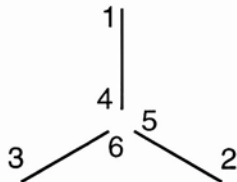


TERMINAL MARKINGS AND CONNECTIONS THREE-PHASE MOTORS—SINGLE SPEED

NEMA NOMENCLATURE—6 LEADS

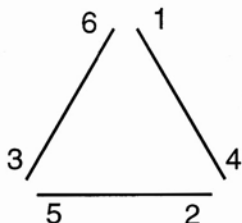
SINGLE VOLTAGE EXTERNAL WYE CONNECTION

L1	L2	L3	JOIN
1	2	3	4&5&6



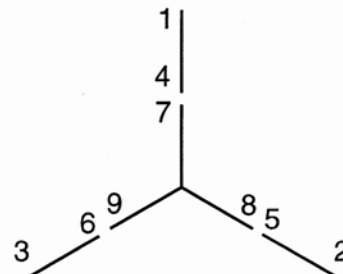
SINGLE VOLTAGE EXTERNAL DELTA CONNECTION

L1	L2	L3
1,6	2,4	3,5



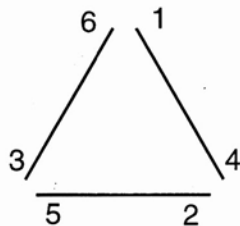
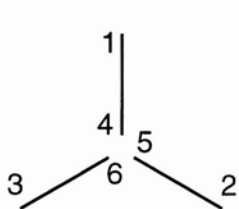
NEMA NOMENCLATURE—9 LEADS

DUAL VOLTAGE WYE-CONNECTED



VOLTAGE	L1	L2	L3	JOIN
LOW	1,7	2,8	3,9	4&5&6
HIGH	1	2	3	4&7,5&8,6&9

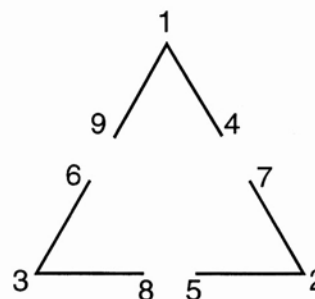
SINGLE AND DUAL VOLTAGE WYE-DELTA CONNECTIONS



SINGLE VOLTAGE

OPERATING MODE	CONNECTION	L1	L2	L3	JOIN
START	WYE	1	2	3	4&5&6
RUN	DELTA	1,6	2,4	3,5	—

DUAL VOLTAGE DELTA-CONNECTED



VOLTAGE	L1	L2	L3	JOIN
LOW	1,6,7	2,4,8	3,5,9	—
HIGH	1	2	3	4&7,5&8,6&9

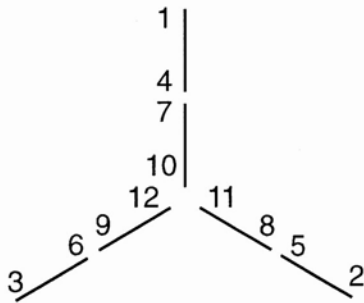
DUAL VOLTAGE*

VOLTAGE	CONNECTION	L1	L2	L3	JOIN
HIGH	WYE	1	2	3	4&5&6
LOW	DELTA	1,6	2,4	3,5	—

*Voltage Ratio: 1.732 to 1.

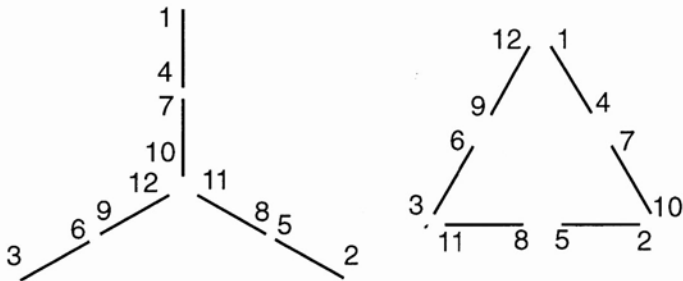
NEMA NOMENCLATURE-12 LEADS

DUAL VOLTAGE EXTERNAL WYE CONNECTION



VOLTAGE	L1	L2	L3	JOIN
LOW	1,7	2,8	3,9	4&5&6, 10&11&12
HIGH	1	2	3	4&7,5&8,6&9, 10&11&12

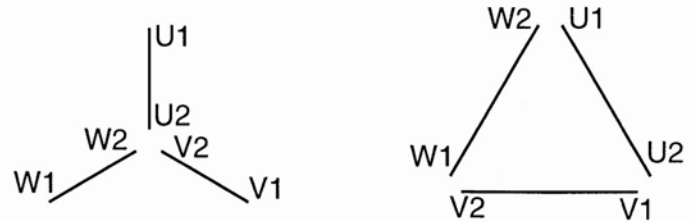
DUAL VOLTAGE WYE-CONNECTED START DELTA-CONNECTED RUN



