

RD-Y(St)Y

Data transmission cable



TECHNICAL DATA

PVC data cable in alignment with DIN VDE 0815

Temperature range	flexible -5°C to +50°C fixed -30°C to +70°C
Peak operating voltage	600 V (not for high power current installation purposes)
Test voltage core/core	2000 V
Test voltage core/screen	2000 V
Conductor resistance at 20°C	max. 39.2 Ohm/km
Mutual capacitance core/core	at 800 Hz 2 - 4 pairs: approx. 120 pF/m 8 - 96 pairs: approx. 100 pF/m
Capacitive coupling k₁	at 800 Hz, max. 200 pF/100m; 20% of the values, but at least one value may amount up to 400 pF/100m
Characteristic impedance	at 1 kHz, 370 Ohm, at 10 kHz, 130 Ohm, (approx. value)
Cable attenuation	at 1 kHz, 1.2 dB/km at 10 kHz, 3.0 dB/km (approx. value)
Crosstalk attenuation	at 10 kHz, 60.00 dB (approx. value)
Minimum bending radius	fixed 7.5x Outer-Ø

■ CABLE STRUCTURE

- Copper wire bare, stranded
- Wire structure:
0.5 mm²: 7 x 0.3 mm
- Core insulation: semirigid PVC
- Core identification: colour coded, per bundle:
Pair no. 1: a-core = blue; b-core = red
Pair no. 2: a-core = grey; b-core = yellow
Pair no. 3: a-core = green; b-core = brown
Pair no. 4: a-core = white; b-core = black

- Cores stranded in pairs with optimal lay lengths, 4 pairs stranded into bundles with optimal lay lengths, bundles stranded in layers with optimal lay lengths
- Bundle identification: synthetic helix with printed digits
- Drain wire, tinned copper, stranded (0.5 mm² = 7 x 0.3 mm)
- Screen: plastic-coated aluminium foil (St), approx. overlap 25%
- Outer sheath: PVC
- Sheath colour: see table
- Length marking: in metres

■ PROPERTIES

- the materials used during manufacturing are cadmium-free, contain no silicone and are free from substances harmful to the wetting properties of lacquers
- pair stranding with short and varied lay lengths within a bundle, leads to good crosstalk attenuation values

■ TESTS

- flame-retardant acc. to DIN VDE 0482-332-1-2 / DIN EN 60332-1-2 / IEC 60332-1-2
- certifications and approvals:
EAC

■ APPLICATION

RD data transmission cables are used in measurement and control technology, as well as in control stations of industrial plants. The cables are used for the transmission of analogue and digital signals up to a frequency of approximately 10 kHz. They are suitable for fixed installations inside buildings.

■ NOTES

- the conductor is metrically (mm²) constructed, AWG numbers are approximated, and are for reference only
- 2-pair cables: cores stranded to a star quad
- with blue sheathing for the installation of intrinsically safe systems (ignition protection type -i-) in explosion-endangered areas according to DIN VDE 0165-1 / DIN EN 60079-14 / IEC 60079-14, Section 16.2.2

Sheath color: grey (RAL 7032)

Part no.	No. cores x cross-sec. mm ²	AWG, approx.	Outer Ø mm, approx.	Cu factor per km	Weight kg/km, approx.
20140	2 x 2 x 0.5	20	6.2	25.0	61.0
20141	4 x 2 x 0.5	20	8.3	45.0	96.0
20142	8 x 2 x 0.5	20	11.3	85.0	160.0
20143	12 x 2 x 0.5	20	12.1	125.0	210.0
20144	16 x 2 x 0.5	20	13.5	165.0	282.0
20145	24 x 2 x 0.5	20	16.0	245.0	330.0
20146	32 x 2 x 0.5	20	19.0	325.0	530.0
20147	48 x 2 x 0.5	20	22.0	485.0	730.0
20148	96 x 2 x 0.5	20	31.5	965.0	1400.0

Sheath color: blue (RAL 5015)

Part no.	No. cores x cross-sec. mm ²	AWG, approx.	Outer Ø mm, approx.	Cu factor per km	Weight kg/km, approx.
20189	2 x 2 x 0.5	20	6.2	25.0	61.0
20190	4 x 2 x 0.5	20	8.3	45.0	96.0
20191	8 x 2 x 0.5	20	11.3	85.0	160.0
20192	12 x 2 x 0.5	20	12.1	125.0	210.0
20193	16 x 2 x 0.5	20	13.5	165.0	282.0
20194	24 x 2 x 0.5	20	16.0	245.0	330.0
20195	32 x 2 x 0.5	20	19.0	325.0	530.0
20196	48 x 2 x 0.5	20	22.0	485.0	730.0
20197	96 x 2 x 0.5	20	31.5	965.0	1400.0