

HR10 SERIES SHELL SIZE 7mm PUSH-PULL CONNECTORS

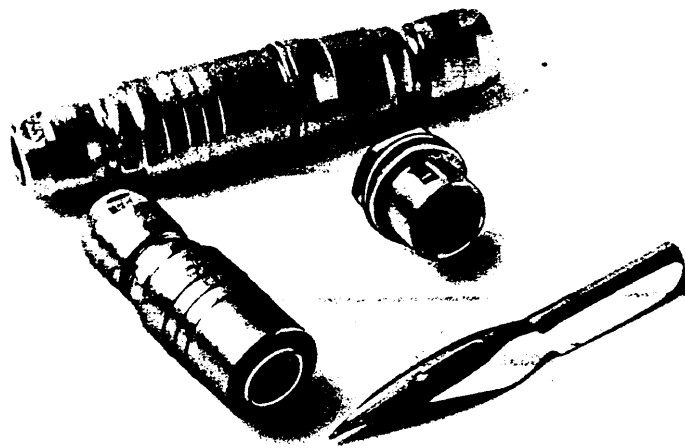
Introduction

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

The HR10 series connectors offer most advanced mechanism in its light weight simplified cigarette sized calibers and assure high reliability and durability as well as easy "push-pull" operation. It is not an exaggeration to

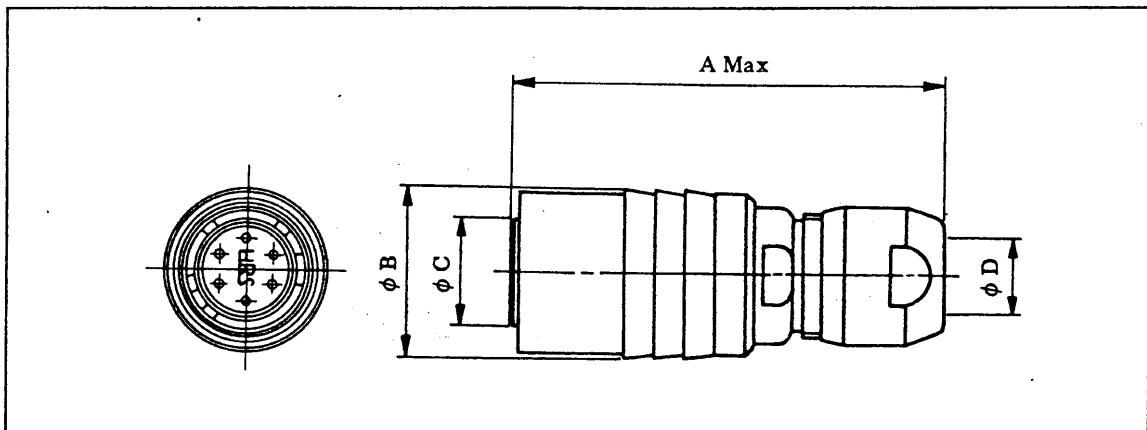
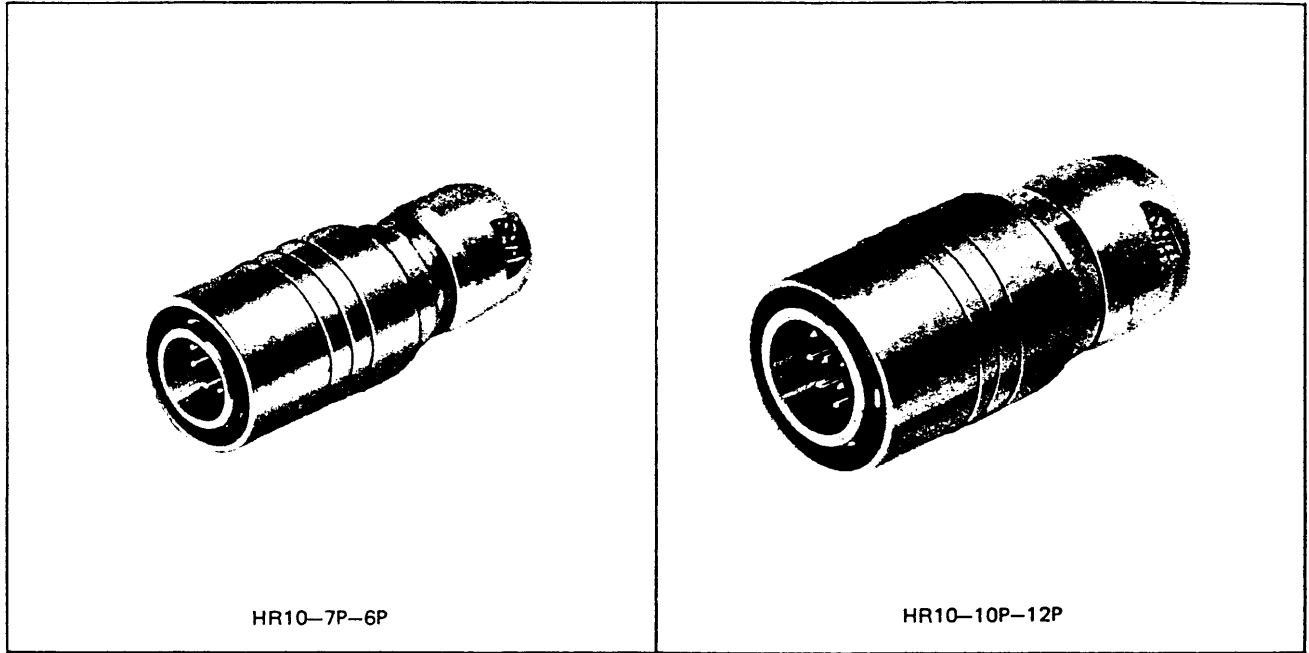
call the HR10 series connector "A LITTLE GIANT". You may apply the HR10 series connectors to any kinds of small-sized electronic equipment with highly integrated circuit requiring high reliability, however this simple but refined connectors are most suitable to be used for portable electronic equipment which maintain importance on the appearance. Typical applications are: Computer and the peripherals, medical equipment, audio equipment, video equipment, portable radio (wireless) apparatus, measuring equipment and so on.

