



STANDARD

5228 A

Cable type : **5228 A**
Reference : **EC5-50-A**

Cable with standard UV resistant PE jacket, halogen free according to IEC 60754

FLAME RETARDANT

HLFR

Cable type : **5228A-HLFR**
Reference : **EC5-50A-FR**

Cable with UV resistant, halogen free, low smoke, flame retardant jacket according to IEC 60754-2, IEC 60332-1-2, IEC 60332-3 Cat. C and IEC 61034-1+2

CHARACTERISTICS

Construction

• Inner conductor		
Material		smooth copper tube
Diameter (mm)		9.2
• Dielectric		
Material		gas-injected cellular polyethylene
Diameter (mm)		23.5
• Outer conductor		
Material		corrugated copper tube
Diameter (mm)		25.0
• Jacket		
Material		black polyethylene
Thickness (mm)		1.4
Diameter (mm)		28.0

Mechanical

• Minimum bending radius		
a) single bending (cm)		10
b) 15 repeated bends (cm)		25
• Maximum pulling strength (daN)		140
• Recommended temperature range		
- Storage		-70 to +85 °C
- Installation		-40 to +60 °C
- Operation		-55 to +85 °C
• Maximum length per hoisting grip (m)		70
• Maximum hanger spacing		1.2
• Flat Plate Crush resistance (kg/mm)		1.4
• Bending moment (Nm)		11.6
• Weight (kg/km)		465

[1] a = 0.1107
b = 0.000333
 $\alpha(f) = a \cdot \sqrt{f} + b \cdot f$ [dB/100m]

Electrical

• Characteristic impedance (Ω)	50 \pm 1
• Nominal capacity (pF/m)	75
• Relative propagation velocity (%)	89
• Inductance (μ H/m)	0.187
• DC-resistance at 20 °C	
- inner conductor (Ω /km)	1.46
- outer conductor (Ω /km)	1.31
• RF peak voltage (kV)	2.9
• RF peak power (kW)	86
• Cut-off-frequency (GHz)	5.1
• Insulation resistance (M Ω .km)	>>5000

Attenuation [1] and power rating

Frequency (MHz)	Attenuation at 20 °C ^(*) (dB/100m)	Mean power rating ^(**) (kW)
10	0.35	25.46
20	0.50	17.93
30	0.62	14.60
80	1.02	8.85
100	1.14	7.89
150	1.41	6.40
200	1.63	5.51
300	2.02	4.46
400	2.35	3.83
450	2.50	3.60
500	2.64	3.41
600	2.91	3.09
700	3.16	2.85
800	3.40	2.65
894	3.61	2.49
960	3.75	2.40
1000	3.83	2.35
1500	4.79	1.88
1700	5.13	1.75
1800	5.30	1.70
1880	5.43	1.66
2000	5.62	1.60
2170	5.88	1.53
2200	5.92	1.52
2300	6.07	1.48
2400	6.22	1.45
2500	6.37	1.41
2700	6.65	1.35
3000	7.06	1.27
4000	8.33	1.08
6000	-	-

(*) nominal values

(**) Ambient temperature = 40 °C; Temperature of inner conductor = 100 °C; VSWR = 1.0; no solar loading



NM50A78MA



716FV78MA

CONNECTORS & TOOL

Reference	Description
716MV78MA	7-16 DIN male, O-Ring
716FV78MA	7-16 DIN female, O-Ring
716MA78MA	7-16 DIN male, Sealant injection
716FA78MA	7-16 DIN female, Sealant injection
NM50V78MA	N male, O-Ring
NF50V78MA	N female, O-Ring
NM50A78MA	N male, Sealant injection
NF50A78MA	N female, Sealant injection
SPTC50AV78M	Cable preparation tool
Inner ring (a)	Spare parts for cable preparation tool
Outer ring (b)	(Refer to installation instruction of the tool)
Spring (c)	
Cutting knife (d)	
Peeling knife (e)	
Flaring knife (f)	
SIL-744 90ml	Sealant for connectors using sealant injection
SIL-744 310 ml	Sealant for connectors using sealant injection

Rem.: • Sealant for connectors using the sealant injection method must be purchased separately.
 • EIA connectors available on request.



SPTC50AV78M

ACCESSORIES

Description	Reference
• Grounding clamp with parallel outlet	GCS78PAR
• Fixing clamps	see page 35
• Additional weatherproofing	see page 41
• Lace-up hoisting grip	HG-78
• Pre-laced hoisting grip	HG-78-L
	see page 37

Specification of N-connectors 7-16 connectors

Electrical

• Nominal impedance (Ω)	50	50
• Reflection coefficient at 2 GHz	≤ 0.02	≤ 0.02
• Insulation resistance ($G\Omega$)	≥ 5	≥ 10
• Test voltage (at sea level) (kV rms, 50 Hz)	2.5	4
• Working voltage (at sea level) (kV rms, 50 Hz)	1	2.7
• Screening effectiveness up to 1 GHz (dB)	> 128	> 128
• Outer contact resistance (m Ω)	≤ 0.7	≤ 0.7
• Inner contact resistance (m Ω)	≤ 1	≤ 1
• PIM ratio (2 x 20 W carrier) (dBc)		≤ -155 (Typical -163)

Mechanical

• Torque on coupling nut (Nm)	8	30
• Cable retention (N)	> 400	> 1000

Environmental

• Temperature range ($^{\circ}C$)	-40 to +85
• Degree of protection (humidity)	IP68

Materials

• External parts	Passivated silver plated or electroless nickel plated brass
• Outer contact	Passivated silver plated brass
• Inner contact	Passivated silver plated Cu-Be and brass
• Dielectric	PTFE TPX
• Gaskets	High quality silicone



GCS78PAR