

BUS-CABLES

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02YS(St)CY

PROFIBUS

Bus-cable for Profibus

Permanent installation indoor • 1 x 2 x 0,64 / 2,50



APPLICATION

The cable can be used as connecting cable in general machinery construction. It is used as connection cable between bus segments. Cost-efficient plant and machinery wiring is the great advantage of bus technology. Only the information-related component responds to the signal and processes it. The cable is applicable for indoor installation.

STANDARDS

DIN 19245 T3; EN 50170 (acc. to Profibus specifications)

CONSTRUCTION

Conductor: copper wire, solid, bare (AWG 22/1)

Core insulation: Foam-Skin PE

Core identification: red, green

Core stranding: 2 cores and 2 drain wires layed up

Lapping: plastic foil

Screen: Al/PETP compound foil; tinned copper wire braid (visual covering appr. 80%)

Sheath: PVC; colour: violett RAL 4001

ELECTRICAL CHARACTERISTICS

(Conductor) loop resistance max.	115 Ω/km
Insulation resistance min.	1 GΩ x km
Characteristic impedance (3 – 20 MHz)	150 ± 15 Ω
Mutual capacitance nom.	30 nF/km
Attenuation max. at	9,6 kHz 2,5 dB/km
	38,4 kHz 4,0 dB/km
	4,0 MHz 22,0 dB/km
	16,0 MHz 42,0 dB/km
Peak operating voltage	250 V
Test voltage	1500 V

THERMAL & MECHANICAL PROPERTIES

Temperature range stationary	-30°C to +70°C
Cable diameter	7,5 ± 0,2 mm
Cable weight appr.	54 kg/km
Copper index	25kg/km
Minimum bending radius stationary	65 mm

Minimum order quantities may be required where the requested product does not meet our standard manufacturing minimums or is not indicated in the order, Shipping will always be made in the standard manufactured lengths or unless precisely requested.

We reserve changes which serve technical progress • Copper base 150,00 € / 100,00 kg
Price upon quantity-specific request

02YS(St)CY2Y

PROFIBUS

Bus-cable for Profibus

Permanent installation outdoor • 1 x 2 x 0,64



APPLICATION

The cable can be used as connecting cable in general machinery construction. It is used as connection cable between bus segments. Cost-efficient plant and machinery wiring is the great advantage of bus technology. Only the information-related component responds to the signal and processes it. The cable is applicable for indoor and outdoor installation.

STANDARDS

DIN 19245 T3; EN 50170 (acc. to Profibus specifications)

CONSTRUCTION

Conductor: copper wire, solid, bare (AWG 22/1)

Core insulation: Foam-Skin PE

Core identification: red, green

Core stranding: 2 cores and 2 drain wires layed up

Lapping: plastic foil

Screen: Al/PETP compound foil; tinned copper wire braid (visual covering appr. 80%)

Inner sheath: PVC, colour: violet RAL 4001

Outer sheath: PE, colour: black RAL 9005

ELECTRICAL CHARACTERISTICS

(Conductor) loop resistance max.	115 Ω/km
Insulation resistance min.	1 GΩ x km
Char. impedance (3–20 MHz)	150 Ω ± 15 Ω
Mutual capacitance nom.	30 nF/km
Attenuation max. at	9,6 kHz 2,5 dB/km
	38,4 kHz 4,0 dB/km
	4,0 MHz 22,0 dB/km
	16,0 MHz 42,0 dB/km
Peak operating voltage	250 V
Test voltage	1500 V

THERMAL & MECHANICAL PROPERTIES

Temperature range stationary	-30°C to +70°C
Cable diameter	10,2 ± 0,2 mm
Cable weight appr.	95 kg/km
Copper index	25 kg/km
Minimum bending radius stationary	120 mm
UV resistant	

Minimum order quantities may be required where the requested product does not meet our standard manufacturing minimums or is not indicated in the order, Shipping will always be made in the standard manufactured lengths or unless precisely requested.

