CABLE CODE



CABLE REFERENCE: 4 x 1 YY/LSZH PER LOCK

for the following reasons:

NACD advises as follows:

manufacturer/installer.*

inferior locking solution

doorset range".

LOCKING FOR RESIDENTIAL BUILDINGS

locking and associated cabling is required on all

access controlled doors. It is NOT included in

quotations unless expressly stated otherwise.

Locking to be supplied by the door company

SBD New Homes 2014 states "the locking

"Locks that are supplied with the door which

have not been tested as part of the particular

therefore fail to meet the SBD physical security

standards" - which would clearly apply to locks

system must form part of the certificated

doorset range, will fall outside the scope

of the manufacturer's certification, and will

supplied by NACD or any other 3rd party.

1. The electric locking must always be

supplied and installed by the door

2. The supply/installation of electric locking by

at time of manufacture, will result in an

any party, other than the door manufacturer

The drawings show that 12VDC Fail Safe

Fail safe locking relies on the locking receiving the correct voltage and current. Fail secure electro-mechanical locking always requires a 3rd core control cable. Only industry reference 4 x 1 YY/LSZH cabling (or Fire Protected equivalent, if applicable) is to be used. Alarm, data or communications cabling; for example; CAT5E, CW1308 is unacceptable.

Conductors:	Flexible copper, class 5.	
Core identification:	4 core: brown, grey, black, green/yellow	
Insulation:	LSZH	
Sheath/Jacket:	LSZH	
Colour:	Grey	
Voltage:	300/500V -5°C / + 70°C	
Operating temperature:		
Minimum bending radius:	6 x overall diameter	
Standards:	BS EN 50525-3-11, EN 61034-2, EN 60332-1-2.	

Core size sq.mm		Radial thickness of insulation mm	Nominal overall diameter mm	Weight kg/km
1	4	0.6	7.9	99

T: 01322-441165 Product ref: 3184B-Grey Part number: 45574 www.batt.co.uk

LONWorks™ LSZH FireFighter® 400 Series 1x2x16awg 600 Volts Ref: LSZH 4001P1644-08 (-08 = orange but other colours also available) T: 01279 871150 F: 01279 871129 www.belcom.co.uk LONWorks™ is a trademark of Echelon Corp. Conductors: Stranded tinned copper wire (19/0.30mm). 2 cores twisted into a pair

6.70mm ± 0.10 mm

Diameter

(outer):

correctly, the door(s) must close true each time and that this is the responsibility of the door manufacturer/installer who has taken into account all site environmental variables. 4. Doors must be fit for purpose and fitted

3. For any locking system to operate

with the appropriate door closer, and door stop(s) top and bottom as appropriate. 5. The supply/installation of electric locking

- after the doors have been supplied to site will be significantly more expensive than at the time of manufacture.
- Doors on fire escape routes must be clearly marked accordingly.
- Emergency exit devices must be installed on all such doors to guarantee emergency exit at all times.
- 8. Electric locking circuits must only use lock circuit cabling 4-core, 1mm²/core per lock, or Fire Protected equivalent.
- Do NOT use Shear (pin type) magnets and shoot bolt type locking systems because they are very sensitive to the door closing true each time. The margin of error

(tolerance) is very small which makes this type of locking very unreliable. 10. All locking to be 12VDC FAIL SAFE only.

- 11. Electro-mechanical fail secure locking & electric fail secure releases are (a) NOT to be used with battery back-up as not designed to be continuously powered "unlocked" (b) NOT suitable for connection to Fire/AOV system for guarantee "unlock" in the event of emergency
- 12. Electro-mechanical fail secure locking does NOT unlock immediately and often causes annoyance to residents.
- 13. Never use Fail SECURE locking especially on doors that have access control on the **ESCAPE FROM** side.

IMPORTANT

Any 3rd party attempting to cut a locking device into a metal door/frame will invalidate all warranties. All such works must always be referred back to the door company.

*Avoid glass framed doors as especially difficult to electrically lock.

CABLES CPR COMPLIANT to Cca,S1b,d2,a2 or better

- A Class E (CAT6) U/UTP x 4no + Earth 1.5mm² (6491X)
- **B** 3-core 1.5mm² flex cable (3183Y)
- C Class E (CAT6) U/UTP + Earth 1.5mm² (6491X)
- D Class E (CAT6) U/UTP
- E Lock circuit cable ref. 4 x 1 YY/LSZH per lock (4-core, 1mm²/core)
- F Class E (CAT6) U/UTP x 2no
- **G** Lock circuit cable ref. 4 x 1 YY/LSZH per lock (4-core, 1mm²/core)
- + Class E (CAT6) U/UTP x 1no
- H RG58 Coaxial LSZH
- J LSZH Firefighter® ZHH stranded 21-core copper cable, 1mm² per core, with Y/G negative (www.belcom.com)
- K Class E (CAT6) U/UTP + 2-core, 0.75mm²/core (BS4737)
- L Alarm cable 8-core, 0.22mm²/core (BS4737)
- M Class E (CAT6) U/UTP x 5no

- N Class E (CAT6) U/UTP x 10no
- R Class EA (CAT6A) F/FTP x 1no
- **T** LSZH 4001P1644-08 x 1no (www.belcom.com)
- U Fire rated mains cable FP200H1.5, 3-core
- V FP200 (BS5839-1 / Class 1 CU compliant) 1mm²/core cable, 3-core + 1-core Earth. (Red sheaf, brown, grey, black + green/yellow cores)
- W 2-core, 0.75mm²/core cable
- Y WF100 (CAI Approved)
- **Z** WF 125 (CAI Approved)
- Ψ OM3 Multimode 50/125. 4 Core Fibre Optic Cable, Int/Ext Loose Tube/ E-Glass, for 1 Gb/s transmission up to 550 metres.
- Ω OM4 Multimode 50/125. 4 Core Fibre Optic Cable, Int/Ext Loose Tube/ E-Glass, for 10 Gb/s transmission up to 400 meters
- **‡** Single mode pre-terminated armoured fibre cable for TV IRS systems (Global Invacom code G657A)
- Ø LSZH Firefighter® 400 low loss flexible 50 Ohm coax (www.belcom.com)

NOTES

Refer to Construction Products

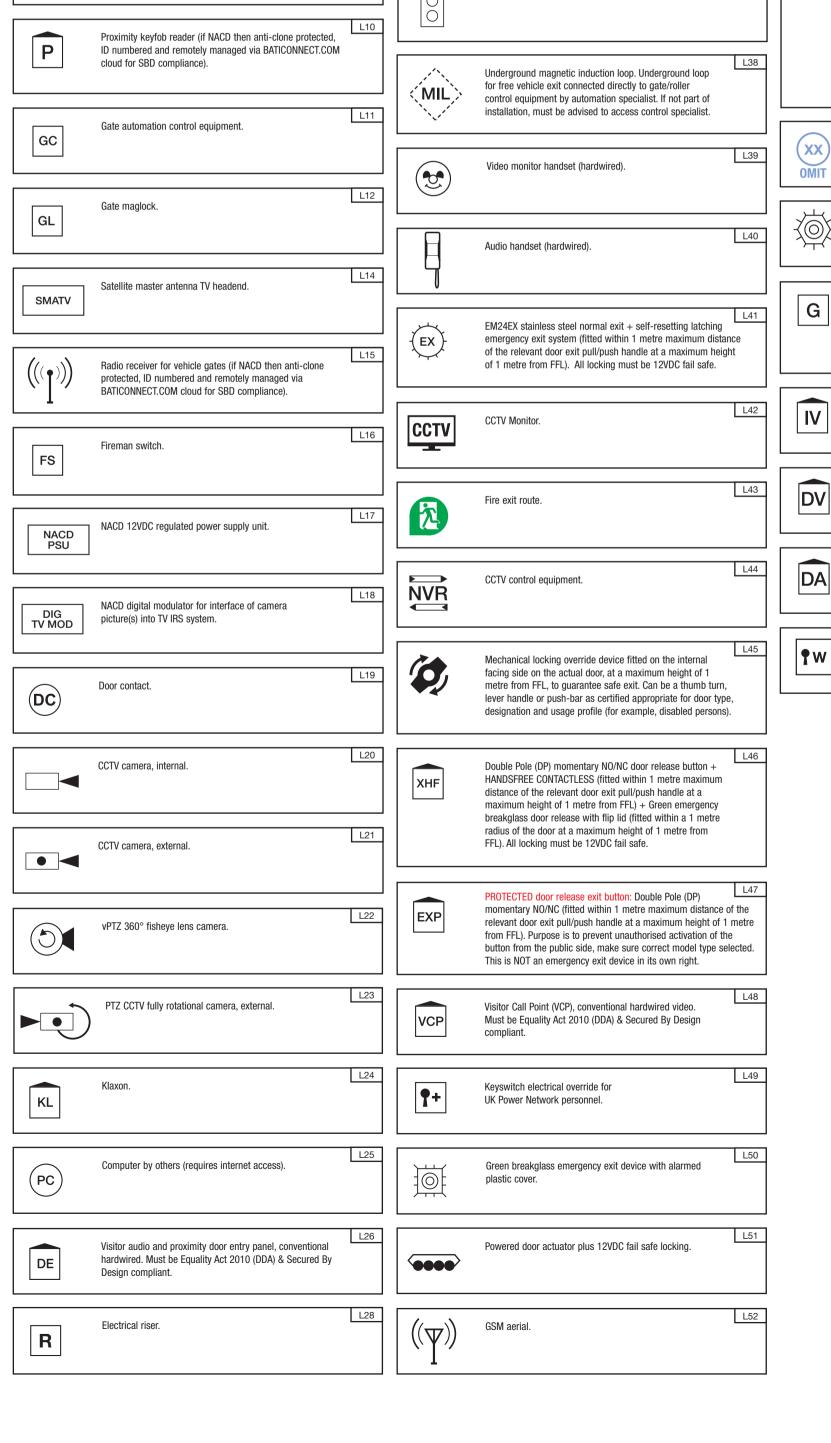
- 3. Make sure duct or external grade cable equivalents are used
- 4. Any and all installation and system/equipment guarantees relating to correct functionality and reliability only apply if 1st fix cabling, cables used, control equipment locations and mains strictly in accordance with the site (development) specific

Regulations (CPR) - BS6701 and ISO/IEC 11801 - 6: 2017 Part 6: Distributed Building Services (or BS EN 50173-6:2018 Part 6: Distributed Building Services).

1. Only use CPR compliant cabling. 2. Never use BT cable ref. CW1308

for digital video/audio systems.

- whenever applicable.
- power requirements are provided drawings supplied by NACD Ltd.



