

ABB low voltage products for the Contractor/Installer

Within this catalogue, you will find products for contractors/wholesalers available from stock from ABB Low Voltage Products in the UK and via our expanding distributor network which can be located in the links section of our website: <http://www.abb.co.uk/lowvoltage>

As well as our range of contractor/wholesaler products contained in this catalogue, we have a comprehensive range of industrial products too, with the same emphasis on providing items from stock, all of which are included in our catalogue **ABB Low Voltage Products for Industrial and Automation.**

ABB has a reputation for manufacturing and supplying quality low voltage components, the result of our on-going research and development programme. Our product ranges are supported by full and extensive technical documentation and page 6 shows some of the major supporting catalogues. In addition, a visit to our website at <http://www.abb.co.uk/lowvoltage> will provide you with a wealth of product information including catalogue downloads, cad drawings and product configurators.



Contractor Catalogue

<http://view.digi-page.net/?id=1TXD000001P0229>

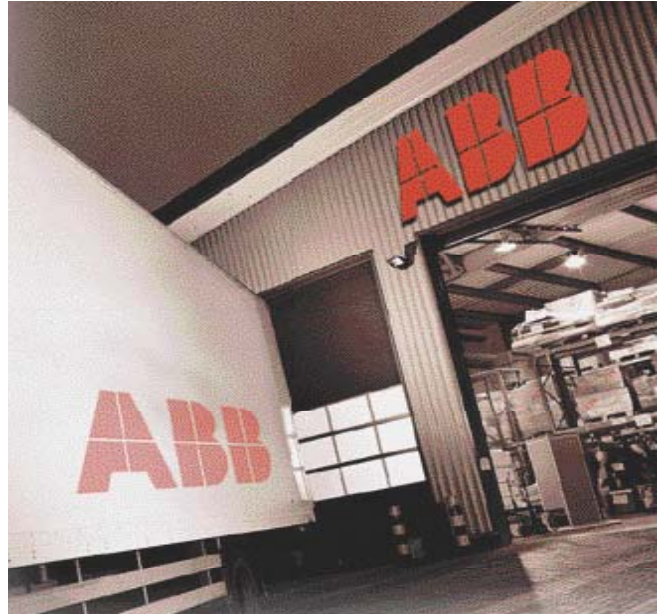
To view these publications on line with our turning page technology type the URLs into your web browser, you do not have to download pdf files. Save the URLs in your favourites for future viewing.



Industrial Catalogue

<http://view.digi-page.net/?id=ABBIndustrialProducts>

General Information



Contents	Main Index	2-3
	Information for Wholesalers and Stockists	4
	About Voltimum	5
	ABB Publications	6
	New Product Features	7 - 14

Knowledge Base
General Enquiries: LV.Enquiries@gb.abb.com
Customer Services: LV.CustomerService@gb.abb.com
Technical: LV.TechnicalSupport@gb.abb.com

Stockists and on line price list
To find your nearest stockists, and
subscribe to our on line price list please
visit: - <http://gb.pricelistabb.com>

Sales Desk
Telephone: 02476 368676
Facsimile: 02476 368401
Credit Control: 01480 475321

If you already have an account you can place orders:
Online: <http://online.abb.com/bol>
Email: orders.lvp@gb.abb.com
Facsimile: 02476 368401

Main Index

1

Distribution

2



Consumer Units
16



Type A
Distribution
Boards
24



Type B
Distribution
Boards
28



Panel Boards
41

Switching

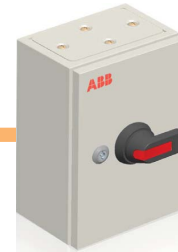
3



Isolators
Polycarbonate
Enclosures
50



Isolators
Plastic Enclosures
51



Isolators
Metal Enclosures
52



Control

4



DOL Starters
56



Reversing Starters
57



Star Delta Starters
59



Heating & Lighting
Contactors
61

Domestic

5



Movement Detectors
66



Wiring Accessories
68



Dimmers
71



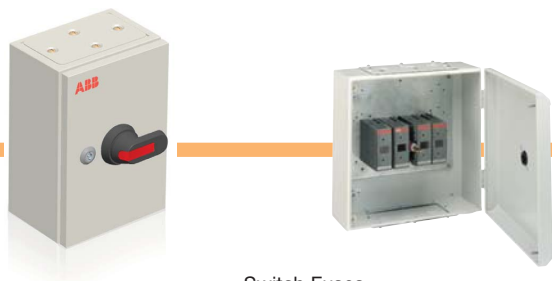
KNX Devices
74



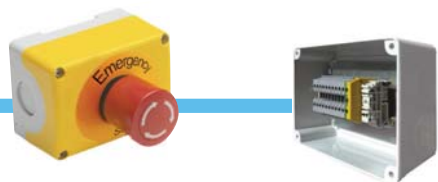
Protection Devices
19 & 26

Modular Devices
38

Digital Metering
40



Switch Fuses
Metal Enclosures
53



Pushbutton Stations
62

Enclosed Terminals
63

Contents

- 2** Distribution 16 - 48
- 3** Switching 49 - 54
- 4** Control 55 - 64
- 5** Domestic 65 - 74
- 6** Enclosures 75 - 96
- 7** Plugs, Couplers & Sockets . . . 97 - 106
- 8** Solar PV 101 - 107
- Terms and Conditions 108 - 109

Enclosures

6

75



Plugs, Couplers & Sockets

7

91



Solar PV

8

101



General Information

Wholesales and Stockists

We have created two dedicated publications focussing on our core products for industrial automation and contractor/installer markets.

You will find information on our stocked products including brief technical specification, short code, order code and product hierarchy. (Example below)

1

Polycarbonate Enclosure 9kW ... 37kW 4 pole

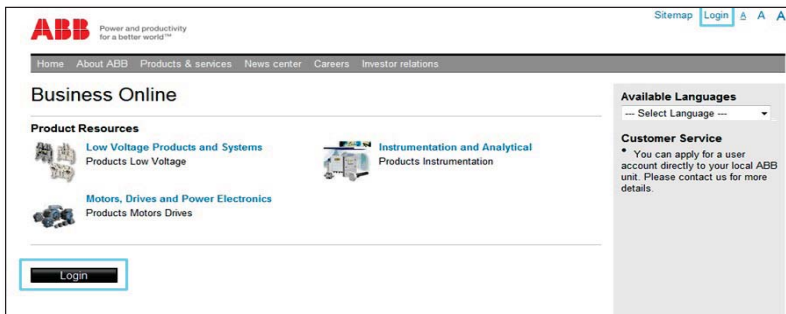
Rating@415v			Dimensions mm			Product Hierarchy 4000002	
1th A	AC22	kW	H	W	D	Order Code	Price £
32	25	9	125	100	107	S47K5N-B	25.80
40	40	11				S415KN-B	32.81
63	63	22	170	140	108	S418KN-B	51.95
80	80	37				S426KN-B	73.21

The Product Hierarchy has been included to assist in identifying discounts for particular product ranges when used in conjunction with the customer discount structure file.

By focusing on core products, we are confident that the majority of your requirements can be satisfied from stock by selecting products from the Low Voltage Essentials catalogues. Of course, our full range of products is still available to you, but on factory lead times.

We have also included complimentary items that support other products in our range. These products are not normally stocked.

As a customer, you can also take advantage of the services provided by our web based on-line solutions.



From this portal you can obtain price and availability, check order status, obtain copy documentation and place orders on-line 24/7/365. If you have not already registered, you can do this by talking to your local ABB sales engineer.

About Voltimum



ABB is a founder member of Voltimum which was launched in 2003.

Voltimum is an internet portal for the electrical industry and is active in 6 countries within Europe.

The portal is backed by 7 leading European manufacturers of electrical installation products who have invested over 20 million euros in the project.

Other manufacturers join the Voltimum online catalogue regularly as they see this unique initiative as an opportunity to increase the awareness of their products, being used on a daily basis by electrical contractors.

The initiative was first announced to the press in October 2000 and since then technical architecture of the portal has been designed and developed. Also in this period, 6 locally based teams were put in place to develop the portal in each country, adapting the portal to the needs of the local market and working with local providers of appropriate content.

Voltimum is headed by Bruno Hamon who is based in the Company's HQ in Geneva.

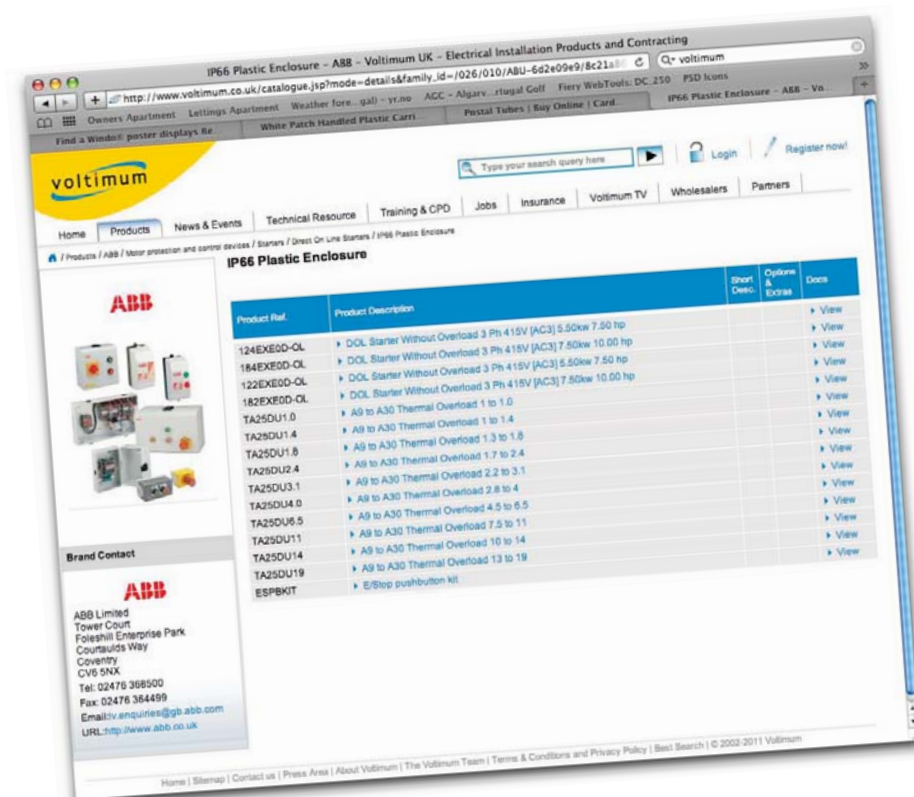


ABB Low Voltage Technical Publications

1

Integrated Control Range



New
Industrial Products
1SBC100155C0201

Block Contactors



Industrial Products
1SBC100122C0202

Pilot Devices



Industrial Products
1SFC151003C0201

Soft Starters



Industrial Products
1SFC132005C0201

Relay & Timers



Industrial Products
2CDC110004C0206

Installation Equipment



Industrial Products
Contractor Products
2CSC400002D0208



Industrial Products

1TXD000001P0211

KNX Equipment



New
Contractor Products
2CDC500007B0207

Wiring Accessories



Contractor Products
1SXF610007C0201

Watchdog PIRs



Contractor Products
9AKK104295D5667

Jokab Safety



Industrial Products
2TLC172001C0201

MCCBs



Industrial Products
Contractor Products
1SDC210015D0204

ACBs



Industrial Products
1SDC200006D0207

Our main technical catalogues are illustrated on this page.
Visit the ABB Library at:
<http://www.abb.com/abblibrary/DownloadCenter/>
or enter the catalogue part number into a search engine to
download the catalogue(s) you require.

Switch Fuses



Industrial Products
Contractor Products
1SCC311013C0201

Switch Disconnectors



Industrial Products
Contractor Products
1SCC301001C0201

Changeover Switches



Industrial Products
1SCC303003C0201

XR SlimLine Switch Fuses



Industrial Products
1SEC311001C0201

Cam Switches



Industrial Products
Contractor Products
1SCC302003C0201

Cewe Plugs and Sockets



Contractor Products
2CMC700014C0008

5000 Series



Industrial Products
1SNC160001C0207

SNK Series



Industrial Products
1SNK161001C0204

Solar PV Products



Contractor Products
9AKK1051152A5119

Technology of Choice

Smart Home & Intelligent Building Control

KNX and ABB i-bus® KNX Intelligent Building Control.

In many areas of our private and working lives, the increasing level of automation is a trend that confronts us on a daily basis without actually being noticed.

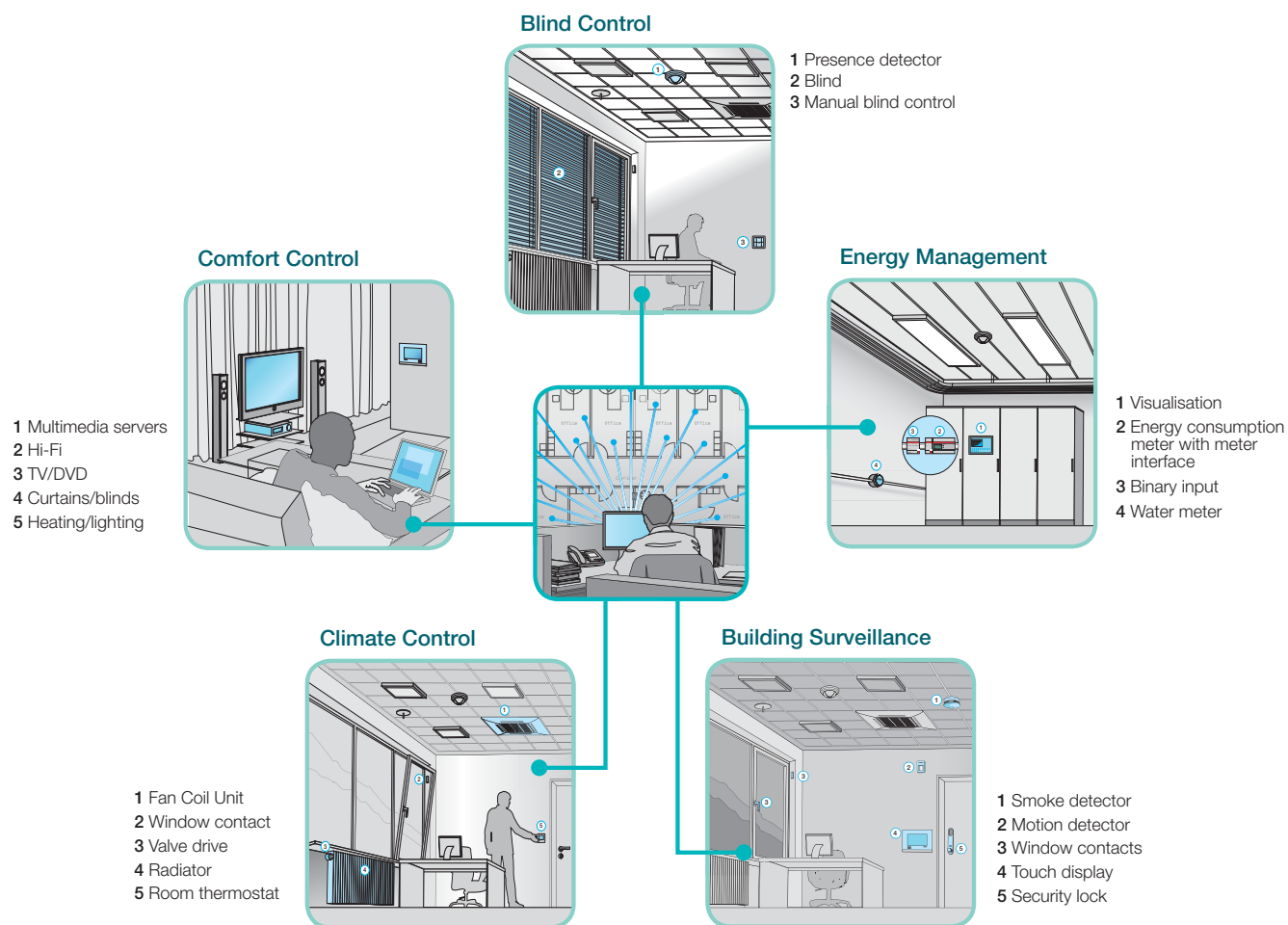


ABB Busch-iDock

recharging the soul with a position for sound

1

A fixed place for music in your life with the new Busch-iDock in the charger without a jumble of cables. For a wall with sound the Busch-iDock with its simple elegance blends with every environment discover it's additional functions.



Whether relaxing or stimulating.

Sound waves have a direct influence on body and mind. And therefore on one's well-being. That is why music as an integral part of life deserves a permanent place in the living environment, since it can have a decisive influence on the atmosphere in a room. To match one's personal style.

The Busch-iDock offers each iPod* or iPhone* a fixed place in the home.

The Busch-iDock with its simple elegance blends with every environment. With the Apple* remote control the iPod* or the iPhone* are easy to operate from a distance. Even MP3 players from other manufacturers can be connected to a 3.5 mm jack socket. The Busch-iDock offers excellent interplay with the Busch DigitalRadio or the integration with Busch AudioWorld®.

Industrial Plugs and Sockets up to 125A - 690V to IEC Standards

1

ABB Cewe has produced Industrial Plugs and Sockets for over 60 years in Nyköping, Sweden. Long experience in development and production has resulted in a wide product range with high quality and a robust ergonomic design. Continuous development is made to meet the customer's requirements, and to take environmental aspects into consideration



Easy & Safe products for adequate functionality and ergonomic design



Tough & Safe products for best performance in demanding and heavy-duty applications.



Critical & Safe products for the highest safety

ABB Industrial Plugs and Sockets have the solution for products in industrial environments with high demands on safety, durability, reliability and cost saving for the end user.

- **Safety**

Tested and approved by third party testing laboratories.

- **Durability**

Materials used give a high durability in tough conditions and environments.

- **Reliability**

High quality contacts ensure reliability.

- **Cost saving**

Designed for quick and easy installation.



IP65 Plastic IP55 Metal Enclosed Starters

1

DOL with or without isolator
DOL Reversing with or without isolator
Star Delta with or without isolator
Heating & Lighting Enclosed Contactors

- Smoothly styled modern IP66 enclosed DOL starter IEC947-4-1
- Generous cabling space for easy installation
- Combined contactor/overload assembly can be unclipped from DIN rail to ease installation
- Support for 400v 3ph or 230v single phase
- Overload supplied separately



IP65 Metal Enclosed Switches & Switch Fuses

Load Break Switches 3 - 4 pole 20 ... 800A
Switch Fuses 3 - 4 pole 20 ... 800A

1

Load Break Switches

- IP65 rated (not suitable for external installation)
- Powder coated textured finish (RAL 7035)
- All 3 pole switches include detachable neutral link (OT160 solid link)
- Hinged lid complete with lock
- Padlockable pistol grip handle as standard
- Removable gland plates fitted top and bottom

Switch Fuses

- IP65 rated (not suitable for external installation)
- Powder coated textured finish (RAL 7035)
- All switches are supplied with fuses and removable gland plates
- All 3 pole switches include detachable neutral link (OT160 solid link)
- Hinged lid complete with lock
- Switch Fuses are internally rated IP20 on incoming terminals up to 63A
- Padlockable pistol grip handle as standard
- Switch Fuses 100A are supplied with incoming terminal shrouds not fitted to allow customer connections



Dedicated products for Solar Energy

1

The UK Government have introduced a new initiative aimed at encouraging the nationwide adoption of renewable energy technologies.

Always ready to meet any new demand from the market, ABB has developed a whole range of reliable products dedicated to photovoltaic applications.

The Feed Tariff

Called the Feed-in Tariff, this initiative will see owners of renewable energy equipment being paid not only for the energy they use but also the amount of surplus energy they supply to the UK National Grid.

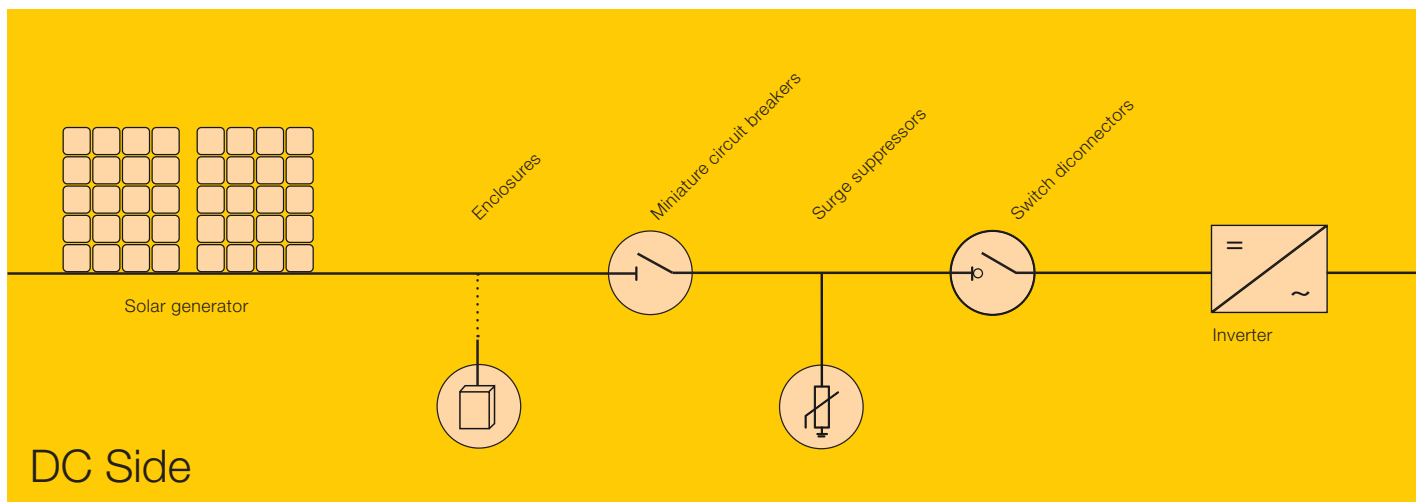
Inspired by similar schemes already operating in continental Europe, the UK Feed-in Tariff initiative is aimed at residential, commercial and industrial users of renewable energy sources. A table of the technologies covered are listed below.

How does the Feed-in Tariff Work?

The Feed-in Tariff is based on the amount of energy produced by a renewable energy source, plus where surplus energy is produced, a bonus to cover energy exported to the National Grid. By effectively paying producers more for the energy they don't use, the system is also aimed at encouraging energy efficiency.

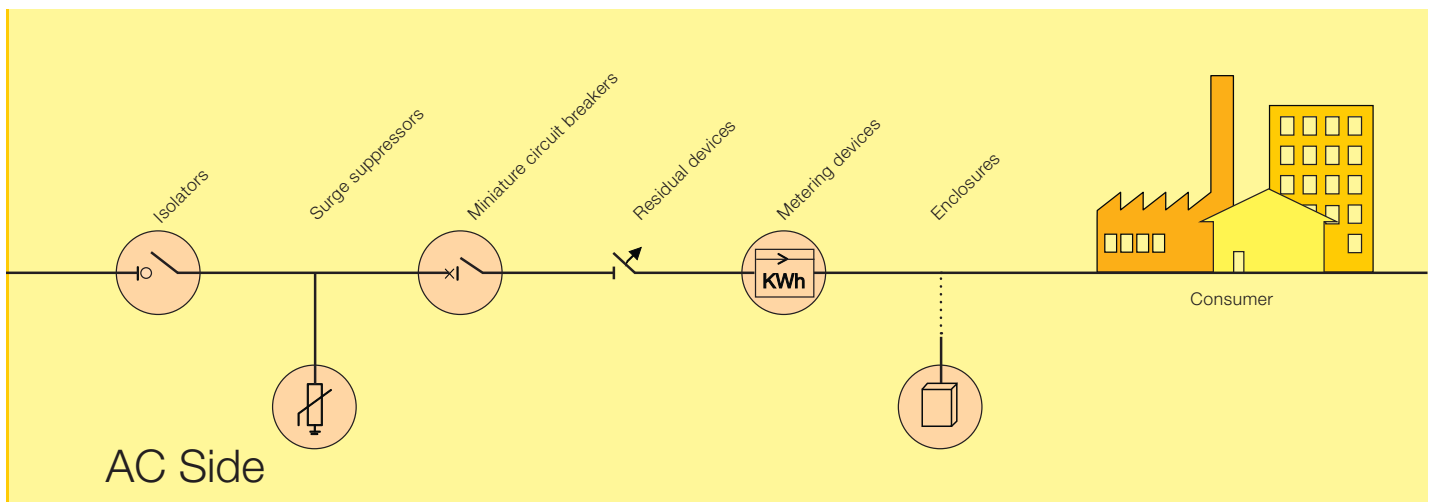
To cover periods when the renewable energy source may be not producing sufficient electricity to cover demand, additional energy may be imported from the National Grid, with the user paying their electricity supplier for the amount consumed.

Technology	Tariff amount (pence per kWh) for installation fitted periods:		
	April 2010 - March 2011	April 2011 - March 2012	April 2012 - March 2013
Solar photovoltaic <4 kW (new)	36.1	36.1	36.1
Solar photovoltaic <4 kW (retrofit)	41.3	41.3	41.3
Solar photovoltaic >4 - 10kW	36.1	36.1	33.0
Solar photovoltaic >10 - 100 kW	31.4	31.4	28.7
Solar photovoltaic >100 - 5MW	29.3	29.3	26.8



From the string on the direct current side through to the alternate current grid connection point. ABB's products include:

- String boxes
- Switch-disconnectors
- Interface relays
- Fuse disconnecting switches and fuses
- Surge arresters
- Miniature circuit breakers
- Residual current-operated circuit breakers
- Energy meters
- Consumer units and enclosures suitable for outdoor installation

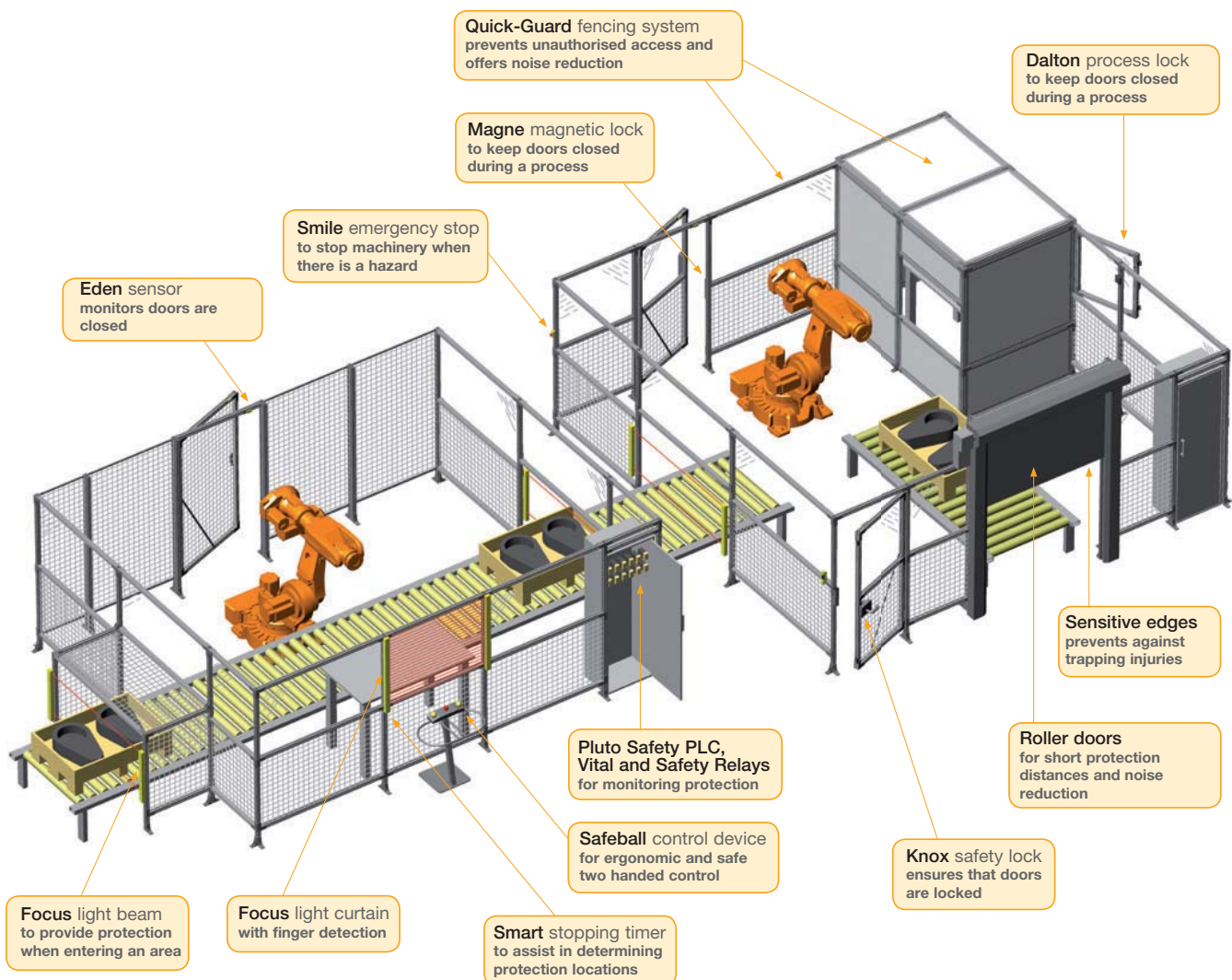


Production Friendly Safety Systems from ABB Jokab

SEE INDUSTRIAL
CATALOGUE
ABB JOKAB

1

A complete range of safety products, which combine to build safety systems. Innovative systems and products which are continuously developed in cooperation with our customers. Our extensive program of products, safety solutions and long experience in machine safety make ABB a safe partner.



