electrium

WYLEX

Circuit Protection Systems for Domestic Household Premises

AFDDs MANDATED

The use of Arc Fault Detection Devices is mandated for single-phase AC final circuits supplying socket-outlets (with a rated current up to 32A) in certain types of premises i.e.

- In Higher Risk Residential Buildings (HRRB)
- In Houses in Multiple Occupation (HMO)
- In Purpose-Built Student Accommodation
- In Care Homes

The use of AFDDs is also recommended in all other types of premises for single-phase AC final circuits supplying socket outlets rated up to 32A.

AFDDs shall be placed at the origin of the circuit to be protected i.e. in the consumer unit or distribution board.

See BS 7671 (including Amendment 2) for full details

ULTIMATE PROTECTION USING STANDARD PRODUCTS

- Miniature sized AFDD 18mm wide
- AFD/RCBO combined or AFD/MCB combined
- Fits regular consumer units
- Standard installation process
- Uses 1 consumer unit way
- Ring circuit compatible
- Radial circuit compatible
- Detects serial arc faults
- Detects parallel arc faults
- AFD/RCBO option Type A 30mA
- With double pole switching bidirectional *
- Self tests every 15 hours
- Status indicators (fault find assistant)
- BS EN 62606
- Retrofit compatible
- Protects against fires caused by arc faults

for full details visit www.electrium.co.uk

* Declaration of Conformance certification available via www.electrium.co.uk

SPDs IN ALL INSTALLATIONS

Transient overvoltage protection devices (SPDs) are now required in all electrical installations however, in some cases the owner of the installations can opt out and accept all risks and consequential losses from such over-voltages.

Transient overvoltage protection must be provided where the consequence of overvoltage can cause.

- Serious injury to, or loss of, human life
- The failure of a safety service, as defined in Part 2 of BS 7671
- Significant financial or data loss

Transient overvoltage protection is required in all other cases too unless the owner of the installations declares it is not required and accepts all risks and consequences.

See BS 7671 (including Amendment 2) for full details.

ULTIMATE PROTECTION USING STANDARD PRODUCTS

- MCB sized SPDs
- Fits regular consumer units
- Direct busbar connection
- Standard installation process
- Uses 1 consumer unit way
- 100A rated
- No back up MCB required
- Type 2 surge protection
- Health status indicator
- Remote signal facility
- Replace cartridge indicator
- BS EN 61643 -11
- Retrofit compatible
- Protects appliances and electronic devices

for full details visit www.electrium.co.uk

RCBOs AVOID UNWANTED TRIPPING

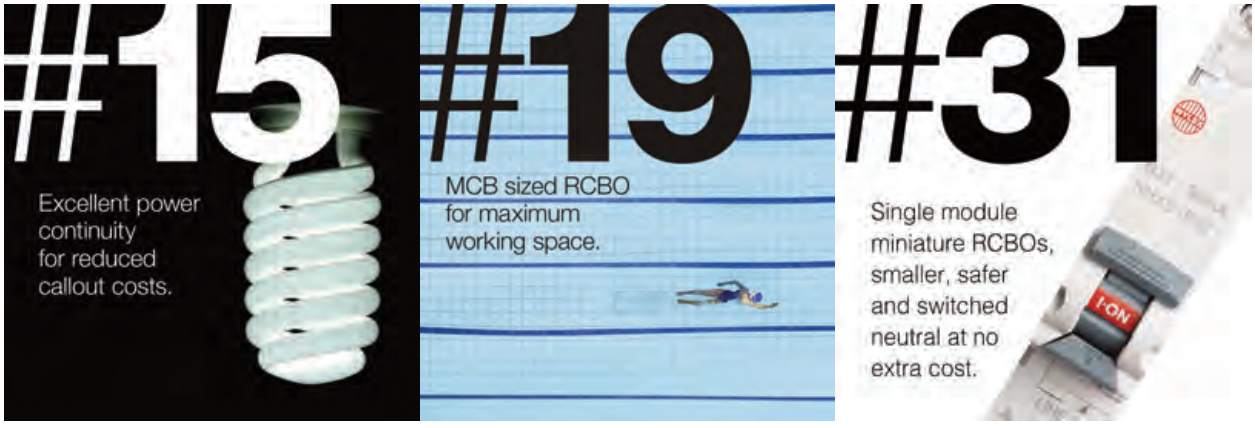
Where additional protection is required (by use of a 30mA device) designers should consider the use of RCBOs for individual final circuits (in residential premises) to reduce the risk of unwanted tripping. Other considerations include:

Any earth leakage currents that occur during normal operation of equipment should not cause unwanted tripping.

To avoid unwanted tripping by protective conductor currents such currents should be less than 30% of 30mA (9mA).

Every installation must be divided into sufficient number of final circuits in order to avoid danger and minimize inconvenience in the event of a fault, and avoid hazards from the failure of a single circuit such as a lighting circuit.

See BS 7671 (including Amendment 2) for full details.



ULTIMATE PROTECTION USING STANDARD PRODUCTS

- MCB sized RCBOs
- Fits regular consumer units
- Maximises wiring space
- No miss terminal design
- Avoids unwanted tripping
- Type A 30mA Device
- Two pole switching device
- Bidirectional *
- IR Test compatible (off position)
- Total isolation of faults
- Safer working environment
- B & C Curve variants
- 6A to 40A
- Fully compliant to IEC 61009-1
- Retro fit compatible

for full details visit www.electrium.co.uk

* Declaration of Conformance certification available via www.electrium.co.uk

GOOD REASONS TO CHOOSE WYLEX
(THERE'S NO END OF THEM)

Our UK based R&D teams design products from scratch and look after each stage of design and performance validation.

As part of the Siemens family Wylex reaps the benefits of being in a global manufacturing network.

With a UKAS accredited, ASTA recognised test laboratory (RTL), Wylex customers can have full confidence in Wylex products.

Offering you the largest range of domestic circuit protection products in the UK, and a custom-built product service.

Single module miniature AFDD/RCBO provides the highest levels of protection for the installation and its users, miniature AFDDs fit regular consumer units in new & existing installations*

Single module miniature RCBOs provide total circuit isolation following detection of any fault condition AND for maintenance purposes. Miniature RCBOs are quicker and easier to install and test, saving time and money.

Single module Type 2 SPDs are100A rated, need no MCB back up, connect directly to the busbar and protect valuable appliances and electronic equipment as well as the overall fixed installation.

Wylex Devices are designed with a no miss terminal arrangement to ensure that busbar connections are not misaligned. Secure connections with Siemens technology.

* Busbar check required, see page 50 busbar compatibility table

Electrium Sales Ltd. is a Siemens company,
Wylex is part of Electrium Sales Ltd.

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Certificate Number 18828
ISO 9001, ISO 14001, ISO 45001

2013-RTL-L4-75
2013-RTL-L4-36

Testing Laboratory No. 1460
Testing Laboratory No. 2003

As a leading manufacturer of electrical installation equipment, Wylex is committed to the continual improvement of all quality assurance procedures and performance.

WHY CHOOSE ANYTHING LESS?

NM Main Switch Consumer Units

NM1406L

MAIN SWITCH FIXED

CAT REF	MS RATING	AFD/RCBO WAYS	TOTAL WAYS
NM206/40	40A	2	2
NM206/63	63A	2	2
NM506L	100A	5	5
NM806L	100A	8	8
NM1106L	100A	11	11
NM1406L	100A	14	14
NM1906L	100A	19	19

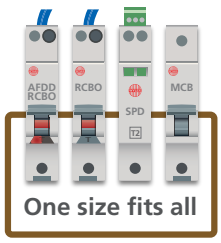
MAIN SWITCH FLEXIBLE

NM506FLEX	100A	5	5
NM806FLEX	100A	8	8
NM1106FLEX	100A	11	11
NM1406FLEX	100A	14	14
NM1906FLEX	100A	19	19

MAIN SWITCH FLEXIBLE COMPLETE WITH SURGE PROTECTION DEVICE - SPD

NM706LS	100A	7	7
NM1006LS	100A	10	10
NM1306LS	100A	13	13
NM1806LS	100A	18	18

• Compatible with single module AFDDs, RCBOs, SPDs & MCBs



Consumer unit accessories pages 26 & 27
Flexible busbar has full DIN Rail.
For further information please contact Wylex technical 01543 438320

NM Split Load Consumer Units

NMRS12SLMA

SPLIT LOAD FIXED WITH TYPE A RCD

CAT REF	MS RATING	AFD/RCBO WAYS	RCD WAYS	TOTAL WAYS
NMRS2406L	100A	4	2	6
NMRS3306L	100A	3	3	6
NMRS5406L	100A	4	5	9
NMRS4506L	100A	5	4	9
NMRS6306L	100A	3	6	9
NMRS6606LA	100A	6	6	12
NMRS12506L	100A	5	12	17
NMRS61106L	100A	11	6	17
NMRS9806L	100A	8	9	17
NMRS8906L	100A	9	8	17

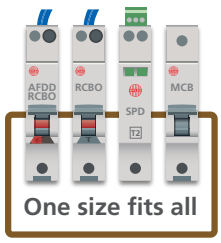
SPLIT LOAD FLEXIBLE WITH TYPE A RCD

NMRS6SLMA	100A	4 max	4 max	6
NMRS9SLMA	100A	6 max	6 max	9
NMRS12SLMA	100A	9 max	9 max	12
NMRS17SLMA	100A	12 max	12 max	17

SPLIT LOAD FLEXIBLE WITH 100A TYPE A RCDs

NMRS12SL100	100A	9 max	9 max	12
NMRS17SL100	100A	12 max	12 max	17

• Compatible with single module AFDDs, RCBOs, SPDs & MCBs



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Flexible busbar has full DIN Rail.
For further information please contact Wylex technical 01543 438320

NM High Integrity Consumer Units

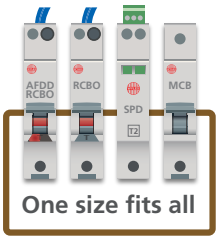
NM High Integrity Consumer Units

NMRS10SSLMHIA

HIGH INTEGRITY / TWIN TYPE A RCDs

CAT REF	MS RATING	AFD/RCBO WAYS	RCD1 WAYS	RCD2 WAYS	TOTAL WAYS
NMRS23206LA	100A	2	3	2	7
NMRS44206LA	100A	2	4	4	10
NMRS33406LA	100A	4	3	3	10
NMRS76206LA	100A	2	6	7	15
NMRS66306LA	100A	3	6	6	15
NMRS55506L	100A	5	5	5	15
NMRS45606LA	100A	6	5	4	15

• Compatible with single module AFDDs, RCBOs, SPDs & MCBs



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For further information please contact Wylex technical 01543 438320

NMRS9SSLMHISA

HIGH INTEGRITY / TWIN TYPE A RCDs

CAT REF	MS RATING	AFD/RCBO WAYS	RCD1 WAYS	RCD2 WAYS	TOTAL WAYS
NMRS7SSLMHIA	100A	4 max	4 max	4 max	7
NMRS10SSLMHIA	100A	5 max	5 max	5 max	10
NMRS15SSLMHIA	100A	9 max	7 max	9 max	15

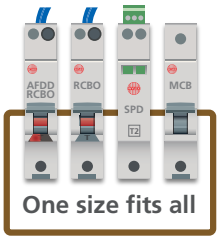
HIGH INTEGRITY FLEXIBLE / TWIN TYPE A RCDs WITH SURGE PROTECTION DEVICE - SPD

NMRS9SSLMHISA	100A	5 max	5 max	5 max	9
NMRS14SSLMHISA	100A	8 max	8 max	8 max	14

HIGH INTEGRITY FLEXIBLE / TWIN TYPE A RCDs WITH 100A RCDs

NMRS10HI100	100A	5 max	5 max	5 max	10
NMRS15HI100	100A	9 max	9 max	9 max	15

• Compatible with single module AFDDs, RCBOs, SPDs & MCBs



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Flexible busbar has full DIN Rail.

For further information please contact Wylex technical 01543 438320

NM Dual RCD Consumer Units

NMISS5506LA

DUAL RCD FIXED WITH TYPE A RCDs

CAT REF	MS RATING	AFD/RCBO WAYS	RCD1 WAYS	RCD2 WAYS	TOTAL WAYS
NMISS3406LA	100A	0	3	4	7
NMISS4606L	100A	0	4	6	10
NMISS5506LA	100A	0	5	5	10
NMISS8706L	100A	0	8	7	15

Note: Not suitable for installations using AFDDs, RCBOs or SPDs

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For further information please contact Wylex technical 01543 438320

NM Dual RCD Consumer Units Flexible

NMISS10SLMA

DUAL RCD FLEXIBLE WITH 80A TYPE A RCDs

CAT REF	MS RATING	AFD/RCBO WAYS	RCD1 WAYS	RCD2 WAYS	TOTAL WAYS
NMISS10SLMA	100A	0	6 Max	6 Max	10
NMISS15SLMA	100A	0	9 Max	9 Max	15

DUAL RCD FLEXIBLE WITH 100A TYPE A RCDs

NMISS10SL100	100A	0	6 Max	6 Max	10
NMISS15SL100	100A	0	9 Max	9 Max	15

Note: Not suitable for installations using AFDDs, RCBOs or SPDs

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Flexible busbar has full DIN Rail.

For further information please contact Wylex technical 01543 438320

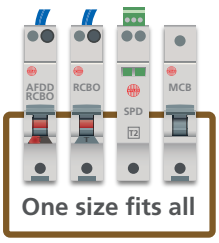
NM Dual Tariff Consumer Units

NMIIX4506L

DUAL TARIFF 100A MAIN SWITCH & 100A MAIN SWITCH

CAT REF	MS RATING	WAYS	MS RATING	WAYS
NMIIX2406L	63A	2	100A	4
NMIIX5406L	100A	5	100A	4
NMIIX4506L	100A	4	100A	5
NMIIX3906L	100A	3	100A	9
NMIIX4806L	100A	4	100A	8
NMIIX7506L	100A	7	100A	5
NMIIX6606L	100A	6	100A	6
NMIIX5706L	100A	5	100A	7
NMIIX9806L	100A	9	100A	8
NMIIX8906L	100A	8	100A	9
NMIIX51206L	100A	5	100A	12
NMIIX11606L	100A	11	100A	6

• Compatible with single module AFDDs, RCBOs, SPDs & MCBs



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For further information please contact Wylex technical 01543 438320

NM Dual Tariff with RCD Consumer Units

NMRSX6606L

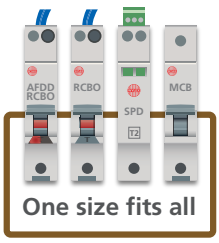
DUAL TARIFF 100A MAIN SWITCH & 100A 30mA TYPE A RCD

CAT REF	RCD RATING	MCB WAYS	MS RATING	WAYS
NMRSX5706L	100A 30mA	5	100A	7
NMRSX6606L	100A 30mA	6	100A	6
NMRSX8906L	100A 30mA	8	100A	9
NMRSX9806L	100A 30mA	9	100A	8

SPLIT LOAD DUAL TARIFF 100A MAIN SWITCHES & 80A 30mA TYPE A RCD

CAT REF	MS RATING	AFD/RCBO WAYS	RCD WAYS	MS2 RATING	AFD/RCBO WAYS	TOTAL WAYS
NMRS10SLMDT	100A	5 max	5 max	100A	5 max	10
NMRS15SLMDT	100A	9 max	7 max	100A	9 max	15

• Compatible with single module AFDDs, RCBOs, SPDs & MCBs



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Flexible busbar has full DIN Rail.

