

HR10 SERIES SHELL SIZE 7mm PUSH-PULL CONNECTORS

Introduction

The HR10 series connectors are push-pull coupling type micro-connectors. They have been developed with our accumulated technology of many years in reply to customers' recent needs and demands of miniaturization, high density, and easy handling in applying to various electronic equipment.

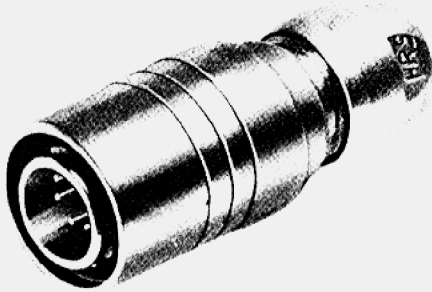
The HR10 series connectors offer light weight and assure high reliability and durability as well as easy "push-pull" operation.

You may apply the HR10 series connectors to any kinds of small-sized electronic equipment requiring high reliability. However, this simple but refined connectors are most suitable for portable electronic equipment which require good appearance. Typical applications are: Computers and peripherals, medical equipment, audio equipment, video equipment, portable radio (wireless) apparatus, measuring equipment, etc.

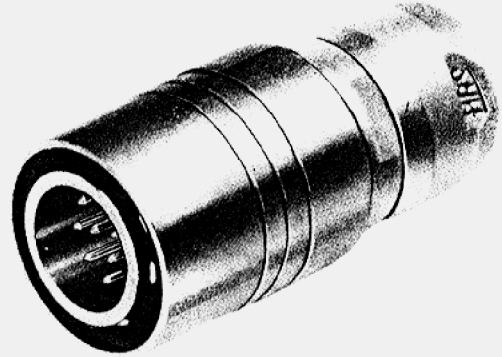


Features

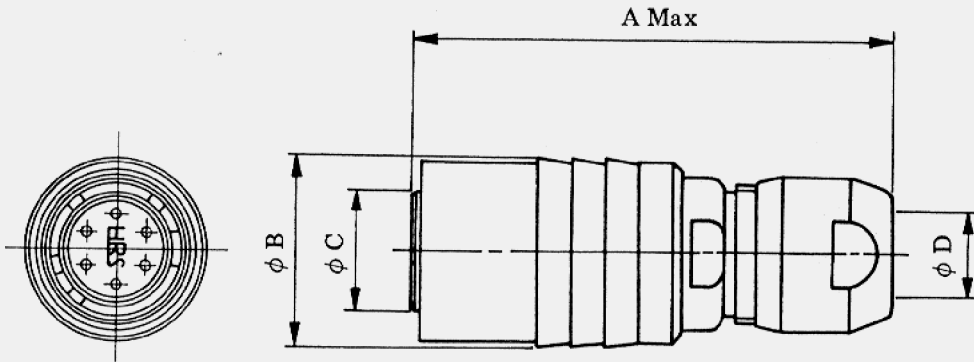
- 1. "A LITTLE GIANT"**
The most compact HR10 series is as slender as a cigarette but it fits every application with well-balanced, simplified layout in limited space.
- 2. EASY "PUSH-PULL" OPERATION**
One touch "push-pull" coupling mechanism assures easy and quick connecting and disconnecting. You can couple it accurately just by pushing any part of the connector housing.
- 3. POLARIZATION**
Five-key system permits only one way of coupling so that you can find right position to connect even when blind mating.
- 4. PROTECTION OF CONNECTION PIN**
A connector pin is located to avoid any damage which may be caused when blind mating.
- 5. HIGH DENSITY**
The space-saving "push-pull" mechanism facilitates multi-installation of connectors.
- 6. EASY WIRING AND MOUNTING**
No use of screws makes wiring and mounting easier.
- 7. SIMPLE AND REFINED APPEARANCE**
Simple and well designed connectors with matte finish enhance the appearance of the equipment.
- 8. THREE PATTERNS OF CONTACTS**
4, 6 and 12 pins are available. And also pin and socket inserts are reversible with each other.
- 9. TWO PATTERNS OF CONNECTION**
For cable-to-chassis connection, please use plug and receptacle, and for cable-to-cable connection, plug and jack are convenient.