Contents

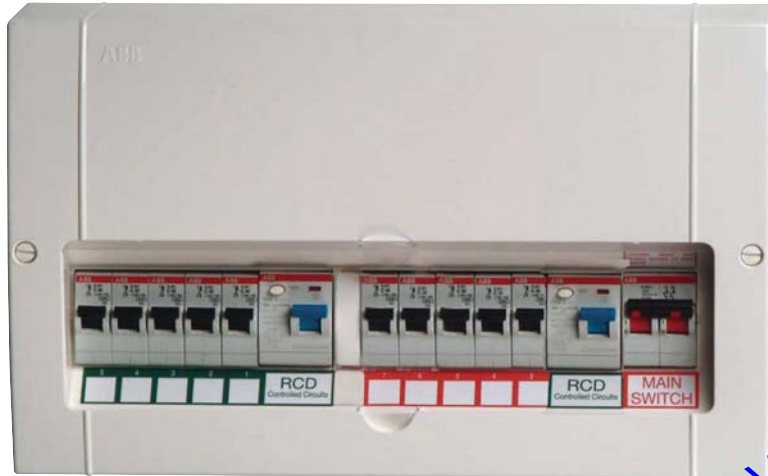
- Consumer Units16 - 20
- Artline Flush Mounting Consumer Units21 - 23
- Protecta Distribution Boards Type A 24 - 27
- Protecta Distribution Boards Type B28 - 36
- Meter Modules & Extension Boxes 37
- Modular Devices38 - 39
- Energy Meters 40
- Panel Boards41 - 47



Housemaster - Consumer Units

Overview

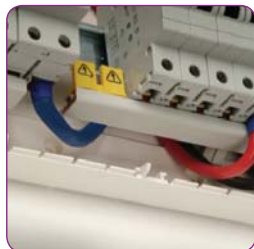
2



MOULDED PLASTIC VERSIONS NO LONGER AVAILABLE



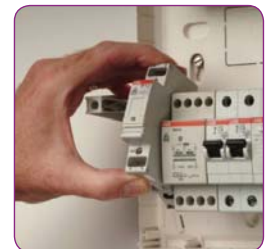
Unique Space Saving Sliding Door



TRUE FLEXIBLE SPLIT LOAD - Less stock, on site flexibility



FULLY SHROUDED BUSBAR - Easier and quicker to fit



DIN RAIL MOUNTED COMPONENTS
Bell Transformers, timers, contactors etc.

Housemaster - Consumer Units

Moulded Enclosures

Moulded Enclosure to BS EN 60439-3

- Supplied factory fitted with switch disconnecter and/or RCD, specification as table. Unit comes complete with 4 blanking plates, shrouded busbar, terminal bars and installation instructions.
- Colour RAL9010 Moulded
- Adaptable split load and 17th Edition Versions.



HMSL8+8C

Way Combinations	Incomer Isolator	RCD	Part No	Product Hierarchy 4300001	
				Order Code	Price £
4	100A		HMMS4C	1SPE007712F0111	
6	100A		HMMS6C	1SPE007712F0211	
10	100A		HMMS10C	1SPE007712F0311	
14	100A		HMMS14C	1SPE007712F0411	
18	100A		HMMS18C	1SPE007712F0511	
4	-	80A/30mA	HMRC4C	1SPE007712F0112	
6	-	100A/30mA	HMRC6C	1SPE007712F0212	
10	-	100A/30mA	HMRC10C	1SPE007712F0312	
14	-	100A/30mA	HMRC14C	1SPE007712F0412	
18	-	100A/30mA	HMRC18C	1SPE007712F0512	
4+4 3+5, 2+6 5+3, 6+2	100A	80A/30mA	HMSL4+4C	1SPE007712F0313	
6+6 4+8, 5+7 8+4, 7+5	100A	80A/30mA	HMSL6+6C	1SPE007712F0413	
8+8 7+9, 9+7	100A	80A/30mA	HMSL8+8C	1SPE007712F0513	



Supplied unpopulated

HMSL552C

17th Edition Moulded Enclosure to BS EN 60439-3

- Colour RAL9010 Moulded

No of Ways	Split Load Dual RCD		Part No	Product Hierarchy 4300001	
	Isolator	RCD x 2		Order Code	Price £
5 + 5	100A	63A/30mA	HMSL552C	1SPE007712F0416	
7 + 7	100A	63A/30mA	HMSL772C	1SPE007712F0516	

Dimensions

Part No	Height mm	Width mm	Depth mm
HMMS4C - HMRC4C	226	190	123
HMMS6C - HMRC6C	226	230	123
HMMS10C - HMRC10C - HMSL4+4C	226	300	123
HMMS14C - HMRC14C - HMSL6+6C - HMSL552C	226	370	123
HMMS18C - HMRC18C - HMSL8+8C - HMSL772C	226	440	123

Housemaster - Consumer Units

Steel Enclosures

2



HSSL8+8C

Steel Enclosure to BS EN 60439-3

- Supplied factory fitted with switch disconnecter and/or RCD, specification as table. Unit comes complete with shrouded busbar, earth and neutral bars and installation instructions.
- Colour RAL7035 Steel
- Adaptable split load versions.

Way Combinations	Incomer Isolator	RCD	Split Load		Part No	Product Hierarchy 4300001		
			Isolator	RCD		Order Code	Price £	
4	-	100A	-	-	HSMS4C	1SKB106142C4001		
7	-	100A	-	-	HSMS7C	1SKB109142C4001		
11	-	100A	-	-	HSMS11C	1SKB113142C4001		
16	-	100A	-	-	HSMS16C	1SKB118142C4001		
20	-	100A	-	-	HSMS20C	1SKB122142C4001		
4	-	-	80A/30mA	-	HSRC4C	1SKB106142C6001		
7	-	-	100A/30mA	-	HSRC7C	1SKB109142C6001		
11	-	-	100A/30mA	-	HSRC11C	1SKB113142C6001		
16	-	-	100A/30mA	-	HSRC16C	1SKB118142C6001		
20	-	-	100A/30mA	-	HSRC20C	1SKB122142C6001		
4+4	3+5, 2+6	-	-	100A	80A/30mA	HSSL4+4C	1SKB113142C8001	
6+6	4+8, 5+7	-	-	100A	80A/30mA	HSSL6+6C	1SKB118142C8001	
8+8	7+9, 9+7	-	-	100A	80A/30mA	HSSL8+8C	1SKB122142C8001	

Dimensions

Part No	Height mm	Width mm	Depth mm
HSMS4C - HSRC4C	256	155	110
HSMS7C - HSRC7C	256	210	110
HSMS11C - HSRC11C - HSSL4+4C	256	282	110
HSMS16C - HSRC16C - HSSL6+6C	256	368	110
HSMS20C - HSRC20C - HSSL8+8C	256	440	110

Housemaster - Consumer Units

Outgoing MCBs & RCBOs

S200 Series Type B&C - MCBs - BS EN 60898 6kA



S201

Single Pole			Product Hierarchy 2400007		Product Hierarchy 2400007	
Rating Amps	kA	Part No	Type B Order Code	Price £	Type C Order Code	Price £
6	6	S201•6	2CDS251001R0065		2CDS251001R0064	
10	6	S201•10	2CDS251001R0105		2CDS251001R0104	
16	6	S201•16	2CDS251001R1165		2CDS251001R0164	
20	6	S201•20	2CDS251001R0205		2CDS251001R0204	
25	6	S201•25	2CDS251001R0255		2CDS251001R0254	
32	6	S201•32	2CDS251001R0325		2CDS251001R0324	
40	6	S201•40	2CDS251001R0405		2CDS251001R0404	
50	6	S201•50	2CDS251001R0505		2CDS251001R0504	
63	6	S201•63	2CDS251001R0635		2CDS251001R0634	

2

• Add tripping curve for B or C eg: S201B6

Type B - Suitable for small inrush or switching surges, heating loads and tungsten lighting

Type C - Suitable for moderate switching surges for sort duration. eg. discharge lamps.

RCBO single pole, solid neutral to BS EN 61009



DS271AC-C10/0.03

Type B				Product Hierarchy 2500002	
Rating Amps	kA	Sensitivity	Part No	Order Code	Price £
6	10	30mA	DS271AC-B6/0.03	2CSR175092R1065	
10	10	30mA	DS271AC-B10/0.03	2CSR175092R1105	
16	10	30mA	DS271AC-B16/0.03	2CSR175092R1165	
20	10	30mA	DS271AC-B20/0.03	2CSR175092R1205	
25	10	30mA	DS271AC-B25/0.03	2CSR175092R1255	
32	10	30mA	DS271AC-B32/0.03	2CSR175092R1325	
Type C					
6	10	30mA	DS271AC-C6/0.03	2CSR175092R1064	
10	10	30mA	DS271AC-C10/0.03	2CSR175092R1104	
16	10	30mA	DS271AC-C16/0.03	2CSR175092R1164	
20	10	30mA	DS271AC-C20/0.03	2CSR175092R1204	
25	10	30mA	DS271AC-C25/0.03	2CSR175092R1254	
32	10	30mA	DS271AC-C32/0.03	2CSR175092R1324	
40	10	30mA	DS271AC-C40/0.03	2CSR175092R1404	

Type B - Suitable for small inrush or switching surges, heating loads and tungsten lighting

Type C - Suitable for moderate switching surges for sort duration. eg. discharge lamps.

Supplied with 800mm flying neutral and functional earth leads.

Housemaster - Consumer Units Accessories

Accessories



SA1



2

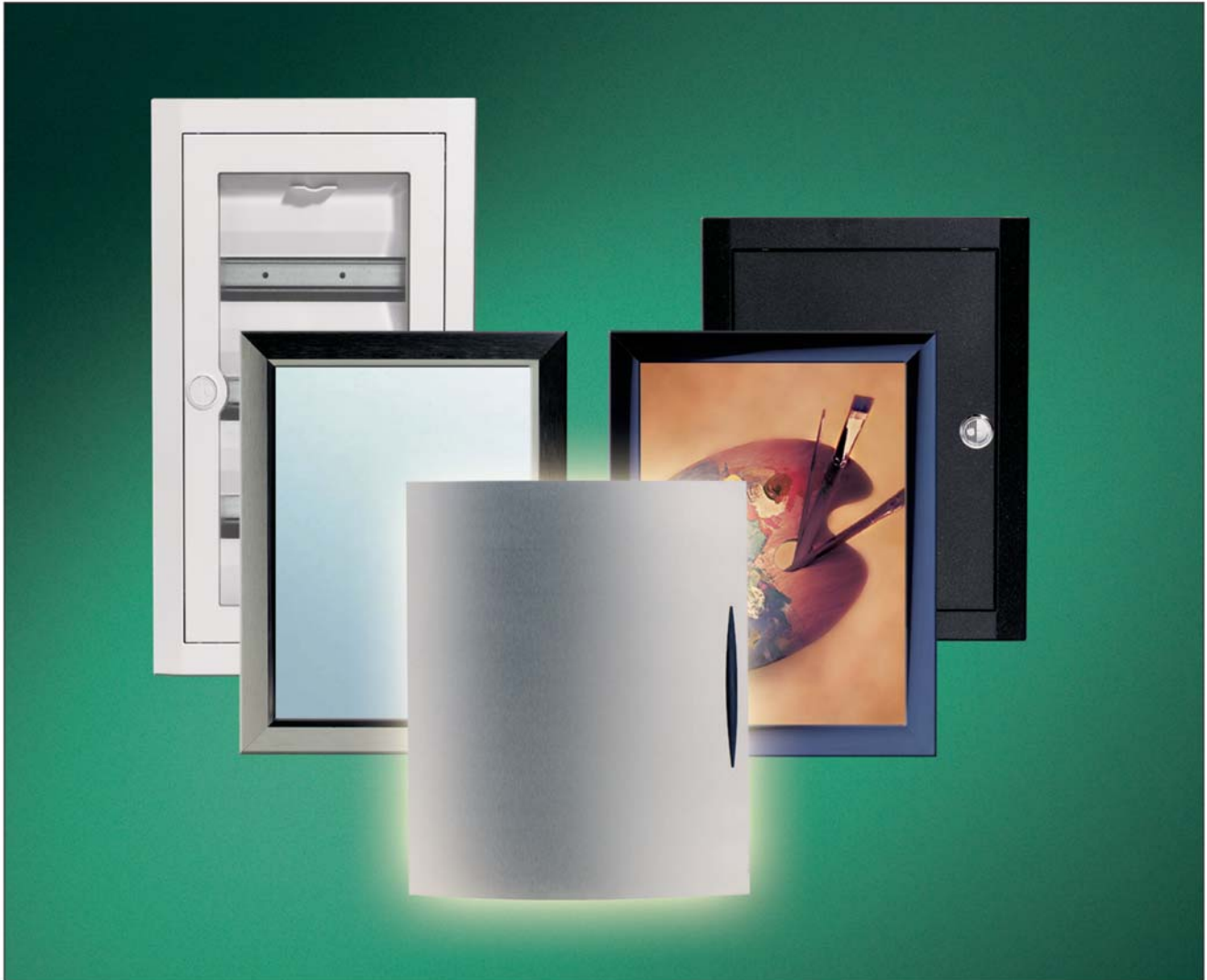
Description	Part No.	Product Hierarchy 2400002	
		Order Code	Price £
MCB padlock adaptor 3mm hasp	SA1	GJF1101903R0001	
MCB padlock adaptor 6mm hasp	SA1E	GJF1101903R0004	
Padlock with 2 keys	SA2	GJF1101903R0002	
Moulded Housemaster connection bridge	HMCB	1SPE007712F0001	
Moulded Housemaster spare 1 module blank	HMBS	1SPE007712F0002	
Spare Housemaster Label Sheet	110381	110381	
Spare 19 Module Busbar	PS 1/19/30	2CDL210001R3019	
Spare End Cap for 19 Module Busbar (LH & RH End Cap)	PS-END 0	2CDL200001R0004	
Busbar Cover for 5 unused ways or split into individuals	SZ-BSK	2CDL200001R0011	

For Steel Versions ONLY

12 module blank cover	SZ-BP1	GHL5301904R0001	
1 module blank cover	SZ-BP2	GHS2701913R0002	

ArtLine - Consumer Units Overview

2



add your own picture or artwork



functional yet elegant



gives a splash of colour

ArtLine - Consumer Units Enclosures & Doors

2



Flush Mounted Consumer Unit



UK510BE

UK520BE

Description	Size	Part No	Product Hierarchy 3100004	
			Order Code	Price £
Consumer Unit	1 - 12 Modules	UK510BE	2CPX077619R9999	
	2 - 24 Modules	UK520BE	2CPX077620R9999	
	3 - 36 Modules	UK530BE	2CPX077621R9999	
	4 - 48 Modules	UK540BE	2CPX077622R9999	



UK530BE

UK540BE

Description	Size	Part No	Product Hierarchy 3100004	
			Order Code	Price £
Door (Standard Door)	1	BL510	2CPX030853R9999	
	2	BL520	2CPX030854R9999	
	3	BL530	2CPX030855R9999	
	4	BL540	2CPX030856R9999	



Additional ranges of doors are available on request

ArtLine - Consumer Units

Incoming & Outgoing Devices



S201

Incomers

Description	Size	Product Hierarchy 3100004	
		Order Code	Price £
Isolator Incoming Kit 63A Incomer	1	FMCU-1ISO	
	2	FMCU-2ISO	
	3	FMCU-3ISO	
	4	FMCU-4ISO	
RCD Incoming Kit 63A / 30mA Incomer	1	FMCU-1RCD	
	2	FMCU-2RCD	
	3	FMCU-3RCD	
	4	FMCU-4RCD	
Isolator & Twin RCD Kit 63A Incomer / 2 x 63A RCDs	2	FMCU-2ISRCD	
	3	FMCU-3ISRCD	
	4	FMCU-4ISRCD	

2

All above kits are made to order.

S200 Series Type B&C - MCBs - BS EN 60898 6kA

Single Pole

Rating Amps	kA	Part No	Product Hierarchy 2400007		Product Hierarchy 2400007	
			Type B Order Code	Price £	Type C Order Code	Price £
6	6	S201•6	2CDS251001R0065		2CDS251001R0064	
10	6	S201•10	2CDS251001R0105		2CDS251001R0104	
16	6	S201•16	2CDS251001R1165		2CDS251001R0164	
20	6	S201•20	2CDS251001R0205		2CDS251001R0204	
25	6	S201•25	2CDS251001R0255		2CDS251001R0254	
32	6	S201•32	2CDS251001R0325		2CDS251001R0324	
40	6	S201•40	2CDS251001R0405		2CDS251001R0404	
50	6	S201•50	2CDS251001R0505		2CDS251001R0504	
63	6	S201•63	2CDS251001R0635		2CDS251001R0634	

- Add tripping curve for B or C eg: S201B6

Type B - Suitable for small inrush or switching surges, heating loads and tungsten lighting

Type C - Suitable for moderate switching surges for short duration. eg. discharge lamps.

Accessories

Description	Product Hierarchy 3100004	
	Order Code	Price £
Hollow Wall Set	2CPX062563R9999	
Safety Lock	2CPX030870R9999	

Protecta - Overview

Type A & B Distribution Boards

Utilising Europe's
No.1 Selling MCB

2



Distribution Boards
Type A page 25
Type B page 28-29



Incoming Devices
Type A page 25
Type B page 30



Connection Kit
Type B page 30



Outgoing Devices
Type A page 26
Type B page 31-37

For a complete distribution board you will need to select from the individual sections in the catalogue

Protecta

Type A Distribution Boards

Type A - SP&N Distribution Boards

- Constructed to BSEN60439 part 1 & 3. IP30 to BSEN60529. Finished in RAL7035
- Supplied without incomer, see incomer options page below
- Earth and neutral bars included
- Neutral link to incomer included
- Busbar rating 100A - 230v



Type A - SP&N Distribution Boards



ECS107C



E202/100r



F202 AC-63/0.03

Number of Outgoing Ways	Part No	Product Hierarchy 4200001	
		Order Code	Price £
4 way SP&N	ECS104C	1SKB106142C2001	
7 way SP&N	ECS107C	1SKB109142C2001	
11 way SP&N	ECS111C	1SKB113142C2001	
16 way SP&N	ECS116C	1SKB118142C2001	
20 way SP&N	ECS120C	1SKB122142C2001	

Dimensions

Part No	Height mm	Width mm	Depth mm
ECS104C	255	155	110
ECS107C	255	210	110
ECS111C	255	282	110
ECS116C	255	368	110
ECS120C	255	440	110

Incomer Options

Description	Rating (A)	Sensitivity (mA)	Part No.	Product Hierarchy 2700001	
				Order Code	Price £
Switch Disconnector 100A 2 pole <small>(max cable 50mm²)</small>			E202/100r	2CDE282001R0100	
RCCB	63A 2 pole	30	F202 AC-63/0.03	2CSF202001R1630	
RCCB	63A 2 pole	300	F202 AC-63/0.3	2CSF202001R3630	
RCCB	80A 2 pole	30	F202 AC-80/0.03	2CSF202001R1800	
RCCB	100A 2 pole	30	F202 AC-100/0.03	2CSF202001R1900	

Protecta - Type A Distribution Boards

Outgoing MCBs

2



S201M

S200M Series Type B&C - MCBs - BS EN 60898 10kA

Single Pole			Product Hierarchy 2400007		Product Hierarchy 2400004	
			Type B Order Code	Price £	Type C Order Code	Price £
Rating Amps	kA	Part No				
6	10	S201M•6	2CDS271001R0065		2CDS271001R0064	
8	10	S201M•8	-		2CDS271001R0084	
10	10	S201M•10	2CDS271001R0105		2CDS271001R0104	
13	10	S201M•13	2CDS271001R0135		2CDS271001R0134	
16	10	S201M•16	2CDS271001R0165		2CDS271001R0164	
20	10	S201M•20	2CDS271001R0205		2CDS271001R0204	
25	10	S201M•25	2CDS271001R0255		2CDS271001R0254	
32	10	S201M•32	2CDS271001R0325		2CDS271001R0324	
40	10	S201M•40	2CDS271001R0405		2CDS271001R0404	
50	10	S201M•50	2CDS271001R0505		2CDS271001R0504	
63	10	S201M•63	2CDS271001R0635		2CDS271001R0634	

• Add tripping curve for B or C eg: S201MB6

Type B - Suitable for small inrush or switching surges, heating loads and tungsten lighting

Type C - Suitable for moderate switching surges for short duration. eg. discharge lamps.

S200 Series Type D - MCBs - single pole - BS EN 60898 6kA

Single Pole			Product Hierarchy 2400004	
			Type D Order Code	Price £
Rating Amps	kA	Part No		
6	6	S201D6	2CDS271001R0061	
10	6	S201D10	2CDS251001R0101	
16	6	S201D16	2CDS251001R0161	
20	6	S201D20	2CDS251001R0201	
25	6	S201D25	2CDS251001R0251	
32	6	S201D32	2CDS251001R0321	
40	6	S201D40	2CDS251001R0401	
50	6	S201D50	2CDS251001R0501	
63	6	S201D63	2CDS251001R0631	

Type D - Suitable for cable protection and high inrush applications such as transformers

Protecta - Type A Distribution Boards

Accessories



SA1



Accessories

Description	Part No.	Product Hierarchy 2400002	
		Order Code	Price £
MCB padlock adaptor 3mm hasp	SA1	GJF1101903R0001	
MCB padlock adaptor 6mm hasp	SA1E	GJF1101903R0004	
Padlock with 2 keys	SA2	GJF1101903R0002	
Spare Housemaster Label Sheet	110381	110381	
Spare 19 Module Busbar	PS 1/19/30	2CDL210001R3019	
Spare End Cap for 19 Module Busbar (LH & RH End Cap)	PS-END 0	2CDL200001R0004	
Busbar Cover for 5 unused ways or split into individuals	SZ-BSK	2CDL200001R0011	

Protecta - Type B Distribution Boards

TP & N Distribution Boards

2



General Description

- Constructed to BS EN60439 part 1 & 3
- Enclosure finished in RAL7035
- Busbar rated 250A
- Voltage rating at 230/400v 50Hz
- Integral door latch with key
- Security Lock is also available (please ask)
- Incoming devices up to 250A mounted in the board
- IP Ingress protection IP41BSEN60529
- 4 - 24 TP&N ways
- Fault level 35kA
- Earth and neutral terminals included
- Reversible door



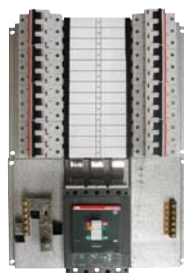
EPB25-312C

TP&N Distribution Boards

Outgoing Ways	Dimensions			Part No	Product Hierarchy 4200001	
	H	W	D		Order Code	Price £
4 way TP&N	502	400	125	EPB25-304C	1SKP804142C0059	
6 way TP&N	560	400	125	EPB25-306C	1SKP806142C0059	
8 way TP&N	610	400	125	EPB25-308C	1SKP808142C0059	
12 way TP&N	718	400	125	EPB25-312C	1SKP812142C0059	
16 way TP&N	830	400	125	EPB25-316C	1SKP816142C0059	
20 way TP&N	1001	400	125	EPB25-320C	1SKP820142C0059	
24 way TP&N	1140	400	125	EPB25-324C	1SKP824142C0059	

Also available 470 mm wide versions

TP&N Pan Assemblies (for panel mounting)

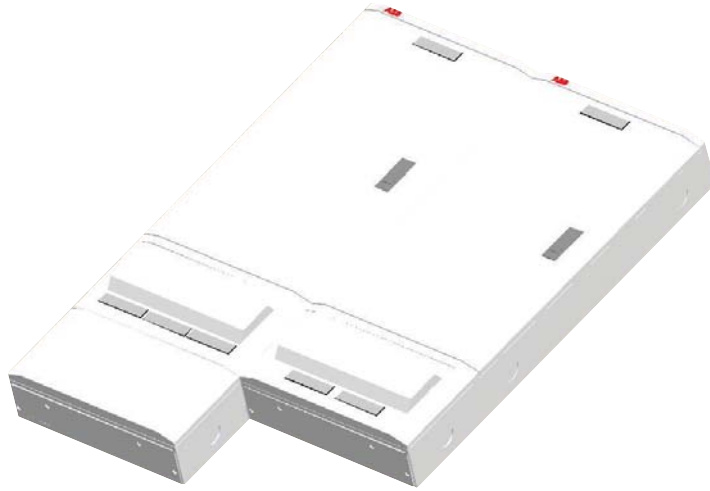


EPB25-PA308C

Outgoing Ways	Dimensions			Part No	Product Hierarchy 4200001	
	H	W	D		Order Code	Price £
4 way TP&N	375	270	60	EPB25-PA304C	1SKP804100C0051	
6 way TP&N	429	270	60	EPB25-PA306C	1SKP806100C0051	
8 way TP&N	483	270	60	EPB25-PA308C	1SKP808100C0051	
12 way TP&N	591	270	60	EPB25-PA312C	1SKP812100C0051	
16 way TP&N	699	270	60	EPB25-PA316C	1SKP816100C0051	
20 way TP&N	874	270	60	EPB25-PA320C	1SKP820100C0051	
24 way TP&N	1014	270	60	EPB25-PA324C	1SKP824100C0051	

Protecta - Type B Distribution Boards

Split Load Type B - TP & N Distribution Boards



A range of three phase MCB distribution boards which allows the option of metering in each section. This makes these units suitable for individual monitoring of the power and lighting circuits within an installation.

