09 45 600 01X0

HARTING PROFINET Type A Cable 4-wire, Cat. 5, PVC

PROFINET Type A Cable
4-wire, Cat. 5, PVC

Advantages

- Suitable for PROFINET cabling Category 5 / Class D according to ISO/IEC 11801 respectively EN 50173-1 and ISO/IEC 24702 respectively EN 50173-3
- Capable for fix installation
- Applicable for industrial premises
- RoHS conform, UL listed, flame retardant

General

This data cable is suitable for PROFINET cabling according to type A in industrial premises and areas. It is useable for fix installation. The core is fitted with 4 wires twisted to quad that allows the transmission of Fast Ethernet 10/100Mbit/s.

It is designed for fast assembling with the easy-stripping tool and can be assembled with all HARTING 4-pole RJ45 connectors.

Identification	Part number	Drawing
PROFINET Type A Cable 4-wire, Cat. 5, PVC		
20 m ring	09 45 600 0130	
50 m ring	09 45 600 0140	
100 m ring	09 45 600 0100	
500 m reel	09 45 600 0110	

- Wire: Solid bare copper AWG22/1
- Insulation: PE Ø 1.5 mm
- Inner sheath: Polyvinylchloride (PVC)
- Overall screen: Aluminate foil overlapped, tinned copper wire braid, braid coverage about 90%
- Outer sheath: Polyvinylchloride (PVC), flame retardant

Color code: wh, ye, bu, or
Color of inner sheath: white
Color of outer sheath: green, RAL 6018
Overall diameter: 6.3 mm – 6.7 mm

HARTING PROFINET Type A Cable 4-wire, Cat. 5, PVC

Technical Characteristics

Performance	Category 5 according to EN 50288-2-1:2003, IEC 61156-5:2002
Mechanical Characteristics	
Minimal bending radius	Repeated bending: 7,5 x diameter Single bending: 3 x diameter
Tensile strength	max. 150 N
Electrical Characteristics at 20 °C	
Transfer impedance 10 MHz	10 mOhm/m
Conductor resistance	max. 115 Ohm/km
Insulation resistance	min. 500 MOhm*km
Velocity of propagation	5.3 ns/m
Characteristic impedance at 100 MHz	100 Ohm ± 5 Ohm
Test voltage (wire/wire/screen rms 50 Hz 1min)	2000 V
Chemical Characteristics	
Flame retardant	IEC 60332-1-2
Free of hazardous substances	RoHS 2002/95/EG
Limited oil resistance	
Sunlight resistant	UL 1581 Sec. 1200
Thermal Characteristics	
Permissible temperature range	- 40 °C to + 75 °C
During laying	- 20 °C to + 60 °C
Printing	HARTING INDUSTRIAL ETHERNET STANDARD CABLE CAT 5 PLUS * 22AWG (SHIELDED) (UL) E119100 VERIFIED CAT 5E CMG 75°C or PLTC or AWM 20201 600V FT4 SUN RES * 094560001000100 "sequential length in metres" * "year/internal order number" "HARTING-LOGO"
Weight about	66 kg/km

HARTING PROFINET Type A Cable 4-wire, Cat. 5, PVC

Technical Characteristics

Frequency MHz	Attenuation dB/100m		NEXT dB	
	typ.	Cat 5 max*	typ.	Cat 5 min*
1	1.6	2.1	80	65.3
4	3.2	4.0	75	56.3
10	5.2	6.3	70	50.3
16	6.9	8.0	65	47.2
20	7.8	9.0	63	45.8
31.25	10.5	11.4	60	42.9
62.5	15	16.5	55	38.4
100	19.5	21.3	50	35.3

* EN 50288-2-1:2003

HARTING PROFINET Type B Cable 4-wire, Cat. 5, PVC

09 45 600 01X2

PROFINET Type B Cable
4-wire, Cat. 5, PVC

Advantages

- Suitable for PROFINET cabling Category 5 / Class D according to ISO/IEC 11801 respectively EN 50173-1 and ISO/IEC 24702 respectively EN 50173-3
- Capable flexible cords
- Applicable for industrial premises
- RoHS conform, UL listed, flame retardant

General

This data cable is suitable for PROFINET cabling according to type B in industrial premises and areas. It is useable for flexible cords. The core is fitted with 4 wires twisted to quad that allows the transmission of Fast Ethernet 10/100Mbit/s.