INSTALLATION COMPONENTS MISCELLANEOUS Not on tender schematics. It is recommended to check Fire alarm relay interface with client as controlled access may be required. 240VAC Mains Unswitched Fused Spur, 13A. 240VAC/13A double power socket (VOA) Double Pole (DP) momentary NO/NC door release button Proximity keyfob reader & Keypad for coded access Protected (type to prevent unauthorised activation from (fitted within 1 metre maximum distance of the relevant door (if NACD then remotely managed via BATICONNECT.COM cloud). the public side), EM24EX stainless steel normal exit + (EXP) exit pull/ push handle at a maximum height of 1 metre from self-resetting emergency exit system (fitted within 1 metre FFL). This is NOT an emergency exit device in its own right. maximum distance of the relevant door exit pull/push handle at a maximum height of 1 metre from FFL). All ocking must be 12VDC fail safe. Keypad for coded access (if NACD then remotely Green emergency breakglass door release with flip lid managed via BATICONNECT.COM cloud). (fitted within a 1 metre radius of the door at a maximum height of 1 metre from FFL). Required on all escape routes Equipment that has been either recommended / waiting on to comply with Building Control regulations (www.labc.co.uk) client instructions / not yet quoted / not yet ordered. locking must be 12VDC fail safe. IPKEYSAFE for secure access controlled storage of mechanical site keys - remotely managed via BATICONNECT COM cloud Double Pole (DP) momentary NO/NC door release button Emergency only, self-resetting latching exit button device (fitted within 1 metre maximum distance of the relevant door (fitted within 1 metre maximum distance of the relevant exit pull/push handle at a maximum height of 1 metre from FFL door exit pull/push handle at a maximum height of 1 metre - Green emergency breakglass door release with flip lid (fitted TVCCTV and CCTV camera. from FFL). Installation must comply with Building Control within a 1 metre radius of the door at a maximum height of 1 T+C regulations (www.labc.co.uk) for safe egress metre from FFL). All locking must be 12VDC fail safe External GSM data modem. Local 240VAC mains power. EM24EX-HF stainless steel normal exit + HANDSFREE CONTACTLESS + self-resetting latching emergency exit system (fitted within 1 metre maximum distance of the relevant door exit pull/push handle at a maximum height of 1 metre from FFL). All locking must be 12VDC fail safe. IPGUARD® 4G/IP/GSM Smart Visitor door entry & access 2VDC fail safe electric release or electro-magnet (as control panel. Smart technology audio-visual calls to smart per advice or pre-installed by door supplier for door phones, tablets, iPads using free IPGUARD APP, Remotely type, designation and usage profile). Concierge communication device. managed via BATICONNECT.COM cloud 2VDC fail safe electric release or electro-magnet with Double Pole (DP) momentary NO/NC 20mm dia s.steel NON monitoring contacts (as per advice or pre-installed by door LATCHING door release button with yellow plastic ring and yellow supplier for door type, designation and usage profile Traffic lights. illumination. Must always be fitted within 1 metre maximum distance of the relevant door exit pull/push handle at a maximum height of 1metre from FFL. Only use with fail safe electric locking Engraved PUSH TO EXIT (Green), In emergency press and hold exit button while opening door (Red), ONLY USE IN CONJUNCTION with a secondary independent emergency door release system. It is your responsibility to check and ensure your installation complies fully with Building Control regulations (www.labc.co.uk) for emergency safe egress. Reference number only. Door entry / Access control / CCTV equipment shown on previous versions, had been omitted off plans in revised design. Monitored green breakglass emergency exit device with alarmed plastic cover. Gerda Access Control Box (ACB) to provide access to the Fire & Rescue Service through the Gerda One Key® system Secured By Design Homes 2016, section 27.10). Refer to NACD drawing T12030 for cabling. For all information: www.gerdasecurity.co.ul IPVIEW video door entry system (IP based).

COMMUNICATIONS

Remote programming, monitoring and real-time management for visitor door entry, resident access control and CCTV surveillance systems is a requirement for Secured By Design compliance.

NACD's BATICONNECT CLOUD for visitor door entry / resident access control is supplied complete with its own remote connectivity.

Non NACD: If remote connectivity to CLOUD is not included in their package, all third party door entry and access control systems will require broadband with a static IP address to enable remote access. This must be provided by the builder or client. Please check the manufacturer's specifications for third party system(s) requirements.

CCTV systems: Digital broadband service with static IP address, minimum uplink speed of 2.5Mbps per camera required.

Information required for broadband for CCTV and third party systems: Router: Username & Password. Internet Service Provider: Username & Password. Static IP address: Paperwork showing details.

PROGRAMMING

All programming of NACD proximity keys, radio transmitters, keypad codes and telephone numbers is free of charge within 18 working hours of request for 12 months from the date of handover, BUT **ONLY** if NACD's BATICONNECT CLOUD system has been installed.

Please check with reference to third party systems

SPACE / POWER IN RISER (MINIMUM NATURALLY VENTED)

Hub and communications location: 600mmH x 400mmW x 300mmD x 2no 240VAC/13A unswitched fused spur x 4no 240VAC/13A double power socket x 1no

Secondary door entry, access control and CCTV equipment location(s): 600mmH x 400mmW x 300mmD x 1no 240VAC/13A unswitched fused spur x 2no

TV headend location(s) 240VAC/13A unswitched fused spur x 1no

+ 240VAC/13A double power socket x 1no All other TV IRS equipment location(s):

240VAC/13A unswitched fused spur x 1no + 240VAC/13A power socket x 1no

All control/distribution equipment installed in the riser(s) for door entry, access contro CCTV, TV IRS will each require its own 240VAC / 13A unswitched fused spur. All of these must be on a dedicated electrical circuit, labelled security, which only services the landlord security / TV systems. All riser equipment to be housed in secure metal cabinet(s) / protective enclosure(s), as appropriate, and clearly

External enclosures / cabinets (all disciplines):

If no suitable weatherproof location(s) for system control/distribution equipment are available, site to provide and install externally rated steel lockable enclosures/cabinets (as per dimensions supplied by NACD).

WARNING

DUOX video door entry system.

DUOX audio door entry system

Nireless networked locking system, handle operated,

battery powered. See notes for manufacturer and reference.

Never install any system control / power equipment in false ceilings or in underground cavities.



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IPGUARD 4G/IP/GSM Smart Visitor Door Entry Panels, BATICONNECT.COM CLOUD







IPGUARD range of fully 4G/IP/GSM enabled video door entry panels with:

- Anti-vandal BS316 stainless steel
- 4G/IP/GSM communications
- Calls up to 3 landline or mobile numbers per dwelling
- Cloud based programming no software required Illuminated colour digital display
- High resolution camera, viewable on Apple & Android smartphones and tablets using the free app Integral proximity reader
- Equality Act 2010 compliant
- Large 15.6mm dia. braille embossed buttons with 8mm illuminated digits
- Voice output messages, visual icon messages
- 3000 call capacity
- Mobile AccessTM
- Friends and family feature Dedicated tablet feature



