EGW
INSTALLATION GUIDE

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CAME
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INSTALLATION SPECIFICATION

It is the responsibility of the installer to follow CAME Entrotec's installation and cable specification as well as ALL relevant wiring 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 the following applicable standards:
- **BS 7671**: Requirements for electrical installations. IET Wiring Regulations 18th Edition.
- **The Electricity at Work Regulations 1989**
- **ANSI/TIA-568.0-D**: Generic Telecommunications Cabling for Customer Premises.
- **ANSI/TIA-568.1-D**: Commercial Building Telecommunications Cabling Standard.

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.

⚠ WARNING - ISOLATION OF ELECTRICAL EQUIPMENT

In compliance with **The Electricity at Work Regulations 1989,** electrical equipment 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.

WARRANTY AND SUPPORT

CAME Entrotec systems are renowned for their reliability and have 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:
01506 886 235 - 9am to 5pm Monday-Friday.
ceuk.technicalsupport@came.com

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1 CABLE SPECIFICATION

The cabling system is based on Unshielded Twisted Pair **Category 5e** (Cat5e) or **Category 6** (Cat6). The cable must be **annealed pure copper**, meeting or exceeding the requirements defined in the standard ANSI/TIA 568 C.2.

Failure to comply with this cable specification may result in erratic operation of equipment.

The specification below shows the minimum cable requirements, allow for extra cabling if redundancy is required.

	Connection	Cable
A	EGW Controller with PSU to Apex controller with PSU:	1x Cat5e or Cat6. 1x 4mm² Single (Black). 1x RG59 coax (if video).
B	Mains Supply Cable from Fused Spur to Controller with PSU:	0.75 to 1.5mm² flex cable.
C	Circuit Protective Conductor	6mm² earth cable.
D	EGW Controller to Entronet Workstation or LAN:	2x Cat5e or Cat6.

⚠ WARNING

DO NOT USE CCA (Copper Clad Aluminium), **CCS** (Copper Clad Steel) or **CCAM** (Copper Clad Magnesium).
These cables are far less conductive than a pure copper cable and will cause erratic operation.

