

# MegaLine® F6-90 S/F CI

## 4 x 2 x AWG 23/1 PIMF

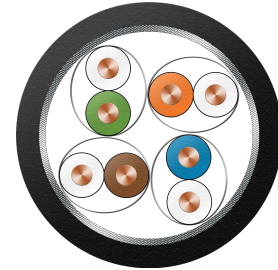
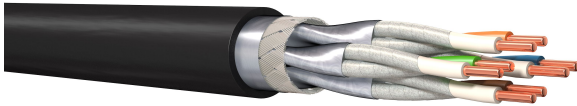
 Category 7 **S<sub>5</sub> P<sub>3</sub> A<sub>4</sub> C<sub>4</sub> E<sub>5</sub>**


Illustration similar

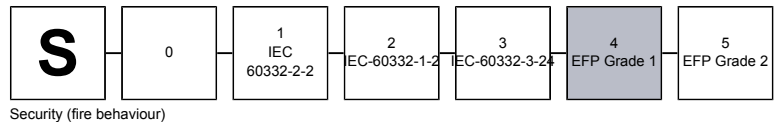
### Construction

Conductor bare copper wire, AWG 23/1  
 Insulation cellular-PE, core-Ø: nominal value 1.4 mm  
 Colour code wh/bl, wh/or, wh/gn, wh/br  
 Element cores to pair  
 Pair shielding aluminium-bonded polyester tape

Twisting 4 pairs  
 Bound fire protection foil  
 Outer sheath halogen free, flame retardant compound  
 Colour Jet black

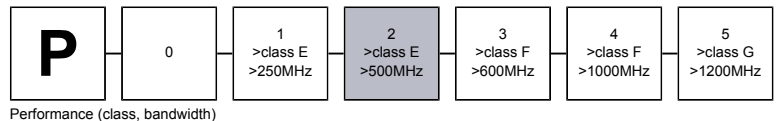
### Fire Behaviour

Fire performance EN 50575 / EN 50399  
 Flame retardancy IEC 60332-3-24/22  
 Halogen-free IEC 60754-1/2  
 Acidity IEC 60754-2  
 Smoke density IEC 61034-1/2  
 Fire load (approx.) 1.05 MJ/m



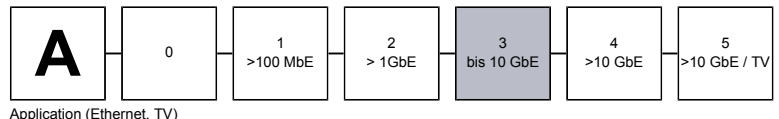
### Performance

better than Category 7 acc. to EN 50288 and IEC 61156  
 excellent NEXT, exzellente screen properties (pair- and overall screen), low Skew  
 Transmission bandwidth (typ.) 900 MHz



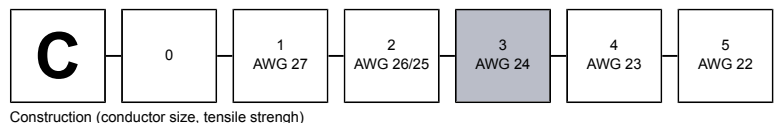
### Applications

Installation cable for generic cabling systems acc. to ISO/IEC 11801 and EN 50173 (3rd edition). Ideal for all applications of class D up to F, Multimedia (Video, Data, Voice) >10 GbE acc. to IEEE 802.3an, Cable sharing, VoIP, PoE/PoE+/4PPoE and for information and fire alarm systems with circuit and function integrity resp. emergency operation during 120 minutes.



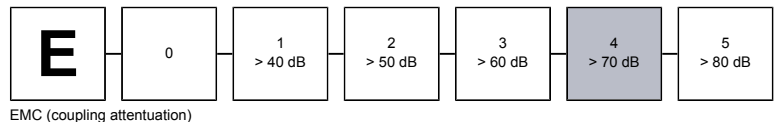
### Mechanical characteristics (cable)

Bending radius (dynamic) (min.) 8x outer-Ø  
 Tensile loading (max.) 300 N  
 Crush resistance (long term) 2000 N/100mm  
 Impact strength (quantity of impacts) 10



### Electromagnetic behaviour

Coupling resistance @ 10 MHz (nom.) 5 mΩ/m  
 Screen attenuation (nom.) 70 dB  
 Coupling attenuation (nom.) 85 dB  
 Segregation class according EN 50174-2 d



