

ZE05(Hybrid) Series

High Temperature and Vibration Resistance, 0.5+1.5 Size/2mm Pitch, Automotive Interface Connector



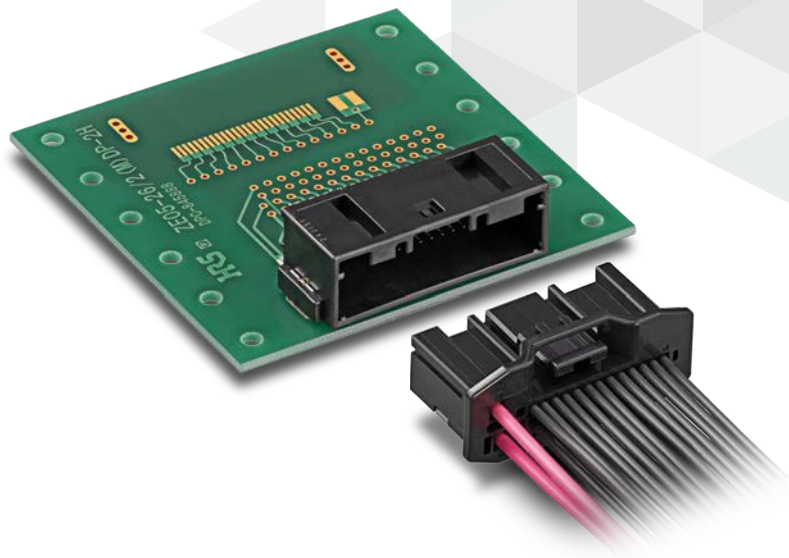
Low Profile



Space Saving



Contact Reliability

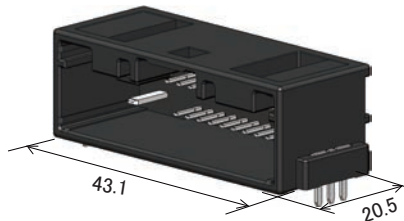


Features

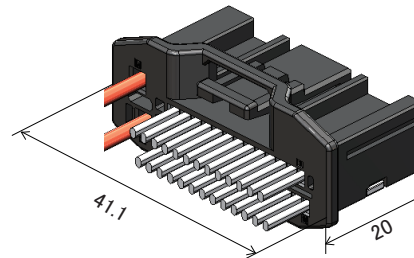
1. Space-saving

A hybrid-type connector featuring signal contacts with tab size 0.5 and 2mm pitch, along with power contacts with tab size 1.5 and 3mm pitch. Contributes to end product size reduction.

<Receptacle>
ZE05B-26/2(M)DP-2H



<Plug>
ZE05-26/2(M)DS-HU/R



2. High Temperature Resistance: Up to 125°C

- Up to 125°C
- Suitable for automotive and other high temperature applications

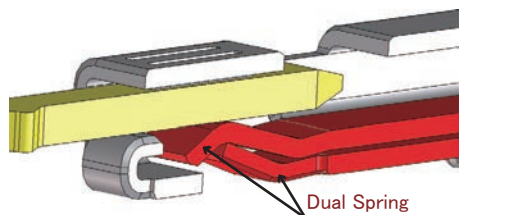
Note : Includes the temperature rise due to current flow.

3. High Vibration Resistance

- Female contact with original 3-point contact design
- Dual spring for stability
- Maintains contact under intense vibration, enhancing reliability

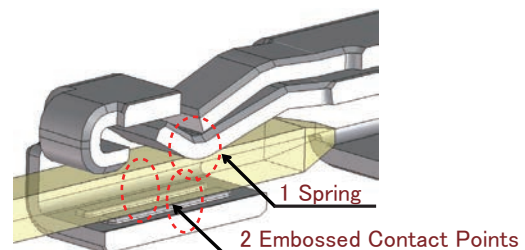
① Dual Spring Design

Increases contact force and prevents vibration from outside.



② 3-Point Contact Design

Withstands severe vibration due to improved contact reliability.
1 Spring + 2 Embossed Contact Points = 3-Point Contact Design



*The contact is flipped upside down to make the beat easier to see.