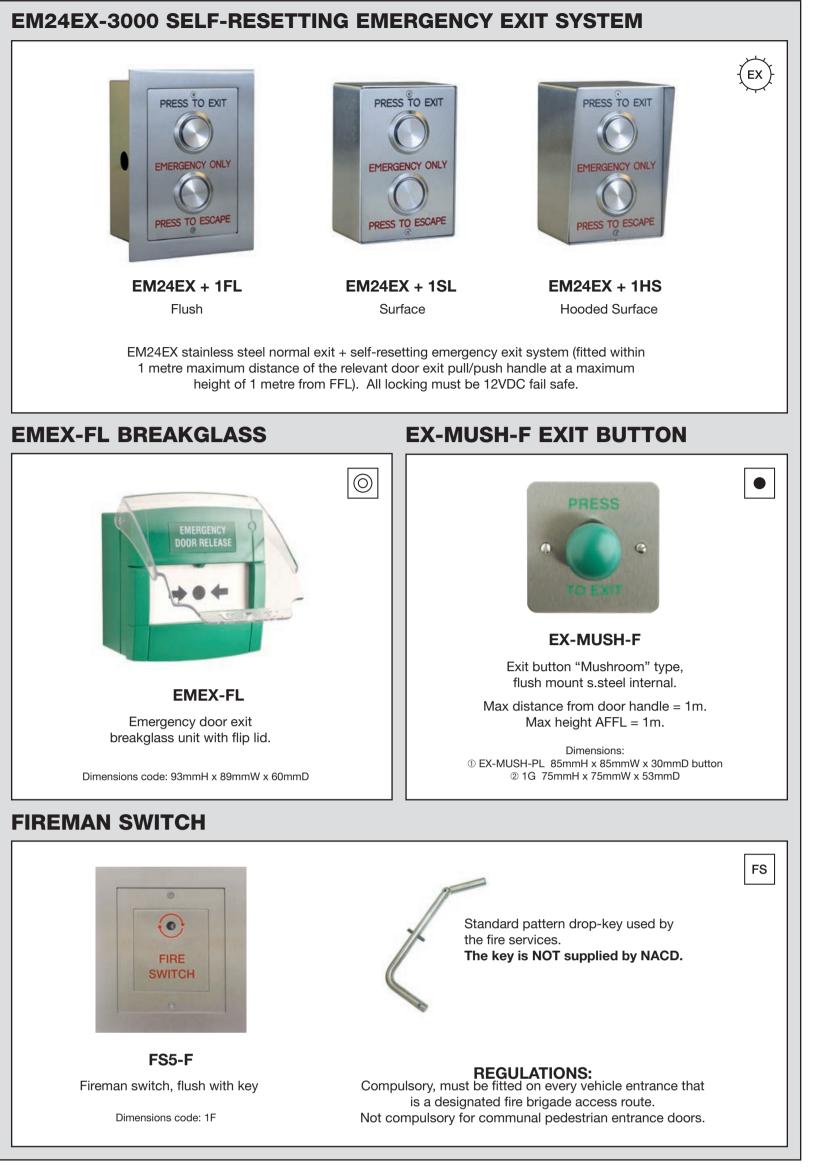
IPGUARD MINI

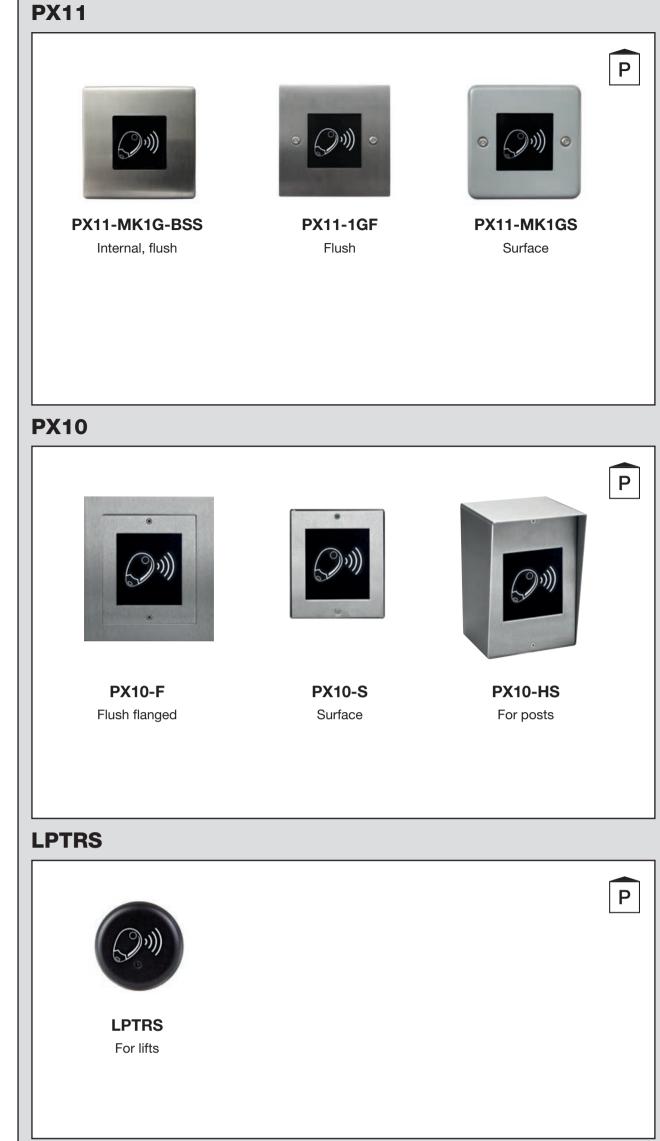




IPGUARD MINI TOUCH

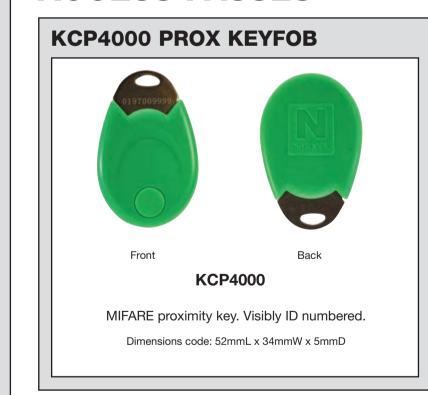
For specification sheets and dimension, please visit www.nacd.co.uk

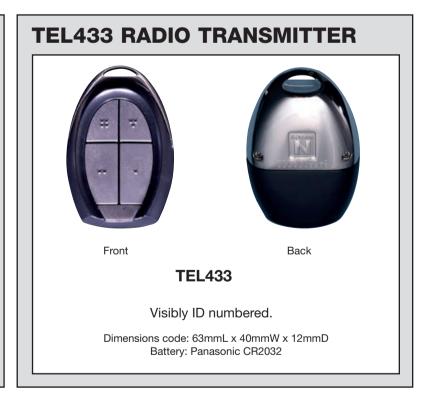




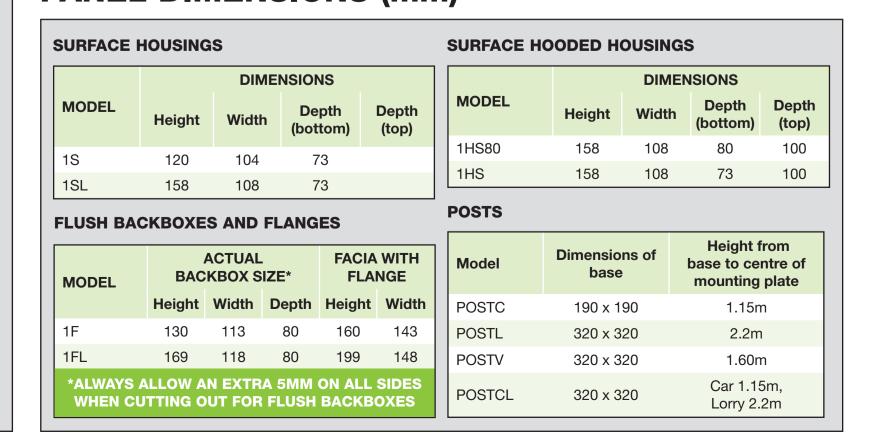
ACCESS PASSES

EXIT DEVICES



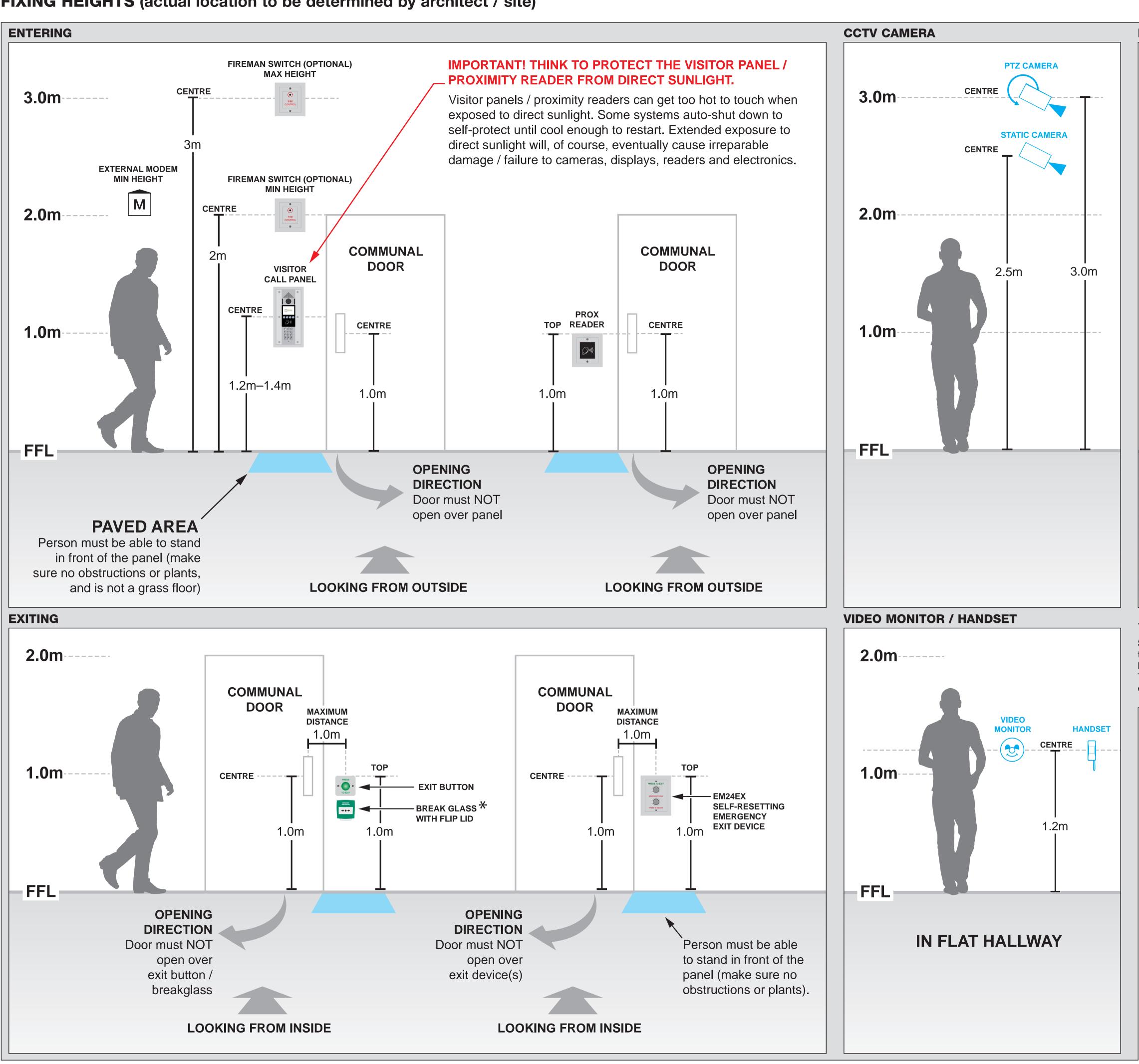


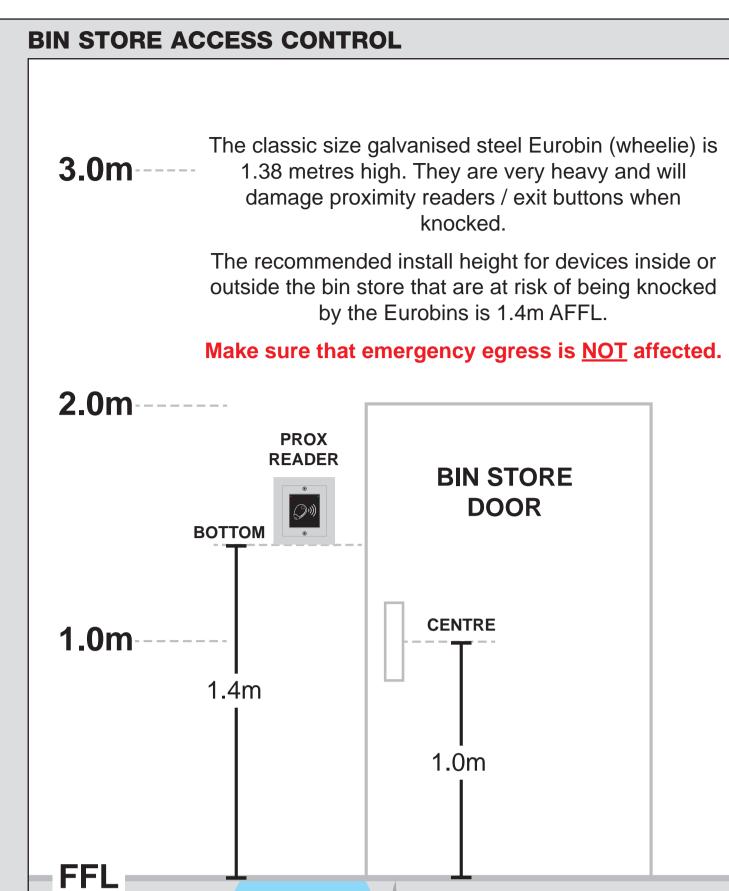
PANEL DIMENSIONS (mm)





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* A NOTE ON BREAKGLASS POSITION

Sometimes, for security reasons, the breakglass (BG) cannot be located close to the door. The 1.0 m max distance from door handle does NOT apply to the BG because when it is activated the fail safe locking stays unlocked until it is reset. The BG must, however, be located so that it is impossible to miss – which means easy to see and activate by all persons exiting in an emergency.



