



# Test Report

Product Name: Outdoor Integrated Cabinet

Product Model:OC-65

Apply company:SUZHOU LANGJI TECHNOLOGY CO.,LTD.

Kind of testing:Commissioned Inspection





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Report Number: B14X72620 Labs

### China Telecommunication Technology Labs

Product Name	Outdoor Integrated Cabinet	Model	OC-65				
Apply Company	SUZHOU LANGJI	Production date	/				
	TECHNOLOGY						
	CO.,LTD.						
Manufacturer	SUZHOU LANGJI	Kind of testing	Entrust the test				
	TECHNOLOGY						
	CO.,LTD.						
Address	No. 58 Tongxin Roac	l, Tongan Industrial	Park, SND, Suzhou,				
	Jiangsu Province, Ch	ina, 215153.	1				
Deliver Date	Oct.17th,2014	Deliver Person	Yingying Zhang				
Sample base	/	Sample Quantity	1 unit				
Initial sample	The sample is in goo	od initial condition ar	nd meet the				
state	inspection requireme	ents					
Inspection basis	YD/T 1537-2006 <g< td=""><td>eneral requirements</td><td>for telecom system</td></g<>	eneral requirements	for telecom system				
	user outdoor cabine	t>					
Test result	The OC-65 outdoor i	integrated cabinet p	roduced by Suzhou				
	Langji company has	been inspected, and	1 23 performance				
	and technical indexe	s have been inspect	ed. The test results				
	are shown in the relevant inspection items.						
	E A CTT, SE						
	(Special seal for inspectic) report)						
	Issue date: Oct.24th,2014						
Remark		/					

#### **Testing report**

Approval:

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Check:

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Main tester:

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## **Test Result**

No.	Inspection items	Unit	Basic Requirements	Test result
1	surface color		The surface coating color of the cabinet should meet the requirements of sheet 2 in GB / T3181-1995	meet the standards
2	Coating appearance		The coating surface is continuous and uniform, and the texture is consistent with the corresponding standard samples, and there are no defects such as nodulation, shrinkage, blistering, pinholes, cracking, flaking, chalking, particles, sagging, open bottom, and inclusions. For cabinets without spray coating, the gloss and texture of the outer surface should be uniform and beautiful.	meet the standards
3	Coating adhesion		After the coating of the cabinet surface is tested for adhesion, it shall meet the requirements of level 1 in sheet 1 of GB / T9286-1998.	Meet the standards
4	Coating impact resistance		After the coating on the surface of the cabinet is subjected to the impact test, there are no defects such as radial cracks and notches.	There are no defects such as radial cracks and notches.
5	Cabinet material		Non-metallic parts used for cabinets shall be free from defects such as delamination and voids. Non-metallic parts of the cabinet should not corrode and damage other materials.	Meet the standards
6	Connect and fasten		Cabinets are not allowed to use threaded connections without anti-loosening devices as structural and load-bearing connections.	Cabinets use threaded connections of anti-loosening devices as structural and load-bearing connections
7	Cabinet size		It is recommended that the cabinet use the external dimensions in standard sheet 1.	H*W*D 1440*700*750 mm
8	Equipment bay		After the cabinet door is opened, the equipment must be installed and maintained smoothly. The installation dimensions and width dimensions of equipment cabin racks should be serialized according	After the cabinet door is opened, the equipment can be smoothly installed



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			to 482.6mm (19in), 533.4mm (21in), 584.2mm	and maintained.			
			(23in) or 609.6mm (24in) standard series: rack	Installation			
			height dimensions should be $25mm$ or $44.45mm$ ( U	dimensions and			
			system) standard serialization.	width dimensions of			
			When the cabinet is installed in a limited space and	equipment cabin			
			the door cannot be opened and closed normally, a	rack: 482.6mm			
			cover structure should be adopted.	(19in): rack height			
				dimension:			
				44.45mm (U			
				system). The cabinet			
				has no cover			
				structure.			
9	Crossing area		Sufficient cable capacity is reserved in the cable	Meet the standards			
			passing area of the cabinet to meet the wiring				
			operation requirements of the cabinet when fully				
			equipped; consider the convenience, replaceability,				
			and expandability of the operation when the cable is				
			introduced, fixed, and grounded: power lines, signal				
			lines, and optical cables There should be				
			independent cable entry holes to avoid mutual				
			interference; the cable entry holes should be sealed				
			to prevent water and dentate animals from entering				
			the cabinet; for cabinets that need to provide oil				
			engine power, special cable entry holes should be				
			considered.				
10	Lifting device		It is not allowed to lift the lifting device through the	Lifting device meets			
			inside of the cabinet. When the full load of the	standard			
			cabinet exceeds 90kg, a lifting device (such as a ring	requirements			
			bolt) should be designed. The lifting requirements				
			should be clearly specified in the installation				
			instructions. The positioning of the lifting device				
			should ensure that the cabinet is stable and balanced				
			during the movement.				
11	Mechanical		The cabinet should not appear: deformation or	Meet the standards			
	performance		damage that affects shape, fit and function, such as				
	requirements		functional damage such as hinges, locks, pins, etc.:				
	• •		delamination, warpage, puncture, damage, and				
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permanent deformation; door switches are not flexible and unreliable; Expansion, cracking, falling off; bending, loosening, displacement or damage of mounting parts and fasteners; moving parts such as doors and covers cannot be flexibly rotated, cannot