HR10-7P-6P



HR10-10P-12P



PLUG WITH PIN INSERT

mm (inch)

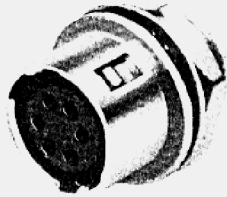
No. of contact	Part No.	A	B	C	D	Weight
4	HR10-7P-4P	28.5 (1.122)	11 (0.433)	7 (0.276)	5.2 (0.205)	8 grs.
6	HR10-7P-6P	28.5 (1.122)	11 (0.433)	7 (0.276)	5.2 (0.205)	8 grs.
12	HR10-10P-12P	32.5 (1.28)	14 (0.551)	9.5 (0.374)	7.2 (0.283)	15 grs.

PLUG WITH SOCKET INSERT

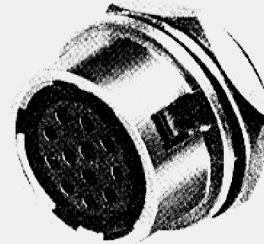
mm (inch)

No. of contact	Part No.	A	B	C	D	Weight
4	HR10-7P-4S	28.5 (1.112)	11 (0.433)	7 (0.276)	5.2 (0.205)	8 grs.
6	HR10-7P-6S	28.5 (1.112)	11 (0.433)	7 (0.276)	5.2 (0.205)	8 grs.
12	HR10-10P-12S	32.5 (1.28)	14 (0.551)	9.5 (0.374)	7.2 (0.283)	15 grs.

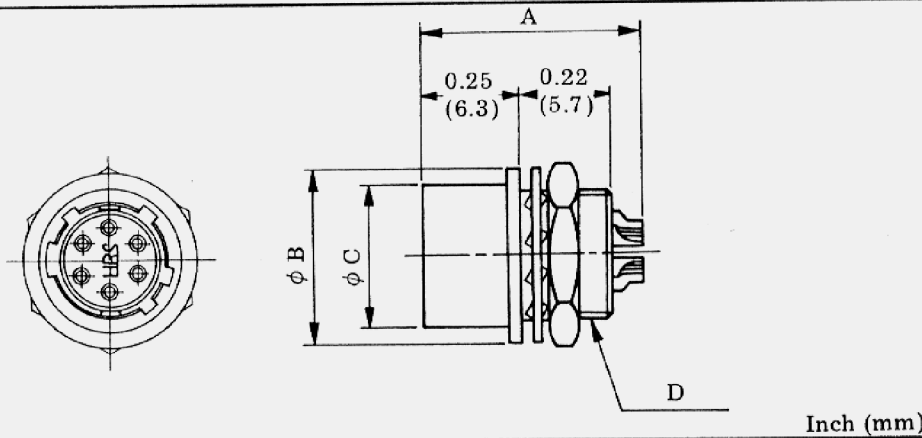
Receptacle



HR10-7R-6S



HR10-10R-12S



Inch (mm)

RECEPTACLE WITH SOCKET INSERT

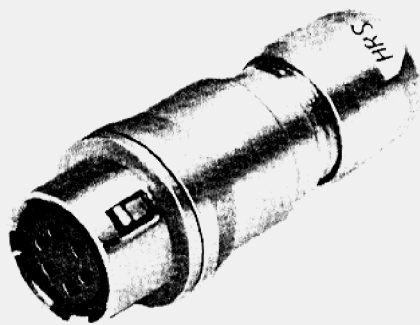
mm (inch)

No. of contact	Part No.	A	B	C	D	Weight
4	HR10-7R-4S	14 (0.551)	11 (0.433)	8.85 (0.34)	M8x0.5 (M0.315x0.02)	3.5 grs.
6	HR10-7R-6S	14 (0.551)	11 (0.433)	8.85 (0.34)	M8x0.5 (M0.315x0.02)	3.5 grs.
12	HR10-10R-12S	16 (0.63)	14 (0.551)	11.9 (0.469)	M8x0.75 (M0.433x0.03)	6 grs.
4	HR10-7WRA-4S	14 (0.551)	11 (0.433)	8.85 (0.34)	M8x0.5 (M0.433x0.03)	3.5 grs.
6	HR10-7WRA-6S	14 (0.551)	11 (0.433)	8.85 (0.34)	M8x0.5 (M0.433x0.03)	3.5 grs.

