PRODUCT CATALOG

HIROSE ELECTRIC CO., LTD.

KW10A Series

2.5mm Pitch, Single Row, Center Lock, Wire to Board Connector (UL/C-UL Listed)

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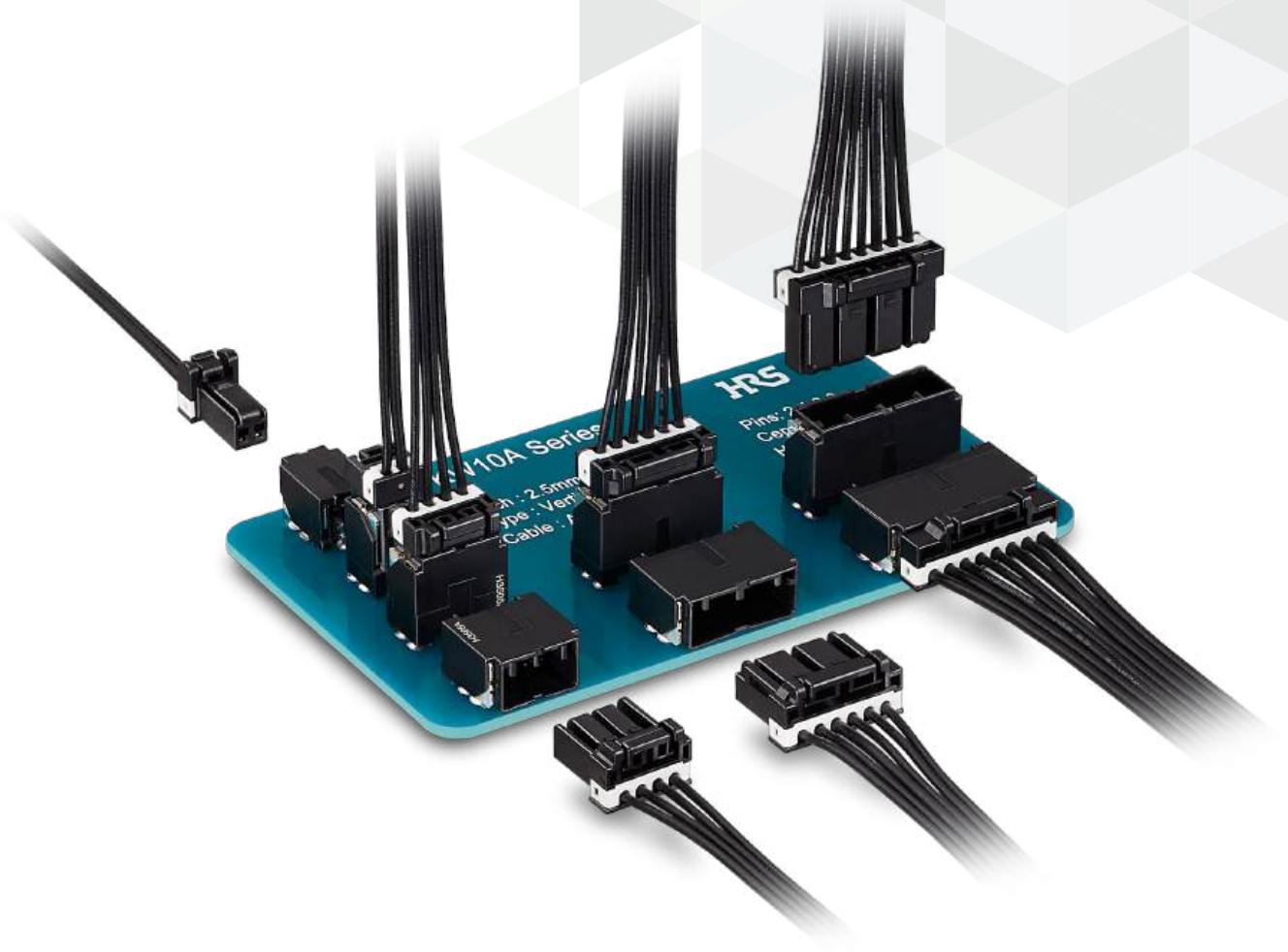
Positive-Lock