We reserve changes which serve technical progress • Copper base 150,00 € / 100,00 kg
Price upon quantity-specific request

02YS(St)C11Y

PROFIBUS

Bus-cable for Profibus

drag chain appliaction • 1 x 2 x 0,64/2,50



APPLICATION

The cable can be used as connecting cable in general machinery construction. It is used as connecting cable between bus segments. Cost-efficient plant and machinery wiring is the great advantage of bus technology. Only the information-related component responds to the signal and processes it. The cable is applicable for use in drag chains due to strand construction and the PUR sheath.

STANDARDS

DIN 19245 T3; EN 50170 (acc. to Profibus specifications)

CONSTRUCTION

Conductor: copper strand, bare (AWG24/19)

Core insulation: Foam-Skin PE

Core identification: red, green

Core stranding: 2 cores and 2 drain wires layed up

Lapping: fleece

Screen: Al/PETP compound foil; tinned copper wire braid (visual covering appr. 80%)

Sheath: PUR; colour: violet RAL 4001

ELECTRICAL CHARACTERISTICS

(Conductor) loop resistance max.	145 Ω/km
Insulation resistance min.	1 GΩx km
Char. impedance (3–20 MHz)	150 ± 15 Ω
Mutual capacitance nom.	30 nF/km
Attenuation max. at	9,6 kHz 3,0 dB/km
	38,4 kHz 5,0 dB/km
	4,0 MHz 25,0 dB/km
	16,0 MHz 49,0 dB/km
Peak operating voltage	250 V
Test voltage	1500 V

THERMAL & MECHANICAL PROPERTIES

Temperature range	-30°C to +70°C
Cable diameter	8,0 ± 0,2 mm
Cable weight appr.	64 kg/km
Copper index	28 kg/km
Min. bending radius during installation	68 mm

Minimum order quantities may be required where the requested product does not meet our standard manufacturing minimums or is not indicated in the order, Shipping will always be made in the standard manufactured lengths or unless precisely requested.

We reserve changes which serve technical progress • Copper base 150,00 € / 100,00 kg
Price upon quantity-specific request

02YSY(St)CY FC

PROFIBUS

Bus-cable for Profibus

Fast Connect • 1 x 2 x 0,64



APPLICATION

The cable can be used as connecting cable in general machinery construction. It is used as connecting cable between bus segments. Cost-efficient plant and machinery wiring is the great advantage of bus technology. Only the information-related component responds to the signal and processes it. Together with the appropriate tools and connectors the cable is applicable for quick-assembly technology.

STANDARDS

DIN 19245 T3; EN 50170 (acc. to Profibus specifications)

CONSTRUCTION

Conductor: copper wire, solid, bare (AWG 22/1)

Core insulation: Foam-Skin PE

Core identification: red, green

Core stranding: 2 cores layed up

Sheath inside: filling compound

Lapping: plastic foil

Screen: Al/PETP compound foil; tinned copper wire braid (visual covering appr. 80%)

Sheath: PVC; colour: violet RAL 4001

ELECTRICAL CHARACTERISTICS

(Conductor) loop resistance max.	115 Ω/km
Insulation resistance min.	1 GΩ x km
Characteristic impedance (3–20 MHz)	150 ± 15 Ω
Mutual capacitance nom.	30 nF/km
Attenuation max. at	9,6 kHz 2,5 dB/km
	38,4 kHz 4,0 dB/km
	4,0 MHz 22,0 dB/km
	16,0 MHz 42,0 dB/km
Peak operating voltage	250 V
Test voltage	1500 V

THERMAL & MECHANICAL PROPERTIES

Temperature range stationary	-30°C to +70°C
Cable diameter	7,8 ± 0,2 mm
Cable weight appr.	70 kg/km
Copper index	25 kg/km
Minimum bending radius stationary	80 mm

Minimum order quantities may be required where the requested product does not meet our standard manufacturing minimums or is not indicated in the order, Shipping will always be made in the standard manufactured lengths or unless precisely requested.

