

 Prüfbericht-Nr.:
 50143315 001
 Auftrags-Nr.:
 154325415
 Seite 1 von 19

 Test Report No.:
 Order No.:
 Page 1 of 19

Kunden-Referenz-Nr.: 608072 Auftragsdatum: 25.04.2018

Client Reference No.: Order date:

Auftraggeber: Wenzhou Yingrun Electrical Co., Ltd.

No. 57, Xilong Road, Yueqing, Zhejiang 325604, P. R. China

Prüfgegenstand: Waterproof switch socket

Test item:

Bezeichnung / Typ-Nr.: Identification / Type No.: YRL66-U

Auftrags-Inhalt: Perform IP66 test

Order content:

Prüfgrundlage: Only test clause 13 and 14 of IEC 60529

Test specification:

Wareneingangsdatum: 14.06.2018

Date of receipt:

Prüfmuster-Nr.: A000758916

Test sample No.:

Prüfzeitraum: 19.06.2018-06.07.2018

Testing period:

Ort der Prüfung: TÜV Rheinland (Shanghai)

Place of testing: Co., Ltd.

Prüflaboratorium: TÜV Rheinland (Shanghai)

Testing laboratory: Co., Ltd.

Prüfergebnis*: Pass

Test result*:



geprüft von / tested by : kontrolliert von / reviewed by:

13.07.2018 Tonghui Wu / PE 17.07.2018 Wencai Zhang / TC Datum Name / Stellung Unterschrift Datum Name / Stellung Unterschrift Name / Position Signature Date Name / Position Signature Date

Sonstiges / Other:

This report is created for only IP test according to the requirement of the client.

Attachment 1: Measurement equipment list. (1 page)

Zustand des Prüfgegenstandes bei Anlieferung: Prüfmuster vollständig und unbeschädigt Condition of the test item at delivery: Test item complete and undamaged

* Legende: 1 = sehr gut 2 = gut 3 = befriedigend 4 = ausreichend 5 = mangelhaft F(ail) = entspricht nicht o.g. Prüfgrundlage(n) P(ass) = entspricht o.g. Prüfgrundlage(n) N/A = nicht anwendbar N/T = nicht getestet 3 = satisfactory 4 = sufficient Legend: 1 = very good 2 = good5 = poorP(ass) = passed a.m. test specification(s) F(ail) = failed a.m. test specification(s) N/A = not applicable N/T = not tested

Dieser Prüfbericht bezieht sich nur auf das o.g. Prüfmuster und darf ohne Genehmigung der Prüfstelle nicht auszugsweise vervielfältigt werden. Dieser Bericht berechtigt nicht zur Verwendung eines Prüfzeichens.

This test report only relates to the a. m. test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any test mark.



TEST REPORT IEC 60529 / EN 60529 Degrees of protection provided by enclosures (Ip code)

Report Reference No.....: 50143315 001 Tested by (name + signature): See cover page Witnessed by (name + signature): N/A Supervised by (name + signature) ...: Approved by (name + signature).....: See cover page Date of issue....: See cover page Testing Laboratory..... TÜV Rheinland (Shanghai) Co., Ltd. No. 177, 178, Lane 777 West Guangzhong Road, Jing'an District Address: Shanghai, China Testing location / procedure: TÜV Rheinland (Shanghai) Co., Ltd. Testing location / address: No. 177, 178, Lane 777 West Guangzhong Road, Jing'an District Shanghai, China Wenzhou Yingrun Electrical Co., Ltd. Applicant's name.....: Address: No. 57, Xilong Road, Yueqing, Zhejiang 325604, P. R. China Test specification: Standard: IEC 60529: 1989-11 + A1:1999 EN 60529 :1991-10 (incl. Corrigendum: 1993-05) + A1: 2000-02 Test procedure Test report Non-standard test method.....: N/A Test Report Form No.....: IECEN60529A

Copyright © 2006 IEC System for Conformity Testing and Certification of Electrical Equipment (IECEE), Geneva, Switzerland. All rights reserved.

TRF Originator.....: IMQ

Master TRF...... Dated 2006-06

This publication may be reproduced in whole or in part for non-commercial purposes as long as the IECEE is acknowledged as copyright owner and source of the material. IECEE takes no responsibility for and will not assume liability for damages resulting from the reader's interpretation of the reproduced material due to its placement and context.

If this Test Report Form is used by non-IECEE members, the IECEE/IEC logo shall be removed.