OPENING

LOOKING FROM OUTSIDE

DIRECTION

Door must NOT

open over panel

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IPGUARD

FIT VERTICALLY

VISITOR PANELS / PROXIMITY READERS

/ EXIT DEVICES ARE DESIGNED TO BE

FITTED VERTICALLY IE. UPRIGHT

NOT AT AN ANGLE!

NACD EXCLUDE ALL RESPONSIBILITY

FOR DAMAGE TO PANEL ELECTRONICS

CAUSED BY CONDENSATION WITHIN 3RD

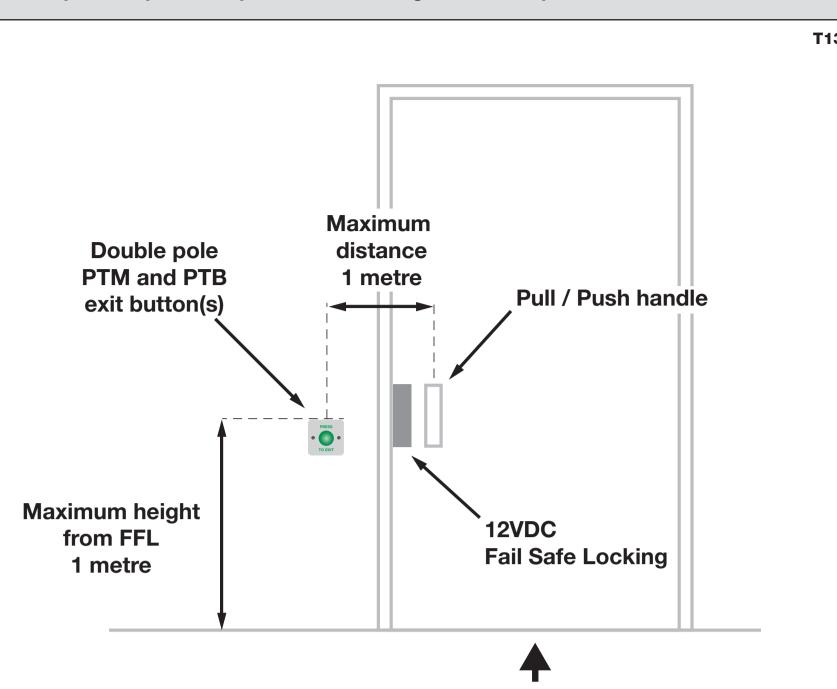
PARTY POSTS. ALSO, IF PANEL AGAINST

ADVICE FITTED AT AN ANGLE, IT MUST

BE UNDER COVER SO PROTECTED FROM

DIRECT RAIN / SNOW / SUN.

T13032-0-2



HEALTH & SAFETY WARNING NOT SAFE!

EXIT ROUTE FROM INTERNAL

If a person cannot reach the exit button AND the door handle at the same time, the safety PTB poles of the button are USELESS. The installation is unsafe and dangerous.

THINK SAFETY, THINK FIRE, THINK **EMERGENCY EXIT.** LIVES DEPEND **ON A CORRECT** INSTALLATION.

REPORT NON-COMPLIANT INSTALLATIONS IMMEDIATELY. **LIVES DEPEND** ON IT!

ALWAYS CHECK THAT WHEN A BUTTON IS PUSHED AND HELD DOWN THE DOOR STAYS UNLOCKED AND DOES NOT RE-LOCK. ALL INSTALLATIONS MUST COMPLY WITH BUILDING CONTROL REGULATIONS.

Clause 2.17 of Part M (Access) of the Building Regulations, Section J: "the operation of switches, outlets and controls does not require the simultaneous use of both hands, except where this mode of operation is necessary for safety reasons.'

ACCEPTABLE REPLACEMENT FOR A GREEN BREAKGLASS.

WARNING! A PTM/PTB* DOUBLE POLE EXIT BUTTON ONLY IS NOT AN

You cannot have a system where the only emergency exiting procedure requires that the person needs to hold in a button, and at the same time pull/push the door because some people (elderly, physically impaired, children etc) will not be capable of doing this.

Also, if the distance from the exit buttons to the door makes this physically impossible (too far apart) to press in the button and push/pull the door simultaneously, the installation is obviously flawed and unsafe for everyone.

The emergency exit button MUST when pressed in the normal way ie pressed and immediately released also latch the door unlocked for a period of minimum 3 minutes. Each time the emergency exit button is pressed and immediately released it must "hold the door unlocked" for a minimum period of 3 minutes.

*PTM = Push to make momentary contacts = Convenience feature only.

PTB = Push to break momentary contacts = Safety feature.

COMPLIANT

NOT SAFE AND NOT

T13032-0-3 **NOT ALLOWED** PRESS TO EXIT M EMERGENCY EXIT PRESS & HOLD IN WHILST OPENING DOOR

BUILDING REGULATIONS

WARNING:

IT IS YOUR **RESPONSIBILITY TO CHECK AND ENSURE** THE INSTALLATION **COMPLIES FULLY WITH BUILDING CONTROL REGULATIONS FOR EMERGENCY SAFE EGRESS** (WWW.LABC.CO.UK).

CORRECT POSITIONING OF EXIT BUTTON(S) IS VITAL

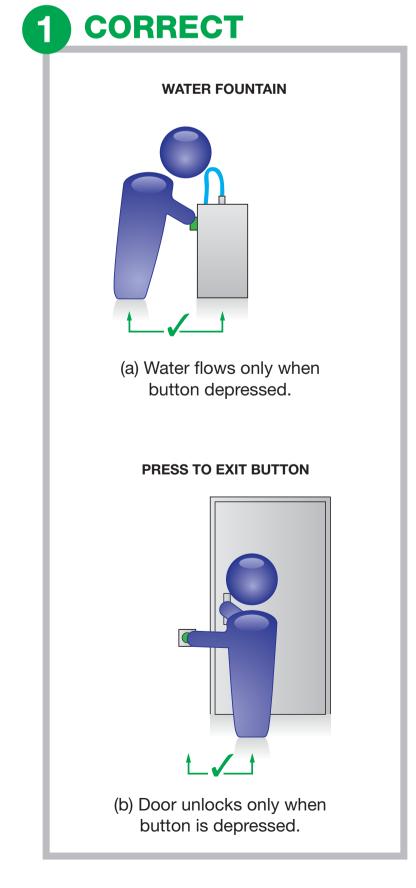
The PTB (Push to Break) contacts on the button break the 12VDC Fail Safe lock power circuit but only when the button is pressed in.

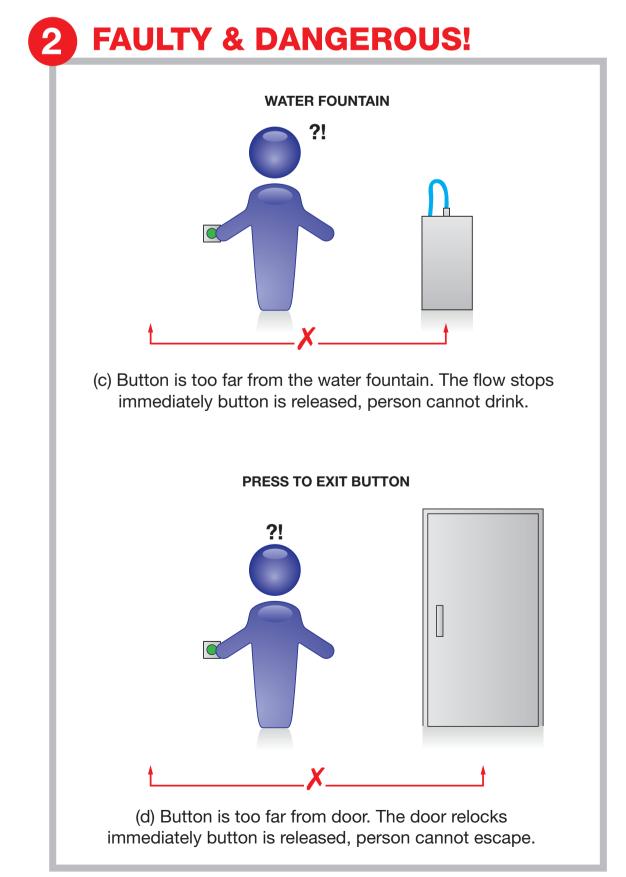
The instant the button is released. the 12VDC Fail Safe lock is immediately re-powered and the door immediately locks.

If the person cannot both press the button in and push or pull the door open at the same time, the installation is dangerous.

WARNING: Must be fitted within 1 metre maximum distance of the door exit pull/push handle at a maximum height of 1 metre from FFL.

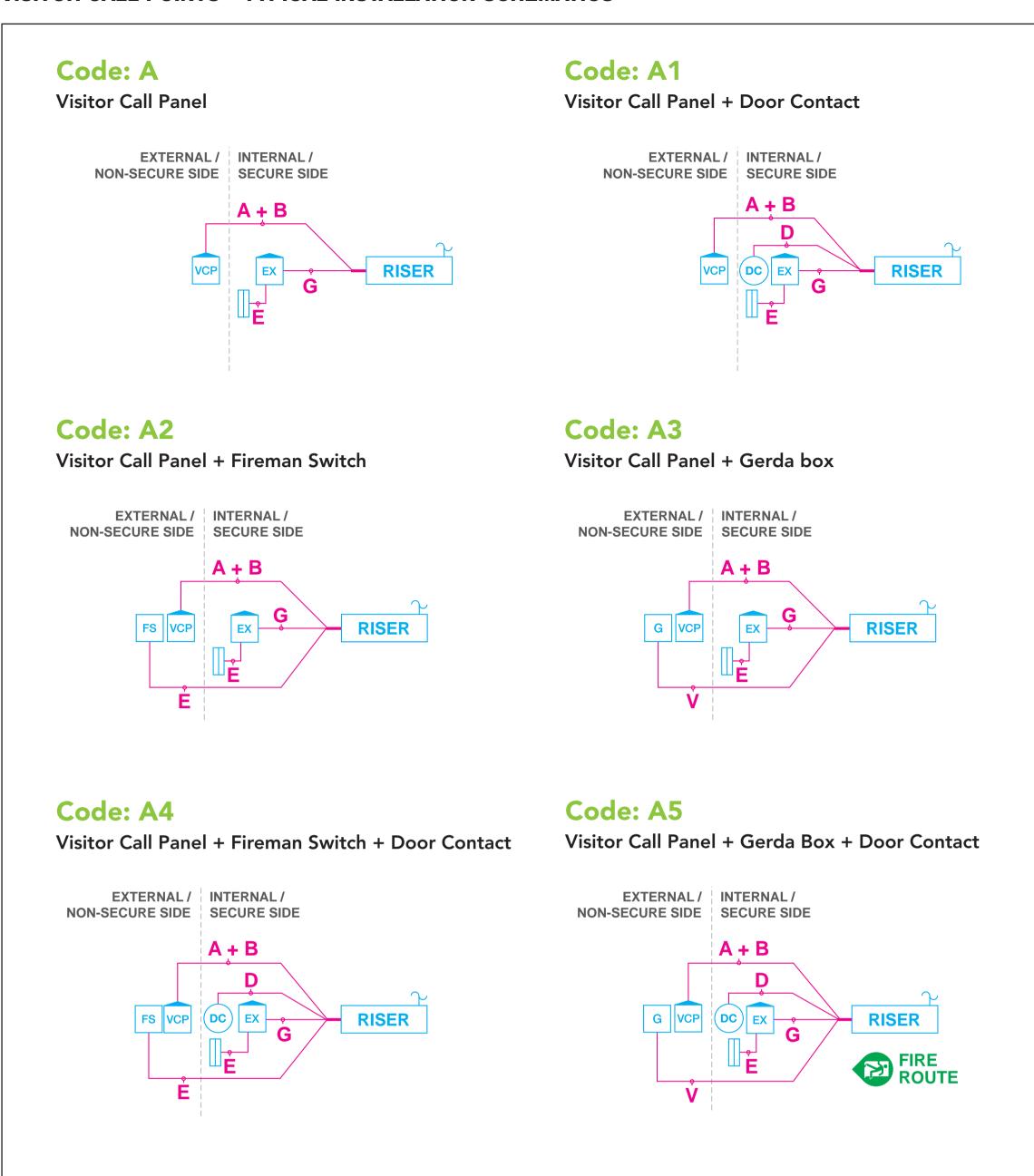
Position carefully so that door does not open OVER the exit button(s).