For further information please contact Wylex technical 01543 438320

NM Duplex Main Switch Consumer Units

NMD1920

MAIN SWITCH DUPLEX UNITS FLEXIBLE

CAT REF	MS RATING	AFD/RCBO WAYS	TOTAL WAYS
NMD89	100A	17	17
NMD1112	100A	23	23
NMD1415	100A	29	29
NMD1920	100A	39	39

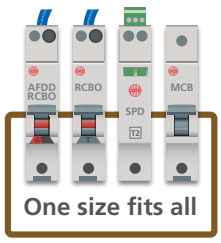
DUAL TARIFF DUPLEX FIXED

	TOP BANK		BOTTOM BANK		
CAT REF	MS RATING 1	AFD/RCBO WAYS	MS RATING 2	AFD/RCBO WAYS	TOTAL WAYS
NMDIIX88L	100A	8	100A	8	16
NMDIIX1111L	100A	11	100A	11	22
NMDIIX1414L	100A	14	100A	14	28
NMDIIX1919L	100A	19	100A	19	38

DUAL TARIFF DUPLEX FIXED

CAT REF	MS RATING	TOP BANK AFD/RCBO WAYS	BOTTOM BANK RCD1 WAYS	TOTAL WAYS
NMDISX88L	100A	8	8	16
NMDISX1111L	100A	11	11	22
NMDISX1414L	100A	14	14	28

• Compatible with single module AFDDs, RCBOs, SPDs & MCBs



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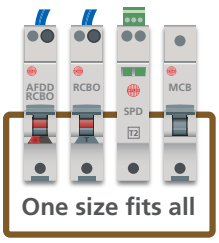
NM Duplex RCD Split Load Consumer Units

NMDIS1111L

SPLIT LOAD DUPLEX FIXED WITH TYPE A RCD

	TOP BANK		BOTTOM BANK	
CAT REF	MS RATING	AFD/RCBO WAYS	RCD1 WAYS	TOTAL WAYS
NMDIS88L	100A	8	8	16
NMDIS1111L	100A	11	11	22
NMDIS1414L	100A	14	14	28
NMDIS1919L	100A	19	19	38

• Compatible with single module AFDDs, RCBOs, SPDs & MCBs



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NM Duplex High Integrity Consumer Units

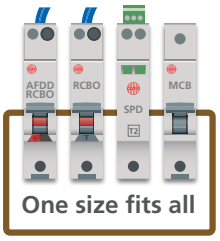
NMDRS24HIA

HIGH INTEGRITY DUPLEX FLEXIBLE WITH TYPE A RCDs

		TOP BANK		BOTTOM BANK	
CAT REF	MS RATING	AFD/RCBO WAYS	RCD1 WAYS	RCD2 WAYS	TOTAL WAYS
NMDRS14SSLHIA	100A	5 max	5 max	8	14
NMDRS20SSLHIA	100A	6 max	5 max	11	20
NMDRS26SSLHIA	100A	10 max	8 max	14	26
NMDRS36SSLHIA	100A	16 max	15 max	19	36

		TOP BANK		BOTTOM BANK		
CAT REF	MS RATING	AFD/RCBO WAYS	RCD1 WAYS	RCD2 WAYS	RCD3 WAYS	TOTAL WAYS
NMDRS12HI	100A	6 max	4 max	6 max	6 max	12
NMDRS18HI	100A	7 max	5 max	7 max	7 max	18
NMDRS24HIA	100A	8 max	6 max	8 max	8 max	24
NMDRS34HIA	100A	10 max	8 max	10 max	10 max	34

• Compatible with single module AFDDs, RCBOs, SPDs & MCBs



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NM NM Duplex Dual RCD Consumer Units

NMDISS1214L

DUAL RCD DUPLEX FIXED WITH TYPE A RCDs

		TOP BANK	BOTTOM BANK		
CAT REF	MS RATING	AFD/RCBO WAYS	RCD 1 WAYS	RCD 2 WAYS	TOTAL WAYS
NMDISS119LA	100A	0	9	11	20
NMDISS1214L	100A	0	12	14	26

Note: Not suitable for installations using AFDDs, RCBOs or SPDs

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NM Main RCD Consumer Units

NMTM1106L

RCD INCOMER FIXED

CAT REF	RCD RATING	MCB WAYS
NMRS206/63A	63A 30mA	2
NMRS506LA	100A 30mA	5
NMRS806LA	100A 30mA	8
NMRS1106LA	100A 30mA	11
NMRS1406LA	100A 30mA	14
NMRS1906L	100A 30mA	14
NMRM206/40	40A 100mA	2
NMRM206/63	63A 100mA	2
NMRM506L	100A 100mA	5
NMRM806L	100A 100mA	8
NMRM806LA	100A 100mA	8
NMRM1106L	100A 100mA	11
NMTM806L	100A 100mA time delay	8
NMTM1106L	100A 100mA time delay	11
NMTM1406L	100A 100mA time delay	14

RCD INCOMER WITH MCBs

CAT REF	RCD RATING	MCB1	MCB2	MCB WAYS
NMRS206/63GWUA	63A 30mA	6A	16A	2

For applications with AFDDs and RCBOs contact Wylex Technical 01543 438320

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NM Time Delay RCD Split Load Consumer Units

NMSTM9SLM

SPLIT LOAD (TIME DELAY) FLEXIBLE

CAT REF	RCD RATING	MCB WAYS MIN	MCB WAYS MAX	TD RCD	WAYS MIN	WAYS MAX	WAYS TOTAL
NMSTM9SLM	80A 30mA	3	6	100A 100mA	3	6	9
NMSTM12SLM	80A 30mA	3	9	100A 100mA	3	9	12
NMSTM17SLM	80A 30mA	5	12	100A 100mA	5	12	17

For applications with AFDDs and RCBOs contact Wylex Technical 01543 438320

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Meter Cabinet Main Switch Consumer Units

FALNM806L

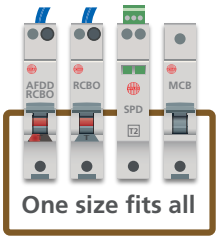
MAIN SWITCH METAL CASED SKELETON UNITS FIXED BUSBAR

CAT REF	MS RATING	ONE MOD WAYS	TOTAL WAYS
FALNM806L	100A	8	8
273mm wide fixing centres			
FALNM1106L	100A	11	11
320mm wide fixing centres			
F43NM1406L	100A	14	14
430mm wide fixing centres			

DUAL TARIFF METAL CASED SKELETON UNITS FLEXIBLE BUSBAR

CAT REF	MS RATING	ONE MOD WAYS	TOTAL WAYS
FALNMHIIX9DT	100A (2)	9	9
320mm wide fixing centres			
F43NMHIIX12DT	100A (2)	12	12
430mm wide fixing centres			

- Shroud extension from gland plate max 78mm min 14mm
- Compatible with single module AFDDs, RCBOs, SPDs & MCBs



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Meter Cabinet Split Load Consumer Units

FALNMRS9SLMA

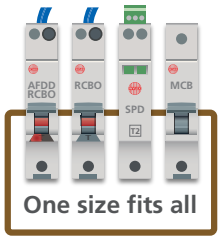
SPLIT LOAD METAL CASED SKELETON UNITS WITH TYPE A RCD - FIXED BUSBAR

CAT REF	MS RATING	MS WAYS	RCD WAYS	TOTAL WAYS
FALNMRS5406L	100A	4	5	9
320mm wide fixing centres				
F43NMRS6606L	100A	6	6	12
430mm wide fixing centres				

SPLIT LOAD METAL CASED SKELETON UNITS WITH TYPE A RCD - FLEXIBLE BUSBAR

CAT REF	MS RATING	MS WAYS	RCD WAYS	TOTAL WAYS
FALNMRS9SLMA	100A	6 (max)	6 (max)	9
320mm wide fixing centres				
F43NMRS12SLM	100A	9 (max)	9 (max)	12
430mm wide fixing centres				

- Shroud extension from gland plate max 78mm min 14mm
- Compatible with single module AFDDs, RCBOs, SPDs & MCBs



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Meter Cabinet High Integrity Consumer Units

FALNMRS7SSLHIA

HIGH INTEGRITY METAL CASED SKELETON UNITS WITH TYPE A RCD - FIXED BUSBAR

CAT REF	MS RATING	MS WAYS	RCD1 WAYS	RCD2 WAYS	TOTAL WAYS
F43NMRS44206L	100A	2	4	4	10

430mm wide fixing centres

HIGH INTEGRITY METAL CASED SKELETON UNITS WITH TYPE A RCD - FLEXIBLE BUSBAR

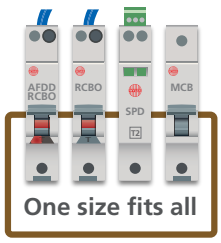
CAT REF	MS RATING	MS WAYS	RCD1 WAYS	RCD2 WAYS	TOTAL WAYS
FALNMRS7SSLHIA	100A	4 (max)	4 (max)	4 (max)	7
FALNMRS9SSLHIA	100A	5 (max)	5 (max)	5 (max)	9

320mm wide fixing centres

F43NMRS10SSLHI	100A	5 (max)	5 (max)	5 (max)	10

430mm wide fixing centres

- Shroud extension from gland plate max 78mm min 14mm
- Compatible with single module AFDDs, RCBOs, SPDs & MCBs



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Meter Cabinet Dual RCD Consumer Units

F43NMISS10SLM

DUAL RCD METAL CASED SKELETON UNITS WITH TYPE A RCD - FLEXIBLE BUSBAR

CAT REF	MS RATING	RCD1 WAYS	RCD2 WAYS	TOTAL WAYS
F43NMISS10SLM	100A	6 (max)	6 (max)	10

430mm wide fixing centres

FALNMISS7SLMA	100A	4 (max)	4 (max)	7
FALNMISS9SLMA	100A	5 (max)	5 (max)	9

320mm wide fixing centres

- Shroud extension from gland plate max 78mm min 14mm
- Type A RCDs

Note: Not suitable for installations using AFDDs, RCBOs or SPDs

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P5202/SPARE

MNSPE7358/NR

SPARES

CAT REF	DESCRIPTION
MNSPE7358/NR	Bracket extension pack for 320mm consumer unit to fit 430mm meter cabinet
MNSPE7660/NR	Bracket extension pack for 273mm consumer unit to fit 320mm meter cabinet
P5202/SPARE	Mantel / meter cabinet enclosure metal bottom screen plate
P9713/SPARE	Mantel / meter cabinet enclosure PVC - insulated bottom screen plate

Consumer unit accessories pages 26 & 27

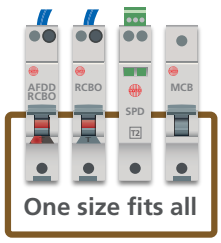
NM Main Switch PV Consumer Units

NM14DSRCBMPVF

MAIN SWITCH DUAL SUPPLY PV CONSUMER UNIT WITH MID CERTIFIED GENERATION METER

CAT REF.	DESCRIPTION
NMRCBO16BMPV	1 way unit with DP 16A RCBO (includes meter)
NM14DSRCBMPVF	14 Way unit with dual supply isolators & 16A DP RCBO c/w PV MID Meter
NM9DSRCBMPVF	9 Way unit with dual supply isolators & 16A DP RCBO c/w PV MID Meter

- Compatible with single module AFDDs, RCBOs, SPDs & MCB
- All PV meters supplied are MID B&D Certified, design & functionality may be upgraded to versions shown in catalogue
- WRCBX RCBOs are Bi-directional.



Consumer unit accessories pages 26 & 27

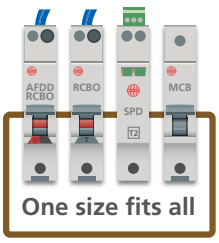
NM High Integrity PV Consumer Units

NM10DSRCBMPVHI

HIGH INTEGRITY DUAL SUPPLY PV CONSUMER UNIT WITH MID CERTIFIED GENERATION METER - TYPE A RCDs

CAT REF.	DESCRIPTION
NM10DSRCBMPVHI	10 Way unit with dual supply isolators & 16A DP RCBO c/w PV MID Meter

- Compatible with single module AFDDs, RCBOs, SPDs & MCBs
- All PV meters supplied are MID B&D Certified, design & functionality may be upgraded to versions shown in catalogue
- WRCBX RCBOs are Bi-directional.



Consumer unit accessories pages 26 & 27

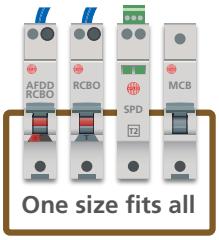
NM Split Load PV Consumer Units

NM12DSRCBMPVSL

SPLIT LOAD DUAL SUPPLY PV CONSUMER UNIT WITH MID CERTIFIED GENERATION METER - TYPE A RCD

CAT REF.	DESCRIPTION
NM12DSRCBMPVSL	12 Way unit with dual supply isolators & 16A DP RCBO c/w PV MID Meter

- All PV meters supplied are MID B&D Certified, design & functionality may be upgraded to versions shown in catalogue
- WRCBX RCBOs are Bi-directional.



Consumer unit accessories pages 26 & 27

Combination PV Isolator Units

PV Isolators

NHDSMS

NHTPSD32

COMBINATION DC & AC PV ISOLATOR

Two isolators DC & AC in a single enclosure that allows the installer to save time by comparison to other methods that utilise two separate enclosures. Class II construction.

CAT REF.	DESCRIPTION
NHDSMS	Dual Isolator
NHDS106B16	Dual Isolator with SP 16A MCB

- Available with or without local circuit protection devices (MCB, RCD or RCBO)
- Compact combined DC & AC Isolator in one enclosure
- Speeds up installation
- Securable in the Off position
- Robust metal enclosure with Knockout cable entries

When circuit protection devices are provided at the inverter output, the installer must ensure that the characteristics of the protective device are suitable for the fault levels at that point in the circuit and will meet required disconnection times

PV supplies (DC & AC) must be arranged so that the converter can be isolated from both supplies for maintenance

AC ISOLATOR

AC Isolator in an all insulated IP65 enclosure with rotary door interlock and padlock locking Off facility.

CAT REF.	DESCRIPTION
NHTPSD16	16A 230V AC 3 Pole
NHTPSD25	25A 230V AC 3 Pole
NHDSREC4	100A 230V AC Dual supply Rec switch

DC ISOLATOR

DC Isolator in an all insulated enclosure with rotary handle and padlock locking Off facility.

CAT REF.	DESCRIPTION
NHDC406006P	40A 600V 6 Pole

Type B RCD Unit

NSPE-5580

PV-DC TYPE B RCD IN ENCLOSURE

CAT REF.	DESCRIPTION
NSPE-5580	40A 30mA DP RCD
NSPE-5581	40A 300mA DP RCD

Type B RCDs may be required for Electric Vehicle chargers as well as some Solar PV installations

PV Mid Meter Units

NHSPMTRA NHSPMTRD

MID METERS IN ENCLOSURE

MID B&D certified meters c/w an IP40 insulated enclosure.

