



Technical data

- Special core insulation of PE
- **Conductor resistance**
0,5 mm²: max. 39,2 Ohm/km
0,75 mm²: max. 24,6 Ohm/km
1,3 mm²: max. 14,2 Ohm/km
- **Temperature range**
flexing -5 °C to +50 °C
fixed installation -40 °C to +70 °C
- **Operating top level voltage**
max. 300 V (not for purposes of high current and power installation)
- **Test voltage**
core/core 2000 V
core/screen 1000 V
- **Insulation resistance**
min. 5 GOhm x km
- **Mutual capacitance** at 800 Hz
core/core 0,5 mm²: 60 nF/km
for 1 and 2 pairs: 75 nF/km
core/core 0,75 mm²: 65 nF/km
for 1 and 2 pairs: 110 nF/km
core/core 1,3 mm²: 75 nF/km
for 1 and 2 pairs: 100 nF/km
- **Inductance** max. 0,75 mH/km
- **Cross-talk attenuation**
min. 0,88 dB/km at 60 kHz
- **Minimum bending radius**
approx. 7,5x cable ø

Cable structure

- Bare copper stranded wires
0,5 mm² (7x0,3 mm)
0,75 mm² (7x0,37 mm)
1,3 mm² (7x0,49 mm)
- Core insulation of PE
- Cores colours with numbering pair: a-core black, b-core white triple:a-core black, b-core white, c-core red with number print 1/1, 2/2, etc.
- Cores twisted to pairs with optimum pitch
- Pairs stranded in layer + 1 communication core 0,5 mm², PE-insulated, orange (communication core for multicore version)
- Core wrapping with foil
- Electrostatic screen (St) of plastics-coated metal foil and tinned drain-wire 0,5 mm² (7x0,3 mm)
- PVC outer jacket, reinforced
- Colour black (RAL 9005) or blue (RAL 5015)
- with blue outer jacket for hazardous areas to hazard type -i- for intrinsically safe installation according to DIN EN 60079-14 and IEC 60079-14 section 12.2.2 (VDE 0165 part 1)
- with meter marking, change-over in 2011
- Wall-thickness to DIN VDE 0816 part 1, table 7, col. 1

Properties

- Self-extinguishing and flame retardant according to VDE 0482-332-1-2, DIN EN 60332-1-2/ IEC 60332-1 (equivalent DIN VDE 0472 part 804 test method B)
- The electrostatic screen protect the screened pairs against outer electrostatic interference fields
- Low level of line attenuations and low mutual capacitances enable long transmission distances and fast pulse acceleration
- The materials used in manufacture are cadmium-free and contain no silicone and free from substances harmful to the wetting properties of lacquers

Note

- AWG sizes are approximate equivalent values. The actual cross-section is in mm².
- Cop.Weight including communication core and drain-wire.
- Control cable with blue outer jacket, see catalog part A.

Application

Instrumentation cables are used in data processing and process control.

Instrumentation cables are suitable for fixed installations in damp locations, in open spaces and for underground laying.

CE= The product is conformed with the EC Low-Voltage Directive 2006/95/EG.