VOLT.	CONN.	L1	L2	L3	JOIN
LOW	WYE	1,7	2,8	3,9	4&5&6, 10&11&12
	DELTA	1,6,7, 12	2,4,8, 10	3,5,9, 11	—
HIGH	WYE	1	2	3	4&7,5&8,6&9, 10&11&12
	DELTA	1,12	2,10	3,11	4&7,5&8,6&9

IEC NOMENCLATURE-6 LEADS

SINGLE AND DUAL VOLTAGE WYE-DELTA CONNECTIONS



SINGLE VOLTAGE

OPER. MODE	CONN.	L1	L2	L3	JOIN
START	WYE	U1	V1	W1	U2&V2&W2
RUN	DELTA	U1,W2	V1,U2	W1,V2	—

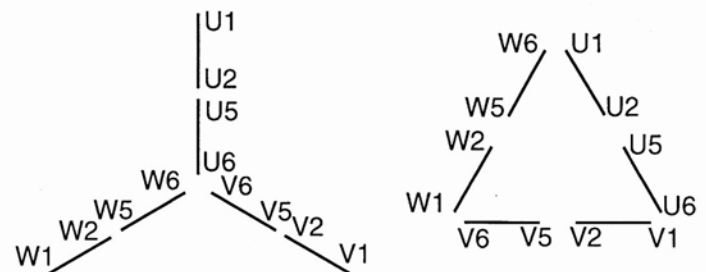
DUAL VOLTAGE*

VOLT.	CONN.	L1	L2	L3	JOIN
HIGH	WYE	U1	V1	W1	U2&V2&W2
LOW	DELTA	U1,W2	V1,U2	W1,V2	—

*Voltage Ratio: 1.732 to 1.

IEC NOMENCLATURE-12 LEADS

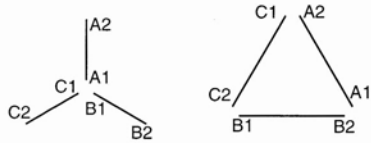
DUAL VOLTAGE WYE-CONNECTED START DELTA-CONNECTED RUN



VOLT.	CONN.	L1	L2	L3	JOIN
LOW	WYE	U1,U5	V1,V5	W1,W5	U2&V2&W2, U6&V6&W6
	DELTA	U1,U5, W2,W6	V1,V5, U2,U6	W1,W5, V2,V6	—
	HIGH	WYE	U1	V1	W1
	DELTA	U1,W6	V1,U6	W1,V6	U2&U5,V2&V5, W2&W5

NOMENCLATURE FORMERLY USED IN GREAT BRITAIN—6 LEADS

SINGLE AND DUAL VOLTAGE WYE-DELTA CONNECTIONS



SINGLE VOLTAGE

OPERATING MODE	CONNECTION	L1	L2	L3	JOIN
START	WYE	A2	B2	C2	A1&B1&C1
RUN	DELTA	A2,C1	B2,A1	C2,B1	—

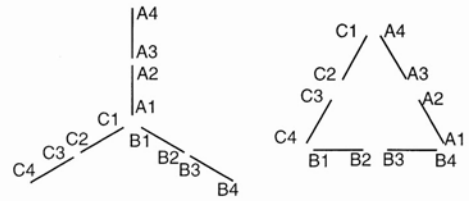
DUAL VOLTAGE*

VOLTAGE	CONNECTION	L1	L2	L3	JOIN
HIGH	WYE	A2	B2	C2	A1&B1&C1
LOW	DELTA	A2,C1	B2,A1	C2,B1	—

*Voltage ratio: 1.732 to 1.