This report is not valid as a CB Test Report unless signed by an approved CB Testing Laboratory and appended to a CB Test Certificate issued by an NCB in accordance with IECEE 02.



Page 3 of 19

Report No. 50143315 001

Test item description:

Trade Mark: N/A

Manufacturer: Wenzhou Yingrun Electrical Co., Ltd.

Model and/or Type reference: YRL66-U

Rating(s): IP66

Copy of marking plate

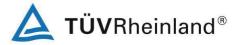




Page 4 of 19

Report No. 50143315 001

Summary of testing:
The results of IP degree tests were valid only for the coming samples. And YRL66-U was performed IP66 tests.
All tests were passed.



Page 5 of 19

Report No. 50143315 001



Page 6 of 19

Report No. 50143315 001





Page 7 of 19

Report No. 50143315 001









Page 8 of 19

Report No. 50143315 001







Page 9 of 19

IEC/EN 60529

Report No. 50143315 001

	Requirement – Te	est	Result		Verdict
5	DEGREES OF PROTECTION AGAINST ACCESS TO HAZARDOUS PARTS AND AGAINST SOLID FOREIGN OBJECTS INDICATED BY THE FIRST CHARACTERISTIC NUMERAL				
6		PROTECTION AGAINST INGRE CHARACTERISTIC NUMERAL	SS OF WATER	INDICATED BY	
				'	
,		PROTECTION AGAINST ACCES THE ADDITIONAL LETTER	SS TO HAZARD	OUS PARTS	
	INDICATED BY	THE ADDITIONAL LETTER			
}	SUPPLEMENTA	ARY LETTERS			
)	EXAMPLES OF	DESIGNATIONS WITH THE IP	CODE		
10	MARKING				
11	GENERAL RE	QUIREMENTS FOR TESTS			
	TESTS FOR PR	QUIREMENTS FOR TESTS OTECTION AGAINST ACCESS THE FIRST CHARACTERISTIC		US PARTS	_
12	TESTS FOR PRINDICATED BY TESTS FOR PRINDICATED BY	TOTECTION AGAINST ACCESS THE FIRST CHARACTERISTIC TOTECTION AGAINST SOLID FOR THE FIRST CHARACTERISTIC	NUMERAL OREIGN OBJECT		
12	TESTS FOR PRINDICATED BY TESTS FOR PRINDICATED BY	OTECTION AGAINST ACCESS THE FIRST CHARACTERISTIC	NUMERAL OREIGN OBJECT		
11 12 13 13.1	TESTS FOR PRINDICATED BY TESTS FOR PRINDICATED BY (Both Metal en Test means	THE FIRST CHARACTERISTIC OTECTION AGAINST SOLID FOR THE FIRST CHARACTERISTIC Closure and Stainless steel end of the main test conditions are	NUMERAL OREIGN OBJECT		
12	TESTS FOR PRINDICATED BY TESTS FOR PRINDICATED BY (Both Metal en Test means Test means and given in Tab. VIII-7	THE FIRST CHARACTERISTIC OTECTION AGAINST SOLID FOR THE FIRST CHARACTERISTIC Closure and Stainless steel end the main test conditions are the tests for protection	NUMERAL OREIGN OBJECT		— — P
12	TESTS FOR PRINDICATED BY TESTS FOR PRINDICATED BY (Both Metal en Test means Test means and given in Tab. VII-7 Test means for	THE FIRST CHARACTERISTIC OTECTION AGAINST SOLID FOR THE FIRST CHARACTERISTIC Closure and Stainless steel end the main test conditions are the tests for protection	NUMERAL OREIGN OBJECT		— — P — —
12	TESTS FOR PRINDICATED BY TESTS FOR PRINDICATED BY (Both Metal en Test means Test means and given in Tab. VII Tab. VII-7 Test means for against solid for First characteristic	COTECTION AGAINST ACCESS THE FIRST CHARACTERISTIC COTECTION AGAINST SOLID FOR THE FIRST CHARACTERISTIC Closure and Stainless steel end the main test conditions are the tests for protection oreign objects	OREIGN OBJEC NUMERAL closure)	CTS	P
12	TESTS FOR PRINDICATED BY TESTS FOR PRINDICATED BY (Both Metal en Test means Test means and given in Tab. VIII Tab. VIII-7 Test means for against solid for First characteristic numeral	THE FIRST CHARACTERISTIC OTECTION AGAINST SOLID FOR THE FIRST CHARACTERISTIC closure and Stainless steel end the main test conditions are the tests for protection preign objects Test means	OREIGN OBJEC NUMERAL closure)	CTS	
12	TESTS FOR PRINDICATED BY TESTS FOR PRINDICATED BY (Both Metal en Test means Test means and given in Tab. VII Tab. VII-7 Test means for against solid for First characteristic numeral	ROTECTION AGAINST ACCESS THE FIRST CHARACTERISTIC ROTECTION AGAINST SOLID FOR THE FIRST CHARACTERISTIC closure and Stainless steel end the main test conditions are the tests for protection oreign objects Test means No test required Rigid sphere without handle or guard	OREIGN OBJECT NUMERAL Closure) Test force	Test conditions	