General Description

- Constructed to BS EN60439 part 1 & 3
- Enclosure finished in RAL7035
- Busbar rated 250A
- Voltage rating at 230/400v 50Hz
- Integral door latch with key
- Incoming devices 125A & 250A
- IP Ingress protection IP41 BSEN60529
- 4+4 - 24+24 TP&N ways
- Incoming devices are included
- Earth and neutral terminals included
- Reversible door
- Includes 2 meters



EPB25-0808S125C

Split Load Type B TP&N Distribution Boards

Outgoing Ways	Dimensions			Incomer	Product Hierarchy 4200001	
	H	W	D		Order Code	Price £
4+4 way TP&N	902	800	125	125A	EPB25-0404S125C	
4+4 way TP&N	902	800	125	125A	EPB25-0606S125C	
4+4 way TP&N	902	800	125	125A	EPB25-0808S125C	
4+4 way TP&N	902	800	125	125A	EPB25-1212S125C	
4+4 way TP&N	902	800	125	125A	EPB25-1616S125C	
4+4 way TP&N	902	800	125	125A	EPB25-2020S125C	
4+4 way TP&N	902	800	125	125A	EPB25-2424S125C	
4+4 way TP&N	902	800	125	250A	EPB25-0404S250C	
6+6 way TP&N	960	800	125	250A	EPB25-0606S250C	
8+6 way TP&N	1010	800	125	250A	EPB25-0808S250C	
12+12 way TP&N	1118	800	125	250A	EPB25-1212S250C	
16+16 way TP&N	1230	800	125	250A	EPB25-1616S250C	
20+20 way TP&N	1401	800	125	250A	EPB25-2020S250C	
24+24 way TP&N	1540	800	125	250A	EPB25-2424S250C	

4+4 way TP&N

Protecta

Type B Distribution Boards

2



E203



F204AC



250A MCCB



Incomer Options

Description	Rating (A)	(mA)	Part No	Product Hierarchy 2500001	
				Order Code	Price £
Switch Disconnector (no kit required)	100A 3 pole		E203/100r	2CDE283001R0100	
Switch Disconnector (no kit required)	125A 3 pole		E203/125r	2CDE283001R0125	
Switch Disconnector MCCB•	250A 3 pole		1SDA051327R1	1SDA051327R1	

• Require Kit EPBKIT1-T3C1

RCCB (requires EPB Kit 2C)	63A 4 pole	30	F204AC-63/0.03	2CSF204001R1630	
RCCB (requires EPB Kit 2C)	63A 4 pole	100	F204AC-63/0.1	2CSF204001R2630	
RCCB (requires EPB Kit 2C)	63A 4 pole	300	F204AC-63/0.3	2CSF204001R3630	
RCCB (requires EPB Kit 2C)	80A 4 pole	30	F204AC-80/0.03	2CSF204001R1800	
RCCB (requires EPB Kit 2C)	100A 4 pole	30	F204AC-100/0.03	2CSF204001R1900	
RCCB (requires EPB Kit 2C)	100A 4 pole	100	F204AC-100/0.1	2CSF204001R2900	
RCCB time delayed (requires EPB Kit 2C)	100A 4 pole	300	F204AC-100/0.3	2CSF204001R3900	

Description	Rating (A)	Part No	Product Hierarchy 3000004	
			Order Code	Price £
MCCB T3 - 36kA Require Kit EPBKIT1-T3C1	100A 3 pole	1SDA051243R1	1SDA051243R1	
	125A 3 pole	1SDA051244R1	1SDA051244R1	
	160A 3 pole	1SDA051245R1	1SDA051245R1	
	200A 3 pole	1SDA051246R1	1SDA051246R1	
	250A 3 pole	1SDA051247R1	1SDA051247R1	

All the above require an EPBKIT1-T3C1

Connection Kits

Description	Part No	Product Hierarchy 4200001	
		Order Code	Price £
F200 RCD Connection kit	EPBKIT2C	1SKA142000C1001	
Coupling kit side by side	EPBKIT5	1SKA145000C0001	
Spare 100A TP Isolator kit	EBKIT8C	1SKA148000C1001	
250A Single phase kit	EPBKIT6C1-25	1SKA146000C5001	
Single phase connection kit	EPBKIT6C1	1SKA146000C3001	
250A MCCB connection kit	EPBKIT1-T3C1	1SKA141000C3003	
70mm Cable connection kit	EPBKIT4C1	1SKA144000C3001	
120mm Cable connection kit	EPBKIT3C1	1SKA143000C3001	
Label kit for 24 way EPB board	EPBKIT0-7	1SKA140000C1008	
Blank spare flange plate	EPBGP1UK	1SKA130002C0001	

Protecta - Type B Distribution Boards

Outgoing MCBs

B



S201M



S202M



S203M

S200M Series Type B - MCBs - BS EN 60898 10kA (BS EN60947-2 15kA<50A)

Suitable for cable protection and small inrush or switching surges, heating loads and tungsten lighting

Single Pole

Rating Amps	kA	Part No	Product Hierarchy 2400004	
			Order Code	Price £
6	10kA	S201MB6	2CDS271001R0065	
10	10kA	S201MB10	2CDS271001R0105	
16	10kA	S201MB16	2CDS271001R0165	
20	10kA	S201MB20	2CDS271001R0205	
25	10kA	S201MB25	2CDS271001R0255	
32	10kA	S201MB32	2CDS271001R0325	
40	10kA	S201MB40	2CDS271001R0405	
50	10kA	S201MB50	2CDS271001R0505	
63	10kA	S201MB63	2CDS271001R0635	

Double Pole

6	10kA	S202MB6	2CDS272001R0065	
10	10kA	S202MB10	2CDS272001R0105	
13	10kA	S202MB13	2CDS272001R0135	
16	10kA	S202MB16	2CDS272001R0165	
20	10kA	S202MB20	2CDS272001R0205	
25	10kA	S202MB25	2CDS272001R0255	
32	10kA	S202MB32	2CDS272001R0325	
40	10kA	S202MB40	2CDS272001R0405	
50	10kA	S202MB50	2CDS272001R0505	
63	10kA	S202MB63	2CDS272001R0635	

Triple Pole

6	10kA	S203MB6	2CDS273001R0065	
10	10kA	S203MB10	2CDS273001R0105	
16	10kA	S203MB16	2CDS273001R0165	
20	10kA	S203MB20	2CDS273001R0205	
25	10kA	S203MB25	2CDS273001R0255	
32	10kA	S203MB32	2CDS273001R0325	
40	10kA	S203MB40	2CDS273001R0405	
50	10kA	S203MB50	2CDS273001R0505	
63	10kA	S203MB63	2CDS273001R0635	

2

Protecta - Type B Distribution Boards

Outgoing MCBs

S200M Series Type C - MCBs - BS EN 60898 10kA (BS EN60947-2 15kA<50A)

C

Suitable for cable protection and moderate switching surges for short duration. eg. discharge lamps.

2



S201M



S202M

Single Pole

Rating Amps	kA	Part No	Product Hierarchy 2400004	
			Order Code	Price £
0.5	10kA	S201MC0.5	2CDS271001R0984	
1	10kA	S201MC1	2CDS271001R0014	
2	10kA	S201MC2	2CDS271001R0024	
3	10kA	S201MC3	2CDS271001R0034	
4	10kA	S201MC4	2CDS271001R0044	
6	10kA	S201MC6	2CDS271001R0064	
8	10kA	S201MC8	2CDS271001R0084	
10	10kA	S201MC10	2CDS271001R0104	
13	10kA	S201MC13	2CDS271001R0134	
16	10kA	S201MC16	2CDS271001R0164	
20	10kA	S201MC20	2CDS271001R0204	
25	10kA	S201MC25	2CDS271001R0254	
32	10kA	S201MC32	2CDS271001R0324	
40	10kA	S201MC40	2CDS271001R0404	
50	10kA	S201MC50	2CDS271001R0504	
63	10kA	S201MC63	2CDS271001R0634	

Double Pole

0.5	10kA	S202MC0.5	2CDS272001R0984	
1	10kA	S202MC1	2CDS272001R0014	
2	10kA	S202MC2	2CDS272001R0024	
3	10kA	S202MC3	2CDS272001R0034	
6	10kA	S202MC6	2CDS272001R0064	
8	10kA	S202MC8	2CDS272001R0084	
10	10kA	S202MC10	2CDS272001R0104	
16	10kA	S202MC16	2CDS272001R0164	
20	10kA	S202MC20	2CDS272001R0204	
25	10kA	S202MC25	2CDS272001R0254	
32	10kA	S202MC32	2CDS272001R0324	
40	10kA	S202MC40	2CDS272001R0404	
50	10kA	S202MC50	2CDS272001R0504	
63	10kA	S202MC63	2CDS272001R0634	

Protecta - Type B Distribution Boards

Outgoing MCBs

C



S203M

S200M Series Type C - MCBs - BS EN 60898 10kA (BS EN60947-2 15kA<50A)

Suitable for cable protection and moderate switching surges for short duration. eg. discharge lamps.

Triple Pole

Rating Amps	kA	Part No	Product Hierarchy 2400004	
			Order Code	Price £
1	10kA	S203MC1	2CDS273001R0014	
2	10kA	S203MC2	2CDS273001R0024	
3	10kA	S203MC3	2CDS273001R0034	
4	10kA	S203MC4	2CDS273001R0044	
6	10kA	S203MC6	2CDS273001R0064	
10	10kA	S203MC10	2CDS273001R0104	
13	10kA	S203MC13	2CDS273001R0134	
16	10kA	S203MC16	2CDS273001R0164	
20	10kA	S203MC20	2CDS273001R0204	
25	10kA	S203MC25	2CDS273001R0254	
32	10kA	S203MC32	2CDS273001R0324	
40	10kA	S203MC40	2CDS273001R0404	
50	10kA	S203MC50	2CDS273001R0504	
63	10kA	S203MC63	2CDS273001R0634	

2

Protecta - Type B Distribution Boards

Outgoing MCBs

D

S200 Series Type D - MCBs - single pole - BS EN 60898 6kA

Suitable for cable protection and high inrush applications such as transformers

2



S201M



S202M

Single Pole

Rating Amps	kA	Part No	Product Hierarchy 2400004	
			Order Code	Price £
1	6kA	S201D1	2CDS251001R0011	
2	6kA	S201D2	2CDS251001R0021	
3	6kA	S201D3	2CDS251001R0031	
4	6kA	S201D4	2CDS251001R0041	
6	6kA	S201D6	2CDS251001R0061	
10	6kA	S201D10	2CDS251001R0101	
16	6kA	S201D16	2CDS251001R0161	
20	6kA	S201D20	2CDS251001R0201	
25	6kA	S201D25	2CDS251001R0251	
32	6kA	S201D32	2CDS251001R0321	
40	6kA	S201D40	2CDS251001R0401	
50	6kA	S201D50	2CDS251001R0501	
63	6kA	S201D63	2CDS251001R0631	

Double Pole

0.5	6kA	S202D0.5	2CDS252001R0157	
1	6kA	S202D1	2CDS252001R0011	
2	6kA	S202D2	2CDS252001R0021	
3	6kA	S202D3	2CDS252001R0031	
4	6kA	S202D4	2CDS252001R0041	
6	6kA	S202D6	2CDS252001R0061	
10	6kA	S202D10	2CDS252001R0101	
16	6kA	S202D16	2CDS252001R0161	
20	6kA	S202D20	2CDS252001R0201	
25	6kA	S202D25	2CDS252001R0251	
32	6kA	S202D32	2CDS252001R0321	
40	6kA	S202D40	2CDS252001R0401	
50	6kA	S202D50	2CDS252001R0501	
63	6kA	S202D63	2CDS252001R0631	

Protecta - Type B Distribution Boards

Outgoing MCBs

D



S203M

S200 Series Type D - MCBs - single pole - BS EN 60898 6kA

Suitable for cable protection and high inrush applications such as transformers

Triple Pole

Rating Amps	kA	Part No	Product Hierarchy 2400004	
			Order Code	Price £
1	6kA	S203D1	2CDS253001R0011	
2	6kA	S203D2	2CDS253001R0021	
3	6kA	S203D3	2CDS253001R0031	
4	6kA	S203D4	2CDS253001R0041	
6	6kA	S203D6	2CDS253001R0061	
10	6kA	S203D10	2CDS253001R0101	
16	6kA	S203D16	2CDS253001R0161	
20	6kA	S203D20	2CDS253001R0201	
25	6kA	S203D25	2CDS253001R0251	
32	6kA	S203D32	2CDS253001R0321	
40	6kA	S203D40	2CDS253001R0401	
50	6kA	S203D50	2CDS253001R0501	
63	6kA	S203D63	2CDS253001R0631	

2

RCBO single pole, solid neutral to BS EN 61009

Type B

Rating Amps	kA	Sensitivity	Part No	Product Hierarchy 2500002	
				Order Code	Price £
6	10	30mA	DS271AC-B6/0.03	2CSR175092R1065	
10	10	30mA	DS271AC-B10/0.03	2CSR175092R1105	
16	10	30mA	DS271AC-B16/0.03	2CSR175092R1165	
20	10	30mA	DS271AC-B20/0.03	2CSR175092R1205	
25	10	30mA	DS271AC-B25/0.03	2CSR175092R1255	
32	10	30mA	DS271AC-B32/0.03	2CSR175092R1325	



DS271AC-C10/0.03

Type C

6	10	30mA	DS271AC-C6/0.03	2CSR175092R1064	
10	10	30mA	DS271AC-C10/0.03	2CSR175092R1104	
16	10	30mA	DS271AC-C16/0.03	2CSR175092R1164	
20	10	30mA	DS271AC-C20/0.03	2CSR175092R1204	
25	10	30mA	DS271AC-C25/0.03	2CSR175092R1254	
32	10	30mA	DS271AC-C32/0.03	2CSR175092R1324	
40	10	30mA	DS271AC-C40/0.03	2CSR175092R1404	

Type B - Suitable for small inrush or switching surges, heating loads and tungsten lighting

Type C - Suitable for moderate switching surges for short duration. eg. discharge lamps.

Supplied with 800mm flying neutral and functional earth leads.

Protecta - Type B Distribution Boards

Outgoing MCBs

General Accessories/Spares

Description	Product Hierarchy 2400004	
	Order Code	Price £
12 module blank cover	GHL5301904R0001	
1 module blank cover	GHS2701913R0002	
Busbar cover for 5 unused ways	2CDL200001R0011	

2

Protecta - Type B Distribution Boards

Metering Modules, Extension Boxes



Meter Modules

Distribution Board 3 phase kWh meter module fitted with multi function Meter c/w pulsed output



- Extension box with CT's, wiring loom and MCB to pick up voltage.
- Can be mounted top or bottom of board.
- Modbus, maximum demand and M-bus version available

CT size	Max Cable Diameter (Through CT)	Dimensions mm			Part No	Product Hierarchy 42000001	
		H	W	D		Order Code	Price £
100A	27mm	400	400	125	DB100METMOD	1TVL151800S1017	
125A					DB125METMOD	1TVL151800S1018	
250A					DB250METMOD	1TVL151800S1019	

Please Note: The above modules are built to order, lead times available on request.

Extension Boxes



Top Extension Boxes

Description	Part No	Product Hierarchy 42000001	
		Order Code	Price £
Extension Box Plain Cover No DIN Rail	EPBTEB200C	1SKA121142C0001	
Extension Box Plain Cover No DIN Rail	EPBTEB400C	1SKA123142C0001	
14 Module Extension Box Steel Flap (1 row)	EPBTEB200S	1SKA122142C0001	
28 Module Extension Box Steel Flap (2 row)	EPBTEB400S	1SKA124142C0001	

Extension Box Dimensions

Part No	Height mm	Width mm	Depth mm
EPBTEB200C	200	400	125
EPBTEB400C	400	400	125
EPBTEB200S	200	400	125
EPBTEB400S	400	400	125

Housemaster & Protecta Modular Devices

2



F202 AC-63/0.03

F200 Series RCCBs Double Pole AC - BS/EN 61008

Rated Current	Tripping mA	Part No	Product Hierarchy 2500001	
			Order Code	Price £
16	10	F202 AC-16/0.01	2CSF202001R0160	
25	30	F202 AC-25/0.03	2CSF202001R1250	
40	30	F202 AC-40/0.03	2CSF202001R1400	
63	30	F202 AC-63/0.03	2CSF202001R1630	
80	30	F202 AC-80/0.03	2CSF202001R1800	
100	30	F202 AC-100/0.03	2CSF202001R1900	
25	300	F202 AC-25/0.3	2CSF202001R3250	
40	300	F202 AC-40/0.3	2CSF202001R3400	
63	300	F202 AC-63/0.3	2CSF202001R3630	



F204 AC-63/0.03

F200 Series RCCBs Four Pole AC - BS/EN 61008

25	30	F204 AC-25/0.03	2CSF204001R1250	
40	30	F204 AC-40/0.03	2CSF204001R1400	
63	30	F204 AC-63/0.03	2CSF204001R1630	
80	30	F204 AC-80/0.03	2CSF204001R1800	
100	30	F204 AC-100/0.03	2CSF204001R1900	
100	100	F204 AC-100/0.1	2CSF204001R2900	
25	300	F204 AC-25/0.3	2CSF204001R3250	
40	300	F204 AC-40/0.3	2CSF204001R3400	
63	300	F204 AC-63/0.3	2CSF204001R3630	



ESB24.40

Installation Contactors - BS EN 61095

Rated Current	230v kW		400v kW		Contacts			Part no	Product Hierarchy 2700001	
	AC1	AC3	AC1	AC3	n/o	n/c	Order Code		Price £	
20	4	1.3	-	-	2	0	ESB20.20	GHE3211102R0006		
					1	1	ESB20.11	GHE3211302R0006		
24	9	2.2	16	4	2	-	ESB24.20	GHE3291102R0006		
					4	0	ESB24.40	GHE3291102R0006		
					2	2	ESB24.22	GHE3291302R0006		
40	16	5.5	26	11	4	-	ESB40.40	GHE3491102R0006		
63	24	8.5	40	16	4	-	ESB63.40	GHE3691102R0006		

All above contactors fitted with 230v 50Hz coils

Spacer ESB - DIS								GHE3201902R0001	
Aux Contacts (not for ESB20)	2	-					EH04.20	GHE3401321R0001	

Housemaster & Protecta Modular Devices



AT3

Analogue Timers

Description	Part No	Product Hierarchy 2700001	
		Order Code	Price £
Daily programme with standby battery 200 hr	AT3-R	2CSM204235R0601	
Weekly programme with standby battery 200 hr	AT3-7R	2CSM204245R0601	

Twilight Switches

The twilight switch allows ON/OFF switching of lights according to pre-established light levels

Twilight switch + light sensor	TW1	2CSM204135R1341	
--------------------------------	-----	-----------------	--

Digital Timers

1 Channel Weekly Time Switch	D1	2CSM258763R0621	
------------------------------	----	-----------------	--



E203/63R

Isolators

E202/63R 2P 63A	E202/63R	2CDE282001R0063	
E202/100R 2P 100A	E202/100R	2CDE282001R0100	
E202/125R 2P 125A	E202/125R	2CDE282001R0125	
E203/63R 3P 63A	E203/63R	2CDE283001R0063	
E203/100R 3P 100A	E203/100R	2CDE283001R0100	
E203/125R 3P 125A	E203/125R	2CDE283001R0125	
E204/63R 4P 63A	E204/63R	2CDE284001R0063	
E204/125R 4P 125A	E204/125R	2CDE284001R0125	



OVR1N15275

Surge Arrestors

Type 1 - 3 pole + N	OVRT13N25525TS	2CTB815101R0700	
Type 2 - 3 pole + N	OVRT23N40275SPTS	2CTB803953R0200	
SP + N surge unit with integrated overload unit	OVRPLUSIN10275	2CTB813812R2600	
	OVRPLUSN140	2CTB803701R0100	
TP & N surge unit with integrated overload unit	OVRPLUS3N15275	2CTB803701R0400	
	OVRTPLUS3N40275	2CTB803701R0300	

Housemaster & Protecta Digital Energy Meters

2



- Type approved and verified (MID, IEC)
- High accuracy
- Class B (Cl. 1) is standard
- Class C (Cl. 0.5) available for CTVT connected meters
- High meter performance
- Wide voltage range (from 57/100 up to 400/690 V)
- Wide temperature range -40 °C - +70 °C
- High measurement dynamics, low min current – high max current
- Large pixel-oriented display
- Several values can displayed simultaneously
- Extensive functionality
- Instrument values
- Alarms
- Built-in communication

Type	Order code
C11 110 - 300	2CMA170550R1000
CEM 05100	2CMA137121R1000
CGM 05000	2CMA137104R1000
CMM 05000	2CMA137120R1000
CRM 04000	2CMA137091R1000
CSO 05000	2CMA137124R1000
CTM 04000	2CMA137090R1000
DIN-rail for DELTAplus	2CMA132540R1000
DIN-rail for DELTAsingle	2CMA139501R1000
Enclosure for ODIN	2CMA131022R1000
Front mounting kit for DELTAplus and ODIN	2CMA132635R1000
Long cover for DELTAplus	2CMA132633R1000
OD1065	2CMA131040R1000
OD1365	2CMA131041R1000
OD4110	2CMA131025R1000
OD4165	2CMA131024R1000
Short cover for ODIN	2CMA131026R1000
ZS/S 1.1	2CDG110083R0011

Type	Order code
A41 111 - 100	2CMA170554R1000
A41 112 - 100	2CMA170500R1000
A41 212 - 100	2CMA170501R1000
A41 311 - 100	2CMA170502R1000
A41 312 - 100	2CMA170503R1000
A41 313 - 100	2CMA170504R1000
A41 412 - 100	2CMA170505R1000
A41 413 - 100	2CMA170506R1000
A41 513 - 100	2CMA170508R1000
A42 111 - 100	2CMA170555R1000
A42 112 - 100	2CMA170510R1000
A42 212 - 100	2CMA170511R1000
A42 312 - 100	2CMA170512R1000
A42 412 - 100	2CMA170513R1000
A42 413 - 100	2CMA170514R1000
A42 552 - 120	2CMA170518R1000
A42 553 - 120	2CMA170519R1000
A43 111 - 100	2CMA170520R1000
A43 121 - 100	2CMA170521R1000
A43 212 - 100	2CMA170522R1000
A43 213 - 100	2CMA170523R1000
A43 311 - 100	2CMA170524R1000
A43 312 - 100	2CMA170525R1000
A43 313 - 100	2CMA170526R1000
A43 412 - 100	2CMA170528R1000
A43 413 - 100	2CMA170529R1000
A43 512 - 100	2CMA170531R1000
A43 513 - 100	2CMA170532R1000
A44 111 - 100	2CMA170533R1000
A44 212 - 100	2CMA170534R1000
A44 213 - 100	2CMA170535R1000
A44 311 - 100	2CMA170536R1000
A44 352 - 100	2CMA170537R1000
A44 353 - 100	2CMA170538R1000
A44 452 - 100	2CMA170540R1000
A44 453 - 100	2CMA170541R1000
A44 552 - 100	2CMA170545R1000
A44 552 - 110	2CMA170548R1000
A44 553 - 100	2CMA170546R1000
A44 553 - 110	2CMA170549R1000

Panel Boards



Panel Boards

2

Panel Boards



Any 6, 12, 18 way board rated at 400A
Any 6, 12, 18 way board rated at 800A

Any 6, 12, 18 way board rated at 400A

Any 6, 12, 18 way board rated at 630A

Any 6, 12, 18 way board rated at 800A

Page 43

Incomers



no incomer required

250A TP Switch
250A TP MCCB 36kA
400A TP Switch
400A TP MCCB 36kA

630A TP Switch
630A TP MCCB 36kA
630A TP MCCB 50kA

800A TP Switch
800A TP MCCB 36kA
800A TP MCCB 50kA

Page 45

Connecting Kits



400A Direct Connection Kit
800A Direct Connection Kit

250A MCCB/Switch Connection Kit
400A MCCB/Switch Connection Kit

630A MCCB/Switch Connection Kit

800A MCCB/Switch Connection Kit

Page 44

Inner Doors



P6X6DC

P6X6T3

P6X6T5

P6X6T6

Page 44

Outgoers



T1 or T3 (not mixed)
Front connection terminals are required for all T3 devices

Page 45

For the Panelboard to be complete you need to order one item from the pages shown

Panel Boards

3 Pole and Custom Boards

Technical Details

- Colour Light Grey RAL 7035
- ASTA Certified Busbars
- Supplied with a plain door as standard
- Supplied without incomer, see options below
- 4 Pole Versions on request
- Rated current/lcw: up to 400A/35kA flat busbar
up to 800A/50kA profiled busbar



640T1PB3

3 Pole Panel Board

Ways	MCCB Type	Copper Rating	Dimensions mm			Product Hierarchy 4100001	
			H	W	D	Order Code	Price £
6	T1	400A	1050	690	204	640T1PB3	
	T3	400A	1250	690	204	640T3PB3	
	T3	800A	1250	690	204	680T3PB3	
12	T1	400A	1450	690	240	124T1PB3	
	T3	400A	1650	690	240	124T3PB3	
	T1	800A	1450	690	240	128T1PB3	
	T3	800A	1650	690	240	128T3PB3	
18	T1	400A	1850	690	240	184T1PB3	
	T1	800A	1850	690	240	188T1PB3	
	T3	800A	2050	690	240	188T3PB3	

T1 and T3 breakers **cannot** be mixed in standard Panelboard

3 Pole Custom Panel Board (for use with 400, 630 and 800A incomers only)

Ways	MCCB Type	Copper Rating	Dimensions mm			Product Hierarchy 4100001	
			H	W	D	Order Code	Price £
6	T1/T2/T3	400A	1250	690	204	CU640PB3	
12			1650	690	240	CU124PB3	
18			2050	690	240	CU184PB3	
6	T1/T2/T3	800A	1250	690	204	CU680PB3	
12			1650	690	240	CU128PB3	
18			2050	690	240	CU188PB3	

It is necessary to purchase plug-in bases for the MCCBs fitted in a Custom Panel Board see page 46

Panel Board

Incoming Devices & Accessories

2



Connection Kits



MCCB / Switch Disconnecter

Incomer Options

Rating	Device	kA Rating	Product Hierarchy 4100001	
			Order Code	Price £
400/800A	Direct Connection Kit 400A	-	400DC3/4P	
	Direct Connection Kit 800A	-	800DC3P	
	Inner Door to suit the above kits	-	P6X6DC	
250A	3 Pole Connection Kit 250A T3 MCCB/Switch	-	250T33P	
	Inner Door to suit the above kit	-	P6X6T3	
	250A 3P Switch Disconnecter T3D250	-	1SDA051327R1	
	250A 3P MCCB T3N250	36kA	1SDA051247R1	
400A	3 Pole Connection Kit 400A T5 MCCB/Switch	-	400T53P	
	Inner Door to suit the above kit	-	P6X6T5	
	400A 3P Switch Disconnecter T5D400	-	1SDA054599R1	
	400A 3P MCCB T5N400	36kA	1SDA054317R1	
630A	3 Pole Connection Kit 630A T5 MCCB/Switch	-	630T53P	
	Inner Door to suit the above kit	-	P6X6T5	
	630A 3P Switch Disconnecter T5D630	-	1SDA054601R1	
	630A 3P MCCB T5N630	36kA	1SDA054396R1	
	630A 3P MCCB T5S630	50kA	1SDA054404R1	
800A	3 Pole Connection Kit 800A T6 MCCB/Switch	-	800T63P	
	Inner Door to suit the above kit	-	P6X6T6	
	800A 3P Switch Disconnecter T6D800	-	1SDA060345R1	
	800A 3P MCCB T6N800	36kA	1SDA060214R1	
	800A 3P MCCB T6S800	50kA	1SDA060216R1	

Panel Boards

Incoming & Outgoing MCCBs



1SDA052616R1



1SDA050870R1



1SDA050894R1



1SDA050894R1

Model	Current [A]	Product Hierarchy 3000003		
		Order Code	Price	
16kA	Im			
	16A	1SDA052616R1		
	20A	1SDA052617R1		
	32A	1SDA052619R1		
	T1B Single Pole	40A	1SDA052620R1	
		63A	1SDA052622R1	
		80A	1SDA052623R1	
		100A	1SDA052624R1	
		125A	1SDA052625R1	
	25kA	160A	1SDA052626R1	
16A		1SDA050870R1		
20A		1SDA050871R1		
32A		1SDA050873R1		
T1B Triple Pole 16kA		40A	1SDA050874R1	
		50A	1SDA050875R1	
	63A	1SDA050876R1		
	80A	1SDA050877R1		
	100A	1SDA050878R1		
	125A	1SDA050879R1		
	160A	1SDA050880R1		
	T1C Triple Pole 25kA	25A	1SDA050894R1	
32A		1SDA050895R1		
40A		1SDA050896R1		
50A		1SDA050897R1		
63A		1SDA050898R1		
80A		1SDA050899R1		
100A		1SDA050900R1		
125A		1SDA050901R1		
160A		1SDA050902R1		
T1N Triple Pole 36kA	32A	1SDA050917R1		
	40A	1SDA050918R1		
	50A	1SDA050919R1		
	63A	1SDA050920R1		
	80A	1SDA050921R1		
	100A	1SDA050922R1		
	125A	1SDA050923R1		
	160A	1SDA050924R1		
T3 Triple Pole 36kA	63A	1SDA051241R1		
	80A	1SDA051242R1		
	100A	1SDA051243R1		
	125A	1SDA051244R1		
	160A	1SDA051245R1		
	200A	1SDA051246R1		
	250A	1SDA051247R1		
T3 Triple Pole 50kA	63A	1SDA051263R1		
	80A	1SDA051264R1		
	100A	1SDA051265R1		
	125A	1SDA051266R1		
	160A	1SDA051267R1		
	200A	1SDA051268R1		
	250A	1SDA051269R1		

Panel Boards Accessories

2



PLT33P

MCCB Accessories

		Product Hierarchy 4100001 - 3000003 - 3400004	
Front Connection Terminal for Copper Cables - FC CU		Order Code	Price £
T3 - 3 pieces		1SDA051482R1	
High Terminal Cover HTC		Order Code	Price £
T1 3P - 2 Pieces		1SDA051415R1	
T3 3P - 2 Pieces		1SDA051415R1	
T5 - 2 Pieces		1SDA054960R1	
T6 - 2 Pieces		1SDA014040R1	
T1 1P - 1 Piece		ED0001	

General Accessories

		Product Hierarchy 4100001	
Description	Order Code	Price £	
MCCB blanking module for inner door (210mm)	GHL5301904R0001		
T1 Busbar Shroud 10 pcs	MODT1		
T3 Busbar Shroud 10 pcs	MODT3		

Plug-in Bases

		Width mm	Order Code	Price £
T1 Single Pole L1 & L3 Plug In	25.4	PLT11L1/L3P		
T1 single pole L2 plug in base	25.4	PLT11L2P		
T1 three pole plug in base	76.2	PLT13P		
T3 3 Pole Plug In Base	105	PLT33P		
Additional kit for neutral & earth bars		AK1NE		
Extension kit for neutral & earth bars		EX1NE		
Busbar Shroud 630mm Long 3Pcs		SH630		

Meter Modules

Panel Board 3 phase kWh meter module

- Extension box with multi function meter (Deltaplus1300), CT's, wiring loom and MCB to pick up voltage.
- Extension box with CT's, wiring loom and MCB to pick up voltage.
- Modbus, maximum demand and M-Bus versions available
- Can be mounted top or bottom of board.