CAT REF.	DESCRIPTION
NHSPMTRA	1 Mod MID Meter (Analogue)
NHSPMTRD	1 Mod MID Meter (Digital)

Note: Surge Protection devices are available on request

All PV meters supplied are MID B&D Certified, design & functionality may be upgraded to versions shown in catalogue

NM Consumer Unit Accessories

Full Metal Cover for NH Metal Units

FLUSH KIT

PATTRESS

UPGRADE COVER

TIME DELAYED RCCB

FLUSH MOUNTING KITS FOR NM

CAT REF	PRODUCT
NM07FLA	7 module flush kit assembly
NM10FLA	10 module flush kit assembly
NM13FLA	13 module flush kit assembly
NM16FLA	16 module flush kit assembly
NM21FLA	21 module flush kit assembly
NM26DFLA	26 module flush kit assembly
NM32DFLA	32 module flush kit assembly
NM42DFLA	42 module flush kit assembly

For flush fitting of surface mounting NM units only
Not suitable for meter cabinet units

NM CONSUMER UNIT PATTRESSES

CAT REF TOP/BOTTOM	LEFT/RIGHT CABLE ENTRY	ENCLOSURE WIDTH	DEPTH
MNSPE-6462/BNR	**MNSPE6668/7NR**	7 Module	16mm
MNSPE-6462/CNR	**MNSPE6668/10NR**	10 Module	16mm
MNSPE-6462/DNR	**MNSPE6668/13NR**	13 Module	16mm
MNSPE-6462/ENR	**MNSPE6668/16NR**	16 Module	16mm
MNSPE-6462/FNR	**MNSPE6668/21NR**	21 Module	16mm

For use with NM consumer units. Allows surface cable entry through rear knockouts and automatically maintains enclosure IP rating to comply with BS7671 and BSEN61439-3

• Cable entry slot may be positioned top / bottom or left / right

Not suitable for Duplex or meter cabinet units

NH UPGRADE / REPLACEMENT COVER

CAT REF	PRODUCT
NH7/MCLA255G	7 module cover assembly
NH10/MCLA255G	10 module cover assembly
NH13/MCLA255G	13 module cover assembly
NH16/MCLA255G	16 module cover assembly
NH21/MCLA255G	21 module cover assembly

For use on upgrading existing NH metal units only (replacing cover, plastic visor and hinges). Colour Grey RAL 7035

NM REPLACEMENT METAL COVER AND VISOR ASSEMBLY

CAT REF	PRODUCT
NM7/CCLA	7 module metal cover and curved visor assembly
NM10/CCLA	10 module metal cover and curved visor assembly
NM13/CCLA	13 module metal cover and curved visor assembly
NM16/CCLA	16 module metal cover and curved visor assembly
NM21/CCLA	21 module metal cover and curvedvisor assembly

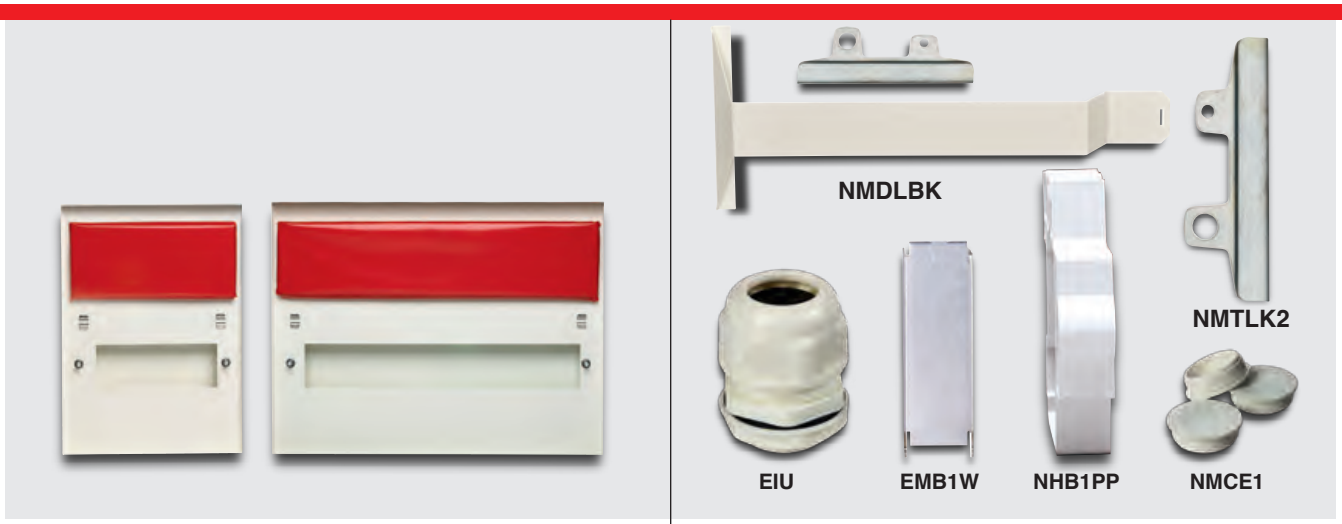
TIME DELAYED (S TYPE) RCCB AND ENCLOSURE

CAT REF	PRODUCT
P.O.A	100A 100mA time delay RCCB

Products made to order. Contact Wylex technical

NM Consumer Unit Accessories

Cable Glands and



INTUMESCENT STRIPS

CAT REF	PRODUCT	CONSUMER UNIT	WIDTH
NMFS07	Intumescent fire barrier	7MOD	188mm
NMFS10	Intumescent fire barrier	10MOD	241mm
NMFS13	Intumescent fire barrier	13MOD	292mm
NMFS16	Intumescent fire barrier	16MOD	343mm
NMFS21	Intumescent fire barrier	21MOD	438mm

Application guidance covering the full consumer unit range is available from Wylex Technical Department

CABLE ENTRY ACCESSORIES

MAINS TAILS GLAND

CAT REF	PRODUCT
EIU	Moulded cable gland kit Suitable for 16mm² or 25mm² double insulated cable and 16mm² earth cable Fits 32mm knockout
NMTG32	Flush 'push fit' moulded cable gland Suitable for 16mm² or 25mm² double insulated cable and 16mm² earth cable Fits 32mm knockout

As recommended in the IET On Site Guide

FIRE RETARDENT MEMBRANE CABLE ENTRIES

CAT REF	PRODUCT
NMCE1	Membrane cable entries kit 1 - 3 x 32mm & 7 x 20mm
NMCE2	Membrane cable entries kit 2 - 10 x 20mm

NM ACCESSORIES

CAT REF	PRODUCT	MODULE
EMB1W	Metal blanking plate - Push fit	1
NHB1PP	Blanking plate - Busbar & cover	1
NH00PP	Blanking plate - Twist fit	1
NHET25	25mm Earth Terminal	-
NHSPDC	Single Pole Direct Connection Unit	
NMLDK	Angled visor locking kit	
NMTLK2	Curved visor locking kit	
NMDLBK	Visor locking kit Duplex consumer units	
MCBLDX	MCB locking device	
WPL	Padlock for NMTLK2, NMLDK & MCBLDX	
NH13CBKIT	13 pin comb busbar, labels and covers	
NM9010TUP	Touch up paint white RAL9010	

ULTIMATE PROTECTION USING STANDARD PRODUCTS

AFDDs Mandated

The use of Arc Fault detection devices is mandated (in Amendment 2 to BS 7671) for single-phase AC final circuits supplying socket-outlets (with a rated current up to 32A) in certain types of premises i.e.

- In Higher Risk Residential Buildings (HRRB)
- In Houses in Multiple Occupation (HMO)
- In Purpose-Built Student Accommodation
- In Care Homes

The use of AFDDs is also recommended in all other types of premises for single-phase AC final circuits supplying socket outlets with a rated up to 32A

ACTUAL SIZE

Types of Arc Fault:

SERIAL ARCING FAULTS: Are caused by a poorly made connection or a damaged / broken conductor. Miniature circuit breakers and residual current protective devices will not detect these electrical faults.

PARALLEL ARCING FAULTS BETWEEN CONDUCTORS: Are caused by electric arcs resulting from damage to the insulation which permits minimum contact between the two live conductors. AFD technology is extremely sensitive and will disconnect a parallel arcing fault where the arcing values may be much lower than the current levels needed for the shutdown conditions of an MCB or Fuse.

PARALLEL ARCING FAULTS BETWEEN PHASE OR NEUTRAL/PROTECTIVE CONDUCTOR: AFD technology will detect arcing faults against the protective conductor and provide adequate fire protection where no RCD is used. However by integrating the AFD technology with 30mA Miniature RCBOs this will ensure they reliably detect and shut down this type of arc fault, and provide additional protection against electric shock.

Single Module Arc Fault Detection Devices

Single Module Arc Fault Detection Devices

COMBINED AFD/RCBO - WITH SWITCHED NEUTRAL 6kA

B CURVE	CURRENT RATING	RCD RATING	RCD TYPE	SWITCHED POLES	MODULE
NXSB06AFD	6A	30mA	A	2	1
NXSB10AFD	10A	30mA	A	2	1
NXSB13AFD	13A	30mA	A	2	1
NXSB16AFD	16A	30mA	A	2	1
NXSB20AFD	20A	30mA	A	2	1
NXSB25AFD	25A	30mA	A	2	1
NXSB32AFD	32A	30mA	A	2	1
NXSB40AFD	40A	30mA	A	2	1

- AFDD-RCBOs are compatible with all Wylex consumer units (except Dual RCD consumer units)
- With integral 2 pole Type A RCBO

COMBINED AFD/MCB - WITH SWITCHED NEUTRAL 6kA

B CURVE	CURRENT RATING	RCD RATING	RCD TYPE	SWITCHED POLES	MODULE
NXB06AFD	6A	-	-	2	1
NXB10AFD	10A	-	-	2	1
NXB16AFD	16A	-	-	2	1
NXB20AFD	20A	-	-	2	1
NXB32AFD	32A	-	-	2	1
NXB40AFD	40A	-	-	2	1

- Wylex AFDD-MCBs combine the protective functions of both AFDD and MCB within a single module, miniature device

- AFDD-MCBs are compatible with all Wylex consumer units where residulal fault current protection is provided to a number of circuits via a single RCD

All AFD devices are bidirectional, Declaration of Conformance certification available via www.electrium.co.uk

COMBINED AFD/RCBO - WITH SWITCHED NEUTRAL 6kA

C CURVE	CURRENT RATING	RCD RATING	RCD TYPE	SWITCHED POLES	MODULE
NXSC06AFD	6A	30mA	A	2	1
NXSC10AFD	10A	30mA	A	2	1
NXSC13AFD	13A	30mA	A	2	1
NXSC16AFD	16A	30mA	A	2	1
NXSC20AFD	20A	30mA	A	2	1
NXSC25AFD	25A	30mA	A	2	1
NXSC32AFD	32A	30mA	A	2	1
NXSC40AFD	40A	30mA	A	2	1

- AFDDs are compatible with all Wylex consumer units (except Dual RCD)
- With integral 2 pole Type A RCBO

ULTIMATE PROTECTION USING STANDARD PRODUCTS

RCBOs Avoid Unwanted Tripping

Amendment 2 of BS 7671 states that where additional protection is required (by use of a 30mA device) designers should consider the use of RCBOs for individual final circuits to reduce the risk of unwanted tripping in residential premises, other considerations include:

Any earth leakage currents that occur during normal operation of equipment should not cause unwanted tripping.

To avoid unwanted tripping by protective conductor currents such currents should be less than 30% of 30mA (9mA).

Every installation must be divided into sufficient final circuits in order to avoid danger and minimize inconvenience in the event of a fault, and avoid hazards from the failure of a single circuit such as a lighting circuit.

Wylex miniature RCBOs bring higher levels of safety to an electrical installation and its users by including switched neutral as standard which also brings cost savings by reducing installation and testing times.

ACTUAL SIZE
TYPE A RCBO

NHXS Miniature RCBOs (Type A)

NHXS Miniature RCBOs (Type A)

NHXS MINIATURE RCBO - TYPE A 2 POLE SWITCHING (MCB sized 1 module with switched neutral) 6kA

B CURVE	CURRENT RATING	RCD RATING	RCD TYPE	SWITCHED POLES	MODULES
NHXS1B06	6A	30mA	A	2	1
NHXS1B10	10A	30mA	A	2	1
NHXS1B16	16A	30mA	A	2	1
NHXS1B20	20A	30mA	A	2	1
NHXS1B25	25A	30mA	A	2	1
NHXS1B32	32A	30mA	A	2	1
NHXS1B40	40A	30mA	A	2	1

- NHXS Miniature RCBOs are compatible with all Wylex consumer units (except Dual RCD units)

WRCBL MINIATURE RCBO (MCB sized 2 module with switched neutral)

B CURVE	CURRENT RATING	RCD RATING	SWITCHED POLES	MODULES
WRCBL45B2	45A	30mA	2	2
WRCBL50B2	50A	30mA	2	2

- AFDDs are compatible with all Wylex consumer units (except Dual RCD)
- All RCBOs are Type A - pure AC and pulsating DC sensitivity unless otherwise specified.

Miniature RCBOs are bidirectional Declaration of Conformance certification available via www.electrium.co.uk

NHXS MINIATURE RCBO - TYPE A 2 POLE SWITCHING (MCB sized 1 module with switched neutral) 6kA

C CURVE	CURRENT RATING	RCD RATING	RCD TYPE	SWITCHED POLES	MODULES
NHXS1C06	6A	30mA	A	2	1
NHXS1C10	10A	30mA	A	2	1
NHXS1C16	16A	30mA	A	2	1
NHXS1C20	20A	30mA	A	2	1
NHXS1C32	32A	30mA	A	2	1
NHXS1C40	40A	30mA	A	2	1

- NHXS Miniature RCBOs are compatible with all Wylex consumer units (except Dual RCD units)

WRCBL MINIATURE RCBO (MCB sized 2 module with switched neutral)

C CURVE	CURRENT RATING	RCD RATING	SWITCHED POLES	MODULES
WRCBL45C2	45A	30mA	2	2
WRCBL50C2	50A	30mA	2	2

- AFDDs are compatible with all Wylex consumer units (except Dual RCD)
- All RCBOs are Type A - pure AC and pulsating DC sensitivity unless otherwise specified.

Miniature RCBOs are bidirectional Declaration of Conformance certification available via www.electrium.co.uk

NHXL Miniature Circuit Breakers

Din Rail Mounting Control Devices

MESB-40NO

NHXL MINIATURE CIRCUIT BREAKERS (6kA)

B CURVE	C CURVE	CURRENT RATING	POLES	MODULES
-	**NHXLC03**	3A	1	1
NHXLB06	**NHXLC06**	6A	1	1
NHXLB10	**NHXLC10**	10A	1	1
NHXLB16	**NHXLC16**	16A	1	1
NHXLB20	**NHXLC20**	20A	1	1
NHXLB25	**NHXLC25**	25A	1	1
NHXLB32	**NHXLC32**	32A	1	1
NHXLB40	**NHXLC40**	40A	1	1
NHXLB50	**NHXLC50**	50A	1	1

- Quick Din release clip
- No miss terminals

Miniature Circuit Breakers are bidirectional.

