HCS Site Installation Procedure

This HCS Site Installation Procedure shall be used in order to obtain a valid HCS Lifetime Warranty and/or HCS Product Warranty.
Failing to comply with any part of this document shall turn the HCS Lifetime Warranty and/or HCS Product Warranty void.

PART 1: Basic installation guidelines

Installation shall fully conform to ANSI/TIA/EIA-568 and ANSI/TIA/EIA-569 latest editions.

1. Avoid any cable abuse, including kinking, twisting and crushing.
2. Maximum pulling tension of horizontal cable should not exceed 8 Kgf (78N).
3. The cable path should not include more than 3 turns of 90° in each link.
4. The dynamic bend radius should be minimum 8 times the cable OD.
5. The static bend radius should be minimum 4 times the cable OD.
6. Avoid proximity to power cables, transformers, elevator shafts and any other source of EMI.
7. Avoid any proximity to heat sources.
8. The cable must never be exposed to temperatures lower than –20C and higher than +60C.
9. During installation the cable temperature and the room temperature must never be lower than 0C and higher than +40C.
10. Indoor cables must never be exposed sunlight, rain and excessive humidity.
11. Do not bundle the cables during installation – lay them as randomly as possible.
12. Avoid creating neat service loops.
13. Use only soft cable ties loosely tied at uneven intervals.
14. During cable termination remove the absolute minimum of jacket required the keep the pair twist to the point of connection.
15. Always use proper tools and equipment for installation and testing.

HCS – HES Cabling Systems
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PART 2: Installation procedure

Each and every HCS site shall be installed according to the ***INCREMENTAL INSTALLATION & TESTING PROCEDURE***, as follows:

1. In any new CAT 6A/Class EA installation, first install 20-30 links, terminate them and test them as Permanent Links.
In any new CAT 6/Class E installation, first install 2-3 links, terminate them and test them as Permanent Links.
In cases where the termination stage is done later, terminate the links with HCS keystone jacks having the same Category as the horizontal cable.

2. Review all the results carefully and verify that all parameters, including but not limited to RL & NEXT, pass with margins of 3 dB minimum over the standard requirements.

3. If all CAT 6A/Class EA results provide 3dB minimum margin in all parameters you may continue the installation, installing 50 links at a time and testing at least 10% of links installed (5 links minimum in every 50 link batch).
If all CAT 6/Class E results provide 3dB minimum margin in all parameters you may continue the installation, installing 100 links at a time and testing at least 1% of links installed (1 link minimum in every 100 link batch).

4. In case any link shows margins smaller than of 3 dB stop the installation and check for the reason.
If you cannot find the reason please contact HCS for assistance.
The installation process must not continue until the source of problem is found and all results obtained are above the 3dB minimum margin.
In any case of doubt, question or problem pls contact HCS headquarters for further instruction.

5. All the above pilot tests shall be saved with plots, indicating all the relevant details, including time, date and site name, and shall be sent to HCS headquarters for inspection.

PART 3: Test equipment guidelines

The test equipment used for all testing shall be:

1. State-of-the-art test equipment specially designed for testing of cabling systems in local area networks.

2. Properly calibrated as required in the instrument manual and by the test instrument manufacturer.

3. Loaded with the latest standard limits valid at the time of testing for the standard used.

4. In full compliance with the **Level IIIe** accuracy requirements of ANSI/TIA/TIA-568-B.2-10, Annex I.

PART 4: Installer Credentials

1. All people involved in any stage of the site installation, including cable pulling, laying, cutting, terminating and testing, whether as company employees, contractors or sub-contractors, shall be **supervised and trained** by officially trained and certified HCS installers with a valid HCS Installation Partner Certificate (*CHIP*).

2. All people involved in any stage of the site installation, including cable pulling, laying, cutting, terminating and testing, whether as company employees, contractors or sub-contractors, shall carefully review this document and follow its procedures and guidelines.

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