Page 10 of 19

Report No. 50143315 001

		IEC/EN 60529				
Clause	Requirement – Test		Result		Verdict	
	4	Rigid steel wire 1 mm diameter with edges free from burrs	1 N ± 10%	13.2	N/A	
	5	Dust chamber Fig. 2, with or without underpressure	_	13.4 and 13.5	N/A	
	6	Dust chamber Fig. 2, with underpressure	_	13.4 and 13.6	Р	
13.2	Test condition	ons for first characteristic numera	als 1, 2, 3, 4			
		obe is pushed against any openingsure with the force specified in Tab.	6		N/A	
13.3	Acceptance	conditions for first characteristic	numerals 1, 2,	3, 4		
		n is satisfactory if the full iameter of acified in Table VII does not pass opening.	(EN 60529/A	1)	N/A	
13.4		r first characteristic numerals	5 and 6			
	incorporating whereby the preplaced by o talcum powder chamber. The to pass through nominal width The amount of per cubic met shall not have	ade using a dust chamber the basic principles shown in Fig. 2 powder circulation pump may be ther means suitable to maintain the er in suspension in a closed test at lacum powder used shall be able gh a square-meshed sieve the diameter of which is 50 mm and the of a gap between wires 75 mm. In the first of the test chamber volume. It is been used for more than 20 tests.		1)	Р	
	Enclosures au categories:	re of necessity in one of two				
	Category 1: E working cycle reductions in	inclosures where the normal of the equipment causes air pressure within the enclosure the surrounding air, e.g., due to g effects.	YRL66-U: IP6	66	Р	
		inclosures where no pressure ative to the surrounding air is			N/A	
	Category 1 er	nclosures:				
	test chamber enclosure is r atmospheric	e under test is supported inside the and the pressure inside the naintained below the surrounding pressure by a vacuum pump.			Р	
		onnection shall be made to a hole rided for this test.			Р	



Page 11 of 19

Report No. 50143315 001

IEC/EN 60529				
Clause	Requirement – Test	Result	Verdict	
	If not otherwise specified in the relevant product standard, this hole shall be in the vicinity of the vulnerable parts.		Р	
	If it is impracticable to make a special hole, the suction connection shall be made to the cable inlet hole.		N/A	
	If there are other holes (e.g., more cable inlet holes or drain-holes) these shall be treated as intended for normal use on site.		N/A	
	The object of the test is to draw into the enclosure, by means of depression, a volume of air 80 times the volume of the sample enclosure tested without exceeding the extraction rate of 60 volumes per hour.		Р	
	In no event shall the depression exceed 2 kPa (20 mbar) on the manometer shown in Fig. 2.		Р	
	If an extraction rate of 40 to 60 volumes per hour is obtained the duration of the test is 2 h.		Р	
	If, with a maximum depression of 2 kPa (20 mbar), the extraction rate is less than 40 volumes per hour, the test is continued until 80 volumes have been drawn through, or a period of 8 h has elapsed.		N/A	
	or a period of 8 h has elapsed.		N/A	
	Category 2 enclosures:			
	The enclosure under test is supported in its normal operating position inside the test chamber, but is not connected to a vacuum pump.		N/A	
	Any drain-hole normally open shall be left open for the duration of the test.		N/A	
	The test shall be continued for a period of 8		N/A	
	Category 1 and category 2 enclosures:			
	If it is impracticable to test the complete enclosure in the test chamber, one of the following procedures shall be applied:		N/A	
	testing of individually enclosed sections of the enclosure;.		N/A	
	testing of representative parts of the enclosure, comprising components such as doors, ventilation openings, joints, shaft seals, etc., in position during test;		N/A	
	testing of a smaller enclosure having the same full-scale design details.		N/A	