4. Rated Current

Signal: 2A (All pins power supply)

Power: 10A (All pins power supply)

5. Compatible Cable

Signal: 20-22 AWG (0.3-0.5sq)

24-26 AWG(0.13-0.22sq)

Power: 16-18 AWG (0.75- 1.25sq)

Product Specifications

Rated Current	Signal: 2A (All pins power supply) Power: 10A (All pins power supply)	Operating Temperature (Note1)	-40 to +125°C
Rated Voltage	60V AC/DC	Storage Temperature (Note2)	-10 to +60°C
		Storage Humidity Range (Note2)	Relative humidity 85% Max. (No condensation)

Items	Specifications	Conditions
Contact Resistance	10m Ω Max. (Signal Contact) 3m Ω Max. (Power Contact)	Measured at 1A DC
Insulation Resistance	100M Ω Min.	Measured at 500V DC
Withstanding Voltage	No insulation breakdown	1,000V AC for 1 min.
Mating Durability	Contact Resistance: 20m Ω Max. (Signal Contact) 10m Ω Max. (Power Contact)	30 Insertion/Extraction cycles
Vibration Resistance	(1)No electrical discontinuity of 1 μ s or more (2)Contact Resistance: 20m Ω Max. (Signal Contact) 10m Ω Max. (Power Contact)	Frequency: 10 to 1,000Hz (0.2 to 30(m/s ²) ² /Hz) 8 hours in 3 directions
Shock Resistance	No electrical discontinuity of 1 μ s or more	Peak Acceleration: 981m/s ² Operating Time: 10ms, 3 times in 6 directions (Up, down, left, right, front, and back)
Lock Strength	100N Min.	Lock breaking strength measured when pulling in mating axis direction
Steady State Moisture Resistance	(1)Contact Resistance: 20m Ω Max. (Signal Contact) 10m Ω Max. (Power Contact) (2)Insulation Resistance: 100 M Ω Min.	Left for 96 hours at a temperature of 60°C and a relative humidity 90 to 95%
Thermal Shock	Contact Resistance: 20m Ω Max. (Signal Contact) 10m Ω Max. (Power Contact)	Temperature: -40°C → Room temperature → +125°C → Room temperature Time: 30 → 5 → 30 → 5 minutes for 1,000 cycles
Heat Resistance	Contact Resistance: 20m Ω Max. (Signal Contact) 10m Ω Max. (Power Contact)	Left at 140°C for 120 hours
Cold Resistance	Contact Resistance: 20m Ω Max. (Signal Contact) 10m Ω Max. (Power Contact)	Left at -40°C for 120 hours
Sulfuric Acid Gas Resistance	Contact Resistance: 20m Ω Max. (Signal Contact) 10m Ω Max. (Power Contact)	Left in sulfuric acid gas at room temperature with a concentration of 25ppm and 75% or more RH for 96 hours while unmated.

Note 1 : Includes the temperature rise due to current flow.

Note 2 : Storage refers to long-term storage of unused items before they are mounted on the PCB.

Operating temperature and humidity range apply when the product is not powered after PCB mounting and when temporarily stored during transportation.

Materials / Finish

Component	Part	Material	Color / Finish
Receptacle	Housing	PA	Black
	Signal Contact	Brass	Tin Plating
	Power Contact	Copper Alloy	Tin Plating
	Retention Tab	Brass	Tin Plating
Plug	Housing	PA	Black
	Retainer	PA	Gray
Crimp Contact	Signal Contact	Copper Alloy	Tin Plating
	Power Contact	Copper Alloy	Tin Plating

Product Number Structure

Refer to the chart below when determining the product specifications from the product number.
Please select from the product numbers listed in this catalog when placing orders.

