

Fischer Connectors SA manufactures connectors in several body styles and sizes which are specifically designed for thermocouple applications. Most of these are also available in environmentally sealed versions, with either the «A» or «Z» contact polarity.

The selection of the correct thermocouple contact materials is important in minimizing measurement errors. We can supply the following contact types suitable for thermocouple applications:

- Contacts made of different thermocouple materials
- Gold-plated copper alloy contacts

For connectors with cable clamps, two versions are available:

- «M» version for semi-rigid cables in stainless steel tubes (Thermocoax®)
- «P» version for flexible compensation and extension cables

Version «M»

This version of the 102 series is designed to accept semi-rigid cables in stainless steel tubes (Thermocoax®). To facilitate assembly, the contact block of these connectors has a metal sleeve to which the thermocouple tubing is soldered. The cable entry diameter «D» should be added to the reference number, which can be selected from the table on page G2. Available body styles are shown on page 2-1 of the Core Series Catalogue.

Cable entries are available in increments of 0.5 mm from 0.6 to 3.1 mm diameter.

Example: Panel mounted cable receptacle, 2 pole; NiCr - Ni, PTFE insulator, for 1.5 mm diameter semi-rigid cable.
Part Number is DK 102 A005-M / 1.5

Note: Standard Thermocoax® cables up to 1 mm diameter are now delivered with a 3 mm diameter crimp ferrule with reinforced wires, providing easier assembly. This type of Thermocoax® requires the use of the version «P» connectors.

Version «P»

This version of the 102 series thermocouple connectors is furnished with a one-piece clamp which is designed to secure the flexible cables typically used for compensation or extension. It may also be used for Thermocoax® cables with crimp ferrule termination.

To order, the reference number of the thermocouple can be selected from the table on page G2 and the body style prefix from page 2-1 of the Core Series Catalogue.

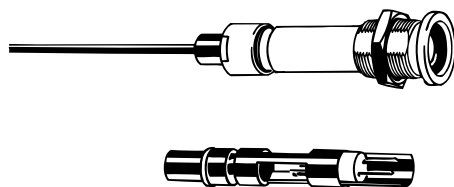
For cable connectors, the part numbers of the cable clamp sets should be added as a second line item. These U-unshielded cable clamp sets are listed in Section 4-11 of the Core Series Catalogue.

Example: Straight plug, 2 pole, Fe - CuNi, PTFE insulator, for flexible cable with outer diameter of 4.5 mm:
Part Number of the plug: « S 102 A009 » and for the cable clamp: « E3 102.5 / 4.5 »

G

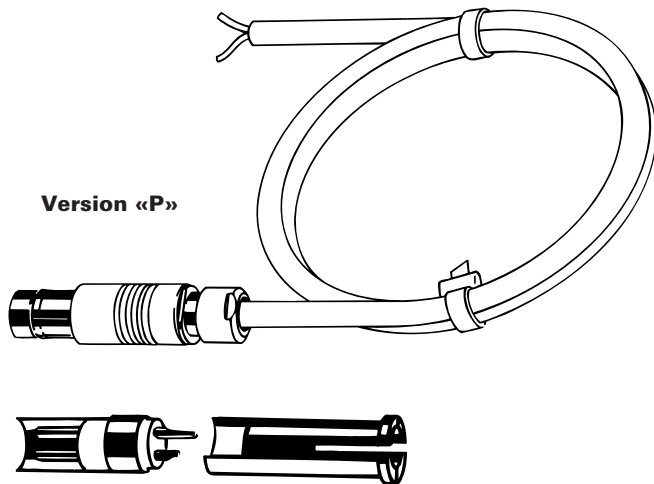
102 Series

Version «M»
for THERMOCOAX®

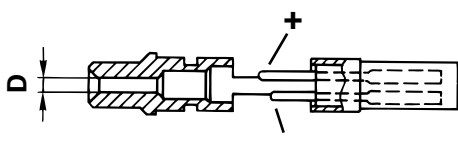


Contact block of version «M»
for semi-rigid cables

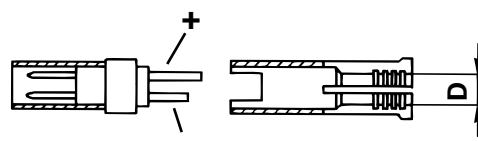
Version «P»



Contact block and cable clamp of version «P» for compensation
cables and THERMOCOAX® ≤ 1 mm diameter



D = Cable diameter max. 3.1 mm



D = Cable clamp sets are ordered
from tables «U» in section H

In all versions, the longer contact termination is the electrically positive material.

SERIES 102 103 104	Number of Contacts	Contact Diameter [mm]	Designation and Contact Material			Insulator Material	Reference Number
			ANSI	IEC	+ Designation -		
	2	0.9	K ^①	NiCr - Ni NiCr - NiAl	Nickel/Chrom - Nickel Chromel - Alumel	PTFE	102 A005
						Ceramic	102 A006
	2	0.9	—	+ CuZn Ni/Au	Copper Alloy Nickel/gold plated	PTFE	102 A007
						Ceramic	102 A008
	2	0.9	J	Fe - CuNi	Iron - Constantan	PTFE	102 A009
2	0.9	T	Cu - CuNi	Copper - Constantan	PTFE	102 A016	
	2	1.3	J	Fe - CuNi	Iron - Constantan	PTFE	103 A011
	2	1.3	K ^①	NiCr - Ni NiCr - NiAl	Nickel/Chrome - Nickel Chromel - Alumel	PTFE	103 A025
	2	1.3	T	Cu - CuNi	Copper - Constantan	PTFE	103 A030
	2	1.6	J	Fe - CuNi	Iron - Constantan	PTFE	104 A057
	2	1.3	K ^①	NiCr - Ni NiCr - NiAl	Nickel/Chrome - Nickel Chromel - Alumel	PTFE	104 A061
	4	1.3	J	Fe - CuNi	Iron - Constantan	PTFE	104 A035
	4	1.3	K ^①	NiCr - Ni NiCr - NiAl	Nickel/Chrome - Nickel Chromel - Alumel	PTFE	104 A036

① The designation «K» is applicable for both NiCr - Ni and for the registered trade name Chromel - Alumel®. Chromel is an alloy of 80% Ni and 20% Cr; Alumel is an alloy of 95% Ni and small quantities of Mn, Al, Si, and others. Chromel (+) is non-magnetic. Alumel (-) is magnetic up to 170°C

THERMOCOAX® is a registered trade name of PHILIPS

The above thermocouple alloys are in conformity with the Standards per (ANSI) IEC 60584.