

1 Wire Structure

project		unit	technical requirement
electric conductor	Conductor Structure	N/mm	19/0.08SC+8C
	Single conductor diameter	mm	0.08 ± 0.003
	Conductor twist outer diameter	mm	0.4 ± 0.05
insulation	insulation material	—	FEP (red/black/white/gray/blue/brown/yellow/green)
	Nominal insulation thickness	mm	0.15
	Minimum thickness at any point	mm	0.12
	Insulation outer diameter	mm	0.7 ± 0.05
Summary	Twisted outer diameter	mm	4.4 ± 0.10
	padding	—	Cotton rope
	PTFE film wound inside and outside the winding layer	mm	17*0.075 White film
shield	Weaving Structure	—	176/0.1 Tinned copper alloy (98%)
sheath	Sheath material	—	80A tear-resistant silicone (dark gray)
	Nominal sheath thickness	mm	0.85
	Minimum thickness at any point	mm	0.70
	Outer diameter of finished product	mm	6.5 ± 0.15

2 Electrical and mechanical physical properties

project	unit	test condition	technical requirement
Insulation spark withstand voltage	—	3kV	No breakdown
Insulation water immersion pressure	—	1kV/1min	No breakdown
rated voltage	—	300V	—
rated temperature	—	-60°C ~ +200°C	—

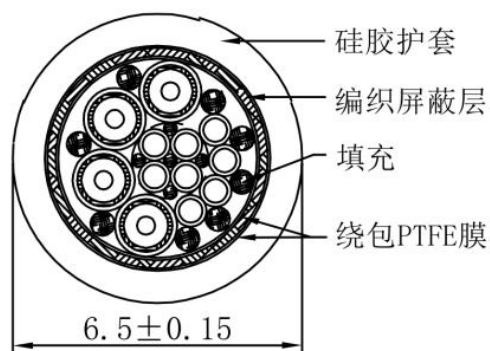
3. Change column

NO.	Version/Release	Change date	Change Description	Changes	examine and verify
1	A/0	2022.07.01	editio princeps		
2	A/1	2023.01.11	Edit mesh structure		

4. Notes

1. No printing on the surface of the wire.
2. The wire shall be perfectly round, flexible, and possess tensile and bending resistance. For specific requirements, please refer to Appendix 1: "Silicone Wire Acceptance Standard".

5 Product Structure Diagram



RF137 coaxial cable

Conductor: 7/0.10 silver-coated copper ++tin-coated copper braided shield

OD: 1.37 ± 0.05 Material: FEP

Color: Black/Dark Gray/Light Gray/White

Impedance: 50 Ohms

Annex 1 Silicone wire acceptance standard:

order number	project	acceptance level	remarks
1	surface	The surface of the wire is smooth, without burrs, cracks, scratches and deformation defects, the wire is round and uniform, the color is dark gray, without patterns, color differences and other defects, no obvious irritating smell.	
		The silicone coating has a softness of 80A, and is resistant to oil, corrosion and high temperature of 200 degrees.	
2	electrical character	1000V/60S insulation water ingress resistance.	
		The insulation spark withstand voltage is 3000V.	
		The electromagnetic shielding coverage exceeds 90% under all bending, twisting, and usage modes, and must pass the EMI (radiation emission and conducted emission) and EMS (radiation interference resistance, conducted interference resistance, and power frequency magnetic field interference resistance) tests in the YY9706.102-2021 medical standard EMC testing program.	The cable shielding coverage exceeds 90%, but the interference test requires coordination with your company's PCB, connectors, and system testing.
		The coaxial and electronic cables have passed signal stability tests, with both video and electrical signals remaining stable under YY9706.102-2021 Medical's EMC testing standards.	The test requires coordination with Zhong 'an Shida's PCB, connectors, and system testing.
3	mechanical properties	The bending test applies a load of 400g, with 12.5mm R corners bent upward and downward at 90 degrees for 30,000 cycles.	
		The torsion test weighs 450g, and each 0.6 meters is twisted 180 degrees for 100,000 times.	
		The controller underwent a simulated test involving external pulling and twisting, with no noticeable movement or displacement of the internal electronic wires.	