■ Receptacle / Plug

ZE05 B - 26 / 2 (M) D P - 2 H

① ② ③ ④ ⑤ ⑥ ⑦ ⑧

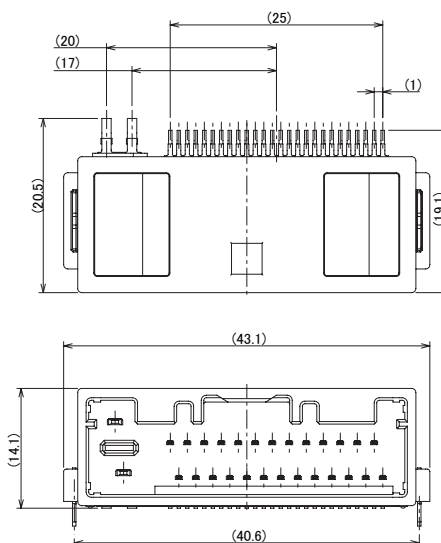
■ Crimp Contact

ZE05 A - 2022 SCF

① ⑨ ⑩

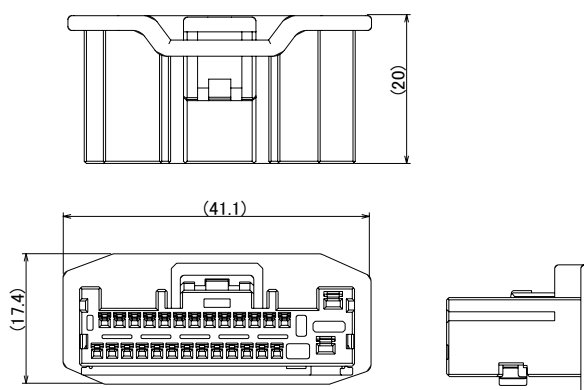
① Series Name	ZE05 ZE150	⑥ Connector Type	P: Receptacle S: Plug
② No of Pos. (Signal)	26	⑦ Pitch	2mm
③ No of Pos. (Power)	2	⑧ Part Type	H: Right Angle HU/R: Housing/Retainer
④ Size of Power Contact	(M): Middle	⑨ Compatible Cable	2022: 20-22 AWG (0.3-0.5sq) 2426: 24-26 AWG (0.13-0.22sq) 1618: 16-18 AWG (0.75-1.25sq)
⑤ Row	D: Double-row	⑩ Form Type/Packaging	Female Contact, Reel

Receptacle



Part No.	HRS No.	Color	Mating Key	No. of Pos.	Purchase Unit
ZE05B-26/2(M)DP-2H	CL0752-2400-0-00	Black	Standard	Signal: 26, Power: 2	420pcs per box

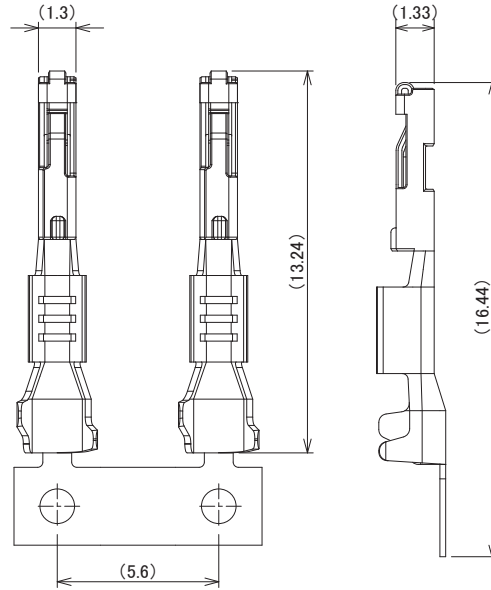
Plug



Part No.	HRS No.	Color	Mating Key	No. of Pos.	Purchase Unit
ZE05-26/2(M)DS-HU/R	CL0752-2403-0-00	Black	Standard	Signal: 26, Power: 2	210pcs per box

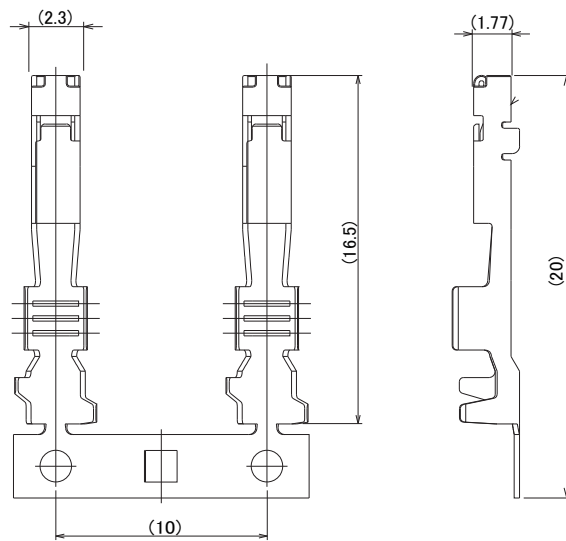
Crimp Contact for Plug

For Signal



Part No.	HRS No.	Compatible Cable	Purchase Unit
ZE05A-2022SCF	CL0752-2002-0-00	20-22 AWG (0.3-0.5sq) Coated Outer Diameter: ϕ 1.7mm Max.	10,000pcs per reel
ZE05A-2426SCF	CL0752-2010-0-00	24-26 AWG (0.13-0.22sq) Coated Outer Diameter: ϕ 1.2mm Max.	