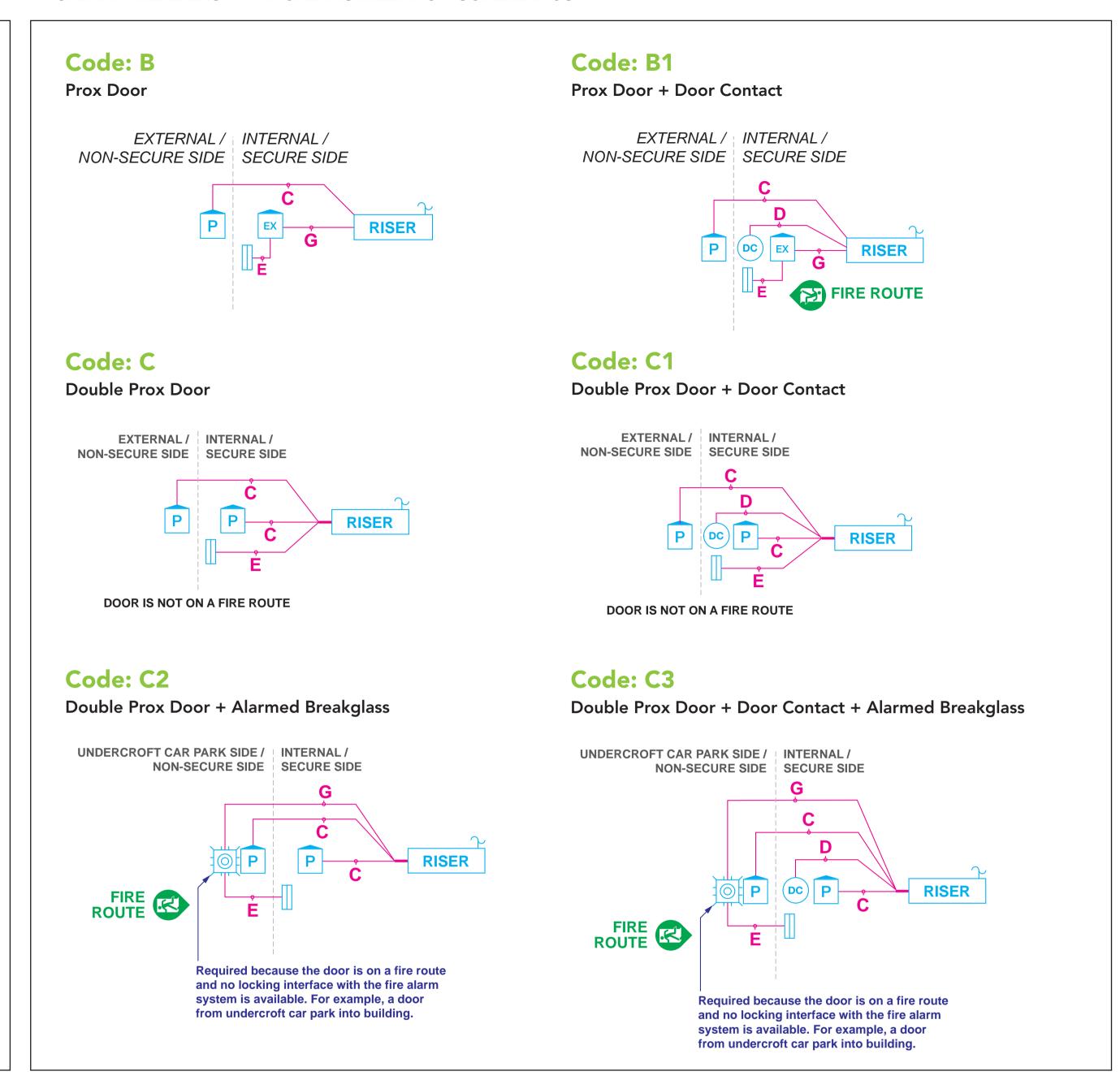




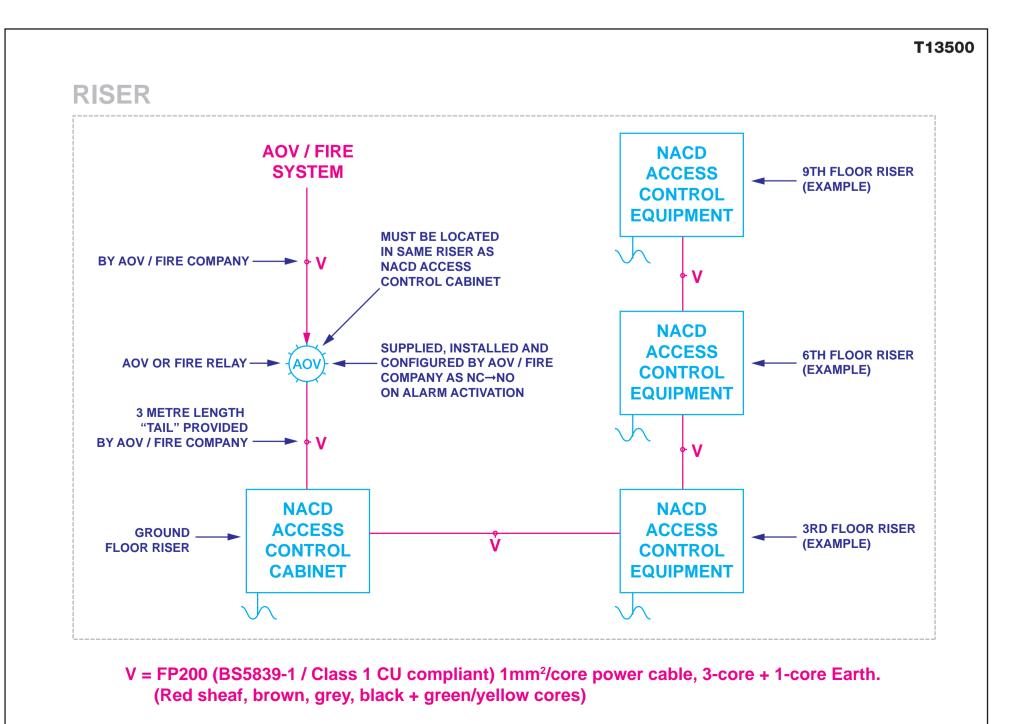


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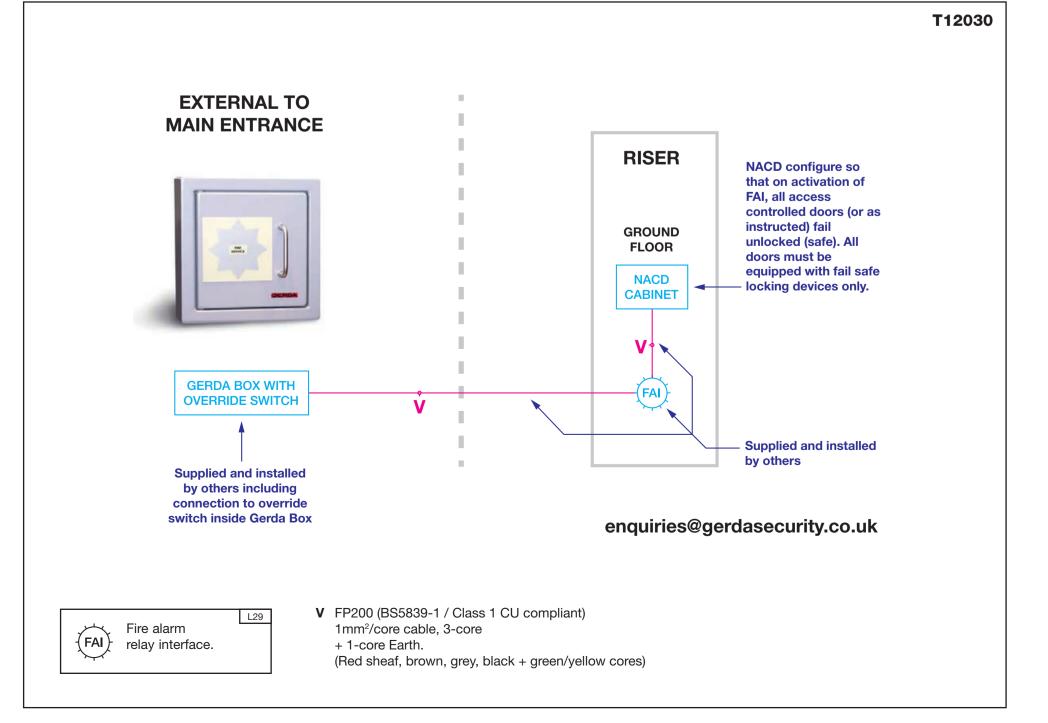