DIN RAIL MODULAR DEVICES FOR USE IN FLEXIBLE UNITS

CAT REF	PRODUCT	MODULE
ME242/230	Staircase timer	1
SMSCD11	Digital time clock 1 channel 1xNO/NC contact 16A	1
TMSCD21	Digital time clock 1 channel 1xNO contact 16A	2
TMTCD22	Digital time clock 2 channel 24 hour 7Day prog	2
MESB-20NC	20A 2 Pole Contactor 2 x N/C 240V Coil	1
MESB-20NO	20A 2 Pole Contactor 2 x N/O 240V Coil	1
MESB-24NC	24A 4 Pole Contactor 4 x N/C 240V Coil	2
MESB-24NO	24A 4 Pole Contactor 4 x N/O 240V Coil	2
MESB-40NC	40A 4 Pole Contactor 4 x N/C 240V Coil	3
MESB-40NO	40A 4 Pole Contactor 4 x N/O 240V Coil	3
MESB-63NO	63A 4 Pole Contactor 4 x N/O 240V Coil	3
MTS8	Bell transformer 1 x 12V and 1 x 8V outputs	2
TRMSCT31	Disc type time clock 1 channel 1xNC contact 16A	3
SMSCT11	Disc type time clock 1 channel 1xNO contact 16A	1
TRMSCQT31	Disc type time clock 1 channel 1xNO contact 16A	1

Modular Devices suitable for flexible consumer units only

Where used in a DIN enclosure it is advised to allow 1 space between every 2 contactors for ventilation and heat dissipation

ULTIMATE PROTECTION USING STANDARD PRODUCTS

SPDs in all Installations

Transient overvoltage protection devices (SPDs) are now required in all electrical installations however, in some cases the owner of the installations can opt out and accept all risks and consequential losses from such over-voltages.

Transient overvoltage protection must be provided where the consequence of overvoltage can cause:

- Serious injury to, or loss of, human life
- The failure of a safety service, as defined in Part 2 in BS 7671
- Significant financial or data loss

Transient overvoltage protection is required in all other cases too unless the owner of the installation declares it is not required and accepts all risks and consequences

See BS 7671 (including Amendment 2) for full details

Type 2 Miniature SPD

NMT2SPD3W/1

NMT2SPD/P

SURGE PROTECTION DEVICE

CAT REF	DESCRIPTION
NMT2SPD3W/1	Single Module Type 2 SPD

REPLACEMENT PLUG-IN CARTRIDGE

CAT REF	DESCRIPTION
NMT2SPD/P	Replacement Plug-in Cartridge for **NMT2SPD3W/1**

- Suitable for all Single Phase 3 Wire Systems TN-C-S, TN-S and TT
- Combined Metal Oxide Varistor (L1 & N) and Gas Discharge Tube (N & E)
- Clear Indication of device status
- Fitted with remote signalling contact
- Suitable for use in Main Switch, Split Load & Hi-Integrity consumer unit configurations
- Not suitable for Dual RCD configurations

Alternative SPD products are available for Dual RCD consumer unit installations. Please contact Wylex technical for further assistance.

TN-S / TT / TN-C-S
Single Phase Supply - Separate Protective Earth & Neutral

Type 2 Surge Arresters provide protection against overvoltage originating from switching and the secondary effects of lightning strikes. These devices will discharge current having an 8/20µs waveform and provide a low voltage protection level of ≤1.3kV (Up) for sensitive electronic equipment exceeding the requirements for category II equipment identified within table 443.2 (BS7671).

Surge and lightning arresters have a lifespan directly related to the number and magnitude of their operations.

All Wylex devices provide visual life status indication.

The plug in unit must be removed during installation insulation resistance testing.

Type 1 Lightning SPD

NHSPD4123T1

3 CONDUCTOR SYSTEM; L, N, PE

LIST NO.	DESCRIPTION
NHSPD4123T1	2 mod DIN mounting SPD with remote indication contact

TN-S / TT / TN-C-S
Single Phase Supply - Separate Protective Earth & Neutral

Type 1 Lightning Arresters are installed at an electrical installations intake position in conjunction with an external Lightning Protection System. These devices have a high impulse current withstand (10/350µs) associated with direct lightning strikes.

Surge and lightning arresters have a lifespan directly related to the number and magnitude of their operations.

All Wylex devices provide visual life status indication.

The plug in unit must be removed during installation insulation resistance testing.

Type 1+2 SPD

Replacement SPD Plugs

NHSPD4421T12

3 CONDUCTOR SYSTEM; L, N, PE

LIST NO.	DESCRIPTION
NHSPD4421T12	4 mod DIN mounting SPD with remote indication contact

TN-S / TT / TN-C-S
Single Phase Supply - Separate Protective Earth & Neutral

REPLACEMENT PLUGS

LIST NO.	DESCRIPTION
NHSPD4182T1	**T1 N-PE GDT plug 50kA** NHSPD4123T1 NHSPD4143T1
NHSPD4183T1	**T1 L-N varistor plug 12.5kA** NHSPD4123T1 NHSPD4143T1
NHSPD4481T12	**T1 L-N spark gap plug 25kA** NHSPD4421T12 NHSPD4441T12
NHSPD4281T12	**T2 L-N varistor plug 20kA** NHSPD4421T12 NHSPD4441T12
NHSPD4180T12	**T1 N-PE spark gap plug 100kA** NHSPD4421T12 NHSPD4441T12
NHSPD4681T2	**T2 L-N varistor plug 20kA** NHSPD4641T2 NHSPD4621T2
NHSPD4880T2	**T2 N-PE GDT plug 20kA (12.5kA)** NHSPD4621T2 NHSPD4641T2

Type 1+2 Surge Arresters combine the benefits of both type 1 and type 2 having both high impulse current withstand (10/350µs) associated with direct lightning strikes and a low voltage protection level of ≤1.5kV (Up) exceeding the requirements for category II equipment identified within table 443.2 (BS7671).

Surge and lightning arresters have a lifespan directly related to the number and magnitude of their operations.

All Wylex devices provide visual life status indication.

The plug in unit must be removed during installation insulation resistance testing.

Surge and lightning arresters have a lifespan directly related to the number and magnitude of their operations.

All Wylex devices provide visual life status indication.

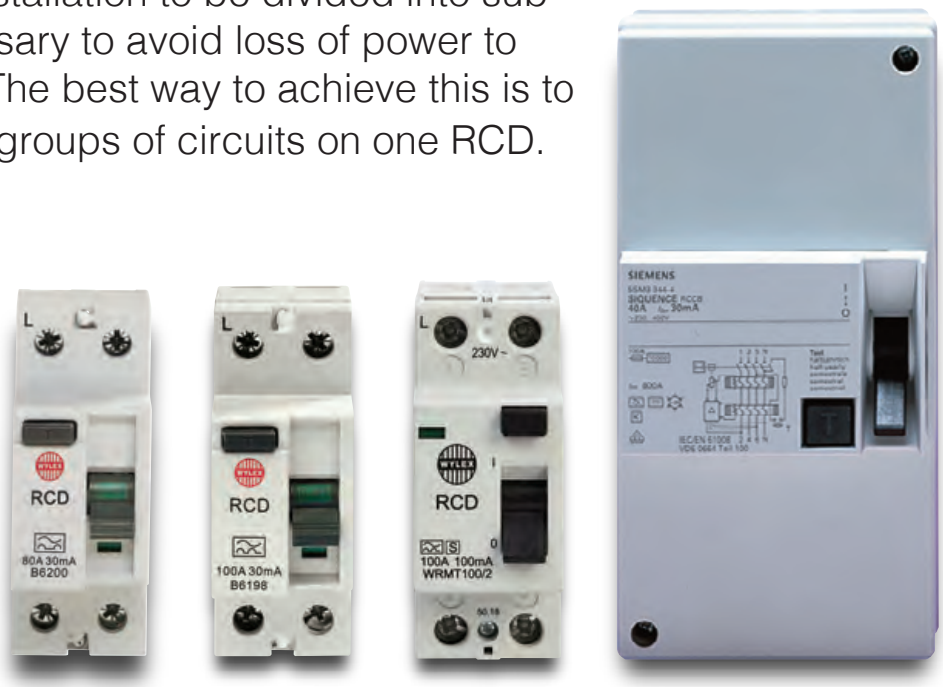
The plug in unit must be removed during installation insulation resistance testing.

LIFELINE RCCB RANGE

Residual Current Circuit Breakers are protective devices that help installers meet the requirements of BS 7671 IET Wiring Regulations which prescribes the circumstances under which RCD protection/additional protection is necessary.

The minimum RCD protection standard for Wylex is TYPE A and this can only be used for general purpose and will trip if up to 6mA residual pulsating DC current is present.

The wiring regulations include requirements for protection against unwanted tripping of RCDs from PE Currents for example, and requires every installation to be divided into sub circuits as necessary to avoid loss of power to healthy circuits. The best way to achieve this is to avoid protecting groups of circuits on one RCD.



WRDS80/2

WRDS100/2

WRMT100/2

NSPE-5580

2 POLE RCDs DC SENSITIVE - TYPE A 10mA - 30mA

CAT REF.	RATED CURRENT	SENSITIVITY
WRDVS32/2	32A	10mA
WRDS40/2	40A	30mA
WRDS63/2	63A	30mA
WRDS80/2	80A	30mA
WRDS100/2	100A	30mA

2 POLE RCDs DC SENSTIVE - TYPE A 100mA - 300mA

CAT REF.	RATED CURRENT	SENSITIVITY
WRDM40/2	40A	100mA
WRDM63/2	63A	100mA
WRDM80/2	80A	100mA
WRDM100/2	100A	100mA
WRDL63/2	63A	300mA
WRDL100/2	100A	300mA

RCBO (combined MCB/RCD device) - TYPE A

C CURVE	CURRENT RATING	RCD RATING	POLES	MODULES
WRCBX6C2	6A	30mA	2	2
WRCBX10C2	10A	30mA	2	2
WRCBX16C2	16A	30mA	2	2
WRCBX20C2	20A	30mA	2	2
WRCBX32C2	32A	30mA	2	2
WRCBX40C2	40A	30mA	2	2

2 POLE RCD DC SENSITIVE - TYPE A 100mA TIME DELAY

CAT REF.	RATED CURRENT	SENSITIVITY
WRDMT100/2	100A	100mA

2 POLE RCD DC SENSITIVE - TYPE B

CAT REF.	RATED CURRENT	SENSITIVITY
NSPE-5580	40A	30mA
NSPE-5581	40A	300mA

DOMESTIC SWITCH FUSE

Wylex Domestic Switch Fuse units are fully enclosed in non combustible material to meet the requirements of BS 7671 IET Wiring Regulations 421.1.201 for consumer units and similar switchgear for use in domestic household premises.

Designed for stand alone applications or for conversion projects where a large building is being converted to several apartments these domestic switch fuse units are available in 60, 80 or 100A ratings and supplied complete with fuse.

All units have been designed and tested by Wylex engineers in the UK and fully meet the relevant product standards and requirements of the IET Wiring Regulations.

Domestic Switch Fuse Metal Cased

ALL METAL SWITCH FUSE UNIT - FOR USE IN DOMESTIC HOUSEHOLD PREMISES

CAT REF		
DSF100M	Switch Fuse including fuse	100A
DSF80M	Switch Fuse including fuse	80A
DSF60M	Switch Fuse including fuse	60A

DSFNFM	Switch Fuse - Unfused	100A max.

EIU	Cable gland for meter tails	16/25mm²
NMTG32	Push fit cable gland for meter tails	16/25mm²
NHET25	25mm earth terminal	25mm²

Enclosed in a robust all metal enclosure

32mm diameter standard knock out for cable gland (top & bottom)

Metal door and robust metal enclosure, 1.0mm thick steel with low smoke & fume Epoxy paint finish

Live and Neutral cable capacity 16mm² min 35mm² max

16mm Earth terminating point inside enclosure

Replacement HRC Fuses
DSF40FL (40A) DSF45FL (45A) DSF50FL (50A)
DSF60FL (60A) DSF80FL (80A) DSF100FL (100A)

Lockable for safe isolation

Rotating fuse carrier for easy withdrawal

Switch Fuse Unit Insulated

INSULATED SWITCH FUSE UNIT - FOR USE IN OTHER (NON DOMESTIC) PREMISES

CAT REF		
DSF100	Switch Fuse including fuse	100A
DSF80	Switch Fuse including fuse	80A
DSF60	Switch Fuse including fuse	60A

DSFNF	Switch Fuse - Unfused	100A max.

Bussman cartridge fuse included with device

Twin terminal screw connections

Live and Neutral cable capacity 16mm² min, 35mm² max

In built meter cable guides - clamps

Fuse cover inside carrier preventing accidental contact

Lockable switch mechanism for safe isolation

Replacement HRC Fuses
DSF40FL (40A) DSF45FL (45A) DSF50FL (50A)
DSF60FL (60A) DSF80FL (80A) DSF100FL (100A)

REC ISOLATORS

Wylex REC Isolators are installed between the meter and the consumer unit. Many meter operators install these switches as a convenient device to complete their meter installation process.

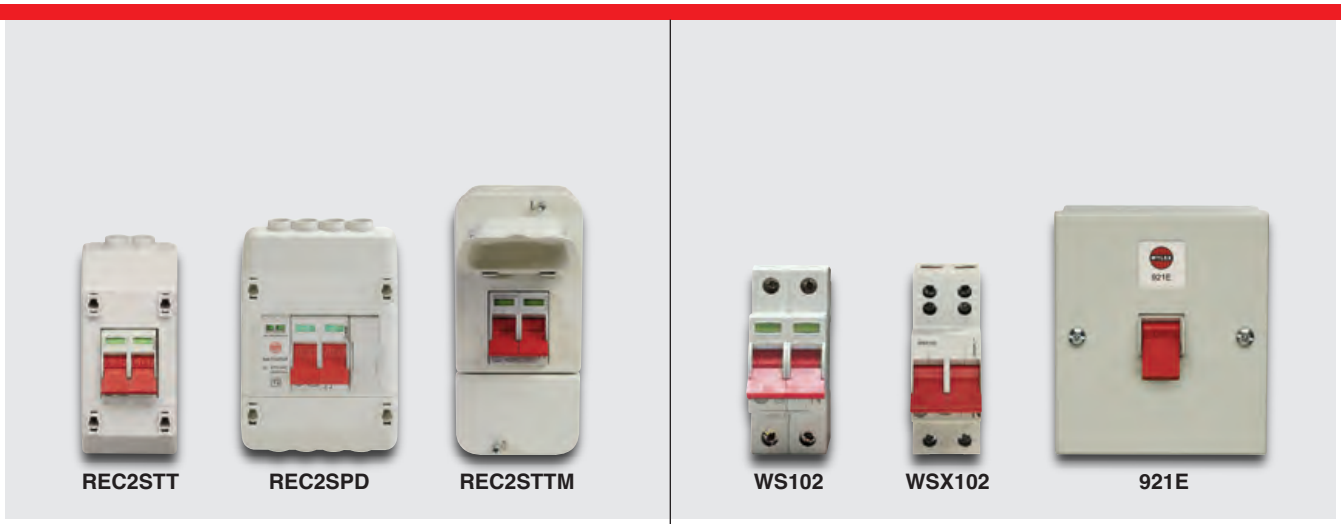
The meter tails connections can be secured behind the sealed split cover and the isolator put into the off position.

This provides a secure and convenient method for the electrical contractor to connect the consumer unit tails to the supply.

Many electrical contractors, local authorities and housing associations have standardised the installation of these REC Isolators when a consumer unit is changed. This makes provision for future works to be carried out quicker and safer than before.

