



## UNITRONIC® BUS EIB COMBI 2x2x0.8 + 3x1.5

DB2170242

valid from: 02.05.2011

## Application

UNITRONIC® BUS EIB COMBI 2x2x0.8 + 3x1.5 is a screened installation cable based on type J-Y(ST)Y acc. to VDE 0815 combined with power supply cores 3x1.5 mm<sup>2</sup> based on NYM acc. to VDE 0250 part 204. The cable is designed for data transmission in the building management, in particular as bus cable for the European Installation Bus EIB (use for decentralised control of lighting, heating, air-conditioning, ventilation, energy management, blind, time management, locking systems etc.) and electrical power supply.

The EIB bus cable can be laid in, on and under plaster, in pipes and cable ducts, in dry, damp and wet rooms. They may only be installed outdoors with UV-protection and in observation of the temperature range. EIB cables has been tested with a test voltage of 4 kV. The cables may be laid respectively be touched without restrictions next to power cables.

## Design

Conductor	EIB: solid, bare copper wire, Ø 0.8 mm NYM: solid, bare copper wire, 1.5 mm <sup>2</sup>
Insulation	EIB: PVC TI51 in acc. to VDE 0819-101, coreØ ca. 1.6 mm NYM: PVC TI1 in acc. to VDE 0281-1, coreØ ca. 2.6 mm
Core identification code	EIB: Pair 1: red and black; Pair 2: white and yellow NYM: brown, blue, green/yellow acc. to DIN VDE 0293-308
Stranding	EIB: 4 cores twisted (star quad formation), wrapping with plastic foil, one layer plastic-coated aluminium foil, tape metal side inside with Ø 0.4 mm bare copper drain wire, sheath of PVC TM1 acc. to VDE 0281-1, Ø 6.2 mm, colour similar to RAL 6017  All-up stranding: EIB bus cable with NYM-Adern 3x1.5 mm <sup>2</sup> , wrapping with plastic foil (optional)
Screen	one layer plastic-coated aluminium foil, tape metal side inside with bare copper drain wire 1.5 mm <sup>2</sup>
Outer sheath	PVC TM1 acc. to VDE 0281-1, colour green similar to RAL 6017, outer Ø max. 12.7 mm

## Electrical properties at 20°

Loop resistance	EIB: max. 73.2 Ω/km NYM: max. 24.4 Ω/km
Insulation resistance	> 100 MΩ x km
Mutual capacitance	at 800 Hz: nom. 100 nF/km
Inductivity	at 800 Hz: approx. 0.65 mH/km
Capacitive coupling	100 m at 800 Hz: max. 300 pF
Characteristic impedance	nom. 85 Ω (100 kHz) nom. 75 Ω (1 MHz)
Attenuation	nom. 3.5 dB/km (10 kHz) nom. 8 dB/km (100 kHz)
Peak working voltage	300 V (not for power purposes)
Rated voltage	only NYM: 300/500 V



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Test voltage

EIB:

A/A: 1000 V

A/S: 1000 V

NYM:

A/A: 1500 V

Complete cable in a water quench (5 min): 4000 V

**Mechanical and thermal properties**

Bending radius

230 mm

Temperature range

Fixed installation: - 30°C up to +70°C

Burning load

0.63 kWh/m

Flammability

flame retardant acc. to IEC 60332-1-2

EC directive

This cable is conform to ECD 2006/95/EC (Low Voltage Directive)

Design and characteristics are similar to VDE 0815 and VDE 0250-204 respectively