It is designed for fast assembling with the easy-stripping tool and can be assembled with all HARTING 4-pole RJ45 connectors.

Identification	Part number	Drawing
PROFINET Type B Cable 4-wire, Cat. 5, PVC		
20 m ring	09 45 600 0132	
50 m ring	09 45 600 0142	
100 m ring	09 45 600 0102	
500 m reel	09 45 600 0112	

- Wire: Stranded tinned copper AWG22/7
- Insulation: : PE Ø 1.56 mm (±0.03)
- Inner sheath: Polyvinylchloride (PVC)
- Overall screen: aluminate foil overlapped, tinned copper wire braid, braid coverage about 85%
- Outer sheath: Polyvinylchloride (PVC), flame retardant

Color code: wh, ye, bu, or
Color of inner sheath: white
Color of outer sheath: green, RAL 6018
Overall diameter: 6.3 mm – 6.7 mm

HARTING PROFINET Type B Cable 4-wire, Cat. 5, PVC

09 45 600 01X2

Technical Characteristics

Performance	Category 5 according to EN 50288-2-1:2003, IEC 61156-5:2002
Mechanical Characteristics	
Minimal bending radius	Repeated bending: 5 x diameter Single bending: 3 x diameter
Torsional strength	±180° on 1 m, 30,000 cycles
Electrical Characteristics at 20 °C	
Transfer impedance 10 MHz	20 mOhm/m
Conductor resistance	max. 120 Ohm/km
Insulation resistance	min. 500 MOhm*km
Velocity of propagation	5.3 ns/m
Characteristic impedance at 100 MHz	100 Ohm ± 5 Ohm
Test voltage (wire/wire/screen rms 50 Hz 1min)	2000 V
Chemical Characteristics	
Flame retardant	UL 1685 (CSA FT 4)
Free of hazardous substances	RoHS 2002/95/EG
Sunlight resistant	UL 1581 Sec. 1200
Thermal Characteristics	
Permissible temperature range	- 40 °C to + 70 °C
During laying	- 20 °C to + 60 °C
Printing	HARTING INDUSTRIAL ETHERNET STRANDED CABLE CAT 5 PLUS * 22AWG (SHIELDED) (UL) E119100 CMG or PLTC or AWM 2570 80°C 600V FT4 SUN RES * 094560001020200 "sequential length in meters" * "year/internal order number" HARTING-LOGO"
Weight about	68 kg/km

HARTING PROFINET Type B Cable 4-wire, Cat. 5, PVC

09 45 600 01X2

Technical Characteristics

Frequency MHz	Attenuatin dB/100m		NEXT dB	
	typ.	Cat 5 max*	typ.	Cat 5 min*
1	2.1	2.1	80	80
4	4	4	76	76
10	6.3	6.3	70	70
16	8	8	65	65
20	9	9	63	63
31.25	11.4	11.4	60	60
62.5	16.5	16.5	55	55
100	21.3	21.3	50	50

* EN 50288-2-1:2003

HARTING PROFINET Type B Cable 4-wire, Cat. 5, PUR

PROFINET Type B Cable
4-wire, Cat. 5, PUR

09 45 600 01X9

Advantages

- Suitable for PROFINET cabling Category 5 / Class D according to ISO/IEC 11801 respectively EN 50173-1 and ISO/IEC 24702 respectively EN 50173-3
- Capable for flexible cords
- Applicable for industrial premises
- RoHS conform, flame retardant, halogen free

General

This data cable is suitable for PROFINET cabling according to type B in industrial premises and areas. It is useable for flexible cords. The core is fitted with 4 wires twisted to quad that allows the transmission of Fast Ethernet 10/100Mbit/s.

It is designed for fast assembling with the easy-stripping tool and can be assembled with all HARTING 4-pole RJ45 connectors.

Identification	Part number	Drawing
PROFINET Type B Cable 4-wire, Cat. 5, PUR		
20 m ring	09 45 600 0139	
50 m ring	09 45 600 0149	
100 m ring	09 45 600 0109	
500 m reel	09 45 600 0119	

- Wire: Stranded tinned copper AWG22/7
- Insulation: : PE Ø 1.56 mm (±0.03)
- Inner sheath: Thermoplastic Copolymer (FRNC)
- Overall screen: aluminate foil overlapped, tinned copper wire braid, braid coverage about 85 %
- Outer sheath: Polyurethane (PUR), flame retardant, halogen free

