

Product specification

1. Scope

This specification covers heavy-duty connectors equipped with crimp contacts, and specifies their performance requirements, test methods and acceptance criteria.

Applicable Product Models: FTH series.

2. Applicable Standards

The following documents form a part of this specification. In the event of conflict between the requirements of this specification and the product drawing, the product drawing shall take precedence. In the event of conflict between the requirements of this specification and the referenced documents, this specification shall take precedence.

2.1 EN 61984: Connectors - Safety requirements and tests

2.2 IEC 60512: Connectors for electronic equipment -Test and measurement

2.3 IEC 60529: Degrees of Protection Provided by Enclosures (IP Code)

2.4 GB/T5095: Electromechanical components for electronic equipment — Basic testing procedures and measuring methods

2.5 GB/T2423: Environmental testing for electric and electronic products

3. Parameter Range

See drawing for details.

4. Appearance and Dimensions

4.1 Appearance: The product surface shall be free from defects, dirt, cracks and mechanical damage. Contacts shall be free from rust, oxidation or plating peeling.

4.2 Appearance and dimensions shall comply with the requirements of product drawings.

4.3 Exchangeable: Exchangeable with same specification products.

5. Materials

See drawing for details.

6. Test Requirements and Procedures Summary

Serial No.	Item	Test Method	Technical Requirements
1	Examination of Product	Visual inspection (IEC 60512-1-1/-2, Test 1a and 1b 6.2 of EN 61984)	Meet the drawing requirements, no damage or abnormality in visual appearance

Mechanical Characteristics			
2	Cable Retention Force	For conductor cross-section 0.05~10 mm ² , the minimum pull-out force of crimp connection shall comply with Table 1 of EN 60352-2. For conductor cross-section >10 mm ² , the minimum pull-out force of crimp connection shall comply with Table 8 of NF F 00-363.	Axial tensile force shall be applied steadily during test; conductor shall not pull out from crimp barrel when reaching specified force.
3	Durability	Mating cycles: 500 cycles Mating speed: 8~10 cycles per minute (GB/T 5095.5-1997 Test 9a)	Performance shall comply with drawing requirements; no damage or abnormal appearance.
Electrical Requirement			
4	Contact Resistance	Test current: 1A Measure points at the end of the termination (IEC 60512-2-2 Test 2b)	Contact resistance shall comply with drawing requirements.
Environmental Performance			
5	Low temperature test	Test temperature: -40℃ Test duration: 2 h After test, recover for 2 h under ambient conditions before inspection. (GB/T 5095.6-1997 Test 11j)	Appearance: No damage; Contact resistance shall comply with drawing requirements.
6	High temperature test	Test temperature: 125℃. Test duration: 168 h. After test, recover for 2 h under ambient conditions before inspection. (GB/T 5095.6-1997 Test 11i)	

7	Temperature	Mate connector measure the temperature rise of contact when the maximum rated current is passed. (GB/T 5095.2-1997 Test 4a)	The sum of the ambient temperature and the temperature rise (ΔT) of a connector shall not exceed the upper limiting temperature
8	Potassium Sulfide Tarnish Resistance Test	Test solution: 5% potassium sulfide aqueous solution Test temperature: 25°C Immersion duration: 5 min Sample quantity: 3~5 pcs per batch	After immersion, cleaning and drying, no discoloration, black spots or tarnish shall be observed on the sample surface.