



Protection and Distribution 1A to 6300A

Our Price List. Effective from 1st August 2009.

OUR CUSTOMER CARE COMMITMENTS

Quality is Guaranteed

All products supplied from this price list carry a guarantee against defects in materials and workmanship for a period of 12 months from date of purchase as standard.

Quality is Accredited

Terasaki has ISO 9001 accreditation for the manufacture, sale and distribution of all products featured in this price list.

Ordering is Easy

We have made ordering easy for you by including order codes. If you need help with ordering or selection, please call the telephone number shown below.

Technical Support is Free

Our helpful Applications Team are at your disposal. They provide free, detailed advice on the application of our products and use industry-leading electrical design software packages.



CUSTOMER SERVICE CONTACT DETAILS

TERASAKI ELECTRIC (EUROPE) LTD.

80 Beardmore Way, Clydebank Industrial Estate
Clydebank, Glasgow, G81 4HT, Scotland (UK)

Telephone: 44-141-941-1940

Fax: 44-141-952-9246

Email: marketing@terasaki.co.uk

<http://www.terasaki.com/>

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Product Group Discount Table

		Discount
TemWay	Final Distribution Products	
TemBreak 2	Moulded Case Circuit Breakers & CBRs	
TemPower 2	Air Circuit Breakers	
Power Factor Correction	Power Factor Correction	
TemProtect	Earth Leakage Protection	
TemMeasure	Multifunction Meters and Analysers	

Terasaki are now setting the highest standards for customer service, competitiveness and product quality.

This price list includes our largest-ever portfolio of electrical safety and protection products: from 1A to 6300A.

Our latest exciting product developments are highlighted on the following pages...



THREE-PHASE, SPLIT-LOAD DISTRIBUTION BOARDS

NEW
PRODUCTS

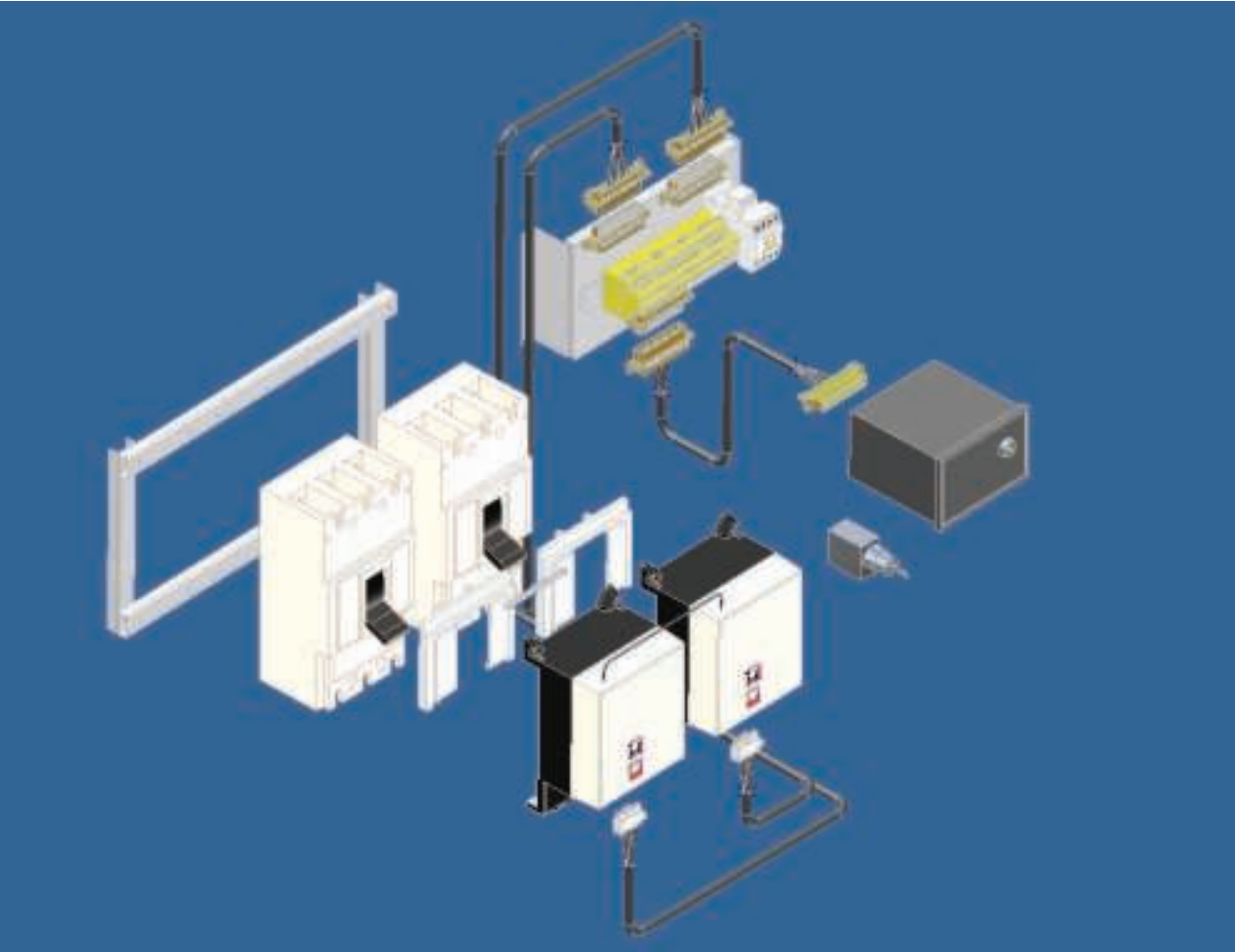


Tem Way 250 LP

Our solution incorporates two separately metered busbar systems for lighting and power circuits, with a range of different configurations of outgoing ways.

Details on page 15-16.

AUTOMATIC CHANGEOVER PAIRS



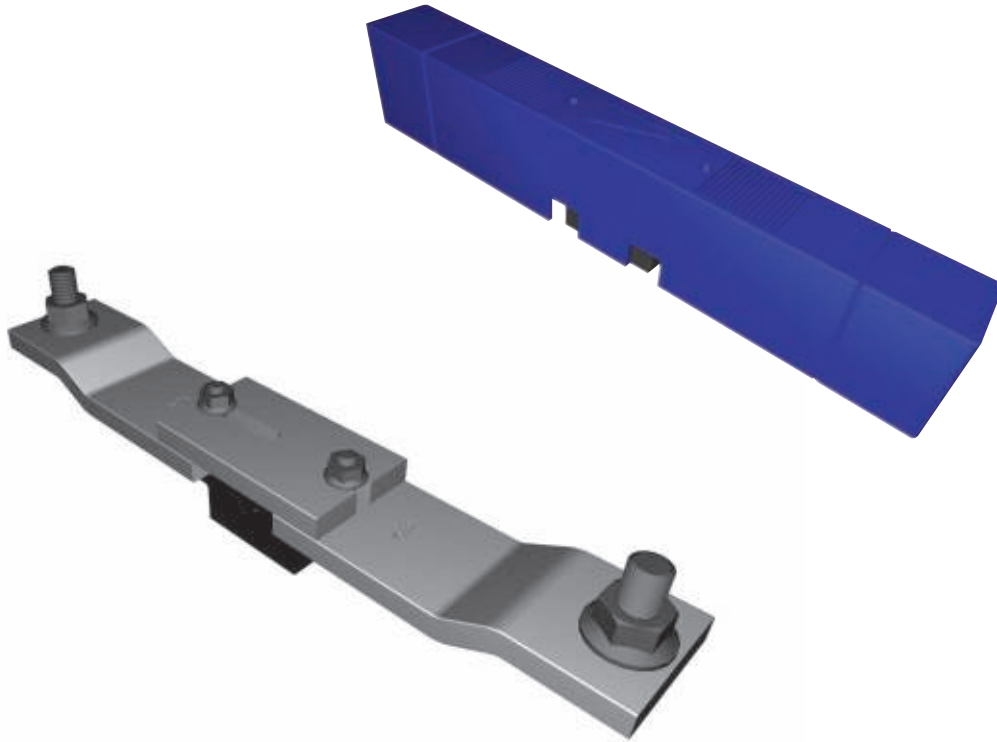
Tembreak 2

Motorised mechanically and electrically interlocked MCCBs fully assembled on a mounting bracket ready for installation. A wiring controller and wiring harnesses suitable for use with the TemTransfer Automatic Changeover Controller are also available.

Details on pages 46/61/80.

NEUTRAL LINKS

NEW
PRODUCTS



MCCB Neutral Link

When combined with a three-pole MCCB, the neutral link provides a termination for the neutral conductor at the same pole-pitch and terminal height as the neutral pole of a four-pole MCCB.

Shrouds are available separately.

Details on page 45/60/79/89/99

ENHANCED ELECTRONIC MCCB



Tembreak2

Integrated VTs and CTs monitor current, voltage, instantaneous power, energy, power factor and harmonic currents. Data can be transmitted externally using the modbus protocol. LCD can be supplied mounted vertically or horizontally.

Details on page 64/65/72

FINAL DISTRIBUTION PRODUCTS: CONTENTS

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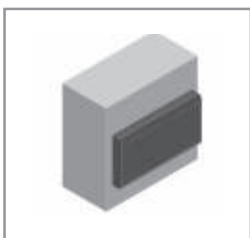


SINGLE PHASE DISTRIBUTION BOARDS

TEMWAY

TEMWAY 100

- Scratch-resistant, high-gloss galvanised steel
- Multiple easy-clear knockouts
- Lockable transparent cover
- IP40



Outgoing Ways	Code	Dimensions (mm)		
		Width	Height	Depth
9	404101009	230	225	110
15	404101015	320	225	110
30*	404101030	320	450	110
Insulated Comb Busbar 15-way**	401102001	-	-	-

* Two rows

** Can be cut to 9-way



Incoming Device	Code
100A Switch Disconnecter	DDF 1020100



Incoming Device	Code
63A, 30mA, 2P RCCB	ZFP632003AC
80A, 30mA, 2P RCCB	ZFP802003AC
100A, 30mA, 2P RCCB	ZPP1002003AC
63A, 100mA, 2P RCCB	ZFP63201AC
63A, 300mA, 2P RCCB	ZFP63203AC
80A, 300mA, 2P RCCB	ZFP80203AC
100A, 300mA, 2P RCCB	ZFP100203AC

SINGLE PHASE DISTRIBUTION BOARDS

TEMWAY 100

TEMWAY



Outgoing Single Pole MCBs

Refer to page 17



Outgoing RCBOs

Refer to page 19

THREE-PHASE DISTRIBUTION BOARDS

Technical Specification

- Manufactured in accordance with BS5486 Part 13
- Sheet steel enclosure, door and cover plates
- Lockable doors with 180° concealed hinges
- Door can be left or right handed
- Fault Rating 30kA conditional
- Busbar rating 250 Amps (Joint free)
- Earth and shrouded neutral terminals
- IP31 protection is standard
- Colour coding for all connections as standard
- Generous cabling space
- Powder coating (RAL 7035w)



Outgoing Ways	Code	Dimensions (mm)		
		Width	Height	Depth
6	404201006	420	569	165
8	404201008	420	623	165
12	404201012	420	730	165
16	404201016	420	837	165
20	404201020	420	944	165
24	404201024	420	1051	165



Incoming Device	Code
125A TP Switch Disconnectors	404200125
160A TP Switch Disconnectors	404200160
250A TP Switch Disconnectors	404200250
160A TP MCCB Incomer 36kA	404300160
250A TP MCCB Incomer 36kA	404300250



Extension Boxes	Code	Dimensions (mm)		
		Width	Height	Depth
Multiservice Extension box	404202182	420	200	165
Extension box for metering *	404202250	420	200	165
Extension box for cabling	404200017	420	200	165

* Box includes 250A CT's and DIN96 Cutout

Description	Code
Blanking plates for outgoing ways pack of 6	404100000
MCB Padlock Device	404300025
MCCB Padlock Device 125/250A	037016

THREE-PHASE, SPLIT METERED DISTRIBUTION BOARDS

TEMWAY 250 LP

TEMWAY

Energy used for lighting and power can be metered separately.

Features:

- Sheet steel enclosure, door and cover plates
- Lockable doors with 180° concealed hinges
- Earth and shrouded neutral terminals
- Door sealing gasket
- Door can be left or right handed
- Powder coated (RAL 7035w)

Two ways to buy:

Kit price includes:

- enclosure
- two busbar assemblies, fitted
- cover plate
- meter extension box with two DIN96 cutouts, fitted

Assembled price provides the board with

- 100A MCB incomer, fitted
- two 150: 5A block CTs, fitted
- meter protection MCB, fitted
- metering and incomer wired
- two TEMM-R4-HP multifunction energy meters, fitted



Outgoing Ways	Code		
6+6	LP26TP6TP		
6+8	LP26TP8TP		
6+10	LP26TP10TP		
8+8	LP28TP8TP		
8+10	LP28TP10TP		
8+12	LP28TP12TP		
10+10	LP28TP10TP		
10+12	LP210TP12TP		
12+12	LP212TP12TP		
16+16	LP216TP16TP		
20+20	LP220TP20TP		

THREE-PHASE, SPLIT METERED DISTRIBUTION BOARDS

TEMWAY



Incoming MCBs	Code	Price
80A 4P (6 DIN module) type C	TDHC4080	
100A 4P (6 DIN module) type C	TDHC4100	
125A 4P (6 DIN module) type C	TDHC4125	



Incomer Box	Code	Dimensions (mm)		
		Width	Height	Depth
Suitable for 250A frame MCCB or switch disconnector	404202301	420	250	165



Incoming Device and Switch Disconnectors*	Code	Price
125A TP Switch Disconnector	404200125	
160A TP Switch Disconnector	404200160	
250A TP Switch Disconnector	404200250	
160A TP MCCB Incomer 36kA	404300160	
250A TP MCCB Incomer 36kA	404300250	

* Incomer box required

OUTGOING DEVICES FOR DISTRIBUTION BOARDS

MINIATURE CIRCUIT BREAKER

TemDin 2 Miniature Circuit Breakers protect installations against overloads and short-circuits.

Features:

- 10kA BS EN 60898
- 15kA BS EN 60947-2
- Terminal capacity of 35mm²
- DIN rail mounting



		CURVE						
		B		C		D		
poles	In (A)	Code	Price	Code	Price	Code	Price	
1	0.3	-	-	-	-	DH06D100V3		
	0.5	-	-	-	-	DH06D100V5		
	0.75	-	-	-	-	DH06D100V7		
	1	-	-	-	-	DH06D10001		
	1.6	-	-	-	-	DH06D101V6		
	2	-	-	-	-	DH06D10002		
	2.5	-	-	-	-	DH06D102V5		
	3	-	-	-	-	DH06D10003		
	3.5	-	-	-	-	DH06D103V5		
	4	-	-	-	-	DH06D10004		
	6	DH06B10006			DH06C10006		DH06D10006	
	10	DH06B10010			DH06C10010		DH06D10010	
	16	DH06B10016			DH06C10016		DH06D10016	
	20	DH06B10020			DH06C10020		DH06D10020	
	25	DH06B10025			DH06C10025		DH06D10025	
	32	DH06B10032			DH06C10032		DH06D10032	
40	DH06B10040			DH06C10040		DH06D10040		
50	DH06B10050			DH06C10050		DH06D10050		
63	DH06B10063			DH06C10063		DH06D10063		

OUTGOING DEVICES FOR DISTRIBUTION BOARDS

MINIATURE CIRCUIT BREAKER



		CURVE					
		B		C		D	
poles	In (A)	Code		Code		Code	
3	0.3	-	-	-	-	DH06D300V3	
	0.5	-	-	-	-	DH06D300V5	
	0.75	-	-	-	-	DH06D300V7	
	1	-	-	-	-	DH06D30001	
	1.6	-	-	-	-	DH06D301V6	
	2	-	-	-	-	DH06D30002	
	2.5	-	-	-	-	DH06D302V5	
	3	-	-	-	-	DH06D30003	
	3.5	-	-	-	-	DH06D303V5	
	4	-	-	-	-	DH06D30004	
	6	DH06B30006			DH06C30006		DH06D30006
	10	DH06B30010			DH06C30010		DH06D30010
	16	DH06B30016			DH06C30016		DH06D30016
	20	DH06B30020			DH06C30020		DH06D30020
	25	DH06B30025			DH06C30025		DH06D30025
	32	DH06B30032			DH06C30032		DH06D30032
	40	DH06B30040			DH06C30040		DH06D30040
50	DH06B30050			DH06C30050		DH06D30050	
63	DH06B30063			DH06C30063		DH06D30063	

OUTGOING DEVICES FOR DISTRIBUTION BOARDS

ZDH RCBO (SINGLE MODULE RCBO + NEUTRAL TAIL)

Specification

Short circuit capacity	10kA
Tripping characteristic	B, C
Type	A
Sensitivity	30mA
Rated voltage	230V / 400V~
Frequency	50 / 60 Hz
Calibration temperature	30°C
Terminal capacity	Incoming 25mm ² /Outgoing 10mm ²
Standards	EN 61009-1

Nominal current ratings from 6 to 32A
Residual current circuit breakers with overcurrent protection designed for total safety.

- Residual current circuit breakers protect people against electrocution from direct or indirect contact (30mA). They also protect property from fires caused by the breakdown of insulation of conductors.

- ZDH RCBOs also protect circuits against overloads and short circuits.



In(A)	Sensitivity (mA)	Type	CURVE			
			B		C	
			Code	Price	Code	Price
6	30	A	ZDH041P/06B/003-A		ZDH041P/06C/003-A	
10	30	A	ZDH041P/10B/003-A		ZDH041P/10C/003-A	
16	30	A	ZDH041P/16B/003-A		ZDH041P/16C/003-A	
20	30	A	ZDH041P/20B/003-A		ZDH041P/20C/003-A	
32	30	A	ZDH041P/32B/003-A		ZDH041P/32C/003-A	

PANEL BOARDS & ACCESSORIES

TEMWAY

Technical Specification

- Manufactured in accordance with BS5486 Part 13
- Sheet steel enclosure, door and cover plates
- Lockable doors with 180° concealed hinges
- Door can be left or right handed
- Powder coding (RAL 7035w)
- Generous cabling space
- Fault rating 50kA for 1 second
- Colour coding for all connections as standard
- Totally encapsulated, full insulated 400A or 800A 415Vac, busbar system
- One piece copper construction
- Maintenance free
- Earth and neutral terminals
- IP31 protection as standard
- Incoming kits include all shrouds and links

400A Panel Board



Poles	Outgoing Ways	Code	Price	Dimensions (mm)		
				Height	Width	Depth
3 Pole	6	405401006		1160	700	200
	12	405401012		1550	700	200
Optional shrouding for earth and neutral bars	6, 12	405402001				

* Maximum outgoing device 125A



Incoming Device	Code	Price
250A TP Switch Disconnecter	404404253	
400A TP Switch Disconnecter	404404403	
250A TP MCCB Incomer	404404251	
400A TP MCCB Incomer	404404401	
Padlock Device	037207	

800A Panel Board



Poles	Outgoing Ways	Code	Price	Dimensions (mm)		
				Height	Width	Depth
3 Pole	6	405801006		1160	700	200
	12	405801012		1550	700	200
	18	405801018		1750	700	200
Optional shrouding for earth and neutral bars	6, 12	405402001				

* Maximum outgoing device 125A



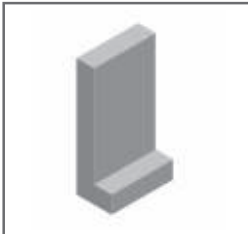
Incoming Device	Code	Price
630A TP Switch Disconnecter	404804633	
800A TP Switch Disconnecter	404804803	
630A TP MCCB Incomer	404804631	
800A TP MCCB Incomer	404804801	
Padlock Device	215011004	

PANEL BOARDS & ACCESSORIES



Extension Boxes	Code	Dimensions (mm)		
		Width	Height	Depth
TemWay 400/800 Extension Box	404802182	700	200	200
TemWay 400 Meter Box*	404802400	700	300	200
TemWay 800 Meter Box*	404802800	700	300	200

* Box includes CT's and DIN96 Cutout



Extra Deep Extension Box	Code	Price
for TemWay 400/800	404802300	



Side-mounted Cable Boxes	Code	Price
6-way TemWay 400/800	404802301	
12-way TemWay 400/800	404802302	
18-way TemWay 800	404802303	

* Prices are for one cable box which can be mounted either on the right or on the left of the panelboard



Side-mounted Metering Boxes	Code	Price
6-way TemWay 400/800 with 3 DIN96 cutouts	404802304	
12-way TemWay 400/800 with 6 DIN96 cutouts	404802305	
18-way TemWay 800 with 9 DIN96 cutouts	404802306	

* Prices are for one cable box which can be mounted either on the right or on the left of the panelboard. Blanking plates for unused cutouts are included. Mounting brackets for CTs are included.

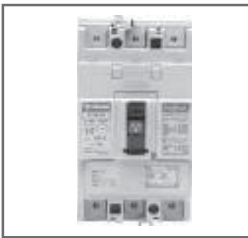
PANEL BOARDS & ACCESSORIES

TEMWAY

400A Panel Board Outgoing MCCBs



poles	I_R (A)	S125-NF Code	25kA Price
1	16	254796	
	20	254703	
	25	254710	
	32	254727	
	40	254734	
	50	254741	
	63	254758	
	80	254765	
	100	254772	
	125	254789	



poles	I_R (A)	E125-NJ Code	25kA Price	S125-NJ Code	36kA Price	S125-GJ Code	65kA* Price
3	13-20	254802		255007		255205	
	20-32	254819		255014		255212	
	32-50	254826		255021		255229	
	40-63	254833		255038		255236	
	63-100	254840		255045		255243	
	79-125	254857		255052		255250	

Adjustment Ratings
 *Maximum busbar withstand rating - 50kA

Terminal Shrouds & Accessories

		Code	Price
1P FC	Load Terminal Shroud	080401	
	Line Terminal Shroud	080531	
3P FC	Load Terminal Shroud	080425	
	Line Terminal Shroud	080555	
1P or 3P	Padlock Device	037016	
1P or 3P	Blanking Kit	404100000	

*Note: 1 off each shroud (either 1p or 3p) required per MCCB

PANEL BOARDS & ACCESSORIES

800A Panel Board Outgoing MCCBs



poles	I_R (A)	S160-NF Code	25kA Price
1	16	326707	
	20	326714	
	25	326721	
	32	326738	
	40	326745	
	50	326752	
	63	326769	
	80	326776	
	100	326790	
	125	326790	
	160	326806	



poles	I_R (A)	S160-NJ Code	36kA Price	S160-GJ Code	65kA* Price
3	13-20	326837		-	-
	20-32	326844		-	-
	32-50	326851		327025	
	40-63	326868		327032	
	63-100	326875		327049	
	79-125	326882		327056	
	101-160	326899		327063	

poles	I_R (A)	S250-NJ Code	36kA Price	S250-GJ Code	65kA* Price
3	01-160	312021		312229	
	126-200	312052		312250	
	158-250	312038		312236	

Terminal Shrouds & Accessories

		Code	Price
1P FC	Load Terminal Shroud	080449	
	Line Terminal Shroud	080579	
3P FC	Load Terminal Shroud	080456	
	Line Terminal Shroud	404300000	
1P or 3P	Padlock Device	037016	
1P or 3P	Blanking Kit	404100000	

* Note: 1 off each shroud (either 1p or 3p) required per MCCB

PAN ASSEMBLIES

Specification:

Fully insulated 250A 415Vac busbar system

Busbar short circuit withstand is certified 30kA conditional

One piece copper construction

Maintenance free

Colour coding for all connections as standard

Shroud for spare/unused outgoing terminals

250A MCB Pan Assembly



Pan Assembly inc Tray Earth & Neutral		
Outgoing Ways	Code	Price
6	404203006	
8	404203008	
12	404203012	
16	404203016	
20	404203020	
24	404203024	

Specification:

Totally encapsulated, fully insulated 400A 415Vac busbar system

Short circuit withstand is ASTA certified 50kA for 1 second

One piece copper construction

Maintenance free

Colour coding for all connections as standard

Shroud for spare/unused outgoing terminals

400A MCCB Pan Assembly



Outgoing Ways	Pan Assembly		Pan Assembly inc Tray Earth & Neutral	
	Code	Price	Code	Price
6	404403106	£262.04	404403006	
12	404403112	£404.71	404403012	

Specification:

Totally encapsulated, fully insulated 800A 415Vac busbar system

Short circuit withstand is ASTA certified 50kA for 1 second

One piece copper construction

Maintenance free

Colour coding for all connections as standard

Shroud for spare/unused outgoing terminals

800A MCCB Pan Assembly



Outgoing Ways	Pan Assembly		Pan Assembly inc Tray Earth & Neutral	
	Code	Price	Code	Price
6	404803106	£326.41	404803006	
12	404803112	£527.62	404803012	

MCCBs & CBRs: CONTENTS

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A note on item codes: 13-digit EAN codes are shown in full against applicable items. These correspond to the barcode on the product packaging and facilitate inventory management using barcode scanning.

Only the last 6 digits of the code are required to identify an item from the TemBreak 2 range of products. The preceding 7 digits may be omitted from orders and enquiries.

Quick Pricing Guide

Rating, /n MCCB	Terasaki Breaker Type			MCCB	Auxiliary Switch	Shunt	UVT	Variable Depth Handle	Terminal Cover (1cover)	Motor Operator
	Merlin Gerin Equivalent	ABB Equivalent	25kA Fault Level							
<=63A	E125NJ	NSX100F	T1C							
100A	E125NJ	NSX100F	T1C							
125A	E125NJ	NSX160F	T1C							
160A	E250NJ	NSX160F	T1C							
200A	E250NJ	NSX250F	T3N							
250A	E250NJ	NSX250F	T3N							
400A	E400NJ	NSX400F	T5N							

Rating, /n MCCB	Merlin Gerin Equivalent			MCCB	Auxiliary Switch	Shunt	UVT	Variable Depth Handle	Terminal Cover (1cover)	Motor Operator
	ABB Equivalent	36kA Fault Level								
<=63A	S125NJ	NSX100F	T1N							
100A	S125NJ	NSX100F	T1N							
125A	S125NJ	NSX160F	T1N							
160A	S160NJ	NSX160F	T1N							
200A	S250NJ	NSX250F	T3N							
250A	S250NJ	NSX250F	T3N							
400A	S400CJ	NSX400F	T5N							
630A	E630NE	NSX630F	T5N							

Rating, /n MCCB	ABB Equivalent			MCCB	Auxiliary Switch	Shunt	UVT	Variable Depth Handle	Terminal Cover (1cover)	Motor Operator
	50kA Fault Level									
<=63A	S125GJ	NSX100N	T2S							
100A	S125GJ	NSX100N	T2S							
125A	S125GJ	NSX160N	T2S							
160A	S160GJ	NSX160N	T2S							
200A	S250GJ	NSX250N	T3S							
250A	S250GJ	NSX250N	T3S							
400A	S400NJ	NSX400N	T5S							
630A	S630CE	NSX630N	T5S							
800A	XS800NJ	NS800N	T6S							
1000A	XS1000CE	NS1000N	T6S							
1250A	XS1250CE	NS1250N	T7S							

Rating, /n MCCB	ABB Equivalent			MCCB	Auxiliary Switch	Shunt	UVT	Variable Depth Handle	Terminal Cover (1cover)	Motor Operator
	65kA Fault Level									
<=63A	S125GJ	NSX100H	T2H							
100A	S125GJ	NSX100H	T2H							
125A	S125GJ	NSX160H	T2H							
160A	S160GJ	NSX160H	T2H							
200A	S250GJ	NSX250H	T3H							
250A	S250GJ	NSX250H	T3H							
400A	S400GJ	NSX400H	T5H							
630A	S630GE	NSX630H	T5H							
800A	XH800SE	NS800H	T6H							
1000A	XS1250SE	NS1000H	T6H							
1250A	XS1250SE	NS1250H	T7H							

Rating, /n MCCB	ABB Equivalent			MCCB	Auxiliary Switch	Shunt	UVT	Variable Depth Handle	Terminal Cover (1cover)	Motor Operator
	80kA Fault Level									
<=63A	H125NJ	NSX100S	T2L							
100A	H125NJ	NSX100S	T2L							
125A	H125NJ	NSX160S	T2L							
160A	H160NJ	NSX160S	T2L							
200A	H250NJ	NSX250S	T4L							
250A	H250NJ	NSX250S	T4L							
630A	XH800PJ	NSX630S	T5L							
800A	XH800PJ	NS800L	T6L							
1000A	XS1250SE	NS1000L	T6L							
1250A	XS1250SE	NS1600b	T7L							

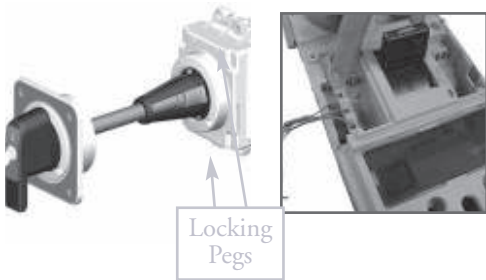
- Notes: 1: Above prices for 3 Pole MCCBS
 2: Breaking Capacities based on 400V AC
 3: Alarm Switches same price as auxiliary Switches upto 630A

TEMBREAK 2

10 Reasons to Use TemBreak 2

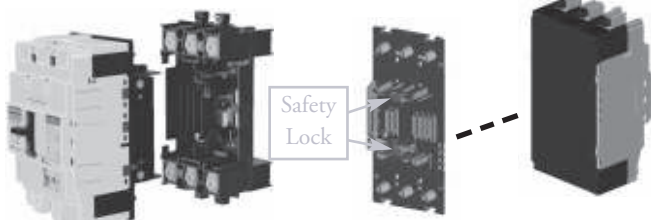
TEMBREAK 2

1. FIELD-INSTALLABLE ACCESSORIES



- Accessories can be fitted by the switchboard builder or added by the end-user. All internal accessories are common for TemBreak 2 MCCBs.
- External operating handles and motor operators can be rapidly fitted using the locking pegs. It takes **less than 10 seconds** to secure a handle or motor to the MCCB – a great time saving compared to alternative products.
- All accessories are endurance tested to the same level as the host MCCB.

