

Hydro Bond Engineering Ltd

Underwater Mateable Electrical Connectors: Rubber Keyed















Rubber Keyed HRS (Hydro Bond Rubber Sealing)

Hydro Bond Engineering Ltd offer rubber keyed underwater mateable electrical connectors from its extensive, high integrity range of subsea connectors.

Our in-house engineered and developed electrical technology is at the forefront of harsh environment requirements. Our products have been extensively tested both internally and externally and are field proven on major local, national and international projects.

Our Electrical Engineers and Technicians are fully trained and certified on our equipment by City & Guilds.



Features

- Underwater mateable
- Proven shock-tested design
- Depth rated to 2,440 MSW
- Fully open-face pressure sealed
- · Metal shell construction
- · Available in five shell sizes
- Bulkhead mount and panel mount designs available as standard
- Mounting O

 Ring face seals and optional barrel seals available as standard
- Pin densities from 1 to 70 ways
- Voltage ratings up to 3,300 Volts RMS
- Current ratings up to 750 Amps
- Standard and reverse gender configurations available
- Available in 316 stainless steel as standard or titanium, Aluminium Silicon Bronze, Nickel Aluminium Bronze etc. on request
- · Non-magnetic versions available
- 0.75 metre conductor tails on all bulkhead connectors as standard with other lengths on request
- Optional earth bonding
- Optional cathodic delamination versions available
- Termination options include fully water-blocked, mechanical strain terminations and oil-filled options
- Moulding options include Polyurethane and Polyethylene
- Acetal dust caps included on all connectors (additional lanyards on request)

















Rubber Keyed HRS (Hydro Bond Rubber Sealing)

Benefits

- · Cost effective diver mateable solution
- Easy to use
- Fast lead times
- · Wide variety of pin configurations allows cost-effective system design
- Standard and reverse gender configurations allow for safe system design
- · Wide variety of metal options allows for best corrosion resistant design
- Extensive track record





Specifications

The following pages feature a range of HRS (Hydro Bond Rubber Sealing) Underwater Mateable Electrical Connectors that have been designed, manufactured and field tested. The following charts feature a range of pin (face view) configurations, together with electrical, environmental and standard material specifications.