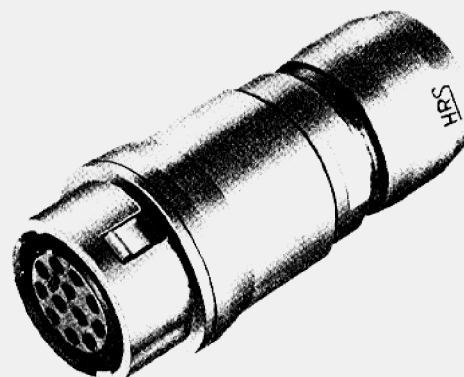
RECEPTACLE WITH PIN INSERT

mm (inch)

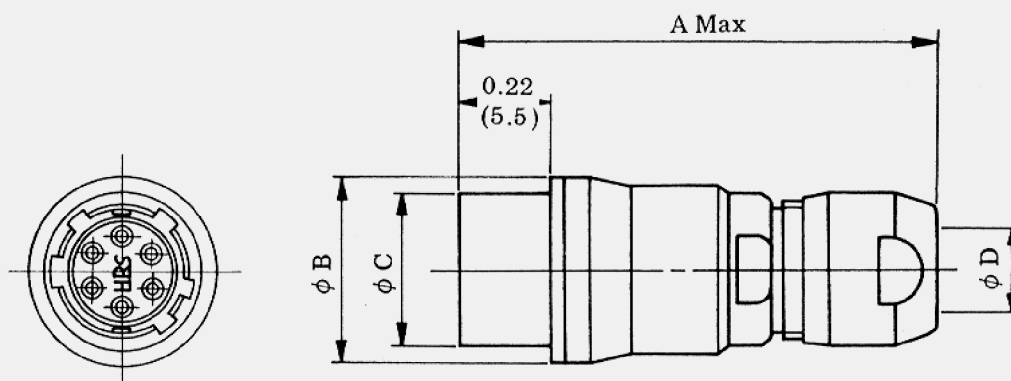
No. of contact	Part No.	A	B	C	D	Weight
4	HR10-7R-4P	14 (0.551)	11 (0.433)	8.85 (0.34)	M8x0.5 (M0.315x0.02)	3.5 grs.
6	HR10-75-6P	14 (0.551)	11 (0.433)	8.85 (0.34)	M8x0.5 (M0.315x0.02)	3.5 grs.
12	HR10-10R-12P	16 (0.63)	14 (0.551)	11.9 (0.469)	M11x0.75 (M0.433x0.03)	6 grs.



HR10-7J-6S



HR10-10J-12S



JACK WITH SOCKET INSERT

mm (inch)

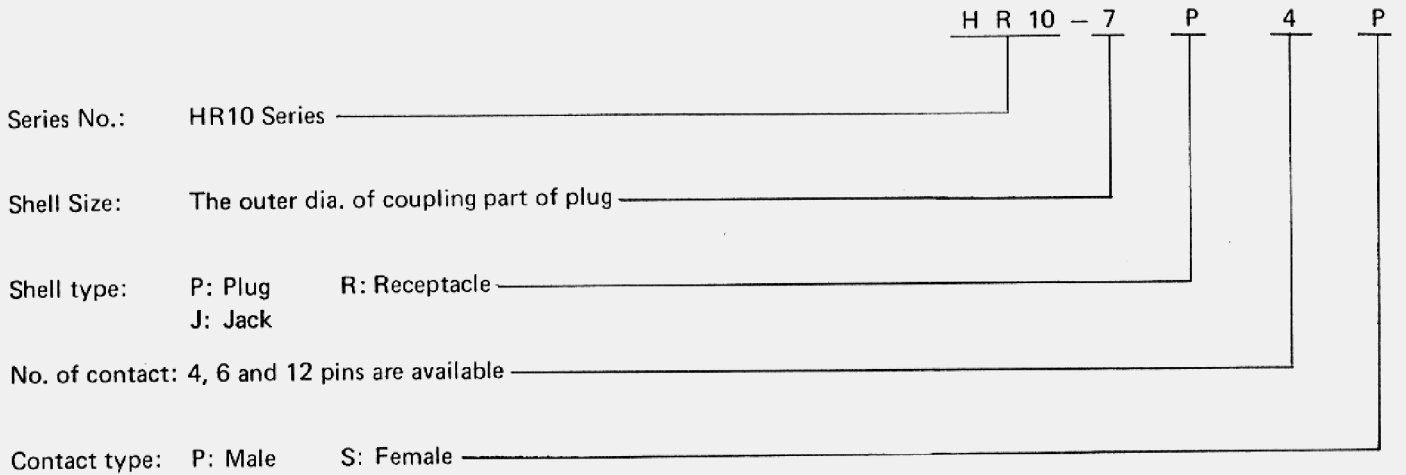
No. of contact	Part No.	A	B	C	D
4	HR10-7J-4S	28.5 (1.122)	11 (0.433)	8.85 (0.34)	5.2 (0.205)
6	HR10-7J-6S	28.5 (1.122)	11 (0.433)	8.85 (0.34)	5.2 (0.205)
12	HR10-10J-12S	32.5 (1.28)	14 (0.551)	11.9 (0.469)	7.2 (0.283)

