










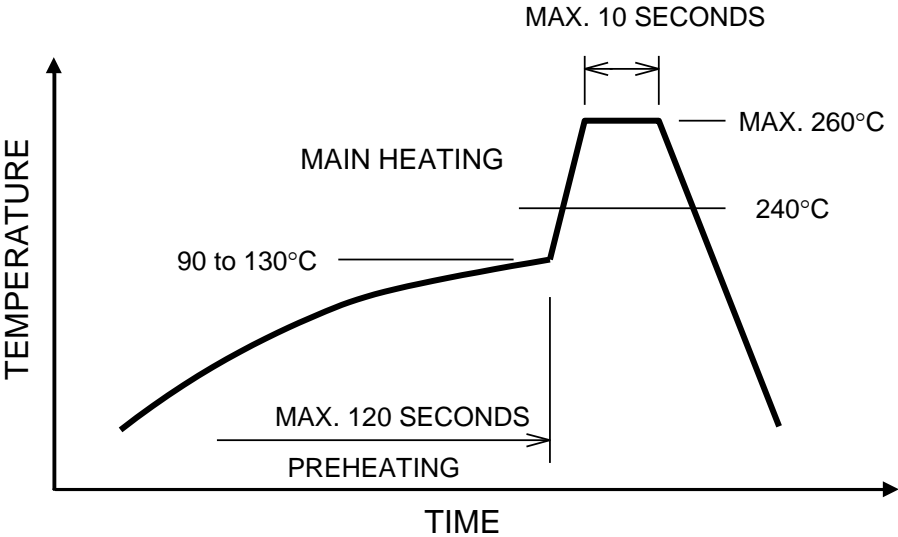


APPLICABLE STANDARD		ISO/IEC 11801 CLASS D CATEGORY 5			
RATING	Operating temperature range	-40 to +85 °C (Note 1)	Storage temperature range	-10 to +60 °C (Note 2)	
	Voltage	100 V AC, 100 V DC	Operating humidity range	10 to 90 %	
	Current	4 A / pin (Note 4)			
SPECIFICATIONS					
ITEM		PROCEDURE	REQUIREMENTS	QT	AT
CONSTRUCTION					
General examination		Visually and by measuring instrument.	According to drawing.	X	X
Marking		Confirmed visually.		X	X
ELECTRICAL CHARACTERISTICS					
Contact resistance (Initial value) 	100 mA MAX. (DC or 1000 Hz)		1) Contact : 10 mΩ MAX. (Note 3) 2) Shielding : 50 mΩ MAX. (Note 3)	X	-
Insulation resistance (Initial value) 	500 V DC.		5000 MΩ MIN.	X	-
Voltage proof (Initial value) 	1500 V AC for 1 min. • Distance between two male contacts. • Distance between male contact and the R-Shield plate ST (1 DIP).		No flashover or breakdown.	X	X
MECHANICAL CHARACTERISTICS					
Contact insertion, release and extraction force	Measured by applicable contact.		Insertion force : 12 N MAX. Extraction force : 0.5 N MIN.	X	-
Engaging and separating forces	Measured by applicable connector.  		Insertion force : 40 N MAX. (Typical:16.7N) Extraction force : 10 N MIN. (Typical:13.8N)	X	-
Mechanical operation	500 times insertions and extractions.		1) Contact : 25 mΩ MAX. (Note 3) 2) Shielding : 70 mΩ MAX. (Note 3) 3) No damage, crack and looseness of parts.	X	-
Vibration (sinusoidal)	Frequency 10 to 55 Hz single amplitude 0.75 mm, 3 axial directions, 2 h each.		1) No electrical discontinuity of 10 μs. 2) No damage, crack and looseness of parts.	X	-
Vibration (Railway random vibration test)	JIS E 4031 CATEGORY 1 CLASS B Frequency : 5 to 150 Hz Excitation condition RMS : 7.90 m/s ² ASD level : 1.857 (m/s ²)/Hz 3 axial directions, 5 h each.		1) No electrical discontinuity of 10 μs. 2) No damage, crack and looseness of parts.	X	-
Shock	Acceleration 490 m/s ² , duration of pulse 11 ms, for 3 times in 3 both axial directions. (half-sine wave)		1) No electrical discontinuity of 10 μs. 2) No damage, crack and looseness of parts.	X	-
Shock (Railway)	JIS E 4031 CATEGORY 1 CLASS B Peak acceleration : 50 m/s ² Nominal time : 30 ms 3 both axial directions, 3 times each.		1) No electrical discontinuity of 10 μs. 2) No damage, crack and looseness of parts.	X	-
ENVIRONMENTAL CHARACTERISTICS					
Rapid change of temperature	Temperature : -40 → 15 to 35 → 125 → 15 to 35 °c Time : 30 → 2 to 3 → 30 → 2 to 3 min. Under 5 cycles.		1) Contact : 25 mΩ MAX. (Note 3) 2) Shielding : 70 mΩ MAX. (Note 3) 3) No damage, crack and looseness of parts.	X	-
	COUNT	DESCRIPTION OF REVISIONS	DESIGNED	CHECKED	DATE
	5	DIS-E-00001781	TU. TANIGUCHI	AH. KODAMA	18. 09. 07
REMARK This specification sheet shows the performance with incorporated applicable crimp contacts and compatible connector. Unless otherwise specified, refer to IEC 60512.			APPROVED	RI. TAKAYASU	16. 07. 06
			CHECKED	AH. KODAMA	16. 07. 06
			DESIGNED	TA. TORIHARA	16. 07. 06
			DRAWN	TA. TORIHARA	16. 07. 06
Note QT: Qualification Test AT: Assurance Test X: Applicable Test			DRAWING NO.		ELC-128493-00-00
	SPECIFICATION SHEET		PART NO.	TJ20L (1) -4P	
	HIROSE ELECTRIC CO., LTD.		CODE NO.	CL236-3218-8-00	 1/3