Color code: wh, ye, bu, or
Color of inner sheath: white
Color of outer sheath: green, RAL 6018
Overall diameter: 6.3 mm – 6.7 mm

HARTING PROFINET Type B Cable 4-wire, Cat. 5, PUR

09 45 600 01X9

Technical Characteristics

Performance	Category 5 according to EN 50288-2-1:2003, IEC 61156-5:2002
Mechanical Characteristics	
Minimal bending radius	Repeated bending: 7 x diameter Single bending: 3 x diameter
Torsional strength	±180° on 1 m, 30,000 cycles
Electrical Characteristics at 20 °C	
Transfer impedance 10 MHz	20 mOhm/m
Conductor resistance	max. 120 Ohm/km
Insulation resistance	min. 500 MOhm*km
Velocity of propagation	5.3 ns/m
Characteristic impedance at 100 MHz	100 Ohm ± 5 Ohm
Test voltage (wire/wire/screen rms 50 Hz 1min)	2000 V
Chemical Characteristics	
Flame retardant	IEC 60332-1-2
Free of hazardous substances	RoHS 2002/95/EG
Thermal Characteristics	
Permissible temperature range	- 40 °C to + 70 °C
During laying	- 20 °C to + 60 °C
Printing	HARTING INDUSTRIAL ETHERNET STRANDED CABLE CAT 5 PLUS PUR FRNC * 22AWG (SHIELDED) * 094560001020400 "sequential length in meters" * "year/internal order number" HARTING LOGO"
Weight about	62 kg/km

HARTING PROFINET Type B Cable 4-wire, Cat. 5, PUR

Technical Characteristics

Frequency MHz	Attenuatin dB/100m		NEXT dB	
	typ.	Cat 5 max*	typ.	Cat 5 min*
1	2.1	2.1	80	80
4	4	4	76	76
10	6.3	6.3	70	70
16	8	8	65	65
20	9	9	63	63
31.25	11.4	11.4	60	60
62.5	16.5	16.5	55	55
100	21.3	21.3	50	50

* EN 50288-2-1:2003

09 45 600 01X9

HARTING PROFINET Type B Outdoor Cable, 4-wire, Cat. 5, PVC

PROFINET Type B Outdoor cable 4-wire, Cat. 5, PVC

Advantages

- Suitable for PROFINET cabling Category 5 / Class D according to ISO/IEC 11801 respectively EN 50173-1 and ISO/IEC 24702 respectively EN 50173-3
- Capable for outdoor installation
- Applicable for industrial premises
- RoHS conform, UL listed, flame retardant

General

This data cable is suitable for PROFINET cabling according to type B in industrial premises and areas. It is useable for flexible cords. The core is fitted with 4 wires twisted to quad that allows the transmission of Fast Ethernet 10/100Mbit/s.

It is designed for fast assembling with the easy-stripping tool and can be assembled with all HARTING 4-pole RJ45 connectors.

Identification	Part number	Drawing
PROFINET Type B Outdoor Cable 4-wire, Cat. 5, PVC		
20 m ring	09 45 600 0135	● Wire: Stranded tinned copper AWG22/7
50 m ring	09 45 600 0145	● Insulation: : PE Ø 1.56 mm (±0.03)
100 m ring	09 45 600 0105	● Inner sheath: Polyvinylchloride (PVC)
500 m reel	09 45 600 0115	● Overall screen: aluminate foil overlapped, tinned copper wire braid, braid coverage about 85 %
		● Outer sheath: Polyvinylchloride (PVC), flame retardant
		Color code: wh, ye, bu, or
		Color of inner sheath: white
		Color of outer sheath: black, RAL 9005
		Overall diameter: 6.3 mm – 6.7 mm

