



BUS CABLES

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BCB SERIES

High Performance CANBUS
E.L.V BUS / Automation Cable



APPLICATIONS:

Control Area Network (CANBUS) Suitable for use in the area of automation technology where complex controllers and control units are networked.

Industrial Suitable for use in the textile or construction machine industry and medical industries.

CANBUS fixed wiring cables Suitable for indoor use for fixed applications.

CANBUS Drag Chain Cable Suitable for use in energy chains and industrial and outdoor areas subject to harsh environments.

PRODUCT FEATURES:

- ▶ Low capacitance special foam skin polyethylene insulation
- ▶ Special oil resistant SPVC (CANBUS fixed wiring series)
- ▶ Good reverse bending strength microbe and hydrolysis resistant PUR Sheath (CANBUS drag chain series)
- ▶ UV stabilised
- ▶ Flame retardant
- ▶ Good elongation at break (CANBUS drag chain series)
- ▶ Good dielectric properties (CANBUS drag chain series)
- ▶ Heat, oil and chemical resistant (See *Technical Section*)

CONSTRUCTION:

Conductor Annealed plain copper stranded (Class 2).

Insulation PE polyethylene.

Screening Tinned copper braided screen.

Sheath PVC or PUR.

CHARACTERISTICS:

Operating Temperature Range Fixed -40°C to 70°C.

Maximum Conductor Temperature 70°C.

Nominal Voltage 250V.

Minimum Bending Radius Fixed 8 x cable diameter (Fixed wiring CANBUS cables) / Flexible 7.5 x cable diameter (CANBUS drag chain cables).

Sheath Colour Violet or Grey (Also available in intrinsically safe Blue on request).

Standard Core Colours 1 Pair – White, Brown
4 Core – White/Brown and Green/Yellow.

Relevant Standards Profibus acc. To DIN 19245 T3 and EN50170, UL Style 2571, **RoHS** Compliant.

Electrical Data	CANBUS Fixed Wiring (Indoor) 0.22mm ²	CANBUS Fixed Wiring (Indoor) 0.5mm ²	CANBUS Drag Chain (Industrial)
Characteristic Impedance	120 Ω +/- 10%	120 Ω +/- 10%	120 Ω +/- 10%
Conductor Resistance (max)	186 Ω/km	186 Ω/km	186 Ω/km
Insulation Resistance	1.0 GΩ x km min	1.0 GΩ x km min	1.0 GΩ x km min
Mutual Capacitance	40 nF/km nom	40 nF/km nom	40 nF/km nom
Test Voltage	1.5kV	1.5kV	1.5kV

Code	No. of Cores x Size (mm ²)	Nearest AWG	Approx. Overall Diameter (mm)	Approx. Weight (Kg/Km)	Outer Sheath Material
CANBUS FIXED WIRING (INDOOR)					
BCB01/2/0.22	1 PAIR 0.22	24	5.4	16	SPVC
BCB02/2/0.22	2 PAIR 0.22	24	6.9	21	SPVC
BCB04/0.5	4 x 0.5	20	8.5	44	SPVC
BCB01/2/0.5	1 PAIR 0.5	20	7.0	30	SPVC
CANBUS DRAG CHAIN (INDUSTRIAL)					
BCBDC01/2/0.25	1 PAIR 0.25	24	6.2	18	PUR
BCBDC04/0.25	4 x 0.25	24	6.9	21	PUR

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BDV SERIES

High Performance Devicenet Trunk & Drop BUS Cable



APPLICATIONS:

Devicenet Devicenet is a BUS system developed by Allen Bradley (Rockwell Automation). These cables are used to interconnect various industrial devices, such as SPS controls or limit switches.

Devicenet Indoor Suitable for indoor fixed applications.

Devicenet Drag Chain (Industrial) Suitable for drag/energy chain applications.