INTERFACING LOCKING WITH AOV SYSTEM

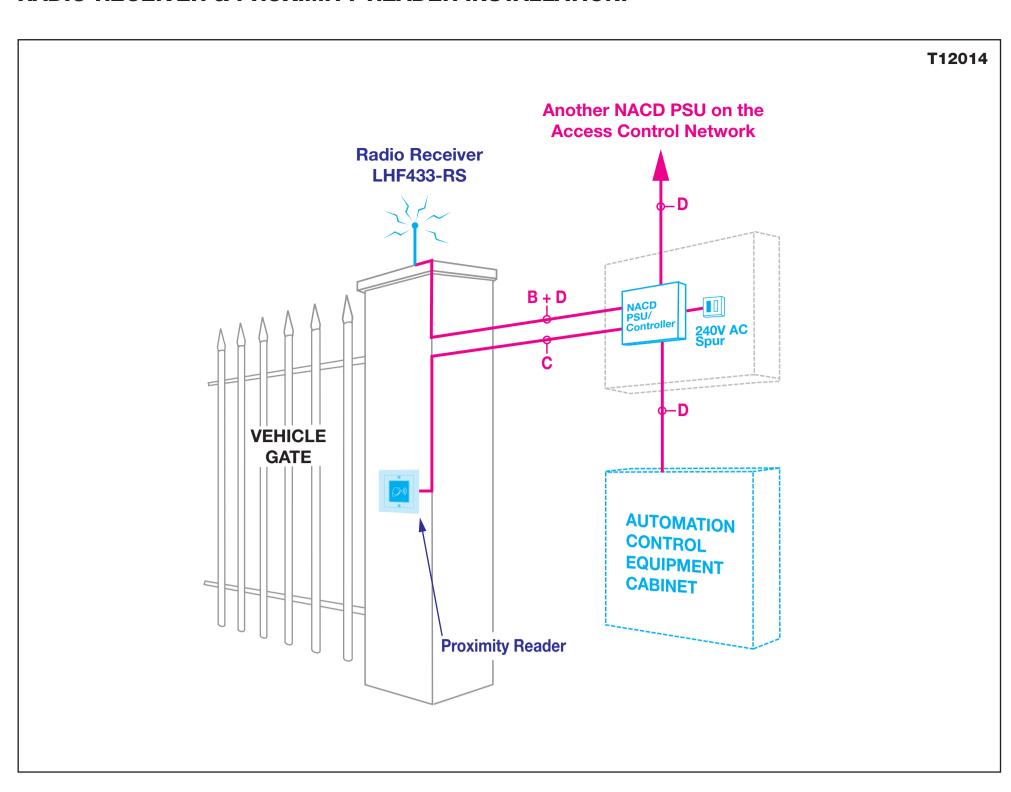


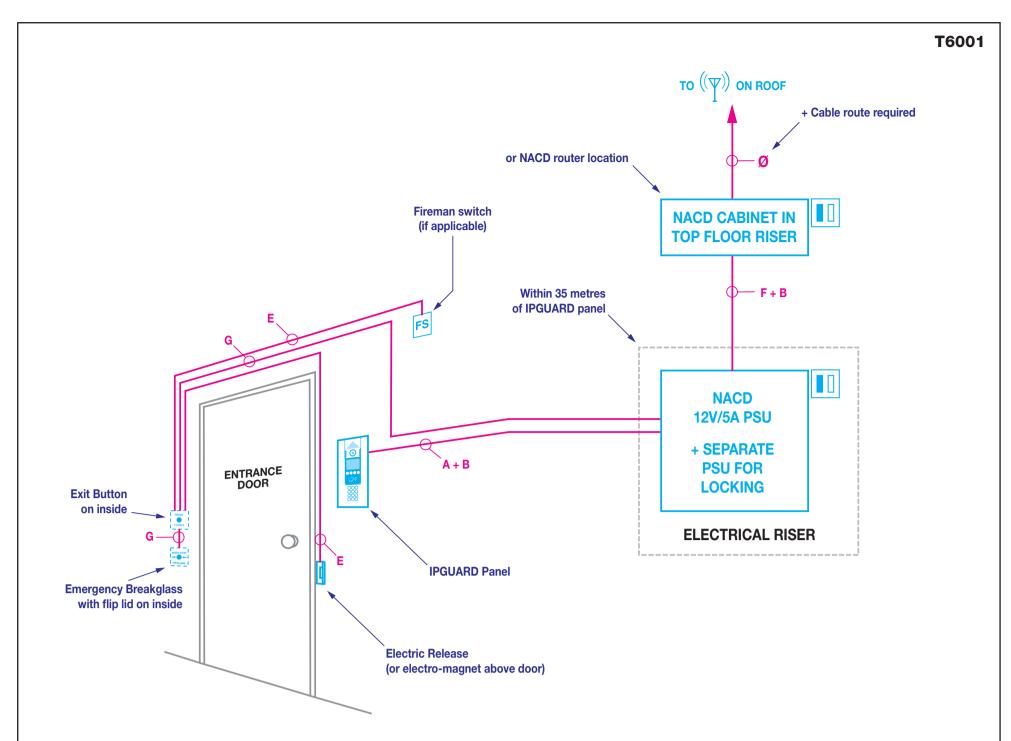
GERDA BOX (ACB)

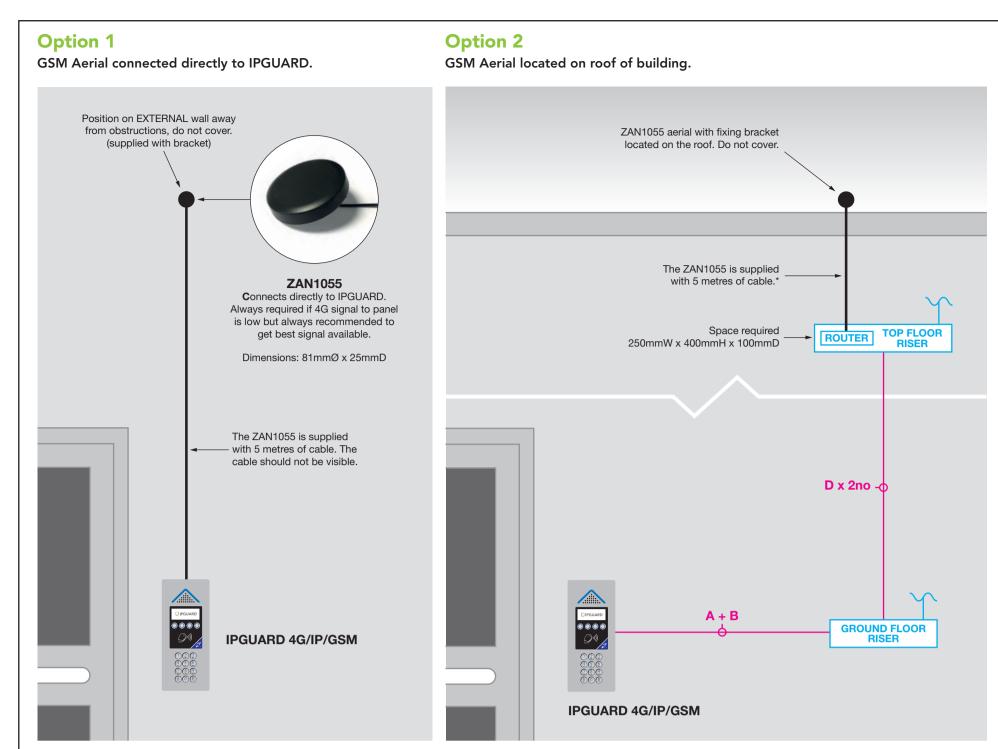




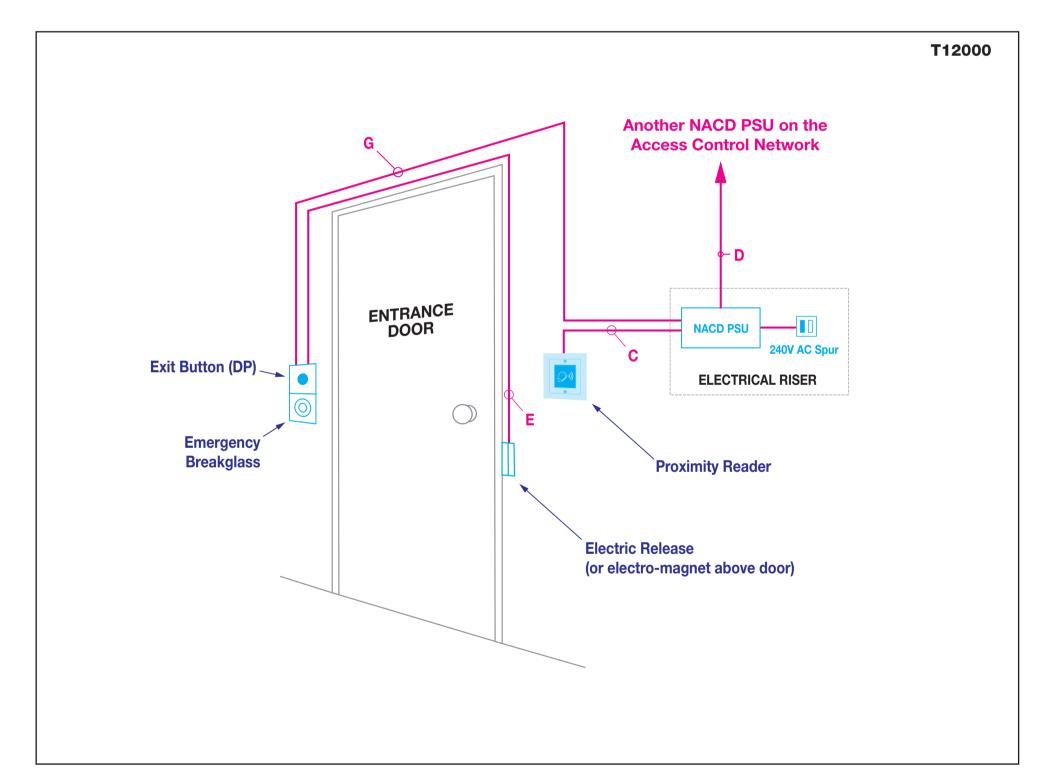
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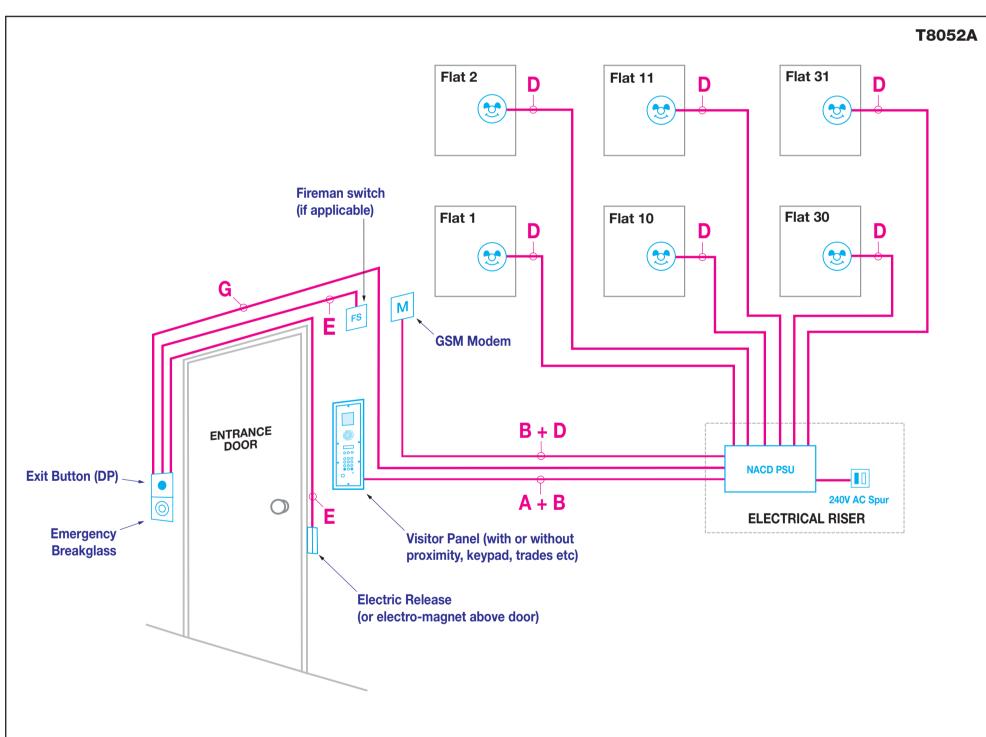




