

BiT 500[®] BLACK FR

Flexible, highly flame retardant control cables for outdoor applications with number coded conductors, rated 300/500 V



Industrial application



Internal application



External application



Underground application



EN 60332-1-2



EN 60332-3-24



Oxygen index



UV resistant



High flexibility

Technical data:

Thermal parameters:

Operating temperature:

fixed installation: -40 °C to 80 °C
flexible connections: -5 °C to 80 °C
occasional flexing: -15 °C* to 80 °C

Electrical parameters:

Operating voltage: $U_0/U = 300/500$ V

Test voltage (50 Hz): 3000 V

Insulation resistance: 20 MΩ x km

Design:

Conductors:

bare copper conductors, multi-stranded class 5

acc. to EN 60228

Insulation:

PVC compound

Core identification:

black, number coded conductors, cables with protective earth conductor marked G (e.g. 7G1,5)

Core arrangement:

cores twisted together or pairs twisted together

Outer sheath:

PVC compound, oil resistant (see table of chemical resistance), self-extinguishing and flame retardant (acc. to EN 60332-1-2, EN 60332-3-24, cat. C), UV resistant; colour: black

Application:

Flexible control cables designed for operation in control and protective devices as well as in control circuits. Also for power supply to low power portable and mobile devices. Designed especially for installation in industrial areas with increased fire safety requirements (limited flame propagation). They are suitable for fixed installations and for flexible connections in industrial devices, technological lines and machines operating in dry and damp rooms. Cables suitable for outdoor installation - outer sheath is UV resistant. **Cables designed also for direct burial in ground.** Insulation and sheath materials and conductor construction in BiT 500[®] BLACK FR cable enable easy and fast connections and ensure their high durability. Cables classified according to **EN 50575 (CPR)**.

*minimum temperature for occasional flexing with bending radius not smaller than $15 \times D$. Bending test at low temperature (-15 °C acc. to EN 60811-504).

| Cat. no. | n x mm ² | Outer diameter* [mm] | Approximate cable weight [kg/km] |
|----------|---------------------|----------------------|----------------------------------|
| SB1800 | 2x0,5 | 6,8 | 62 |
| SB1801 | 3G0,5 | 7,1 | 70 |
| SB1802 | 3x0,5 | 7,1 | 70 |
| SB1803 | 4G0,5 | 7,6 | 80 |
| SB1804 | 4x0,5 | 7,6 | 80 |
| SB1805 | 5G0,5 | 8,1 | 92 |
| SB1806 | 5x0,5 | 8,1 | 92 |
| SB1807 | 6G0,5 | 8,6 | 105 |
| SB1808 | 7G0,5 | 8,6 | 110 |
| SB1809 | 7x0,5 | 8,6 | 110 |
| SB1810 | 8G0,5 | 9,3 | 125 |
| SB1811 | 8x0,5 | 9,3 | 125 |
| SB1812 | 10G0,5 | 10,6 | 155 |
| SB1813 | 12G0,5 | 10,6 | 165 |
| SB1814 | 12x0,5 | 10,6 | 165 |
| SB1815 | 14G0,5 | 11,0 | 180 |
| SB1816 | 16G0,5 | 11,6 | 200 |
| SB1817 | 18G0,5 | 12,1 | 220 |
| SB1818 | 19G0,5 | 12,1 | 220 |
| SB1819 | 21G0,5 | 12,6 | 240 |
| SB1820 | 25G0,5 | 14,1 | 285 |
| SB1821 | 27G0,5 | 14,1 | 295 |
| SB1822 | 30G0,5 | 14,6 | 320 |
| SB1823 | 34G0,5 | 15,6 | 365 |
| SB1824 | 37G0,5 | 15,6 | 375 |