PRODUCT FEATURES:

- ▶ Low capacitance special foam skin polyethylene insulation
- ▶ Special oil resistant SPVC (BDV fixed wiring series)
- ▶ Good reverse bending strength microbe and hydrolysis resistant PUR Sheath (BDVDC drag chain series)
- ▶ UV stabilised
- ▶ Flame retardant
- ▶ Good tensile strength, tearing strength and abrasion resistance (BDVDC drag chain series)
- ▶ Good elongation at break (BDVDC drag chain series)
- ▶ Good dielectric properties (BDVDC drag chain series)
- ▶ Heat, oil and chemical resistant (*See Technical Section*)

CONSTRUCTION:

Conductor Annealed tinned copper stranded high flexibility (Class 5).

Insulation Data pair: Polyethylene. Power supply pair: SPVC or PUR.

Screening Collective shield of aluminium/polyester tape c/w tinned copper stranded drain wire and overall tinned copper braided screen.

Sheath PVC or PUR.

CHARACTERISTICS:

Operating Temperature Range -20°C to 80°C (PVC Sheath)
-40°C to 80°C (PUR Sheath).

Maximum Conductor Temperature 80°C.

Nominal Voltage 300V.

Minimum Bending Radius Fixed 15 x cable diameter.
(Fixed wiring devicenet cables) / Flexible 5 x cable diameter
(Devicenet drag chain cables).

Sheath Colour Grey (also available in intrinsically safe Blue).

Standard Core Colours 1 Pair – Blue, White.

1 Pair Power – Red, Black.

Relevant Standards ODVA Devicenet, UL Style: CMG 750C PLTC FT4 (PVC Sheath), UL Style: CMX 750C CL2X (PUR Sheath), CSA Standard CEC:CMG FT4 (1 Pair 18AWG+ 1 Pair 15AWG), CSA Standard CSA FT4 (1Pair 24AWG+ 1 Pair 22AWG), **RoHS** Compliant.

Electrical Data	Devicenet (Trunk) 1 Pair 18AWG + 1 Pair 15AWG	Devicenet (Drop) 1 Pair 24AWG + 1 Pair 22AWG
Characteristic Impedance	120 Ω +/- 10%	120 Ω +/- 10%
Conductor Resistance	45 Ω/km (Loop)	184 Ω/km (Loop)
Insulation Resistance	0.20 GΩ x km min	0.20 GΩ x km min
Mutual Capacitance	39.8 nF/km nom	39.4 nF/km nom
Test Voltage	2.0kV	2.0kV
Attenuation	125 kHz < 0.42 dB/km 125 kHz < dB/km	500 kHz < 0.81 dB/km 500 kHz < dB/km

Code	No. of Cores x Size (mm ²)	Nearest AWG	Approx. Overall Diameter (mm)	Approx. Weight (Kg/Km)	Outer Sheath Material
DEVICENET FIXED WIRING (INDOOR)					
BDV18/15	(Trunk) 1 Pair 0.8 (DATA) + 1 Pair 1.6 (POWER)	1 Pair 18AWG + 1 Pair 15AWG	12.2	185	SPVC
BDV24/22	(Drop) 1 Pair 0.22 (DATA) + 1 Pair 0.34 (POWER)	1 Pair 24AWG + 1 Pair 22AWG	6.9	68	SPVC
DEVICENET DRAG CHAIN (INDUSTRIAL)					
BDVDC18/15	(Trunk) 1 Pair 0.8 (DATA) + 1 Pair 1.6 (POWER)	1 Pair 18AWG + 1 Pair 15AWG	12	185	PUR
BDVDC24/22	(Drop) 1 Pair 0.22 (DATA) + 1 Pair 0.34 (POWER)	1 Pair 24AWG + 1 Pair 22AWG	7.0	68	PUR

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BPB SERIES

High Performance Profibus E.L.V L2 BUS Cable

APPLICATIONS:

Process Field BUS (Profibus) Used for interconnection for L2-BUS components. Suitable for use in cell and field areas. Used for the information exchange between different automation systems as well as communication with the connected decentralized field units and where serial BUS systems are used.

Industrial Suitable for use in the textile or construction machine industry and medical industries.

Profibus L2 Indoor Suitable for indoor fixed applications.

Profibus L2 Drag Chain (Industrial) Suitable for drag/energy chain applications.