2. SAFETY LOCK FOR PLUG-IN VERSIONS

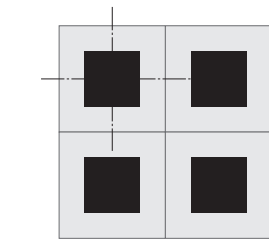


Plug-in MCCB and base

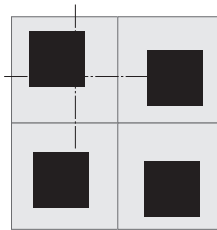
Plug-in connection kit, including safety lock

The plug-in MCCB is locked to the base when the toggle is ON. It cannot be removed unless the toggle is OFF or TRIPPED. The safety lock prevents a trip occurring as the MCCB is being removed from the base.

3. SYMMETRICAL DOOR CUTOUT PATTERNS



Using TemBreak 2 Operating Handles



Using other MCCB Operating Handles

Door cutout patterns for handles are symmetrical, even when breakers are mounted in opposite directions.

4. SUPERIOR TEMPERATURE PERFORMANCE

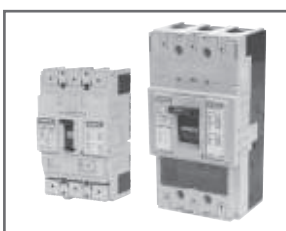


All TemBreak 2 MCCBs are fully rated for use at 50°C.

Overheating is the most common cause of failure in electrical switchgear. You can reduce the likelihood of overheating by using switchgear with superior temperature performance.



5. MODULAR SIZES



All current ratings up to 630A can be supplied in 2 sizes: the 250A and 630A sizes.



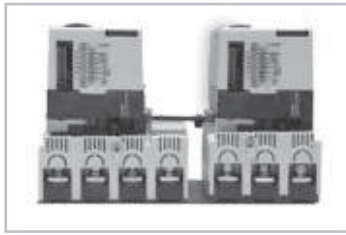
The compact 125A size offers the same features and performance but with reduced dimensions and cost.

10 Reasons to Use TemBreak 2

6. COMPACT CHANGEOVERS



Changeover Pair with Link Interlock and Motor Operators



Viewed from Below (250A frame)

The mechanical interlock is installed on the front of the MCCB, and is compatible with motor operators and handles. An automatic changeover system can be assembled in a few minutes by a switchboard builder or end-user.

Alternatively, we will supply the motorised and interlocked MCCBs fully assembled on a mounting bracket ready for installation. We will provide a wiring controller and wiring harnesses suitable for use with the TemTransfer Automatic Changeover Controller.

7. DIRECT OPENING

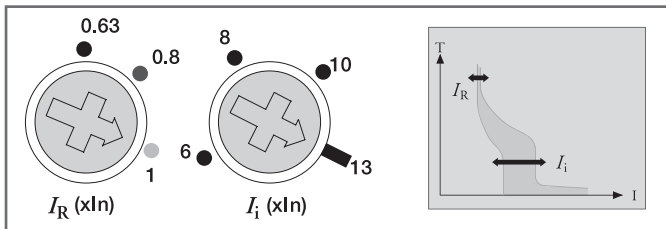


Under the heading “Measures to minimise the risk in the event of failure”, IEC 60204-1 Safety of Machinery-Electrical Equipment Machinery includes the following recommendation:

“-the use of switching devices having positive (or direct) opening operation.”



8. UNSURPASSED FLEXIBILITY

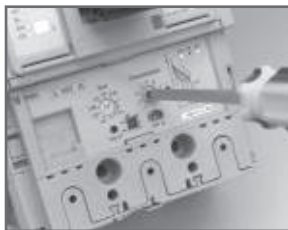


Overload protection is adjustable between 63% and 100% of the rating.

Short-circuit protection is adjustable on all thermal magnetic models.

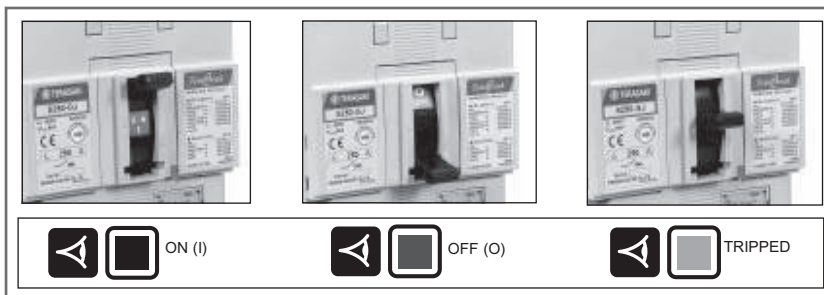
Short-circuit protection settings are suitable for motor starting on all models, including the compact 125A frame.

9. CUSTOMISED TRIPPING TIMES



If you require a characteristic which is not available as a preset on our electronic protection unit, send us the details and we will program a customised characteristic to suit your application. (Within certain limits - contact us for details).

10. VISUAL SAFETY



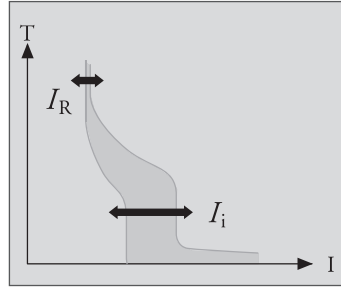
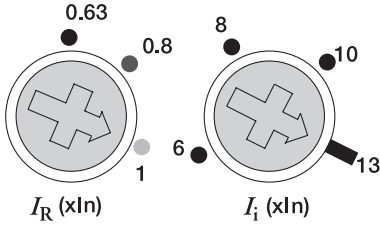
Coloured indicators display the ON or OFF status. The indicators are fully covered if the breaker trips, and black is the only visible colour.



Choosing a Current Rating

THERMAL MAGNETIC PROTECTION

Adjustment Dials



1. I_R is the thermal element adjustment dial and is used to set the rated current to match the conductor rating.

I_R can be set between 0.63 and 1.0 times I_n .

2. I_i is the magnetic element adjustment dial and is used to set the short circuit tripping threshold to suit the application.

- I_i can be set between 6 and 12 times I_n on models with $I_n \leq 100A$ and models with $I_n = 400$.
- I_i can be set between 6 and 10 times I_n on models with $I_n = 125A$ and 250A.
- I_i can be set between 6 and 13 times I_n on models with $I_n = 160A$ and $I_n = 200A$.

Models, Types and Rated Currents of Thermal Elements

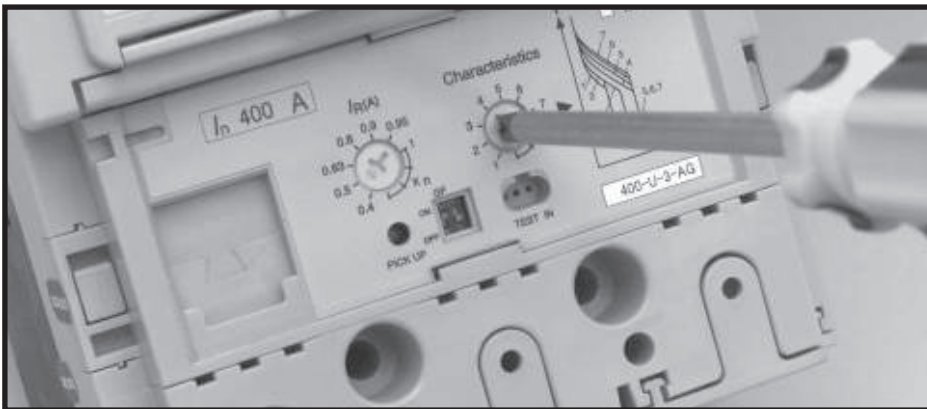
Model	Type	Current Rating I_n (A)
S125	-NF	16, 20, 25, 32, 40, 50, 63, 80, 100, 125
E125	-NJ	20, 32, 50, 63, 100, 125
S125	-NJ	20, 32, 50, 63, 100, 125
S125	-GJ	20, 32, 50, 63, 100, 125
H125	-NJ	20, 32, 50, 63, 100, 125
L125	-NJ	20, 32, 50, 63, 100, 125
S160	-NF	16, 20, 25, 32, 40, 50, 63, 80, 100, 125, 160
S160	-NJ	20, 32, 50, 63, 100, 125, 160
S160	-GJ	50, 63, 100, 125, 160
H160	-NJ	160
L160	-NJ	160
E250	-NJ	20, 32, 50, 63, 100, 125, 160, 200, 250
S250	-NJ	160, 200, 250
S250	-GJ	160, 200, 250
H250	-NJ	160, 250
L250	-NJ	160, 250
E400	-NJ	250, 400
S400	-CJ	250, 400
S400	-NJ	250, 400
S400	-GJ	250, 400
H400	-NJ	250, 400
L400	-NJ	250, 400

ELECTRONIC PROTECTION

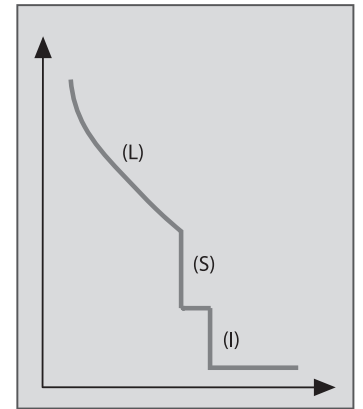
TemBreak 2 MCCBs from 250A frame to 630A frame are available with electronic protection units. Current ratings, I_n , of 40A, 125A, 250A, 400A and 630A are available. Overload protection can be adjusted to $0.4 \times I_n$. These offer great flexibility as their characteristics can be set to suit a wide range of application conditions.

Terasaki offer one of the most adaptable protection units on the market:

If you require a characteristic which is not available as a preset on our standard electronic protection unit, send us the details and we will program a customised characteristic to your specification.*



Selecting a Preset Characteristic for a 400A TemBreak 2 MCCB with Electronic Protection



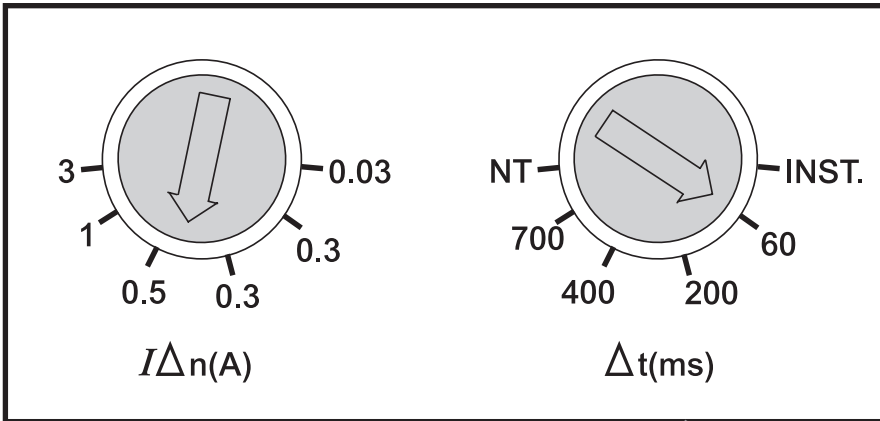
Electronic Protection Characteristic

Every TemBreak 2 electronic protection unit includes overload protection (L), delayed short-circuit protection (S) and instantaneous protection (I) as standard.

CBR Protection Setting

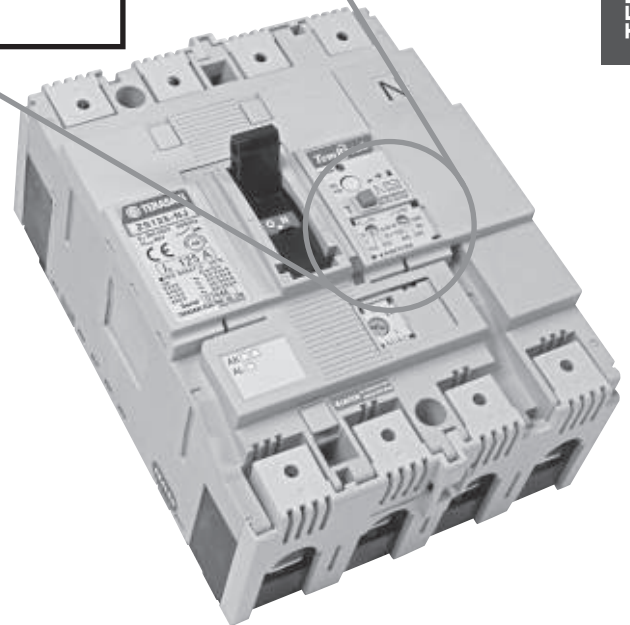
RESIDUAL CURRENT PROTECTION

Adjustment Dials



TEMBREAK 2

- $I_{\Delta n}$ is the adjustable tripping threshold for residual current (earth leakage) protection. It can be set between 30mA and 3A. Available settings are shown below:
- Δt (ms) is a time delay which is introduced to the residual current (earth leakage) protection characteristic. Available settings are shown below. It can also be set to 0 (max. actual tripping time is 40ms) or NT (No Trip - tripping time = ∞). The maximum breaking time at each setting is shown in brackets. Note that if $I_{\Delta n}$ is set at 30mA, Δt defaults to 0.
- Please refer to page XX for Thermal Element Adjustment (I_R)



Models, Ratings and Adjustment Settings

	I_n (A)	$I_{\Delta n}$ (A)	Δt (ms)	I_i
ZE125, ZS125	20, 32, 50, 63, 100	0.03, 0.1, 0.3, 0.5, 1, 3	0 (40), 60 (195), 200 (365), 400 (620), 700 (950), NT (∞)	$12 \times I_n$ (+/- 20%)
ZE125, ZS125	125	0.03, 0.1, 0.3, 0.5, 1, 3	0 (40), 60 (195), 200 (365), 400 (620), 700 (950), NT (∞)	$10 \times I_n$ (+/- 20%)
ZE250, ZS250	160	0.03, 0.1, 0.3, 0.5, 1, 3	0 (40), 60 (195), 200 (365), 400 (620), 700 (950), NT (∞)	$13 \times I_n$ (+/- 20%)
ZE250, ZS250	250	0.03, 0.1, 0.3, 0.5, 1, 3	0 (40), 60 (195), 200 (365), 400 (620), 700 (950), NT (∞)	$10 \times I_n$ (+/- 20%)

1P MCCBs



Dimensions		
h (mm)		155
w (mm)		30
d (mm)		68

Model	I_n (A)	1P	
S125-NF $I_{cu}=25$ kA Thermal Magnetic	16	4547560 254796	
	20	4547560 254703	
	25	4547560 254710	
	32	4547560 254727	
	40	4547560 254734	
	50	4547560 254741	
	63	4547560 254758	
	80	4547560 254765	
	100	4547560 254772	
	125	4547560 254789	

TEMBREAK 2



Dimensions		
h (mm)		165
w (mm)		35
d (mm)		68

Model	I_n (A)	1P	
S160-NF $I_{cu}=25$ kA Thermal Magnetic	16	4547560 326707	
	20	4547560 326714	
	25	4547560 326721	
	32	4547560 326738	
	40	4547560 326745	
	50	4547560 326752	
	63	4547560 326769	
	80	4547560 326776	
	100	4547560 326783	
	125	4547560 326790	
	160	4547560 326806	

A note on item codes: 13-digit EAN codes are shown in full against applicable items. These correspond to the barcode on the product packaging and facilitate inventory management using barcode scanning.

Only the last 6 digits of the code are required to identify an item from the TemBreak 2 range of products. The preceding 7 digits may be omitted from orders and enquiries.

ACCESSORIES FOR 1P MCCBs

Shunt Trips (SHT)

Field Fit Accessory		Code	
	AC 100-120V for S160-NF	4547560 001000	
	AC 200-240V for S160-NF	4547560 001017	
	AC 380-450V for S160-NF	4547560 001024	
	DC 24V for S160-NF	4547560 001031	
	DC 48V for S160-NF	4547560 001048	
	DC 100-120V for S160-NF	4547560 001055	
	DC 200-240V for S160-NF	4547560 001062	

Extension Bars (FB)

Flat Bars Field Fit Accessory		Code	
	1 bar for S125-NF	4547560 010064	
	1 bar for S160-NF	4547560 010101	

Cable Clamps (FW)

Solderless Terminals Field Fit Accessory		Code	
	1 clamp for S125-NF	4547560 080692	
	1 clamp for S160-NF	4547560 080760	

Terminal Covers For Front Connections (CF)

Field Fit Accessory		Code	
	1 cover for S125-NF	4547560 080401	
	1 cover for S160-NF	4547560 080449	
	Terminal cover lock	4547560 038020	

Terminal Covers For Cable Clamps (CS)

Terminal Covers for Solderless Terminal Field Fit Accessory		Code	
	1 cover for S125-NF	4547560 080531	
	1 cover for S160-NF	4547560 080579	
	Terminal cover lock	4547560 038020	

Handle Locks (HL)



Field Fit Accessory		Code	
	For 125AF	211011001	
	For 160AF	4547560 037016	

125A FRAME MCCBs & CBRs



Dimensions		E125
		S125
h (mm)		155
w (mm)	3 pole	90
	4 pole	120
d (mm)		68

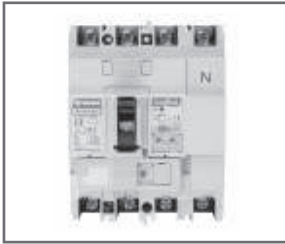
TEMBREAK 2

Model	I _R (A)	3P	Price	4P	Price
E125-NJ I _{cu} = 25 kA Thermal Magnetic	13-20	4547560 254802		4547560 254901	
	20-32	4547560 254819		4547560 254918	
	32-50	4547560 254826		4547560 254925	
	40-63	4547560 254833		4547560 254932	
	63-100	4547560 254840		4547560 254949	
	79-125	4547560 254857		4547560 254956	
S125-NJ I _{cu} = 36kA Thermal Magnetic	13-20	4547560 255007		4547560 255106	
	20-32	4547560 255014		4547560 255113	
	32-50	4547560 255021		4547560 255120	
	40-63	4547560 255031		4547560 255137	
	63-100	4547560 255045		4547560 255144	
	79-125	4547560 255052		4547560 255151	
S125-GJ I _{cu} = 65kA Thermal Magnetic	13-20	4547560 255205		4547560 255304	
	20-32	4547560 255212		4547560 255311	
	32-50	4547560 255229		4547560 255328	
	40-63	4547560 255236		4547560 255335	
	63-100	4547560 255243		4547560 255342	
	79-125	4547560 255250		4547560 255359	

Magnetic Trip Only and Low Instantaneous

Model	I _R (A)	3P Magnetic Trip Only	Price	4P Magnetic Trip Only	Price	3P Low Instantaneous	Price	4P Low Instantaneous
E125-NJ I _{cu} = 25kA Magnetic Only/ Low Instantaneous	12.5-20	4547560 256608		4547560 256707		4547560 257940		4547560 258008
	20-32	4547560 256615		4547560 256714		4547560 257957		4547560 258015
	32-50	4547560 256622		4547560 256721				
	40-63	4547560 256639		4547560 256738				
	63-100	4547560 256646		4547560 256745		4547560 257964		4547560 258022
	80-125	4547560 256653		4547560 256752		4547560 257971		4547560 258039
S125-NJ I _{cu} = 36kA Magnetic Only/ Low Instantaneous	12.5-20	4547560 257001		4547560 257100		4547560 258244		4547560 258305
	20-32	4547560 257018		4547560 257117		4547560 258251		4547560 258312
	32-50	4547560 257025		4547560 257124				
	40-63	4547560 257032		4547560 257131				
	63-100	4547560 257049		4547560 257148		4547560 258268		4547560 258329
	80-125	4547560 257056		4547560 257155		4547560 258275		4547560 258336
S125-GJ I _{cu} = 65kA Magnetic Only/ Low Instantaneous	12.5-20	4547560 257506		4547560 257605		4547560 258541		4547560 258602
	20-32	4547560 257513		4547560 257612		4547560 258558		4547560 258619
	32-50	4547560 257520		4547560 257629				
	40-63	4547560 257537		4547560 257636				
	63-100	4547560 257544		4547560 257643		4547560 258565		4547560 258626
	80-125	4547560 257551		4547560 257650		4547560 258572		4547560 258633

125A FRAME MCCBs & CBRs



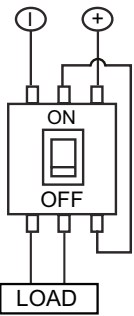
125A FRAME CBRs

Model	I_R (A)	3P	Price	4P	Price
ZE125-NJ $I_{cu} = 25$ kA	12.5-20	4547560 622106		4547560 622205	
	20-32	4547560 622113		4547560 622212	
	32-50	4547560 622120		4547560 622229	
	40-63	4547560 622137		4547560 622236	
	63-100	4547560 622144		4547560 622243	
	80-125	4547560 622151		4547560 622250	
ZS125-NJ $I_{cu} = 36$ kA	12.5-20	4547560 622502		4547560 622601	
	20-32	4547560 622519		4547560 622618	
	32-50	4547560 622526		4547560 622625	
	40-63	4547560 622533		4547560 622632	
	63-100	4547560 622540		4547560 622649	
	80-125	4547560 622557		4547560 622656	
ZS125-GJ $I_{cu} = 65$ kA	12.5-20	4547560 622304		4547560 622403	
	20-32	4547560 622311		4547560 622410	
	32-50	4547560 622328		4547560 622427	
	40-63	4547560 622335		4547560 622431	
	63-100	4547560 622342		4547560 622441	
	80-125	4547560 622359		4547560 622458	

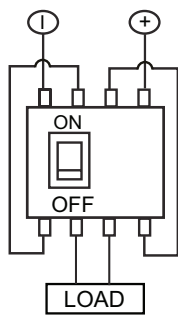
CBR with Residual Monitor and Remote Trip Module

Model	I_R (A)	3P	Price	4P	Price
ZE125-NJ ZP $I_{cu} = 25$ kA	12.5-20	4547560 622700		4547560 622809	
	20-32	4547560 622717		4547560 622816	
	32-50	4547560 622724		4547560 622823	
	40-63	4547560 622731		4547560 622830	
	63-100	4547560 622746		4547560 622847	
	80-125	4547560 622755		4547560 622854	
ZS125-NJ ZP $I_{cu} = 36$ kA	12.5-20	4547560 623103		4547560 623202	
	20-32	4547560 623110		4547560 623219	
	32-50	4547560 623127		4547560 623266	
	40-63	4547560 623134		4547560 623233	
	63-100	4547560 623141		4547560 623240	
	80-125	4547560 623158		4547560 623257	
ZS125-GJ ZP $I_{cu} = 65$ kA	12.5-20	4547560 622908		4547560 623004	
	20-32	4547560 622915		4547560 623011	
	32-50	4547560 622922		4547560 623028	
	40-63	4547560 622930		4547560 623035	
	63-100	4547560 622946		4547560 623042	
	80-125	4547560 622953		4547560 623059	

125A FRAME MCCB & CBRs



3 Poles in Series



4 Poles in Series

TEMBREAK 2

DC Application

Model	I_R (A)	3P	Price	4P	Price
S125-ND @ 350V DC $I_{cu} = 10kA$ Thermal Magnetic <i>Poles wired in series</i>	20	4547560 245800			
	32	4547560 245817			
	50	4547560 245824			
	63	4547560 245831			
	100	4547560 245848			
	125	4547560 245855			

Model	I_R (A)	3P	Price	4P	Price
S125-ND @ 500V DC $I_{cu} = 7.5kA$ Thermal Magnetic <i>Poles wired in series</i>	20	4547560		4547560 261503	
	32	4547560		4547560 261510	
	50	4547560		4547560 261527	
	63	4547560		4547560 261534	
	100	4547560		4547560 261541	
	125	4547560		4547560 261558	

(4 Pole Version only)

Model	I_R (A)	3P	Price	4P	Price
S125-ND @ 600V DC $I_{cu} = 5kA$ Thermal Magnetic <i>Poles wired in series</i>	20	4547560		4547560 261602	
	32	4547560		4547560 261619	
	50	4547560		4547560 261626	
	63	4547560		4547560 261633	
	100	4547560		4547560 261640	
	125	4547560		4547560 261657	

(4 Pole Version only)

ACCESSORIES FOR 125A FRAME MCCBs & CBRs

Auxiliary Switches (AX) *General Purpose*



Field Fit Accessory	Code	Price
Changeover	4547560 000348	
Changeover for low currents (mA)	4547560 000324	

Auxiliary Switches (AX) *Heavy Duty*



Field Fit Accessory	Code	Price
Normally open	4547560 000300	
Normally closed	4547560 000317	

Alarm Switches (AL) *General Purpose*



Field Fit Accessory	Code	Price
Changeover	4547560 000744	
Changeover for low currents (mA)	4547560 000720	

Alarm Switches (AL) *Heavy Duty*



Field Fit Accessory	Code	Price
Normally open	4547560 000706	
Normally closed	4547560 000713	

Shunt Trips (SHT)



Field Fit Accessory	Code	Price
AC 100-120V	4547560 000904	
AC 200-240V	4547560 000911	
AC 380-450V	4547560 000928	
DC 12V	4547560 000973	
DC 24V	4547560 000935	
DC 48V	4547560 000942	
DC 100-120V	4547560 000959	
DC 200-240V	4547560 000966	

*Not suitable for use with CBR

ACCESSORIES FOR 125A FRAME MCCBs & CBRs

Instantaneous



Field Fit Accessory	Code	Price
AC 100-120V	4547560 001208	
AC 200-240V	4547560 001215	
AC 380-450V	4547560 001222	
DC 24V	4547560 001239	
DC 100-120V	4547560 001246	
DC 200-240V	4547560 001253	

*Not suitable for use with CBR

Extension Bars (FB)



Straight type

Flat Bars Field Fit Accessory	Code	Price
3 bars	4547560 010026	
4 bars	4547560 010040	

Rear



Flat Bar Studs Field Fit Accessory	Code	Price
3 studs	4547560 080111	
4 studs	4547560 080128	

Fixed Part of



Plug-in Mount Blocks Field Fit Accessory	Code	Price
3P	4547560 060267	
4P	4547560 060359	

A plug-in conversion is also required to complete the plug-in MCCB

*Not suitable for use with CBR

Plug-in Conversion



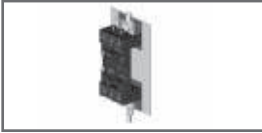
For Removable Part of Plug-in MCCB Field Fit Accessory	Code	Price
3P	4547560 800160	
4P	4547560 800177	

A fixed part is also required to complete the plug-in MCCB

*Not suitable for use with CBR

ACCESSORIES FOR 125A FRAME MCCBs & CBRs

Extension Terminal for Fixed Part of Plug-in MCCB (PF)



Flat Bar for PIB Field Fit Accessory	Code	Price
3 bars	4547560 045813	
4 bars	4547560 045820	