i TEST FOR PURE COPPER CABLE

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

1.1 TYPICAL CONFIGURATION

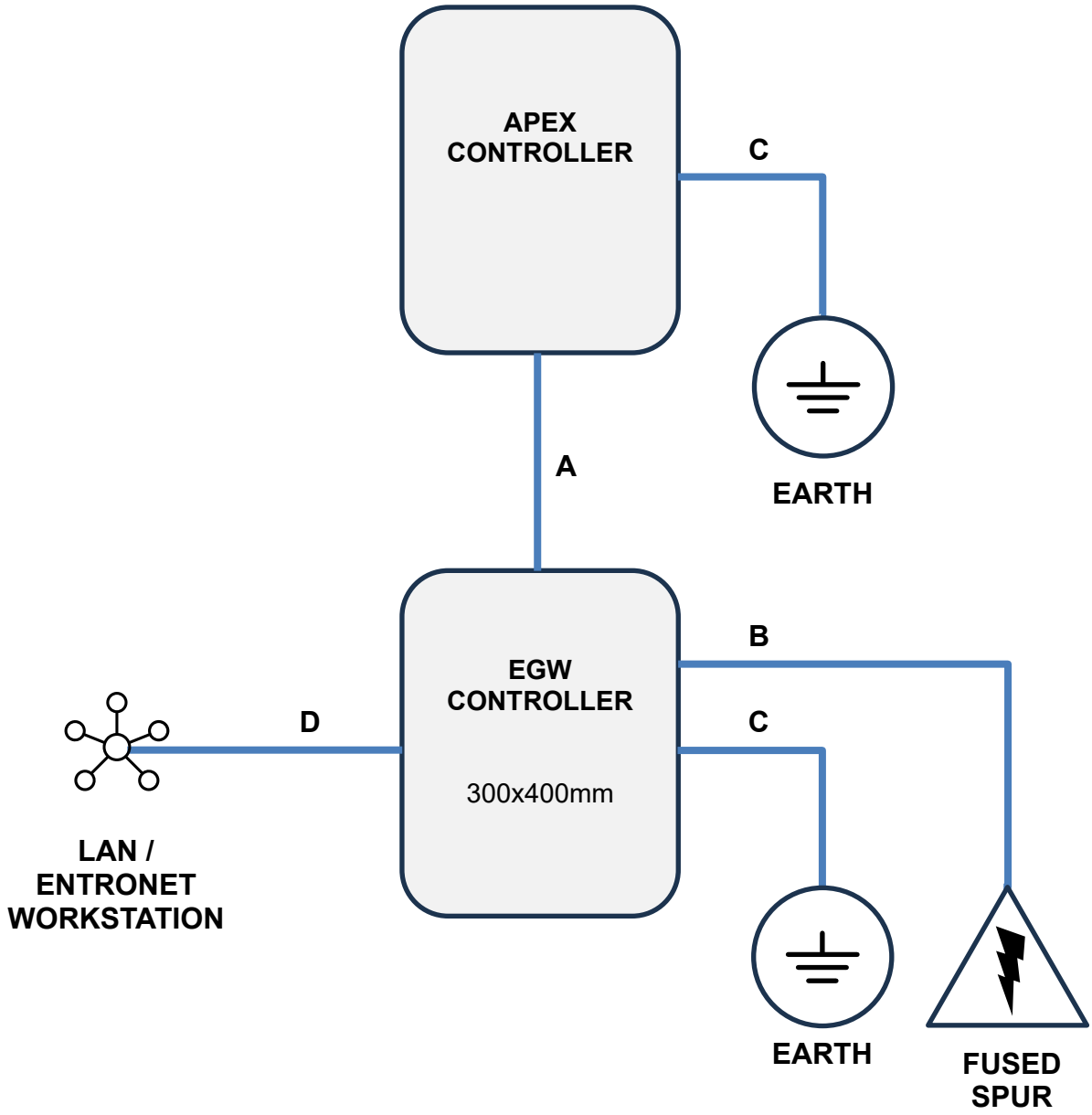


FIGURE 1-1 - MINIMUM CABLE REQUIREMENTS

2 OVERVIEW

2.1 EGW CONTROLLER

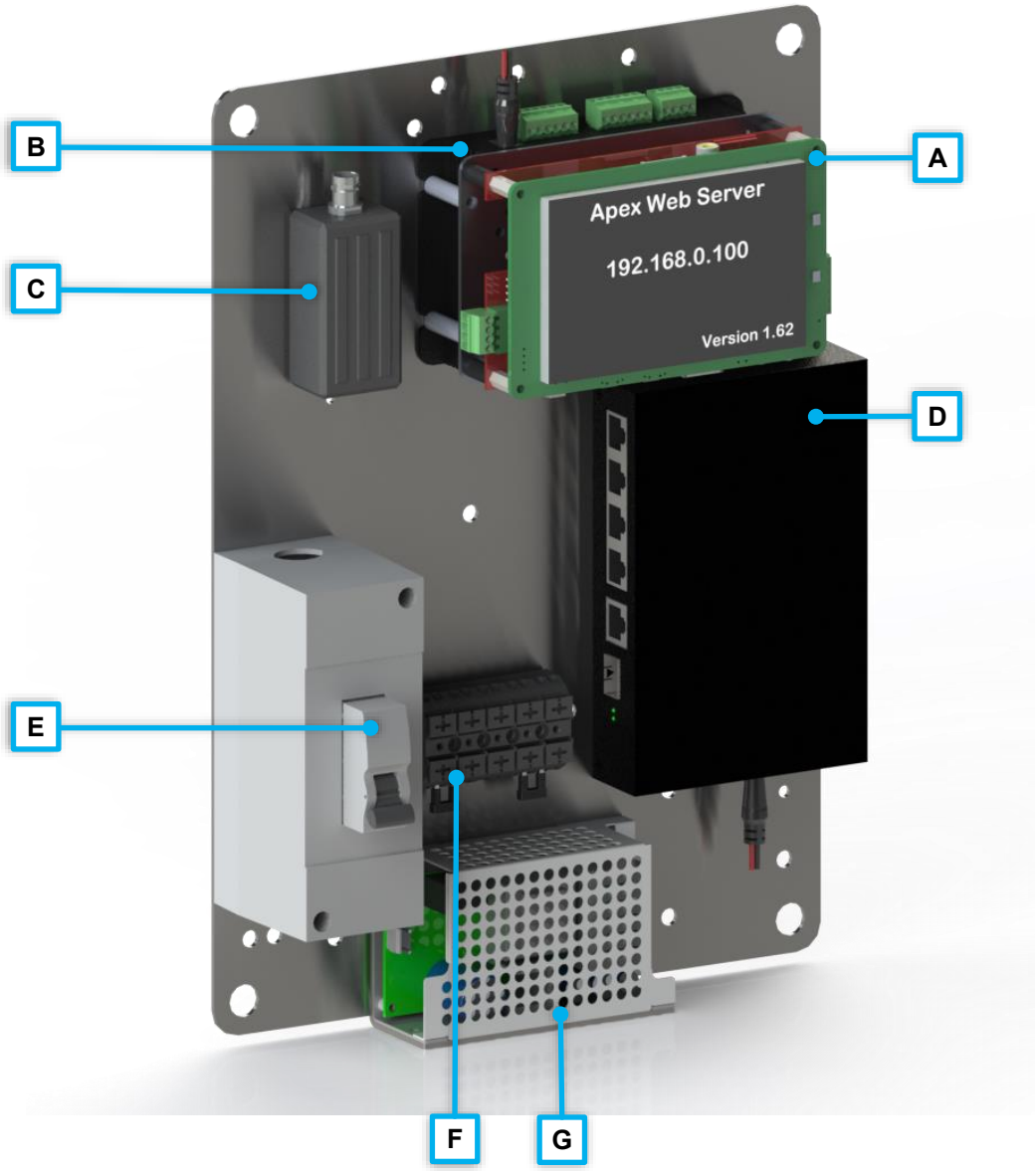


FIGURE 2-1 – PRE-WIRED CONNECTIONS NOT SHOWN

	Item	Connection Detail
A	Apex Webserver	Section 4.1
B	VoIP Server	
C	IP Video Server	Section 4.2
D	Network Switch	Section 5.1
