

## MULTIPOINT THERMOCOUPLE DESIGN POCKET JUNCTION MULTIPOINT (PJM)

We have developed another new way to manufacture multipoint thermocouples. This new method is an offshoot of our popular “OMP” Optimized Multipoint mineral insulated cable multipoint design.

We are calling this method the “PJM” Pocket Junction Multipoint design. This ungrounded junction method uses the standard design mineral insulated cable that has either 4 wires, 6 wires, 8 wires, with alternating conductors or any design of MIC that has the conductor wires located near the protection sheath. This PJM design micro-mills through the protection sheath exposing a positive and a negative conductor wire set. The set of wires are then laser welded together making the ungrounded/uncommon junction. The MgO ceramic is then re filled and compacted. The sheath is then Laser welded closed and sealed.

Some of the big advantages of this PJM design are:

1. The largest thermocouple wire diameter possible in a multipoint thermocouple. Sheath and wire meet or exceed ASTM E-585 minimum dimensions.
2. Electrical insulation resistance and dielectric strength that meet or exceed ASTM E-608, and ASTM E-839 requirements.
3. Quicker delivery where standard mineral insulated cable design are being used and are usually in stock.
4. Ungrounded / uncommon thermocouple junctions that do NOT use a common conductor leg.
5. Accurate measuring point location.
6. Long lengths, junction welding is not affected by wire resistance..
7. Robust strong design minimum bend radius is 3 times the sheath diameter.
8. Offered in multiple thermocouple calibrations, and sheath materials.
9. Protection sheath welds are 100% tested for integrity.
10. May be supplied in coil form for easier, lower shipping costs.

Available combinations are: 2 points in 3.2mm, 3 points in 4.77mm, 4 points in 6.0, 6.4, 8.0, and 9.53 mm

### Pyrosales Pty Ltd

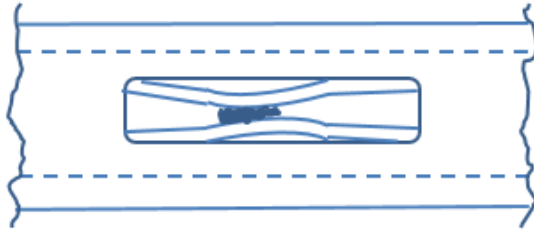
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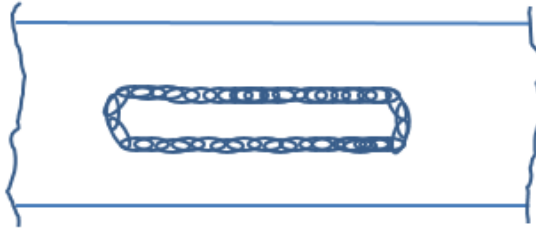
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CUTAWAY VIEW OF THE POCKET JUNCTION MULTIPOINT SHOWING THE THERMOCOUPLE WIRES BEING WELDED TOGETHER TO FORM AN ISOLATED "UNGROUNDING JUNCTION" PRIOR TO HAVING THE MgO INSULATION RE COMPACTED AROUND THE WIRES.

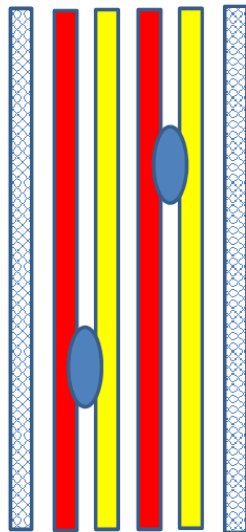


CUTAWAY END VIEW OF THE JUNCTION



LASER WELDED CAP OVER THE UNGROUNDING JUNCTION WILL NOT EXTEND ABOVE M.I. CABLE SHEATH MORE THAN .003"

DRAWING IS NOT TO SCALE.

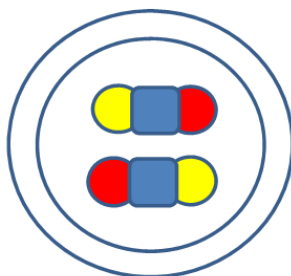


The pocket junction multipoint is an offshoot of the OMP Multipoint thermocouple design.

Also known as the "PJM", this thermocouple design uses standard mineral insulated cable of four (4), six (6), or eight (8) wires.

Ungrounded Uncommon (isolated) junctions may be located anywhere required along the sheath length.

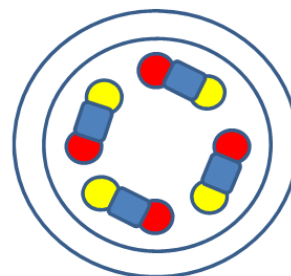
Standard transition housings are used to transition from the MI cable to flexible lead wire.



4 WIRES / 2 JUNCTION



6 WIRE / 3 JUNCTION



8 WIRE / 4 JUNCTION