	12.5
Short circuit duration Tk (s)	1

FPR	
Switching sequence	O-3 min-CO-3 min-CO O-0.3 s-CO-3 min-CO O-0.3 s-CO-15 s-CO
Closing time (ms)	50
Opening time (ms)	80
Number of switching operations	10 000
Service temperature (°C)	-25/+40

Offer extension

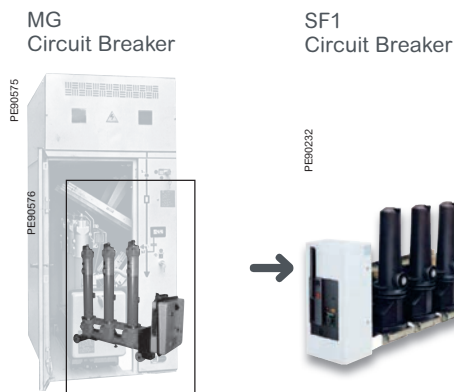
Energy management: replacement of the old protection relay (Schneider Electric or competitors)



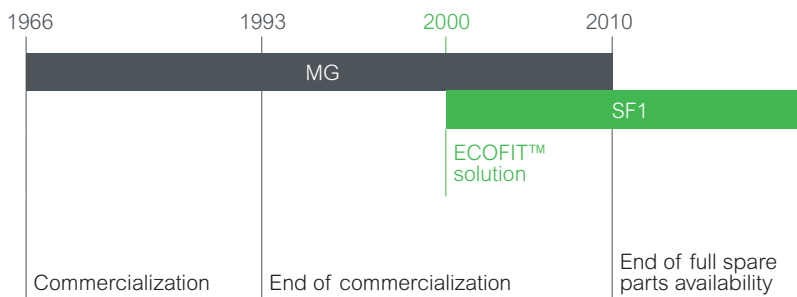
Composit (860mm width) / MG by SF1

Original brand: Nuova Magrini Galileo

ECOFIT™ proposal



With ECOFIT™, a true extended life time



Main technical characteristics

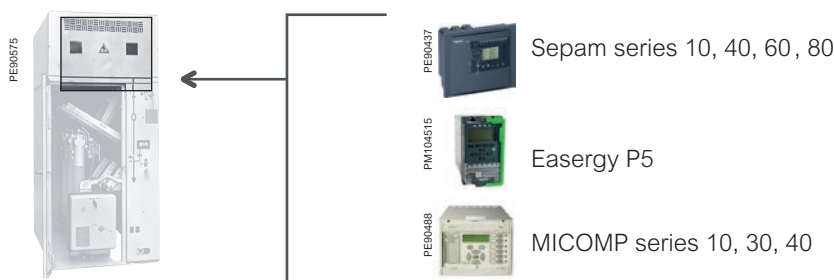
	MG				
	150-500	150-750	350-750	150-750	350-750
Rated current (Ir)	630-1250 A	630-1250 A	630-1250 A	630-1250 A	630-1250 A
Short circuit current (Isc)	8.7-28.9 kA	5-29 kA	12.5-29 kA	3.6-24 kA	6.3-21.7 kA
Rated voltage Un (50/60 Hz)	10 kV	15 kV	17 kV	20 kV	24 kV

	SF1
Technology	SF6
Rated voltage Ur (kV)	17.5-24
Surge withstand voltage Up (kV)	95-125
Nominal frequency (Hz)	50-60
Rated current Ir (A)	630-1250
Short circuit current Isc (kA)	25
Short circuit duration Tk (s)	3

	SF1
Switching sequence	O-3 min-CO-3 min-CO O-0.3 s-CO-3 min-CO O-0.3 s-CO-15 s-CO
Closing time (ms)	<65
Opening time (ms)	<50
Number of switching operations	10 000
Service temperature (°C)	-25/+40

Offer extension

Energy management: replacement of the old protection relay (Schneider Electric or competitors)

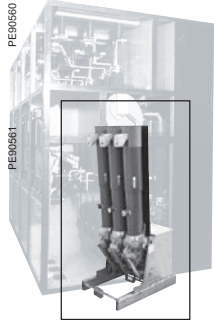


CSIM 1-12 & 3-12 / SCI-4 by VEIVACUUM F

Original brand: VEB "Otto Buchwitz"

ECOFIT™ proposal

SCI-4
Circuit Breaker



VEIVACUUM F
Circuit Breaker



With ECOFIT™, a true extended life time



Main technical characteristics

SCI-4	
Rated current (Ir)	630 - 1250 A
Short circuit current (Isc)	16 - 31.5 kA
Rated voltage Un (50/60 Hz)	12 kV

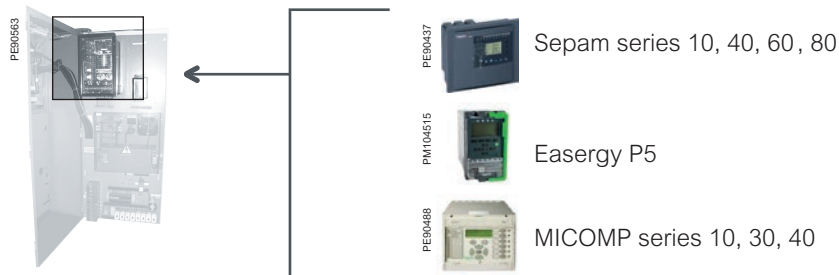
	VEIVACUUM F
Technology	Vacuum
Rated voltage Ur (kV)	12

Surge withstand voltage Up (kV)	75
Nominal frequency (Hz)	50 - 60
Rated current Ir (A)	600 - 1250
Short circuit current Isc (kA)	25
Short circuit duration Tk (s)	3

	VEIVACUUM F
Switching sequence	O-0.3s-CO-3min-CO
Closing time (ms)	65
Opening time (ms)	50
Number of switching operations	10 000
Service temperature (°C)	-25/+40

Offer extension

Energy management: replacement of the old protection relay (Schneider Electric or competitors)



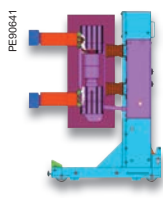
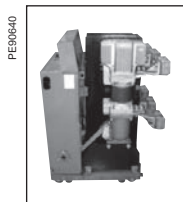
CSIM 1-12 & 3-12 / SCI-4 by VA

Original brand: VEB "Otto Buchwitz"

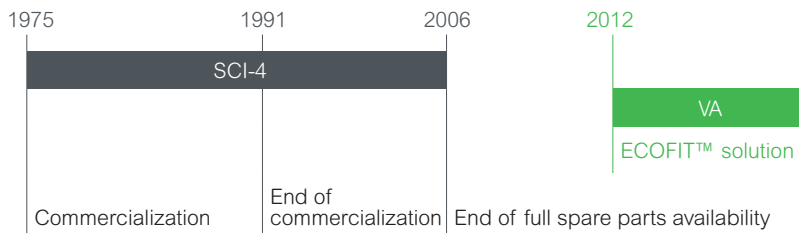
ECOFIT™ proposal

SCI-4
Circuit Breaker

VEIVACUUM F - VA
Circuit Breaker



With ECOFIT™, a true extended life time



Main technical characteristics

SCI-4	
Rated current (Ir)	630-2500A
Short circuit current (Isc)	16-31.5kA
Rated voltage Un (50/60 Hz)	12kV

	VA
Technology	Vacuum
Rated voltage Ur (kV)	12
Surge withstand voltage Up (kV)	75
Nominal frequency (Hz)	50-60
Rated current Ir (A)	600-3150
Short circuit current Isc (kA)	25-40
Short circuit duration Tk (s)	3

	VA
Switching sequence	0-0.3s-CO-3min-CO
Closing time (ms)	45-65
Opening time (ms)	45-65
Number of switching operations	10000
Service temperature (°C)	-5/+40

Offer extension

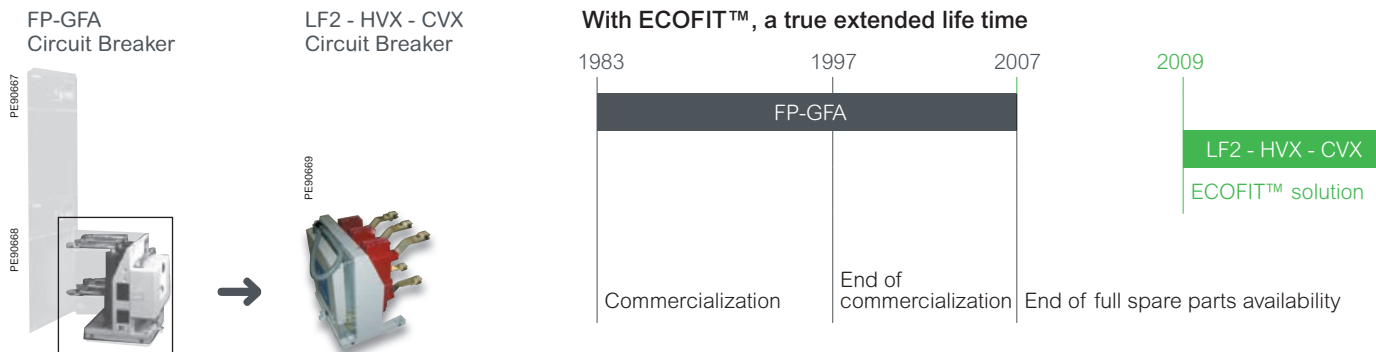
Energy management: replacement of the old protection relay (Schneider Electric or competitors)



DNF4-2E/ FP-GFA by LF2 - HVX - CVX

Original brand: Alstom

ECOFIT™ proposal



Main technical characteristics

FP-GFA			
Rated current (Ir)	400 - 2000 A		
Short circuit current (Isc)	40 kA		
Rated voltage Un (50/60 Hz)	12 kV		

	LF2	HVX	CVX
Technology	SF6	Vacuum	Vacuum
Rated voltage Ur (kV)	12	12	12

Surge withstand voltage Up (kV)	75	75	75
Nominal frequency (Hz)	50-60	50-60	50-60
Rated current Ir (A)	up to 2000	630-3150	400
Short circuit current Isc (kA)	12-50	16-50	4

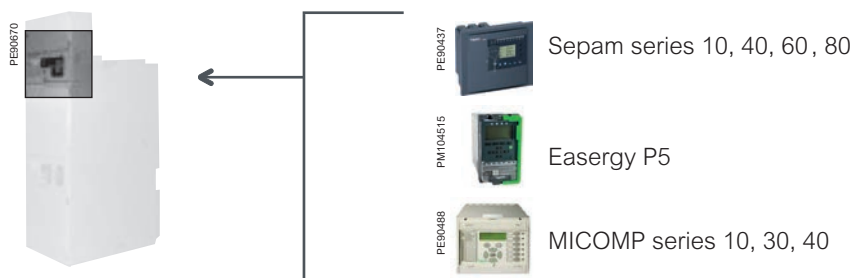
Short circuit duration Tk (s)	3	3	1
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*HVX only - **FP only

	LF2	HVX	CVX
Switching sequence	O-3 min-CO-3 min-CO O-0.3 s-CO-3 min-CO* CO-15 s-CO O-0.3 s-CO-15 s-CO* O-0.3 s-CO-3 min-CO**		C/O
Closing time (ms)	50	35-53	40-80
Opening time (ms)	70	45-63	100-200
Number of switching operations	10 000	10 000	300 000 (mech.) 500 000 (elec.)
Service temperature (°C)	-5/+40	-25/+40	-25/+40

Offer extension

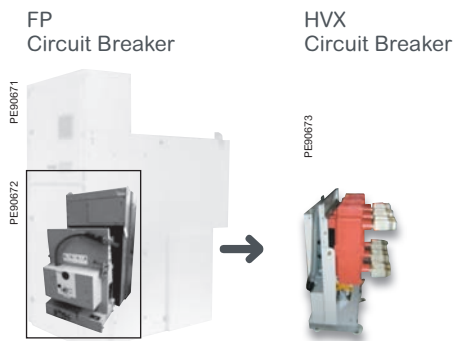
Energy management: replacement of the old protection relay (Schneider Electric or competitors)



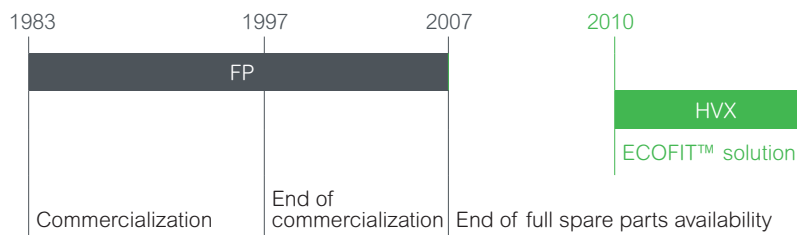
DNF4 MI & FI / FP by HVX

Original brand: Alsthom

ECOFIT™ proposal



With ECOFIT™, a true extended life time



Main technical characteristics

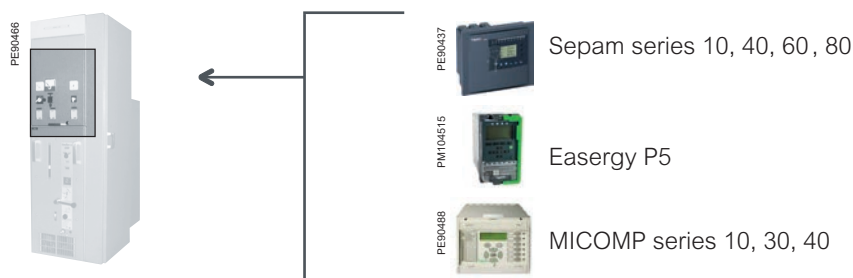
FP	
Rated current (Ir)	400 - 2000 A
Short circuit current (Isc)	40 kA
Rated voltage Un (50/60 Hz)	12 kV

HVX	
Technology	Vacuum
Rated voltage Ur (kV)	12
Surge withstand voltage Up (kV)	75
Nominal frequency (Hz)	50-60
Rated current Ir (A)	630-3150
Short circuit current Isc (kA)	25-50
Short circuit duration Tk (s)	3

HVX	
Switching sequence	O-3 min-CO-3 min-CO O-0.3 s-CO-3 min-CO CO-15 s-CO O-0.3 s-CO-15 s-CO
Closing time (ms)	35-53
Opening time (ms)	45-63
Number of switching operations	10 000
Service temperature (°C)	-5/+40

Offer extension

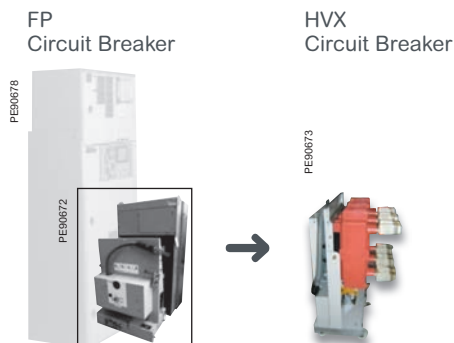
Energy management: replacement of the old protection relay (Schneider Electric or competitors)



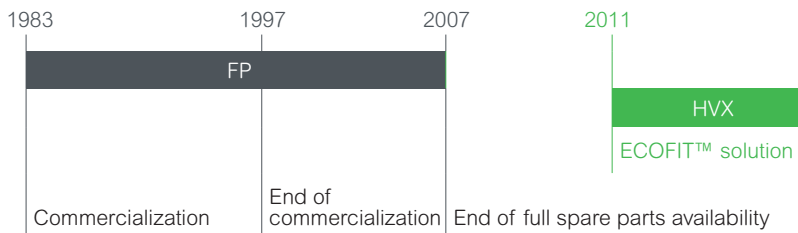
DNF5 - DNF5-2B / FP by HVX

Original brand: Alstom

ECOFIT™ proposal



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Main technical characteristics

FP	
Rated current (Ir)	630-2000A
Short circuit current (Isc)	40kA
Rated voltage Un (50/60 Hz)	17.5kV

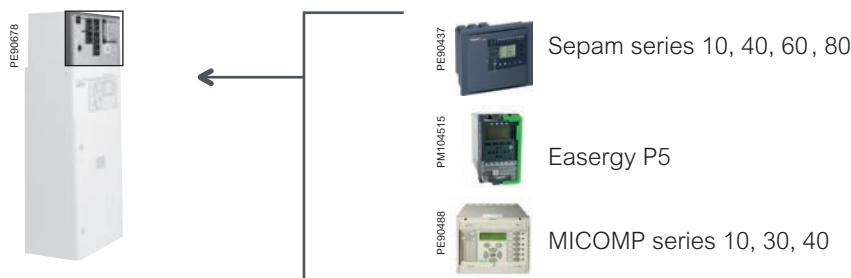
	HVX
Technology	Vacuum
Rated voltage Ur (kV)	17.5

Surge withstand voltage Up (kV)	75
Nominal frequency (Hz)	50 -60
Rated current Ir (A)	630-3150
Short circuit current Isc (kA)	25-40
Short circuit duration Tk (s)	3

	HVX
Switching sequence	O-3min-CO-3min-CO O-0.3s-CO-3min-CO CO-15s-CO O-0.3s-CO-15s-CO
Closing time (ms)	35-53
Opening time (ms)	45-63
Number of switching operations	10000
Service temperature (°C)	-5/+40

Offer extension

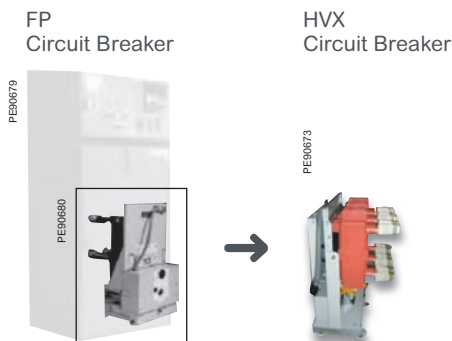
Energy management: replacement of the old protection relay (Schneider Electric or competitors)



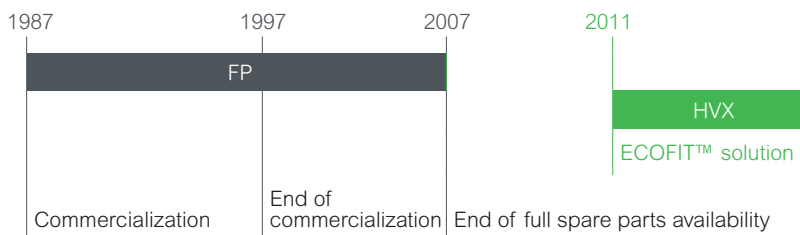
DNF6 / FP by HVX

Original brand: Alsthom

ECOFIT™ proposal



With ECOFIT™, a true extended life time



Main technical characteristics

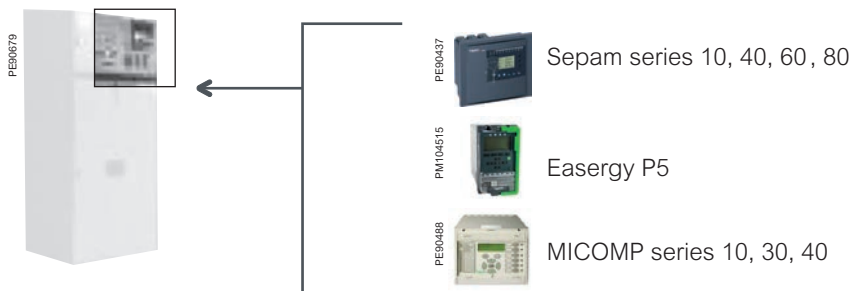
FP	
Rated current (Ir)	400 - 2000 A
Short circuit current (Isc)	31.5 kA
Rated voltage Un (50/60 Hz)	24 kV

HVX	
Technology	Vacuum
Rated voltage Ur (kV)	24
Surge withstand voltage Up (kV)	75
Nominal frequency (Hz)	50-60
Rated current Ir (A)	630 - 2500
Short circuit current Isc (kA)	25-40
Short circuit duration Tk (s)	3

HVX	
Switching sequence	O-3 min-CO-3 min-CO O-0.3 s-CO-3 min-CO CO-15 s-CO O-0.3 s-CO-15 s-CO
Closing time (ms)	35-53
Opening time (ms)	45-63
Number of switching operations	10 000
Service temperature (°C)	-5/+40

Offer extension

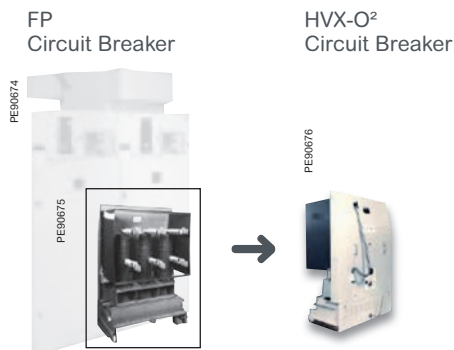
Energy management: replacement of the old protection relay (Schneider Electric or competitors)



DNF7 / FP by HVX-O²

Original brand: Alstom

ECOFIT™ proposal



With ECOFIT™, a true extended life time



Main technical characteristics

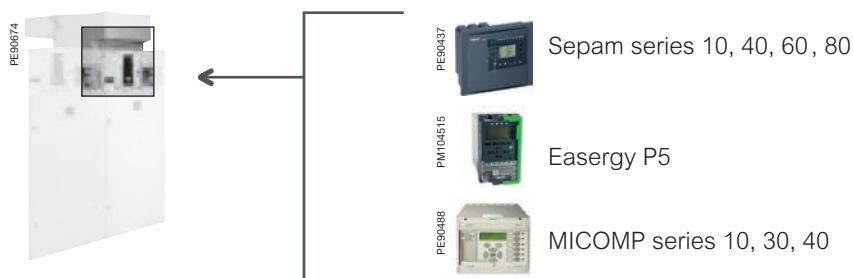
FP	
Rated current (Ir)	400-2000A
Short circuit current (Isc)	31.5kA
Rated voltage Un (50/60 Hz)	36kV

HVX-O ²	
Technology	Vacuum
Rated voltage Ur (kV)	40.5
Surge withstand voltage Up (kV)	185
Nominal frequency (Hz)	50-60
Rated current Ir (A)	Up to 2500
Short circuit current Isc (kA)	31.5
Short circuit duration Tk (s)	3

HVX-O ²	
Switching sequence	O-0.3 s-CO-3 min-CO O-3 min-CO-3 min-CO O-0.3 s-CO-15s-CO CO-15 s-CO
Closing time (ms)	45-53
Opening time (ms)	45-63
Number of switching operations	10000
Service temperature (°C)	-5/+40

Offer extension

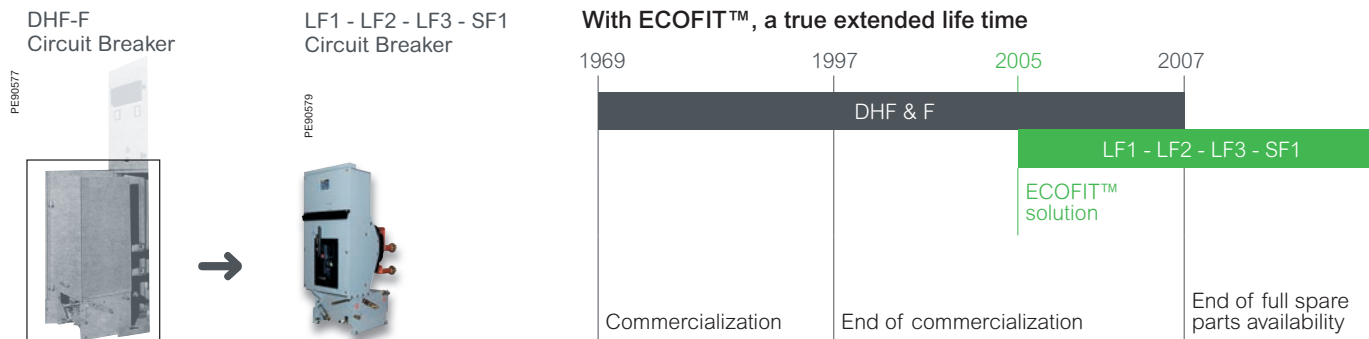
Energy management: replacement of the old protection relay (Schneider Electric or competitors)



Epoclad / DHF & F by LF1 - LF2 - LF3 - SF1

Original brand: Nuova Magrini Galileo

ECOFIT™ proposal



Main technical characteristics

	DHF & F							
	6DHF 6DHF/N 250-500	7F/N 250-350	10DHF 250-750	7F 350-750	15DHF 350-850	12F 12F/N 350-750	24DHF 350-500	20DHF 350-750 24F 500-750
Rated current (Ir)	630-3150A	630-3150A	630-3150A	630-3150A	630-1250 A	630-3150A	630-3150A	630-1250A
Short circuit current (Isc)	20-48kA	29-34kA	12-43kA	18-48kA	13.5-32.5kA	12.5-48kA	9.2-14.5kA	8-18kA /20DHF 12.5-18kA /24F
Rated voltage Un (50/60 Hz)	6kV	7.2kV	10kV	12kV	15kV	17kV	20kV	24kV

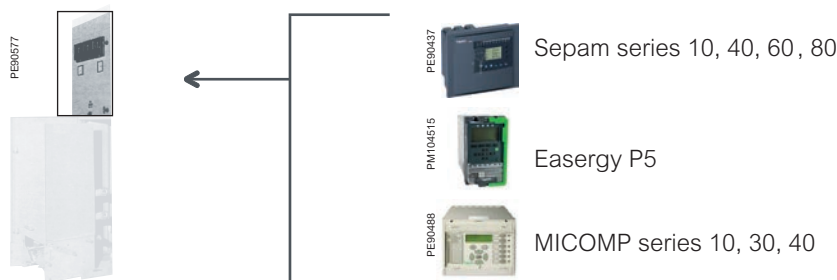
	LF1	LF2	LF3*	SF1
Technology	SF6	SF6	SF6	SF6
Rated voltage Ur (kV)	7.2	7.2-12	17.5	24
Surge withstand voltage Up (kV)	60	60-75	95	125
Nominal frequency (Hz)	50-60	50-60	50-60	50-60
Rated current Ir (A)	630-1250	2000/up to 2000	630-3150	630-1250
Short circuit current Isc (kA)	31.5	40-50	40	25
Short circuit duration Tk (s)	3	3	3	3

	LF1	LF2	LF3*	SF1
Switching sequence	O-3 min-CO-3 min-CO O-0.3 s-CO-3 min-CO O-0.3 s-CO-15 s-CO			
Closing time (ms)	<72	<72	<72	<65
Opening time (ms)	<54	<54	<54	<50
Number of switching operations	10000	10000	10000	10000
Service temperature (°C)	-25/+40	-25/+40	-25/+40	-25/+40

* Ur: 7.2 / 12kV, A: 3150, kA: 50

Offer extension

Energy management: replacement of the old protection relay (Schneider Electric or competitors)



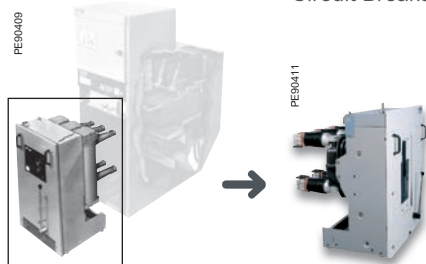
Fluair F100 - F200 / FG1 - FG2 by LF2 - LF3 - Evolis - Easypact EXE

Original brand: Merlin Gerin

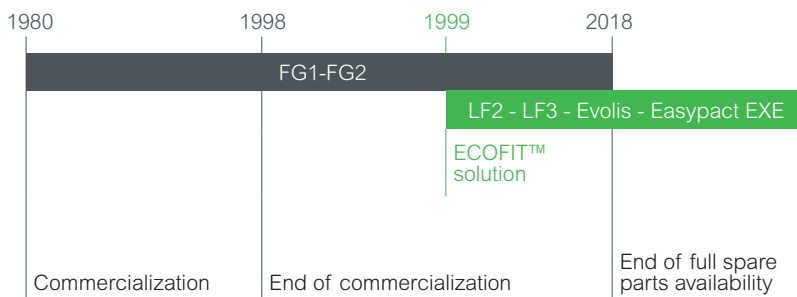
ECOFIT™ proposal

FG1 - FG2
Circuit Breaker

LF2 - LF3 - Evolis -
Easypact EXE
Circuit Breaker



With ECOFIT™, a true extended life time



Main technical characteristics

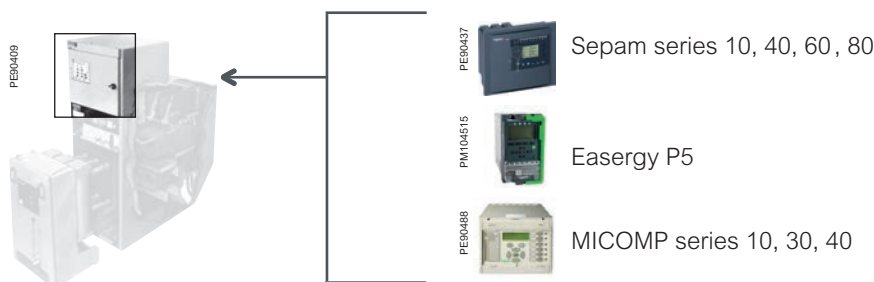
FG1 - FG2			
Rated current (Ir)	630-3150A	630-3150A	630-3150A
Short circuit current (Isc)	25-50kA	25-50kA	25-31.5kA
Rated voltage Un (50/60 Hz)	7.2kV	12kV	17.5kV

	LF2	LF3	Evolis & Easypact EXE
Technology	SF6	SF6	Vacuum
Rated voltage Ur (kV)	7.2-12	17.5	up to 17.5
Surge withstand voltage Up (kV)	60-75	95	up to 95
Nominal frequency (Hz)	50-60	50-60	50-60
Rated current Ir (A)	630-3150	630-3150	630-2500
Short circuit current Isc (kA)	25-50	31.5	40
Short circuit duration Tk (s)	3	3	3

	LF1	LF3	Evolis & Easypact EXE
Switching sequence	O-3 min-CO-3 min-CO O-0.3 s-CO-3 min-CO O-0.3 s-CO-15 s-CO		
Closing time (ms)	< 72	< 72	< 65
Opening time (ms)	< 54	< 54	< 50
Number of switching operations	10000	10000	2000 (Isc = 40 kA/M1 class) - 10000
Service temperature (°C)	-25/+40	-25/+40	-25/+40

Offer extension

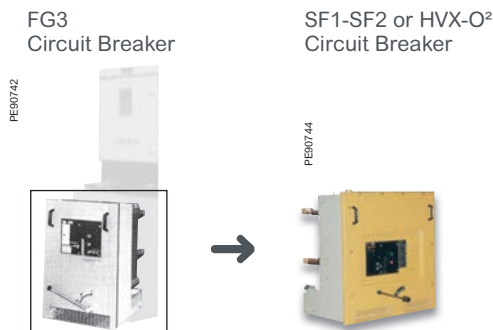
Energy management: replacement of the old protection relay (Schneider Electric or competitors)



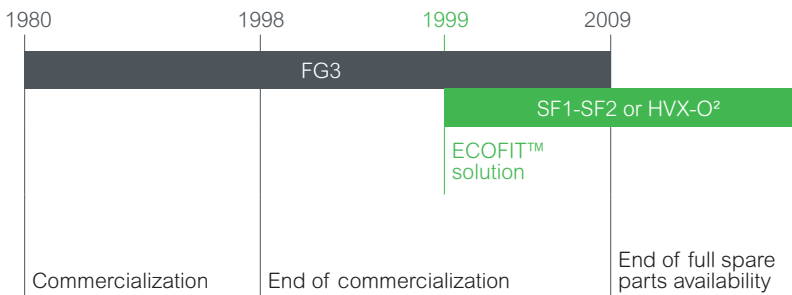
Fluair F300 / FG3 (750mm width) by HVX-O² FG3 (1000mm width) by SF1 - SF2

Original brand: Merlin Gerin

ECOFIT™ proposal



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Main technical characteristics

FG3			
Rated current (Ir)	630-2500A		
Short circuit current (Isc)	25-31.5kA		
Rated voltage Un (50/60 Hz)	24kV		

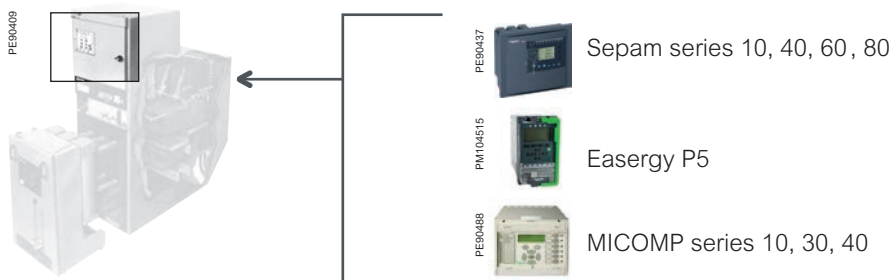
	SF1	SF2	HVX-O ²
Technology	SF6	SF6	SF6
Rated voltage Ur (kV)	24	24	24

Surge withstand voltage Up (kV)	125	125	125
Nominal frequency (Hz)	50-60	50-60	50-60
Rated current Ir (A)	630-1250	1250-2500	up to 1250
Short circuit current Isc (kA)	25	25-31.5	up to 25
Short circuit duration Tk (s)	3	3	3

	SF1	SF2	HVX-O ²
Switching sequence	O-0.3 s-CO-3 min-CO O-3 min-CO-3 min-CO O-0.3 s-CO-15s-CO CO-15 s-CO		
Closing time (ms)	<65	<65	45-63
Opening time (ms)	<50	<50	25-53
Number of switching operations	10000	10000	10000 electrical
Service temperature (°C)	-25/+40	-25/+40	-5/+40

Offer extension

Energy management: replacement of the old protection relay (Schneider Electric or competitors)



Fluair F400C / FC4 by SF2

Original brand: Merlin Gerin

ECOFIT™ proposal

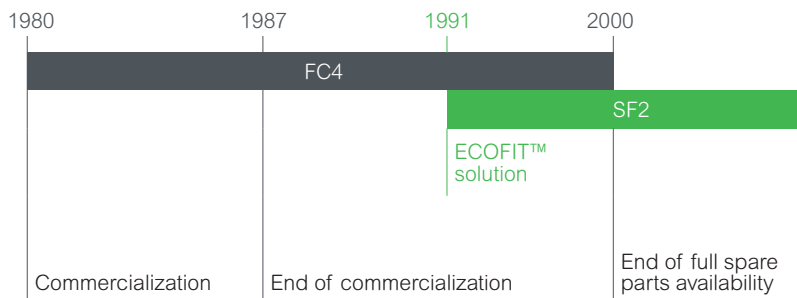
FC4
Circuit Breaker



SF2
Circuit Breaker



With ECOFIT™, a true extended life time



Main technical characteristics

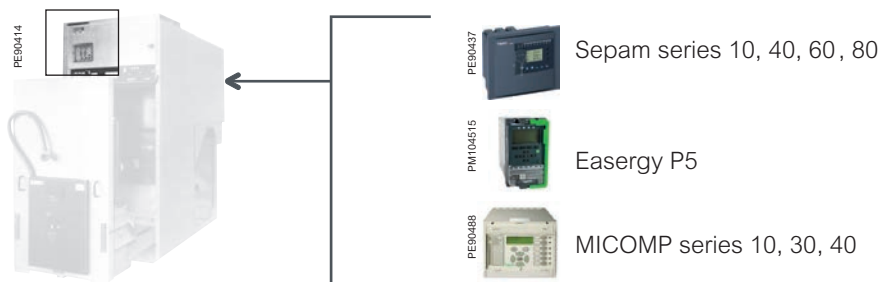
FC4	
Rated current (Ir)	1250-2500 A
Short circuit current (Isc)	31.5-40 kA
Rated voltage Un (50/60 Hz)	36 kV

	SF2
Technology	SF6
Rated voltage Ur (kV)	36
Surge withstand voltage Up (kV)	170
Nominal frequency (Hz)	50-60
Rated current Ir (A)	1250-2500
Short circuit current Isc (kA)	31.5-40
Short circuit duration Tk (s)	3

	SF2
Switching sequence	O-3 min-CO-3 min-CO O-0.3 s-CO-3 min-CO O-0.3 s-CO-15 s-CO
Closing time (ms)	<65
Opening time (ms)	<50
Number of switching operations	10000
Service temperature (°C)	-25/+40

Offer extension

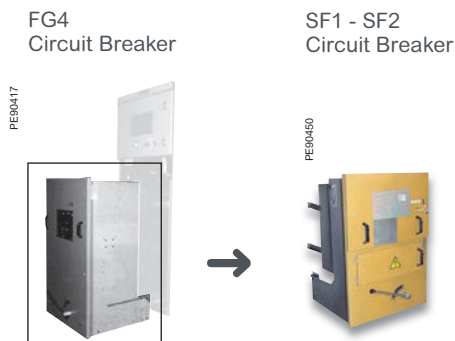
Energy management: replacement of the old protection relay (Schneider Electric or competitors)



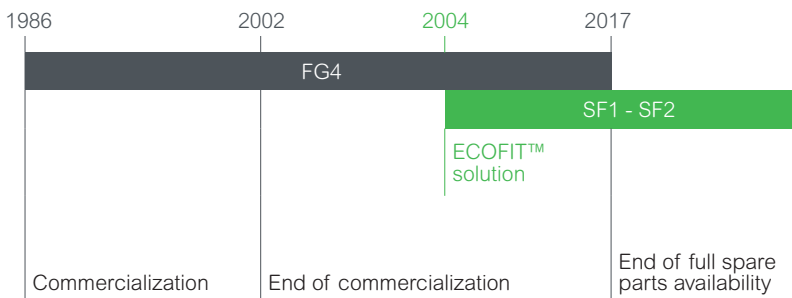
Fluair F400G / FG4 by SF1 - SF2

Original brand: Merlin Gerin

ECOFIT™ proposal



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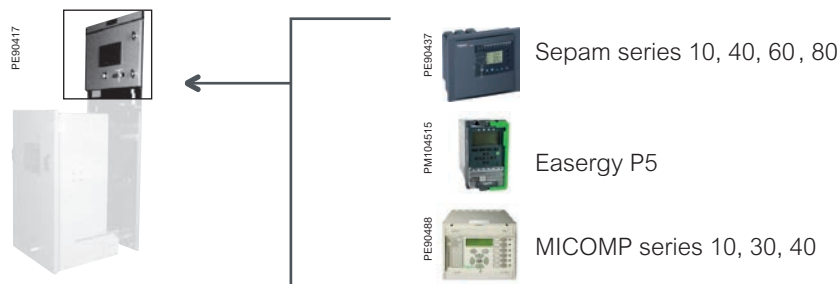
Main technical characteristics

FG4		
Rated current (Ir)	1250-2500 A	1250-2500 A
Short circuit current (Isc)	40 kA	25-40 kA
Rated voltage Un (50/60 Hz)	24 kV	36 kV

	SF1-SF2	
Technology	SF6	Switching sequence
Rated voltage Ur (kV)	24-36	O-3 min-CO-3 min-CO O-0.3 s-CO-3 min-CO O-0.3 s-CO-15 s-CO
Surge withstand voltage Up (kV)	125-170	Closing time (ms)
Nominal frequency (Hz)	50-60	< 65
Rated current Ir (A)	1250-2500	Opening time (ms)
Short circuit current Isc (kA)	25-40	< 50
Short circuit duration Tk (s)	3	Number of switching operations
		10000
		Service temperature (°C)
		-25/+40

Offer extension

Energy management: replacement of the old protection relay (Schneider Electric or competitors)



GS-10 / GE by VA - VAA

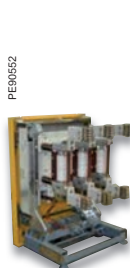
Original brand: AEG

ECOFIT™ proposal

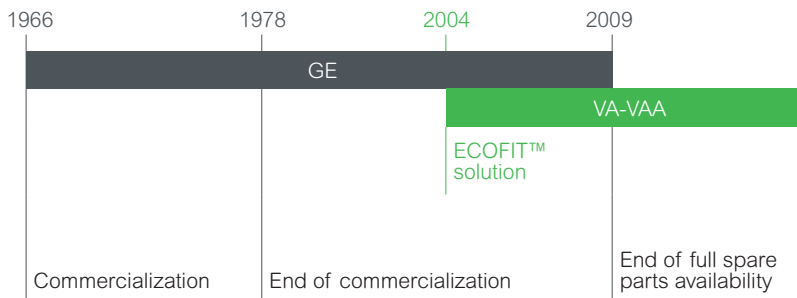
GE
Circuit Breaker



VA-VAA
Circuit Breaker



With ECOFIT™, a true extended life time



Main technical characteristics

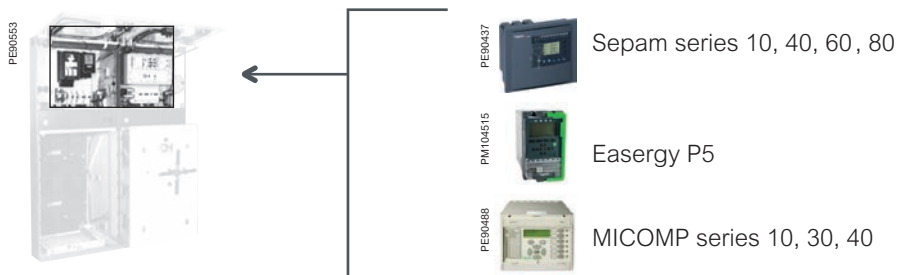
GE	
Rated current (Ir)	630-3000A
Short circuit current (Isc)	16-40kA
Rated voltage Un (50/60 Hz)	12kV

