## Bus Cables

## Selection table

|  | $\begin{aligned} & 0 \\ & \stackrel{0}{7} \\ & \frac{0}{0} \\ & \frac{0}{0} \\ & 0 \end{aligned}$ | $\begin{aligned} & \stackrel{N}{\varphi} \\ & \mathscr{\infty} \\ & \underline{\varrho} \end{aligned}$ | $\begin{aligned} & \stackrel{\wedge}{\varphi} \\ & \omega \\ & \underline{\oplus} \end{aligned}$ | $\begin{aligned} & \underset{\oplus}{\tau} \\ & \infty \\ & \underline{@} \end{aligned}$ | $\begin{aligned} & \bullet \\ & \dot{\varphi} \\ & \omega \\ & \varrho \\ & \oplus \end{aligned}$ | $\begin{aligned} & \infty \\ & \frac{\infty}{\varphi} \\ & \infty \\ & \infty \\ & \infty \end{aligned}$ |  |  |  | $\begin{aligned} & \circ \\ & \hline- \\ & \underline{@} \end{aligned}$ |  |  | $\begin{aligned} & 0 \\ & \text { N } \\ & 0 \\ & 0 \\ & 0 \\ & \infty \end{aligned}$ | $\begin{aligned} & \text { ๗ } \\ & \text { O } \\ & \text { o } \\ & 0 \\ & \infty \end{aligned}$ |  |  |  | $\begin{aligned} & \text { À } \\ & \text { ó } \\ & 0 \end{aligned}$ | $\begin{aligned} & \infty \\ & \underset{\sim}{1} \\ & 0 \\ & \infty \\ & 0 \\ & \infty \end{aligned}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Screened | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | - | $\bigcirc$ | $\bigcirc$ | - |  |  |  |  | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | - | $\bigcirc$ | $\bigcirc$ | - | $\bigcirc$ |
|  | Inner sheath |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Optical waveguide POF |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | $+180^{\circ} \mathrm{C}$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | $+90^{\circ} \mathrm{C}$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | $+85^{\circ} \mathrm{C}$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | $+80^{\circ} \mathrm{C}$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | $+75^{\circ} \mathrm{C}$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | $+70^{\circ} \mathrm{C}$ | - |  | - | , |  |  |  |  |  |  |  |  |  |  |  |  |  |  | - |
|  | $-30^{\circ} \mathrm{C}$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | $-40^{\circ} \mathrm{C}$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | - $50^{\circ} \mathrm{C}$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | - $90^{\circ} \mathrm{C}$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| $\begin{aligned} & 0 \\ & 0 \\ & \frac{\pi}{0} \\ & > \end{aligned}$ | Nominal voltage 300/500 V |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Peak operating voltage max. 30 V |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Peak operating voltage max. 50 V |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Peak operating voltage max. 90 V |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Peak operating voltage max. 350 V | - | - | $\bigcirc$ | - | - | $\bigcirc$ | - | - | - | 0 | $\bigcirc$ | 0 | $\bigcirc$ | - | $\bigcirc$ | 0 | - | 0 | $\bigcirc$ |
|  | Voltage UL 30 V |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Voltage UL resp. CSA 300 V |  | $\bigcirc$ |  |  | $\bigcirc$ |  |  |  |  |  |  |  |  |  |  |  | $\bigcirc$ | $\bigcirc$ |  |
|  | Voltage UL resp. CSA 600 V |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Testing voltage 600 V |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Testing voltage 750 V |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Testing voltage 1000 V | $\bigcirc$ |  | $\bigcirc$ | $\bigcirc$ | - | - |  |  |  |  |  |  |  |  | $\bigcirc$ |  |  |  |  |
