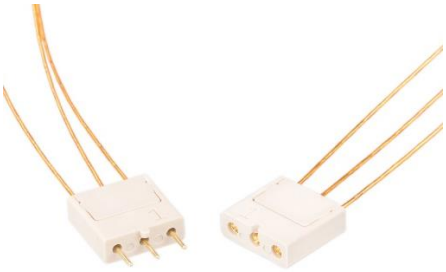
UCC – UHV CRYOGENIC CONNECTOR





Features

- UHV and cryogenic compatible
- Lower outgassing values than PEEK
- Wire strain relief included
- Notch guarantees correct mating
- Machined, gold plated contacts
- Solder cup, no crimp tooling needed
- 2-pin and 3-pin models

Description / Applications

The UCC is a connector for use in vacuum and cryogenic conditions that offers a quick and easy solution for (dis-)connecting electrical contacts. The isolator material is selected for low outgassing rates, even outperforming PEEK. The connector is fitted with solder cups and a wire strain relief is clicked on that also covers the open contacts, so no need for tape or shrink tubing. Parts are marked with a pin 1 indication and notches prevent incorrect mating. High quality machined and gold-plated contact pins ensure a high retention force and low contact resistance for many cycles.

Specifications

General info	
Dimensions	See drawings below
Operational environmental conditions	20 mK to 375 K, ambient to UHV
Electrical specifications	
Pitch	3,5 mm
Wire gauge	up to AWG28
Wire contact	Solder cup, maximum soldering temperature 250 °C
Max voltage	150 V AC/DC
Max current	1 A continuous
Contact resistance	<10 mΩ
Retention force per pin, typical	1,5 N
Mating cycles, typical	1000
Materials	
Isolator body	PPS, low outgassing, excellent chemical resistance to cleaning alcohols and acetone
Contact pins	Brass, gold plated
Outgassing (RGA, sampled after 5 hrs). Outgassing is a factor 3 lower than a PEEK alternative would be	
H2O	1,22e-6 mbar*l/s
CxHy 45-100	3,56e-9 mbar*l/s
CxHy 100-200	3,10e-10 mbar*l/s
Max bake out temperature	150 °C
Model specific information	
-2p-bag	2 pins, bag containing 10 sets of male and female
-3p-bag	3 pins, bag containing 10 sets of male and female

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Ordering Information

Available models

UCC-2p-bag	UHV Cryogenic Connector–2 pins
UCC-3p-bag	UHV Cryogenic Connector–3 pins

Available Options

None

Accessories

None

Volume pricing

1 bag	See pricelist
2 or more bags	10% discount
6 or more bags	15% discount
11 or more bags	20% discount

