

Miniature, Waterproof Plastic Connectors

HR30 Series - Overmold Version



Building on the success of the standard HR30 connector, Hirose now offers a version that allows for a custom overmold to be applied to the connector. This gives the design engineer the opportunity to design the overmold that suits the application. Hirose supplies the un-overmolded connectors and it is up to the design engineer to have the overmold applied to the connector.

1. Small size

Short in length when fully terminated and mated.

2. Water and dust protected

IP67 protection rating: Complete protection against dust penetration and against water penetration when submerged 1 meter deep for half hour when mated with the corresponding connector or protective cap.

3. Simple pull lock release

Built-in lock/release mechanism securely locks mated connectors while allowing quick disconnection by simply pulling on the plug's release collar. Molded-in grooves prevent finger slippage when pulled. The round configuration of the collar allows easy side-by-side panel mounting and will not snag on objects when the cable is pulled-out.

4. Light weight, corrosion resistant

Glass reinforced thermoplastic compounds and noncorrosive components are used in all assemblies.

5. Contact protection and self- alignment

Multiple polarizing keys protect the contacts from missalignment or attempted insertion of the wrong connector, while assuring correct mating between the corresponding connectors.

6. Visual alignment indicators

Permanent alignment indicators in a contrasting color on all connectors aid in correct alignment and engagement.

Applications

Test and measuring equipment, portable devices, instrumentation, industrial devices, recreational equipment, I/O applications and other applications requiring use of lightweight, corrosion resistant quick mate-release cable connections.

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Ordering Information & Product Specifications

HR30 - 6 P A - 6 S C (* *)

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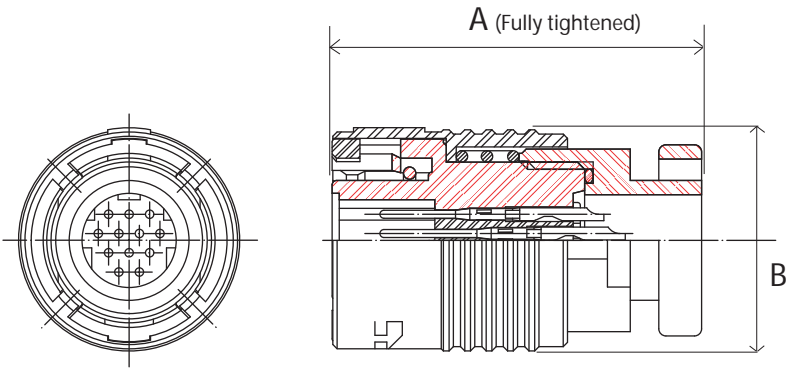
① Series Name :HR30	⑤ Number of contacts: 3, 6, 10 and 12
② Shell Size :Outside diameter/plug mating side	⑥ Contact type S: Female contact P: Male contact
③ Connector type P: Plug R: Receptacle J: Jack	⑦ Contact wiring type Blank: Solder C : Crimping D : Through hole
④ Variation Blank: Standard A: Fine wire B: Overmold	⑧ Plating (71) : Gold plated (except caps)

Characteristics	Specification	Conditions
1. Contact resistance	5m ohms max. (3 pos) 15m ohms max. (Solder type: 6, 10, and 12 pos.) 30m ohms max. (Through hole type: 6 and 12 pos.)	1A DC
2. Insulation resistance	1000M ohms min	100V DC
3. Withstanding voltage	No flashover or insulation breakdown	300V AC/one minute
4. Vibration	No Electrical discontinuity of 10 μ s or more	Frequency: 10 to 55 Hz, single amplitude of 0.75mm 1 cycle = 5min, 10 cycles in each of the three directions
5. Durability (mating/unmating)	Contact resistance 10m ohms min. (3 pos.) Contact resistance 30m ohms min. (Solder type: 6, 10, and 12 pos.) Contact resistance 100m ohms min. (through hole type: 6 and 12 pos.)	1000 cycles
6. Temperature cycle	Insulation resistance 100M ohms min.	(-5°C: 30 minutes Room temperature: 10 to 15 minutes +85°C: 30 minutes Room temperature: 10 to 15 minutes) for 5 cycles
7. Humidity resistance	Insulation resistance 10M ohms min. (when humidity is high) 100M ohms min. (when dry)	96 hours at room temperature of 40 ohms and humidity of 90% to 95%
8. Waterproof performance	No penetration inside	While mated with corresponding or protective cap submerged at depth of 1 meter for 1/2 hour
9. Dust protection		