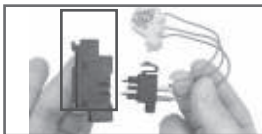
Control Wiring Terminals for Plug-in MCCBs



Plug for Removable Part of MCCB, 3 terminals Field Fit Accessory	Code	Price
Plug for auxiliary switches and alarm switches	4547560 800108	
Plug for shunt trips and undervoltage trips	4547560 800115	

Order one plug for each internal accessory

Control Wiring Terminals for Plug-in MCCBs



Socket for Fixed Part of MCCB, 3 terminals Field Fit Accessory	Code	Price
Socket	4547560 045004	

Order one socket for each electrical accessory

Cable Clamps (FW)



Solderless Terminals Field Fit Accessory	Code	Price
3 clamps	4547560 080715	
4 clamps	4547560 080722	

Motor Operation (MC)



Field Fit Accessory	Code	Price
AC 100-110V	4547560 755606	
AC 200-220V	4547560 755613	
AC 230-240V	4547560 755620	
DC 24V	4547560 755637	
DC 48V	4547560 755644	
DC 100V	4547560 755651	

ACCESSORIES FOR 125A FRAME MCCBs & CBRs

Motor Operation



Field Fit Accessory	Code	Price
AC 100-110V	4547560 755873	
AC 200-220V	4547560 755880	
AC 230-240V	4547560 755897	
DC 24V	4547560 755675	
DC 48V	4547560 755682	
DC 100V	4547560 755699	

Motor plus keylock available on request

External



Field Fit Accessory	Code	Price
Black handle IP3X	4547560 725623	
Black handle IP3X with keylock	4547560 725609	
Red handle IP3X	4547560 726101	
Red handle IP3X with keylock	4547560 726088	
Black handle IP5X	4547560 725630	
Black handle IP5X with keylock	4547560 725616	
Red handle IP5X	4547560 726118	
Red handle IP5X with keylock	4547560 726095	

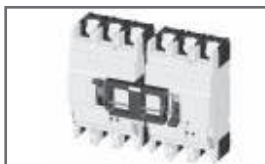
External Operating



Field Fit Accessory	Code	Price
Black handle IP54	4547560 727993	
Black handle IP54 with keylock	4547560 727832	
Red handle IP54	4547560 728631	
Red handle IP54 with keylock	4547560 728471	
Black Handle IP65	4547560 728037	
Black Handle IP65 with keylock	4547560 727870	
Red Handle IP65	4547560 728679	
Red Handle IP65 with keylock	4547560 728518	

ACCESSORIES FOR 125A FRAME MCCBs & CBRs

Slide Type Mechanical Interlocks (MS)

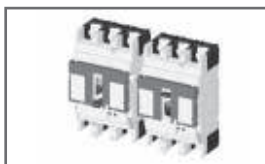


Field Fit Accessory	Code	Price
Front / rear connection 125AF 3P	4547560 033513	
Front / rear connection 125AF 4P	4547560 033520	
Plug-in type 125AF 3P	4547560 033544	
Plug-in type 125AF 4P	4547560 033551	

Order one part between two MCCBs

*Not suitable for use with CBR

Link Type Mechanical Interlocks (ML)



Field Fit Accessory	Code	Price
Right side	4547560 035005	
Left side 3P	4547560 035012	
Left side 4P	4547560 035029	

Order one interlock part for each MCCB

*Not suitable for use with CBR

Wire Type Mechanical Interlocks (MW)



Field Fit Accessory	Code	Price
Interlock	4547560 036026	
1m length interlock cable	4547560 036064	
1.5m length interlock cable	4547560 036057	

Order one interlock part for each MCCB and one cable between two MCCBs

*Not suitable for use with CBR

Electrical Interlocks



Field Fit Accessory	Code	Price
Cable for Electrical Interlocks, 500mm	4547560 756405	
Cable for Electrical Interlocks, 1500mm	4547560 756412	

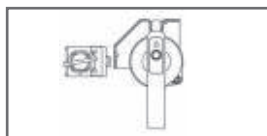
Handle Locks (HL)



Field Fit Accessory	Code	Price
For 125 / 250AF	4547560 037016	

ACCESSORIES FOR 125A FRAME MCCBs & CBRs

Castell Lock



Field Fit Accessory	Code	Price
Fittings for panel mounted type handle (lock and key not included)	4547560 037054	
Fittings for toggle operated MCCB ((lock and key not included)	4547560 037023	

Terminal Covers for Front Connection (CF)



Field Fit Accessory	Code	Price
3P, 1 cover	4547560 080425	
4P, 1 cover	4547560 080432	
Earth barrier for 125 / 250AF 3P barrier	4547560 008634	
Earth barrier for 125 / 250AF 4P barrier	4547560 008641	
Terminal cover lock	4547560 038006	

Terminal Covers for Rear Connection and Plug-In (CR)



Field Fit Accessory	Code	Price
3P, 1 cover	4547560 080487	
4P, 1 cover	4547560 080494	
Terminal cover lock	4547560 038006	

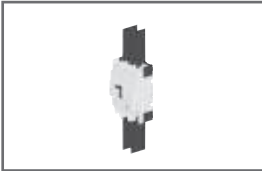
Terminal Covers for Cable Clamps (CS)



Terminal Covers for Solderless Terminal Field Fit Accessory	Code	Price
3P, 1 cover	4547560 080555	
4P, 1 cover	4547560 080562	
Terminal cover lock	4547560 038006	

ACCESSORIES FOR 125A FRAME MCCBs & CBRs

Interpole Barriers (BA)



Field Fit Accessory	Code	Price
1 barrier	4547560 043062	

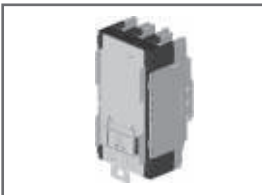
Interpole barriers are supplied as standard: 2 pieces per 3P MCCB, 3 pieces per 4P MCCB.
For additional barriers please order individually Field Fit Accessory

Lead Terminal Block



Field Fit Accessory	Code	Price
Left side	4547560 044526	
Right side	4547560 044533	

DIN Rail Adapter



Field Fit Accessory	Code	Price
DIN rail adapter for 125AF	4547560 045103	

Neutral Link

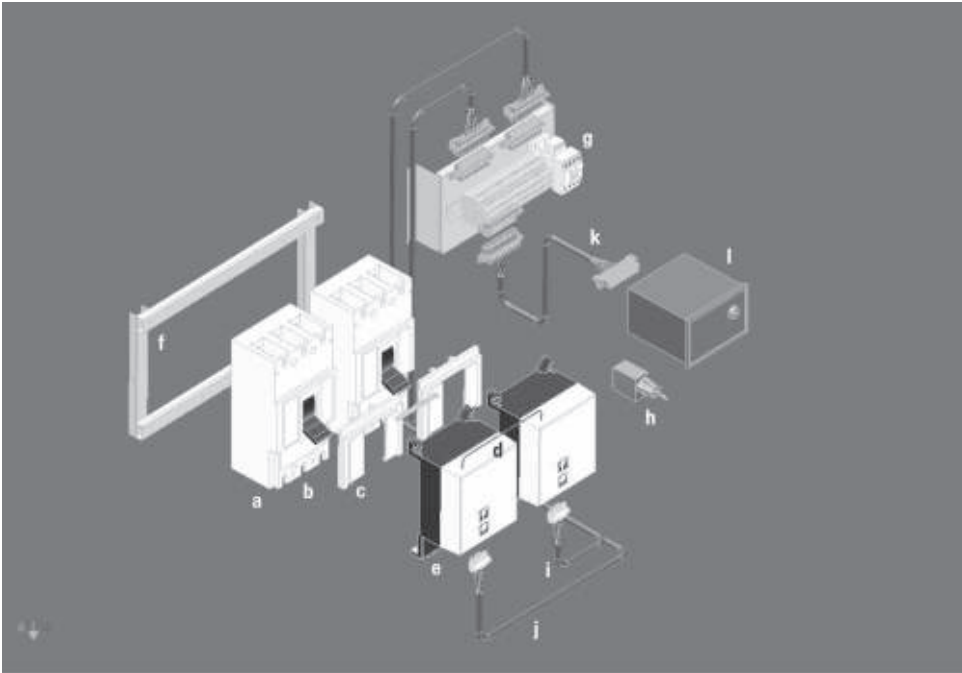


Field Fit Accessory	Code	Price
125A Neutral Link	800481	
125/250A Neutral Link Shroud	800559	

ACCESSORIES FOR 125A FRAME MCCBs & CBRS

Automatic Changeover Pairs

TEMBREAK 2



125A Frame

Factory Assembled	Code	Price
a Two TemBreak 2 MCCBs, 125A Frame	N/A	Not included
Auxillary switch for mains MCCB	000348	
b Auxillary switch for generator MCCB	000348	
Link type mechanical interlock (right)	035005*	
Link type mechanical interlock (left)	035012*	
or		
c Link type mechanical interlock (left, 4P)	035029*	
d Cable for electrical interlock (500m)	756405	
Motor operator for mains MCCB	Refer to "Motor Operator" Select code base on required voltage.	
Motor operator for generator MCCB	Refer to "Motor Operator" Select code base on required voltage.	
e		
f Mounting brackets		
g Wiring controller		
h Bypass keyswitch		
i Wiring harness for generator MCCB		
j Wiring harness for mains MCCB		
k Wiring harness for TemTransfer	303001001	
l TemTransfer Automatic Changeover Controller	302001001	
Total (Excluding MCCBs)		

*Not available for CBR's

250A FRAME MCCBs & CBRs



Dimensions			H125/H160
			S160 L125/L160
			E250 H250
			S250 L250
h (mm)			165 165
w (mm)	3 pole		105 105
	4 pole		140 140
d (mm)			68 103

Model	I_R (A)	3P	Price	4P	Price
H125-NJ * $I_{cu} = 125kA$ Thermal Magnetic	13-20	4547560 255403		4547560 255502	
	20-32	4547560 255410		4547560 255519	
	32-50	4547560 255427		4547560 255526	
	40-63	4547560 255434		4547560 255533	
	63-100	4547560 255441		4547560 255540	
	79-125	4547560 255458		4547560 255557	
L125-NJ * $I_{cu} = 200kA$ Thermal Magnetic	13-20	4547560 255601		4547560 255700	
	20-32	4547560 255618		4547560 255717	
	32-50	4547560 255625		4547560 255724	
	40-63	4547560 255632		4547560 255731	
	63-100	4547560 255649		4547560 255748	
	79-125	4547560 255656		4547560 255755	

Model	I_R (A)	3P	Price	4P	Price
S160-NJ $I_{cu} = 36 kA$ $\%I_{cu} = 30 kA$ Thermal Magnetic	13-20*	4547560 326837		4547560 326905	
	20-32*	4547560 326844		4547560 326912	
	32-50	4547560 326851		4547560 326929	
	40-63	4547560 326868		4547560 326936	
	63-100	4547560 326875		4547560 326943	
	79-125	4547560 326882		4547560 326950	
	101-160	4547560 326899		4547560 326967	
S160-GJ $I_{cu} = 65 kA$ Thermal Magnetic	32-50	4547560 327025		4547560 327124	
	40-63	4547560 327032		4547560 327131	
	63-100	4547560 327049		4547560 327148	
	79-125	4547560 327056		4547560 327155	
	101-160	4547560 327063		4547560 327162	
H160-NJ * $I_{cu} = 125 kA$ Thermal Magnetic	101-160	4547560 318474		4547560 318573	
L160-NJ * $I_{cu} = 200 kA$ Thermal Magnetic	101-160	4547560 318672		4547560 318771	

*H125-NJ, L125-N3, H160-NJ AND L160-NJ are 103mm deep. Refer to TemBreak 2 catalogue for details.

250A FRAME MCCBs & CBRs

TEMBREAK 2

Model	I_n (A)	3P	Price	4P	Price
E250-NJ $I_{cu} = 25\text{kA}$ Thermal Magnetic	13-20	4547560 327209		4547560 327308	
	20-32	4547560 327216		4547560 327315	
	32-50	4547560 327223		4547560 327322	
	40-63	4547560 327230		4547560 327339	
	63-100	4547560 327247		4547560 327346	
	79-125	4547560 327254		4547560 327353	
	101-160	4547560 327261		4547560 327360	
	126-200	4547560 327278		4547560 327377	
	158-250	4547560 327285		4547560 327384	
S250-NJ $I_{cu} = 36\text{ kA}$ Thermal Magnetic	101-160	4547560 312021		4547560 312120	
	126-200	4547560 312052		4547560 312151	
	158-250	4547560 312038		4547560 312137	
S250-GJ $I_{cu} = 65\text{ kA}$ Thermal Magnetic	101-160	4547560 312229		4547560 312328	
	126-200	4547560 312250		4547560 312359	
	158-250	4547560 312236		4547560 312335	
H250-NJ * $I_{cu} = 125\text{ kA}$ Thermal Magnetic	101-160	4547560 312427		4547560 312526	
	158-250	4547560 312434		4547560 312533	
L250-NJ * $I_{cu} = 200\text{ kA}$ Thermal Magnetic	101-160	4547560 312625		4547560 312724	
	158-250	4547560 312632		4547560 312731	

Low Instantaneous

Model	I_R (A)	3P	Price	4P	Price
S160-NJ $I_{cu} = 36\text{ kA}$ $*I_{cu} = 30\text{ kA}$ Low Instantaneous	20*	4547560 329517		4547560 329616	
	32*	4547560 329524		4547560 329623	
	100	4547560 329531		4547560 329630	
	125	4547560 329548		4547560 329647	
	160	4547560 329500		4547560 329609	
S160-GJ $I_{cu} = 65\text{ kA}$ Low Instantaneous	100	4547560 331008		4547560 331039	
	125	4547560 331015		4547560 331046	
	160	4547560 331022		4547560 331053	

* H250-NJ and L250-NJ are 103mm. Refer to Tembreak 2 catalogue for details.

250A FRAME MCCBs & CBRs

Low Instantaneous

Model	I_R (A)	3P	Price	4P	Price
E250-NJ	20	4547560 329814		4547560 329913	
$I_{cu} = 25$ kA	32	4547560 329821		4547560 329920	
Low Instantaneous	100	4547560 329838		4547560 329937	
	125	4547560 329845		4547560 329944	
	160	4547560 329852		4547560 329951	
	200	4547560 329869		4547560 329968	
	250	4547560 329807		4547560 329906	
S250-NJ	160	4547560 330117		4547560 330216	
$I_{cu} = 36$ kA	200	4547560 330124		4547560 330223	
Low Instantaneous	250	4547560 330100		4547560 330209	
S250-GJ	160	4547560 330414		4547560 330438	
$I_{cu} = 65$ kA	200	4547560 330421		4547560 330445	
Low Instantaneous	250	4547560 330407		4547560 330452	

TEMBREAK 2

Magnetic Trip Only

Model	I_R (A)	3P	Price	4P	Price
S160-NJ	20*	4547560 328305		4547560 328404	
$I_{cu} = 36$ kA	32*	4547560 328312		4547560 328411	
$I_{cu} = 30$ kA	50	4547560 328329		4547560 328428	
Magnetic Trip Only	63	4547560 328336		4547560 328435	
	100	4547560 328343		4547560 328442	
	125	4547560 328350		4547560 328459	
	160	4547560 328367		4547560 328466	
S160-GJ	50	4547560 328602		4547560 328701	
$I_{cu} = 65$ kA	63	4547560 328619		4547560 328718	
Magnetic Trip Only	100	4547560 328626		4547560 328725	
	125	4547560 328633		4547560 328732	
	160	4547560 328640		4547560 328749	
E250-NJ	20	4547560 329005		4547560 329104	
$I_{cu} = 25$ kA	32	4547560 329012		4547560 329111	
Magnetic Trip Only	50	4547560 329029		4547560 329128	
	63	4547560 329036		4547560 329135	
	100	4547560 329043		4547560 329142	
	125	4547560 329050		4547560 329159	
	160	4547560 329067		4547560 329166	
	200	4547560 329074		4547560 329173	
	250	4547560 329081		4547560 329180	
S250-NJ	160	4547560 329302		4547560 329333	
$I_{cu} = 36$ kA	200	4547560 329319		4547560 329340	
Magnetic Trip Only	250	4547560 329326		4547560 329357	
S250-GJ	160	4547560 329401		4547560 329432	
$I_{cu} = 65$ kA	200	4547560 329418		4547560 329449	
Magnetic Trip Only	250	4547560 329425		4547560 329456	

250A FRAME MCCBs & CBRs

TEMBREAK 2

Model		I_R (A)	3P	Price	4P	Price
S250-NE $I_{cu} = 36$ kA Electronic Electronic Protection Codes: A - LSI; P - Preferential Trip Alarm; G - Ground Fault; N - Neutral Protection	A 40	16-40	4547560 331701		4547560 331725	
	AN 40	16-40			4547560 331749	
	AP 40	16-40	4547560 331718		4547560 331732	
	APN 40	16-40			4547560 331756	
	A 125	16-125	4547560 331800		4547560 331824	
	AN 125	16-125			4547560 331848	
	AP 125	16-125	4547560 331817		4547560 331831	
	APN 125	16-125			4547560 331855	
	A 160	100-160	4547560 337802		4547560 337826	
	AN 160	100-160			4547560 337840	
	AP 160	100-160	4547560 337819		4547560 337833	
	APN 160	100-160			4547560 337857	
	A 250	50-250	4547560 331909		4547560 331923	
	AN 250	50-250			4547560 331947	
	AP 250	50-250	4547560 331916		4547560 331930	
	APN 250	50-250			4547560 331954	
S250-GE $I_{cu} = 65$ kA Electronic Electronic Protection Codes: A - LSI; P - Preferential Trip Alarm; G - Ground Fault; N - Neutral Protection	A 40	50-40	4547560 332005		4547560 332029	
	AN 40	50-40			4547560 332043	
	AP 40	50-40	4547560 332012		4547560 332036	
	APN 40	50-40			4547560 332050	
	A 125	100-125	4547560 332104		4547560 332128	
	AN 125	100-125			4547560 332142	
	AP 125	100-125	4547560 332111		4547560 332135	
	APN 125	100-125			4547560 332159	
	A 160	100-160	4547560 337925		4547560 337949	
	AN 160	100-160			4547560 337963	
	AP 160	100-160	4547560 337932		4547560 337956	
	APN 160	100-160			4547560 337970	
	A 250	100-250	4547560 332203		4547560 332227	
	AN 250	100-250			4547560 332241	
	AP 250	100-250	4547560 332210		4547560 332234	
	APN 250	100-250			4547560 332258	
S250-PE $I_{cu} = 70$ kA Electronic Electronic Protection Codes: A - LSI; P - Preferential Trip Alarm; G - Ground Fault; N - Neutral Protection	A 40	16-40	4547560 327704		4547560 327728	
	AN 40	16-40			4547560 327742	
	AP 40	16-40	4547560 327711		4547560 327735	
	APN 40	16-40			4547560 327759	
	A 125	50-125	4547560 327803		4547560 327827	
	AN 125	50-125			4547560 327841	
	AP 125	50-125	4547560 327810		4547560 327834	
	APN 125	50-125			4547560 327858	
	A 160	100-160	4547560 327902		4547560 337926	
	AN 160	100-160			4547560 337940	
	AP 160	100-160	4547560 327919		4547560 337933	
	APN 160	100-160			4547560 337957	
	A 250	100-250	4547560 319006		4547560 332227	
	AN 250	100-250			4547560 332241	
	AP 250	100-250	4547560 319020		4547560 332234	
	APN 250	100-250			4547560 332258	

*Note: All electronic 250A frame models are 103mm deep. Refer to Tembreak 2 catalogue for details.

250A FRAME MCCBs & CBRs

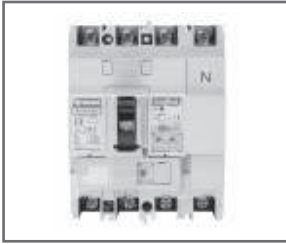
Model		I_R (A)	3P	Price	4P	Price
H250-NE $I_{cu} = 125$ kA Electronic <small>Electronic Protection Codes: A - LSI; P - Prefential Trip Alarm; G - Ground Fault; N - Neutral Protection</small>	A 40	16-40	4547560 328008		4547560 328022	
	AN 40	16-40			4547560 328046	
	AP 40	16-40	4547560 328015		4547560 328039	
	APN 40	16-40			4547560 328053	
	A 125	50-125	4547560 328107		4547560 328121	
	AN 125	50-125			4547560 328145	
	AP 125	50-125	4547560 328114		4547560 328138	
	APN 125	50-160			4547560 328152	
	A 160	100-160	4547560 328206		4547560 328220	
	AN 160	100-160			4547560 338244	
	AP 160	100-160	4547560 328213		4547560 328237	
	APN 160	100-160			4547560 328251	
	A 250	100-250	4547560 319105		4547560 319112	
	AN 250	100-250			4547560 319143	
	AP 250	100-250	4547560 328129		4547560 319136	
	APN 250	100-250			4547560 319150	

*Note: All electronic 250A frame models are 103mm deep. Refer to Tembreak 2 catalogue for details.

TEMBREAK 2

250A FRAME MCCBs & CBRs

250A FRAME CBRs



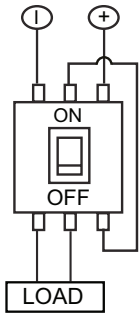
TEMBREAK 2

Model	I_R (A)	3P	Price	4P	Price
ZE250-NJ $I_{cu} = 25$ kA	100-160	4547560 642807		4547560 642906	
	160-250	4547560 642814		4547560 642913	
ZS250-NJ $I_{cu} = 36$ kA	100-160	4547560 643002		4547560 643101	
	160-250	4547560 643019		4547560 643118	
ZS250-GJ $I_{cu} = 65$ kA	100-160	4547560 643200		4547560 643309	
	160-250	4547560 643217		4547560 643316	

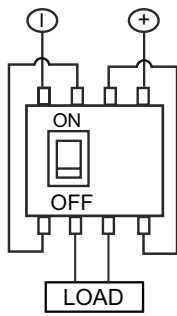
CBR with Residual Current Monitor and Remote Trip Module

Model	I_R (A)	3P	Price	4P	Price
ZE250-NJ ZP $I_{cu} = 25$ kA	100-160	4547560 644009		4547560 644108	
	160-250	4547560 644016		4547560 644115	
ZS250-NJ ZP $I_{cu} = 36$ kA	100-160	4547560 644207		4547560 644306	
	160-250	4547560 644214		4547560 644313	
ZS250-GJ ZP $I_{cu} = 65$ kA	100-160	4547560 644405		4547560 644504	
	160-250	4547560 644412		4547560 644511	

250A FRAME MCCBs & CBRs



3 Poles in Series



4 Poles in Series

DC Application

Model	I_R (A)	3P	Price	4P	Price
S 160-ND @ 350V DC $I_{cu} = 10kA$ Thermal Magnetic	20	4547560 334108			
	32	4547560 334115			
	50	4547560 334122			
	63	4547560 334139			
	100	4547560 334146			
	125	4547560 334153			
S250-ND @350V DC $I_{cu} = 10kA$ <i>Poles wired in series</i>	160	4547560 334160			
	160	4547560 317262			
	250	4547560 317279			

Model	I_R (A)	3P	Price	4P	Price
S 160-ND @ 500V DC $I_{cu} = 7.5kA$ Thermal Magnetic	20	4547560		4547560 334207	
	32	4547560		4547560 334214	£251.62
	50	4547560		4547560 334221	£251.62
	63	4547560		4547560 334238	£251.62
	100	4547560		4547560 334245	£275.58
	125	4547560		4547560 334252	£275.58
S250-ND @500V DC $I_{cu} = 7.5kA$ <i>Poles wired in series</i>	160	4547561		4547560 334269	£275.58
	160	4547563		4547560 334405	£303.15
	250	4547564		4547560 334412	£467.29

(4 Pole Version Only)

Model	I_R (A)	3P	Price	4P	Price
S 160-ND @ 600V DC $I_{cu} = 5kA$ Thermal Magnetic	20	4547560		4547560 334306	£251.62
	32	4547560		4547560 334313	£251.62
	50	4547560		4547560 334320	£251.62
	63	4547560		4547560 334337	£251.62
	100	4547560		4547560 334344	£275.58
	125	4547560		4547560 334351	£275.58
S250-ND @600V DC $I_{cu} = 5kA$ <i>Poles wired in series</i>	160	4547561		4547560 334368	£275.58
	160	4547560		4547560 334429	£303.15
	250	4547560		4547560 334436	£467.29

(4 Pole Version Only)

ACCESSORIES FOR 250A FRAME MCCBs & CBRs

Auxiliary Switches (AX) General Purpose



Field Fit Accessory	Code	Price
Changeover	4547560 000348	
Changeover for low currents (mA)	4547560 000324	

Auxiliary Switches (AX) Heavy Duty



Field Fit Accessory	Code	Price
Normally open	4547560 000300	
Normally closed	4547560 000317	

Alarm Switches (AL) General Purpose



Field Fit Accessory	Code	Price
Changeover	4547560 000744	
Changeover for low currents (mA)	4547560 000720	

Alarm Switches (AL) Heavy Duty



Field Fit Accessory	Code	Price
Normally open	4547560 000706	
Normally closed	4547560 000713	

Shunt Trips (SHT)



Field Fit Accessory	Code	Price
AC 100-120V	4547560 000904	
AC 200-240V	4547560 000911	
AC 380-450V	4547560 000928	
DC 12V	4547560 000973	
DC 24V	4547560 000935	
DC 48V	4547560 000942	
DC 100-120V	4547560 000959	
DC 200-240V	4547560 000966	

*Not suitable for use with CBR

ACCESSORIES FOR 250A FRAME MCCBs & CBRs

Instantaneous Undervoltage Trips (UVT)



Field Fit Accessory	Code	Price
AC 100-120V	4547560 001208	
AC 200-240V	4547560 001215	
AC 380-450V	4547560 001222	
DC 24V	4547560 001239	
DC 100-120V	4547560 001246	
DC 200-240V	4547560 001253	

Extension Bars (FB)



Straight type



Offset type

Flat Bars Field Fit Accessory	Code	Price
3 Bars (off set)	4547560 010409	
3 Bars (straight)	4547560 010408	
4 Bars (straight)	4547560 010163	

*Not suitable for use with CBR

Rear Connections (RC)



Flat Bar Studs Field Fit Accessory	Code	Price
3 studs for thermal magnetic E and S types	4547560 080159	
4 studs for thermal magnetic E and S types	4547560 080166	
3 studs for H and L types and electronic S types	4547560 080180	
4 studs for H and L types and electronic S types	4547560 080197	

Fixed Part of Plug-in MCCB (PM)



Plug-in Mount Blocks Field Fit Accessory	Code	Price
3P	4547560 012365	
4P	4547560 012464	

A plug-in conversion is also required to complete the plug-in MCCB

*Not suitable for use with CBR

Plug-in Conversion for MCCB



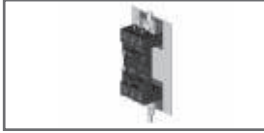
For Removable Part of Plug-in MCCB Field Fit Accessory	Code	Price
3P for thermal magnetic E and S types	4547560 800023	
4P for thermal magnetic E and S types	4547560 800030	
3P for H and L types (250A) and electronic S types	4547560 800184	
4P for H and L types (250A) and electronic S types	4547560 800191	

A fixed part is also required to complete the plug-in MCCB

*Not suitable for use with CBR

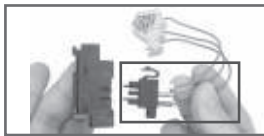
ACCESSORIES FOR 250A FRAME MCCBs & CBRs

Extension Terminal for Fixed Part of Plug-in MCCB (PF)



Flat Bar for PIB Field Fit Accessory	Code	Price
3 Bars	4547560 045837	
4 Bars	4547560 045844	

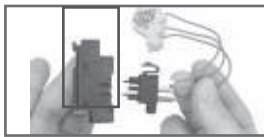
Control Wiring Terminals for Plug-in MCCBs



Plug for Removable Part of MCCB, 3 terminals Field Fit Accessory	Code	Price
Plug for auxiliary switches and alarm switches	4547560 800108	
Plug shunt trips and undervoltage trips	4547560 800115	

Order one plug for each internal accessory

Control Wiring Terminals for Plug-in MCCBs



Socket for Fixed Part of MCCB, 3 terminal Field Fit Accessory	Code	Price
Socket	4547560 045004	

Order one socket for each internal accessory

Cable Clamps (FW)



