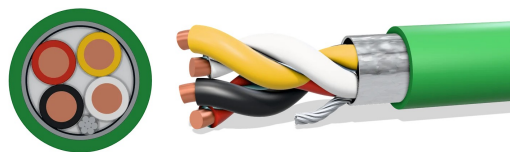


Application

The KNX/EIB busleiding is a certified bus cable for KNX/EIB building automation, essentially a KNX-approved J-Y(St)Yh 2x2x0.8 (one pair carries the bus, the second pair is a spare / auxiliary). Solid bare-copper conductors (0.8 mm diameter) are insulated with PVC (a halogen-free FRNC/LSZH insulation variant also exists) and stranded to pairs (star-quad); the assembly is enclosed by a collective (overall) screen of aluminium/polyester foil in contact with a tinned copper drain wire, protecting the bus signals against electromagnetic interference. The outer sheath is green, the KNX-standard colour. The cable complies with the KNX specification (system standard EN 50090) and is verified for a 4 kV insulation strength, so bus and mains circuits may be routed in a shared installation. It carries only the SELV bus (typ. 21-30 V DC); it is not for power distribution.



CONSTRUCTION

Conductor	Solid bare (plain) annealed copper, 0.8 mm diameter, class 1 acc. to IEC 60228.
Insulation	PVC core insulation (halogen-free FRNC/PE variant available).
Stranding	Two pairs, star-quad stranded (bus pair + spare pair); cores colour-coded (red/black bus, white/yellow spare).
Screen	Collective (overall) screen of aluminium/polyester (Al/PET) foil in contact with a tinned copper drain wire (CAM).
Sheath	Outer sheath green, the KNX-standard colour; PVC (flame-retardant IEC 60332-1-2), or halogen-free FRNC/LSZH in the halogen-free variant.

ELECTRICAL & THERMAL PROPERTIES

Peak operating voltage	250 V (cable rating; the KNX bus itself is SELV, typ. 21-30 V DC, not for power distribution).
Insulation strength / test voltage	4 kV core/core (KNX verification for shared routing with mains circuits).
Conformity	Acc. to the KNX specification; system standard EN 50090.
Standard	Base construction DIN VDE 0815 (J-Y(St)Yh); flame test IEC 60332-1-2; halogen-free variant acc. to IEC 60754-1.
Conductor resistance	max. 36.6 Ω /km per conductor (loop max. 73.2 Ω /km) at 20 °C.
Mutual capacitance	max. 120 nF/km.
Insulation resistance	min. 100 M Ω $\times$ km (0.1 G Ω $\times$ km).
Max. conductor temperature	+70 °C.
Permitted temperature, fixed	-30 °C to +70 °C.
Min. bending radius, fixed	10 $\times$ overall diameter.
Reaction to fire (CPR)	Eca (EN 50575, PVC version); Cca on request for the halogen-free version.

DIMENSIONS & TECHNICAL DATA

Pairs × mm	Cond. R @20°C (Ω/km)	Nominal O.D. (mm)	Weight (kg/km)
2 × 0.8	36.6	6.6	54

The pairs column lists number of pairs × conductor diameter; every pair is 2 × 0.8 mm solid bare copper (0.8 mm diameter ~0.5 mm²). Conductor resistance is per conductor at 20 °C (loop resistance max. 73.2 Ω/km). The standard KNX construction is 2 × 2 × 0.8; a 4 × 2 × 0.8 (double-pair) variant is also available. Nominal outer diameter and weight are the manufacturer values of the leading reference source (green PVC/FRNC sheath); all figures are indicative and non-binding.