|  | Testing voltage 1500 V |  |  |  |  |  |  | - | $\bigcirc$ | - | 0 | $\bigcirc$ | 0 | $\bigcirc$ | - | $\bigcirc$ | 0 |  |  |  |
|  | Testing voltage 2000 V |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | - | 0 | - |
|  | Testing voltage 3000 V |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Halogen-free acc. to IEC 60754-1 + VDE 0482-754-1 |  |  |  | - | - | $\bigcirc$ | - | $\bigcirc$ |  | $\bigcirc$ | $\bigcirc$ |  | $\bigcirc$ | - | $\bigcirc$ | 0 |  | - | - |
|  | Halogen-free for rail types |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | flame retardant and self-extinguishing acc. to IEC 60332-1-2 + VDE 0482-332-1-2 | - | - | - |  | - |  | - |  | - |  |  |  |  |  |  |  | - | 0 |  |
|  | no flame propagation acc. to IEC 60332-3-24 + IEC 60332-3-25 Cat. C resp. D |  |  |  |  |  |  | - | - |  |  |  |  |  |  | $\bigcirc$ | 0 |  |  |  |
|  | no flame propagation acc. to IEC 60332-3-24 + VDE 0482-332-3-24 resp. IEC 60332-3-25 + VDE 0482-332-3-25 and EN 50305 + VDE 0260-305 section 9.1.2 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | no flame propagation acc. to IEC 60332-3-22 + VDE 0482-332-3-22 Cat. A |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | flame retardant ISO 6722 (UN/ECE R118) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | UL Horizontal Flame Test FT2 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | UL VW1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | acc. to NF C 32-070 C1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | $\bigcirc$ |  |  |  |
|  | Corrosiveness of conflagration gases: in compliance with IEC 60754-2 + VDE 0482-754-2 - no development of corrosive conflagration gases |  |  |  |  |  | - | - | $\bigcirc$ |  | - |  |  |  | - | 0 | - |  |  |  |
|  | Smoke density acc. to IEC 61034 + VDE 0482-1034 |  |  |  |  |  |  | - | - |  |  |  |  |  |  | - | $\bigcirc$ |  |  |  |
|  | Toxicity acc. to EN 50305 + VDE 0260-305 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | UL recognized |  | $\bigcirc$ |  |  | $\bigcirc$ |  |  |  |  |  |  |  |  |  |  |  | $\bigcirc$ | $\bigcirc$ |  |
|  | CSA approved |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | ABS approved |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Rail type acc. to EN 45545-2 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Oil resistance acc. to internal standard | $\bigcirc$ |  | $\bigcirc$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Oil resistance acc. to VDE |  | - |  | - | - |  |  |  | - |  | $\bigcirc$ | 0 | $\bigcirc$ |  |  |  | - | 0 | $\bigcirc$ |
|  | Oil resistance acc. to EN |  |  |  | - | - | $\bigcirc$ |  |  |  | $\bigcirc$ | $\bigcirc$ | - | $\bigcirc$ |  |  |  |  | 0 | - |
|  | Chemical resistance |  |  |  |  |  |  |  |  |  |  | B | B | B |  |  |  |  | B |  |
|  | Weather resistance | C | C | C | A | A | B | B | B | C | B | A | A | A |  |  |  | C | A |  |
|  | Suitable for cable tracks |  |  |  | - | - |  |  |  |  |  | - | - | - |  |  |  |  | - |  |
|  | Torsion angle |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Flexibility | B | B | B | A | A | A | B | B |  | A | A | A | A | B | B | B | B | A |  |

