Smart thinking simple solution

Smart home technology should be simple to install and commission if the contractor is to make the most out of such an opportunity argues Colin Legg, product marketing manager at Hager.

Smart home technology need hold no fears for the competent electrical contractor.   From lighting and heating control to a networked home, the installation skills are no different to those they face daily.

Commissioning and programming control scenarios have also simplified over the years and manufacturers should be able to provide training and a simple step by step guide.

In our experience once a contractor has installed such technology for the first time they become a champion of it and go on to win many more projects. Such projects are generally not price driven so if you are in business to make money, you should take advantage of offering something different to your competitors in the yellow pages.

South of the border smart homes are becoming more common in upmarket homes. For a £1/2 million house the typical cost of say £4,000 is not a big problem for developers wanting to make their properties stand out from the crowd. The good news is that the technology is now beginning to establish in Scotland and Ireland, albeit in its infancy.

In its basic form bus systems such as our own Tebis TS, will form the backbone of a control system. Using this the building services such as lighting, heating and security can be linked to provide scenarios that suit the homeowner.

Such scenarios may include different lighting options for the lounge to watch television or listen to music or for reading. Similarly in a kitchen diner there may be different lighting moods for food preparation and a dinner party.

One useful multitask application is a master switch by the front door, which turns the lighting off, turns the heating down to frost protection and alarms the security system. Similarly if a smoke alarm or burglar alarm is activated all the lights in the home can be programmed to come on acting as either a deterrence or to aid escape.

The scenarios are limitless. The trick, however, is to keep the installation, commissioning and programming simple.

Bus systems use a single twisted pair cable along which the control signals travel as binary signals. Inputs, whether switches, timers, photocells or thermostats link to the bus line via an input device. Outputs, whether lighting, heating or links to other services such as the burglar alarm, smoke alarms or a modem are attached via output devices.

The bus line can be laid in several configurations such as a star, linear, tree or as a ring. Cable connectors enable the contractor to tap off the bus line and run the cable to input locations such as wall switches. Most of the output devices are connected to the bus via the circuits terminated in the consumer unit. An advantage of using a bus system for control is that generally power only needs supplying to the loads.

Programming a bus system at its simplest level involves giving each input and output device a number or an address location. It is then a question of telling the output devices which input signals they should respond to. Different systems do this in different ways but in our experience the programming and commissioning requires only a little training. It is more important to be organised so that you know the numbers or addresses of both the inputs and outputs.

Installing a control system for control of a home's services are being realised today and are relatively simple and cost effective to achieve.

Home entertainment.

The more glamorous articles in the press and on television tell us about entertainment networks connected to the PC and an intelligent fridge reordering food online. While the latter may produce a smirk among most of us, networked home entertainment is becoming a reality.

While it is true that wireless technology can help achieve such an infrastructure the perceived wisdom is that data cabling still offers a more reliable and better option.

Again for refurbishment and new build it is becoming common to flood a house with Cat 5e data cabling. A central PC or server, so the visionaries tell us, may become the hub of all our entertainment - whether through downloaded music or video. Similarly Sky or Sky plus may require networking around the house too more than one TV set.

In reality the infrastructure is no different to that found in most commercial premises. The home is simply catching up with the office.

The contractor need not concern himself with the details of how to programme the PC to the television he or she simply needs to provide the means of achieving the end result.

For any contractor involved in commercial installations the answer for the home network can be exactly the same as for the office.

After installing the data cabling, all the homeowner or developer needs is a flexible means of connecting the hardware together. Accepting that a wired solution is still better and more reliable than wireless, the link to the data network is the wiring accessory.

In a commercial installation eurodata faceplates and modules provide flexible links to data. Different data modules simply clip into the faceplate and can be changed in the future. Using a patch panel, just like a commercial installation, allows the hardware to be connected and, to meet future needs, changed.

While this is a new concept for the home there is nothing revolutionary about such an approach. It has simply not been done.

Installing such modular wiring accessories around the home provides flexibility for the installation today and simplicity for changing it in the future. Television sets can be linked to the PC, music can be played in any room in the house whether it originates from a Hi Fi or is downloaded.

From sophisticated building services control to a networked entertainment system, the installation and commissioning technology should hold no fears for the contractor. Solutions applied in the commercial installation have become simpler and more flexible and they are increasingly finding their way into the home.

The next time you are rewiring an upmarket home why not explore the possibilities of installing the infrastructure for smart technology. It might just win you extra more valuable business. After you have done one smart home, you will be hooked.

Hager Ltd
Hortonwood 50,
Telford,
Shropshire,
TF1 7FT
Website: www.hager.co.uk