ALTITUDE & AMBIENT DERATION CONNECTION DIAGRAMS

ALTITUDE

Up to 1000m (3300 ft.) no deration in output is required. Above 1000m (3300 ft.) the air becomes less dense and its ability to transfer heat declines. For every 500m (1650 ft.) above 1000m, the output of the machine must be reduced by 3%.

Altitude	Deration	Factor	Altitude	Deration	Factor
1,500m (4,900 ft.)	3%	0.97	3,000m (9,900 ft)	12%	0.88
2,000m (6,600 ft.)	6%	0.94	3,500m (11,500 ft)	15%	0.85
2,500m (8,200 ft.)	9%	0.91	4,000m (13,100 ft.)	18%	0.82

AMBIENT

Insulation materials and systems are rated by their total thermal capacity. We use Class H materials throughout the range of products. Rated for a total temperature of 190 °C. At this point, the thermal and electrical properties commence to degrade.

The standards, i.e. NEMA, BSS, IEC, CSA, limit the total temperature as follows:

Class H	Temp. Rise	Ambient	Total
Peak Stand-by	163 °C	27 °C	190 °C
Standby	150 °C	40 °C	190 °C
Continuous	125 °C	40 °C	165 °C

These limitations ensure a life expectancy in keeping with the application and expected usage. Should the ambient increase above 40°C, the allowed temp. rise must reduce, i.e. lower output. If the ambient is below 40°C, a less than proportionate increase in output is permissible. See 163/27 ratings.

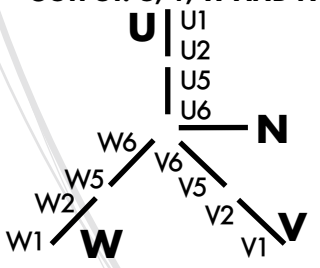
Ambient	Deration	Factor
45 °C (113 °F)	3%	0.97
50 °C (122 °F)	6%	0.94
55 °C (131 °F)	9%	0.91
60 °C (140 °F)	12%	0.88

CONNECTION DIAGRAMS FOR WINDING 311 MACHINES:

Assemblers and users should refer to the wiring and connection diagrams supplied with each machine, before operation, to ensure the main stator connection complies with the voltage required. The following refers to our Winding 311.

HIGH WYE 3 PHASE 4W

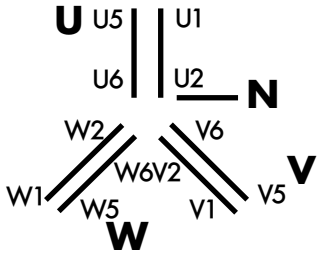
OUTPUT: U, V, W AND N



60 HZ 416/240 - 480/277V
60 HZ 600/347
50 HZ 380/220 - 440/254V

LOW WYE 3 PHASE 4W

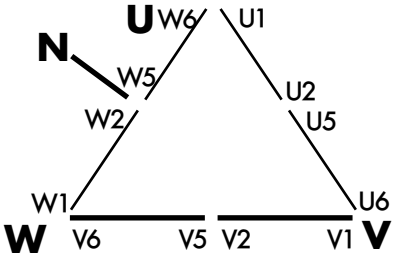
OUTPUT: U, V, W AND N



60 HZ 208/120 - 240/139V
50 HZ 190/110 - 220/127V

SERIES DELTA 3 PHASE 3W

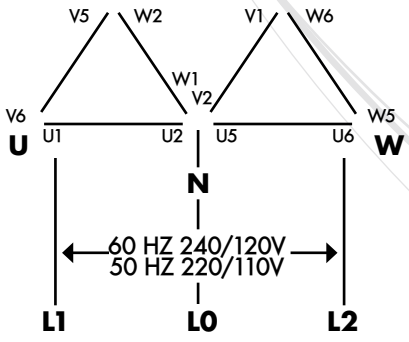
OUTPUT: U, V, W AND W



60 HZ 240/277V
50 HZ 220/254V

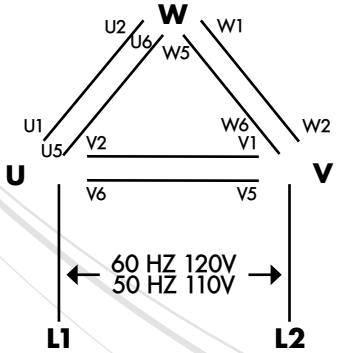
DOUBLE DELTA 1 PHASE 3W

OUTPUT: U, W AND N



PARALLEL DELTA 1 PHASE 2W*

OUTPUT: U, V



TERMINAL MARKINGS	
METRIC	**NEMA**
U	L1
V	L2
W	L3
N	N
U1	T1
U2	T4
U5	T7
U6	T10
V1	T2
V2	T5
V5	T8
V6	T11
W1	T3
W2	T6
W5	T9
W6	T12

*Available with SX460 & AS440 AVR. For MX341 AVR a 120 to 240V step up transformer is required (not supplied).

For customer support contact: 1-800-367-2764/1-763-528-7301 Fax: 1-800-863-9243/1-763-574-5082