



Installation instructions, NM Range Fixed Busbar Consumer Units 230 / 240V a.c. BSEN61439-3



IMPORTANT INFORMATION

This unit should be installed by a qualified competent person in accordance with all relevant legislation and regulations including building regulations and wiring regulations BS7671. If in doubt contact a qualified competent person.

- Turn off all power supplying this equipment before working on or inside the equipment.
- Always use a properly rated volt-sensing device to confirm the power is off.
- Replace all devices, doors and covers before turning on the power to this equipment.

Failure to follow these instructions could result in serious injury or death.

DO NOT USE POWER TOOL SCREWDRIVERS ON ELECTRICAL CONNECTIONS



After installation, tests must be carried out in accordance with the requirements of the current edition of the IET Wiring Regulations. It is essential that the user guide is drawn to the attention of the person responsible for its operation and is at all times available for ready reference.

The total current supplied by the unit must not exceed the rating of the incoming main switch or RCD or any additional limitation (as shown on the way label).

The total sum of the individual MCB ratings may exceed this value where there is appropriate diversity on the installation. It is expected that only one outgoing circuit will exceed 32 A rating and it is recommended that this is installed adjacent to the incoming main switch or RCD. Others may be fitted if the diversity allows and the total load is not exceeded.

This product is suitable for indoor use only and is rated at IP2XC. The consumer unit and associated components are designed for use with copper cables and have been type tested to the following specifications: -

Consumer Unit	BSEN61439-3
MCBs	BSEN60898-1 Type B or C
RCDs	BSEN61008-1
RCBOs	BSEN61009-1 Type B or C
Main Switch	BSEN60947-3
SPD	BSEN61643-11
AFDD	BSEN62606 Type B or C

Ambient Temperature Considerations

The NH Range of MCB's are calibrated to meet the 30 °C Ref Calibration Temperature requirements of BSEN 60898-1. At other temperatures the following rating factors should be used:-

At 60 °C use 0.9	At 20 °C use 1.0	At 0 °C use 1.1
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Adjacent thermal-magnetic MCBs should not be continuously loaded or approaching their nominal rated currents when mounted in enclosures. It is good engineering practice to apply generous derating factors or make provision for adequate free air between devices. In these situations, and in common with other manufacturers, we recommend a 60% diversity factor is applied to the MCB nominal rated current where it is intended to load the MCB's continuously (in excess of 1 hour).

Before fitting the front cover - **Check the tightness of all connections, including factory made connections.**

Device	Max. Cable Capacity	Recommended tightening torque	
Main Switch / RCD	50 mm ²	2.3 Nm	
MCB	25 mm ²	2.3 Nm	
RCBO	Outgoing connection – 16 mm ²	2.0 Nm	
AFDD	Outgoing connection – 16 mm ²	1 MOD	2.0 Nm
Earth & neutral terminals	16 mm ²	1.7 Nm	
SPD	1.5 mm ² to 16 mm ²	3.0 Nm	

Use No.2 Pozidrive bit

1. Enclosure Mounting

- Remove appropriate knockouts from enclosure.
- Fix unit to wall using screws and rawplugs as appropriate
- Bring cables through appropriate apertures.
- Route main incoming cables to desired position.

2. Connection of Main Incoming Device

Cut and dress the main incoming cables and earth conductor. Fit them into the appropriate terminals.

(Fig 1)

Note: Extra holes are provided on the earth bar for bonding purposes.

- Tighten the main incoming terminals securely. (See recommended tightening torque.)

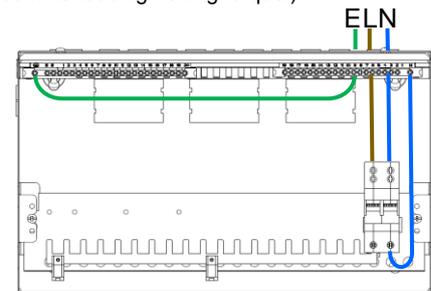
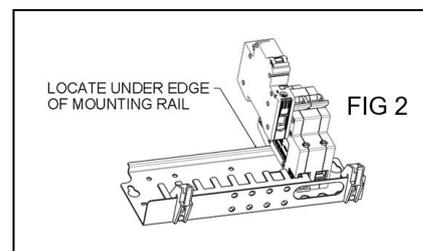


Fig 1 Incoming Terminal Connections

3. Installation of MCBs, RCBOs and AFDDs

Only NHX range MCBs and NHX range RCBOs, RCCBs, AFDDs, SPDs and main switches must be used within Wylex NM range consumer units.

Slide MCB onto busbar (Fig 2)



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Ensure MCB engages onto the mounting rail
Tighten terminal screw. (See recommended tightening torque.)

NOTE:
Cage type terminals are used in these devices. Ensure the terminals are opened fully before inserting cables (suitable for copper cables only).