| Cat. no. | n x mm ² | Outer diameter* [mm] | Approximate cable weight [kg/km] |
|----------|---------------------|----------------------|----------------------------------|
| SB1825 | 40G0,5 | 16,1 | 400 |
| SB1826 | 42G0,5 | 17,9 | 455 |
| SB1827 | 50G0,5 | 18,6 | 515 |
| SB1828 | 56G0,5 | 19,4 | 570 |
| SB1829 | 61G0,5 | 19,9 | 605 |
| SB1830 | 2x0,75 | 7,2 | 70 |
| SB1831 | 3G0,75 | 7,5 | 82 |
| SB1832 | 3x0,75 | 7,5 | 82 |
| SB1833 | 4G0,75 | 8,1 | 94 |
| SB1834 | 4x0,75 | 8,1 | 94 |
| SB1835 | 5G0,75 | 8,6 | 110 |
| SB1836 | 5x0,75 | 8,6 | 110 |
| SB1837 | 6G0,75 | 9,2 | 126 |
| SB1838 | 6x0,75 | 9,2 | 126 |
| SB1839 | 7G0,75 | 9,2 | 132 |
| SB1840 | 7x0,75 | 9,2 | 132 |
| SB1841 | 8G0,75 | 10,0 | 152 |
| SB1842 | 8x0,75 | 10,0 | 152 |
| SB1843 | 10G0,75 | 11,4 | 188 |
| SB1844 | 12G0,75 | 11,4 | 200 |
| SB1845 | 12x0,75 | 11,4 | 200 |
| SB1846 | 14G0,75 | 11,9 | 225 |
| SB1847 | 16G0,75 | 12,5 | 250 |
| SB1848 | 18G0,75 | 13,1 | 275 |
| SB1849 | 19G0,75 | 13,1 | 280 |

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| Cat. no. | n x mm ² | Outer diameter* [mm] | Approximate cable weight [kg/km] |
|----------|---------------------|----------------------|----------------------------------|
| SB1850 | 21G0,75 | 13,7 | 305 |
| SB1851 | 25G0,75 | 15,3 | 365 |
| SB1852 | 27G0,75 | 15,3 | 375 |
| SB1853 | 30G0,75 | 15,8 | 405 |
| SB1854 | 34G0,75 | 17,6 | 490 |
| SB1855 | 37G0,75 | 17,6 | 505 |
| SB1856 | 40G0,75 | 18,2 | 540 |
| SB1857 | 42G0,75 | 19,7 | 590 |
| SB1858 | 50G0,75 | 20,5 | 670 |
| SB1859 | 56G0,75 | 21,1 | 725 |
| SB1860 | 61G0,75 | 21,7 | 775 |
| SB1861 | 2x1,0 | 7,5 | 80 |
| SB1862 | 3G1,0 | 7,9 | 92 |
| SB1863 | 3x1,0 | 7,9 | 92 |
| SB1864 | 4G1,0 | 8,4 | 108 |
| SB1865 | 4x1,0 | 8,4 | 108 |
| SB1866 | 5G1,0 | 9,0 | 126 |
| SB1867 | 5x1,0 | 9,0 | 126 |
| SB1868 | 6G1,0 | 9,6 | 146 |
| SB1869 | 6x1,0 | 9,6 | 146 |
| SB1870 | 7G1,0 | 9,6 | 152 |
| SB1871 | 7x1,0 | 9,6 | 152 |
| SB1872 | 8G1,0 | 10,5 | 155 |
| SB1873 | 10G1,0 | 12,1 | 220 |
| SB1874 | 10x1,0 | 12,1 | 220 |
| SB1875 | 12G1,0 | 12,1 | 235 |
| SB1876 | 12x1,0 | 12,1 | 235 |
| SB1877 | 14G1,0 | 12,6 | 260 |
| SB1878 | 16G1,0 | 13,2 | 295 |
| SB1879 | 18G1,0 | 13,8 | 325 |
| SB1880 | 18x1,0 | 13,8 | 325 |
| SB1881 | 19G1,0 | 13,8 | 330 |
| SB1882 | 21G1,0 | 14,5 | 360 |
| SB1883 | 25G1,0 | 16,3 | 430 |
| SB1884 | 27G1,0 | 16,3 | 445 |
| SB1885 | 30G1,0 | 17,4 | 510 |
| SB1886 | 34G1,0 | 18,6 | 580 |
| SB1887 | 37G1,0 | 18,6 | 600 |
| SB1888 | 40G1,0 | 19,5 | 655 |
| SB1889 | 42G1,0 | 20,9 | 705 |
| SB1890 | 50G1,0 | 21,8 | 805 |
| SB1891 | 56G1,0 | 22,8 | 895 |
| SB1892 | 61G1,0 | 23,4 | 955 |
| SB1893 | 2x1,5 | 8,3 | 100 |
| SB1894 | 3G1,5 | 8,7 | 118 |
| SB1895 | 3x1,5 | 8,7 | 118 |
| SB1896 | 4G1,5 | 9,4 | 142 |
| SB1897 | 4x1,5 | 9,4 | 142 |
| SB1898 | 5G1,5 | 10,1 | 166 |
| SB1899 | 5x1,5 | 10,1 | 166 |
| SB1900 | 6G1,5 | 10,8 | 190 |
| SB1901 | 6x1,5 | 10,8 | 190 |
| SB1902 | 7G1,5 | 10,8 | 200 |
| SB1903 | 7x1,5 | 10,8 | 200 |
| SB1904 | 8G1,5 | 11,8 | 235 |
| SB1905 | 10G1,5 | 13,7 | 295 |
| SB1906 | 10x1,5 | 13,7 | 295 |
| SB1907 | 12G1,5 | 13,7 | 315 |
| SB1908 | 12x1,5 | 13,7 | 315 |
| SB1909 | 14G1,5 | 14,3 | 355 |
| SB1910 | 16G1,5 | 15,1 | 395 |
| SB1911 | 18G1,5 | 15,8 | 440 |