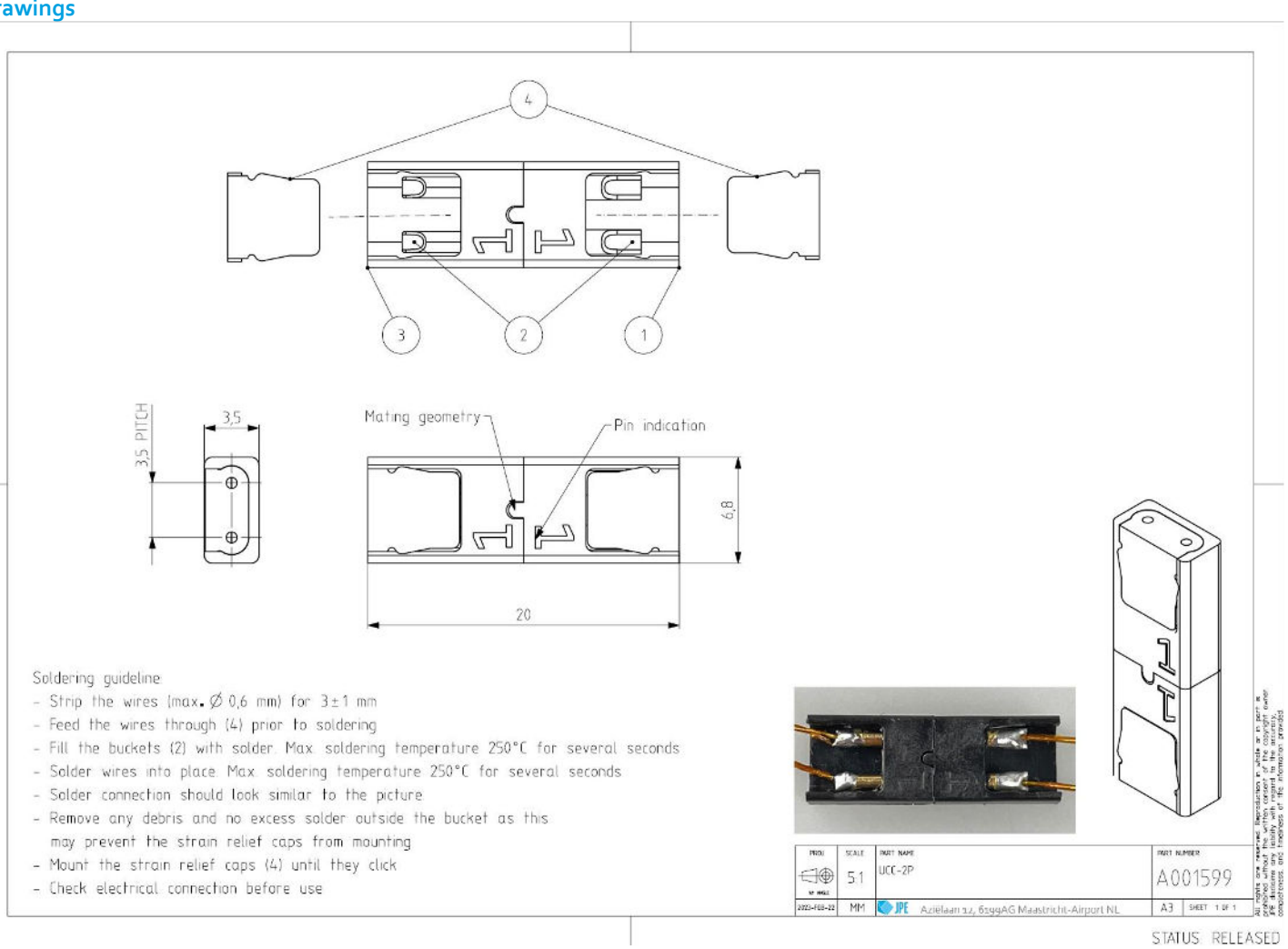
Mechanical and electrical information

Download 3D step files and manuals from:
https://www.jpe-innovations.com/cryo-nano-products/

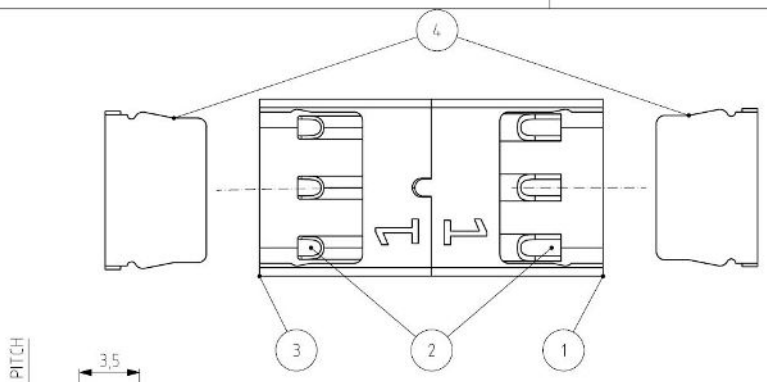
Contact

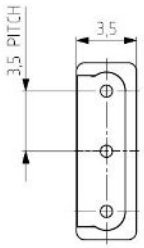
For quotations, specials, or engineering services, please contact us at:
https://www.jpe-innovations.com/contact/

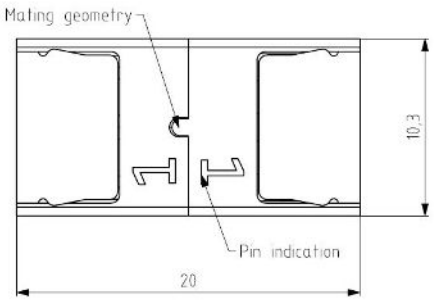
Drawings

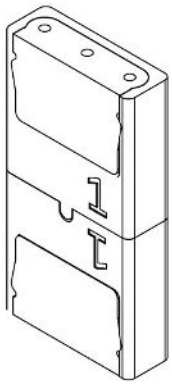


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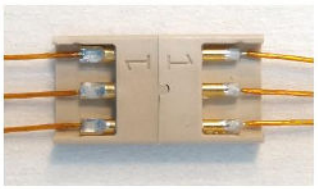