$\begin{array}{ll}A=\text { very good } & 1=\text { up to } \pm 360^{\circ} / \mathrm{m} \\ B=\text { good } & 2=\text { up to } \pm 180^{\circ} / \mathrm{m}\end{array}$
*The temperature range for flexible application is mentioned on the corresponding catalogue page

## Bus Cables

## Selection table



## Bus Cables

## Selection table

|  | $\begin{aligned} & \stackrel{0}{2} \\ & \stackrel{2}{2} \\ & \frac{0}{0} \\ & \stackrel{0}{\circ} \end{aligned}$ | $\begin{aligned} & \text { N } \\ & \text { y } \\ & \text { o } \\ & \mathrm{L} \end{aligned}$ | $\begin{aligned} & J \\ & J \\ & 0 \\ & 0 \\ & 0 \\ & \infty \end{aligned}$ | $\begin{aligned} & \circ \\ & \infty \\ & 0 \\ & 0 \\ & \infty \\ & \infty \end{aligned}$ | $\begin{aligned} & 0 \\ & \sum_{0}^{0} \\ & 0 \\ & 0 \\ & \infty \\ & 0 \\ & 0 \\ & 0 \\ & 0 \\ & 0 \end{aligned}$ | $\begin{aligned} & \text { O} \\ & \text { 仓̀ } \\ & \text { co } \end{aligned}$ | $\begin{aligned} & \bar{\lambda} \\ & \hat{0} \\ & \hline \end{aligned}$ | $\begin{aligned} & \text { O } \\ & \text { i } \\ & 0 \\ & 0 \end{aligned}$ | 3 0 0 0 0 0 $\sim$ |  | $\begin{aligned} & \infty \\ & 0 \\ & \text { i } \\ & 0 \\ & 0 \\ & \end{aligned}$ | $$ |  |  | $\begin{aligned} & \infty \\ & 0 \\ & \infty \\ & \infty \\ & 0 \end{aligned}$ |  | $\begin{aligned} & 0 \\ & \text { N } \\ & 0 \\ & 0 \\ & \hline \end{aligned}$ | $\sum$ 0 0 0 0 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Screened | - | $\bigcirc$ |  | - |  |  | $\bigcirc$ | - | $\bigcirc$ | - | - | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | - |
|  | Inner sheath |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Optical waveguide POF |  |  |  |  | $\bigcirc$ | $\bigcirc$ |  |  |  |  |  |  |  |  |  |  |  |
|  | $+180^{\circ} \mathrm{C}$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | $+90^{\circ} \mathrm{C}$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | $+85^{\circ} \mathrm{C}$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | $+80^{\circ} \mathrm{C}$ |  |  |  |  |  |  |  | - |  |  |  |  |  |  |  |  |  |
|  | $+75^{\circ} \mathrm{C}$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | $+70^{\circ} \mathrm{C}$ |  | - |  |  |  |  | - |  |  |  |  |  |  |  |  | - |  |
|  | - $30^{\circ} \mathrm{C}$ | , |  |  |  |  |  | , |  |  |  |  |  |  |  |  | , |  |
|  | - $40^{\circ} \mathrm{C}$ |  | , | , | , | , | , |  |  |  |  |  |  |  |  |  |  |  |
|  | - $50^{\circ} \mathrm{C}$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | - $90^{\circ} \mathrm{C}$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| $\begin{aligned} & \stackrel{0}{0} \\ & \frac{\pi}{9} \\ & \hline> \end{aligned}$ | Nominal voltage 300/500 V |  |  |  |  | $\bigcirc$ | $\bigcirc$ |  |  |  |  |  |  |  |  |  |  |  |
|  | Peak operating voltage max. 30 V |  |  |  |  |  |  |  |  |  |  |  |  | $\bigcirc$ |  |  |  |  |
|  | Peak operating voltage max. 50 V |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | - |
|  | Peak operating voltage max. 90 V |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Peak operating voltage max. 350 V | - | - | - | - |  |  | - | 0 | - | - | - | $\bigcirc$ |  | - | - | - |  |
|  | Voltage UL 30 V |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Voltage UL resp. CSA 300 V |  |  |  |  |  |  |  | - |  |  | - | - |  | - | - | - |  |
|  | Voltage UL resp. CSA 600 V |  |  |  |  | $\bigcirc$ | - |  |  |  |  |  |  |  |  |  |  |  |
