



Application Note 2/2002

## Cable for Structured Wiring

### Category 6 – the Standards are approved

**Who can remember? In September, 1997 the standard group ISO/IEC JTC1 SC25 WG3 started to define a new class of networks for data communication. After almost 5 years this work is to be finalized and results lie on the table. What are the important changes for the end user?**

In a lot of planning documents the wiring standards ISO/IEC 11801 or EN 50173 were referenced in the past, even when cables had to be defined. This was not critical, because the mentioned standards referred to the related cable standards. This will also remain in the future, but the detailed requirements to ensure the cable performance are summarized within a separate group of standards. IEC has developed IEC 61156-5 and Cenelec calls it EN 50288-x-1.

These documents represent the valid measuring pole by which manufacturers of cables have to orientate themselves. This already begins with the designation which sometimes differs from that used in practice. The new **IEC 61156-5**, which we consider as the basis for our products, offers clarification:

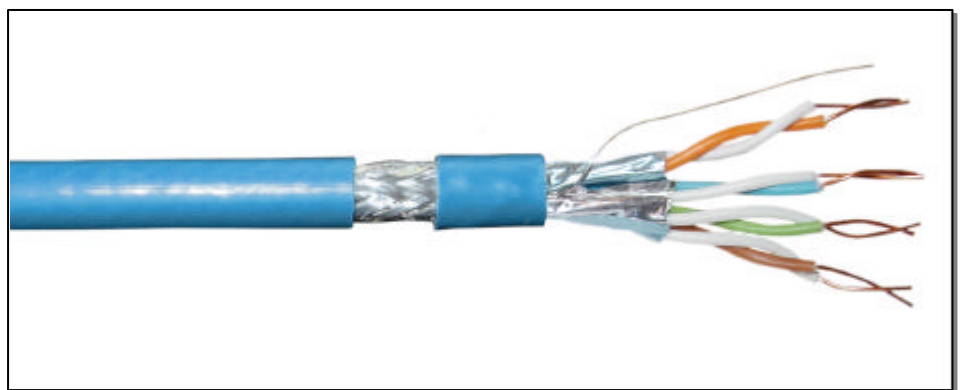
#### Categories

Distinctions are made by Cat.5e, Cat.6 and Cat.7 what makes sense in practice, because in some countries "old" Cat.5 in the definition from 1995 still plays a role.

#### Cable lay up

Here we distinguish UTP, FTP and STP. FTP is meant for whole screen and STP stands for an individual pair screen. The gradations in screening are not coded, but inside the standard there is a definition of Grade1 and Grade2 which correspond with particular requirements for the cable transfer impedance.

We have taken the opportunity of these innovations in the standardization to redefine our product marking fundamentally. We maintain furthermore the additional S/... in the marking to indicate the additional screen with its corresponding screen quality Grade2. We also maintain the additional HP-... (HighPerformance...) to indicate the performance level of product line UC1200, which by far exceeds category 7 requirements and still forms a class of its own.



The proved UC400 HS24 4P: new colour, new marking, but the "inner values" remain.

With these changes we also take into account that nowadays fire properties are expressed exclusively by IEC-standards. Thus, the flame retardant, non-corrosive indoor cables in accordance with IEC 60332-1 will be marked with the addition **FRNC** (flame-retardant-non-corrosive). Those cables, which are designed for riser installations in compliance with IEC 60332-3C, will get the addition **FRNC-C**.

Finally, the proved cable of the series UC400 which is already built for years unchanged will get a new name: UC400 **HS23/1**. The change concerns exclusively the marking, because the cable is built without any redesign since 1998. And due to the fact that the patented wrapped foil screen is an individual pair screen, the cable will get its standard-conformal designation ...**STP**. To give a clear indication of all

these innovations from the previous way of marking, we finally modified the sheath colour: the lighter blue **RAL 5012** should underline the mentioned changes. Practical effect: the markability is thereby improved.

In order to avoid any mess due to these changes, we have fixed for the products of the series UC400 a new set of product codes. This allows us to manage the changeover to the new products with a maximum of convenience for you.

We primarily aim to create more distinctness and clarity for our common customers. The accompanying table gives a survey of all named changes once again.

The Multimedia Team will be happy to assist you in case of any questions with regard to this matter.

#### Cable Identification

| Product line | Screening class | Cond. size | Pairs      | Category    | Cable Lay up | Standard    | Add on (optional)               |
|--------------|-----------------|------------|------------|-------------|--------------|-------------|---------------------------------|
| UC300        | -               | 24         | 4P         | Category 5e | UTP          | IEC 61156-5 | EC-VERIFIED;<br>FRNC;<br>FRNC-C |
|              | SCREEN          | 24         |            |             | FTP          |             |                                 |
|              | HIGH SCREEN     | 24         |            |             | S/FTP        |             |                                 |
| UC400        | -               | 24         |            | Category 6  | UTP          |             |                                 |
|              | SCREEN          | 23/1       | STP        |             |              |             |                                 |
|              | HIGH SCREEN     | 23/1       | S/STP      |             |              |             |                                 |
| UC600        | SUPER SCREEN    | 23/1       | Category 7 | S/STP       |              |             |                                 |
|              | SUPER SCREEN    | 22         |            | S/STP       |              |             |                                 |
| UC1200       | SUPER SCREEN    | 23/1       | Category 7 | HP-S/STP    |              |             |                                 |
|              | SUPER SCREEN    | 22         |            | HP-S/STP    |              |             |                                 |