147-027 thru to 038.



Features

- 1. "A LITTLE GIANT"**
The most compact HR10 series is as slender as a cigarette but it installs every required mechanism 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. Especially, check and see the pointers that you can couple it accurately just by pushing any part of the connector.
- 3. POLARIZATION**
Five-key system permits only one way of coupling for never-missing so that you can find right position to connect even by groping.
- 4. PROTECTION OF CONNECTOR PIN**
A connector pin is located at the safe place to avoid any damage which may be caused when you try to find the key by groping.
- 5. HIGH DENSITY**
The space-saving "push-pull" mechanism assures 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 assure well-balanced beautiful package when installed in small-sized equipment.
- 8. THREE PATTERN OF CONTACT ARRANGEMENT**
4, 6 and 12 pin are available. And also pin and socket inserts are reversible 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.



PLUG WITH PIN INSERT

mm (inch)

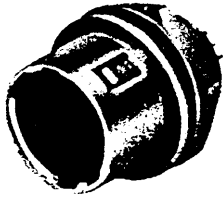
No. of contact	Part No.	A	B	C	D	Weight
4	HR10-7P-4P	28.5 (1.122)	11 (0.433)	7 (0.276)	5.2 (0.205)	8 grs.
6	HR10-7P-6P	28.5 (1.122)	11 (0.433)	7 (0.276)	5.2 (0.205)	8 grs.
12	HR10-10P-12P	32.5 (1.28)	14 (0.551)	9.5 (0.374)	7.2 (0.283)	15 grs.

PLUG WITH SOCKET INSERT

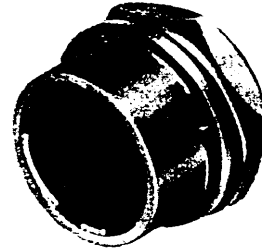
mm (inch)

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.