REC Enclosed Isolators

DIN Rail Isolators



SUPPLY AUTHORITY TWIN TERMINAL ISOLATOR ASSEMBLIES INSULATED ENCLOSURE

CAT REF.	DESCRIPTION	CURRENT RATING
REC2STT	DP Isolator Hex Socket Screw & 2 Mod Enclosure	100A
RECSW2S	DP Isolator Combi Screw & 2 Mod Enclosure	100A
RECSW3	TP Isolator Combi Screw & 4 Mod Enclosure	100A
RECSW4	4P Isolator Combi Screw & 4 Mod Enclosure	100A

SUPPLY AUTHORITY TWIN TERMINAL ISOLATOR ASSEMBLIES METAL ENCLOSURE

CAT REF.	DESCRIPTION	CURRENT RATING
REC2STTM	DP Isolator Hex Socket Screw & 2 Mod Enclosure	100A
RECSW2SM	DP Isolator Combi Screw & 2 Mod Enclosure	100A

REC SWITCH WITH SURGE PROTECTION DEVICE T2

CAT REF.	DESCRIPTION	CURRENT RATING
REC2SPD	Insulated DP Isolator complete with SPD2	100A
REC2MSPD	Metal DP Isolator complete with SPD2	100A
REC2MLSPD	Metal DP Isolator complete with SPD2 (+50mm)	100A
NMRECSPD	Metal Consumer Unit Isolator complete with SPD2	100A

A wide range of custom built variations is also available. Contact Wylex Technical for full details.

WS RANGE OF MODULAR ISOLATORS

CAT REF.	DESCRIPTION	CURRENT RATING
WS602	2 Pole, 2 module	63A
WS102	2 Pole, 2 module	100A
WS122	2 Pole, 2 module	125A

- For fixed balcony connection consumer units NM/NH see page 50 busbar compatibility table.

WS RANGE OF DIRECT CONNCTION UNITS

CAT REF.	DESCRIPTION	CURRENT RATING
NHSPDC	Single Pole Unit	
NHDPDC	Double Pole Unit	

WS RANGE OF MODULAR ISOLATORS TWIN TERMINAL

CAT REF.	DESCRIPTION	CURRENT RATING
WSX102	2 Pole, 2 module	100A

TRIPLE POLE & NEUTRAL 415V, 50HZ AC

CAT REF.	DESCRIPTION	CURRENT RATING
921E	With switched neutral, surface mounting in a metal enclosure	32A

Plain DIN Rail Enclosures

NM METAL DIN ENCLOSURES

CAT REF.	DESCRIPTION
NM4ED6	4 modules
NM7ED6	7 modules
NM10ED6	10 modules
NM13ED6	13 modules
NM16ED6	16 modules
NM21ED6	21 modules

Supplied with earth & neutral terminal bars cover and visor

DIN ENCLOSURES

CAT REF. INSULATED	CAT REF. METAL	DIN MODULES	IP RATING
ESE2	**ESM6**	2	IP40
ESi2S (Rec 2 mod)	**ESMREC2**	2	IP40
ESE2L*	**-**	2	IP40
ESE4	**ESM8**	4	IP20
ESi4 (Rec 4 mod)	**-**	4	IP40

* Supplied with earth connection link
** Enclosure for larger cables

WBE4/NK installed in WBE4

IP65 DIN ENCLOSURES AND ACCESSORIES

CAT REF.	DESCRIPTION
WBE3	2/3 module enclosure
WBE4	4 module enclosure
WBE3/EK	Earth block
WBE3/NK	Neutral block
WBE4/EK	Earth block
WBE4/NK	Neutral block
WBE/BS	Blanks

Plastic enclosures - not recommended for use in domestic household premises

Retrofit
NHX MCBs

NHXB06 NHXB16 NHXB32 NHXB50
NHXB10 NHXB20 NHXB40

MINIATURE CIRCUIT BREAKERS (6kA)*

B CURVE	C CURVE	RATING	POLES	MODULES
-	**NHXC03**	3A	1	1
NHXB06	**NHXC06**	6A	1	1
NHXB10	**NHXC10**	10A	1	1
NHXB16	**NHXC16**	16A	1	1
NHXB20	**NHXC20**	20A	1	1
NHXB32	**NHXC32**	32A	1	1
NHXB40	**NHXC40**	40A	1	1
NHXB50	**NHXC50**	50A	1	1

ACCESSORIES

MCBLDX	MCB Locking device
WPL	Padlock for MCBLDX

* For fixed balcony connection consumer units NM/NH see page 50 busbar compatibility table

Retrofit
NHX RCBOs

NHXSBS1B06 NHXSBS1B16 NHXSBS1B32 NHXSBS1B50
NHXSBS1B10 NHXSBS1B20 NHXSBS1B40

NHXSBS RCBO (combined MCB/RCD device)*

B CURVE	C CURVE	CURRENT RATING	RCD RATING	POLES	MODULES
NHXSBS1B06	**NHXSBS1C06**	6A	30mA	1	1
NHXSBS1B10	**NHXSBS1C10**	10A	30mA	1	1
NHXSBS1B16	**NHXSBS1C16**	16A	30mA	1	1
NHXSBS1B20	**NHXSBS1C20**	20A	30mA	1	1
NHXSBS1B25	-	25A	30mA	1	1
NHXSBS1B32	**NHXSBS1C32**	32A	30mA	1	1
NHXSBS1B40	**NHXSBS1C40**	40A	30mA	1	1
NHXSBS1B45	-	45A	30mA	1	1
NHXSBS1B50	**NHXSBS1C50**	50A	30mA	1	1
-	**WRCBL6C2+**	6A	30mA	2	2
-	**WRCBL10C2+**	10A	30mA	2	2
-	**WRCBL16C2+**	16A	30mA	2	2
-	**WRCBL20C2+**	20A	30mA	2	2
-	**WRCBL32C2+**	32A	30mA	2	2
-	**WRCBL40C2+**	40A	30mA	2	2

+ Suitable for flexible comb busbar consumer units only

* For fixed balcony connection consumer units NM/NH see page 50 busbar compatibility table

Type A devices

CUSTOM BUILT

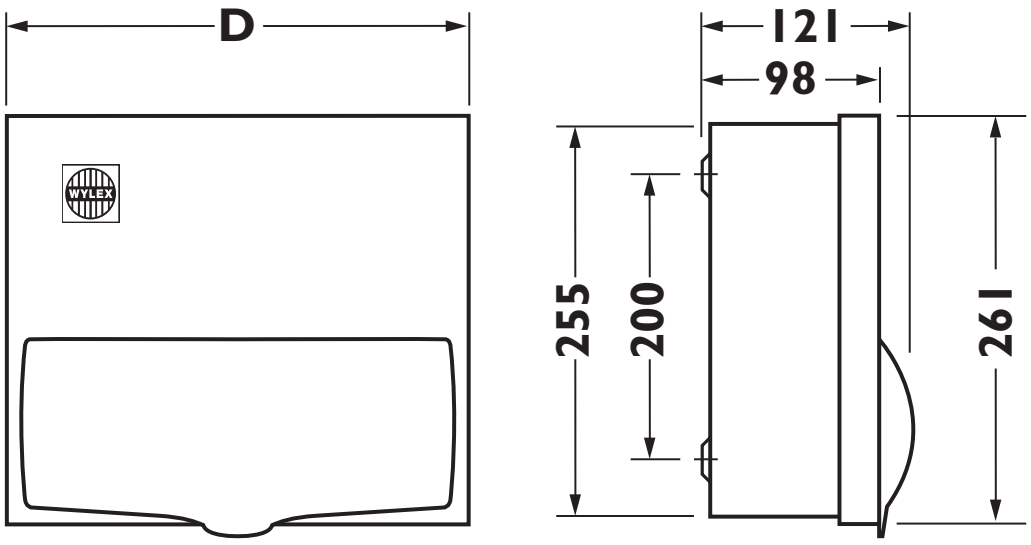
To meet the ever changing requirements and demands of the modern electrical installation, Wylex offers a service to the electrical installer for catalogued ranges of products - Consumer Units and Distribution Boards to be modified and assembled to customer specification and meet specific needs.

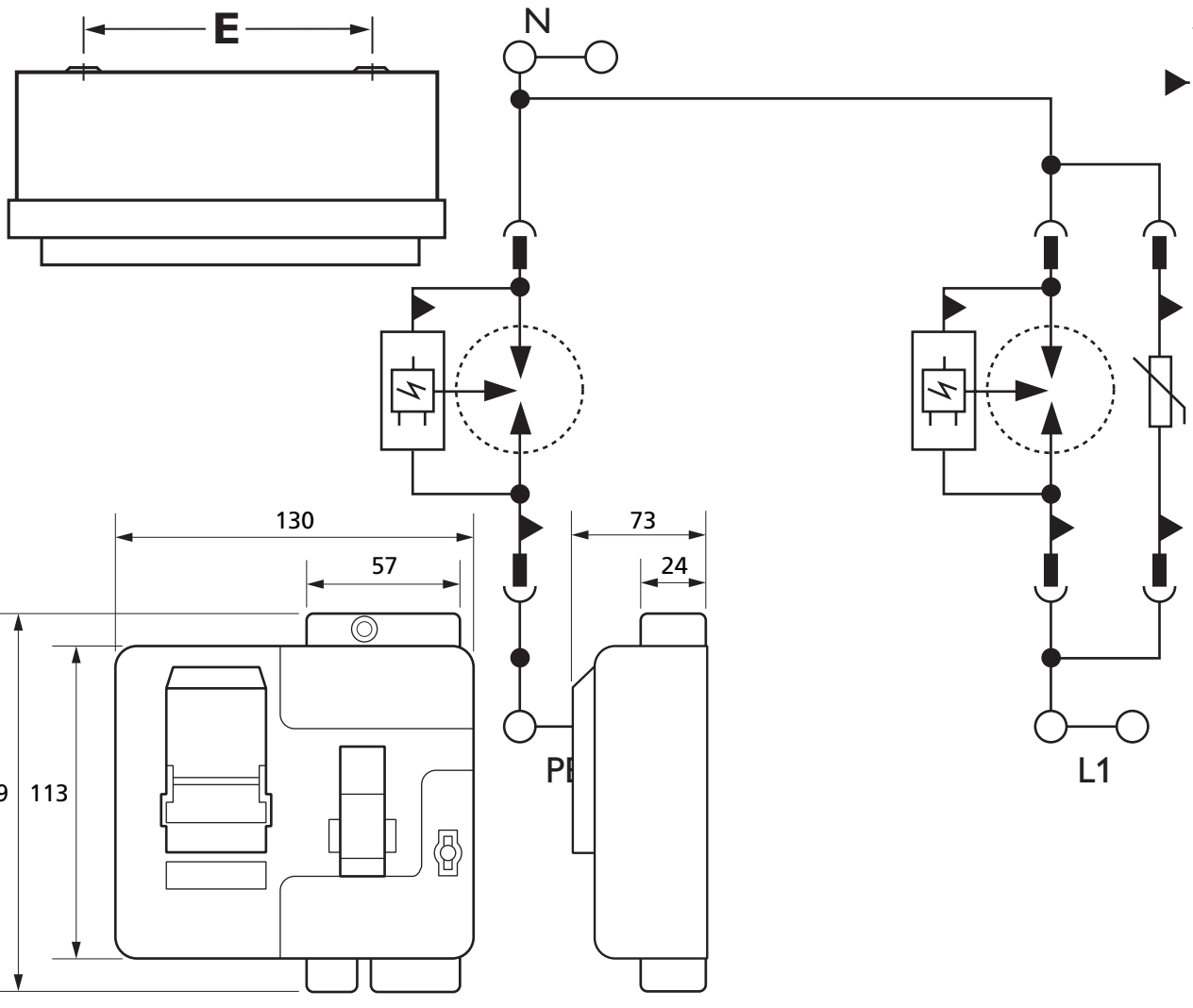
The levels of adaptation may vary from the basic pre-population and assembly of outgoing protective devices MCBs, RCBOs into the units with personalised labelling, to the complete customisation and wiring of additional accessory devices within a unit:- for example meters, energy monitors, control switching equipment:- contactors, relays and timers, and over voltage surge protection devices plus almost any other DIN rail mounted piece of electrical accessory equipment that is available.

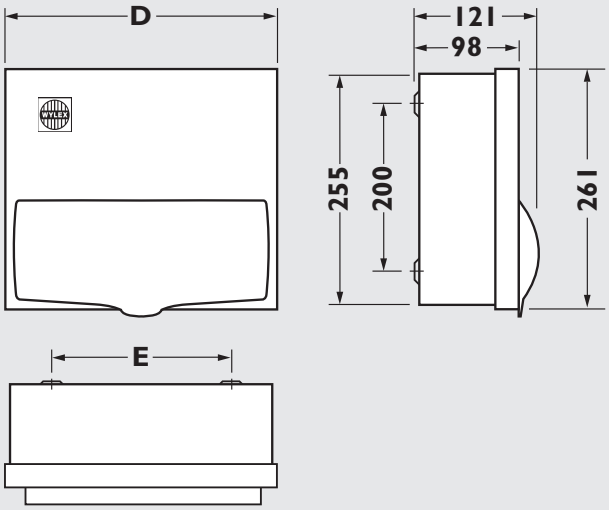
This Custom Built service can save time on site, reduce labour costs, and help achieve early completion & ultimately save money for the installer of these units.

NM High Integrity consumer unit, factory configured with SPD (over-voltage protection) and customer specified MCBs

TECHNICAL DATA & DIMENSIONS







DIMENSIONS 185(H) 130(W) 104(D)

4 MODULE

NM206/40	NMB16MPV	NMRM206/40
NM206/63A	NMB16PV	NMRM206/63
NMRS206/63A	NMRCBO16BPV	NM4ED6
NMRS206/63GWUA		

DIMENSIONS D=188mm(7.4"), E=138mm(4.2")

7 MODULE

NM506L	NMRS506LA	NMRCBO16BMPV
NM7ED6	NMRM506L	
	NM506FLEX	

DIMENSIONS D=241mm(9.5"), E=160mm(6.3")

10 MODULE

NMRM806LA	NMRS6SLMA	NMTM806L
NM10ED6	NM806L	NM806FLEX
NMRS2406L	NMRS806LA	NM706LS
NMRS3306L	NMIIX2406L	

DIMENSIONS D=292mm(11.5"), E=210mm(8.3")

13 MODULE

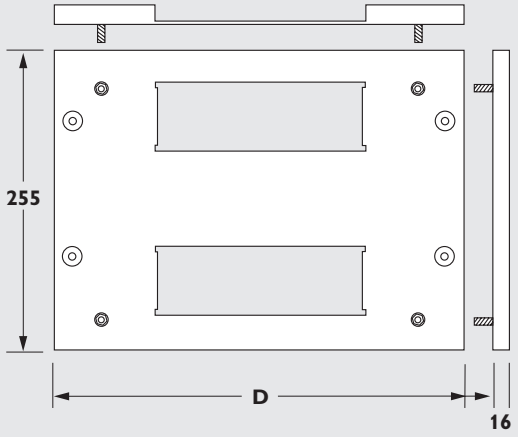
NMRM1106L	NMRS9SLMA	NMTM1106L	NM1006LS
NM1106L	NMRS1106LA	NMRS23206LA	NMSTM9SLM
NMRS4506L	NMRS5406L	NMRS7SSLMHIA	NMISS3406LA
NMRSS5406L	NM13ED6	NM1106FLEX	
	NMRS6306L	NM1IX5406L	
		NM1IX4506L	

DIMENSIONS D=343mm(13.5"), E=260.4mm(10.2")

16 MODULE

NM1406L	NMTM1406L	NMRS33406LA	NMRS9SSLMHISA
NMRS1406LA	NMRS12SLMA	NMRS10SSLMHIA	NMISS4606L
NM16ED6	NMISS5506LA	NM1406FLEX	NMISS10SLMA
NMIIX3906L	NMRSX5706L	NMRS6606LA	NMSTM12SLM
NMIIX4806L	NMRSX6606L	NMRS12SL100	NM1806LS
NMIIX7506L	NMRS10SLMDT	NMRS10HI100	
NMIIX6606L	NMISS10SLMA	NMISS10SL100	
NMIIX5706L	NMRS44206LA	NM1306LS	