Contact Reliability

Finger Protect



Product Page
https://www.hirose.com/en/product/series/KW10A

Dec.2025

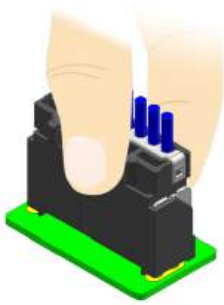
Features

1. Wide Variations

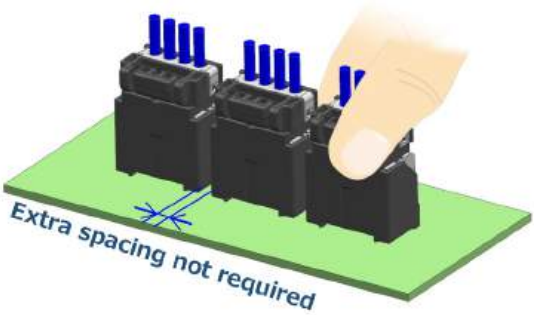
- 2.5mm Pitch
- Single Row, 2-8pos.
- Center Lock Type
- Straight or right-angle interface options
- Compatible cable size: 20-22 AWG
- Tin plated
- Through-Hole reflow compatible

2. Center Lock Design

Enables high-density mounting and easy operation.
The plug's central locking structure allows simple one-hand insertion and extraction.



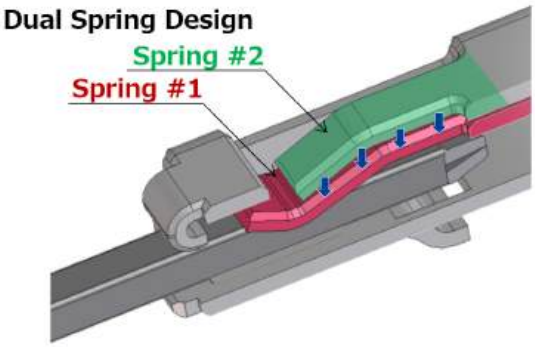
Center lock lever with various widths enables user-friendly operation.



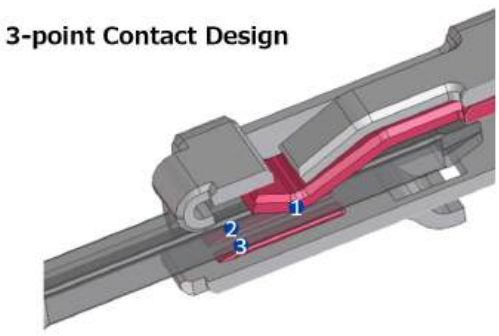
High density mounting contributes to space saving.

3. High Contact Reliability

Dual-spring, three-point contact design maintains stable connections and resists vibration.



Enhances contact force and reduces the impact of external vibration.



Improves contact reliability to withstand severe vibrations.

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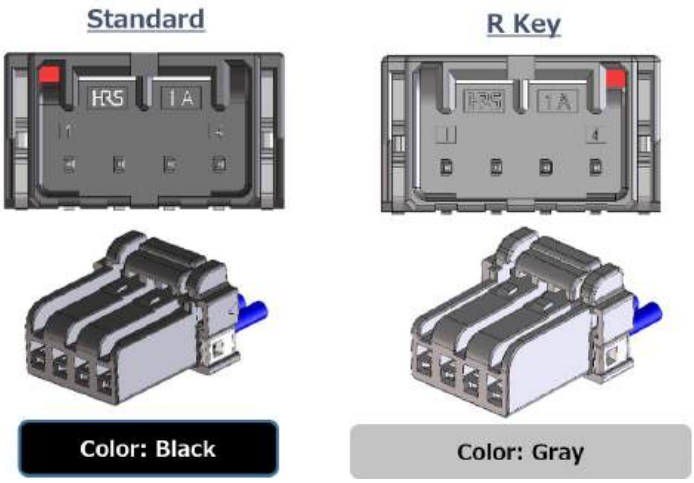
4. Safety-Focused Design

Prevents electric shock, incomplete insertion, and lock damage. The finger-protection wall improves assembly safety, while keying prevents mis-insertion when using multiple connectors.