Profibus L2 Torsion & Festoon Suitable for robotic, crane and hoist applications.

Profibus L2 Long Distance & Hazardous Areas Suitable for use for fixed installation over long distances such as PA installations. Also suitable for hazardous areas requiring an intrinsically safe circuit.

PRODUCT FEATURES:

- ▶ Low capacitance special foam skin polyethylene insulation
- ▶ Special oil resistant SPVC (BPBI series)
- ▶ Tear, notch, pressure and wear resistance PUR sheath (BPBDC & BPBTF Series)
- ▶ Good reverse bending strength microbe and hydrolysis resistant (BPBDC & BPBTF Series)
- ▶ Good tensile strength, tearing strength and abrasion resistance (BPBTF Series)
- ▶ UV stabilised
- ▶ Flame retardant
- ▶ Good elongation at break (BPBTF Series)
- ▶ Good dielectric properties (BPBTF Series)
- ▶ Heat, oil and chemical resistant (See *Technical Section*)

See over for full product table ▶



CONSTRUCTION:

Conductor Annealed plain copper stranded (Class 2).

Insulation Polyethylene.

Screening Collective shield of aluminum/polyester tape c/w tinned copper stranded drain wire and overall tinned copper braided screen.

Sheath SPVC or PUR.

CHARACTERISTICS:

Operating Temperature Range Fixed -40°C to 70°C.

Maximum Conductor Temperature 70°C.

Nominal Voltage 250V.

Minimum Bending Radius Fixed 10 x cable diameter (single strand profibus cables) / Flexible 15 x cable diameter (multi stranded profibus cables).

Sheath Colour Violet or Grey (also available in intrinsically safe Blue).

Standard Core Colours Red and Green.

Relevant Standards Profibus acc. To DIN 19245 T3 and EN50170, UL Style 2571, **RoHS** Compliant.

BPB SERIES continued

Electrical Data	Profibus L2 Indoor	Profibus L2 Drag Chain	Profibus L2 Torsion & Festoon
Characteristic Impedance	150 Ω +/- 10%	150 Ω +/- 10%	150 Ω +/- 10%
Conductor Resistance	55 Ω/km	55 Ω/km	49 Ω/km
Insulation Resistance	1.0 GΩ x km min	1.0 GΩ x km min	1.0 GΩ x km min
Mutual Capacitance	30.0 nF/km nom	30.0 nF/km nom	29.0 nF/km nom
Test Voltage	1.5kV	1.5kV	3.6kV
Attenuation	9.6 kHz < 2.5 dB/km	9.6 kHz < 3.0 dB/km	9.6 kHz < 3.0 dB/km
	36.4 kHz < 4.0 dB/km	36.4 kHz < 5.0 dB/km	38.4 kHz < 4.0 dB/km
	4.0 MHz < 22.0 dB/km	4.0 MHz < 25.0 dB/km	4.0 MHz < 25.0 dB/km
	16.0 MHz < 42.0 dB/km	16.0 MHz < 52.0 dB/km	16.0 MHz < 49.0 dB/km

Code	No. of Cores x Size (mm ²)	Nearest AWG	Approx. Overall Diameter (mm)	Approx. Weight (Kg/Km)	Outer Sheath Material
PROFIBUS FIXED WIRING (INDOOR)					
BPBI01/2/0.64	1PAIR 0.64	19	7.8	70	SPVC
PROFIBUS L2 DRAG CHAIN (INDUSTRIAL)					
BPBDC01/2/0.64	1PAIR 0.64	19	8.0	65	PUR
PROFIBUS L2 TORSION AND FESTOON					
BPBTF01/2/0.80	1PAIR 0.80	18	8.0	66	PUR

BIB SERIES

High Performance Interbus
E.L.V BUS/Automation Cable



APPLICATIONS:

Interbus These cables are suitable for Interbus S systems to network sensors and actuators with all standard automation instruments.

PRODUCT FEATURES:

- ▶ Low capacitance polyethylene insulation
- ▶ Special oil resistant SPVC
- ▶ UV stabilised
- ▶ Flame retardant
- ▶ Heat, oil and chemical resistant (See Technical Section)

CONSTRUCTION:

Conductor Annealed plain copper stranded high flexibility (Class 5).