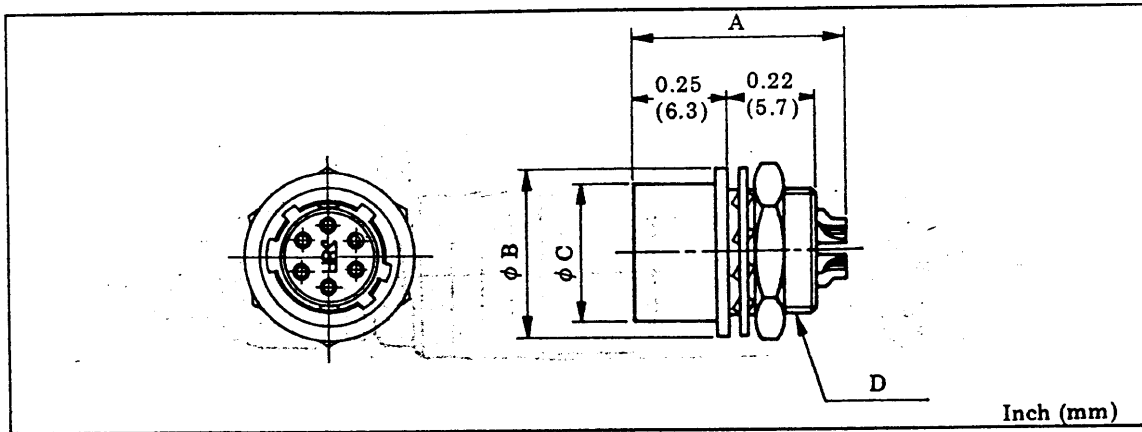
Receptacle



HR10-7R-6S



HR10-10R-12S



RECEPTACLE WITH SOCKET INSERT

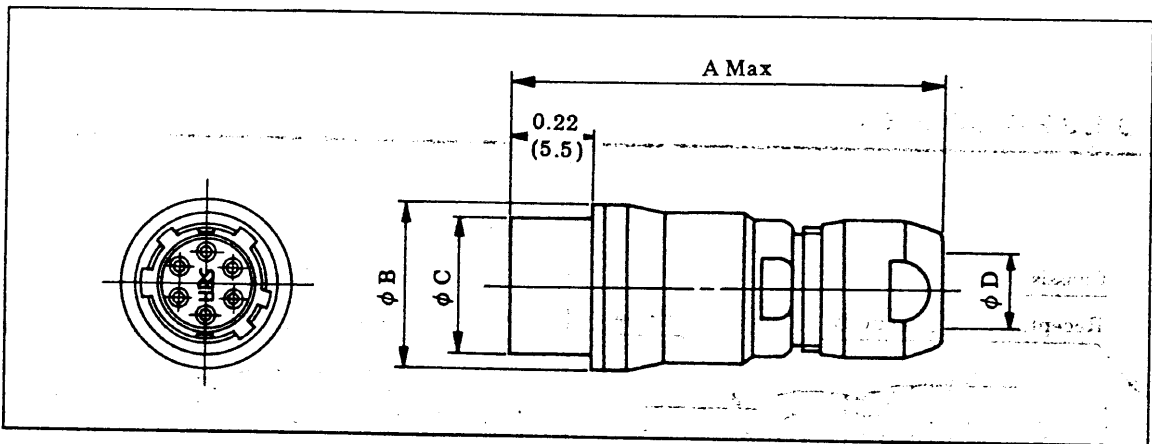
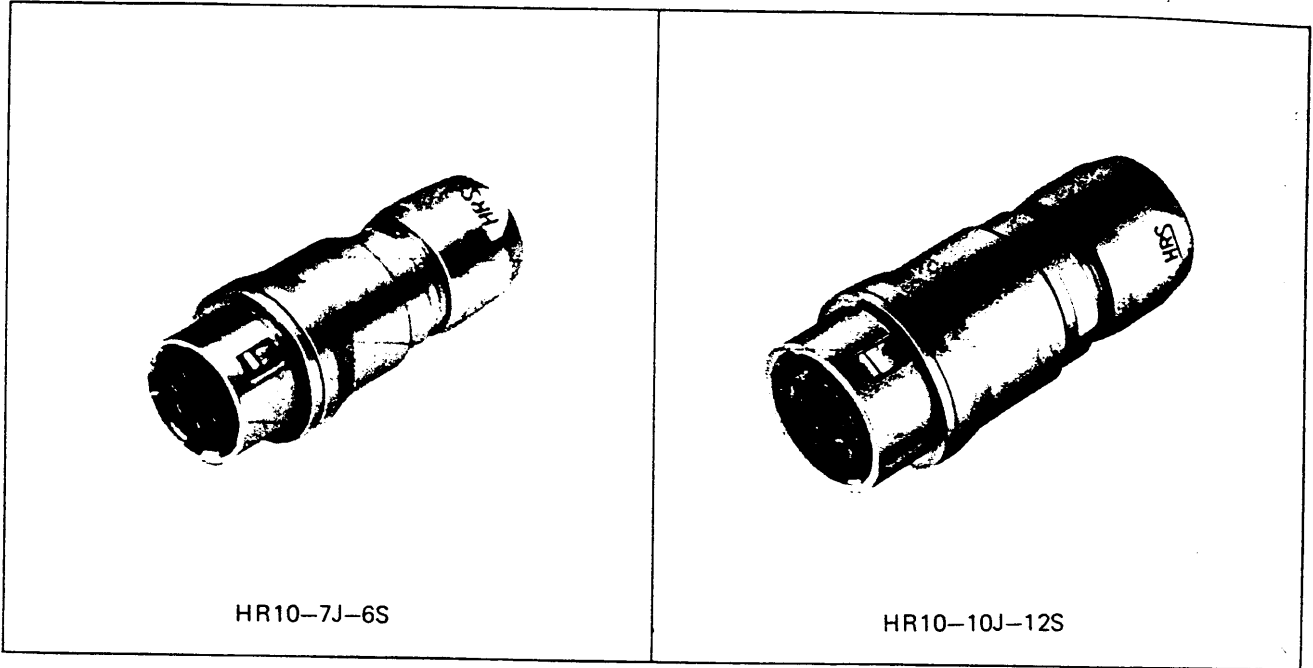
mm (inch)