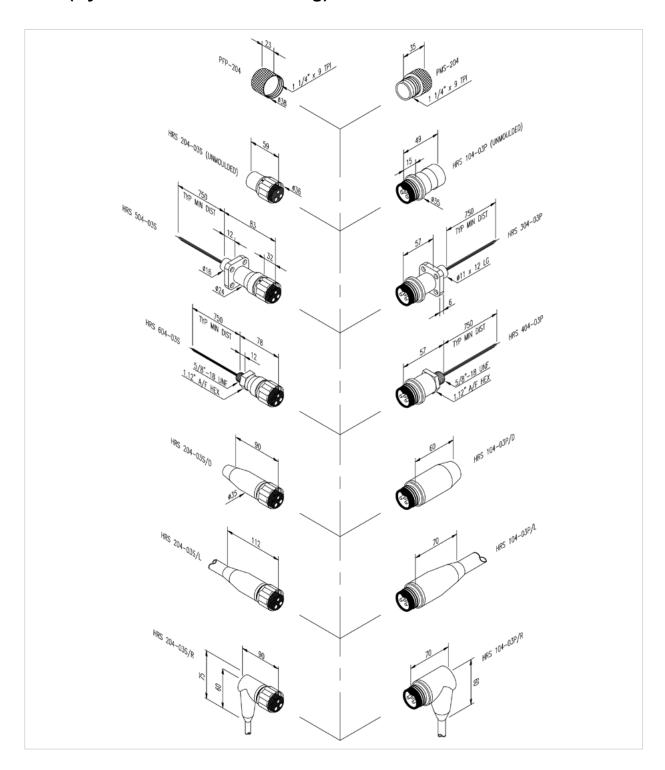








Rubber Keyed HRS (Hydro Bond Rubber Sealing) : Shell Size 4 / Connector Details







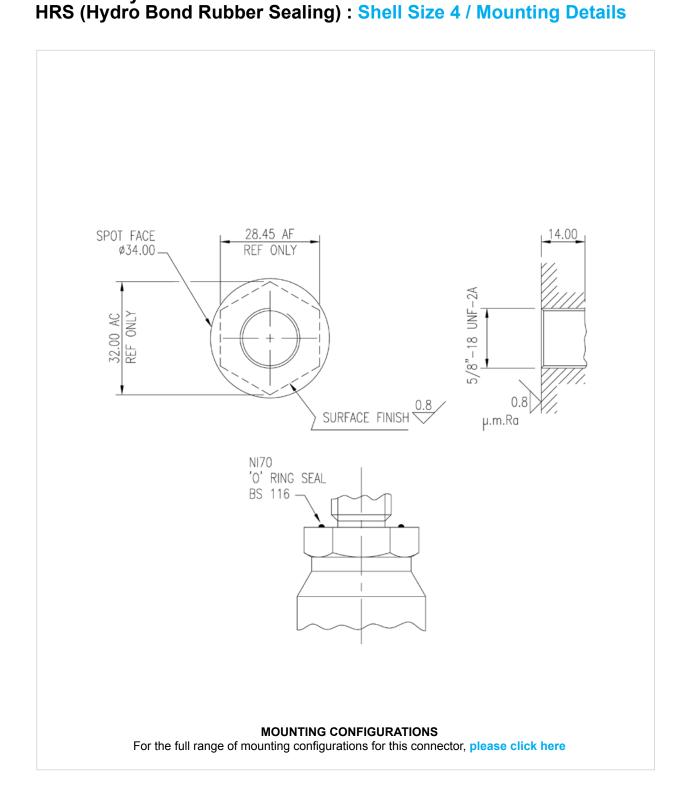








Rubber Keyed















Rubber Keyed HRS (Hydro Bond Rubber Sealing) : Shell Size 4 / Specifications

Electrical and Environmental Standard Material Specification **Face Views** Pin Current Rating: 1 way 10 A, 2 way 25 A 316 Stainless Steel Socket Pin Body: Pin Voltage Rating: 2,000 V rms Aluminium Silicon Bronze Fix Ring: Contact to Contact IR: >1,000 MOhms @ 1,000 V dc Back Shell: Contact to Body IR: >1,000 MOhms @ 1,000 V dc Contact Pins: CZ121/Au Mated Depth Rating: CZ121/Au 2,440 MSW Contact Sockets: -20 ° C to +60 ° C Temperature Rating: Insert Material: Neoprene 18 AWG / 14 AWG Conductor Tail Size: Conductor Tails: Spec 44 X 0.75 m Solder Bucket Size: 1 X 2.5 mm dia, 2 X 3.0 mm dia O - Rings: Ni70 Ref: HRS 04-03 Pin Current Rating: 8 AMPS Body: 316 Stainless Steel Socket Pin Pin Voltage Rating: 2,000 V rms Fix Ring: Aluminium Silicon Bronze Contact to Contact IR: >1,000 MOhms @ 1,000 V dc Back Shell: N/A >1,000 MOhms @ 1,000 V dc Contact to Body IR: Contact Pins: CZ121/Au Mated Depth Rating: 2,440 MSW Contact Sockets: CZ121/Au Temperature Rating: -20 $^{\circ}$ C to +60 $^{\circ}$ C Insert Material: Neoprene 18 AWG Spec 44 X 0.75 m Conductor Tail Size: Conductor Tails: Ref: HRS 04-04 Solder Bucket Size: 2.5 mm dia O - Rings: NI70

Custom Product Design

Not found what you are looking for?

Our in house engineers design, develop, manufacture and test new products to customer specifications.