PB250METMOD

		Product Hierarchy 4200001		
Panel Board Depth	CT Size [A]	CT Hole Diameter	Order Code	Price £
240mm	250A	37mm	1TVL151800S1013	
	400A		1TVL151800S1014	
	600A		1TVL151800S1015	
	800A		1TVL151800S1016	
204mm	250A	37mm	1TVL151800S1174	
	400A		1TVL151800S1175	
	600A		1TVL151800S1176	
	800A		1TVL151800S1177	

When fitting side extension modules together with a meter module please order the required number or RC2000 extension modules

Please note: The above modules are built to order - Lead times available on request

Panel Boards Accessories



640T1PB3

Plinths

Product Hierarchy 4100001		
	Order Code	Price £
Four corner feet 100mm high for main structure	ZL1000	
Finish profile for above plinth	ZL1001	
Two Feet 100mm high for side extension box	ZL3000	
Finishing profile for side extension box	ZL2001	

Plinths cannot be used when meter modules are fitted/extension boxes

Top/Bottom Extension Modules

385H x 690W x 240D mm top/bottom structure extension box	RC1000	
385H x 390W x 240D mm top/bottom cable way extension box	RC2000	

Side Extension Modules

Uprights 1050mm	MI1000	
Cable Container 1050mm	VC1000	
Front Door 1050mm	PC1002	
Uprights 1250mm	MI1200	
Cable Container 1250mm	VC1200	
Front Door 1250mm	PC1202	
Uprights 1450mm	MI1400	
Cable Container 1450mm	VC1400	
Front Door 1450mm	PC1402	
Uprights 1650mm	MI1600	
Cable Container 1650mm	VC1600	
Front Door 1650mm	PC1602	
Uprights 1850mm	MI1800	
Cable Container 1850mm	VC1800	
Front Door 1850mm	PC1802	
Uprights 2050mm	MI2000	
Cable Container 2050mm	VC2000	
Front Door 2050mm	PC2002	

When fitting side extension modules together with a top or bottom extension box please order the required number of RC2000 extension modules

Contents

Loadbreak Switches.....	50 - 52
Switch Fuses	53 - 54



Switching - Loadbreak Switches

IP65 Polycarbonate Enclosure

- IP65 three and four-pole switch disconnectors suitable for load break switching or isolation.
- Polycarbonate enclosure. IEC 60947-3

Polycarbonate Enclosure 9kW ... 11kW 3 pole



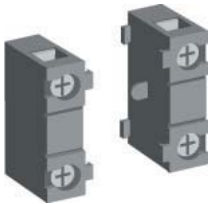
S37K5N

Rating@415v			Dimensions mm			Product Hierarchy 4000002	
1th A	AC22	kW	H	W	D	Order Code	Price
32	25	9	125	100	107	S37K5N-B	
40	40	11				S315KN-B	

Polycarbonate Enclosure 9kW ... 37kW 4 pole

Rating@415v			Dimensions mm			Product Hierarchy 4000002	
1th A	AC22	kW	H	W	D	Order Code	Price
32	25	9	125	100	107	S47K5N-B	
40	40	11				S415KN-B	
63	63	22	170	140	108	S418KN-B	
80	80	37				S426KN-B	

Auxiliary Contacts



			Product Hierarchy 4000002	
NO	NC		Order Code	Price
1	-		OA1G10	
-	1		OA1G01	
1	1		OA2G11	

Switching - Loadbreak Switches

IP65 Plastic Enclosure

Load Break Switches 3 - 4 - 6 pole 16...125 amps

- IP65 rated
- Grey plastic enclosure
- Standard handle - Red/Yellow (padlockable in the off position)
- Cable entries top and bottom
- All OTP16 (excluding 3p) /25/32 all have 25/20mm reducers



OTP16BA3M



OTP25BA3M



OTP45BA3M



OTP80BA3U

Rating@415v				No. Poles	Dimensions mm			Product Hierarchy 4000002	
1th A	AC22	AC23	kW		H	W	D	Order Code	Price
25	16	16	7.5	3 + solid neutral	120	85	60	OTP16BA3M	
				4	150	130	60	OTP16BA4MS	
				6	150	130	60	OTP16BA6M	
32	25	20	9	3+ solid neutral	150	130	60	OTP25BA3M	
				4	150	130	60	OTP25BA4M	
				6	150	130	60	OTP25BA6M	
40	40	23	11	3+ neutral	150	130	60	OTP32BA3M	
				4	150	130	60	OTP32BA4M	
				6	150	130	60	OTP32BA6M	
63	63	45	22	3+ solid neutral	200	145	90	OTP45BA3M	
				4	200	145	90	OTP45BA4M	
				6	200	145	90	OTP45BA6M	
80	80	75	37	3+ solid neutral	200	145	90	OTP63BA3M	
				4	200	145	90	OTP63BA4M	
				6	200	145	90	OTP63BA6M	
125	125	90	45	3+ solid neutral	400	200	140	OTP125BA3U	
				4	400	200	140	OTP125BA4U	
				6	400	200	140	OTP125BA6U	

3

Safety Switches 3 pole 16...40 amps

Rating@415v				No. Poles	Dimensions mm			Product Hierarchy 4000002	
1th A	AC22	AC23	kW		H	W	D	Order Code	Price
25	16	16	7.5	3	150	130	60	OTP16B3M	
32	25	20	9	3	150	130	60	OTP16B3M	
40	40	23	11	3	150	130	60	OTP32B3U	

Switching - Loadbreak Switches

IP65 Steel Enclosure

3



Load Break Switches 3 - 4 pole 20 ... 800A

- IP65 rated (not suitable for external installation)
- Powder coated textured finish (RAL 7035)
- All 3 pole switches include detachable neutral link (OT160 solid link)
- Hinged lid complete with lock
- Padlockable pistol grip handle as standard
- Removable gland plates fitted top and bottom (see below for knockout configurations)
- Spreader boxes available see below

Rating@415v [A]			Dimensions			Product Hierarchy 4000003			
1th A	AC22	AC23	H	W	D	No. Poles		Order Code	Price
32	25	20	300	200	150	3 + solid neutral		OT20TPN-B	
						4		OT20FP-B	
40	40	23	300	200	150	3+ solid neutral		OT32TPN-B	
						4		OT32FP-B	
80	80	75	300	300	150	3+ solid neutral		OT63TPN-B	
						4		OT63FP-B	
115	100	80	400	300	150	3+ solid neutral		OT100TPN-B	
						4		OT100FP-B	
125	125	90	400	300	150	3+ solid neutral		OT125TPN-B	
						4		OT125FP-B	
160	160	135	500	400	200	3 + solid neutral		OT160TPN-B	
						4		OT160FP-B	
200	200	200	500	400	200	3+ solid neutral		OT200TPN-B	
						4		OT200FP-B	
315	315	315	500	400	200	3+ solid neutral		OT315TPN-B	
						4		OT315FP-B	
500	500	500	500	400	200	3+ solid neutral		OT400TPN-B	
						4		OT400FP-B	
630	630	630	600	400	250	3+ solid neutral		OT630TPN-B	
						4		OT630FP-B	
800	800	800	600	400	250	3+ solid neutral		OT800TPN-B	
						4		OT800FP-B	

Note: OT630 & OT800 TPN/FP products are made to order and are non-stock items

Accessories

Spreader Boxes Suitable for Loadbreak Switches	Product Hierarchy 4000002			
	Spreader Box Order Code	Price	Spreader Box Gasket Order Code	Price
OT20, OT32, OT63, OT100, OT125	Not Required			
OT160, OT200, OT315, OT400	SRN5420K		GZ4020	
OT630, OT800	SRN6425K		GZ4025	
Wall Mounting Brackets (Pack of 4)			AA1206	

Auxiliary Contacts	Order Code	Price
1 N/O	OA1G10	
1 N/C	OA1G01	
1 N/O - 1 N/C	OA2G11	

Switching - Switch Fuses

IP65 Steel Enclosure



3 - 4 pole 20 ... 800A

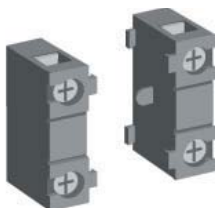
- IP65 rated (not suitable for external installation)
- Powder coated textured finish (RAL 7035)
- All switches are supplied with fuses and removable gland plates
- All 3 pole switches include detachable neutral link (OT160 solid link)
- Hinged lid complete with lock
- Switch Fuses are internally rated IP20 on incoming terminals up to 63A
- Padlockable pistol grip handle as standard
- Switch Fuses 100A are supplied with incoming terminal shrouds (NOT FITTED) to allow customer connections
- Spreader boxes available see below

1thA	AC23 [kW]			Dimensions			No. Poles	Fuse Type	Product Hierarchy 4000004	
	400V	500V	690V	H	W	D			Order Code	Price
20	7.5	11	15	300	300	150	3+detach neutral	A1	OS20TPN-B	
							4		OS20FP-B	
32	15	18	25	300	300	150	3+detach neutral	A2	OS32TPN-B	
							4		OS32FP-B	
63	30	37	55	400	300	150	3+detach neutral	A2/A3	OS63TPN-B	
							4		OS63FP-B	
100	55	55	90	400	300	150	3+detach neutral	A2/A3	OS100TPN-B	
							4		OS100FP-B	
125	55	75	110	400	300	150	3+detach neutral	A2/A3	OS125TPN-B	
							4		OS125FP-B	
160	75	90	132	500	400	200	3+solid neutral	A3/A4	OS160TPN-B	
							4		OS160FP-B	
200	110	132	200	600	400	250	3+detach neutral	B1/B2	OS200TPN-B	
							4		OS200FP-B	
315	160	220	220	600	400	250	3+detach neutral	B1/B4	OS315TPN-B	
							4		OS315FP-B	
400	220	280	400	600	400	250	3+detach neutral	B1/B4	OS400TPN-B	
							4		OS400FP-B	
630	355	450	560	600	600	300	3+detach neutral	C1/C2	OS630TPN-B	
							4		OS630FP-B	
800	450	560	710	800	600	300	3+detach neutral	C1/C2	OS800TPN-B	
							4		OS800FP-B	

Note: OS630 & OS800 TPN/FP products are made to order and are non-stock items

Accessories

Spreader Boxes Suitable for Loadbreak Switches	Product Hierarchy 4000002			
	Spreader Box Order Code	Price	Spreader Box Gasket Order Code	Price
OS20, OS32, OS63, OS100, OS125	Not Required			
OS160	SRN5420K		GZ4020	
OS200, OS315, OS400	SRN6425K		GZ4025	
OS630, OS800	SRN8630K		GZ6030	
Wall Mounting Brackets (Pack of 4)			AA1206	



Auxiliary Contacts	Order Code	Price
1 N/O	OA1G10	
1 N/C	OA1G01	
1 N/O - 1 N/C	OA2G11	

Contents

- Direct on Line Starters 56
- Direct on Line Starters + Isolator 57
- Reversing Direct on Line Starters 58
- Star Delta Starters 59
- Overload Selection 60
- Heating and Lighting Controls 61
- Pushbutton Stations & Terminal Boxes 63 - 64



Direct-on-Line Starters

IP65 Plastic - IP55 Metal Enclosure



Direct on Line IP65 Plastic Enclosure 400v up to 7.5kW

230v coil - Select overload from page 60

Three Phase 400V [AC3]		Single Phase 230V [AC3]		Dimensions mm			Part No	Product Hierarchy 3600001	
KW	hp	KW	hp	H	W	D		Order Code	Price £
5.5	7.5	1.5	2.0	230	106	127	DL23055P99	1TVS230550P5099	
7.5	10.0	2.2	3.0				DL23075P99	1TVS230750P5099	

400v coil - Select overload from page 60

5.5	7.5			230	106	127	DL40055P99	1TVS400550P5099	
7.5	10.0						DL40075P99	1TVS400750P5099	

Accessories

Description	Part No	Product Hierarchy 3600001	
		Order Code	Price £
E/Stop pushbutton kit	ESPBKIT	ESPBKIT	

DL23055P99

4

Direct-on-Line Starters + Isolator

IP65 Plastic - IP55 Metal Enclosure

Three Phase 400v up to 7.5kW with Isolator

- Direct-On-Line Starter with isolator in plastic & metal enclosure IEC 947-4-1
- Support for 400v 3ph or 230v single phase
- Overload supplied separately



DI23055P99

IP65 Plastic Enclosure 230v coil

Select overload from page 60

Three Phase 400V [AC3]		Single Phase 230V [AC3]		Dimensions mm			Part No	Product Hierarchy 3600001	
KW	hp	KW	hp	H	W	D		Order Code	Price £
5.5	7.5	1.5	2.0	220	200	160	DI23055P99	1TVS230551P5099	
7.5	10.0	2.2	3.0				DI23075P99	1TVS230751P5099	

400v coil

Select overload from page 60

5.5	7.5		220	200	160	DI40055P99	1TVS400551P5099	
7.5	10.0					DI40075P99	1TVS400751P5099	

4



DI23055S99

IP55 Metal Enclosure 230v coil

Select overload from page 60

Three Phase 400V [AC3]		Single Phase 230V [AC3]		Dimensions mm			Part No	Product Hierarchy 3600001	
KW	hp	KW	hp	H	W	D		Order Code	Price £
5.5	7.5	1.5	2.0	184	184	180	DI23055S99	1TVS230551S5099	
7.5	10.0	2.2	3.0				DI23075S99	1TVS230751S5099	

400v coil

Select overload from page 60

5.5	7.5		184	184	180	DI40055S99	1TVS400551S5099	
7.5	10.0					DI40075S99	1TVS400751S5099	

Direct-on-Line Reversing Starters

IP65 Plastic - IP55 Metal Enclosure



DR23075P99

Three Phase 400v up to 7.5kW Reversing

- Direct-On-Line Reversing Starter in plastic & metal enclosure IEC 947-4-1.
- Mechanically and electrically interlocked contactors.
- Overload supplied separately

IP65 Plastic Enclosure

230v coil

Select overload from page 60

Three Phase 400V [AC3]		Single Phase 230V [AC3]		Dimensions mm			Part No	Product Hierarchy 3600001	
KW	hp	KW	hp	H	W	D		Order Code	Price £
7.5	10.0	2.2	3.0	220	200	160	DR23075P99	1TVS230752P5099	

400v coil

Select overload from page 60

7.5	10.0			220	200	160	DR40075P99	1TVS400752P5099	
-----	------	--	--	-----	-----	-----	------------	-----------------	--

4



DR23075S99

IP55 Metal Enclosure

230v coil

Select overload from page 60

Three Phase 400V [AC3]		Single Phase 230V [AC3]		Dimensions mm			Part No	Product Hierarchy 3600001	
KW	hp	KW	hp	H	W	D		Order Code	Price £
7.5	10.0	2.2	3.0	184	184	165	DR23075S99	1TVS230752S5099	

400v coil

Select overload from page 60

7.5	10.0			184	184	165	DR40075S99	1TVS400752S5099	
-----	------	--	--	-----	-----	-----	------------	-----------------	--



Star Delta Starters

IP65 Plastic - IP55 Metal Enclosure



SD23015P99

Enclosed Star-Delta up to 22kW 400V

- Star-Delta Starters in metal enclosure IEC 947-4-1.
- All three phase star delta starters, are complete with pushbuttons, and 230v or 415v coils.
- Resetting of overload via stop button.
- Overload for standard motor duty is supplied separately.

Note: The overload should be fitted in the Delta loop, therefore overload rating equal to FLC x by 0.58*

IP65 Plastic Enclosure

230v coil Select overload from page 60

Three Phase 400V [AC3]		Dimensions mm			Part No	Product Hierarchy 3600001	
KW	hp	H	W	D		Order Code	Price £
15	20.0	220	275	138	SD23015P99	1TVS230153P5099	

400v coil Select overload from page 56

15	20.0	220	275	138	SD40015P99	1TVS400153P5099	
----	------	-----	-----	-----	------------	-----------------	--



SD23015S99



IP55 Metal Enclosure

230v coil Select overload from page 60

Three Phase 400V [AC3]		Dimensions mm			Part No	Product Hierarchy 3600001	
KW	hp	H	W	D		Order Code	Price £
15	20.0	184	284	165	SD23015S99	1TVS230153S5099	
22.0	30.0	305	284	175	SD23022S99	1TVS230223S5099	

400v coil Select overload from page 60

15	20.0	184	284	165	SD40015S99	1TVS400153S5099	
22.0	30.0	305	284	175	SD40022S99	1TVS400223S5099	



SI23015S99

IP55 Metal Enclosure with Isolator

230v coil Select overload from page 60

Three Phase 400V [AC3]		Dimensions mm			Part No	Product Hierarchy 3600001	
KW	hp	H	W	D		Order Code	Price £
15	20.0	184	284	180	SI23015S99	1TVS230154S5099	
22.0	30.0	305	284	190	SI23022S99	1TVS230224S5099	

400v coil Select overload from page 60

15	20.0	184	284	180	SI40015S99	1TVS400154S5099	
22.0	30.0	305	284	190	SI40022S99	1TVS400224S5099	

Overload Protection Selection



T25DU

4

Direct on Line Overload Selection

Three Phase 400V [AC3]		Single Phase		Overload Rating Amps		Part No	Product Hierarchy 1700006	
KW	hp	KW	hp	From	To		Order Code	Price £
0.25	0.33	0.05	0.08	0.63	1.0	TA25DU1.0	1SAZ211201R1021	
0.37	0.55	0.07	0.09	1.0	1.4	TA25DU1.4	1SAZ211201R1023	
0.55	0.75	0.1	0.12	1.3	1.8	TA25DU1.8	1SAZ211201R1025	
0.75	1.0	0.18	0.25	1.7	2.4	TA25DU2.4	1SAZ211201R1028	
1.1	1.5	0.25	0.33	2.2	3.1	TA25DU3.1	1SAZ211201R1031	
1.5	2.0	0.37	0.50	2.8	4.0	TA25DU4.0	1SAZ211201R1033	
2.2	3.0	0.55	0.75	4.5	6.5	TA25DU6.5	1SAZ211201R1038	
3.7	5.0	0.75	1.15	6.0	8.5	TA25DU8.5	1SAZ211201R1040	
4.0	5.5	1.1	1.5	7.5	11.0	TA25DU11	1SAZ211201R1043	
5.5	7.5	1.5	2.0	10.0	14.0	TA25DU14	1SAZ211201R1045	
7.5	10.0	2.2	3.0	13.0	19.0	TA25DU19	1SAZ211201R1047	

Star Delta Overload Selection

Three Phase 400V [AC3]		Overload Rating Amps		Part No	Product Hierarchy 1700006	
KW	hp	From	To		Order Code	Price £
3.7	5.0	6.0	8.5	TA25DU8.5	1SAZ211201R1040	
5.5	7.5	10.0	14.0	TA25DU14	1SAZ211201R1045	
7.5	10.0	13.0	19.0	TA25DU19	1SAZ211201R1047	
15	20	24.0	32.0	TA25DU32	1SAZ211201R1053	

Note: The overload should be fitted in the Delta loop, therefore overload rating equal to FLC x by 0.58*

*Overload Calculation			
Motor FLC	Delta Loop Setting		
5	2.9	18	10.4
6	3.5	20	11.6
7	4.0	25	14.5
8	4.6	30	17.4
9	5.2	35	20.3
10	5.8	40	23.2
12	7.0	45	26.1
14	8.1	50	29.0
16	9.3	55	32.0

Heating & Lighting

IP65 Plastic - IP55 Metal Enclosure



IP65 Plastic Enclosure Three & Four Pole Contactors 230v coil

(Including neutral terminal strip)

Heating AC1 Amps	Amps per pole Fluorescent Mercury	Amps per pole Tungsten	Main Poles	Part No	Product Hierarchy 3600004	
					Order Code	Price £
25	16	16	4	HL23025P4	1TVS230250P5000	
45	30	32	4	HL23045P4	1TVS230450P5000	
70	40	42	3	HL23063P3	1TVS230631P5000	
100	70	70	3	HL230100P3	1TVS230101P5000	



IP55 Metal Enclosure Three & Four Pole Contactor 230v coil

(Including neutral terminal strip)

Heating AC1	Amps per pole Fluorescent Mercury	Amps per pole Tungsten	Main Poles	Part No	Product Hierarchy 3600004	
					Order Code	Price £
25	16	16	4	HL23025S4	1TVS230250S5000	
45	30	32	4	HL23045S4	1TVS230450S5000	
70	40	42	3	HL23063S3	1TVS230631S5000	
100	70	70	3	HL230100S3	1TVS230101S5000	



Dimensions

Enclosure	Part No	Height mm	Width mm	Depth mm
Plastic	HL●●●25P4 - HL●●●45P4	230	106	127
	HL●●●63P3 - HL●●●100P3	220	200	160
Metal	HL●●●25S4 - HL●●●45S4	180	185	145
	HL●●●63S3 - HL●●●100S3			

Notes

4

Lined area for notes

Pushbutton Stations

Plastic IP65 Enclosures



Plastic Pushbutton Stations

- IP65 thermoplastic control station complete with actuator, contact blocks and legend plate. Supplied fully assembled. Other variations are available on request.



1GO



1RSC-EN



1K2 O-I

Description	Dimensions mm			Part No	Product Hierarchy 3600003	
	H	W	D		Order Code	Price £
1 Way Start/Green	75	101	74	1GO	1TVL110000P3101	
1 Way Stop/Red				1RC	1TVL101000P3102	

Mushroom Head 30mm (twist release) 300V 5A Max - to IEC60947-5-5	75	101	92	1RSC	1TVL101000P3203	
Emergency Stop 40mm (twist release) - to IEC60947-5-5	75	101	107	1RSC-EN	1TVL101000P3204	
Mushroom Head 60mm (twist release) - to IEC60947-5-5	75	101	107	1RMSC50	1TVL101000P3205	
Emergency Stop 40mm (with key release) 300V 5A Max - to IEC60947-5-5	75	101	122	1RMSKC	1TVL101000P3206	

Two-position switch	75	101	74	1H2O-I	1TVL110000P3107	
Two-position key switch (key removable both positions)				1K2O-I	1TVL110000P3108	
Three position switch				1H3I-O-II	1TVL110100P3109	
Three position key switch (key removable in all positions)				1K3I-O-II	1TVL110100P3110	

Pushbutton Stations & Terminals

IP65 Plastic - IP55 Metal Enclosure

Plastic Pushbutton Stations



2GORC

- IP65 thermoplastic control station complete with actuator, contact blocks and legend plate. Supplied fully assembled. Other variations are available on request.

