Parting temperature range   -55 °C to 85 °C   Storage temperature range   -10 °C TO 50 °C (Packed corrections)   Frequency 10 to 55 Hz, half amplitude   0.75 mm, for 10 cycles in 3 axial directions.   One to the form of the form of the first stance of PC insertion force   Measured by applicable FPC (Thickness of FPC shall be t=0.30mm at initial condition.)   FPC retention force   Measured by applicable FPC (Thickness of FPC shall be t=0.30mm applicable FPC (Thickness of FPC shall be t=0.30mm at initial condition.)   Ope of popper of popper of precional proper of the first stance   Pop contacts	Not de	wed)
RATING Votage Current  A 0.3 A Applicable cable  SPECIFICATIONS  ITEM TEST METHOD REQUIREMENTS  CONSTRUCTION  General examination Visually and by measuring instrument.  According to drawing.  (note 1)  ELECTRICAL CHARACTERISTICS  Voltage proof 90 V AC for 1 min.  Insulation resistance 100 V DC.  Contact resistance AC 20 mV MAX , 1 mA .  MECHANICAL CHARACTERISTICS  Vibration Frequency 10 to 55 Hz, half amplitude 0.75 mm, for 10 cycles in 3 axial directions.  Mechanical operation 10 times insertions and extractions.  Mechanical operation 10 times insertions and extractions.  FPC insertion force Measured by applicable FPC (Thickness of FPC shall be t=0.30mm at initial condition.)  Measured by applicable FPC (Thickness of FPC shall be t=0.30mm at initial condition.)  REQUIREMENTS  L=0.3±0.03mm, Gold p t=0.3±0.00mm, Glod p t=0.3±0.00mm, Glo	QT X X X X	AT × ×
SPECIFICATIONS  ITEM TEST METHOD REQUIREMENTS  CONSTRUCTION  General examination Visually and by measuring instrument.  Marking Confirmed visually.  ELECTRICAL CHARACTERISTICS  Voltage proof 90 ∨ AC for 1 min.  Insulation resistance 100 ∨ DC.  Contact resistance AC 20 mV MAX , 1 mA . 100 mΩ MAX.  Including FPC bulk resistance (L=8mm)  MECHANICAL CHARACTERISTICS  Vibration Frequency 10 to 55 Hz, half amplitude 0.75 mm, for 10 cycles in 3 axial directions.  Shock 981 m/s² , duration of pulse 6 ms at 3 times in 3 both axial directions.  Mechanical operation 10 times insertions and extractions.  Mechanical operation 10 times insertions and extractions.  FPC insertion force Measured by applicable FPC (Thickness of FPC shall be t=0.30mm at initial condition.)  FPC retention force Measured by applicable FPC (Thickness of FPC shall be t=0.30mm at initial condition.)  FPC retention force Direction of extraction 5+0.07 × n N MIN (note3)	X X X	AT × ×
SPECIFICATIONS	×   ×   ×   ×   ×     ×	×
TEM	×   ×   ×   ×   ×     ×	×
CONSTRUCTION         General examination       Visually and by measuring instrument.       According to drawing. (note 1)         Marking       Confirmed visually.       (note 1)         ELECTRICAL CHARACTERISTICS       Voltage proof       90 V AC for 1 min.       No flashover or breakdown.         Insulation resistance       100 V DC.       50 MΩ MIN.         Contact resistance       AC 20 mV MAX , 1 mA .       100 mΩ MAX.         Including FPC bulk resistance (L=8mm)         MECHANICAL CHARACTERISTICS         Vibration       Frequency 10 to 55 Hz, half amplitude 0.75 mm, for 10 cycles in 3 axial directions.       ① No electrical discontinuity of 1 μs. ② Contact resistance: 100 mΩ MAX.         Shock       981 m/s², duration of pulse 6 ms at 3 times in 3 both axial directions.       ③ No damage, crack and looseness of parts.         Mechanical operation       10 times insertions and extractions.       ① Contact resistance: 100 mΩ MAX.         § No damage, crack and looseness of parts.         FPC insertion force       Measured by applicable FPC (Thickness of FPC shall be t=0.30mm at initial condition.)       (n: Number of contacts)         FPC retention force       Measured by applicable FPC (Thickness of FPC shall be t=0.30mm at initial condition.)       Retention force : Direction of extraction 5+0.07 × n N MIN (note 3)	×   ×   ×   ×   ×     ×	×
General examination       Visually and by measuring instrument.       According to drawing. (note 1)         Marking       Confirmed visually.         ELECTRICAL CHARACTERISTICS         Voltage proof       90 V AC for 1 min.       No flashover or breakdown.         Insulation resistance       100 V DC.       50 MΩ MIN.         Contact resistance       AC 20 mV MAX , 1 mA .       100 mΩ MAX. Including FPC bulk resistance (L=8mm)         MECHANICAL CHARACTERISTICS       Vibration       Frequency 10 to 55 Hz, half amplitude 0.75 mm, for 10 cycles in 3 axial directions.       ① No electrical discontinuity of 1 μs. ② Contact resistance: 100 mΩ MAX. ② Contact resistance: 100 mΩ MAX. ② No damage, crack and looseness of parts.         Shock       981 m/s² , duration of pulse 6 ms at 3 times in 3 both axial directions.       ③ No damage, crack and looseness of parts.         Mechanical operation       10 times insertions and extractions.       ① Contact resistance: 100 mΩ MAX. ② No damage, crack and looseness of parts.         FPC insertion force       Measured by applicable FPC (Thickness of FPC shall be t=0.30mm at initial condition.)       Insertion force : Direction of extraction 5+0.07 × n N MIN (note 2)         FPC retention force       Measured by applicable FPC (Thickness of FPC shall be t=0.30mm       Retention force : Direction of extraction 5+0.07 × n N MIN (note3)	× × × × ×	×
