

CONTACTUM

Defender 1.0 Consumer Units



DEFENDER
1.0



Defender 1.0

Contactum Metal Consumer Units & Surge Protection

In January 2019 the IET published the 18th Edition of the Wiring Regulations - BS7671:2018

This introduced new requirements covering for the provision of over-voltage protection by the use of Surge Protection Devices designed to overcome the potential impact upon Installations and the equipment within them.

Definition of a Surge

A surge is a fast short duration electrical transient in current or voltage within an electrical circuit.

Typically caused by an oversupply in voltage either from a switching event, or from an external source such as lightning.

Mains sources of Surges

■ Transient Voltages

These occur during switching events which release stored energy from established magnetic fields. External examples of these are power stations, distribution transformers and generators. Transient voltages can also occur locally within installations by the switching of appliances such as welders and air-con units. These by their nature will be smaller in magnitude

■ Lightning Strikes

These can be extremely detrimental to electrical installations and attached equipment, as the current contained within a strike can be up to 200kA. Ground lightning strikes can cause surges within installations up to 2km away as this energy can find its way into buried electrical cables

Benefits of Surge Protection

A correctly specified and installed surge protection device **will safely disperse over voltages to earth** – minimising damage to the installation wiring and any connected equipment.

When do you need Surge Protection?

443.4 Over-voltage Control

Protection against over-voltages shall be provided where the consequence caused by



Type tested to **BS EN 61439-3**

over-voltage could result in:

- (i) Serious injury to, or loss of human life
- (ii) Interruption of public services and/or damage to cultural heritage
- (iii) Interruption of commercial or industrial activity
- (iv) A large number of co-located individuals being affected.

For all other cases, a risk assessment according to 443.5 shall be performed in order to determine if protection against over-voltages is required. **Except** for single dwelling units where the total value of the

installation and equipment therein does not justify such protection.

Defender Consumer Units with Surge Protection Devices

Solution for all earthing systems

Available in:

- DD Range
- DDS Range
- Kits also available which include Surge Protection Devices, MCB and wires.

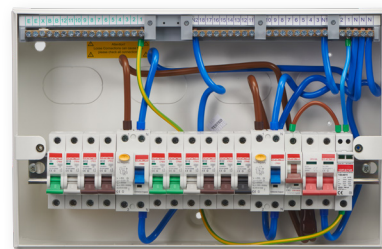
CONTACTUM

Circuit Protection

Devices for Domestic Premises



Features & Benefits



- A comprehensive range of single phase consumer units compliant with BS7671 18th Edition Wiring Regulations.
- **Tested in accordance to BS EN 61439-3**
- A modern sleek design suitable for all installations.
- Comprehensive range comprising 10 different enclosures sizes.
- Up to 22 module board as standard; combine boards to increase number of outgoing ways.
- Maximum cable space and extensive number of cable entry points allowing easy installation.
- Comprehensive user instructions and high quality sub circuit identification labels.
- Degree of protection IP4X.
- Flexible board configuration to enable optimal combination of RCD, MCB and RCBO use.
- Pre-populated configurations available.
- Secure hinge design.
- Locking kits available.

Do you need SURGE PROTECTION?

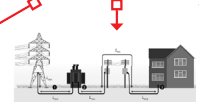


ONE
OPTION

SMART
CHOICE

Risk Assessment Calculation
$$CRL = f_{env} / (L_p \times N_g)$$

Environment	f_{env}
Rural and suburban environment	85
Urban environment	850



$LP = 2LPAL + LPCL + 0.4LPAH + 0.2LPCH$ (km)
LPAL is the length of LV overhead line
LPCL is the length of LV underground cable
LPAH is the length of HV overhead line
LPCH is the length of HV underground cable
Flash Density - N_g
For London use 0.8 N_g
IF $CRL < 1000$ then SP is needed