ENVIRONMENTAL CHARACTERISTICS					
Dry heat	Exposed at 105 ± 2 °C for 96 h. Combining the applicable connector.	1) Contact : 25 mΩ MAX. (Note 3) 2) Shielding : 70 mΩ MAX. (Note 3) 3) Insulation resistance : 10 MΩ MIN. 4) No damage, crack and looseness of parts.	X	-	
Cold	Exposed at -55 ± 3 °C for 96 h. Combining the applicable connector.	1) Contact : 25 mΩ MAX. (Note 3) 2) Shielding : 70 mΩ MAX. (Note 3) 3) Insulation resistance : 10 MΩ MIN. 4) No damage, crack and looseness of parts.	X	-	
Damp heat, steady state	Exposed at 60 ± 2 °C, 95 ± 3 % RH for 96 h. Combining the applicable connector.	1) Contact : 25 mΩ MAX. (Note 3) 2) Shielding : 70 mΩ MAX. (Note 3) 3) Insulation resistance : 10 MΩ MIN. 4) No damage, crack and looseness of parts.	X	-	
Flowing mixed gas corrosion test	Exposed in H ₂ S 0.1 ± 0.02 ppm, SO ₂ 0.5 ± 0.1 ppm, 25 ± 2 °C, 75 ± 5 % RH, 96 h. Combining the applicable connector.	No excessive corrosion in contact area that would impair the function.	X	-	
Corrosion, salt mist	Exposed in 5 % salt water spray for 48 h. Combining the applicable connector.	No excessive corrosion in contact area that would impair the function.	X	-	
Resistance to soldering heat, solder bath method	Solder temperature, 260 ± 5 °c for immersion, duration, 10 ± 1 s. (when using flow solder)	No deformation of case and excessive looseness of the terminals.	X	-	
Solderability, wetting, solder bath method	Soldered at solder temperature, 235 ± 5 °c for immersion, duration, 5 ± 0.5 s MAX..(when using flow solder)	Soldering point of contacts immersion in solder 95% MIN..	X	-	
<div>Notes</div> <div><div>1.</div><div>1) The product performance is guaranteed only in the temperature adequate people's activities. 2) The operation temperature includes the temperature rise by current carrying. 3) Specifications for assembled item with applicable housing.</div></div> <div><div>2.</div><div>Storage temperature range shows storage condition for unused products including packing materials.</div></div> <div><div>3.</div><div>The cable conductor resistance is not considered.</div></div> <div><div>4.</div><div>The value varies depending on board design and cable.</div></div>					
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CONNECTOR SPECIFICATION SUPPLEMENT

1. RoHS directive
Compliance: Avoidance of the 6 restricted substances declared by the rohs directive.
- 2.Detailed material information
See appendix.
3. Soldering conditions
- Flow conditions (usage of Sn-Ag-Cu solder)



- Soldering iron conditions (usage of Sn-3.0Ag-0.5Cu solder)
Soldering iron tip temperature: 380°C MAX., soldering duration: 3 seconds MAX.
- Reflow is not possible. (reflow oven can not be used)

4. Weight
10.76g
5. Coating availability
Except the soldered contacts on the pcb side, coating is not possible.
6. Packaging
Refer to packing specification sheet. (ETAP-E3126)
7. Product naming conventions

TJ 20 L (1) - 4 P
① ② ① ③ ④ ⑤

①Series name	TJ*L
②Mounting method	10: Right angle dip type 20: Straight dip type
③Port amount	(1): 1 port (2): 2 ports
④Positions	4: 4 contacts 8: 8 contacts
⑤Connector classification	P: Receptacle connector (male contact) S: Plug connector (female contact)

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PART NO.

TJ20L (1) -4P

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