

TGF/TGM Sealing for Process Temperatures up to 1400 °F (760 °C)

Conax Technologies TGF/TGM assemblies with fiberglass-insulated thermocouple wire are specially designed for applications where the sensor wire is exposed to process temperatures reaching up to 900 °F (482 °C).

This assembly is particularly targeted for use with pressure vessels, autoclaves, vacuum and/or inert gas back-filled furnaces with vessel wall temperatures up to 200 °F (93.3 °C) and pressures not exceeding 300 PSIG.

The assembly consists of bonded fiberglass-insulated/silicone impregnated thermocouple grade wires on the body side, with stripped bare wires passing through the Conax-manufactured feedthrough.

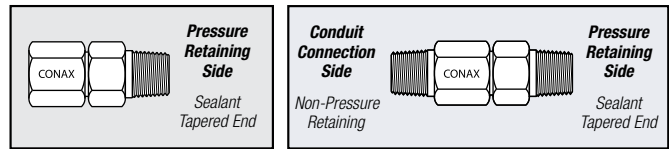
An alternative high-temperature fiberglass for Type K wire is also available with temperature capabilities up to 1400 °F (760 °C).

Sleeved insulation material on the wires exiting the cap side may be fiberglass/silicone impregnated, Teflon™ or polyolefin.

Feedthrough bodies, caps and followers are constructed from 303 SST standard. (For information on body materials, see page 9.)



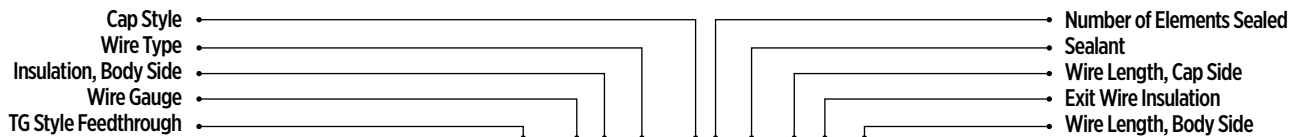
Cap Style A offers a mounting thread only. Cap Style B provides threading on both ends for attachment to conduit or terminal heads. These assemblies are offered with Viton™ or Teflon™ sealants. Alternative sealants are available. Please consult a Conax Technologies sales engineer for custom needs.



Type A has mounting thread only.

Type B has cap end threaded. B Cap NPT matches the standard mounting NPT.

Catalog Numbering System



Example: TG-24F(J)-A2-T, 24P/36

TG Style Feedthrough	Wire Gauge	Insulation, Body Side	Wire Type	Cap Style	Number of Elements Sealed	Sealant	Wire Length, Cap Side (in inches)	Exit Wire Insulation	Wire Length, Body Side (in inches)
<ul style="list-style-type: none"> MTG TG 	<ul style="list-style-type: none"> 20 20 AWG solid 24 24 AWG solid 	<ul style="list-style-type: none"> F Fiberglass/Silicone Impregnated – Use up to 900 °F (480 °C) M High Temperature Fiberglass – Magnesia alumina silicate vitreous fiber braid for Type K, 24 and 20 AWG, and Type J 20 AWG. Standard use up to 1400 °F (760 °C) 	<ul style="list-style-type: none"> J Iron/Constantan K Chromel/Alumel T Copper/Constantan E Chromel/Constantan BX Copper CX Alloy for Tungsten 5% Rhenium/Tungsten 26% Rhenium, 24 AWG only RX/SX Copper/Copper Nickel alloy 	<ul style="list-style-type: none"> A Has mounting thread only B Has cap end threaded 	<ul style="list-style-type: none"> 2 4 6 8 16 24 	<ul style="list-style-type: none"> V Viton™ T Teflon™ L Lava Consult factory for details. 		<ul style="list-style-type: none"> P Polyolefin F Fiberglass T Teflon™ 	

TGM Example:
TG-24M (K) -A2-T, 24P/36

Specifications (TGM available in Type K wire only for applicable models below.)