Description	Dimensions mm			Part No	Product Hierarchy 3600003	
	H	W	D		Order Code	Price £
Start/Green and Stop/Red	75	141	79	2GORC	1TVL211000P3111	
Start/Green and Red/Emergency Stop 40mm (twist release) to IEC60947-5-5	75	141	107	2GORSC-EN	1TVL211000P3112	

4



1RSC-ENSS

Stainless Enclosures

Description	Dimensions mm			Part No	Product Hierarchy 3900004	
	H	W	D		Order Code	Price £
Emergency Stop 40mm (stay-put) - to EN418	100	140	100	1RSC-ENSS	1TVL100000P5015	
1 Gang Empty Enclosure	-	-	55	01.001001.SS1	01.001001.SS1	
2 Gang Empty Enclosure	-	-	55	01.001002.SS2	01.001002.SS2	
3 Gang Empty Enclosure	-	-	55	01.001003.SS3	01.001003.SS3	



5-JBOX2.5

Terminals in Enclosures

Description	No. Terms	[A] 1th	Dimensions mm			Part No	Product Hierarchy 3600005	
			H	W	D		Order Code	Price £
Junction Box IP65 junction box with flexible knockouts	5	24	-	-	-	5JBOX2.5	5-JBOX2.5 (Pack of 3)	
Terminal Box 2.5mm IP55 plastic enclosure	5	24	118	163	72	5TERM2.5	5TERM2.5	
	10	24				10TERM2.5	10TERM2.5	
Terminal Box 4mm IP55 plastic enclosure	5	32				5TERM4	5TERM4	
	10	32				10TERM4	10TERM4	



10TERM 2.5

Contents

- Busch Watchdog PIRs66
- Presence Tech67
- Concept BS Switches and Socket Series68 - 71
- Busch iDock70
- DIN Rail Dimmers71
- KNX Smart Homes and Intelligent Building Control72 - 74



Domestic Equipment

Busch Watchdog PIRs



5



ProfessionalLine 90

Busch Watchdog BasicLine - 240°

240° detection angle, IP55, 12m range frontal/lateral, 5sec-12min timer, 2000W ohmic/480W fluorescent switching, 5-1000 Lux, 2 years warranty

Product Hierarchy 1100001	
Order Code	Price
6844 AGM-204-500 white	6800-0-2507

Busch Watchdog ProfessionalLine - 90°

90/220/280° detection angle, IP55, 90°=12m range frontal/6m lateral, 220/280° = 16m range frontal/lateral, 10sec-30min timer, 3,680W ohmic/16AX fluorescent switching (cos.0.6), 0.5-300 Lux, 5 years warranty

6853 AGM-204-500 white	6800-0-2321
6853 AGM-201 brown	6800-0-2318
6853 AGM-35 anthracite	6800-0-2322



ProfessionalLine 280

Busch Watchdog ProfessionalLine - 220°

6845/11 AGM-204-500 white (no R/C)	6800-0-2334
6845/11 AGM-201-500 brown (no R/C)	6800-0-2335
6845/11 AGM-35-500 anthracite (no R/C)	6800-0-2336
6845 AGM-204-500 white (with R/C)	6800-0-2300
6845 AGM-201-500 brown (with R/C)	6800-0-2301
6845 AGM-35-500 anthracite (with R/C)	6800-0-2302
6846 AGM-204-500 white (with R/C)	6800-0-2307
6846 AGM-201-500 brown (with R/C)	6800-0-2308
6846 AGM-35-500 anthracite (with R/C)	6800-0-2309



AlarmLine 220

Busch Watchdog AlarmLine - 220°

220° detection angle, IP55, 16m range frontal/lateral and 6m security range, 10sec-30 min timer, 2,300W ohmic/10AX fluorescent switching (cos.0.6), second relay output 120W (for security range) 0.5-300 Lux. Radio range between PIR and receiver is 100m line of sight. 5 years warranty

6849 AGM-204-500 white (with R/C)	6800-0-2314
6849 AGM-201 brown (with R/C)	6800-0-2311
6849 AGM-35 anthracite (with R/C)	6800-0-2312



Busch Watchdog WaveLine - 220°

Wire-less, 220° detection angle, battery operated (5-10yrs lifespan), IP55, 16m range front/lat, 5 years warranty.

6745 AGM-204 white	6700-0-0018
6745 AGM-201 brown	6700-0-0019
6745 AGM-35 anthracite	6700-0-0020
6701 Receiver	6700-0-0022



Corner Mounting Bracket



RC Suppressor

Busch Watchdog Accessories

6887-204-500 Corner adapter (except BasicLine), white	6899-0-0292
6887-201-500 Corner adapter (except BasicLine), brown	6899-0-0293
6887-35-500 Corner adapter (except BasicLine), anthracite	6899-0-0294
6841-500 Remote control (except BasicLine)	6899-0-0296
6842 Service Remote control (except BasicLine)	6899-0-0299
6899 RC Suppressor	6899-0-0231

Domestic Equipment

PresenceTech 360°



Product Hierarchy 1100001

Busch PresenceTech BasicLine - 360°

Order Code

Price

Basic 360°, detection range 7m ø, IP40, switching 2,000W incandescent, 1,000W halogen, 900VA fluorescent, 5sec-20min timer, 10/40/100/400/1,000 Lux, 28mm mounting depth, 2 years warranty

6814 U-500 Busch PresenceTech BasicLine, white

6800-0-2518

Mini 360°, detection range 5m ø, IP40, switching 2,000W incandescent, 1,000W halogen, 900VA fluorescent, 1/5/10/15min timer, 10/40/100/400/1,000 Lux, 38mm ø, 40mm mounting depth, spring clamp flush mounted, 25 mm x 162 mm x 23 mm (power box) , 2 years warranty

6811 EB-500 Busch PresenceTech BasicLine mini, white

6800-0-2517

Corridor 360°, detection range 24m ø, IP40, switching 2,000W incandescent, 1,000W halogen, 900VA fluorescent, 1/5/15/30/60 min timer, 10/40/100/400/1,000 Lux + actual brightness, 19mm mounting depth, 2 years warranty

6818 U-500 Busch PresenceTech BasicLine corridor, white

6800-0-2519

6888 Surface mounting box for BasicLine corridor

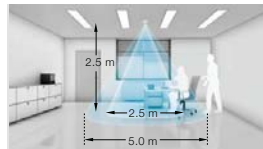
6899-0-2305

6898 Protective cage

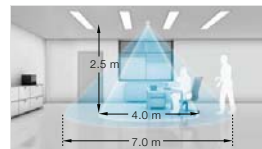
6899-0-2304

6843 IR Remote control (only BasicLine corridor)

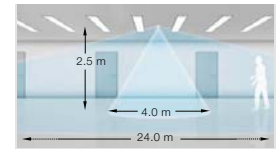
6800-0-2511



Mini



Basic



Corridor

5

Busch Watchdog PresenceTech - 360°

Presence 360° for special applications and Master/Slave function

P 5401 WHI PresenceTech with relay insert 2,300W/WA (can be used as Master)

P 5401 WHI

P 5402/11 WHI PresenceTech with 2g/1w output for switching 2 different circuits at 2 different levels (can be used as Master)

P 5402/11 WHI

P 5450 WHI PresenceTech for fluorescent light 0-10VDC, 700W for constant brightness control (can be used as Master)

P 5450 WHI

P 5405 WHI PresenceTech extension for P5401 WHI, P5402/11, P5450 WHI (will be used as a slave)

P 5405 WHI

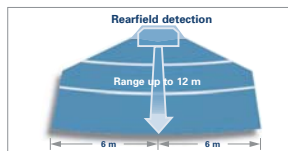
6899-0-0282 surface mounting box for PresenceTech P5401 WHI, P5402/11 WHI, P5450 WHI

6899-0-0282

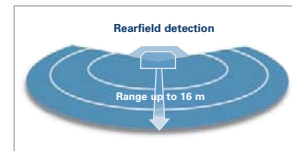


Watchdog Diagrams

Busch-Watchdog 90 ProfessionalLINE

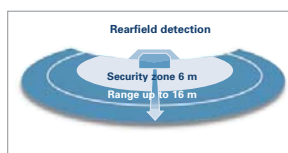


Busch-Watchdog 220 ProfessionalLINE

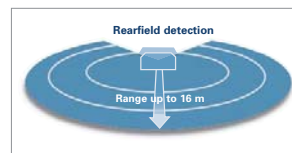


Busch-Watchdog 220 SelectLINE

Busch-Watchdog 220 AlarmLINE



Busch-Watchdog 280 ProfessionalLINE



Domestic Equipment

Concept BS Series Wiring Accessories

Concept BS

...concept in every detail

For over 125 years our products have mirrored the growth and development changes in electrical wiring technologies. Quality and reliability of our products have always been our first priority. Having a concept in every detail was, is and always will be our secret to success.

With its unique design - its square rocker combined with a slight curve on the top and bottom - concept bs is the best choice to meet your pursuit of EWA products with high quality and attractive design.



AC101 AC105



AC429 AC107



AC120WH AC177



AC176 AC109

Switches

1 gang 1 way switch, 10AX
1 gang 2 way switch, 10AX
2 gang 2 way switch, 10AX
3 gang 2 way switch, 10AX
4 gang 2 way switch, 10AX
Intermediate switch, 10AX
Push switch with "bell" symbol, 10A
1 gang 1 way push switch, 10A
2 gang 1 way push switch, 10A
1 gang 1 way double pole switch, with marking "on", 20AX
1 gang 1 way double pole switch, with marking "On", with flex outlet, 20AX
1 gang 1 way double pole switch, with marking "On", "water heater", with flex outlet, 20AX
1 gang 1 way double pole switch with LED, 32A
1 gang 1 way double pole switch with LED, 45A
45A double pole switch with LED and 13A switched socket outlet with neon
Pull cord switch, 10AX
Fan isolator 3 pole, 10A

Pack Qty	Product Hierarchy 9000002	
	Order Code	Price
15	AC101	
	AC105	
	AC106	
	AC107	
	AC108	
	AC119	
	AC429	
	AC430	
	AC438	
	AC111	
10	AC120	
	AC120WH	
8	AC176	
	AC177	
5	AC118	
10	AC109	
15	AC134	

Sockets & Outlets

BS socket outlet, 13A	15	AC208	
BS double pole switched socket outlet, 13A		AC237	
BS double pole switched socket outlet with neon, 13A		AC238	
2 gang BS double pole switched socket outlet, 13A	8	AC239	
2 gang BS double pole switched socket outlet with neon, 13A		AC240	
BS round pin socket outlet, 5A	15	AC210	
BS double pole round pin switched socket outlet, 5A		AC221	
Shaver socket outlet	1	AC401	
Fused connection unit, 13A	10	AC506	
Switched Fused connection unit with neon, 13A		AC507	



AC208 AC238



AC210 AC401



AC401 AC506

Domestic Equipment

Concept BS Series Wiring Accessories



AC301

AC302



AC303

AC305



AC333

AC332

TV/Data/Communication

	Pack Qty	Product Hierarchy 9000002	
		Order Code	Price
1 gang TV outlet, dead-end feeder	10	AC301	
1 gang TV outlet, loop-through		AC304	
2 gang TV outlet, TV/TV, loop-through		AC302	
2 gang TV outlet, TV/FM, F-type, dead-end feeder	1	AC312	
1 gang Satellite outlet, TV, F-type, dead-end feeder	10	AC303	
1gang telephone outlet, BT master, RJ11,6-pole UPT		AC305	
1gang telephone outlet, BT second, RJ11,6-pole UPT		AC306	
1 gang computer outlet, RJ45, cat.5e, 8-pole UTP		AC331	
1 gang computer outlet, RJ45, cat.6, 8-pole UTP		AC333	
2 gang computer outlet, RJ45, cat.5e, 8-pole UTP		AC332	

Hotel Wiring Accessories



AC332

AC402



AC403-02

AC417

Shaver socket outlet	1	AC401	
20A Card switch with 30sec switch-off delay	8	AC402	
Bell push-switch "Do Not Disturb" & "Please Clean Room" marking and indicator, 10A	12	AC403-002	
Thermostat controller with display, 2 pipe system	1	AC417	

5

Frames



AC5101-S



AC5103

1 gang blank plate	20	AC504	
2 gang blank plate	10	AC505	
1 gang frame, white		AC5101-G	
1 gang frame, silver	60	AC5101-S	
1 gang frame, elegant grey	10	AC5101-G	
2 gang frame, white	30	AC5201	
2 gang frame, silver		AC5201-S	
2 gang frame, elegant grey	10	AC5201-G	
3 gang frame, white	30	AC5103	
3 gang frame, silver		AC5103-S	
3 gang frame, elegant grey	10	AC5103-G	
4 gang frame, white	30	AC5104	
4 gang frame, silver		AC5104-S	
4 gang frame, elegant grey	10	AC5104-G	
2 gang Horizontal frame for DSSO, silver	2	CBA0326601P1011	
2 gang Vertikel frame for Shaver socket, silver		CBA0146611P1001	
2 gang Horizontal frame for DSSO, elegant grey	1	CBA0326601P2211	
2 gang Vertikel frame for Shaver socket, elegant grey		CBA0146611P2211	
1 gang adapter plate for dimmer and other BJE items, white	20	AC503	
1 gang adapter plate for dimmer and other BJE items, silver		AC503-S	
1 gang adapter plate for dimmer and other BJE items, elegant grey	100	AC503-G	
Earthing kit (to be used when installing dimmer)	20	AC543	

Domestic Equipment

Busch iDock Future



Busch iDock Future

The Busch iDock offers each iPod* or iPhone* a fixed place in the home. The Busch iDock with its simple elegance blends with every environment. With the Apple* remote control the iPod* or the iPhone* are easy to operate from a distance. Even MP3 players from other manufacturers can be connected to a 3.5 mm jack socket. The Busch iDock offers excellent interplay with the Busch Digital Radio or integration with Busch AudioWorld®. It can also be used with the Concept bs series.



iDock

iDock	Product Hierarchy 9000002	
	Order Code	Price
8230-84 Busch iDock set, white (future) - iPhone not included	8200-0-0132	
8218 U Busch iDock single unit, insert only - iPhone not included	8200-0-0142	
8254-84 Busch iDock cover plate, white (future) - iPhone not included	8200-0-0135	

*Apple, the Apple logo, iPod classic, iPod nano and iPod touch are trademarks of Apple inc., which are registered in the USA and in other countries. iPhone is a trademark of Apple inc. Apple is not responsible for the function of the device or its conformity with safety standards and regulatory standards.

The ABB Busch AudioWorld (F) offers more functions and devices for various applications, like microphone consoles (i.e. For use in surgeries), DIN-rail amplifier for Busch iDock (i.e. Hotels) and much more. For more information please contact technical department.

5



Domestic Equipment

Dimmers

High Wattage Dimmers

- DIN Rail Mounted

The ideal component for public and commercial buildings to cope with higher loads. The MDRC Dimmer allows step by step increase in load capacities up to 27,000 watts. The unit can be installed in the distribution board and can be controlled by one push switch. Inter-changeable cover cap on the top of the module, which can be used for maintenance purposes. Choose from Rotary Control Cap, Push Button or Timer for central control. Each module (6584-500) comes with ready-made line jack (RJ12) for capacity expansion.



Universal Master Dimmer (MDRC)

For switching and dimming incandescent, 230V Halogen, LV Halogen with conv. or Electronic Transformer. Light level memory, capacity-expansion with 6584-500, low noise, short circuit protected, overload protected.

Rated: 230V
 Rated Frequency: 50/60Hz.
 Rated Power: 60-500W/VA

Product Hierarchy 9000002	
Order Code	Price
6590-0-0178	



Universal Central Module (MDRC)

To be used with 6583-500, combination of up to 6 modules (3,000W/VA)

Rated: 230V
 Rated Frequency: 50/60Hz.
 Rated Power: 60-500W/VA

Product Hierarchy 9000002	
Order Code	Price
6590-0-0179	



Control Unit (MDRC)

For controlling up to 2 x 9 groups, on site operation via control input 0-10VDC/0-20mA, special adjustable functions ie: cleaning light, vacation, group control.

Rated: 230V
 Rated Frequency: 50Hz.
 2 x Control Signal Outputs

Product Hierarchy 9000002	
Order Code	Price
6590-0-0155	



Push Button Cap

To be used with Master 6583-500 to replace original cover, resting on Master Dimmer

Product Hierarchy 9000002	
Order Code	Price
6590-0-0181	

Rotary Knob Cap

To be used with Master 6583-500 to replace original cover, resting on Master Dimmer

Product Hierarchy 9000002	
Order Code	Price
6590-0-0183	

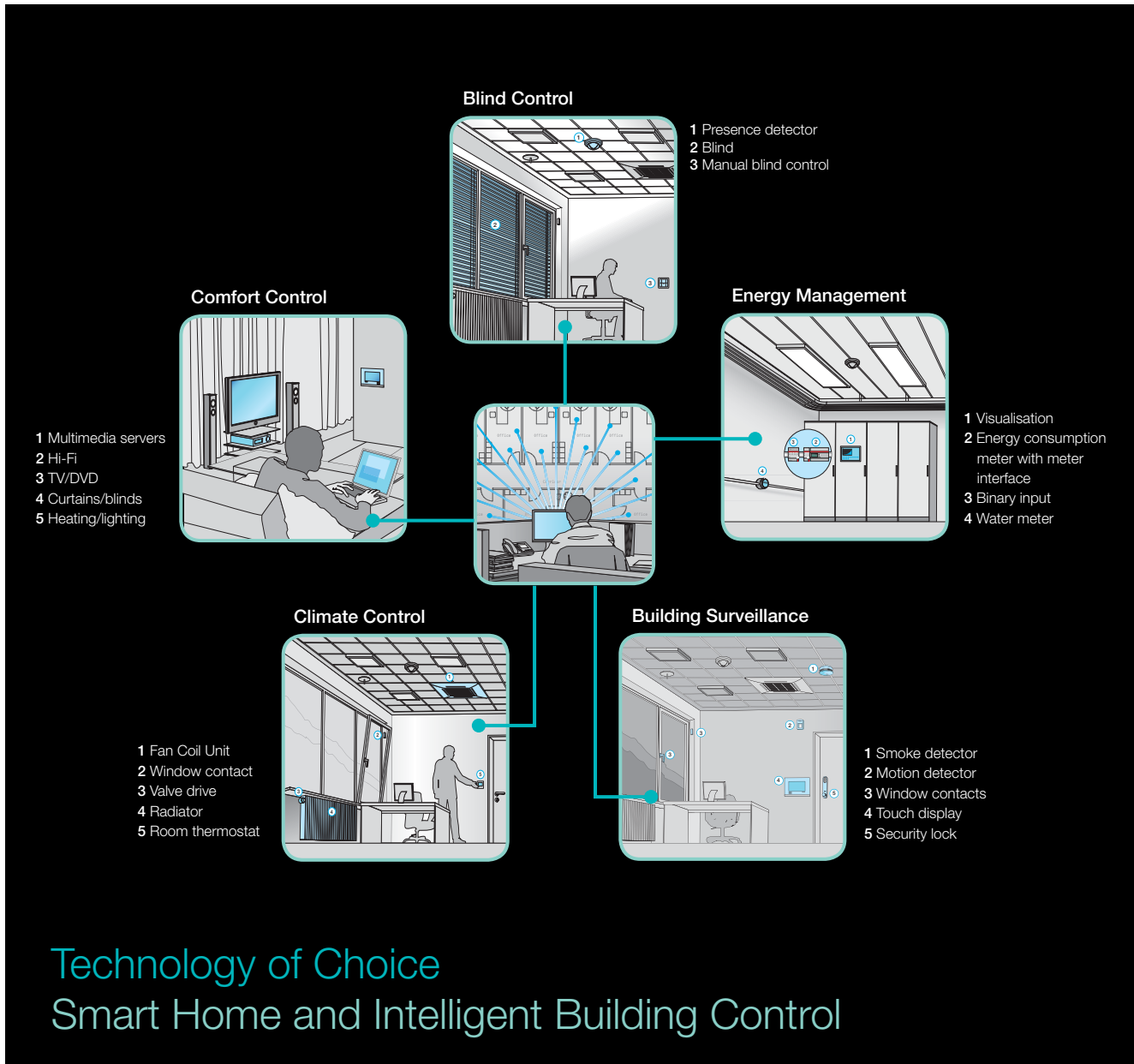


Timer Control Cap

To be used with Master 6583-500 to replace original cover, resting on Master Dimmer

Product Hierarchy 9000002	
Order Code	Price
6590-0-0185	

5



KNX

Overview

ABB i-bus® KNX Intelligent Building Control.

In many areas of our private and working lives, the increasing level of automation is a trend that confronts us on a daily basis without actually being noticed.

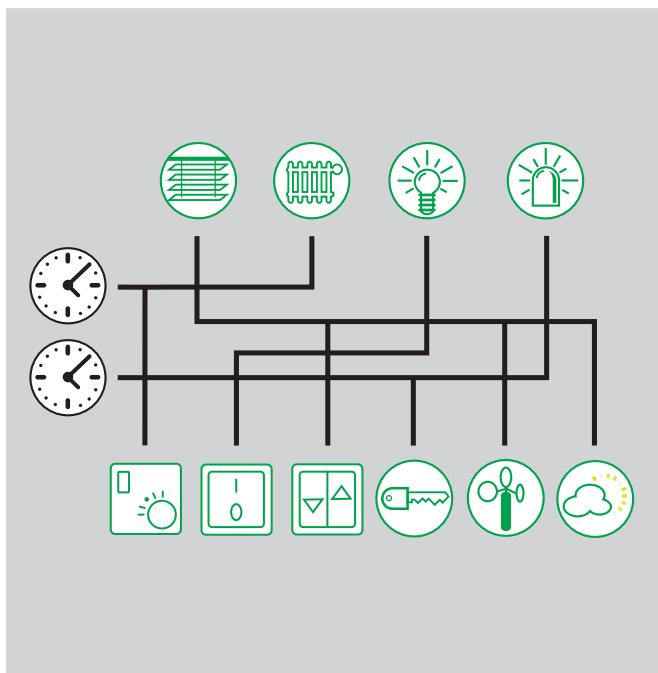
Automation in buildings aims to combine individual room functions with one another and to simplify the implementation of individual customer preferences. KNX is the logical development for implementing traditional and new requirements in electrical building installations and thus replacing conventional installation techniques. The intelligent installation bus system efficiently performs the conventional functions and offers an additional broad range of expanded features, which could not be realized without a bus system. ABB offers consultants, system integrators and electrical installers a comprehensive product range with ABB i-bus® KNX, in order to meet the challenges posed to electrical building installations both today and in the future.

The KNX system is the leading intelligent control system for buildings world-wide. KNX resulted from the merger of major bus systems, including the well-known EIB (European Installation Bus) that has been successfully on the market since 1992.

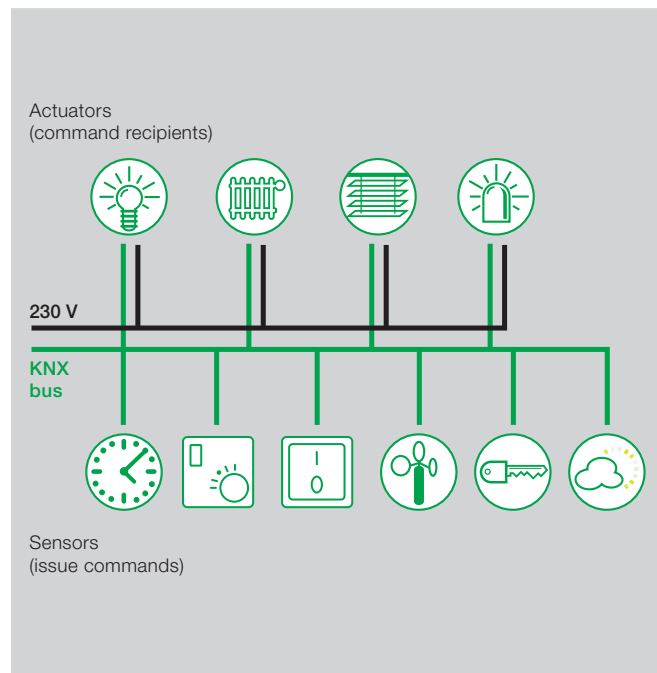
What does KNX stand for? KNX is the first globally standardized system for the automation of residential and commercial buildings in accordance with the international standard

(ISO/IEC 14543-3), the European standard (CENELEC EN 50090, CEN EN 13321-1 and 13321-2), the Chinese standard (GB/Z 20965) and the US standard (ANSI/ASHRAE 135).– KNX has established a clearly defined system platform where the KNX products of different manufacturers can be operated with one another. Both the data protocol and the devices are certified compliant to the KNX standard. KNX thus guarantees the net-workability, interoperability, is both upward and downward compatible and thus future-proof. Just one common software tool is required for planning, engineering and commissioning of all KNX installations. Both the manufacturers and the KNX Association support professionals during planning, commissioning and maintenance world-wide. Comprehensive training opportunities are available for beginners and experienced users in certified training centres. More than 200 internationally certified manufacturers are members of the KNX association. More than 22,000 qualified KNX partners plan, install and integrate KNX systems worldwide. Thousands of buildings, ranging from private houses to airport complexes around the world, are equipped with more than 10 million KNX products.