Part no.	No.pairs x cross-sec. mm ²	Jacket colour	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
20099	1 x 2 x 0,5	black	8,2	15,0	74,0	20
20100	2 x 2 x 0,5	black	10,2	30,0	117,0	20
20101	4 x 2 x 0,5	black	11,5	50,0	140,0	20
20233	6 x 2 x 0,5	black	12,6	70,0	190,0	20
20102	8 x 2 x 0,5	black	13,8	90,0	215,0	20
20103	10 x 2 x 0,5	black	14,9	110,0	220,0	20
20104	12 x 2 x 0,5	black	15,7	130,0	280,0	20
20105	16 x 2 x 0,5	black	17,5	170,0	352,0	20
20106	20 x 2 x 0,5	black	18,8	210,0	385,0	20
20107	24 x 2 x 0,5	black	20,2	250,0	468,0	20
20108	36 x 2 x 0,5	black	24,1	370,0	656,0	20
20109	48 x 2 x 0,5	black	27,5	490,0	854,0	20
20149	1 x 2 x 0,75	black	7,9	20,0	74,0	18
20150	2 x 2 x 0,75	black	10,6	35,0	123,0	18
20151	4 x 2 x 0,75	black	11,8	65,0	164,0	18
20152	8 x 2 x 0,75	black	14,6	125,0	258,0	18
20153	10 x 2 x 0,75	black	16,1	154,0	305,0	18
20154	12 x 2 x 0,75	black	17,0	185,0	350,0	18
20155	16 x 2 x 0,75	black	19,0	245,0	445,0	18
20156	20 x 2 x 0,75	black	21,5	298,0	520,0	18
20157	24 x 2 x 0,75	black	23,2	365,0	620,0	18
20158	36 x 2 x 0,75	black	28,2	532,0	940,0	18
20159	48 x 2 x 0,75	black	32,0	708,0	1250,0	18
20125	1 x 2 x 1,3	black	9,4	31,0	102,0	-
20132	1 x 3 x 1,3	black	9,7	44,0	116,0	-
20126	2 x 2 x 1,3	black	11,7	62,0	161,0	-
20127	4 x 2 x 1,3	black	13,5	114,0	230,0	-
20234	6 x 2 x 1,3	black	16,0	168,0	310,0	-
20128	8 x 2 x 1,3	black	17,1	218,0	377,0	-
20129	12 x 2 x 1,3	black	19,3	322,0	515,0	-
20130	16 x 2 x 1,3	black	22,0	426,0	656,0	-
20131	24 x 2 x 1,3	black	26,5	684,0	952,0	-
20235	1 x 2 x 0,5	blue	8,2	15,0	74,0	20
20236	2 x 2 x 0,5	blue	10,2	30,0	117,0	20
20237	4 x 2 x 0,5	blue	11,5	50,0	140,0	20
20238	6 x 2 x 0,5	blue	12,6	70,0	190,0	20
20239	8 x 2 x 0,5	blue	13,8	90,0	215,0	20
20240	10 x 2 x 0,5	blue	14,9	110,0	220,0	20
20241	12 x 2 x 0,5	blue	15,7	130,0	280,0	20
20242	16 x 2 x 0,5	blue	17,5	170,0	352,0	20
20243	20 x 2 x 0,5	blue	18,8	210,0	385,0	20
20244	24 x 2 x 0,5	blue	20,2	250,0	468,0	20
20245	36 x 2 x 0,5	blue	24,1	370,0	656,0	20
20246	48 x 2 x 0,5	blue	27,5	490,0	854,0	20
20169	1 x 2 x 0,75	blue	7,9	20,0	74,0	18
20170	2 x 2 x 0,75	blue	10,6	35,0	123,0	18
20171	4 x 2 x 0,75	blue	11,8	65,0	164,0	18
20172	8 x 2 x 0,75	blue	14,6	125,0	258,0	18
20173	10 x 2 x 0,75	blue	16,1	154,0	305,0	18
20174	12 x 2 x 0,75	blue	17,0	185,0	350,0	18
20175	16 x 2 x 0,75	blue	19,0	245,0	445,0	18
20176	20 x 2 x 0,75	blue	21,5	298,0	520,0	18
20177	24 x 2 x 0,75	blue	23,2	365,0	620,0	18
20178	36 x 2 x 0,75	blue	28,2	532,0	940,0	18
20179	48 x 2 x 0,75	blue	32,0	708,0	1250,0	18
20247	1 x 2 x 1,3	blue	9,4	31,0	102,0	-
20255	1 x 3 x 1,3	blue	9,7	44,0	116,0	-
20248	2 x 2 x 1,3	blue	11,7	62,0	161,0	-
20249	4 x 2 x 1,3	blue	13,5	114,0	230,0	-
20250	6 x 2 x 1,3	blue	16,0	168,0	310,0	-
20251	8 x 2 x 1,3	blue	17,1	218,0	377,0	-
20252	12 x 2 x 1,3	blue	19,3	322,0	515,0	-
20253	16 x 2 x 1,3	blue	22,0	426,0	656,0	-
20254	24 x 2 x 1,3	blue	26,5	684,0	952,0	-

Dimensions and specifications may be changed without prior notice. (RB01)