JACK WITH PIN INSERT

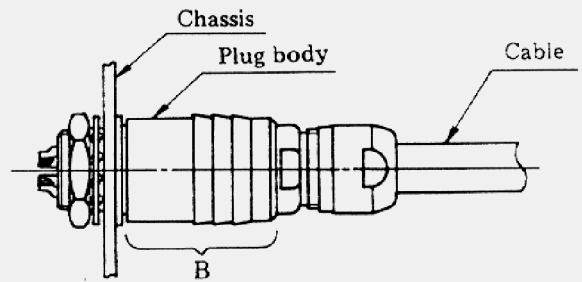
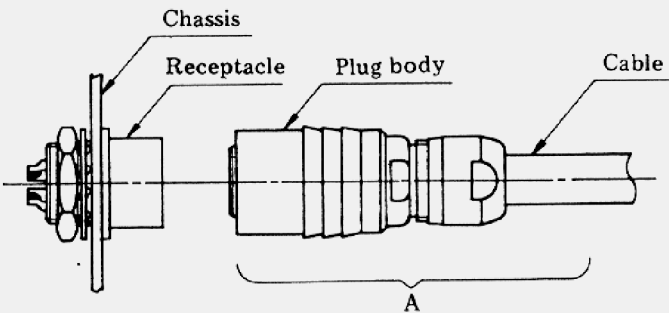
mm (inch)

No. of contact	Part No.	A	B	C	D
4	HR10-7J-4P	28.5 (1.122)	11 (0.433)	8.85 (0.34)	5.2 (0.205)
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12	HR10-10J-12P	32.5 (1.28)	14 (0.551)	11.9 (0.469)	9.2 (0.283)

Ordering Information



How to Use Connector



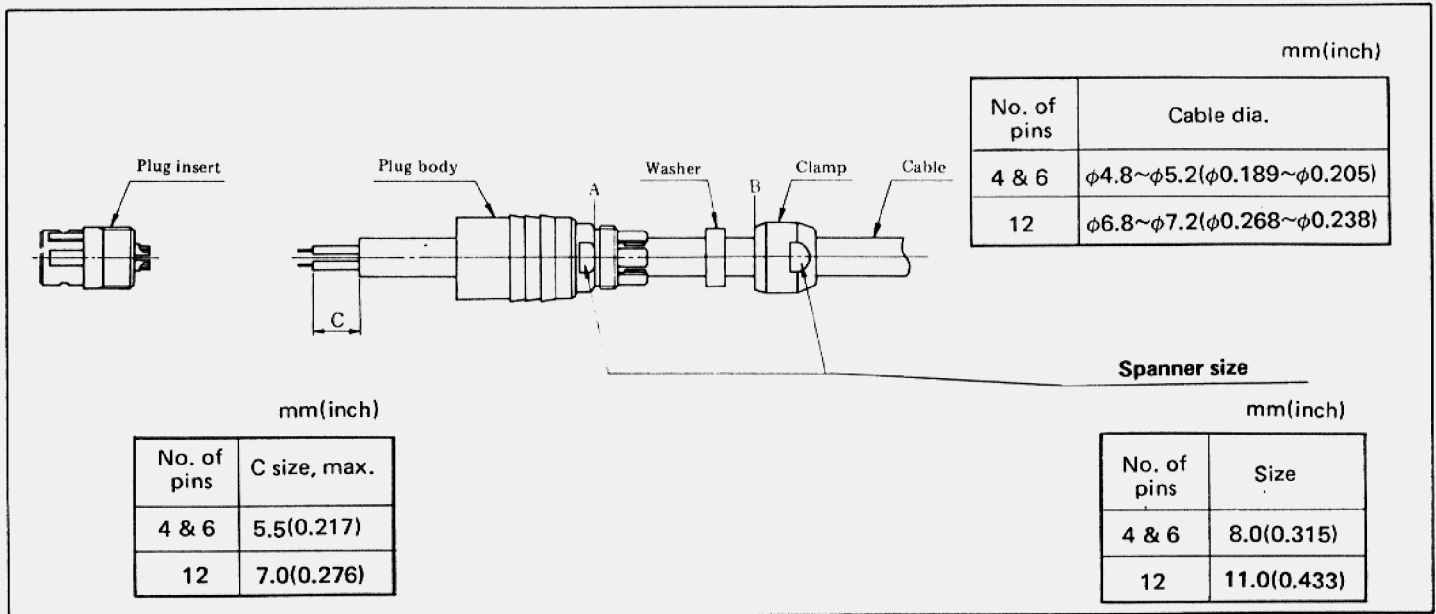
1. COUPLING

Mate the five keys with the key ways of receptacle holding "A" part of plug. Then, push it straight. Coupling is completed.