TOP/BOTTOM CABLE ENTRY PATTRESS

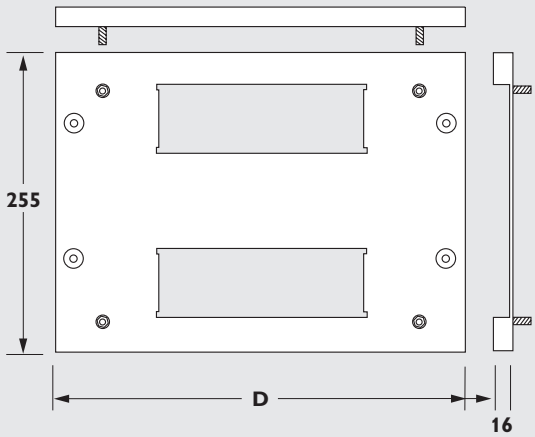


DIMENSIONS D=438mm(17.2"), E=356mm(10.1")

21 MODULE

NM1906L	NMRS1906L	NMRS45606LA	NM1806LS
NMRS61106L	NMRS8906L	NMRS15SSLMHIA	NMRS12506L
NMRS9806L	NMIIX51206L	NM12DSRCBMPVSL	NMRS14SSLMHISA
NMRS17SLMA	NMIIX11606L	NMRS17SL100	NMSTM17SLM
NM21ED6	NMISS8706L	NMRS15HI100	NM14DSRCBMPVF
NM1906FLEX	NM10DSRCBMPVHI	NMISS15SL100	NM12DSRCBMPVSL
NMIIX9806L	NMISS15SLMA		
NMIIX8906L	NMRS76206LA		
NMRSX8906L	NMRS66306LA		
NMRSX9806L	NMRS46506LA		
NMRS15SLMDT	NMRS55506L		

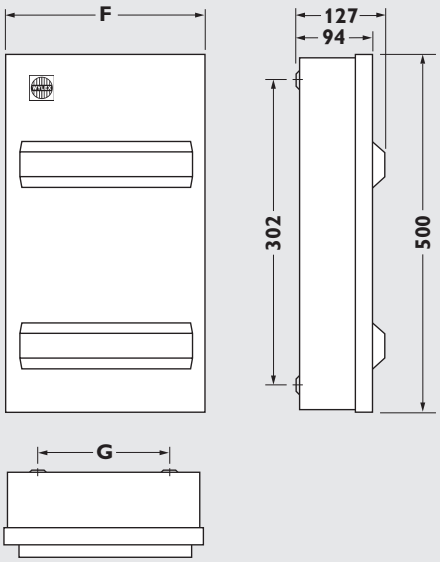
LEFT/RIGHT CABLE ENTRY PATTRESS



CABLE ENTRY PATTRESS

CONSUMER UNIT ENCLOSURE SIZE (D)		TOP/BOTTOM CABLE ENTRY	LEFT/RIGHT CABLE ENTRY
7 Module	188mm	MNSPE-6462/BNR	MNSPE6668/7NR
10 Module	241mm	MNSPE-6462/CNR	MNSPE6668/10NR
13 Module	292mm	MNSPE-6462/DNR	MNSPE6668/13NR
16 Module	343mm	MNSPE-6462/ENR	MNSPE6668/16NR
21 Module	438mm	MNSPE-6462/FNR	MNSPE6668/21NR

DUPLEX METAL



DIMENSIONS F = 241mm (9.5"), G = 160mm (6.3")

10 MODULE

NMDIS88L	NMDRS12HI	
NMDIIX88L	NMDRS14SSLHIA	
NMDISX88L	NMD89	

DIMENSIONS F = 292mm (11.5"), G = 210mm (8.3")

13 MODULE

NMDIS1111L	NMDRS18HI	NMD1112
NMDIIX1111L	NMDRS20SSLHIA	
NMDISX1111L	NMDISS119LA	

DIMENSIONS F = 343mm (13.5"), G = 260mm (10.2")

16 MODULE

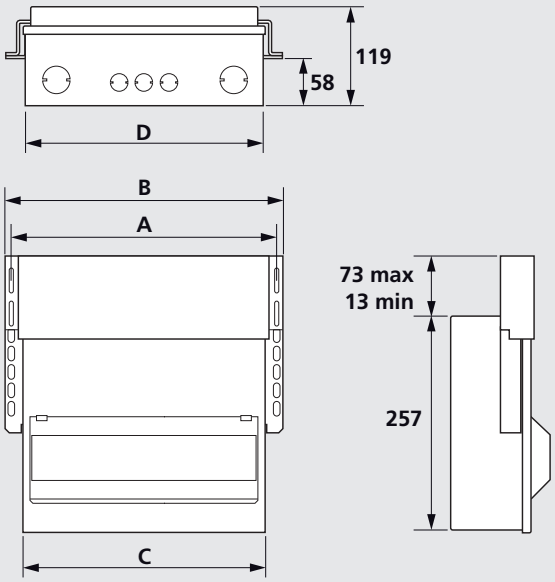
NMDIS1414L	NMDRS24HIA	NMD1415
NMDIIX1414L	NMDRS26SSLHIA	
NMDISX1414L	NMDISS1214L	

DIMENSIONS F = 430mm (17.2"), G = 235mm (10.1")

21 MODULE

NMDIS1919L	NMDRS34HIA	
NMDIIX1919L	NMDRS36SSLHIA	
	NMD1920	

SKELETON



DIMENSIONS A = 273mm, B = 289mm, C = 241mm, D = 235mm

10 MODULE

FALNM806L

DIMENSIONS A = 320mm, B = 335mm, C = 292mm, D = 286mm

13 MODULE

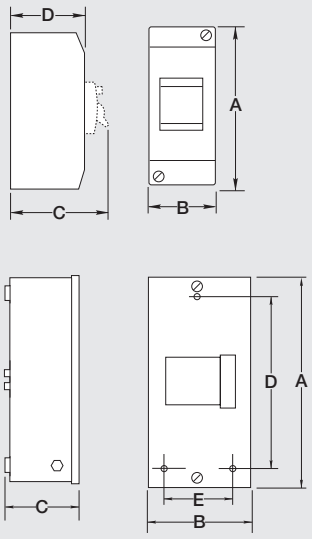
FALNM1106L	FALNMRS23206L	FALNMISS7SLMA
FALNMRS5406L	FALNMRS7SSLHIA	FALNMISS9SLMA
FALNMRS9SLMA	FALNMRS9SSLHIA	FALNMHIIX9DT

DIMENSIONS A = 430mm, B = 445mm, C = 343mm, D = 336mm

16 MODULE

F43NM1406L	F43NMRS44206L	F43NMHIIX12DT
F43NMRS6606L	F43NMRS10SSLHI	
F43NMRS12SLM	F43NMISS10SLM	

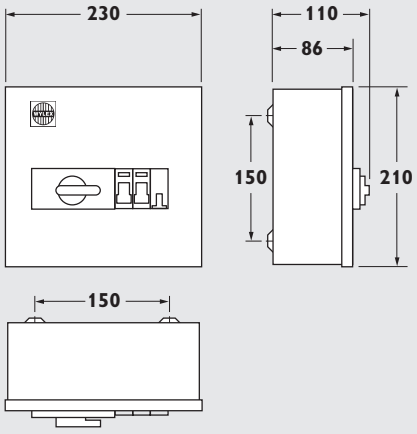
ENCLOSURES



INSULATED	A	B	C	D
ESE2	150	60	79	60
ESi2S	140	50	79	63
ESE2L	150	60	79	60
ESE4	150	79	79	60
ESi4	149	100	79	63

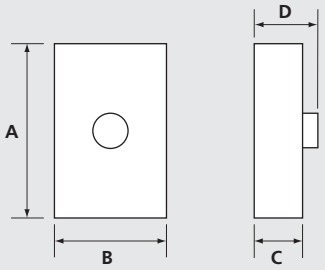
METAL	A	B	C	D	E
ESM6	223	112	66	184	73
ESM8	223	90	66	184	73

PV NH RANGE



NHDSMS
NHDS106B16

PV AC ISOLATORS



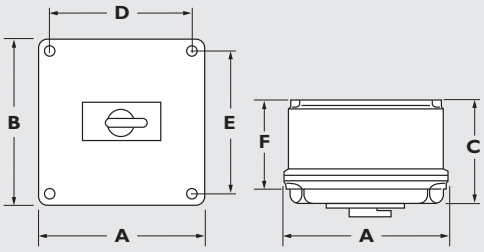
DIMENSIONS
A = 130mm, B = 85mm, C = 75mm, D = 105mm

NHTPSD16
NHTPSD25

DIMENSIONS
A = 175mm, B = 125mm, C = 100mm, D = 137mm

NHTPSD32

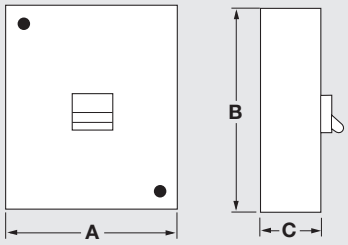
PV DC ISOLATORS



DIMENSIONS
A = 160mm, B = 160mm, C = 92mm, D = 140mm, E = 140mm, F = 69mm

NHDC325004P
NHDC405004P
NHDC256006P
NHDC406006P

ISOLATOR



DIMENSIONS
A = 114mm, B = 133mm, C = 61mm, Terminal Capacity = 10mm^2

921E

Ultimate Protection using Standard Products

CONSUMER UNIT ENCLOSURES, BARRIERS, FIXINGS & COMPONENTS

421.1.201 Consumer units must have enclosures manufactured from non-combustible materials & comply with BS EN 61439-3.

416.2.1 Live parts must be inside enclosures and suitable provisions must be made to prevent contact with live parts.

416.2.2 Installed consumer units must achieve IP4X on the top elevation of the enclosure.

416.2.3 Barriers must be secured in place with sufficient stability and durability to achieve and maintain appropriate levels of protection from live parts.

522.8.5 Every cable must be installed so that there is no undue stress or strain on the conductors & terminations. Meter tails require appropriate clips/fixings.

536.4.203 Only manufacturer approved parts can be used in low voltage assemblies i.e. consumer units. Mixing brands without approvals will invalidate guarantees.

PROTECTION AGAINST OVERVOLTAGE IN ALL INSTALLATIONS

443.4.1 Transient overvoltage protection is required in all electrical installations, however, in some cases the owner can opt out and accept all risks & consequential losses from such over-voltages.

PROTECTION AGAINST HAZARDS & DANGER CAUSED BY UNWANTED TRIPPING OF RCDs

531.3.2 The use of RCBOs shall be considered for each circuit in residential dwellings.

Devices shall be selected and installed so as to limit the risk of unwanted tripping. Dividing the installation into individual circuits- each one using a 30mA RCBO will maintain power continuity to healthy circuits.

Any earth leakage currents that occur during normal operation of equipment should not cause unwanted tripping.

PE current (leakage current not due to a fault) is no more than 30% of 30mA.

314.1 (iv) Every installation shall be divided into the necessary number of circuits to reduce the possibility of unwanted tripping of RCDs from PE current (not due to a fault).

314.1 (i) Every installation shall be divided into the necessary number of circuits to avoid danger and inconvenience in the event of a fault.

314.1 (iii) Every installation shall be divided into circuits as necessary to take account of hazards that may arise from the failure of a single circuit such as a lighting circuit.

560.7.1 Circuits of safety services, e.g. Smoke & Heat Alarm systems, CO detection, etc. shall be independent of other circuits.

SAFE ISOLATION - SWITCHES AND PROTECTIVE DEVICES

462.1.201 A mains switch intended to be operated by ordinary persons (e.g. in domestic household premises) must switch both live conductors (L&N) of a single phase supply.

462.2 A means of isolation shall be provided for each circuit, for all live conductors (except where the neutral is reliably connected to earth by a low resistance and required disconnection times can be met).

422.3.13 Every circuit requires a means of isolation from all live supply conductors. Common isolation of a group of circuits may be provided if service conditions allow.

531.1.1 Devices for protection against electric shock must be suitable for isolation as required in Chapter 46 & Section 537.

514.1.1 A suitable means of identification shall be provided for the identification & purpose of each item of switchgear.

PROTECTION AGAINST FIRE CAUSED BY ELECTRICAL EQUIPMENT

421.1.7 AFDDs are mandatory for circuits serving socket outlets in certain buildings i.e. Higher Risk Residential Buildings, Homes in Multiple Occupation, Purpose Built Student Accommodation & Care Homes.

AFDDs are also recommended for circuits serving socket outlets in all other types of building.

532.6 AFDDs should be installed at the origin of each final (230Vac) circuit that is being protected i.e. in the consumer unit or distribution board.

ADDITIONAL PROTECTION BY 30mA RCBO/RCD PROTECTING USERS OF ELECTRICAL INSTALLATIONS

415.1.1 RCDs (including RCBOs) with a residual operating current of no more than 30mA are prescribed for provision of additional protection.

411.3.4 Additional protection by use of a 30mA device is required for all luminaire circuits in domestic household premises.

411.3.3 Additional protection by use of a 30mA device is required for all socket outlets up to & including 32A rating.

411.3.3 Additional protection by use of a 30mA device is required for all mobile equipment (for use outdoors) up to & including 32A rating.

522.6.202 Cables concealed in walls or partitions as less than 50mm depth and without earthed mechanical protection (e.g. conduit), must be protected by 30mA device.

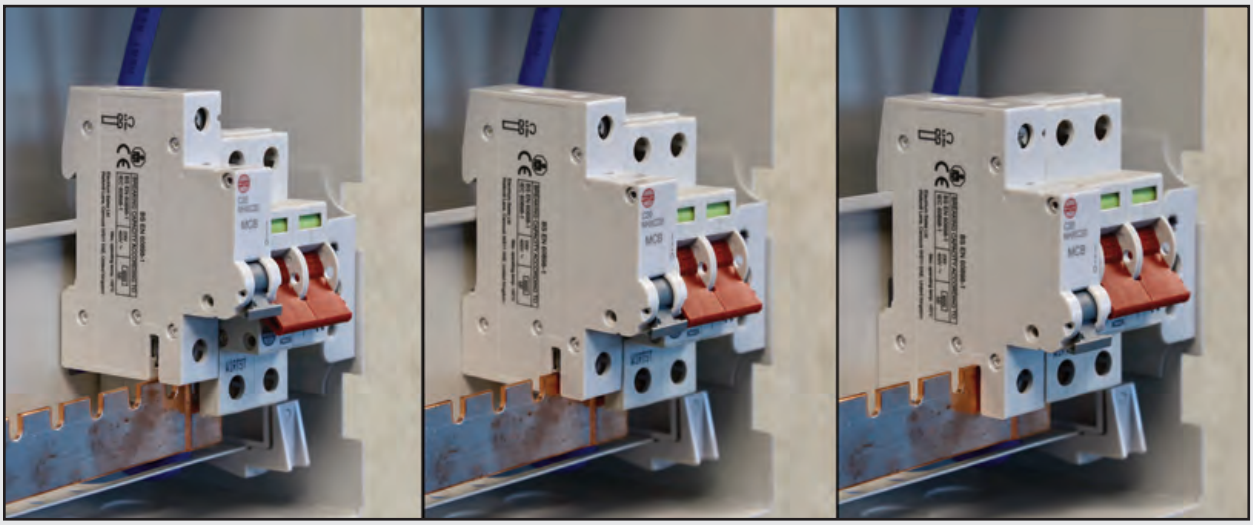
522.6.203 Cables buried in walls or partitions (which include metallic parts in their construction) must be provided with additional protection by 30mA device, or be installed in earthed metallic carrier systems that also provide mechanical protection.