It is recommended that the highest rated MCB or RCBO is fitted nearest to the main incoming device (or split-load RCD where relevant).

4. Circuit Connections to MCBs, RCBOs and AFDDs

Cut, dress and connect circuit conductors to appropriate MCBs, RCBOs, AFDDs, Neutral and Earth terminals. (Figs 3.1 and 3.2)
Ensure that each Neutral outgoing circuit is correctly made to its corresponding numbered terminal (Figs 3.1 and 3.2)

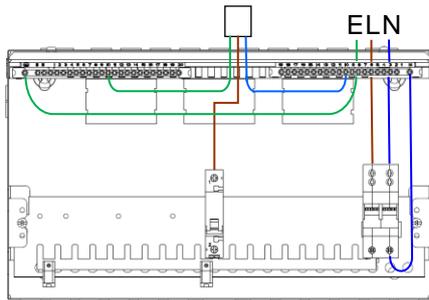


Fig 3.1 Connections to MCB's

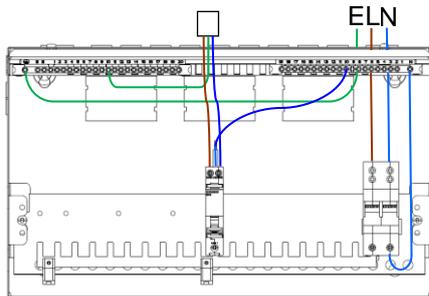


Fig 3.2 Connections to RCBO's

5. Installation of Control Devices

Control devices such as timers, transformers and contactors can only be fitted to the consumer units supplied with an accessory rail. The incoming supply for the device must be fed from an MCB (*not directly from the busbar*).

6. Circuit Identification

The consumer unit way label is fixed on the front cover of the consumer unit.

Pre-printed identification labels are provided and should be fixed in position on the way label according to the outgoing circuit.

7. Replacement of Covers.

It is important to replace the busbar insulation shield and fit the front cover to complete the installation.

8. Blanking of Unused Ways

Blanking plates should be fitted to cover any spare modular ways. Blanking plates are available if required.

9. Testing of the Installation

After completion of the installation, it is essential that it is tested in accordance with the current Edition of the IET Wiring Regulations (BS7671).

It is important that the following are included in the above: -

- Operation of the test button of any RCDs, RCBOs, AFDD/RCBOs fitted.
- Verification that the Earth loop impedance requirements are satisfactory.

10. Consumer Unit Accessories

CABLE ENTRY PATTRESSES used with all metal consumer units allowing compliance with BS7671 416.2.2. IP4X can be maintained on the consumer unit's horizontal top surface by providing cable entry via rear knock outs.

Patress cable entry slots can be provided either top or bottom or left or right.

Top / Bottom	Width	Left / Right	Width
MNSPE-6462/BNR	7 module	MNSPE 6668/7NR	7 module
MNSPE-6462/CNR	10 module	MNSPE 6668/10NR	10 module
MNSPE-6462/DNR	13 module	MNSPE 6668/13NR	13 module
MNSPE-6462/ENR	16 module	MNSPE 6668/16NR	16 module
MNSPE-6462/FNR	21 module	MNSPE 6668/21NR	21 module

Fire retardant CABLE MEMBRANE ENTRIES protect cables from damage and support compliance with the IP4X requirement BS7671 416.2.2.

NMCE1	Kit 1 3 x 32 mm & 7 x 20 mm
NMCE2	Kit 2 10 x 20 mm

In line with published IET formal recommendation MAINS TAILS GLANDS will protect mains tails at their point of entry into all metal consumer units. Furthermore disturbance of mains tails within the consumer unit, up to their point of connection to the isolator, is restricted.

EIU	Tails Gland Kit
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INTUMESCENT STRIPS will dramatically subdue or fully extinguish any fire which may occur within a consumer unit. The addition of an intumescent strip within a correctly installed all metal consumer unit will support the requirement of BS7671 421.1.201 effectively containing and suppressing a fire at source.

NMFS07	7 module
NMFS10	10 module
NMFS13	13 module
NMFS16	16 module
NMFS21	21 module

TEMPORARY LOCKING KIT for use with consumer units with curved visors while installing on site. (Fig 4)

NMTLK2	Temp locking kit for curved visor
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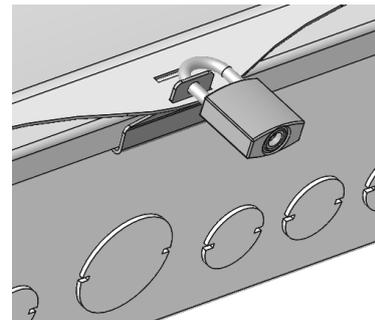


Fig 4



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