HARTING PROFINET Type B Outdoor Cable, 4-wire, Cat. 5, PVC

Technical Characteristics

Performance	Category 5 according to EN 50288-2-1:2003, IEC 61156-5:2002
Mechanical Characteristics	
Minimal bending radius	Repeated bending: 5 x diameter Single bending: 3 x diameter
Torsional strength	±180° on 1 m, 30,000 cycles
Electrical Characteristics at 20 °C	
Transfer impedance 10 MHz	20 mOhm/m
Conductor resistance	max. 120 Ohm/km
Insulation resistance	min. 500 MOhm*km
Velocity of propagation	5.3 ns/m
Characteristic impedance at 100 MHz	100 Ohm ± 5 Ohm
Test voltage (wire/wire/screen rms 50 Hz 1min)	2000 V
Chemical Characteristics	
Flame retardant	UL 1685 (CSA FT 4)
Free of hazardous substances	RoHS 2002/95/EG
Sunlight resistant	UL 1581 Sec.1200
Thermal Characteristics	
Permissible temperature range	- 40 °C to + 70 °C
During laying	- 20 °C to + 60 °C
Printing	HARTING INDUSTRIAL ETHERNET STRANDED CABLE CAT 5 PLUS * UV protected * 22AWG (SHIELDED) (UL) E119100 CMG or PLTC or AWM 2570 80°C 600V FT4 SUN RES * 94560001020300 "sequential length in metres" * "year/internal order number" "HARTING-LOGO"
Weight about	68 kg/km

09 45 600 01X5

HARTING PROFINET Type B Outdoor Cable, 4-wire, Cat. 5, PVC

Technical Characteristics

Frequency MHz	Attenuatin dB/100m		NEXT dB	
	typ.	Cat 5 max*	typ.	Cat 5 min*
1	2.1	2.1	80	80
4	4	4	76	76
10	6.3	6.3	70	70
16	8	8	65	65
20	9	9	63	63
31.25	11.4	11.4	60	60
62.5	16.5	16.5	55	55
100	21.3	21.3	50	50

* EN 50288-2-1:2003

09 45 600 01X5

HARTING PROFINET Type C Cable 4-wire, Cat. 5, PUR

PROFINET Type C Cable
4-wire, Cat. 5, PUR

Advantages

- Suitable for PROFINET cabling Category 5 / Class D according to ISO/IEC 11801 respectively EN 50173-1 and ISO/IEC 24702 respectively EN 50173-3
- Capable for drag-line
- Applicable for industrial premises
- RoHS conform, UL listed, flame retardant, halogen free

General

This data cable is suitable for PROFINET cabling according to type C in industrial premises and areas. It is useable for flexible cords especially for drag-chain. The core is fitted with 4 wires twisted to quad that allows the transmission of Fast Ethernet 10/100Mbit/s.

It is designed for fast assembling with the easy-stripping tool and can be assembled with all HARTING 4-pole RJ45 connectors.

Identification	Part number	Drawing
PROFINET Type C Cable 4-wire, Cat. 5, PUR		
20 m ring	09 45 600 0131	
50 m ring	09 45 600 0141	
100 m ring	09 45 600 0101	
500 m reel	09 45 600 0111	

- Wire: Stranded tinned copper AWG22/7
- Insulation: : PE Ø 1.56 mm (±0.03)
- Inner sheath: Thermoplastic copolymer (FRNC)
- Overall screen: aluminate foil overlapped, tinned copper wire braid, braid coverage about 85 %
- Outer sheath: Polyurethane (PUR), flame retardant

Color code: wh, ye, bu, or
Color of inner sheath: white
Color of outer sheath: green, RAL 6018
Overall diameter: 6.3 mm – 6.7 mm

HARTING PROFINET Type C Cable 4-wire, Cat. 5, PUR

Technical Characteristics

Performance	Category 5 according to EN 50288-2-1:2003, IEC 61156-5:2002
Mechanical Characteristics	
Minimal bending radius	Repeated bending: 7 x diameter Single bending: 3 x diameter
Tensile strength	max. 150 N
Trailing strength	3 million bending cycles bending diameter 200 mm at a speed of 4 m/s acceleration 4 m/s²
Torsional strength	±180° on 1 m, 30,000 cycles
Electrical Characteristics at 20 °C	
Transfer impedance 10 MHz	20 mOhm/m
Conductor resistance	max. 120 Ohm/km
Insulation resistance	min. 500 MOhm*km
Velocity of propagation	5.3 ns/m
Characteristic impedance at 100 MHz	100 Ohm ± 5 Ohm
Test voltage (wire/wire/screen rms 50 Hz 1min)	2000 V
Chemical Characteristics	
Flame retardant	IEC 60332-1-2
Free of hazardous substances	RoHS 2002/95/EG
Oil resistance	EN 60811-2-1
UV-resistant	
Thermal Characteristics	
Permissible temperature range	- 40 °C to + 70 °C
During laying	- 20 °C to + 60 °C
Printing	HARTING INDUSTRIAL ETHERNET TRAILING CABLE CAT 5 PLUS * 22AWG (SHIELDED) (UL) E119100 VERIFIED CAT 5E PATCH CABLE CMX 75°C FRNC * 094560001010100 "sequential length in meters" * "year/internal order number" "HARTING-LOGO"
Weight about	61 kg/km

