



PROJECT INFORMATION: _____

JOB: _____

APPROVALS: _____

POLARIS™
Pre-Insulated Connectors

To enable users to achieve desired ampacity with a UL listed pre-insulated connector through paralleling, NSi Industries’ Polaris™ line of connectors have been fully tested and meet the specifications for UL 486 A/B for 90°C conductor (copper and aluminum) in accordance with the National Electrical Code (NEC).

De-rating of conductors per the NEC can vary depending on the type of installation (i.e. conductors in free air, conductors in a wireway, number of conductors in a wireway, etc.) and size of conductors (250KCMIL-500KCMIL de-rated by 65%, 600KCMIL and larger de-rated by 75%). It is expected that the wire connectors will be used with parallel feeds meeting the NEC. See the chart to the right that shows the maximum ampacity for connectors, assuming a “free air” installation.

Although these connectors have been tested in the worst case condition (Line conductor(s) on one end of the connector and load conductor(s) on opposite end of connector), laboratory tests have shown that the connector will run cooler if the load is “distributed”. The recommendation is to stagger the line and load conductors (line-load-line-load-line-load) throughout the wire connector. If that is not possible, another practice that would run cooler is to place the main/line conductors in the center of the connector and the load/tap conductors on the outer ports of the connector.



Max Ampacity for “Free Air” Installation:

SIZE OF CONNECTOR	# OF PARALLEL CONDUCTORS	# OF CONNECTOR WIRE PORTS	COPPER CONDUCTOR (AMPS)	ALUMINUM CONDUCTOR (AMPS)
250	2	4	527	410
250	3	6	790	615
250	4	8	1053	820
350	2	4	657	514
350	3	6	985	770
350	4	8	1314	1028
500	2	4	806	631
500	3	6	1209	946
500	4	8	1612	1262
600	2	4	1035	810
600	3	6	1554	1215
600	4	8	2070	1620
750	2	4	1178	930
750	3	6	1767	1395
750	4	8	2356	1860