E	Miniature Circuit Breaker (MCB)	Section 3.1
F	Power Distribution Terminal Block	Section 3.2.1
G	Power Supply Unit (PSU)	Section 3.2

3 POWER SUPPLY

3.1 MAINS SUPPLY CONNECTIONS

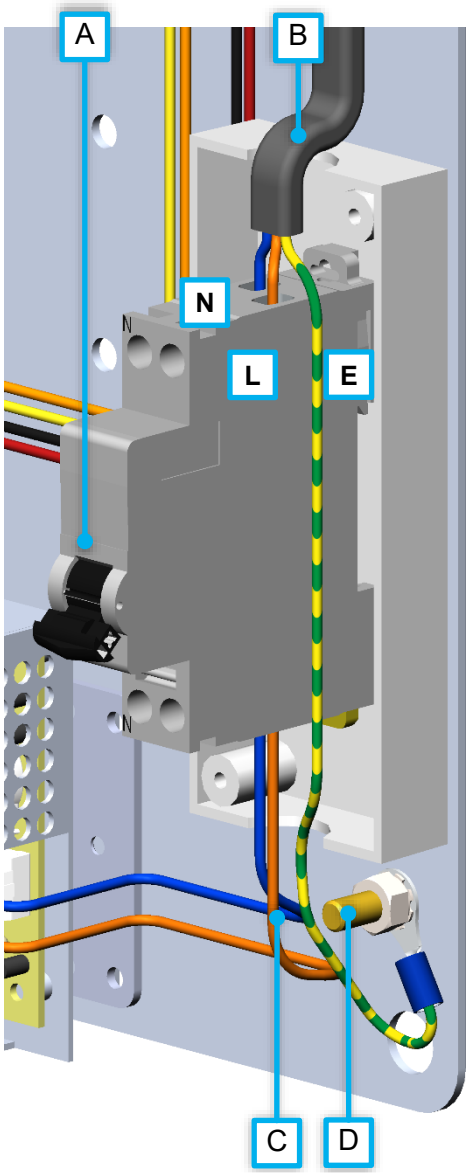


FIGURE 3-1

A	5A Miniature Circuit Breaker
B	Mains Supply Cable from Fused Spur - Flex
C	Pre-Wired Load Cable to PSU
D	Earth Point
N	NEUTRAL - BLUE
L	LIVE - BROWN
E	EARTH - GREEN/YELLOW

⚠ WARNING

Isolate mains supply before connecting.

