

## Overview

This NOS sets out the skills, knowledge and understanding for you to confirm pre-installation preparations and arrangements for electronic security systems including installation, maintenance and other services. Electronic security systems is a generic term that includes: intruder, fire, cctv, access, remote monitoring systems and other types of protective installations. It also encompasses the integration of existing and new systems.

These standards are aimed at people who work with electronic security systems, this includes roles such as: surveyor, technical sales, system designer, installer, maintenance engineer, service engineer, commissioning engineer.

This NOS covers the following activities:

1. Confirm plans and agreements for installation
2. Confirm availability of equipment and materials
3. Contribute to the preparation of installation

## Performance criteria

*You must be able to:*

### **Confirm plans and agreements for installation**

- P1 confirm working arrangements with customers and third parties where necessary, that are mutually acceptable
- P2 Confirm planned install is compatible with site and operational requirements
- P3 confirm access arrangements are suitable for installation staff, equipment and vehicles where required
- P4 confirm the availability of health and safety documentation that should be present on site
- P5 confirm the availability of suitable public services and site facilities that you need during installation work
- P6 identify all the necessary information you need to plan the installation and confirm that it is current and accurate
- P7 produce project plans that are fit for purpose
- P8 anticipate and plan contingency action to deal with potential problems with installation work

### **Confirm availability of equipment and materials**

- P9 confirm that all system equipment and materials needed for the installation are available in accordance with the specification
- P10 confirm that all necessary tools and equipment are available, in good working order, are suitable for the job and comply with relevant safety requirements
- P11 confirm that all relevant test equipment is available and has a current calibration certificate
- P12 report the details of faulty or dangerous tools or equipment to the relevant person
- P13 make sure you have all the necessary documents required to carry out the installation
- P14 deal with any discrepancies in the availability of the correct system components, equipment, tools or documents before starting installation work

## **Contribute to the preparation of installation**

P15 confirm locations of transmission and system components comply with those specified

P16 select the correct types of transmission and system components for the site characteristics and installation, containments and fixings to suit

P17 record details of variations from original specification accurately and fully

P18 provide details of first fixes to the people involved with installations in suitable formats and within agreed timescales

P19 select suitable fixing methods that are appropriate to sites, building materials, regulations, standards and codes of practice

P20 set up safe and secure work areas that are convenient to installation, staff and customers, using barriers and signs as appropriate

P21 erect temporary access equipment in line with safe practice, regulations and customers' restrictions

P22 anticipate problems in preparing for the installation and resolve them promptly in line with your organisations' procedures and guidelines

P23 safely identify the presence of electrical supply, into and inside, electronic security systems equipment

P24 identify the means for safe isolation of electrical supply systems to comply with the current regulatory requirements and industry best practice

## Knowledge and understanding

*You need to know and understand:*

### **Legal and Organisational requirements**

K1 current relevant legislation, regulation, standards, codes of practice and guidelines relating to the installation and operation of systems

K2 current relevant legislation, regulations, standards and codes of practice relating to cabling security systems

K3 why it is important to confirm the availability of health and safety documentation and their requirements

K4 the relevant health and safety requirements for working on the site

### **Legal and Organisational requirements**

K5 current relevant legislation, regulation, standards, codes of practice and guidelines relating to the installation and operation of systems

K6 current relevant legislation, regulations, standards and codes of practice relating to cabling security systems

K7 why it is important to confirm the availability of health and safety documentation and their requirements

K8 the relevant health and safety requirements for working on the site

### **Confirm plans and agreements for installation**

K9 the performance, limitations and availability of the transmission and system components

K10 how to relate system design specification to the customers' requirements relevant to security systems

K11 why it is important to confirm and agree working arrangements with customers and third parties

K12 why it is important to have full and feasible plans in order to carry out efficient and effective installations

K13 the principles of project planning and how to use common planning tools, and techniques

K14 why it is important to confirm suitable access for staff, equipment

and vehicles

K15 the requirements of safe and secure storage of equipment and materials

K16 what information you require to carry out the installation, and what to do if it is not all available to you

K17 how to communicate with customers and third parties

### **Confirm availability of equipment and materials**

K18 why it is important for the correct transmission and system components are correct and available, and how to confirm this

K19 why it is important to check the safe and correct operation of tools and equipment, how to do this and how to deal with any that do not meet requirements

K20 why it is important to know what test equipment is required for the relevant completion tests

K21 the capabilities and limitation of the tools and equipment that you use, and why it is important to use the correct tools and equipment

K22 the properties of commonly used building materials and how these could influence installation work

K23 why it is important for all test equipment to have a current calibration certificate

K24 what documents you need to install systems and how you must use them

K25 how to relate physical locations for transmission and system components to technical documents

### **Contribute to the preparation of installation**

K26 the different devices and methods for fixing transmission and system components to the building materials

K27 the principles of system design and installation including how environmental factors can affect the operation and performance of transmission and system components

K28 the different temporary access equipment available, and how to erect and use them safely

- K29 why it is important to set up safe and secure work areas, including for equipment and tools
- K30 how to discuss and negotiate work arrangements with customers, to achieve mutual satisfaction
- K31 why you need to identify the presence of electrical supply and how it can be isolated safely
- K32 installation activities, their typical timescales, and how to plan and coordinate them
- K33 how to match skill requirements for installation with the skills of available personnel
- K34 the typical problems that can occur and how to plan to deal with them
- K35 how to plan and co-ordinate the use of resources
- K36 why it is important to co-ordinate with other trades
- K37 why you need to identify the presence of electrical supply and how it can be isolated safe
- K38 why it is important to co-ordinate with other trades
- K39 why you need to identify the presence of electrical supply and how it can be isolated safe
- K40 how to interpret system design specification and site information relevant to selecting types of transmission components
- K41 electrical, signalling and transmission principles
- K42 the uses of different types of transmission systems
- K43 the properties of typical building materials that could affect the transmission systems
- K44 the technical knowledge or experience required to safely isolate an electrical supply including:
- (a) adequate knowledge of electricity;
  - (b) adequate experience of the electrical work being carried out;
  - (c) adequate understanding of the system to be worked on and practical experience of that class of system;
  - (d) understanding of the hazards which may arise during the work and the precautions which need to be taken;
  - (e) the ability to recognise at all times whether it is safe for work to continue

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**Scope/range**

Competency must be demonstrated in two of the seven areas including at least one of the core areas:

**Core areas**

- Intruder
- Fire Alarm
- CCTV
- Access Control

**Other areas**

- Nurse Call
- EAS Systems
- Cloud Based System

## Glossary

In these National Occupational Standards;

**Electronic security systems:** a generic term that includes: intruder, fire, cctv, access, remote monitoring systems and other types of protective installations. It also encompasses the integration of existing and new systems.

**electrical supply systems:** supply to the system components, such as primary and secondary supplies

**sites:** premises of installations. For example (but not exhaustive) commercial; industrial; retail; domestic; governmental

**specification:** the specific detail containing design, installation, commissioning or maintenance requirements

**systems:** a set of components working together as an interconnecting network. For example (but not exhaustive) new installations; extensions; modifications

**transmission:** the means by which system components communicate. This includes, for example: wired, wireless, Bluetooth, networking



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