

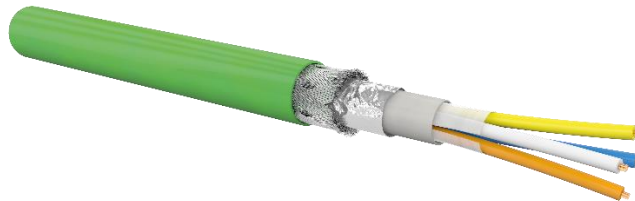


## Profinet Type B Cable

4 x 22(7) AWG



Standards: ISO/IEC 11801, IEC 61156-5  
EN 50173-1, IEC61156-6



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 B cables are designed for flexible, industrial Ethernet applications involving occasional movement, vibration, or bending, such as in factory automation, automation cells, and machinery cabling. They are intended for indoor, dry or damp environments. Industrial Ethernet ProfiNet Type B cables are designed to provide reliable network communications in the demanding Industrial and Process Control environment where difficult EMC conditions are pervasive. Conforming to the EIA/TIA-568 standard, These Cables support half-duplex high speed communications. It ensures superior transmission properties and can be used even under most severe conditions.

Suitable for installations where the cable is moved occasionally, but not for continuous motion (which requires Type C). Often features a stranded core (e.g., 7-wire) for flexibility and is typically shielded (SF/UTP) to protect against electromagnetic interference in industrial settings. Usually have a green PVC or FRNC (Flame Retardant Non-Corrosive) outer sheath. Many Type B cables are designed with

a "Fast Connect" structure, allowing for quick, easy assembly with standard connectors, These cables comply with the PROFINET requirements for industrial networking.

Common applications include wiring within control cabinets, cable trays, and fixed installations. They support high-speed data transmission.

#### Temperature limit conditions:

- Ambient installation temperature, range: from 0°C to +50°C
- Operating temperature, range: from -30 °C to +70°C

#### Mechanical properties:

Minimum internal bending radius:

(D = cable outer diameter)

- No load 5xD
- during installation (under load): 10xD
- 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 60754-1; IEC 60332-1
- non-corrosive combustion gases according to IEC 60754-2
- minimal smoke emission according to IEC 61034-1-2

#### Cable construction

Conductor category class:	Stranded copper wire , 22/7 AWG
Conductor material	copper class 2
AWG size	22/7
Insulation material	Skin-Foam-Skin or Polyethylene (HDPE)
Number of Cores	4
Core identification	Yellow, Blue, Orange, White
Tape around cores	Polyester foil
Inner Bedding	Halogen free, flame retardant compound FRNC
Overall screen 1	Aluminum foil ( > 100 % Coverage)
Overall screen 2	Tinned Copper Braid ( > 85% Coverage)
Overall tape	Polyester
Nominal diameter through insulation	1.6 mm
Sheath material	Halogen free, flame retardant compound FRNC resistant to UV, microbes
Outer diameter:	6.7-6.9 mm
Sheath color:	Green (RAL 6018)

#### Electrical characteristics at 20°C ± 5°C

Main characteristic impedance at (31.25 KHz)	100 Ω ± 15
Conductor resistance at 20°C max.	(Ωxkm) 60
Loop resistance at 20°C	(Ωxkm) 120
Insulation resistance min.	(GΩxkm) 0.5
Nominal resistance at 20°C , max.	(Ω/km) ≤ 59
Test voltage ( DC,1min)	v 2000
Voltage UL	V 300
Voltage Rating max.	V 350
Capacitance at 800 Hz	pF/km 52
Caloric load approx.	MJ/m 0.32

**Technical data**

Cable type	Number of cores (22AWG)	insulation diameter mm	Outer diameter mm	weight kg/km
Profinet Type B 4 x 22/7 AWG	4	1.6	6.7-6.9	71-77

Frequency (MHz)	Attenuation (Db/100m)	NEXT (Db)	ACR (Db/100m)
1.0	6.0	70.0	64.0
16	7.6	65.0	57.4
62.5	16.0	55.0	39.0
100	21.0	50.0	29.0