Assembly	Component	Material	Finish	Remarks
Plug	Insulator	PPS	Black	UL94V-0
		PBT	Black	UL94V-0
		Polyacetal	Natural	-
	Gasket	Silicone rubber, chloroprene rubber	Red/Black	-
	Contacts	Brass, phosphor bronze	Gold plated	-
	Spring	Stainless steel	-	-
Receptacles	Insulator	PPS	Black	UL94V-0
	Gasket	Chloroprene rubber	Black	-
	Contacts	Brass, phosphor bronze	Gold plated	-
	Hexagonal nut	Zinc alloy	Chromate	-
	Washer	Phosphor bronze	Nickel plated	-
Crimp Contact (male/female)	Contacts	Phosphor bronze	Selective gold plated	-

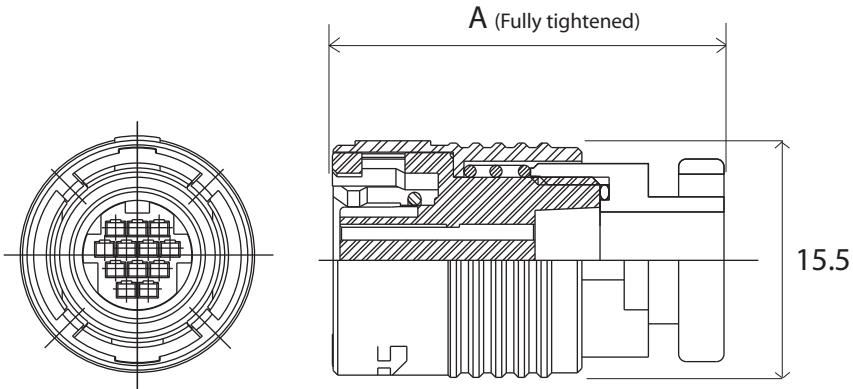
Ratings	Current rating	5A (3 pos) 2A (6, 10, 12 pos.)	Operation Temperature Range	-25°C to +85°C
	Voltage rating	100V AC, 140V DC (3, 6 pos.) 30V AC, 42V DC (10, 12 pos)	Storage Temperature Range	-25°C to +85°C

Solder Type Plugs



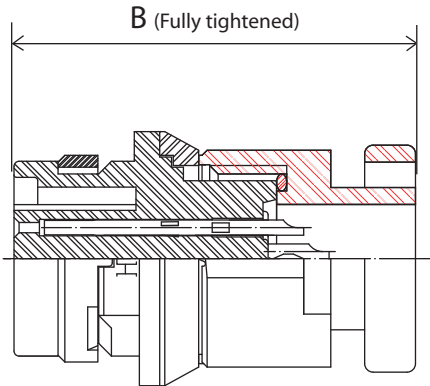
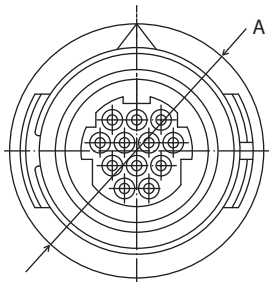
Part Number	CL No.	A	B	Solder Pot Inner Diameter	Cable Diameter Range	Weight	RoHS
HR30-6PB-3S	130-0034-2 00	22.7	12.6	1.1 mm	Ø 5.2 MAX	3.1 g	Yes
HR30-6PB-6P	130-0037-0 00	23.2		0.8 mm		2.84 g	
HR30-6PB-6S	130-0032-7-00	22.7				2.91 g	
HR30-7PB-12S	130-0035-5 00	25.9	15.5	0.6 mm	Ø 6.4 MAX.	4.7 g	
HR30-8PB-12P	130-0030-1-00	25.9			Ø 6.4 MAX.	4.4 g	