The conventional solution: Many separate cables, separate functionality, little flexibility



The intelligent solution: KNX – a system, a standard, many interoperable functions for maximum flexibility



5



Product Hierarchy 1100001		
	Order Code	Price
Sensors		
Smart Touch Control Panel	6136-0-0185	
Design Frame For Panel	6136-0-0141	
Flush mounting box for Controlpanel	6136-0-0124	
Busch-ComfortTouch	6136-0-0124	
Cover Frame - ComfortTouch, Black	8136-0-0004	
Design bar - ComfortTouch, Aluminium	8136-0-0018	
Flush mounting box for ComfortTouch	8136-0-0020	
Design strip for ComfortTouch	8136-0-0018	

Product Hierarchy 1100001		
	Order Code	Price
Sensors		
Smart Touch Control Panel	6136-0-0185	
Design Frame For Panel	6136-0-0141	
Flush mounting box for Controlpanel	6136-0-0124	
Busch-ComfortTouch	6136-0-0124	
Cover Frame - ComfortTouch, Black	8136-0-0004	
Design bar - ComfortTouch, Aluminium	8136-0-0018	
Flush mounting box for ComfortTouch	8136-0-0020	
Design strip for ComfortTouch	8136-0-0018	

System Products		
RM/S2.1 Room Master	2CDG110095R0011	
RM/S1.1 Room Master	2CDG110094R0011	
SV/S30.640.5 Power Supply 640MA	GHQ6310048R0111	
DG/S 8.1 Dali Gateway 8F	2CDG110025R0011	
Bus Coupler	6120-0-0065	
LK/S4.1 Line Coupler	2CDG110027R0011	
Connection Terminal-red/blk	GHQ6301901R0001	
US/U2.2 Universal Interface 2 Fold FM	GHQ6310074R0111	

Dimmers		
UD/S2.300.2 2-FOLD 300VA	2CDG110074R0011	
4-FOLD 210VA	6197-0-0025	
4-FOLD 315VA	6197-0-0026	
6-FOLD 315VA	6197-0-0027	
4-FOLD 600VA	6197-0-0028	

PIRs		
Watchdog 220 Silver	6132-0-0162	
Watchdog 220 White	6132-0-0160	
Corner Bracket	6899-0-0292	

Contents

- IP65 Sheet Steel Enclosures Steel Door 82
- IP65 Sheet Steel Enclosures Glazed Door 83
- Overview of Insulated Enclosures 84 - 85
- Adaptable Boxes 86 - 87
- IP66 Weather Proof Enclosures 88 - 91
- Modular Enclosures 92 - 94
- IP Ratings Chart 95



Enclosures

IP65 Sheet Steel Enclosure (For external use please consult us)



6

Solid Door Enclosures IP65 - Nema 4, 12 & 13

Colour: RAL7035 (Orange Peel)

Top & Bottom Gland Plates including Mounting Plate

Description H x W x D	Product Hierarchy 3200003	
	Order Code	Price
300 x 200 x 150	SRN3215K	
300 x 300 x 150	SRN3315K	
300 x 400 x 150	SRN3415K	
400 x 300 x 150	SRN4315K	
400 x 300 x 200	SRN4320K	
400 x 200 x 200	SRN4420K	
400 x 600 x 200	SRN4620K	
500 x 300 x 200	SRN5320K	
500 x 400 x 200	SRN5420K	
500 x 400 x 250	SRN5425K	
600 x 400 x 200	SRN6420K	
600 x 400 x 250	SRN6425K	
600 x 500 x 200	SRN6520K	
600 x 640 x 300	SRN6630K	
800 x 600 x 250	SRN6625K	
600 x 600 x 250	SRN7520K	
700 x 500 x 200	SRN7525K	
700 x 500 x 250	SRN8625K	
800 x 600 x 300	SRN8630K	
800 x 800 x 300	SRN8830K	
1000 x 600 x 250	SRN10625K	
1000 x 600 x 300	SRN10630K	
1000 x 800 x 300	SRN10830K	
1200 x 600 x 300	SRN12630K	
1200 x 800 x 300	SRN12830K	
1200 x 800 x 400	SRN12840K	

Coming soon - stainless steel versions - consult us for more information

Enclosures

IP65 Sheet Steel Enclosure

Glazed Door Sheet Steel Enclosures IP65 Mounting Plate Sold Separately	Product Hierarchy 3200003	
	Description H x W x D	Order Code
500 x 400 x 200	SRN5420VK	
500 x 400 x 250	SRN5425VK	
600 x 400 x 200	SRN6420VK	
600 x 400 x 250	SRN6425VK	
800 x 600 x 250	SRN8625VK	
700 x 500 x 200	SRN7520VK	
700 x 500 x 250	SRN7525VK	
800 x 600 x 250	SRN8625VK	
800 x 600 x 300	SRN8630VK	
1000 x 600 x 250	SRN10625VK	
1000 x 600 x 300	SRN10630VK	
1000 x 800 x 300	SRN10830VK	
1200 x 600 x 300	SRN12630VK	
1200 x 800 x 300	SRN12830VK	

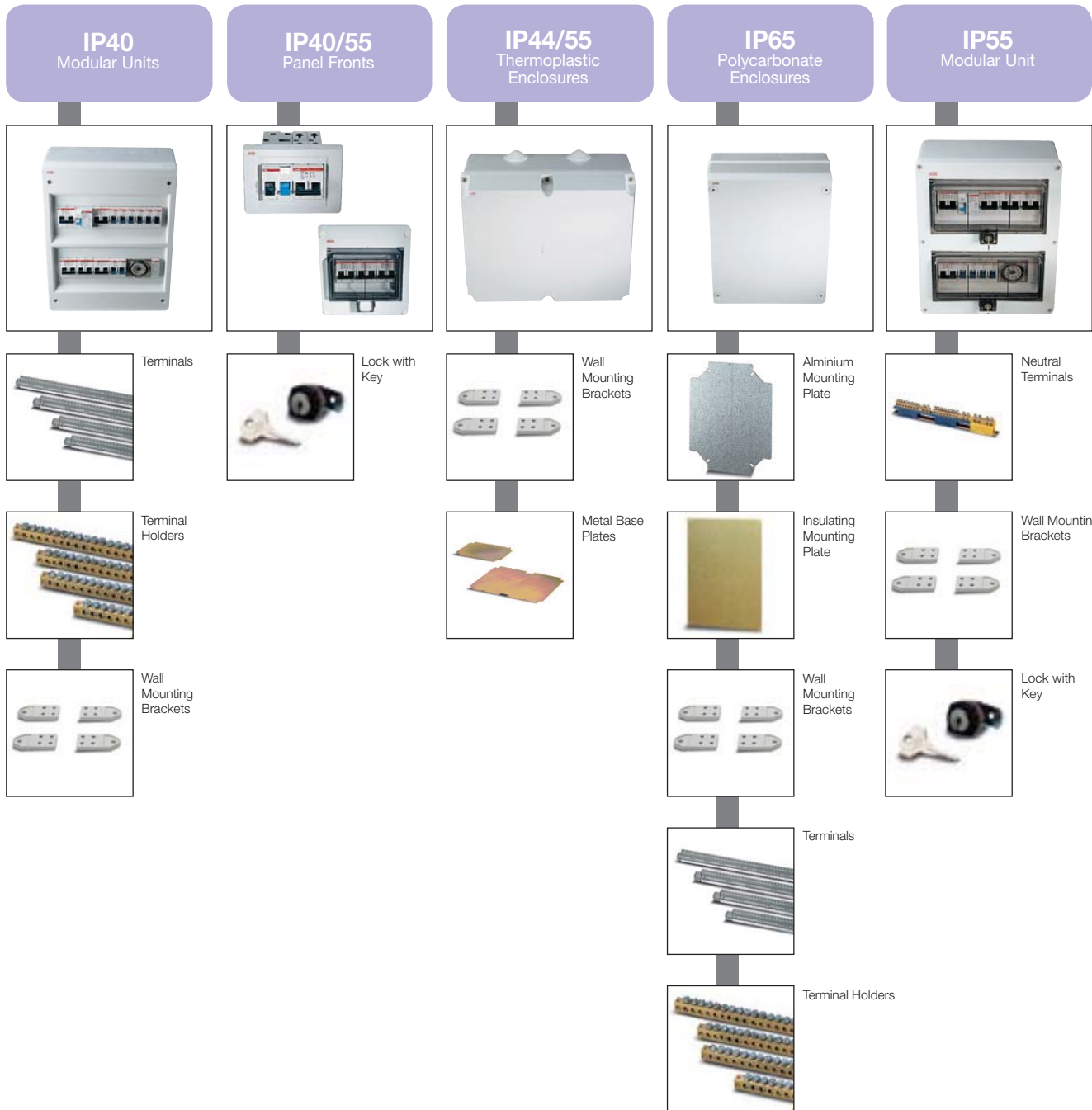
6

Accessories	Product Hierarchy 3200003	
	Description	Order Code
Document pocket	AA5600	
N.4 wall mounting brackets	AA1206	
Lock with Yale insert & key	AA8002	

PF5040 MOUNTING PLATE FOR SRN5420VK - SRN5425VK
PF6040 MOUNTING PLATE FOR SRN6420VK - SRN6425VK
PF8060 MOUNTING PLATE FOR SRN8625VK - SRN8630VK
PF1060 MOUNTING PLATE FOR SRN10625VK - SRN10630VK
PF1080 MOUNTING PLATE FOR SRN10830VK
PF1260 MOUNTING PLATE FOR SRN12630VK
PF1280 MOUNTING PLATE FOR SRN12830VK

Enclosures - Insulated IP40 - IP66

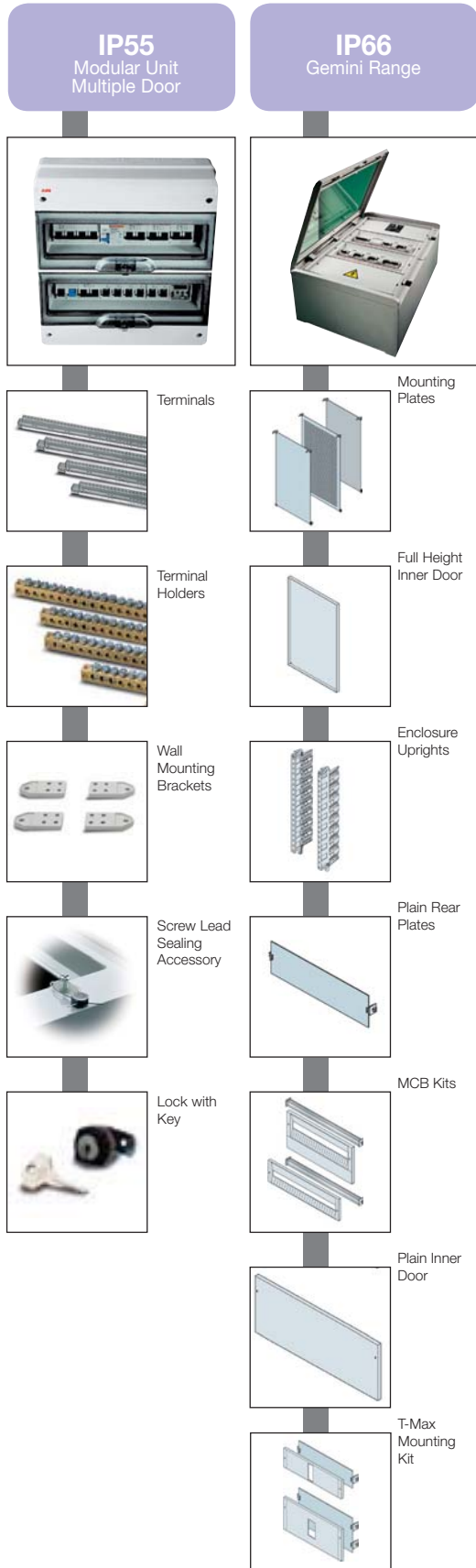
Overview



6

Enclosures - Insulated IP40 - IP66

Overview



Enclosures - IP44 & 55 Thermoplastic Adaptable Boxes



IP44 Box

Size	Description	Product Hierarchy 3100007	
		Order Code	Price
ø65 - H35	round with glands & press on lid	00800	
ø80 - H40	round with glands & press on lid	00802	
65 x 65 x 32	with glands & screw on lid	00808	
80 x 80 x 40	with glands & screw on lid	00810	
100 x 100 x 50	with glands & screw on lid	00816	
105 x 70 x 50	with glands & screw on lid	00820	
100 x 100 x 80	with glands & screw on lid	00821	
153 x 110 x 66	with glands & low screw on lid	00822	
160 x 135 x 77	with glands & low screw on lid	1SL0824A00	
220 x 170 x 80	with glands & low screw on lid	1SL0826A00	
310 x 240 x 110	with glands & low screw on lid	1SL0828A00	
160 x 135 x 150	with glands & high screw on lid	1SL0830A00	
220 x 170 x 150	with glands & high screw on lid	1SL0832A00	
310 x 240 x 160	with glands & high screw on lid	1SL0834A00	

6



IP55 Box

Size	Description	Product Hierarchy 3100007	
		Order Code	Price
100 x 100 x 50	with smooth walls & low screw-on lid	00846	
105 x 70 x 50	with smooth walls & low screw-on lid	00850	
100 x 100 x 80	with smooth walls & low screw-on lid	00851	
153 x 110 x 66	with smooth walls & low screw-on lid	00852	
160 x 135 x 77	with smooth walls & low screw-on lid	1SL0854A00	
220 x 170 x 80	with smooth walls & low screw-on lid	1SL0856A00	
310 x 240 x 110	with smooth walls & low screw-on lid	1SL0858A00	
153 x 110 x 66	with smooth walls & transparent low screw-on lid	00872	
160 x 135 x 150	with smooth walls & transparent high screw-on lid	00880	
220 x 170 x 150	with smooth walls & transparent low screw-on lid	1SL0882A00	
310 x 240 x 160	with smooth walls & transparent high screw-on lid	1SL0884A00	
160 x 135 x 150	with smooth walls & high screw-on lid	1SL0860A00	
220 x 170 x 150	with smooth walls & high screw-on lid	1SL0862A00	
310 x 240 x 160	with smooth walls & high screw-on lid	1SL0864A00	
160 x 135 x 70	with smooth walls & transparent low screw-on lid	1SL0874A00	
220 x 170 x 80	with smooth walls & transparent low screw-on lid	1SL0876A00	
310 x 240 x 110	with smooth walls & transparent low screw-on lid	1SL0878A00	

Enclosures - IP65 in Polycarbonate Adaptable Boxes



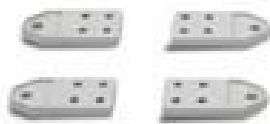
IP65 Polycarbonate Enclosure

Size HxWxD	Product Hierarchy 3100007	
	Order Code	Price
220 x 140 x 140	12804	
220 x 205 x 140	12808	
220 x 275 x 140	12812	
370 x 275 x 140	12814	
570 x 275 x 140	12816	
570 x 380 x 140	12818	



Aluminium Mounting Plate

For Enclosure Type	Product Hierarchy 3100007	
	Order Code	Price
12804	12842	
12808	12844	
12812	12845	
12814	12846	
12816	12847	
12818	12848	

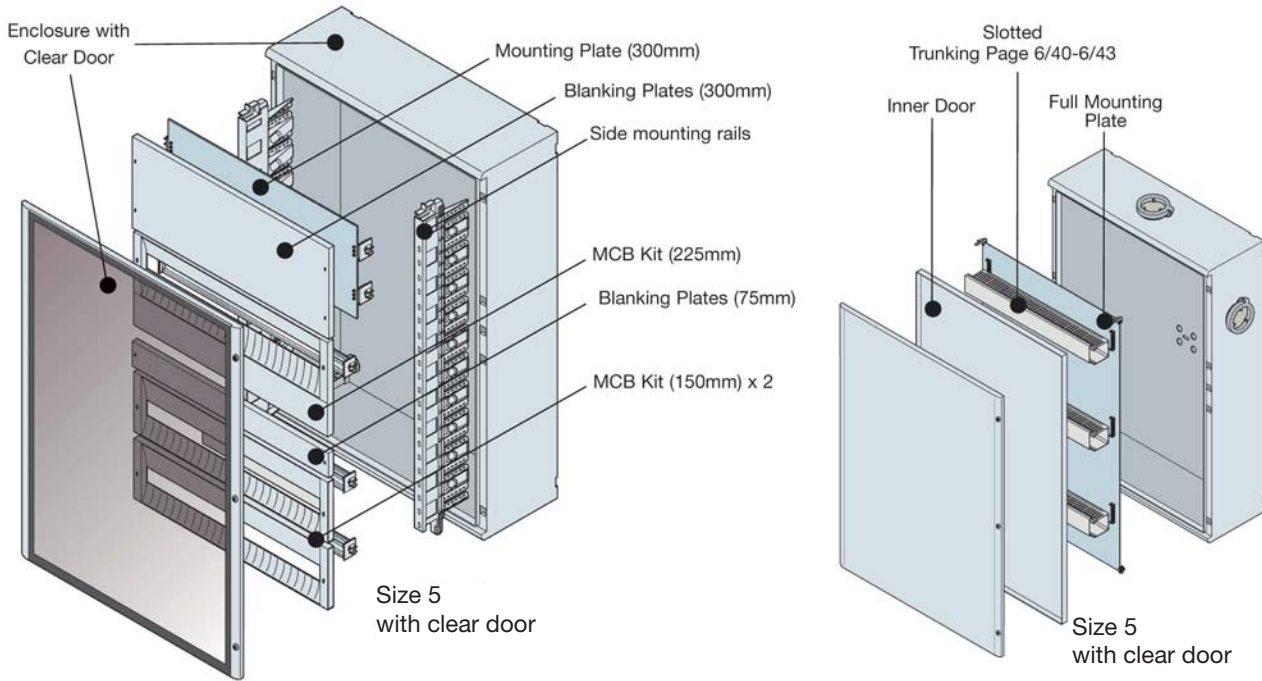


Wall Mounting Brackets

For Enclosure Type	Product Hierarchy 3100007	
	Order Code	Price
Fits All	12858	

Enclosures

IP66 Gemini Weather Proof Range



6

Gemini Enclosures

Components are suitable for any type and size of enclosure



Enclosure with Plain Door

Size HxWxD	Usable Height	Size	Product Hierarchy 3100007	
			Order Code	Price
400 x 335 x 210	300	1	1SL0201A00	
550 x 460 x 260	450	2	1SL0202A00	
700 x 460 x 260	600	3	1SL0203A00	
700 x 590 x 260	600	4	1SL0204A00	
855 x 590 x 360	750	5	1SL0205A00	

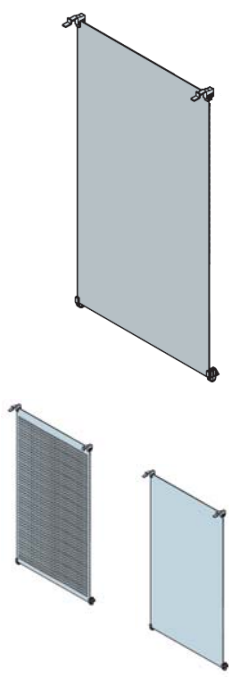
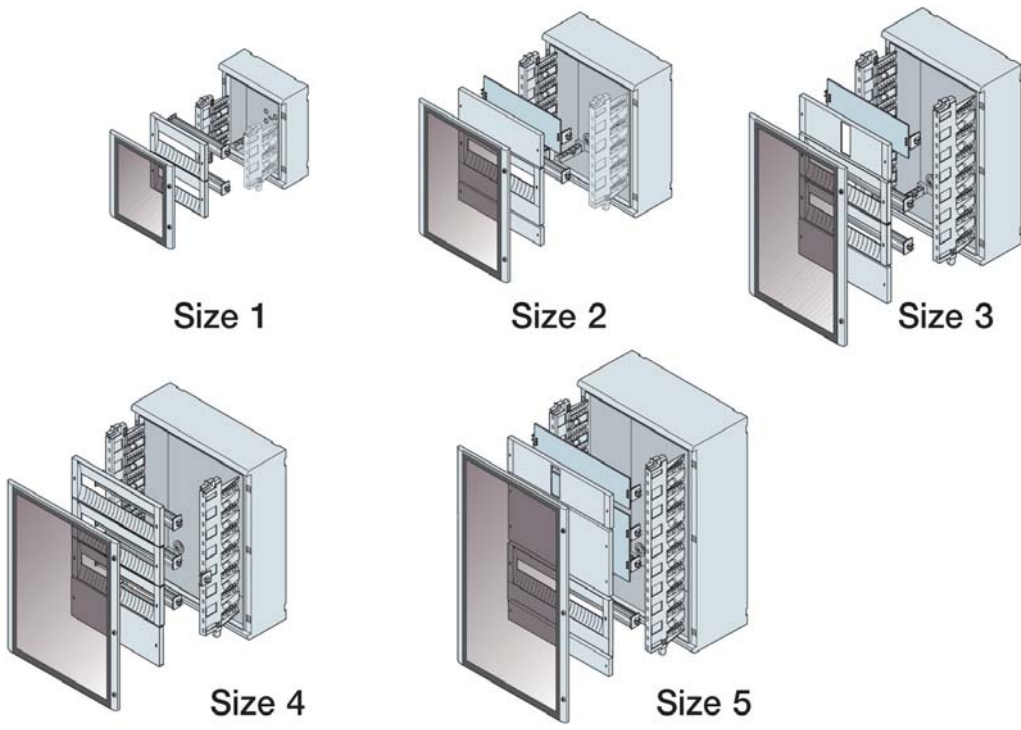


Enclosure with Clear Door

Size HxWxD	Usable Height	Size	Product Hierarchy 3100007	
			Order Code	Price
400 x 335 x 210	300	1	1SL0211A00	
550 x 460 x 260	450	2	1SL0212A00	
700 x 460 x 260	600	3	1SL0213A00	
700 x 590 x 260	600	4	1SL0214A00	
855 x 590 x 360	750	5	1SL0215A00	

Enclosures

IP66 Gemini Weather Proof Range



Full Mounting Plates

Size HxW	Size	Product Hierarchy 3100007	
		Order Code	Price
285 x 235	1	1SL0259A00	
435 x 360	2	1SL0260A00	
585 x 360	3	1SL0261A00	
585 x 485	4	1SL0262A00	
735 x 485	5	1SL0263A00	

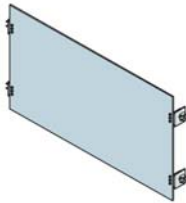
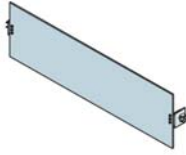
Also available:

- Perforated Mounting Plates suitable for use with floating nuts.
- Insulated Mounting Plates.

Please consult us for availability

Enclosures

IP66 Gemini Weather Proof Range



Mounting Plates

Mounting Plates			Product Hierarchy 3100007	
Size HxW	Nominal Size	Size	Order Code	Price
130 x 210	150	1	1SL0296A00	
130 x 318	150	2	1SL0297A00	
130 x 318	150	3	1SL0297A00	
130 x 443	150	4	1SL0298A00	
130 x 443	150	5	1SL0298A00	
130 x 663	150	6	1SL0299A00	
280 x 318	300	2	1SL0302A00	
280 x 318	300	3	1SL0302A00	
280 x 443	300	4	1SL0303A00	
280 x 443	300	5	1SL0303A00	
280 x 663	300	6	1SL0304A00	

Side Mounting Rails

Side Mounting Rails		Product Hierarchy 3100007		
Size H		Size	Order Code	Price
300		1	1SL0283A00	
450		2	1SL0284A00	
600		3	1SL0285A00	
600		4	1SL0285A00	
750		5	1SL0286A00	
900		6	1SL0287A00	

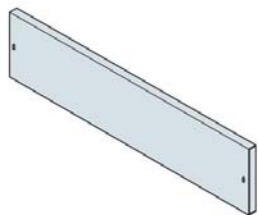
MCB Kits

MCB Kits			Product Hierarchy 3100007	
Size HxW	Modules	Size	Order Code	Price
150 x 250	12	1	1SL0307A00	
150 x 375	18	2	1SL0308A00	
150 x 375	18	3	1SL0308A00	
150 x 500	24	4	1SL0309A00	
150 x 500	24	5	1SL0309A00	
150 x 750	36	6	1SL0310A00	
225 x 375	2	18	1SL0313A00	
225 x 375	3	18	1SL0313A00	
225 x 500	4	24	1SL0314A00	
225 x 500	5	24	1SL0314A00	
225 x 750	6	36	1SL0315A00	



Enclosures

IP66 Gemini Weather Proof Range



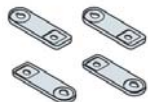
Blanking Plates

Blanking Plates		Product Hierarchy 3100007	
Size HxW	Size	Order Code	Price
150 x 250	1	1SL0324A00	
150 x 375	2	1SL0325A00	
150 x 375	3	1SL0325A00	
150 x 500	4	1SL0326A00	
150 x 500	5	1SL0327A00	
150 x 750	6	1SL0327A00	



Accessories

Accessories		Product Hierarchy 3100007	
Description	Size	Order Code	Price
Key lock and handle	Fits All	1SL0340A00	
Square lock	Fits All	1SL0339A00	
Wall mounting brackets (4off)	Fits All	1SL0342A00	



Enclosures - IP40, IP55, IP65

Modular Units



IP40 Polycarbonate

No. Modules	Size W x H x D	Product Hierarchy 3100007	
		Order Code	Price
2	100 x 160 x 85	12702	
4	140 x 220 x 110	12704	
8	205 x 220 x 110	12708	
12	275 x 220 x 110	12712	
24	275 x 370 x 110	12714	
36	275 x 570 x 110	12716	



IP55 Thermoplastic

No. Modules	Size W x H x D	Product Hierarchy 3100007	
		Order Code	Price
4	125 x 180 x 105	12644	
6	160 x 180 x 105	12646	
10	230 x 180 x 105	12650	
20	230 x 320 x 135	12652	
10 - special	250 x 320 x 135	12654	



IP65 Polycarbonate Solid Door

No. Modules	Size W x H x D	Product Hierarchy 3100007	
		Order Code	Price
8	205 x 220 x 140	12728	
12	275 x 220 x 140	12732	
18	380 x 220 x 140	12733	
24	275 x 370 x 140	12734	



IP65 Polycarbonate Clear Door

No. Modules	Size W x H x D	Product Hierarchy 3100007	
		Order Code	Price
4	140 x 220 x 140	12744	
8	205 x 220 x 140	12748	
12	275 x 220 x 140	12752	
18	380 x 220 x 140	12753	
24	275 x 370 x 140	12754	
36	275 x 570 x 140	12756	



IP65 Polycarbonate Multiple Doors

No. Modules	Size W x H x D	Product Hierarchy 3100007	
		Order Code	Price
2/4	100 x 160 x 100	12742	
8	205 x 220 x 140	12743	
12	275 x 220 x 140	12745	
24	275 x 370 x 140	12746	
36	275 x 570 x 140	12747	



Enclosures - IP40, IP55, IP65

Modular Units Accessories



For Switchboard type	Product Hierarchy 3100007			
	Terminal Holders		Terminals	
	Order Code	Price	Order Code	Price
12704	12538 (x2)	3.86	12531 (x2)	
12708	12539 (x2)	4.33	12531 (x2)	
12712	12540 (x1)	5.01	12531 (x2)	
			12532 (x1)	
12714	12540 (x2)	5.01	12533 (x2)	
12716	12540 (x2)	5.01	12534 (x2)	
12724 - 12744	12538 (x2)	3.86	12531 (x2)	
12728 - 12748	12539 (x2)	4.33	12531 (x2)	
12732 - 12752	12540 (x1)	5.01	12531 (x2)	
			12532 (x1)	
12733 - 12753	12543 (x1)	9.67	12531 (x1)	
			12535 (x1)	
12735 - 12755	12543 (x2)	9.67	12534 (x2)	
12736 - 12756	12540 (x2)	5.01	12534 (x2)	
12738 - 12758	12543 (x2)	9.67	12535 (x2)	
12743	12539 (x2)	4.33	12531 (x2)	
12745	12540 (x1)	5.01	12531 (x1)	
			12532 (x1)	
12746	12540 (x2)	5.01	12533 (x2)	
12747	12540 (x2)	5.01	12534 (x2)	

(x) Quantity Required



Terminal Blocks			Product Hierarchy 3100007	
For Switchboard type	Neutral terminals	Earth terminals	Order Code	Price
12 644 - 12 684	2x4.5 + 3x5.6	2x4.5 + 3x5.6	12880	
12 646 - 12 686	6x4.5 + 5x5.6	2x4.5 + 3x5.6	12882	
12 650 - 12 690	6x4.5 + 5x5.6	2x4.5 + 3x5.6	12884	
12 652 - 12 692 - 12 654	2 (6x4.5 + 5x5.6)	2 (2x4.5 + 3x5.6)	12886	



Accessories		Product Hierarchy 3100007	
Description	Order Code	Price	
Wall Mounting Brackets for Box	12658		

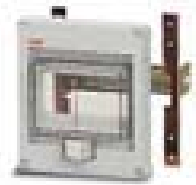
Enclosures - Polycarbonate

IP65 Switchboards - IP40 & IP55 Panel Fronts



IP40 Front Panel

No. Modules	Size HxWxD	Product Hierarchy 3100007	
		Order Code	Price
2	9012362	12362	
3	9012362	12363	
4	9012362	12364	



IP55 Front Panel

No. Modules	Size HxWxD		
4	180 x 125 x 34	12658	
6	180 x 160 x 34	12659	
10	180 x 230 x 34	12660	

Enclosures

IP Ratings

IP

Protection against solid objects			Protection against liquids		
0	No protection		0	No protection	
1	Protected against solid objects up to 50mm eg. accidental touch by hands		1	Protected against vertically falling drops of water eg. condensation	
2	Protected against solid objects up to 12mm eg. fingers		2	Protected against direct sprays of water up to 15° from vertical	
3	Protected against solid objects over 2.5mm (tools + wires)		3	Protected against direct sprays of water up to 60° from vertical	
4	Protected against solid objects up to 1mm (tools wires + small wires)		4	Protected against sprays of water from all directions	
5	Protected against dust (no harmful deposit)		5	Protected against low pressure jets of water from all directions	
6	Totally protected against dust		6	Protected against strong jets of water eg. for use on ship decks	
			7	Protected against the effects of immersion between 15cm and 1m.	
			8	Protected against long periods of immersion under pressure	

Cewe Plugs, Couplers and Sockets

Contents

Overview	92
About Easy & Safe	93
About Tough & Safe	94
About Critical & Safe	95
Stock Items	96
Plugs IP44	97
Couplers IP44	98
Sockets IP44	99



Cewe Industrial Plugs & Sockets

Overview

The ABB Industrial Plugs and Sockets are a part of the comprehensive ABB program of high quality low voltages products for industries, buildings and OEM's.