Solderless Terminals Field Fit Accessory	Code	Price
3 clamps for S160, H160, L160, E250, S250, H250, L250	4547560 080784	
4 clamps for S160, H160, L160, E250, S250, H250, L250	4547560 080791	
3 clamps for H125, L125	4547560 080746	
4 clamps for H125, L125	4547560 080753	

Motor Operation (MC)



Field Fit Accessory	Code	Price
100V to 110V AC	4547560 755705	
200V to 220V AC	4547560 755712	
230V to 240V AC	4547560 755729	
24V DC	4547560 755736	
48V DC	4547560 755743	
100V DC	4547560 755750	

ACCESSORIES FOR 250A FRAME MCCBs & CBRs

Motor Operation (MC) with Automatic Reset



Field Fit Accessory	Code	Price
100V to 110V AC	4547560 755972	
200V to 220V AC	4547560 755989	
230V to 240V AC	4547560 755996	
24V DC	4547560 755774	
48V DC	4547560 755781	
100V DC	4547560 755798	

Motor plus keylock available on request

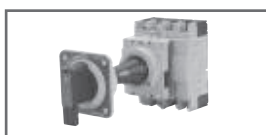
TEMBREAK 2

External Operating Handles (Breaker Mounted Type) (HB)



Field Fit Accessory	Code	Price
Black handle IP3X	4547560 726347	
Black handle IP3X with keylock	4547560 726323	
Red handle IP3X	4547560 726828	
Red handle IP3X with keylock	4547560 726804	
Black handle IP5X	4547560 726354	
Black handle IP5X with keylock	4547560 726330	
Red handle IP5X	4547560 726835	
Red handle IP5X with keylock	4547560 726811	

External Operating Handles (Panel Mounted Type) (HP)



Field Fit Accessory	Code	Price
Black handle IP54 for 250AF	4547560 728952	
Black handle IP65 for 250AF (keylock)	4547560 728792	
Red handle IP54 for 250AF	4547560 729591	
Red handle IP65 for 250AF (keylock)	4547560 729430	
Black Handle IP65	4547560 728990	
Black Handle IP65 with keylock	4547560 728839	
Red Handle IP65	4547560 729638	
Red Handle IP65 with keylock	4547560 729478	

ACCESSORIES FOR 250A FRAME MCCBs & CBRs

Slide Type Mechanical Interlocks (MS)

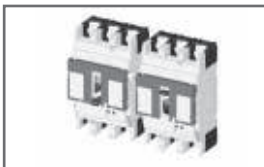


Field Fit Accessory	Code	Price
E,S thermal magnetic types for front, rear connection 250AF 3P	4547560 033605	
E,S thermal magnetic types for front, rear connection type 250AF 4P	4547560 033612	
E,S type for thermal magnetic plug-in type 250AF 3P	4547560 033629	
E,S type for plug-in type 250AF 4P	4547560 033636	
H,L type for front, rear connection type 250AF 3P and electronic S types	4547560 033643	
H,L type for front, rear connection type 250AF 4P and electronic S types	4547560 033650	
H,L type for plug-in type 250AF 3P and electronic S types	4547560 033667	
H,L type for plug-in type 250AF 4P and electronic S types	4547560 033674	

Order one part between two MCCBs

*Not suitable for use with CBR

Link Type Mechanical Interlocks (ML)



Field Fit Accessory	Code	Price
Right side	4547560 035104	
Left side 3P	4547560 035111	
Left side 4P	4547560 035128	

Order one interlock part for each MCCB

*Not suitable for use with CBR

Wire Type Mechanical Interlocks (MW)



Field Fit Accessory	Code	Price
Interlock	4547560 036125	
1m length interlock cable	4547560 036064	
1.5m length interlock cable	4547560 036057	

Order one interlock part for each MCCB and one cable between two MCCBs

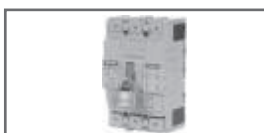
*Not suitable for use with CBR

Electrical Interlocks



Field Fit Accessory	Code	Price
Cable for Electrical Interlocks, 500mm	4547560 756405	
Cable for Electrical Interlocks, 1500mm	4547560 756412	

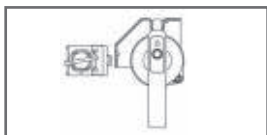
Handle Locks (HL)



Field Fit Accessory	Code	Price
For 125 / 250AF	4547560 037016	

ACCESSORIES FOR 250A FRAME MCCBs & CBRs

Castell Lock



Field Fit Accessory	Code	Price
Fittings for panel mounted type handle (lock and key not included)	4547560 037054	
Fittings for toggle operated MCCB ((lock and key not included)	4547560 037047	

Terminal Covers for Front Connection (CF)



Field Fit Accessory	Code	Price
3P, 1 cover for thermal magnetic E and S types	4547560 080456	
4P, 1 cover for thermal magnetic E and S types	4547560 080463	
3P, 1 cover for H and L types and electronic S types	4547560 080654	
4P, 1 cover for H and L types and electronic S types	4547560 080661	
Terminal cover lock	4547560 038006	

TEMBREAK 2

Terminal Covers for Rear Connection and Plug-In (CR)



Field Fit Accessory	Code	Price
3P, 1 cover	4547560 080517	
4P, 1 cover	4547560 080524	
Terminal cover lock	4547560 038006	

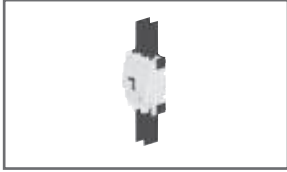
Terminal Covers for Cable Clamps (CS)



Terminal Covers for Solderless Terminal Field Fit Accessory	Code	Price
3P, 1 cover	4547560 080586	
4P, 1 cover	4547560 080593	
Terminal cover lock	4547560 038006	

ACCESSORIES FOR 250A FRAME MCCBs & CBRs

Interpole Barriers (BA)



Field Fit Accessory	Code	Price
For thermal magnetic E and S types	4547560 043161	
For H and L types and electronic S types	4547560 043260	

Interpole barriers are supplied as standard: 2 pieces per 3P MCCB, 3 pieces per 4P MCCB.
For additional barriers please order individually.

Lead Terminal Block



Field Fit Accessory	Code	Price
Left side	4547560 044526	
Right side	4547560 044533	

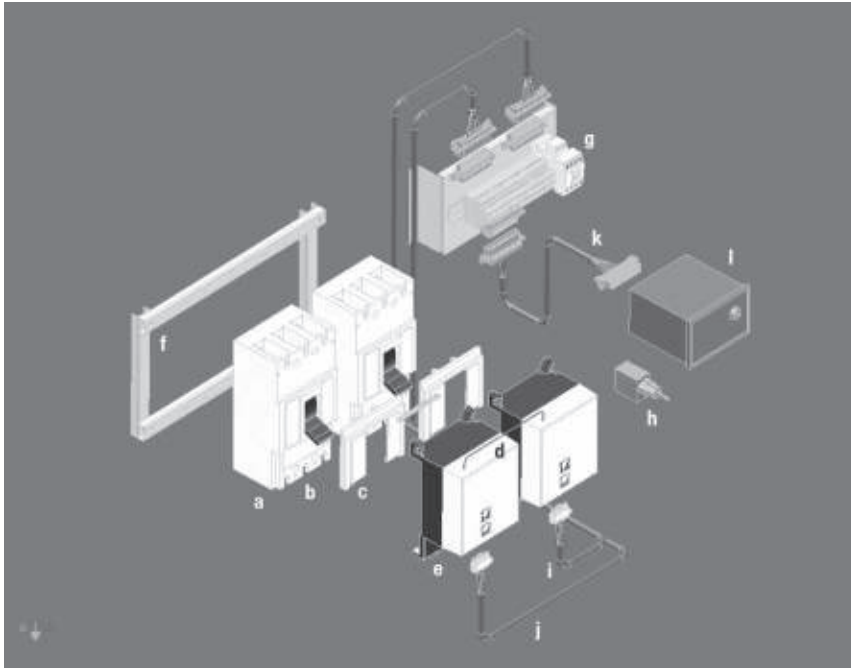
Neutral Link Shroud



Field Fit Accessory	Code	Price
250A Neutral Link	800498	
125A/250A Neutral Link	800559	

ACCESSORIES FOR 250A FRAME MCCBs & CBRs

Automatic Changeover Pairs



TEMBREAK 2

250A Frame

Factory Assembled		Code	Price
a	Two TemBreak 2 MCCBs, 250A Frame	N/A	Not included
	Auxillary switch for mains MCCB	000348	
b	Auxillary switch for generator MCCB	000348	
	Link type mechanical interlock (right)	035104*	
	Link type mechanical interlock (left)	035111*	
c	Link type mechanical interlock (left, 4P)	035128*	
d	Cable for electrical interlock (500m)	756405	
	Motor operator for mains MCCB	Refer to "Motor Operator" Select code base on required voltage.	
e	Motor operator for generator MCCB	Refer to "Motor Operator" Select code base on required voltage.	
f	Mounting brackets		
g	Wiring controller		
h	Bypass keyswitch		
i	Wiring harness for generator MCCB		
j	Wiring harness for mains MCCB		
k	Wiring harness for TemTransfer	303001001	
l	TemTransfer Automatic Changeover Controller	302001001	
Total (Excluding MCCBs)			

*Not suitable for CBRS

400A & 630A FRAME MCCBs

400A Frame MCCBs with Front Connections



Dimensions		E400	H400
		S400	L400
h (mm)		260	260
w (mm)	3 pole	140	140
	4 pole	185	185
d (mm)		103	140

TEMBREAK 2

Model	I_R (A)	3P	Price	4P	Price
E400-NJ $I_{cu} = 25$ kA Thermal Magnetic	158-250	4547560 378522		4547560 378560	
	252-400	4547560 378539		4547560 378577	
S400-CJ $I_{cu} = 36$ kA Thermal Magnetic	158-250	4547560 381423		4547560 378645	
	252-400	4547560 381430		4547560 378652	
S400-NJ $I_{cu} = 50$ kA Thermal Magnetic	158-250	4547560 378720		4547560 378843	
	252-400	4547560 378737		4547560 378850	
S400-GJ $I_{cu} = 65$ kA Thermal Magnetic	158-250	4547560 378928		4547560 379048	
	252-400	4547560 378935		4547560 379055	

Model		I_R (A)	3P	Price	4P	Price
S400-NE $I_{cu} = 50$ kA Electronic <small>Electronic Protection Codes: A - Standard relay with LSI characteristic; P - Preferential Trip Alarm; G - Ground Fault; N - Neutral Protection</small>	A	100-250	4547560 379604		4547560 379703	
	AN	100-250	--		4547560 379727	
	AP	100-250	4547560 379611		4547560 379710	
	APN	100-250	--		4547560 379734	
	A	160-400	4547560 379628		4547560 379741	
	AG	160-400	4547560 379642	--		
	AN	160-400	--		4547560 379765	
	AP	160-400	4547560 379635		4547560 379758	
	AGN	160-400	--		4547560 379789	
	APG	160-400	4547560 379659	--		
	APN	160-400	--		4547560 379772	
	APGN	160-400	--		4547560 379796	
	S400-GE $I_{cu} = 70$ kA Electronic <small>Electronic Protection Codes: A - Standard relay with LSI characteristic; P - Preferential Trip Alarm; G - Ground Fault; N - Neutral Protection</small>	A	100-250	4547560 379802		4547560 379901
AN		100-250	--		4547560 379925	
AP		100-250	4547560 379819		4547560 379918	
APN		100-250	--		4547560 379932	
A		160-400	4547560 379826		4547560 379949	
AG		160-400	4547560 379840*	--		
AN		160-400	--		4547560 379963	
AP		160-400	4547560 379833		4547560 379956	
AGN		160-400	--		4547560 379987	
APG		160-400	4547560 379857*	--		
APN		160-400	--		4547560 379970	
APGN		160-400	--		4547560 379994	

400A & 630A FRAME MCCBs

Model		I_R (A)	3P	Price	4P	Price	
H400-NE $I_{cu} = 125$ kA Electronic Electronic Protection Codes: A - Standard relay with LSI characteristic; P - Preferential Trip Alarm; G - Ground Fault; N - Neutral Protection	A	100-250	4547560 364907		4547560 364921		
	AN	100-250			4547560 372810		
	AP	100-250	4547560 364945		4547560 372803		
	APN	100-250			4547560 372827		
	A	160-400	4547560 364914		4547560 364938		
	AG	160-400	4547560 364983*				
	AN	160-400			4547560 372865		
	AP	160-400	4547560 364976		4547560 372858		
	AGN	160-400			4547560 372889		
	APG	160-400	4547560 364990*				
	APN	160-400			4547560 372872		
	APGN	160-400			4547560 372896		
	L400-NE $I_{cu} = 200$ kA Electronic Electronic Protection Codes: A - Standard relay with LSI characteristic; P - Preferential Trip Alarm; G - Ground Fault; N - Neutral Protection	A	100-250	4547560 365003		4547560 365027	
		AN	100-250			4547560 372919	
AP		100-250	4547560 365041		4547560 372902		
APN		100-250			4547560 372926		
A		160-400	4547560 365010		4547560 365034		
AG		160-400	4547560 365089*				
AN		160-400			4547560 372964		
AP		160-400	4547560 365072		4547560 372957		
AGN		160-400			4547560 372988		
APG		160-400	4547560 365096*				
APN		160-400			4547560 372971		
APGN		160-400			4547560 372995		

*An external neutral CT must be ordered. Refer to External Accessories.

400A & 630A FRAME MCCBs

400A Frame MCCBs with Front Connections

TEMBREAK 2

Model		I_R (A)	3P	Price	4P	Price
S400-NE $I_{cu} = 50$ kA Enhanced Electronic MCCB with LCD	A	100-250	4547560 390661		4547560 390906	
	AG	100-250	4547560 390678*			
	AGN	100-250			4547560 390913	
	APGS	100-250	4547560 390692*			
	APGNS	100-250			4547560 390937	
	APGSCWH	100-250	4547560 390715*			
	APGNSCWH	100-250			4547560 390951	
	A	160-400	4547560 390784		4547560 391026	
	AG	160-400	4547560 390791*			
	AGN	160-400			4547560 391033	
	APGS	160-400	4547560 390814*			
	APGNS	160-400			4547560 391057	
	APGSCWH	160-400	4547560 390838*			
	APGNSCWH	160-400			4547560 391071	
S400-GE $I_{cu} = 70$ kA Enhanced Electronic MCCB with LCD	A	100-250	4547560 391620		4547560 391866	
	AG	100-250	4547560 391637*			
	AGN	100-250			4547560 391873	
	APGS	100-250	4547560 391651*			
	APGNS	100-250			4547560 391897	
	APGSCWH	100-250	4547560 391675*			
	APGNSCWH	100-250			4547560 391910	
	A	160-400	4547560 391743		4547560 391989	
	AG	160-400	4547560 391750*			
	AGN	160-400			4547560 391996	
	APGS	160-400	4547560 391774*			
	APGNS	160-400			4547560 392016	
	APGSCWH	160-400	4547560 391798*			
	APGNSCWH	160-400			4547560 392030	
H400-NE $I_{cu} = 70$ kA Enhanced Electronic MCCB with LCD	A	100-250	4547560 393549		4547560 393785	
	AG	100-250	4547560 393556*			
	AGN	100-250			4547560 393792	
	APGS	100-250	4547560 393570*			
	APGNS	100-250			4547560 393815	
	APGSCWH	100-250	4547560 393594*			
	APGNSCWH	100-250			4547560 393839	
	A	160-400	4547560 393662		4547560 393907	
	AG	160-400	4547560 393679*			
	AGN	160-400			4547560 393914	
	APGS	160-400	4547560 393693*			
	APGNS	160-400			4547560 393938	
	APGSCWH	160-400	4547560 393716*			
	APGNSCWH	160-400			4547560 393952	

Electronic Protection Codes:
A - LSI; P - Pre-trip alarm;
G - Ground fault trip
N - N-phase protection;
S - Phase rotation protection
C - Communication function;
W - Electrical energy pulse;
H - Harmonic current

*An external neutral CT must be ordered for ground fault trip function.

400A & 630A FRAME MCCBs

400A Frame MCCBs with Front Connections

Model		I _R (A)	3P	Price	4P	Price	
L400-NE I _{cu} = 200 kA Enhanced Electronic MCCB with LCD <i>Electronic Protection Codes:</i> A - LSI; P - Pre-trip alarm; G - Ground fault trip N - N-phase protection; S - Phase rotation protection C - Communication function; W - Electrical energy pulse; H - Harmonic current	A	100-250	4547560 395468		4547560 395703		
	AG	100-250	4547560 395475*				
	AGN	100-250			4547560 395170		
	APGS	100-250	4547560 395499*				
	APGNS	100-250			4547560 395734		
	APGSCWH	100-250	4547560 395512*				
	APGNSCWH	100-250			4547560 395758		
	A	160-400		395581		4547560 395826	
	AG	160-400		395598*			
	AGN	160-400				4547560 395833	
	APGS	160-400	4547560	395611*			
	APGNS	160-400				4547560 395857	
	APGSCWH	160-400	4547560	395635*			
	APGNSCWH	160-400				4547560 395871	

*An external neutral CT must be ordered for ground fault trip function.

400A & 630A FRAME MCCBs

400A Frame MCCBs with Front Connections



TEMBREAK 2

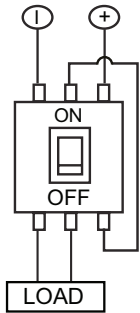
Magnetic Trip Only

Model	I_R (A)	3P	Price	4P	Price
E400-NJ $I_{cu} = 25kA$ Thermal Magnetic	158-250	4547560 380747		4547560 374722	
	252-400	4547560 380754		4547560 374739	
S400-CJ $I_{cu} = 36 kA$ Thermal Magnetic	158-250	4547560 380907		4547560 380921	
	252-400	4547560 380914		4547560 380938	
S400-NJ $I_{cu} = 50 kA$ Thermal Magnetic	158-250	4547560 381102		4547560 381126	
	252-400	4547560 381119		4547560 381133	
S400-GJ $I_{cu} = 65 kA$ Thermal Magnetic	158-250	4547560 381300		4547560 381324	
	252-400	4547560 381317		4547560 381331	

Low Instantaneous

Model	I_R (A)	3P	Price	4P	Price
E400-NJ $I_{cu} = 25kA$ Low Instantaneous	252-400	4547560 383120		4547560 TBA	
S400-CJ $I_{cu} = 36 kA$ Low Instantaneous	252-400	4547560 383175		4547560 383182	
S400-NJ $I_{cu} = 50 kA$ Low Instantaneous	252-400	4547560 383236		4547560 383243	
S400-GJ $I_{cu} = 65 kA$ Low Instantaneous	252-400	4547560 383335		4547560 383342	

400A & 630A FRAME MCCBs



3 Poles in Series

DC Application

Model	I_R (A)	3P	Price
S400-ND 350V DC $I_{cu} = 20kA$	250	4547560 399008	
	400	4547560 399015	
Thermal Magnetic			
<i>Poles wired in series</i>			

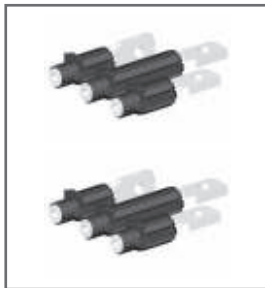
Model	I_R (A)	3P	Price
S400-ND 500V DC $I_{cu} = 15kA$	250	4547560 399022	
	400	4547560 399039	
Thermal Magnetic			
<i>Poles wired in series</i>			

Model	I_R (A)	3P	Price
S400-ND 600V DC $I_{cu} = 15kA$	250	4547560 399046	
	400	4547560 399053	
Thermal Magnetic			
<i>Poles wired in series</i>			

400A & 630A FRAME MCCBs

400A Frame MCCBs with Rear Connections Fitted

TEMBREAK 2



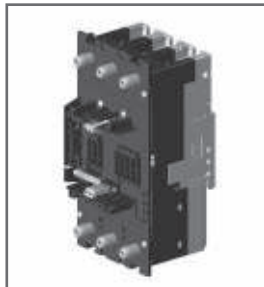
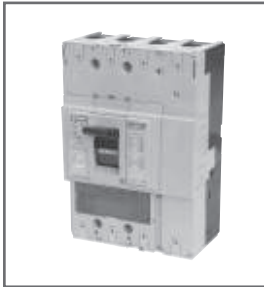
Model		I_R (A)	3P	Price	4P	Price	
H400-NE $I_{cu} = 125\text{kA}$ Electronic	A	100-250	4547560 373008		4547560 373206		
	AN	100-250			4547560 373220		
	AP	100-250	4547560 373015		4547560 373213		
	APN	100-250			4547560 373237		
	A	160-400	4547560 373107		4547560 373305		
	AG	160-400	4547560 373121*				
	AN	160-400			4547560 373329		
	AP	160-400	4547560 373114		4547560 373312		
	AGN	160-400			4547560 373343		
	APG	160-400	4547560 373138*				
	APN	160-400			4547560 373336		
	APGN	160-400			4547560 373350		
	L400-NE $I_{cu} = 200\text{ kA}$ Electronic	A	100-250	4547560 373503		4547560 373701	
		AN	160-250			4547560 373725	
AP		100-250	4547560 373510		4547560 373718		
APN		100-250			4547560 373732		
A		160-400	4547560 373602		4547560 373800		
AG		160-400	4547560 373626*				
AN		160-400			4547560 373824		
AP		160-400	4547560 373619		4547560 373817		
AGN		160-400			4547560 373848		
APG		160-400	4547560 373633*				
APN		160-400			4547560 373831		
APGN		160-400			4547560 373855		

*An external neutral CT must be ordered. Refer to External Accessories.

400A & 630A FRAME MCCBs

400A Frame MCCBs with Plug-in Connections Fitted*

*Plug-in base and auxiliary connectors must be ordered separately



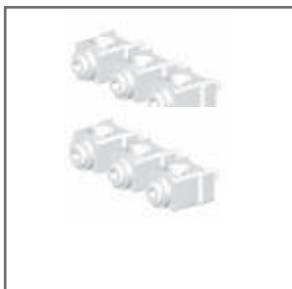
Model		I_R (A)	3P	Price	4P	Price	
H400-NE $I_{cu} = 125kA$ Electronic Electronic Protection Codes: A - Standard relay with LSI characteristic; P - Preferential Trip Alarm; G - Ground Fault; N - Neutral Protection	A	100-250	4547560 373022		4547560 373244		
	AN	100-250			4547560 373268		
	AP	100-250	4547560 373039		4547560 373251		
	APN	100-250			4547560 373275		
	A	160-400	4547560 373145		4547560 373367		
	AG	160-400	4547560 373169*				
	AN	160-400			4547560 373381		
	AP	160-400	4547560 373152		4547560 373374		
	AGN	160-400			4547560 373404		
	APG	160-400	4547560 373176*				
	APN	160-400			4547560 373398		
	APGN	160-400			4547560 373411		
	L400-NE $I_{cu} = 200 kA$ Electronic Electronic Protection Codes: A - Standard relay with LSI characteristic; P - Preferential Trip Alarm; G - Ground Fault; N - Neutral Protection	A	100-250	4547560 373527		4547560 373749	
		AN	100-250			4547560 373763	
AP		100-250	4547560 373534		4547560 373756		
APN		100-250			4547560 373770		
A		160-400	4547560 373640		4547560 373862		
AG		160-400	4547560 373664*				
AN		160-400			4547560 373886		
AP		160-400	4547560 373657		4547560 373879		
AGN		160-400			4547560 373909		
APG		160-400	4547560 373671*				
APN		160-400			4547560 373893		
APGN		160-400			4547560 373916		

*An external neutral CT must be ordered. Refer to External Accessories.

400A & 630A FRAME MCCBs

400A Frame MCCBs with Cable Clamps Fitted

TEMBREAK 2



Model		I_R (A)	3P	Price	4P	Price	
H400-NE $I_{cu} = 125kA$ Electronic Electronic Protection Codes: A - Standard relay with LSI characteristic; P - Preferential Trip Alarm; G - Ground Fault; N - Neutral Protection	A	100-250	4547560 373046		4547560 373282		
	AN	100-250			4547560 373084		
	AP	100-250	4547560 373053		4547560 373299		
	APN	100-250			4547560 373091		
	A	160-400	4547560 373183		4547560 373428		
	AG	160-400	4547560 373060*				
	AN	160-400			4547560 373442		
	AP	160-400	4547560 373190		4547560 373435		
	AGN	160-400			4547560 373466		
	APG	160-400	4547560 373077*				
	APN	160-400			4547560 373459		
	APGN	160-400			4547560 373473		
	L400-NE $I_{cu} = 200 kA$ Electronic Electronic Protection Codes: A - Standard relay with LSI characteristic; P - Preferential Trip Alarm; G - Ground Fault; N - Neutral Protection	A	100-250	4547560 373541		4547560 373787	
		AN	100-250			4547560 373565	
AP		100-250	4547560 373558		4547560 373794		
APN		100-250			4547560 373572		
A		160-400	4547560 373688		4547560 373923		
AG		160-400	4547560 373480*				
AN		160-400			4547560 373947		
AP		160-400	4547560 373695		4547560 373930		
AGN		160-400			4547560 373961		
APG		160-400	4547560 373497*				
APN		160-400			4547560 373954		
APGN		160-400			4547560 373978		

*An external neutral CT must be ordered. Refer to External Accessories.

400A & 630A FRAME MCCBs

630A Frame MCCBs with Front Connections



Dimensions		E630
		S630
h (mm)		260
w (mm)	3 pole	140
	4 pole	185
d (mm)		103

Model		I_R (A)	3P	Price	4P	Price
E630-NE $I_{cu} = 36$ kA Electronic Electronic Protection Codes: A - Standard relay with LSI characteristic; P - Preferential Trip Alarm; G - Ground Fault; N - Neutral Protection	A	252-630	4547560 380204		4547560 380242	
	AG	252-630	4547560 380228*			
	AN	252-630			4547560 380266	
	AP	252-630	4547560 380211		4547560 380259	
	AGN	252-630			4547560 380280	
	APG	252-630	4547560 380235*			
	APN	252-630			4547560 380273	
	APGN	252-630			4547560 380297	
	S630-CE $I_{cu} = 50$ kA Electronic Electronic Protection Codes: A - Standard relay with LSI characteristic; P - Preferential Trip Alarm; G - Ground Fault; N - Neutral Protection	A	252-630	4547560 380303		4547560 380341
AG		252-630	4547560 380327*			
AN		252-630			4547560 380365	
AP		252-630	4547560 380310		4547560 380358	
AGN		252-630			4547560 380389	
APG		252-630	4547560 380334*			
APN		252-630			4547560 380372	
APGN		252-630			4547560 380396	
S630-GE $I_{cu} = 70$ kA Electronic Electronic Protection Codes: A - Standard relay with LSI characteristic; P - Preferential Trip Alarm; G - Ground Fault; N - Neutral Protection		A	252-630	4547560 380402		4547560 380440
	AG	252-630	4547560 380426*			
	AN	252-630			4547560 380464	
	AP	252-630	4547560 380419		4547560 380457	
	AGN	252-630			4547560 380488	
	APG	252-630	4547560 380433*			
	APN	252-630			4547560 380471	
	APGN	252-630			4547560 380495	

*An external neutral CT must be ordered. Refer to External Accessories.

400A & 630A MCCBs

630A MCCBs with Front Connections

TEMBREAK 2

Model		I_R (A)	3P	Price	4P	Price
E630-NE $I_{cu} = 36$ kA Enhanced Electronic MCCB with LCD	A	630	4547560 397462		4547560 397585	
	AG	630	4547560 397479*			
	AGN	630			4547560 397592	
	APGS	630	4547560 397493*			
	APGNS	630			4547560 397615	
	APGSCWH	630	4547560 397516*			
	APGNSCWH	630			4547560 397639	
S630-CE $I_{cu} = 50$ kA Enhanced Electronic MCCB with LCD	A	630	4547560 397967		4547560 398087	
	AG	630	4547560 397974*			
	AGN	630			4547560 398094	
	APGS	630	4547560 397998*			
	APGNS	630			4547560 398117	
	APGSCWH	630	4547560 398018*			
	APGNSCWH	630			4547560 398131	
S630-GE $I_{cu} = 70$ kA Enhanced Electronic MCCB with LCD	A	630	4547560 397967		4547560 398582	
	AG	630	4547560 398476*			
	AGN	630			4547560 398599	
	APGS	630	4547560 398490*			
	APGNS	630			4547560 398612	
	APGSCWH	630	4547560 398513*			
	APGNSCWH	630			4547560 398636	

Electronic Protection Codes:
 A - LSI; P - Pre-trip alarm; G - Ground fault trip;
 N - N-phase protection; S - Phase rotation protection;
 C - Communication function; W - Electrical energy pulse;
 H - Harmonic current

*An external neutral CT must be ordered for ground fault trip function.