PROXIMITY READER INSTALLATION.

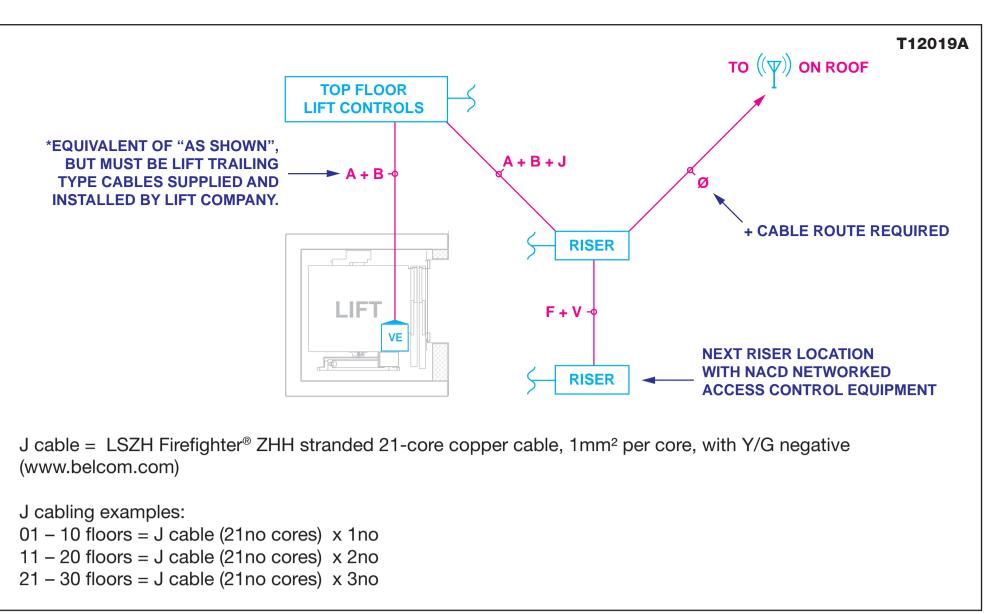


VIDEO DOOR ENTRY: VIDEO MONITOR IN LOBBY OF FLAT.

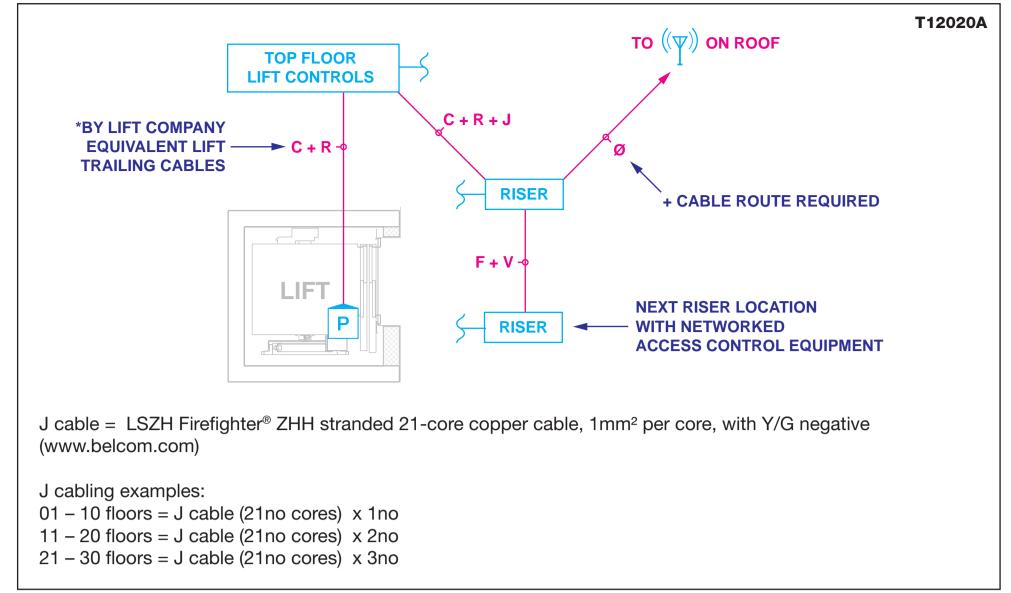




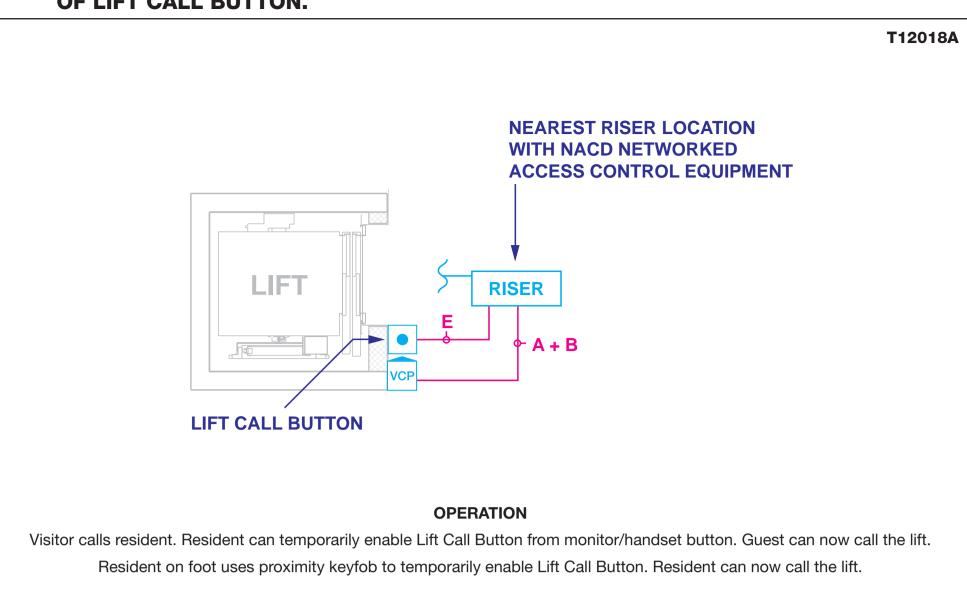
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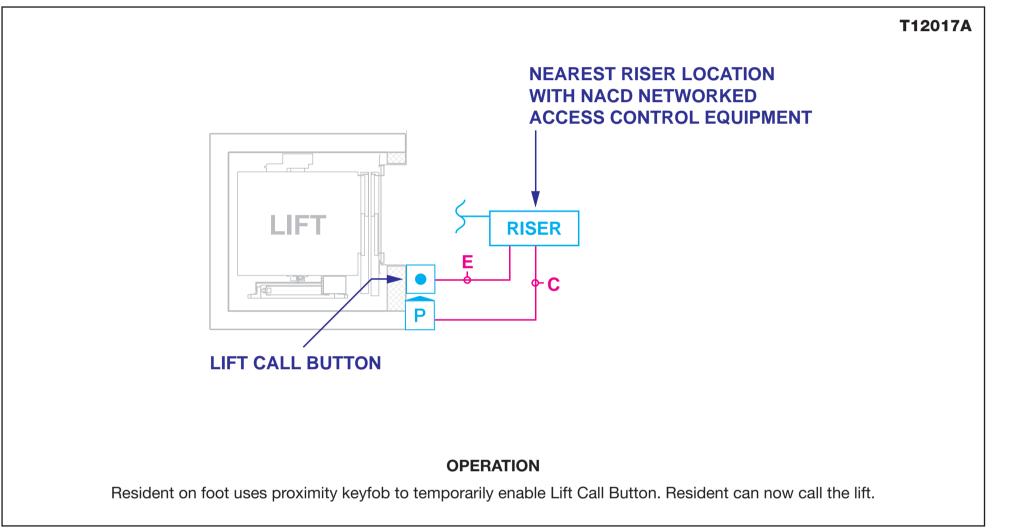
LIFT: FLOOR SPECIFIC PROXIMITY READER



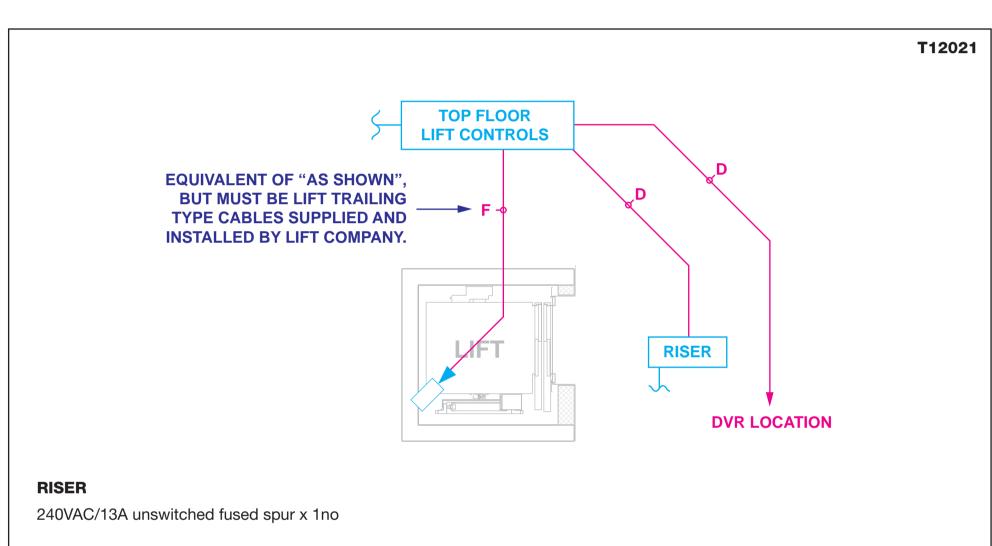
LIFT: VISITOR CALL PANEL WITH PROXIMITY READER CONTROLLING THE ENABLING OF LIFT CALL BUTTON.