ABB Cewe-Control has manufactured Industrial Plugs and Sockets for over 60 years in the factory located in Nyköping, Sweden. Long experience of developing and manufacturing plugs and sockets within ABB has resulted in a wide product range of high quality and a robust ergonomic design. Covering products up to 125 A and 690 V, all tested and approved for IEC standards.

The design and material used have continuously been improved to meet the customer's requirements, and to take the environmental aspects into consideration.

ABB Industrial Plugs and Sockets have the solution for products in industrial environments with high demands on safety, durability, reliability and cost saving for the end user.

- Safety - tested and approved by third party testing laboratories.
- Durability - materials used give a high durability in tough conditions and environments.
- Reliability - high quality contacts ensure reliability.
- Cost saving - designed for quick and easy installation.

You will find all you need in the ABB Industrial Plugs and Sockets product range. One supplier for all your needs and worldwide availability.

7

Perfect performance

All Plugs and Sockets in our range comply with high standards of quality meeting different required tasks. Some are made of heavy-duty plastics (PBT), others of metal. Some have advanced features while others have a straight forward functionality. Perfect for demanding customers.

Perfect productivity

The result is that you can rely on all our Plugs and Sockets to help you maintain a high up-time in your operations. No unscheduled or unwanted interruptions, allowing you a high degree of flexibility.

Perfect safety

Safety is also very important. By choosing ABB Plugs and Sockets you minimize the risk of short circuits. You also ensure maximum personal safety for anyone nearby or around your equipment.

Perfect for the job

Different applications and environments require different products. To make your choice of products easier, we have categorized our range into three groups. All groups have however one feature in common - Safety!



- Select Critical & Safe products for the highest safety in fixed installations.



- Select Tough & Safe products for best performance in demanding and heavy-duty applications.



- Select Easy & Safe products for adequate functionality and ergonomic design.

The structure of our main catalog is based on these three groups. Look for the three different symbols to make your choice.

ABB Industrial Plugs and Sockets – a complete offer

- Approved according to IEC 60 309-1, -2, -4
- Range from 16 A up to 125 A.
- IP 44 (splashproof) and IP67 (watertight).
- All contacts are self cleaning and calibrated, to maintain the accurate contact pressure, quality and performance over time.
- Plugs and Sockets for 63 and 125 A have pins and sleeves carriers in glass fiber reinforced polyamide.
- For devices in the Critical & Safe and Tough & Safe range, all external screws are made of stainless steel.
- Clear terminal markings inside and at the front of the devices.
- Switched interlocked socket-outlets for vertical or horizontal mounting.



Cewe Industrial Plugs & Sockets

Easy & Safe



Without saving on the quality the Easy & Safe is the range that has an ergonomic design and full of small practical features. The device has a natural designed grip that makes it easy to work with during connection. The combined cable clamp / cable gland, where the strain relief is created by tightening of the gland nut, has a locking mechanism that will continuously apply pressure to the cable.

The installation is easy done due to the clear terminal marking. After connecting the cables the housing is easily closed by a twist. The plastic material PA is used to provide a device that meets requirements of quality and safety.

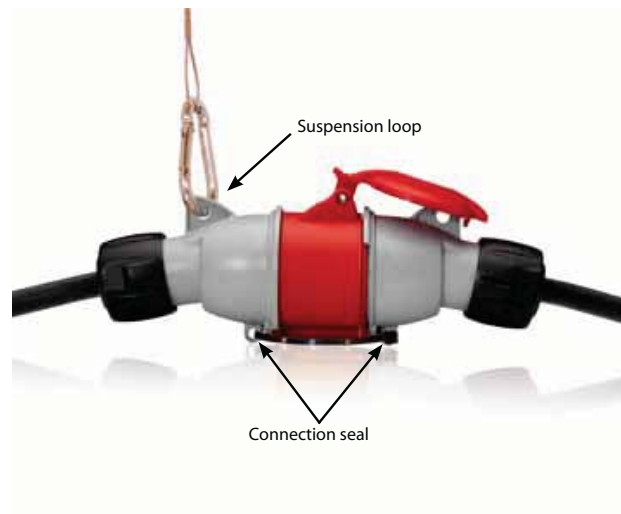
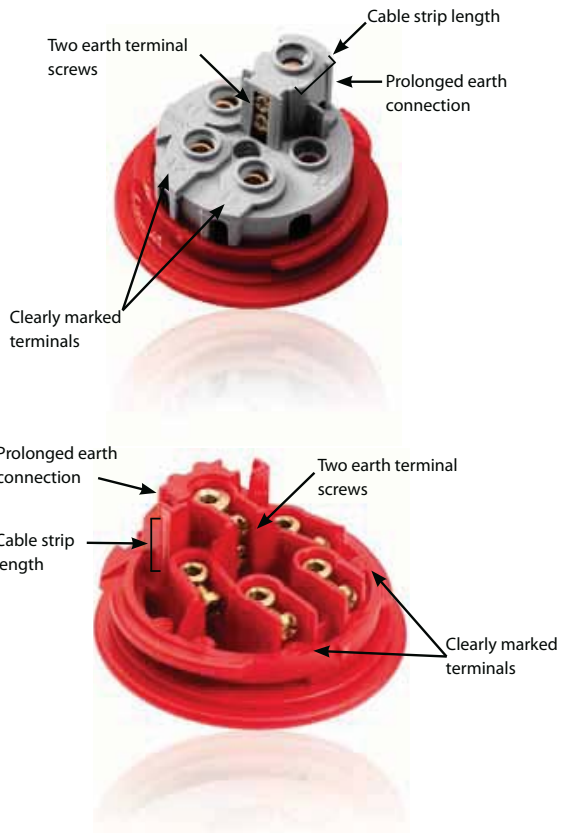
For the user, small features are included such as a sealing / locking feature to avoid accidental disconnection of for example a PA system. A suspension function that enables the user to hang the connector/plug that is not used on the wall or connect to a flexible wire in the ceiling (drop feed).

Features

- IP44 Splashproof
- 16 - 32 A
- PA6 plastic material
- IEC 60 309-1, -2
- Superior grip
- Compact design

Applications

- Light industry
- Construction sites
- Farms
- General equipment



Combination of hard and soft plastic material - both flexible and hard

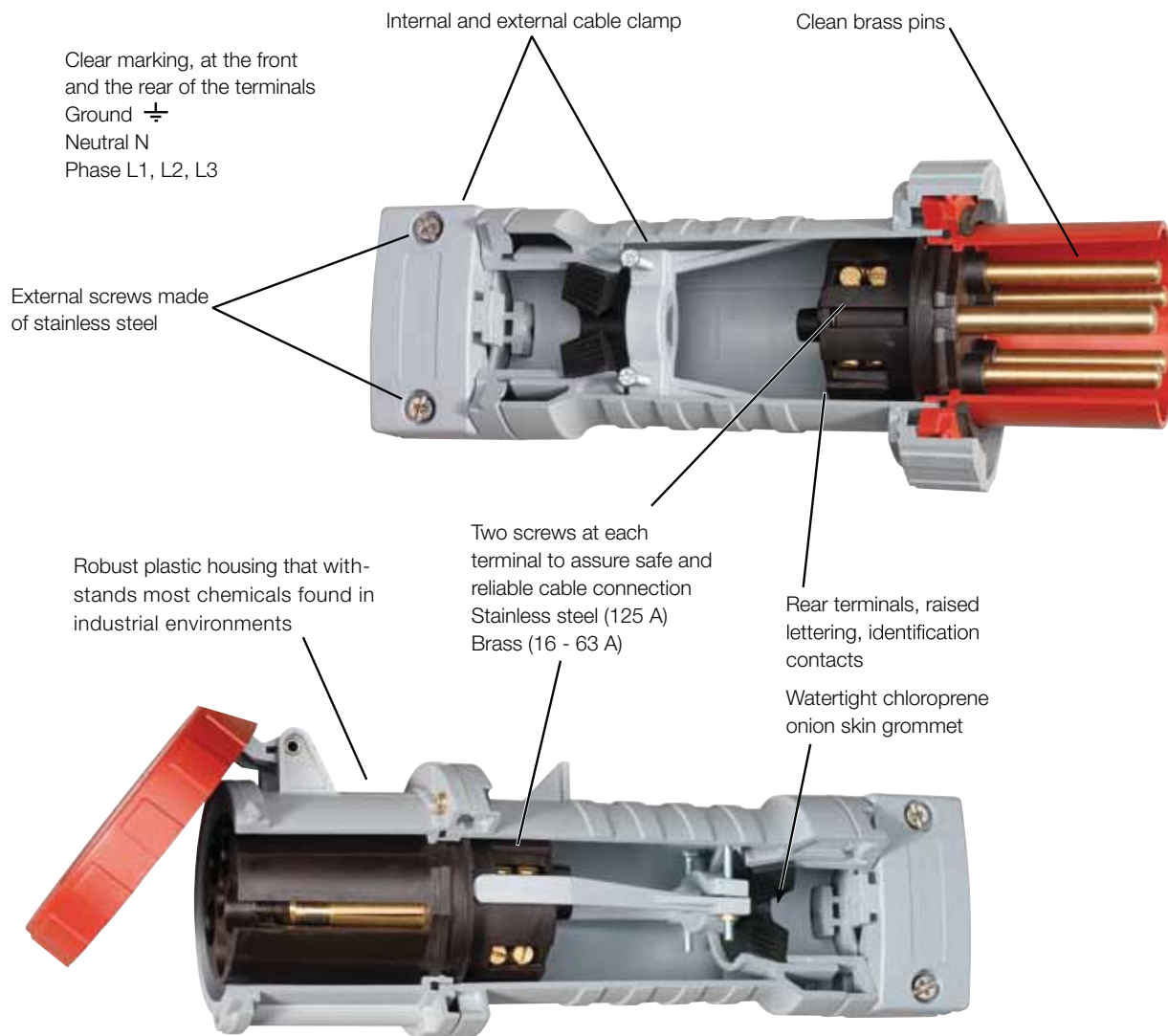


Cable gland tightening torque



Cewe Industrial Plugs & Sockets

Tough & Safe



Cewe Industrial Plugs & Sockets

Critical & Safe



Critical & Safe is the range for applications with high demands on safety, durability and performance. Perfect for applications with frequent connection / disconnection, and to use in public areas.

The housing is made of PBT or aluminum. PBT is a tough plastic material that withstands heavy-duty usage and most chemicals found in industrial environments. The aluminum housing is a mix of aluminium and silicon called Silumin, which gives an excellent protection against corrosion while being robust and tough against impact and sun light.

Features

- IP67 Watertight or IP44 Splashproof
- 16 - 125 A, 50 - 690 VAC
- IEC 60 309-2, -4
- All external screws are made of stainless steel

Applications

- Heavy / chemical industry
- Sawmills
- Airports
- Hospitals

Type: 4125MVS6WH

Brass threaded inserts

Padlockable handle

Space for wiring and easy access for cables

Material that withstands heavy-duty usage and most chemicals found in industrial environments

Mechanically interlocked to prevent making and breaking under load

Clear terminal marking, inside and outside the box

Ground \perp
Neutral N
Phase L1, L2, L3

Cover and mounting screws made of stainless steel

Rugged hinge mechanism pivots 180° for easy access during installation and maintenance

Pre-wired IEC receptacle accepts all manufacturer's IEC 60 309-2 plugs



Cewe Industrial Plugs & Sockets

Included in this catalogue

Plugs



16A

32A

Connectors



16A

32A

Surface socket-outlets



16A

32A

Surface inlets



16A

32A

Panel mounted socket outlets



16 - 32A

16 - 32A

Panel mounted socket inlets



16A

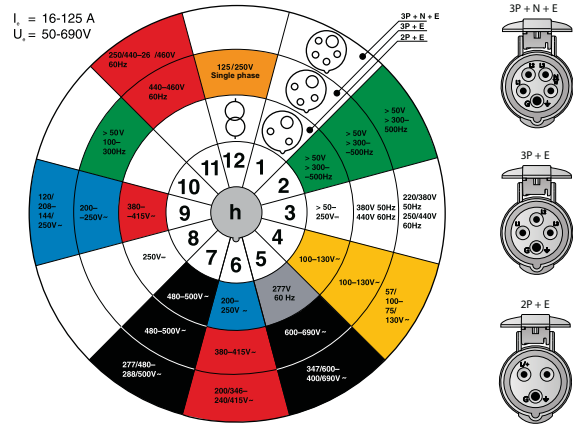
16 - 32A

Standard voltages

Color codes according to IEC60309-1, -2

Position of earthing sleeve according to IEC 60309-2 (clock)	2P+earth	3P+earth	3P+N+earth
1 All operating voltages and/or currents not stated below	Optional voltage (not stated below)	Optional voltage (not stated below)	Optional voltage (not stated below)
2 Aeronautics/airports, military	>50 V >300-500 Hz 16, 32A	>50 V >300-500 Hz 16, 32A	>50 V >300-500 Hz 16, 32A
3 3-phase only for cooling containers (standardized by ISO)	50-250 V DC	380 V 50 Hz, 440 V 60 Hz 16, 32 A	220/380 V 50 Hz, 250/440 V 60 Hz 16, 32 A
4 For example in U.K.	100-130 V 50/60 Hz	100-130 V 50/60 Hz	57/100-75/130 V 50/60 Hz
5 Wind power	277 V 60 Hz	600-690 V 50/60 Hz	647/600-400/690 V 50/60 Hz
6 Most common voltages in Western Europe	200-250 V 50/60 Hz	380-415 V 50/60 Hz	200/346-240/415 V 50/60 Hz
7 Paper mills, steel plants, ship building industry	480-500 V 50/60 Hz	480-500 V 50/60 Hz	480-500 V 50/60 Hz
8	>250 V DC	Not used	Not used
9 For example in Norway	380-415 V 50/60 Hz	200-250 V 50/60 Hz	Not used
10	Not used	>50 V >100-300 Hz	Not used
11 Mainly for marine installations	Not used	440-460 V 60 Hz	Not used
12 Supply from isolating transformer	Supply from isolating transformer	125/250 V Single phase	Not used

7



Cewe Industrial Plugs & Sockets

Plugs

16A, IP44 Splashproof

Thermoplastic



Cable entry with compression gland. Cable area 1 - 2.5mm²

Type	Terminals/ Poles	Colour Code	Voltage V	Part No	Product Hierarchy 3600004	
					Order Code	Price
2P+E	3	Yellow	100-130	216-P4	2CMA193500R1000	
3P+E	4	Yellow	100-130	316-P4	2CMA193504R1000	
		Black	600-690	316-P5	2CMA193505R1000	
		Black	480-500	316-P7	2CMA193507R1000	
		Blue	200-250	316-P9	2CMA193508R1000	
		Red	440-460	316-P11	2CMA193509R1000	

32A, IP44 Splashproof

Thermoplastic



Cable entry with compression gland. Cable area 2.5 - 6mm²

Type	Terminals/ Poles	Colour Code	Voltage V	Part No	Product Hierarchy 3600004	
					Order Code	Price
2P+E	3	Yellow	100-130	232-P4	2CMA193512R1000	
		Blue	200-250	232-P6	2CMA193513R1000	
3P+E	4	Black	600-690	332-P5	2CMA193514R1000	
		Red	380-415	332-P6	2CMA193515R1000	
		Black	480-500	332-P7	2CMA193516R1000	
		Blue	200-250	332-P9	2CMA193517R1000	
		Red	440-460	332-P11	2CMA193518R1000	

7

63A, IP44 Splashproof

Thermoplastic



Cable entry with compression gland. Cable area 4 - 16mm²

Type	Terminals/ Poles	Colour Code	Voltage V	Part No	Product Hierarchy 3600004	
					Order Code	Price
2P+E	3	Yellow	100-130	263-P4	2CMA166740R1000	
		Blue	200-250	263-P6	2CMA166742R1000	
3P+E	4	Black	600-690	363-P5	2CMA166750R1000	
		Red	380-415	363-P6	2CMA166752R1000	
		Black	480-500	363-P7	2CMA166754R1000	
		Blue	200-250	363-P9	2CMA166756R1000	
3P+N+E	5	Red	346-415	463-P6	2CMA166764R1000	

Cewe Industrial Plugs & Sockets Connectors

16A, IP44 Splashproof

Thermoplastic



Cable entry with compression gland. Cable area 1 - 2.5mm²

Type	Terminals/ Poles	Colour Code	Voltage V	Part No	Product Hierarchy 3600004	
					Order Code	Price
3P+E	4	Yellow	100-130	316-C4	2CMA193522R1000	
		Red	380-415	316-C6	2CMA193523R1000	
		Black	480-500	316-C7	2CMA193524R1000	
		Blue	200-250	316-C9	2CMA193525R1000	
3P+N+E	5	Red	346-415	416-C6	2CMA193526R1000	

32A, IP44 Splashproof

Thermoplastic



Cable entry with compression gland. Cable area 2.5 - 6mm²

Type	Terminals/ Poles	Colour Code	Voltage V	Part No	Product Hierarchy 3600004	
					Order Code	Price
2P+E	3	Yellow	100-130	232-C4	2CMA193527R1000	
		Blue	200-250	232-C6	2CMA193528R1000	
3P+E	4	Black	600-690	332-C5	2CMA193533R1000	
		Red	380-415	332-C6	2CMA193529R1000	
		Black	480-500	332-C7	2CMA193534R1000	
		Blue	200-250	332-C9	2CMA193530R1000	

7

63A, IP44 Splashproof

Thermoplastic



Cable entry with compression gland. Cable area 4 - 16mm²

Type	Terminals/ Poles	Colour Code	Voltage V	Part No	Product Hierarchy 3600004	
					Order Code	Price
2P+E	3	Yellow	100-130	263-C4	2CMA166838R1000	
		Blue	200-250	263-C6	2CMA166840R1000	
3P+E	4	Black	600-690	363-C5	2CMA166848R1000	
		Red	380-415	363-C6	2CMA166850R1000	
		Black	480-500	363-C7	2CMA166852R1000	
		Blue	200-250	363-C9	2CMA166854R1000	
3P+N+E	5	Red	346-415	463-C6	2CMA166862R1000	

Cewe Industrial Plugs & Sockets

Surface Sockets

16A, IP44 Splashproof

Thermoplastic



Flexible membrane and M20 insert for top cable entry.
Rear knockout cable entry. Cable area 1.5 - 4mm²

Type	Terminals/ Poles	Colour Code	Voltage V	Part No	Product Hierarchy 3600004	
					Order Code	Price
3P+E	4	Yellow	100-130	316-RS4	2CMA193104R1000	
		Black	600-690	316-RS5	2CMA193105R1000	
		Red	380-415	316-RS6	2CMA193106R1000	
		Black	480-500	316-RS7	2CMA193107R1000	
		Blue	200-250	316-RS9	2CMA193108R1000	
		Red	440-460	316-RS11	2CMA193110R1000	

32A, IP44 Splashproof

Thermoplastic



Flexible membrane and M25 insert for top cable entry.
Rear knockout cable entry. Cable area 2.5 - 10mm²

Type	Terminals/ Poles	Colour Code	Voltage V	Part No	Product Hierarchy 3600004	
					Order Code	Price
2P+E	3	Yellow	100-130	232-RS4	2CMA193121R1000	
		Blue	200-250	232-RS6	2CMA193122R1000	
3P+E	4	Black	600-690	332-RS5	2CMA193129R1000	
		Red	380-415	332-RS6	2CMA193130R1000	
		Black	480-500	332-RS7	2CMA193131R1000	
		Blue	200-250	332-RS9	2CMA193132R1000	

7

63A, IP44 Splashproof

Thermoplastic Polyester (PBT)



Cable entry M32. Alternative rear knockout cable entry. Cable area 6 - 25mm²

Type	Terminals/ Poles	Colour Code	Voltage V	Part No	Product Hierarchy 3600004	
					Order Code	Price
2P+E	3	Yellow	100-130	263-RS4	2CMA167474R1000	
		Blue	200-250	263-RS6	2CMA167476R1000	
3P+E	4	Black	600-690	363-RS5	2CMA167496R1000	
		Red	380-415	363-RS6	2CMA167498R1000	
		Black	480-500	363-RS7	2CMA167500R1000	
		Blue	200-250	363-RS9	2CMA167502R1000	
3P+N+E	5	Red	346-415	463-RS6	2CMA167484R1000	

Contents

Overview	102 - 103
DC Switching & Protection	104 - 105
AC Switching & Protection	106 - 107



The photovoltaic (PV) is seeing steady growth in the UK and is set to expand further.

ABB offers a wide range of products to the installer specifically for PV application.

The following pages offer an overview of these products. For further information or assistance with PV, please consult us.



Full range of product and technical information place this part number in a search engine and download
9AKK105152A5119

Solar PV products for renewable energy

The UK Government have introduced a new initiative aimed at encouraging the nationwide adoption of renewable energy technologies.

Called the Feed-in Tariff, this initiative will see owners of renewable energy equipment being paid not only for the energy they use but also the amount of surplus energy they supply to the UK National Grid.

Inspired by similar schemes already operating in continental Europe, the UK Feed-in Tariff initiative is aimed at residential, commercial and industrial users of renewable energy sources. A table of the technologies covered are listed below.

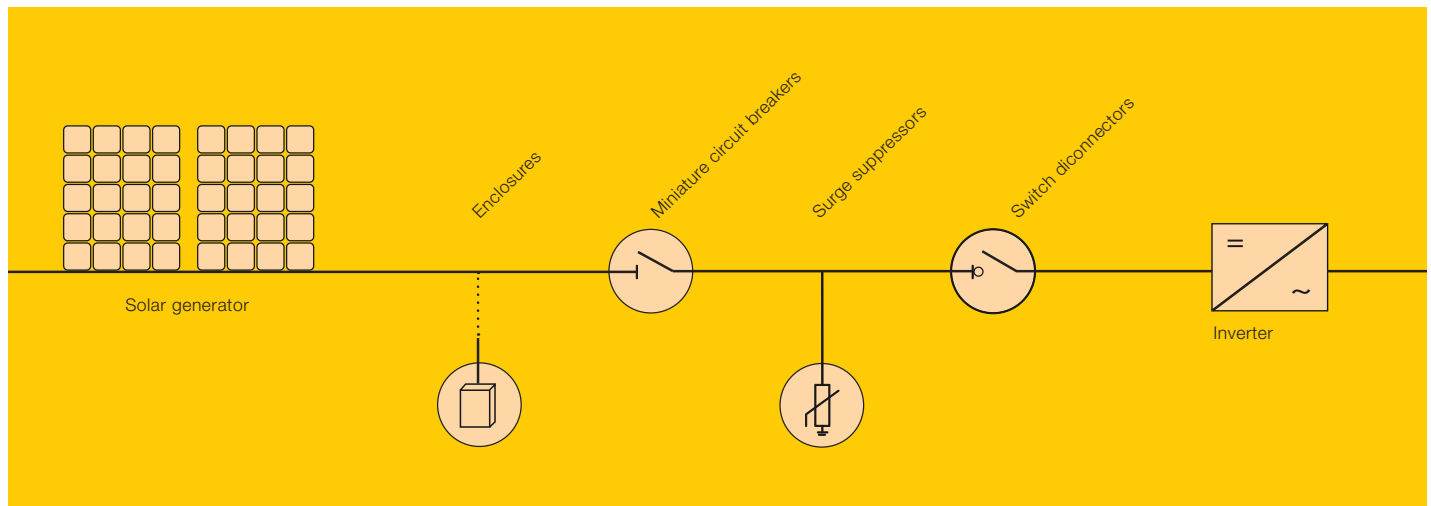
How does the Feed-in Tariff Work?

The Feed-in Tariff is based on the amount of energy produced by a renewable energy source, plus where surplus energy is produced, a bonus to cover energy exported to the National Grid. By effectively paying producers more for the energy they don't use, the system is also aimed at encouraging energy efficiency.

To cover periods when the renewable energy source may be not producing sufficient electricity to cover demand, additional energy may be imported from the National Grid, with the user paying their electricity supplier for the amount consumed.

Technology	Tariff amount (pence per kWh) for installation fitted periods:		
	April 2010 - March 2011	April 2011 - March 2012	April 2012 - March 2013
Solar photovoltaic <4 kW (new)	36.1	36.1	36.1
Solar photovoltaic <4 kW (retrofit)	41.3	41.3	41.3
Solar photovoltaic >4 - 10kW	36.1	36.1	33.0
Solar photovoltaic >10 - 100 kW	31.4	31.4	28.7
Solar photovoltaic >100 - 5MW	29.3	29.3	26.8

8



DC Side

Solar PV

products for renewable energy

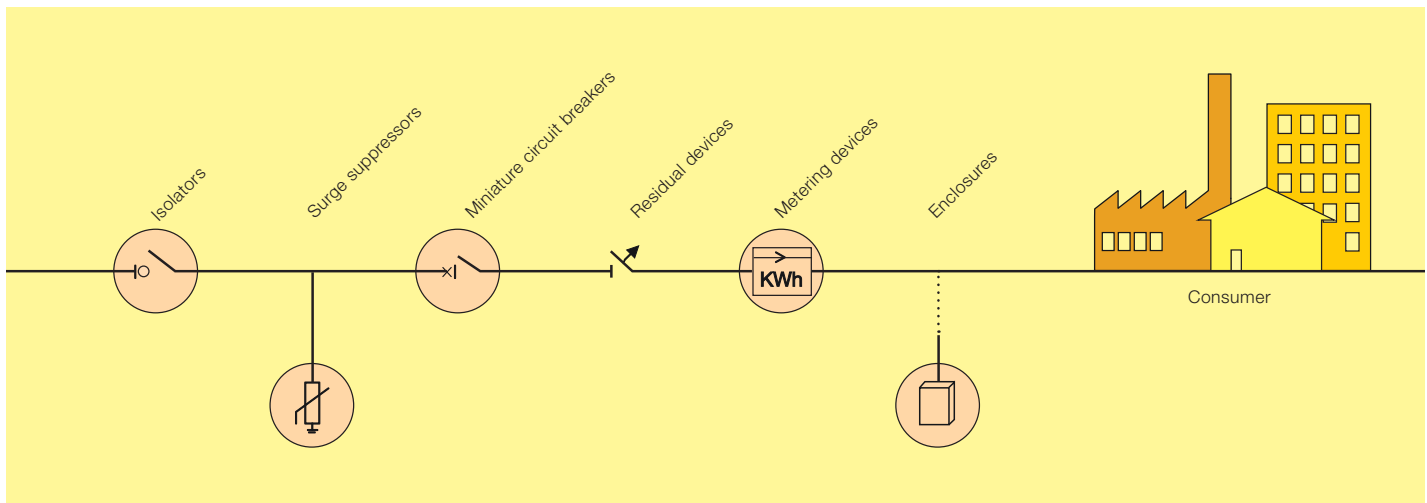
The components of photovoltaic systems

The efficiency and quality of a system are measured by the efficiency and quality of each individual component

An accurate choice of components, especially the modules and inverters, is of fundamental importance if a photovoltaic system is to be a success. Before it can be considered a good investment, a photovoltaic system must be able to function efficiently for at least 20 years in all weathers and under the blazing sun.

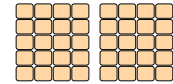
What is commonly called the “BOS” (Balance of System), i.e. the “rest of the system” (electromechanical equipment for protection, control and isolation purposes, cables), undoubtedly plays an important role in ensuring that people and the buildings connected to the system are properly protected, and that there is an adequate production of energy over the years. From an economic viewpoint, it is even more important for each individual component of a photovoltaic system to be chosen on the basis of the warranties provided by the product and by its manufacturer than it is for a normal electric system. This is because the operating specifications of each device must remain unchanged throughout the entire life cycle of the system and the relative investment.