5. Halogen-free

Contains no chlorine or bromine above IEC 61249-2-21 limits.
*As defined by IEC 61249-2-21
(Br ≤ 900 ppm, Cl ≤ 900 ppm, Br+Cl ≤ 1500 ppm)

6. UL/C-UL Compliant

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Product Specifications

Rated Current	No. of Pos.	20-22 AWG	Operating Temperature (Note 1)	-55 to +125° C
	2, 4	5A /pin	Operating Humidity Range (Note 2)	Relative Humidity 85% Max.
	6, 8	3A /pin	Storage Temperature (Note 3)	-10 to +60° C
Rated Voltage	250V AC/DC		Storage Humidity Range (Note 2)(Note 3)	Relative Humidity 85% Max.

UL/C-UL Safety Standard Approved specification	Rated Current	No. of Pos.	20-22 AWG
		2, 4	5A /pin
		6, 8	3A /pin
	Rated Voltage	250V AC/DC	

UL/C-UL File No. and Recognition No. E132750

Items	Specifications	Conditions
Contact Resistance	25mΩ Max.	Measured at 1mA, 20mV AC
Insulation Resistance	100MΩ Min.	Measured at 500V DC
Withstanding Voltage	No insulation breakdown	1,500V AC for 1 min.
Mating Durability	Contact Resistance : 25mΩ Max.	30 times
Vibration Resistance	No electrical discontinuity of 1μs or more	Frequency : 5Hz to 1,000Hz 17.75mm/s^2 at 8 hours for 3 directions
Shock Resistance	No electrical discontinuity of 1μs or more	Accelerated velocity : 343.23mm/s^2 for 5-10ms, half-sine wave in 3 directions, 10 times for each direction
Moisture Resistance (Steady State)	Contact Resistance : 25mΩ Max. Insulation Resistance : 100MΩ Min.	Left for 96 hours at temperature of 60°C and humidity of 90 to 95%
Temperature Cycles	Contact Resistance : 25mΩ Max. Insulation Resistance : 100MΩ Min.	Temperature : -40°C → Room Temperature → +125°C → Room Temperature Time : 30 → 5 → 30 → 5 min. for 1,000 cycles

Note 1 : Includes temperature rise due to current flow.
Note 2 : Use without condensation on parts.
Note 3 : Storage refers to long-term storage of unused parts before PCB mounting.
The same temperature and humidity limits also apply when the product is mounted but unpowered, including during transport.
Note 4 : For details, please refer to the product specification sheet.

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Materials / Finish

Product	Component	Material	Color / Finish	UL Regulation
Receptacle	Insulator	PA	Black or Gray	UL94V-0
	Contact	Brass	Tin Plated	-
	Retention Tab	Brass	Tin Plated	-
Plug	Housing	PA	Black or Gray	UL94V-0
	Crimp Contact	Copper Alloy	Tin Plated	-
	Retainer	PA	Black or Gray	UL94V-0

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.

Connector

KW10A R - # P - 2.5 V (BK) (800)

❶ ❷ ❸ ❹ ❺ ❻ ❼

Crimp Contact

KW10A - 2022 SCF (800)

❶ ❽ ❾

❶ Series Name	KW10A	❻ Product type	V : Straight SMT H : Right Angle SMT C : Crimp Socket
❷ Key Code	Blank : Standard (Black) R : R Key (Gray)	❼ Retainer Color	(GY) : Gray (BK) : Black
❸ No. of Pos.	Single-row : 2, 4, 6, 8	❽ Applicable Wire	2022 : 20-22 AWG
❹ Connector type	P : Receptacle S : Plug RS : Retainer	❾ Packaging Style	SCF : Socket Contacts/Reel
❺ Contact Pitch	2.5mm		

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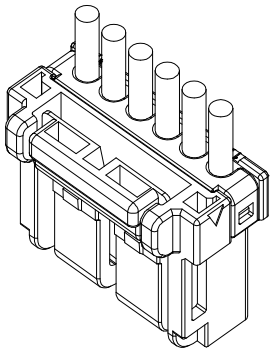
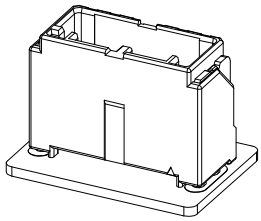
Diagram of Connector Mating Combinations