ACCESSORIES FOR 400A & 630A FRAME MCCBs

Auxiliary Switches (AX) *General Purpose*



Field Fit Accessory	Code	Price
Changeover	4547560 000348	
Changeover for low currents (mA)	4547560 000324	

Auxiliary Switches (AX) *Heavy Duty*



Field Fit Accessory	Code	Price
Normally open	4547560 000300	
Normally closed	4547560 000317	

Alarm Switches (AL) *General Purpose*



Field Fit Accessory	Code	Price
Changeover	4547560 000744	
Changeover for low currents (mA)	4547560 000720	

Alarm Switches (AL) *Heavy Duty*



Field Fit Accessory	Code	Price
Normally open	4547560 000706	
Normally closed	4547560 000713	

Shunt Trips (SHT)



Field Fit Accessory	Code	Price
AC 100-120V	4547560 000904	
AC 200-240V	4547560 000911	
AC 380-450V	4547560 000928	
DC 12V	4547560 000973	
DC 24V	4547560 000935	
DC 48V	4547560 000942	
DC 100-120V	4547560 000959	
DC 200-240V	4547560 000966	

ACCESSORIES FOR 400A & 630A FRAME MCCBs

Instantaneous Undervoltage Trips (UVT)



Field Fit Accessory	Code	Price
AC 100-120V	4547560 001208	
AC 200-240V	4547560 001215	
AC 380-450V	4547560 001222	
DC 24V	4547560 001239	
DC 100-120V	4547560 001246	
DC 200-240V	4547560 001253	

Extension Bars (FB)



Straight type



Offset type

Flat Bars Field Fit Accessory	Code	Price
3 bars, 400A (Offset)	010323	
3 bars, 400A (Straight)	010415	
4 bars, 400A (Offset)	010330	
4 bars, 400A (Straight)	010422	
3 bars, 630A (Offset)	010347	
3 bars, 630A (Straight)	010439	
4 bars, 630A (Offset)	010354	
4 bars, 630A (Straight)	010446	

Rear Connections (RC)



Flat Bar Studs Field Fit Accessory	Code	Price
3 studs, 400A	4547560 080210	
4 studs, 400A	4547560 080227	
3 studs, 630A	4547560 080265	
4 studs, 630A	4547560 080272	

Rear connections for H400 and L400 models are factory fitted. Item numbers for MCCBs complete with rear connections can be found under "400A Frame MCCBs with Rear Connections Fitted"

Fixed Part of Plug-in MCCB (PM)



Plug-in Mount Blocks Field Fit Accessory	Code	Price
3P,	4547560 012563	
4P,	4547560 012662	

A plug-in conversion is also required to complete the plug-in MCCB

Plug-in Conversion for MCCB



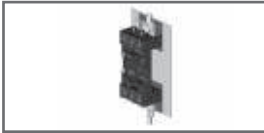
For Removable Part of Plug-in MCCB	Code	Price
3P, 400A	4547560 800047	
4P, 400A	4547560 800054	
3P, 630A	4547560 800085	
4P, 630A	4547560 800092	

Plug-in conversions for H400 and L400 models are factory fitted. Item numbers for MCCBs complete with plug-in conversions can be found under "400A Frame MCCBs with Plug-in Connections Fitted"
A fixed part is also required to complete the plug-in MCCB

ACCESSORIES FOR 400A & 630A FRAME MCCBs

TEMBREAK 2

Extension Terminal for Fixed Part of Plug-in MCCB (PF)



Flat Bar for PIB Field Fit Accessory	Code	Price
3 bars,	4547560 045851	
4 bars,	4547560 045868	

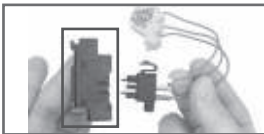
Control Wiring Terminals for Plug-in MCCBs



Plug for Removable Part of MCCB, 3 terminals Field Fit Accessory	Code	Price
Plug for auxiliary switches and alarm switches	4547560 800108	
Plug for shunt trips and undervoltage trips	4547560 800115	

Order one plug for each internal accessory

Control Wiring Terminals for Plug-in MCCBs



Socket for Fixed Part of MCCB, 3 terminal Field Fit Accessory	Code	Price
Socket	4547560 045004	

Order one socket for each internal accessory

Cable Clamps (FW)



Solderless Terminals Field Fit Accessory	Code	Price
3 clamps, 400A	4547560 014734	
4 clamps, 400A	4547560 014741	

Cable clamps for H400 and L400 models are factory fitted. Item numbers for MCCBs complete with cable clamps can be found under "400A Frame MCCBs with Cable Clamps Fitted"

Motor Operation (MC)



Field Fit Accessory	Code	Price
100V to 240V AC for 400-630AF	4547560 756009	
24V DC for 400-630AF	4547560 756016	
100V to 120V DC for 400-630AF	4547560 756023	

Motor plus keylock available on request

ACCESSORIES FOR 400A & 630A FRAME MCCBs

Motor Operation (MC) with Automatic Reset



Field Fit Accessory	Code	Price
AC 100V to 240V	4547560 756092	
DC 24V to 48V	4547560 756108	
DC 100V to 120V	4547560 756115	

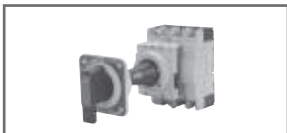
Motor plus keylock available on request

External Operating Handles (Breaker Mounted Type) (HB)



Field Fit Accessory	Code	Price
Black handle IP3X	4547560 727601	
Black handle IP3X with keylock	4547560 727047	
Red handle IP3X	4547560 727542	
Red handle IP3X with keylock	4547560 727528	
Black handle IP5X	4547560 727078	
Black handle IP5X with keylock	4547560 727054	
Red handle IP5X	4547560 727559	
Red handle IP5X with keylock	4547560 727535	

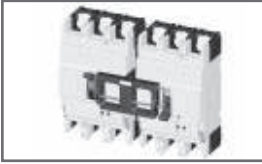
External Operating Handles (Panel Mounted Type) (HP)



Field Fit Accessory	Code	Price
Black handle IP54	4547560 729911	
Black handle IP54 with keylock	4547560 729751	
Red handle IP54	4547560 730757	
Red handle IP54 with keylock	4547560 730597	
Black Handle IP65	4547560 729959	
Black Handle IP65 with keylock	4547560 729799	
Red Handle IP65	4547560 730795	
Red Handle IP65 with keylock	4547560 730634	

ACCESSORIES FOR 400A & 630A FRAME MCCBs

Slide Type Mechanical Interlocks (MS)



Field Fit Accessory	Code	Price
E,S type for front, rear connection type 400-630AF 3P	4547560 033704	
E,S type for front, rear connection type 400-630AF 4P	4547560 033711	
E,S type for plug-in type 400-630AF 3P	4547560 033728	
E,S type for plug-in type 400-630AF 4P	4547560 033735	
H,L type for front, rear connection type 400-630AF 3P	4547560 033742	
H,L type for front, rear connection type 400-630AF 4P	4547560 033759	
H,L type for plug-in type 400-630AF 3P	4547560 033766	
H,L type for plug-in type 400-630AF 4P	4547560 033773	

Order one part between two MCCBs

Link Type Mechanical Interlocks (ML)



Field Fit Accessory	Code	Price
Right side	4547560 035265	
Left side 3P	4547560 035272	
Left side 4P	4547560 035289	

Order one interlock part for each MCCB

Wire Type Mechanical Interlocks (MW)



Field Fit Accessory	Code	Price
Interlock	4547560 036248	
1m length interlock cable	4547560 036064	
1.5m length interlock cable	4547560 036057	

Order one interlock part for each MCCB and one cable between two MCCBs

Electrical Interlocks



Field Fit Accessory	Code	Price
Cable for Electrical Interlocks, 600mm	4547560 756429	
Cable for Electrical Interlocks, 2100mm	4547560 756436	

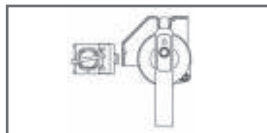
Handle Locks (HL)



Field Fit Accessory	Code	Price
For 400-630AF	4547560 037207	

ACCESSORIES FOR 400A & 630A FRAME MCCBs

Castell Lock



Field Fit Accessory	Code	Price
Fittings for panel mounted type handle (lock and key not included)	4547560 037221	
Fittings for toggle operated MCCB ((lock and key not included)	4547560 037214	

Terminal Covers for Front Connection (CF)



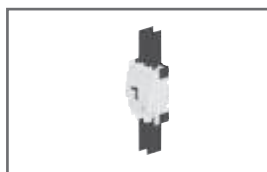
Field Fit Accessory	Code	Price
3P, 1 cover (narrow type)	081002	
4P, 1 cover (narrow type)	081019	
3P, 1 cover	080807	
4P, 1 cover	080814	
Terminal cover lock	038006	

Terminal Covers for Rear Connection, Cable Clamps and Plug-In (CR)



Field Fit Accessory	Code	Price
3P, 1 cover (narrow type)	4547560 081002	
4P, 1 cover (narrow type)	4547560 081019	
3P, 1 cover	4547560 080807	
4P, 1 cover	4547560 080814	
Terminal cover lock	4547560 038006	

Interpole Barriers (BA)



Field Fit Accessory	Code	Price
For E and S types	4547560 043338	

Interpole barriers are supplied as standard: 2 pieces per 3P MCCB, 3 pieces per 4P MCCB.
For additional barriers please order individually

ACCESSORIES FOR 400A & 630A FRAME MCCBs

Lead Terminal Block

Field Fit Accessory	Code	Price
Left side	4547560 044540	
Right side	4547560 044557	

External Neutral CT

Field Fit Accessory	Code	Price
400A	045912	
630A	045929	

OCR Checker

Field Fit Accessory	Code	Price
OCR Checker 100-120V AC	756306	
OCR checker 200-240V AC	756313	

Neutral Link

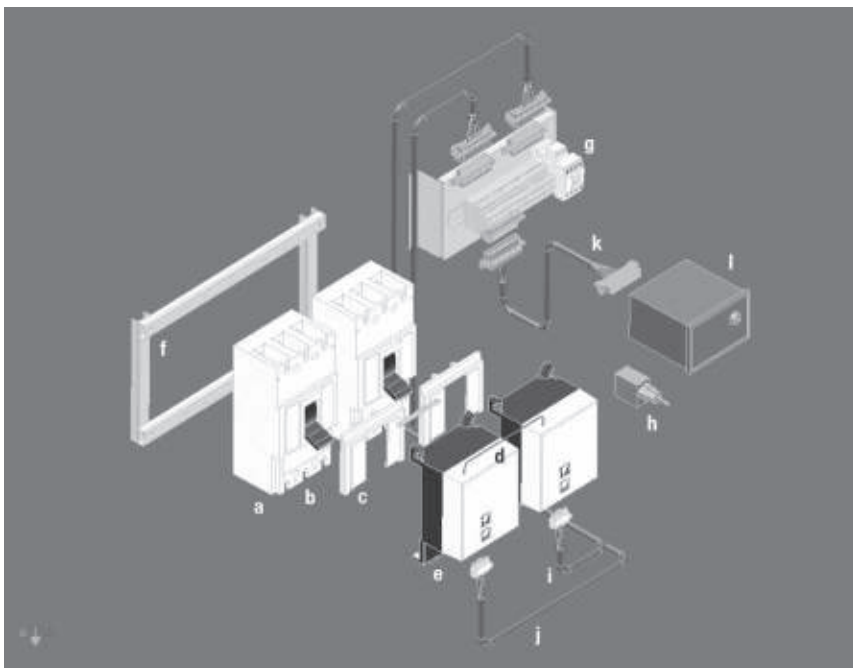


Field Fit Accessory	Code	Price
400A Neutral Link	800504	
630A Neutral Link	800511	
400/630 Neutral Link Shroud	800566	

ACCESSORIES FOR 400A & 630A MCCBs

Automatic Changeover Pairs

TEMBREAK 2



400A and 630A Frame

Factory Assembled		Code	Price
a	Two TemBreak 2 MCCBs, 400A or 630A	N/A	
	Auxillary switch for mains MCCB	000348	
b	Auxillary switch for generator MCCB	000348	
	Link type mechanical interlock (right)	035265	
	Link type mechanical interlock (left)	035272	
c	or Link type mechanical interlock (left, 4P)	035289	
d	Cable for electrical interlock (500m)	756405	
	Motor operator for mains MCCB	Refer to "Motor Operator" Select code base on required voltage.	
	Motor operator for generator MCCB	Refer to "Motor Operator" Select code base on required voltage.	
e			
f	Mounting brackets		
g	Wiring controller		
h	Bypass keyswitch		
i	Wiring harness for generator MCCB		
j	Wiring harness for mains MCCB		
k	Wiring harness for TemTransfer	303001001	
l	TemTransfer Automatic Changeover Controller	302001001	
Total (Excluding MCCBs)			

TEMBREAK 800A FRAME MCCBs

800A MCCBs with Front Connections



Dimensions		XS	
		XH	TL
h (mm)		273	370
w (mm)	3 pole	210	210
	4 pole	280	280
d (mm)		103	140

Model	I_R (A)	3P	Price	4P	Price	
XS800NJ $I_{cu} = 65$ kA Thermal Magnetic	397-630	206520563		206520763		
	504-800	206520580		206520780		
XS800SE $I_{cu} = 50$ kA <small>Electronic protection codes: A - Standard relay with LSI characteristic ; P - Preferential trip alarm; G - Ground fault; I - Fault indication LEDs</small>	A 318-630	206570563		206570763		
	AG 318-630	206575563*		206575763		
	AI 318-630	206571563		206571763		
	AP 318-630	206572563		206572763		
	A 403-800	206570580		206570780		
	AG 403-800	206575580*		206575780		
	AI 403-800	206571580		206571780		
	AP 403-800	206572580		206572780		
	XH800SE $I_{cu} = 65$ kA <small>Electronic protection codes: A - Standard relay with LSI characteristic ; P - Preferential trip alarm; G - Ground fault; I - Fault indication LEDs</small>	A 318-630	206576563		206576763	
		AG 318-630	206585563*		206585763	
AI 318-630		206581563		206581763		
AP 318-630		206582563		206582763		
A 403-800		206576580		206576780		
AG 403-800		206585580*		206585780		
AI 403-800		206581580		206581780		
AP 403-800		206582580		206582780		
XH800PJ $I_{cu} = 100$ kA Thermal Magnetic	252-400	206521540		206521740		
	397-630	206521563		206521763		
	504-800	206521580		206521780		

*An external neutral CT must be ordered. See External Accessories.

TEMBREAK 800A FRAME MCCBs

TEMBREAK 2

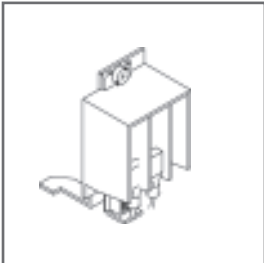
Model		I_R (A)	3P	Price	4P	Price
XH800PE $I_{cu} = 65$ kA Electronic protection codes: A - Standard relay with LSI characteristic ; P - Preferential trip alarm; G - Ground fault; I - Fault indication LEDs	A	318-630	206527563		206527763	
	AG	318-630	206525563*		206525763	
	AI	318-630	206526563		206526763	
	AP	318-630	206528563		206528763	
	A	403-800	206527580		206527780	
	AG	403-800	206525580*		206525780	
	AI	403-800	206526580		206526780	
	AP	403-800	206528580		206528780	
TL800NE (1600A Frame) $I_{cu} = 125$ kA Electronic protection codes: A - Standard relay with LSI characteristic ; P - Preferential trip alarm; G - Ground fault; I - Fault indication LEDs	A	318-630	206529563		206516563	
	AG	318-630	206524563*		206524763	
	AI	318-630	206516563		206516763	
	AP	318-630	206518563		206518763	
	A	403-800	206529580		206529780	
	AG	403-800	206524580*		206524780	
	AI	403-800	206516580		206516780	
	AP	403-800	206518580		206518780	

An external neutral CT must be ordered. See External Accessories.

INTERNAL ACCESSORIES FOR 800A FRAME TEMBREAK MCCBs

(XS800NJ, XS800SE, XH800SE, XH800PJ, XH800PE)

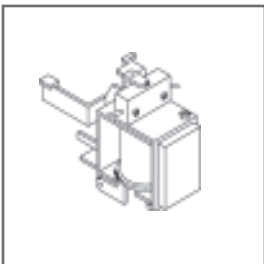
Auxiliary/Alarm Switches



	Code	Price
1 Alarm	215001070	
1 Auxiliary	215001005	
1 Auxiliary, 1 Alarm	215001042	
2 Auxiliaries	215001015	
2 Auxiliaries, 1 Alarm	215001052	
2 Auxiliaries, 2 Alarms	215001098	
3 Auxiliaries	215001025	
3 Auxiliaries, 1 Alarm	215001097	

TEMBREAK 2

Shunt Trips

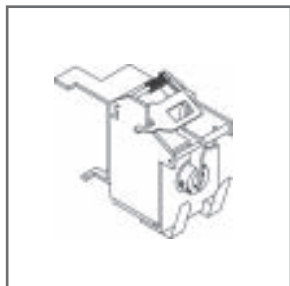


	Code	Price
AC 100-115V	215002006	
AC 200-480V	215002014	
AC 24V	215002146	
AC 48V	215002156	
DC 12V	215002024	
DC 24V	215002032	
DC 48V	215002040	
DC 100-115V	215002051	
DC 200-230V	215002059	
DC 60V	215002164	
DC 125V	215002198	
DC 30V	215002190	

INTERNAL ACCESSORIES FOR 800A FRAME TEMBREAK MCCBs

(XS800NJ, XS800SE, XH800SE, XH800PJ, XH800PE)

UnderVoltage Trips



TEMBREAK 2

	Code	Price
AC 100-120V	215002067	
AC 100-120V TIME DELAY	215002119	
AC 100-120V 1SEC TIME DEL	215002243	
AC 100-120V 2SEC TIME DEL	215002253	
AC 200-240V	215002075	
AC 200-240V TIME DELAY	215002127	
AC 200-240V 1SEC TIME DEL	215002206	
AC 200-240V 2SEC TIME DEL	215002215	
(IND) 240V	215002313	
AC 380-450V	215002083	
AC 380-450V TIME DELAY	215002135	
AC 380-450V 1SEC TIME DEL	215002226	
AC 380-450V 2SEC TIME DEL	215002235	
DC 100-115V	215002101	
DC 200-230V	215002111	
DC 24V	215002093	
DC 48V	215002173	
DC 60V	215002181	

EXTERNAL ACCESSORIES FOR 800A FRAME TEMBREAK MCCBs

Connections

		Code	Price
3 Pole	3 extension Bars (630A)	215003357	
	3 extension Bars (800A)	215003359	
	Drawout conversion kit (630A)*	215003243	
	Drawout conversion kit (800A)*	215003251	
	3 cable Clamps	215003192	
	Plug in conversion kit (630A)**	215003141	
	Plug in conversion kit (800A)**	215003143	
	3 rear connection studs (top)	215003115	
	3 rear connection studs (bottom)	215003103	
	Auxiliary connector plug for plug in and drawout**	215003072	

		Code	Price
4 Pole	4 extension Bars (630A)	215003358	
	4 extension Bars (800A)	215003360	
	Drawout conversion kit (630A)*	215003247	
	Drawout conversion kit (800A)*	215003256	
	4 cable clamps	215003193	
	4 rear connection studs (top)	215003116	
	4 rear connection studs (bottom)	215003104	
	Plug in conversion kit (630A)**	215003142	
	Plug in conversion kit (800A)**	215003144	
	Auxiliary connector plug for plug in and drawout**	215003072	

*Drawout chassis and auxiliary connectors must be ordered separately

** Plug in base and auxiliary connectors must be ordered separately

*** Auxiliary connector socket must be ordered separately

EXTERNAL ACCESSORIES FOR 800A FRAME TEMBREAK MCCBs

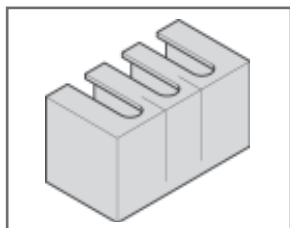
TEMBREAK 2

Motor Operators

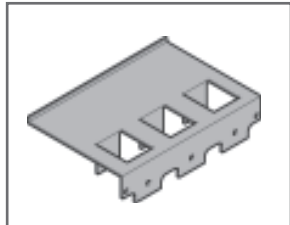


		Code	Price
AC 100-110V		215008016	
AC 200~220V		215008024	
AC 240V		215008043	
DC 24V		215008054	
DC 110V		215008057	

Terminal Covers



		Code	Price
3 Pole	2 covers for front connection	215004018	
	2 interpole barriers	215004042	
	2 covers for rear connection and plug in	215004024	



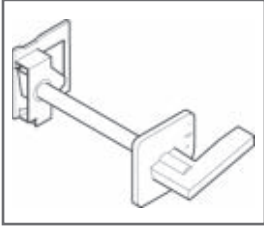
		Code	Price
4 Pole	2 covers for front connection	215004019	
	2 interpole barriers	215004043	
	2 covers for rear connection and plug in	215004025	

Drawout Chassis

		Code	Price
3P	Drawout Chassis 630A	215014021	
4P	Drawout Chassis 630A	215014028	
3P	Drawout Chassis 800A	215014036	
4P	Drawout Chassis 800A	215014045	

EXTERNAL ACCESSORIES FOR 800A FRAME TEMBREAK MCCBs

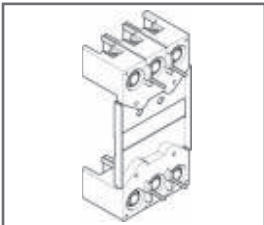
External Operating Handles



	Code	Price
Door Mounted Black handle IP54 (TemBreak 2)	215005378	
Door Mounted Black handle IP65 (TemBreak 2)	215005379	
Door Mounted Red handle IP54 (TemBreak 2)	215005380	
Door Mounted Red handle IP65 (TemBreak 2)	215005381	
Door Mounted Handle (TemBreak)	215005035	
LEFT:BLACK Breaker mounted HANDLE	215005227	
LEFT:BLACK Breaker mounted :IP55 HANDLE	215005235	
LEFT:RED/YEL Breaker mounted HANDLE	215005243	
LEFT:RED/YEL Breaker mounted: IP55 HANDLE	215005251	
RIGHT:BLACK Breaker mounted HANDLE	215005195	
RIGHT:BLACK Breaker mounted: IP55 HANDLE	215005203	
RIGHT:RED/YEL Breaker mounted HANDLE	215005211	
RIGHT:RED/YEL Breaker mounted :IP55 HANDLE	215005219	
UPPER:BLACK Breaker mounted HANDLE	215005259	
UPPER:BLACK Breaker mounted :IP55 HANDLE	215005267	
UPPER:RED/YEL Breaker mounted HANDLE	215005275	
UPPER:RED/YEL Breaker mounted:IP55 HANDLE	215005283	
OHE:Handle Mechanism	215005156	
Door Flange	215005160	

LEFT, RIGHT and UPPER refer to the direction of incoming power supply

Plug-in Bases

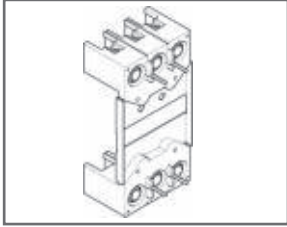


		Code	Price
3 Pole	Plug In Base	215007039	
	Plug In Base with extension bars	215007011	
	IP20 Plug in base	215007069	
	IP20 Plug in base with extension bars	215007021	
	Auxiliary connector socket for plug in	215007049	

EXTERNAL ACCESSORIES FOR 800A FRAME TEMBREAK MCCBs

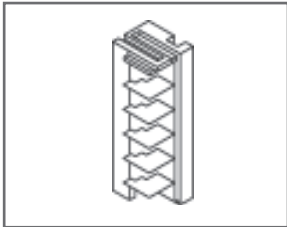
TEMBREAK 2

Plug-in Bases



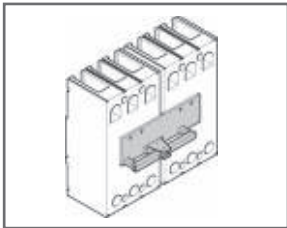
		Code	Price
4 Pole	Plug In Base	215007040	
	Plug In Base with extension bars	215007136	
	IP20 Plug in base	215007070	
	IP20 Plug in base with extension bars	215007140	
	Auxiliary connector socket for plug in	215007049	

Accessory Terminal Blocks



		Code	Price
	1 Off Accessory Terminal Block	215006001	
	2 Off Accessory Terminal Block	215006002	
	3 Off Accessory Terminal Block	215006003	
	4 Off Accessory Terminal Block	215006004	

Mechanical Interlocks



		Code	Price
3 Pole	Front Mechanical Interlock	215009005	
	Rear Mechanical Interlock	215009023	
	1m Wire Mechanical Interlock	215009035	
	1.5m wire mechanical interlock	215009040	
	Rear Mech Interlock+accessory terminals*	215009060	
	Rear Mech Interlock+TemTransfer terminal*	215009138	
	Rear Mechanical Interlock for Plug in+accessory terminals*	215009080	
	TemTransfer Automatic Changeover Controller	302001001	

*Includes backplate and mounting frame

		Code	Price
4 Pole	Front Mechanical Interlock	215009006	
	Rear Mechanical Interlock	215009024	
	1m Wire Mechanical Interlock	215009035	
	1.5m wire mechanical interlock	215009040	
	Rear Mech Interlock+accessory terminals*	215009061	
	Rear Mech Interlock+TemTransfer terminals*	215009139	
	Rear Mechanical Interlock for Plug in+accessory terminals*	215009045	
	TemTransfer Automatic Changeover Controller	302001001	

*Includes backplate and mounting frame

EXTERNAL ACCESSORIES FOR 800A FRAME TEMBREAK MCCBs

TEMBREAK 2

Castell Locks

	Code	Price
Castell A Lock in Closed	215010010	
Castell B Lock in Closed	215010024	
Castell Special Lock in Closed	215010047	
Castell A Lock in Open	215010058	
Castell B Lock in Open	215010069	
Castell Special Lock in Open	215010094	
Castell Lock XFH Handle	215010100	
Cam for XFH Handle	215010102	
Castell Lock XFH SP Handle	215010107	

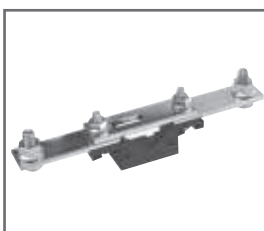
Handle Locks

	Code	Price
Handle Lock	215011004	
Handle Extension	215011007	
Adjustment Seal Facility	215011014	

External Neutral CTs

	Code	Price
630A	215015001	
800A	215015002	

Neutral Link



	Code	Price
800A Neutral Link	800528	
800A Neutral Link Shroud	215020005	

TEMBREAK 1250 & 1600A FRAME MCCBs

1250A MCCBs with Extension Bars



Dimensions		XS	TL
h (mm)		370	370
w (mm)	3 pole	210	210
	4 pole	280	280
d (mm)		120	140

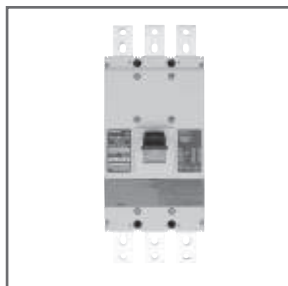
TEMBREAK 2

Model		I_R (A)	3P	Price	4P	Price
XS1250CE $I_{cu} = 50$ kA Electronic protection codes: A - LSI; P - Preferential trip alarm; G - Ground fault; I - Fault indication LEDs	A	1000	206660510		206660710	
	AG	1000	206665510*		206665710	
	AI	1000	206661510		206661710	
	AP	1000	206662510		206662710	
	A	1250	206660512		206660712	
	AG	1250	206665512*		206665712	
	AI	1250	206661512		206661712	
	AP	1250	206662512		206662712	
XS1250SE $I_{cu} = 85$ kA Electronic protection codes: A - Standard relay with LSI characteristic ; P - Preferential trip alarm; G - Ground fault; I - Fault indication LEDs	A	504-1000	206670510		206670710	
	AG	504-1000	206675510*		206675710	
	AI	504-1000	206671510		206671710	
	AP	504-1000	206672510		206672710	
	A	630-1250	206670512		206670712	
	AG	630-1250	206675512*		206675712	
	AI	630-1250	206671512		206671712	
	AP	630-1250	206672512		206672712	
TL1250NE (1600A Frame) $I_{cu} = 125$ kA Electronic protection codes: A - Standard relay with LSI characteristic ; P - Preferential trip alarm; G - Ground fault; I - Fault indication LEDs	A	504-1000	206629510		206629710	
	AG	504-1000	206625510*		206625710	
	AI	504-1000	206626510		206626710	
	AP	504-1000	206628510		206628710	
	A	630-1250	206629512		206629712	
	AG	630-1250	206625512*		206625712	
	AI	630-1250	206626512		206626712	
	AP	630-1250	206628512		206628712	

An external neutral CT must be ordered. See External Accessories.