VA-VAA	
Technology	Vacuum
Rated voltage Ur (kV)	12
Surge withstand voltage Up (kV)	75
Nominal frequency (Hz)	50-60
Rated current Ir (A)	600-1250
Short circuit current Isc (kA)	40
Short circuit duration Tk (s)	3

VA-VAA	
Switching sequence	O-0.3s-CO-3min-CO
Closing time (ms)	45-65
Opening time (ms)	45-65
Number of switching operations	10000
Service temperature (°C)	-5/+40

Offer extension

Energy management: replacement of the old protection relay (Schneider Electric or competitors)

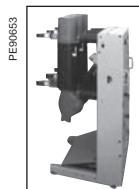


HP / HP - W - TW - TM by HVX

Original brand: Concordia Sprecher, Sprecher & Schuh, GEC Alsthom, Alstom, Areva

ECOFIT™ proposal

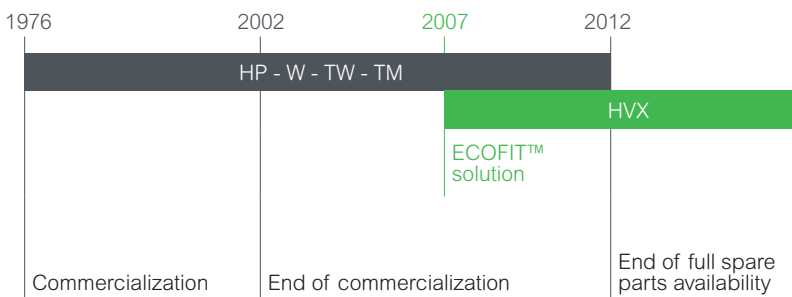
HP - W - TW - TM
Circuit Breaker



HVX
Circuit Breaker



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Main technical characteristics

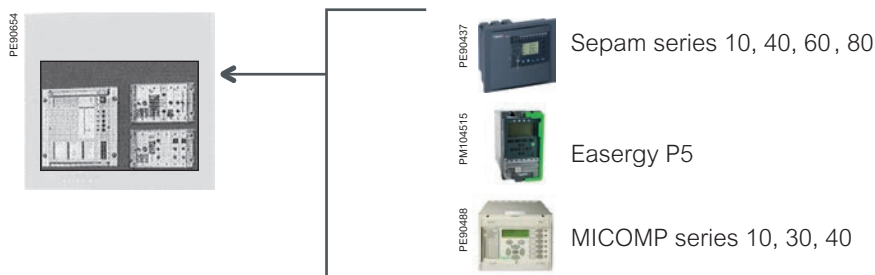
HP - W - TW - TM	
Rated current (Ir)	600-800-1250-2500-3150A
Short circuit current (Isc)	8.4-12.5-21.7-31.5-40kA
Rated voltage Un (50/60 Hz)	7.2-12-24kV

HVX	
Technology	Vacuum
Rated voltage Ur (kV)	6-24
Surge withstand voltage Up (kV)	75-125
Nominal frequency (Hz)	50-60
Rated current Ir (A)	630-3150
Short circuit current Isc (kA)	16-40
Short circuit duration Tk (s)	3

HVX	
Switching sequence	O-0.3s-CO-3min-CO
Closing time (ms)	45-63
Opening time (ms)	35-53
Number of switching operations	10000
Service temperature (°C)	-5/+40

Offer extension

Energy management: replacement of the old protection relay (Schneider Electric or competitors)

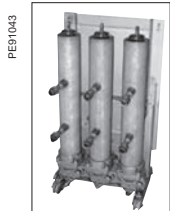


K104/ K104 by LF - Evolis

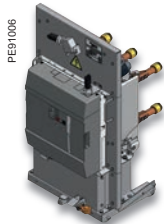
Original brand: GOST standard

ECOFIT™ proposal

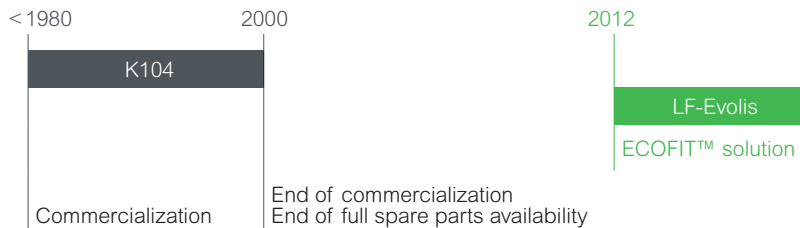
K104
Circuit Breaker



LV - Evolis
Circuit Breaker



With ECOFIT™, a true extended life time



Main technical characteristics

K104	
Rated current (Ir)	630 - 1000 - 1600 A
Short circuit current (Isc)	25 - 31.5 kA
Rated voltage Un (50/60 Hz)	6 - 10 kV

	LF	Evolis
Technology	SF6	Vacuum
Rated voltage Ur (kV)	6 - 10	6 - 17.5
Surge withstand voltage Up (kV)	60 - 75	60 - 75
Nominal frequency (Hz)	50	50
Rated current Ir (A)	630 - 1250 - 2000	630 - 1250 - 1600
Short circuit current Isc (kA)	25 - 31.5	25 - 31.5
Short circuit duration Tk (s)	3	3

	LF	Evolis
Switching sequence	O-0,3 c-C/O-15 c-C/O 3 min	O-0,3 c-C/O-15 c-C/O 3 min
Closing time (ms)	< 65	< 65
Opening time (ms)	< 50	< 50
Number of switching operations	10 000	20 000
Service temperature (°C)	-25/+40	-25/+40

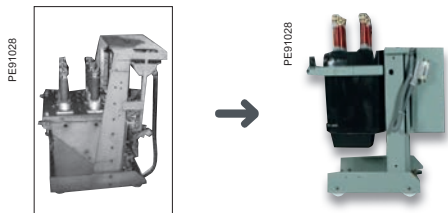
KAD / KAD-KAC by VMX-540

Original brand: GEC, GEC Alsthom, Alstom

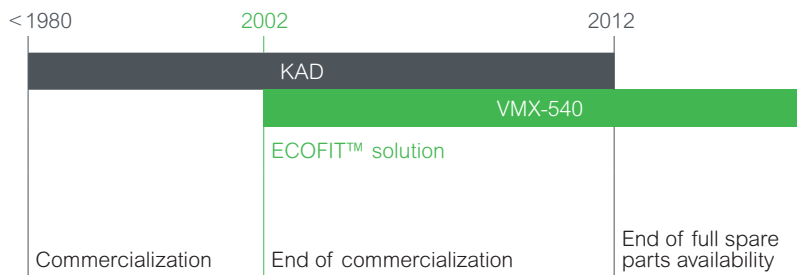
ECOFIT™ proposal

KAD
Circuit Breaker

VMXX-540
Circuit Breaker



With ECOFIT™, a true extended life time



Main technical characteristics

KAD	
Rated current (Ir)	800 A
Short circuit current (Isc)	25 kA
Rated voltage Un (50/60 Hz)	12 kV

	VMX-540
Technology	Vacuum
Rated voltage Ur (kV)	12
Surge withstand voltage Up (kV)	75
Nominal frequency (Hz)	50
Rated current Ir (A)	1250
Short circuit current Isc (kA)	25
Short circuit duration Tk (s)	3

	VMX-540
Switching sequence	O-3 min-CO-3 min-CO
Closing time (ms)	≤ 60
Opening time (ms)	≤ 60
Number of switching operations	
Service temperature (°C)	-5/+40

KRU / KRU 2-10 by LF1 - Evolis

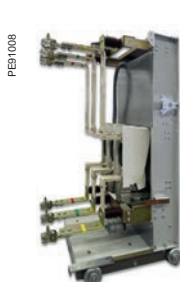
Original brand: GOST standard

ECOFIT™ proposal

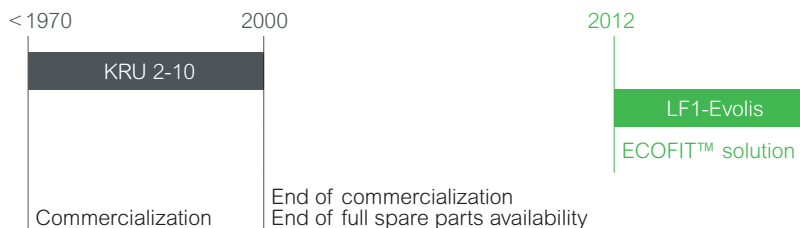
KRU 2-10
Circuit Breaker



LF1 - Evolis
Circuit Breaker



With ECOFIT™, a true extended life time



Main technical characteristics

KRU 2-10		
Rated current (Ir)	630-1000-1600 A	
Short circuit current (Isc)	25-31.5 kA	
Rated voltage Un (50/60 Hz)	6-10 kV	

	LF1	Evolis
Technology	SF6	Vacuum
Rated voltage Ur (kV)	6-17.5	6-10
Surge withstand voltage Up (kV)	60-75	60-75
Nominal frequency (Hz)	50	50
Rated current Ir (A)	630-1250-2000	630-1250-1600
Short circuit current Isc (kA)	40-50 (6kV) - 40 (10kV)	25-45
Short circuit duration Tk (s)	3	3

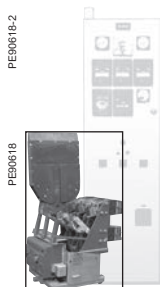
	LF1	Evolis
Switching sequence	O-0,3 c-C/O-15 c -C/O 3 min	O-0,3 c-C/O-15 c -C/O 3 min
Closing time (ms)	< 65	< 65
Opening time (ms)	< 50	< 50
Number of switching operations	10 000	20 000
Service temperature (°C)	-25/+40	-25/+40

Metalclad switchgear / DST2 & 5 by DST2V & 5V

Original brand: Federal Pioneer

ECOFIT™ proposal

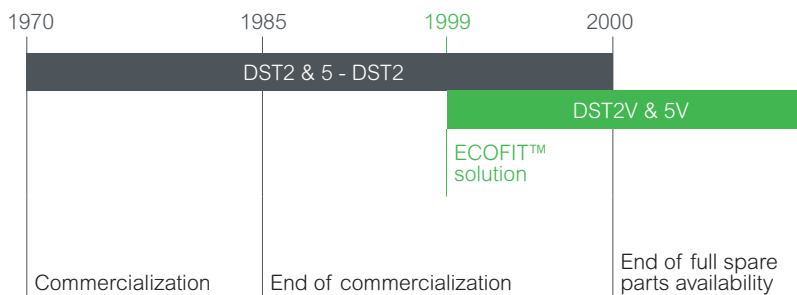
DST2 & 5
Circuit Breaker



DST2V & 5V
Circuit Breaker



With ECOFIT™, a true extended life time



Main technical characteristics

	DST2 & 5	DST2
Rated current (Ir)	1200-3000 A	1200-3000 A
Short circuit current (Isc)	250-350 MVA	500-750 MVA
Rated voltage Un (50/60 Hz)	5 kV	15 kV

	DST2V	DST5V
Technology	Vacuum	Vacuum
Rated voltage Ur (kV)	5	15
Surge withstand voltage Up (kV)	60	95

	DST2V	DST5V
Rated current Ir (A)	1200-3000	1200-3000
3-phase rating (MVA)	350	500-750

Offer extension



Magnum circuit breakers correctly interface with the existing breaker compartment components and maintain safety interlocks inherent in the original equipment design.

- New circuit breakers are installed in existing switchgear.
- Original footprint is left intact, saving time and money.
- Installation expense is a fraction of new equipment costs.
- Less down time for installation.
- Enhanced equipment reliability.
- Manufactured with new components.
- Undergoes complete factory testing.
- Backed by our standard equipment warranty.
- New, easy-to-maintain operating mechanism.
- No bulky arc chutes to handle and maintain.
- Reduced need for difficult to obtain spare parts.

Optional capabilities

- Increased fault current interruption rating.
- Relay upgrade, improved accuracy and repeatability, and performance.
- Power metering, monitoring and communication.
- Ground and test devices available for various types of switchgear.

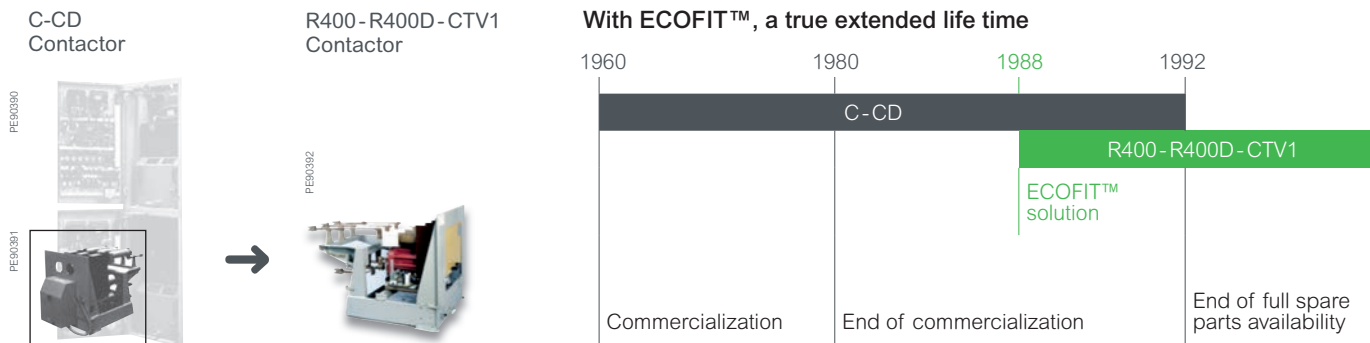
Closed Door Electric Racking Mechanism

- Arc flash hazard reduced with remote operation.
- Maintenance shutdown time is significantly reduced.
- No storage space is required for the electrical racking system.
- Require just a common 120VAC, 15A outlet for power up.

Motorstart P50D/C - CD by R400 - R400D - CTV1

Original brand: Merlin Gerin

ECOFIT™ proposal



Main technical characteristics

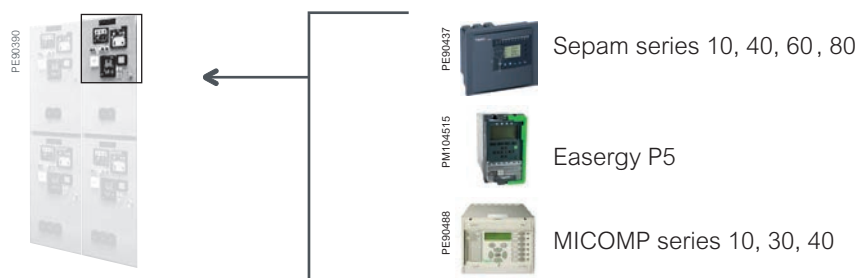
C-CD			
Rated current (Ir)	80-200 A		
Short circuit current (Isc)	50 kA (with fuses)		
Rated voltage Un (50/60 Hz)	7.2 kV		

	R400	R400D	CTV1
Technology	SF6	SF6	Vacuum
Rated voltage Ur (kV)	7.2	7.2	7.2
Surge withstand voltage Up (kV)	60	60	60
Nominal frequency (Hz)	50-60	50-60	50-60
Rated current Ir (A)	80-250	80-250	80-250
Short circuit current Isc (kA)	50 (with fuses)	50 (with fuses)	50 (with fuses)
Short circuit duration Tk (s)	3	3	3

	R400	R400D	CTV1
Switching sequence			
Closing time (ms)	75-155	75-155	60-80
Opening time (ms)	20-50	20-50	20-30
Number of switching operations	300 000	100 000	200 000
Service temperature (°C)	-25/+40	-25/+40	-25/+40

Offer extension

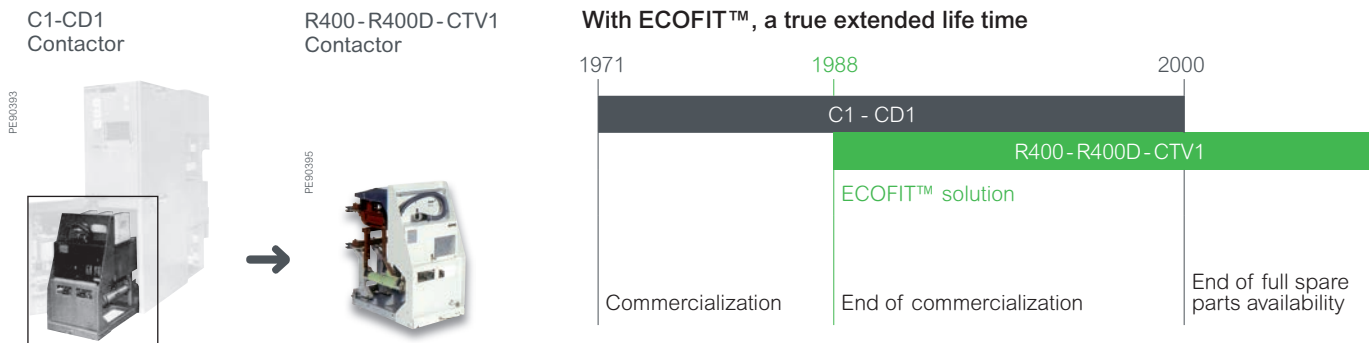
Energy management: replacement of the old protection relay (Schneider Electric or competitors)



Motorstart P500D/C1 - CD1 by R400 - R400D - CTV1

Original brand: Merlin Gerin

ECOFIT™ proposal



Main technical characteristics

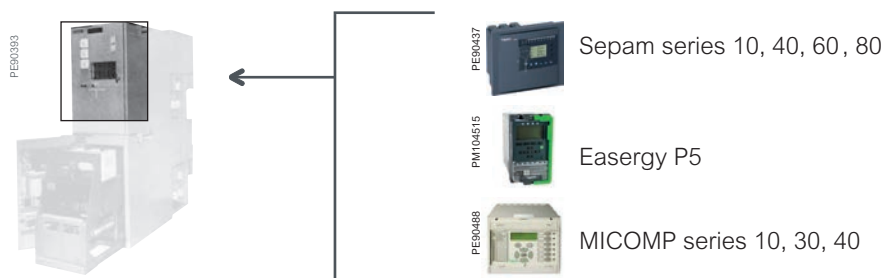
C1-CD1	
Rated current (Ir)	80-250 A
Short circuit current (Isc)	50 kA (with fuses)
Rated voltage Un (50/60 Hz)	7.2 kV

	R400	R400D	CTV1
Technology	SF6	SF6	Vacuum
Rated voltage Ur (kV)	7.2	7.2	7.2
Surge withstand voltage Up (kV)	60	60	60
Nominal frequency (Hz)	50-60	50-60	50-60
Rated current Ir (A)	80-250	80-250	80-250
Short circuit current Isc (kA)	50 (with fuses)	50 (with fuses)	50 (with fuses)
Short circuit duration Tk (s)	3	3	3

	R400	R400D	CTV1
Switching sequence			
Closing time (ms)	75-155	75-155	60-80
Opening time (ms)	20-50	20-50	20-30
Number of switching operations	300 000	100 000	200 000
Service temperature (°C)	-25/+40	-25/+40	-25/+40

Offer extension

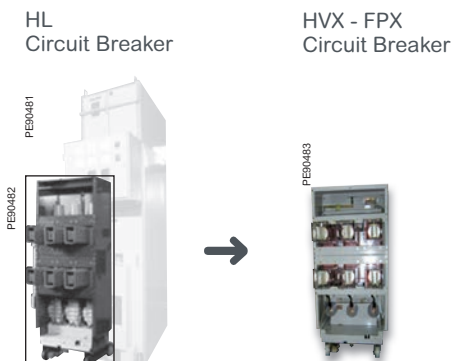
Energy management: replacement of the old protection relay (Schneider Electric or competitors)



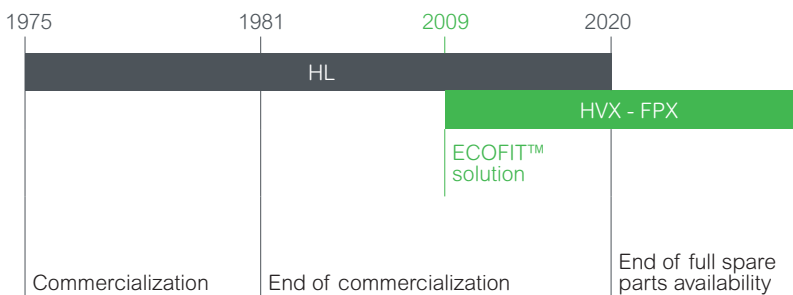
Normabloc N13xx / HL by HVX -FPX

Original brand: Delle Alsthom

ECOFIT™ proposal



With ECOFIT™, a true extended life time



Main technical characteristics

HL		
Rated current (Ir)	630 - 1250 A	
Short circuit current (Isc)	25 & 40 kA	
Rated voltage Un (50/60 Hz)	17.5 kV	

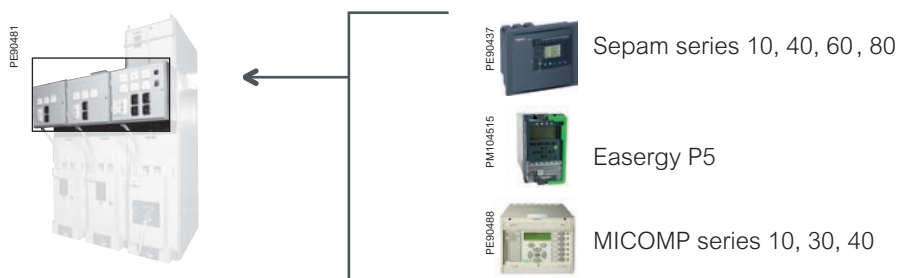
	HVX	FPX
Technology	Vacuum	SF6
Rated voltage Ur (kV)	17.5	17.5

Surge withstand voltage Up (kV)	95	95
Nominal frequency (Hz)	50-60	50-60
Rated current Ir (A)	630-1250	630-1250
Short circuit current Isc (kA)	16-40	12.5-40
Short circuit duration Tk (s)	3	3

	HVX	FPX
Switching sequence	O-3min-CO-3min-CO O-0.3s-CO-3min-CO O-15s-CO O-0.3s-CO-15s-CO	O-3min-CO-3min-CO O-0.3s-CO-3min-CO O-0.3s-CO-15s-CO
Closing time (ms)	35-53	50
Opening time (ms)	45-63	50
Number of switching operations	10000	10000
Service temperature (°C)	-25/+40	-25/+40

Offer extension

Energy management: replacement of the old protection relay (Schneider Electric or competitors)



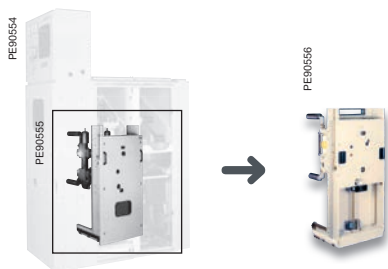
R / M - MC - IMC - E - AL - ALF - BAL - FAL - IFAL - TG by VA - VAA - Contactor

Original brand: AEG, Alstom

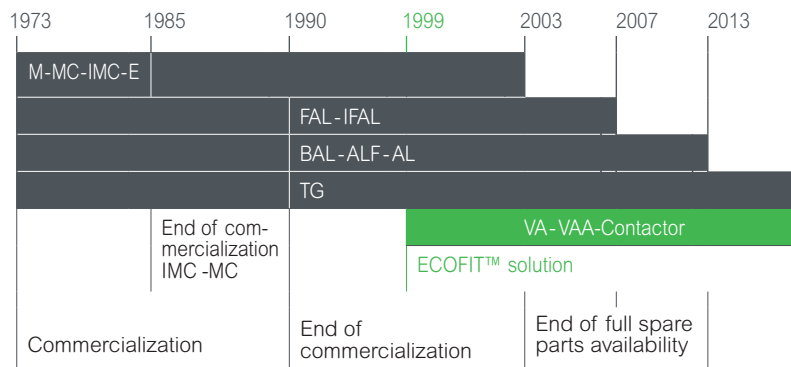
ECOFIT™ proposal

M-MC-IMC-E-AL-ALF-BAL-FAL-IFAL-TG
Switch device

VA-VAA-Contactor



With ECOFIT™, a true extended life time



Main technical characteristics

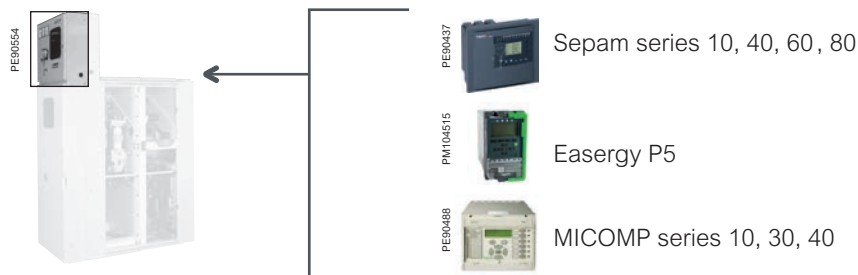
M-MC-IMC-E-AL-ALF-BAL-FAL-IFAL-TG	
Rated current (Ir)	1250-4000 A
Short circuit current (Isc)	16-50 kA
Rated voltage Un (50/60 Hz)	12-36 kV

	VA-VAA-Contactor
Technology	Vacuum
Rated voltage Ur (kV)	12-24
Surge withstand voltage Up (kV)	75-125
Nominal frequency (Hz)	50-60
Rated current Ir (A)	630-3550
Short circuit current Isc (kA)	16-50
Short circuit duration Tk (s)	3

	VA-VAA-Contactor
Switching sequence	O-0.3s-CO-3min-CO
Closing time (ms)	20
Opening time (ms)	20-50
Number of switching operations	10000
Service temperature (°C)	-5/+40

Offer extension

Energy management: replacement of the old protection relay (Schneider Electric or competitors)



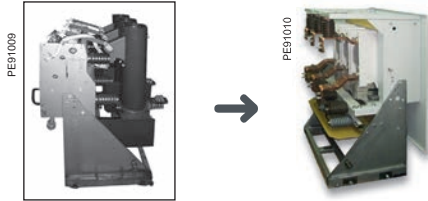
RSW / RSW by LF - Evolis

Original brand: GOST standard

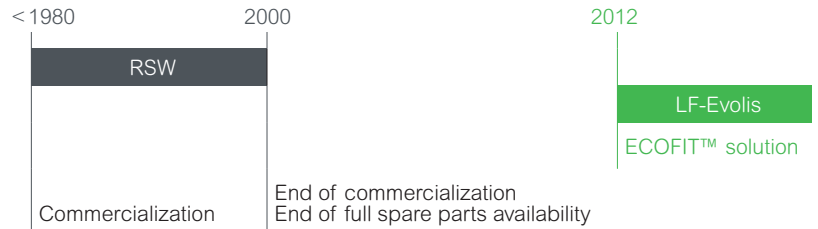
ECOFIT™ proposal

RSW
Circuit Breaker

LF - Evolis
Circuit Breaker



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Main technical characteristics

RSW		
Rated current (Ir)	630-1250 A	
Short circuit current (Isc)	25-31.5 kA	
Rated voltage Un (50/60 Hz)	6-10 kV	

	LF	Evolis
Technology	SF6	Vacuum
Rated voltage Ur (kV)	6-17.5	6-10
Surge withstand voltage Up (kV)	60-75	60-75
Nominal frequency (Hz)	50	50
Rated current Ir (A)	630-1250	630-1250
Short circuit current Isc (kA)	25-31.5	25-31.5
Short circuit duration Tk (s)	3	3

	LF	Evolis
Switching sequence	O-0,3 c-C/O-15 c -C/O 3 min	O-0,3 c-C/O-15 c -C/O 3 min
Closing time (ms)	<65	<65
Opening time (ms)	<50	<50
Number of switching operations	10 000	20 000
Service temperature (°C)	-25/+40	-25/+40

Siclad / MAG II by LF1 - LF2

Original brand: Ansaldo

ECOFIT™ proposal

MAG II
Circuit Breaker



LF1 - LF2
Circuit Breaker



With ECOFIT™, a true extended life time



Main technical characteristics

	MAG II - 6 - 250/400	MAG II - 10 - 500	MAG II - 15 - 6 - 300/350
Rated current (Ir)	630-1250-2000A	630-1250-2000A	630-1250-2000A
Short circuit current (Isc)	20-48 kA	20-28 kA	12-30 kA
Rated voltage Un (50/60 Hz)	6 kV	10 kV	15 kV

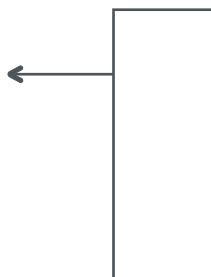
	LF1	LF2*
Technology	SF6	SF6
Rated voltage Ur (kV)	7.2-12	7.2-12-17.5
Surge withstand voltage Up (kV)	60-75	60-75-95
Nominal frequency (Hz)	50-60	50-60
Rated current Ir (A)	630-1250	2000
Short circuit current Isc (kA)	31.5	40
Short circuit duration Tk (s)	3	3

* For Siclad panels 630mm & 850mm wide

	LF1	LF2*
Switching sequence	O-3 min-CO-3 min-CO O-0.3 s-CO-3 min-CO O-0.3 s-CO-15 s-CO	
Closing time (ms)	< 72	< 72
Opening time (ms)	< 54	< 54
Number of switching operations	10000	10000
Service temperature (°C)	-25/+40	-25/+40

Offer extension

Energy management: replacement of the old protection relay (Schneider Electric or competitors)



Sepam series 10, 40, 60, 80



Easergy P5

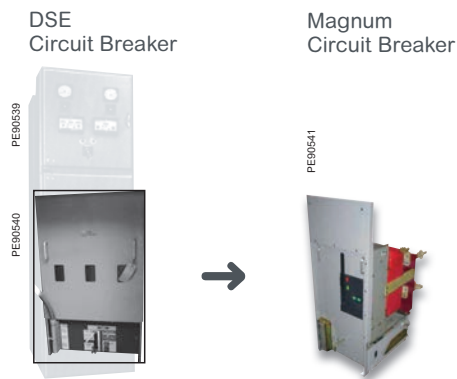


MICOMP series 10, 30, 40

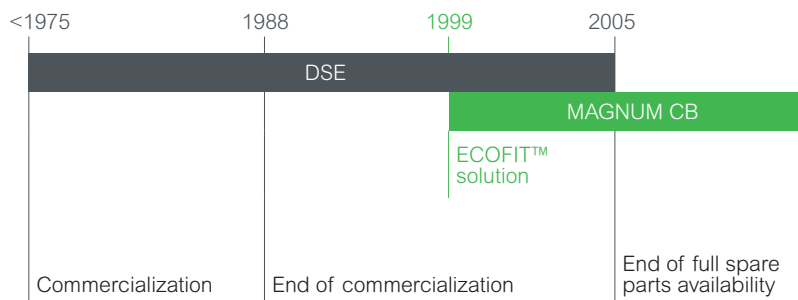
Solenarc DSE Metal-Clad switchgear / DSE by Magnum CB

Original brand: Square D

ECOFIT™ proposal



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Main technical characteristics

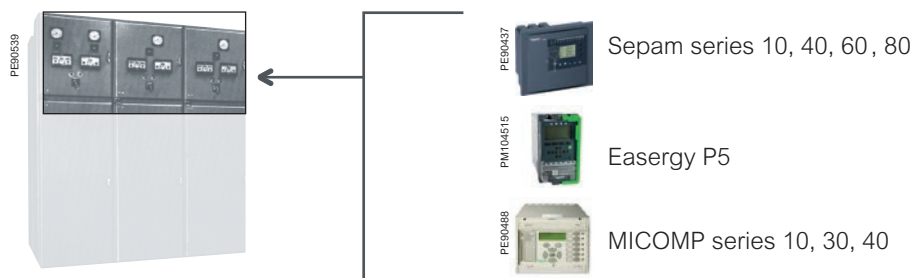
DSE		
Rated current (Ir)	1200-3000 A	1200-3000 A
Short circuit current (Isc)	250 MVA	250-1000 MVA
Rated voltage Un (50/60 Hz)	5 kV	15 kV

	5MGSB	15MGSB
Technology	Vacuum	Vacuum
Rated voltage Ur (kV)	5	15
Surge withstand voltage Up (kV)	60	95

	5MGSB	15MGSB
Rated current Ir (A)	1200	1200-3000
3-phase rating (MVA)	250	250-1000
Interrupting time (ms)	100	60

Offer extension

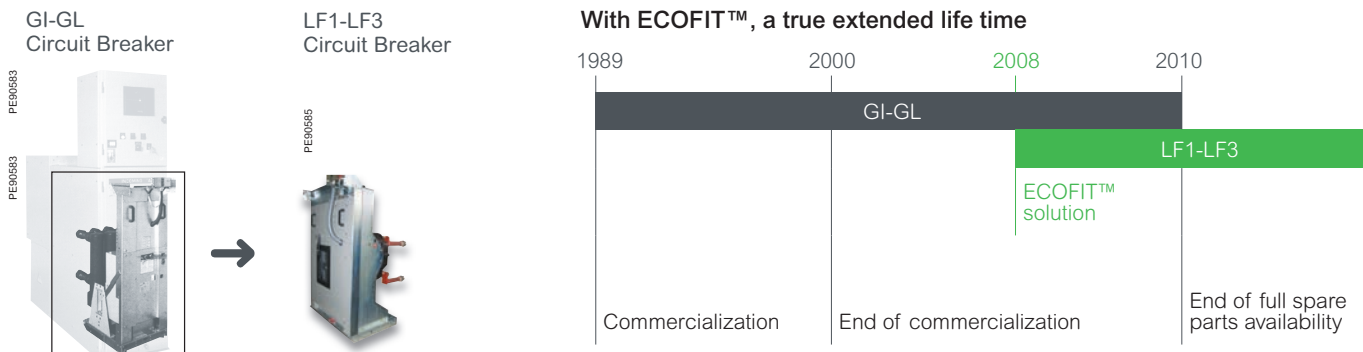
Energy management: replacement of the old protection relay (Schneider Electric or competitors)



Venus / GI - GL by LF1 - LF3

Original brand: Nuova Magrini Galileo

ECOFIT™ proposal



Main technical characteristics

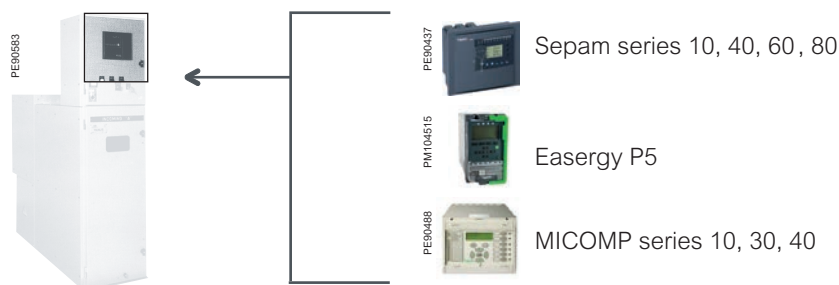
	GI		GL			
Rated current (Ir)	630-1250 A	630-1250 A	1600-3150 A	1600-3150 A	1600-3150 A	1600-3150 A
Short circuit current (Isc)	12.5-31.5 kA	12-25 kA	50 kA	20-40 kA	20-40 kA	20-31.5 kA
Rated voltage Un (50/60 Hz)	7-12 kV	17-24-36 kV	7 kV	12 kV	24 kV	36 kV

	LF1	LF3
Technology	SF6	SF6
Panel width (mm)	600	900
Rated voltage Ur (kV)	12	17.5
Surge withstand voltage Up (kV)	75	125
Nominal frequency (Hz)	50-60	50-60
Rated current Ir (A)	630-1250	1250-1600
Short circuit current Isc (kA)	31.5	50
Short circuit duration Tk (s)	3	3

	LF1	LF3
Switching sequence	O-3 min-CO-3 min-CO O-0.3 s-CO-3 min-CO O-0.3 s-CO-15 s-CO	
Closing time (ms)	< 72	< 72
Opening time (ms)	< 54	< 54
Number of switching operations	10000	10000
Service temperature (°C)	-25/+40	-25/+40

Offer extension

Energy management: replacement of the old protection relay (Schneider Electric or competitors)

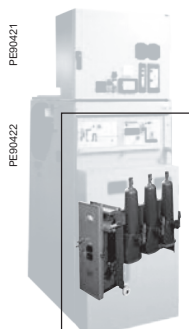


VM6 DM12 / FB4 by SF1

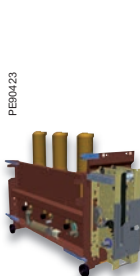
Original brand: Merlin Gerin

ECOFIT™ proposal

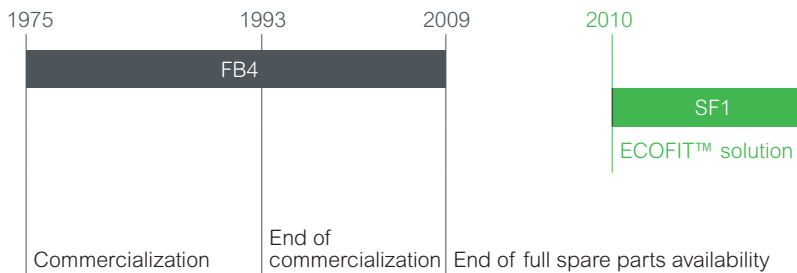
FB4
Circuit Breaker



SF1
Circuit Breaker



With ECOFIT™, a true extended life time



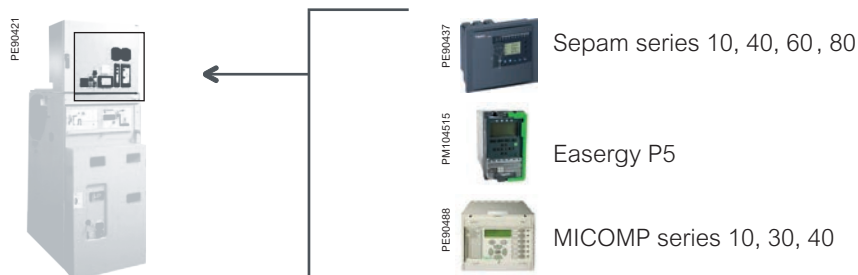
Main technical characteristics

FB4				
Rated current (Ir)	400 - 1250 A	400 - 1250 A	400 - 1250 A	400 - 1250 A
Short circuit current (Isc)	12.5 - 31.5 kA	12.5 - 25 kA	12.5 - 20 kA	12.5 - 20 kA
Rated voltage Un (50/60 Hz)	7.2 kV	12 kV	17.5 kV	24 kV

SF1		SF1	
Technology	SF6	Switching sequence	O-3 min-CO-3 min-CO O-0.3 s-CO-3 min-CO O-0.3 s-CO-15 s-CO
Rated voltage Ur (kV)	Up to 24	Closing time (ms)	< 65
Surge withstand voltage Up (kV)	Up to 125	Opening time (ms)	< 50
Nominal frequency (Hz)	50 - 60	Number of switching operations	10 000
Rated current Ir (A)	400 - 1250	Service temperature (°C)	-25/+40
Short circuit current Isc (kA)	12.5 - 25		
Short circuit duration Tk (s)	3		

Offer extension

Energy management: replacement of the old protection relay (Schneider Electric or competitors)