Defender SPMS



Defender 1.0 Consumer Units

Switch Disconnect Incomer Consumer Units Without & With Surge Protection



Without Surge	With Surge	Description
DD026MS	DD006SPMS	2 Way 63A ISO Incomer
DD028MS	-	2 Way 80A ISO Incomer
DD046MS	-	4 Way 63A ISO Incomer
DD041MS	DD041SPMS	4 Way 100A ISO Incomer
DD066MS	-	6 Way 63A ISO Incomer
DD061MS	-	6 Way 100A ISO Incomer
-	DD081SPMS	8 Way 100A ISO Incomer
DD106MS	-	10 Way 63A ISO Incomer
DD101MS	DD101SPMS	10 Way 100A ISO Incomer
DD121MS	DD121SPMS	12 Way 100A ISO Incomer
DD141MS	DD141SPMS	14 Way 100A ISO Incomer
DD161MS	DD161SPMS	16 Way 100A ISO Incomer
DD181MS	DD181SPMS	18 Way 100A ISO Incomer
DD201MS	-	20 Way 100A ISO Incomer
DD101MS-P01	DD101SPMS-P01	10 Way 100A Switch 1 x 40A, 2 x 32A 1 x 16A, 2 x 6A eRCBO + 4 Blanks
	DD101SPMS-P02	10 Way 100A Switch 1 x 40A, 2 x 32A 1 x 16A, 2 x 6A eRCBO + 2 Blanks

RCD Incomer Consumer Units



Code	Description
DR026AMS	2 Way 63A RCD Class A Incomer
DR046AMS	4 Way 63A RCD Class A Incomer
DR048AMS	4 Way 80A RCD Class A Incomer
DR066AMS	6 Way 63A RCD Class A Incomer
DR068AMS	6 Way 80A RCD Class A Incomer
DR106AMS	10 Way 63A RCD Class A Incomer
DR108AMS	10 Way 80A RCD Class A Incomer
DR148AMS	14 Way 80A RCD Class A Incomer
DR168AMS	16 Way 80A RCD Class A Incomer
DR208AMS	20 Way 80A RCD Class A Incomer

Split Load Consumer Units



Code	Description
DS0816AMS	8 Way 63A ISO Incomer + 1 RCD Class A
DS0818AMS	8 Way 80A ISO Incomer + 1 RCD Class A
DS1016AMS	10 Way 63A ISO Incomer + 1 RCD Class A
DS1018AMS	10 Way 80A ISO Incomer + 1 RCD Class A
DS1216AMS	12 Way 63A ISO Incomer + 1 RCD Class A
DS1218AMS	12 Way 80A ISO Incomer + 1 RCD Class A
DS1416AMS	14 Way 63A ISO Incomer + 1 RCD Class A
DS1418AMS	14 Way 80A ISO Incomer + 1 RCD Class A
DS1616AMS	16 Way 63A ISO Incomer + 1 RCD Class A
DS1618AMS	16 Way 80A ISO Incomer + 1 RCD Class A
DS1818AMS	18 Way 80A ISO Incomer + 1 RCD Class A

Flexible High Integrity Split Load Dual RCD Consumer Units Without & With Surge Protection



Without Surge	With Surge	Description
DDS06166AMS	DDS06166ASPMS	6 Way 63A ISO Incomer + 2 RCD Class A
DDS06188AMS	DDS06188ASPMS	6 Way 80A ISO Incomer + 2 RCD Class A
DDS08166AMS	DDS08166ASPMS	8 Way 63A ISO Incomer + 2 RCD Class A
DDS08188AMS	DDS08188ASPMS	8 Way 80A ISO Incomer + 2 RCD Class A
DDS10166AMS	DDS10166ASPMS	10 Way 63A ISO Incomer + 2 RCD Class A
DDS10188AMS	DDS10188ASPMS	10 Way 80A ISO Incomer + 2 RCD Class A
DDS12166AMS	DDS12166ASPMS	12 Way 63A ISO Incomer + 2 RCD Class A
DDS12188AMS	DDS12188ASPMS	10 Way 80A ISO Incomer + 2 RCD Class A
DDS14166AMS	DDS14166ASPMS	14 Way 63A ISO Incomer + 2 RCD Class A
DDS14188AMS	DDS14188ASPMS	14 Way 80A ISO Incomer + 2 RCD Class A
DDS16166AMS	-	16 Way 63A ISO Incomer + 2 RCD Class A
DDS16188AMS	-	16 Way 80A ISO Incomer + 2 RCD Class A
DDS06166AMS-P01	-	6 Way 63A ISO Incomer + 2 RCD Class A c/w 1 x 40A, 2 x 32A, 1 x 16A, 2 x 6A MCBs
DDS06188AMS-P01	-	6 Way 80A ISO Incomer + 2 RCD Class A c/w 1 x 40A, 2 x 32A, 1 x 16A, 2 x 6A MCBs
DDS08166AMS-P01	-	8 Way 63A ISO Incomer + 2 RCD Class A c/w 1 x 40A, 3 x 32A, 2 x 16A, 2 x 6A MCBs
DDS08188AMS-P01	-	8 Way 80A ISO Incomer + 2 RCD Class A c/w 1 x 40A, 3 x 32A, 2x 16A, 2 x 6A MCBs
DDS10166AMS-P01	-	10 Way 63A ISO Incomer + 2 RCD Class A c/w 1 x 40A, 4 x 32A, 2 x 16A, 3 x 6A MCBs
DDS10188AMS-P01	DDS10188ASPMS-P01	10 Way 80A ISO Incomer + 2 RCD Class A c/w 1 x 40A, 4 x 32A, 2 x 16A, 3 x 6A MCBs
DDS12188AMS-P01	DDS12188ASPMS-P01	12 Way 80A ISO Incomer + 2 RCD Class A c/w 1 x 40A, 4 x 32A, 2 x 16A, 3 x 6A MCBs
DDS14188AMS-P01	DDS14188ASPMS-P01	14 Way 80A ISO Incomer + 2 RCD Class A c/w 1 x 40A, 4 x 32A, 2 x 16A, 3 x 6A MCBs
DDS16188AMS-P01	-	16 Way 80A ISO Incomer + 2 RCD Class A c/w 1 x 40A, 4 x 32A, 2 x 16A, 3 x 6A MCBs

