

APEX **INSTALLATION GUIDE**

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GENERAL PRECAUTIONS

- This equipment must be installed by a skilled and competent person, i.e. a person with the relevant current training and experience; with access to the requisite tools, equipment and information, and capable of carrying out a defined task.
- Read the instructions carefully before beginning the installation and carry out the actions as specified by the manufacturer.
- The installation, programming, commissioning and maintenance of the product must only be carried out by qualified technicians, properly trained in compliance with the regulations in force, including health and safety measures and the disposal of packaging.
- Before carrying out any cleaning or maintenance operation, disconnect the device from the power supply.
- The equipment must be destined solely for the use for which it was expressly designed.
- The manufacturer declines all liability for any damage as a result of improper, incorrect or unreasonable use.

WARNING - ISOLATION OF ELECTRICAL EQUIPMENT

As per **Clause L.2 of BS EN 62368-14** an appropriate external disconnect device **MUST** be fitted as part of the system installation within the building. This device could be a fused switched spur, a dedicated RCD or other mechanical device to isolate the system in the event of fault or fire. It is the responsibility of the installer to supply and fit this device, it will not be supplied by CAME Entrotec. Markings should be clear and the device operable without special tools nor expose users to hazard.

In accordance with **The Electricity at Work Regulations 1989**, electrical equipment and conductors should be made dead to prevent danger while work is carried out on or near that equipment. No person shall be engaged in any work activity on or so near any live conductor.

INTENDED INSTALLATION LOCATION

This equipment is intended for installation within both communal and restricted access areas, it is the installers responsibility to ensure any equipment located within a communal space must be left safe, locked and prevent tamper.

INSTALLATION SPECIFICATION

It is the responsibility of the installer to follow CAME Entrotec's installation and cable specification as well as ALL relevant regulations. Failure to comply with CAME Entrotec's installation and cable specification may result in erratic operation of equipment and could invalidate any warranty.

- Installations must comply with **BS 7671:2018+A3:2024 - SET: Requirements for Electrical Installations**. IET Wiring Regulations (18th Edition).
- Installers are recommended to assess **BS 6701:2016+A1:2017: The Standard for Telecommunications equipment and telecommunications cabling**; a standard that helps meet legal **CPR** obligations for cable fire performance.

IET Wiring Regulations 18th Edition: Regulation 444 (MEASURES AGAINST ELECTROMAGNETIC DISTURBANCES) imposes requirements for segregation of circuits.

IET Wiring Regulations 18th Edition: Regulation 528 (PROXIMITY TO WIRING SYSTEMS TO OTHER SERVICES) imposes requirements for segregation of door entry / access control circuits (Band I), 230VAC mains circuits (Band II) and other higher voltage circuits.

IET Wiring Regulations 18th Edition: Regulations 541 and 542 impose requirements for earthing and bonding conductors. Ensure ALL metalwork is bonded to the buildings earth, this includes call panels, exit switches, cabinets and metal conduit. Ring terminals and earth points are provided on call panels and cabinets to terminate earth cables, ensure these connections are made.

WARRANTY AND SUPPORT

CAME Entrotec equipment is renowned for reliability and has a 2-year warranty on all CAME Entrotec manufactured products as standard. This warranty does not cover water damage, vandalism, mains electrical faults, lightning strikes, damage caused by miswiring or cable faults.

CAME Entrotec offer complimentary training courses and telephone support:
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1 CABLE SPECIFICATION

- Failure to comply with this cable specification may result in erratic operation of equipment.
- The cabling system is based on Unshielded Twisted Pair (UTP) that meets or exceeds the construction and transmission performance requirements of **Cat5e** or **Cat6**.
- The cable must be **annealed pure copper** with a **conductor diameter $\geq 0.485\text{mm}$** .
- Cables routed out with the fabric of the building, i.e. to a gate, the cables must be protected by metallic containment (such as class 4 galvanised steel conduit tubing), earthed at both ends.
- The cable specification below defines **minimum electrical performance requirements only**. Installers must assess and select cable types that also meet **project-specific fire performance classifications** (e.g. EuroClass Cca-s1b,d2,a2) and comply with **all applicable regulations and standards** such as **BS 6701** and **BS EN 50174**, based on the building type, installation environment, and system function.

	Connection	Cable
A	Controller to each ED5, EV5 or EV6 receiver:	1 x Cat5e or Cat6 (UTP - 4 pair min.). Maximum cable run 90M.
B	Controller with PSU to controller with PSU:	1 x Cat5e or Cat6 (UTP - 4 pair min.), 1 x 4mm ² multi-stranded flexible cable, 1 x RG59 coax (if video). Maximum cable run 50M.
C	Controller with PSU to controller without PSU:	1 x Cat5e or Cat6 (UTP - 4 pair min.), 2 x 1.5mm ² multi-stranded flexible cable, 1 x 4mm ² multi-stranded flexible cable. 1 x RG59 coax (if video). Maximum cable run 50M.
D	Main controller with PSU to each call panel:	1 x Cat5e or Cat6 (UTP - 4 pair min.). 1 x 3-Core Flex 0.75mm ² (stranded). Maximum cable run 50M.
E	Access controller to proximity reader:	1 x Cat5e or Cat6. Max cable run 90M. NOT required for Call Panels with EasiTag reader.
F	Access controller to access controller:	1 x Cat6 - Max cable run 90M (system dependant, CAME KMS SK4 total bus length 700M max.) NOT required for EasiTag.
G	Lock Relay to locks:	1 x 3-Core Flex 1.5mm ² (stranded) - 90M max. Route through any exit / fire switch or break glass for fail safe operation.
H	Lock Relay to exit / fire switch, and/or break glass:	1 x Cat5e or Cat6 (UTP - 4 pair min). Maximum cable run 50M.
J	Main controller to camera:	1 x RG59 coax (75 Ohm). 1 x Cat5e or Cat6 (UTP - 4 pair min).
K	3A Fused Spur to Controller with PSU:	1 x 3-Core Flexible Mains Cable 1.5mm ² .
L	Circuit Protective Conductor	6mm ² earth cable.