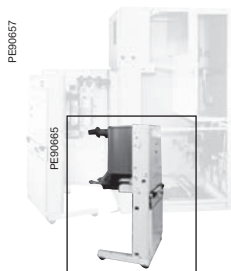


WBA/ ECA - BAL - AL by VA - VAA - Contactor

Original brand: AEG, Alstom, Areva

ECOFIT™ proposal

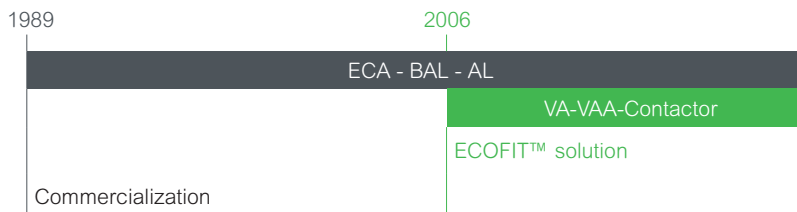
ECA - BAL - AL
Circuit Breaker



VA-VAA
Circuit Breaker



With ECOFIT™, a true extended life time



Main technical characteristics

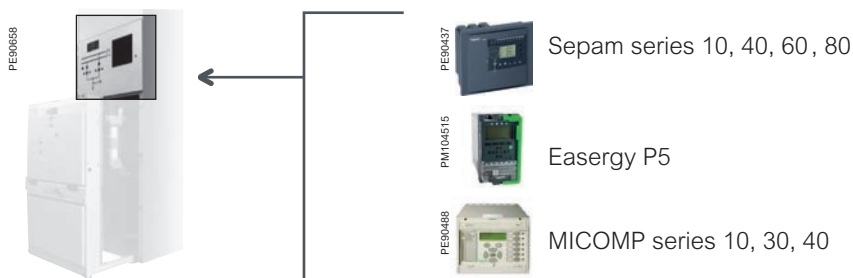
	BAL-AL	ECA
Rated current (Ir)	250 A	630 - 2500 A
Short circuit current (Isc)	20 kA	20 - 50 kA
Rated voltage Un (50/60 Hz)	3.6 - 12 kV	12 - 24 kV

	VA-VAA-Contactor
Technology	Vacuum
Rated voltage Ur (kV)	12 - 24
Surge withstand voltage Up (kV)	75-125
Nominal frequency (Hz)	50-60
Rated current Ir (A)	600-2500
Short circuit current Isc (kA)	25-31.5
Short circuit duration Tk (s)	3

	VA-VAA-Contactor
Switching sequence	0-0.3s-CO-3min-CO
Closing time (ms)	20
Opening time (ms)	20-50
Number of switching operations	10000
Service temperature (°C)	-5/+40

Offer extension

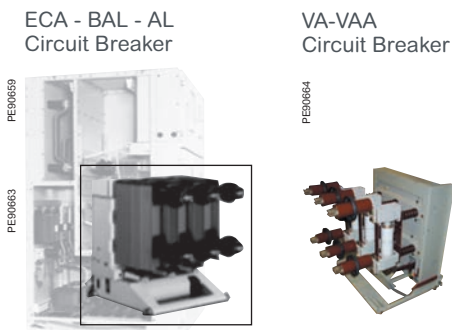
Energy management: replacement of the old protection relay (Schneider Electric or competitors)



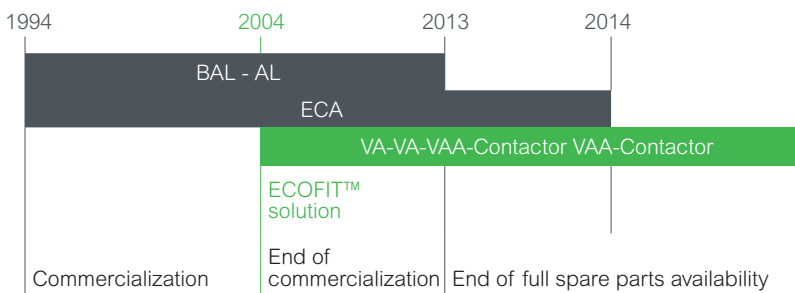
WBB / ECA - BAL - AL by VA - VAA - Contactor

Original brand: AEG, Alstom, Areva

ECOFIT™ proposal



With ECOFIT™, a true extended life time



Main technical characteristics

	BAL-AL	ECA
Rated current (Ir)	250 - 630 A	630 - 2500 A
Short circuit current (Isc)	20 kA	20 - 50 kA
Rated voltage Un (50/60 Hz)	3.6 - 12 kV	12 kV

	VA-VAA-Contactor
Technology	Vacuum
Rated voltage Ur (kV)	12
Surge withstand voltage Up (kV)	75 - 95
Nominal frequency (Hz)	50 - 60
Rated current Ir (A)	630 - 2500
Short circuit current Isc (kA)	25 - 31.5
Short circuit duration Tk (s)	3

	VA-VAA-Contactor
Switching sequence	O-0.3s-CO-3min-CO
Closing time (ms)	20
Opening time (ms)	20 - 50
Number of switching operations	10000
Service temperature (°C)	-5 / +40

Offer extension

Energy management: replacement of the old protection relay (Schneider Electric or competitors)



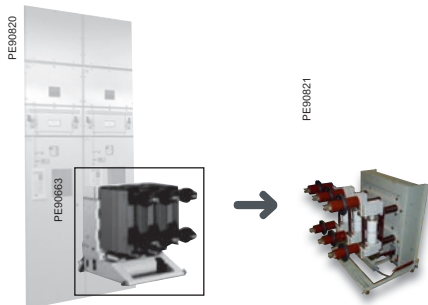
WBD/ HVX-C by VA - VAA

Original brand: AEG, Alstom, Areva, Schneider Electric

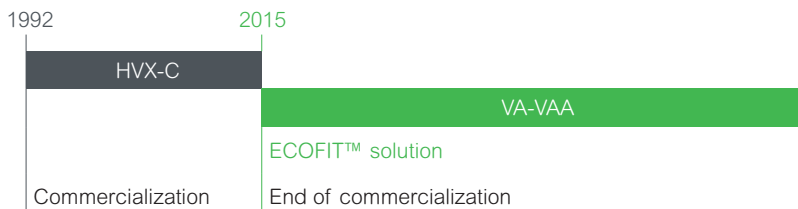
ECOFIT™ proposal

HVX-C
Circuit Breaker

VA-VAA
Circuit Breaker



With ECOFIT™, a true extended life time



Main technical characteristics

HVX-C	
Rated current (Ir)	630-2500A
Short circuit current (Isc)	25-31.5 kA
Rated voltage Un (50/60 Hz)	12 kV

Technology	VA-VAA
Rated voltage Ur (kV)	12
Surge withstand voltage Up (kV)	80
Nominal frequency (Hz)	50-60
Rated current Ir (A)	630-3150
Short circuit current Isc (kA)	25-31.5
Short circuit duration Tk (s)	3

Switching sequence	VA-VAA
Closing time (ms)	20
Opening time (ms)	20-50
Number of switching operations	10000
Service temperature (°C)	-5/+40

Offer extension

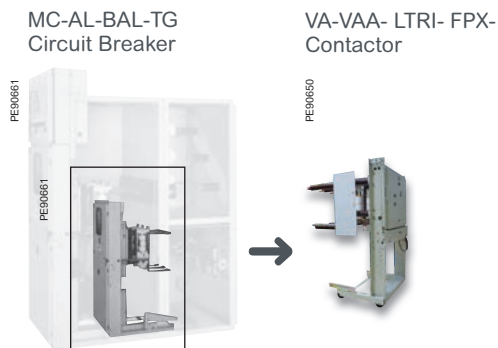
Energy management: replacement of the old protection relay (Schneider Electric or competitors)



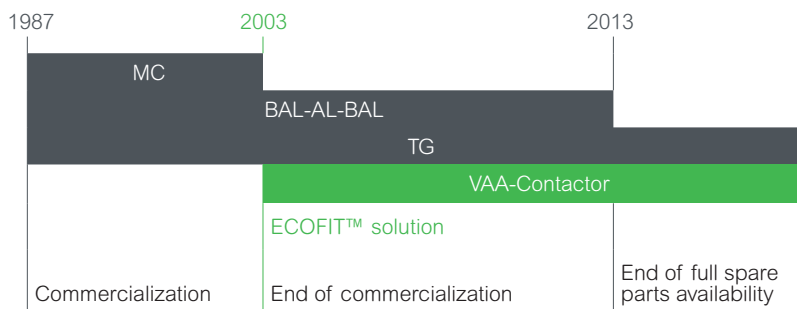
WK(A/B/C/D/E/F) / MC - AL - BAL - TG by VAA - Contactor

Original brand: AEG

ECOFIT™ proposal



With ECOFIT™, a true extended life time



Main technical characteristics

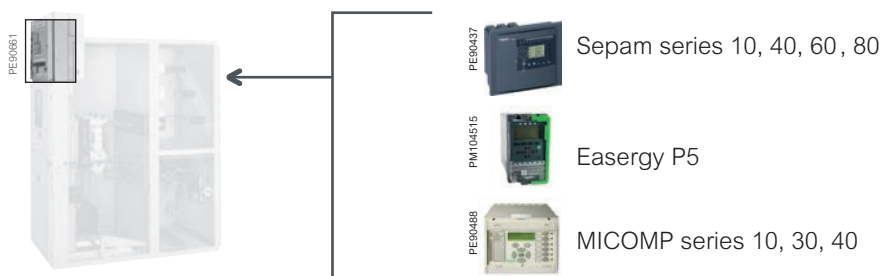
MC-BAL-AL-TG	
Rated current (Ir)	630-3150A
Short circuit current (Isc)	31.5-50kA
Rated voltage Un (50/60 Hz)	Up to 36kV

VA-VAA- LTRI- FPX- Contactor	
Technology	Vacuum
Rated voltage Ur (kV)	3.6-12-24-36
Surge withstand voltage Up (kV)	60-110
Nominal frequency (Hz)	50-60
Rated current Ir (A)	400-4000
Short circuit current Isc (kA)	10-50
Short circuit duration Tk (s)	3

VA-VAA- LTRI- FPX- Contactor	
Switching sequence	O-0.3s-CO-3min-CO
Closing time (ms)	20
Opening time (ms)	20-50
Number of switching operations	10000
Service temperature (°C)	-5/+40

Offer extension

Energy management: replacement of the old protection relay (Schneider Electric or competitors)

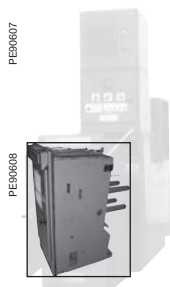


YSF6 / YSF6 by YSF6 Evolis

Original brand: Yorkshire Switchgear

ECOFIT™ proposal

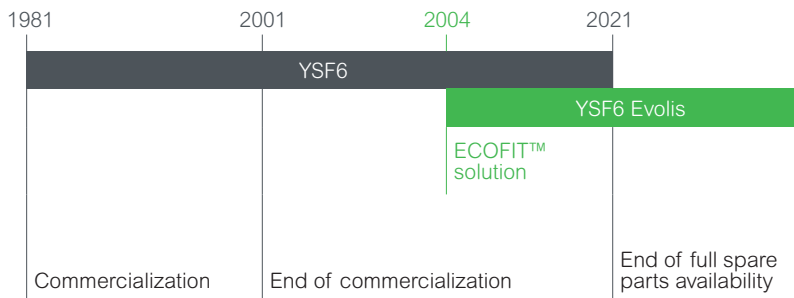
YSF6
Circuit Breaker



YSF6 Evolis
Circuit Breaker



With ECOFIT™, a true extended life time



Main technical characteristics

YSF6	
Rated current (Ir)	630 - 1250 A
Short circuit current (Isc)	Up to 25 kA
Rated voltage Un (50/60 Hz)	12 kV

YSF6 Evolis	
Technology	Vacuum
Rated voltage Ur (kV)	11
Surge withstand voltage Up (kV)	75 - (95 for Australia)
Nominal frequency (Hz)	50 - 60
Rated current Ir (A)	630 - 1250
Short circuit current Isc (kA)	25
Short circuit duration Tk (s)	3

YSF6 Evolis	
Switching sequence	O-3 min-CO-3 min-CO O-0.3 s-CO-3 min-CO O-0.3 s-CO-15 s-CO
Closing time (ms)	< 50
Opening time (ms)	< 65
Number of switching operations	10 000
Service temperature (°C)	-25 / +40

Offer extension

Energy management: replacement of the old protection relay (Schneider Electric or competitors)



Cradle to Cradle / All breaker types

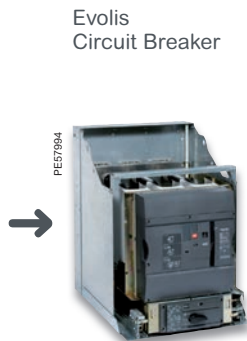
Withdrawable CB by Evolis MC cassette

Original brand: all brands

ECOFIT™ proposal

All breaker types

Compatible with
all open Air
Insulated
Switchgear legacy
and no legacy
cubicles
with minimum inside
panel width
≥ 560 mm



Evolis
Circuit Breaker

With ECOFIT™, a true extended life time

This solution consists in fitting a cradle inside an existing panel:

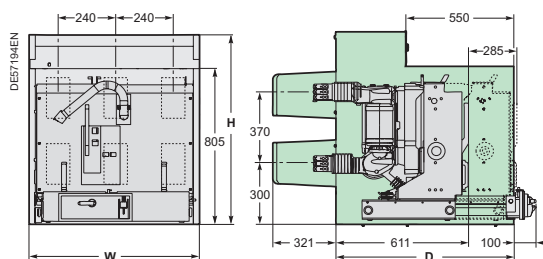
- It is particularly adapted for non Schneider Installed Base.
- ECOFIT™ solution with shutters and mechanical interlocks embedded.
- Only the fixed connections (between the cradle and existing busbar) are customized.
- No age condition of the existing equipment.
- Only the width of the existing panel has to be considered.

Main technical characteristics

All types		
Rated current (Ir)	630-1250 A	630-2500 A
Short circuit current (Isc)	Up to 31.5 kA	Up to 40 kA
Rated voltage Un (50/60 Hz)	7.2-12 kV	7.2-12-17.5 kV

	MC1	MC2	MC3
Technology	Vacuum	Vacuum	Vacuum
Rated voltage Ur (kV)	7.2-12	7.2-12-17.5	7.2-12-17.5
Surge withstand voltage Up (kV)	60-75	60-75-95	60-75-95
Nominal frequency (Hz)	50-60	50-60	50-60
Rated current Ir (A)	630-1250	630-1250	630-2500
Short circuit current Isc (kA)	Up to 31.5	Up to 40	Up to 40
Short circuit duration Tk (s)	3	3	1

	MC1	MC2	MC3
Switching sequence	O-3 min-CO-3 min-CO O-0.3 s-CO-3 min-CO O-0.3 s-CO-15 s-CO		
Closing time (ms)	<65	<65	<65
Opening time (ms)	<50	<50	<50
Number of switching operations	2.000 (for Isc= 40 kA class M1) - 10 000		
Service temperature (°C)	-25/+40	-25/+40	-25/+40



Cassette	MC1	MC2	MC3
Phase to phase (mm)	E 145	185	240
Dimensions (mm)	W 556	686	886
	H 980	980	980
	D 1223	1223	1223
Weight (kg)	222	255	326

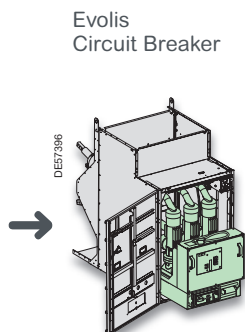
Cradle to Cradle / All breaker types Withdrawable CB by F400 cassette

Original brand: all brands

ECOFIT™ proposal

All breaker types

Compatible with
all open Air
Insulated
Switchgear legacy
and no legacy
cubicles
with minimum inside
panel width
 ≥ 1105 mm



With ECOFIT™, a true extended life time

This solution consists in fitting a cradle inside an existing panel:

- It is particularly adapted for non Schneider Installed Base.
- ECOFIT™ solution with shutters and mechanical interlocks embedded.
- Only the fixed connections (between the cradle and existing busbar) are customized.
- No age condition of the existing equipment.
- Only the width of the existing panel has to be considered.

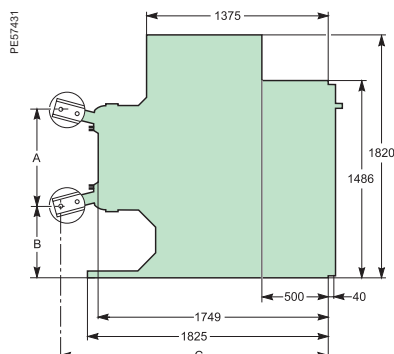
Main technical characteristics

All types		
Rated current (Ir)	1250 - 2500 A	1250 A
Short circuit current (Isc)	Up to 40 kA	Up to 31.5 kA
Rated voltage Un (50/60 Hz)	24 - 36 kV	40.5 kV

	F400-SF	F400 cassette
Technology	SF6	SF6
Rated voltage Ur (kV)	24 - 36	40.5
Surge withstand voltage Up (kV)	125 - 170	185
Nominal frequency (Hz)	50 - 60	50 - 60
Rated current Ir (A)	1250 - 2500	630 - 1250
Short circuit current Isc (kA)	25 - 40	31.5
Short circuit duration Tk (s)	3	3

	MC1	MC2
Switching sequence	O-3 min-CO-3 min-CO O-0.3 s-CO-3 min-CO O-0.3 s-CO-15 s-CO	
Closing time (ms)	< 65	< 65
Opening time (ms)	< 50	< 50
Number of switching operations	10 000	10 000
Service temperature (°C)	-25/+40	-25/+40

Cassette	1250 A	2500A - 3000 A
Dimensions (mm)		
A	748	752
B	540	533
C	2030	2030
Weight (kg)	750	850



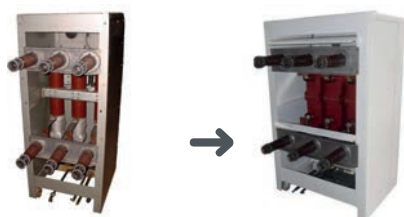
All EIB and open Air Insulated Switchgears / A - Frontal Circuit Breaker by HVX - VA

Original brand: EIB

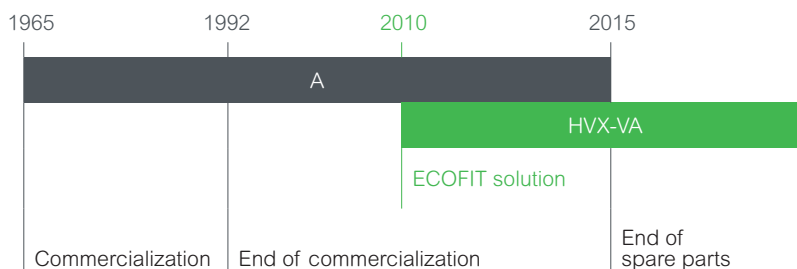
ECOFIT proposal

A
Frontal Circuit Breaker

HVX
Circuit Breaker



With ECOFIT, a true extended life time



Main technical characteristics

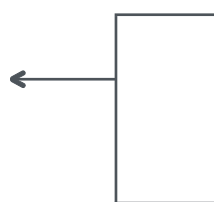
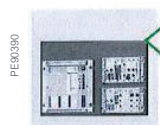
	A3-A10	A15-A20	A30-A36
Rated current (Ir)	400 – 1250 A	400 – 2500 A	600 – 2500 A
Short circuit current (Isc)	up to 40 kA	up to 31.5 kA	up to 25 kA
Rated voltage Un (50 Hz)	3 – 10 kV	15 – 20 kV	30 – 36 kV

	HVX	VA
Technology	Vacuum	Vacuum
Rated voltage Ur (kV)	12-17.5-24	36
Surge withstand voltage Up (kV)	75-95-125	170
Nominal frequency (Hz)	50-60	50-60
Rated current Ir (A)	630-2500 A	1250-2500 A
Short circuit current Isc (kA)	16-31.5	25-31.5-40
Short circuit duration Tk (s)	3	3

	HVX	VA
Switching sequence	O – 0.3 s – CO – 15 s – CO	O – 0.3 s – CO – 15 s – CO
Closing time (ms)	45-63	45-65
Opening time (ms)	35-53	31-45
Number of switching operations	10 000	10 000
Service temperature (°C)	-5/+40	-5/+40

Offer extension

Energy management: replacement of the old protection relay (Schneider Electric or competitors)



Sepam series 10, 20, 40, 60, 80



MiCOMP series 10, 20, 30, 40

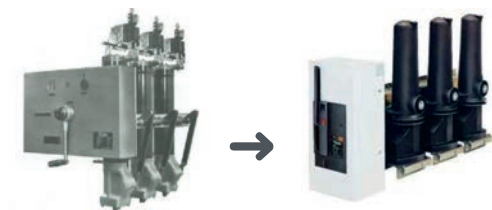
All EIB and open Air Insulated Switchgears / A - Lateral Circuit Breaker by SF1

Original brand: EIB

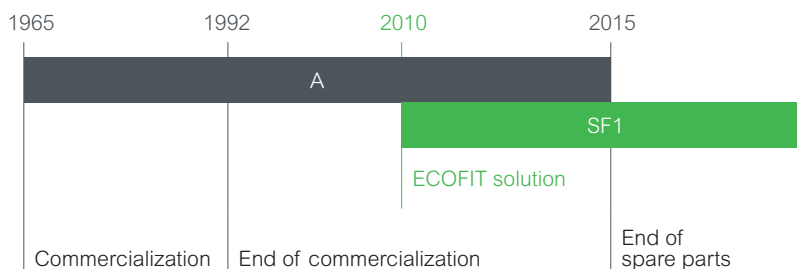
ECOFIT proposal

A
Lateral Circuit Breaker

SF1
Circuit Breaker



With ECOFIT, a true extended life time



Main technical characteristics

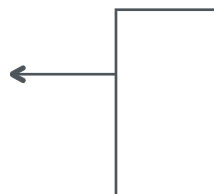
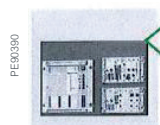
	A3-A10	A15-A20
Rated current (Ir)	400 – 1250 A	400 – 1250 A
Short circuit current (Isc)	up to 25 kA	up to 25 kA
Rated voltage Un (50 Hz)	3 – 10 kV	15 – 20 kV

	SF1
Technology	SF6
Rated voltage Ur (kV)	12-17.5-24
Surge withstand voltage Up (kV)	75-95-125
Nominal frequency (Hz)	50-60
Rated current Ir (A)	630-1250 A
Short circuit current Isc (kA)	25
Short circuit duration Tk (s)	3

	SF1
Switching sequence	O – 0.3 s – CO – 15 s – CO
Closing time (ms)	< 65
Opening time (ms)	< 50
Number of switching operations	10000
Service temperature (°C)	-5/+40

Offer extension

Energy management: replacement of the old protection relay (Schneider Electric or competitors)



Sepam series 10, 20, 40, 60, 80



MiCOMP series 10, 20, 30, 40

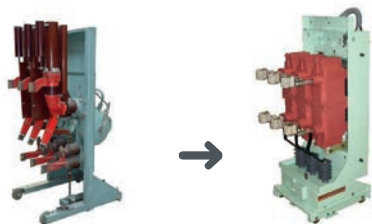
All EIB and open Air Insulated Switchgears / DB - Frontal Circuit Breaker by HVX - VA

Original brand: BBC - EIB

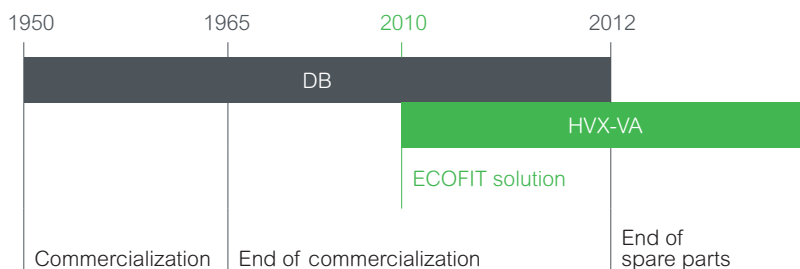
ECOFIT proposal

DB
Frontal Circuit Breaker

HVX
Circuit Breaker



With ECOFIT, a true extended life time



Main technical characteristics

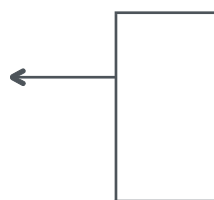
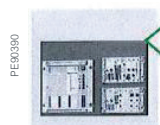
	DB10	DB20	DB3
Rated current (Ir)	1000-2500 A	1000-2500 A	1000-2500 A
Short circuit current (Isc)	up to 50 kA	up to 50 kA	up to 31,5 kA
Rated voltage Un (50 Hz)	10 kV	20 kV	30 kV

	HVX	VA
Technology	Vacuum	Vacuum
Rated voltage Ur (kV)	12-17.5-24	36
Surge withstand voltage Up (kV)	75-95-125	170
Nominal frequency (Hz)	50-60	50-60
Rated current Ir (A)	630-2500 A	1250-2500 A
Short circuit current Isc (kA)	16-31.5	25-31.5-40
Short circuit duration Tk (s)	3	3

	HVX	VA
Switching sequence	O – 0.3 s – CO – 15 s – CO	O – 0.3 s – CO – 15 s – CO
Closing time (ms)	45-63	45-65
Opening time (ms)	35-53	31-45
Number of switching operations	10 000	10 000
Service temperature (°C)	-5/+40	-5/+40

Offer extension

Energy management: replacement of the old protection relay (Schneider Electric or competitors)



Sepam series 10, 20, 40, 60, 80



MiCOMP series 10, 20, 30, 40

All EIB, AEG, Alstom and open Air Insulated Switchgears / DPI L (CRR1000) Circuit Breaker by SFset

Original brand: EIB/AEG/Alstom

ECOFIT proposal

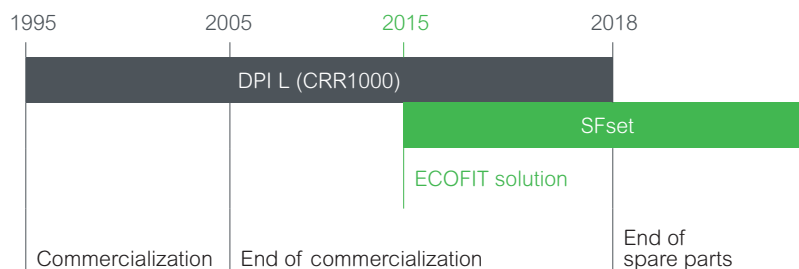
DPI L
Circuit Breaker



SFset
Circuit Breaker



With ECOFIT, a true extended life time



Main technical characteristics

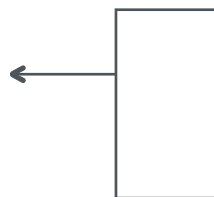
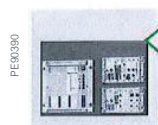
	DPI 4 L	DPI 5 L	DPI 6 L
Rated current (Ir)	800 – 1250 A	800 – 1250 A	800 – 1250 A
Short circuit current (Isc)	up to 25 kA	up to 25 kA	up to 25 kA
Rated voltage Un (50 Hz)	12 kV	17.5 kV	24 kV

	SFset
Technology	SF6
Rated voltage Ur (kV)	12-17.5-24
Surge withstand voltage Up (kV)	75-95-125
Nominal frequency (Hz)	50-60
Rated current Ir (A)	630-1250 A
Short circuit current Isc (kA)	25
Short circuit duration Tk (s)	3

	SFset
Switching sequence	O – 0.3 s – CO – 15 s – CO
Closing time (ms)	< 65
Opening time (ms)	< 50
Number of switching operations	10000
Service temperature (°C)	-5/+40

Offer extension

Energy management: replacement of the old protection relay (Schneider Electric or competitors)



Sepam series 10, 20, 40, 60, 80



MiCOMP series 10, 20, 30, 40

All EIB, AEG, Alstom and open Air Insulated Switchgears / VB L (CRR1000) Circuit Breaker by SF1

Original brand: EIB/AEG/Alstom

ECOFIT proposal

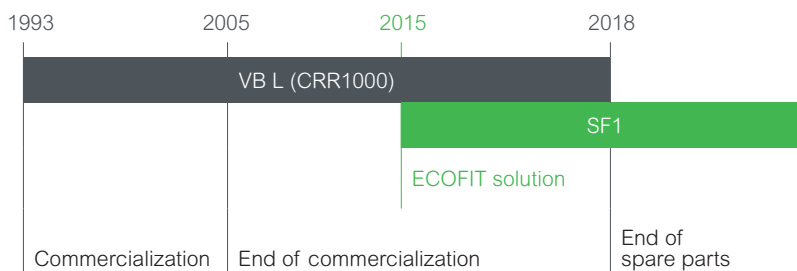
VB L
Circuit Breaker



SF1
Circuit Breaker



With ECOFIT, a true extended life time



Main technical characteristics

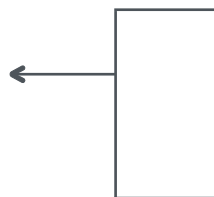
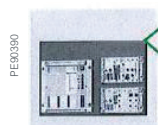
	VB4	VB5	VB6
Rated current (Ir)	800 – 1250 A	800 – 1250 A	800 – 1250 A
Short circuit current (Isc)	up to 25 kA	up to 25 kA	up to 25 kA
Rated voltage Un (50 Hz)	12 kV	17.5 kV	17.5 kV

	SF1
Technology	SF6
Rated voltage Ur (kV)	12-17.5-24
Surge withstand voltage Up (kV)	75-95-125
Nominal frequency (Hz)	50-60
Rated current Ir (A)	630-1250 A
Short circuit current Isc (kA)	25
Short circuit duration Tk (s)	3

	SF1
Switching sequence	O – 0.3 s – CO – 15 s – CO
Closing time (ms)	< 65
Opening time (ms)	< 50
Number of switching operations	10000
Service temperature (°C)	-5/+40

Offer extension

Energy management: replacement of the old protection relay (Schneider Electric or competitors)



Sepam series 10, 20, 40, 60, 80



MiCOMP series 10, 20, 30, 40

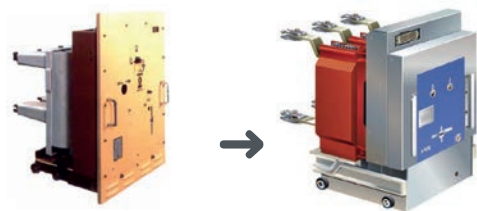
All EIB and open Air Insulated Switchgears / VB-Frontal Circuit Breaker by HVX

Original brand: EIB/AEG/Alstom/AREVA

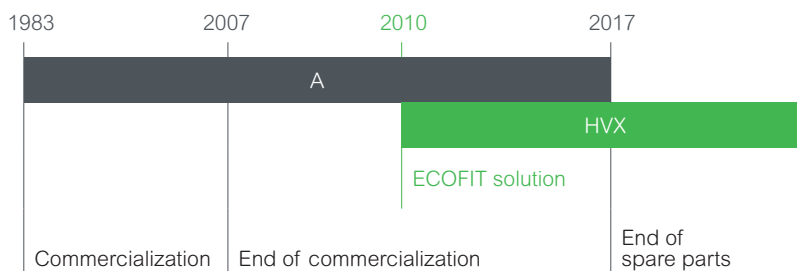
ECOFIT proposal

A
Frontal Circuit Breaker

HVX
Circuit Breaker



With ECOFIT, a true extended life time



Main technical characteristics

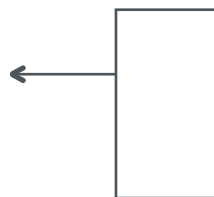
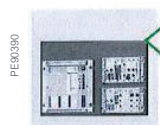
	VB4	VB5	VB6
Rated current (Ir)	800 – 3150 A	800 – 3150 A	800 – 2500 A
Short circuit current (Isc)	up to 40 kA	up to 40 kA	up to 25 kA
Rated voltage Un (50 Hz)	12 kV	17.5 kV	24 kV

	HVX
Technology	Vacuum
Rated voltage Ur (kV)	12-17.5-24
Surge withstand voltage Up (kV)	75-95-125
Nominal frequency (Hz)	50-60
Rated current Ir (A)	630-2500 A
Short circuit current Isc (kA)	16-31.5
Short circuit duration Tk (s)	3

	HVX
Switching sequence	O – 0.3 s – CO – 15 s – CO
Closing time (ms)	45-63
Opening time (ms)	35-53
Number of switching operations	10000
Service temperature (°C)	-5/+40

Offer extension

Energy management: replacement of the old protection relay (Schneider Electric or competitors)



Sepam series 10, 20, 40, 60, 80



MiCOMP series 10, 20, 30, 40

Circuit Breaker & Panel Order Form

First Name	Last Name
Country	Phone
Email ID	Quantity

Serial no. of existing CB	
Brand	Type
Range	Type of new CB
Rated Current (A)	Rated Voltage (kV)
Short circuit current (kA/sec)	Isolating technology for new CB
Frequency	Standard
Opening coil (YO1)	Opening coil (YO2)
Under voltage coil (YM)	Closing coil (YF)

Phase to phase distance for MCset	Diagram Number(optional)
JE Number	Year of Installation
Pressure switch for SF2	Moisture Heater resistor
Mechanical Interlocking	
Comments/Message	

To request for a quote, please use the ECOFIT directory web site: <http://ecofit-directory.schneider-electric.com/>

Circuit Breaker & Panel Order Form

Please fill the quotation request form on the left, using data hereafter to enable quotation from ECOFIT centers.

Complete datas required to quote all other retrofit solutions are available on the web at the following address:

<http://ecofit-directory.schneider-electric.com/>

Type of new CB	Rated Current (A)	Rated Voltage (kV)	KA Short circuit current (kA/sec)	Isolating technology for new CB	Frequency	Standard	Opening coil (YO1)	Opening Coil (YO2)	Under voltage coil (YM)	Closing Coil (YF)	CB Motor	Mitop	Operation sequence
SF1	400	7.2	12.5 1	Vacuum	50 Hz	IEC	24 (DC)	24 (DC)	24 (DC)	24 (DC)	24...32V DC	With contact	0-3mn-CO-3mn-CO
SF2	630	12	25 3	SF6	60	ANSI	30 (DC)	30 (DC)	30 (DC)	30 (DC)	48...60V DC/AC	Without contact	0-0.3s-CO-3mn-CO
LF1	1250	24	31.5				48 (DC)	48 (DC)	48 (DC)	48 (DC)	110...127V DC/AC		0-0.3s-CO-15s-CO
LF2	2500	36	40				60 (DC)	60 (DC)	60 (DC)	60 (DC)	220...250V DC/AC		
LF3	3150		50				110 (DC)	110 (DC)	110 (DC)	110 (DC)			
DV2							125 (DC)	125 (DC)	125 (DC)	125 (DC)			
							220 (DC)	220 (DC)	220 (DC)	220 (DC)			
							48 (AC)	48 (AC)	48 (AC)	48 (AC)			
							110 (AC) (50Hz)	110 (AC) (50Hz)	110 (AC) (50Hz)	110 (AC) (50Hz)			
							120 (AC) (50Hz)	120 (AC) (50Hz)	120 (AC) (50Hz)	120 (AC) (50Hz)			
							220 (AC) (50Hz)	220 (AC) (50Hz)	220 (AC) (50Hz)	220 (AC) (50Hz)			
							240 (AC) (50Hz)	240 (AC) (50Hz)	240 (AC) (50Hz)	240 (AC) (50Hz)			



Medium Voltage
Distribution
manufactured
as original
or customised

Contents

MV CB or contactor manufactured as original

Alliance	A-58
Cemafluor C26.2	A-59
DNF4 MI&FI	A-60
DNF5/DNF5-2B	A-61
DNF6	A-62
DNF7	A-63
Fluair F100C	A-64
Fluokit M24	A-65
Fluokit M24+	A-66
Fluokit M36	A-67
HMC400 - HMC410	A-68
HMC1072	A-69
HMC1172	A-70
HWX	A-71
MX 51 & MX 81	A-72
Normaclad PX12-24	A-73
PIX SF6	A-74
PNX 36	A-75
R	A-76
VISAX	A-77
VMX	A-78
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WBD	A-81
WK	A-82

MV panel manufactured as original

AHA	A-83
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F100/200	A-85
Normaclad PX 12-24	A-86
PIX	A-87
PNX36	A-88
R	A-89
VISAX	A-90
VMX	A-91
WBA	A-92
WBB	A-93
WBD	A-94
WK	A-95

MV panel customised solution

Modulec CT panel	A-96
Modulec9 panel	A-97

Order forms

Circuit Breaker & Panel Order Form	A-98
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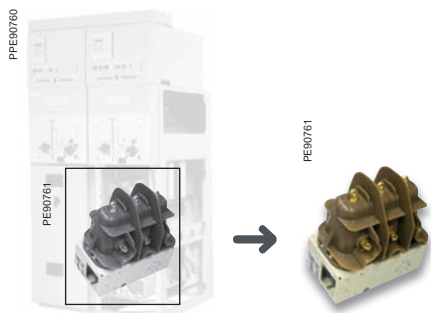
ALLIANCE / FP - GFA by FP - GFA

Original brand: Alstom

ECOFIT™ proposal

FP-GFA
Circuit Breaker

FP-GFA
Circuit Breaker



With ECOFIT™, a true extended life time



Main technical characteristics

	FP	GFA
Rated current (Ir)	400-3150A	400A
Short circuit current (Isc)	16-50kA	10kA
Rated voltage Un (50/60 Hz)	60-75 kV	60kV

	FP	GFA
Technology	SF6	SF6
Rated voltage Ur (kV)	7.2 - 12	7.2
Surge withstand voltage Up (kV)	60-75	60
Nominal frequency (Hz)	50-60	50-60
Rated current Ir (A)	400-3150	400
Short circuit current Isc (kA)	16-50	10
Short circuit duration Tk (s)	1	1

	FP	GFA
Switching sequence	O-3min-CO-3min-CO C/O CO-15s-CO O-0.3s-CO-3min-CO	
Closing time (ms)	50	45-175
Opening time (ms)	70	90-120
Number of switching operations	10000 (mechanical)	300000 (mechanical)
Service temperature (°C)	-5/+40	-5/+40

Offer extension

Energy management: replacement of the old protection relay (Schneider Electric or competitors)

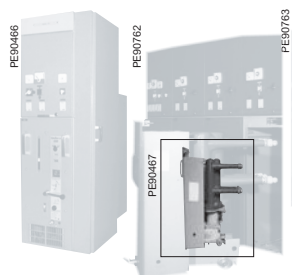


Cemafluor-C26.2 / FPR by FPR

Original brand: CEM

ECOFIT™ proposal

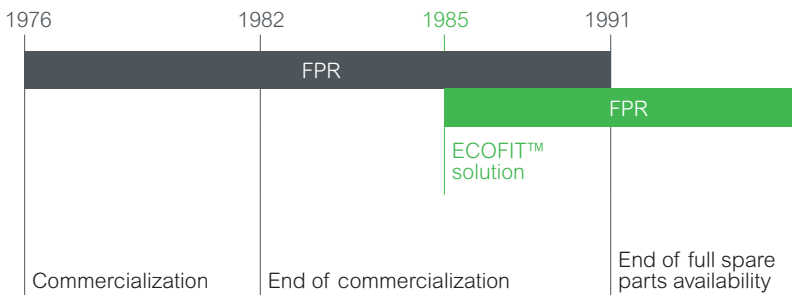
FPR
Circuit Breaker



FPR
Circuit Breaker



With ECOFIT™, a true extended life time



Main technical characteristics

	FPR
Rated current (Ir)	400 - 1250 A
Short circuit current (Isc)	12.5 kA
Rated voltage Un (50/60 Hz)	24 kV

	FPR
Technology	SF6
Rated voltage Ur (kV)	24
Surge withstand voltage Up (kV)	125
Nominal frequency (Hz)	50 - 60
Rated current Ir (A)	400 - 1250
Short circuit current Isc (kA)	12.5
Short circuit duration Tk (s)	1

	FPR
Switching sequence	O-3 min-CO-3 min-CO O-0.3 s-CO-15 s-CO
Closing time (ms)	50
Opening time (ms)	80
Number of switching operations	10000
Service temperature (°C)	-25/+40

Offer extension

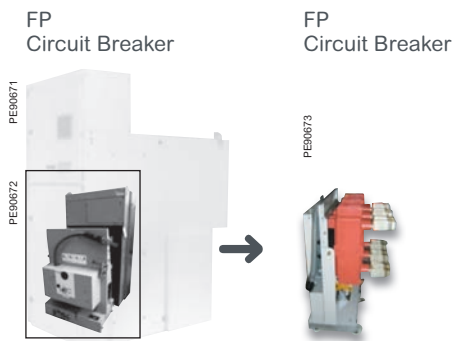
Energy management: replacement of the old protection relay (Schneider Electric or competitors)