3.2 OUTPUT CONNECTIONS

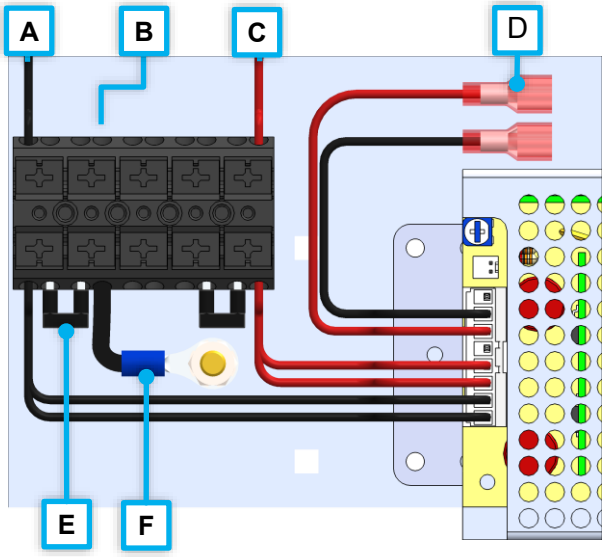
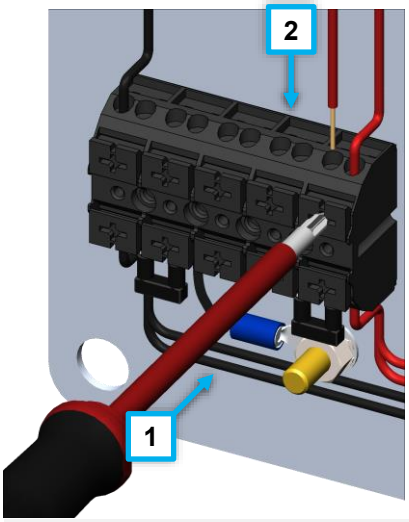


FIGURE 3-2

A	Pre-Wired 0V to Internal Devices
B	System Ground to Additional Controllers - 4mm² Single Core
C	Pre-Wired 12V to Internal Devices
D	Backup Battery Connections for Sealed Lead Acid Battery
E	Jumper Link
F	System Ground to Earth Link REMOVE FROM ADDITIONAL CONTROLLERS (section 3.3)

3.2.1 Power Distribution Terminal Block



- Strip cable 10mm.
- 4 conductors per pole.
- Accepts stranded or solid core.

1 Push Lever

2 Insert Cable

FIGURE 3-3

3.3 GROUND RULES

Earth is a direct connection to the buildings main earthing system. All metalwork including panels, chassis' and enclosures must be connected to Earth.

System Ground on Extra Low Voltage (ELV) systems, such as Apex, serves as a return path for signals and power within equipment, and on the interconnections between equipment.

The System Ground must be connected to Earth at a single point, even on multi-block systems. It is important to remove this connection on all additional controllers. This prevents the System Ground being connected to Earth points of differing potential.

⚠ WARNING

Connecting the System Ground to Earth more than once may cause interference.

3.3.1 System Ground Connections for Additional Controllers

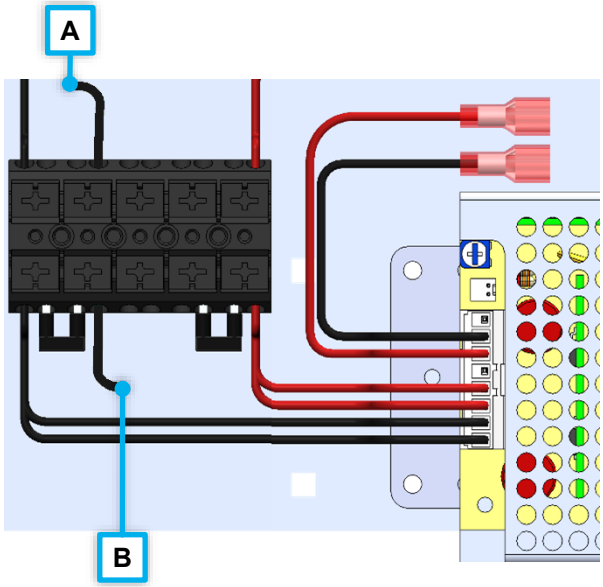


FIGURE 3-4

A	System Ground Connection to Next Controller(s)
B	System Ground Connection from Previous Controller(s)

