

# RD-Y(St)YY

Data transmission cable, double outer sheath



HELUKABEL® RD-Y(St)YY 4x2x0,5 QMM / 20181 CE

## TECHNICAL DATA

PVC data cable in alignment with DIN VDE 0815

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

## CABLE STRUCTURE

- Copper wire bare, stranded
- Wire structure:  
0.5 mm<sup>2</sup>: 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 mm<sup>2</sup> = 7 x 0.3 mm)
- Screen: plastic-coated aluminium foil (St), approx. overlap 25%
- Outer sheath: PVC, double (YY)
- 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 (mm<sup>2</sup>) 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 <sup>2</sup>	AWG, approx.	Outer Ø mm, approx.	Cu-weight kg/km	Weight kg/km, approx.
20180	2 x 2 x 0.5	20	8.4	25.0	93.0
20181	4 x 2 x 0.5	20	10.3	45.0	139.0
20182	8 x 2 x 0.5	20	13.5	85.0	223.0
20183	12 x 2 x 0.5	20	14.2	125.0	279.0
20184	16 x 2 x 0.5	20	15.7	165.0	354.0

Part no.	No. cores x cross-sec. mm <sup>2</sup>	AWG, approx.	Outer Ø mm, approx.	Cu-weight kg/km	Weight kg/km, approx.
20185	24 x 2 x 0.5	20	18.2	245.0	480.0
20186	32 x 2 x 0.5	20	23.0	325.0	657.0
20187	48 x 2 x 0.5	20	24.1	485.0	866.0
20188	96 x 2 x 0.5	20	36.5	965.0	1450.0