HARTING PROFINET Type C Cable 4-wire, Cat. 5, PUR

Technical Characteristics

Frequency MHz	Attenuatin dB/100m		NEXT dB	
	typ.	Cat 5 max*	typ.	Cat 5 min*
1	2.1	2.1	80	65.3
4	4	4	76	56.3
10	6.3	6.3	70	50.3
16	8	8	65	47.2
20	9	9	63	45.8
31.25	11.4	11.4	60	42.9
62.5	16.5	16.5	55	38.4
100	21.3	21.3	50	35.3

* EN 50288-2-1:2003

09 45 600 01X1

HARTING PROFINET Hybrid Cable 4-wire + 4 x 1.5 , Cat. 5, FRNC

PROFINET Hybrid Cable
4-wire + 4 x 1.5, Cat. 5, FRNC

Advantages

- Suitable for PROFINET cabling Category 5 / Class D according to ISO/IEC 11801 respectively EN 50173-1 and ISO/IEC 24702 respectively EN 50173-3
- Capable for flexible cords
- Applicable for industrial premises
- RoHS conform, UL recognized, flame retardant FRNC

General

This data cable is suitable for PROFINET Hybrid cabling according to type B in industrial premises and areas. It is useable for flexible cords and installation also. The core is fitted with 4 data wires twisted to star quad that allows the transmission of Fast Ethernet 10/100 Mbit/s and 4 power wires each of 1.5 mm² cross section.

It is designed for fast assembling in benefit for the customer. The PROFINET Hybrid cable is best capable for termination with Han® 3 A RJ45 Hybrid connector set.

Identification	Part number	Drawing
PROFINET Hybrid Cable 4-wire + 4 x 1.5, Cat. 5, FRNC		
10 m ring	09 45 600 0310	
20 m ring	09 45 600 0330	
50 m ring	09 45 600 0340	
100 m reel	09 45 600 0300	
500 m reel	09 45 600 0320	

Quad
- Wire: Stranded tinned copper AWG22/7
- Insulation: PE Ø 1.55 mm
- Color: wh, ye, bu, og
- Screen: Aluminate foil overlapped, tinned copper wire braid, braid coverage about 85 %

Power
- Wire: Stranded bare copper 84 x 0.15 mm (AWG16)
- Insulation: FRNC Ø .4 mm
- Color: bk, number printed

Core
- Plastic tape overlapped
- Outer sheath: Thermoplastic Copolymer (FRNC), flame retardant

Color of outer sheath: green, RAL 6018

Overall diameter: 9.7 mm – 10.3 mm

HARTING PROFINET Hybrid Cable 4-wire + 4 x 1.5 , Cat. 5, FRNC

Technical Characteristics

Performance	Category 5 according to EN 50288-2-1:2003, IEC 61156-5:2002
Mechanical Characteristics	
Minimal bending radius	Repeated bending: 10 x diameter Single bending: 5 x diameter
Tensile strength	max. 200 N
Electrical Characteristics at 20 °C	
Quad	
Transfer impedance at 1 MHz	50 mOhm/m
Transfer impedance at 10 - 100 MHz	10 mOhm/m
Conductor resistance	max. 120 Ohm/km
Insulation resistance	min. 500 MOhm x km
Velocity of propagation	5.3 ns/m
Characteristic impedance at 100 MHz	100 Ohm ± 5 Ohm
Test voltage (wire/wire/screen rms 50 Hz 1 min)	1500 V
Operating voltage	150 V
Power	
Conductor resistance	max. 14 Ohm/km
Insulation resistance	min. 20 MOhm*km
Test voltage (wire/wire/screen rms 50 Hz 1 min)	1500 V
Operating voltage	150 V
Chemical Characteristics	
Flame retardant	IEC 60332-1-2
Free of hazardous substances	RoHS 2002/95/EG
Halogen free	EN 60811-2-1
Thermal Characteristics	
Permissible temperature range	- 20 °C to + 80 °C
Printing	HARTING PROFINET HYBRID CABLE CAT 5 FRNC * 4xAWG22/7 + 4x1.5 (SHIELDED) E130266 AWM 21282 * 09456000300200 “internal lot number” “sequential length in meters”
Weight about	154 kg/km