|  | Testing voltage 600 V |  |  |  |  |  |  | $\bigcirc$ |  |  |  |  |  | $\bigcirc$ |  |  |  | $\bigcirc$ |
|  | Testing voltage 750 V |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Testing voltage 1000 V |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Testing voltage 1500 V | $\bigcirc$ | $\bigcirc$ |  |  |  |  |  |  | $\bigcirc$ |  |  |  |  |  |  |  |  |
|  | Testing voltage 2000 V |  |  |  |  |  |  |  | - |  |  |  |  |  |  |  |  |  |
|  | Testing voltage 3000 V |  |  |  |  | $\bigcirc$ | $\bigcirc$ |  |  |  |  |  |  |  |  |  |  |  |
|  | Halogen-free acc. to <br> IEC 60754-1 + VDE 0482-754-1 |  |  | - | - |  |  |  |  | $\bigcirc$ | - | $\bigcirc$ |  |  |  |  |  |  |
|  | Halogen-free for rail types |  |  |  |  |  |  |  |  |  |  |  |  | - |  |  |  |  |
|  | flame retardant and self-extinguishing acc. to IEC 60332-1-2 + VDE 0482-332-1-2 |  |  |  |  | - | - |  |  | - |  |  |  | - | - | - | - |  |
|  | no flame propagation acc. to IEC 60332-3-24 + IEC 60332-3-25 Cat. C resp. D |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | no flame propagation acc. to IEC $60332-3-24+$ VDE $0482-332-3-24$ resp. IEC 60332-3-25 + VDE 0482-332-3-25 and EN 50305 + VDE 0260-305 section 9.1.2 |  |  |  |  |  |  |  |  |  |  |  |  | - |  |  |  |  |
|  | no flame propagation acc. to IEC 60332-3-22 <br> + VDE 0482-332-3-22 Cat. A |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | flame retardant ISO 6722 (UN/ECE R118) |  |  |  |  |  |  |  |  |  |  |  |  | $\bigcirc$ |  |  |  |  |
|  | UL Horizontal Flame Test FT2 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | UL VW1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | acc. to NF C 32-070 C1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Corrosiveness of conflagration gases: in compliance with IEC 60754-2 + VDE 0482-754-2 - no development of corrosive conflagration gases |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Smoke density acc. to IEC 61034 + VDE 0482-1034 |  |  |  |  |  |  |  |  |  |  |  |  | - |  |  |  |  |
|  | Toxicity acc. to EN 50305 + VDE 0260-305 |  |  |  |  |  |  |  |  |  |  |  |  | $\bigcirc$ |  |  |  |  |
|  | UL recognized |  |  |  |  | $\bigcirc$ | $\bigcirc$ |  | $\bigcirc$ |  |  | $\bigcirc$ | $\bigcirc$ |  | $\bigcirc$ | - | - |  |
|  | CSA approved |  |  |  |  | - | - |  |  |  |  | - | $\bigcirc$ |  |  |  |  |  |
|  | ABS approved |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Rail type acc. to EN 45545-2 |  |  |  |  |  |  |  |  |  |  |  |  | $\bigcirc$ |  |  |  |  |
|  | Oil resistance acc. to internal standard | $\bigcirc$ |  |  |  |  | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ |  |  |  |  |  |  |  |  |  |
|  | Oil resistance acc. to VDE |  | - | $\bigcirc$ | $\bigcirc$ | - |  |  |  |  | - | - | $\bigcirc$ |  |  |  |  |  |
|  | Oil resistance acc. to EN |  | - | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ |  |  |  |  | - | - | $\bigcirc$ |  |  | - | - |  |
|  | Chemical resistance |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Weather resistance | C | A |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Suitable for cable tracks |  | - |  | $\bigcirc$ |  |  |  |  |  |  | - |  |  | - |  |  |  |
|  | Torsion angle |  |  |  |  |  |  |  |  |  |  |  | 2 |  |  | 1 |  |  |
|  | Flexibility |  |  |  | A |  |  |  |  |  |  |  |  |  |  |  |  |  |

