1. **Scope**

This specification covers the Wire to Wire pitch 2.5mm series connectors.

Product name	Housing		Terminal	
Series number	FHG25010	FHG25011	FT25009	FT25010

2. **Applicable documents**

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

3. **Ordering information**

Refer to the drawing.

4. **Connector dimensions**

Refer to the drawing.

5. **Material**

Housing: PA66 (UL 94V-0)

Color: Refer to the drawing.

Contacts terminal: Phosphor bronze

Plating: Tin plated

6. **Recommended panel layout**

Refer to the drawing.

7. **Rating and applicable wires**

Operating voltage(Max.)	250V AC/DC (rms)
Current rating(Max.)	3.0A (AWG.#22) DC
Temperature range-operating	-25°C -- +85°C (Including terminal temperature rise)
Applicable wires	AWG. #28 ~ #22

8. **Performance**

Test item	Requirement	Test Condition
Appearance	Plastic part: Smooth and flat surface without discolor, broken, crack, distortion defects is acceptable. Metal part: Bright and even surface without rust, oxide, fog and obvious physical damage defects is acceptable.	Visual by eye Light: ＞1.0 Lamp: (200~300)lx Space: (0.3~0.5)m

Test item	Requirement		Test Condition
Electrical Performance			
Contact Resistance	20 mΩ Max. (Initial)		Mate connectors, measure by dry circuit, 20mV Max., 10mA. Mated Length : 50mm (AWG. #22) (Based upon JIS C5402 5.4)
Insulation Resistance	1000 MΩ Min.		Mate connectors, apply 500V DC between adjacent terminals or ground. (Based upon JIS C5402 5.2/MIL-STD-202 method 302 Cond.B)
Withstand Voltage	No breakdown and flashover		Mate connectors, apply 1000V AC for 1 minute between adjacent terminal or ground. (Based upon JIS C5402 5.1/MIL-STD-202 Method 301)
Mechanical Performance			
Insertion and Withdrawal Force	Insertion (Max.)	10.0 N Max. * Number of Circuits	Insertion and withdrawal connectors at the speed rate of 1 mm/s ~ 5 mm/s
	Withdrawal (Min.)	1.0 N Min. * Number of Circuits	
Crimping pull out Force	AWG.#22	40 N Min.	Fix the crimped terminal, apply axial pull out force on the wire at the speed rate of 25±3 mm/minute (Based upon JIS C5402 6.22)
	AWG.#24	30 N Min.	
	AWG.#26	20 N Min.	
	AWG.#28	15 N Min.	
Terminal/Housing Retention Force	20 N Min.		Apply axial pull out force at the speed rate of 25±3 mm/minute on the terminal assembled in the housing.
Housing Lock Retention Force	10 N Min.		Insertion and withdrawal housing at the speed rate of 1 mm/s ~ 5 mm/s
Environmental Performance and others			
Repeated insertion/ withdrawal	Contact Resistance	30 mΩ Max.	Mate connector up to 50 cycles repeatedly at a rate of 10 cycles/minute. After which test the contact resistance
Temperature Rise	30 °C Max.		Apply rated current load on mated connector in series-connection. Measure change of temperature on contact using thermocouples for 4 hours. (Based upon UL 1977)

Test item	Requirement		Test Condition
Heat resistance	Appearance	No Damage	Mated connector shall be placed in an oven for 4 hours at +85±2°C. (Based upon JIS C5402 7.8)
	Contact Resistance	30 mΩ Max.	
Cold resistance	Appearance	No Damage	Mated connector shall be placed in a temperature chamber for 4 hours at -25±2°C (Based upon JIS C5402 7.9)
	Contact Resistance	30 mΩ Max.	
Temperature Cycling	Appearance	No Damage	Mated connector shall be set to temperature cycling for 5 cycles of which 1 cycle consists of: 1>.+25°C ~ 3 minutes 2>.-25°C ~ 30 minutes 3>.+25°C ~ 3 minutes 4>.+85°C ~ 30 minutes (Based upon JIS C5402 7.2)
	Contact Resistance	30 mΩ Max.	
	Withstand Voltage	1000 V AC/min	
	Insulation Resistance	1000 MΩ Min.	
Humidity	Appearance	No Damage	Mated connector shall be placed in a humidity chamber on the following conditions. Temperature: 40±2°C Relative humidity: 90~95% Duration : 96 Hours (Based upon JIS C0022/MIL-STD-202 Method 103B Cond.B)
	Contact Resistance	30 mΩ Max.	
	Withstand Voltage	1000 V AC/min	
	Insulation Resistance	1000 MΩ Min.	
Vibration	Appearance	No Damage	Frequency: 10~55 Hz Amplitude: ±0.35 mm Frequency: ＞55~500 Hz Acceleration: 50 m/s^2 Duration: 2 hours in each X、Y、Z axlals. (Based upon MIL-STD-202 method 201A)
	Contact Resistance	30 mΩ Max.	
	Discontinuity	1μ sec Max.	
Salt Spray	Appearance	No Damage	Mated connector shall be placed in a salt spray chamber on the following conditions. Salt Solution Density : 5±1% Temperature : 35±2°C Duration : 16 Hours (Based upon JIS C5402 7.1/MIL-STD-202 Method 101 Cond. B)
	Contact Resistance	30 mΩ Max.	
Solderability	95% of immersed area must show no voids nor pin holes.		Immerse fluxed soldered section of contact pin into a solder bath for 2±0.5 sec Temperature: 235±5 °C
Resistance to soldering heat	Appearance	No Damage	Mated connector shall be dipped on solder bath for 5 ±1 sec Temperature: 260±5°C