

## SPECIFICATION AND PERFORMANCE

Series	303C	File	303C-321018-30-04_SPEC_1	Date	2021/12/06
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### Scope:

This specification covers the requirements for product performance, test methods and quality assurance provisions of below

Part Name	Description
303C-C4115-30-04	Pogo Machine Pin, Magnet Type, 4P H=4.15mm, Pitch 3.0, DIP, 20u", black
303C-321018-30-04	Pogo Pin, Magnet Type, 4Pin H4.6, Pitch 3.0, DIP, 5u", Black

### Performance and Descriptions:

The product is designed to meet the electrical, mechanical and environmental performance requirements specification. Unless otherwise specified, all tests are performed at ambient environmental conditions.

### RoHS:

All material in according with the RoHS environment related substances list controlled.

MATERIALS		
NO.	PART NAME	DESCRIPTION
1	HOUSING	HTN FR52G30NH, UL94V-0, Black
2	POGO PIN	Lead free brass C6801 or equivalent, gold plating over nickel
3	MACHINE PIN	Lead free brass C2801 or equivalent, gold plating over nickel
4	MAGNET	Neodymium magnet N48, nickel plating
5	GLUE	LTE-120HP

RATING	
Rated Current	1A
Rated Voltage	12V DC
Operating Temperature	-30°C TO +60°C
Storage Temperature	-30°C TO +60°C
Durability	20,000 Cycles

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## ELECTRICAL

Item	Requirement	Test Condition
Contact Resistance	30mΩ Max. at working stroke (at standing still)	Voltage drop system four-wire system with below 300mA
Dielectric Strength	No dielectric breaks down.	500VAC 1 minute
Insulation Resistance	100M MIN.	500VDC 1 minute

## MECHANICAL

Item	Requirement	Test Condition
Pin Force	40g±20g	0.4mm compression, test speed 25.0mm/min.
Pin Strength	No appearance damage	9.8N force on pin from any direction for 1 minute
Pin Pulling Off Force	No appearance damage	3.0N force on a pin from axis direction for 1 minute

## ENVIRONMENTAL

Item	Requirement	Test Condition
Operation durability	No appearance damage Contact Resistance: 100mΩ Max. Pin Force: 80g±0.2g No appearance damage	1.0mm pin compression for the nominal stroke at a frequency of 10 to 20 times per minute for 20,000 cycles.
Low Temperature Durability	Contact Resistance: 100mΩ Max.	Store in temp: -30°C±3°C for 96hrs, then leave in the ambient temperature for 1 hour.
High Temperature Durability	No appearance damage	Store in temp: +60°C±2°C for 96hrs, then leave in the ambient temperature for 1 hour.
Humidity Durability	Meet electrical spec.	Store in temp: 60°C±2°C with humidity of 90% ~ 95% for 96hrs, then leave in the ambient temperature for 1 hour.
Temperature Cycle Test	No appearance damage	Cycle 5 times (Table 1 Shows test condition for 1 circle). Leave in the ambient temp for 1 hour.
Salt Spray	No excessive surface corrosion	The electrical performance shall be measured after continuous spray of salt water with 5±1% density and 35°C±2°C temperature for 24 hours, cleaning

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		with lukewarm water and dry, and leaving in ambient temperature for 1 hour.
Vibration	Contact Resistance: 100mΩ Max.  No appearance damage  Intermittency below 1μ sec	Connect each connector pin in series, conducting current of 0.1A. After that, the vibration described below is added. <ul style="list-style-type: none"><li>● Amplitude: 1.5mm</li><li>● Sweeping cycle: 10~55~10 Hz/minute</li><li>● Duration of test: 2 hours for each of X, Y, Z axis</li></ul>
Shock		Connect each connector pin in series, conducting current of 0.1A. After that, the shock described below is added. <ul style="list-style-type: none"><li>● Accelerating rate: 490m/s<sup>2</sup></li><li>● Operating time of the test: 11ms</li><li>● The number of operating times: 3 shocks at X, Y, Z axis both in negative and positive direction.</li></ul>

Table 1 –Temperature Cycle

Step	Temperature (°C)	Time (minutes)
1	-30±3	30~35
2	5~35	10~15
3	60±2	30~35
4	5~35	10~15

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