Key Code : Standard Key

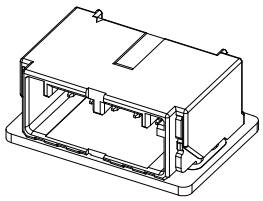
Plug Housing	Crimp Contact	Retainer
KW10A-#S-2.5C(800)	KW10A-2022SCF(800)	KW10A-#RS-2.5(GY)(800)



Straight Receptacle
KW10A-#P-2.5V(800)

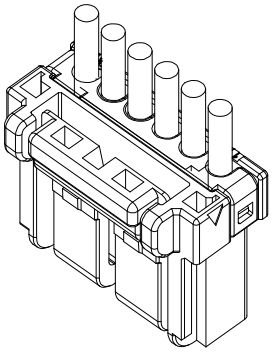


Right Angle Receptacle
KW10A-#P-2.5H(800)

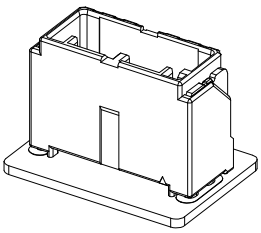


Key Code : R Key

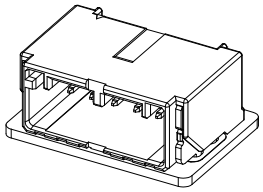
Plug Housing	Crimp Contact	Retainer
KW10AR-#S-2.5C(800)	KW10A-2022SCF(800)	KW10A-#RS-2.5(BK)(800)



Straight Receptacle
KW10AR-#P-2.5V(800)



Right Angle Receptacle
KW10AR-#P-2.5H(800)



Note 1 : The R key (gray) is compatible with 4, 6, and 8 pos., 2 pos. are not available.
Note 2 : The retainer product number is for 4 pos. only, "KW10-4RS-2.5(GY)(800)" and "KW10-4RS-2.5(BK)(800)."

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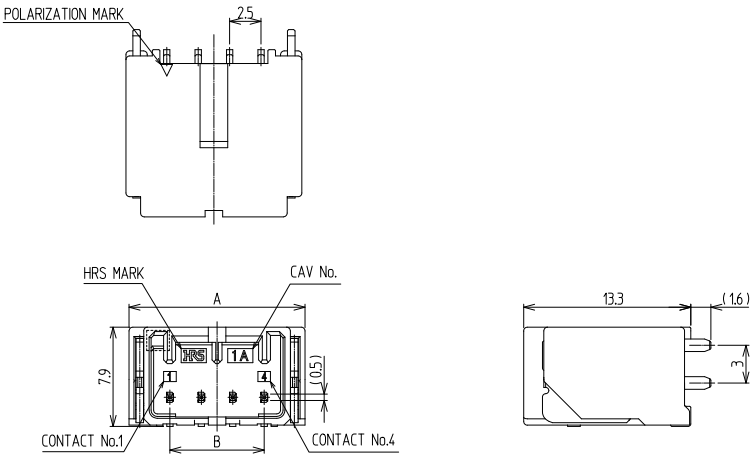
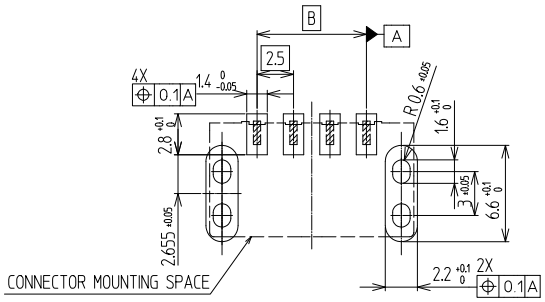
Straight Receptacle



Recommended PCB Layout (t=1.6mm)



Unit : mm

Part No.	HRS No.	Color	Key Code	No. of Pos.	A	B	Purchase Unit
KW10A-2P-2.5V(800)	CL0480-1246-0-00	Black	Standard	2	9.0	2.5	250pcs per reel
KW10A-4P-2.5V(800)	CL0480-1247-0-00	Black	Standard	4	14.0	7.5	
KW10AR-4P-2.5V(800)	CL0480-1250-0-00	Gray	R Key				
KW10A-6P-2.5V(800)	CL0480-1248-0-00	Black	Standard	6	19.0	12.5	200pcs per reel
KW10AR-6P-2.5V(800)	CL0480-1251-0-00	Gray	R Key				
KW10A-8P-2.5V(800)	CL0480-1249-0-00	Black	Standard	8	24.0	17.5	
KW10AR-8P-2.5V(800)	CL0480-1252-0-00	Gray	R Key				