Crimp Type Plugs



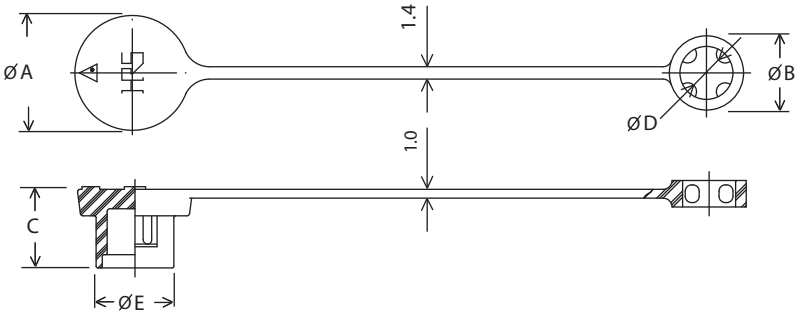
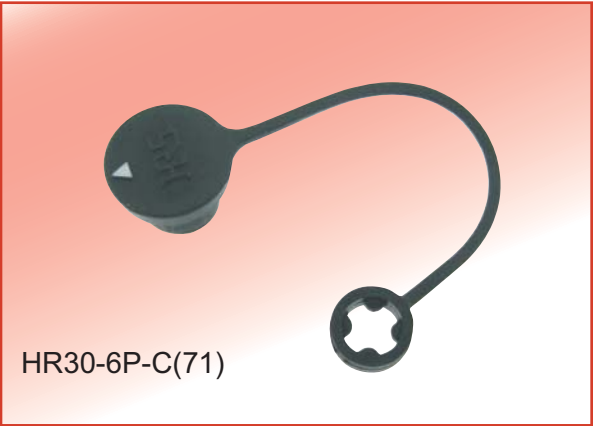
Part Number	CL No.	A	Crimp Contact	Cable Diameter Range	Weight	RoHS
HR30-7PB-10SC	130-0036-8 00	25.9	HR30-SC-211	Ø 6.4 MAX	4.1 g	Yes
HR30-7PB-12SC	130-0033-0 00					
HR30-8PB-12PC	130-0031-4-00		HR30-PC-211		4.3 g	

Solder and Crimp Type Jacks



Part Number	CL No.	A	B	Solder Pot Inner Diameter	Cable Diameter Range	Weight	RoHS
HR30-6JB-6P	130-2021-1-00	Ø 12	21.7	0.8 mm	Ø 5.2 MAX.	2.2 g	Yes
HR30-7JB-12P	130-2023-7 00	Ø 15	23.7	0.6 mm	Ø 6.4 MAX.	3.6 g	
HR30-8JB-12S	130-2024-0 00				Ø 6.4 MAX.	4.0 g	
HR30-7JB-10PC	130-2025-2 00						
HR30-7JB-12PC	130-2022-4 00						
HR30-8JB-12SC	130-2026-5 00						

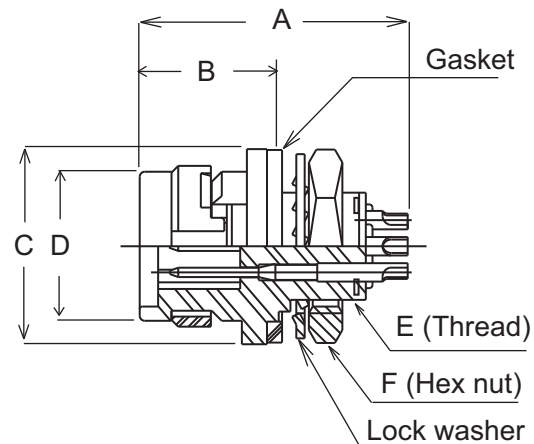
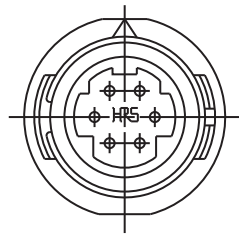
Caps