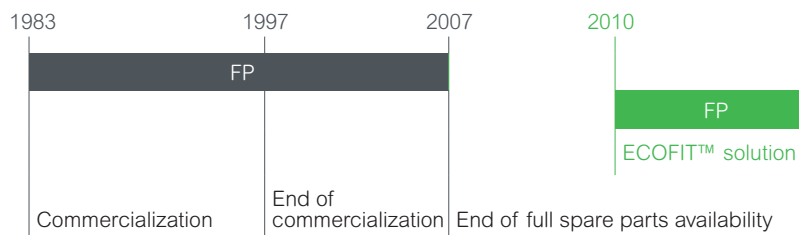
DNF4 MI & FI / FP by FP

Original brand: Alstom

ECOFIT™ proposal



With ECOFIT™, a true extended life time



Main technical characteristics

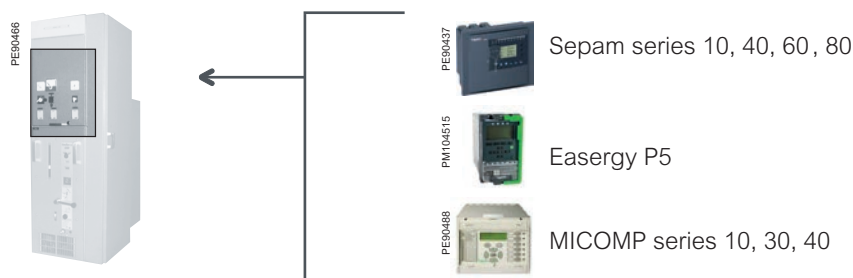
FP	
Rated current (Ir)	400 - 2000 A
Short circuit current (Isc)	40 kA
Rated voltage Un (50/60 Hz)	12 kV

	FP
Technology	SF6
Rated voltage Ur (kV)	12
Surge withstand voltage Up (kV)	75
Nominal frequency (Hz)	50 - 60
Rated current Ir (A)	400 - 3150
Short circuit current Isc (kA)	16 - 50
Short circuit duration Tk (s)	3

	FP
Switching sequence	O-3 min-CO-3 min-CO CO-15s-CO O-0.3s-CO-3 min-CO
Closing time (ms)	50
Opening time (ms)	70
Number of switching operations	10 000
Service temperature (°C)	-5/+40

Offer extension

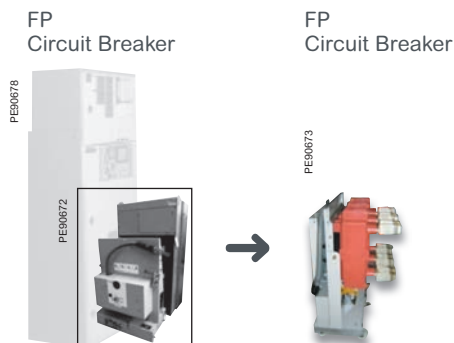
Energy management: replacement of the old protection relay (Schneider Electric or competitors)



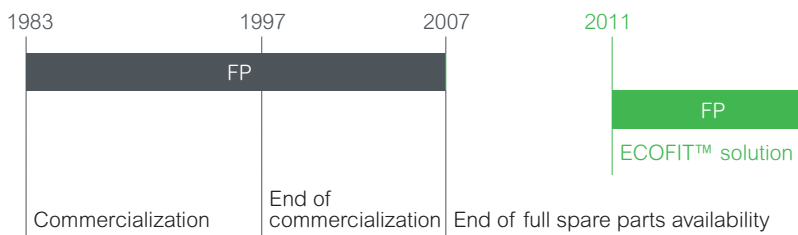
DNF5 - DNF5-2B / FP by FP

Original brand: Alsthom

ECOFIT™ proposal



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Main technical characteristics

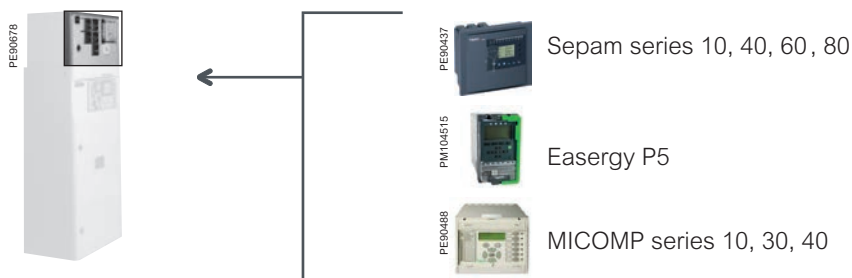
FP	
Rated current (Ir)	630-2000 A
Short circuit current (Isc)	40 kA
Rated voltage Un (50/60 Hz)	17.5 kV

	FP
Technology	SF6
Rated voltage Ur (kV)	17.5
Surge withstand voltage Up (kV)	75
Nominal frequency (Hz)	50-60
Rated current Ir (A)	400-3150
Short circuit current Isc (kA)	16-40
Short circuit duration Tk (s)	3

	FP
Switching sequence	O-3 min-CO-3 min-CO CO-15s-CO O-0.3 s-CO-3 min-CO
Closing time (ms)	50
Opening time (ms)	70
Number of switching operations	10000
Service temperature (°C)	-5/+40

Offer extension

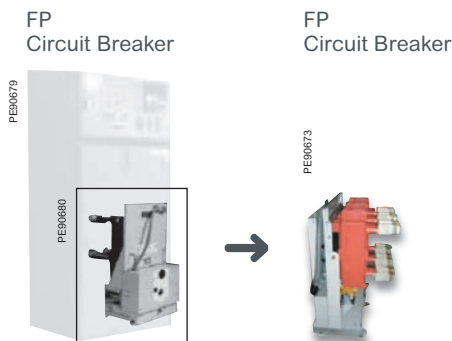
Energy management: replacement of the old protection relay (Schneider Electric or competitors)



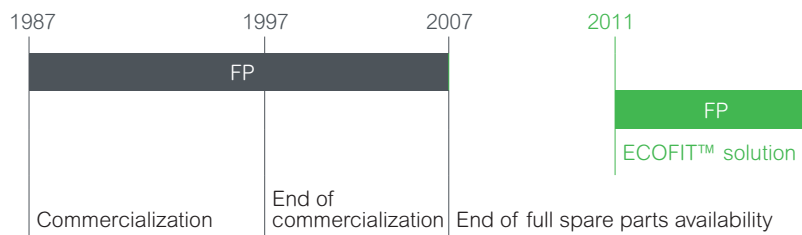
DNF6 / FP by FP

Original brand: Alsthom

ECOFIT™ proposal



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Main technical characteristics

FP	
Rated current (Ir)	400-2000 A
Short circuit current (Isc)	31.5 kA
Rated voltage Un (50/60 Hz)	24 kV

	FP
Technology	SF6
Rated voltage Ur (kV)	24
Surge withstand voltage Up (kV)	75
Nominal frequency (Hz)	50-60
Rated current Ir (A)	400-3150
Short circuit current Isc (kA)	16-40
Short circuit duration Tk (s)	3

	FP
Switching sequence	O-3 min-CO-3 min-CO CO-15s-CO O-0.3 s-CO-3 min-CO
Closing time (ms)	50
Opening time (ms)	70
Number of switching operations	10000
Service temperature (°C)	-5/+40

Offer extension

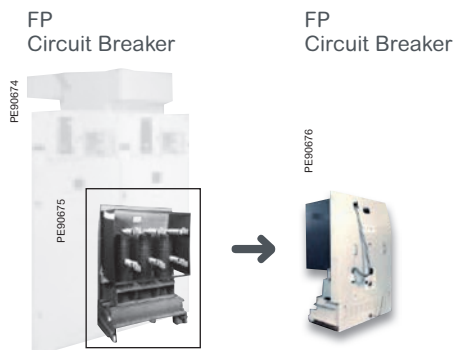
Energy management: replacement of the old protection relay (Schneider Electric or competitors)



DNF7 / FP by FP

Original brand: Alstom

ECOFIT™ proposal



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Main technical characteristics

FP	
Rated current (Ir)	400-2000 A
Short circuit current (Isc)	31.5 kA
Rated voltage Un (50/60 Hz)	36 kV

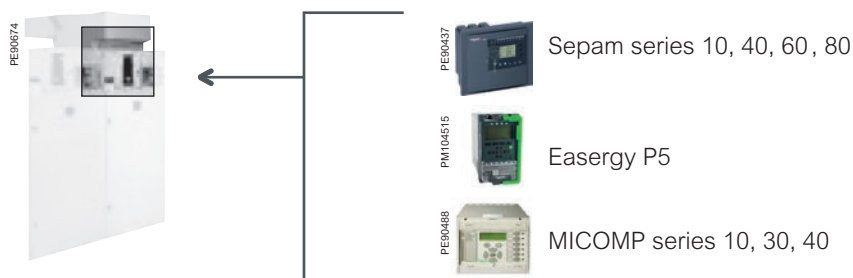
	FP
Technology	SF6
Rated voltage Ur (kV)	36

Surge withstand voltage Up (kV)	170
Nominal frequency (Hz)	50-60
Rated current Ir (A)	Up to 2500
Short circuit current Isc (kA)	31.5
Short circuit duration Tk (s)	3

	FP
Switching sequence	O-0.3 s-CO-3 min-CO O-3 min-CO-3 min-CO O-0.3 s-CO-15s-CO CO-15 s-CO
Closing time (ms)	50
Opening time (ms)	70
Number of switching operations	5.000
Service temperature (°C)	-5/+40

Offer extension

Energy management: replacement of the old protection relay (Schneider Electric or competitors)

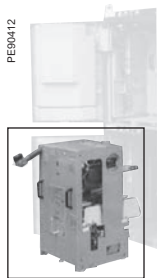


Fluair F100C / R400 - R400D by R400 - R400D

Original brand: Merlin Gerin

ECOFIT™ proposal

R400 - R400D
Circuit Breaker



R400 - R400D
Circuit Breaker



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1980

1998

R400 - R400D

R400 - R400D

ECOFIT™ solution

Commercialization

End of full spare parts availability

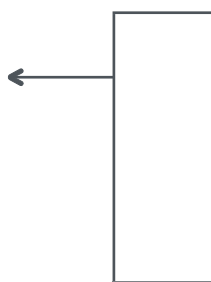
Main technical characteristics

	R400	R400D
Technology	SF6	SF6
Rated voltage Ur (kV)	7.2	7.2
Surge withstand voltage Up (kV)	60	60
Nominal frequency (Hz)	50-60	50-60
Rated current Ir (A)	80-250	80-250
Short circuit current Isc (kA)	50 (with fuses)	50 (with fuses)
Short circuit duration Tk (s)	3	3

	R400	R400D
Closing time (ms)	75-155	75-155
Opening time (ms)	20-50	20-50
Number of switching operations	300 000	100 000
Service temperature (°C)	-25/+40	-25/+40

Offer extension

Energy management: replacement of the old protection relay (Schneider Electric or competitors)



Sepam series 10, 40, 60, 80



Easergy P5

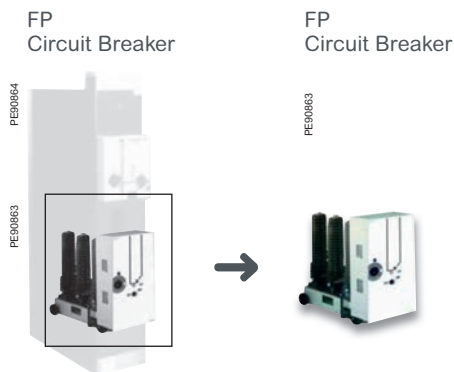


MICOMP series 10, 30, 40

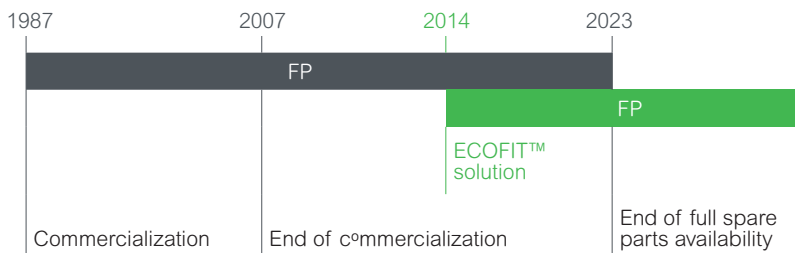
Fluokit M24 / FP by FP

Original brand: GEC-Alsthom, Alstom, Areva

ECOFIT™ proposal



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Main technical characteristics

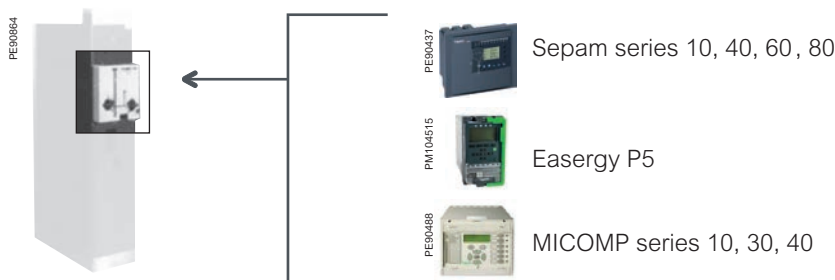
FP		
Rated current (Ir)	400-3150A	
Short circuit current (Isc)	16-20-25-31.5-40kA	
Rated voltage Un (50/60 Hz)	12kV	

	FP	
Technology	SF6	SF6
Rated voltage Ur (kV)	12	24
Surge withstand voltage Up (kV)	75	125
Nominal frequency (Hz)	50-60	50-60
Rated current Ir (A)	400-3150	400-3150
Short circuit current Isc (kA)	16-20-25-31.5-40	16-20-25-31.5-40
Short circuit duration Tk (s)	3	3

	FP
Switching sequence	O-3mn-CO-3mn-CO CO-15s-CO O-0.3s-CO-3mn-CO
Closing time (ms)	70
Opening time (ms)	50
Number of switching operations	10000
Service temperature (°C)	-5/+40

Offer extension

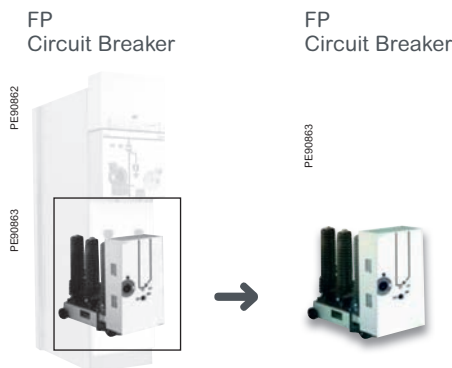
Energy management: replacement of the old protection relay (Schneider Electric or competitors)



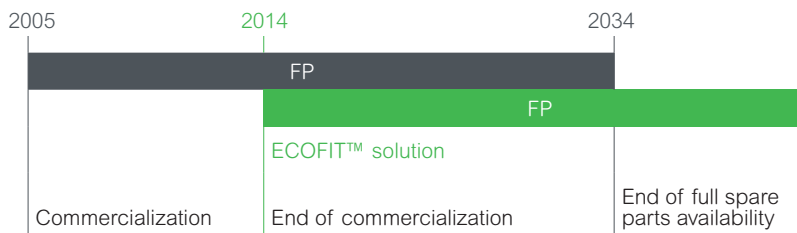
Fluokit M24+ / FP by FP

Original brand: Delle Alsthom

ECOFIT™ proposal



With ECOFIT™, a true extended life time



Main technical characteristics

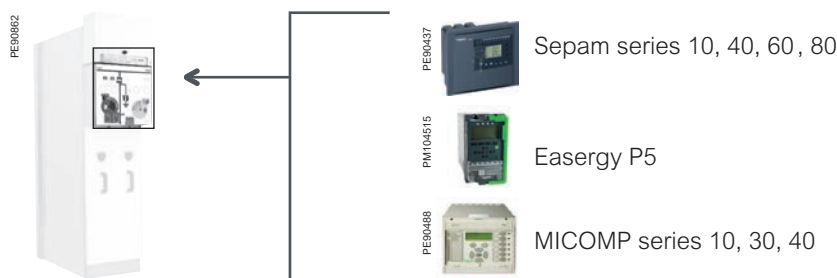
FP		
Rated current (Ir)	400-3150A	
Short circuit current (Isc)	16-20-25-31.5-40kA	
Rated voltage Un (50/60 Hz)	12kV	

	FP	
Technology	SF6	SF6
Rated voltage Ur (kV)	12	24
Surge withstand voltage Up (kV)	75	125
Nominal frequency (Hz)	50-60	50-60
Rated current Ir (A)	400-3150	400-3150
Short circuit current Isc (kA)	16-20-25-31.5-40	16-20-25-31.5-40
Short circuit duration Tk (s)	3	3

	FP
Switching sequence	O-3mn-CO-3mn-CO CO-15s-CO O-0.3s-CO-3mn-CO
Closing time (ms)	70
Opening time (ms)	50
Number of switching operations	10000
Service temperature (°C)	-25/+40

Offer extension

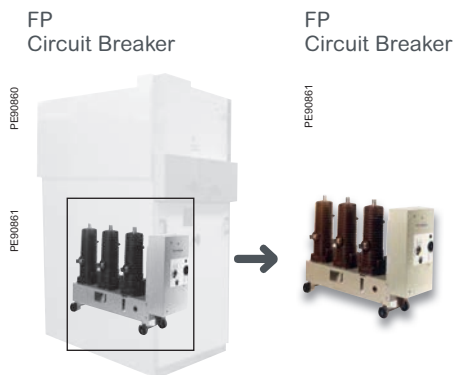
Energy management: replacement of the old protection relay (Schneider Electric or competitors)



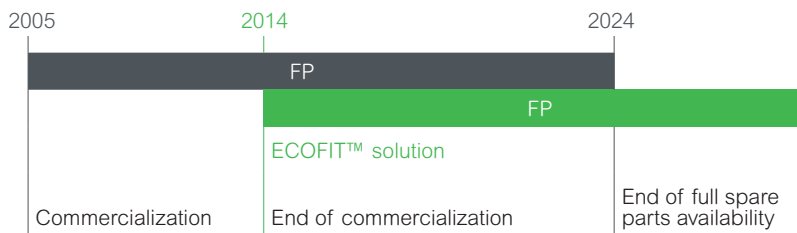
Fluokit M36 / FP by FP

Original brand: GEC-Alsthom, Alstom, Areva

ECOFIT™ proposal



With ECOFIT™, a true extended life time



Main technical characteristics

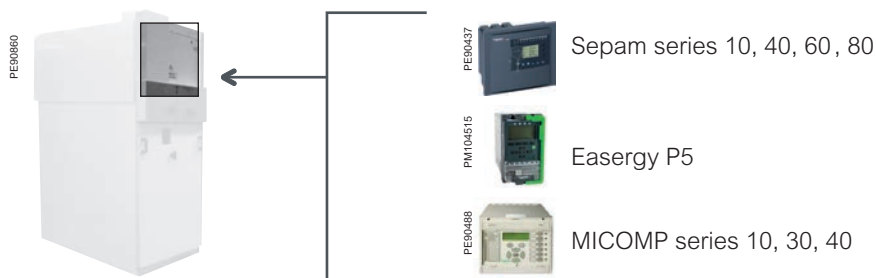
FP	
Rated current (Ir)	400-3150A
Short circuit current (Isc)	16-20-25-31.5kA
Rated voltage Un (50/60 Hz)	36kV

	FP
Technology	SF6
Rated voltage Ur (kV)	36
Surge withstand voltage Up (kV)	170
Nominal frequency (Hz)	50-60
Rated current Ir (A)	400-3150
Short circuit current Isc (kA)	16-20-25-31.5
Short circuit duration Tk (s)	3

	FP
Switching sequence	O-3mn-CO-3mn-CO CO-15s-CO O-0.3s-CO-3mn-CO
Closing time (ms)	70
Opening time (ms)	50
Number of switching operations	10000
Service temperature (°C)	-5/+40

Offer extension

Energy management: replacement of the old protection relay (Schneider Electric or competitors)



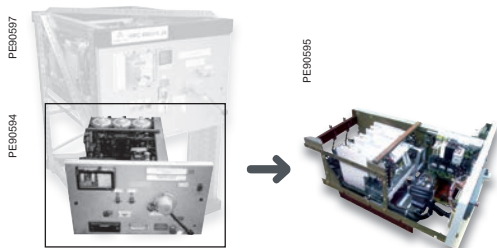
HMC400 - HMC410 / HMC400 - HMC410 by HMC400 - HMC410

Original brand: GEC, GEC Alsthom, Alstom, Areva

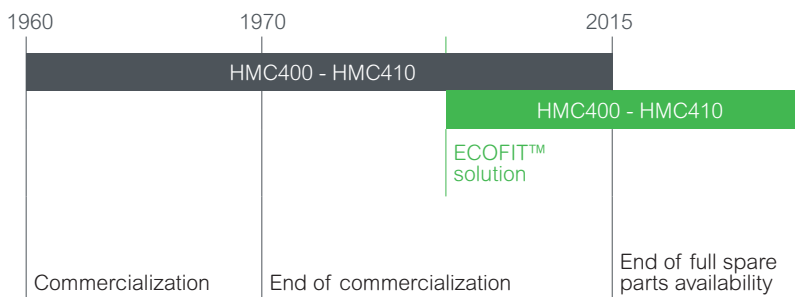
ECOFIT™ proposal

HMC400 - HMC410
Circuit Breaker

HMC400 - HMC410
Circuit Breaker



With ECOFIT™, a true extended life time



Main technical characteristics

HMC400 - HMC410	
Rated current (Ir)	400 A
Short circuit current (Isc)	43.8 kA
Rated voltage Un (50/60 Hz)	3.3 kV
	6.6 kV

	HMC400 - HMC410
Technology	Vacuum
Rated voltage Ur (kV)	Up to 6.6
Surge withstand voltage Up (kV)	Up to 75
Nominal frequency (Hz)	50 - 60
Rated current Ir (A)	400
Short circuit current Isc (kA)	26.3 - 43.8
Short circuit duration Tk (s)	3

	HMC400 - HMC410
Switching sequence	O-3 min-CO-3 min-CO O-0.3 s-CO-3 min-CO O-0.3 s-CO-15 s-CO
Closing time (ms)	< 52
Opening time (ms)	< 61
Number of switching operations	10 000
Service temperature (°C)	-25 / +40

Refurbishment



In-house refurbishment, including vacuum contactors and control scheme, using Gemstart unit, on site maintenance.

HMC1072 /HMC1072 by HMC1072

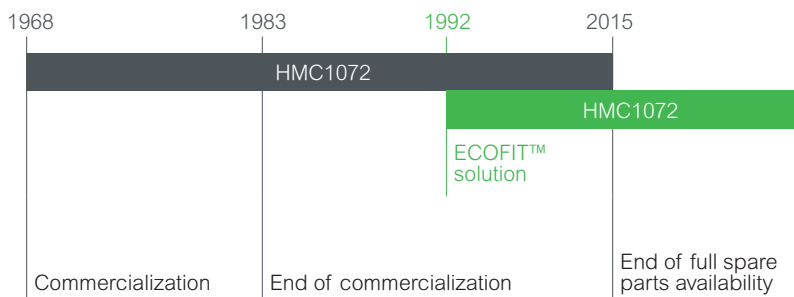
Original brand: GEC, GEC Alsthom, Alstom, Areva

ECOFIT™ proposal

HMC1072 Circuit Breaker



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Main technical characteristics

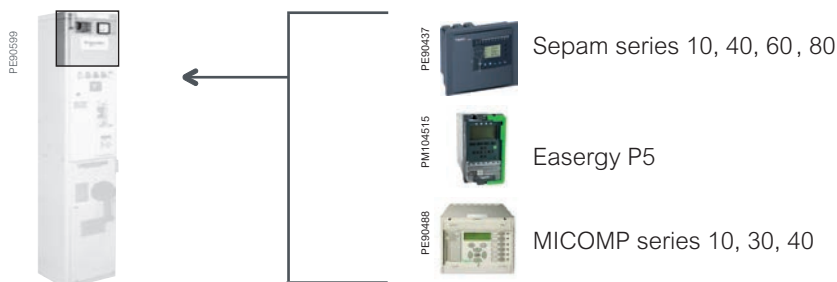
HMC1072	
Rated current (Ir)	400 A
Short circuit current (Isc)	63 kA rms/1s - 50 kA rms/3s
Rated voltage Un (50/60 Hz)	7.2 kV

HMC1072	
Technology	Vacuum
Rated voltage Ur (kV)	7.2
Surge withstand voltage Up (kV)	Up to 75
Nominal frequency (Hz)	50-60
Rated current Ir (A)	400
Short circuit current Isc (kA)	50-63
Short circuit duration Tk (s)	3 to 1

HMC1072	
Switching sequence	O-3 min-CO-3 min-CO O-0.3 s-CO-3 min-CO O-0.3 s-CO-15 s-CO
Closing time (ms)	< 52
Opening time (ms)	< 61
Number of switching operations	10000
Service temperature (°C)	-25/+40

Offer extension

Energy management: replacement of the old protection relay (Schneider Electric or competitors)

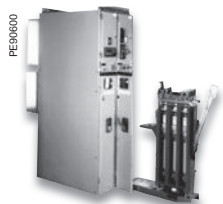


HMC1172 /HMC1172 by HMC1172

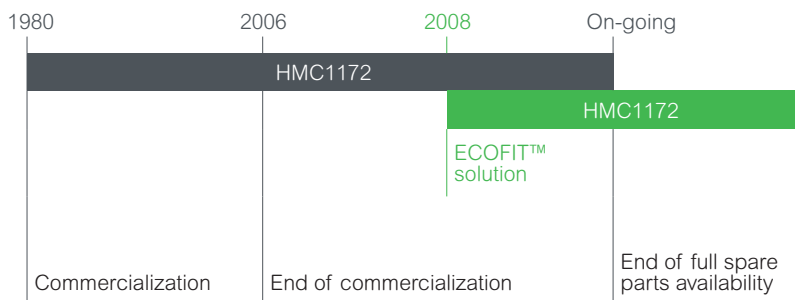
Original brand: GEC, GEC Alsthom, Alstom, Areva

ECOFIT™ proposal

HMC1172 Circuit Breaker



With ECOFIT™, a true extended life time



Main technical characteristics

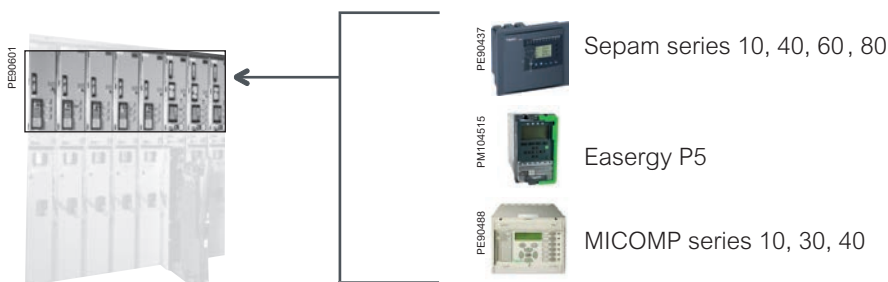
HMC1172	
Rated current (Ir)	400 A
Short circuit current (Isc)	63 kA rms/1s - 50 kA rms/3s
Rated voltage Un (50/60 Hz)	7.2 kV

	HMC 1172	Contactor
Technology	Vacuum	Vacuum
Rated voltage Ur (kV)	7.2	7.2
Surge withstand voltage Up (kV)	60	63
Nominal frequency (Hz)	50-60	50-60
Rated current Ir (A)	1000-2000	400
Short circuit current Isc (kA)	25-31.5	9
Short circuit duration Tk (s)	3	1

	HMC 1172	Contactor
Switching sequence	O-3 min-CO-3 min-CO O-0.3 s-CO-3 min-CO O-0.3 s-CO-15 s-CO	O/C
Closing time (ms)	90-120	90-120
Opening time (ms)	<61	<61
Number of switching operations	10000	1.000.000
Service temperature (°C)	-25/+40	-25/+40

Offer extension

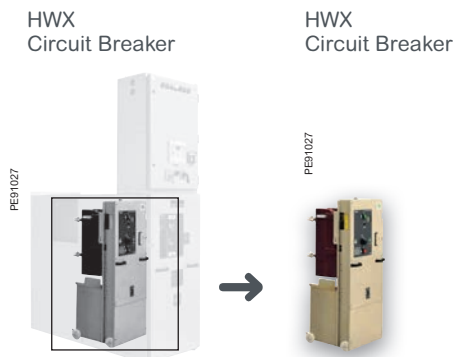
Energy management: replacement of the old protection relay (Schneider Electric or competitors)



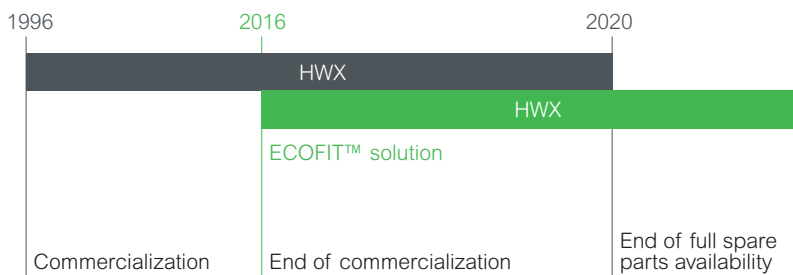
HWX / HWX by HWX

Original brand: Schneider Electric, GEG, GEC Alsthom, Alstom, Areva

ECOFIT™ proposal



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Main technical characteristics

HWX	
Rated current (Ir)	3150A
Short circuit current (Isc)	50 kA
Rated voltage Un (50/60 Hz)	12 kV

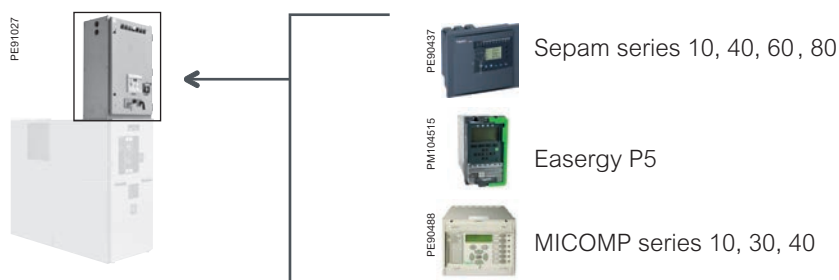
	HWX
Technology	Vacuum
Rated voltage Ur (kV)	12
Surge withstand voltage Up (kV)	75
Nominal frequency (Hz)	50
Rated current Ir (A)	3150

	HWX
Switching sequence	O-0.3s-CO-3min-CO
Closing time (ms)	≤ 60
Opening time (ms)	≤ 60
Number of switching operations	
Service temperature (°C)	-5/+40

	HWX
Short circuit current Isc (kA)	50
Short circuit duration Tk (s)	3

Offer extension

Energy management: replacement of the old protection relay (Schneider Electric or competitors)



MX51 & MX81 by MX51 & MX81

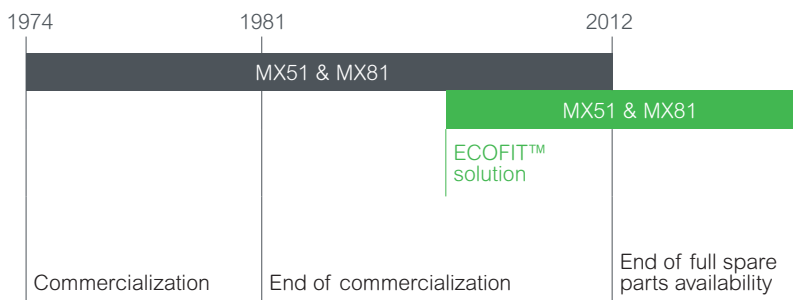
Original brand: GEC Alstom

ECOFIT™ proposal

MX51 & MX81 Circuit Breaker



With ECOFIT™, a true extended life time



Main technical characteristics

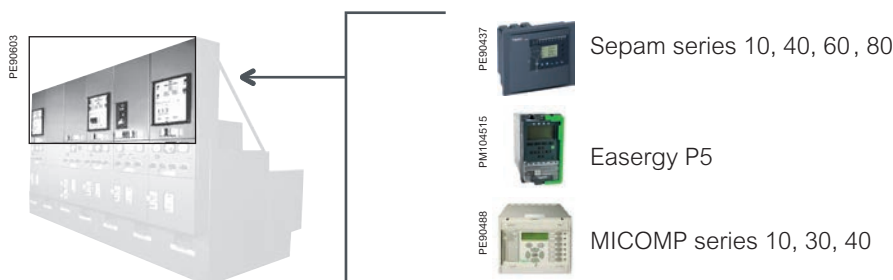
	MX51		MX81	
Rated current (Ir)	630-2000A	630-2000A	630-1250A	630-1250A
Short circuit current (Isc)	25-31.5kA	25-31.5kA	12.5-20kA	12.5-20kA
Rated voltage Un (50/60 Hz)	3.6kV	17.5kV	3.6kV	17.5kV

	MX51 & MX81
Technology	Vacuum
Rated voltage Ur (kV)	Up to 17.5
Surge withstand voltage Up (kV)	Up to 115
Nominal frequency (Hz)	50-60
Rated current Ir (A)	630-2000
Short circuit current Isc (kA)	Up to 31.5
Short circuit duration Tk (s)	3

	MX51 & MX81
Switching sequence	O-3 min-CO-3 min-CO O-0.3 s-CO-3 min-CO O-0.3 s-CO-15 s-CO
Closing time (ms)	<52
Opening time (ms)	<61
Number of switching operations	10000
Service temperature (°C)	-25/+40

Offer extension

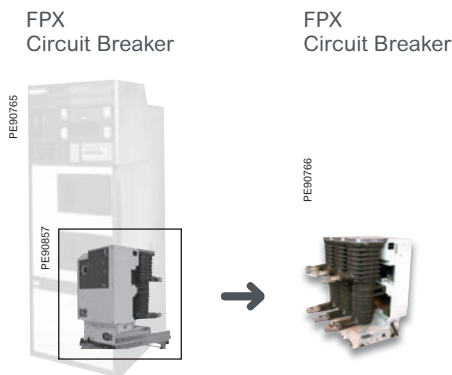
Energy management: replacement of the old protection relay (Schneider Electric or competitors)



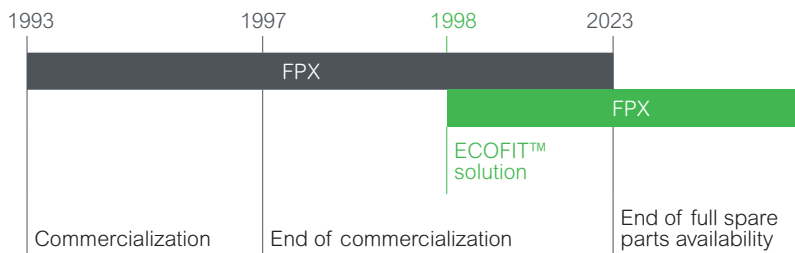
Normaclad PX12-24 / FPX by FPX

Original brand: GEC Alsthom, Alsthom

ECOFIT™ proposal



With ECOFIT™, a true extended life time



Main technical characteristics

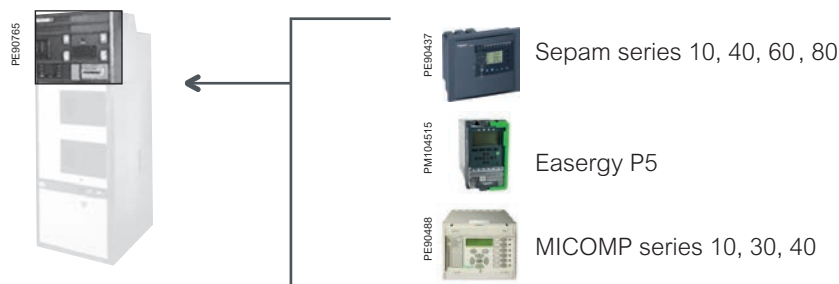
FPX	
Rated current (Ir)	Up to 3150A
Short circuit current (Isc)	40kA
Rated voltage Un (50/60 Hz)	12kV

	FPX		
Technology	SF6	SF6	SF6
Rated voltage Ur (kV)	12	17.5	24
Surge withstand voltage Up (kV)	100	80	80
Nominal frequency (Hz)	50-60	50-60	50-60
Rated current Ir (A)	3150	2500	2500
Short circuit current Isc (kA)	40	31.5	31.5
Short circuit duration Tk (s)	3	3	3

	FPX		
Switching sequence	O-3 min-CO-3 min-CO O-0.3 s-CO-3 min-CO O-0.3 s-CO-15 s-CO		
Closing time (ms)	50	50	50
Opening time (ms)	50	50	50
Number of switching operations	10000	10000	10000
Service temperature (°C)	-5/+40	-5/+40	-5/+40

Offer extension

Energy management: replacement of the old protection relay (Schneider Electric or competitors)

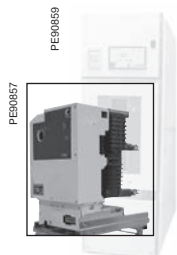


PIX SF6 / GFX - FPX by GFX - FPX

Original brand: AEG

ECOFIT™ proposal

FPX Circuit Breaker,
GFX Contactor



FPX Circuit Breaker,
GFX Contactor



With ECOFIT™, a true extended life time



Main technical characteristics

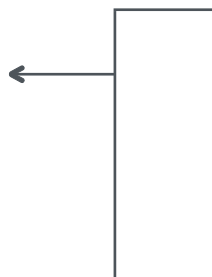
	FPX				GFX	
Rated current (Ir)	Up to 3150A				Up to 2500A	400A
Short circuit current (Isc)	40kA				31.5kA	6-10kA
Rated voltage Un (50/60 Hz)	12kV				24kV	7.2-12kA

	FPX			GFX
Technology	SF6	SF6	SF6	SF6
Rated voltage Ur (kV)	12	17.5	24	7.2-12
Surge withstand voltage Up (kV)	75	95	125	60 @ 7.2kV 75 @ 12kV
Nominal frequency (Hz)	50-60	50-60	50-60	50-60
Rated current Ir (A)	Up to 3150	Up to 2500	Up to 2500	400
Short circuit current Isc (kA)	Up to 40	Up to 31.5	Up to 31.5	6-10 without fuse 31.5-50 with fuse
Short circuit duration Tk (s)	3	3	3	1

	FPX	GFX
Switching sequence	O-3mn-CO-3mn-CO	CO-0.3s-CO-15s-CO O-0.3s-CO-3mn-CO
Closing time (ms)	50	90-130
Opening time (ms)	50	< 50 (magnetic hold) < 30 (mechanical hold)
Number of switching operations	10000	300000 (magnetic hold) 50000 latch-in 600 operations per hour
Service temperature (°C)	-5/+40	-5/+40

Offer extension

Energy management: replacement of the old protection relay (Schneider Electric or competitors)



Sepam series 10, 40, 60, 80



Easergy P5

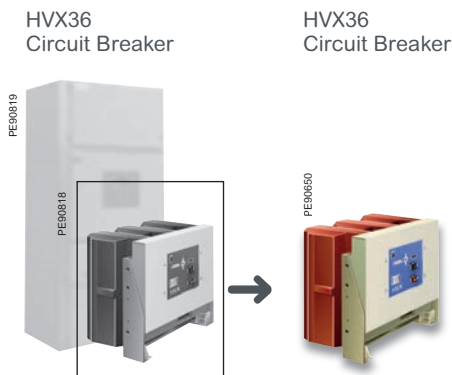


MICOMP series 10, 30, 40

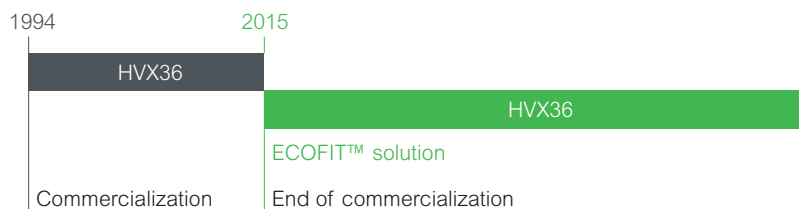
PNX36 / HVX36 by HVX36

Original brand: Alstom, Areva, Schneider Electric

ECOFIT™ proposal



With ECOFIT™, a true extended life time



Main technical characteristics

HVX36	
Rated current (Ir)	630 - 2500 A
Short circuit current (Isc)	25-31.5 kA
Rated voltage Un (50/60 Hz)	36 kV

HVX36	
Technology	Vacuum
Rated voltage Ur (kV)	36
Surge withstand voltage Up (kV)	70
Nominal frequency (Hz)	50-60
Rated current Ir (A)	630 - 2500

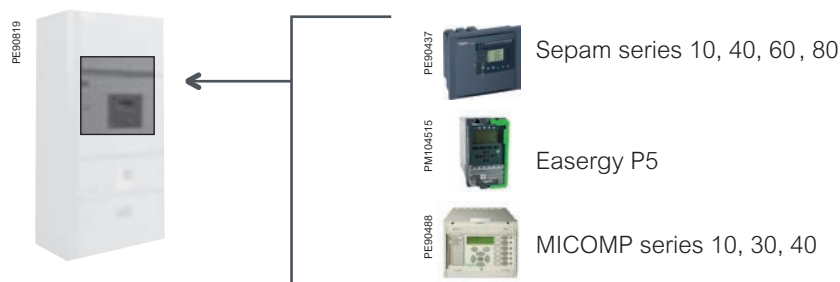
HVX36	
Switching sequence	O-0.3s-CO-3min-CO
Closing time (ms)	45-63
Opening time (ms)	35-53
Number of switching operations	10 000

