

## Sub-D feedthroughs for Type N thermocouples: 7 Thermocouple pairs on a single D15 Feedthrough

**210-D15-C40-TCN | 210-D15-C63-3-TCN | 210-D15-C100-8-TCN | 210-D15-K50-TCN and more**

Allectra offers Sub-D feedthroughs with thermocouple pins Type N.

Type N is the best universal thermocouple material for a temperature range from -200°C to +1300°C with high stability.

Specifications	
Vacuum	UHV ( $10^{-10}$ mbar and below)
Test Voltage	500V DC
Temperature	-200°C...+230°C
Accessories	
Vacuum side connectors	211-FS15-PK   211-FS15-UHV
Air side connectors	211-FS15-ATC
Crimp pins	213-PINF-N
Recommended cables	301-KAP-TCN (Radiation Resistant)
Wires with welded tip	313-TCN-JOINT (blank)
Wire Assemblies	On request
Materials	
(+) Pin	NiCrSi (Nicrosil) Class 1 (Resistivity: $98 \mu\Omega\text{cm}$ )
(-) Pin	NiSi (Nisil) Class 1 (Resistivity: $34 \mu\Omega\text{cm}$ )
Seal	Glass
Body, Flange	Stainless Steel

The upper row uses (+) material and has one pin more than the lower row with (-) material.

The Pins can be distinguished by resistivity for validation, please see the table above.

Standard loading of typical flanges is summarized in the table on the next page.

The density can be optimized and adjusted to specific requirements in customer specific configurations and also on customer specific flanges.

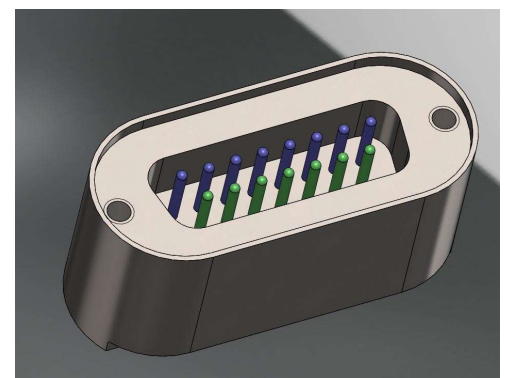
Combinations with other standard or special feedthroughs are possible.



15-Pin Sub D Type N



15-Pin Sub D Type N on CF40 Flange  
(210-D15-TCN)



15-pin Sub-D with thermocouple pins, shown from vacuum side. Positive Pins (upper row) in blue, negative Pins (lower row) in green.

## Short Product List

Feedthroughs are available on larger Flanges as well. Customer specific flanges are also possible.

Art. Nr.	Description	
<b>FEEDTHROUGHS + FLANGES</b>		
218-D15-TCN	Weldable Sub-D f/t with Type N pin material	7 pairs
210-D15-C40-TCN	DN40CF with 1x Type N Sub-D feedthrough	7 pairs
210-D15-C63-TCN	DN63CF with 1x Type N Sub-D feedthrough	7 pairs
210-D15-C63-2-TCN	DN63CF with 2x Type N Sub-D feedthrough	14 pairs
210-D15-C63-3-TCN	DN63CF with 3x Type N Sub-D feedthrough	21 pairs
210-D15-C100-TCN	DN100CF with 1x Type N Sub-D feedthrough	7 pairs
...	...	
210-D15-C100-8-TCN	DN100CF with 8x Type N Sub-D feedthrough	56 pairs
210-D15-K40-TCN	DN40KF with 1x Type N Sub-D feedthrough	7 pairs
210-D15-K50-TCN	DN50KF with 1x Type N Sub-D feedthrough	7 pairs
210-D15-K50-2-TCN	DN50KF with 2x Type N Sub-D feedthrough	14 pairs
210-D15-ISO63-TCN	DN63ISO with 1x Type N Sub-D feedthrough	7 pairs
210-D15-ISO63-2-TCN	DN63ISO with 2x Type N Sub-D feedthrough	14 pairs
210-D15-ISO63-3-TCN	DN63ISO with 3x Type N Sub-D feedthrough	21 pairs
210-D15-ISO100-TCN	DN100ISO with 1x Type N Sub-D feedthrough	7 pairs
...	...	
210-D15-ISO100-7-TCN	DN100ISO with 7x Type N Sub-D feedthrough	49 pairs
<b>PINS</b>		
213-PINF-N	TC Crimp pins for Sub-D female, N-Type, 5 pairs	5 pairs
213-PINF-N-20	TC Crimp pins for Sub-D female, N-Type, 20 pairs	20 pairs
213-PINM-N	TC Crimp pins for Sub-D male, N-Type, 5 pairs	5 pairs
<b>HOUSINGS</b>		
211-FS15-PK	15 pin Sub-D UHV PEEK connector	7 pairs
<b>RADIATION RESISTANT THERMOCOUPLE CABLE</b>		
301-KAP-TCN-1M	Kapton ins. Thermocouple Type N, rad. Resistant, 1 m	
301-KAP-TCN-5M	Kapton ins. Thermocouple Type N, rad. Resistant, 5 m	
313-TCN-JOINT	Bare Thermocouple Junction, Type N, 300 mm	
<b>AIR SIDE CONNECTORS FOR THERMOCOUPLE PINS</b>		
211-FS15-ATC	Sub-D Thermocouple Socket, 15 pins, female, air side	7 pairs

File: 210-D15-Sub-D-TCN Last revised 2023-03-15

All data given in this sheet are carefully checked but subject to change at any time.