

## Appendix B

### KSB Smarthome Technician Tier 3

## Knowledge Modules: Smarthome Technician Tier 3

- Technical drawings, product specifications, wiring schedules, testing specifications and schematics.
- Plans, elevations, cross-sectional drawings, isometrics, landscape drawings and Mechanical & Electrical drawings for other services.
- Project plans, works orders, change notes, purchase orders, sign-off sheets and performance / functional specifications.
- Construction and electrical health and safety specific to personal safety and accident prevention. Includes Safe Isolation & Accessory Replacement.
- Basic electrical theory (Ohms law, power law, series and parallel circuits, Inductance & capacitance), signal types and modulation methods.
- Network connected devices (e.g. typical domestic routers, network switches and wireless access points), basic network security and data protection.
- Control hardware (e.g. keypads, handsets, apps, control processors & interface standards) and building control systems (e.g. lighting control, HVAC control).
- Access control hardware e.g. CCTV cameras and recorders, door intercoms, access control keypads, locks and sensors).
- Audio, video and entertainment hardware, interfaces and content sources (e.g. speakers, amplifiers, processors, disc players, terrestrial & satellite broadcast television & radio, streaming devices, video displays, switching and distribution systems).
- Terrestrial & satellite broadcast television, analogue and digital radio receivers.
- Construction types, fixing methods, cable running, racks, brackets and other mounting hardware.
- Communication devices (e.g. telephones, smart phones, tablets, laptops, intercoms etc.).
- Environmental and energy management systems (e.g. HVAC, equipment ventilation and temperature / humidity control, smart meters, battery backup and power storage).
- Structured wiring and typical connectors used in smart home engineering to PAS 35491 (e.g. RJ series, coax connectors, HDMI and other AV types), wired Ethernet to IEEE 802.3 and wireless networks to IEEE 802.11.
- Applicable system specifications, standards, hardware, software, firmware and test equipment.
- Construction methods, project stages, MEP (Mechanical Electrical and Plumbing) materials, equipment & tools.
- Key job roles and responsibilities of associated trades, suppliers, customers and other officials.

## Skills Modules: Smarthome Technician Tier 3

- Using documentation keys, scales and revision numbers.
- Reading and following installation, architectural and project documentation.
- Following electrical and constructional health and safety procedures and policies for human safety and accident prevention.
- Safe isolation & accessory replacement.
- Connecting and configuring various network connected devices (e.g. typical domestic routers, network switches and wireless access points), securing a network using physical and cryptographic means.
- Installing and testing typical control hardware.
- Installation, configuration and testing of typical access control hardware.
- Installing, configuring, troubleshooting, maintaining and basic calibration of audio, video, and home entertainment systems.
- Installation and testing of terrestrial & satellite broadcast television, analogue and digital radio receivers.
- Placing and mounting typical hardware of all types listed within the individual subject areas of this standard.
- Installing, configuring and testing communication devices.
- Installing equipment ventilation and battery backup system (UPSs) and interfacing with HVAC and other energy management systems.
- Installing and testing structured wiring systems using verification tools to PAS 35491.
- Testing, fault finding and troubleshooting cabling infrastructure, hardware, software, and firmware. Using applicable test equipment to check compliance with agreed specifications.
- Making modifications to existing construction (e.g. drilling, channelling, cable running, choosing and using appropriate anchoring devices).
- Troubleshooting basic systems to rectify simple faults.

## Behaviour Modules: Smarthome Technician Tier 3

- To make effective use of personal communication skills with colleagues, customers, third parties and associate companies using relevant, concise language in line with organisational style/culture.
- To instigate, develop and maintain trust with colleagues, customers and related trades building credibility and confidence. To behave in an ethical manner and in accordance with local laws and directives.
- To be positive and pro-active at all times. Ability to work independently and take responsibility.
- To be ready to learn new skills, gain new knowledge and continually appraise new technologies. Be well informed of new legislation/regulations and apply these correctly.
- Maintain a productive, professional, respectful and secure working environment when working alone or with others.
- Work in a healthy and safe manner and adhere to local rules and guidelines. Use resources wisely and take into account environmental, social and economic factors when working.
- To deliver excellent customer service, providing the right solutions to meet the customer's expectations within the agreed timeline.