701.411.3.3 Additional protection by use of a 30mA device, is required for all circuits serving or passing through a location with a fixed bath or shower.

This is not a substitute for BS7671, other regulations also apply see BS7671 for full details.

Busbar Compatibility

	Wylex Busbar and Device Compatibility Chart	Range	MCB	RCBO	AFDD
Pre 2018	**Fixed - Balcony Connection** 	NH NM	NHX	NHXS	n/a
	Flexible - Balcony Connection 	NH NM	NHX	NHXS	n/a
	Note: NHXL, NHXS1 and AFDD do not fit balcony units				
After 2018	**Flexible - Cage Connection** 	NH NM	NHX NHXL	NHXS NHXS1	NXS
	Fixed/Flexible - Cage Connection 	NMX	NHX NHXL	NHXS NHXS1	NXS
	Fixed - Cage Connection 	NML	NHX NHXL	NHXS NHXS1	NXS



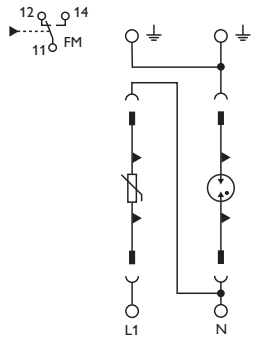
A fixed balcony busbar connection, see page 43 for compatible Retrofit NHX MCBs and RCBOs devices.

Type 1 + 2 Lightning / Surge Arresters Technical Data

- Plug-In Arresters
- Disconnect facility for each individual module
- Visual end of life indication for each module
- Remote Indication auxiliary contact
- Mechanical keying of all slots
- IEC61643-1 / EN61643-11
- DIN rail mounting
- Temperature Range -40… +80°C
- IP20
- Replacement plug in modules are available

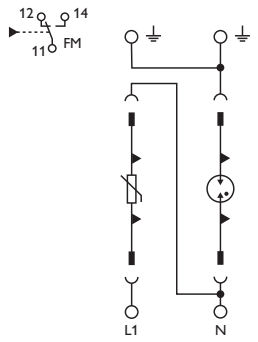
Type 2 Surge Arresters

NMT2SPD3W/1 - Total width 18mm



	NMT2SPD3W/1	
Protective system	TN-S / TT / TN-C / IT	
Rated surge arrester voltage U_C	L-N / L-PEN 275 V a.c.	N-PE 275 V a.c.
Nominal voltage U_N	230 ... 240 V a.c. 50/60 Hz	
Nominal discharge current I_N (8/20) µs	20 kA	
Maximum discharge current I_{MAX} (8/20) µs	40 kA	
Protection level U_P	≤1.3 kV	≤1.3 kV
Maximum backup fuse	125 A gL	-
Short circuit resistance I_P with max. backup fuse	25 kA_{rms}	-
Ø minimum L, N, PE	2.5mm² (solid) - 2.5mm² (stranded)	
Ø maximum L, N, PE	35mm² (solid) - 25mm² (stranded)	

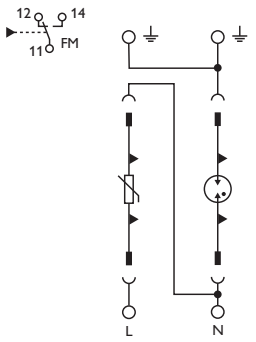
NHSPD4621T2 - Total width 35.8mm



	NHSPD4621T2	
Protective system	TN-S / TT / TN-C / IT	
Rated surge arrester voltage U_C	L-N / L-PEN 350 V a.c.	N-PE 260 V a.c.
Nominal voltage U_N	230 ... 240 V a.c. 50/60 Hz	
Nominal discharge current I_N (8/20) µs	20 kA	
Maximum discharge current I_{MAX} (8/20) µs	40 kA	
Protection level U_P	≤1.4 kV	≤1.5 kV
Maximum backup fuse	125 A gL	-
Short circuit resistance I_P with max. backup fuse	25 kA_{rms}	-
Ø minimum L, N, PE	2.5mm² (solid) - 2.5mm² (stranded)	
Ø maximum L, N, PE	35mm² (solid) - 25mm² (stranded)	

Type 1 Lightning Arresters

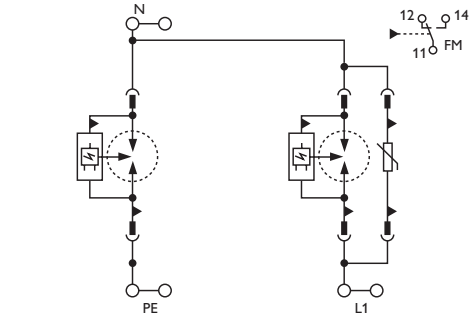
NHSPD4123T1 - Total width 35.8mm



	NHSPD4123T1	
Protective system	TN-S / TT / TN-C / TNC-S L, N, PE	
Lightning protection level	111, 1V	
Highest continuous voltage U_C	(L-N) 335 V a.c. 50/60 Hz	(N-PE) 264 a.c. 50/60 Hz
Nominal voltage U_N	240 V a.c. (230/400 V a.c. ... 240/415 V a.c.) 50/60 Hz	
Lightning test current I_{imp} (10/350) µs per path	(L-N) 12.5 kA / 6.25 As / 39 kJ/Ω	(N-PE) 50 kA / 25 As / 625 kJ/Ω
Nominal discharge surge current I_N (8/20) µs per path	(L-N) 12.5 kA	(N-PE) 50 kA
Maximum discharge surge current I_{MAX} (8/20) µs per path	(L-N) 50 kA	(N-PE) 50 kA
Protection level U_P	(L-N) ≤ 1.2 kV	(N-PE) ≤ 1.7 kV
U_{TOV} (withstand, 5 sec. (L-N)/withstand, 200 msec. (N-PE))	(L-N) 415 V a.c.	(N-PE) 1200 V a.c.
Short circuit resistance I_P with maximum backup fuse	25 kA_{RMS}	
Maximum backup fuse	160 A gL/gG	
Ø minimum L, N, PE	1.5mm² (solid) - 1.5mm² (stranded)	
Ø maximum L, N, PE	35mm² (solid) - 25mm² (stranded)	

Type 1 + 2 Lightning / Surge Arresters

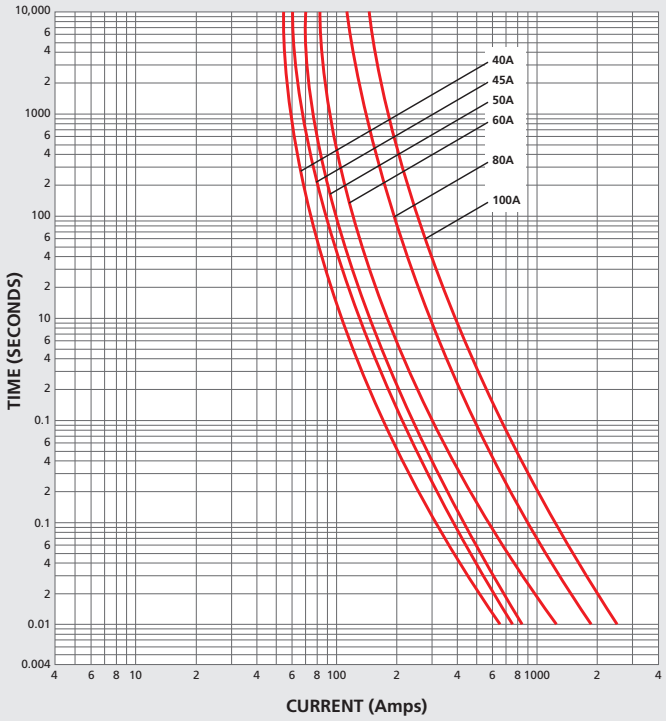
NHSPD4421T12 - Total width 71.6mm



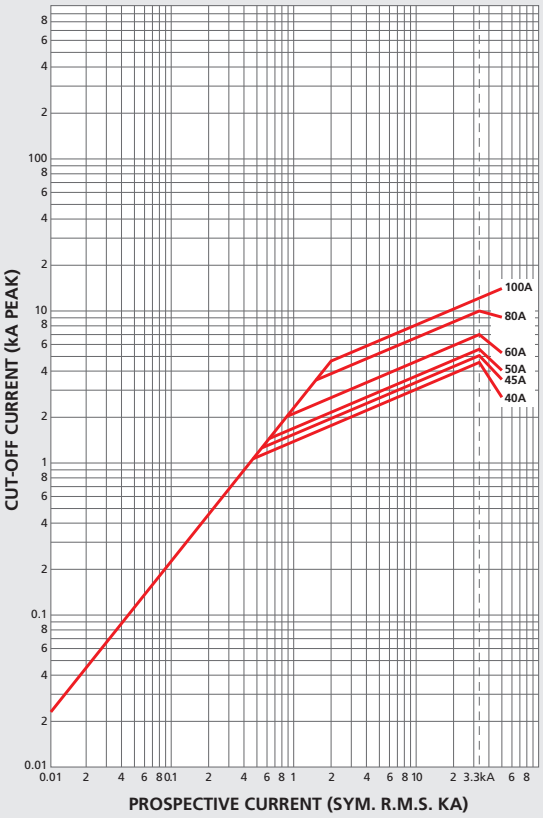
	NHSPD4421T12	
Protective system	TN-S / TT / TNC-S L1, N, PE	
Lightning protection level	111 / 1V, 50 kA	
maximum continuous operating voltage U_C	350 V a.c. 50/60 Hz	
Nominal voltage U_N	230/400 V a.c. ... 240/415 V a.c. 50/60 Hz	
Rated load current I_L	125 A (T_A = 55°C)	
Lightning peak current I_{imp} (10/350) µs	(L-N) 25kA	(N-PE) 100kA
Nominal discharge current I_N (8/20) µs	(L-N) 25kA	(N-PE) 100kA
Protection level U_P	≤ 1.5 kV	
Short circuit resistance with maximum backup fuse I_P	25 kA_{RMS}	
Follow current limitation	25 kA (264 V a.c.)	
Maximum back-up fuse	Application A: 125 A gL/gG	Application B: 315 A gL/gG
Ø minimum L, N, PE	2.5mm² (solid) - 2.5mm² (stranded)	
Ø maximum L, N, PE	35mm² (solid) - 25mm² (stranded)	

Domestic Switch Fuse Units - Technical Data

TIME-CURRENT CURVE CHARACTERISTICS



CUT-OFF CURRENT CURVES



FUSE LINKS SPECIFICATION

Class of Operation: gG
Standards/Approvals:
- ASTA Certified
- BS 1361 : 1971 including amendments 1, 2 and 3

TECHNICAL DATA
Rated Voltage: 415Vac
Amps: 5 to 100A
Rated breaking capacity: 33kA

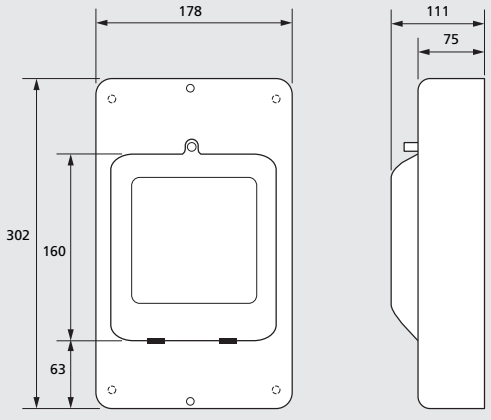
RECOMMENDED TIGHTENING TORQUES

Live and Neutral terminal cage	Earth Terminal cage	Earth Terminal bar (metal clad only)
2.3Nm 16mm² min 35mm² max	0.7Nm 10mm² min 16mm² max	1.2Nm 10mm² min 16mm² max

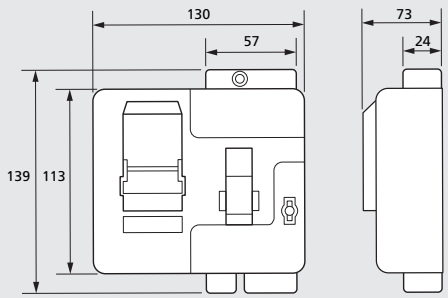
FUSE LINKS DATA

CAT REF	AMP RATING	I^2t (AMP² SECONDS) PRE-ARCING	TOTAL at 240V	TOTAL at 415V	NOM. WATTS LOSS
DSF40FL	40	2500	6800	14000	3.8
DSF45FL	45	3600	9880	20500	3.8
DSF50FL	50	4720	13000	27000	4.2
DSF60FL	60	9100	25000	52000	4.3
DSF80FL	80	24500	41500	58500	5.4
DSF100FL	100	43500	73500	105000	6.1

ALL METAL SWITCH FUSE UNIT



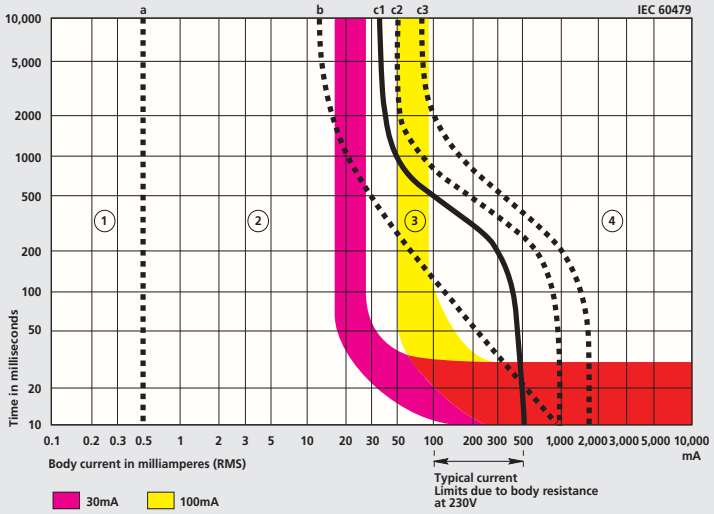
INSULATED SWITCH FUSE UNIT



MODEL	RCBO	MCB	AFD/RCBO
Product brand name	NHXS	NHXL	NXS
Product designation	RCD operated circuit breaker	Miniature circuit breaker	AFDD and RCBO
GENERAL TECHNICAL DATA			
Product standard	IEC 61009-1	BS EN 60898-1	BS EN 62606 & IEC 61009-1
Number of poles	2	1	2
Number of poles	1P+N	1P	1P + N
Number of poles / with protection	1	1	1
Tripping characteristics class	B or C	B or C	B or C
RCD type	A	-	A
Mechanical service life (switching cycles) / typical	10,000	-	10,000
Overvoltage category	III	III	III
PRODUCT FUNCTION			
Product function / neutral conductor switching	Yes	N/A	Yes
VOLTAGE			
Surge current resistance / at (8/20) μs	1kA	N/A	1kA
SUPPLY VOLTAGE			
• at AC / rated value	240V	240V	240V
• for testing equipment / minimum	195V	-	195V
Supply voltage frequency / rated value	50Hz	50Hz	50Hz
PROTECTION CLASS			
Protection class IP	IP20	IP20	IP20
Energy limiting class	3	3	3
SWITCHING CAPACITY CURRENT			
• acc. to EN 60898 / rated value	6kA	6kA	6kA
ELECTRICITY			
Tripping residual current / rated value	30mA	N/A	30mA
Current / at AC / rated value	6A - 40A	3A - 50A	6A - 40A
CONNECTIONS			
Connectable conductor cross-section / stranded			
• minimum	0.75mm^2	0.75mm^2	0.75mm^2
• maximum	16mm^2	25mm^2	16mm^2
Connectable conductor cross-section			
• solid - minimum	0.75mm^2	0.75mm^2	0.75mm^2
• solid - maximum	16mm^2	25mm^2	16mm^2
• finely stranded / with core end processing - minimum	0.75mm^2	0.75mm^2	0.75mm^2
TIGHTENING TORQUE / WITH SCREW-TYPE TERMINALS			
Line terminal			
• minimum	2.5Nm	2.3Nm	2.5Nm
• maximum	3.0Nm	3.0Nm	3.0Nm
Load terminal			
• minimum	1.2Nm	2.3Nm	1.2Nm
• maximum	2.0Nm	3.0Nm	2.0Nm
MECHANICAL DESIGN			
Height x Width x Depth	90mm x 18mm x 77mm	90mm x 18mm x 77mm	90mm x 18mm x 77mm
Mounting position	Any	Any	DIN
Installation depth	70mm	70mm	70mm
Number of width units	1	1	1
Net weight	130g - 168g	116g - 156g	130g - 175g
Connection	Pozi No. 2 Screw	Pozi No. 2 Screw	Pozi No. 2 Screw
ENVIRONMENTAL CONDITIONS			
Degree of pollution	2	2	2
Influence of the surrounding temperature	Maximum 95% humidity	Maximum 95% humidity	Maximum 95% humidity
Ambient Temperature			
• minimum	-25°C	-25°C	-25°C
• maximum	55°C	45°C	55°C
• during storage / minimum	-40°C	-40°C	-40°C
• during storage / maximum	75°C	75°C	75°C