3.3.2 System Ground to Earth Connections

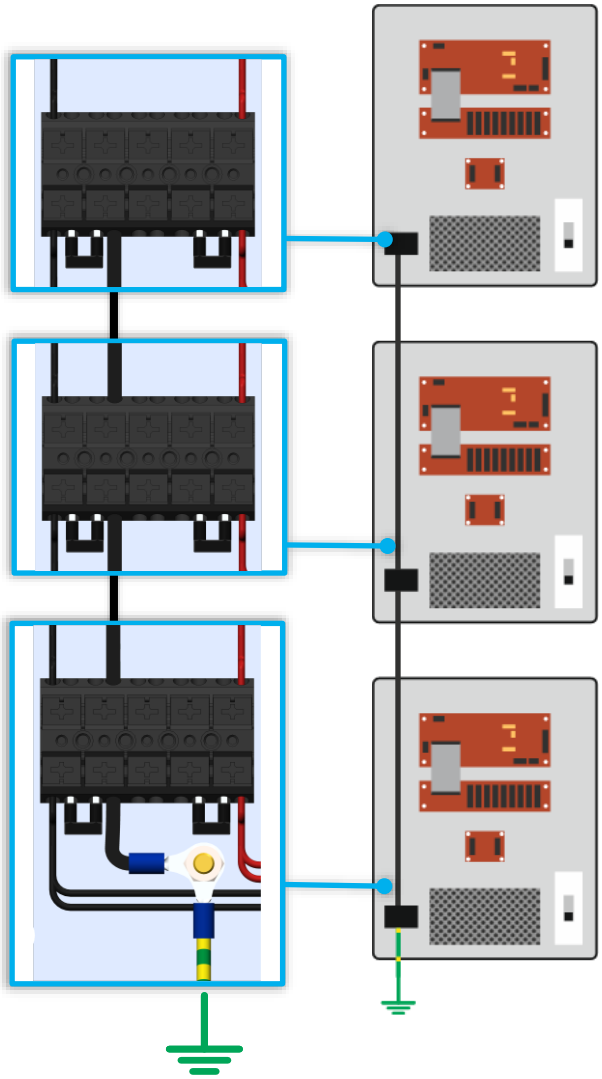


FIGURE 3-5

3.4 OUTPUT VOLTAGE SETTING

i SYSTEM VOLTAGE 13.8VDC

Always test the output voltage.
Only adjust if required.