Part Number	CL No.	Applicable Connector	A	B	C	D	E	Weight	RoHS					
HR30-6P-C(71)	130-3000-7 -71	HR30-6P-3S(71)	13	8.4	8.9	4	8.8	1g	YES					
		HR30-6P-6S(71)												
		HR30-6P-6P(71)												
		HR30-6PA-3S(71)												
		HR30-6PA-6S(71)												
		HR30-6PA-6P(71)												
		HR30-6PB-3S												
		HR30-6PB-6P												
HR30-6PB-6S														
HR30-7P-C(71)	130-3004-8-71	HR30-7P-10SC(71)	16	10.4	10.5	6	11.4	2g						
		HR30-7PB-10SC												
		HR30-7P-12S(71)												
		HR30-7P-12SC(71)												
		HR30-7PB-12SC												
HR30-8P-C(71)	130-3003-5-71	HR30-8P-12P(71)												
		HR30-8P-12PC(71)												
		HR30-8PB-12PC												

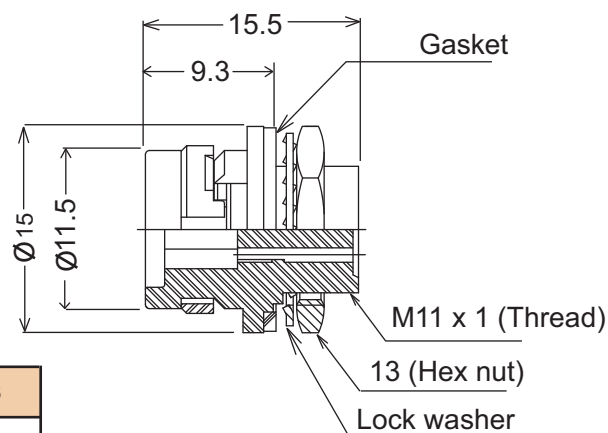
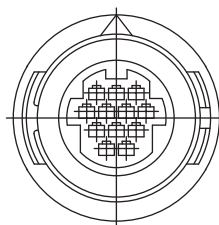
■ Receptacles

Solder Type



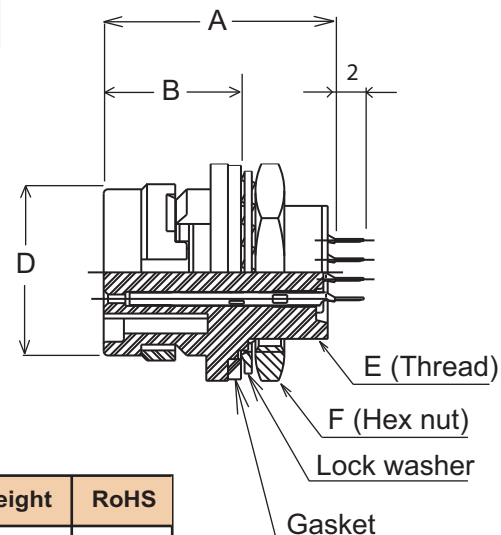
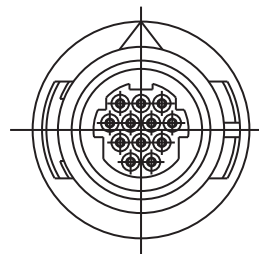
Part Number	CL No.	A	B	C	D	E	F	Solder Pot Inner Diameter	Weight	RoHS
HR30-6R-3P(71)	130-1003-4-71	16	8.3	12	8.9	M8 x 0.75	10	1.1mm	2 g	Yes
HR30-6R-6P(71)	130-1009-0-71							0.8mm		
HR30-6R-6S(71)	130-1008-8-71	18.4								
HR30-7R-12P(71)	130-1016-6-71	18.6	9.3	15	11.5	M11 x 1	13	0.6mm	3.4 g	
HR30-8R-12S(71)	130-1018-1-71									