Short circuit current Isc (kA)	25-31.5
Short circuit duration Tk (s)	3

Service temperature (°C)	-5/+40
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Offer extension

Energy management: replacement of the old protection relay (Schneider Electric or competitors)



R / VA - VAA by VA - VAA

Original brand: AEG, Alstom

ECOFIT™ proposal

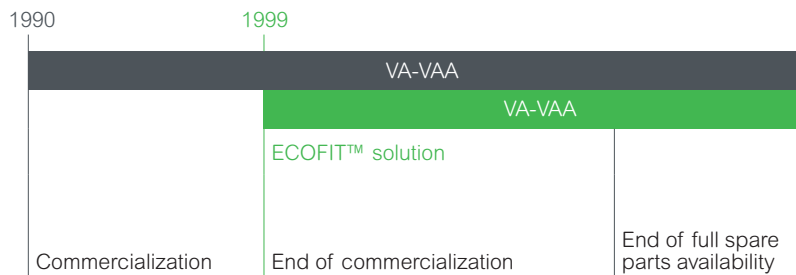
VA-VAA
Circuit Breaker



VA-VAA
Circuit Breaker



With ECOFIT™, a true extended life time



Main technical characteristics

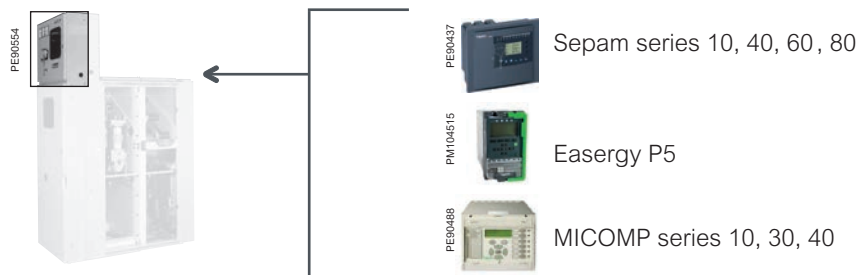
VA-VAA	
Rated current (Ir)	1250-4000 A
Short circuit current (Isc)	16-50 kA
Rated voltage Un (50/60 Hz)	12-36 kV

	VA-VAA
Technology	Vacuum
Rated voltage Ur (kV)	12-24-36
Surge withstand voltage Up (kV)	75-125
Nominal frequency (Hz)	50-60
Rated current Ir (A)	630-3550
Short circuit current Isc (kA)	16-50
Short circuit duration Tk (s)	3

	VA-VAA
Switching sequence	O-0.3s-CO-3min-CO
Closing time (ms)	20
Opening time (ms)	20-50
Number of switching operations	10000
Service temperature (°C)	-5/+40

Offer extension

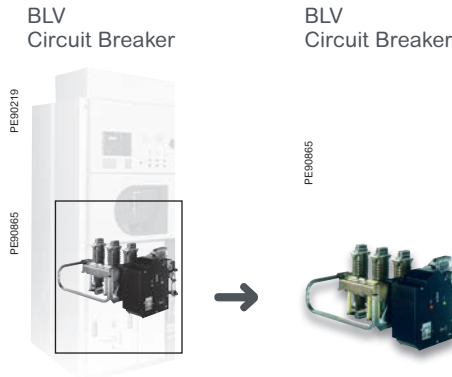
Energy management: replacement of the old protection relay (Schneider Electric or competitors)



VISAX / BLV by BLV

Original brand: GEC Alsthom

ECOFIT™ proposal



With ECOFIT™, a true extended life time



Main technical characteristics

BLV				
Rated current (Ir)	400-1250A	400-1250A	400-1250A	400-1250A
Short circuit current (Isc)	16-40kA	16-40kA	16-40kA	16-31.5kA
Rated voltage Un (50/60 Hz)	7.2kV	12kV	17.5kV	24kV

	BLV			
Technology	Vacuum	Vacuum	Vacuum	Vacuum
Rated voltage Ur (kV)	7.2	12	17.5	24
Surge withstand voltage Up (kV)	125	125	125	125
Nominal frequency (Hz)	50-60	50-60	50-60	50-60
Rated current Ir (A)	400-2500	400-2500	400-2500	400-2500
Short circuit current Isc (kA)	16-40	16-40	16-40	16-31.5
Short circuit duration Tk (s)	3	3	3	3

	BLV
Switching sequence	O-3mn-CO-3mn-CO O-0.3s-CO-3mn-CO O-0.3s-CO-15s-CO
Closing time (ms)	50
Opening time (ms)	40
Number of switching operations	10000
Service temperature (°C)	-5/+40, -25 on demand

Offer extension

Energy management: replacement of the old protection relay (Schneider Electric or competitors)

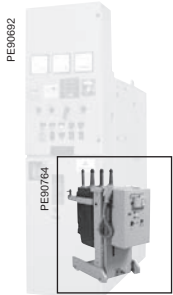


VMX / VMX by VMX

Original brand: GEC Alsthom, Alstom, Areva

ECOFIT™ proposal

VMX
Circuit Breaker



VMX
Circuit Breaker



With ECOFIT™, a true extended life time



Main technical characteristics

VMX	
Rated current (Ir)	630 - 2000 A
Short circuit current (Isc)	Up to 25 kA/3s
Rated voltage Un (50/60 Hz)	11 kV

VMX	VMX
Technology	Vacuum
Rated voltage Ur (kV)	11
Surge withstand voltage Up (kV)	95
Nominal frequency (Hz)	50-60
Rated current Ir (A)	630 - 1250
Short circuit current Isc (kA)	25
Short circuit duration Tk (s)	3

VMX	VMX
Switching sequence	O-3 min-CO-3 min-CO O-0.3 s-CO-3 min-CO O-0.3 s-CO-15 s-CO
Closing time (ms)	< 52
Opening time (ms)	< 61
Number of switching operations	10000
Service temperature (°C)	-25/+40

Offer extension

Energy management: replacement of the old protection relay (Schneider Electric or competitors)



Sepam series 10, 40, 60, 80



Easergy P5



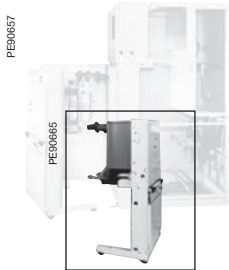
MICOMP series 10, 30, 40

WBA/ VA - VAA by VA - VAA

Original brand: AEG, Alstom, Areva

ECOFIT™ proposal

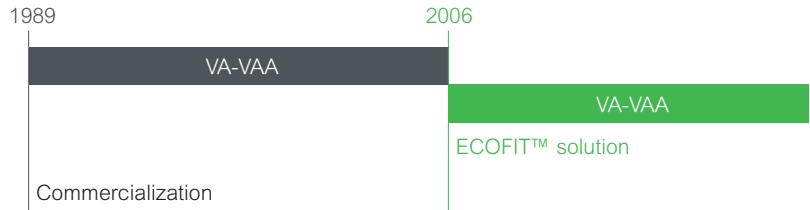
VA-VAA
Circuit Breaker



VA-VAA
Circuit Breaker



With ECOFIT™, a true extended life time



Main technical characteristics

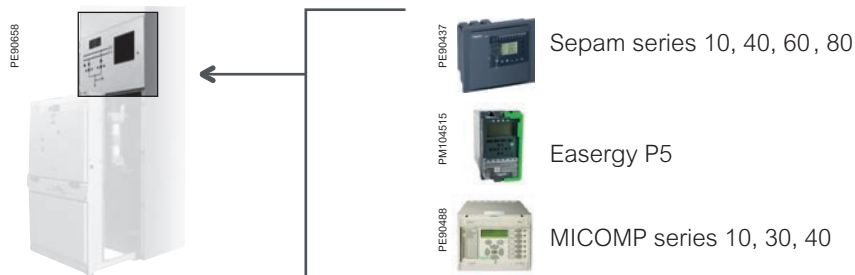
	VA	VAA
Rated current (Ir)	630 - 2500 A	630 - 1250 A
Short circuit current (Isc)	20 - 50 kA	16 - 25 kA
Rated voltage Un (50/60 Hz)	12 - 24 kV	12 - 24 kV

	VA-VAA
Technology	Vacuum
Rated voltage Ur (kV)	12 - 24
Surge withstand voltage Up (kV)	75-125
Nominal frequency (Hz)	50-60
Rated current Ir (A)	600-2500
Short circuit current Isc (kA)	25-31.5
Short circuit duration Tk (s)	3

	VA-VAA
Switching sequence	O-0.3s-CO-3min-CO
Closing time (ms)	20
Opening time (ms)	20-50
Number of switching operations	10000
Service temperature (°C)	-5/+40

Offer extension

Energy management: replacement of the old protection relay (Schneider Electric or competitors)

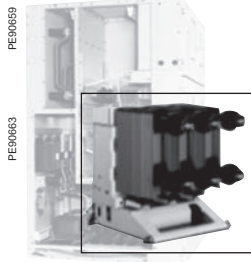


WBB / VA - VAA by VA - VAA

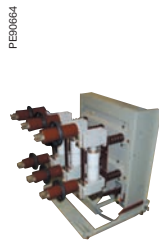
Original brand: AEG, Alstom, Areva

ECOFIT™ proposal

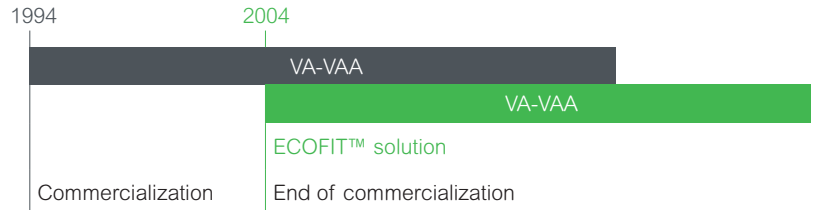
VA-VAA
Circuit Breaker



VA-VAA
Circuit Breaker



With ECOFIT™, a true extended life time



Main technical characteristics

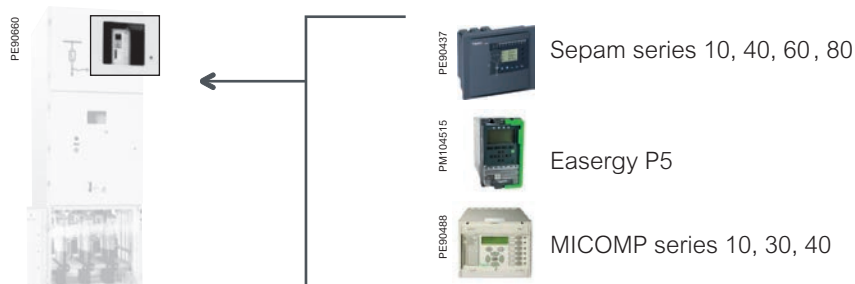
	VAA	VA
Rated current (Ir)	630 - 1250 A	630-2500 A
Short circuit current (Isc)	16 - 25 kA	20-50 kA
Rated voltage Un (50/60 Hz)	12 kV	12 kV

	VA-VAA
Technology	Vacuum
Rated voltage Ur (kV)	12
Surge withstand voltage Up (kV)	75 - 95
Nominal frequency (Hz)	50 - 60
Rated current Ir (A)	630 - 2500
Short circuit current Isc (kA)	16 - 31.5
Short circuit duration Tk (s)	3

	VA-VAA
Switching sequence	0-0.3s-CO-3min-CO
Closing time (ms)	20
Opening time (ms)	20-50
Number of switching operations	10000
Service temperature (°C)	-5/+40

Offer extension

Energy management: replacement of the old protection relay (Schneider Electric or competitors)



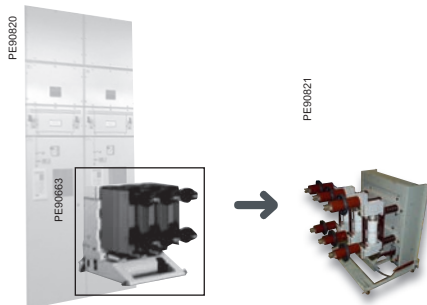
WBD / VA-VAA by VA - VAA

Original brand: AEG, Alstom, Areva, Schneider Electric

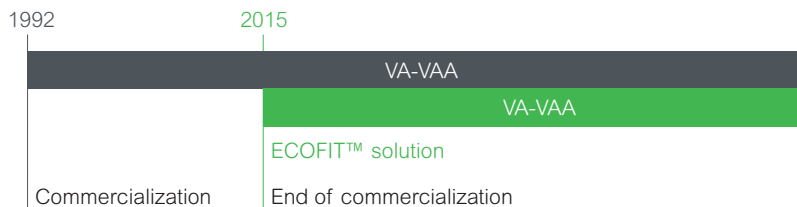
ECOFIT™ proposal

VA-VAA
Circuit Breaker

VA-VAA
Circuit Breaker



With ECOFIT™, a true extended life time



Main technical characteristics

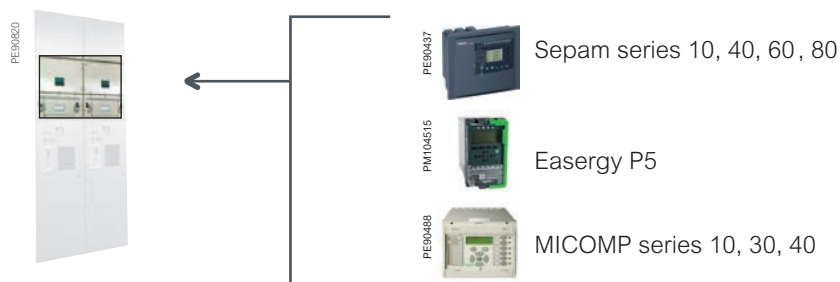
VA-VAA	
Rated current (Ir)	630 - 2500 A
Short circuit current (Isc)	25-31.5 kA
Rated voltage Un (50/60 Hz)	12 kV

VA-VAA	VA-VAA
Technology	Vacuum
Rated voltage Ur (kV)	12
Surge withstand voltage Up (kV)	80
Nominal frequency (Hz)	50-60
Rated current Ir (A)	630-3150
Short circuit current Isc (kA)	25-31.5
Short circuit duration Tk (s)	3

VA-VAA	VA-VAA
Switching sequence	O-0.3s-CO-3min-CO
Closing time (ms)	20
Opening time (ms)	20-50
Number of switching operations	10000
Service temperature (°C)	-5/+40

Offer extension

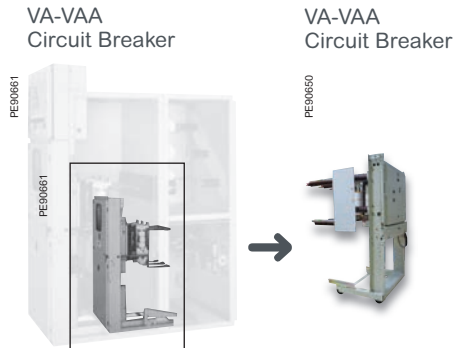
Energy management: replacement of the old protection relay (Schneider Electric or competitors)



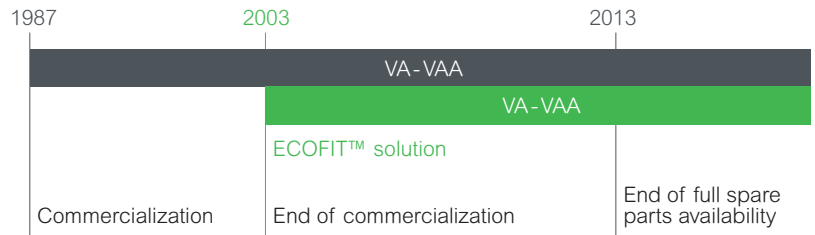
WK(A/B/C/D/E/F) / VA, VAA by VA, VAA

Original brand: AEG, Alstom, Areva

ECOFIT™ proposal



With ECOFIT™, a true extended life time



Main technical characteristics

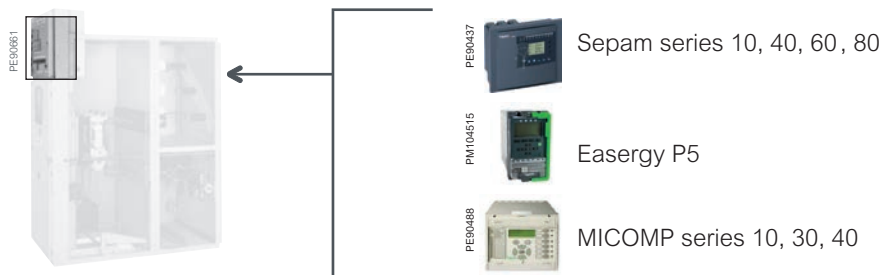
VA - VAA	
Rated current (Ir)	630-2500A
Short circuit current (Isc)	31.5-50kA
Rated voltage Un (50/60 Hz)	Up to 36kV

	VA - VAA
Technology	Vacuum
Rated voltage Ur (kV)	12-36
Surge withstand voltage Up (kV)	60-110
Nominal frequency (Hz)	50-60
Rated current Ir (A)	400-4000
Short circuit current Isc (kA)	10-50
Short circuit duration Tk (s)	3

	VA - VAA
Switching sequence	O-0.3s-CO-3min-CO
Closing time (ms)	20
Opening time (ms)	20-50
Number of switching operations	10000
Service temperature (°C)	-5/+40

Offer extension

Energy management: replacement of the old protection relay (Schneider Electric or competitors)

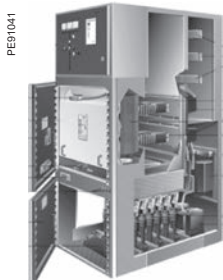


AHA panel by AHA panel

Original brand: AEG, Alstom, Areva

ECOFIT™ proposal

AHA



With ECOFIT™, a true extended life time



Main technical characteristics

AHA	
Rated current (Ir)	630 - 1250 A
Short circuit current (Isc)	25 - 31.5 kA
Rated voltage Un (50/60 Hz)	12 - 17.5 kV

	AHA
Rated insulation level (kV)	12 - 17.5
Rated power frequency withstand voltage/1mn (kVrms)	38
Lightning impulse withstand voltage (peak value) (kVp)	95
Overall dimensions (w x h x d) (mm)	700 x 2330 x 1450

	AHA
Rated current of busbar (A)	1250
Rated short time withstand current (4s) (kA)	25 - 31.5
Internal Arc Classification (1s) (AFLR)	31.5
Ingress Protection degree (IP)	Enclosure IP42 - Compartment IP2X

Offer extension

Energy management: replacement of the old protection relay (Schneider Electric or competitors)



DNF7 panel by DNF7 panel

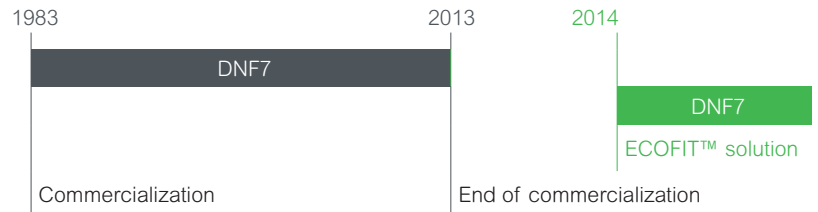
Original brand: Alsthom

ECOFIT™ proposal

DNF7



With ECOFIT™, a true extended life time



Main technical characteristics

DNF7	
Rated current (Ir)	400-2000A
Short circuit current (Isc)	31.5kA
Rated voltage Un (50/60 Hz)	36kV

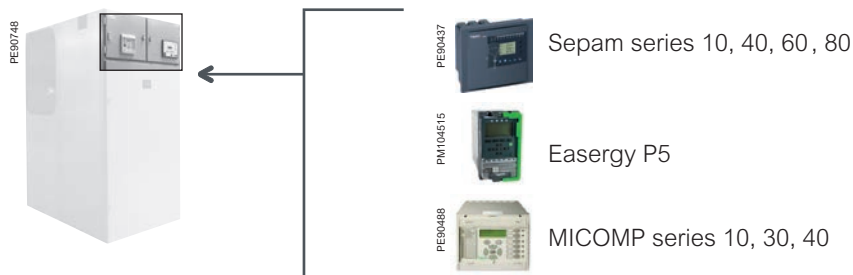
	DNF7
Rated insulation level (kV)	36
Rated power frequency withstand voltage/1mn (kVrms)	70
Lightning impulse withstand voltage (peak value) (kVp)	170
Overall dimensions (wxhxd) (mm)	1300x2250*x2300**

	DNF7
Rated current of busbar (A)	400-1250 (2500***)
Rated short time withstand current (4s) (kA)	16-31.5
Internal Arc Classification (1s) (AFLR)	25kA
Ingress Protection degree (IP)	Enclosure IP3X

* 2900 mm with busbar compartment - ** 2500 mm with internal arc withstand, 2750 mm with cables voltage compartment - *** With forced cooling (on request)

Offer extension

Energy management: replacement of the old protection relay (Schneider Electric or competitors)

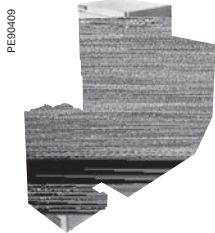


Fluair F100-200 panel by Fluair F100- 200 panel

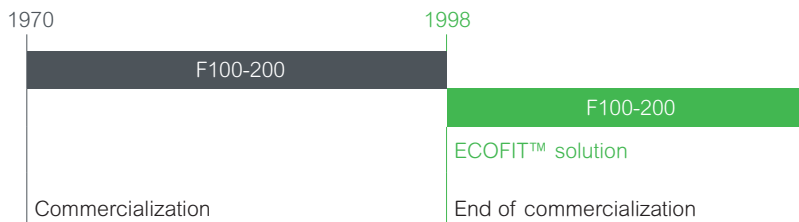
Original brand: Merlin Gerin

ECOFIT™ proposal

F100/200



With ECOFIT™, a true extended life time



Main technical characteristics

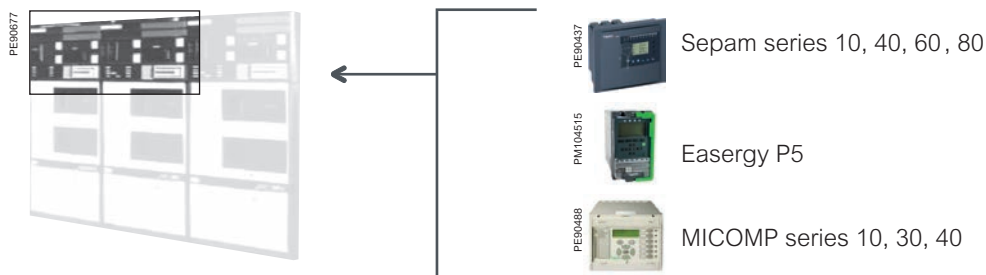
	F100	F200
Rated current (Ir)	630-3150A	630-3150A
Short circuit current (Isc)	25-50kA	25-50kA
Rated voltage Un (50/60 Hz)	7.2kV	12-17.5kV

	F100-200
Rated insulation level (kV)	7.2-12-17.5
Rated power frequency withstand voltage/1mn (kVrms)	20-28-38
Lightning impulse withstand voltage (peak value) (kVp)	60-75-95
Overall dimensions (wxhxd) (mm)	≤1250A: 650x2100x1455/1700 2500-3150A: 900x2100x1700

	F100-200
Rated current of busbar (A)	Up to 3150
Rated short time withstand current (3s) (kA)	Up to 50
Internal Arc Classification (1s) (AFLR)	
Ingress Protection degree (IP)	Enclosure IP3X

Offer extension

Energy management: replacement of the old protection relay (Schneider Electric or competitors)



Normaclad PX12-24 panel by Normaclad PX12-24 panel

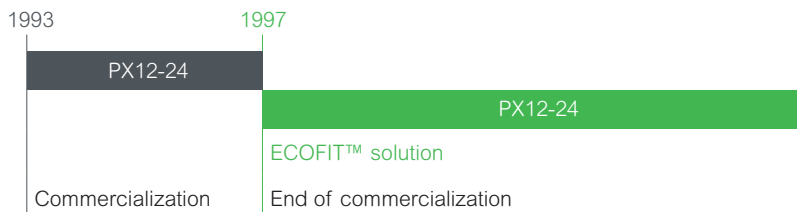
Original brand: Alstom

ECOFIT™ proposal

PX 12-24



With ECOFIT™, a true extended life time



Main technical characteristics

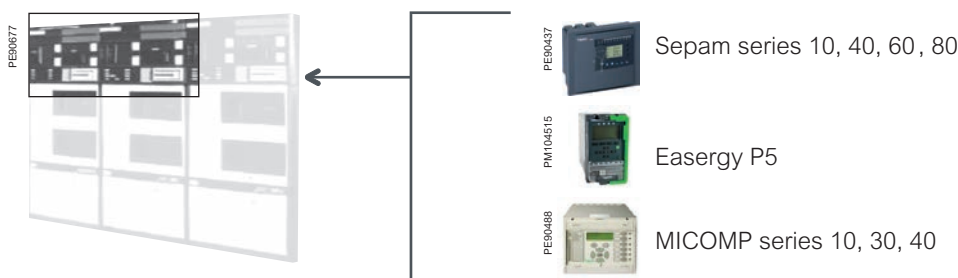
	PX12	PX24
Rated current (Ir)	400-3150A	400-2500A
Short circuit current (Isc)	25-40kA	16-25-31.5kA
Rated voltage Un (50/60 Hz)	12kV	24kV

	PX12	PX24
Rated insulation level (kV)	12	24
Rated power frequency withstand voltage/1mn (kVrms)	28	50
Lightning impulse withstand voltage (peak value) (kVp)	75	125
Overall dimensions (wxhxd) (mm)	<1250A: 650x2135x1320 ≤2000A: 750x2135x1320 >2000A: 900x2135x1320	≤2000A: 750x2135x1320 >2000A: 900x2335x1570

	PX12	PX24
Rated current of busbar (A)	630-3150	630-2500
Rated short time withstand current (4s) (kA)	25-40	25-31.5
Internal Arc Classification (1s) (AFLR)	25	25
Ingress Protection degree (IP)	Enclosure IP3X	Enclosure IP3X

Offer extension

Energy management: replacement of the old protection relay (Schneider Electric or competitors)



PIX-SF6 panel by PIX-SF6 panel

Original brand: Alstom

ECOFIT™ proposal

PIX-SF6



With ECOFIT™, a true extended life time

PIX-SF6	PIX-SF6
Commercialization	ECOFIT™ solution End of commercialization

Main technical characteristics

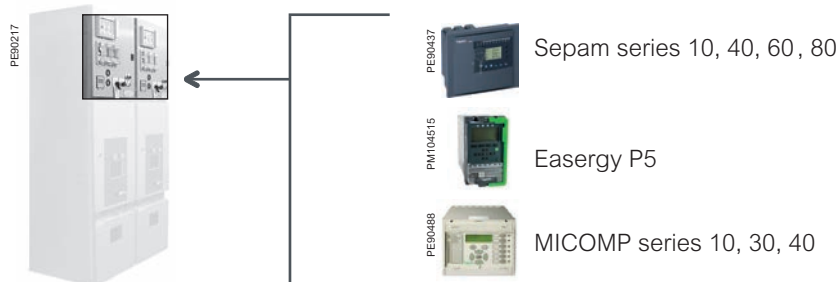
	PIX-SF6		
Rated current (Ir)	Up to 3150 A	Up to 2500 A	Up to 2500 A
Short circuit current (Isc)	40 kA/3s	31.5 kA/3s	31.5 kA/3s
Rated voltage Un (50/60 Hz)	12 kV	17.5 kV	24 kV

	PIX-SF6		
Rated insulation level (kV)	12	17.5	24
Rated power frequency withstand voltage/1mn (kVrms)	28	38	50
Lightning impulse withstand voltage (peak value) (kVp)	75	95	125
Overall dimensions (w x h x d) (mm)	1000x2130x1405 - 1000x2330x1605 - 1000x2330x1605		

	PIX-SF6		
Rated current of busbar (A)	Up to 3150	Up to 2500	Up to 2500
Rated short time withstand current (4s) (kA)	40	31.5	31.5
Internal Arc Classification (1s) (AFLR)	40	40	40
Ingress Protection degree (IP)	IP3X	IP3X	IP3X

Offer extension

Energy management: replacement of the old protection relay (Schneider Electric or competitors)



PNX36 panel by PNX36 panel

Original brand: Alstom, Areva, Schneider Electric

ECOFIT™ proposal

PNX36



With ECOFIT™, a true extended life time



Main technical characteristics

PNX36	
Rated current (Ir)	630-2500A
Short circuit current (Isc)	10-25kA
Rated voltage Un (50/60 Hz)	36kV

	PNX36
Rated insulation level (kV)	36
Rated power frequency withstand voltage/1mn (kVrms)	70
Lightning impulse withstand voltage (peak value) (kVp)	170
Overall dimensions (wxhxd) (mm)	120x2500x1600

	PNX36
Rated current of busbar (A)	630-2500*
Rated short time withstand current (4s) (kA)	82
Internal Arc Classification (1s) (AFLR)	Arcing due to internal fault according to IEC 60298, 31.5 kA 1s, Type of accessibility A
Ingress Protection degree (IP)	

* With forced cooling (on request)

Offer extension

Energy management: replacement of the old protection relay (Schneider Electric or competitors)

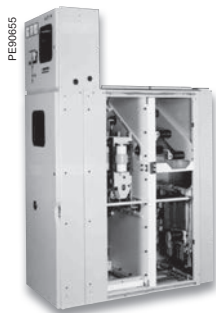


R panel by R panel

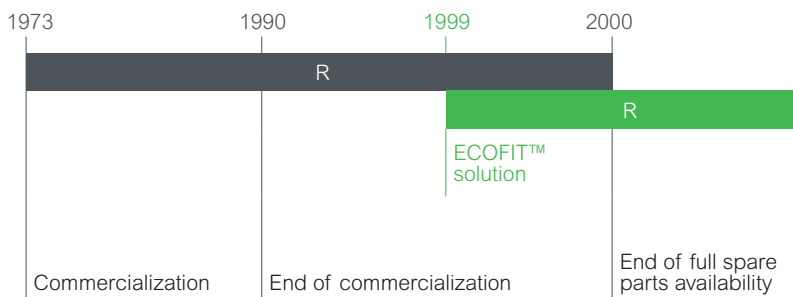
Original brand: AEG, Alstom

ECOFIT™ proposal

R
Circuit Breaker



With ECOFIT™, a true extended life time



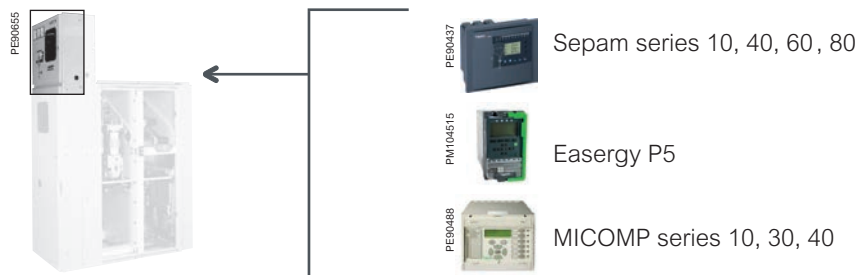
Main technical characteristics

R		
Rated current (Ir)	400-4000A	400-2500A
Short circuit current (Isc)	Up to 40 kA/3s	Up to 25 kA/3s
Rated voltage Un (50/60 Hz)	12 kV	24-36 kV

	R		R
Rated insulation level (kV)	12-24-36	Rated current of busbar (A)	630-3350
Rated power frequency withstand voltage/1mn (kVrms)	28-50	Rated short time withstand current (4s) (kA)	40-125
Lightning impulse withstand voltage (peak value) (kVp)	75-125	Internal Arc Classification (1s) (AFLR)	PEHLA
Overall dimensions (w x h x d) (mm)	700, 800, 1000, 1400, 1600x2330, 2420x1100, 1250, 1300, 1450	Ingress Protection degree (IP)	Standard IP2X On request IP3X, IP4X

Offer extension

Energy management: replacement of the old protection relay (Schneider Electric or competitors)



VISAX panel by VISAX panel

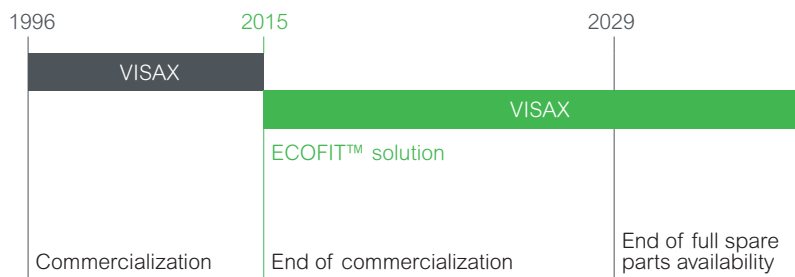
Original brand: GEC Alstom

ECOFIT™ proposal

VISAX



With ECOFIT™, a true extended life time



Main technical characteristics

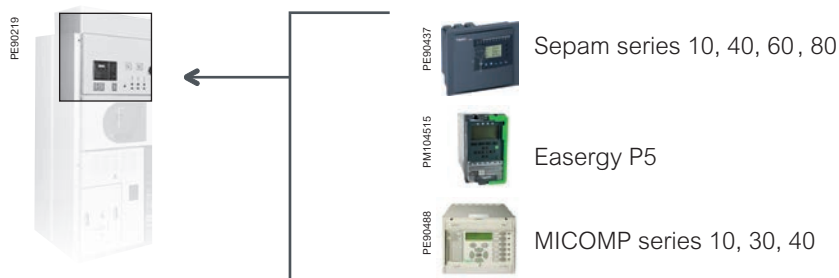
VISAX			
Rated current (Ir)	Up to 2500 A		Up to 2500 A
Short circuit current (Isc)	25 kA/3s		25 kA/3s
Rated voltage Un (50/60 Hz)	12 kV		24 kV

	VISAX		
Rated insulation level (kV)	12	17.5	24
Rated power frequency withstand voltage/1mn (kVrms)	28	38	50
Lightning impulse withstand voltage (peak value) (kVp)	75	95	125
Overall dimensions (wxhxd) (mm)	800 - 1100x2150 - 2650x1250 - 1540		

	VISAX		
Rated current of busbar (A)	Up to 2500	Up to 2500	Up to 2500
Rated short time withstand current (4s) (kA)	25	25	25
Internal Arc Classification (1s) (AFLR)	25	25	25
Ingress Protection degree (IP)	IP3X - IP4X	IP3X - IP4X	IP3X - IP4X

Offer extension

Energy management: replacement of the old protection relay (Schneider Electric or competitors)



VMX panel by VMX panel

Original brand: GEC Alsthom, Alstom, Areva

ECOFIT™ proposal

VMX



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Main technical characteristics

VMX	
Rated current (Ir)	630-2000A
Short circuit current (Isc)	Up to 25kA/3s
Rated voltage Un (50/60 Hz)	11 kV

VMX	VMX
Rated insulation level (kV)	12
Rated power frequency withstand voltage/1mn (kVrms)	28-35
Lightning impulse withstand voltage (peak value) (kVp)	75
Overall dimensions (w x h x d) (mm)	606-540 x 2000-2000 x 1867-1360

VMX	VMX
Rated current of busbar (A)	Up to 2000
Rated short time withstand current (4s) (kA)	Up to 26.3
Internal Arc Classification (1s) (AFLR)	25
Ingress Protection degree (IP)	IP3X

Offer extension

Energy management: replacement of the old protection relay (Schneider Electric or competitors)

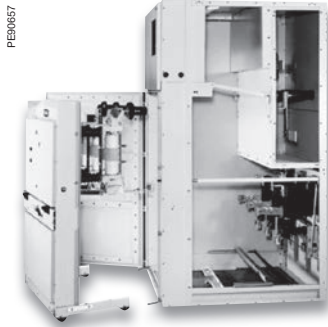


WBA panel by WBA panel

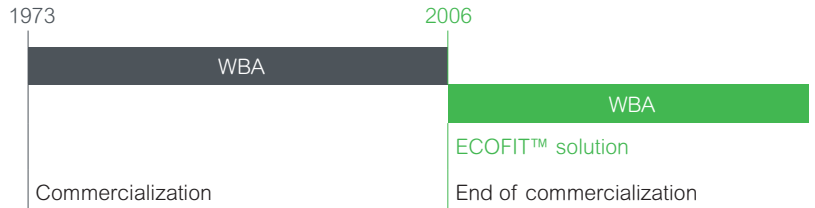
Original brand: AEG, Alstom, Areva

ECOFIT™ proposal

WBA



With ECOFIT™, a true extended life time



Main technical characteristics

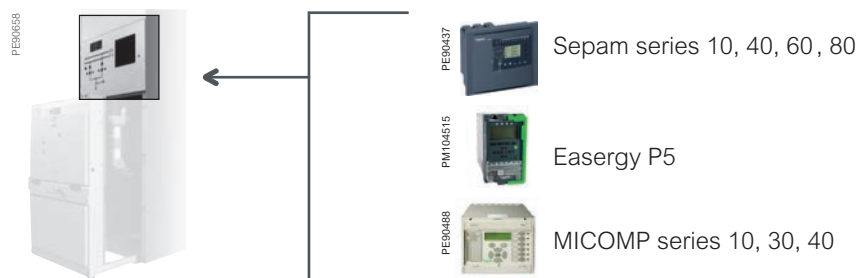
WBA		
Rated current (Ir)	630-2500 A	630-2500 A
Short circuit current (Isc)	16-25 kA & 20-50 kA	20-50 kA
Rated voltage Un (50/60 Hz)	12-24 kV	12-38 kV

	WBA
Rated insulation level (kV)	12-24
Rated power frequency withstand voltage/1mn (kVrms)	28-50
Lightning impulse withstand voltage (peak value) (kVp)	75-125
Overall dimensions (wxhxd) (mm)	600/800/1000x2330x1250/1300

	WBA
Rated current of busbar (A)	630-2500
Rated short time withstand current (4s) (kA)	63-80
Internal Arc Classification (1s) (AFLR)	PEHLA 31.5 kA
Ingress Protection degree (IP)	Standard IP2X On request IP3X, IP4X

Offer extension

Energy management: replacement of the old protection relay (Schneider Electric or competitors)



WBB panel by WBB panel

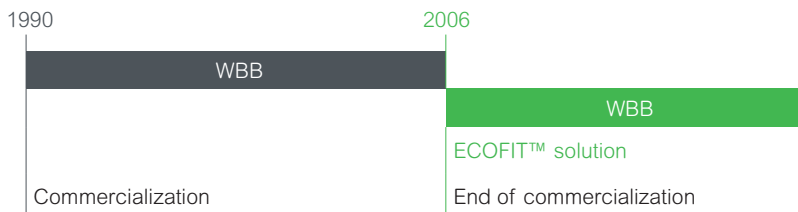
Original brand: AEG, Alstom, Areva

ECOFIT™ proposal

WBB



With ECOFIT™, a true extended life time



Main technical characteristics

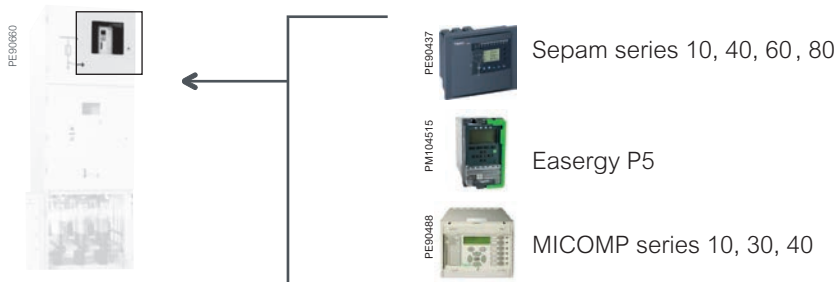
WBB	
Rated current (Ir)	630-2500 A
Short circuit current (Isc)	20-50 kA
Rated voltage Un (50/60 Hz)	12-24 kV

	WBB
Rated insulation level (kV)	12-24
Rated power frequency withstand voltage/1mn (kVrms)	28-38
Lightning impulse withstand voltage (peak value) (kVp)	75-95
Overall dimensions (wxhxd) (mm)	600, 800, 1000x2330x1250, 1500

	WBB
Rated current of busbar (A)	630-2500
Rated short time withstand current (4s) (kA)	63-80
Internal Arc Classification (1s) (AFLR)	PEHLA 31.5 kA
Ingress Protection degree (IP)	Standard IP2X On request IP3X, IP4X