TEMBREAK 1250 & 1600A FRAME MCCBs

1600A MCCBs with Various Terminal Types



Dimensions		
h (mm)		370
w (mm)	3 pole	210
	4 pole	280
d (mm)		120

Model		I_R (A)	3P	Price	4P	Price
XS1600CE $I_{cu} = 50$ kA Electronic protection codes: A - Standard relay with LSI characteristic ; P - Preferential trip alarm; G - Ground fault; I - Fault indication LEDs	A	806-1600 FC	206760516	206760716		
	AG	806-1600 FC	206765516*	206765716		
	AI	806-1600 FC	206761516	206761716		
	AP	806-1600 FC	206762516	206762716		
	A	806-1600 RC	206760616	206760816		
	AG	806-1600 RC	206765616*	206765816		
	AI	806-1600 RC	206761616	206761816		
	AP	806-1600 RC	206762616	206762816		
	A	806-1600 DO	206760916	206760016		
	AG	806-1600 DO	206765916*	206765016		
	AI	806-1600 DO	206761916	206761016		
	AP	806-1600 DO	206762916	206762016		
XS1600SE $I_{cu} = 100$ kA Electronic protection codes: A - Standard relay with LSI characteristic ; P - Preferential trip alarm; G - Ground fault; I - Fault indication LEDs	A	806-1600 FC	206770516	206770716		
	AG	806-1600 FC	206775516*	206775716		
	AI	806-1600 FC	206771516	206771716		
	AP	806-1600 FC	206772516	206772716		
	A	806-1600 RC	206770616	206770816		
	AG	806-1600 RC	206775616*	206775816		
	AI	806-1600 RC	206771616	206771816		
	AP	806-1600 RC	206772616	206772816		
	A	806-1600 DO	206770916	206770016		
	AG	806-1600 DO	206775916*	206775016		
	AI	806-1600 DO	206771916	206771016		
	AP	806-1600 DO	206772916	206772016		

Key to MCCB connection codes:

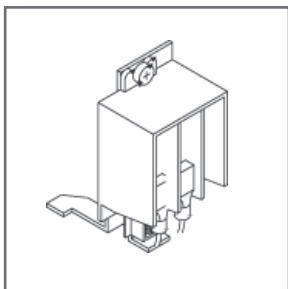
FC - with front connections; RC - with rear connections; DO - with drawout connections

* An external Neutral CT must be ordered. See External Accessories.

INTERNAL ACCESSORIES FOR 1250 & 1600A FRAME TEMBREAK MCCBs

(TL800NE, XS1250CE, XS1250SE, TL1250NE, XS1600CE, XS1600SE)

Auxiliary/Alarm Switches

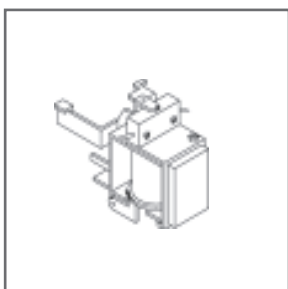


TEMBREAK 2

		Code	Price
3 Pole	1 Alarm	212001071	
	1 Auxiliary	212001006	
	1 Auxiliary, 1Alarm	212001043	
	2 Auxiliaries	212001016	
	2 Auxiliaries, 1 Alarm	212001053	
	2 Auxiliaries, 2 Alarms	212001102	
	3 Auxiliaries	212001026	
	3 Auxiliaries, 1 Alarm	212001101	

		Code	Price
4 Pole	1 Alarm	212001072	
	1 Auxiliary	211001007	
	1 Auxiliary, 1Alarm	212001044	
	2 Auxiliaries	212001017	
	2 Auxiliaries, 1 Alarm	212001054	
	2 Auxiliaries, 2 Alarms	212001104	
	3 Auxiliaries	212001027	
	3 Auxiliaries, 1 Alarm	212001103	

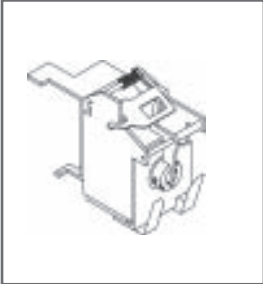
Shunt Trips



	Code	Price
AC 100-115V	212002007	
AC 200-480V	212002015	
AC 24V	211002147	
AC 48V	211002157	
DC 100-115V	212002052	
DC 12V	211002025	
DC 125V	212002199	
DC 200-230V	212002060	
DC 24V	212002033	
DC 30V	212002191	
DC 48V	212002041	
DC 60V	211002165	

INTERNAL ACCESSORIES FOR 1250 & 1600A FRAME TEMBREAK MCCBs

UnderVoltage Trips



Field Fit Accessory	Code	Price
AC 100-120V	212002068	
AC 100-120V Time Delay	212002120	
AC 100-120V 1Sec Time Delay	211002244	
AC 100-120V 2Sec Time Delay	211002254	
AC 200-240V	212002076	
AC 200-240V Time Delay	212002128	
AC 200-240V 1Sec Time Delay	212002208	
AC 200-240V 2Sec Time Delay	211002216	
(IND) 240V	211002314	
AC 380-450V	211002084	
AC 380-450V Time Delay	212002136	
AC 380-450V 1Sec Time Delay	211002228	
AC 380-450V 2Sec Time Delay	211002236	
DC 100-115V	212002102	
DC 200-230V	212002112	
DC 24V	212002094	
DC 48V	212002174	
DC 60V	212002183	

TEMBREAK 2

EXTERNAL ACCESSORIES FOR 1250 & 1600A FRAME TEMBREAK MCCBs

Connections

TEMBREAK 2

1250A		Code	Price
3 Pole	6 rear connection bars	212003025	
	3 rear connection bars (bottom)	211003099	
	3 rear connection bars (top)	211003110	
	IP20 Plug In Conversion kit*	212003145	
	Drawout Conversion kit**	212003260	
	Auxiliary connector plug for plug in and drawout***	215003072	

1250A		Code	Price
4 Pole	8 rear connection studs	212003026	
	4 rear connection bars (bottom)	212003100	
	4 rear connection bars (top)	212003111	
	IP20 Plug In Conversion kit*	212003146	
	Drawout Conversion kit**	212003264	
	Auxiliary connector plug for plug in and drawout***	215003072	

1600A		Code	Price
3 Pole	3 rear connection bars (bottom)	212003212	
	3 rear connection bars (top)	212003112	

1600A		Code	Price
4 Pole	4 rear connection bars (bottom)	211003309	
	4 rear connection bars (top)	211003308	

*Drawout chassis and auxiliary connectors must be ordered separately

** Plug in base and auxiliary connectors must be ordered separately

*** Auxiliary connector socket must be ordered separately

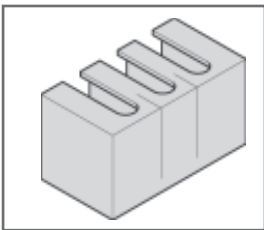
EXTERNAL ACCESSORIES FOR 1250 & 1600A FRAME TEMBREAK MCCBs

Motor Operators

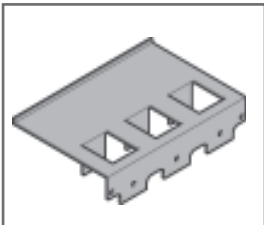


	Code	Price
AC100-115V	211008074	
AC200-230V	211008075	
DC 24V	211008076	
DC100-110V	211008077	
AC 240V	212008044	

Terminal Covers



1250A		Code	Price
3 Pole	2 covers for front connection	211004020	
	1 cover for front connection	211004070	



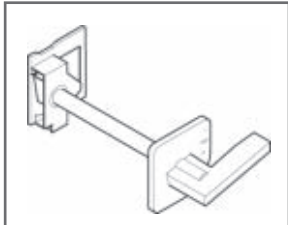
1250A		Code	Price
4 Pole	2 covers for front connection	211004021	
	1 cover for front connection	211004071	

Drawout Chassis

1250A		Code	Price
3 Pole	Drawout Chassis	211014053	
4 Pole	Drawout Chassis	211014061	

EXTERNAL ACCESSORIES FOR 1250 & 1600A FRAME TEMBREAK MCCBs

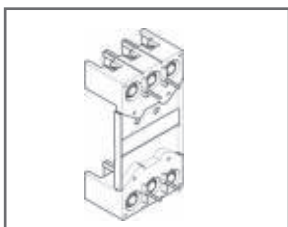
Handles



TEMBREAK 2

	Code	Price
Door Mounted Black handle IP54 (TemBreak 2)	211005382	
Door Mounted Black handle IP65 (TemBreak 2)	211005383	
Door Mounted Red handle IP54 (TemBreak 2)	211005384	
Door Mounted Red handle IP65 (TemBreak 2)	211005385	
Door Mounted Handle	212005036	
Left:Black Breaker mounted Handle	211005228	
Left:Black Breaker mounted:IP55 Handle	211005236	
Left:Red/Yellow Breaker mounted Handle	211005244	
Left:Red/Yellow Breaker mounted:IP55 Handle	211005252	
Right:Black Breaker mounted Handle	211005196	
Right:Black Breaker mounted :IP55 Handle	211005204	
Right:Red/Yellow Breaker mounted Handle	211005212	
Right:R/Y Breaker mounted:IP55 Handle	211005220	
Upper:Black Breaker mounted Handle	211005260	
Upper:Black Breaker mounted:IP55 Handle	211005268	
Upper:Red/Yellow Breaker mounted Handle	211005276	
Upper:R/Y Breaker mounted:IP55 Handle	211005284	
OHE:Handle Mechanism	211005157	
Door Flange	211005161	

Plug-in Bases

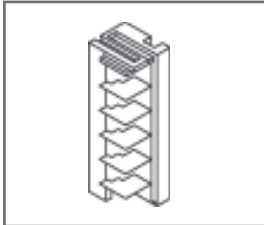


1250A		Code	Price
3 Pole	Plug In Base	211007041	
	IP20 Plug In Base	211007071	
	Auxiliary connector socket for plug in base	215007049	

1250A		Code	Price
4 Pole	Plug In Base	211007042	
	IP20 Plug In Base	211007072	
	Auxiliary connector socket for plug in base	215007049	

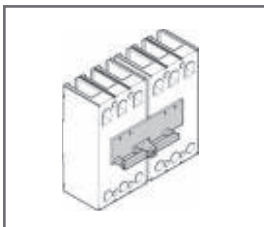
EXTERNAL ACCESSORIES FOR 1250 & 1600A FRAME TEMBREAK MCCBs

Accessory Terminal Blocks



	Code	Price
1 Off Accessory Terminal Block	215006001	
2 Off Accessory Terminal Block	215006002	
3 Off Accessory Terminal Block	215006003	
4 Off Accessory Terminal Block	215006004	

Mechanical Interlocks



1250A		Code	Price
3 Pole	Front Mechanical Interlock	211009007	
	Rear Mechanical Interlock	211009025	
	Rear Mechanical Interlock + Accessory terminals*	211009028	
	Rear Mechanical Interlock + TemTransfer terminals*	211009140	
	1M Wire mechanical interlock	211009036	
	1.5M Wire mechanical interlock	211009041	
	Rear mechanical interlock for plug in + accessory terminals*	211009081	
	TemTransfer Automatic Changeover Controller	302001001	

*Includes backplate and mounting frame

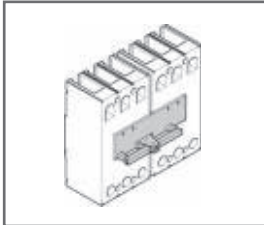
1250A		Code	Price
4 Pole	Front Mechanical Interlock	211009008	
	Rear Mechanical Interlock	211009026	
	Rear Mechanical Interlock + Accessory terminals*	211009029	
	Rear Mechanical Interlock + TemTransfer terminals*	211009141	
	1M Wire mechanical interlock	211009036	
	1.5M Wire mechanical interlock	211009041	
	Rear mechanical interlock for plug in + accessory terminals*	211009082	
	TemTransfer Automatic Changeover Controller	302001001	

*Includes backplate and mounting frame

TEMBREAK 2

EXTERNAL ACCESSORIES FOR 1250 & 1600A FRAME TEMBREAK MCCBs

Mechanical Interlocks



TEMBREAK 2

1600A		Code	Price
3 Pole	Front Mechanical Interlock	211009007	
	Rear Mechanical Interlock	211009027	
	Rear Mechanical Interlock + Accessory terminals	211009030	
	Rear Mechanical Interlock + TemTransfer terminals	211009142	
	1M Wire mechanical interlock	211009037	
	1.5M Wire mechanical interlock	211009042	
	TemTransfer Automatic Changeover Controller (Optional)	302001001	

1600A		Code	Price
4 Pole	Front Mechanical Interlock	211009008	
	Rear Mechanical Interlock	211009087	
	Rear Mechanical Interlock + Accessory terminals	211009055	
	Rear Mechanical Interlock + TemTransfer terminals	211009143	
	1M Wire mechanical interlock	211009037	
	1.5M Wire mechanical interlock	211009042	
	TemTransfer Automatic Changeover Controller (Optional)	302001001	

Castell Locks

	Code	Price
Castell A Lock In Close	211010013	
Castell B Lock In Close	211010025	
Castell A Lock In Open	211010059	
Castell B Lock In Open	211010070	
Castell Lock XFH Handle	215010100	
CAM FOR XFH Handle	215010102	
Castell Lock XFH SP Handle	215010107	
Castell SPEC Lock In Close	211010048	
Castell SPEC Lock In Open	211010097	

EXTERNAL ACCESSORIES FOR 1250 & 1600A FRAME TEMBREAK MCCBs

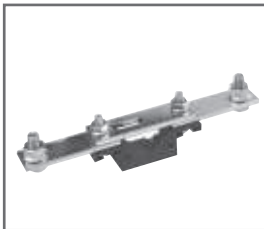
Handle Locks

	Code	Price
Handle Lock	211011005	
Handle Extension	215011007	
Adjustment Seal Facility	211011015	

External Neutral CTs

	Code	Price
1000A	211015003	
1250A	211015004	
1600A	211015005	

Neutral Link



	Code	Price
1000A Neutral Link	800535	
1000A Neutral Link Shroud	211020006	

2000A AND 2500A ELECTRONIC MCCBs WITH VARIOUS TERMINAL TYPES

Dimensions		XS2000NE	XS2500NE
h (mm)		450*	450
w (mm)	3 pole	320	320
	4 pole	429	429
d (mm)		225	185

* Dimension does not include copper attachment.

Model		I_R (A)	3P	Price	4P	Price
XS2000NE $I_{cu} = 85kA$	A	2000FC	204850520		204850720	
	AG	2000FC	204855520*		204855720	
	AI	2000FC	204851520		204851720	
	AP	2000FC	204852520		204852720	
	A	2000RC	204850620		204850820	
	AG	2000RC	204855620*		204855820	
	AI	2000RC	204851620		204851820	
	AP	2000RC	204852620		204852820	
XS2500NE $I_{cu} = 85kA$	A	2500RC	204950625		204950825	
	AG	2500RC	204955625*		204955825	
	AI	2500RC	204951625		204951825	
	AP	2500RC	204952625		204952825	

Electronic Protection Codes:
A - LSI; P - Preferential trip alarm;
G - Ground fault; I - Fault indication LEDs

Key to MCCB connection codes:

FC - with front connections; RC - with rear connections

*An external Neutral CT must be ordered. See External Accessories.

Contact Terasaki for details of accessories for 2000A and 2500A frame MCCBs.

TEMBREAK DC MCCBS 1000 TO 3200A WITH VARIOUS TERMINAL TYPES

Dimensions	XS1000ND	XS1250ND	XS1600ND	XS2000ND	XS2500ND	XS3200ND
h (mm)	273*	370*	370*	450*	450	456
w (mm)	210	210	210	320	320	320
d (mm)	103	140	140	225	185*	185*

* Dimension does not include copper attachments

Model	I_n (A)	3P	Price
XS1000ND (800A Frame) Icu = 20kA @ 500V DC Icu = 20kA @ 600V DC Thermal Magnetic	1000	206640510	
XS1250ND (Front Connected) Icu = 50kA @ 500V DC Icu = 20kA @ 600V DC Magnetic Only	1250	206645512	
XS1600ND (Front Connected) Icu = 50kA @ 500V DC Icu = 20kA @ 600V DC Magnetic Only	1600	206740516	
XS2000ND (Front Connected) Icu = 50kA @ 500V DC Icu = 20kA @ 600V DC Magnetic Only	2000	206840520	
XS2000ND (Rear Connected) Icu = 50kA @ 500V DC Icu = 20kA @ 600V DC Magnetic Only	2000	206840620	
XS2500ND (Rear Connected) Icu = 50kA @ 500V DC Icu = 20kA @ 600V DC Magnetic Only	2500	206940625	
XS3200ND (Rear Connected) Icu = 50kA @ 500V DC Icu = 20kA @ 600V DC Magnetic Only	32500	206940632	

* Contact Terasaki for details of accessories for XS3200ND.

ACCESSORIES FOR TEMBREAK DC MCCBs

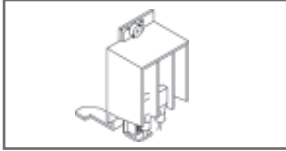
Accessorie per MCCB
per frame size

1000A

1250A
1600A

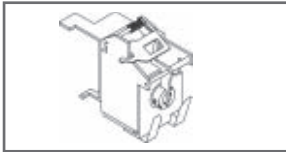
2000A
2500A

Auxiliary Switches and Alarm Switches



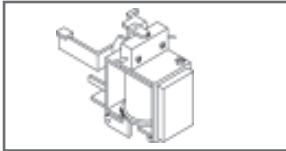
Factory Fit Accessory	Price	Price	Price
1AB Auxiliary Switch			
Alarm Switch			

Under Voltage Trips



Factory Fit Accessory	Price	Price	Price
Under Voltage Trip (24/2004V DC)			

Shunt Trips



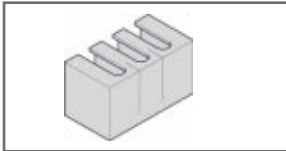
Factory Fit Accessory	Price	Price	Price
Shunt Trip (110/240V AC, 24/48/110/220V DC)			

Motor Operators



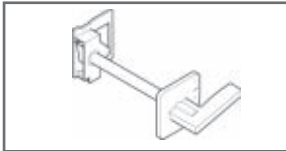
Factory Fit Accessory	Price	Price	Price
Motor Operator (110/220V AC, 110V DC)			

Terminal Covers



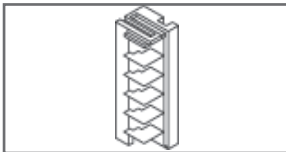
Field Fit Accessory	Price	Price	Price
Terminal Cover FC 3P			

Handles



Factory Fit Accessory	Price	Price	Price
Handle Operator OHE			
Handle Operator OHJ			
Handle Operator OHH			
Castell for MCCB			
Castell for OHH Handle			
Cam Only for OHH Handle			
Handle Lock			
Handle Extension			
Door Flange			

Accessory Lead Terminal



Factory Fit Accessory	Price	Price	Price
Lead Terminal			

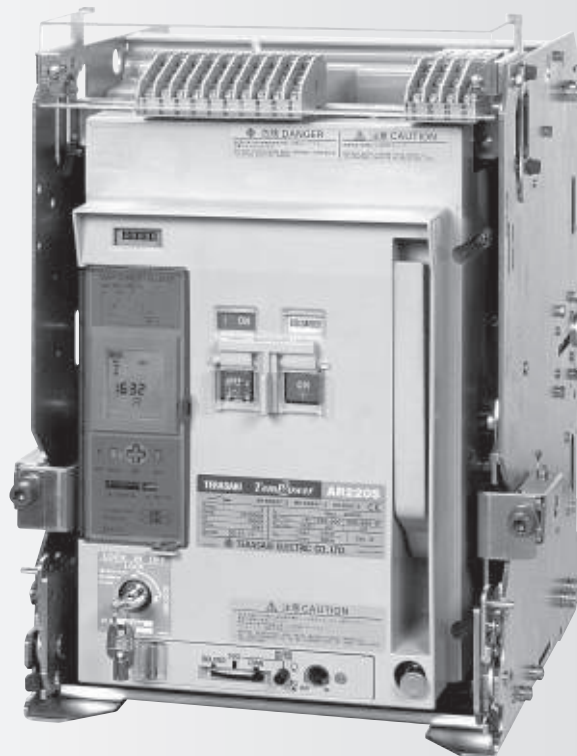
SWITCH-DISCONNECTORS ALL FRAME SIZES

Model	I_n	I_{cm}	3P	Price	4P	Price
S125-NN	125	3.6	4547560 244902		4547560 245008	
S160-NN	160	6	4547560 315800		4547560 315909	
S250-NN	250	6	4547560 316005		4547560 316104	
S400-NN	400	9	4547560 381553		4547560 381577	
S630-NN	630	9	4547560 381607		4547560 381621	

Model	I_n	I_{cm}	3P	Price	4P	Price
XS800NN	800	15	206590580		206590780	
XS1250NN	1250	32	206690512		206690712	
XS1600NN FC	1600	45	206790516		206790716	
XS1600NN RC	1600	45	206790616		206790816	
XS1600NN DO	1600	45	206790916		206790016	

AIR CIRCUIT BREAKER (ACBs): CONTENTS

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Quick Pricing Guide

ACB 3P Drawout Type					
ACB Rating	Merlin Gerin Equivalent	ABB Equivalent	Terasaki Breaker Type	Icw 1 sec (kA)	ACB, Chassis & Connections
800A	NWH1 or NWA	E2S or E2SM/S	AR208S	65	
1250A	NWH1 or NWA	E2S or E2SM/S	AR212S	65	
1600A	NWH1 or NWA	E2S or E2SM/S	AR216S	65	
2000A	NWH1 or NWA	E2S or E2SM/S	AR220S	65	
2500A	NWH2 or NWHF	E3V or E3V/MS	AR325S	85	
3200A	NWH2 or NWHF	E3V or E3V/MS	AR332S	85	
4000A	NW40b	E4H or E4H/MS	AR440SB	100	
5000A	NW50	E6H or E6H/MS	AR650S	120	
6300A	NW63	E6H or E6H/MS	AR663S	120	

ACB 4P Drawout Type					
ACB Rating	Merlin Gerin Equivalent	ABB Equivalent	Terasaki Breaker Type	Icw 1 sec (kA)	ACB, Chassis & Connections
800A	NWH1 or NWA	E2S or E2SM/S	AR208S	65	
1250A	NWH1 or NWA	E2S or E2SM/S	AR212S	65	
1600A	NWH1 or NWA	E2S or E2SM/S	AR216S	65	
2000A	NWH1 or NWA	E2S or E2SM/S	AR220S	65	
2500A	NWH2 or NWHF	E3V or E3V/MS	AR325S	85	
3200A	NWH2 or NWHF	E3V or E3V/MS	AR332S	85	
4000A	NW40b	E4H or E4H/MS	AR440SB	100	
5000A	NW50	E6H or E6H/MS	AR650S	120	
6300A	NW63	E6H or E6H/MS	AR663S	120	

ACB 3P Fixed Type					
ACB Rating	Merlin Gerin Equivalent	ABB Equivalent	Terasaki Breaker Type	Icw 1 sec (kA)	ACB & Connections
800A	NWH1 or NWA	E2S or E2SM/S	AR208S	65	
1250A	NWH1 or NWA	E2S or E2SM/S	AR212S	65	
1600A	NWH1 or NWA	E2S or E2SM/S	AR216S	65	
2000A	NWH1 or NWA	E2S or E2SM/S	AR220S	65	
2500A	NWH2 or NWHF	E3V or E3V/MS	AR325S	85	
3200A	NWH2 or NWHF	E3V or E3V/MS	AR332S	85	

ACB 4P Fixed Type					
ACB Rating	Merlin Gerin Equivalent	ABB Equivalent	Terasaki Breaker Type	Icw 1 sec (kA)	ACB & Connections
800A	NWH1 or NWA	E2S or E2SM/S	AR208S	65	
1250A	NWH1 or NWA	E2S or E2SM/S	AR212S	65	
1600A	NWH1 or NWA	E2S or E2SM/S	AR216S	65	
2000A	NWH1 or NWA	E2S or E2SM/S	AR220S	65	
2500A	NWH2 or NWHF	E3V or E3V/MS	AR325S	85	
3200A	NWH2 or NWHF	E3V or E3V/MS	AR332S	85	

Common Accessories	
Protection Relays	
Switch Disconnecter (Non-Auto)	
Protection Relay LSI (AGR-11BL-AL)	
Protection Relay LSIG (AGR-11BL-GL)	
Electrical Accessories	
Motor Operator	
Closing Coil	
Shunt Trip	
UVT	
Switches	
7 Aux Switches	
10 Aux Switches	
Position Switch 2 off	
Position switch 4 off	
Locking & Interlocking Accessories	
Mechanical Interlock 2 ACBS	
Mechanical Interlock 3 ACBS	
Door Interlock	
Castel Lock Facility	

Standard Specification includes:
 Padlockable Mechanical Close & Open Buttons
 Mechanical Close & Open Indicators
 Mechanical Indication of Spring Charged/Discharged State
 4AB Auxiliary Contacts
 Terminal Cover
 IP20 Door Flange
 Horizontal or Vertical Busbar Connections
 Spring Charged Main Circuit Shutters
 Control Circuit Shutters
 Position Indicator
 Drawout Handle

TEMPOWER 2

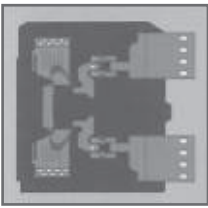
10 Reasons to Use TemPower 2

1. BREAKING CONTACTS



TemPower2 is the world's first DoubleBreak ACB, having two breaking contacts per phase. The unique pole structure means that the short-time withstand rating (I_{cw}) is equal to the service short-circuit breaking capacity (I_{cs}) for all models.

2. RELIABILITY



DoubleBreak contacts increase service life. Electrical and mechanical endurance ratings are the best available, and exceed the requirements of IEC 60 947-2.

3. DOUBLE QUICK OPENING

TemPower2 ACBs clear short-circuit faults in less than 30ms. That's twice as fast as most ACBs.

4. DOUBLE OPENING AND CLOSING COILS

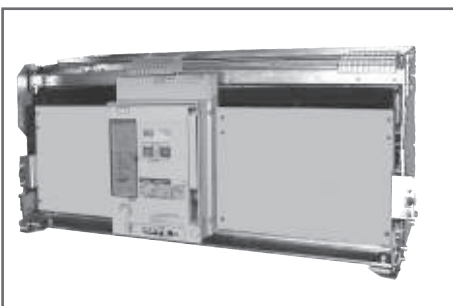


Now you can extend control system redundancy to an ACB. Double coils allow designers to implement back-up tripping and closing systems.

5. AR440SB AND AR6 ACBs

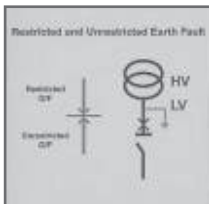


Terasaki are committed to the progressive innovation of the TemPower 2 AR ACB. With this in mind we are introducing our AR440SB 400A ACB which is based on the AR3 frame size, and the AR6 - 5000A and 6300A ACBs. Our ACBs come with the same excellent performance expected from all Terasaki products; delivering innovative circuit protection with built in reliability and safety. The introduction of these ACBs provide a solution from 800A to 6300A with the same front cover dimension and standardised accessories.



10 Reasons to Use TemPower 2

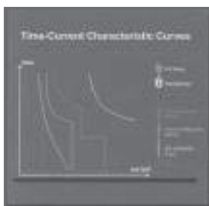
6. DOUBLE GROUND FAULT PROTECTION



Restricted and Unrestricted Ground Fault Protection.

The AGR-B Protection Relay offers Ground Fault Protection on the line/transformer side (Restricted) and load side (Unrestricted) of the ACB.