		be locked (locked), and become stuck.	
12	Coating solvent resistance	 After the coating on the surface of the cabinet has been subjected to the solvent resistance test, the surface should be visually obviated from light loss, obvious discoloration, and no signs of wiping.	The surface showed no signs of matting, obvious discoloration, or being wiped.
13	Non-metallic materials flame retardant test	 Non-metallic parts (including insulated telecommunications, cables, and foamed materials) shall be self-extinguishing materials. After the end of the continuous burning time of applying the test flame, the test sample shall not ignite or the flame shall continue to burn after the test sample leaves the fire The time does not exceed 10s, and the flame or burning or hot particles falling from the test sample does not spread the combustion to the bottom layer placed under the test sample.	The duration of flame burning after the test sample left the fire: the first time: 1s, the second time: 1s, the bottom of the paving is unburned.
14	Monitoring and alert test	 Door sensor alarm: When a door sensor is installed in the cabinet, an illegal intrusion through the door (cover) should issue an intrusion alarm signal, and can transmit the alarm signal to the monitoring center. Power failure alarm: When a power failure alarm device is installed in the cabinet, if the AC power fails, an AC power failure alarm signal should be issued, and the alarm signal will be transmitted to the monitoring center. The cabinet equipped with an active cooling system shall have a cooling system failure alarm and be able to transmit the alarm signal to the monitoring center. Smoke alarm: When a smoke sensor is installed in the cabinet, if there is combustion and smoke in the cabinet, an alarm signal should be issued and the alarm signal can be transmitted to the monitoring center. Water sensor alarm: When a water sensor is installed in the cabinet, if water intrudes or submerged at a	Meet the standards



15	General requirements	 specified height, an alarm signal should be issued and the alarm signal can be transmitted to the monitoring center. Temperature and humidity alarm: When the temperature and humidity sensors are installed in the cabinet, if the temperature or humidity exceeds the specified range, high temperature, low temperature alarm or humidity alarm should be issued, and the alarm signal can be transmitted to the monitoring center. The cabinet should avoid potential safety hazards	Meet the standards
		such as sharp edges and burrs during assembly, installation, use and maintenance.	
16	Grounding performance test	 The cabinet should be provided with a grounding bar, and its cross-sectional area (excluding connection holes) should be greater than 16m m <sup>2</sup> : the grounding bar should be able to connect at least 8 grounding wires. The metal parts of the cabinets should be interconnected and connected to the ground bar. The connection resistance between any two points should be less than $0.1\Omega$ . The protective ground of other equipment in the cabinet should be connected to the ground bar. The ground bar should be connected to the ground network from two different directions. All ground connections should be copper wires with a cross-sectional area greater than 16m m <sup>2</sup> , and the ground connection points should have clear ground signs.	The cross-section area of the grounding bar is more than 16m $m^2$ , and the grounding bar can connect 13 ground wires. The connection resistance between any two points is 2.8 $\Omega$ . With grounding mark.
17	Anti-vandal test of lock	 All external doors should be equipped with locks, and the anti-damage performance should meet the Class B requirements in GA / T73-1994.	Meet the standards
18	High temperature test	 After the cabinet is subjected to a high temperature test, the following defects should not appear: warping, damage or damage, permanent deformation of the cabinet body; inflexible or unreliable locking of movable parts such as doors, windows and orifice covers; coatings, seals, etc	Meet the standards