Offer extension

Energy management: replacement of the old protection relay (Schneider Electric or competitors)



WBD panel by WBD panel

Original brand: AEG, Alstom, Areva, Schneider Electric

ECOFIT™ proposal

WBD



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Main technical characteristics

	WBD
Rated current (Ir)	630-3150A
Short circuit current (Isc)	80kA
Rated voltage Un (50/60 Hz)	12kV

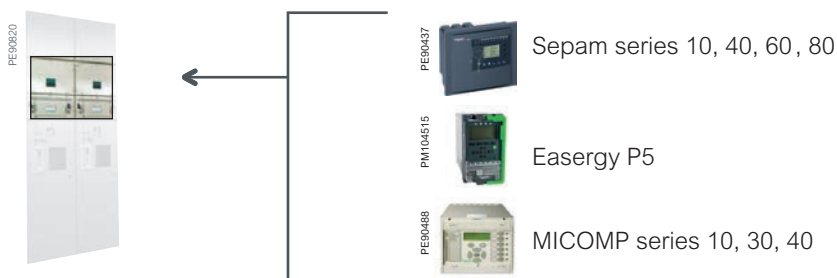
	WBD
Rated insulation level (kV)	12
Rated power frequency withstand voltage/1mn (kVrms)	28
Lightning impulse withstand voltage (peak value) (kVp)	80
Overall dimensions (wxhxd) (mm)	600, 800x3000x1750

	WBD
Rated current of busbar (A)	630-3150*
Rated short time withstand current (4s) (kA)	80
Internal Arc Classification (1s) (AFLR)	PEHLA 31.5kA
Ingress Protection degree (IP)	IP 2X even for open door and modul in disconnecting position, IP 3X to the busbar, outside IP 52 possible

* With forced cooling (on request)

Offer extension

Energy management: replacement of the old protection relay (Schneider Electric or competitors)

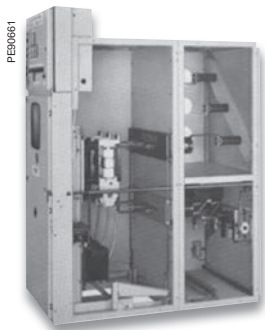


WK panel by WK panel

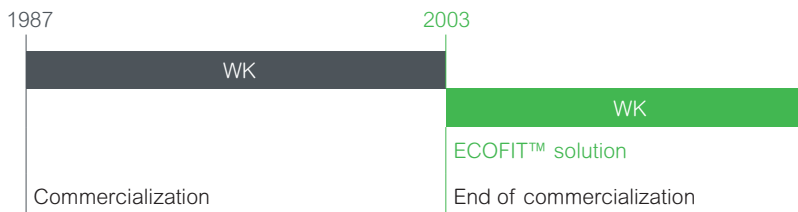
Original brand: AEG, Alstom, Areva

ECOFIT™ proposal

WK



With ECOFIT™, a true extended life time



Main technical characteristics

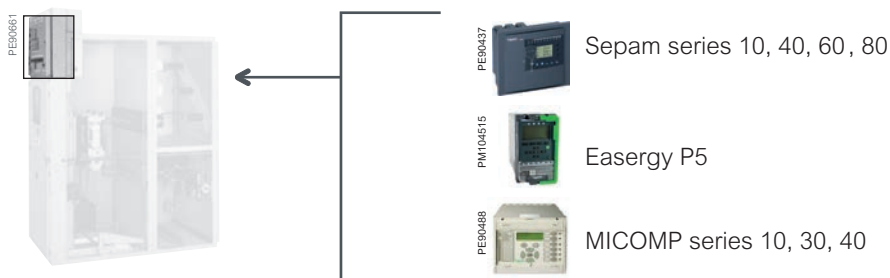
WK	
Rated current (Ir)	630-3150A
Short circuit current (Isc)	20-50 kA/3s
Rated voltage Un (50/60 Hz)	12-24-38 kV

	WK
Rated insulation level (kV)	12-36
Rated power frequency withstand voltage/1mn (kVrms)	28-38
Lightning impulse withstand voltage (peak value) (kVp)	110
Overall dimensions (w x h x d) (mm)	600/1060 x 2330 x 1700/2100

	WK
Rated current of busbar (A)	630-4000
Rated short time withstand current (4s) (kA)	63-80
Internal Arc Classification (1s) (AFLR)	PEHLA 31.5 kA
Ingress Protection degree (IP)	Standard IP2X On request IP3X, IP4X

Offer extension

Energy management: replacement of the old protection relay (Schneider Electric or competitors)



Modulec CT panel by SM6 panel

Original brand: EIB

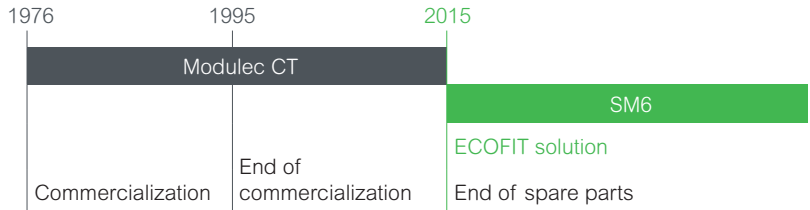
ECOFIT proposal

Modulec CT

SM6



With ECOFIT, a true extended life time



Main technical characteristics

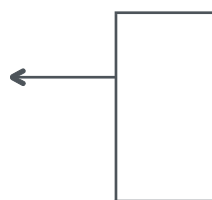
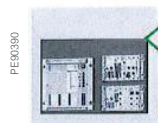
Modulec CT 17,5	
Rated current (Ir)	400 – 630 A
Short circuit current (Isc)	20 – 25 kA
Rated voltage Un (50 Hz)	17.5 kV

SM6	
Rated insulation level (kV)	17.5
Rated power frequency withstand voltage/1mn (kVrms)	38
Lightning impulse withstand voltage (peak value) (kVp)	95
Overall dimensions (wxhxd) (mm)	375/500/750 x 1600 x 1030/1230
Rated current of busbar (A)	630 – 800 – 1250

SM6	
Rated short time withstand current (1s) (kA)	20 – 25
Rated short time withstand current (3s) (kA)	20 (on demand)
Internal Arc Classification (1s) (AFLR)	16 – 20
Ingress Protection degree (IP)	IP3X

Offer extension

Energy management: replacement of the old protection relay (Schneider Electric or competitors)



Sepam series 10, 20, 40, 60, 80



MiCOMP series 10, 20, 30, 40

Modulec9 panel by SM6 panel

Original brand: EIB/AEG/Alstom

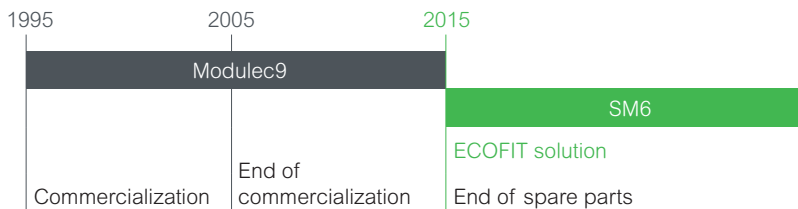
ECOFIT proposal

Modulec9

SM6



With ECOFIT, a true extended life time



Main technical characteristics

	Modulec9 CT104	Modulec9 CT105	Modulec9 CT106
Rated current (Ir)	630 A	630 A	630 A
Short circuit current (Isc)	25 kA	20 kA	16 kA
Rated voltage Un (50/60 Hz)	12 kV	17.5 kV	24 kV

	SM6		
Rated insulation level (kV)	12	17.5	24
Rated power frequency withstand voltage / 1 min (kVrms)	28	38	50
Lightning impulse withstand voltage (peak value) (kVp)	75	95	125
Overall dimensions (w x h x d) (mm)	375/500/750 x 1600 x 1030/1230	375/500/750 x 1600 x 1030/1230	375/500/750 x 1600 x 1030/1230
Rated current of busbar (A)	630 – 800 – 1250	630 – 800 – 1250	630 – 800 – 1250
Rated short time withstand current (1 s) (kA)	20 – 25	20 – 25	20 – 25
Rated short time withstand current (3 s) (kA)	20 (on demand)	20 (on demand)	20 (on demand)
Internal Arc Classification (1s) (AFLR) (kA)	16 – 20	16 – 20	16 – 20
Ingress Protection degree (IP)	IP3X	IP3X	IP3X

Offer extension

Energy management: replacement of the old protection relay (Schneider Electric or competitors)



Circuit Breaker & Panel Order Form

First Name	Last Name
Country	Phone
Email ID	Quantity

Serial no. of existing CB	
Brand	Type
Range	Type of new CB
Rated Current (A)	Rated Voltage (kV)
Short circuit current (kA/sec)	Isolating technology for new CB
Frequency	Standard
Opening coil (YO1)	Opening coil (YO2)
Under voltage coil (YM)	Closing coil (YF)

Phase to phase distance for MCset	Diagram Number(optional)
JE Number	Year of Installation
Pressure switch for SF2	Moisture Heater resistor
Mechanical Interlocking	
Comments/Message	

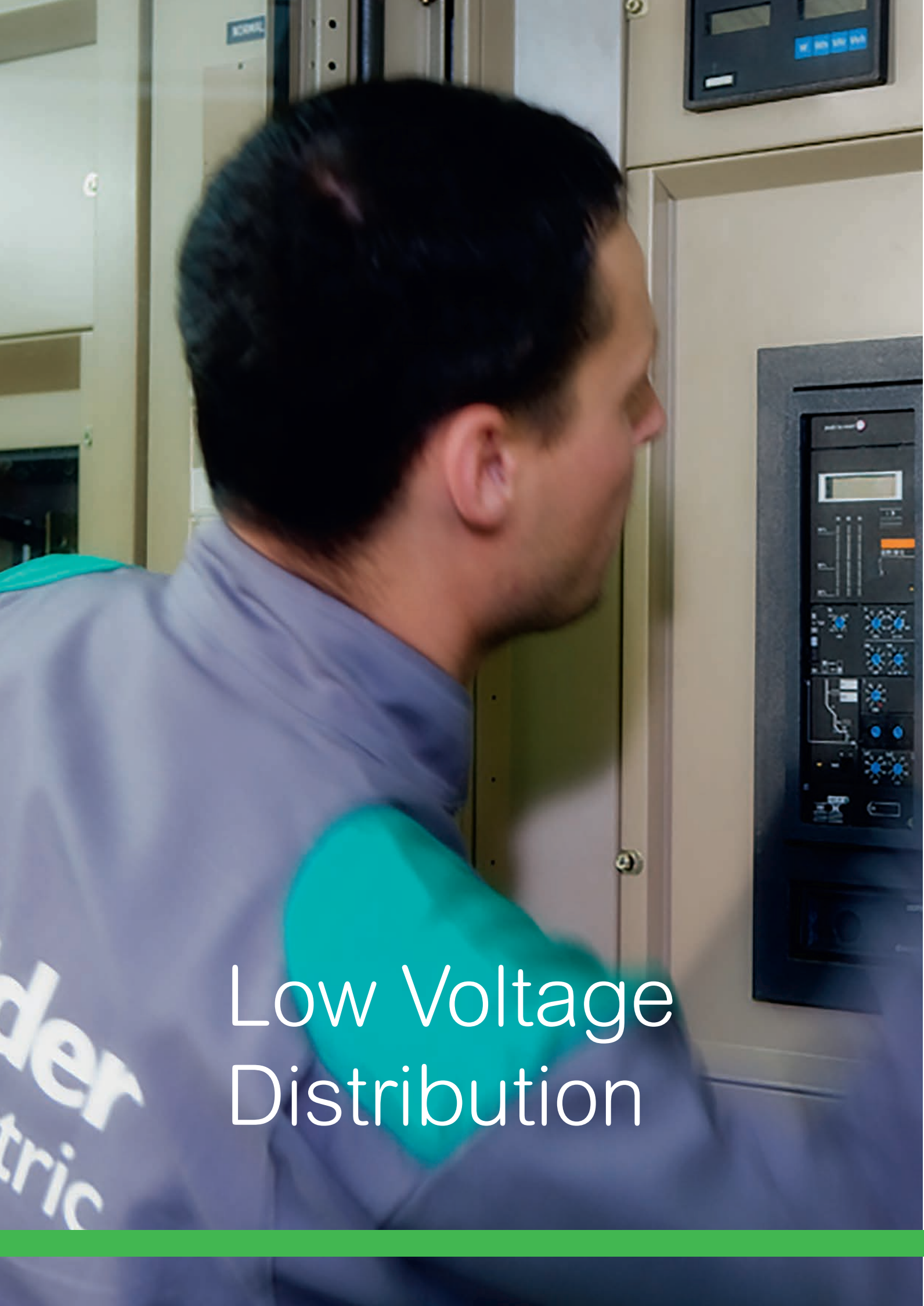
To request for a quote, please use the ECOFIT directory web site: <http://ecofit-directory.schneider-electric.com/>

Circuit Breaker & Panel Order Form

Please fill the quotation request form on the left, using data hereafter to enable quotation from ECOFIT centers.

Complete datas required to quote all other retrofit solutions are available on the web at the following address: <http://ecofit-directory.schneider-electric.com/>

Type of new CB	Rated Current (A)	Rated Voltage (kV)	KA Short circuit current (kA/sec)			Isolating technology for new CB	Frequency	Standard	Opening coil (YO1)	Opening Coil (YO2)	Under voltage coil (YM)	Closing Coil (YF)	CB Motor	Mitop	Operation sequence
SF1	400	7.2	12.5	1		Vacuum	50 Hz	IEC	24 (DC)	24 (DC)	24 (DC)	24 (DC)	24...32V DC	With contact	0-3mn-CO-3mn-CO
SF2	630	12	25	3		SF6	60	ANSI	30 (DC)	30 (DC)	30 (DC)	30 (DC)	48...60V DC/AC	Without contact	0-0.3s-CO-3mn-CO
LF1	1250	24	31.5						48 (DC)	48 (DC)	48 (DC)	48 (DC)	110...127V DC/AC		0-0.3s-CO-15s-CO
LF2	2500	36	40						60 (DC)	60 (DC)	60 (DC)	60 (DC)	220...250V DC/AC		
LF3	3150		50						110 (DC)	110 (DC)	110 (DC)	110 (DC)			
DV2									125 (DC)	125 (DC)	125 (DC)	125 (DC)			
									220 (DC)	220 (DC)	220 (DC)	220 (DC)			
									48 (AC)	48 (AC)	48 (AC)	48 (AC)			
									110 (AC) (50Hz)	110 (AC) (50Hz)	110 (AC) (50Hz)	110 (AC) (50Hz)			
									120 (AC) (50Hz)	120 (AC) (50Hz)	120 (AC) (50Hz)	120 (AC) (50Hz)			
									220 (AC) (50Hz)	220 (AC) (50Hz)	220 (AC) (50Hz)	220 (AC) (50Hz)			
									240 (AC) (50Hz)	240 (AC) (50Hz)	240 (AC) (50Hz)	240 (AC) (50Hz)			

A man with dark hair, wearing a blue long-sleeved shirt with teal accents on the shoulders, is shown in profile, looking at a low voltage distribution panel. The panel is a large, tan-colored metal cabinet with a black control panel on the right side. The control panel features a digital display, several buttons, and a series of blue indicator lights. The man's shirt has the words "der" and "tric" visible on the sleeve. The background shows other parts of the electrical cabinet.

Low Voltage Distribution

Contents

LV Circuit Breaker or Contactor

B Control	B-2
Compact C801-C1251	B-3
DA	B-4
DS	B-5
H Series	B-6
Masterpact M	B-7
SE	B-9
Selpact	B-10
LV Circuit Breaker - Associated offers - Energy Management	B-11
LV Circuit Breaker - Associated offers - Source-changeover systems	B-11
LV Circuit Breaker - Measurements	B-12
LV Circuit Breaker - Smartpanel integration	B-12

LV Drawer

T140	B-13
MB400	B-14
LV Drawers - Associated offers	B-15

Order forms

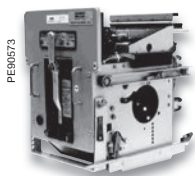
Compact Plug and Play	B-16
Compactkit	B-17
Masterpact M with NW Plug & Play	B-18
Masterkit with NW	B-19
Masterpact M with MTZ Plug & Play	B-20
Masterkit with MTZ	B-21

B Control by Masterpact NT - NW

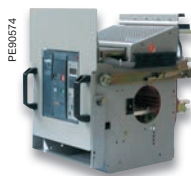
Original brand: Nuova Magrini Galileo

ECOFIT™ proposal

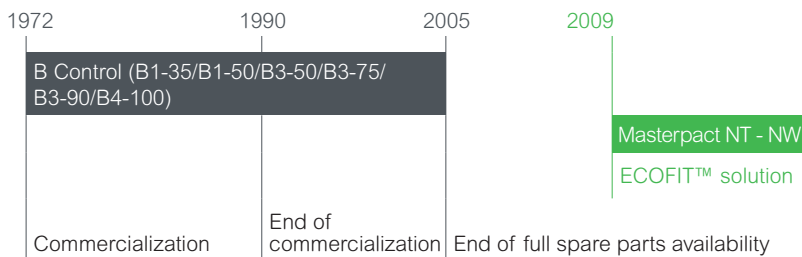
B Control
Circuit Breaker



Masterpact NW
Circuit Breaker



With ECOFIT™, a true extended life time



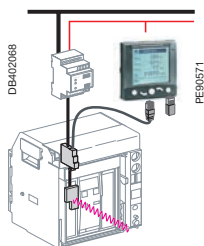
Main technical characteristics

	B Control	Masterpact NT - NW
Rated operational voltage (V AC 50/60Hz) Ue	660V	690V
Rated current (A) In 40° C	800-4000 A	800-4000A
Ultimate breaking capacity (kA rms, 220/415VAC 50/60Hz) Icu	32-100kA	42-150kA



B Control ECOFIT™ solution

The ECOFIT™ B Control solutions fixed or draw-out types enable to benefit from all the enhanced features of Masterpact NT or NW circuit breakers and accessories.



Active Energy Management™ programme that includes an energy metering system

- Identify the device,
- Indicate status conditions,
- Control the device (with communication auxiliaries),
- Setting of the protection and alarm functions.

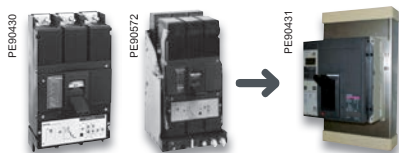
Compact C801 - C1251 by Compact NS800 - NS1250

Original brand: Merlin Gerin

ECOFIT™ proposal

C801-C1251
Circuit Breaker

NS801-NS1251
Circuit Breaker



With ECOFIT™, a true extended life time

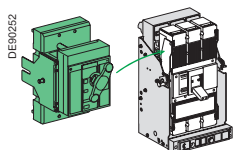
1993	2007	2009
Compact C801 - C1251		Compact NS800 - NS1251 ECOFIT™ solution
Commercialization	End of commercialization	End of full spare parts availability

Main technical characteristics

	Compact C801 - C1251	Compact NS800 - NS1251
Rated operational voltage (V AC 50/60Hz) Ue	690V	690V
Rated current (A) In 40°C	800-1250A	800-1250A
Ultimate breaking capacity (kA rms, 220/415VAC 50/60Hz) Icu 50-150kA	50-150kA	50-150kA

Compact C801 - C1251 ECOFIT™ solution

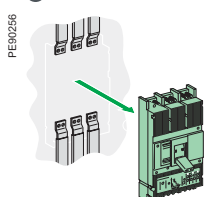
Plug & Play



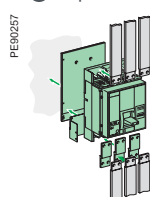
The ECOFIT™ Compact Plug & Play solution lets you retrofit the latest generation of Compact NS circuit breakers in the existing Compact C chassis with very short onsite servicing times.

Solution available for withdrawable type only, 3P & 4P, 800A to 1250A.

1 Removal



2 Replacement



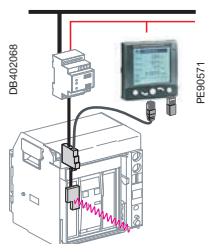
Compactkit

The ECOFIT™ Compactkit solution enables to benefit from all the enhanced features of Compact NS circuit breakers and accessories. It requires total shutdown of the installation to access the busbars.

Solution available for fixed type, 3P & 4P, 800A to 1250A.

Active Energy Management™ programme that includes an energy metering system

- Identify the device,
- Indicate status conditions,
- Control the device (with communication auxiliaries),
- Setting of the protection and alarm functions.



DA (DSA1 - DNA1 - DSA2 - DNA2 - DRA - DNAH) by Masterpact NW08 -NW63

Original brand: Merlin Gerin

ECOFIT™ proposal

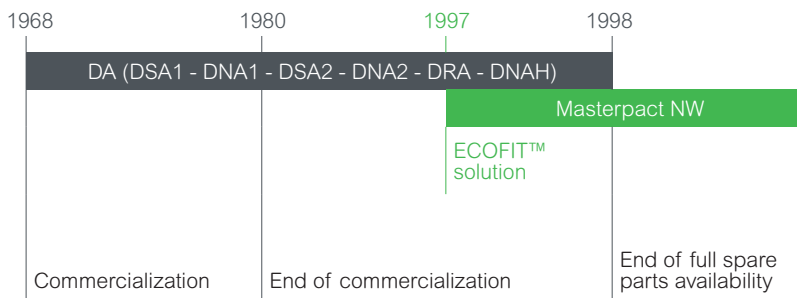
DA
Circuit Breaker



Masterpact NW
Circuit Breaker



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Main technical characteristics

	DA	Masterpact NW
Rated operational voltage (V AC 50/60Hz) Ue	660V	690V
Rated current (A) In 40° C	630-6300A	800-6300A
Ultimate breaking capacity (kA rms, 220/415VAC 50/60Hz) Icu	42-100kA	42-150kA

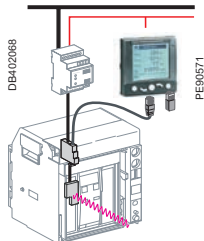


DA ECOFIT™ solution

The ECOFIT™ DA solution enables to benefit from all the enhanced features of Masterpact NW circuit breakers and accessories.

It requires total shutdown of the installation to access the busbars.

The kit solution (including circuit breaker) is available for fixed and withdrawable types, 3p & 4p, 630 to 6300A.



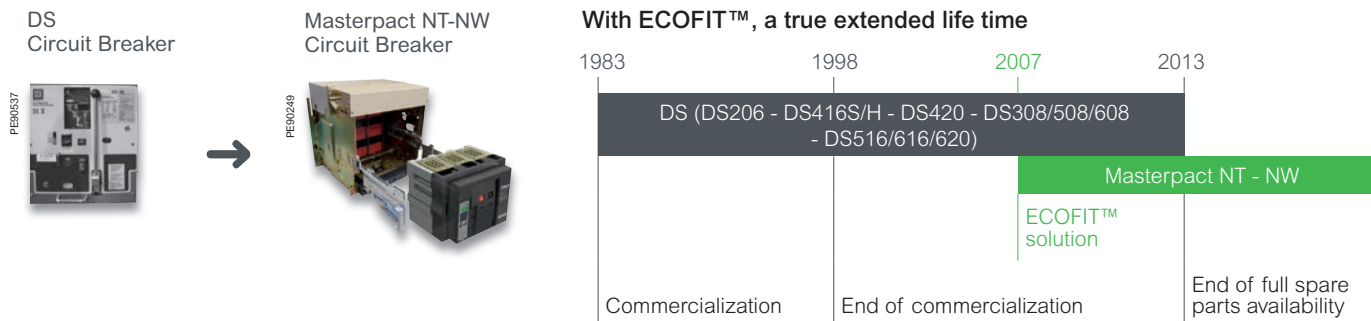
Active Energy Management™ programme that includes an energy metering system

- Identify the device,
- Indicate status conditions,
- Control the device (with communication auxiliaries),
- Setting of the protection and alarm functions.

DS by Masterpact NT - NW

Original brand: Square D, Westinghouse

ECOFIT™ proposal



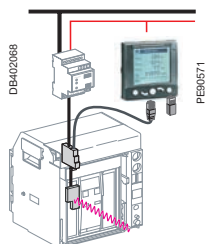
Main technical characteristics

	DS	Masterpact NT - NW
Rated operational voltage (V AC 50/60Hz) Ue	600V	600V
Rated current (A) In 40° C	800-2000 A	800-2000 A
Ultimate breaking capacity (kA rms, 220/415V AC 50/60Hz) Icu	42-65 kA	42-65 kA



DS ECOFIT™ solution

The ECOFIT™ DS solutions fixed or draw-out types enable to benefit from all the enhanced features of Masterpact NT or NW circuit breakers and accessories.



Active Energy Management™ programme that includes an energy metering system

- Identify the device,
- Indicate status conditions,
- Control the device (with communication auxiliaries),
- Setting of the protection and alarm functions.

H Series by Masterpact NT - NW

Original brand: Federal Pioneer

ECOFIT™ proposal

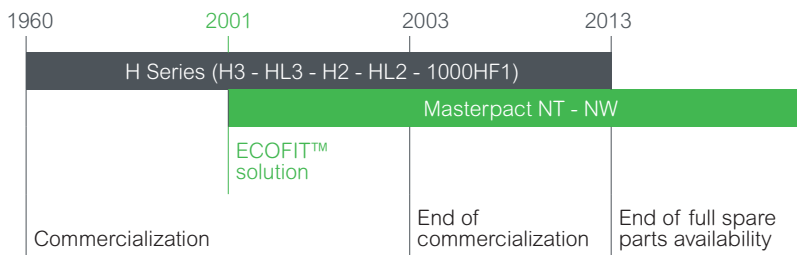
H Series
Circuit Breaker



Masterpact NT-NW
Circuit Breaker



With ECOFIT™, a true extended life time



Main technical characteristics

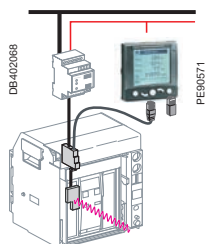
	H Series	Masterpact NT - NW
Rated operational voltage (V AC 50/60Hz) Ue	600V	600V
Rated current (A) In 40° C	600-4000 A	800-6000A
Ultimate breaking capacity (kA rms, 220/415VAC 50/60Hz) Icu 30-200* kA		30-200* kA

* with fuse



H Series ECOFIT™ solution

The ECOFIT™ H Series solutions fixed or draw-out types enable to benefit from all the enhanced features of Masterpact NT or NW circuit breakers and accessories.



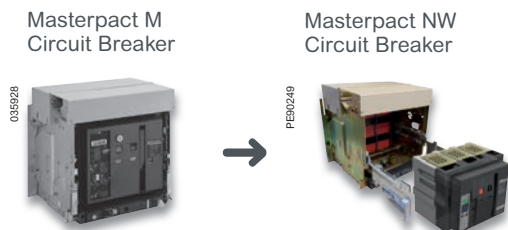
Active Energy Management™ programme that includes an energy metering system

- Identify the device,
- Indicate status conditions,
- Control the device (with communication auxiliaries),
- Setting of the protection and alarm functions.

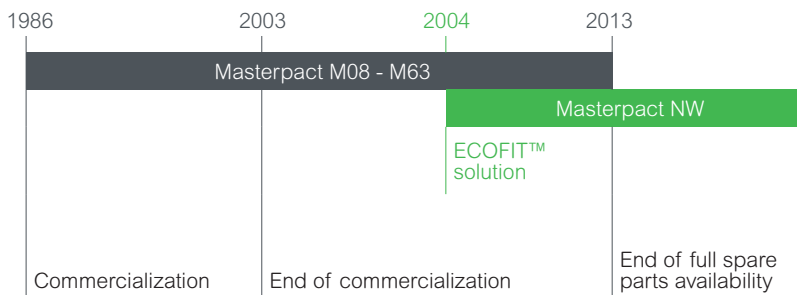
Masterpact M08 - M63 by Masterpact NW08 -NW63

Original brand: Merlin Gerin

ECOFIT™ proposal



With ECOFIT™, a true extended life time



Main technical characteristics

	Masterpact M08 - M63	Masterpact NW
Rated operational voltage (V AC 50/60Hz) Ue	690V	690V
Rated current (A) In 40° C	800-6300A	800-6300A
Ultimate breaking capacity (kA rms, 220/415VAC 50/60Hz) Icu 40-150kA		42-150kA

Masterpact M ECOFIT™ solution

Plug & Play

The ECOFIT™ Masterpact Plug & Play solution lets you retrofit the Masterpact NW circuit breakers in the existing Masterpact M chassis.

Solution available for withdrawable type only, 3P & 4P, 800A to 3200A.



1 Removal



2 Replacement



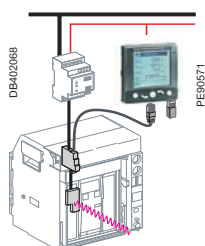
Masterkit

The ECOFIT™ Masterkit solution enables to benefit from all the enhanced features of Masterpact NW circuit breakers and accessories without modifying the busbars. It requires total shutdown of the installation to access the busbars.

Solution available for fixed and withdrawable types, 3P & 4P, 800A to 6300A.

Active Energy Management™ programme that includes an energy metering system

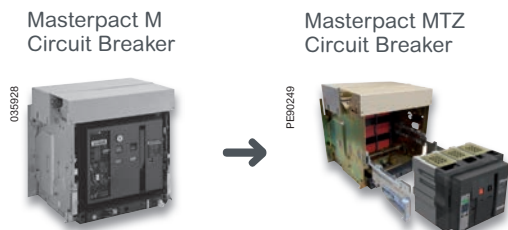
- Identify the device,
- Indicate status conditions,
- Control the device (with communication auxiliaries),
- Setting of the protection and alarm functions.



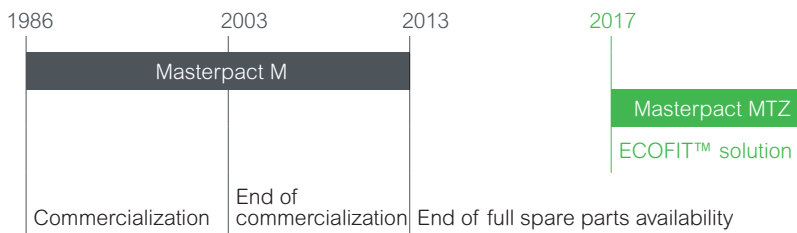
Masterpact M08 - M63 by Masterpact MTZ2 08 - MTZ3 63

Original brand: Merlin Gerin

ECOFIT™ proposal



With ECOFIT™, a true extended life time



Main technical characteristics

	Masterpact M08 - M63	Masterpact MTZ
Rated operational voltage (V AC 50/60Hz) Ue	690V	690V
Rated current (A) In 40° C	800-6300 A	800-6300 A
Ultimate breaking capacity (kA rms, 220/415V AC 50/60Hz) Icu	40-150 kA	42-150 kA

Masterpact M ECOFIT™ solution

Plug & Play

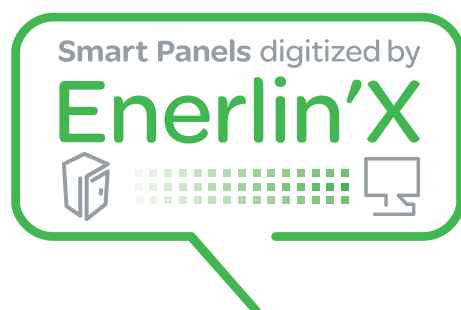
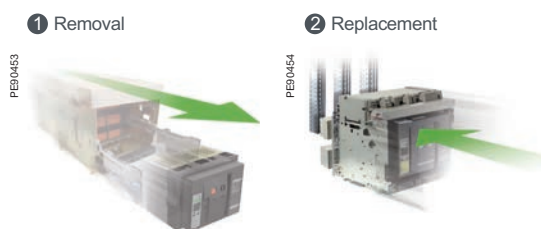


The ECOFIT™ Masterpact Plug & Play solution allows you to retrofit the latest generation of Masterpact MTZ circuit breakers in the existing Masterpact M chassis. Solution available for withdrawable type only, 3P & 4P, 800 A to 3200 A.

Masterkit

The ECOFIT™ Masterkit solution enables to benefit from all the enhanced features of Masterpact MTZ circuit breakers and accessories without modifying the busbars. It requires total shutdown of the installation to access the busbars.

Solution available for fixed and withdrawable types, 3P & 4P, 800 A to 6300 A.



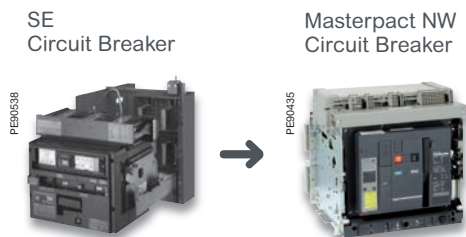
Masterpact MTZ with Micrologic X improves Enerlin'X digital system

By collecting circuit breaker and actuator status, electrical and counting values, Enerlin'X provides a simple and reliable access to local LCD displays and expert applications.

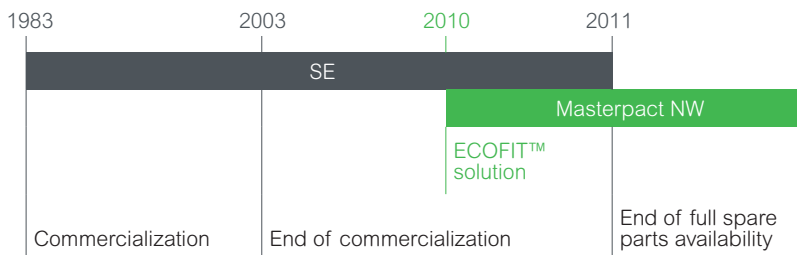
SE by Masterpact NW

Original brand: Square D, Westinghouse

ECOFIT™ proposal

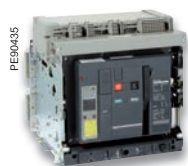


With ECOFIT™, a true extended life time



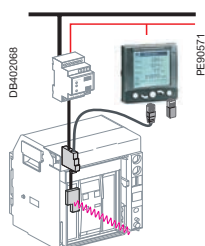
Main technical characteristics

	SE	Masterpact NW
Rated operational voltage (V AC 50/60Hz) Ue	600V	600V
Rated current (A) In 40° C	1250-3000A	1250-3000A
Ultimate breaking capacity (kA rms, 220/415VAC 50/60Hz) Icu 100kA		85kA



SE ECOFIT™ solution

The ECOFIT™ SE solutions fixed or draw-out types enable to benefit from all the enhanced features of Masterpact NT or NW circuit breakers and accessories.



Active Energy Management™ programme that includes an energy metering system

- Identify the device,
- Indicate status conditions,
- Control the device (with communication auxiliaries),
- Setting of the protection and alarm functions.

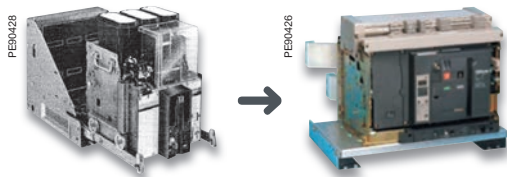
Selpact by Masterpact NT-NW

Original brand: Merlin Gerin

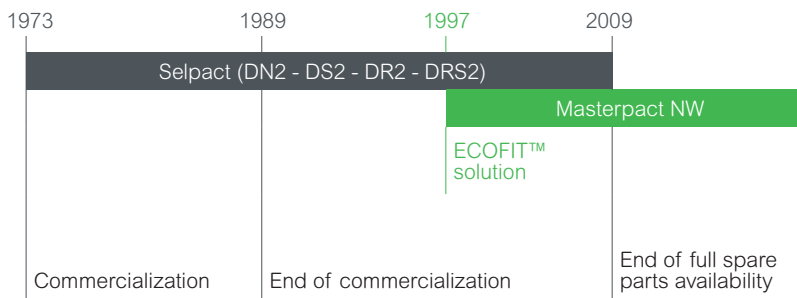
ECOFIT™ proposal

Selpact
Circuit Breaker

Masterpact NW
Circuit Breaker



With ECOFIT™, a true extended life time



Main technical characteristics

	Selpact	Masterpact NW
Rated operational voltage (V AC 50/60Hz) Ue	660V	690V
Rated current (A) In 40° C	630-3200 A	800-3200 A
Ultimate breaking capacity (kA rms, 220/415V AC 50/60Hz) Icu	42-100 kA	42-100 kA

Selpact ECOFIT™ solution

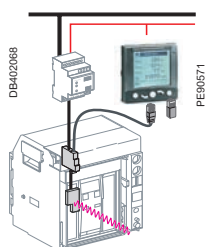
The ECOFIT™ Selpact solutions enable to benefit from all the enhanced features of Masterpact NT or NW circuit breakers and accessories.

Plug & Play

The Plug&Play solution is available for withdrawable type only, 3p & 4p, 630 to 1600 A.

Kit

The kit solution (including circuit breaker) is available for fixed and withdrawable types, 3p & 4p, 630 to 3200 A.



Active Energy Management™ programme that includes an energy metering system

- Identify the device,
- Indicate status conditions,
- Control the device (with communication auxiliaries),
- Setting of the protection and alarm functions.

LV Circuit Breaker - Associated offers

Energy Management - Micrologic control units - Measurements and protections

Available for ECOFIT™ solutions using Masterpact NT/NW and Compact NS



Micrologic	2	5	6	7
Type	A - E	A - E - P - H	A - E - P - H	A - P - H
Functions	Long time + instantaneous	Long time + short time + instantaneous	Long time + short time + instantaneous + earth fault	Long time + short time + instantaneous + earth leakage up to 3200A

A: Current measurements, fault indications, display and current maximeter.

Specificities: 6.0 provides earth fault protection (residual or Source Ground Return); 7.0 provides earth leakage protection.

E: A + Instantaneous measurement of power and energy without earth leakage protection.

P: A + Calculation of power and energy value, voltage measurement, and programmable protection

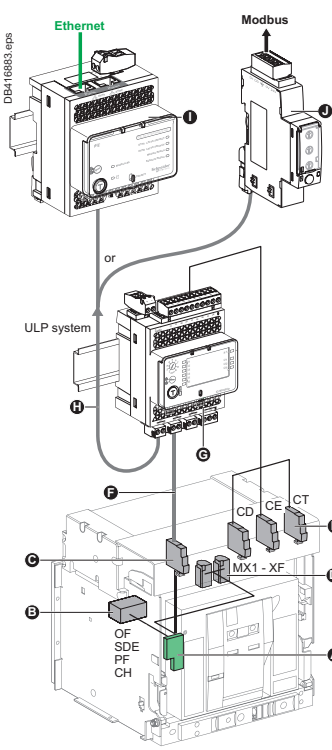
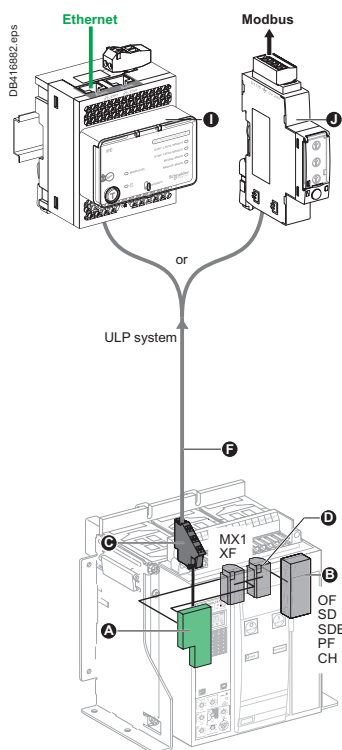
H: P + Harmonics

Energy Management - Communication

Available for ECOFIT™ solutions using Masterpact NT/NW and Compact NS

Fixed device

Withdrawable device

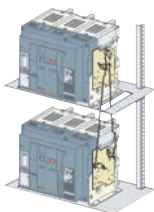


- A BCM ULP
- B OF, SDE ... microswitches
- C COM terminal block (E1 to E6)
- D MX1 and XF communicating voltage releases
- E CE, CD and CT contacts
- F Breaker ULP cord
- G I/O application module
- H ULP cable
- I IFE module
- J IFM module

Source-changeover systems

Available for DA, Selpact and Masterpact M ECOFIT™ solutions using Masterpact NT/NW

Mechanical interlocking (2 types)	Automatic controllers	
Using connecting rods or using cables	IVE: Electrical interlocking	BA or UA automatic controllers



LV Circuit Breaker - Associated offers

Measurements - Diagnostics & Maintenance - Protections - Communication

Available for ECOFIT™ solutions using Masterpact MTZ



Micrologic	2.0X	5.0X	6.0X	7.0X
Functions	Long time + instantaneous	Long time + short time + instantaneous	Long time + short time + instantaneous + earth fault	Long time + short time + instantaneous + earth leakage up to 3200A

Measurement: Energy management is the challenge of present & future generations. To meet this requirement Micrologic X incorporates all the measuring functions of a power meter including Energy Class 1 accuracy 3rd party certified.

