

**LEONI SeaLine®**

## Cables for shipbuilding

### Further characteristics:

- Sunlight resistant
- Fire resistant acc. to IEC 60331-23
- Flame retardant acc. to IEC 60332-3-22 (Cat. A)
- Halogen free
- RoHS compliant (Directive 2011/65/EC)
- Available with SHF1, SHF2 and mud resistant jacket
- Optional with steel wire braided armor
- Functional integrity for 180 minutes

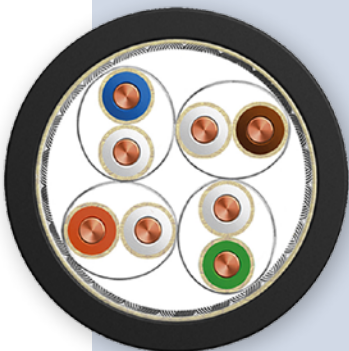
## Data communication cables Cat 6<sub>A</sub> with functional integrity during fire influence (>PH 120)

The ship and offshore market requires more and more cables with functional integrity during fire influence. These cables must have the capability to transfer all necessary power or signals even during fire influence. LEONI has designed several different cable types that will be able to transmit the data characteristics of Cat. 6<sub>A</sub> or Cat. 7 in standard use. The Cat 6<sub>A</sub> cable also transmits the data characteristics in case of fire and afterwards.

The cable was designed in accordance to the requirements of the IEC 60093-350 standard for fire-resistant cables and is similar to the standard design of data transmission cables.

### Cable design:

The insulation of the single cores must be involved a combined (hybrid) design of an electrical insulation part of extruded thermoplastic material and a fire-resistant second layer. In the LEONI design, it is a polyethylene inner skin directly extruded on the copper wire and a number of fire-resistant mica tapes, which are wrapped around the thermoplastic insulation.



**DNV·GL**  
*in progress*

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## Data cables with limited functional integrity during fire influence

Overview of available cable types optional with armor (steel wire braid):

| Cross section of wires | Type of sheathing material |
|------------------------|----------------------------|
| <b>AWG 22/7</b>        | SHF 1                      |
|                        | SHF 2                      |
|                        | SHF 2/mudres               |
| <b>AWG 23/1</b>        | SHF 1                      |
|                        | SHF 2                      |
|                        | SHF 2/mudres               |
| <b>AWG 24/7</b>        | SHF 1                      |
|                        | SHF 2                      |
|                        | SHF 2/mudres               |

### Burning test EN 50200

EN 50289-4-16 is applied to testing the functional integrity of the cable. This standard combines the EN 50200 fire test that has to be performed and the requirements for the transmission characteristics.