No. of contact	Part No.	A	B	C	D	Weight
4	HR10-7R-4S	14 (0.551)	11 (0.433)	8.9 (0.35)	M8x0.5 (M0.315x0.02)	3.5 grs.
6	HR10-7R-6S	14 (0.551)	11 (0.433)	8.9 (0.35)	M8x0.5 (M0.315x0.02)	3.5 grs.
12	HR10-10R-12S	16 (0.63)	14 (0.551)	11.9 (0.469)	M11x0.75 (M0.433x0.03)	6 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)	8.9 (0.35)	M8x0.5 (M0.315x0.02)	3.5 grs.
6	HR10-7R-6P	14 (0.551)	11 (0.433)	8.9 (0.35)	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.



JACK WITH SOCKET INSERT

No. of contact	Part No.	mm (inch)			
		A	B	C	D
4	HR10-7J-4S	28.5 (1.122)	11 (0.433)	8.9 (0.35)	5.2 (0.205)
6	HR10-7J-6S	28.5 (1.122)	11 (0.433)	8.9 (0.35)	5.2 (0.205)
12	HR10-10J-12S	32.5 (1.28)	14 (0.551)	11.9 (0.469)	7.2 (0.283)

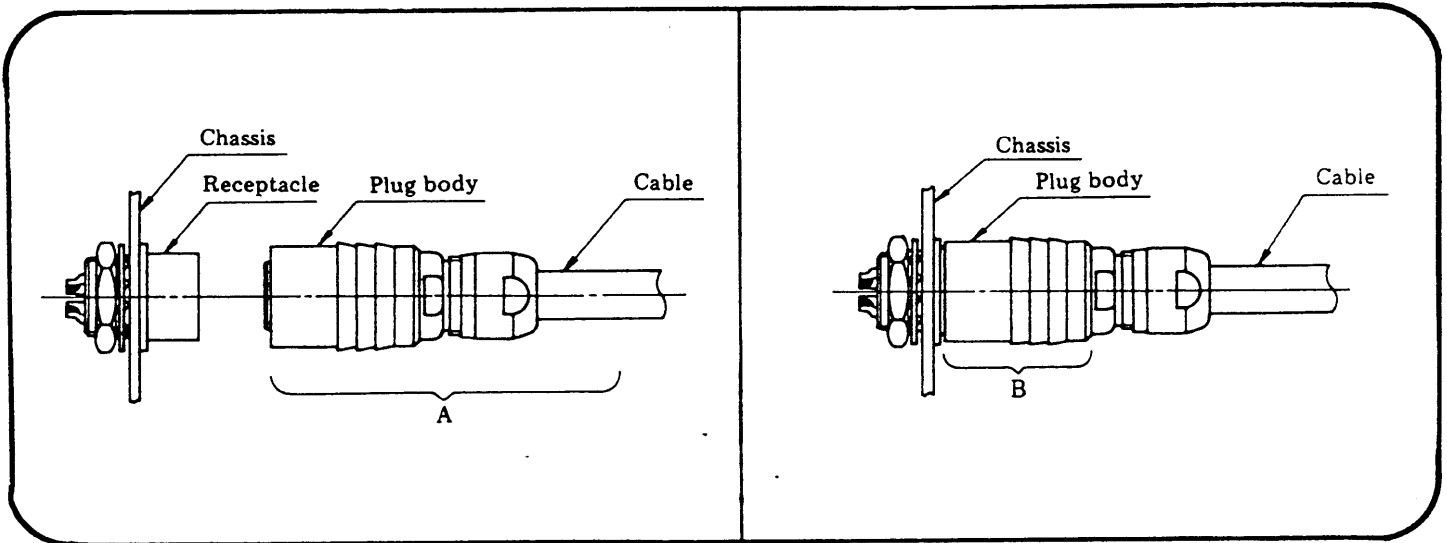
