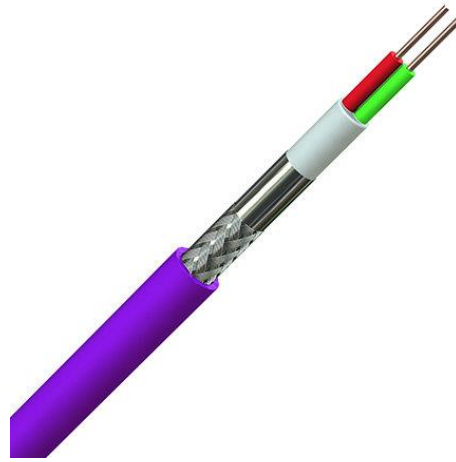




Profibus DP 1x2x22 AWG



Standards: EN 50170-8-2, IEC 61784; IEC61158



Ambient installation T°
C range
0 + 50 °C



Operating temp.
-20 + 60 °C



Storage temperature
range
-20 + 70 °C



Flame retardant
IEC 60332-1



Smoke density

Application

PROFIBUS DP 1X2X22 AWG cables are specifically designed for data communication in fieldbus networks, commonly used in industrial automation for connecting centralized controllers to sensors and actuators. The "1X2X22" specification indicates it is a single twisted pair cable (2 conductors) with a 22 AWG conductor size, typically featuring a violet-colored jacket. Widely used in PROFIBUS DP (Decentralized Peripherals) networks to connect controllers to distributed field devices (sensors/actuators). Frequently used in production and process control systems, offering high data transmission rates up to 12 Mbps. Used for connecting devices in manufacturing environments that require fast, reliable, and high-speed communication. Available in various materials (PVC, PUR, LSHF, Steel Wire Armored) for harsh environments, including offshore, maritime, and indoor/outdoor

installations. Many 1x2x22 AWG DP variants are designed with special compounds suitable for Fast Connect stripping and connector installation

Temperature limit conditions:

- Ambient installation temperature, range: from 0°C to +50°C
- Operating temperature, range: from -40 °C to +75°C

Mechanical properties:

Minimum internal bending radius:

(D = cable outer diameter)

- No load 5xD
- during installation (under load): 8xD
- packaging: 500m on wooden reel

Flame resistance:

- the cable is self-extinguishing according to IEC 60332-1
- halogen-free according to IEC 60754-1/2; IEC 60332-3-24
- non-corrosive combustion gases according to IEC 60754-1/2
- minimal smoke emission according to IEC 61034-2

Cable construction

Conductor category class:	Bare copper, 22(1) AWG
Conductor material	copper f 0.643 mm
AWG size	22/1
Insulation material	Skin-Foam-Skin PE
Number of Cores	2
Core identification	Green, Red
Inner Bedding	Low Smoke Halogen Free (LSHF)
Static screen	Aluminum foil (> 100 % Coverage)
Braid	Tinned Copper Braid (> 85% Coverage)
Nominal diameter through insulation	2.5 mm
Sheath material	Low Smoke Halogen Free (LSHF)
Outer diameter:	7.6-7.8 mm
Sheath color:	Violet (RAL 4001)

Electrical characteristics at 20°C ± 5°C

Main characteristic impedance	150 Ω
Loop resistance at 20°C	(Ωxkm) ≤ 110
Nominal resistance at 20°C , max.	(Ω/km) ≤ 12
Test voltage (DC,1min)	v 1000
Operating Voltage	v ≤ 100
Mutual Capacitance	nF/km 28.5
Capacitance unbalance to earth max.	nF/km 1.5
Inductance (nominal)	Mh/km 0.90
Velocity of Propagation	0.78

Technical data

Cable type	Number of cores (22AWG)	insulation diameter mm	Outer diameter mm	weight kg/km
Profibus DP 1x2x22 AWG	2	2.5	7.6-7.8	88-90

Electrical data

Frequency	Impedance (Ω)	Attenuation (dB/km)
9.6 kHz	270 ± 27	≤ 2.5
38.4 kHz	185 ± 18.5	≤ 4.0
1 MHz		
3 MHz	150 ± 15	
4 MHz	150 ± 15	≤ 22
16 MHz	150 ± 15	≤ 42
20 MHz	150 ± 15	



The information contained within this datasheet is for guidance only and is subject to change without notice or liability. All the information is provided in good faith and is believed to be correct at the time of publication. When selecting cable accessories, please note that actual cable dimensions may vary due to manufacturing tolerances.