We reserve changes which serve technical progress • Copper base 150,00 €/100,00 kg
Price upon quantity-specific request

Li02YSCY

PA BUS

Fieldbus-cable for Profibus field network

1 x 2 x 1,0 PA



APPLICATION

The cable provides a cost-efficient solution for connecting various components in automation equipment. It serves especially for the connection of sensors/actuators in process automation (PA). The cable is applicable for fixed installation in dry and moist rooms.

STANDARDS

DIN 19245; EN 50170

CONSTRUCTION

Conductor: copper strand, bare, VDE 0295 Kl. 5

Core insulation: Foam-Skin PE

Core identification: red, green

Core stranding: 2 cores and 2 drain wires layed up

Lapping: plastic foil

Screen: tinned copper wire braid (visual covering appr. 80%)

Sheath (inherently safe): PVC; colour: blue RAL 5015

Sheath (not inherently safe): PVC, colour: black RAL 9005

ELECTRICAL CHARACTERISTICS

(Conductor) loop resistance max.	44 Ω/km
Insulation resistance min.	1 GΩ x km
Characteristic impedance (31,25 kHz)	100 ± 20 Ω
Mutual capacitance nom.	50 nF/km
Attenuation max. at	39 kHz 3,0 dB/km
	100 kHz 3,5 dB/km
	1,0 MHz 12,0 dB/km

THERMAL & MECHANICAL PROPERTIES

Temperature range	-20°C to +70°C
Cable diameter	8,0 ± 0,2 mm
Cable weight appr.	73 kg/km
Copper index	45 kg/km
Minimum bending radius stationary	80 mm

Minimum order quantities may be required where the requested product does not meet our standard manufacturing minimums or is not indicated in the order, Shipping will always be made in the standard manufactured lengths or unless precisely requested.

We reserve changes which serve technical progress • Copper base 150,00 € / 100,00 kg
Price upon quantity-specific request

Li2YCY

INTERBUS

Long distance-BUS (2-cores system)

1/2/3 x 2 x 0,22



APPLICATION

The cable provides a cost-efficient solution for connecting various components in automation equipment. The basic element is a twisted two-wire line. Elaborate parallel wiring can be avoided since all bus components are bonded over the basic element.

STANDARDS

DIN 19258

CONSTRUCTION

Conductor: copper strand, bare (AWG 24/7)

Core insulation: PE

Core identification: acc. to DIN 47100

Core stranding: 2 cores to pair, pairs layed up to cable core

Lapping: plastic foil

Screen: tinned copper wire braid (visual covering appr. 80%)

Sheath: PVC; colour: violet RAL 4001

Minimum order quantities may be required where the requested product does not meet our standard manufacturing minimums or is not indicated in the order, Shipping will always be made in the standard manufactured lengths or unless precisely requested.

ELECTRICAL CHARACTERISTICS

(Conductor) loop resistance max.		186 Ω/km
Insulation resistance min.		5 GΩ x km
Characteristic impedance (1 MHz)		100 Ω ± 15 Ω
Mutual capacitance nom.		50 nF/km
Attenuation max. at	0,256 MHz	1,5 dB/100 m
	0,772 MHz	2,4 dB/100 m
	1 MHz	2,7 dB/100 m
	4 MHz	5,2 dB/100 m
	10 MHz	8,4 dB/100 m
	16 MHz	11,2 dB/100 m
Bit rates/Lengths	9,6–93,75 kBit/s	1200 m
	187,5 kBit/s	max. 1000 m
	500 kBit/s	max. 400 m
	10 MBit/s	max. 10 m

THERMAL & MECHANICAL PROPERTIES

Temperature range	-30°C to +70°C
Minimum bending radius stationary	10 x diameter

dimension	diameter appr. mm	cable weight ca. kg/km	copper index kg/km
1 x 2 x 0,22	5,7	30	15
2 x 2 x 0,22	7,1	50	28
3 x 2 x 0,22	7,2	70	36,5

We reserve changes which serve technical progress • Copper base 150,00 € / 100,00 kg
Price upon quantity-specific request

Li02YSCY

CAN BUS

Fieldbus-system CAN • 1PR/2PR x ... 0,22 / 0,34 / 0,5 / 0,75

Permanent application, max. bitrate 1MBit/s



APPLICATION

Controller Area Network (CAN) serves as variable fieldbus system for industry. In automation complex sensors, actuators and control units are interconnected. The cables are applicable for fixed installation in dry and moist rooms.