Always ready to meet any new demand from the market, ABB has developed a whole range of reliable products dedicated to photovoltaic applications and able to meet all installation requirements, from the string on the direct current side through to the alternate current grid connection point. ABB’s products include string boxes, miniature circuit breakers, switch-disconnectors, residual current-operated circuit breakers, interface relays, energy meters, fuse disconnecting switches and fuses, surge arresters, consumer units and enclosures suitable for outdoor installation, all specially designed for these applications. ABB can also provide a series of “plug & operate” solutions, i.e. finished, wired and certified switchgear able to suit the requirements of a vast range of installations: from the individual string for domestic use to the large solar park.



AC Side

Solar PV DC Side - Switching & Protection

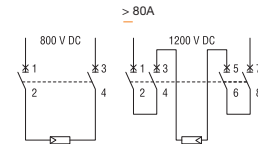


S800 PV MCBs

S800 PV-S miniature circuit-breakers and S800 PV-M switch disconnectors can be used in networks up to 1200 V d.c. (four-pole version). These products and their vast range of accessories (auxiliary contacts, release coils) can be used to create countless system configurations. The main features of S800 PV-S circuit-breakers are:



- interchangeable terminals
- fault signalling lever in the central position
- contact status displayed for each individual pole
- no restrictions as to polarity or power direction in the wiring
- use of the rotary door operating handle



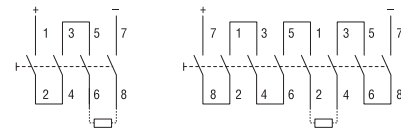
Connection
Photovoltaic panel network
in earth-insulated systems

OT Isolators

OT series disconnectors are available with 16 A to 125 A rated current values in 3, 4, 6 and 8 pole versions, depending on the direct current voltage used.

The main features of OT disconnectors are:

- quick make-break mechanism with independent tripping function (in the OT 45...125 versions).
- accessories that are snap-fitted on the circuit-breakers
- OT 45 ... 125 switch-disconnector mechanism for installation on DIN channel.
- can be locked with a locking adapter



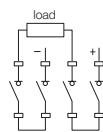
8

Tmax PV Disconnector

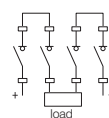
Tmax PV series disconnectors are available with up to 1600 A class DC-22B rated operating current values, for 1100 V d.c. maximum rated operating voltage. The switching devices of the Tmax PV series are the first box disconnectors for direct current high voltage available on the market. They are certainly of interest for use in any type of photovoltaic installation since they are ideal for all disconnecting requirements.

The main features of Tmax PV disconnectors are:

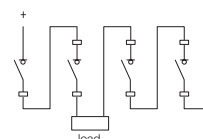
- Comprehensive range. There are 6 different sizes, from the compact T1 (which can be fixed to DIN channel) to T7, available in the two versions with operating lever and motor control
- Excellent performance-dimensions ratio
- Wide choice of accessories to suit every requirement



Circuit Diagram
Valid for T1D PV, T3D PV,
T6D PV, T7D PV,



Circuit Diagram
Valid for T4D PV, T5D PV



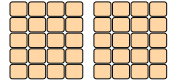
Circuit Diagram
Valid for all Tmax series



Full range of product and technical information place this part number in a search engine and download
9AKK105152A5119

Solar PV

DC Side - Switching & Protection



E90 Fuse Disconnectors

The E 90 PV series fuse disconnectors has been designed for up to 1000 V direct current voltage with DC-20B class of use. The E 90 PV series is specifically used for protecting photovoltaic systems against overcurrents and provides a reliable, compact and inexpensive solution since it uses 10.3 x 38 mm cylindrical fuses. The main features of E 90 PV fuses connectors are:



- Handle opening through 90° that allows the horizontal fuse to be easily inserted even when wearing gloves or using the thumb
- Only an additional 17 mm larger in the open position than in the closed position
- 25 mm² terminals with knurled terminal cage to allow the cable to be clamped in a better way
- Fully compatible with electric screwdrivers
- Pozidrive screws for flat-head and cross-point screwdrivers
- Lockable in the open position using the padlocks commonly available on the market, so as to ensure safe maintenance work
- Can be sealed in the closed position to prevent improper use
- Cooling chambers and ventilation slits to facilitate heat dispersion
- Versions with indicator light are available

OVR PV Surge Arresters

ABB provides a wide range of surge protection devices that have been specifically designed for photovoltaic systems.

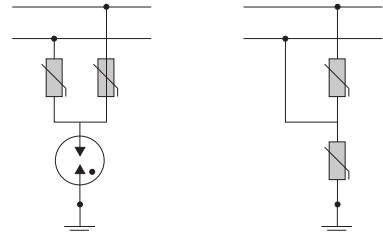
The main features of the OVR PV surge arresters are:



- built-in thermal protection with 25 A d.c. breaking capacity*
- removable cartridges for easy maintenance with no need to isolate the line
- remote signalling contact for monitoring the operating status (TS versions)
- no subsequent short-circuit current
- no risk if the polarity is reversed

***Note:**

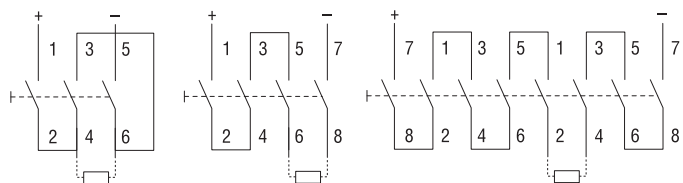
For surge protection device installed at points of the network where short circuit current exceeds 25A DC suitable protection must be provided



8

OTP Enclosed Disconnectors

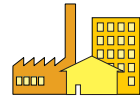
- IP65 rated
- Grey plastic enclosure
- Standard handle - Red/Yellow (padlockable in the off position)
- Cable entries top and bottom



Full range of product and technical information place this part number in a search engine and download

9AKK105152A5119

Solar PV AC Side - Switching & Protection



8



S200M MCBs

The S200 M protect installations against overload and short circuit, ensuring reliability and safety for operations. They are selectively switchable, even under load, in the event of a fault or for maintenance purposes. The standstill times are minimised thanks to the devices' reclosing capability. These devices offer users confidence thanks to their 100% factory testing. The devices, with their wide range of accessories, are suitable for international use.

The S200 M are known for their ease of maintenance – thanks to a special type of fastening for easy removal of the device from its present installation. Supply is possible from above or below, also for busbars. Without busbars, two terminal sections can be used. The tripping behaviour caters to customer requirements (B, C, D, K, Z characteristics)



E200 Isolators

The isolator is used as a master switch on the AC side. It offers reliable and safe switching under load. Ease of maintenance is guaranteed by the special fastening for easy removal of the device from its present installation. The wide range of accessories facilitates use of all applications.



F200 PV-B RCCBs

Residual current devices ensure protection of people and installations against fault current to earth and fire risks. An RCD B type is required on the AC side in case of lack of electrical separation between the AC and the DC side. The devices save money and improve global efficiency by using PV connectors without an internal insulation transformer. The devices, with their wide range of accessories are suitable for international use. The RCCBs F202 PV B and F204 B are intended for installation of single and three phase PV converters. they protect against fire risks and leakage currents.

CM-UFS Interface relay for connection to the power grid

Even small distributed generating systems need to be connected to the power grid with guarantees as to completely safe operation, especially when the energy flow towards the network must be shut off for maintenance or if a fault occurs in the network itself.

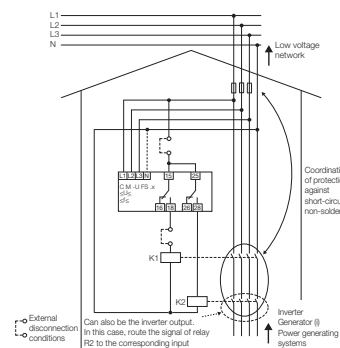
Rapid disconnection is essential if hazardous situations for the people who must work on the lines are to be avoided. This sort of protection can be achieved with an automatic monitoring device able to immediately detect faults in the network. The CM-UFS interface, which conforms to both the Italian ENEL Distribuzione Directive for connections to the electricity main and to German DIN V VDE 0126-1-1, answers to the need for safety for both the installations and the operators in the case of faults and malfunctions in the public power grid during parallel operation.

The main features of the CM-UFS interface relay are:

- Undervoltage protection
- Overvoltage protection
- Minimum frequency protection
- Maximum frequency protection
- Installation on DIN channel, dimension 22 mm
- Configurable connection for the neutral conductor
- 3 LED to indicate the operating status
- Power supply from the circuit under control
- Measurement of the true RMS value
- Can also be used for monitoring single-phase systems
- 2 switch contacts (SPDT)

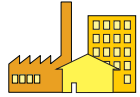


Full range of product and technical information place this part number in a search engine and download
9AKK105152A5119



Solar PV

AC Side - Switching & Protection



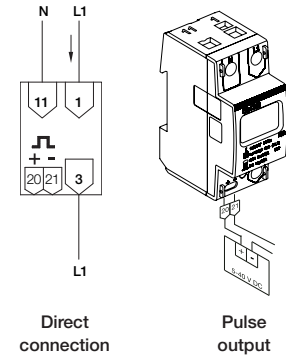
ODINsingle DELTAplus Modular Energy Meters

Modular energy meters are ideal for metering and monitoring the energy produced by a photovoltaic system. All the meters are tested and comply with the European MID directive, which allows the meters to be used whenever the energy readings must be used for payment quantification purposes. The terminal boards can be sealed so as to prevent the meter's programming functions from being accessed and to safeguard the inputs of the measuring signals.



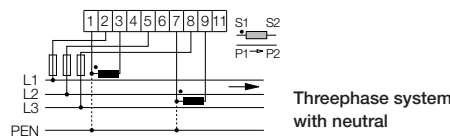
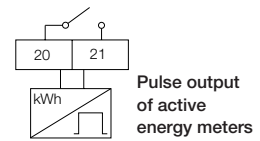
ODINsingle:

- Accuracy class B (1)
- MID certified for sub-billing purposes
- Direct connection in single-phase systems of up to 65 A
- OD1365 with pulse output
- OD1365 with re-settable register
- LCD display, excellent visibility in all lighting conditions
- Front LED for checking load

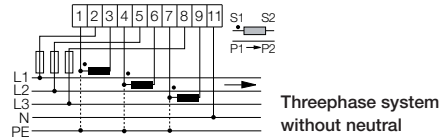


DELTAplus:

- Accuracy class B (1)
- MID certified for sub-billing purposes
- Connection by current and voltage transformers
- Active energy metering in three phase systems
- With programmable pulse output
- Electric parameters, voltage, current, power and frequency displayed
- Installation assessment: phase presence and sequence
- Front LED for checking load

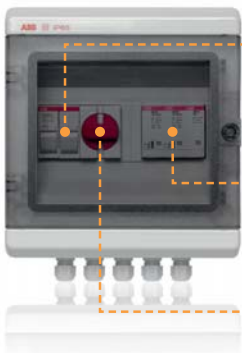


Threephase system with neutral



Threephase system without neutral

String Boxes



Fuse Disconnectors E90 PV

E90 PV have been designed for up to 1000 V d.c. voltage values (class DC-20B) and are ideally used in photovoltaic systems to isolate the individual strings and protect them against short circuits. All ABB string boxes are supplied with fuses as part of the standard equipment.

Surge Arresters OVR PV

All ABB string boxes are equipped with OVR PV series surge arresters specifically designed for photovoltaic applications. Only a specifically designed product can ensure that the cartridge functions properly until the end of its useful life, without the risk of short-circuits or dangerous polarity reversals.

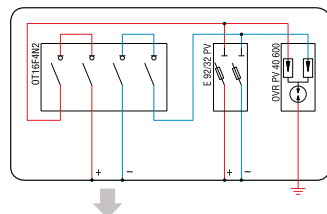
Disconnectors OT

High-performance, readily available OT disconnectors stand out for their high voltage values and compliance with the most advanced international standards. They are an excellent choice for small systems both cost-wise and as to performance.



Full range of product and technical information place this part number in a search engine and download

9AKK105152A5119



Note:

The following string boxes show options for 1, 2, 3 and 4 string. Please consult us for other variations.

Terms and Conditions

1. GENERAL

- 1.1. Whenever ABB Limited ("ABB") has referred to Orgalime S 2000 in an offer or order acknowledgement, Orgalime S 2000 and this Addendum shall apply to the resulting contract. If the Purchaser refers to other conditions, such conditions shall apply only to the extent ABB agrees to them in writing.
- 1.2. The Purchaser represents that it has access to the Orgalime S 2000 general conditions.
- 1.3. In the event of any contradictions between this Addendum and Orgalime S 2000, this Addendum shall prevail.

2. DEFINITIONS

- 2.1. In Orgalime S 2000 and this Addendum,
 - (a) "Article" shall refer to an article in this Addendum;
 - (b) "Clause" shall refer to a clause in Orgalime S 2000;
 - (c) "Orgalime S 2000" shall mean Orgalime's General Conditions for the Supply of Mechanical, Electrical and Electronic Products, August 2000 edition;
 - (d) "Product" shall mean all goods and services to be provided by ABB under this contract as described in ABB's offer;
 - (e) "Purchaser" shall mean the other party to this contract; and
 - (f) "Supplier" shall mean ABB.

3. STANDARD PRODUCTS

- 3.1. Unless agreed otherwise in writing, all Products are to factory standard, including in respect of documentation, manuals, reports, finish and packing.
- 3.2. The Product is not warranted to be fit for any particular purpose, unless specified and warranted by ABB in writing.

4. DRAWINGS AND DESCRIPTIONS

- 4.1. Where ABB is to submit drawings for approval, the Purchaser approves or otherwise within the time given in the contract, or, if no time limit is specified, within fourteen (14) days of receipt, failing which they shall be deemed to have been approved.
- 4.2. The contract language shall be in English. All contract communications and documentation shall be in English.

5. VARIATIONS

- 5.1. Either party may request variations to the contract in writing. Where the parties agree to vary the contract, the parties shall also agree any revised scope, purchase price and/or delivery date prior to ABB undertaking the variation work.
- 5.2. No such variations shall be effective unless agreed in writing and signed by both parties.
- 5.2. If during the contract there are changes in laws, orders, regulations, standards or by-laws, which affect the cost or time of performance of this contract, then an equitable adjustment shall be made to the date(s) and price(s) resulting therefrom.

6. DELIVERY, PASSING OF RISK

- 6.1. The Purchaser shall inspect the Products and notify ABB in writing of any loss, shortage, excess, or transit damage within forty-eight (48) hours of delivery and permit ABB immediate rights of inspection and investigation. Failing which, any remedial costs shall be the responsibility of the Purchaser.
- 6.2. The Purchaser shall only be entitled to request proof of delivery within five (5) days of receipt of ABB's invoice, failing which, delivery is deemed to have taken place. ABB shall provide such proof within five (5) days of receipt.
- 6.3. For the avoidance of doubt, risk in the Product shall pass to the Purchaser at the time specified in the applicable

INCOTERMS. From the time when risk in the Products passes until the time when title passes to the Purchaser in accordance with Article 8.3, the Purchaser shall insure the Products for their full value with a reputable insurer and hold the proceeds of any sale or claim on such insurance policy on trust for ABB, remitting to ABB the proceeds upon demand.

7. PAYMENT & VAT

- 7.1. Payment shall be made by the Purchaser no later than thirty (30) days from the date of the invoice. Time of payment is of the essence of the contract and ABB reserves the right to suspend the provision of Products to the Purchaser where any amounts are overdue under the contract or under any other contract until all such amounts have been paid. No queries concerning an invoice will be considered later than fourteen (14) days from the date of its issue. Payment may be made via BACS.
- 7.2. Payment shall be made in the currency quoted by ABB.
- 7.3. Without prejudice to any other right or remedy, ABB will be entitled to set-off any amount otherwise due to the Purchaser under this contract or any other contract against any sum or sums which the Purchaser is or may be liable to pay ABB or recover any such amount as a debt.
- 7.4. Where ABB has entered into a "Credit Agreement" with the Purchaser, the Credit Agreement with its credit limit shall form part of the contract. To the extent permitted by applicable law, if in ABB's reasonable opinion there are grounds for doubting the creditworthiness of the Purchaser at any time, such as but not limited to, the Purchaser's failure to pay ABB's invoice on this contract or any other contract when due and/or the Purchaser exceeding its agreed credit limit with ABB, then ABB may refuse to proceed with orders or suspend delivery of Products to the Purchaser, under this contract and any other contract, agreement or arrangement entered into with the Purchaser whether independent of or connected to this contract without being in breach of contract and without incurring any liability to the Purchaser.
- 7.5. The purchase price is strictly net and exclusive of VAT.

8. RETENTION OF TITLE

- 8.1. Until title in the Product has passed to the Purchaser, the Purchaser shall keep the Product clearly marked as being ABB's and store it separately from the Purchaser's own equipment. ABB shall be entitled during normal business hours to enter the Purchaser's premises in order to inspect the Product.
- 8.2. Should the contract be terminated by ABB for any reason before title in the Product has passed to the Purchaser, or ABB has grounds for doubting the creditworthiness of the Purchaser (cf. Article 7.4), ABB shall be entitled during normal business hours to enter the Purchaser's premises and recover the Product. ABB reserves the right to dispose of any Product so recovered.
- 8.3. To the extent permitted by law, title to the Product shall remain with ABB until it has received payment in full due under the contract and any other sums due (together with any interest which may have accrued) in respect of any other goods or services previously or subsequently supplied by ABB to the Purchaser under any other agreement. When such payments have been received by ABB title shall pass to the Purchaser.
- 8.4. Notwithstanding any appropriation by the Purchaser to the contrary, all payments made by the Purchaser to ABB shall be appropriated first to the Products which have been resold by the Purchaser and then to the Products which remain in the Purchaser's possession or control.
- 8.5. If the Purchaser resells any Products in which title has not passed to the Purchaser, the proceeds of such resale shall (as between ABB and the Purchaser only) be made by the Purchaser as agent for ABB.

Terms and Conditions

9. LIABILITY FOR DEFECTS
- 9.1. Except as expressly set out in Orgalime S2000 and this Addendum, all conditions, warranties and representations, implied by statute, common law or otherwise, in relation to the supply, non supply or delay in supplying the Products are excluded to the fullest extent permitted by law and the warranties, as stipulated in Clauses 22-36 and Article 9.2, are exclusive and in lieu of all other warranties, conditions, terms, representations, statements, undertakings and obligations whether expressed or implied by statute, common law, custom, usage or otherwise, all of which are excluded to the fullest extent permitted by law.
- 9.2. Save as stipulated in Clauses 22-36, the necessary repair, replacement or re-performance shall constitute ABB's total liability to the Purchaser for defects in design, material or workmanship.
10. FORCE MAJEURE
- 10.1. Should a Force Majeure event occur, the delivery date(s) shall be extended by a period equal to the duration of the Force Majeure event plus a reasonable time to overcome the consequences and all additional costs and expenses incurred by ABB shall be paid by the Purchaser in addition to the purchase price.
- 10.2. For the elimination of any doubt, "circumstances beyond the control of the parties", (cf. Clause 39), shall be deemed to include, without limitation, any acts of God, act of terrorism, sanction, blockage, import restriction or any other act or failure to act of any state or national government authority.
11. EXPORT RESTRICTIONS AND NON-AUTHORISED USE
- 11.1. Unless expressly agreed otherwise in writing by ABB, the Product is provided on strict condition that:
- the Product is solely for civil use;
 - the Product is not to be supplied to any country whether directly or indirectly or for any application where such supply or application is prohibited by any law or regulation binding or effective in that country, in the UK, the US or the country of manufacture;
 - the Product will not in any way be installed, used or applied in or in connection with the operation of any nuclear facilities such as but not limited to nuclear power plants, nuclear fuel manufacturing plants, uranium enrichment plants, spent nuclear fuel stores or research reactors; and
 - whenever ABB so requests, the Purchaser shall provide ABB with an end-user certificate, which shall be on such terms and in such form as ABB may require and signed by the end-user confirming that it shall comply with Article 11.1 (a) to (c) . Until such time as ABB has received such end-user certificate, ABB shall be entitled to suspend the performance under this contract. The end-user certificate shall form part of this contract. The Purchaser agrees and accepts that it shall be liable for any acts or omissions in relation to the use of the Products (including (without limit) the acts or omissions of its employees, agents, subcontractors, customers, any end user of the Products and/or any third party) in breach any of the provisions set out in Article 11.1 (a) to (c) and further agrees that such a breach shall be deemed a fundamental breach of contract by the Purchaser, and shall entitle ABB to terminate the contract forthwith by giving notice to the Purchaser.
- 11.2 The Purchaser shall comply with all laws and other restrictions on the export, re-export or import of any Product or technology licensed under the contract as may be imposed from time to time by the UK or US Governments or their agencies, and shall procure such export licence or other Government approval as may be required. The Purchaser shall require that all third parties receiving such Product or technology from the Purchaser comply with this requirement. ABB shall assist the Purchaser in every reasonable way in obtaining of such licences at the Purchaser's cost.
- 11.3 The performance by either of the parties of an obligation under this contract, which performance requires an export or import licence or other government approval, and any other obligation affected shall, to the extent it is necessary, automatically be suspended until such licence or approval as mentioned in Article 11.2 is given. If such licence is not granted within a reasonable time or is revoked by the appropriate authorities, ABB shall be entitled to terminate this contract, and the Purchaser shall indemnify ABB on demand for any loss or damage which ABB may suffer or incur as a result of such termination.
- 11.4 ABB may at its reasonable discretion, without breaching the contract, delay, withhold or refuse the provision of services to be undertaken in any territory or upon any site deemed by ABB to be unsafe or unfit for ABB's personnel, upon notice of which the parties may agree to reschedule or remove said portion of services from scope.
- 11.5 The Purchaser shall keep ABB, its officers, directors, employees, agents and advisers indemnified against any and all claims and liabilities arising out of any breach by the Purchaser or any for whom the Purchaser is liable (which shall, without limitation, include the end-user) of any of the provisions set out in this Article 11.
12. CONFIDENTIALITY
- 12.1. The Purchaser shall keep all information communicated to the Purchaser in connection with this contract, or otherwise concerning ABB's business, secret and confidential, and will not use the same except for the purposes of performing this contract.
13. INSURANCE
- 13.1. ABB shall maintain Employer's Liability insurance as required by law and Public/Products Liability insurance in respect of its obligations and liabilities under the contract for an amount of two million pounds (£2,000,000) per one event and in the aggregate. ABB shall upon request produce to the Purchaser evidence of satisfactory policies of insurance in the form of its Brokers letter.
14. INDEMNIFICATION
- 14.1. If Products are to be manufactured or any process is to be applied to Products by ABB in accordance with a specification submitted by the Purchaser, the Purchaser shall indemnify ABB against all losses, damages, costs (including legal costs), expenses, liabilities and claims suffered or incurred by ABB in connection with infringement of any intellectual property rights of any third party resulting from ABB's use of the Purchaser's specification.
15. LIMITATION OF LIABILITY
- 15.1. To the maximum extent permitted by law, and notwithstanding anything to the contrary in this contract, other than the express provisions for liquidated damages, in no event shall ABB be liable to the Purchaser, whether as a result of breach of contract, warranty, guarantee, indemnity, tort (including negligence), strict liability, statutory duty or otherwise, for any of the following damages or losses, in each case whether direct or indirect, such as, but not limited to:
- | | |
|-------------------------------|-----------------------------|
| (a) loss of revenue, | (b) loss of profit, |
| (c) loss of contract, | (d) loss of business, |
| (e) loss of use, | (f) loss of production, |
| (g) interruption of business, | (h) loss of operation time, |
| (i) costs of capital, | (j) economic loss, |

Terms and Conditions

- (k) costs in connection with interruption of operation, or
 - (l) any special, incidental or consequential loss or damage, howsoever caused even if ABB was advised of the possibility of them in advance.
- 15.2. To the maximum extent permitted by law, and notwithstanding anything to the contrary in this contract, ABB's total liability in respect of any and all claims for damages or losses, caused by breach of contract, warranty, guarantee, indemnity, tort (including negligence), strict liability, statutory duty or otherwise, which may arise in connection with its performance or non-performance under this contract shall not exceed in the aggregate the total purchase price.
- 15.3. The Purchaser acknowledges that the contents of this Article 15 have been especially brought to the Purchaser's attention, and agree the exclusions and limitations on liability are reasonable in the circumstances.
16. LIMITATION PERIOD
- 16.1. Subject to law as regards personal injury and death, the Purchaser shall have no claim against ABB, in contract or in tort, in relation to anything performed or delivered under this contract (including claims for defective Products, services or goods), unless ABB has been notified in writing of such claim within twenty-four (24) months of delivery of the Product.
17. TERMINATION
- 17.1. Should
- (a) the Purchaser's payments be overdue by more than fourteen (14) days;
 - (b) a breach of the contract occurs in the circumstances set out in Article 11.1(d) or in Article 19.1;
 - (c) proceedings be commenced to wind up the Purchaser (except for the purpose of solvent amalgamation or reconstruction);
 - (d) any composition or arrangement with the Purchaser's creditors be made;
 - (e) the Purchaser be put into administration, or if a receiver is appointed;
 - (f) the Purchaser stops or suspend payment of its debts or is unable to, or has no real prospect of being able to, or admits an inability to, pay its debts as they fall due or fails to satisfy any judgment debt in whole or in part within fourteen (14) days; or
 - (g) the Purchaser ceases or threatens to cease to carry on the whole or a substantial part of its business or is dissolved;
- ABB shall be entitled (without incurring any liability to the Purchaser) to terminate the contract immediately by notice in writing to the Purchaser, and thereupon to recover any loss or damage ABB has suffered or incurred as a result of such termination.
18. EXCLUSION OF THIRD PARTY RIGHTS
- 18.1. The parties do not intend that a person who is not a party to this contract shall have any rights to enforce any term of this contract.
19. MISCELLANEOUS
- 19.1. The Purchaser shall acquaint itself and comply with ABB's Code of Conduct as displayed on ABB's website (<http://www.abb.com>) as may be updated or modified from time to time.
- 19.2. This contract constitutes the complete understanding between the parties and save in respect of fraud supersedes all previous representations, negotiations and agreements in respect thereof. Neither party shall be bound by any terms other than as expressly provided in this contract or as subsequently agreed between the parties in writing.
- 19.3. The Purchaser shall not use the name or logo of ABB or product designations on any letter heading, publication, advertisement or other literature without prior written approval of ABB, such approval shall be at ABB's sole discretion.
- 19.4. The Purchaser may not subcontract, transfer or assign any of its rights or obligations in connection with this contract.
- 19.5. The invalidity, illegality or unenforceability of any provision of this contract shall not affect the validity of the remaining provisions. If any provision proves to be invalid, illegal or unenforceable, the parties shall replace such provision by a valid new one having an effect as close as possible to the original provision.
20. GOVERNING LAW
- 20.1. This contract shall in all respects be governed by and construed in accordance with the laws of England and Wales. The parties agree that the United Nations Convention On Contracts For The International Sale Of Goods 1980 shall not apply to this contract (even if the UK or any part thereof should accede to the said convention).

Contact us

ABB Limited

Tower Court
Foleshill Enterprise Park
Courtaulds Way
Coventry CV6 5NX

Phone: 02476 368500
Fax: 02476 364499

www.abb.co.uk/lowvoltage



1TXD 0000 0 1 P0229 Rev A May 2013