| Cat. no. | n x mm ² | Outer diameter* [mm] | Approximate cable weight [kg/km] |
|----------|---------------------|----------------------|----------------------------------|
| SB1912 | 19G1,5 | 15,8 | 450 |
| SB1913 | 21G1,5 | 17,2 | 515 |
| SB1914 | 25G1,5 | 19,5 | 625 |
| SB1915 | 27G1,5 | 19,5 | 645 |
| SB1916 | 30G1,5 | 20,2 | 705 |
| SB1917 | 34G1,5 | 21,6 | 805 |
| SB1918 | 37G1,5 | 21,6 | 835 |
| SB1919 | 40G1,5 | 22,8 | 920 |
| SB1920 | 42G1,5 | 24,5 | 985 |
| SB1921 | 50G1,5 | 26,1 | 1170 |
| SB1922 | 56G1,5 | 26,9 | 1270 |
| SB1923 | 61G1,5 | 27,6 | 1360 |
| SB1924 | 2x2,5 | 9,4 | 134 |
| SB1925 | 3G2,5 | 9,9 | 160 |
| SB1926 | 3x2,5 | 9,9 | 160 |
| SB1927 | 4G2,5 | 10,7 | 194 |
| SB1928 | 4x2,5 | 10,7 | 194 |
| SB1929 | 5G2,5 | 11,6 | 230 |
| SB1930 | 5x2,5 | 11,6 | 230 |
| SB1931 | 6G2,5 | 12,5 | 270 |
| SB1932 | 6x2,5 | 12,5 | 270 |
| SB1933 | 7G2,5 | 12,5 | 285 |
| SB1934 | 7x2,5 | 12,5 | 285 |
| SB1935 | 10G2,5 | 16,0 | 420 |
| SB1936 | 12G2,5 | 16,0 | 450 |
| SB1937 | 12x2,5 | 16,0 | 450 |
| SB1938 | 14G2,5 | 17,4 | 535 |
| SB1939 | 16G2,5 | 18,3 | 600 |
| SB1940 | 18G2,5 | 19,4 | 675 |
| SB1941 | 21G2,5 | 20,3 | 760 |
| SB1942 | 25G2,5 | 23,3 | 930 |
| SB1943 | 30G2,5 | 24,1 | 1050 |
| SB1944 | 34G2,5 | 26,5 | 1240 |
| SB1945 | 37G2,5 | 26,5 | 1290 |
| SB1946 | 42G2,5 | 29,5 | 1490 |
| SB1947 | 50G2,5 | 30,8 | 1710 |
| SB1948 | 2x4,0 | 11,1 | 194 |
| SB1949 | 3G4,0 | 11,7 | 240 |
| SB1950 | 3x4,0 | 11,7 | 240 |
| SB1951 | 4G4,0 | 12,8 | 290 |
| SB1952 | 5G4,0 | 13,9 | 350 |
| SB1953 | 7G4,0 | 15,0 | 435 |
| SB1954 | 10G4,0 | 20,3 | 680 |
| SB1955 | 12G4,0 | 20,3 | 740 |
| SB1956 | 2x6,0 | 11,7 | 240 |
| SB1957 | 3G6,0 | 12,4 | 300 |
| SB1958 | 3x6,0 | 12,4 | 300 |
| SB1959 | 4G6,0 | 13,6 | 380 |
| SB1960 | 5G6,0 | 14,7 | 455 |
| SB1961 | 7G6,0 | 15,9 | 575 |
| SB1962 | 2x10 | 13,9 | 365 |
| SB1963 | 3G10 | 14,7 | 460 |
| SB1964 | 3x10 | 14,7 | 460 |
| SB1965 | 4G10 | 16,9 | 605 |
| SB1966 | 5G10 | 18,3 | 730 |
| SB1967 | 7G10 | 20,0 | 940 |
| SB1968 | 2x16 | 15,7 | 505 |
| SB1969 | 3G16 | 17,3 | 675 |
| SB1970 | 3x16 | 17,3 | 675 |
| SB1971 | 4G16 | 19,3 | 865 |
| SB1972 | 5G16 | 20,9 | 1050 |