JACK WITH PIN INSERT

No. of contact	Part No.	mm (inch)			
		A	B	C	D
4	HR10-7J-4P	28.5 (1.122)	11 (0.433)	8.9 (0.35)	5.2 (0.205)
6	HR10-7J-6P	28.5 (1.122)	11 (0.433)	8.9 (0.35)	5.2 (0.205)
12	HR10-10J-12P	32.5 (1.28)	14 (0.551)	11.9 (0.469)	9.2 (0.283)

Ordering Information

		H R 10 - 7 P 4 P
Series No.:	HR10 Series	
Shell Size:	The outer dia. of coupling part of plug	
Shell type:	P: Plug R: Receptacle J: Jack	
No. of contact:	4, 6 and 12 pin are available	
Contact type:	P: Male S: Female	

How to Use a Connector



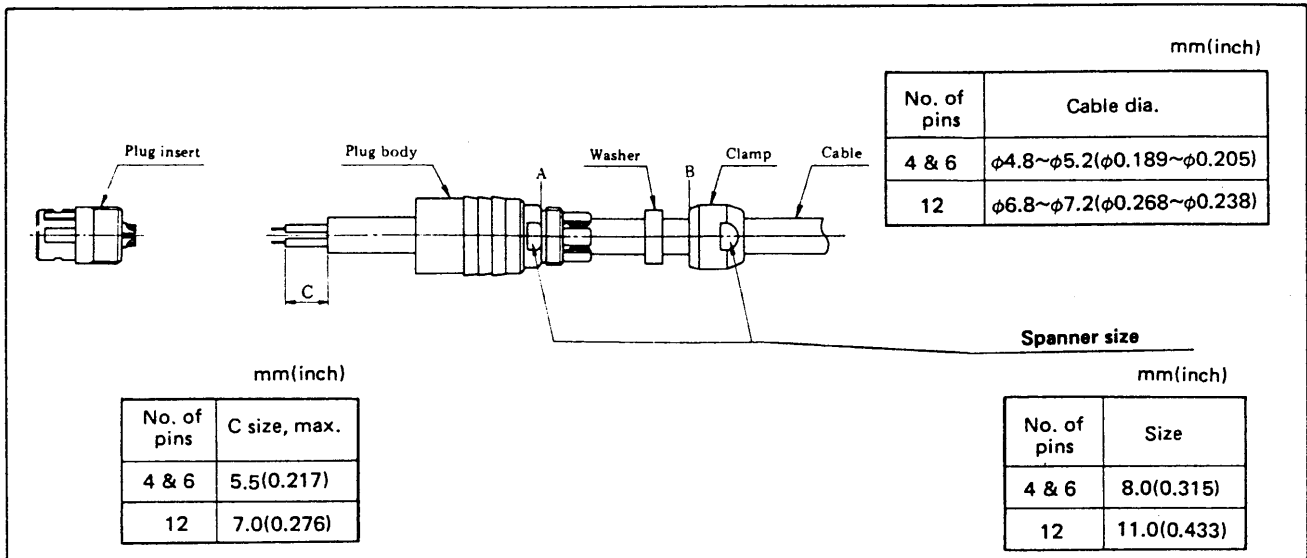
1. COUPLING

Mate the five keys with the key ways of receptacle by groping, holding "A" part of a plug. Then, push it straight. Next moment, coupling is completed.