7. PROTECTION CHARACTERISTICS



TemPower2 offers time-current characteristics to 3 different standards;

- IEC 60 947-2 (low voltage circuit breakers)
 - IEC 60 255-3 (electrical relays)
 - Lloyds Register of Shipping (for marine generator protection)
- All models have LSI protection.

8. REDUCE TIME TO REPAIR



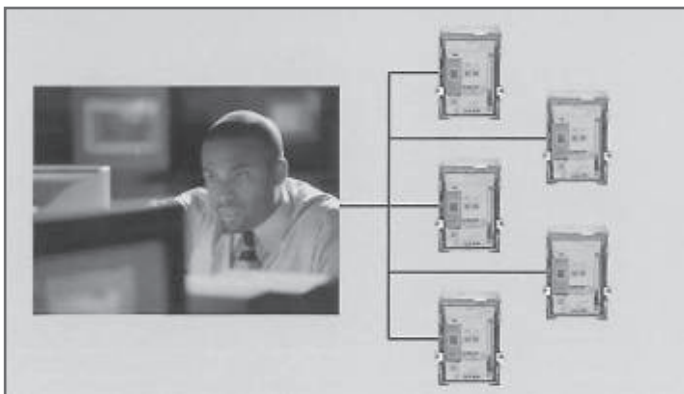
Modular construction means that each pole of the TemPower2 ACB can be replaced in about 15 minutes - by the user. This unique feature will reduce downtime for end-users.

9. DOUBLE NEUTRALS



How do you make a system harmonic proof in the face of increasing triple-N harmonic currents? Terasaki have launched the first Double Neutral ACB. The AH-60DN will carry 10,000A of neutral current.

10. CONTROL AND MONITORING OPTIONS



Circuit breaker control and monitoring can be implemented either by hard wiring or digital data transmission. The Tempower2 ACB can support Modbus communication protocol.

AIR CIRCUIT BREAKER STANDARD SERIES

Selection Procedure
1) Select a fixed ACB OR a Drawout body + Chassis
2) Select Top & Bottom connections
3) Select a Protection Relay
4) Select accessories according to specification

Standard Specification-Non Automatic
Padlockable Mechanical close & open buttons
Mechanical close & open indicators
Mechanical Indication of spring charged/discharge state
4AB Auxiliary Switches
Terminal Block for Accessories
Terminal Cover
Protection Relay Cover
IP20 Door Flange
Drawout Only:
Spring Charged Main Circuit Shutters
Control Circuit Shutters
Position Indicator
Drawout Handle

Rated Current	ACB Type	Breaking Capacity <i>I_{cs} = I_{cw}, 1s</i>	No Poles	Fixed Body	Drawout Body	Drawout Chassis	Horizontal Connections Half Set	Vertical Connections Half Set	Front Connections Half Set	Earthing Device Body	Earthing Device Chassis
800A	AR208S	65kA	3								
			4								
1250A	AR212S	65kA	3								
			4								
1600A	AR216S	65kA	3								
			4								
2000A	AR220S	65kA	3								
			4								
2500A	AR325S	85kA	3								
			4								
3200A	AR332S	85kA	3								
			4								
4000A	AR440SB	100kA	3								
			4								
5000A	AR650S	120kA	3								
			4								
6300A	AR663S	120kA	3								
			4								

TEMPOWER 2

AIR CIRCUIT BREAKER HIGH FAULT SERIES

Standard Specification-Non Automatic

Padlockable Mechanical close & open buttons
 Mechanical close & open indicators
 Mechanical Indication of spring charged/discharge state
 4AB Auxiliary Switches
 Terminal Block for Accessories
 Terminal Cover
 Protection Relay Cover
 IP20 Door Flange

Drawout Only:
 Spring Charged Main Circuit Shutters
 Control Circuit Shutters
 Position Indicator
 Drawout Handle

Selection Procedure

- 1) Select a fixed ACB OR a Drawout body + Chassis
- 2) Select Top & Bottom connections
- 3) Select a Protection Relay
- 4) Select accessories according to specification

Rated Current	ACB Type	Breaking Capacity Ics = Icw, 1s	No Poles	Fixed Body	Drawout Body	Drawout Chassis	Horizontal Connections Half Set	Vertical Connections Half Set	Front Connections Half Set	Earthing Device Body	Earthing Device Chassis
1250A	AR212H	80kA	3								
			4								
1600A	AR216H	80kA	3								
			4								
1600A	AR316H	100kA	3								
			4								
2000A	AR220H	80kA	3								
			4								
2000A	AR320H	100kA	3								
			4								
2500A	AR325H	100kA	3								
			4								
3200A	AR332H	100kA	3								
			4								

AGR PROTECTION RELAY

TEMPOWER 2

No Protection	LIST PRICE													
Non-Automatic	£171.17													

Protection Characteristic	Protection Relay	LIST PRICE	Common Relay Options			Selective Relay Options								
			Communication	Zone Interlock	N-Phase Protection	Restricted Ground Fault	Contact Temp Monitoring	Phase Rotation Protection	Trip Indication	Under Voltage Alarm	Spring Charge Indication	Second Pre-Trip Alarm	Manual Reset	
			C	Z	NP	REF ①	OH ①	NS ①	①	UV ②	②	PTA2③	MRST	
Standard Protection Relays														
Dial Type	For general feeder circuits	AGR-11BL-AL (LSI)												
		AGR-11BL-GL (LSIG)												
		AGR-11BL-AS (LSI)												
		AGR-11BL-GS (LSIG)												
Standard LCD Type	For general feeder circuits	AGR-21BL-PS (LSI)												
		AGR-21BL-PG (LSIG)												
Specialised Protection Relays														
Standard LCD Type	For generator protection	AGR-21BR-PS (LSI)												
		AGR-21BR-PG (LSIG)												
		AGR-21BS-PS (LSI)												
		AGR-22BS-PR (LSI)												
Enhanced LCD Type	For general protection	AGR-31BL-PS (LSI)												
		AGR-31BL-PG (LSIG)												
	IEC 60255-3 Curves	AGR-31BR-PS (LSI)												
		AGR-31BR-PG (LSIG)												
		For generator protection	AGR-31BS-PS (LSI)											
			AGR-31BS-PR (LSI)											

Note 1 - Only one function can be selected from REF, OH, NS or Trip Indication.

Note 2 - Only one function can be selected from UV, Spring Charge Indication or PTA2.

For Earth Leakage Protection please contact Terasaki.

3 Pole ACBs with Ground Fault or Neutral Phase Protection will require one AUX CT.
 3 Pole ACBs with Restricted Ground Fault will require two AUX CTs.
 800A to 2000A
 2500A to 4000A

Example of AGR Description

KEY:

AGR -21BL -P S

AGR: Protection Relay Family.
 -21BL: Protection Relay Group.
 -P S: Protection Function and Indication.

A = LSI PROTECTION.
 G = A + UNRESTRICTED GROUND FAULT PROTECTION.
 P = A + PRE TRIP ALARM.
 R = REVERSE POWER.

All AGR-B Protection Relays have individual operation contact indicators except the AGR-11B, which has a single operation contact indicator.



Standard OCR with adjustment dial Type AGR-11B.



Standard OCR with LCD-Ammeter Type AGR-21B,22B.



Enhanced OCR with backlit LCD-Power Analyser Type AGR-31B.

ACCESSORY SELECTION

INDICATION ACCESSORIES AND ELECTRICAL OPERATION ACCESSORIES

INDICATION ACCESSORIES

4AB Auxiliary Switches
7AB Auxiliary Switches
10AB Auxiliary Switches

Standard

Auxiliary switches electrically indicate the open-closed status of the breaker



Position Switches (Max of 2 positions)
Position Switches (Max of 4 positions)

The position switches operate to give an indication of the body position relative to the chassis.



Ready to Close Switch

Indicates when the ACB is in a ready to close status.



Trip Indicator Switch

Used to indicate the ACB is in the trip condition.



Spring Charge Up Switch

This output contact is used to indicate the closing springs have been fully charged



ELECTRICAL OPERATION ACCESSORIES

Continuously Rated Shunt Trip
Double Shunt Trip 24V DC & 240V AC

Shunt trip with redundant coil for emergency use. Uses two of the ACB's auxiliary switches. Contact Terasaki for other voltages.
Short Rated Shunt (if UVT fitted)



Capacitor Shunt Trip 48V DC

Used to trip an ACB within a limited time period when the mains fails.



Instantaneous Undervoltage Trip
Fixed Time-Delay Undervoltage Trip

Automatically trips the ACB when the mains voltage drops below a pre-determined value.



Motor Operator + Closing Coil (< 240v)

The closing springs are charged by means of an internally mounted motor.



Continuously Rated Closing Coil
Double Closing coil 24V DC & 240V AC

Closing coil with redundant coil for emergency use. Contact Terasaki for other voltages.



ACCESSORY SELECTION

EXTERNAL ACCESSORIES

EXTERNAL ACCESSORIES

Door Flange IP31



IP55 Transparent Cover

An IP 55 cover is a heavy-duty clear plastic assembly with a hinged door. IP 55 Protection defined by IEC 60529.



Lifter Loader AWR-1B (AR2, 3 & 440SB) AWR-2B (AR2, 3, 4 & 6)

The Lifter Loader is designed specifically to raise, lower and manoeuvre the body to the chassis for the insertion or withdrawal in a safe and secure manner.



IP3X Chassis Protection Cover

An IP3X cover offers protection against objects touching live terminals at the rear of the chassis when the body is withdrawn.



Storage Drawout Handle

Storage location for drawout handle. Hinged handle which can be stowed on the front of the ACB with the door closed.



Fixing Bolts (For Drawout ACBs)

Fixing bolts should be used if the ACB is being subjected to strong vibration, typically encountered during Marine applications



Auto-Discharge Device

This device allows the charged closing springs to be automatically released when the ACB is drawn out from the ISOLATED to the REMOVED position.



Open/Close Counter

Mechanical readout that shows the number of ON-OFF cycles the ACB has performed.



Test Jumper

Allows ON-OFF tests to be carried out when the ACB body is drawn out from the chassis.



Tropicalisation, Anti-Corrosion, Cold Climate POA
Factory-applied treatments for onerous operating environments.



Step Down transformer 440V to 220V

Required if the control voltage is above 240V for motor operators.



Lifting Plates

Detachable tools that can be used to lift the ACB body out of the chassis.



OCR Checker

The OCR checker allows easy checking of the protection functions.



InterPole Barriers 3P InterPole Barriers 4P

Prevents possible short-circuiting at busbar connections due to falling foreign objects.



Insertion Prevention Device

Locking system which prevents the body being inserted into the wrong chassis



ACCESSORY SELECTION

LOCKING AND INTERLOCKING SYSTEMS

LOCKING AND INTERLOCKING SYSTEMS



Door Interlock
Prevents the switchboard door from being opened unless the breaker body is in the ISOLATED position.

Please specify whether standard drawout handle or storage drawout handle is required. (Storage handle will incur extra cost)



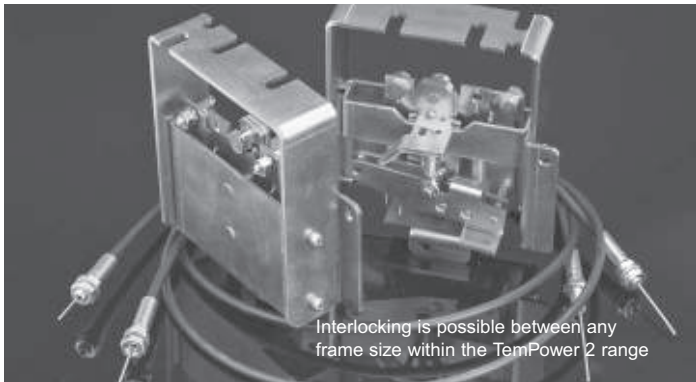
Shutter Padlock Device
This device allows the main shutters to be locked when the body has been removed.

AR208 - AR332
AR440



Cylinder Lock and Key
Castell Lock and Key (factory fitted)
Lock in Off Position
Castell Facility

MECHANICAL INTERLOCKING



Interlocking is possible between any frame size within the TemPower 2 range

For Horizontal Interlocking 2 ACB's

	Breaker 1	Breaker 2
Interlocking	0	1
Type-C	1	0

1 = Closed
0 = Open

Mechanical Interlock for 2 ACB's with cables

Total Price

TEMPOWER 2

For Horizontal Interlocking 3 ACB's

	Breaker 1	Breaker 2	Breaker 3
Interlocking	1	0	0
Type-A	0	1	0
	0	0	1
	1	0	1

1 = Closed
0 = Open

Mechanical Interlock for 3 ACB's with cables

Total Price

For Horizontal Interlocking 3 ACB's

	Breaker 1	Breaker 2	Breaker 3
Interlocking	0	0	1
Type-B & Type-D	0	1	0
	0	1	1
	1	0	1
	1	0	0
	1	0	1
	1	1	0

1 = Closed
0 = Open

Mechanical Interlock for 3 ACB's with cables

Total Price

Vertical Interlocking 2 ACB's

Vertical Mechanical Interlocking is available between 2 ACB's

Minimum Pitch - 550mm
Maximum Pitch - 1200mm

Total Price

TemTransfer

This is a fully configurable automatic supply transfer unit. It is designed to monitor the incoming AC mains supply for over/under voltage and over/under frequency. Should these fall out of the set limits, the TemTransfer will switch the loads from the mains to a generator.



TemTransfer

Total Price

TemPower 2 ACB Order Form

COMPANY NAME:	EMAIL ADDRESS:
CONTACT NAME:	ORDER NUMBER:
TELEPHONE NUMBER:	QUANTITY:
FAX NUMBER:	DELIVERY TIME REQUEST :

1. TemPower 2 ACB: Enter your choice in the boxes provided (Refer to the catalogue for ratings and specifications)

TERASAKI ACB TYPE	→	AR	<input type="text"/>	FOR EXAMPLE - AR	<input type="text" value="325"/>
ENTER CIRCUIT BREAKER TYPE - Type S, H or SB	→		<input type="text"/>	*H TYPES ARE ONLY AVAILABLE ON 1250A TO 3200A ACBS AND 'SB' TYPE ON THE 4000A ACB	
ENTER RATED CURRENT - Amps	→		<input type="text"/>		
ENTER SENSOR KIT RATING - Ict	→		<input type="text"/>	ONLY ENTER A VALUE IF DIFFERENT FROM RATED CURRENT	
ENTER NUMBER OF POLES	→		<input type="text"/>		

2. Type of Mounting, Connections and Shutters: Tick required boxes.

Fixed Pattern.	<input type="checkbox"/>	Not available on AR4 & AR6 ACBs	Drawout Pattern.	<input type="checkbox"/>
	<input type="checkbox"/>	Horizontal	<input type="checkbox"/>	Vertical
	<input type="checkbox"/>	Front		
Top - Connections.	<input type="checkbox"/>		Control Circuit Terminal Cover	<input type="checkbox"/>
Bottom - Connections.	<input type="checkbox"/>		Main Circuit Shutters	<input type="checkbox"/>
			Control Circuit Shutters	<input type="checkbox"/>

For AR4 & AR6 ACBs only vertical connections are available

3. AGR - Protection Relay and Protection Options: Tick required boxes.

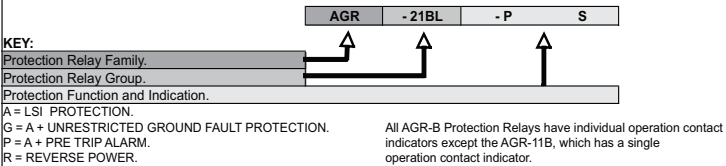
Non Automatic.	<input type="checkbox"/>	Go to Section 4 - Indication	
Protection Functions	AGR 11B Standard Protection - Dial	AGR 21/22B Standard Protection - LCD	AGR 31B Enhanced Protection - LCD
	AGR-11BL	AGR-21BL AGR-21BR AGR-21BS AGR-22BS	AGR-31BL AGR-31BR AGR-31BS
AL			
AS			
PS			
GL			
GS			
PG			
PR			

Protection Options

N-Phase Protection -NP.								
S1-Contact Temperature Monitoring - OH.								
S1-Trip Indicator.		N2	N2		N2	N2	N2	
S1-Phase Rotation Protection - NS.		N2	N2		N2	N2		
S1-Restricted Ground Fault - REF. N4		N2	N2		N2	N2		
S2-Second Pre -Trip Alarm - PTA2.					N3			N3
S2-Undervoltage Alarm - UV.					N3	N3	N3	
S2-Spring Charge Indicator.					N3	N3	N3	
Zone Interlock - Z.								
Communication - C.								
External Display.					N1	N1	N1	N1
Earth Leakage - ELT.						N1	N1	

Please specify control voltage AC100-120V AC200-240V DC24V DC48V DC100-25V DC200-250V

Example of AGR Description



For AGR-31B please state system voltage - Volts
 Specify generator full load current (In) if applicable - Amps
 Back lit LCD for AGR-21B, 22B (option)

NOTES:
 N1 - Soon to be available.
 N2 - Only one function can be selected from section S1.
 N3 - Only one function can be selected from section S2.
 N4 - Restricted Ground Fault only available with PG function.

4. Indication Accessories: Tick required boxes.

4AB Auxiliary Switches	<input type="checkbox"/>	Std
7AB Auxiliary Switches (Refer to Page 40)	<input type="checkbox"/>	
10AB Auxiliary Switches (Refer to Page 40)	<input type="checkbox"/>	
4AB Standard + 3AB Gold (Refer to Page 40)	<input type="checkbox"/>	
7AB Standard + 3AB Gold (Refer to Page 40)	<input type="checkbox"/>	
2 Position Switches (Write a '0', '1' or a '2', total 2)	<input type="checkbox"/>	Insert Isolated Test Conn
4 Position Switches (Write a '0', '1' or a '2', total 4)	<input type="checkbox"/>	
Non-Auto Trip Indication Switch-Normal (Not Ready to Close)	<input type="checkbox"/>	Non-Auto Trip Indication Switch-Gold (Not Ready to Close)
Non-Auto Spring Charge Switch-Normal Ready to Close Contact	<input type="checkbox"/>	Non-Auto Spring Charge Switch-Gold Open/Close Cycle Counter

5. Electrical Operation Accessories: Tick required boxes.

Double Closing Coil 24V DC & 240V AC Only (Short Rated)	<input type="checkbox"/>	Capacitor Shunt Trip 110 AC (Not Available with UVT)	<input type="checkbox"/>
Double Shunt Trip Coil 24V DC & 240 V AC Only (Short Rated)	<input type="checkbox"/>		
Split Circuit** (For Motor and Closing Coil)	<input type="checkbox"/>	**Split Circuit - Voltages for the motor and closing coil must be indicated below.	
AC - Control Voltage			
Shunt Trip Continuously Rated (Short Rated with UVT)			
Motor Operator and Closing coil			
Closing Coil (Split Circuit)**			
Motor Operator (Split Circuit)**			
Undervoltage Trip Device - Instantaneous			
Undervoltage Trip Device - Time-Delay			
DC - Control Voltage			
Shunt Trip Continuously Rated (Short Rated with UVT)			
Motor Operator and Closing coil			
Closing Coil (Split Circuit)**			
Motor Operator (Split Circuit)**			
Undervoltage Trip Device - Instantaneous			

See page 2 of 2 for External Accessories, Locking/Interlocking Systems and Earthing devices.

Tempower 2 ACB Order Form

6.External Accessories: Tick required boxes.

Door Flange IP20	<input type="checkbox"/>	IP55 Transparent Cover	<input type="checkbox"/>
Door Flange IP31	<input type="checkbox"/>	Fixing Blocks	<input type="checkbox"/>
Standard Drawout Handle	<input type="checkbox"/>	Test Jumper	<input type="checkbox"/>
Storage Drawout Handle	<input type="checkbox"/>	Auto-Discharge	<input type="checkbox"/>
Insertion Prevention Device (Insert Code in Box)	<input type="checkbox"/>	Lifting Plates	<input type="checkbox"/>
InterPole Barriers (Not Applicable for Front Connections)	<input type="checkbox"/>	OCR Checker ANU-1	<input type="checkbox"/>
Step Down Transformer (P380-440V/S220V)	<input type="checkbox"/>	OCR Checker ANU-2	<input type="checkbox"/>
Tropicalisation Treatment	<input type="checkbox"/>	Main Shutter Padlock Device	<input type="checkbox"/>
Anti-Corrosion Treatment	<input type="checkbox"/>	IP3X Chassis Protection	<input type="checkbox"/>
Cold Climate Treatment	<input type="checkbox"/>		
Test Report (Enter Number of Copies in Box)	<input type="checkbox"/>	Lifter Loader	<input type="checkbox"/>
		AWR-1B	<input type="checkbox"/>
		AWR-2B	<input type="checkbox"/>
			For AR 2, 3 & 440SB
			For AR 2, 3, 4 & 6

7.Locking and Interlocking Systems: Tick required boxes.

Horizontal Mechanical Interlock for three ACBs, Gen. ACB Interlocked with outer ACBs	<input type="checkbox"/>	Type A (4)	<input type="checkbox"/>						
Horizontal Mechanical Interlock for three ACBs, two from three	<input type="checkbox"/>	Type B (2)	<input type="checkbox"/>						
Horizontal Mechanical Interlock for two ACBs, one from two	<input type="checkbox"/>	Type C (1)	<input type="checkbox"/>						
Horizontal Mechanical Interlock for three ACBs, one from three	<input type="checkbox"/>	Type D (3)	<input type="checkbox"/>						
Type A - Indicate position of Gen. ACB	<table border="1"> <tr> <td>Left</td> <td>Cent</td> <td>Right</td> </tr> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> </table>			Left	Cent	Right	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Left	Cent	Right							
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>							
All Types - Pitch 'P1' (1st & 2nd), 'P2' (2nd & 3rd)	P1= <input type="text"/> mm P2= <input type="text"/> mm								
Vertical Mechanical Interlock for two ACBs, one from two	<input type="checkbox"/>								
Enter Vertical Pole Pitch 'P' Between ACBs	P= <input type="text"/> mm								
Door Interlock	<input type="checkbox"/>	Indicate type of drawout handle required Section 5 – External Accessories.							
Cylinder lock (Lock in Off) and key	<input type="checkbox"/>	Tick One Box	<input type="text"/> Enter Castell symbol required. <input type="text"/> Enter Castell symbol required.						
Cylinder lock (Lock in On) and key	<input type="checkbox"/>								
Lock in Off Padlock Facility	<input type="checkbox"/>								
Castell Fitting (Lock in Off) - Facility only	<input type="checkbox"/>								
Castell Fitting (Lock in On) - Facility only	<input type="checkbox"/>								
Castell Lock (Lock in Off) and Key (Factory fitted)	<input type="checkbox"/>								
Castell Lock (Lock in On) and Key (Factory fitted)	<input type="checkbox"/>								
Chassis Castell (Lock in Isolate) - Facility only	<input type="checkbox"/>								
Chassis Castell (Lock in Isolate) - Lock and Key (Factory fitted)	<input type="checkbox"/>								

8.Earthing Devices: Tick required boxes.

Body (Portable Part)	<input type="checkbox"/>	Chassis (Permanent Part)	<input type="checkbox"/>
Earthing Device Note:			
Not available with front connections.			
Not recommended with a UVT, as manual disconnection is required.			

For Customer Notes or References.

(Please photocopy)

POWER FACTOR CORRECTION(PFC): CONTENTS

Modular Units	120-123
Control Regulators	120 & 122
Stand-Alone Equipment	123-124
Wall Mounted Equipment	123 & 125



POWER FACTOR CORRECTION

MODULAR UNITS

Code	Capacitance (kVAR)	Voltage (V)	Current (A)	Switching Stages (x kVAR)	L (mm)	D (mm)	H (mm)	
ECCTT.40125*	-	25	400	36.1	1x25	150	250	400
ECCTT.40150*	-	50	400	72.2	1x50	150	250	400
ECCT.40125 ECCTX.40125	25	400	36.1	1x25	480	345	365	
ECCT.40150 ECCTX.40150	50	400	72.2	1x50	480	345	365	
ECCT.40225 ECCTX.40225	50	400	72.2	2x25	480	345	365	
ECCT.40250 ECCTX.40250	100	400	144.3	2x50	480	345	365	
ECCT.40325 ECCTX.40325	75	400	108.3	3x25	480	345	365	
ECCT.40425 ECCTX.40425	100	400	144.3	4x25	480	345	365	
ECCT.41125 ECCTX.41125	25	415	34.82	1x25	480	345	365	
ECCT.41150 ECCTX.41150	50	415	69.64	1x50	480	345	365	
ECCT.41225 ECCTX.41225	50	415	69.64	2x25	480	345	365	
ECCT.41425 ECCTX.41425	100	415	139.28	4x25	480	345	365	
ECCT.41325 ECCTX.41325	75	415	104.45	3x25	480	345	365	
ECCT.41425 ECCTX.41425	100	415	139.28	4x25	480	345	365	
ECCT.44130 ECCTX.44130	30	440	39.4	1x30	480	345	365	
ECCT.44160 ECCTX.44160	60	440	78.8	1x60	480	345	365	
ECCT.44230 ECCTX.44230	60	440	78.8	2x30	480	345	365	
ECCT.44260 ECCTX.44260	120	440	157.5	2x60	480	345	365	
ECCT.44330 ECCTX.44330	90	440	118.1	3x30	480	345	365	
ECCT.44430 ECCTX.44430	120	440	157.5	4x30	480	345	365	
ECCT.48125 ECCTX.48125	25	480	30.1	1x25	480	345	365	
ECCT.48150 ECCTX.48150	50	480	60.2	1x50	480	345	365	
ECCT.48225 ECCTX.48225	50	480	60.2	2x25	480	345	365	
ECCT.48250 ECCTX.48250	100	480	120.4	2x50	480	345	365	
ECCT.48325 ECCTX.48325	75	480	90.3	3x25	480	345	365	
ECCT.48425 ECCTX.48425	100	480	120.4	4x25	480	345	365	
ECCT.55130 ECCTX.55130	30	550	31.5	1x30	480	345	365	
ECCT.55160 ECCTX.55160	60	550	63.0	1x60	480	345	365	
ECCT.55230 ECCTX.55230	60	550	63.0	2x30	480	345	365	
ECCT.55260 ECCTX.55260	120	550	126.1	2x60	480	345	365	
ECCT.55330 ECCTX.55330	90	550	94.5	3x30	480	345	365	
ECCT.55430 ECCTX.55430	120	550	126.1	4x30	480	345	365	
ECCT.40112 ECCTX.40112	12.5	400	18.1	1x12.5	480	545	315	
ECCT.40212 ECCTX.40212	25	400	36.1	2x12.5	480	545	315	
ECCT.40125 ECCTX.40125	25	400	36.1	1x25	480	545	315	
ECCT.40150 ECCTX.40150	50	400	72.2	1x50	480	545	315	

* New design reduced dimensions

PFC

Control Regulators



Automatic power factor correction regulator with microprocessor management for 6-8-12 steps activation with THD1% control, temperature control and serial connector only for 8-12 steps version. The unit is designed to check very distorted signals and be able to ensure an accurate control of plan electrical values like voltage, current, power factor, internal temperature of the equipment (EPF8T-EPF12T) voltage harmonic distortion (EPF8T-EPF12T).

Standard Version (6 Stage) Features:

- Full Auto/Manual Setting
- Automatic CT Polarity Check
- Display: PF, A, V, I_{cw}
- Alarms: Under/over correction

Advanced Version (8,12 Stage) Features:

- As Standard
- Temperature Reading
- Harmonics Sending
- Max Value: Kw, V, I, Trend

POWER FACTOR CORRECTION

MODULAR UNITS

A complete range of modular units, which are very simple to install inside an existing cabinet to provide automatic power factor correction systems. Manufactured from galvanised sheet steel, with contactors specifically designed for capacitor switching, with suitably rated fuses and holders for each switching stage and utilising three phase capacitors for increased reliability.