Insulation Polyethylene.

Screening Plain copper braided screen.

Sheath PVC.

CHARACTERISTICS:

Operating Temperature Range Fixed -40°C to 70°C.

Maximum Conductor Temperature 70°C.

Nominal Voltage 250V.

Minimum Bending Radius Fixed 15 x cable diameter.

Sheath Colour Turquoise.

Standard Core Colours White/Brown, Green/Red, Yellow/Green + (Blue, Red, Green/Yellow).

Relevant Standards Interbus specification 2.0, IEC 61158, UL Style 2571, **RoHS** Compliant.

Electrical Data	
Characteristic Impedance	120 Ω +/- 15 Ω
Conductor Resistance	96 Ω/km
Insulation Resistance	1.0 GΩ x km min
Mutual Capacitance	60.0 nF/km nom
Test Voltage	1.0kV
Attenuation	256 kHz < 1.5 dB/100m
	772 kHz < 2.4 dB/100m
	1 MHz < 2.7 dB/100m
	4 MHz < 5.2 dB/100m
	10 MHz < 8.4 dB/100m
	16 MHz < 11.2 dB/100m
	20 MHz < 11.9 dB/100m

Code	No. of Cores x Size (mm ²)	Nearest AWG	Approx. Overall Diameter (mm)	Approx. Weight (Kg/Km)
INTERBUS FIXED WIRING (INDOOR)				
BIB03/2/0.22	3 Pair 0.22	24	7.0	70
BIB03/2/0.22+3/1.0	3 Pair 0.22 + 3 x 1.0	24	8.0	96

BASI SERIES

High Performance ASI E.L.V BUS Cable

APPLICATIONS:

Actuator Sensor Interface This cable is designed for connecting simple field I/O devices such as actuators, sensors, rotary encoders, push buttons, analogue inputs and outputs and valve position sensors.

Industrial Applications Suitable for industrial use on conveyor controls, packaging machines, process control valves, bottling plants, electrical distribution systems, airport carousels, elevators and food production lines.

PRODUCT FEATURES:

- ▶ Special oil resistant sheath materials
- ▶ Quick easy installation with BASI modules (sheath piercing)
- ▶ Tear, notch, pressure and wear resistance PUR sheath (BASIP series)
- ▶ UV stabilised
- ▶ Flame retardant
- ▶ Good elongation at break (BASIP series)
- ▶ Good dielectric properties (BASIP series)
- ▶ Heat, oil and chemical resistant (See Technical Section)



CONSTRUCTION:

Conductor Annealed tinned copper stranded high flexibility (Class 5).

Insulation Special rubber, polyolefin or TPE.

Sheath EPDM, PUR or TPE.

CHARACTERISTICS:

Operating Temperature Range -40°C to 85°C.

Maximum Conductor Temperature 85°C.

Nominal Voltage 300V.

Minimum Bending Radius 30mm.

Sheath Colour Yellow or Black.

Standard Core Colours Blue, Brown.

Relevant Standards Profibus acc. To DIN 19245 T3 and EN50170, UL Style 2571, **RoHS** Compliant.

Electrical Data

Conductor Resistance 27.4 Ω/km (Loop)

Insulation Resistance 1.0 GΩ x km min

Test Voltage 1.5kV

Code	No. of Cores x Size (mm ²)	Nearest AWG	Approx. Weight (Kg/Km)	Insulation Material	Outer Sheath Material	Nominal Voltage
BASIE02/1.5Y	2 x 1.5	15	70	SER Rubber	Yellow EPDM	32
BASIE02/1.5B	2 x 1.5	15	70	SER Rubber	Black EPDM	42
BASIP02/1.5Y	2 x 1.5	15	70	Polyolefin	Yellow PUR	32
BASIP02/1.5B	2 x 1.5	15	70	Polyolefin	Black PUR	42
BASIUL02/1.5Y	2 x 1.5	15	70	TPE	TPE	32
BASIUL02/1.5B	2 x 1.5	15	70	TPE	TPE	42