STANDARDS

ISO 11898, EN 50170

UL/CSA Approbation Type CMX

CONSTRUCTION

Conductor: copper strand, bare

Core insulation: Foam-Skin PE

Core identification: acc. to DIN 47100

Core stranding: 1PR: 2 cores twinned to pairs; 2PR: 2 cores to pair, pairs layed up to cable core

Lapping: plastic foil

Screen: tinned copper wire braid (visual covering appr. 80%)

Sheath: PVC; colour: violet RAL 4001

Minimum order quantities may be required where the requested product does not meet our standard manufacturing minimums or is not indicated in the order, Shipping will always be made in the standard manufactured lengths or unless precisely requested.

ELECTRICAL CHARACTERISTICS

Loop resistance (0,22) max.	186 Ω/km
Loop resistance (0,34) max.	116 Ω/km
Loop resistance (0,5) max.	79 Ω/km
Loop resistance (0,75) max.	52 Ω/km
Insulation resistance min.	1 GΩ x km
Characteristic impedance (1 MHz)	120 Ω ± 15 %
Mutual capacitance nom.	40 nF/km
Peak operating voltage	250V
Test voltage	1500V

THERMAL & MECHANICAL PROPERTIES

Temperature range	-30°C to +70°C
Minimum bending radius stationary	10 x diameter

dimension	diameter appr. mm	cable weight ca. kg/km	copper index kg/km
1 x 2 x 0,22 AWG24/7	6,0	42	16,7
1 x 2 x 0,34 AWG22/7	6,8	55	22,1
1 x 2 x 0,5 AWG20/7	7,5	90	41,3
1 x 2 x 0,75 VDE 0295 Kl. 5	8,7	108	52,7
2 x 2 x 0,22 AWG24/7	7,6	68	34,8
2 x 2 x 0,34 AWG22/7	8,5	88	46,4
2 x 2 x 0,5 AWG20/7	9,7	106	59,4
2 x 2 x 0,75 VDE 0295 Kl. 5	11,8	142	80,6

We reserve changes which serve technical progress • Copper base 150,00 € / 100,00 kg
Price upon quantity-specific request

LiF02YSC11Y-FR

CAN BUS

Fieldbus-system FDP CAN • 1PR/2PR x ... 0,25 / 0,34 / 0,5
Ultraflexible Bus-cable, max. bitrate 1MBit/s



APPLICATION

Controller Area Network (CAN) serves as variable fieldbus system for industry. In automation complex sensors, actuators and control units are interconnected. The cables are applicable for ultraflexible use.

STANDARDS

ISO 11898, EN 50170
 UL/CSA Approbation Typ CMX

CONSTRUCTION

Conductor: copper strand, bare, fine-wired:
 32x0,1 (0,25); 42x0,1 (0,34); 64x0,1 (0,5)
Core insulation: Foam-Skin PE
Core identification: acc. to DIN 47100
Core stranding: 1PR: 2 cores twinned to pairs; 2PR: 2 cores to pair, pairs layed up to cable core
Lapping: fleece
Screen: tinned copper wire braid (visual covering appr. 80%)
Sheath: PUR; colour: violet RAL 4001

Minimum order quantities may be required where the requested product does not meet our standard manufacturing minimums or is not indicated in the order, Shipping will always be made in the standard manufactured lengths or unless precisely requested.

