

RD-Y(St)Yv

Data transmission cable, reinforced outer sheath



HELUKABEL® RD-Y(St)Yv 4x2x0,5 QMM / 20161 CE

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 k ₁	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	flexible 10x Outer-Ø fixed 10x 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, reinforced (v)
- Sheath colour: grey (RAL 7032)
- Length marking: in metres

PROPERTIES

- direct burial
- 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, outdoors and underground.

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

Part no.	No. cores x cross-sec. mm ²	AWG, approx.	Outer Ø mm, approx.	Cu factor per km	Weight kg/km, approx.
20160	2 x 2 x 0.5	20	7.8	25.0	82.0
20161	4 x 2 x 0.5	20	9.7	45.0	125.0
20162	8 x 2 x 0.5	20	12.9	85.0	205.0
20163	12 x 2 x 0.5	20	13.6	125.0	259.0
20164	16 x 2 x 0.5	20	14.7	165.0	318.0

Part no.	No. cores x cross-sec. mm ²	AWG, approx.	Outer Ø mm, approx.	Cu factor per km	Weight kg/km, approx.
20165	24 x 2 x 0.5	20	17.2	245.0	438.0
20166	32 x 2 x 0.5	20	21.6	325.0	583.0
20167	48 x 2 x 0.5	20	22.7	485.0	788.0
20168	96 x 2 x 0.5	20	35.5	965.0	1300.0