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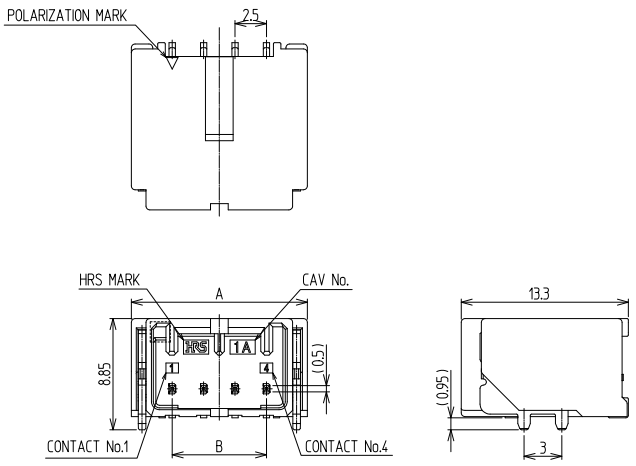
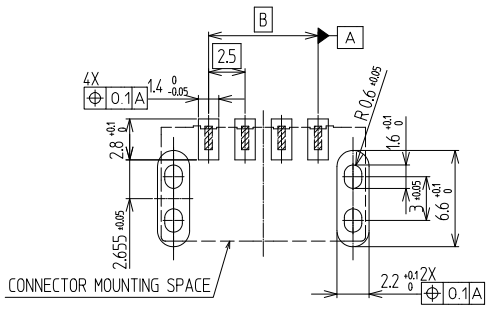
Right Angle Receptacle



Recommended PCB Layout (t=1.6mm)



Unit : mm

Part No.	HRS No.	Color	Key Code	No. of Pos.	A	B	Purchase Unit
KW10A-2P-2.5H(800)	CL0480-1239-0-00	Black	Standard	2	9.0	2.5	400pcs per reel
KW10A-4P-2.5H(800)	CL0480-1240-0-00	Black	Standard	4	14.0	7.5	
KW10AR-4P-2.5H(800)	CL0480-1243-0-00	Gray	R Key				
KW10A-6P-2.5H(800)	CL0480-1241-0-00	Black	Standard	6	19.0	12.5	
KW10AR-6P-2.5H(800)	CL0480-1244-0-00	Gray	R Key				
KW10A-8P-2.5H(800)	CL0480-1242-0-00	Black	Standard	8	24.0	17.5	
KW10AR-8P-2.5H(800)	CL0480-1245-0-00	Gray	R Key				

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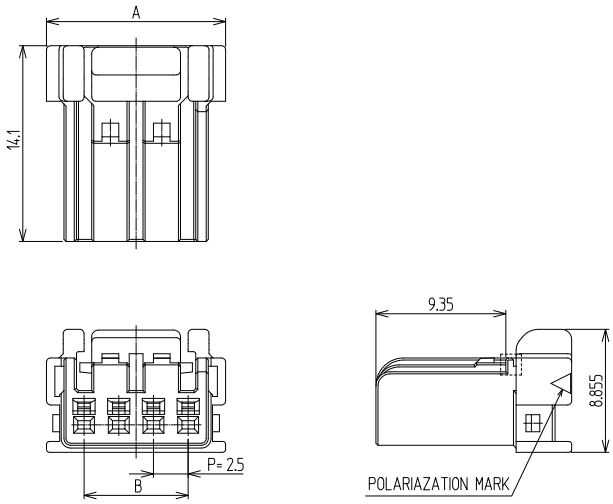
Plug Housing