ELECTRICAL CHARACTERISTICS

Loop resistance (0,25) max.	160 Ω/km
Loop resistance (0,34) max.	116 Ω/km
Loop resistance (0,50) max.	79 Ω/km
Insulation resistance min.	1 GΩ x km
Characteristic impedance (1 MHz)	120 Ω ± 15 %
Mutual capacitance nom.	40 nF/km
Peak operating voltage	250 V
Test voltage	1500 V

THERMAL & MECHANICAL PROPERTIES

Temperature range	-30°C to +70°C
Min. bending radius during installation	15 x diameter
Flammability	IEC 60332-1-2

dimension	diameter appr. mm	cable weight ca. kg/km	copper index kg/km
1 x 2 x 0,25	6,6	40	17,5
1 x 2 x 0,34	6,8	60	32,8
1 x 2 x 0,5	8,0	74	41,9
2 x 2 x 0,25	8,4	70	41,3
2 x 2 x 0,34	9,6	88	52,4
2 x 2 x 0,5	11,0	100	59,4

We reserve changes which serve technical progress • Copper base 150,00 € / 100,00 kg
 Price upon quantity-specific request

VOKA-LONWORK F/UTP 1x2xAWG 22/1 FRNC**VOKA-LONWORK F/UTP 2x2xAWG 22/1 FRNC****LON BUS****APPLICATION**

Data cable for analogue and digital signal transmission in LON networks and for building automation.

STANDARDS

EN 50288-5-1; EN 50173; ISO/IEC 11801 2nd edition; IEC 61156-5
EN 60332-1-2; EN 61034; EN 50267; IEC 60754-2; IEC 61034

CONSTRUCTION

Conductor: copper, solid, bare, AWG 22/1

Core insulation: PE

Core identification: colour code acc. to IEC 708-1;

1PR: whbu-bu; 2PR: whbu-bu, whor-or

Core stranding: 2 cores twinned to pairs

Screen: plastic-laminated aluminium foil, drain wire (AWG 26, tinned)

Sheath: halogen-free compound (FRNC); colour: white
RAL 9010

CHEMICAL PROPERTIES

IEC 60811-2-1 (IRM 902, 4h at 70°C)

RoHS 2002/95/EC

ELECTRICAL CHARACTERISTICS

Loop resistance max. (VDE 0812)	110 Ω/km
Resistance unbalance max.	5 %
Insulation resistance min. (20 °C)	5 GΩ x km
Characteristic impedance (0,772 MHz)	102 Ω ± 15 %
Characteristic impedance (1–20 MHz)	100 Ω ± 15 %
Mutual capacitance nom.	48 nF/km

Attenuation max. at	0,772 MHz	1,46 dB/100 m
	1 MHz	1,79 dB/100 m
	4 MHz	3,67 dB/100 m
	8 MHz	4,87 dB/100 m
	10 MHz	5,52 dB/100 m
	16 MHz	7,14 dB/100 m
NEXT (2PR)	20 MHz	7,80 dB/100 m
	0,772 MHz	85 dB/100 m
	1 MHz	80 dB/100 m
	4 MHz	78 dB/100 m
	8 MHz	75 dB/100 m
	10 MHz	73 dB/100 m
Relative propagation velocity	16 MHz	70 dB/100 m
	20 MHz	67 dB/100 m
		ca. 0,67 c
Test voltage		700 V

THERMAL & MECHANICAL PROPERTIES

Temperature range stationary	-20 °C to +75 °C
Temperature range during installation	0 °C to +50 °C
Core diameter 1PR	1,62 ± 0,02 mm
Core diameter 2PR	1,39 ± 0,02 mm
Cable diameter 1PR	4,6 ± 0,2 mm
Cable diameter 2PR	6,5 ± 0,2 mm
Min. bending radius stationary	5 x diameter
Min. bending radius during installation	10 x diameter
Maximum traction	80 N

We reserve changes which serve technical progress • Copper base 150,00 € / 100,00 kg
Price upon quantity-specific request

J-Y(St)Yh**J-H(St)Hh****KNX/EIB**

according to KNX/EIB-specification

2 x 2 x 0,8**APPLICATION**

For use in bus systems (EIB - European Installaton Bus) and as ICA cable in power installations. Laying in/on plaster, even in moist and wet rooms. Not approved for power and underground installation.