$A=$ very good
$1=$ up to $\pm 360 \% / \mathrm{m}$
$2=$ up to $\pm 180^{\circ} / \mathrm{m}$
*The temperature range for flexible application is mentioned on the corresponding catalogue page

## Bus Cables

## Selection table

|  | $\begin{aligned} & \stackrel{0}{\circ} \\ & \stackrel{2}{\lambda} \\ & \frac{0}{0} \\ & \stackrel{\circ}{\circ} \end{aligned}$ | $\begin{aligned} & \text { N } \\ & \text { O } \\ & \text { Z } \\ & \hline \end{aligned}$ | $\begin{aligned} & \infty \\ & 0 \\ & 0 \\ & \text { ¿ } \\ & \text { ¿ } \end{aligned}$ | $\begin{aligned} & \text { no } \\ & 0 \\ & \text { z } \\ & \hline \end{aligned}$ | $\begin{aligned} & 8 \\ & \mathbf{8} \\ & \text { Z } \\ & \text { ¿ } \end{aligned}$ | $\begin{aligned} & \text { to } \\ & \text { 右 } \\ & \text { Z } \end{aligned}$ |  | $\begin{aligned} & \circ \\ & \text { \& } \\ & \text { z} \end{aligned}$ | $\begin{aligned} & \bar{\circ} \\ & \stackrel{0}{\mathrm{o}} \end{aligned}$ | $\begin{aligned} & \hat{0} \\ & \text { o } \\ & \text { Z } \\ & \text { 心 } \end{aligned}$ | $\begin{aligned} & \stackrel{\infty}{0} \\ & \text { ¿ } \end{aligned}$ | $\begin{aligned} & \text { on } \\ & \text { © } \\ & \text { Z } \end{aligned}$ | $\begin{aligned} & \bar{\infty} \\ & 0 \\ & z \\ & \mathbf{z} \\ & \infty \end{aligned}$ |  |  | $\begin{array}{\|l\|l} \infty \\ 0 \\ 0 \\ \text { z } \end{array}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Screened | - | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | - | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | - | $\bigcirc$ | $\bigcirc$ | - | $\bigcirc$ |
|  | Inner sheath | - | - | $\bigcirc$ | - |  | $\bigcirc$ | - | - | $\bigcirc$ |  |  |  | - |  |  | $\bigcirc$ |
|  | Optical waveguide POF |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | $+180^{\circ} \mathrm{C}$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | $+90^{\circ} \mathrm{C}$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | $+85^{\circ} \mathrm{C}$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | $+80^{\circ} \mathrm{C}$ |  | - |  | - |  | ) |  |  |  |  |  |  |  |  |  |  |
|  | $+75^{\circ} \mathrm{C}$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | $+70^{\circ} \mathrm{C}$ | 0 |  | $\bigcirc$ |  | ( |  | 0 |  |  | - | , |  |  | , | , |  |
|  | - $30^{\circ} \mathrm{C}$ | , | , |  | , | , | $\checkmark$ | , |  |  | , |  |  |  |  |  |  |
|  | - $40^{\circ} \mathrm{C}$ |  |  | $\checkmark$ |  |  |  |  |  |  |  | , |  | , | , | - |  |
|  | - $50^{\circ} \mathrm{C}$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | - $90^{\circ} \mathrm{C}$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| $\begin{aligned} & \stackrel{8}{0} \\ & \frac{\pi}{0} \\ & \hline> \end{aligned}$ | Nominal voltage 300/500 V |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Peak operating voltage max. 30 V |  |  |  |  |  |  |  |  |  |  |  |  |  |  | $\bigcirc$ |  |
|  | Peak operating voltage max. 50 V |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Peak operating voltage max. 90 V |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Peak operating voltage max. 350 V | - | - | $\bigcirc$ | - | - | - | - | - | $\bigcirc$ | - | - | $\bigcirc$ | - | - |  | $\bigcirc$ |
|  | Voltage UL 30 V |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Voltage UL resp. CSA 300 V |  | $\bigcirc$ |  | $\bigcirc$ |  | $\bigcirc$ |  | $\bigcirc$ | $\bigcirc$ |  |  |  |  |  | - | $\bigcirc$ |