Soldering guideline:
- Strip the wires (max. Ø 0,6 mm) for 3 ± 1 mm
- Feed the wires through (4) prior to soldering
- Fill the buckets (2) with solder. Max. soldering temperature 250°C for several seconds
- Solder wires into place. Max. soldering temperature 250°C for several seconds
- Solder connection should look similar to the picture
- Remove any debris and no excess solder outside the bucket as this may prevent the strain relief caps from mounting
- Mount the strain relief caps (4) until they click
- Check electrical connection before use



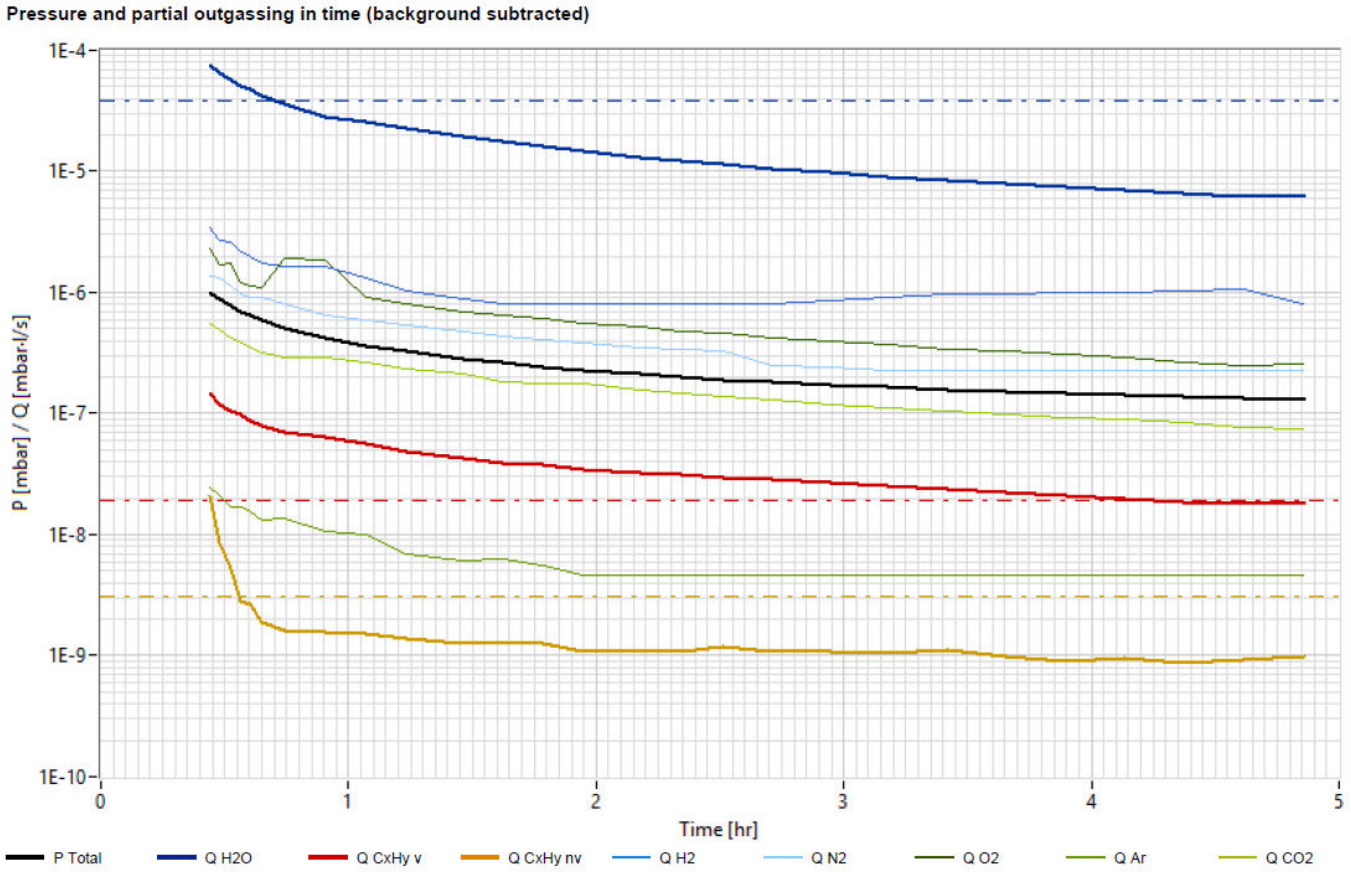
PROJ	SCALE	PART NAME	PART NUMBER
	5:1	UCC-2P	A001599
2023-FEB-22	MM	JPE Aziëlaan 12, 6199AG Maastricht-Airport NL	A3 SHEET 1 OF 1

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Residual Gas Analysis (RGA) results on a batch of 5 UCC-2p samples



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