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| Cat. no. | n x mm ² | Outer diameter* [mm] | Approximate cable weight [kg/km] |
|----------|---------------------|----------------------|----------------------------------|
| SB1973 | 2x25 | 20,1 | 750 |
| SB1974 | 3G25 | 21,3 | 1040 |
| SB1975 | 3x25 | 21,3 | 1040 |
| SB1976 | 4G25 | 24,1 | 1340 |
| SB1977 | 5G25 | 26,7 | 1650 |
| SB1978 | 2x35 | 22,5 | 980 |
| SB1979 | 3G35 | 23,9 | 1350 |
| SB1980 | 3x35 | 23,9 | 1350 |
| SB1981 | 4G35 | 27,2 | 1750 |
| SB1982 | 5G35 | 29,4 | 2110 |

| Cat. no. | n x mm ² | Outer diameter* [mm] | Approximate cable weight [kg/km] |
|----------|---------------------|----------------------|----------------------------------|
| SB1983 | 2x50 | 27,1 | 1490 |
| SB1984 | 3G50 | 28,8 | 1940 |
| SB1985 | 3x50 | 28,8 | 1940 |
| SB1986 | 4G50 | 32,3 | 2480 |
| SB1987 | 5G50 | 35,0 | 3100 |
| SB1988 | 2x70 | 30,7 | 2030 |
| SB1989 | 3G70 | 32,9 | 2080 |
| SB1990 | 3x70 | 32,9 | 2080 |
| SB1991 | 4G70 | 37,1 | 3470 |
| SB1992 | 5G70 | 40,5 | 4240 |