Crimp Type



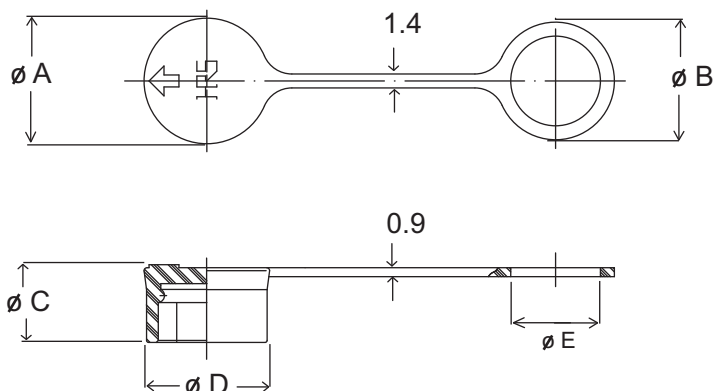
Part Number	CL No.	Crimp Contact	Weight	RoHS
HR30-7R-10PC(71)	130-1012-5-71	HR30-PC-211	3g	Yes
HR30-7R-12PC(71)	130-1013-8-71			
HR30-8R-12SC(71)	130-1014-0-71	HR30-SC-211		

Dip Type



Part Number	CL No.	A	B	C	D	E	F	Weight	RoHS
HR30-6R-6PD(71)	130-1020-3-71	14.9	8.3	12	8.9	M8 x 0.75	10	2 g	Yes
HR30-6R-6SD(71)	130-1021-6-71	15.2							
HR30-7R-12PD(71)	130-1017-9-71	16	9.3	15	11.5	M11 x 1	13	3.4 g	
HR30-8R-12SD(71)	130-1019-4-71								

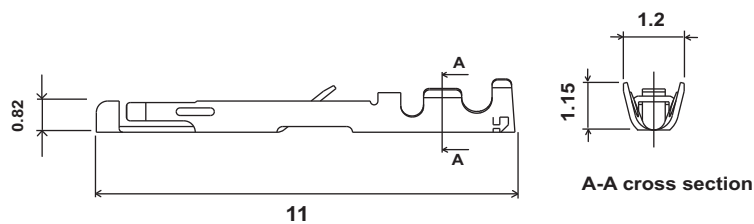
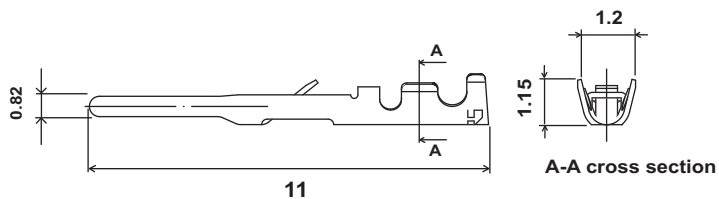
Receptacle Caps



Part Number	CL No.	Applicable Connector	A	B	C	D	E	Weight	RoHS
HR30-6R-C(71)	130-3001-0-71	HR30-6R-3P(71)	12.6	11.8	7.5	12.1	9.1	1g	Yes
		HR30-6R-6P(71)							
		HR30-6R-6PD(71)							
		HR30-6R-6S(71)							
		HR30-6R-6SD(71)							
HR30-7R-C(71)	130-3002-2-71	HR30-7R-10PC(71)	15.5	14.8	8.5	15	12.1		
		HR30-7R-12P(71)							
		HR30-7R-12PC(71)							
		HR30-7R-12PD(71)							
		HR30-8R-12S(71)							
		HR30-8R-12SC(71)							
		HR30-8R-12SD(71)							

Note: When using these caps, do not use the gasket that is normally supplied with the receptacle. The "B" diameter end of the receptacle cap will serve as the gasket.