ELECTRICAL CHARACTERISTICS	× × × ×	
Voltage proof       90 V AC for 1 min.       No flashover or breakdown.         Insulation resistance       100 V DC.       50 MΩ MIN.         Contact resistance       AC 20 mV MAX , 1 mA .       100 mΩ MAX.         Including FPC bulk resistance (L=8mm)         MECHANICAL CHARACTERISTICS         Vibration       Frequency 10 to 55 Hz, half amplitude 0.75 mm, for 10 cycles in 3 axial directions.       ① No electrical discontinuity of 1 μs. ② Contact resistance: 100 mΩ MAX.         Shock       981 m/s² , duration of pulse 6 ms at 3 times in 3 both axial directions.       ③ No damage, crack and looseness of parts.         Mechanical operation       10 times insertions and extractions.       ① Contact resistance: 100 mΩ MAX.         ② No damage, crack and looseness of parts.       Provious manages of parts.         FPC insertion force       Measured by applicable FPC (Thickness of FPC shall be t=0.30mm at initial condition.)       Insertion force : Direction of insertion 2.6+0.14×n N MAX (note 2) (n: Number of contacts)         FPC retention force       Measured by applicable FPC (Thickness of FPC shall be t=0.30mm       Retention force : Direction of extraction 5+0.07×n N MIN (note3)	×	_ _ _
Insulation resistance    100 V DC.   50 MΩ MIN.	×	_ _ _
Contact resistance  AC 20 mV MAX , 1 mA .  100 mΩ MAX.  Including FPC bulk resistance (L=8mm)  MECHANICAL CHARACTERISTICS  Vibration  Frequency 10 to 55 Hz, half amplitude 0.75 mm, for 10 cycles in 3 axial directions.  Shock  981 m/s² , duration of pulse 6 ms at 3 times in 3 both axial directions.  Mechanical operation  10 times insertions and extractions.  Mechanical operation  10 times insertions and extractions.  FPC insertion force  Measured by applicable FPC (Thickness of FPC shall be t=0.30mm at initial condition.)  FPC retention force  Measured by applicable FPC (Thickness of FPC shall be t=0.30mm AC 20 mV MAX.  10 No electrical discontinuity of 1 μs. 20 Contact resistance: 100 mΩ MAX. 30 No damage, crack and looseness of parts.  11 Contact resistance: 100 mΩ MAX. 22 No damage, crack and looseness of parts.  12 Contact resistance: 100 mΩ MAX. 23 No damage, crack and looseness of parts.  13 Insertion force : Direction of insertion of contacts of the contacts of the contact of the contac	×	_
Including FPC bulk resistance (L=8mm)         MECHANICAL CHARACTERISTICS         Vibration       Frequency 10 to 55 Hz, half amplitude 0.75 mm, for 10 cycles in 3 axial directions.       ① No electrical discontinuity of 1 μs.         Shock       981 m/s², duration of pulse 6 ms at 3 times in 3 both axial directions.       ③ No damage, crack and looseness of parts.         Mechanical operation       10 times insertions and extractions.       ① Contact resistance: 100 mΩ MAX.         ② No damage, crack and looseness of parts.         FPC insertion force       Measured by applicable FPC (Thickness of FPC shall be t=0.30mm at initial condition.)       Insertion force : Direction of insertion of contacts)         FPC retention force       Measured by applicable FPC (Thickness of FPC shall be t=0.30mm)       Retention force : Direction of extraction of extraction of the struction of the structio	×	_
MECHANICAL CHARACTERISTICS         Vibration       Frequency 10 to 55 Hz, half amplitude 0.75 mm, for 10 cycles in 3 axial directions.       ① No electrical discontinuity of 1 μs.         Shock       981 m/s², duration of pulse 6 ms at 3 times in 3 both axial directions.       ③ No damage, crack and looseness of parts.         Mechanical operation       10 times insertions and extractions.       ① Contact resistance: 100 mΩ MAX.         ② No damage, crack and looseness of parts.         FPC insertion force       Measured by applicable FPC (Thickness of FPC shall be t=0.30mm at initial condition.)       Insertion force : Direction of insertion of contacts)         FPC retention force       Measured by applicable FPC (Thickness of FPC shall be t=0.30mm)       Retention force : Direction of extraction of extraction of the struction of the structi	×	
MECHANICAL CHARACTERISTICS         Vibration       Frequency 10 to 55 Hz, half amplitude 0.75 mm, for 10 cycles in 3 axial directions.       ① No electrical discontinuity of 1 μs. ② Contact resistance: 100 mΩ MAX.         Shock       981 m/s², duration of pulse 6 ms at 3 times in 3 both axial directions.       ③ No damage, crack and looseness of parts.         Mechanical operation       10 times insertions and extractions.       ① Contact resistance: 100 mΩ MAX.         ② No damage, crack and looseness of parts.         FPC insertion force       Measured by applicable FPC (Thickness of FPC shall be t=0.30mm at initial condition.)       Insertion force : Direction of insertion 2.6+0.14 × n N MAX (note 2) (n: Number of contacts)         FPC retention force       Measured by applicable FPC (Thickness of FPC shall be t=0.30mm       Retention force : Direction of extraction 5+0.07 × n N MIN (note3)		