Other populated configuration available upon request.

Garage Unit, Shower Enclosures & Time Delay Enclosure



Without Surge	With Surge	Description
DR026AMS-P01	-	Garage Unit 2 Way 63A RCD Class A + 1 x 16A, 1 x 6A MCBs
DSPE1AMS	-	40A RCBO Class A Shower Enclosure - No O/G Ways
DSPE2AMS	-	63A RCD Class A Shower Enclosure - 1 O/G 50A MCB
-	DD006SPMS	63A ISO Incomer + 63A 10KA MCB + Surge T2C4011KIT

Defender 1.0 Devices

Empty Enclosures



Metal Enclosures Earth/Neutral

DME02MS	IP2XC/IP4X 2 Mod 114 x 260 x 130mm
DME04MS	IP2XC/IP4X 4 Mod 150 x 260 x 130mm
DME06MS	IP2XC/IP4X 6 Mod 186 x 260 x 130mm
DME08MS	IP2XC/IP4X 8 Mod 222 x 260 x 130mm
DME012MS	IP2XC/IP4X 12 Mod 294 x 260 x 130mm
DME014MS	IP2XC/IP4X 14 Mod 330 x 260 x 130mm
DME016MS	IP2XC/IP4X 16 Mod 366 x 260 x 130mm
DME018MS	IP2XC/IP4X 18 Mod 402 x 260 x 130mm
DME020MS	IP2XC/IP4X 20 Mod 438 x 260 x 130mm
DME022MS	IP2XC/IP4X 22 Mod 474 x 260 x 130mm

Brackets



Defender Brackets

RCEB-TE-12MOD	Rear Cable Top Entry 12 Mod
RCEB-TE-14MOD	Rear Cable Top Entry 14 Mod
RCEB-TE-16MOD	Rear Cable Top Entry 16 Mod
RCEB-TE-18MOD	Rear Cable Top Entry 18 Mod
RCEB-TE-20MOD	Rear Cable Top Entry 20 Mod
RCEB-TE-22MOD	Rear Cable Top Entry 22 Mod

Isolators



Double Pole Isolators

CPD63	63A Double Pole Isolator
CPD100	100A Double Pole Isolator

RCDs



Double Pole RCD Devices Class A

CPR63A	63A 30mA DP Type A RCD
CPR100A	100A 30mA DP Type A RCD

eRCBOs



eRCBO Devices Class A

Compact	Standard	
CCPBR0606AB	CPBR0606AB	6A 6KA B Curve SP
CCPBR0610AB	CPBR0610AB	10A 6KA B Curve SP
CCPBR0616AB	CPBR0616AB	16A 6KA B Curve SP
CCPBR0620AB	CPBR0620AB	20A 6KA B Curve SP
CCPBR0632AB	CPBR0632AB	32A 6KA B Curve SP
CCPBR0640AB	CPBR0640AB	40A 6KA B Curve SP
CCPBR0650AB	CPBR0650AB	50A 6KA B Curve SP