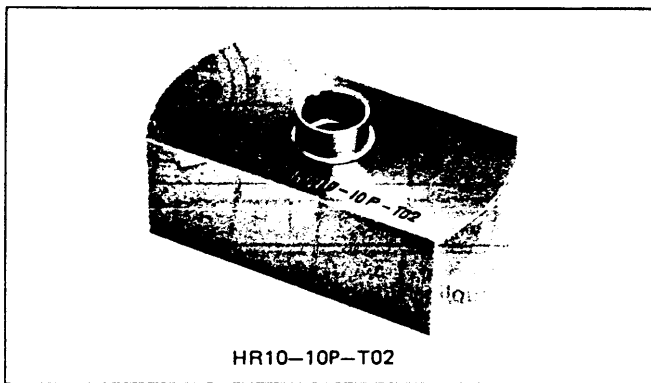
2. PULLING OUT

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

Wiring Procedure (for reference)

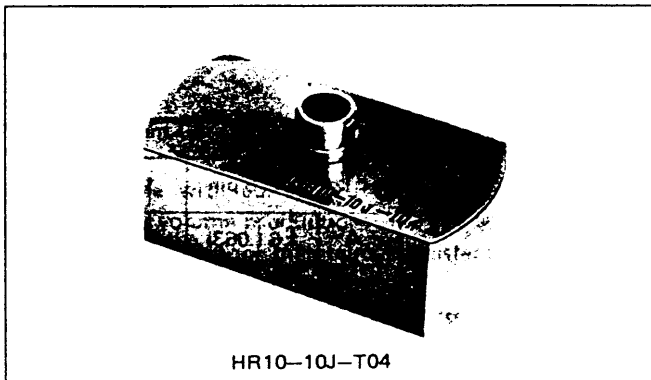


1. Please choose the cable and below the size of AWG26 of which outer diameter meets the cable chart shown above.
2. Then, pass the cable through cable clamp, washer and plug body one after another as shown above.
3. Then, soldering procedure with pin or socket insert shall be followed with wiring tool shown below. After soldering, please loosen "C" part first, then, fasten the plug body with spanner wrench.
4. After a plug body is fastened, please fasten cable clamp until its "B" surface touches "A" surface of plug body. Now, wiring is completed.



WIRING TOOL

We are preparing wiring tools for your convenience.



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



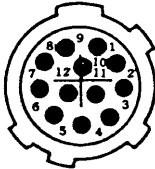
Material

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

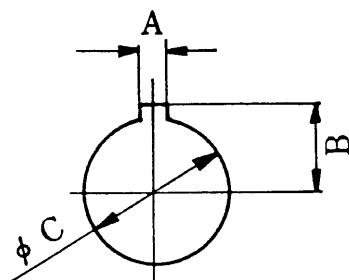
Withstand voltage : AC500V for 4 pin and AC300V for
 6 & 12 pin
 Current rating : 2A
 Insulation resistance : 1000 M Ω or more at DC100V
 Contact resistance : 10 m Ω or less at DC1A
 Solder pot inside diameter : ϕ 0.03 inch (ϕ 0.8 mm)

Contact Arrangement

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

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

Recommended Mounting Hole



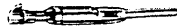
	mm(inch)	
	4 & 6 pin	12 pin
A	1.6 (.063)	2.6 (.103)
B	5.1 (.201)	6.6 (.260)
C	8.1 (.319)	11.1 (.437)

Connectors — Mains & Multipole

Circular Multipole (Plastic) — continued

Two Piece Contacts

BURNDY



Pin Contact



Socket Contact

The contacts are two part. The body is made of a highly conductive copper alloy with a stainless steel outer spring in either tin or gold plated options, both fit the 'Metalok Bantam' or 'SMS QIKMATE' housings.

Contacts Copper alloy, tin plated
Copper alloy, gold plated

Contact Rating Tin plated 7.5A
Gold plated 13.0A

Wire Gauge	Order Code	Price Each Per Quantity		
		1+	4+	40+
25 Per Pack				
Tin Plated Pins				
18—16 AWG	105-487.	£2.88	£2.63	£2.43
22—20 AWG	105-488.	£2.88	£2.63	£2.43
26—24 AWG	105-489.	£2.88	£2.63	£2.43
Tin Plated Sockets				
18—16 AWG	105-490.	£2.57	£2.35	£2.17
22—20 AWG	105-491.	£2.57	£2.35	£2.17
26—24 AWG	105-492.	£2.57	£2.35	£2.17
Gold Plated Pins				
18—16 AWG	105-493.	£3.75	£3.43	£3.17
22—20 AWG	105-494.	£3.75	£3.43	£3.17
Gold Plated Sockets				
18—16 AWG	105-495.	£3.35	£3.07	£2.83
22—20 AWG	105-496.	£3.35	£3.07	£2.83

'Metalok Bantam' and 'SMS QIKMATE' Tooling

BURNDY

	Mftrs. List No.	Order Code	Price Each
Crimping tool	Y16-SCM-2	105-497.	£130.00
Extractor tool	RX20 25GE1	105-498.	£21.00

Sub-Miniature Coaxial Contacts **NEW**

Coaxial plugs and sockets designed to fit into the 'Metalok Bantam' and 'SMS Qikmate' housings, for use with RG179PE coaxial cable.