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 Category 7    **S<sub>5</sub> P<sub>3</sub> A<sub>4</sub> C<sub>4</sub> E<sub>5</sub>**
**Electrical properties at 20°C**

|                                    |             |
|------------------------------------|-------------|
| DC resistance (max.)               | 75 Ω/km     |
| Insulation resistance (min.)       | 5 GΩ x km   |
| Operating capacity (approx.)       | 42 pF/m     |
| Capacitive coupling (e) (approx.)  | 1100 pF/km  |
| Signal velocity (approx.)          | 0.74 x c    |
| Phase delay                        | 480 ns/100m |
| Skew @ 100 MHz (approx.)           | 5 ns/100m   |
| Characteristic impedance @ 100 MHz | 100 +/- 5 Ω |
| Test voltage                       | 1000 V      |
| Operating voltage (max.)           | 125 V       |

**Thermal characteristics (cable)**

|                                   |                     |
|-----------------------------------|---------------------|
| Temperature (transport / storage) | -20 °C up to +60 °C |
| Temperature during installation   | -10 °C up to +60 °C |
| Temperature after installation    | -25 °C up to +75 °C |

**Chemical characteristics**

Free of hazardous substances acc. to RoHS 2011/65/EU

| Frequenz<br>MHz | Attenuation<br>dB/100m |                | NEXT<br>dB |                | PSNEXT<br>dB |                | ACR-N<br>dB@100m |                | PSACR-N<br>dB@100m |                | ACR-F<br>dB@100m |                | PSACR-F<br>dB@100m |                | RL<br>dB |                |
|-----------------|------------------------|----------------|------------|----------------|--------------|----------------|------------------|----------------|--------------------|----------------|------------------|----------------|--------------------|----------------|----------|----------------|
|                 | typ.                   | Cat.7<br>max.* | typ.       | Cat.7<br>min.* | typ.         | Cat.7<br>min.* | typ.             | Cat.7<br>min.* | typ.               | Cat.7<br>min.* | typ.             | Cat.7<br>min.* | typ.               | Cat.7<br>min.* | typ.     | Cat.7<br>min.* |
| 1               | 1,9                    | 2,0            | 102        | 80             | 99           | 77             | 101              | 78,0           | 98                 | 75,0           | 109              | 80             | 106                | 77             | 25,4     | -              |
| 10              | 4,8                    | 5,7            | 102        | 80             | 99           | 77             | 98               | 74,3           | 95                 | 71,3           | 108              | 74             | 105                | 71             | 31,1     | 25,0           |
| 100             | 16,4                   | 18,5           | 102        | 72             | 99           | 69             | 86               | 53,5           | 83                 | 50,5           | 93               | 54             | 90                 | 51             | 33,2     | 20,1           |
| 200             | 24,5                   | 26,8           | 102        | 68             | 99           | 65             | 78               | 41,2           | 75                 | 38,2           | 85               | 48             | 82                 | 45             | 33,2     | 18,0           |
| 250             | 27,8                   | 30,2           | 102        | 66             | 99           | 63             | 75               | 35,8           | 72                 | 32,8           | 82               | 46             | 79                 | 43             | 33,4     | 17,3           |
| 450             | 36,1                   | 41,6           | 97         | 63             | 94           | 60             | 61               | 21,4           | 58                 | 18,4           | 72               | 41             | 69                 | 38             | 31,4     | 17,3           |
| 500             | 38,2                   | 44,1           | 97         | 62             | 94           | 59             | 59               | 17,9           | 56                 | 14,9           | 68               | 40             | 65                 | 37             | 30,5     | 17,3           |
| 600             | 42,9                   | 48,9           | 92         | 61             | 89           | 58             | 49               | 12,1           | 46                 | 9,1            | 62               | 38             | 59                 | 35             | 27,6     | 17,3           |
| 700             | 47,7                   | -              | 92         | -              | 89           | -              | 44               | -              | 41                 | -              | 59               | -              | 56                 | -              | 26,2     | -              |
| 800             | 50,8                   | -              | 90         | -              | 87           | -              | 39               | -              | 36                 | -              | 56               | -              | 53                 | -              | 23,9     | -              |
| 900             | 55,1                   | -              | 85         | -              | 82           | -              | 30               | -              | 27                 | -              | 52               | -              | 49                 | -              | 21,7     | -              |
| 1000            | 58,0                   | -              | 80         | -              | 77           | -              | 22               | -              | 19                 | -              | 42               | -              | 39                 | -              | 18,0     | -              |

\* EN 50288-4-2(2014)/IEC 61156-6(2020)

**Standards, certificates and approvals**

Conformity

to CPR (EU/305/2011)

acc. to LVD (2014/35/EU)

Link Performance

KERPEN MegaLine® systems and further commercial plug-in connector

| Part number     | Weight    | copper weight | Outer Ø approx. | Colour    |
|-----------------|-----------|---------------|-----------------|-----------|
| LKD7KS703240000 | 133 kg/km | 54 kg/km      | 10.5 mm         | Jet black |