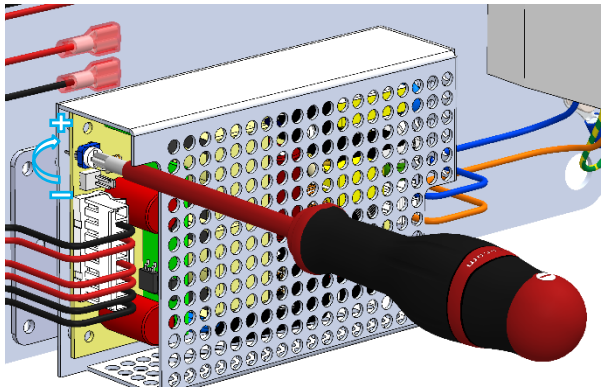


FIGURE 3-6

4 APEX – EGW CONNECTION

4.1 APEX WEBSERVER CONNECTION

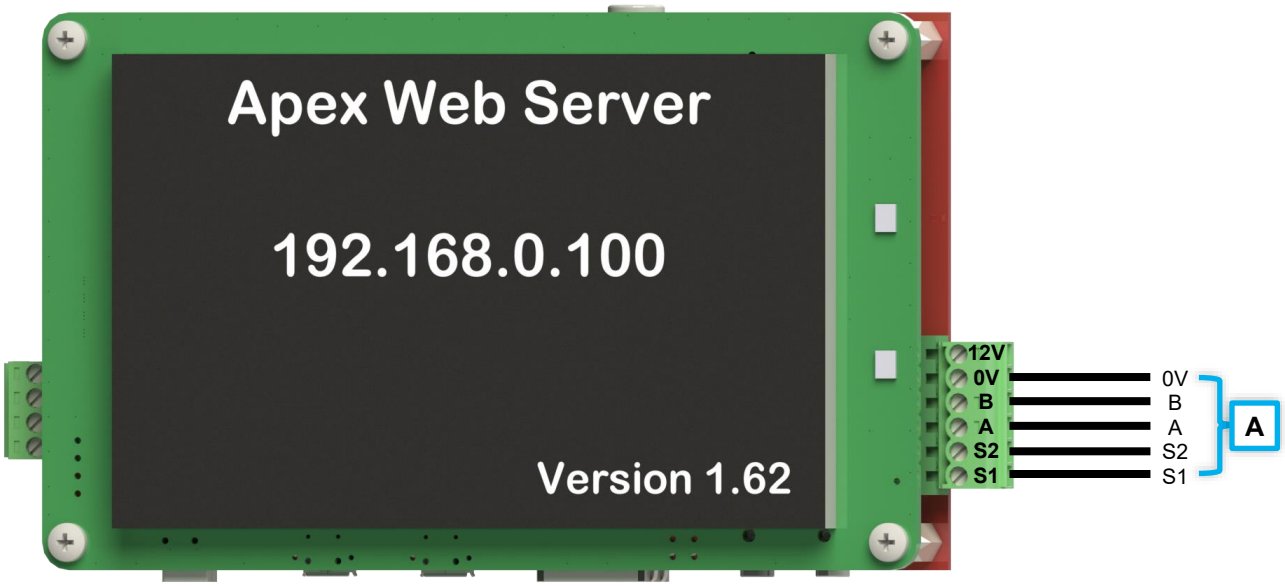


FIGURE 4-1 – APEX WEBSERVER

A	Apex Vertical Bus Connection to Apex Controller(s), See Section 4.3

4.2 OPTIONAL IP VIDEO SERVER CONNECTION

FIGURE 4-2 – IP VIDEO SERVER

A	Video Feed from Apex Video Switch / Distribution or Camera (RG59 Coax)