Coaxial Kit	Mftrs. List No.	Order Code	Price Each Per Quantity		
			1+	10+	50+
Male	RMDXK10D28	105-953	£3.05	£2.59	£2.14
Female	RCDXK1D28	105-954	£2.31	£1.98	£1.62

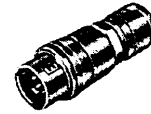
Circular Multipole (Metal)

HR10 Series Miniature Latching 4 and 6 Pole 2 Amp

DUBILIER



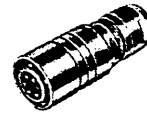
Free Plug
147-030
L = 28.5, Dia = 11



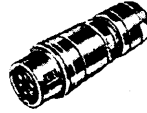
Jack Plug
147-038
L = 28.5, Dia = 11



Panel Plug
147-034
L = 14, Dia = 11



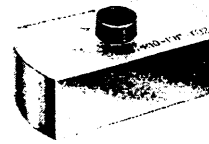
Free Socket
147-028
L = 28.5, Dia = 11



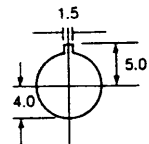
Jack Socket
147-036
L = 28.5, Dia = 11



Panel Socket
147-032
L = 14, Dia = 11



147-039
Assembly Holding Block



Panel Cut-out

Free socket mates with jack plug or fixed plug. Free plug mates with jack socket or fixed socket.

A range of subminiature push-pull latching connectors providing a robust mechanism in a very compact package.

Current rating	2A @ 100V ac 140V dc	Housing	Zinc alloy and brass matt finished, nickel plated
Withstand operating voltage	500V ac for 4 pole 300V ac for 6 pole	Insulators	(Blue) glass reinforced nylon 66
Contact resistance	< 10mΩ	Contacts	Pin
Cable size	5.2mm max	Sockets	Brass, gold plated. Beryllium copper, gold plated

	Mftrs. No.	Order Code		Mftrs. No.	Order Code
Free Plugs			Free Sockets		
4 pole	HR10 7P 4P	147-029	4 pole	HR10 7P 4S	147-027
6 pole	HR10 7P 6P	147-030	6 pole	HR10 7P 6S	147-028
Jack Plugs			Jack Sockets		
4 pole	HR10 7J 4P	147-037	4 pole	HR10 7J 4S	147-035
6 pole	HR10 7J 6P	147-038	6 pole	HR10 7J 6S	147-036
Panel Plugs			Panel Sockets		
4 pole	HR10 7R 4P	147-033	4 pole	HR10 7R 4S	147-031
6 pole	HR10 7R 6P	147-034	6 pole	HR10 7R 6S	147-032
			Assembly Holding Block	HR10 7PT01	147-039

	Order Code	Price Each Per Quantity		
		1+	50+	150+
Free Plugs				
4 pole	147-029	£6.98	£5.81	£5.37
6 pole	147-030	£7.45	£6.21	£5.73
Jack Plugs				
4 pole	147-037	£6.03	£5.02	£4.63
6 pole	147-038	£6.55	£5.46	£5.04
Panel Plugs				
4 pole	147-033	£3.83	£3.19	£2.94
6 pole	147-034	£4.18	£3.48	£3.21
Free Sockets				
4 pole	147-027	£8.23	£6.85	£6.33
6 pole	147-028	£9.28	£7.73	£7.13
Jack Sockets				
4 pole	147-035	£6.80	£5.67	£5.23
6 pole	147-036	£8.38	£6.96	£6.44
Panel Sockets				
4 pole	147-031	£5.07	£4.23	£3.90
6 pole	147-032	£6.13	£5.10	£4.71
Assembly holding block	147-039	£86.32 any quantity		

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Securicor 'A' Service available on request.

Datapost Service available on request,
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