eRCBO also available in C Curve options

MCBs



MCB Devices B Curve

CPB0606B	6A 6KA B Curve SP MCB
CPB0610B	10A 6KA B Curve SP MCB
CPB0616B	16A 6KA B Curve SP MCB
CPB0620B	20A 6KA B Curve SP MCB
CPB0625B	25A 6KA B Curve SP MCB
CPB0632B	32A 6KA B Curve SP MCB
CPB0640B	40A 6KA B Curve SP MCB
CPB0650B	50A 4.5KA B Curve SP MCB
CPB0663B	63A 4.5KA B Curve SP MCB

MCB also available in C Curve options

CONTACTUM

Circuit Protection

Contactors, Transformer & Sensor



Installation Contactors

COA20-20/230	20A 230V 2N/O (1 Mod)
COA25-40/230	25A 230V 4N/O (2 Mods)
COA40-20/230	40A 230V 2N/O (3 Mods)
COA40-40/230	40A 230V 4N/O (3 Mods)
COA63-20/230	63A 230V 2N/O (3 Mods)
COA63-40/230	63A 230V 4N/O (3 Mods)

Bell Transformer

TSBT2	Bell Transformer 1A 8VA Output
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Time Switches



Digital Timing Devices

TSD1T	7 Day 24 Hour 1 Channel 2 Module
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Analogue Timing Devices

TSAQ1	24 Hour 1 Channel 3 Module
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Staircase Timing Device

TSSL1	1 Channel 1 Module
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Surge Kits



Surge Kits

T2C4011KIT	Surge 40KA 1+1 Protection Retro Fit Kit
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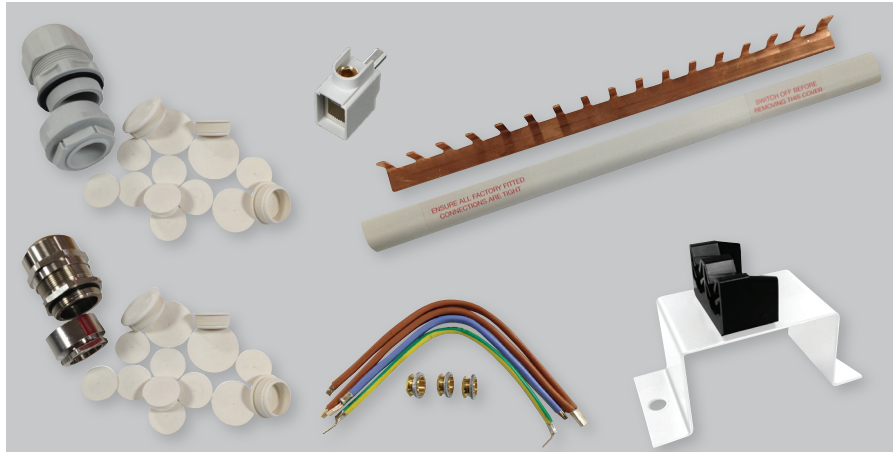
MCB Accessories



MCB Blank & Locking Device

CPBBL	MCB Blank
DCA10	MCB/RCBO Toggle Locking Device

General Accessories



Accessories

DCA01	1/4 Turn Camlock Accessory	DCA24	Defender C/U Stacking & Link (DDS) Kit
DCA02	Key Lock Camlock Accessory	DCA25	Defender C/U Stacking & Link (DD) Kit
DCA20	AMD3 Membrane Grommet Kit	DCA26	2.5-50 mm ² Earth Cable Connector Kit
DCA21	40/32mm Tails Red Kit Metal	DCA30	Defender 14 Mod Spare Busbar and Cover
DCA22	40/32mm Tails Red Kit Plastic	DCA31	Defender 22 Mod Spare Busbar and Cover
DCA23	25mm Tail Retention Bracket		



CONTACTUM

Contactum Ltd, Victoria House, 2 Blackmoor Lane,
Croxley Green Business Park, Watford WD18 8GA
T: 020 8208 7400 E: sales@contactum.co.uk www.contactum.co.uk

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