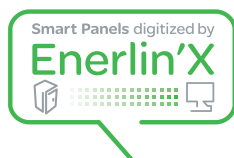
Diagnostics & Maintenance: Optimal continuity of services as well as extended life of equipment is one of customers main concerns. For that purpose Micrologic X integrates new extended diagnosis and assistance to maintenance.

Protection: Improvement of the reliability of Micrologic X, dual settings and additional facilities increase the performance and the flexibility of low voltage systems of protection.

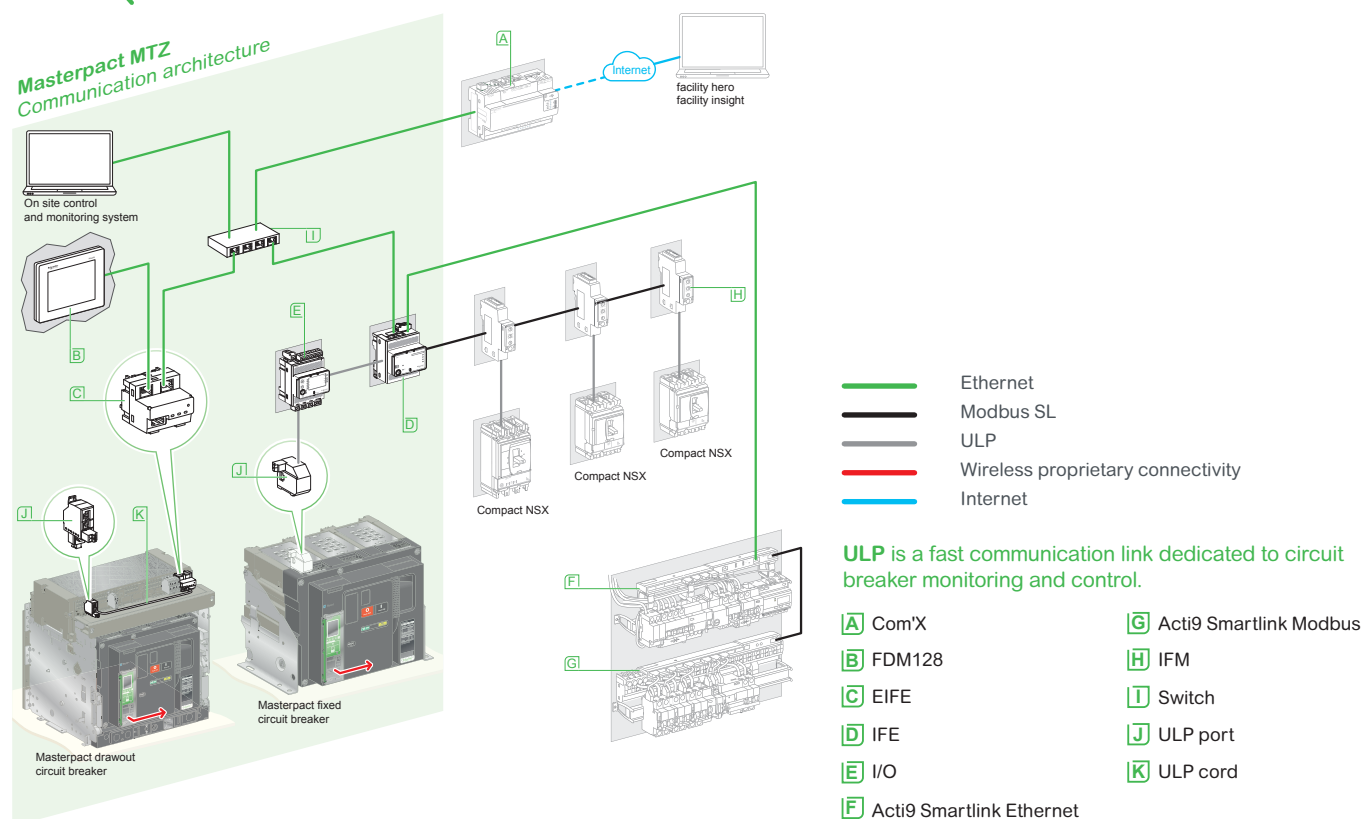
Communication: It is now usual to make available most of the information processed by a Protection Control Unit, locally for network operation and maintenance, and remotely for higher functions of control, monitoring, energy efficiency and assets management. To comply with this requirement Micrologic X, incorporates several channels of communication, including Ethernet and wireless communication facilities.

Smartpanel integration, architecture and systems

Available for ECOFIT™ solutions using Masterpact MTZ



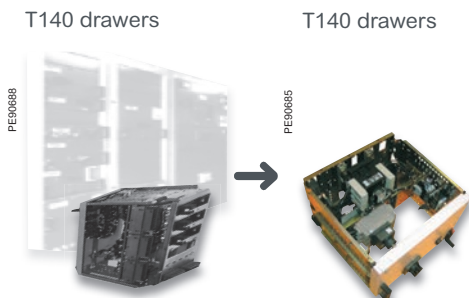
example of digitized switchboard architecture



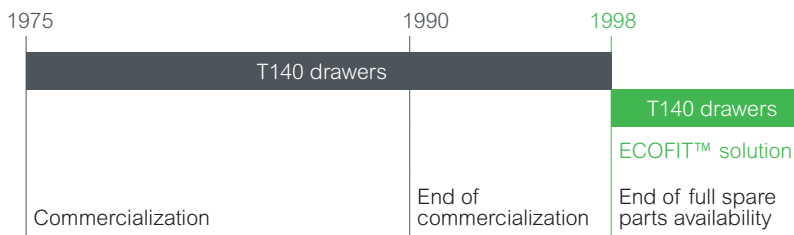
T140 drawers by T140 drawers

Original brand: Merlin Gerin

ECOFIT™ proposal

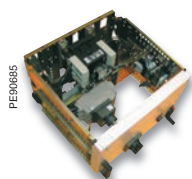


With ECOFIT™, a true extended life time



Main technical characteristics

	T140 drawers	T140 drawers
Rated operational voltage (V AC 50/60Hz) Ue	440V	440V
Rated current (A) In 40° C	125-625A	125-625A
Ultimate breaking capacity (kA rms, 220/415VAC 50/60Hz) Icu	1 to 6	1 to 6



T140 drawers ECOFIT™ solution

The ECOFIT™ T140 drawer solution enables to benefit from all the enhanced features of latest technology devices.

The drawer solutions are suitable for manual or electrical operations.

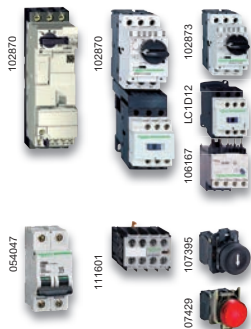


T140 drawers ECOFIT™ solution - Drawer components

•Electrical distribution - Functional units (NSX range with Micrologic)

•Motor control command and protections - Functional units.

•Control command auxiliaries for all types of drawers.



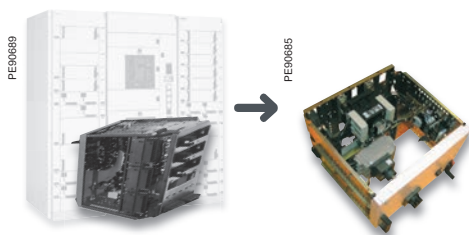
MB400 drawers by MB400 drawers

Original brand: Merlin Gerin

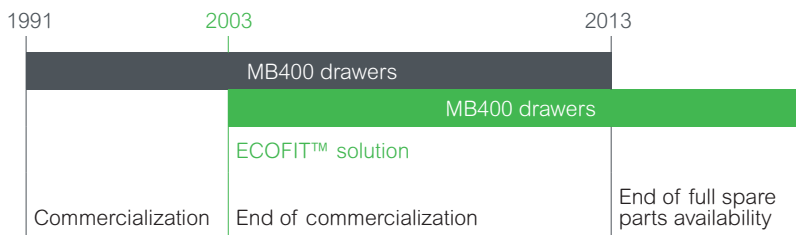
ECOFIT™ proposal

MB400 drawers

MB400 drawers

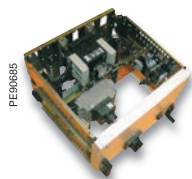


With ECOFIT™, a true extended life time



Main technical characteristics

	MB400 drawers	MB400 drawers
Rated operational voltage (V AC 50/60Hz) Ue	440V	440V
Rated current (A) In 40° C	125-625A	125-625A
Ultimate breaking capacity (kA rms, 220/415VAC 50/60Hz) Icu	1 to 6	1 to 6



MB400 drawers ECOFIT™ solution

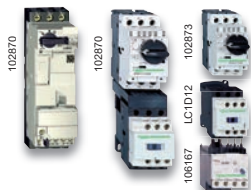
The ECOFIT™ MB400 drawer solution enables to benefit from all the enhanced features of latest technology devices.

The drawer solutions are suitable for manual or electrical operations.

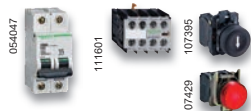


MB400 drawers ECOFIT™ solution - Drawer components

•Electrical distribution - Functional units (NSX range with Micrologic)



•Motor control command and protections - Functional units.



•Control command auxiliaries for all types of drawers.

LV Drawers - Associated offers

Drawer components: Electrical distribution - Functional units (NSX range)

Available for ECOFIT™ solutions using Masterpact NT/NW and Compact NS



Micrologic	2.2 or 2.3	5.2 or 5.3	6.2 or 6.3
Type		A - E	A - E
Functions	LSI protection	LSI protection Ammeter Energy meter	LSI protection Ammeter Energy meter

A: Current measurements, fault indications, display and current maximeter. Specificities: 6.0 provides earth fault protection (residual or Source Ground Return); 7.0 provides earth leakage protection.

E: A + Instantaneous measurement of power and energy without earth leakage protection.

Drawer components: Motor control command and protections - Functional units

Available for ECOFIT™ solutions using Masterpact NT/NW and Compact NS

1 component motor feeder	2 components motor feeder	3 components motor feeder
Circuit breaker - Contactor combination	Thermomagnetic circuit breaker + Contactor	Thermomagnetic circuit breaker or switch- disconnector fuse + Contactor + Thermal protection

Drawer components: Control command auxiliaries for all types of drawers

Available for ECOFIT™ solutions using Masterpact NT/NW and Compact NS

Miniature circuit-breaker Protection auxiliary circuit	Auxiliary relays
Ground fault protection	Push buttons and lights

Specific spare parts: for any spare parts request for the fixe part, please contact your local correspondent.

Compact Plug & Play - Order Form

GCR_PP_NS_CB or GCR_PP_NS_SD

Order N°	
Delivery address	

Customer's name	
-----------------	--

To indicate your choices, check the applicable square and enter the appropriate information in the rectangles

Circuit breaker or switch-disconnector

NS800 to NS1250

Rating	A	
Circuit breaker	N, H	
Switch-disconnector	NA	
Number of poles	3 or 4	
Device	Fixed	X

Micrologic control unit

Basic protection	2.0		5.0		6.0*	
A - Ammeter	2.0		5.0		6.0*	7.0*
E - Energy	2.0		5.0		6.0*	
P - Power		5.0		6.0*		7.0*

* For residual or source ground return earth fault protection with Micrologic 6 and earth leakage protection with Micrologic 7, please contact your Country Account Manager

AD - External power-supply module	V	
LR - Long-time rating plug	Standard 0.4 to 1 Ir	
	Low setting 0.4 to 0.8 Ir	
	High setting 0.8 to 1 Ir	
	LT off	

Communication

COM module: contact your country Account manager

Micrologic control unit functions:

- 2.0: basic protection (long time+ inst.)
- 5.0: selective protection (long time + short time + inst.)
- 6.0: selective + earth-fault protection (long time + short time + inst. + earth-fault)
- 7.0: selective + earth-leakage protection (long time + short time + inst. + earth-leakage)

Plug&Play solution	
Kit Plug&Play C801/1251	Qty

Options

Door option kit for electric mechanism or direct manual mechanism (include transparent cover ref 33859)	Qty
Door option kit for prolonged manual mechanism	Qty

Indication contacts

NS800 to NS1250	SD trip indication (maximum 1) (only for manually operated devices)	
6 A-240 V AC	Qty	Low level
		Qty
	SDE "fault-trip" indication (maximum 1) (SDE integrated in electrically operated devices)	
6 A-240 V AC	Qty	Low level
		Qty
	OF ON/OFF indication contacts (maximum 3)	
6 A-240 V AC	Qty	Low level
		Qty

Remote operation

Electrical operation	Standard	
Power supply	AC	DC
Voltage releases	MX	AC
	MN	AC
	MN delay unit	Adjustable
		Non-adjustable

Rotary handles for NS800/1250 fixed device

Direct	Black	
		Red on yellow front
		CNOMO conversion access
Extended	Black	
		Red on yellow front

Locking (compulsory information)

Locking delivered and mounting on ECOFIT: 2 identical locks + 1 key for tripping withdrawal - specify Ronis or Profalux

Rotary handle using a keylock	Ronis	
		Profalux

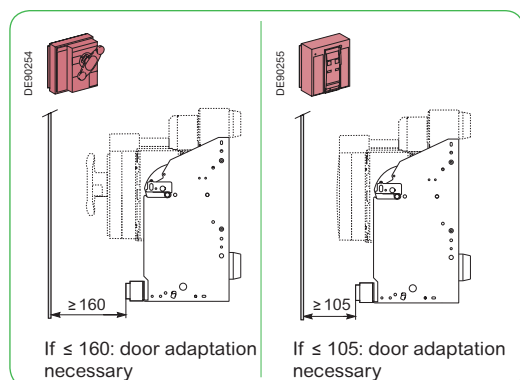
For electrically operated devices	VBP - ON/OFF pushbutton locking (by transparent cover + padlocks)	
	OFF position locking. VSPO - by keylocks:	
	2 identical keylocks, 1 key	Profalux
		Ronis

Accessories

CDM - mechanical operation counter (not compatible with rotary handle)	
Test kits	Mini test kit

Spare parts for C801/C1251 chassis

2 clusters	Ref. EF533706	Qty
Set of 5 fixed female connector	Ref. EF533707	Qty
Lockable bolt on fixed chassis	Ref. EF533708	Qty



NOTA

- Pre-tripping with keylock locking (included as standard).
- If NS electrically operated: only SDE available / SD not available.
- Discrimination & cascading: refer to <http://hto.power.schneider-electric.com/>
- Solution not applicable for communication.
- Solution not applicable for control type toggle.
- CTs Compact C not compatible with Compact NS.
- Compact Plug&Play equipped with C4 type lock (MV/LV/transformer interlocking. Availability: June 2013)
- Compact Plug&Play can not be used for Compact C801/1251 drawout breaker on cradle (with RED operating handle)
- If Compact C behind door, pay attention to minimal distance between door and CB.
 - In case of manual Compact NS, the door kit is compulsory for X < 160 mm.
 - In case of motorized Compact NS, the door kit is compulsory for X < 105 mm.

Compactkit - Order Form

MPA5099C or MPA5118C

Order N° Delivery address Customer's name

To indicate your choices, check the applicable square and enter the appropriate information in the rectangles

Circuit breaker or switch-disconnector

NS800 to NS1250

Rating	A	☐
Circuit breaker	N, H	☐
Switch-disconnector	NA	☐
Number of poles	3 or 4	☐
Device	Fixed	☒

Micrologic control unit

Basic protection	2.0	☐	5.0	☐	6.0*	☐	
A - Ammeter	2.0	☐	5.0	☐	6.0*	☐	7.0*
E - Energy	2.0	☐	5.0	☐	6.0*	☐	
P - Power		☐	5.0	☐	6.0*	☐	7.0*

* For residual or source ground return earth fault protection with Micrologic 6 and earth leakage protection with Micrologic 7, please contact your Country Account Manager

AD - External power-supply module	V	☐
LR - Long-time rating plug	Standard 0.4 to 1 Ir	☐
	Low setting 0.4 to 0.8 Ir	☐
	High setting 0.8 to 1 Ir	☐
	LT off	☐

Communication

COM module: contact your country Account manager

Micrologic control unit functions:

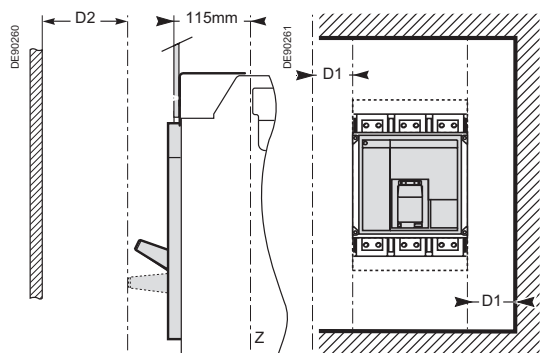
- 2.0: basic protection (long time + inst.)
- 5.0: selective protection (long time + short time + inst.)
- 6.0: selective + earth-fault protection (long time + short time + inst. + earth-fault)
- 7.0: selective + earth-leakage protection (long time + short time + inst. + earth-leakage)

NS800/1250 connection

Front connections	Top & Bottom	☐
Horizontal rear connections	Top & Bottom	☐
Vertical rear connections	Top & Bottom	☐

Note:

Check dimensions according to the below table, i.e. dimensions are the necessary space to be added to the existing C801/1251 to allow installation of the Compactkit solutions.



Axis Z is the back plane of the Compact C 3-pole device.

C801/1251 Compactkit solution (references not adapted, supplied as loose components)

Front connection (Top&Bottom)	3P ref. EF593816	Qty	4P ref. EF593819	Qty
Rear horizontal connection (Top&Bottom)	3P ref. EF593817	Qty	4P ref. EF593820	Qty
Rear vertical connection (Top&Bottom)	3P ref. EF593818	Qty	4P ref. EF593821	Qty

Indication contacts

NS800 to NS1250 SD trip indication (maximum 1) (only for manually operated devices)

6 A-240 V AC	Qty	Low level	Qty
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SDE "fault-trip" indication (maximum 1) (SDE integrated in electrically operated devices)

6 A-240 V AC	Qty	Low level	Qty
--------------	--------------------------	-----------	--------------------------

OF ON/OFF indication contacts (maximum 3)

6 A-240 V AC	Qty	Low level	Qty
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Remote operation

Electrical operation	Standard	☐			
Power supply	AC	☐	DC	☐	V
Voltage releases	MX	AC	DC	☐	V
	MN	AC	DC	☐	V
MN delay unit			Adjustable	☐	Non-adjustable ☐

Rotary handles for NS800/1250 fixed device

Direct	Black	☐	Red on yellow front	☐
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Locking

Toggle (1 to 3 padlocks)		Removable system		Fixed system	
Rotary handle using a keylock	OFF position				
	Ronis 1351B.500			Profalux KS5 B24 D4Z	
				Keylock kit (without keylock)	
For electrically operated devices	VBP - ON/OFF pushbutton locking (by transparent cover + padlocks)				
	OFF position locking:				
	VCPO - by padlocks				
	VSPO - by keylocks:				
	Keylock kit (w/o keylock)		Profalux		Ronis
	1 keylock		Profalux		Ronis
	2 identical keylocks, 1 key		Profalux		Ronis

Accessories

CDM - mechanical operation counter

Test kits	Mini test kit	☐
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C801/1251 Compactkit solution - Door option kits (operation through door)⁽¹⁾

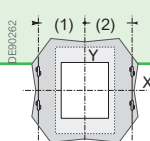
Front connection electrical operation	3P ref. EF593822	Qty	4P ref. EF593826	Qty
Rear connection electrical operation	3P ref. EF593823	Qty	4P ref. EF593827	Qty
Front connection toggle or direct rotary handle	3P ref. EF593824	Qty	4P ref. EF593828	Qty
Rear connection toggle or direct rotary handle	3P ref. EF593825	Qty	4P ref. EF593829	Qty

⁽¹⁾ Restriction in case of operation through door

Axis X & Y are the symmetry planes of the Compact C 3-pole device. If door opens to the left: not suitable for rotary handle operation.

Axis Z is the back plane of the Compact C 3-pole device. Distance between axis Z and door is 115mm.

(1) 194 mini (3P) - 264 mini (4P) / (2) 194 mini



	Manual. by direct rotary handle	Manual. by short toggle	Manual. by long toggle	Electrically by Type T	Electrically by Type TS
Fixed front connection	D1 + 0 mm	+ 0 mm	+ 0 mm	+ 0 mm	+ 0 mm
	D2 + 0 mm	+ 45 mm	+ 15 mm	+ 0 mm	+ 30 mm
Fixed horizontal rear connection	D1 + 15 mm	+ 15 mm	+ 15 mm	+ 15 mm	+ 15 mm
	D2 + 70 mm	+ 110 mm	+ 80 mm	+ 50 mm	+ 95 mm
Fixed vertical rear connection	D1 + 15 mm	+ 15 mm	+ 15 mm	+ 15 mm	+ 15 mm
	D2 + 70 mm	+ 110 mm	+ 80 mm	+ 50 mm	+ 95 mm

Masterpact M Plug & Play - Order Form

GCR_PP_NW_CB or GCR_PP_NW_SD

To indicate your choices, check the applicable square boxes and enter the appropriate information in the rectangles		X	
Circuit breaker or switch-disconnector		Qty	
Masterpact type	Plug & Play NW		
Rating	A		
Sensor rating	A		
Circuit breaker	N1, H1, H2		
If H1 , for ratings ≥ 2000 A, please precise:			
	65 kA	☐	75 kA
Switch-disconnector	HF		
Number of poles	3 or 4⁽¹⁾		
Type of equipment	Drawout without chassis (moving part only)	X	
Micrologic control unit			
A - ammeter	2.0	☐	5.0
E - energy ⁽²⁾	2.0	☐	5.0
P - power meter	5.0	☐	6.0
H - harmonic meter	5.0	☐	6.0
LR - long-time rating plug	Standard 0.4 to 1 Ir		
	Low setting 0.4 to 0.8 Ir		
	High setting 0.8 to 1 Ir		
	LR OFF		
AD - external power-supply module	V	☐	
BAT - battery module			
TCE - external sensor (CT) for neutral and residual ground-fault protection			
TCE - external sensor (CT) for over sized neutral (3P - Micrologic P/H) and residual earth-fault protection			
TCW - external sensor for SGR protection			
Rectangular sensor for earth-leakage protection NW (470 x 160 mm)			
PTE - external voltage connector			
Communication⁽³⁾			
COM module	ModBus ⁽⁴⁾	Breaker	Chassis ⁽⁵⁾
Eco COM module	ModBus	Breaker	
Front display module (FDM121)		Mounting accessories	
Breaker ULP cord	L = 0.35 m		
	L = 1.3 m		
	L = 3 m		

- (1) 4p = neutral on left side. For neutral on right side, please consult France Grenoble ECOFIT center.
 (2) 5.0 recommended
 (3) - For Masterpact M with communicating STR68U + ET44: consult us
 - Incompatibility between Digipact internal bus or modules and Micrologic
 - Compatibility between Jbus and Micrologic: consult us
 (4) COM recommended
 (5) Incompatibility between Masterpact M chassis "connected/test/disconnected" indication contacts and Masterpact Modbus chassis communication module CCM
 (6) Masterpact Plug&Play is not suitable in case Masterpact M chassis is equipped with a test position switch (CT)

Micrologic control unit functions:

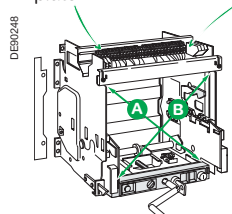
- 2.0: basic protection (long time + inst.)
 5.0: selective protection (long time + short time + inst.)
 6.0: selective + ground-fault protection (long time + short time + inst. + earth-fault)
 7.0: selective + earth-leakage protection (long time + short time + inst. + earth-leakage)

Indication contacts⁽⁶⁾			
OF - ON/OFF indication contacts			
Standard	4 OF 6 A-240 V AC (10 A-240 V AC and low-level for NW)		
Additional	1 block of 4 OF for NW	Max. 2	qty
SDE - "fault-trip" indication contact			
Standard	1 SDE 6 A-240 V AC		
Additional	1 SDE 6 A-240 V AC	☐	1 SDE low level
Programmable contacts	2 M2C contacts	☐	6 M6C contacts
Remote operation			
Remote ON/OFF	MCH - gear motor	V	☐
	XF - closing voltage release	V	☐
	MX - opening voltage release	V	☐
	PF - "ready to close" contact	6 A-240 V AC	☐
		Low level	☐
	BPFE - electrical closing pushbutton	V	☐
	RES - remote electrical reset option	V	☐
	RAR - automatic reset option		☐
Remote tripping	MN - undervoltage release	V	☐
	R - delay unit (non-adjustable)		☐
	Rr - adjustable delay unit		☐
	2nd MX - shunt release	V	☐
Locking			
VBP - ON/OFF pushbutton no access (by transparent cover + padlocks)			
OFF position locking:			
VCPO - by padlocks			☐
VSPO - by keylocks	Keylock kit (without keylock)	Profalux	Ronis
	1 keylock	Profalux	Ronis
	2 identical keylocks, 1 key	Profalux	Ronis
	2 keylocks, different keys (NW)	Profalux	Ronis
Mechanical interlock (source-changeover systems)			
Interlocking axle and installation kit (ref: EF548613)			
Accessories			
Breaker/chassis mismatch protection (ref: EF547056)			
Mini test kit			
CDM - mechanical operation counter			

ECOFIT Plug & Play solutions require Masterpact M chassis in full working order

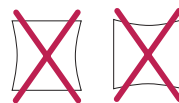
If chassis is bent or damaged, Plug & Play solution is not possible, use Masterkit solution. Refer to Masterpact Plug & Play user manual for more information.

Auxiliary wiring connector plate



Measure the diagonals to make sure the chassis is not distorted or warped ($A = B$).

Check visually for any deformed parts (e.g. inward or outward bulges).



Make sure there are no visible cracks on the chassis.

Carry out a racking test (in and out) 3 times without the circuit breaker and check the movement of:

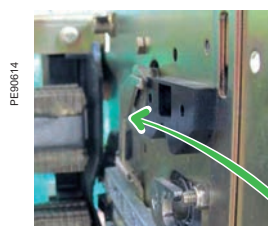
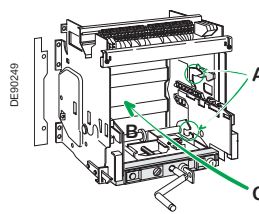
- the safety shutters
- the auxiliary wiring connector plate
- the drawer site plates.

A- Check that all moving parts (pawls, cams) work properly.

- B- Check cradle worm screw:
- 1 Disconnected position without the breaker
 - 2 Note abutment rear (x2)
 - 3 Connect until the return of the hook
 - 4 to remain; one turn + 1/4 maximum
 - 5 Note abutment intermediary (x2)
 - 6 If not OK ► make adjustment with Annex 1

C- Check the contact clusters. If they are in good condition, clean and lubricate them. If not, replace them.

Check for any bent or distorted parts that could hinder insertion of the Masterpact circuit breaker.



Masterkit - Order Form

GCR_MASTERKIT_NW or GCR_MASTERKIT_NWSD or GCR_MKT_CHASSIS

To indicate your choices, check the applicable square boxes ☒ and enter the appropriate information in the rectangles

Circuit breaker or switch-disconnector		Qty
Masterpact type	NW	
Rating	A	
Sensor rating	A	
Circuit breaker	N1, H1, H2, L1	
L1: only for M08 to M20 drawout type		
Switch-disconnector	NA, HA, HF	
Number of poles	3 or 4	
Option: neutral on right side (NW)		
Type of equipment	Fixed	
	Drawout with chassis	
	Drawout without chassis (moving part only)	
	Chassis alone	

Micrologic control unit								
A - ammeter	2.0		5.0		6.0		7.0	
E - energy ⁽¹⁾	2.0		5.0		6.0			
P - power meter			5.0		6.0		7.0	
H - harmonic meter			5.0		6.0		7.0	
LR - long-time rating plug	Standard 0.4 to 1 Ir							
	Low setting 0.4 to 0.8 Ir							
	High setting 0.8 to 1 Ir							
	LR OFF							
AD - external power-supply module		V						
BAT - battery module								
TCE - external sensor (CT) for neutral and residual ground-fault protection								
TCW - external sensor for SGR protection								
Rectangular sensor for earth-leakage protection NW (470 x 160 mm)								
PTE - external voltage connector								

Communication ⁽²⁾			
COM module ⁽³⁾	ModBus	Breaker	Chassis
Eco COM module	ModBus	Breaker	Chassis ⁽⁴⁾
Front display module (FDM121)		Mounting accessories	
Breaker UL P cord	L = 0.35m		
	L = 1.3m		
	L = 3m		

Connection (rear only)			
Horizontal	Top		Bottom
Vertical	Top		Bottom

For M40 4P fixed type, no possible mix between horizontal and vertical connections
For M63 drawout horizontal connection, consult us

- (1) 5.0 recommended
(2) -For Masterpact M with communicating STR68U + ET44: consult us
- Incompatibility between Digipact internal bus or modules and Micrologic
- Compatibility between Jbus and Micrologic: consult us
(3) COM recommended
(4) For drawout breakers, please order 1 ModBus chassis COM module CCM

Micrologic control unit functions:
2.0: basic protection (long time + inst.)
5.0: selective protection (long time + short time + inst.)
6.0: selective + ground-fault protection (long time + short time + inst. + earth-fault)
7.0: selective + earth-leakage protection (long time + short time + inst. + earth-leakage)

Indication contacts

OF - ON/OFF indication contacts			
Standard	4 OF 6 A-240 V AC (10 A-240 V AC and low-level for NW)		
Additional	1 block of 4 OF for NW	Max. 2	qty

EF - combined "connected/closed" contacts			
	1 EF 6 A-240 V AC for NW	Max. 8	qty
	1 EF low-level for NW	Max. 8	qty

SDE - "fault-trip" indication contact			
Standard	1 SDE 6 A-240 V AC		
Additional	1 SDE 6 A-240 V AC		1 SDE low level

Programmable contacts			
	2 M2C contacts		6 M6C contacts

Carriage switches			
	6 A-240 V AC		Low level
CE - "connected" position	Max. 3 for NW		qty
CD - "disconnected" position	Max. 3 for NW		qty
CT - "test" position	Max. 3 for NW		qty

AC - NW actuator for 6 CE - 3 CD - 0 CT additional carriage switches			
			qty

Remote operation

Remote ON/OFF			
MCH - gear motor		V	
XF - closing voltage release		V	
MX - opening voltage release		V	
PF - "ready to close" contact	6 A-240 V AC		
	Low level		
BPFE - electrical closing pushbutton		V	
RES - remote electrical reset option		V	
RAR - automatic reset option			
Remote tripping			
MN - undervoltage release		V	
R - delay unit (non-adjustable)			
Rr - adjustable delay unit			
2 nd MX - shunt release		V	

Locking

VBP - ON/OFF pushbutton no access (by transparent cover + padlocks)			
Breaker OFF position locking:			
VCPO - by padlocks			
VSPO - by keylocks	Keylock kit (without keylock)	Profalux	
	1 keylock	Profalux	
	2 identical keylocks, 1 key	Profalux	
	2 keylocks, different keys (NW)	Profalux	

Chassis locking in "disconnected" position:			
VSPO - by keylocks	Keylock kit (without keylock)	Profalux	
		Kirk	
	1 keylock	Profalux	
	2 identical keylocks, 1 key	Profalux	
	2 keylocks, different keys (NW)	Profalux	

Optional connected/disconnected/test position lock			
VPEC - door interlock		On right-hand side chassis	
		On left-hand side chassis	

VPOC - racking interlock	
IPA - cable-type door interlock	
VDC - breaker/chassis mismatch protection	
VIVC - shutter position indication and locking	
IBPO - racking interlock between crank and OFF pushbutton	
DAE - automatic spring discharge before breaker removal	

Accessories

VO - safety shutters on chassis		X
CDM - mechanical operation counter		
CB - auxiliary terminal shield for chassis		
CDP - escutcheon		
CP - transparent cover for escutcheon		
OP - blanking plate for escutcheon		
KTM - grounding kit		
Mini test kit		
Masterkit power isolation kit		

Masterpact M Plug & Play - Order Form

GCR_PP_MTZ2_CB

To indicate your choices, check the applicable square boxes and enter the appropriate information in the rectangles

Quantity

Number of Devices

* The quantity specified here will not affect the quantity of spare parts.

Basic Configuration

Masterpact type	P&P MTZ2	☐
Rating (3200A max)	A	☐
Sensor rating	A	☐
Circuit breaker	N1, H1, H2	☐
Switch-disconnector	Not available with Masterpact MTZ, use P&P with Masterpact NW	☐
Micrologic X	2.0 ☐ 5.0 ☐ 6.0 ☐ 7.0 ☐	
X with arc	2.0 ☐ 5.0 ☐ 6.0 ☐ 7.0 ☐	
Number of poles	3 ☐ 4 ⁽¹⁾ ☐	

(1) 4P = neutral on left. For neutral on right side, consult France Grenoble ECOFIT Center

Type of equipment Drawout without chassis (moving part only) ☐

Communication

Consult Schneider Electric specialist to support and upgrade current installation with latest communicating solution

Operation Efficiency - Signaling

OF - ON/OFF indication contacts

4 OF 6 A-240 V AC (10 A-240 V AC and low level for NW) is supplied as standard

Note: Masterpact Plug&Play is not suitable in case Masterpact M chassis is equipped with a test position switch (CT)

Additional 1 block of 4 OF for MTZ2 ☐ Max. 2 Blocks ☐

SDE - "fault-trip" indication contact

1 SDE 6A - 240V AC is supplied as standard

Additional 1 SDE 6 A-240 V AC ☐ 1 SDE low level ☐

Programmable contacts 2 M2C contacts ☐

PF - "ready to close" contact

6 A-240 V AC ☐ low level ☐

CDM - mechanical operation counter MTZ2 ☐

Commonly used spare parts

If you would like to order some spare parts, kindly indicate here. Please note that spare parts will be delivered separately.

Mobile powerpack by APC ☐ qty
 USB CABLE ☐ qty
 Transparent cover for micrologic ☐ qty
 Mini test kit ☐ qty

Operation Efficiency - Controlling

Remote control	MCH - gear motor	V	☐
	XF - closing voltage release	V	☐
	MX - opening voltage release	V	☐
	MN - undervoltage release	V	☐
	R - delay unit (non-adjustable)	V	☐
	Rr - adjustable delay unit	V	☐
	2 nd MX - opening voltage release	V	☐
	2 nd MN - undervoltage release	V	☐
	R - delay unit (non-adjustable) for 2 nd MN		☐
	Rr - adjustable delay unit for 2 nd MN		☐

Remote reset after tripping RES - electrical reset option V ☐
 RAR - automatic reset option ☐

Electrical Closing BPFE - electrical closing pushbutton ☐

People and property safety - Locking and interlocking

VBP - ON/OFF pushbutton no access (by transparent cover + padlocks) ☐

OFF position locking: ☐

VCPO - by padlocks ☐

VSPO - by keylocks	Keylock kit (without keylock)	Profalux ☐	Ronis ☐
	Kirk	☐	Castell ☐
	1 keylock	Profalux ☐	Ronis ☐
	2 identical keylocks, 1 key	Profalux ☐	Ronis ☐
	2 keylocks, different keys (MTZ2/3)	Profalux ☐	Ronis ☐

Mechanical interlock (source-changeover systems) ☐

Interlocking axle and installation kit (ref: EF548613, one per P&P) ☐

Mismatch protection (ref EF547056) ☐

People and property safety - Circuit protection

TCE - external sensor (CT) for neutral ☐

Single sensor & Single wire (MTZ 1/2/3) ☐

Rectangular sensor - for earth-leakage protection MTZ2/3 (470 x 160 mm) ☐

Power availability and reliability

VPS - Voltage power supply ☐

AD - external power-supply module V ☐

BAT - battery module ☐

Digital Module

Energy per phase ☐ Wave form capture ☐

Circuit Breaker restoration ☐ Circuit Breaker reclosing ☐

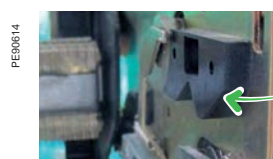
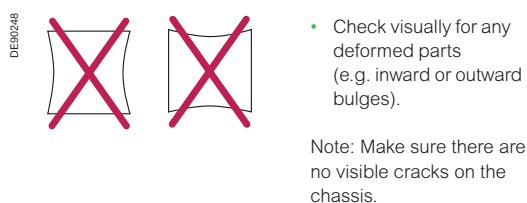
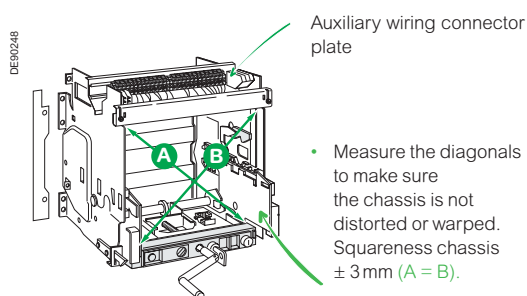
ECOFIT Plug & Play solution requires Masterpact M chassis in full working order

If the chassis is bent or damaged, a Plug & Play solution is not possible and the Masterkit solution must be used.

Note: Refer to Masterpact Plug & Play user manual for more information.

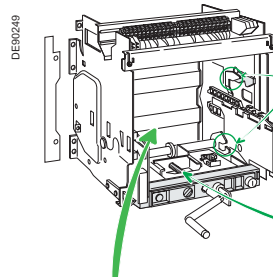
Before ordering a Plug & Play solution, check the condition of the chassis as indicated below

(! Danger: electrical equipment should be installed, operated, services and maintained only by qualified personnel)



Check for any bent or distorted parts that could hinder insertion of the Masterpact circuit breaker.

Carry out a racking test (in and out) 3 times without the circuit breaker and check the movement of the safety shutters, the auxiliary wiring connector plate and the drawer site plates.



- Check that all moving parts (pawls, cams) work properly.
- Check cradle warm screw:
 - Disconnected position without the breaker
 - Note abutment rear (x2)
 - Connect until the return of the hook to remain; one turn + 1/4 maximum
 - Note abutment intermedialyte (x2)
 - If not OK ► make adjustment with Annex 1

- Check the contact clusters. If they are in good condition, clean and lubricate them. If not, replace them.