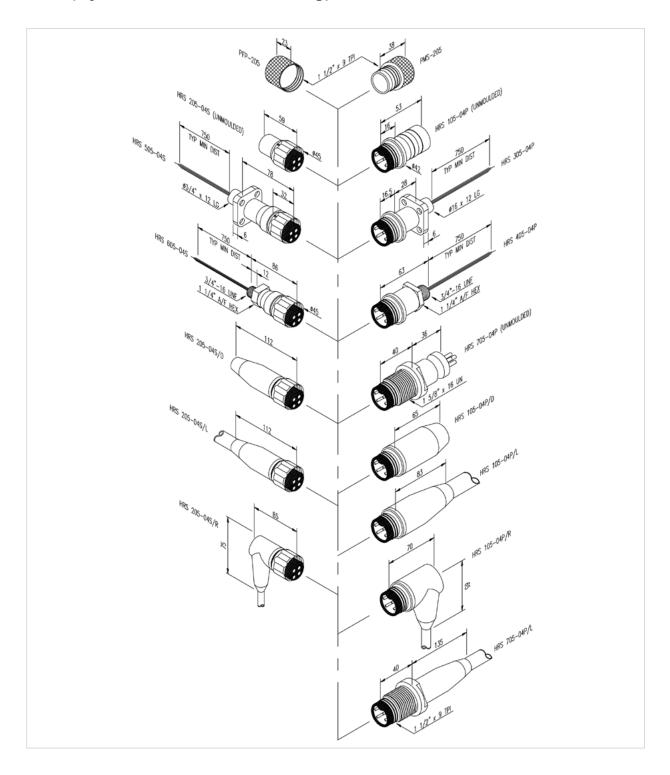








Rubber Keyed HRS (Hydro Bond Rubber Sealing) : Shell Size 5 / Connector Details







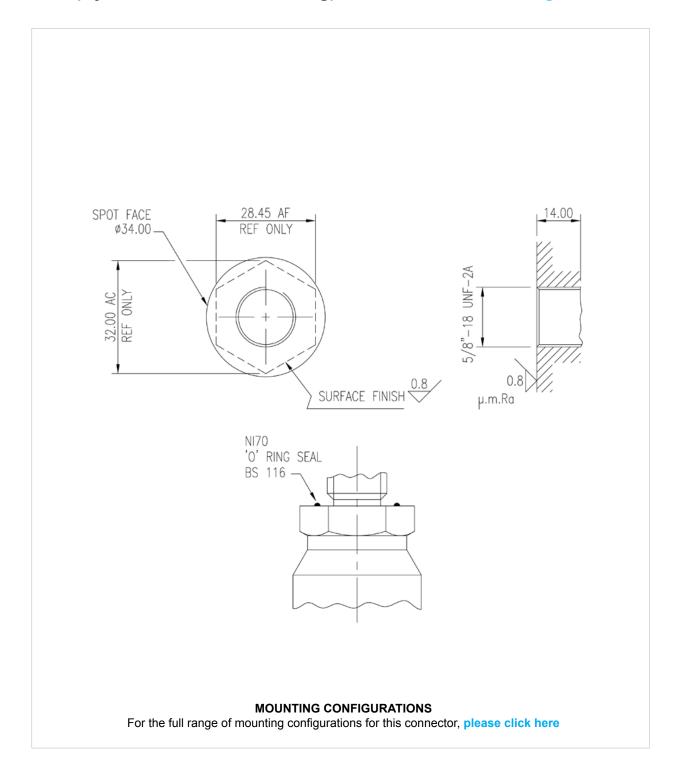








Rubber Keyed HRS (Hydro Bond Rubber Sealing) : Shell Size 5 / Mounting Details















Rubber Keyed HRS (Hydro Bond Rubber Sealing): Shell Size 5 / Specifications

Electrical and Environmental

Standard Material Specification

Face Views

Pin Current Rating: 16 AMPS 2,000 V rms Pin Voltage Rating:

Contact to Contact IR: >1,000 MOhms @ 1,000 V dc Contact to Body IR: >1,000 MOhms @ 1,000 V dc Mated Depth Rating: 2,440 MSW

Temperature Rating: -20 ° C to +60 ° C Conductor Tail Size: 16 AWG Solder Bucket Size: 3.0 mm dia

Body: 316 Stainless Steel Fix Ring: Aluminium Silicon Bronze Back Shell:

Contact Pins: CZ121/Au Contact Sockets: CZ121/Au Insert Material: Neoprene Conductor Tails: Spec 44 X 0.75 m

O - Rings:

NI70

Socket





Pin

Ref: HRS 05-04

Pin Current Rating: Pin Voltage Rating:

2 000 V rms Contact to Contact IR: >1,000 MOhms @ 1,000 V dc >1,000 MOhms @ 1,000 V dc Contact to Body IR: Mated Depth Rating: 2.440 MSW

16 AMPS

Temperature Rating: -20 ° C to +60 ° C 16 AWG Conductor Tail Size: Solder Bucket Size: 3.0 mm dia

316 Stainless Steel Body: Fix Ring: Aluminium Silicon Bronze Back Shell:

Contact Pins: CZ121/Au CZ121/Au Contact Sockets: Insert Material: Neoprene Spec 44 X 0.75 m Conductor Tails: O - Rings:

NI70

Socket





Pin

Ref: HRS 05-04 DK

Pin Current Rating: 8 AMPS 2,000 V rms Pin Voltage Rating:

Contact to Contact IR: >1,000 MOhms @ 1,000 V dc Contact to Body IR: >1,000 MOhms @ 1,000 V dc

Mated Depth Rating: 2,440 MSW -20 ° C to +60 ° C Temperature Rating: **18 AWG** Conductor Tail Size: Solder Bucket Size: 2.5 mm dia

316 Stainless Steel Body: Fix Ring: Aluminium Silicon Bronze Back Shell:

Contact Pins: CZ121/Au Contact Sockets: CZ121/Au Insert Material: Neoprene Spec 44 X 0.75 m Conductor Tails: O - Rings:

Socket

Pin





Ref: HRS 05-06

6 AMPS Pin Current Rating: 2,000 V rms Pin Voltage Rating:

Contact to Contact IR: >1,000 MOhms @ 1,000 V dc Contact to Body IR: >1,000 MOhms @ 1,000 V dc Mated Depth Rating: 2.440 MSW

-20 ° C to +60 ° C Temperature Rating: 18 AWG Conductor Tail Size: Solder Bucket Size: 2.5 mm dia

316 Stainless Steel Body: Fix Ring: Aluminium Silicon Bronze

Back Shell: N/A Contact Pins: CZ121/Au Contact Sockets: CZ121/Au Insert Material: Neoprene Spec 44 X 0.75 m Conductor Tails:

O - Rings:

O - Rings:

Socket





Pin

Ref: HRS 05-08

Pin Current Rating: 5 AMPS Pin Voltage Rating: 2,000 V rms

Contact to Contact IR: >1,000 MOhms @ 1,000 V dc Contact to Body IR: >1,000 MOhms @ 1,000 V dc Mated Depth Rating: 2,440 MSW

Temperature Rating: -20 ° C to +60 ° C 18 AWG Conductor Tail Size: Solder Bucket Size: 2.5 mm dia

316 Stainless Steel Body: Aluminium Silicon Bronze Fix Ring: Back Shell: N/A

Contact Pins: CZ121/Au Contact Sockets: CZ121/Au Insert Material: Neoprene Conductor Tails: Spec 44 X 0.75 m

NI70

Socket

Pin





Ref: HRS 05-12

Custom Product Design

Not found what you are looking for?

Our in house engineers design, develop, manufacture and test new products to customer specifications.