paired cables

| Cat. no. | n x 2 x mm ² | Outer diameter* [mm] | Approximate cable weight [kg/km] |
|----------|-------------------------|----------------------|----------------------------------|
| SB1993 | 2x2x0,5 | 8,9 | 94 |
| SB1994 | 3x2x0,5 | 9,8 | 106 |
| SB1995 | 4x2x0,5 | 10,5 | 126 |
| SB1996 | 5x2x0,5 | 11,2 | 152 |
| SB1997 | 6x2x0,5 | 11,6 | 160 |
| SB1998 | 7x2x0,5 | 12,8 | 184 |
| SB1999 | 8x2x0,5 | 13,3 | 205 |
| SB2000 | 10x2x0,5 | 14,2 | 240 |
| SB2001 | 12x2x0,5 | 15,1 | 270 |
| SB2002 | 14x2x0,5 | 15,9 | 305 |
| SB2003 | 16x2x0,5 | 17,6 | 375 |
| SB2004 | 18x2x0,5 | 18,3 | 400 |
| SB2005 | 20x2x0,5 | 18,8 | 430 |
| SB2006 | 24x2x0,5 | 19,5 | 500 |
| SB2007 | 2x2x0,75 | 9,6 | 110 |
| SB2008 | 3x2x0,75 | 10,6 | 130 |
| SB2009 | 4x2x0,75 | 11,3 | 155 |
| SB2010 | 5x2x0,75 | 12,1 | 185 |
| SB2011 | 6x2x0,75 | 12,5 | 200 |
| SB2012 | 7x2x0,75 | 13,9 | 230 |
| SB2013 | 8x2x0,75 | 14,5 | 250 |
| SB2014 | 10x2x0,75 | 15,4 | 295 |
| SB2015 | 12x2x0,75 | 17,0 | 365 |
| SB2016 | 14x2x0,75 | 18,0 | 410 |
| SB2017 | 16x2x0,75 | 19,4 | 475 |
| SB2018 | 18x2x0,75 | 20,1 | 515 |
| SB2019 | 20x2x0,75 | 20,7 | 555 |
| SB2020 | 24x2x0,75 | 21,3 | 635 |
| SB2021 | 2x2x1,0 | 10,1 | 128 |
| SB2022 | 3x2x1,0 | 11,1 | 144 |
| SB2023 | 4x2x1,0 | 12,0 | 174 |
| SB2024 | 5x2x1,0 | 12,8 | 215 |
| SB2025 | 6x2x1,0 | 13,2 | 235 |

| Cat. no. | n x 2 x mm ² | Outer diameter* [mm] | Approximate cable weight [kg/km] |
|----------|-------------------------|----------------------|----------------------------------|
| SB2026 | 7x2x1,0 | 14,7 | 270 |
| SB2027 | 8x2x1,0 | 15,3 | 295 |
| SB2028 | 10x2x1,0 | 16,4 | 350 |
| SB2029 | 12x2x1,0 | 18,0 | 430 |
| SB2030 | 14x2x1,0 | 19,3 | 495 |
| SB2031 | 16x2x1,0 | 20,5 | 565 |
| SB2032 | 18x2x1,0 | 21,4 | 610 |
| SB2033 | 20x2x1,0 | 22,0 | 660 |
| SB2034 | 24x2x1,0 | 23,0 | 780 |
| SB2035 | 2x2x1,5 | 11,3 | 162 |
| SB2036 | 3x2x1,5 | 12,6 | 188 |
| SB2037 | 4x2x1,5 | 13,6 | 230 |
| SB2038 | 5x2x1,5 | 14,6 | 285 |
| SB2039 | 6x2x1,5 | 15,1 | 310 |
| SB2040 | 7x2x1,5 | 17,4 | 380 |
| SB2041 | 8x2x1,5 | 18,2 | 420 |
| SB2042 | 10x2x1,5 | 19,6 | 510 |
| SB2043 | 12x2x1,5 | 20,9 | 590 |
| SB2044 | 14x2x1,5 | 22,1 | 670 |
| SB2045 | 16x2x1,5 | 24,0 | 785 |
| SB2046 | 18x2x1,5 | 25,0 | 850 |
| SB2047 | 20x2x1,5 | 26,4 | 965 |
| SB2048 | 24x2x1,5 | 27,1 | 1110 |
| SB2049 | 2x2x2,5 | 13,1 | 225 |
| SB2050 | 3x2x2,5 | 14,6 | 260 |
| SB2051 | 4x2x2,5 | 15,9 | 325 |
| SB2052 | 5x2x2,5 | 17,7 | 430 |
| SB2053 | 6x2x2,5 | 18,3 | 470 |
| SB2054 | 7x2x2,5 | 20,6 | 550 |
| SB2055 | 8x2x2,5 | 21,5 | 610 |
| SB2056 | 10x2x2,5 | 23,5 | 750 |
| SB2057 | 12x2x2,5 | 25,0 | 875 |
| SB2058 | 14x2x2,5 | 27,1 | 1030 |
| SB2059 | 16x2x2,5 | 28,9 | 1180 |

*Outer diameter tolerance: +/- 5%

Cable Factory BITNER reserve the right to modify the specifications without prior notice

G - cables with green/yellow earthing conductor

x- cables without green/yellow earthing conductor

Note: on customer's request other cross sections or number of cores can be produced