Masterkit - Order Form

GCR_MASTERKIT_MTZ2 or GCR_MASTERKIT_MTZ3 or
GCR_MKT_MTZ2SD or GCR_MKT_MTZ3SD GCR_MKT_MTZCHASSIS

To indicate your choices, check the applicable square boxes and enter the appropriate information in the rectangles

Quantity	
Number of devices	
The quantity specified here will not affect the quantity of spare parts.	
Basic Configuration	
Masterpack type	MTZ2 ☐ MTZ3 ☐
Rating (Masterkit 4000A only with MTZ2)	A ☐
Sensor rating	A ☐
Circuit breaker	N1, H1, H2, L1 (L1: only for M08 to M20 drawout type) ☐
Switch-disconnector	NA, HA ☐
Micrologic X	2.0 ☐ 5.0 ☐ 6.0 ☐ 7.0 ☐
X with arc	2.0 ☐ 5.0 ☐ 6.0 ☐ 7.0 ☐
Number of poles	3 ☐ 4 ☐
Option: neutral on right side (MTZ2 only up to 3200A)	
Type of equipment	Fixed ☐
	Drawout with chassis ☐
	Drawout without chassis ☐
	Chassis alone ☐
	Chassis alone with contacts ☐
Connection (rear only)	Top Horizontal ☐ Vertical ☐
	Bottom Horizontal ☐ Vertical ☐
For M40 4P fixed type, no possible mix between horizontal and vertical connections	
For M63 drawout horizontal connection, consult us	
Communication⁽¹⁾	
Fixed	ULP port only ☐
	ULP with Ethernet Interface ☐
	ULP with Ethernet Interface + Gateway ☐
Drawable	EIFE ☐
I/O Module	☐
(1) Consult Schneider Electric specialist to support and upgrade current installation with latest communicating solution	
Design and installation simplification	
Interphase barriers	MTZ2 fixed, drawable ☐
Only up to MTZ 2 25	Upstream & Downstream ☐
Operation Efficiency - Signaling	
OF - ON/OFF indication contacts	
4 OF 6 A-240 V AC (10 A-240 V AC and low level for NW) is supplied as standard	
Additional	1 block of 4 OF Max. 2 blocks ☐ qty ☐
EF - combined "connected/closed" contacts	
EF is only for MTZ2/3. Total number of EF cannot exceed the number of additional OF	
	1 EF standard (6A-240VAC) ☐ qty ☐
	1 EF low level ☐ qty ☐
SDE - "fault-trip" indication contact	
1 SDE 6A - 240V AC is supplied as standard	
Additional	1 SDE 6 A-240 V AC ☐ 1 SDE low level ☐
Programmable contacts	2 M2C contacts ☐
Carriage switches - Please refer to the catalogue for the maximum number of each carriage switch	
CE - "con." position	6 A-240 VAC qty ☐ low level qty ☐
CD - "discon." position	6 A-240 VAC qty ☐ low level qty ☐
CT - "test" position	6 A-240 VAC qty ☐ low level qty ☐
PF - "ready to close" contact	6 A-240 V AC ☐ low level ☐
CDM - mechanical operation counter	MTZ2/3 ☐
Commonly used spare parts	
If you would like to order some spare parts, kindly indicate here. Please note that spare parts will be delivered separately.	
Mobile PowerPact by APC	☐
USB CABLE	☐
Transparent cover for micrologic	☐
Display for micrologic	☐
Test kits	Mini test kit ☐
FDM128	☐
Mounting accessories for FDM kits	☐

Operation Efficiency - Controlling			
Remote control	MCH - gear motor	V	☐
	XF - closing voltage release	V	☐
	XF COM - closing voltage release	V	☐
	MX - opening voltage release	V	☐
	MX COM - opening voltage release	V	☐
	MN - undervoltage release	V	☐
	MN COM - undervoltage release	V	☐
	R - delay unit (non-adjustable)		☐
	Rr - adjustable delay unit		☐
	2 nd MX - opening voltage release	V	☐
	2 nd MX COM - opening voltage release	V	☐
	2 nd MN - undervoltage release	V	☐
	2 nd MN COM - undervoltage release	V	☐
	R - delay unit (non-adjustable) for 2 nd MN		☐
	Rr - adjustable delay unit for 2 nd MN		☐
Remote reset after tripping	RES - electrical reset option	V	☐
	RAR - automatic reset option		☐
Electrical closing	BPFE - electrical closing pushbutton		☐
People and property safety - Locking and interlocking			
VBP - ON/OFF pushbutton no access (by transparent cover + padlocks) ☐			
OFF position locking: ☐			
VCPO - by padlocks ☐			
VSPO - by keylocks	Keylock kit (without keylock)	Profalux ☐	Ronis ☐
	Kirk	☐	Castell ☐
	1 keylock	Profalux ☐	Ronis ☐
	2 identical keylocks, 1 key	Profalux ☐	Ronis ☐
	2 keylocks, different keys (MTZ2/3)	Profalux ☐	Ronis ☐
Chassis locking in "disconnected" position:			
VSPD - by keylocks	Keylock kit (without keylock)	Profalux ☐	Ronis ☐
	Kirk	☐	Castell ☐
	1 keylock	Profalux ☐	Ronis ☐
	2 identical keylocks, 1 key	Profalux ☐	Ronis ☐
	2 keylocks, different keys	Profalux ☐	Ronis ☐
	Optional connected/disconnected/test position locking ☐		
VPEC - door interlock	On right-hand side of chassis ☐		
	On left-hand side of chassis ☐		
VPOC - racking interlock	☐		
IPA - cable-type door interlock	☐		
VDC - mismatch protection	☐		
VIVC - shutter position indication and locking for MTZ2/3	☐		
IBPO - racking interlock between crank and OFF pushbutton for MTZ2/3	☐		
People and property safety - Circuit protection			
TCE - external sensor (CT) for neutral			☐
	Single sensor & Single wire (MTZ 2/3)		☐
	Double sensor & double wire (MTZ3)		☐
TCW - external sensor for SGR protection	☐		
Rectangular sensor for earth-leakage protection	MTZ2/3 (470 x 160 mm)		☐
PTE - external voltage connector	☐		
People and property safety - Mechanical protection			
CDP - escutcheon MTZ2/3	☐		
CP - transparent cover for escutcheon MTZ2/3	☐		
OP - blanking plate for escutcheon MTZ2/3	☐		
CB - auxiliary terminal shield for chassis MTZ2/3	☐		
People and property safety - Operation protection			
KMT - grounding kit MTZ2/3	☐		
Earthing switch kit for chassis	☐		
DAE - automatic spring discharge before breaker removal for MTZ2/3	☐		
Power availability and reliability			
VPS - Voltage power supply	☐		
AD - external power-supply module	V	☐	
BAT - battery module	☐		
Digital Module			
Energy per phase	☐	Wave form capture	☐
Circuit Breaker restoration	☐	Circuit Breaker reclosing	☐



Protection relays

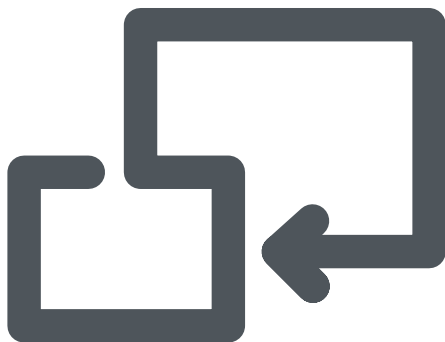
Contents

Protection relay upgrade benefits	C-2
CO	C-3
DPU 445	C-4
HCB	C-5
IAC	C-6
KCGG 122 & 142	C-7
MCAG	C-8
M range - MCGG 11, 21 & 22	C-9
M range - MCTI 39-40	C-10
MCGG 62	C-11
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Sepam 2000	C-13
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Order forms	
Sepam 2000	C-15
Other protection relays	C-17

Protection upgrade benefits



Improve the performance of your system with the latest technology in micro-processor based integrated relays.



Accuracy

Why protection upgrade?

By replacing solid state and older type electromechanical protection relays with technologically advanced multi-function microprocessor-based digital relays, the performance accuracy and longevity of your system can be significantly improved.

With a number of different protection functions Schneider Electric's range of relays can provide a range of options to include metering; communication; event capture; monitoring and control. Units are self-diagnostic to provide enhanced reliability. It is normally possible to use the existing current and potential transformers and auxiliary digital relay inputs.

Schneider Electric's application based approach makes it easy to select the appropriate relay for your needs.

What are the benefits?

> System protection at the current level reduces unnecessary outages and minimise stresses to equipment.

> Increased accuracy of measurement assists in cost allocation and understanding power demand requirements.

> High reliability from advanced self supervision systems.

Flexibility

> The integrated functions of the relay allow for communications and control of the equipment either as a stand-alone unit or as part of networked systems.

> All components in the protection chain are referenced and interface rapidly.

> No constraints for integration in cubicles due to the compact size of the base unit.

Ease of use

> Settings and adjustments are entered via the device's keypad and visually displayed.

Reduced costs

> The amalgamation of functions into one self-diagnosing meter reduces expenditure and saves on space.

CO by MiCOM P111/115

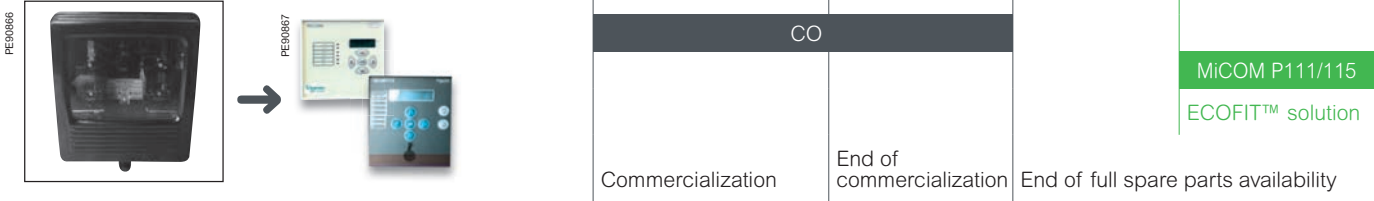
Original brand: Westinghouse - ABB

ECOFIT™ proposal

CO
Protection relay

MiCOM P111 & P115
Protection relay

With ECOFIT™, a true extended life time



Main technical characteristics

	CO-1 to CO-9	MiCOM P111/115
Case	FT-11 or FT 21	Fit FT-11 & FT 21 cutout
Replacement Type	-	1 for 3* with minimal rewiring
Type	Electromechanical	Numerical
Functionality	Single phase overcurrent	3 phase + Ground overcurrent
Frequency range	-	24 VDC - 250 VDC
Communication	-	IEC 60870-5-103, Modbus RTU

*1 ECOFIT™ P111/115 - CO solution could replace 3 single phase CO units.

DPU 445 by MiCOM P123

Original brand: ABB

ECOFIT™ proposal

DPU 445
Protection relay

MiCOM P123
Protection relay

With ECOFIT™, a true extended life time



Main technical characteristics

	DPU 445	MiCOM P123
Case	DPU 445	Fit existing cutout
Replacement Type	-	1 for 1 with minimal rewiring
Type	Digital	Numerical
Functionality	3 phase feeder	3 phase + ground feeder overcurrent
Frequency range	24 VDC - 125 VDC	24 VDC - 250 VDC
Communication	-	Courier, DNP 3.0, IEC 60870-5-103, ModBus RTU

HCB / HCB1 by MiCOM P521

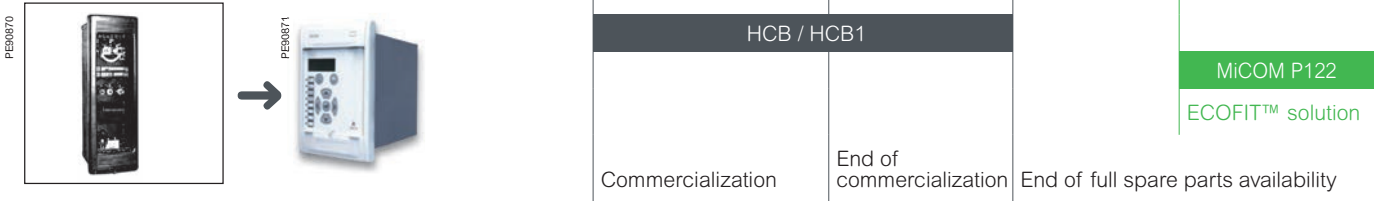
Original brand: ABB

ECOFIT™ proposal

HCB / HCB1
Protection relay

MiCOM P521
Protection relay

With ECOFIT™, a true extended life time



Main technical characteristics

	HCB / HCB1	MiCOM P521
Case	FT-42	Fit existing cutout
Replacement Type	-	1 for 1 with minimal rewiring
Type	Electromechanical	Numerical
Functionality	3 phase differential	3 phase differential
Frequency range	-	24 VDC - 250 VDC
Communication	-	IEC 60870-5-103, ModBus RTU

*1 ECOFIT™ P122 - IAC solution could replace 3 single phase IAC units.

IAC by MiCOM P122

Original brand: General Electric

ECOFIT™ proposal

IAC
Protection relay



MiCOM P122
Protection relay



With ECOFIT™, a true extended life time



Main technical characteristics

	IAC	MiCOM P122
Case	S1, S2, L2 or M1	Fit S1, S2, L2 or M1 cutout
Replacement Type	-	1 for 3* with minimal rewiring
Type	Electromechanical	Numerical
Functionality	Single phase overcurrent	3 phase + Ground overcurrent
Frequency range	-	24 VDC - 250 VDC
Communication	-	Courier, DNP3.0, IEC 60870-5-103, ModBus RTU

*1 ECOFIT™ P122 - IAC solution could replace 3 single phase IAC units.

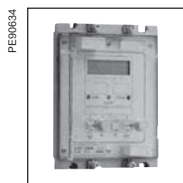
KCGG 122 & 142 by MiCOM P123R

Original brand: Areva

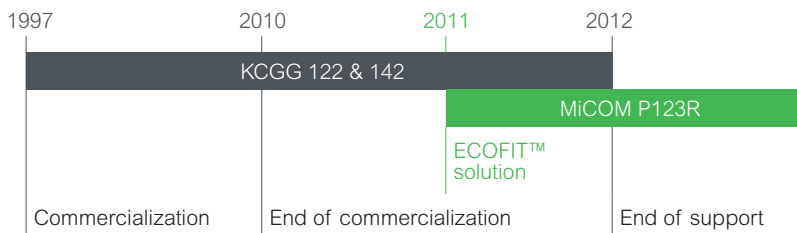
ECOFIT™ proposal

KCGG 122 & 142
Protection relay

MiCOM P123R
Protection relay



With ECOFIT™, a true extended life time



Main technical characteristics

	K range relay - KCGG 122 & 142	MiCOM P123R
Case	20TE size flush mounting	20TE size flush mounting
Replacement Type	Withdrawable case	Withdrawable case
Type	English	Multilanguage
Functionality	KBus / Courier	KBus / Courier, DNP3, IEC60870-5-103
Frequency range	24 V / 125 VDC - 48 V / 250 VDC	24 V / 250 VDC - 48 V / 240 VDC
Communication	48 VDC only	According to Power Supply (above)

ECOFIT™ KCGG 122 & 142 upgrades: diagnosis + implementation/installation of a fully industrialised solution

Improve the performance of your system with the latest technology in micro-processor based integrated relays.

Full retrofit solution

Sustainability

- Replacement of the protection relay and optimised maintenance.
- Access to spare parts, new communication protocols and software facilities.
- Schneider Electric technical support and guarantee.

Manufacturer expertise

- Solution developed by our specialist engineers.
- Enhanced performance.
- Retrofit process optimised.
- Installation warranted by the manufacturer.

Consultancy and audit - Engineering solutions & optimisation

Local support & assistance - Maintenance & refurbishment



No mechanical or electrical impact on your installation. Implementation and site test within a very limited time.

New features enabled:

- Advanced HMI for local control functions.
- Standard communication protocols (Modbus, IEC 60870-5-103, DNP3 or KBus/Courier).
- Monitoring & Automation facilities..

MCAG 34 by MiCOM P126

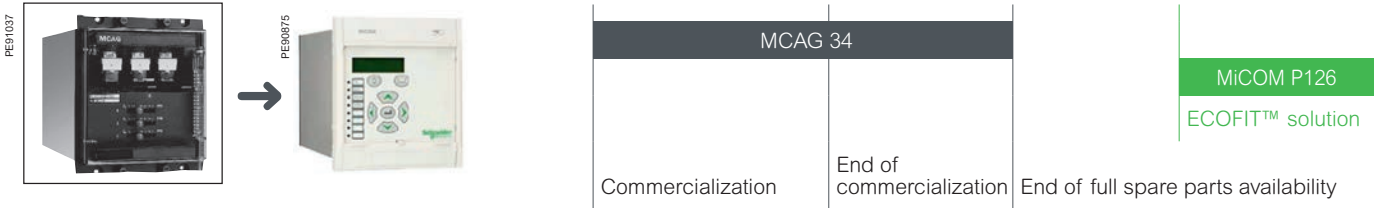
Original brand: Alstom

ECOFIT™ proposal

MCAG 34
Protection relay

MiCOM P126
Protection relay

With ECOFIT™, a true extended life time



Main technical characteristics

	MCAG 34	MiCOM P126
Case	40TE size (MiDos 6) flush mounting	40TE size flush mounting
Installation	Withdrawable case	Withdrawable case
Language	Multilanguage	Multilanguage
Communication	No Communication	Kbus / Courier, DNP3, IEC60870-5-103, ModBus RS485
Power supply	No Vx required	24V / 250 VDC- 55V / 250VAC

M range - MCGG 11, 21 & 22 by MiCOM P120H

Original brand: Areva

ECOFIT™ proposal

MCGG 22
Protection relay

MiCOM P120H
Protection relay

PE90752



PE90635



With ECOFIT™, a true extended life time

< 1984

2010

2012

M range relay - MCGG 11, 21 & 22

MiCOM P120H

ECOFIT™ solution

Commercialization

End of full spare parts availability

Main technical characteristics

	M range relay - MCGG 11, 21 & 22	MiCOM P120H
Case	20TE size flush mounting	20TE size flush mounting
Replacement Type	Withdrawable case	Withdrawable case
Type	English	Multilanguage
Functionality	KBus / Courier	KBus / Courier, DNP3, IEC60870-5-103
Frequency range	24 V / 125 VDC - 48 V / 250 VDC	24 V / 250 VDC - 48 V / 240 VDC
Communication	48 VDC only	According to Power Supply (above)

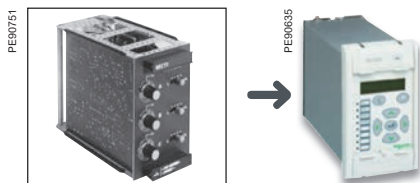
M range - MCTI 39-40 by MiCOM P821MF

Original brand: Areva

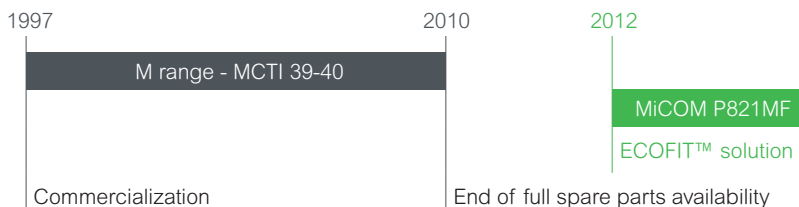
ECOFIT™ proposal

MCTI 39-40
Protection relay

MiCOM P821MF
Protection relay



With ECOFIT™, a true extended life time



Main technical characteristics

	M range relay - MCTI 39-40	MiCOM P821MF
Case	20TE size flush mounting	20TE size flush mounting
Replacement Type	Withdrawable case	Withdrawable case
Type	English	Multilanguage
Functionality	KBus / Courier	KBus / Courier, DNP3, IEC60870-5-103
Frequency range	24 V / 125 VDC - 48 V / 250 VDC	24 V / 250 VDC - 48 V / 240 VDC
Communication	48 VDC only	According to Power Supply (above)

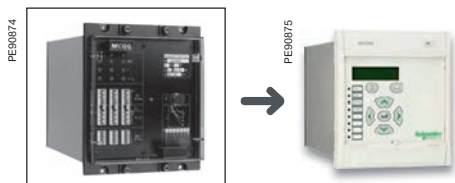
MCGG 62 by MiCOM P126

Original brand: Alstom, Areva

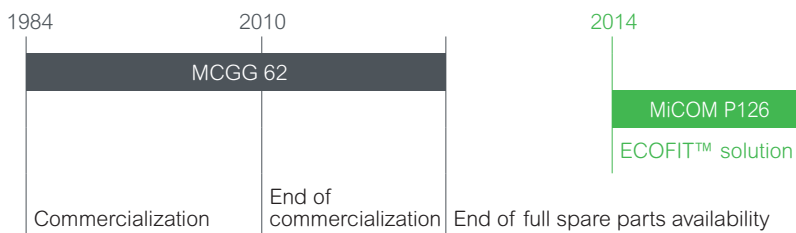
ECOFIT™ proposal

MCGG 62
Protection relay

MiCOM P126
Protection relay



With ECOFIT™, a true extended life time



Main technical characteristics

	MCGG 62	MiCOM P126
Case	Size 6	Fit existing cutout
Replacement Type	-	1 for 1 plug-and-play
Type	Static	Numerical
Functionality	3 phase overcurrent	3 phase + ground overcurrent
Frequency range	24 VDC - 125 VDC	24 VDC - 250 VDC
Communication	-	DNP 3.0, IEC 60870-5-103, ModBus RTU

MVTR 51 by MiCOM P123

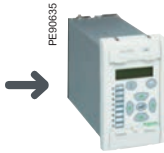
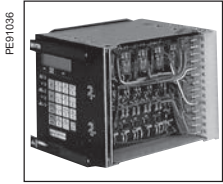
Original brand: Alstom

ECOFIT™ proposal

MVTR 51
Protection relay

MiCOM P123
Protection relay

With ECOFIT™, a true extended life time



Main technical characteristics

	MVTR 51	MiCOM P123
Case	20TE (MiDos 4) size flush mounting	20TE size flush mounting
Installation	Withdrawable case	Withdrawable case
Language	Multilanguage	Multilanguage
Communication	No Communication	Kbus / Courier, DNP3, IEC60870-5-103, ModBus RS485
Power supply	24V / 250 VDC	24V / 250 VDC- 55V / 250VAC

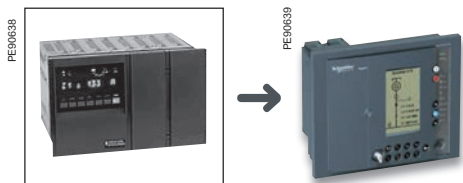
Sepam 2000 by Sepam 60 - 80 series

Original brand: Merlin Gerin

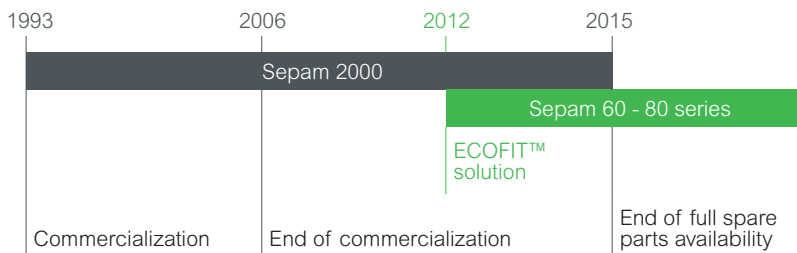
ECOFIT™ proposal

Sepam 2000
Protection relay

Sepam 60 - 80 series
Protection relay



With ECOFIT™, a true extended life time



Main technical characteristics

	CDG	Sepam 80 series	Sepam 60* series
Motor Application	M06, M07, M08, M14	X	
	M02 to M05, M09, M11, M15, M16, M20 to M23		X
Sub-station Application	S02, S03, S06 to S09	X	
	S01, S04, S05		X
Bus Bar Application	B02, B04, B07, B12	X	
	B01, B03		X
Transformer Application without temp.measurement	T01 to T03, T06, T07, T09, T10, T12 to T15, T17 to T19	X	
	T04, T05, T11, T16		X
Transformer Application with temp. measurement	T21, T22, T23, T26, T27, T29, T30, T32 to T35, T37 to T39	X	
	T24, T25, T31, T36		X
Generator Application	G01 to G08, G12, G13, G15 to G18	X	
Capacitor bank Application	C02, C04, C06, C08	X	
	C01, C03		X
Transformer Diff. Application	D02, D22	X	

* Sepam serie 80 will be proposed in case of customised Logipam on the original Sepam 2000

ECOFIT™ Sepam 2000 upgrades: diagnosis + implementation/installation of a fully industrialised solution

Improve the performance of your system with the latest technology in micro-processor based integrated relays.

1. Disconnection of existing terminal blocks

2. Presentation of new ECOFIT™ S2000



No mechanical or electrical impact on your installation. Implementation and site test within a very limited time.

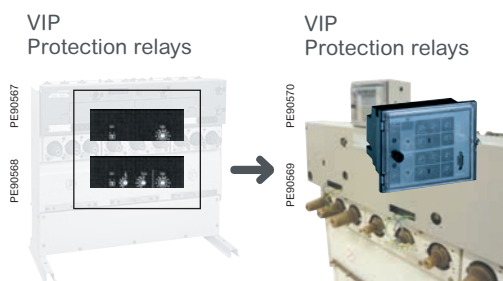
New features enabled:

- Advanced HMI for local control functions.
- Standard communication protocols (Modbus, IEC 60870-5-103, DNP3 or KBUS/Courier).
- Monitoring & Automation facilities..

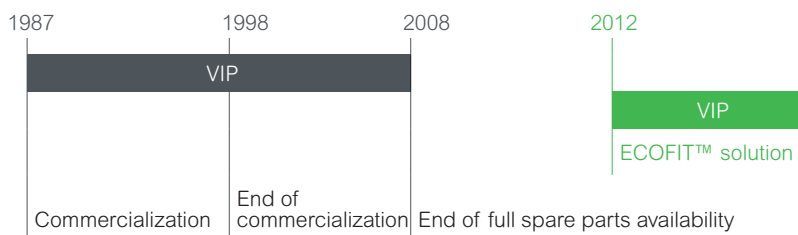
RM6+ / VIP by VIP + ECOFIT™ kit

Original brand: Merlin Gerin

ECOFIT™ proposal



With ECOFIT™, a true extended life time



Proposed substitution

RM6+		
Phase overcurrent protection IDMT (Inverse Definite Minimum Time)	VIP 11R	VIP 30
Phase overcurrent protection IDMT (Inverse Definite Minimum Time)	VIP 12R	VIP 30
Phase overcurrent and Earth-fault protection IDMT and DT IEC 60255	VIP 200	VIP 300LL

ECOFIT™ S2000 - Order Form

Summary of data to collect and provide

End customer:	
Customer ID code:	Country:
Order n°:	Contact email:
Person to contact:	
Fax:	Phone:
Shipping address:	Expected delivery date :

Original application	Confirmation of the original reference ⁽¹⁾	Options (S60/S80)	Choice confirmation
Motor application		Number of Identical ECOFIT™	
M06		Sepam 2000 case type	S25/S26
M07, M08, M14			S35/S36
M02, M03, M04, M15		Man Machine Interface Type	Advanced
M05, M09, M11, M16			Mimic based
M20, M21, M22, M23		Communication protocol	IEC61850 or Modbus TCP
Substation application		(TCP/IP firmware always provided)	Modbus RS485
S02, S07		Communication media (if Ethernet)	RJ45
S06			FO
S03, S08, N14(UK only)		Other options from S2000	
S09		With customised Logipam (Y / N) ⁽²⁾	Choice
S01			Yes
S04, S05		Required HMI language if different from EN / FR	No
SX1, SX2			EN (UK)
Busbar application			FR
B02, B04			ES
B07			BR
B12			CN
B01, B03			DE
Transformer application without temperature sensor			IT
T07, T12, T13			RO
T01, T09, T14, T17, T19			CH (German)
T03, T06, T15, T18			TR
T02, T10			TH
T04, T11			UA (Russian)
T05, T16			UA
Transformer application with temperature sensor			EN (US)
T27, T32, T33		Number of connected ESTOR boards	
T21, T29, T34, T37, T39		Required polarity for logical.	Standard
T23, T23, T35, T38		Inputs, when non standard:	H
T22, T30		(G =220/250Vdc ; H=110/125Vdc)	G
T24, T31		VT connection arrangement	3 VTs
T25, T36			2 VTs
Generator application			1 VT
G01, G05, G07			1 V0
G02, G06, G08			other
G12, G13		Sepam 2000 Power Supply voltage	24V DC
G03			48V DC
G04			110/125V DC
G17			220/250V DC
G18			220/250V AC
G15			Unknown
G16		24V DC Power Supply delivery for the ACE949-2 Modbus module	Yes
Capacitor bank application		Confirm if you want a specific application (only if different from the proposed one)	No
C02, C04, C06			S81
C08			S82
C01, C03			S84
Transformer and Generator bloc group application			M81
D02, D22 (former D01, D21)			M87
Line application			M88
L66			T82
Other specific application not covered			T87
Please, confirm here			G87
	Other		G88
			B83

(1) Write a "X" in front of the original Sepam 2000 application in case of unique name, or the name of the original application if multiple choices are proposed (This selection will define the new Sepam type within the series 60 or 80, its hardware configuration and its application). The name of the original application is repeated on the ECOFIT™ name plate reference.

(2) If a choice is possible between Sepam Serie 60 or 80, the Yes (Y) choice will force the delivery of a Sepam Serie 80. This will be the case if the original control logic provided with the Sepam 2000 has been customised or if the Sepam 2000 is connected to a supervision using different addresses for remote controls (TS/TC), than those configured in factory.

ECOFIT™ S2000 - Order Form

Summary of data to collect and provide

Complementary questions for engineering quotation	Choice	
Do you have the ability to migrate the Logipam from SEPAM 2000 source to Sepam 80 serie? (If "Yes", engineering will not be quoted, as an option)	Yes	☐
	No	☐
If No, can you get the Logic files (*.srl) and setting file (*.par) as soft copy or only pdf form?	*.srl files	☐
	pdf / paper	☐
	Nothing available	☐
Can we consider that all selected SEPAM 2000 relays (if more than 1) have similar logic files?	Yes	☐
	No	☐
	Unknown	☐
If No, how many kind of different logics do you have within the list of Sepam relays?		☐
Complementary Questions for Technical Design only (from Site Survey or Electrical drawings)	Choice	
Can you confirm if existing Sepam 2000 is using Clock synchronisation logical input	Yes	☐
	No	☐
	Unknown	☐
If Yes, on which ESTOR board is connected this synchronisation input	ESTOR 1	☐
	ESTOR 2	☐
	Not used	☐
Tripping Logic with O1 contact.	NO	☐
Confirm if existing Sepam 2000 relay is using a Normally Open (O1_NO) tripping Contact ONLY or Normally closed (O1_NC) trip contact or a Normally Open (O1_NO) for tripping logic + (O1_NC) for interlocks.	NC	☐
If NC, an auxiliary relay will be provided and mounted to inverse the tripping logic.	NO & NC	☐
	Unknown	☐
Are the above Sepam 2000 connected to a remote station using Modbus protocol?	Yes	☐
	No	☐
	Unknown	☐

Other protection relays ECOFIT™ - Order Form

Summary of data to collect and provide

Date:			
Requestor:		Contact name:	
Contact number:		Contact email:	
Location:			
End user name:		End user location:	
Expected date of answer:			

Required items	Check list	Comments / Additional Information
Old Relay Pictures	☐	
Old Panel Front View Pictures	☐	
Old Panel Rear View Pictures	☐	
Existing arrangement of relays	☐	
Draw out or Non-draw out type ☐ Yes ☐ No	☐	
Existing external wiring drawing	☐	
Existing Single line diagram	☐	
Complete model number of old relay	☐	
Protection functions used in old relay	☐	
Communication Protocol used in old relay	☐	
Number of Inputs / Outputs used	☐	
Legacy relay sample available ☐ Yes ☐ No	☐	

Requestor signature	Date	Schneider Electric representative	Date

All of these informations are mandatory and have to be filled.

Please send all supportive documents with this completed request form to avoid any unnecessary delays.

A photograph of two men in a control room. The man on the left is leaning forward, looking at a large screen displaying multiple data panels. The man on the right is seated, typing on a keyboard, also looking at a screen. The room has a modern, industrial feel with large monitors and a curved ceiling.

Substation automation

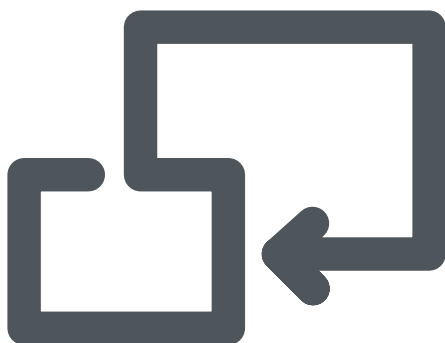
Contents

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GE FANUC	D-5
PACIS OI	D-6
PSCN3020 HMI	D-7
SEEFOX HMI	D-8

Control System upgrade benefits



Improve the performance of your system with the latest technology in micro-processor based integrated relays.



Why Control Systems upgrade?

Upgrade solutions intend to improve the performance of your control system with the latest technology in computers. This is also the opportunity to benefit from computer and OS upgrading to Windows 7 to get enhanced performances and advanced features for the new HMI

Considering the large variety of legacy control systems still in operation with limited extension and maintenance facilities, these ECOFIT™ solutions provide an opportunity to benefit of a unique HMI software and standard communication protocol based on IEC61850.

What are the benefits?

Ready for future extensions



- Enables smooth and consistent legacy Control System solutions modernization.
- Open, flexible and scalable architecture facilitating aggregation of several systems at substation level.
- Easiness for future extensions.

Ease of use



- Fast implementing without substation shut down, original control systems can remain in operation in most of cases
- No modification of existing communication network protocol (Modbus TCP or IEC 61850, as well as protective relays communication protocol) . This could be done step by step in further stages.

Enhance graphical features



- Realtime trends of analog values as tooltip
- Zoom in/ Zoom out
- Monitoring facilities by color bar graph status easy implementation

Costs reduction



- Cost effective solution providing advanced graphical interface features and enhanced performances.
- Secured migration managed by the manufacturer, thanks to an automatic migration tool and the use of a standard protocol.

ADVC2 by ADVC2.2

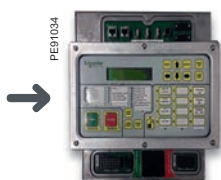
Original brand: Schneider Electric

ECOFIT™ proposal

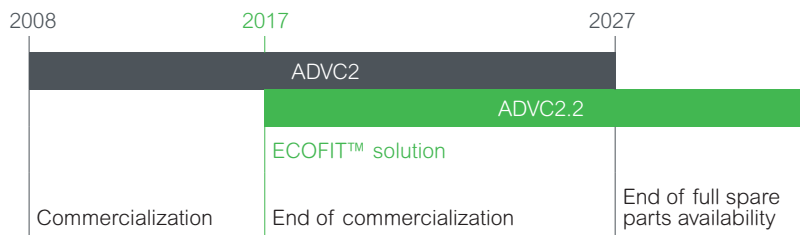
ADVC2
Protection relay



ADVC2.2
Protection relay



With ECOFIT™, a true extended life time



Main technical characteristics

	ADVC2	ADVC2.2
Design Element		
Memory	32 MB	512 MB
Storage	64 MB	1 GB
CPU Frequency	48 MHz	800 MHz
Ethernet	10 Base-T	100 Base-T
USB	Serial	USB 2.0
Communication Ports		
Ethernet	1 x 10Base-T	2 x 100Base-T
RS-232	4	2
RS-485	1	N/A
V23	1	N/A
USB Type B	1 x UART Based USB	1 x USB 2.0
USB Type A	N/A	3 x USB 2.0

Bay Controller BM9x00 by MiCOM C624

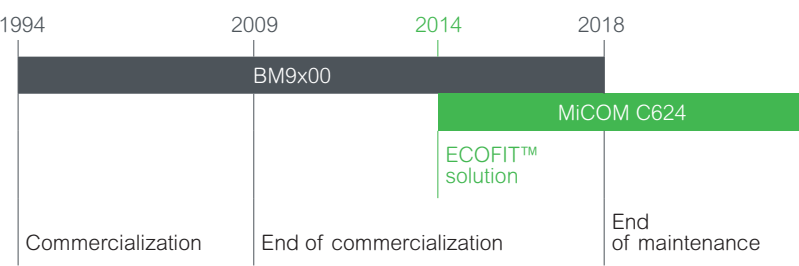
Original brand: Areva or older

ECOFIT™ proposal

MiCOM C2624



With ECOFIT™, a true extended life time



Main characteristics and performances

BM9x00	MiCOM C624
Communication through legacy EFIP protocol with the SCADA level	Standard communication through IEC61850 protocol to SCADA level
Connection with Modbus, IEC103 or KBus communication with protection relay protocol	Conection with Modbus, IEC870-5-103, IEC 870-5-101 Kbus (with K101CVT converter) and IEC61850 protocol for downstream relays
No front side communication available for setting files management	Hardened to match substation cyber security requirements.

GE FANUC by Quantum PLC & EcoSUI EWS

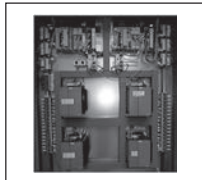
Original brand: General Electric

ECOFIT™ proposal

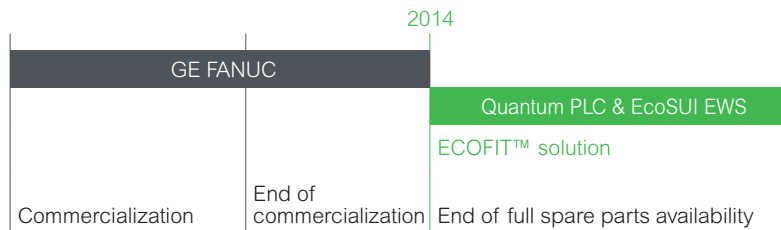
GE FANUC
Protection relay

Quantum PLC
& EcoSUI EWS
Protection relays

PE91035



With ECOFIT™, a true extended life time



Main technical characteristics

	GE FANUC	Quantum PLC	EcoSUI EWS
IEC61850 ready	No	No	Yes
hot-stand by or hot-hot solution	No	Yes	N/A
Built-In bus bar color animation	No	N/A	Yes
Real time trends	No	N/A	Yes
Monitoring / Asset man/Agemet and mainteN/Ance display	N/A	N/A	Yes
language	UnityPRO	UnityPRO	N/A

PACIS OI V3.X up to V4.6 by PACIS EcoSUI

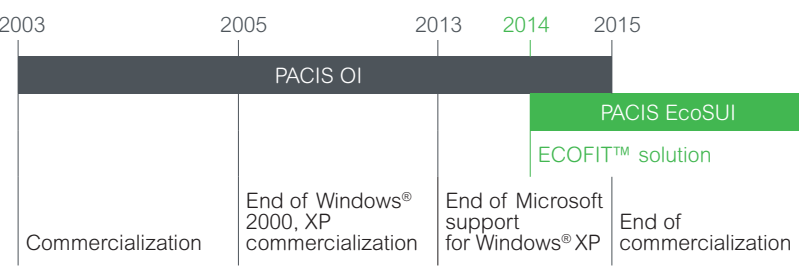
Original brand: Areva or older

ECOFIT™ proposal

PACIS OI V3.X up to V4.6



With ECOFIT™, a true extended life time



Main characteristics and performances

PACIS OI	PACIS EcoSUI
Windows® 2000 or XP	Windows® 7 (32/64bits) Windows® server 2008 64bits
One Ethernet network management Multi-LAN through IEC/IEC Gateways	Multiple IEC61850 client access points Direct IEC61850 configuration by import of SCD file
Off-line modification & Time delayed deployment of database after recompilation	Immediate deployment of database modification
Redundancy switch over within 1 mn	Hot redundancy seamless switchover
Maximum handled dataflow 100 Measured Values archived /sec / server	Handled dataflow up to 3000 MV archived /sec /server

PSCN3020 HMI by EcoSUI HMI

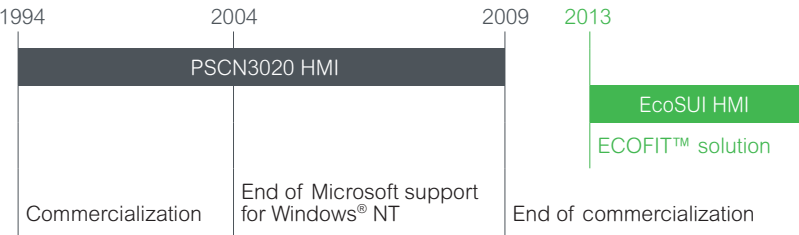
Original brand: Areva or older

ECOFIT™ proposal

PSCN3020



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Main characteristics and performances

PSCN3020 HMI	EcoSUI HMI
Windows® NT4 OS / 2	Windows® 7
One EFIP network management	Open to Ethernet IEC61850 for all future extension and step by step replacement of bay controllers
Configuration & database generation using proprietary & obsolete software	Direct IEC61850 configuration by import of SCD file for all new extensions
Redundancy switch over within 1 mn	Hot redundancy seamless switchover
Handled dataflow limited by EFIP protocol	Handled dataflow up to 3000 MV archived /sec/server, once fully migrated to IEC61850

Seefox HMI by EcoSUI HMI

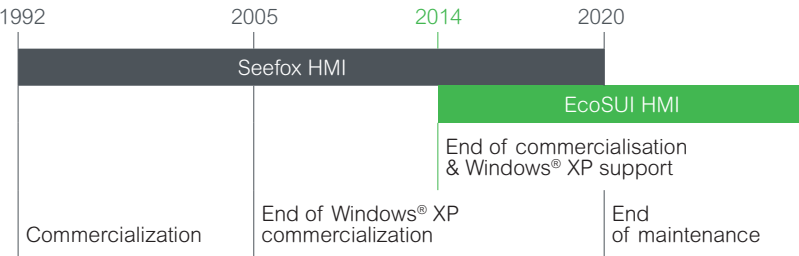
Original brand: Schneider Electric

ECOFIT™ proposal

EcoSUI HMI



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Main characteristics and performances

Seefox HMI	EcoSUI HMI
Windows® XP	Full Schneider Electric HMI and tools design operating on Windows® 7
Based on third party HMI limited to Modbus TCP or Modbus + communication protocol	IEC 61850 native in modeling configuration and communication
Configuration tools no more supported or with limited upgrade facilities	Ready for all standard substation extension using IEC61850 standard
	Compliant with substation cyber security requirements



Contact us!

www.schneider-electric.com/electricaldistributionservices

Discover the ECOFIT™ web selector:

www.schneider-electric.com/en/tools/ECOFIT™-selector

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