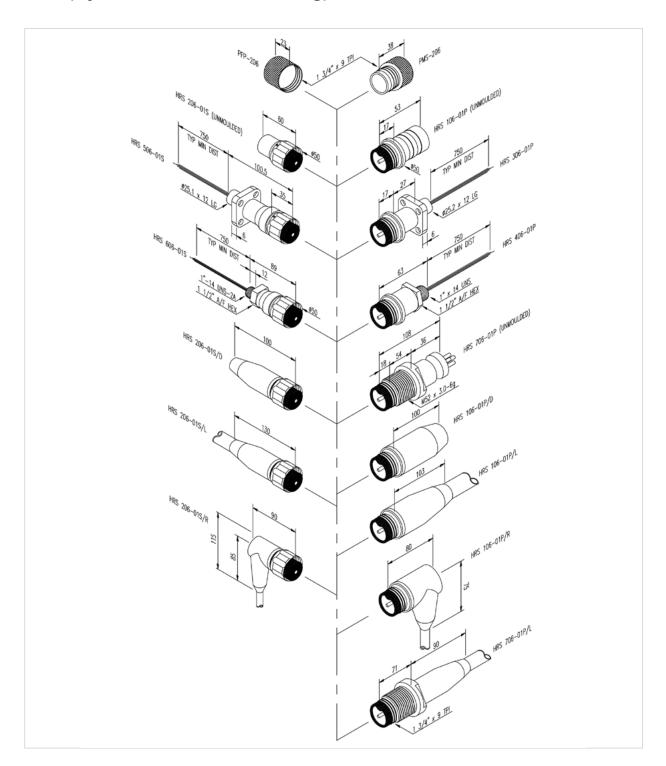








Rubber Keyed HRS (Hydro Bond Rubber Sealing) : Shell Size 6 / Connector Details







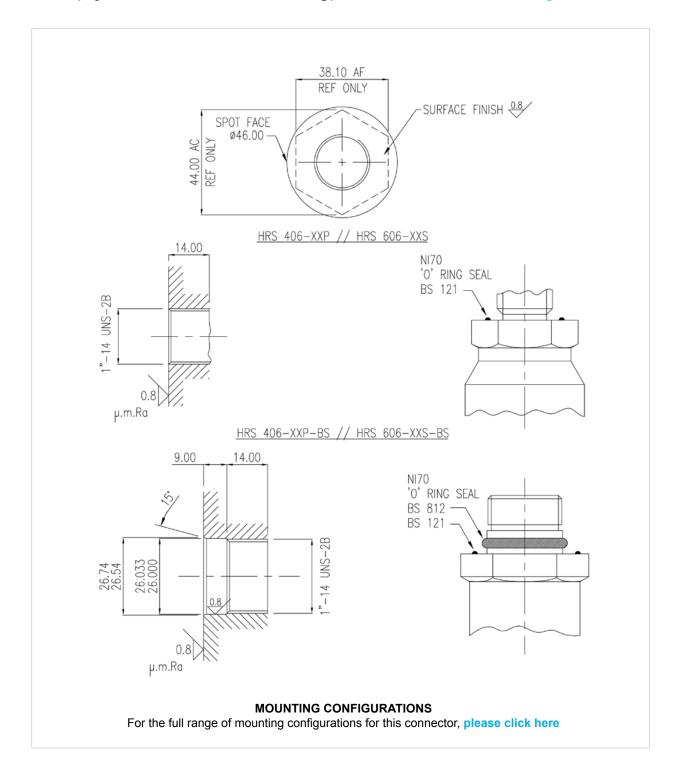








Rubber Keyed HRS (Hydro Bond Rubber Sealing): Shell Size 6 / Mounting Details















Rubber Keyed HRS (Hydro Bond Rubber Sealing): Shell Size 6 / Specifications

Electrical and Environmental Standard Material Specification

Face Views

Pin Current Rating: 33 AMPS (>33 Amps possible)

Pin Voltage Rating: 6.000 V rms

Contact to Contact IR: >1,000 MOhms @ 1,000 V dc Contact to Body IR: >1,000 MOhms @ 1,000 V dc Mated Depth Rating: 2.440 MSW Temperature Rating: -20 ° C to +60 ° C

Conductor Tail Size: 6.0 sq. mm Solder Bucket Size: 5.5 mm dia

Body: 316 Stainless Steel Fix Ring: Aluminium Silicon Bronze

Back Shell: Contact Pins: CZ121/Au Contact Sockets: CZ121/Au Insert Material: Neoprene Conductor Tails: Polyrad X 0.75 m

O - Rings:

NI70

Socket





Pin

Ref: HRS 06-01

Pin Current Rating: 16 AMPS Pin Voltage Rating: 2,000 V rms

Contact to Contact IR: >1,000 MOhms @ 1,000 V dc Contact to Body IR: >1,000 MOhms @ 1,000 V dc

Mated Depth Rating: 2,440 MSW Temperature Rating: -20 ° C to +60 ° C Conductor Tail Size: 2.5 sq. mm Solder Bucket Size: 3.0 mm dia

316 Stainless Steel Body: Fix Ring: Aluminium Silicon Bronze Back Shell:

Contact Pins: CZ121/Au Contact Sockets: CZ121/Au Insert Material: Neoprene Conductor Tails: Radox 125, 0.75 m

