


2170217	<b>DATA SHEET</b>	
valid from: 01.02.2019	<b>UNITRONIC® BUS IBS Yv COMBI</b> <b>3 x 2 x 0,22 mm<sup>2</sup> + 2 x 1,0 mm<sup>2</sup></b>	

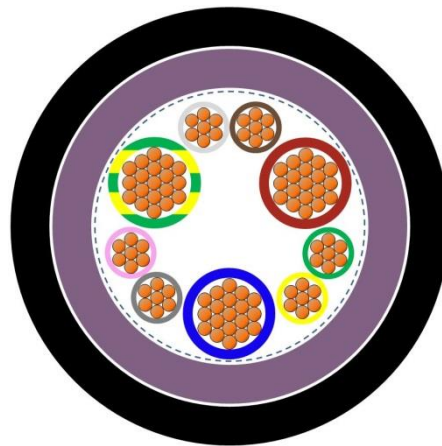
### Application

UNITRONIC® BUS Yv COMBI IBS is a data cable for the field-bus system INTERBUS, with integrated power supply cores in the cable for the bus logic of member (Installation remote bus cable). UNITRONIC® BUS Yv COMBI IBS is for a data transmission rate of 500kBit/s at a length of 400m.

The field-bus cable is designed to the requirements of the bus-system INTERBUS, the transmission characteristics are conform to the system and guarantee a high operating security during data transmission. UNITRONIC® BUS Yv COMBI IBS is certified by the INTERBUS-CLUB.


The cable is intended for limited flexible use and for permanent installation in- and outdoor, as well as used in ground installation. By aboveground installation the outer sheath is resistant to atmospheric UV-irradiation.

### Design



Conductor	data pair: stranded conductor: bare copper, 0.22 mm <sup>2</sup> multicore  power pair: stranded conductor: bare copper, 1.0 mm <sup>2</sup>
Insulation	data pair: PE, core diameter approx. 1.0 mm  power pair: PE, core diameter approx. 1.7 mm
Core identification code	data pair: white-brown, green-yellow, grey-pink (acc. to DIN 47100)  power pair: red, blue, green/yellow
Stranding	data pairs twisted together with power supply cores with wrapping on top
Screen	braid of tinned copper wires
Outer sheath	2 layer construction: inner sheath: PVC, violet Inner sheath diameter max. 7.9 mm  outer sheath: PVC, black, diameter approx 9.5 mm

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### Electrical properties at 20°C

Conductor resistance	power cores: max. 19.5 Ω/km
Loop resistance	data cores: max. 186 Ω/km
Specific volume resistivity	power cores: min. 5 GΩ x km
Mutual capacitance	max. 60 nF/km (800Hz)
Characteristic impedance	110 Ω (±20Ω) (64 kHz) 95 Ω (±15Ω) (>1 MHz)
Attenuation	256 kHz max. 1,0 dB/100 m 772 kHz max. 2,5 dB/100 m 1 MHz max. 2,8 dB/100 m 4 MHz max. 6,9 dB/100 m 10 MHz max. 12,0 dB/100 m 16 MHz max. 15,5 dB/100 m 20 MHz max. 17,2 dB/100 m
Near-end cross-talk	772 kHz min. 61 dB 1 MHz min. 59 dB 2 MHz min. 55 dB 4 MHz min. 50 dB 8 MHz min. 46 dB 10 MHz min. 44 dB 16 MHz min. 41 dB 20 MHz min. 40 dB
Velocity of propagation	nom. 0,66 c
Transfer impedance	transfer impedance: max. 250 mΩ/m (30 MHz)
Peak operating voltage	data pair: 250 V (not for power applications)  power pair: 450 V (not for power applications)
Test voltage	conductor/conductor 1500 V conductor/screen 1000 V

### Mechanical and thermal properties

Minimum bending radius	fixed use 8 x cable Ø flexible use 15 x cable Ø
Temperature range	fixed use - 30° C up to +80° C flexible use - 5° C up to +70° C
Burning load	0,4 kWh/m
Flammability	flame retardant acc. to VDE0482-265-2-1, IEC60332-1
General requirements	This cable is conform to the EU-Directive 2011/65/EU (RoHS, Restriction of the use of certain hazardous substances).

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