

Profinet Type A Cable

4 x 22 AWG



Standards: ISO/IEC 11801, IEC 61156-5
EN 50173-1, EN 50288-9-1; IEC61156-5



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

PROFINET Type A cables are designed specifically for fixed installations in industrial environments, meaning they are intended for permanent, non-moving applications, such as inside cable ducts, machinery, or control cabinets. They are generally 4-wire shielded cables (often Cat5e) that support 100 Mbps Fast Ethernet at distances up to 100 meters. Suitable for permanent, static routing in industrial environments.

Green (RAL 6018), which is the standard color for PROFINET cables. Typically PVC (Polyvinyl Chloride), though PUR (Polyurethane) is used for increased oil resistance. Often features a "Fast Connect" (FC) design, which allows for quick, easy assembly with appropriate connectors. 4-wire, solid

copper conductor .Typically includes an overall shield, often a combination of aluminum foil and tinned copper braid for high EMI protection (e.g., SF/UTP or SF/FTP).Generally around Resistant to chemicals, oils, and sometimes UV radiation.Suitable for a minimum bending radius of roughly 5x the outer diameter during fixed installation. Type A cables are chosen for their rigid, robust structure, which provides maximum immunity to electromagnetic interference (EMI) in permanent industrial settings, but they are not suitable for drag chains or continuous flexing. Not suitable for moving applications, such as cable tracks or robots (Types B or C are used for those)

Temperature limit conditions:

- Ambient installation temperature, range: from 0°C to +50°C
- Operating temperature, range: from -20 °C to +60°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 / EN 60332-1
- halogen-free according to IEC 60754-2; IEC 60332-1
- non-corrosive combustion gases according to IEC 60754-2
- minimal smoke emission according to IEC 61034-2

Cable construction

Conductor category class:	Bare copper, 22(1) AWG
Conductor material	copper class 1
AWG size	22/1
Insulation material (HDPE)	Skin-Foam-Skin or Polyethylene
Number of Cores	4
Core identification	Yellow, Blue, Orange, White
Tape around cores	Polyester
Inner Bedding	Low Smoke Halogen Free (LSHF)
Overall screen 1	Aluminum foil (> 100 % Coverage)
Overall screen 2	Tinned Copper Braid (> 85%
Coverage)	
Overall tape	Polyester
Nominal diameter through insulation	1.5 mm
Sheath material	Low Smoke Halogen Free (LSHF)
Outer diameter:	6.5-6.7 mm
Sheath color:	Green (RAL 6018)

Electrical characteristics at 20°C ± 5°C

Main characteristic impedance at (31.25 KHz)	100 Ω
Loop resistance at 20°C	(Ωxkm) 118
Nominal resistance at 20°C , max.	(Ω/km) ≤ 59
Test voltage (DC,1min)	v 2000
Voltage Rating	v300
Capacitance	pF/km 48

Technical data

Cable type	Number of cores (22AWG)	insulation diameter mm	Outer diameter mm	weight kg/km
Profinet Type A 4 x 22 AWG	4	1.5	6.5-6.7	69-72



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.