Page 12 of 19

Report No. 50143315 001

	IEC/EN 60529				
Clause	Requirement – Test	Result	Verdict		
	In the last two cases, the volume of air to be		N/A		
	drawn through the enclosure under test shall be the same as for the whole enclosure in full scale				
13.5	Special conditions for first characteristic num	eral 5			
13.5.1	Test conditions for first characteristic numera	ıl 5			
	The enclosure shall be deemed category 1 unless the relevant product standard for the equipment specifies that the enclosure is category 2.		N/A		
13.5.2	Acceptance conditions for first characteristic numeral 5				
	The protection is satisfactory if, on inspection, talcum powder has not accumulated in a quantity or location such that, as with any other kind of dust, it could interfere with the correct operation of the equipment or impair safety.		N/A		
	Except for special cases to be clearly specified in the relevant product standard, no dust shall deposit where it could lead to tracking along the creepage distances.		N/A		
13.6	Special conditions for first characteristic num	eral 6			
13.6.1	Test conditions for first characteristic numera	nl 6			
	The enclosure shall be deemed category 1, whether reductions in pressure below the atmospheric pressure are present or not.		Р		
13.6.2	Acceptance conditions for first characteristic				
	The protection is satisfactory if no deposit of dust is observable inside the enclosure at the	YRL66-U: IP66	Р		
	end of the test.	No trace of dust.			



Page 13 of 19

IEC/EN 60529

Result

1 min/m²

1 min/m²

at least 3 min

at least 3 min

12,5 l /min ±

100 I/min ±

5%

5%

Report No. 50143315 001

Verdict

N/A

Ρ

14.2.5

14.2.6

	TESTS FO	OR PROTECTION AGAINS	T WATER IN	IDICATED BY THE	SECOND	
14	CHARACTERISTIC NUMERAL (Both Metal enclosure and Stainless steel enclosure)					
14.1	Test mear			,		
	The test means and the main test conditions are given in Tab. VIII.					Р
	Tab. VIII-8 Test means and main test conditions for the tests for protection against water					
	Second charact. numeral	Test means	Water flow rate	Duration of test	Test conditions	Р
	0	No test required	_	_	_	N/A
	1	Drip box Fig.3 Enclosure on turntable	1 mm/min	10 min	14.2.1	N/A
	2	Drip box Fig.3 Enclosure in 4 fixed positions of 15° tilt	3 mm/min	2,5 min for each position of tilt	14.2.2	N/A
	3	Oscillating tube Fig. 4 Spray ± 60° from vertical, distance max. 200 mm or Spray nozzle Fig. 5 Spray ± 60° from vertical	0,07 I /min ± 5% per hole, multiplied by number of holes	10 min 1 min/m² at least 5 min	14.2.3 a) 14.2.3 b)	N/A
	4	As for numeral 3	10 l /min ± 5%	or numeral 3	14.2.4	N/A

7 Immersion tank 30 min 14.2.7 N/A Water-level on enclosure: 0,15 m above top 1 m above bottom Immersion tank by agreement 14.2.8 8 N/A Water-level: by agreement **Test conditions** 14.2 Test means and main test conditions are given in Ρ Tab. VIII. Details concerning compliance of degrees of Ρ protection - in particular for second characteristic numerals 5/6 (water jets) and numerals 7/8 (immersion) - are given in Clause 6. The tests are conducted with fresh water. Ρ