|  | Voltage UL resp. CSA 600 V |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Testing voltage 600 V |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Testing voltage 750 V |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Testing voltage 1000 V |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Testing voltage 1500 V | - |  | $\bigcirc$ |  | - |  | $\bigcirc$ |  |  | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ |  | - |  |  |
|  | Testing voltage 2000 V |  | - |  | - |  | - |  | $\bigcirc$ | - |  |  |  |  |  | - | $\bigcirc$ |
|  | Testing voltage 3000 V |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Halogen-free acc. to IEC 60754-1 + VDE 0482-754-1 |  | $\bigcirc$ |  | $\bigcirc$ |  |  | $\bigcirc$ | - | $\bigcirc$ |  | - | - | $\bigcirc$ | - | - | $\bigcirc$ |
|  | Halogen-free for rail types |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | flame retardant and self-extinguishing acc. to IEC 60332-1-2 + VDE 0482-332-1-2 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | no flame propagation acc. to IEC 60332-3-24 + IEC 60332-3-25 Cat. C resp. D |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | no flame propagation acc. to IEC $60332-3-24+$ VDE $0482-332-3-24$ resp. IEC $60332-3-25+$ VDE $0482-332-3-25$ and EN $50305+$ VDE $0260-305$ section 9.1 .2 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | no flame propagation acc. to IEC 60332-3-22 <br> + VDE 0482-332-3-22 Cat. A |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | flame retardant ISO 6722 (UN/ECE R118) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | UL Horizontal Flame Test FT2 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | UL VW1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | acc. to NF C 32-070 C1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Corrosiveness of conflagration gases: in compliance with IEC 60754-2 + VDE 0482-754-2 - no development of corrosive conflagration gases |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Smoke density acc. to IEC 61034 + VDE 0482-1034 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Toxicity acc. to EN 50305 + VDE 0260-305 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | UL recognized |  | $\bigcirc$ |  | $\bigcirc$ |  | - |  | $\bigcirc$ |  |  |  |  |  |  | - | $\bigcirc$ |
|  | CSA approved |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | ABS approved |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Rail type acc. to EN 45545-2 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Oil resistance acc. to internal standard | - | $\bigcirc$ |  |  | - | $\bigcirc$ |  |  |  | $\bigcirc$ |  |  |  |  |  |  |
|  | Oil resistance acc. to VDE |  |  | - | - |  |  |  |  | - |  | - | - | - | - | - | $\bigcirc$ |
|  | Oil resistance acc. to EN |  |  | - | $\bigcirc$ |  |  |  |  | $\bigcirc$ |  | - | - | - | 0 | - | - |
|  | Chemical resistance |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Weather resistance |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Suitable for cable tracks |  | $\bigcirc$ |  | $\bigcirc$ |  |  |  |  | $\bigcirc$ |  |  | - |  |  |  |  |
|  | Torsion angle |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 | 1 | 2 |
|  | Flexibility |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

$A=$ very good
$1=$ up to $\pm 360^{\circ} / \mathrm{m}$
$B=$ good
$C=$ medium
*The temperature range for flexible application is mentioned on the corresponding catalogue page

## Bus Cables

## Selection table



[^0]*The temperature range for flexible application is mentioned on the corresponding catalogue page


[^0]:    from
    $\begin{array}{ll}A=\text { very good } & 1=\text { up to } \pm 360^{\circ} / \mathrm{m} \\ B=\text { good } & 2=\text { up to } \pm 180^{\circ} / \mathrm{m}\end{array}$

