

Cable reference

Part number R878968

Source code F

R&M positioning SPE

Cable construction

Conductor Bare solid copper wire AWG22 (0.62mm)

Insulation Polyethylene with additives $\leq \varnothing 1.6$ mm

Twisting 2 wires to the pair

Sheath LSZH

**1 Inner conductor:** bare copper solid wire,**2 PE insulated conductor****3 Screen (pair):** Alu PETP foil**4 Overall screen:** tinned braided copper**5 Outer sheath:** LSZH grey RAL 7035

Application

Supporting ISO/IEC 11801-1 Amd 1 Transmission-Classes T1-A 20 MHz up to 100m channel (10 Mbit/s) and T1-B 600 MHz up to 100m channel (1000Base-T1).

Supporting IEEE 802.3bp 1000Base-T1 Type A (15m) and Type B (40m); IEEE 802.3bw 100Base-T1 (15m); IEEE 802.3cg 10Base-T1-S (15m) and 10Base-T1-L (up to 100m). Supporting Power over Data Line (PoDL) IEEE 802.3bu up to 60 Watt and Confirming to European regulation "CPR" EN 50575

Standards

ISO/IEC 11801-1 Amd 1; ISO/IEC 11801-6 Amd 1 IEC 61156-11; SPE IEC 61156-11 Type I IEEE 802.3bu; Power over Ethernet (PoE) / Type 1-4

Fire rating

LSZH

IEC 60754-1/-2, EN 60754-1/-2, IEC 60332-1-2, EN 60332-1-2, IEC 61034-1/-2, EN 61034-1/-2 EN50575; Dca-s2,d1,a1; DOP D3800

Technical Data

Cable designation SPE S/FTP-1P-AWG22-600M-gu

Packaging Drum 500 m

Outer diameter Nominal 4.9 mm

Weight 30 kg / km

Thermal load 0.18 MJ /m

Segregation class D

Tensile force 25 N

Mechanical Properties

Bending radius ≥ 22 mm during operation (without load) ≥ 50 mm during installation (with load)Temperature range During operation $-20^{\circ}\text{C} \dots +60^{\circ}\text{C}$ During installation $0^{\circ}\text{C} \dots +50^{\circ}\text{C}$

Electrical Properties
(at 20°C ± 5°C)

Mean characteristic impedance		100 ± 5 Ω
Nominal velocity of propagation		Approx. 78 %
Propagation delay	At 1 MHz	≤ 520 ns / 100 m
Delay skew		≤ 20 ns / 100 m
Coupling attenuation		≥ 85 dB
Transfer impedance		≤ 10 mΩ / m
Loop resistance at 20°C		≤ 120 Ω / km
Near end unbalance attenuation		40dB
operating capacity		43 pF/m

ELECTRICAL CHARACTERISTICS

Frequency [MHz]	1	4	10	100	250	500	600
Attenuation [dB/10m]	1.7	3.4	5.3	16.9	27	40	42
Return loss [dB]	26	30	31	28	27	24	23

These performance data are typical measured values.