O - Rings: NI70

Socket

Pin





Ref: HRS 06-04

Pin Current Rating: 5 AMPS Pin Voltage Rating: 2.000 V rms

Contact to Contact IR: >1,000 MOhms @ 1,000 V dc Contact to Body IR: >1,000 MOhms @ 1,000 V dc

Mated Depth Rating: 2,440 MSW Temperature Rating: -20 ° C to +60 ° C **18 AWG** Conductor Tail Size: Solder Bucket Size: 2.5 mm dia

Body: 316 Stainless Steel Fix Ring: Aluminium Silicon Bronze Back Shell: N/A

Contact Pins: CZ121/Au Contact Sockets: CZ121/Au Insert Material: Neoprene Conductor Tails: Spec 44 X 0.75 m O - Rings:

NI70

Socket





Pin

Ref: HRS 06-10

Pin Current Rating: 5 AMPS 2.000 V rms Pin Voltage Rating:

Contact to Contact IR: >1,000 MOhms @ 1,000 V dc >1,000 MOhms @ 1,000 V dc Contact to Body IR:

Mated Depth Rating: 2 440 MSW Temperature Rating: -20 ° C to +60 ° C **18 AWG** Conductor Tail Size: 2.5 mm dia Solder Bucket Size:

316 Stainless Steel Body: Fix Ring: Aluminium Silicon Bronze

Back Shell: N/A CZ121/Au Contact Pins: Contact Sockets: CZ121/Au Insert Material: Neoprene Conductor Tails: Spec 44 X 0.75 m

O - Rinas: N170

Socket

Pin





Ref: HRS 06-12

Pin Current Rating: 5 AMPS 2,000 V rms Pin Voltage Rating:

Contact to Contact IR: >1,000 MOhms @ 1,000 V dc Contact to Body IR: >1,000 MOhms @ 1,000 V dc 2,440 MSW Mated Depth Rating:

Temperature Rating: -20 ° C to +60 ° C 18 AWG Conductor Tail Size: Solder Bucket Size: 2.5 mm dia

316 Stainless Steel Body: Fix Ring: Aluminium Silicon Bronze Back Shell:

Contact Pins: CZ121/Au Contact Sockets: CZ121/Au Insert Material: Neoprene Spec 44 X 0.75 m Conductor Tails: O - Rings:

Socket

Pin





Ref: HRS 06-14

Custom Product Design

Not found what you are looking for?

Our in house engineers design, develop, manufacture and test new products to customer specifications.