Vibration       Frequency 10 to 55 Hz, half amplitude 0.75 mm, for 10 cycles in 3 axial directions.       ① No electrical discontinuity of 1 μs.         Shock       981 m/s², duration of pulse 6 ms at 3 times in 3 both axial directions.       ③ No damage, crack and looseness of parts.         Mechanical operation       10 times insertions and extractions.       ① Contact resistance: $100 \text{ m}\Omega$ MAX.         ② No damage, crack and looseness of parts.         FPC insertion force       Measured by applicable FPC (Thickness of FPC shall be t=0.30mm at initial condition.)       Insertion force : Direction of insertion $2.6+0.14 \times n$ N MAX (note 2) (n: Number of contacts)         FPC retention force       Measured by applicable FPC (Thickness of FPC shall be t=0.30mm)       Retention force : Direction of extraction $5+0.07 \times n$ N MIN (note3)		
0.75 mm, for 10 cycles in 3 axial directions.  ② Contact resistance: 100 mΩ MAX.  Shock  981 m/s², duration of pulse 6 ms at 3 times in 3 both axial directions.  Mechanical operation  10 times insertions and extractions.  ① Contact resistance: 100 mΩ MAX. ② No damage, crack and looseness of parts.  FPC insertion force  Measured by applicable FPC  (Thickness of FPC shall be t=0.30mm 2.6+0.14 × n N MAX (note 2) (n: Number of contacts)  FPC retention force  Measured by applicable FPC  (Thickness of FPC shall be t=0.30mm 5+0.07 × n N MIN (note3)		l —
at 3 times in 3 both axial directions.  Mechanical operation  10 times insertions and extractions.  2 No damage, crack and looseness of parts.  FPC insertion force  Measured by applicable FPC (Thickness of FPC shall be t=0.30mm at initial condition.)  FPC retention force  Measured by applicable FPC (Thickness of FPC shall be t=0.30mm at initial condition.)  Measured by applicable FPC (Thickness of FPC shall be t=0.30mm 5+0.07 × n N MIN (note3)	×	
Mechanical operation       10 times insertions and extractions.       ① Contact resistance: 100 mΩ MAX.         ② No damage, crack and looseness of parts.         FPC insertion force       Measured by applicable FPC (Thickness of FPC shall be t=0.30mm at initial condition.)       Insertion force : Direction of insertion (2.6+0.14 × n N MAX (note 2) (n: Number of contacts)         FPC retention force       Measured by applicable FPC (Thickness of FPC shall be t=0.30mm)       Retention force : Direction of extraction (5+0.07 × n N MIN (note3))		_
PPC insertion force  Measured by applicable FPC (Thickness of FPC shall be t=0.30mm at initial condition.)  Measured by applicable FPC (Thickness of FPC shall be t=0.30mm at initial condition.)  Measured by applicable FPC (Thickness of FPC shall be t=0.30mm 5+0.07 × n N MIN (note3)	×	
(Thickness of FPC shall be t=0.30mm at initial condition.)  PPC retention force  (Thickness of FPC shall be t=0.30mm at initial condition.)  (n: Number of contacts)  Retention force : Direction of extraction of e		
at initial condition.)  (n: Number of contacts)  FPC retention force  Measured by applicable FPC (Thickness of FPC shall be t=0.30mm  (n: Number of contacts)  Retention force: Direction of extraction 5+0.07 × n N MIN (note3)	×	_
FPC retention force  Measured by applicable FPC (Thickness of FPC shall be t=0.30mm  Retention force : Direction of extraction 5+0.07 × n N MIN (note3)		
(Thickness of FPC shall be t=0.30mm 5+0.07 × n N MIN ( <i>note3</i> )	×	_
at initial condition.)		
(		
ENVIRONMENTAL CHARACTERISTICS		
Corrosion salt mist Exposed at 35±2 °C, 5 % salt water spray for 96 h.	×	_
Rapid change of Temperature- $55 \rightarrow +15 \text{TO} +35 \rightarrow +85 \rightarrow +15 \text{TO} +35 ^{\circ}\text{C}$ ① Contact resistance: 100 m $\Omega$ MAX.	×	_
temperature Time $30 \rightarrow 2 \text{ to } 3 \rightarrow 30 \rightarrow 2 \text{ to } 3 \text{ min}$ 2 Insulation resistance: $50 \text{ M}\Omega \text{ MIN}$ .		
Under 5 cycles.  Damp heat  Exposed at 40±2 °C.  3 No damage, crack and looseness of parts.		
Damp heat Exposed at 40±2 °C, (steady state) Relative humidity 90 to 95 %, 96 h.	×	_
Damp heat,cyclic Exposed at -10 to +65 °c, ① Contact resistance: 100 mΩ MAX.	×	_
Relative humidity 90 to 96 %,  (2) Insulation resistance: 1 MΩ MIN.		
10 cycles, TOTAL 240 h. (At high humidity)  (3) Insulation resistance: 50 MΩ MIN.		
(At dry)		
No damage, crack and looseness of parts		
COUNT DESCRIPTION OF REVISIONS DESIGNED CHECKED	DA <sup>-</sup>	TE
3 DIS-F-00010250 SE. YOKOYAMA HY. YAMAZAKI	20210713	
REMARK APPROVED NF. MIYAZAKI	2017	0404
CHECKED YN. TAKASHITA	2017	
DESIGNED HH. MURAKAMI	2017	0404
Unless otherwise specified, refer to IEC 60512. DRAWN HH. MURAKAMI	20170	0404
Note QT:Qualification Test AT:Assurance Test X:Applicable Test DRAWING NO. ELC-368163-10		
SPECIFICATION SHEET PART NO. FH62-**S-0. 25SHW (10	<u>.                                     </u>	
HIROSE ELECTRIC CO., LTD. CODE NO. CL580		1/2