Unit : mm

Part No.	HRS No.	Color	Key Code	No. of Pos.	A	B	Purchase Unit
KW10A-2S-2.5C(800)	CL0480-1253-0-00	Black	Standard	2	7.9	2.5	100pcs per bag
KW10A-4S-2.5C(800)	CL0480-1254-0-00	Black	Standard	4	12.9	7.5	
KW10AR-4S-2.5C(800)	CL0480-1257-0-00	Gray	R key				
KW10A-6S-2.5C(800)	CL0480-1255-0-00	Black	Standard	6	17.9	12.5	
KW10AR-6S-2.5C(800)	CL0480-1258-0-00	Gray	R key				
KW10A-8S-2.5C(800)	CL0480-1256-0-00	Black	Standard	8	22.9	17.5	
KW10AR-8S-2.5C(800)	CL0480-1259-0-00	Gray	R key				

Note : Please use with the separately sold retainer (KW10(A)-#RS-2.5(#)(800)).

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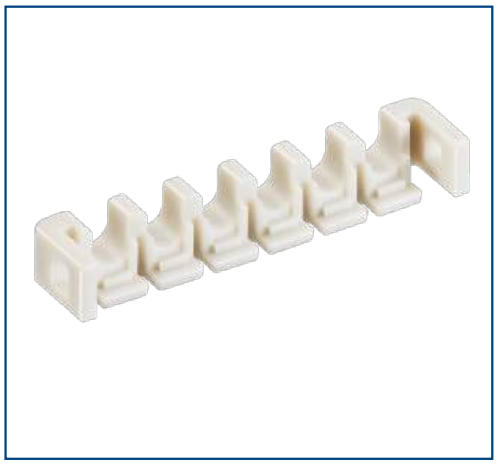
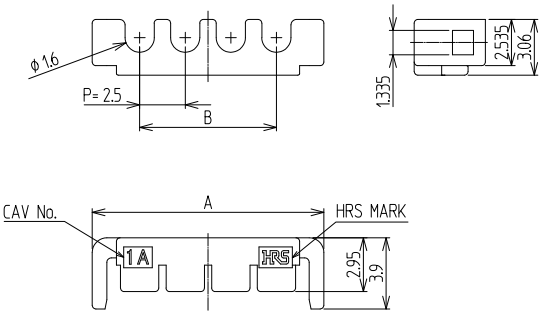
Retainer





Unit : mm

Part No.	HRS No.	Color	No. of Pos.	A	B	Purchase Unit
KW10A-2RS-2.5(GY)(800)	CL0480-1260-0-00	Gray	2	7.7	2.5	1,000pcs per bag
KW10-4RS-2.5(GY)(800)	CL0480-1261-0-00	Gray	4	12.7	7.5	
KW10-4RS-2.5(BK)(800)	CL0480-1265-0-00	Black				
KW10A-6RS-2.5(GY)(800)	CL0480-1263-0-00	Gray	6	17.7	12.5	
KW10A-6RS-2.5(BK)(800)	CL0480-1266-0-00	Black				
KW10A-8RS-2.5(GY)(800)	CL0480-1264-0-00	Gray	8	22.7	17.5	
KW10A-8RS-2.5(BK)(800)	CL0480-1267-0-00	Black				

Note : Use with the separately sold plug housing (KW10A(R)-#S-2.5C(800)).

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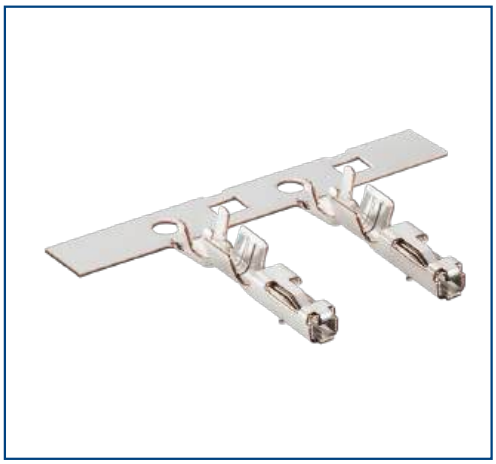
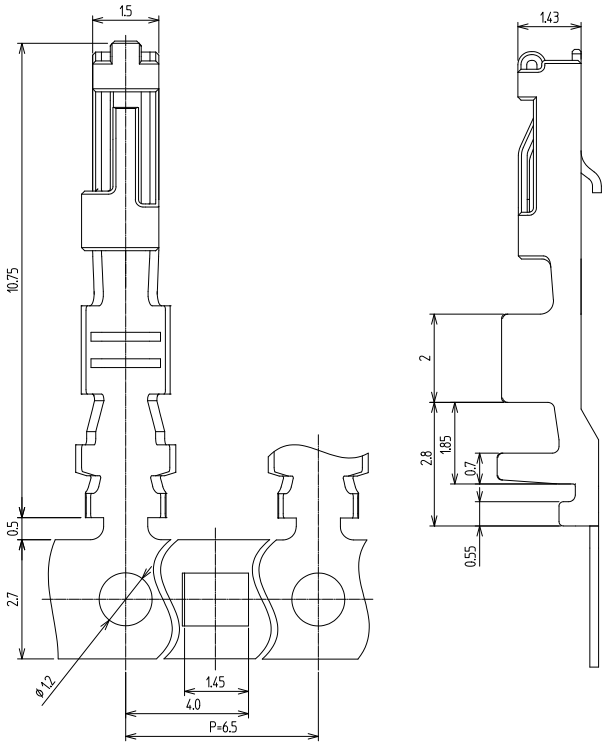
Crimp Contact