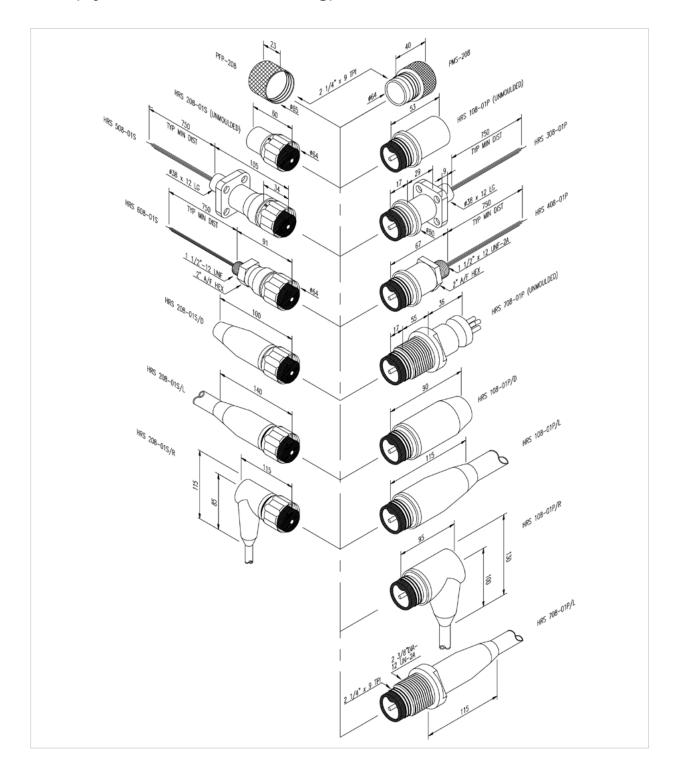








Rubber Keyed HRS (Hydro Bond Rubber Sealing) : Shell Size 8 / Connector Details







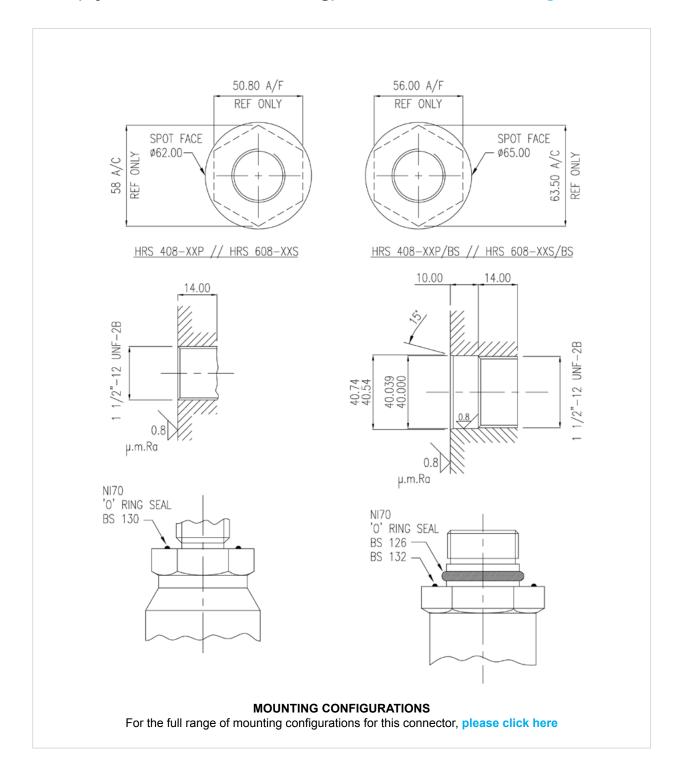








Rubber Keyed HRS (Hydro Bond Rubber Sealing) : Shell Size 8 / Mounting Details















Rubber Keyed HRS (Hydro Bond Rubber Sealing): Shell Size 8 / Specifications

Electrical and Environmental

Standard Material Specification

Face Views

Pin Current Rating: 400 Amps 2 000 V rms Pin Voltage Rating:

Contact to Contact IR: >1,000 MOhms @ 1,000 V dc >1,000 MOhms @ 1,000 V dc Contact to Body IR: 2 440 MSW

Mated Depth Rating: Temperature Rating: -20 ° C to +60 ° C High Voltage Cable Conductor Tail Size: Conductor Crimp Size: 185 sq. mm

316 Stainless Steel Body: Fix Ring: Aluminium Silicon Bronze Back Shell:

N/A Contact Pins: CZ121/Au CZ121/Au Contact Sockets: Insert Material: Neoprene Conductor Tails: N/A O - Rings: NI70



Socket



Pin

Pin

Ref: HRS 08-01

Pin Current Rating: 95 AMPS Pin Voltage Rating: 3,300 V rms

Contact to Contact IR: >1,000 MOhms @ 1,000 V dc Contact to Body IR: >1,000 MOhms @ 1,000 V dc 2,440 MSW

Mated Depth Rating: Temperature Rating: -20 ° C to +60 ° C 25 sq. mm Conductor Tail Size: Solder Bucket Size: 5.5 mm dia

316 Stainless Steel Body: Fix Ring: Aluminium Silicon Bronze Back Shell:

Contact Pins: CZ121/Au Contact Sockets: CZ121/Au Insert Material: Neoprene Conductor Tails: Radox 125 O - Rings: NI70

Socket





Pin Current Rating: 80 AMPS 2 000 V rms Pin Voltage Rating:

Contact to Contact IR: >1,000 MOhms @ 1,000 V dc >1,000 MOhms @ 1,000 V dc Contact to Body IR:

2.440 MSW Mated Depth Rating: Temperature Rating: -20 ° C to +60 ° C 25 sq. mm Conductor Tail Size: Solder Bucket Size: 8 0 mm dia

Body: 316 Stainless Steel Fix Rina: Aluminium Silicon Bronze

Back Shell: N/A Contact Pins: CZ121/Au Contact Sockets: CZ121/Au Insert Material: Neoprene Polyrad X 0.75 m Conductor Tails: O - Rings: NI70

Socket







Ref: HRS 08-04

Pin Current Rating: 12 AMPS Pin Voltage Rating: 2.000 V rms

Contact to Contact IR: >1,000 MOhms @ 1,000 V dc Contact to Body IR: >1,000 MOhms @ 1,000 V dc

Mated Depth Rating: 2.440 MSW -20 ° C to +60 ° C Temperature Rating: 12 AWG Conductor Tail Size: Solder Bucket Size: 3.0 mm dia

316 Stainless Steel Body: Fix Ring: Aluminium Silicon Bronze Back Shell: N/A

CZ121/Au Contact Pins: Contact Sockets: CZ121/Au Insert Material: Neoprene Conductor Tails: Spec 44 X 0.75 m

O - Rings: NI70 Socket





Ref: HRS 08-12

Pin Current Rating: 5 AMPS Pin Voltage Rating: 2.000 V rms

Contact to Contact IR: >1,000 MOhms @ 1,000 V dc Contact to Body IR: >1,000 MOhms @ 1,000 V dc

Mated Depth Rating: 2,440 MSW Temperature Rating: -20 ° C to +60 ° C Conductor Tail Size: 18 AWG Solder Bucket Size: 2.5 mm dia

Body: 316 Stainless Steel Fix Ring: Aluminium Silicon Bronze

Back Shell: N/A Contact Pins: CZ121/Au Contact Sockets: CZ121/Au Insert Material: Neoprene Conductor Tails: Spec 44 X 0.75 m O - Rings: NI70

Socket





Pin

Ref: HRS 08-24

Pin Current Rating: 4 Amps Pin Voltage Rating: 2,000 V rms

>1,000 MOhms @ 1,000 V dc Contact to Contact IR: >1,000 MOhms @ 1,000 V dc Contact to Body IR:

Mated Depth Rating: 2,440 MSW Temperature Rating: -20 ° C to +60 ° C Conductor Tail Size: 18 AWG Solder Bucket Size: 2.5 mm dia

316 Stainless Steel Body: Fix Ring: Aluminium Silicon Bronze Back Shell: N/A

Contact Pins: CZ121/Au Contact Sockets: CZ121/Au Insert Material: Neoprene Conductor Tails: Spec 44 X 0.75 m O - Rings:

NI70

Socket





Pin

Ref: HRS 08-29





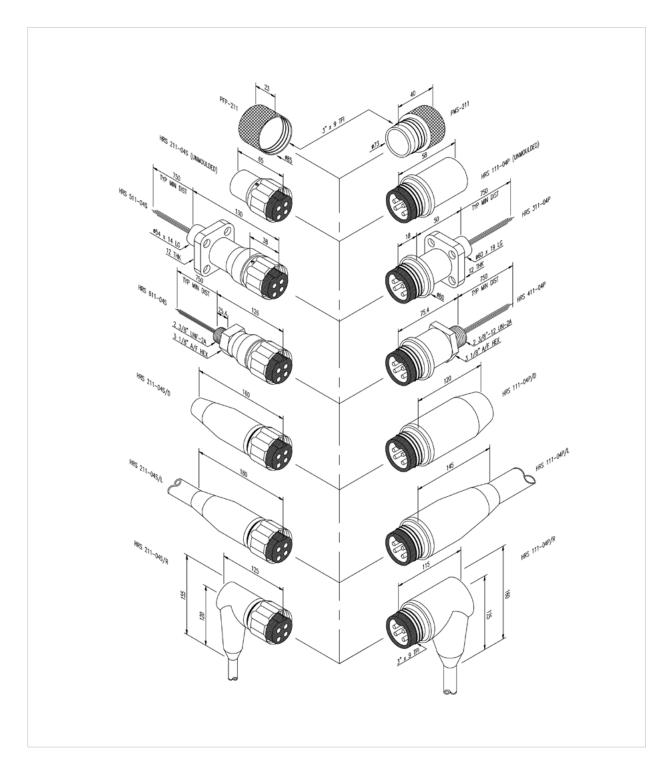








Rubber Keyed HRS (Hydro Bond Rubber Sealing) : Shell Size 11 / Connector Details







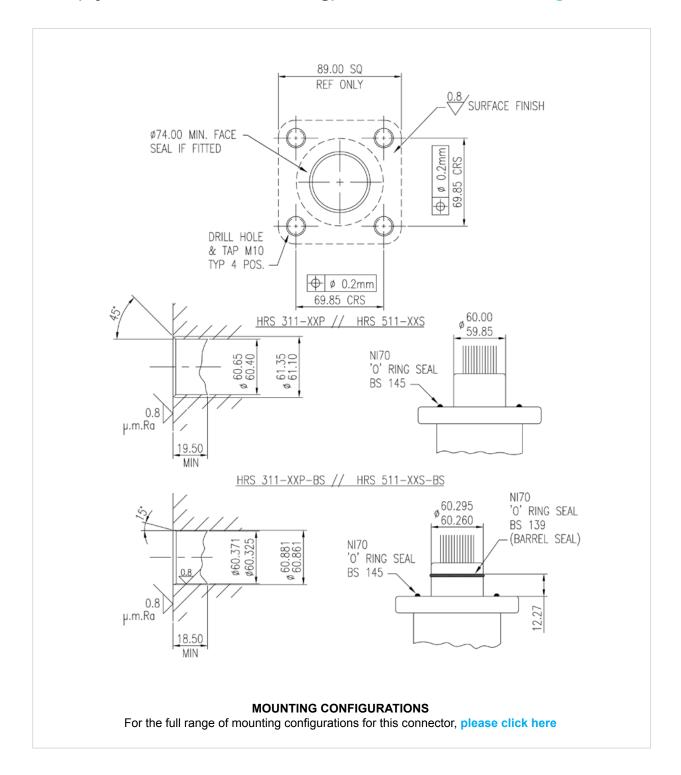








Rubber Keyed HRS (Hydro Bond Rubber Sealing) : Shell Size 11 / Mounting Details















Rubber Keyed HRS (Hydro Bond Rubber Sealing): Shell Size 11 / Specifications

Electrical and Environmental

Standard Material Specification

Face Views

Pin Current Rating: **750 AMPS** 2 000 V rms Pin Voltage Rating:

Contact to Contact IR: >1,000 MOhms @ 1,000 V dc >1,000 MOhms @ 1,000 V dc Contact to Body IR: Mated Depth Rating: 2 440 MSW

-20 ° C to +60 ° C Temperature Rating: **Details on Application** Conductor Tail Size: Solder Bucket Size: 27.0 mm dia

316 Stainless Steel Body: Fix Rina: Aluminium Silicon Bronze Back Shell: N/A

Contact Pins: CZ121/Au Contact Sockets: CZ121/Au Insert Material: Neoprene

Conductor Tails: EPR, CSP, PU BS6195 X 0.75m

NI70 O - Rings:

Pin Socket





Ref: HRS 11-01

Pin Current Rating: 150 AMPS Pin Voltage Rating: 2,000 V rms

Contact to Contact IR: >1,000 MOhms @ 1,000 V dc Contact to Body IR: >1,000 MOhms @ 1,000 V dc

Mated Depth Rating: 2,440 MSW Temperature Rating: -20 ° C to +60 ° C 35 sq. mm Conductor Tail Size: Solder Bucket Size: 5.75 mm dia

316 Stainless Steel Body: Fix Ring: Aluminium Silicon Bronze Back Shell:

Contact Pins: CZ121/Au Contact Sockets: CZ121/Au Insert Material: Neoprene Conductor Tails: Radox 125, 0.75 m O - Rings:

NI70

Pin Socket





Ref: HRS 11-04

Pin Current Rating: Pin Voltage Rating: 2.000 V rms

Contact to Contact IR: >1,000 MOhms @ 1,000 V dc Contact to Body IR: >1,000 MOhms @ 1,000 V dc

Mated Depth Rating: 2,440 MSW Temperature Rating: -20 ° C to +60 ° C Conductor Tail Size: **18 AWG** Conductor Crimp Size: 2.5 mm dia

Body: 316 Stainless Steel Fix Ring: Aluminium Silicon Bronze Back Shell: N/A

Contact Pins: CZ121/Au Contact Sockets: CZ121/Au Insert Material: Neoprene Conductor Tails: Spec 44 x 0.75 m O - Rings:

NI70

Socket





Pin

Ref: HRS 11-37

Pin Current Rating: 2W 80 Amps, 4W15 Amps, 33W 0.5 Amps Pin Voltage Rating: 2,000 V rms

Contact to Contact IR: >1,000 MOhms @ 1,000 V dc Contact to Body IR: >1,000 MOhms @ 1,000 V dc Mated Depth Rating: 2,440 MSW

Temperature Rating: -20 ° C to +60 ° C

Conductor Tail Size: 2x25 sq.mm, 4x14 AWG, 33x18 AWG Solder Bucket Size: 2x8.0 mm dia, 37x2.5 mm dia

316 Stainless Steel Body: Fix Ring: Aluminium Silicon Bronze Back Shell: N/A Contact Pins: CZ121/Au

Contact Sockets: CZ121/Au Insert Material: Neoprene Conductor Tails:

2xPolyrad x 0.5m, 37xspec 44x0.5m O - Rings:

Socket





Pin

Ref: HRS 11-39

Pin Current Rating: 4 way, 25 way, 39 way 2 Amps Pin Voltage Rating: 2,000 V rms

Contact to Contact IR: >1,000 MOhms @ 1,000 V dc Contact to Body IR: >1,000 MOhms @ 1,000 V dc Mated Depth Rating: 2.440 MSW Temperature Rating: -20 ° C to +60 ° C

Conductor Tail Size: 4 x1 0 AWG, 39 x 18 AWG Solder Bucket Size: 4x3.0 mm dia, 39x2.0 mm dia Body: 316 Stainless Steel Fix Ring: Aluminium Silicon Bronze

Back Shell: N/A Contact Pins: CZ121/Au Contact Sockets: CZ121/Au Insert Material: Neoprene Conductor Tails: Spec 44 x 0.75 m O - Rings: NI70

Socket





Pin

Ref: HRS 11-43

Pin Current Rating: 2 AMPS Pin Voltage Rating: 2,000 V rms

Contact to Contact IR: >1,000 MOhms @ 1,000 V dc Contact to Body IR: >1,000 MOhms @ 1,000 V dc

Mated Depth Rating: 2,440 MSW Temperature Rating: -20 ° C to +60 ° C Conductor Tail Size: 18 AWG Solder Bucket Size: 2.5 mm dia

316 Stainless Steel Body: Fix Rina: Aluminium Silicon Bronze Back Shell: N/A

CZ121/Au Contact Pins: Contact Sockets: CZ121/Au Insert Material: Neoprene Conductor Tails: Spec 44 x 0.75 m O - Rinas:

NI70

Socket





Pin

Ref: HRS 11-54













Rubber Keyed HRS (Hydro Bond Rubber Sealing): Shell Size 11 / Specifications

Pin Current Rating: 2,000 V rms Pin Voltage Rating:

Electrical and Environmental

Contact to Contact IR: >1,000 MOhms @ 1,000 V dc
Contact to Body IR: >1,000 MOhms @ 1,000 V dc Mated Depth Rating: 2,440 MSW

Temperature Rating: -20 ° C to +60 ° C 18 AWG Conductor Tail Size: Solder Bucket Size: 2.5 mm dia

316 Stainless Steel Body: Fix Ring: Aluminium Silicon Bronze Back Shell: Contact Pins: CZ121/Au

CZ121/Au Contact Sockets: Insert Material: Neoprene Spec 44 X 0.75 m NI70 Conductor Tails:

Standard Material Specification

O - Rings:

Face Views

Pin Socket





Ref: HRS 11-70

Custom Product Design

Not found what you are looking for ?

Our in house engineers design, develop, manufacture and test new products to customer specifications.