TGF/TGM Series Catalog Number	Wire Gauge	Number of Wires	Length				Hex Size				Pressure Rating	
			Length A		Length B		Body	Cap	Body	Cap	Viton™/Teflon™	
			IN	MM	IN	MM	IN	IN	MM	MM	PSIG	BAR
Model MTG-F												
Standard 1/8" NPT												
MTG-24F(X)-2	24	2	1.38	34.9	1.75	44.5	0.500	0.563	12.7	14.3	300	21
MTG-24F(X)-4	24	4	1.38	34.9	1.75	44.5	0.500	0.563	12.7	14.3	300	21
MTG-20F(X)-2	20	2	1.38	34.9	1.75	44.5	0.500	0.563	12.7	14.3	300	21
Model TG-F												
Standard 1/4" NPT												
TG-24F(X)-2	24	2	2.00	50.8	2.63	66.7	0.750	0.750	19.1	19.1	300	21
TG-24F(X)-4	24	4	2.00	50.8	2.63	66.7	0.750	0.750	19.1	19.1	300	21
TG-20F(X)-2	20	2	2.00	50.8	2.63	66.7	0.750	0.750	19.1	19.1	300	21
Standard 1/2" NPT												
TG-20F(X)-14-2	20	2	2.63	66.7	3.38	85.7	1.000	1.000	25.4	25.4	300	21
TG-20F(X)-14-4	20	4	2.63	66.7	3.38	85.7	1.000	1.000	25.4	25.4	300	21
TG-20F(X)-6	20	6	2.63	66.7	3.38	85.7	1.000	1.000	25.4	25.4	300	21
TG-20F(X)-8	20	8	2.63	66.7	3.38	85.7	1.000	1.000	25.4	25.4	300	21
Standard 3/4" NPT												
TG-24F(X)-16	24	16	2.88	73.0	3.63	92.1	1.125	1.250	28.6	31.8	300	21
TG-24F(X)-24	24	24	2.88	73.0	3.63	92.1	1.250	1.500	31.8	38.1	300	21

Note: (X) refers to the wire calibration/type.
 Note: The pressure and torque ratings provided in this catalog apply only when bores are drilled by Conax Technologies. Custom bore sizes and/or a blank body, follower and/or sealant may be provided. Consult factory.
 All pressure and torque ratings were determined at 68 °F (20 °C) using stainless steel rod as the element. Pressure ratings may degrade at higher temperatures. Pressure rating guide values are provided for feedthroughs with elements restrained by the compressed sealant. Higher pressure may be attained with additional element restraints. For proper assembly of these sealing feedthroughs, see the Assembly Instructions provided on pages 110-124.
 Per ASTM E230-03, the suggested temperature range for BX, CX, and RX/SX extension grade wire is 32 °F to 400 °F (0 °C to 204 °C).

**High Temperature Jack Panel Assembly (JP)
 1200 °F (649 °C) Maximum Rating**

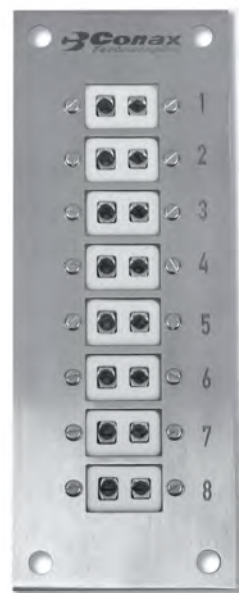
Conax Technologies’ High Temperature Jack Panel Assembly (JP) is designed for mounting directly inside virtually any industrial furnace or autoclave. It provides the ideal complement to our TGF high-temperature feedthrough assemblies in that it provides a rugged platform to securely and efficiently connect internally mounted thermocouple plugs when changing out production loads. The Jack Panel Assembly comes with 2-12 openings.

Features

- Non out-gassing stainless steel and ceramic components
- Vertical or horizontal mounting options
- Laser marked plug locations with your logo
- Supplied unassembled for field assembly of TC wires
- Supplied with brackets and bracket hardware

Application Ideas

- Composite curing autoclaves
- Heat treating furnaces
- Vacuum furnaces



TGF/TGM SERIES