For Power



Part No.	HRS No.	Compatible Cable	Purchase Unit
ZE150-1618SCF	CL0752-2003-0-00	16-18 AWG (0.75-1.25sq) Coated Outer Diameter: ϕ 2.2mm Max.	5,000pcs per reel

Applicable Tools

Type	Part No.	HRS No.	Compatible Crimp Contact
Hirose Crimping Tool	CM-105C	CL0901-0001-0-00	-
Applicator for Hirose Crimping Tool	AP105-ZE150-1618S	CL0901-5261-0-00	ZE150-1618SCF
	AP105-ZE05A-2022S	CL0901-5260-0-00	ZE05A-2022SCF
	AP105-ZE05A-2426S	CL0901-5270-0-00	ZE05A-2426SCF
Japan Automatic Machine Applicator	CHX1230800H	-	ZE05A-2022SCF
Contact Extraction Tool	ZE05/RE-MD	CL0902-5145-0-00	ZE05A-2022SCF

Note 1 : Contact Japan Automatic Machine (J.A.M.) regarding crimping failure relating to applicable

J.A.M. applicators or for other applicator inquiries via the J.A.M. website. (URL : <http://www.jam-net.co.jp>)

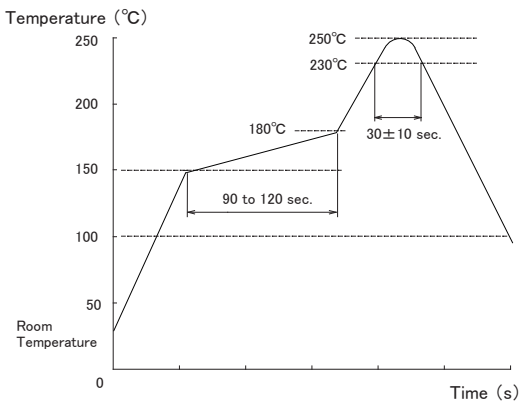
Note 2 : Hand tools are developed as a prototype tool during product development. Use an applicator for mass production.

Note 3 : Applicable cables are limited to 0.3 and 0.5sq. Cut the reel contact for use with the hand tool.

Note 4 : Crimping should be carried out based on the "Crimping Quality Standards" and "Crimping Conditions Table."

Note 5 : Problems caused by tools other than those specified are not covered by the warranty.

Usage Precautions

Recommended Temperature Profile	 <p>Temperature (°C)</p> <p>250 230°C 180°C 150 100 50 Room Temperature 0</p> <p>90 to 120 sec. 30 ± 10 sec.</p> <p>Time (s)</p> <p>【Conditions】</p> <ol style="list-style-type: none"> 1. Reflow Heating Method Used : Far infrared, air atmosphere or nitrogen 2. Peak Temperature 250°C Peak 3. Heated part 230°C Min. 20-40 sec. 4. Preheat Temperature 150 to 180°C 90-120 sec. 5. Cycles 2 times Max.
Recommended Manual Soldering Conditions	Manual Soldering/Soldering iron temperature: 350 to 380°C Soldering Time: within 5 seconds
Cautions	<ol style="list-style-type: none"> 1. Forcing the connector out might cause damage. If challenging to remove, gently press down once and then release the lock. 2. Always disconnect the power before reseating the connector. 3. Avoid touching the contact area when the power is active, as it's hazardous. 4. For harnessing guidelines, please consult a Hirose representative.

While Taking into Consideration

Specifications mentioned in this catalog are reference values.

When considering to order or use this product, please review the Drawing and Product Specifications sheets.

Use an appropriate cable when using the connector in combination with cables.

If considering usage of a non-specified cable, please contact your sales representative.

If assembly process is done by jigs & tools which are not identified by Hirose, the warranty of the product may be affected.

If considering usage for below mentioned applications, please contact your sales representative.

In cases where the application will demand a high level of reliability, such as automotive, medical instruments, public infrastructure, aerospace/defense etc. Hirose must review before assurance of reliability can be given.