Standard Units

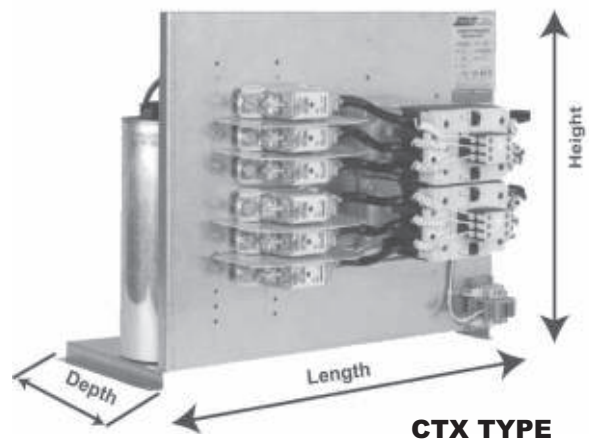
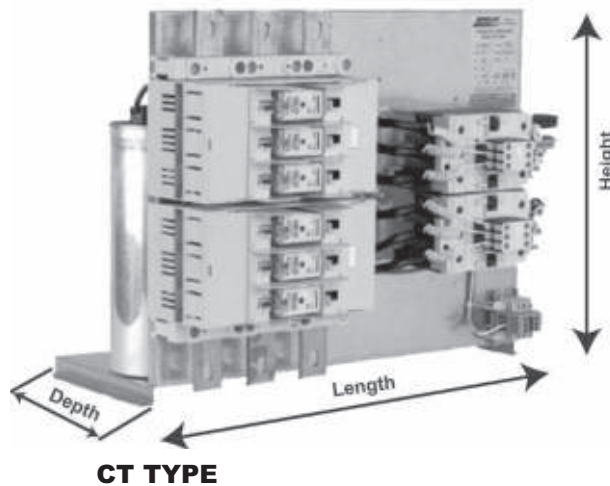
- **CT TYPE:** Includes busbar terminals
- **CTX TYPE:** Without busbar terminals

Both CT and CTX types are equipped with PRT series capacitors.

Units with Filters

- **CTF TYPE:** Includes busbar terminals
- **CTFX TYPE:** Without bus bar terminals

Both CTF and CTFX types are equipped with PRT series capacitors.



Note: Refer to Technical Data on page 13 for dimensions.

POWER FACTOR CORRECTION

MODULAR EQUIPMENT

Modular Tray with Busbar System

Code	Description	Stage Kvar	Stages	Total	Price
ECCT40125	25Kvar 400V 50Hz Mod Unit	25	1	25	
ECCT40150	50Kvar 400V 50Hz Mod Unit	50	1	50	
ECCT40225	50Kvar 400V 50Hz Mod Unit	25	2	50	
ECCT40250	100Kvar 400V 50Hz Mod Unit	50	2	100	
ECCT40325	75Kvar 400V 50Hz Mod Unit	25	3	75	
ECCT40425	100Kvar 400V 50Hz Mod Unit	25	4	100	

Modular Tray without Busbar System

Code	Description	Stage Kvar	Stages	Total	Price
ECCTX40125	25Kvar 400V 50Hz Mod Unit	25	1	25	
ECCTX40150	50Kvar 400V 50Hz Mod Unit	50	1	50	
ECCTX40225	50Kvar 400V 50Hz Mod Unit	25	2	50	
ECCTX40250	100Kvar 400V 50Hz Mod Unit	50	2	100	
ECCTX40325	75Kvar 400V 50Hz Mod Unit	25	3	75	
ECCTX40425	100Kvar 400V 50Hz Mod Unit	25	4	100	

Modular Tray with Busbar System and Reactors

Code	Description	Stage Kvar	Stages	Total	Price
ECCTF40112	12.5Kvar 400V 50Hz Mod Unit	12.5	1	12.5	
ECCTF40212	12.5Kvar 400V 50Hz Mod Unit	12.5	2	25	
ECCTF40125	25Kvar 400V 50Hz Mod Unit	25	1	25	
ECCTF40150	50Kvar 400V 50Hz Mod Unit	50	1	50	

Small Modular Tray (New Design - (Reduced Dimensions))

Code	Description	Stage Kvar	Stages	Total	Price
ECCTT40125	25Kvar 400V 50Hz Mod Unit	25	1	25	
ECCTT40150	50Kvar 400V 50Hz Mod Unit	50	1	50	

Control Regulators

Code	Description	Stages Kvar	Price
ECEPF6	6 Stage PFC Control Relay	6	
ECEPF8T	8 Stage PFC Control Relay	8	
ECEPF12T	12 Stage PFC Control Relay	12	

POWER FACTOR CORRECTION

STAND ALONE EQUIPMENT

RG1 - RG2 Series

Correction range from 7.5 to 175kvar for wall-type automatic equipment for industrial power factor correction designed for small users. Metal cabinet equipped with cooling fins, RAL 7032, contactors designed for capacitive loads, three-phase capacitors with discharge resistors guaranteeing the voltage reduction at the terminals according to a pre-set time, regulator.

RGT Series

Cabinet range from 20 to 125kvar for wall-type equipment for fixed power factor correction of transformers.

Metal cabinet equipped with cooling fins, RAL 7032, three-phase capacitors with discharge resistors guaranteeing the voltage reduction at the terminals according to a pre-set time.

ERA1 - ERA2 - ERA3 Series

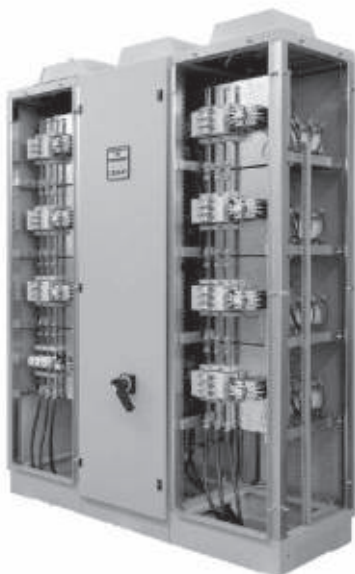
Complete range of floor-type automatic equipment for industrial power factor correction designed for medium-high users.

Metal frame equipped with cooling fans, RAL 7032, removable modular units, regulator, fast tripping disconnecting switch interlocked with the door.

Line with Low Voltage Filters

ERAF Series

Complete range of floor-type automatic equipment for industrial power factor correction designed for medium-high users. Metal cabinet equipped with cooling fins, RAL 7032, CTF-type removable modular units, regulator, fast tripping disconnecting switch interlocked with the door.



For further information please see the specific catalogues. These catalogues give full technical and dimension data.

POWER FACTOR CORRECTION

STAND ALONE EQUIPMENT

Automatic Freestanding Version with Door Interlock

Code	Description	Stage Kvar	Stages	Total	Price
ECERA14012	125Kvar 400V 50Hz Equipment	25/50	4	125	
ECERA14015	150Kvar 400V 50Hz Equipment	25/50	4	150	
ECERA14017	175Kvar 400V 50Hz Equipment	25/50	5	175	
ECERA14020	200Kvar 400V 50Hz Equipment	25/50	5	200	
ECERA24022	225Kvar 400V 50Hz Equipment	25/50	6	225	
ECERA24025	250Kvar 400V 50Hz Equipment	25/50	7	250	
ECERA24027	275Kvar 400V 50Hz Equipment	25/50	7	275	
ECERA24030	300Kvar 400V 50Hz Equipment	25/50	8	300	
ECERA34032	325Kvar 400V 50Hz Equipment	25/50	8	325	
ECERA34035	350Kvar 400V 50Hz Equipment	25/50	9	350	
ECERA34040	400Kvar 400V 50Hz Equipment	25/50	10	400	

Automatic Freestanding Version with Reactors and Door Interlock

Code	Description	Stage Kvar	Stages	Total	Price
ECERAF4010	100Kvar 400V 50Hz Equipment	25/50	3	100	
ECERAF4015	150Kvar 400V 50Hz Equipment	25/50	4	150	
ECERAF4020	200Kvar 400V 50Hz Equipment	25/50	5	200	
ECERAF4025	250Kvar 400V 50Hz Equipment	50	5	250	
ECERAF4030	300Kvar 400V 50Hz Equipment	50	6	300	
ECERAF4035	350Kvar 400V 50Hz Equipment	50	7	350	
ECERAF4040	400Kvar 400V 50Hz Equipment	50	8	400	
ECERAF4045	450Kvar 400V 50Hz Equipment	50	9	450	
ECERAF4050	500Kvar 400V 50Hz Equipment	50	10	500	

POWER FACTOR CORRECTION

WALL MOUNTED EQUIPMENT

Code	Description	Stage Kvar	Stages	Total	Price
ECRGT4020	20Kvar 400V 50Hz Equipment	20	1	20	
ECRGT4025	25Kvar 400V 50Hz Equipment	25	1	25	
ECRGT4030	30Kvar 400V 50Hz Equipment	30	1	30	
ECRGT4035	35Kvar 400V 50Hz Equipment	35	1	35	
ECRGT4040	40Kvar 400V 50Hz Equipment	40	1	40	
ECRGT4050	50Kvar 400V 50Hz Equipment	50	1	50	
ECRGT4060	60Kvar 400V 50Hz Equipment	60	1	60	
ECRGT4070	70Kvar 400V 50Hz Equipment	70	1	70	

Automatic Version

Code	Description	Stage Kvar	Stages	Total	Price
ECRG14007	7.5Kvar 400V 50Hz Equipment	2.5/5	2	7.5	
ECRG14012	12.5Kvar 400V 50Hz Equipment	2.5/5	5	12.5	
ECRG14017	17.5Kvar 400V 50Hz Equipment	2.5/5/10	3	17.5	
ECRG14020	20Kvar 400V 50Hz Equipment	5/10	3	20	
ECRG14025	25Kvar 400V 50Hz Equipment	5/10	3	25	
ECRG14030	30Kvar 400V 50Hz Equipment	5/10	4	30	
ECRG14035	35Kvar 400V 50Hz Equipment	5/10/20	3	35	
ECRG14050	50Kvar 400V 50Hz Equipment	10/20	3	50	

Automatic Version with Door Interlock

Code	Description	Stage Kvar	Stages	Total	Price
ECRG24060	60Kvar 400V 50Hz Equipment	10/20	4	60	
ECRG24070	70Kvar 400V 50Hz Equipment	10/20	4	70	
ECRG24080	80Kvar 400V 50Hz Equipment	20	4	80	
ECRG24100	100Kvar 400V 50Hz Equipment	20	5	100	
ECRG24125	125Kvar 400V 50Hz Equipment	25	5	125	
ECRG24150	150Kvar 400V 50Hz Equipment	25	6	150	
ECRG24175	175Kvar 400V 50Hz Equipment	25	7	175	

EARTH LEAKAGE PROTECTION: CONTENTS

Earth Leakage Relays

128-130

Trip Circuit Supervision Relays

128-130



TEMPROTECT

EARTH LEAKAGE PROTECTION

ELR-1E



The ELR-1E Earth Leakage Relay is a flush mounted DIN 96x96mm unit with a shallow depth (60mm including terminals). The ELR-1E is an extremely reliable, user friendly unit that offers excellent functionality with features that include:

- Adjustable tripping current and time delay settings
- Selectable automatic or manual reset facility
- Adjustable time/current multiplier settings
- Test button
- LEDs to indicate the units status

Trip sensitivity range standard 25mA-25A, with an external multiplier (x100 250mA- 250A. Time delay range of 0.02 to 5 seconds.

ELRC-1



The ELRC-1 Earth Leakage Relay is manufactured with a built-in Toroidal Transformer. It is especially suitable for those applications where space savings is an advantage (for example Motor Control Centres, Battery Distribution Centres etc.)

The ELRC-1 is an extremely compact, user friendly unit that offers excellent

- Adjustable tripping current and time delay settings
- Selectable automatic or manual reset facility
- Adjustable time/current multiplier settings
- Test button
- LEDs to indicate the units status

Trip sensitivity range standard 25mA-25A. Time delay range 0.02 to 5 seconds.

ELR-3C



The ELR3-C Earth Leakage Relay has the same excellent functionality as the larger DIN 96x96mm ELR-1E model with reduced dimensions. The ELR3-C is a din rail mounted unit (DIN 43880 Standard) the three modules width (17.5mm).

Trip sensitivity range standard 25mA-25A, with an external multiplier (x100 250mA- 250A. Time delay range of 0.02 to 5 seconds.

TCS



The TCS Supervision Relay is a devoted trip circuit supervision relay that monitors the protection device's (circuit breaker) tripping circuit. The TCS relay provides the user with peace of mind especially in critical applications such as safety or emergency circuits or where a circuit breaker failure may result in the loss of supply.

EARTH LEAKAGE PROTECTION

TemProtect

ELR-1E Panel Mount Relay (CT must be ordered separately)

Code	Description	Price
601110003	110/240/415 VAC	

ELRC-1 with Built in CT

Code	Description	Price
601101003	35mm, 110/240/415 VAC	
601102003	60mm, 110/240/415 VAC	
601103003	80mm, 110/240/415 VAC	
601104003	110mm, 110/110/240/415 VAC	

ELR-3C Din Modular

Code	Description	Price
601130003	110/240/415 VAC	

Trip Supervision Relays (TCS)

Code	Description	Price
611310113	TCS-2/110/240/415 VAC	

Multiplying CT

Code	Description	Price
601210000	CT1M-External Multiplier (x10 sensitivity)	

EARTH LEAKAGE PROTECTION

TemProtect

Standard CTs for ELR-1E

Code	Description	Price
621401000	CT-1/35mm	
621402000	CT-1/60mm	
621403000	CT-1/80mm	
621404000	CT-1/110mm	
621405000	CT-1/210mm	
621414000	CTA-1/110mm	
621415000	CTA-1/210mm	

Remote Indication and Reset Device

Code	Description	Price
601200000	Auxiliary remote control	

Mounting Accessories

Code	Description	Price
631501000	ELRC-1 COVER 100mm	
631501054	ELR IP54 COVER	

MULTIMETERS & ANALYSERS: CONTENTS

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MULTIMETERS & ANALYSERS

TemMeasure

Terasaki offers a high performance cost effective solution to power management of electrical distribution networks.

The TEMA multifunction analyser is much more than a meter, it allows the monitoring of all electrical parameters to be centralised. This enables the comparison and analysis of power distribution networks.

TEMA-90 ANALYSER



The TEMM-90 is a flush mounted DIN 96x96mm electrical analyser with a backlit blue LCD screen. The TEMM-90 is a compact, extremely reliable, user friendly unit that offers excellent functionality.

- **Auxiliary Supply:** 85-265Vac/dc, 50-60 Hz
- **Protection Degree:** Front IP52 Box IP 20
- **Measured Parameters:** VI-I, VI -N, A, cos ϕ , P, F, F, °T, W, VAR, VA, +kWh, -kWh, +kVarh, -Kvarh, +kVAh, -kVAh, THD
- **Measuring Accuracy:** Voltage: <0.5%, Current: <0.5%, Powers: <1%
Energies: <1%
- **Serial outputs:** RS485/RS232 selectable
- **Communications:** Protocol ASCII or MODBUS-RTU selectable, baud rate 1200-19200 bps
- **Clock Calendar:** Day/month/year, Hour/min/sec
- **Digital outputs:** 2 outputs - (for pulse counting or synchronisation)
10-50Vdc-500mA or 260Vac-100mA max.
- **Memory:** 128Kb

TEMA-90H ANALYSER



The TEMM-90H has the same functionality as the TEMM-90, with the addition of a harmonic analysis function up to the 31st harmonic.

NRG SOFTWARE



NRG is supervision and control software for managing electrical networks from a PC. The software gathers data generated from TEMM multifunction meters and TEMA multifunction analysers and displays the information in a clear easy-to-understand format. The software is very intuitive and simple to use.

TEMMEASURE

MULTIMETERS & ANALYSERS

TemMeasure

The TEMM digital multifunction meter series allows the measurement of the main electrical parameters of an electrical distribution network. The selection of the parameters (over 30) can be easily visualised help of a clear and concise LED display.

TEMM-R4-HP



The TEMM-R4-HP is flush mounted DIN 96x96mm with a shallow depth (56mm including terminals). It is an easy-to-use digital multifunction energy meter.

- **Auxiliary Supply:** Self powered
- **Protection Degree:** Front IP52 Box IP 20
- **Measured Parameters:** VL-L, VL-N, A, cos phi, P, F, F, °T, W, VAr, VA, kWh, kVArh, kVAh
- **Measuring Accuracy:** Voltage: <0.5%, Current: <0.5%, Powers: <1%
Energies: <1%
- **Communications:** Pulsed output

TEMM-R4-485



The TEMM-R4-485 is a flush mounted DIN 96x96mm with a shallow depth (56mm including terminals). It is an easy to use digital multifunction energy meter with an RS485 communication output.

- **Auxiliary Supply:** Self powered
- **Protection Degree:** Front IP52 Box IP 20
- **Measured Parameters:** VL-L, VL-N A, cos phi, P, F, F, °T, W, VAr, VA, kWh, kVArh, kVAh
- **Measuring Accuracy:** Voltage: <0.5%, Current: <0.5%, Powers: <1%
Energies: <1%
- **Communications:** MODBUS-RTU, baud rate 9600-19200 bps.

MULTIMETERS & ANALYSERS

TemMeasure

Code	Description	Price
631201012	TEMM-R4-HP Multimeter	
631201013	TEMM-R4 Multimeter with 485	

Code	Description	Price
631102190	TEMA 90 - Analyser	
631102191	TEMA 90H - Analyser (Harmonics)	

NRG Software

Code	Description	Price
631300002	NRG 2 Software	
631300004	NRG 4 Software	
631300008	NRG 8 Software	
631300016	NRG 16 Software	
631300032	NRG 32 Software	
631300064	NRG 64 Software	
631300028	NRG 128 Software	

retrofit

The TemPower2 ACB has a compact and versatile design. It can be used to replace existing ACBs in almost any switchboard, whilst retaining original copper work and steelwork.



Ellison GEA



GEC M-Pact



English Electric OB3 Switchgear for Power Station. Circa 1950. Replaced by a Terasaki AR216S 3-Pole ACB retrofit kit, complete with ASTA tested and certified copperwork to BSEN 60439, 50kA for 3 seconds

We have developed retrofit kits using TemPower2 which can replace ACBs by:

GEC,
Ellison,
Merlin Gerin,
ABB,

Mitsubishi,
Seimens,
Westinghouse,
others

For further information contact:

General Manager

Peter Anderson

e-mail: peter.anderson@terasaki.co.uk

Service Manager

Stuart Smith

e-mail: stuart.smith@terasaki.co.uk

Customer Service Manager

Kevin Donnachie

e-mail: kevin.donnachie@terasaki.co.uk

1. INTERPRETATION

For the purposes of these terms and conditions of sale the following terms shall have the meaning ascribed to them by this Clause except where this would be inconsistent with the context in which they occur.

'Company' means Terasaki Electric (Europe) Limited incorporated under the Companies Acts and having a place of business at Eighty Beardmore Way Clydebank Industrial Estate Clydebank and any other member of the Terasaki Group of Companies from time to time.

'Purchaser' means any individual or individuals or incorporated or unincorporate body ordering or purchasing Goods and/or Services (as hereinafter defined) from the Company.

'Goods' means the articles and 'Services' means the services which are ordered and/or purchased by the Purchaser from the Company.

'Contract' means a contract made between the Company and the Purchaser for the supply of Goods and/or Services to the Purchaser.

'Terms and Conditions' means terms and conditions for the sale of Goods and/or Services as specified in this document and as adjusted from time to time.

2. GENERAL

The Terms and Conditions shall apply to every Contract unless the Company agrees otherwise in writing.

3. CONDITIONS OF CONTRACT

Where a Contract is concluded, in the event of any conflict between the Terms and Conditions and the terms of any offer made by a Purchaser to purchase Goods and/or Services the Terms and Conditions shall override and prevail over the terms of any such offer.

4. VALIDITY

Any tender submitted by the Company is an invitation to transact business and not an order. The placing of an order by the Purchaser whether in accordance with the terms of a tender or otherwise constitutes an offer by the Purchaser and a Contract shall only be concluded if such an offer is accepted in writing by the Company.

5. PRICE & VAT

All prices quoted are subject to the addition of VAT when chargeable at the rate prevailing at the appropriate tax point. The Company reserves the right to make an extra charge for packing cases where these are required for non-catalogue items although this will be returnable where appropriate. Confirmation of price is necessary at time of order. The Company reserves the right to adjust prices quoted in its price list without notice.

5.1 The minimum order value is £50 excluding VAT.

6. OBLIGATIONS OF PURCHASER

Any order must be accompanied by sufficient information to enable the Company (if it accepts the same) to proceed with the order forthwith. If any delay in manufacture or delivery should take place due or partly due to the Purchaser's failure to provide such information or otherwise due to any sort of delay or change on the part of the Purchaser the Company shall in addition to its other rights in respect therefore be at liberty to make an additional charge in respect of increased costs. Any sample supplied by the Company will be on a sale or return invoice. If sample Goods are not returned within a maximum of Three months the Company's original invoice will be valid and due for payment.

7. DRAWINGS ETC.

All descriptive and item specifications drawings or weights and dimensions which may be submitted uncertified with any tender are approximate only. Any description or illustration contained in the Company's catalogues, price lists or other sales or promotional matter is intended merely to convey a general idea of the Goods and/or Services described; it is not intended to amount to any representation or warranty and shall not form part of any Contract.

8. INSPECTION AND TEST

The Company's products are carefully inspected and where practical submitted to a suitable test (which may be of a sample) at the Company's works before despatch. If tests other than those specified in the Company's tender or tests are required in the presence of the Purchaser or its representatives these will be carried out at the Purchaser's expense. In these circumstances the Purchaser or its representatives will be given 5 working days notice that the Company is ready to carry out such tests and thereafter the tests will proceed irrespective of whether the Purchaser or its representatives attend and they shall be deemed to have attended.

9. PERFORMANCE AND SUITABILITY

The Company accepts no liability for failure of Goods to achieve performance figures quoted unless they are specifically guaranteed in writing by a duly authorised officer of the Company subject to the recognised tolerances and rejection limits applicable to such figures. The Company is to be given reasonable time and opportunity after delivery to comply with the terms of any such guarantee. The Purchaser assumes responsibility for specifying the correct capacity and performance of the Goods suitable for their purpose. Should the Purchaser consider that any Goods do not conform to Contract the Purchaser must notify the Company in writing within 5 days of the receipt of such Goods, failing which the Goods shall be deemed to conform to Contract.

10. DELIVERY TIME

The times estimated for despatch are to be treated as estimates only and will date from the Company's acceptance of the Purchaser's offer or if later the date when all necessary information is available to enable the Company to process the order. The Company shall use its best endeavours to despatch by the date estimated but will have no responsibility for failure. It shall be a reasonable cause for the delay in despatch of the order if the Company shall suffer from or be affected by strikes, lock outs or anything beyond the control of the Company.

11. DESPATCH

Orders worth less than five hundred pounds (£500) sterling will be supplied by the Company ex-works Glasgow. Orders worth five hundred pounds (£500) sterling and over will be supplied F.O.R. the Purchaser's works. Unless otherwise agreed delivery method will be at the Company's option. The Company may charge the Purchaser for any special delivery requested.

12. LOSS OR DAMAGE IN TRANSIT

The Company does not accept any responsibility for damage, shortage or loss in transit unless (a) the Company and the carriers are notified in writing of such damage, shortage or loss within such time as will enable the Company to comply with the carriers' conditions of carriage as affecting damage, shortage or loss in transit and (b) when the goods have not arrived the Company and carriers are notified within 5 working days of the date of despatch. Where delivery is made by the Company's transport the Company must be notified in writing of any damage, shortage or loss within 3 working days of receipt of the goods. Subject to the above conditions being met the Company will replace or repair free of charge goods lost or damaged in transit.

13. WARRANTY

13.1 The Company accepts responsibility for the repair or replacement of any Goods which are defective where such defects arise solely or mainly from faulty materials and/or workmanship provided that the Purchaser complies with the following namely: (a) that written notification giving full particulars of such defects are received by the Company within 1 month of such defect becoming apparent and in any event within 1 year of delivery to the Purchaser (b) any goods which the Purchaser may claim to reject shall be returned to the Company within 10 working days after such notification for inspection by the Company and repair or replacement as the Company reasonably deems necessary. For the purpose of such clauses (a) and (b) hereof time shall be deemed to be of the essence.

13.2 This guarantee is given in place of all warranties, conditions, statements and liabilities whatsoever implied by common law, statute, trade usage or otherwise all of which shall accordingly be excluded. Furthermore the Company and its servants and agents shall not be liable for any injury or loss or damage whatsoever whether direct, consequential or special and howsoever caused resulting from or arising out of or incidental to (a) the Company's performance or failure to conform to any obligations under any Contract or (b) any defect in the goods or (c) any advice or services supplied by the Company or on its behalf in relation to the assembly, installation or use of goods.

14. TERMS OF PAYMENT

Unless otherwise agreed in writing payment in full shall be due within 30 days of the date of the invoice. Invoices are raised on dispatch of goods. Interest will be payable from the due date of payment at a rate of 2% per month or part thereof on any part of the purchase price remaining unpaid after due date.

15. CANCELLATION OF ORDERS

The Purchaser shall not be entitled to cancel any order accepted by the Company without the Company's written consent and without payment of any cancellation charges determined by the Company.

16. SUSPENSION OR CANCELLATION OF DELIVERIES AND LIEN

If the Purchaser:
(a) fails to pay any sum due to the Company under any Contract or otherwise by the due date; or
(b) otherwise defaults in or commits a breach of any Contract or any other obligation due to the Company; or
(c) shall be apparently insolvent or being a company shall enter into liquidation whether compulsory or voluntary (except for the purposes of reconstruction or amalgamation) or if a Receiver of all or part of the Purchaser's undertaking shall be appointed; or
(d) enters into an arrangement with its creditors or suffers any diligence to be done or execution to be levied on its goods then and in any such event and without prejudice to its whole rights and remedies the Company shall be entitled to terminate wholly or in part any or every Contract between the Company and the Purchaser. The Company shall be entitled to exercise a general lien on all goods belonging to the Purchaser in the Company's possession in respect of sums due to the Company whether or not such goods have been paid for.

17. DISPUTES AND SET-OFF

The Purchaser shall make payment to the Company under each and every Contract in accordance with the Terms and Conditions and shall not exercise or seek to exercise any right or claim to withhold payment or any right of compensation or set-off in respect of any alleged breach of any Contract by the Company.

18. PASSING OF PROPERTY

The risk in the Goods shall pass to the Purchaser on delivery and the Purchaser is recommended to take out insurance cover.

19. RETENTION OF TITLE

Until full and final payment has been received by the Company under every Contract ownership of all Goods shall remain with the Company and:

19.1. Where full and final payment has not been made as aforesaid and any Goods are disposed of by the Purchaser other than in good faith and for value ownership in all such goods shall remain with the Company.

19.2. Where any Goods are sold at a fair and reasonable price by the Purchaser or are lost or destroyed by the Purchaser and payment has not been made aforesaid the Purchaser shall be deemed to be holding any monies received from such sale or as a result of such destruction on behalf of and as an agent for the Company and shall remit such sums to the Company on demand as required.

19.3. Where Goods have been incorporated in other items by way of the fitting or manufacturing process but remain readily identifiable and shall allow the Company to repossess same at any time without prior notice being given.

20. STORAGE

The Purchaser shall be bound to store all goods belonging to the Company in terms hereof in such a way as to be readily identifiable and shall allow the Company to repossess same at any time without prior notice being given.

21. PURCHASER'S WARRANTIES

The Purchaser shall hold the Company harmless against any loss, damage or expense resulting from an infringement of patents or trademarks arising from compliance by the Company with the Purchaser's design specifications or instructions.

22. ARBITRATION

If any question, dispute or difference whatsoever shall arise between the Company and the Purchaser in relation to any Contract or the interpretation of these conditions at the sole option of the Company the same shall be submitted for arbitration to a person to be mutually chosen and failing agreement by the President for the time being of the Institute of Electrical Engineers.

23. WAIVERS

The rights of the Company in terms hereof shall not be affected by any waiver or forbearance on the part of the Company.

24. HEALTH & SAFETY

It is essential that the Goods supplied by the Company are used and installed in accordance with the specifications of the Company and in compliance with the recognised standards of the Electrical Industry and that installation and maintenance be carried out by suitably trained and qualified operatives and the Purchaser accepts responsibility for compliance with these conditions.

25. HEADINGS

The headings contained herein are for information and do not form part of these conditions.

26. CHOICE OF LAW

The construction of the Terms and Conditions and the validity and performance of every Contract shall be governed by the Law of Scotland and insofar as not already subject thereto the Company and the Purchaser submit to the non-exclusive jurisdiction of the Court of Session or the Sheriff Court of the appropriate Sheriffdom.

27. DATA PROTECTION ACT

The Company will make a search with a credit reference agency, which will keep a record of that search and will share that information with other businesses. It may also make enquiries about the principal directors with a credit reference agency.



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Terasaki Electric (Europe) Ltd
80 Beardmore Way, Clydebank Industrial Estate, Glasgow, G81 4HT. UK.

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Confirm that they meet your requirements before placing an order.