Crimp Contacts



Part Number	CL No.	Packaging Type	Weight	RoHS
HR30-PC-111	130-0022-3	100 pcs/bag	0.03g/1per pin	Yes
HR30-PC-211	130-0016-0	10,000 pcs/reel	0.03g/1per pin	

Part Number	CL No.	Packaging Type	Weight	RoHS
HR30-SC-111	130-0023-6	100 pcs/bag	0.03g/1per pin	Yes
HR30-SC-211	130-0017-3	10,000 pcs/reel	0.03g/1per pin	

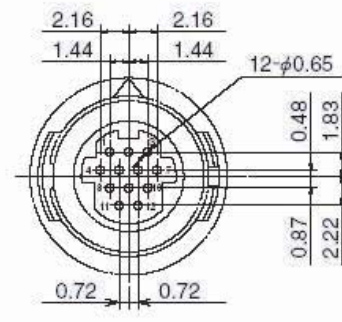
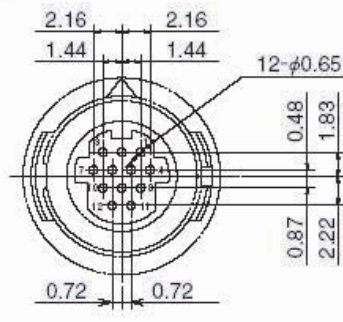
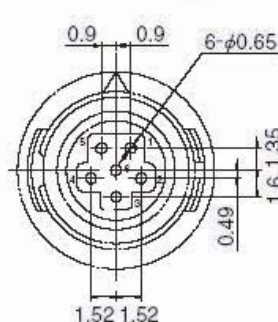
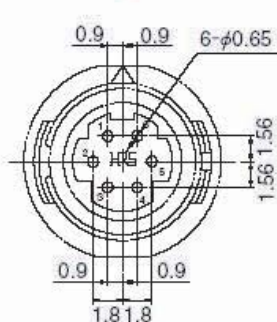
Note: Use wire size AWG 26 to 30 with a jacket diameter of 1 mm max.

Applicable Tools

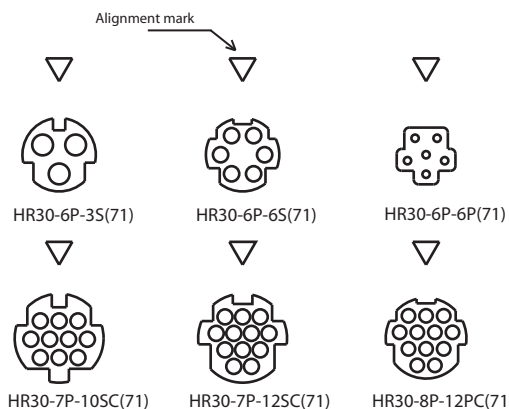
Type	Description	Part Number	CL No.	Applicable Contact	Applicable wire
Manual	Manual Crimping Tool	HT102/HR30-1	150-0229-6	HR30-SC-111	AWG #26-#30
				HR30-PC-111	
Automatic	Automatic Crimping Machine	CM-105	901-0005-4	-	-
	Applicator	AP105-HR30-1	901-4571-3	HR30-SC-211	AWG #26-#30
				HR30-PC-211	
Extraction Tool	HR30-TP	150-0219-2	150-0219-2	HR30-SC-111	-
				HR30-SC-211	-
				HR30-PC-111	-
				HR30-PC-211	-



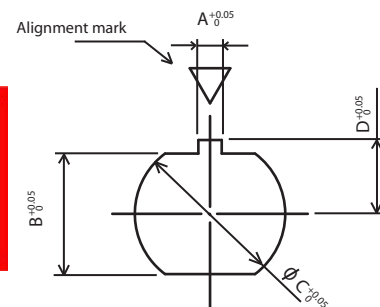
Receptacle, Board Mounting Through Hole Pattern



- Notes
1. The receptacle through hole configuration depicts a view from the mating side of the connector.
 2. The recommended board maximum thickness: 1.2mm
 3. Tolerance of +0.03 mm is recommended for the plated through hole location.
Tolerance of +0.02mm is recommended for the plated through hole diameter.



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	A	B	C	D	Panel Thickness
3, 6 pos.	1.25	6.45	8.05	3.95	0.7 - 2
10, 12 pos.	1.35	9.25	11.05	5.45	0.7 - 3

- Notes
1. The contact configuration depicts a view from the wiring side.
 2. Mounting to the panel is accomplished by tightening the hexagonal nut from the rear side of the panel.