Part No.	HRS No.	Purchase Unit
KW10A-2022SCF(800)	CL0480-1268-0-00	10,000pcs per reel

Applicable Wire (Tin Plated Annealed Copper Wire)

Part No.	Wire Specification	Wire Size	Stranded Wire Structure	Jacket Diameter
KW10A-2022SCF(800)	FLRY-A 0.5SQ	20 AWG	19 / 0.19mm	Ø1.40-1.60mm
	FLRY-A 0.35SQ	22 AWG	7 / 0.27mm	
	UL3633	22 AWG	16 / 0.16mm	

Note : When using cables not specified by Hirose, please contact a Hirose sales representative.

Applicable Tools

Type	Part No.	HRS No.	Applicable Contacts
Automatic Crimp Press	CM-105C	CL0901-0001-0-00	-
Applicator	AP105-KW10A-2022S	CL0901-7006-0-00	KW10A-2022SCF(800)

Note 1 : Please conduct crimping work according to the "Crimp Quality Standard" and "Crimp Condition Table".
Note 2 : Any problems that occur from using tools other than those specified by Hirose are not covered by warranty.

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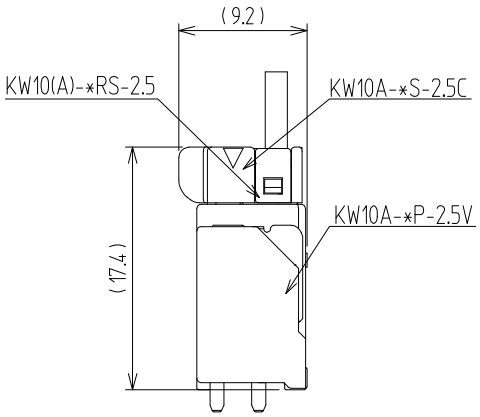
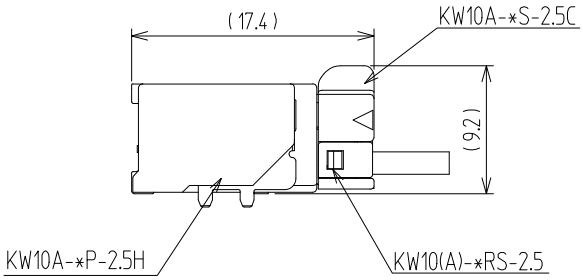
Mated Dimensions

Straight Receptacle to Plug Connection



Right Angle Receptacle to Plug Connection



Precautions for use

1. The connector could be damaged if pulled out forcibly.
   When it is hard to pull out, push it in slightly first and then depress the lock and un-mate.
   Please refer to “ KW10A Series mating and unmating Procedure Document (DOC250407-003) ”
   for points in handling regarding mating operations.

2. When mating a crimped contact into a socket, please refrain from inserting it diagonally in order to maintain
   performance reliability. Please refer to the " KW10A Series Harness procedure manual (DOC211228-004) "
   for points in harness operations.

Operating Environment

Please contact a Hirose representative if you are designing this connector into environmental conditions where high and low temperatures are repeated.

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.

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https://www.hirose.com/

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