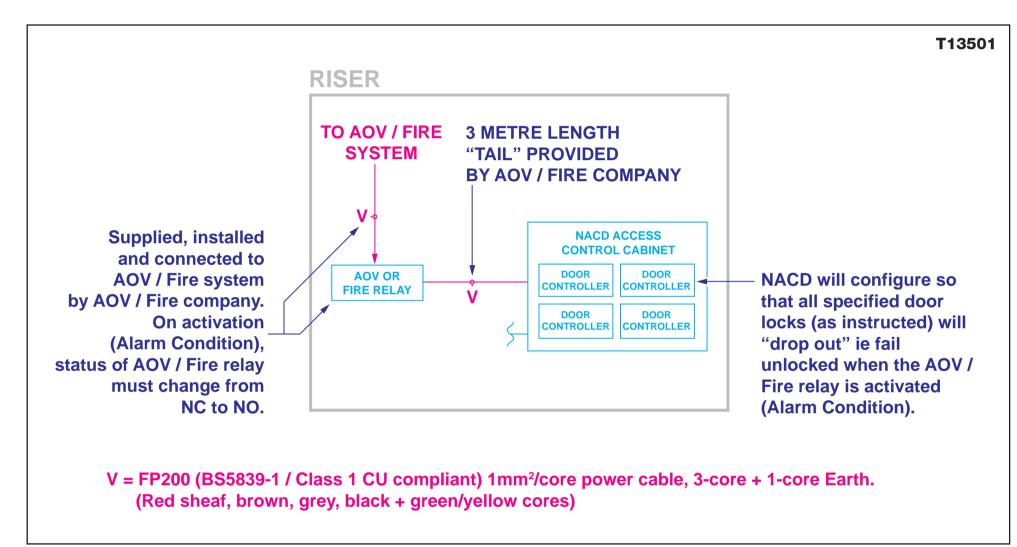
LIFT: PROXIMITY READER CONTROLLING THE ENABLING OF LIFT CALL BUTTON



LIFT: CCTV CAMERA

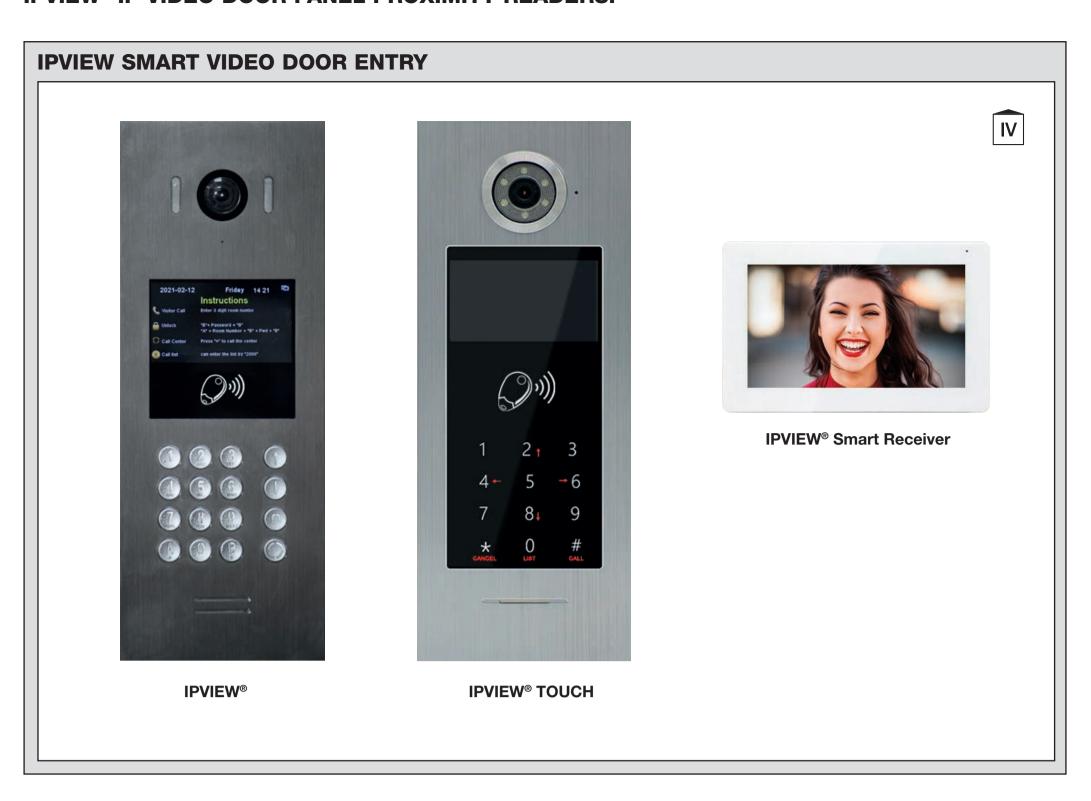


INTERFACING AOV SYSTEM WITH NACD VISITOR DOOR ENTRY & ACCESS CONTROL

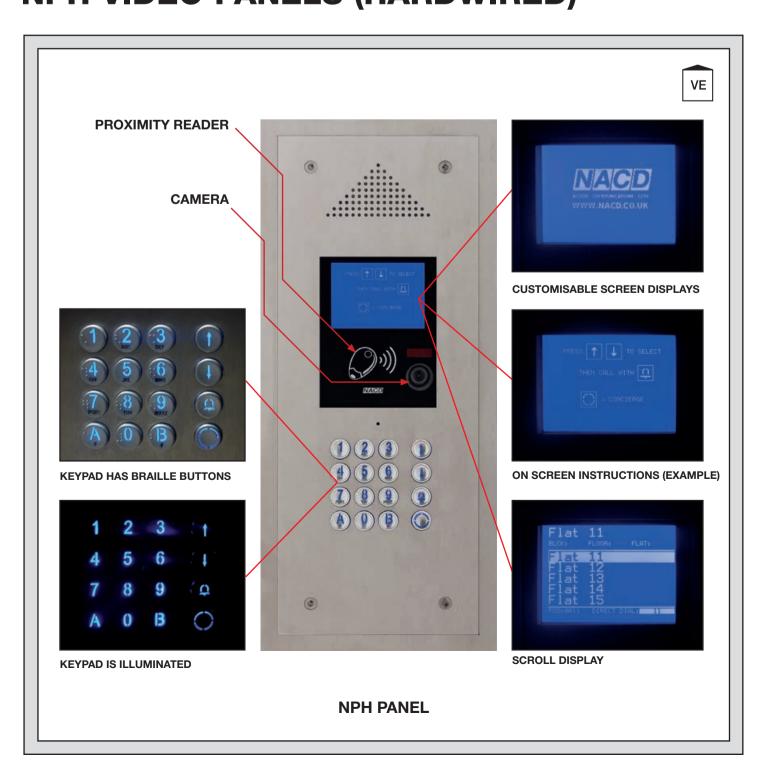




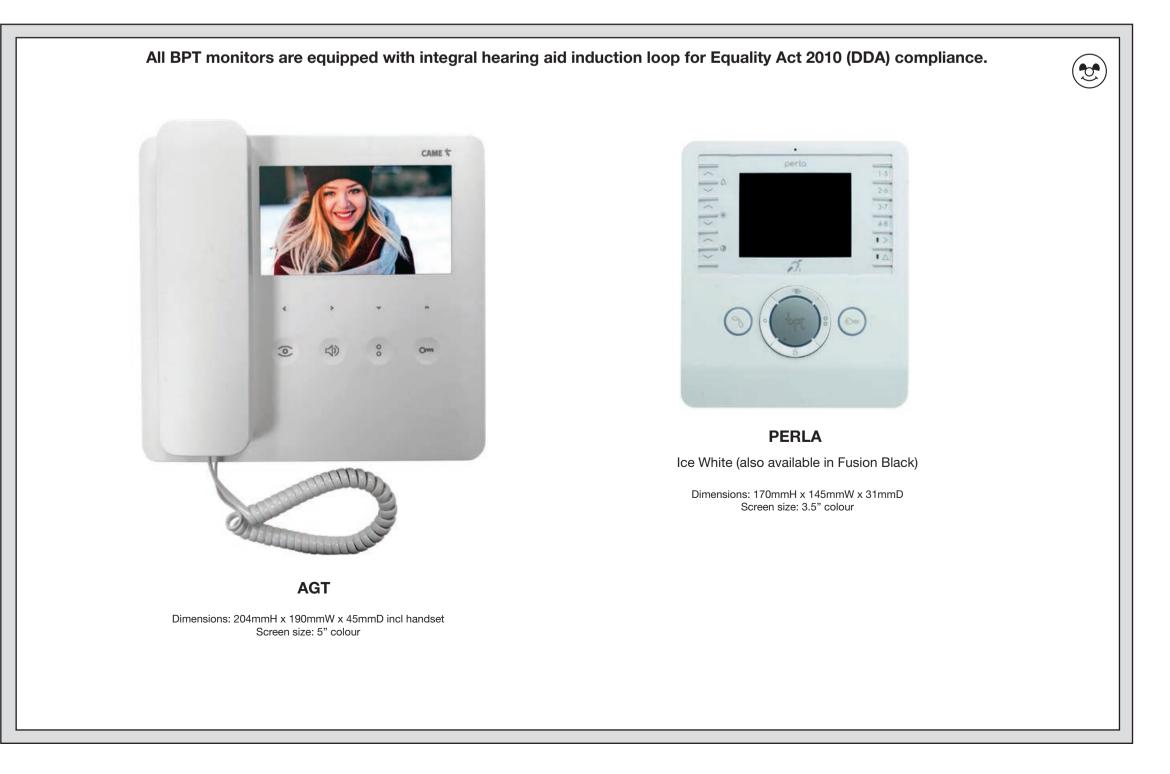
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NPH VIDEO PANELS (HARDWIRED)



BPT colour video monitor range





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