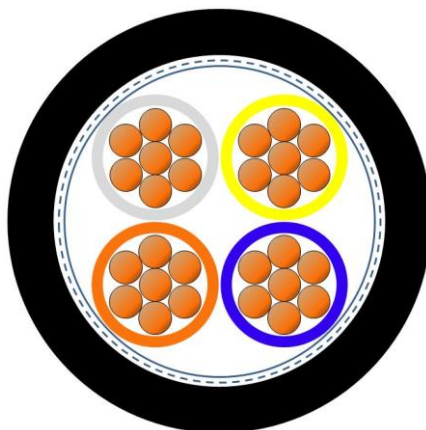


|                           |                                     |                                                                                     |
|---------------------------|-------------------------------------|-------------------------------------------------------------------------------------|
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## Application

ETHERLINE® ROBUST PN Cat. 5e is a halogen free CATEGORY 5e high speed data transmission cable for industrial environments. This data cable meets the requirements of Standards EIA/TIA-568, TSB-36 and ISO/IEC 11801 „Generic Cabling for Customer Premises“ for CLASS D Links. The high quality screen ensures high transmission reliability of data transfer in electromagnetically polluted areas.

## Design



|                          |                                                                                            |
|--------------------------|--------------------------------------------------------------------------------------------|
| Conductor                | bare stranded copper, 22/7 AWG                                                             |
| Insulation               | polyolefin, core Ø ca. 1.5 mm                                                              |
| Core identification code | white, yellow, blue, orange                                                                |
| Stranding                | star quad                                                                                  |
| Screen                   | plastic laminated aluminum foil<br>on top:<br>braid of copper wire, coverage ca. 85 %      |
| Outer sheath             | halogen free TPE-V special compound,<br>black (similar to RAL 9005),<br>outer Ø ca. 6.5 mm |

## Electrical properties at 20°C

|                             |                                                       |
|-----------------------------|-------------------------------------------------------|
| Conductor resistance        | max. 118 Ω/km                                         |
| Specific volume resistivity | min. 5 GΩxkm                                          |
| Velocity of propagation     | ca. 0,64 c                                            |
| Signal transit time         | nom. 530 ns/100 m                                     |
| Peak operating voltage      | 125 V (not for power purposes)                        |
| Test voltage                | conductor/conductor 1000 V<br>conductor/screen 1000 V |

|                      |                       |             |
|----------------------|-----------------------|-------------|
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### Electrical transmission properties at 20°C

| f<br>[MHz]   | Attenuation<br>[dB/100m] | NEXT<br>[dB] | EL FEXT<br>[dB] | Return Loss<br>[dB] |
|--------------|--------------------------|--------------|-----------------|---------------------|
|              | standard                 | standard     | standard        | standard            |
| <b>4</b>     | 6                        | 56,3         | 52              | 23                  |
| <b>10</b>    | 9,5                      | 50,6         | 43,6            | 25                  |
| <b>16</b>    | 12,1                     | 47,2         | 39,8            | 25                  |
| <b>31,25</b> | 17,1                     | 42,9         | 34,1            | 23,3                |
| <b>62,5</b>  | 24,8                     | 38,4         | 28,1            | 20,8                |
| <b>100</b>   | 32                       | 35,3         | 24,0            | 19                  |

### Mechanical and thermal properties

|                        |                                                                                                                                                                                 |
|------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Minimum bending radius | moved: 10 x cable Ø<br>fixed installation: 8 x cable Ø                                                                                                                          |
| Temperature range      | moved: -40° C up to +80° C<br>fixed installation: -50° C up to +80° C                                                                                                           |
| Halogen free           | acc. to IEC 60754-1 / EN 50267-2-1                                                                                                                                              |
| Corrosivity of gases   | acc. to IEC 60754-2 / EN 50267-2-2                                                                                                                                              |
| Smoke density          | acc. to 61034-2                                                                                                                                                                 |
| Toxicity               | acc. to EN 50305                                                                                                                                                                |
| UV resistance          | acc. to EN 50525-1 / VDE 0285-525-1: Cables with black sheath are suitable for per-manent outdoor use.<br>VDE 0276-605, EN ISO 4892-2-2013, method A (change of colour allowed) |
| Ozone resistance       | acc. to VDE 0473-396 / EN 50396, method B                                                                                                                                       |
| General requirements   | This cable is conform to the EU-Directive 2011/65/EU (RoHS, Restriction of the use of certain hazardous substances).                                                            |

|                      |                       |             |
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