4.3 APEX VERTICAL BUS CONNECTION

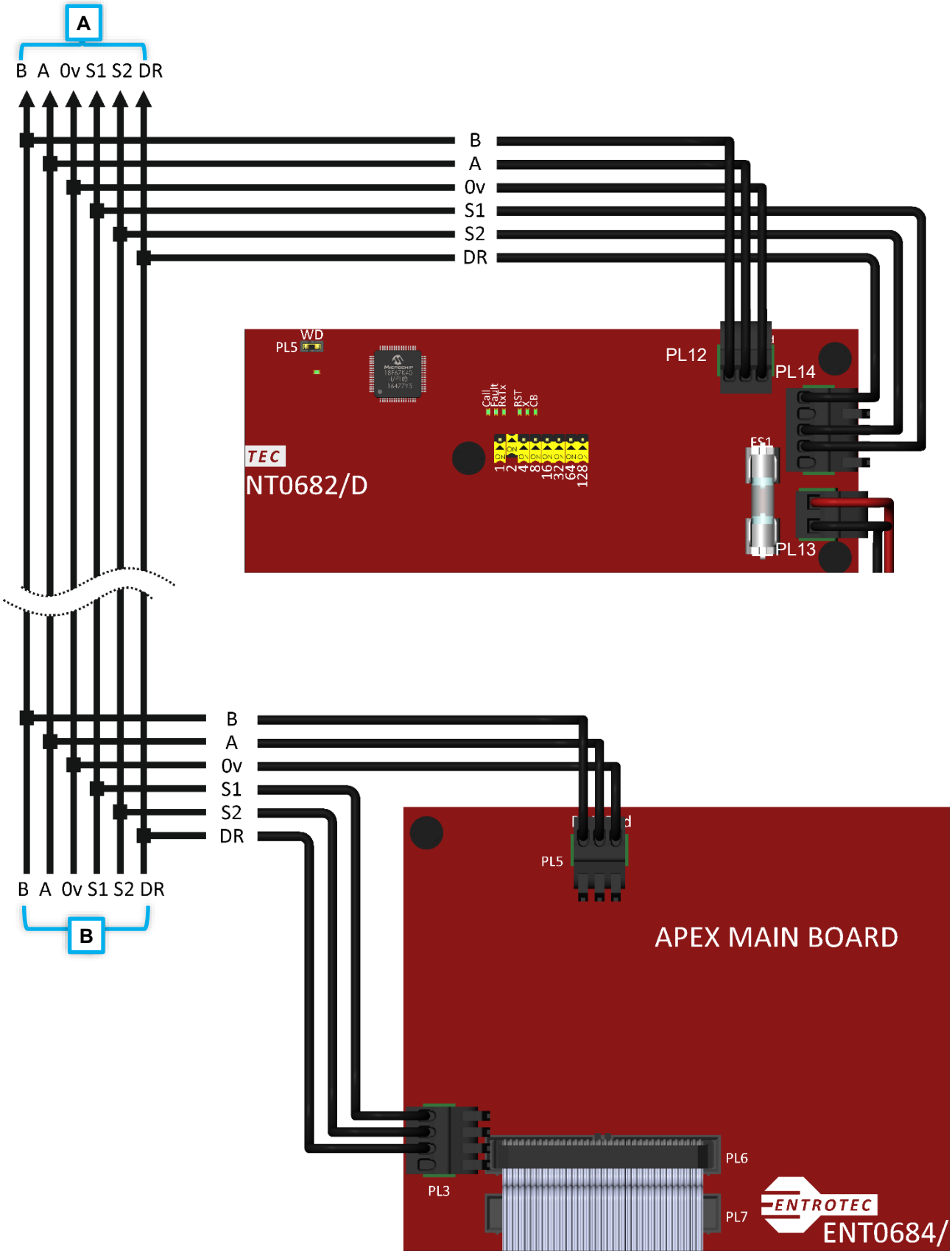


FIGURE 4-3 – CONNECT EGW TO VERTICAL BUS

A	Vertical Bus Connection to Next Controller(s)
B	Vertical Bus Connection from Previous Controller(s)

5 NETWORK CONNECTION

5.1 NETWORK SWITCH

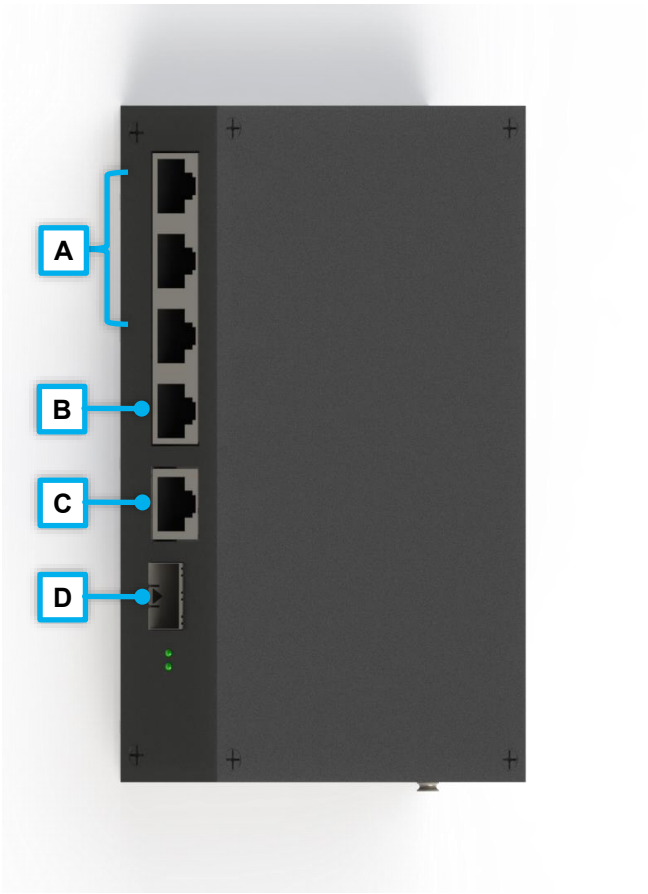


FIGURE 5-1 – PRO-NS4 NETWORK SWITCH

A	3x 10/100 Base-T - Ethernet Ports (Pre-Wired to Internal Devices)
B	1x 10/100 Base-T - Spare Ethernet Port
C	1x 10/100/1000 Base-T -Gigabit Ethernet Uplink Port to LAN/Entronet Workstation; Section 5.2
D	1x 100/1000 Base-X - SFP Fibre Uplink Port (Supports Single and Multi-Mode Transceivers)

5.2 ETHERNET

Connection	Cable Type	Detail
Ethernet from Network Switch to LAN / Entronet Workstation	Cat5e or Cat6	RJ45 - T568B

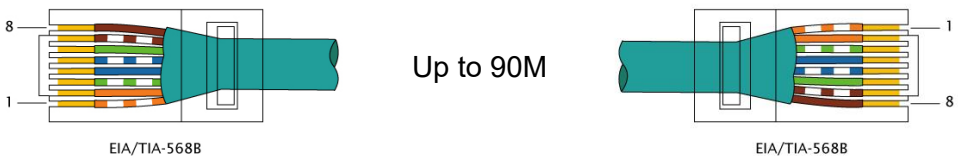


FIGURE 5-2

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