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Installation Manual

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INSTALLATION

Before installing the HC600 series analogue heat sensing cable refer to the zone layout drawings and fixing arrangement drawings. The following points should also be observed:

- The cable should not be in contact with any material that will act as a heat sink and delay the sensing of the temperature increase from the area being monitored.
- HC600 Series cable should be installed so that it is not severely compressed and is not adjacent to sharp objects that may damage the outer sheath.
- The minimum bending radius for the cable is 6 mm.
- Cable ties should not be used directly on the cable – a neoprene sleeve should always be employed.
- Whilst HC600 Series cable has a high tensile strength, care should be taken not to place it under too much tension especially where there is a change in direction at a fixing.
- The distance between supports should be between 0.6 m and 1.2 m dependent on fixing positions available.
- The routing of HC600 Series cable should be chosen to avoid any local sources of high temperature (e.g. light fittings, steam pipes etc).
- The minimum number of joints should be made in any run of HC600 Series cable and these connections should always be in a junction box .
- Adjacent zones should overlap by a minimum of 50 mm.
- All interposing cable between the HC600 Series cable and the DT650/950T Controller should have an inherent metallic screen/braid/sheath/armour as part of its construction, and this should be connected to earth to improve RFI and EMI i mmunity. The connections should be made using a an interposing junction box.
- Where a number of zones of HC600 Series cable are remote from the DT650/950T controllers, a multi-core cable should not be used for interconnections. Individual coaxial or pair cables should be used which meet the criteria above.

Special guidelines for cable way protection

In addition to the reco mmendations above, the following should be observed:

- HC600 Series cable should be installed to cover each cable tray or ladder rack intended for supporting cables. Generally one run of sensing cable should be installed centrally above each level of tray or ladder rack with a further two runs of cable below the bottom level; (one on the outer edge and one on the support edge).
- On horizontal cable routes where cables are mounted vertically, the HC600 Series cable should be routed level with the top edge of the support system on the cable side.
- On lengths of vertical racking of less than 1 metre, used for carrying cables between horizontals, HC600 Series cable should be located across the top of the rising group of cables. Where the riser does not start at floor level, a loop of HC600 Series cable should be provided at the top and bottom of the rising group of cables.
- In the case of cable flumes and risers, HC600 Series cable should be run across the top of the rising group of cables and diagonally from side to side across the support system on the vertical section. The distance between supports should be between 0.6 m and 1.2 m.
- HC600 Series cable should be installed such that it can rapidly respond to convected and/or radiated heat from any event. In general it should be between 150 mm and 250 mm above the cables which are being protected.
- Where there are many levels of cable support and there is a tray or ladder rack that is over twice the width of the level below, the wider level shall be provided with a run of HC600 Series cable below the overhanging edge. This should be in addition to the run protecting the level i mmediately below.

Special guidelines for space protection on ceilings

In addition to the reco mmendations above the following should be observed:

- HC600 Series cable should in general be spaced on the ceiling above the area to be monitored such that the cable is between 500 mm and 2000 mm from any zone boundary, wall or beam having a depth greater than 10% of the ceiling height. The distance between adjacent runs should be no more than 7 m.
- In plan view no point should be more than 5.3 m perpendicular to the run of the sensing cable. (As specified in BS 5839 Part 1 1988).
- The sensing cable should not traverse other zones to reach control equipment or end of line units, a fire resisting cable should be used for the interconnection together with an interposing junction box.
- HC600 Series cable should be installed such that it is between 25 mm and 150 mm from the ceiling.

Note: The above are general reco mmendations and are for guidance only. There may be conditions at site or clients' requirements where some of the above criteria need to be varied. As well as providing cover as detailed above, additional runs of cable may be used directly over specific risks.

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