Spray ± 180° from vertical Water jet hose nozzle Fig. 6

Nozzle 6,3 mm diameter,

Nozzle 12,5 mm diameter,

distance 2,5 m to 3 m Water jet hose nozzle Fig. 6

distance 2.5 m to 3 m

5

6

TRF No.: IECEN60529A

Clause

Requirement - Test



Page 14 of 19

Report No. 50143315 001

IEC/EN 60529				
Clause	Requirement – Test	Result	Verdict	
	During the tests for IPX1 to IPX6 the water		Р	
	temperature should not differ by more than 5 K			
	from the temperature of the specimen under			
	test.			
	If the water temperature is more than 5 K		N/A	
	below the temperature of the specimen a			
	pressure balance shall be provided for the enclosure.			
	For IPX7 details of the water temperature			
	are given in 14.2.7.		N/A	
	During the test, the moisture contained inside			
	the enclosure may partly condense. The dew		P	
	which may thus deposit shall not be mistaken			
	for an ingress of water.			
	For the purpose of the tests, the surface area		Р	
	of the enclosure is calculated with a tolerance		'	
	of 10%.			
	Adequate safety precautions should be taken		Р	
	when testing the equipment in the energized			
	condition			
4.2.1	Test for second characteristic numeral 1 with t	the drip box		
	The test is made with a device which produces a		NI/A	
	uniform flow of water drops over the whole area		N/A	
	of the enclosure.			
	The turntable on which the enclosure is placed		N/A	
	has a rotation speed of 1 r/min and the		14/74	
	eccentricity(distance between turntable axis and			
	specimen axis) is approximately 100 mm.			
	The enclosure under test is placed in its normal		N/A	
	operating position under the drip box, the base of			
	which is larger than that of the enclosure.			
	Except for enclosures designed for wall or ceiling		N/A	
	mounting, the support for the enclosure under test should be smaller than the base of the			
	enclosure.			
	An enclosure normally fixed to a wall or ceiling			
	is fixed in its normal position of use to a wooden		N/A	
	board having dimensions which are equal to			
	those of that surface of the enclosure which is in			
	contact with the wall or ceiling when the			
	enclosure is mounted as in normal use.			
	The duration of test is 10 min.		N/A	
4.2.2	Test for second characteristic numeral 2 with t	the drip box		
	The dripping device is the same as specified in		N/A	
	14.2.1 adjusted to provide the water flow rate		IN/A	
	specified in Tab. VIII.			
	The table on which the enclosure is placed		N/A	
	does not turn as in the case of the test for the		IN//	
	second characteristic numeral 1.			



Page 15 of 19

Report No. 50143315 001

			IEC/EN 60529			
Clause	Requirement – T	est		Result		Verdict
	four fixed positi 15° on either si perpendicular p	s tested for 2,5 m ons of tilt. These de of the vertical lanes (see Fig. 3	positions are in two mutually b)).			N/A
14.2.3		d characteristic	numeral 3 with	 oscillating tube	or spray	N/A
	devices describ	e using one of th ed in Fig. 4 and i h the relevant pro	n Fig. 5 in			N/A
	a) Conditions w Fig. 4 (oscillating	then using the tes	st device as in			N/A
	b) Conditions w	then using the test ezzle)				N/A
14.2.4	Test for secon nozzle	d characteristic	numeral 4 with	oscillating tube	or spray	
	The test is made using one of the two test devices described in Fig. 4 and in Fig. 5 in accordance with the relevant product standard.				N/A	
	a) Conditions when using the test device as in Fig. 4 (oscillating tube):					N/A
	b) Conditions when using the test device as in Fig. 5 (spray nozzle):					N/A
	Tab. IX-9 Total water rate qv under IPX3 and IPX4 test conditions Mean flow rate per hole qv1 = 0,07 I/min					
	Tube radius R mm	Number of open holes N(1)	Total water flow Qv I /min	Number of open holes 1)	Total water flow qv I /min	N/A
	200	8	0,56	12	0.84	N/A
	400	16	1,1	25	1,8	N/A
	600	25	1,8	37	2,6	N/A
	800	33	2,3	50	3,5	N/A
	1000	41	2,9	62	4,3	N/A
	1200	50	3,5	75	5,3	N/A
	1400	58	4,1	87	6,1	N/A
	1600	67	4,7	100	7,0	N/A
	(1)Depending on thoopen holes N may	e actual arrangement be increased by 1.	t of the hole centres a	t the specified distan	ce, the number of	N/A
14.2.5	Test for secon	d characteristic	numeral 5 with	the 6,3 mm noz	zle	
	all practicable of	e by spraying the lirections with a s I test nozzle as s	tream of water			Р