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			Expansion, cracking, or falling of parts; bending, loosening, displacement, or damage of mounting parts and fasteners; rust or coating of metal parts falling off; other defects.		
19	19 Waterproof Test			The cabinet should meet the requirements of IPX5 waterproof rating in GB4208-1993.	There is no water in the cabinet, which meets the requirements of IPX5 waterproof rating.
20	20 Dust-proof Test			Non-ventilated cabinets should meet the IPX5 dust-proof rating in GB4208-1993.The dust-proof level of the ventilated cabinet is specified by the customer.	No ventilation, no obvious dust deposition in the cabinet after the test.
21 Hechanical Bump Test And Performance Requiremen ts			After the test of the cabinet, the following defects shall not occur: deformation or damage affecting the shape, fit and function, such as hinge, lock, bolt and other functional damage; Delamination, warping, puncture, damage and permanent deformation;Door switch is not flexible and reliable; Expansion, cracking, peeling, bending, loosening, displacement or damage of mounting parts and fasteners; The door, cover plate and other moving parts do not rotate flexibly, the door (lock) does not work, Meet Standard Requirements stuck)	Meet Standard Requirements	
22	22 Load Mechanical Load and Test Requiremen ts			After the test of the cabinet, the following defects shall not occur: deformation or damage affecting the shape, fit and function, such as hinge, lock, bolt and other functional damage; Delamination, warping, puncture, damage and permanent deformation;Door switch is not flexible and reliable; Expansion, cracking, peeling, bending, loosening, displacement or damage of mounting parts and fasteners; The door, cover plate and other moving parts do not rotate flexibly, the door (lock) does not work, stuck)	Meet Standard Requirements
23	Stiffn ess Test	Mechanical and Performance Requiremen		After the test of the cabinet, the following defects shall not occur: deformation or damage affecting the shape, fit and function, such as hinge, lock, bolt and other functional damage; Delamination, warping,	Meet Standard Requirements



	ts	puncture, damage and permanent deformation;Door	
		switch is not flexible and reliable; Expansion,	
		cracking, peeling, bending, loosening, displacement	
		or damage of mounting parts and fasteners; The	
		door, cover plate and other moving parts do not	
		rotate flexibly, the door (lock) does not work, stuck)	

#### Environmental & Mechanical Performance Test Conditions

Test Item	Experimental Equipment				
Adhesion Test	According to the test requirements of GB / T 9286-1998.				
Coating Impact Resistance	The coated sample is 200mm×200mm, the impacted part is 15mm away from the edge, the edge of each impact point is 15mm apart, the punch diameter is 15.9mm, the weight is 1kg, the impact force is 18J.				
Solvent Test	At room temperature, using anhydrous ethanol wets cotton balls or soft white cotton cloth to wipe the same surface of the coating surface back and forth 50 times with a pressure of 1 kg and a speed of 1 s.				
Non-metallic Materials Flame Retardant Test	The burner uses a Bunsen burner, using methane gas, or natural gas with a calorific value of about $37mJ/m^3$ . Blue flame, flame height (20 ± 2) mm. Apply flame for 30s.				
High Temperature Test	The test temperature is 55 $^{\circ}$ C ± 2 $^{\circ}$ C and the duration is 8h.				
Waterproof Test	Test according to Article 13.2.5 of GB 4208-1993.				
Dust-proof Test	Test according to chapter 12 of GB 4208-1993.				
Bump test	The metal surface is tested at room temperature. The non-metallic surface should be placed in the environment of -30 °C and 65 °C for no less than 8h, and then tested at room temperature for 10min. Test the top surface of the cabinet, and release a 7.3kg, 216mm diameter hard rubber ball from a height of 1.9m, and hit the top surface: Test the vertical surface of the cabinet. Hang a 7.3kg hard rubber ball with a diameter of 216mm with a wire to form a pendulum (the distance from the center of the ball to the fulcrum is about 2.4m, the ball is released when it is stationary and the vertical height reaches 1.9m.				
Door Load Test	1000 on/off repeat operations				
Stiffness Test	The cabinet should be fixed to the test bench or floor using standard fasteners. Without internal static load.Apply force P2 to each side of the test cabinet, evenly distributed in the shaded area of the figure (standard picture 3);The stiffness test force P2 is determined according to Table 4 in GB / T 18663,1-2002.				



# **Sample Picture**



0C-65 Outdoor Integrated Cabinet



#### **Inspection Instrument**

NO.	Instrument & Equipment	Model	No	Note				
1	Steel Gauge	300mm	G5130					
2	Weight	5kg	G548					
3	Digital Multimeter	VP-2661A	450122E122					
4	Water Spraying Device		G567					
5	Paint Film Impactor	QCJ	G650					
6	High-low Temperature Test Chamber	TC-48S	860626					
7 Horizontal and Vertical Burner		HVUL2	18391800					
8	Phytotron	CWER-A1-40-CP	MAC0804-001					
9	Dust-Resistant Laboratory	GSDT-7200-F	MAP804-001					
10	Paint Film Scriber	QFH	G651					
Inspection instructions:								
According to the standard requirements, item 14th is a standard option.								

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Test Site	China Telecom	China Telecommunication Technology Labs						
Test Time	October 20 to October 24, 2014							
Test Environmental	Temperature	Tomperature (10.26) *						
Condition	Temperature:	Relative numulty: (35-35) %						
Inspector	Wang Chen	Checker	Hu Bingxiao					