HARTING PROFINET Hybrid Cable 4-wire + 4 x 1.5 , Cat. 5, FRNC

Technical Characteristics

Frequency MHz	Attenuation dB/100 m		NEXT dB		PS NEXT dB		EL FEXT dB		PS EL FEXT dB		Return Loss dB	
	typ.	Cat 5 max*	typ.	Cat 5 min*	typ.	Cat 5 min*	typ.	Cat 5 min*	typ.	Cat 5 min*	typ.	Cat 5 min*
1	2.1	2.1	65.3	65.3	62.3	62.3	63.8	63.8	60.8	60.8	-	-
4	4	4	56.3	56.3	53.3	53.3	51.8	51.8	48.8	48.8	23.0	23
10	6.3	6.3	50.3	50.3	47.3	47.3	43.8	43.8	40.8	40.8	25	25
16	8	8	47.2	47.2	44.2	44.2	39.7	39.7	36.7	36.7	25	25
20	9	9	45.8	45.8	42.8	42.8	37.8	37.8	34.8	34.8	25	25
31.25	11.4	11.4	42.9	42.9	39.9	39.9	33.9	33.9	30.9	30.9	23.6	23.6
62.5	16.5	16.5	38.4	38.4	35.4	35.4	27.9	27.9	24.9	24.9	21.5	21.5
100	21.3	21.3	35.3	35.3	32.3	32.3	23.8	23.8	20.8	20.8	20.1	20.1

* EN 50288-2-1:2003

HARTING Industrial Hybrid cable 4-wire + 3 x 0.5, Cat. 5, PUR

Industrial Hybrid Cable
4-wire + 3 x 0.5, Cat. 5, PUR

Advantages

- Suitable for new HARTING PushPull Hybrid connector (HPPH)
- Performance corresponding Category 5 / Class D according to ISO/IEC 11801 respectively EN 50173-1 and ISO/IEC 24702 respectively EN 50173-3
- Capable for flexible cords
- For Fast Ethernet Applications
- Applicable for industrial premises and also for the outdoor
- flame retardant, halogen free
- UL certified AWM Style 21198

General

This data cable is applicable for HARTING Hybrid cabling in industrial premises and areas especially in the automation island. It is useable for flexible cords and installation also.

The core is fitted with 4 data wires twisted to star quad that allows the transmission of Fast Ethernet 10/100 Mbit/s and 3 power wires each of 0.5 mm² cross section.

It is designed for fast assembling in benefit for the customer. The Hybrid cable is best capable for termination with the HARTING PushPull Hybrid connector set.

Identification	Part number	Drawing
Industrial Hybrid Cable 4-wire + 3 x 0.5, Cat. 5, PUR		
20 m ring	09 45 600 0331	
50 m ring	09 45 600 0341	
100 m ring	09 45 600 0301	
500 m reel	09 45 600 0321	

Quad

- Wire: Stranded tinned copper AWG26/7
- Insulation: PE Ø 1.5 mm
- Color: wh, ye, bu, og
- Screen: Aluminate foil overlapped, tinned copper wire braid, braid coverage about 80 %

Power

- Wire: Stranded bare copper 7 x 0.32 mm (AWG20)
- Insulation: FRNC Ø 1.5 mm
- Color: rd, bn, ye

Core

- Plastic tape overlapped
- Outer sheath: Polyurethane (PUR), flame retardant, halogen free

Color of outer sheath: black, RAL 9005

Overall diameter: 6.8 mm – 7.4 mm

HARTING Industrial Hybrid cable 4-wire + 3 x 0.5, Cat. 5, PUR

Technical Characteristics

Performance	Category 5 according to EN 50288-2-2
Mechanical Characteristics	
Minimal bending radius	Repeated bending: 8 x diameter Single bending: 4 x diameter
Electrical Characteristics at 20 °C	
Quad	
Transfer impedance at 10 MHz	100 mOhm/m
Conductor resistance	280 Ohm/km
Insulation resistance	500 MOhm x km
Velocity of propagation	5.3 ns/m
Characteristic impedance at 1 - 100 MHZ	100 Ohm ± 15 Ohm
Test voltage	1500 V
Operating voltage	max. 300 V
Power	
Conductor resistance	34 Ohm/km
Insulation resistance	20 MOhm*km
Test voltage	1500 V
Operating voltage	max. 200 V
Chemical Characteristics	
Flame retardant	IEC 60332-1-2
Free of hazardous substances	RoHS 2002/95/EG
UL AWM Style	AWM 21198 (80 °C / 300 V)
Thermal Characteristics	
Permissible temperature range	- 40 °C to + 80 °C
Printing	HARTING INDUSTRIAL HYBRID CABLE CAT 5 PUR 4XAWG26/7 3XAWG20/7 094560003010000 E130266 AWM 21198 80°C 300V IEC 60332-1-2 $charge number$ $meter marking$
Weight about	65 kg/km