	SPECIFICAT	IONS		
ITEM	TEM TEST METHOD REQUIREMENTS		QT	AT
Dry heat	Exposed at 85±2°C, 96 h.	① Contact resistance: 100 mΩ MAX.	×	_
Cold	Exposed at -55±3°C, 96 h.	② No damage, crack and looseness of parts	×	_
Sulphur dioxide [JIS C 60068-2-42]	Exposed at 40±2 °C,  Relative humidity 80±5%  25±5 ppm for 96 h.  1 Contact resistance: 100 ms		×	_
Hydrogen sulphide [JIS C 60068-2-43]	Exposed at 40±2 °C, Relative humidity 80±5%, 10 to 15 ppm for 96 h.		×	_
Solderability	Soldered at solder temperature, 245±3°C for immersion duration,3±0.3 sec.	A new uniform coating of solder shall cover a minimum of 95 % of the surface being immersed.	×	_
Resistance to soldering heat	1) Reflow soldering: Peak TMP. 250 °C MAX. Reflow TMP. over 220 °C 60 to 90 sec. Number of reflow: 2 times 2) Soldering irons: TMP. 350±10 °C for 5±1 sec.	No deformation of case of excessive looseness of the terminals. (note 4)	×	_

## (note 1)

This product features top-contact point.

"One Action Lock" completes FPC lock just by inserting the FPC.

Do not operate the locking-lever when inserting the FPC.

## (note 2)

Do not insert the FPC to this product at an angle.

## (note 3)



There's a case which FPC retention force doesn't fulfill the value, because FPC specification affects the result of FPC retention force.

Stabilize the FPC to PCB or something fixed, if pull-up or pull-down force is exepected to be applied to the FPC.

## (note 4)

Blisters which may be generated on the housing do not affect product performance.

Note QT:Q	ualification Test AT:Assurance Test X:Applicable Test	DRAWING NO.		ELC-368163-10-01		
HS	SPECIFICATION SHEET	PART NO.	FH62-**S-0. 25SHW(10)			
	HIROSE ELECTRIC CO., LTD.	CODE NO		CL580	A	2/2