
Overview

This standard is for those who identify and rectify faults in communications cabling systems.

The individual undertaking this work must be able to undertake the processes and procedures for the identification and rectification of faults in accordance with the current versions of the relevant industry standards and regulations, the specification, industry recognised working practices, the working environment and the natural environment. * *

They must understand and apply the correct methods and procedures when identifying and rectifying faults in communications cabling systems and equipment, including:

- the identification and use of the correct instruments
- how to identify and locate faults
- how to rectify the faults that are identified, located and diagnosed
- the completion of the relevant documentation
- the recording of relevant data and information

Performance criteria

You must be able to:

1. access current information about the work requirement, as it applies to the identification and rectification of faults, from relevant documentation and other sources of information:
2. confirm before the work commences that the work location and area can be accessed safely and has been checked for risks to all personnel on the site, and take the required action if a risk is identified
3. produce a risk assessment and method statement for the work to be undertaken including the identification and use of personal protective equipment (PPE)
4. verify that the job information and documentation are current and that the plant, instruments, access equipment and tools are fit for purpose
5. confirm with the relevant others
 - the work to be undertaken
 - the relevant procedures for amending diagrams and drawings
 - the variations to the planned programme of work that may have the potential to introduce a hazard and/or impact
 - the correct actions to be undertaken to confirm that any variations to the planned programme of work will not introduce a hazard and have minimum impact on the installation work
6. comply with industry practices and organisational procedures to confirm the co-ordination of site services and the activities of other trades
7. confirm a programme of work with the relevant others in accordance with organisational procedures
8. determine and obtain the resources required, as relevant, to undertake:
 - the testing, identification and location of the fault(s)
 - the rectification of the fault(s)
9. select the instruments to be used when testing, identifying, locating and rectifying faults
10. confirm that the instruments are fit for purpose and have a current calibration certificate

11. identify the correct means of electrical isolation prior to commencing the identification and rectification of faults
12. complete safe-isolation as and when required to confirm the safe fault identification and rectification in communications network and the associated equipment, accessories and components
13. identify, locate, diagnose and rectify faults
14. repair, remove and replace cables, terminations, equipment, components and accessories in accordance with industry recognised methods and procedures, as required:
 - Network communications cables, cords/jumpers
 - Network system equipment, accessories and components
15. confirm if the fault(s) cannot be corrected immediately, that the integrity of the network is maintained
16. inspect and test, as required and in accordance with industry recognised methods and practices the repaired and/or replaced:
 - Network communications cables, cords/jumpers
 - Network system equipment, accessories and components
17. complete the specified identification and rectification of faults in accordance with industry recognised methods and practices
18. provide relevant information to relevant others about the identification and rectification of faults in Network systems in terms of:
 - use, safety and control
 - hand over to the customer/client
 - any variations to the original system and/or its equipment
 - customer/client acceptance of the completed work in accordance with organisational procedures
 - relevant documentation being completed and recorded in the appropriate information systems in accordance with organisational procedures
19. complete and safely store all relevant documentation in accordance with organisational requirements
20. deal promptly and effectively with any problems within the scope and limitations of your own competence, responsibilities and accountability and report those which cannot be solved
21. implement organisational procedures for the safe transport and/or disposal of

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waste materials, substances and liquids in accordance with suppliers' and manufacturers' instructions and relevant legislation

Knowledge and understanding

You need to know and understand:

1. the current legislation, standards, guidelines, policies, procedures and protocols which are relevant to your work practice and to which you must adhere
2. the scope and limitations of your own competence, responsibilities and accountability as it applies to your job role
3. the principles and practice of network systems including their operation, applications, advantages and limitations
4. the site access requirements
5. how to produce a risk assessment and method statement for the work to be undertaken including the identification and use of personal protective equipment (PPE), in accordance with:
 - the Network system design
 - organisational procedures
6. how to confirm that the job information and documentation is current and that the plant, instruments, access equipment and tools are fit for purpose
7. the applications, advantages and limitations of the different types of personal protective equipment used when identifying and rectifying faults
8. the industry recognised methods for identifying and rectifying faults
9. how to interpret diagrams and drawings for the Network system to locate site services
10. how to interpret diagrams and drawings for the Network system to identify the location of faults
11. the operation, applications, advantages and limitations of different network systems
12. how to obtain information about the reported fault(s) and any components which require to be replaced from:
 - relevant sources of information
 - relevant documentation

13. how to advise the relevant others about the potential disruption and consequences
14. how to confirm a programme of work with relevant others
15. how to co-ordinate site services and the activities of other trades affected
16. how to determine and obtain the required resources to undertake:
 - the identification and location of the fault(s)
 - the rectification of the fault(s)
17. how to select the instruments to be used
18. how to confirm that the instruments are fit for purpose and have a current calibration certificate
19. the correct procedures for safe isolation
20. the techniques to identify, locate, diagnose and rectify faults
21. how to repair, remove and replace cables, terminations, equipment, components and accessories in accordance with industry practices:
22. how to confirm, if the fault(s) cannot be corrected immediately, the safety of the relevant:
 - communications cables, cords/jumpers
 - equipment, accessories and components
23. the different methods and processes to inspect and test, as required and in accordance with industry practices, the repair and or replacement of:
 - communications cables, cords/jumpers
 - equipment, accessories and components
24. when and how to apply the correct procedures for safe isolation
25. the relevant procedures for amending diagrams and drawings
26. the organisational procedures for confirming with the relevant others the required actions to be taken to confirm that any variations to the planned programme of work will not introduce a hazard and have minimum negative impact on the installation work to be undertaken
27. the organisational procedures for:
 - communicating the use, safety and control of the system to relevant others

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- confirming with relevant others those necessary variations to the planned programme of work that may have the potential to introduce a hazard and/or impact on the installation work to be undertaken
 - confirming with relevant others the correct actions to be taken to confirm that any variations to the planned programme of work will not introduce a hazard and have minimum impact on the installation work to be undertaken
 - obtaining customer/client acceptance of the installed system and its associated equipment, accessories and components post work activity and how to deal with cases where acceptance is not received
 - the safe transport and/or disposal of any waste material, substances and liquids in accordance with suppliers' and manufacturers' instructions and legislation

28. how to complete and safely store all relevant documentation in accordance with organisational requirements

Scope/range

Working environments (internal and/or external)

- domestic
- non-domestic
 - commercial
 - industrial
 - agricultural
 - horticultural
 - leisure and entertainment
 - residential medical and care facilities
 - public highways and parks
 - public services establishments
 - pre-1919 traditional/historic buildings

System

- Local Area Networks (LAN)
- Wide Area Networks (WAN)
- Other

Site

- new build construction – building or structure
- an existing building or structure (including retro-fit)

Site services

- electricity
- water
- gas
- oil
- drainage
- telecommunications
- data transmission either underground or overhead

Organisation procedures

- information management
- project management
- risk assessment
- risk management
- implementing and monitoring health and safety requirements and issues
- implementing and monitoring issues relating to the natural environment

- customer services
- accident reporting
- emergencies
- communication with relevant people

Plant

- generators
- transformers for low voltage hand-tools
- lifting equipment
- access equipment* *

Resources

- labour
- plant and equipment
- instruments
- finance
- IT
- materials and other consumables

Communications cable

- Copper
- Fibre Optic

Tools and equipment

- hand tools
- power tools
- testing equipment
- access equipment
- accessories
- components
- consumables

Tests

- conductance
- insulation
- mechanical strength
- protection

Relevant people

- customers/clients
- client representatives
- site/contract manager
- other contractors/trades
- members of the public
- work colleagues

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