2. PULLING OUT

Holding "B" part of plug, pull it out straight.

Wiring Procedure (for reference)



1. Please use a suitable cable in the outer diameter having of 0.129 mm^2 (AWG#26) or less in nominal conductor cross-section are.
2. Then, pass the cable through cable clamp, washer and plug body one after another as shown above.
3. Then, soldering procedure with pin or socket insert shall be followed with wiring tool shown below. After soldering, please loosen "C" part first, then, fasten the plug body with spanner wrench.
4. After the plug body is fastened, please fasten cable clamp until its "B" surface touches "A" surface of plug body. Now, wiring is completed.



WIRING TOOL



Part No.	Applicable connector
HR10-7P-T01	HR10-7P
HR10-10P-T02	HR10-10P
HR10-7J-T03	HR10-7J
HR10-10J-T04	HR10-10J



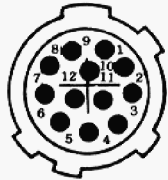
Material

Shell : Zinc alloy and brass + nickel plating matte finish
Insulator : Glass-reinforced 66 nylon, blue colour
Male pin : Brass + gold plating
Female pin : Beryllium copper + gold plating

Electrical

Withstanding voltage : AC500V for 4 pin and AC300V for
6 & 12 pin
Current rating : 2A
Insulation resistance : 1000 M Ω or more at DC100V
Contact resistance : 10 m Ω or less at DC1A
Solder pot inside diameter : ϕ 0.03 inch (ϕ 0.8 mm)

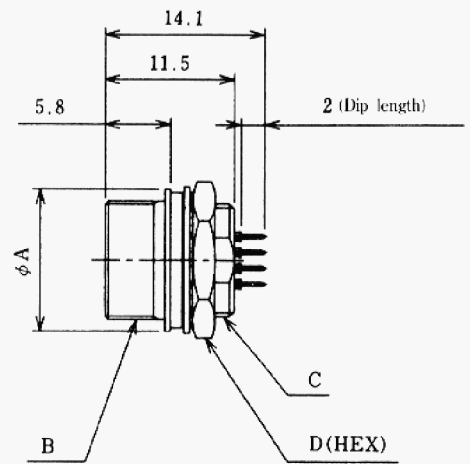
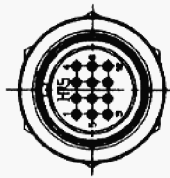
Contact Arrangement

Shell size	7 size	7 size	10 size
Contact arrangement			
No. of contact	4	6	12

Above chart shows the surface of coupling side of socket insert.

Board direct mounting type

RECEPTACLES



(An example of the form is illustrated.)

HRS No.	Product No.	Number of Contacts	ϕA	B	C	D	Weight
125-0019-3	HR25-7TR-4SA	4	10.6	M8.5×0.5	M8×0.5	10	3g
125-0020-2	HR25-7TR-4PA	4	10.6	M8.5×0.5	M8×0.5	10	3g
125-0021-5	HR25-7TR-6SA	6	10.6	M8.5×0.5	M8×0.5	10	3g
125-0022-8	HR25-7TR-6PA	6	10.6	M8.5×0.5	M8×0.5	10	3g
125-0023-0	HR25-7TR-8SA	8	10.6	M8.5×0.5	M8×0.5	10	3g
125-0024-3	HR25-7TR-8PA	8	10.6	M8.5×0.5	M8×0.5	10	3g
125-0119-8	HR25-9TR-12SA	12	12.6	M10.5×0.5	M10×0.75	12	4g
125-0120-7	HR25-9TR-12PA	12	12.6	M10.5×0.5	M10×0.75	12	4g
125-0121-0	HR25-9TR-16SA	16	12.6	M10.5×0.5	M10×0.75	12	4g
125-0122-2	HR25-9TR-16PA	16	12.6	M10.5×0.5	M10×0.75	12	4g
125-0123-5	HR25-9TR-20SA	20	12.6	M10.5×0.5	M10×0.75	12	4g
125-0124-8	HR25-9TR-20PA	20	12.6	M10.5×0.5	M10×0.75	12	4g