HARTING Industrial Hybrid cable 4-wire + 3 x 0.5, Cat. 5, PUR

Technical Characteristics

Frequency MHz	Attenuation dB/100 m		NEXT dB		PS NEXT dB		EL FEXT dB		PS EL FEXT dB		Return Loss dB	
	typ.	Cat 5 max*	typ.	Cat 5 min*	typ.	Cat 5 min*	typ.	Cat 5 min*	typ.	Cat 5 min*	typ.	Cat 5 min*
1	3.2	3.2	65.3	65	62.3	62	63.8	64	60.8	61	-	-
4	6.0	6.0	56.3	56	53.3	53	51.8	52	48.8	49	23.0	23
10	9.5	9.5	50.3	50	47.3	47	43.8	44	40.8	41		25
16	12.1	12.1	47.2	47	44.2	44	39.7	40	36.7	37	25	25
20	13.6	13.6	45.8	45.8	42.8	42.8	37.8	37.8	34.8	34.8	25	25
31.25	17.1	17.1	42.9	43	39.9	40	33.9	34	30.9	31	23.6	23.6
62.5	24.8	24.8	38.4	38	35.4	35	27.9	28	24.9	25	21.5	21.5
100	32	32	35.3	35	32.3	32	23.8	24	20.8	21	20.1	20.1

* EN 50288-2-2

HARTING USB 2.0 Cable, PVC

HARTING USB 2.0 Cable, PVC

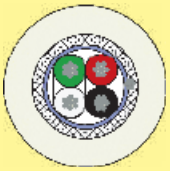
Advantages

- Suitable for USB cabling acc. to USB 2.0
- Best applicable for industrial premises
- RoHS conform, flame retardant

General

This data cable is suitable for flexible cords using in industrial premises.

It fulfils the USB Standard 2.0. The core is fitted with 4 wires, 2 wires are twisted to a pair.

Identification	Part number	Drawing
HARTING USB 2.0 Cable, PVC 100 m ring 1000 m reel	09 45 600 0900 09 45 600 0901	

- 2 wires: Stranded tinned copper AWG24/7, LI2Y 0.22/1.0, rd, bk
- 2 wires twisted to pair: Stranded tinned copper AWG24/7, LI02YS 1X2X0.22/1.0 VZN, wh / gn
- Insulation: : PE Ø 1.0 mm
- Overall screen: aluminate foil overlapped, tinned copper wire braid, braid coverage about 85 %
- Outer sheath: Polyvinylchloride (PVC), flame retardant

Color of outer sheath: white

Overall diameter: 4.55 mm – 4.85 mm

HARTING USB 2.0 Cable, PVC

Technical Characteristics

Performance	Electrical requirements acc. to USB 2.0
Mechanical Characteristics	
Minimal bending radius	Repeated bending: 8 x diameter Single bending: 4 x diameter
Electrical Characteristics at 20 °C	
Conductor resistance	≤ 88 Ohm/km
Insulation resistance	≥ 10 GOhm*km
Characteristic impedance	90 Ohm ±15 %
Test voltage (wire/wire/screen rms 50 Hz 1 min)	500 V
Operating voltage (peak)	max. 100 V
Chemical Characteristics	
Flame retardant	
Free of hazardous substances	RoHS 2002/95/EG
Thermal Characteristics	
Permissible temperature range	- 25 °C to + 80 °C
Printing	HARTING USB 2.0 CABLE 24/7AWG PVC "year/internal order number" 094560001100000 "sequential length in metres"
Weight about	33 kg/km

HARTING Tools

Identification	Part number	
HARTING RJ Industrial® Stripping Tool		
Stripping tool for Ethernet cables including blade cassette	09 45 800 0000	
Spare blade cassette	09 45 800 0001	The RJ Industrial Stripping Tool is ready to remove insulation from cables for fast mounting with diameters from 2.5 to 8 mm quick and easy. It allows to remove cable sheath and shielding braid in one.