



AS-Interface, ISOBUS &amp; KNX Building Bus Cables

# KNX / EIB

## KNX/EIB Building Automation Cable

EN 50090 / VDE 0815 2×2×0.8 mm (Red/Black + White/Yellow) 4 kV test-voltage

KNX / EIB



EN 50090 · KNX TP1 Certified

2×2×0.8 mm Star-Quad · ≤73.2 Ω/km

4.0 kV AC Test · PVC &amp; LSZH Cca

### Application

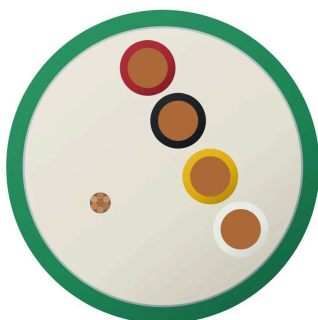
KNX / EIB Building Automation Cable is the KNX Association certified TP1 (Twisted Pair 1, 9600 bps SELV) installation cable in J-Y(St)Y 2×2×0.8 mm (PVC) and J-H(St)H 2×2×0.8 mm (LSZH halogen-free) Star-Quad constructions, featuring Ø 0.80 mm solid bare

**Typical uses:** Commercial office & hotel automation, Hospitals, airports & public buildings, HVAC, lighting (DALI) & blind control, Smart metering & building BMS

### Construction



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Cross-section, not to scale

|   |                                          |                           |
|---|------------------------------------------|---------------------------|
| 1 | Solid bare copper conductors (Ø 0.80 mm) | DIN VDE 0815 / KNX Vol. 9 |
| 2 | Core insulation (PVC or Halogen-Free)    | VDE 0815                  |
| 3 | Static screen (Al/PET + 0.4 mm drain)    |                           |
| 4 | 4 kV tested outer sheath (RAL 6018)      | EN 50090 / EN 50575       |

Technical data

Typical values

|                                    |                                             |                                     |                                         |
|------------------------------------|---------------------------------------------|-------------------------------------|-----------------------------------------|
| Characteristic impedance @ 100 kHz | ≈ 100 Ω (KNX TP1 9600 bps base-band bus)    | Max. DC loop resistance @ 20 °C     | ≤ 73.2 Ω/km (≤ 36.6 Ω/km per conductor) |
| Mutual capacitance @ 800 Hz        | ≤ 100 nF/km (typical 65–75 pF/m)            | Insulation resistance @ 20 °C       | ≥ 100 MΩ·km                             |
| High-voltage dielectric test       | 4.0 kV AC (outer sheath test per EN 50090)  | Bus operating voltage               | 29–30 V DC SELV (300 V peak rating)     |
| Operating temp. (fixed)            | -30 °C to +70 °C                            | Installation temperature            | -5 °C to +50 °C                         |
| Nominal outer diameter             | 6.2 mm ± 0.3 mm (2×2×0.8 mm)                | Min. bending radius                 | 7.5 × D fixed · 12.5 × D during pulling |
| Flame retardancy & CPR             | IEC 60332-1-2 (Eca) · EN 50399 Cca-s1,d1,a1 | Halogen-free & low smoke (J-H(St)H) | IEC 60754-1/2 · IEC 61034-2             |
| Standards                          | EN 50090-2-2 · ISO/IEC 14543-3 · KNX        |                                     |                                         |

Sizes

5 standard constructions

Tick the sizes you need and send this page to info@tebaoflex.com or WhatsApp +86 185 9591 3361.

| Order designation                                                       | Configuration                | Conductor size       | Outer Ø ≈ mm | Copper kg/km | Weight ≈ kg/km | Min. bend R fixed mm |
|-------------------------------------------------------------------------|------------------------------|----------------------|--------------|--------------|----------------|----------------------|
| Standard KNX / EIB configurations 5 sizes                               |                              |                      |              |              |                |                      |
| <input type="checkbox"/> KNX J-Y(St)Y 2×2×0.8 mm Green PVC (CPR Eca)    | 2×2×0.8 mm (PVC Green Eca)   | Ø 0.80 mm (0.50 mm²) | 6.2          | 21           | 53             | 50                   |
| <input type="checkbox"/> KNX J-H(St)H 2×2×0.8 mm Green LSZH (CPR Cca)   | 2×2×0.8 mm (LSZH Green Cca)  | Ø 0.80 mm (0.50 mm²) | 6.3          | 21           | 56             | 50                   |
| <input type="checkbox"/> KNX J-H(St)H 2×2×0.8 mm Green LSZH (CPR B2ca)  | 2×2×0.8 mm (LSZH Green B2ca) | Ø 0.80 mm (0.50 mm²) | 6.5          | 21           | 60             | 52                   |
| <input type="checkbox"/> KNX J-Y(St)Y 1×2×0.8 mm Compact Green PVC      | 1×2×0.8 mm (1-Pair Compact)  | Ø 0.80 mm (0.50 mm²) | 5.4          | 11           | 38             | 43                   |
| <input type="checkbox"/> KNX J-Y(St)Y2Y 2×2×0.8 mm Underground Black PE | 2×2×0.8 mm (Underground PE)  | Ø 0.80 mm (0.50 mm²) | 7.8          | 21           | 74             | 62                   |

– Outer diameters and weights are nominal factory values subject to ±5 % manufacturing tolerance per EN 50090 / ISO/IEC 14543-3 (KNX TP1 / VDE 0815).

Impedance, capacitance & attenuation

5 sizes

| Configuration                | Impedance Z0 | Max. DC R @ 20 °C Ω/km | Mutual C pF/m ≈ | VoP % | Attenuation @ 20 °C dB/100m | Dielectric test V |
|------------------------------|--------------|------------------------|-----------------|-------|-----------------------------|-------------------|
| 2×2×0.8 mm (PVC Green Eca)   | 100 Ω        | 73.2                   | 70.0            | 66    | 0.45 dB/100m @ 100 kHz      | 4,000             |
| 2×2×0.8 mm (LSZH Green Cca)  | 100 Ω        | 73.2                   | 70.0            | 66    | 0.45 dB/100m @ 100 kHz      | 4,000             |
| 2×2×0.8 mm (LSZH Green B2ca) | 100 Ω        | 73.2                   | 68.0            | 66    | 0.45 dB/100m @ 100 kHz      | 4,000             |
| 1×2×0.8 mm (1-Pair Compact)  | 100 Ω        | 73.2                   | 70.0            | 66    | 0.45 dB/100m @ 100 kHz      | 4,000             |
| 2×2×0.8 mm (Underground PE)  | 100 Ω        | 73.2                   | 65.0            | 68    | 0.42 dB/100m @ 100 kHz      | 4,000             |

– Transmission values (characteristic impedance Z0, mutual capacitance, VoP, and attenuation) are measured at +20 °C per EN 50090 / ISO/IEC 14543-3 (KNX TP1 / VDE 0815).

## Standards and approvals

- ✓ KNX Association Certified
- ✓ EN 50090 / ISO/IEC 14543-3
- ✓ EN 50575 CPR Eca / Cca / B2ca

## Certifications



Management systems: ISO 9001, ISO 14001, ISO 45001

### Request a quotation

Send the size, length and destination. An application engineer replies within 2 business hours.

WhatsApp / phone

**+86 185 9591 3361**

Email

**info@tebaoflex.com**

Web

**tebaoflex.com/cables/knx-eib-building-automation-cable**



Typical values for this cable type, based on EN 50090 / ISO/IEC 14543-3 (KNX TP1 / VDE 0815). Values for your order are confirmed in the quotation. Subject to change without notice. Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.