

RD-H(ST)H Bd instrumentation cable, halogen-free



Technical data

- Halogen-free data transmission cable adapted to DIN VDE 0815
- **Conductor resistance**
max. 73,6 Ohm/km (0,5 mm²)
max. 36,8 Ohm/km (1,0 mm²)
- **Temperature range**
flexing -5 °C to +50 °C
fixed installation to +70 °C
- **Operating top level voltage**
(not for purposes of high current and power installation)
max. 225 V
- **Test voltage**
core/core 500 V
core/screen 2000 V
- **Insulation resistance**
min. 100 MOhm x km
- **Mutual capacitance**
at 800 Hz max. 100 nF/km
(this value may be exceeded by 20% with a make-up up to 4 pairs)
- **Impedance** at 1 kHz (nominal values)
450 Ohm (0,5 mm²)
320 Ohm (1,0 mm²)
- **Capacity unbalance**
at 800 Hz max. 200 pF/100 m
(20% of the values, but one value up to 200 pF is allowed)
- **Cross-talk attenuation**
at min. 10 kHz, 60 dB/500 m
- **Line attenuation** at 1 kHz (nominal values)
1,2 dB/km (0,5 mm²)
0,9 dB/km (1,0 mm²)
- **Bending radius**
approx. 7,5x cable ø

Application

The halogen-free data transmission cable RD-H(ST)H are used for measurement and control technology for transmission of analog and digital signals up to frequencies of approx. 10 kHz. The twisted pairs with short pitches (<50 mm for 0,5 mm²) and different lay-lengths which lead good cross-talk attenuation values in a unit.

These cables are used in inside buildings (in special cases in open air, but with sufficient protection against sunlight is necessary).

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

Cable structure

- Bare copper stranded wires 0,5 mm² (7x0,3) or 1,0 mm² (7x0,43)
- Core insulation, halogen-free polymer compound
- Cores twisted in pairs, with short lay-length (approx. 20 pitch/m ±50 mm)
- 4 pairs stranded to a unit
- Holding tape units with number coding
- Units stranded in concentric layers
- Core wrapping
- Electrostatic screen of plastic coated aluminium foil and drain wire tinned, 0,5 mm²
- Outer jacket, halogen-free, polymer compound, flame resistant
- Colour grey (RAL 7032)
- Core colours
pair no./a-core/b-core
1/blue/red
2/grey/yellow
3/green/brown
4/white/black
(4 pairs 1 unit)

Properties

- The static screen protects the transmission circuits against outer electrical interferences
- The halogen-free cables prevent the fire propagation and compared to PVC cables exist only a low smoke density under flame influence
- This results no decomposition products which destroy equipments, machines and buildings by corrosion

Tests

- Flame test to VDE 0482-332-3, BS 4066 part 3/ DIN EN 60332-3/ IEC 60332-3 (equivalent DIN VDE 0472 part 804 test method C)
- Corrosiveness of combustion gases according to VDE 0482 part 267/ DIN EN 50267-2-2/ IEC 60754-2 (equivalent DIN VDE 0472 part 813)
- Smoke density according to VDE 0482 part 1034-1+2, IEC 61034-1+2/ DIN EN 61034-1+2 BS 7622 part 1+2 (equivalent DIN VDE 0472 part 816)

Note

- AWG sizes are approximate equivalent values. The actual cross-section is in mm².

Part no.	No.pairs x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
20200	2 x 2 x 0,5	7,0	26,0	70,0	20
20201	4 x 2 x 0,5	9,0	46,0	110,0	20
20202	8 x 2 x 0,5	11,6	86,0	190,0	20
20203	12 x 2 x 0,5	13,5	127,0	240,0	20
20204	16 x 2 x 0,5	14,0	167,0	300,0	20
20205	20 x 2 x 0,5	16,0	209,0	360,0	20
20206	24 x 2 x 0,5	17,5	250,0	420,0	20
20207	28 x 2 x 0,5	19,0	290,0	480,0	20
20208	32 x 2 x 0,5	21,0	331,0	570,0	20
20209	36 x 2 x 0,5	21,5	372,0	614,0	20
20210	40 x 2 x 0,5	22,5	412,0	680,0	20
20211	44 x 2 x 0,5	23,5	453,0	700,0	20
20212	48 x 2 x 0,5	24,0	494,0	790,0	20
20213	64 x 2 x 0,5	30,0	658,0	1040,0	20
20214	80 x 2 x 0,5	33,0	821,0	1300,0	20
20215	96 x 2 x 0,5	36,0	986,0	1510,0	20

Part no.	No.pairs x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
20216	2 x 2 x 1	9,0	47,0	110,0	17
20217	4 x 2 x 1	12,0	89,0	190,0	17
20218	8 x 2 x 1	16,5	172,0	320,0	17
20219	12 x 2 x 1	17,5	255,0	435,0	17
20220	16 x 2 x 1	19,5	338,0	560,0	17
20221	20 x 2 x 1	21,0	423,0	680,0	17
20222	24 x 2 x 1	23,0	507,0	800,0	17
20223	28 x 2 x 1	27,0	590,0	905,0	17
20225	32 x 2 x 1	29,0	674,0	1080,0	17
20226	36 x 2 x 1	30,0	757,0	1260,0	17
20227	40 x 2 x 1	31,0	841,0	1330,0	17
20228	44 x 2 x 1	34,0	924,0	1410,0	17
20229	48 x 2 x 1	32,5	1008,0	1550,0	17
20230	64 x 2 x 1	39,0	1342,0	2000,0	17
20231	80 x 2 x 1	43,0	1676,0	2470,0	17
20232	96 x 2 x 1	47,0	2016,0	2970,0	17

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