IEC PUBLICATION (60479) CURVES WITH WYLEX RCD CHARACTERISTICS SUPERIMPOSED

TIME/CURRENT ZONES OF EFFECT OF AC CURRENT (15–100Hz) ON PERSONS



Zone Physiological effects

1 Usually no reaction effects (no danger).

2 Usually no harmful physiological effects (usually no effects).

3 Usually no organic damage to be expected. Likelihood of muscular contraction and difficulty of breathing, reversible disturbances of formation and conduction of impulses in the heart, and transient cardiac arrest without ventricular fibrillation increases with current magnitude and time.

4 In addition to the effects of zone 3, probability of ventricular fibrillation increased up to 5% (Curve C2), up to 50% (Curve C3) and above 50% beyond Curve C3. Increasing with magnitude and time, pathyphysiological effects such as cardiac arrest, breathing arrest and heavy burns may occur.

18TH EDITION SELECTION OF RCDS (RCCBS)

A number of different RCDs are available due to their behaviour when the presence of Direct Current components and frequencies that may exist on the electrical installation. The appropriate RCD may be selected from the following:

Type AC

RCDs for which tripping is ensured for residual sinusoidal alternating currents, whether suddenly applied or smoothly increasing.

If it is know that the load contains no DC components then Type AC RCDs may be used only to serve fixed equipment.

Type A

RCDs for which tripping is ensured for residual sinusoidal alternating currents and pulsating direct residual currents, whether suddenly applied or smoothly increasing. Tripping is achieved for residual pulsating DC superimposed on a smooth DC current up to 6mA.

For general purpose, only Type A RCDs may be used.

Type F

RCDs having all the protective elements of a Type A RCD but additionally suitable for detecting residual currents from mixed frequencies of up to 1kHz. Tripping is achieved for residual pulsating DC superimposed on a smooth DC current up to 10mA.

Type B

RCDs that will detect both the residual current waveforms of a Type F and residual smooth DC currents.

In addition, within the BS7671 wiring regulations, Part 7 - Section 722 includes specific requirements for Electric Vehicles – Type A or B maybe required and Section 712 Solar Photovoltaic (PV) power systems Type B may be required.

Footnote BS7671 AM2 -

Type AC RCDs should only be used to serve fixed equipment of a type that does not contain any electronic components.

See Regulation 531.3.3

OPERATION

The RCD employs the current balance principle which involves the supply conductors to the load (phase and neutral) being wound onto a common transformer core to form the primary windings. Under healthy circuit conditions, the current in the phase conductor is equal to the current in the neutral, and the vector sum of the current is zero.

In the event of an earth fault, an amount of current will flow to earth, creating an out of balance situation in the transformer assembly.

This out of balance is detected by the secondary winding of the transformer and at a pre-determined level of out of balance will activate the trip mechanism.

Single phase and neutral or three phase and neutral units (suitable for 3 or 4 wire systems) are available, the latter being suitable for balanced or unbalanced 3 phase loads.

The RCD trip mechanism will operate at a residual current of between 50–100% of its rating tripping current (sensitivity).

TRANSIENT EARTH LEAKAGE (PE) CURRENTS

All Wylex residual current devices incorporate a high level of immunity to tripping when subjected to transient earth leakage currents.

Such transients can occur when there is a significant level of capacitance to earth as can result from cable capacitance (particularly MICC) or RF filter networks. Wylex RCDs are therefore less susceptible to nuisance tripping due to transient earth leakage currents.

To help to avoid unwanted tripping of RCDs from PE currents leaking through the protective conductor during normal (non-fault) operating conditions, BS7671 wiring regulation 531.3.2 (ii) states the accumulated leakage current should be less than 30% of the RCD rating e.g. for a 30mA device this should be no more than 9mA. Designers should also take into consideration (i) Subdivision of circuits with individual associated RCDs and shall be selected in such a way that any earth leakage (PE) current likely to occur will not cause unwanted tripping of the RCD. See also Section 314.

RESIDUAL TRIPPING CURRENTS

10mA- Used in special applications where additional protection against contact is essential due to the nature of the installation.

30mA- Tripping current designated by the IEE Wiring Regulations to provide additional protection.

100mA- Suitable for use where protection is provided to guard against firehazard, etc, rather than to provide additional protection to personnel, and where the earthing requirements need supplementing by RCD protection.

100mA time delay- Suitable for use when total RCD protection is required to supplement the system earthing and where local 30mA RCDs are used to give additional protection. The time delay RCD will discriminate with the 30mA RCD.

300mA- For use in large installations where plant and equipment protection are the main considerations and high levels of earth leakage are experienced.

If using RCDs in series, discrimination can only be achieved by using Type S devices in series with Types A or AC.

Metering - Technical Data

MID approval

Under the Electricity Act 1989 all electricity meters used for billing purposes must be approved.
The approval for these meters is obtained by conforming to the European Measuring Instruments Directive (MID) 2004/22/EC (replacing OFGEM approval). This directive covers a number of different Instruments that are used to measure products or services for reselling. Therefore not only does it apply to Electrical Meters but you may see MID approval on a range of items such as the charge meter in a taxi, beer and wine glasses (the volume measurement line) in a Public House or on the petrol pumps when you are filling up your vehicle.

Who should be using MID certified meters?

By Law, anyone who is taking a meter reading that is then used for billing purposes and for which they subsequently receive a payment from the user for the electricity consumed.

Some typical examples:

- A Retail shopping centre owner wants to measure the individual consumption of all the store owners in his shopping mall and send them separate invoices for the electricity that each has used to run their business.
- A Landlord who wants to measure the electricity used by tenants renting apartments in his building and then send them a bill for the electricity they have used.
- A caravan/mobile home Leisure Park wants to measure the consumption of its customers and charge them an exact amount for the electricity used at the end of their rental period.

All of these examples must have the electricity consumption reading taken from a certified MID approved meter. The MID certification validates that the meter is manufactured using quality components, assures the meter is accurate for electricity billing purposes and that it maintains this accuracy over time for consistent readings.

Standard Meters - Non MID approved

If a meter is being used purely for a “check meter reading” and not being used to resell or charge for electricity consumed, then a standard meter that is reasonably accurate may be used to measure energy used at that point in time. For example, a check meter reading is required to meet L2 Building Regulations and Chartered Institution of Building Services Engineers TM39 guide to Building Energy Metering. The reading taken is used as a ‘check point’ to help reduce energy consumption.

Single Phase and Three Phase Measuring Devices

Direct Connected kW Meters -
No external current transformers required.
Standard reading or MID calibrated options.
All meters have pulsed output for Building Management Systems. (BMS)

General Characteristics		
Housing Width	2 modules DIN	4 modules DIN
Mounting	35mm DIN rail	35mm DIN rail
Depth	70mm	70mm
Reference standard	EN 50470-1-3 (B), EN 62053-23-31	EN 50470-1-3 (B), EN 62053-23-31
Operating Features		
Connectivity	2	2-3-4
Storage of energy values and configuration	yes	yes
Display tariffs identifier	T1 and T2	T1 and T2
Supply		
Rated control supply voltage Un	230 VAC	230 VAC
Operating range voltage	184 … 276 V	184 … 276 V
Rated frequency fn	50 Hz	50 Hz
Rated power dissipation (max.) Pv	≤ 8 (0.6) VA (W)	≤ 8 (0.6) VA (W)
Display (readouts)		
Connection errors and phase out	-	PHASE Err
Display type LCD - Digits	7 (1 decimal) - 6mm x 3mm	8 (1 decimal) - 6mm x 3mm
Active energy: 1 display, 7-digit	000000.0 … 999999.9 kWh	0000000.0 … 999999.9 kWh
+ display import or export (arrow)	999999.9 … 000000.0 kWh	9999999.9 … 000000.0 kWh
Reactive energy: 1 display, 7-digit	000000.0 … 999999.9 kWh	0000000.0 … 999999.9 kWh
+ display import or export (arrow)	999999.9 … 000000.0 kWh	9999999.9 … 000000.0 kWh
Instantaneous active power: 1 display, 3-digit	000 … 999 W, kW or MW	000 … 999 W, kW or MW
Instantaneous reactive power: 1 display, 3-digit	000 … 999 var, kvar or Mvar	000 … 999 var, kvar or Mvar
Instantaneous tariff measurement	1 display, 1 digit T1 or T2	1 display, 1 digit T1 or T2
Display period refresh (seconds)	1	2
Measuring accuracy		
Active energy and power	±1% (B)	±1% (B)
Reactive energy and power	±2 %	±2 %
Pulse output SO		
Pulse output	yes	yes
Pulse quantity	1000 imp/kWh	500 imp/kWh
Pulse duration	30 ±2 ms	30 ±2 ms
Required voltage	5 … 230 ±5% (5 …300) VAC (DC)	5 … 230 ±5% (5 …300) VAC (DC)
Permissible current	90 mA	90 mA
Permissible current	1mA	1mA

MID meters used for billing have a limited lifespan prior to recalibration or replacement.

Contactor Selection Guide

TYPE	POWER (W)	C(yF)	I(A)	MESB-20NC MESB-20NO	MESB-24NC MESB-24NO	MESB-40NC MESB-40NO	MESB-63NC MESB-63NO
Incandescent Lamps	60	-	0.26	23	29	65	85
	100	-	0.43	14	16	40	50
	200	-	0.87	7	8	20	25
	500	-	2.17	3	3	8	10
	1000	-	4.35	1	1	4	5
Fluorescent Lamps uncorrected and Series correction	18	-	0.37	22	24	90	140
	24	-	0.35	22	24	90	140
	36	-	0.43	17	20	65	95
	58	-	0.67	14	17	45	70
Fluorescent Lamps lead-lag circuit	18	-	0.11	2 x 30	2 x 40	2 x 100	2 x 150
	24	-	0.14	2 x 24	2 x 31	2 x 78	2 x 118
	36	-	0.22	2 x 17	2 x 24	2 x 65	2 x 95
	58	-	0.35	2 x 10	2 x 14	2 x 40	2 x 60
Fluorescent Lamps Parallel correction	18	4.5	0.12	7	8	48	73
	24	4.5	0.15	7	8	48	73
	36	4.5	0.2	7	8	48	73
	58	7	0.32	4	5	31	47
Fluorescent Lamps with electronic ballast units (EVG)	1 x 18	-	0.09	25	35	100	140
	1 x 36	-	0.16	15	20	52	75
	1 x 58	-	0.25	14	19	50	72
	2 x 18	-	0.17	12	17	50	70
	2 x 36	-	0.32	7	10	26	38
	2 x 58	-	0.49	7	9	25	36
High-pressure Mercury-vapour Lamps uncorrected	50	-	0.61	14	18	38	55
	80	-	0.8	10	13	29	42
	125	-	1.15	7	9	20	29
	250	-	2.15	4	5	10	15
	400	-	3.25	2	3	7	10
	700	-	5.4	1	2	4	6
	1000	-	7.5	1	1	3	4
High Pressure Mercury-vapour Lamps Parallel correction	50	7	0.28	4	5	31	47
	80	8	0.41	4	5	27	41
	125	10	0.65	3	4	22	33
	250	18	1.22	1	2	12	18
	400	25	1.95	1	1	9	13
	700	45	3.45	-	-	5	7
	1000	60	4.8	-	-	4	5
Halogen metal-vapour Lamps uncorrected	35	-	0.53	18	22	43	60
	70	-	1	10	12	23	32
	150	-	1.8	5	7	12	18
	250	-	3	3	4	7	10
	400	-	3.5	3	3	6	9
	1000	-	9.5	1	1	2	3
	2000	-	16.5	-	-	1	1
Halogen metal-vapour Lamps Parallel correction	35	6	0.25	5	6	36	50
	70	12	0.45	2	3	18	25
	150	20	0.75	1	1	11	15
	250	33	1.5	-	1	6	9
	400	35	2.5	-	1	6	8
	1000	95	5.8	-	-	2	3
	2000	148	11.5	-	-	1	2
High-pressure Sodium-vapour Lamps uncorrected	150	-	1.8	5	6	17	22
	250	-	3	3	4	10	13
	400	-	4.7	2	2	6	8
	1000	-	10.3	-	1	3	3
High-pressure Sodium-vapour Lamps parallel	150	20	0.83	1	1	11	16
	250	33	1.5	-	1	6	10
	400	48	2.4	-	-	4	6
	1000	106	6.3	-	-	2	3
Low-pressure Sodium-vapour Lamps uncorrected	18	-	0.35	22	27	71	90
	35	-	1.5	7	9	23	30
	55	-	1.5	7	9	23	30
	90	-	2.4	4	5	14	19
	135	-	3.5	3	4	10	13
	180	-	3.3	3	4	10	13
Low-pressure Sodium-vapour Lamps Parallel correction	18	5	0.35	6	7	44	66
	35	20	0.31	1	1	11	16
	55	20	0.42	1	1	11	16
	90	26	0.63	1	1	8	12
	135	45	0.94	-	-	4	7
	180	40	1.16	-	-	5	8

		Thermal Rating per Pole	Motor Rating AC3 (kW) 230V	400V
MESB-20NC	MESB-20NO	20	1.3	-
MESB-24NC	MESB-24NO	24	2.2	4
MESB-40NC	MESB-40NO	40	5.5	11
-	MESB-63NO	63	8.5	15

AC Ratings in accordance with BSEN60947-5-1 and BSEN 60947-4-1
Definitions: AC1 Primarily Resistive Load but may be slightly inductive **AC3** Medium-Starting-duty motors, starting and switching off of squirrel-cage motors

electrium

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