WARNING

DO NOT USE Copper Clad Steel (**CCS**), Copper Clad Magnesium (**CCAM**), or Copper Clad Aluminium (sometimes marked with **CCA** - not related to EuroClass **Cca** regulatory requirements). These cables are far less conductive than a pure copper cable and will cause erratic operation.

TEST FOR PURE COPPER CABLE

The typical DC resistance of each core of UTP cable is ≤ 10 Ohms/100M.

1.1 TYPICAL CONFIGURATION

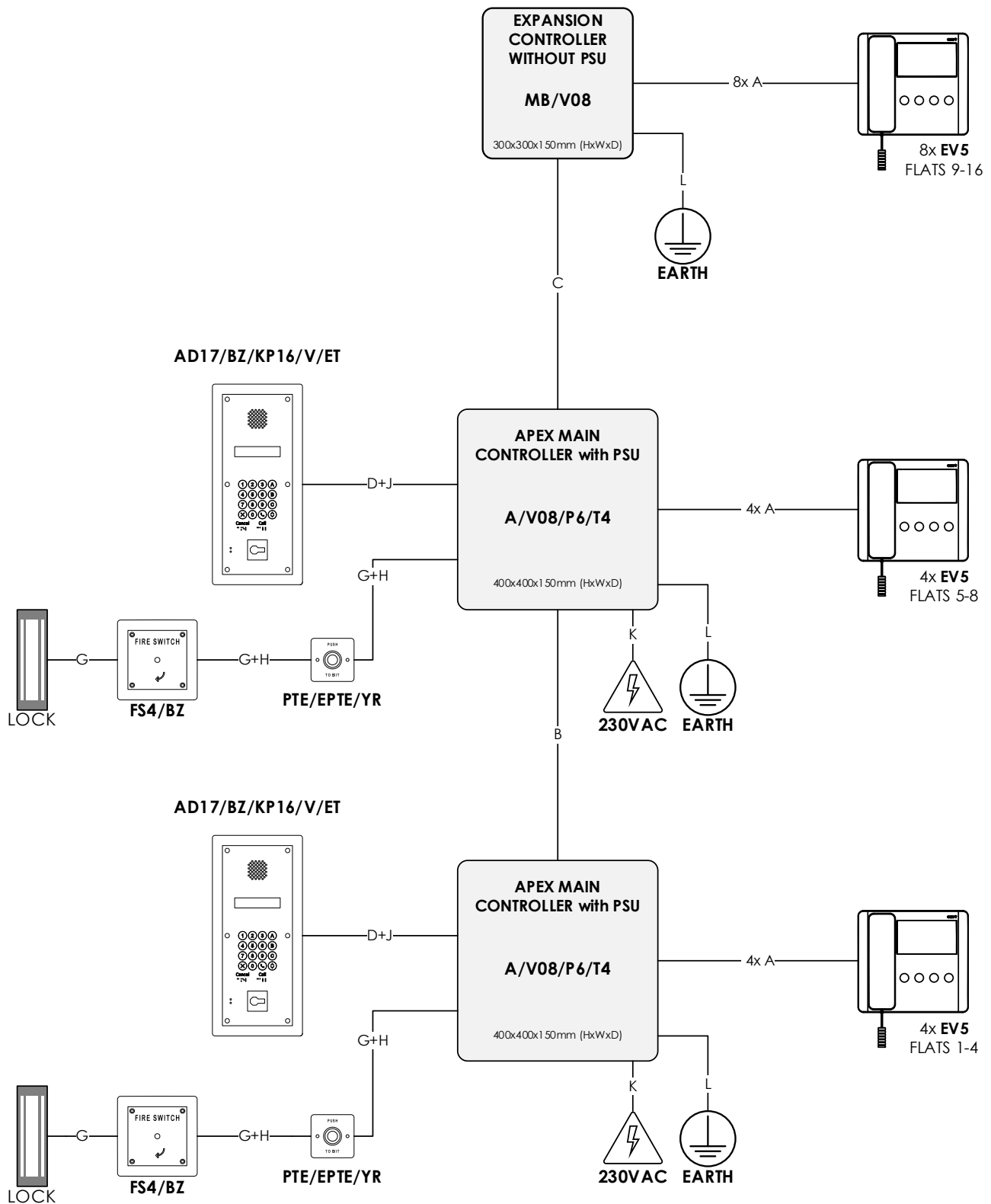


FIGURE 1 - MINIMUM CABLE REQUIREMENTS