Page 16 of 19

Report No. 50143315 001

	IEC/EN 60529				
Clause	Requirement – Test	Result	Verdict		
	The conditions to be observed are as follows:.				
			NI/A		
	internal diameter of the nozzle: 6,3 mm;		N/A		
	delivery rate: 12,5 l/min ± 5%;		N/A		
	water pressure: to be adjusted to achieve the specified delivery rate;		N/A		
	core of the substantial stream: circle of approximately 40 mm diameter at 2,5 m distance from nozzle;		N/A		
	test duration per square metre of enclosure surface area likely to be sprayed: 1 min;		N/A		
	minimum test duration: 3 min;		N/A		
	distance from nozzle to enclosure surface:between 2,5 and 3 m		N/A		
14.2.6	Test for second characteristic numeral 6 with	the 12,5 mm nozzle			
	The test is made by spraying the enclosure from all practicable directions with a stream of water from a standard test nozzle as shown in Fig. 6.	YRL66-U: IP66	Р		
	The conditions to be observed are as follows:.				
	internal diameter of the nozzle: 12,5 mm;		Р		
	delivery rate: 100 l/min ± 5%;.		Р		
	water pressure: to be adjusted to achieve the specified delivery rate;	1006mbar	Р		
	core of the substantial stream: circle of approximately 120 mm diameter at 2,5 m distance from nozzle;		Р		
	test duration per square metre of enclosure surface area likely to be sprayed: 1 min;		Р		
	minimum test duration: 3 min;		Р		
	distance from nozzle to enclosure surface: between 2,5 and 3 m.		Р		
14.2.7	Test for second characteristic numeral 7: temporary immersion between 0,15 and 1 m				
	The test is made by completely immersing the enceposition as specified by the manufacturer so that it satisfied:				
	a) the lowest point of enclosures with a height less than 850 mm is located 1000 mm below the surface of the water;		N/A		
	b) the highest point of enclosures with a height equal to or greater than 850 mm is located 150 mm below the surface of the water;		N/A		
	c) the duration of the test is 30 min;		N/A		
	d) the water temperature does not differ from that of the equipment by more than 5 K.		N/A		



Page 17 of 19

Report No. 50143315 001

IEC/EN 60529					
Clause	Requirement – Test	Result	Verdict		
	However, a modified requirement may be specified in the relevant product standard if the tests are to be made when the equipment is energized and/or its parts in motion		N/A		
14.2.8	Test for second characteristic numeral 8: conti agreement	nuous immersion subject to			
	Unless there is a relevant product standard, the test conditions are subject to agreement between manufacturer and user,		N/A		
	but they shall be more severe than those prescribed in 14.2.7		N/A		
	And they shall take account of the condition that the enclosure will be continuously immersed in actual use.		N/A		
14.3	Acceptance conditions				
	After testing in accordance with the appropriate requirements of 14.2.1 to 14.2.8 the enclosure shall be inspected for ingress of water.	YRL66-U: IP66 No trace of hazard water.	Р		
	It is the responsibility of the relevant Technical Committee to specify the amount of water which may be allowed to enter the enclosure and the details of a dieletric strength test, if any.		N/A		
	In general, if any water has entered, it shall not:				
	be sufficient to interfere with the correct operation of the equipment or impair safety;		N/A		
	deposit on insulation parts where it could lead to tracking along the creepage distances;		N/A		
	reach live parts or windings not designed to operate when wet;		N/A		
	accumulate near the cable end or enter the cable if any.		N/A		
	If the enclosure is provided with drain-holes, it should be proved by inspection that any water which enters does not accumulate and that it drains away without doing any harm to the equipment.		N/A		
	For enclosures without drain-holes, the relevant product standard shall specify the acceptance conditions if water can accumulate to reach live parts		N/A		

15	TESTS FOR PROTECTION AGAINST ACCESS TO HAZARDOUS PARTS	
10	INDICATED BY THE ADDITIONAL LETTER	



Page 18 of 19

Report No. 50143315 001

IEC/EN 60529							
Clause	Requirement – Test	Result	Verdict				
ZA	ZA ANNEX ZA (NORMATIVE) Other International Publications quoted in this standard with the references of the relevant European Publications						

Attachment 1

Measuring equipment list - TÜV Rheinland (Shanghai) Co., Ltd.

Equip.	Description	Model	Manufacturer	Inte. (mon)	Due date
1812092	Barometer	DYM-3	Ningbo temperature	12	26.10.2018
1811606	IPX3~IPX6 Tester	DEYI-01	Wuxi Deyi High-tech	12	06.01.2019
1812755	Jointed Test Finger	P10.14	PTL Dr. Grabenhorst	60	13.06.2022
1812098	Electron-stop watch	J9-2II	Shanghai Stopwatch	12	06.01.2019
1811449	Dust test unit	ST1000-U	Weiss	12	06.01.2019
1811681	Data logger	175H1	Testo	12	06.01.2019
1811873	Steel tape	20m	TAJIMA TOOLS	60	23.09.2019