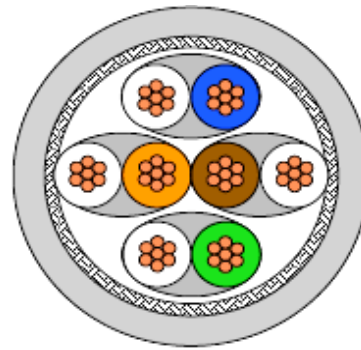


# S/FTP Cat 5e 4PR 0.22/7 DNV

Partnumber: 65010020



## Application:

Generic Data transmission. This cable is a Cat5e S/FTP cable meant for use as installation (horizontal) cable in tougher electrical and mechanical environment, including ships and offshore units.

## Construction:

|                 |  |
|-----------------|--|
| Conductor:      | Stranded copper wire $\varnothing$ 0.22mm <sup>2</sup>           |
| Insulation:     | PE, $\varnothing$ 1.4 mm   |
| Twisting:       | 2 cores to the pair  |
| Cable lay up:   | 4 pairs  |
| Pair screen:    | Al-laminated plastic foil around each pair                       |
| Overall screen: | Copper braid, tinned $\varnothing$ 6.2 mm                        |
| Sheath:         | Oil resistant, Fire retardant and halogen free<br>LSHF-FR (SHF1) |

**Standards:** EN 50173-1; EN 50288-2-1 ISO/IEC 11801; IEC 61156-5 Det Norske Veritas (DNV) specification No. 6-827.50-2.

## Specification

|                                      |                             |
|--------------------------------------|-----------------------------|
| Mineral oils IRM 902 (IEC60811-2-1): | 7 days/23°C<br>4 hours/70°C |
| Diesel - IRM 903 (IEC60811-2-1):     | 7 days/23°C<br>4 hours/70°C |

## Chemical resistance:

This cable is certified by: Det Norske Veritas (DNV).

## Mechanical Properties:

|                      |                     |                  |
|----------------------|---------------------|------------------|
| Bending radius       | Without load        | 8 x D            |
|                      | With load           | 4 x D            |
| Temperature range    | During operation    | - 40°C to + 85°C |
|                      | During installation | - 15°C to + 50°C |
| Fire load            | 4 pair              | 515 MJ/km        |
| Maximum tensile load | During operation    | No load          |
|                      | During installation | 100 N            |



Helmacab Holland B.V.  
www.helmacab.nl

# S/FTP Cat 5e 4PR 0.22/7 DNV

## Electrical Properties

at 20°C

|                                 |                  |                  |
|---------------------------------|------------------|------------------|
| DC loop resistance              |                  | ≤ 185 Ω/km       |
| Resistance unbalance            |                  | ≤ 2%             |
| Insulation resistance           | (500 V)          | ≥ 5000 MΩ x km   |
| Capacitance                     | at 800 Hz        | Nom. 43 nF/km    |
| Capacitance unbalance           | (pair to ground) | ≤ 1500 pF/km     |
| Mean Characteristic impedance   | at 100 MHz       | 100 ± 5 Ω        |
| Nominal velocity of propagation |                  | 0.75 sec         |
| Propagation delay               |                  | ≤ 450 ns/100 mtr |
| Delay skew                      |                  | ≤ 15 ns/100 mtr  |
| Transfer impedance              | at 1 MHz         | ≤ 10 mΩ /m       |
|                                 | at 10 MHz        | ≤ 8 mΩ /m        |
|                                 | at 30 MHz        | ≤ 10 mΩ /m       |
| Coupling attenuation            |                  | ≥ 85 dB          |

## Nominal Transmission characteristics

at 20°C

| F (MHz) | Attenuation (dB/100m) | NEXT (dB) | ACR (dB/100m) | Return loss (dB) | PS-NEXT (dB) | PS-ACR (dB/100m) | ELFEXT (dB/100m) | PS-ELFEXT (dB/100m) |
|---------|-----------------------|-----------|---------------|------------------|--------------|------------------|------------------|---------------------|
| 1       | 2.1                   | 90        | 88            |                  | 87           | 85               | 85               | 82                  |
| 4       | 4.0                   | 90        | 86            | 27               | 87           | 83               | 85               | 82                  |
| 10      | 6.3                   | 90        | 84            | 30               | 87           | 81               | 79               | 76                  |
| 16      | 8.0                   | 90        | 82            | 30               | 87           | 79               | 75               | 72                  |
| 20      | 9.0                   | 90        | 81            | 30               | 87           | 78               | 73               | 70                  |
| 31.25   | 11.4                  | 90        | 79            | 30               | 87           | 76               | 69               | 66                  |
| 62.50   | 16.5                  | 86        | 70            | 30               | 83           | 67               | 63               | 60                  |
| 100     | 21.3                  | 83        | 62            | 30               | 80           | 59               | 59               | 56                  |
| 155.00  | 24.2                  | 81        | 57            | 26               | 78           | 54               | 57               | 54                  |
| 200.00  | 31.5                  | 78        | 47            | 25               | 75           | 44               | 53               | 50                  |
| 250.00  | 35.8                  | 77        | 41            | 25               | 74           | 38               | 51               | 48                  |
| 300.00  | 47.1                  | 73        | 26            | 23               | 70           | 23               | 47               | 44                  |
| 600.00  | 60.1                  | 71        | 11            | 20               | 68           | 8                | 44               | 41                  |

## Technical Data

| Description                       | Variant         | Colour       | Outer Diameter (D) mm | Delivery form | Weight kg/km |
|-----------------------------------|-----------------|--------------|-----------------------|---------------|--------------|
| S/FTP<br>4x2x0.22 mm <sup>2</sup> | LSHF-FR (SHF-1) | Grey RAL7035 | 7.7                   | Per meter     | 68           |



Helmacab Holland B.V.  
www.helmacab.nl