CONSTRUCTION

Conductor: copper, solid, bare

Core insulation: PVC or halogen-free compound

Core stranding: cores stranded to star-quads

Lapping: plastic foil

Screen: plastic-laminated aluminium foil, drain wire

Sheath: PVC (J-Y(St)Yh) or halogen-free compound (J-H(St)Hh); colour: green RAL 6017

ELECTRICAL CHARACTERISTICS

(Conductor) loop resistance max.	73,2Ω/km
Insulation resistance min.	100 MΩ x km
Mutual capacitance max.	100 nF/km
Capacitance unbalance C ₁ max.	200 pF/100 m
Peak operating voltage	300V
Test voltage conductor - sheath	4 kV 50 Hz 1 Min.

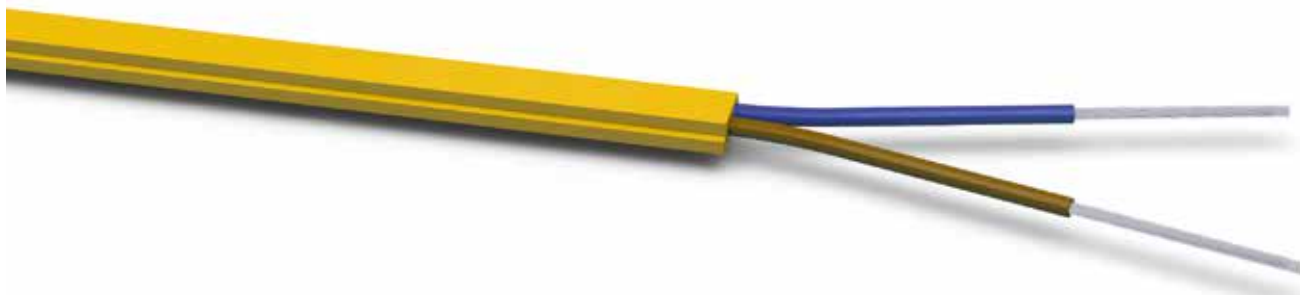
THERMAL & MECHANICAL PROPERTIES

Temperature range stationary	-30°C to +70°C
Cable diameter	6,2 ± 0,2 mm
Cable weight	ca. 64 kg/km
Copper index	21 kg/km
Minimum bending radius	7,5 x diameter

We reserve changes which serve technical progress • Copper base 150,00€ / 100,00 kg
Price upon quantity-specific request

ASI BUS-cable

ASI BUS
Fieldbus-cable
2 x 1,50 mm²



APPLICATION

This fieldbus facilitates simultaneous data and energy transmission. Application in signalling circuits in production facilities and machine tools.

CONSTRUCTION

Conductor: El-copper strand, tinned, 84x0,15 mm (1,50 mm²)

Core insulation: TPE-O

Core identification: bu, bn

Sheath: TPE-O; colour: yellow RAL 1023; imprint: optional

ELECTRICAL CHARACTERISTICS

(Conductor) loop resistance max.	57,1 Ω/km
Insulation resistance min.	(20°C) 20 MΩ x km
Characteristic impedance	100 ± 15 Ω
Capacitance (1 kHz)	80 pF/m
Peak operating voltage	300V
Test voltage core-core min.	2 kV 50 Hz 1 Min.

THERMAL & MECHANICAL PROPERTIES

Temperature range stationary	-40°C to +105°C
Temperature range during installation	-30°C to +105°C
Core diameter	2,5 ± 0,1 mm
Cable diameter	4,0 ± 0,2 mm
Cable grid	3,6 ± 0,2 mm
Cable width 1	10,0 ± 0,2 mm
Cable width 2	6,5 ± 0,2 mm
Shore hardness (A)	56 ± 3

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We reserve changes which serve technical progress • Copper base 150,00 € / 100,00 kg
 Price upon quantity-specific request

VOKA
VOGTLÄNDISCHES
KABELWERK GMBH



CABLES MADE IN GERMANY