NOMENCLATURE FORMERLY USED IN GREAT BRITAIN—12 LEADS

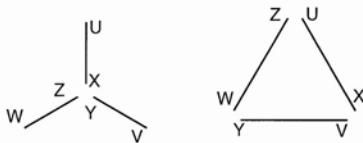
DUAL VOLTAGE WYE- CONNECTED START DELTA-CONNECTED RUN



VOLTAGE	CONNECTION	L1	L2	L3	JOIN
LOW	WYE	A4,A2	B4,B2	C4,C2	A3&B3&C3, A1&B1&C1
	DELTA	A4,A2, C1,C3	B4,B2, A1,A3	C4,C2, B1,B3	—
HIGH	WYE	A4	B4	C4	A3&A2,B3&B2, C3&C2,A1&B1&C1
	DELTA	A4,C1	B4,A1	C4,B1	A3&A2,B3&B2, C3&C2

NOMENCLATURE FORMERLY USED IN EUROPE—6 LEADS

SINGLE AND DUAL VOLTAGE WYE-DELTA CONNECTIONS



SINGLE VOLTAGE

OPERATING MODE	CONNECTION	L1	L2	L3	JOIN
START	WYE	U	V	W	X&Y&Z
RUN	DELTA	U,Z	V,X	W,Y	—

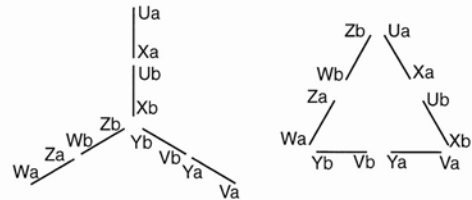
DUAL VOLTAGE*

VOLTAGE	CONNECTION	L1	L2	L3	JOIN
HIGH	WYE	U	V	W	X&Y&Z
LOW	DELTA	U,Z	V,X	W,Y	—

*Voltage ratio: 1.732 to 1.

NOMENCLATURE FORMERLY USED IN GERMANY—12 LEADS

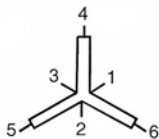
DUAL VOLTAGE WYE- CONNECTED START DELTA-CONNECTED RUN



VOLTAGE	CONNECTION	L1	L2	L3	JOIN
LOW	WYE	Ua,Ub	Va,Vb	Wa,Wb	Xa&Ya&Za, Xb&Yb&Zb
	DELTA	Ua,Ub, Za,Zb	Va,Vb, Xa,Xb	Wa,Wb, Ya,Yb	—
HIGH	WYE	Ua	Va	Wa	Xa&Ub,Ya&Vb, Za&Wb,Xb&Yb&Zb
	DELTA	Ua,Zb	Va,Xb	Wa,Yb	Xa&Ub,Ya&Vb, Za&Wb

TERMINAL MARKINGS AND CONNECTIONS THREE-PHASE MOTORS—TWO SPEED, SINGLE WINDING

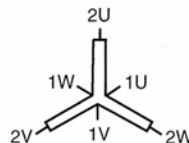
NEMA NOMENCLATURE—6 LEADS CONSTANT TORQUE CONNECTION



Low-speed horsepower is half of high speed horsepower.*

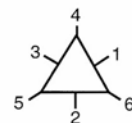
SPEED	L1	L2	L3		TYPICAL CONNECTION
HIGH	6	4	5	1&2&3 JOIN	2 WYE
LOW	1	2	3	4-5-6 OPEN	1 DELTA

IEC NOMENCLATURE—6 LEADS CONSTANT TORQUE CONNECTION



SPEED	L1	L2	L3		TYPICAL CONN.
HIGH	2W	2U	2V	1U&1V&1W JOIN	2 WYE
LOW	1U	1V	1W	2U-2V-2W OPEN	1 DELTA

CONSTANT HORSEPOWER CONNECTION

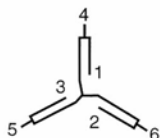


Horsepower is the same at both speeds.*

SPEED	L1	L2	L3		TYPICAL CONNECTION
HIGH	6	4	5	1-2-3 OPEN	1 DELTA
LOW	1	2	3	4&5&6 JOIN	2 WYE

*CAUTION: On European motors horsepower variance with speed may not be the same as shown above.

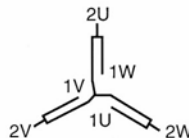
VARIABLE TORQUE CONNECTION



Low-speed horsepower is one-fourth of high-speed horsepower.*

SPEED	L1	L2	L3		TYPICAL CONNECTION
HIGH	6	4	5	1&2&3 JOIN	2 WYE
LOW	1	2	3	4-5-6 OPEN	1 WYE

VARIABLE TORQUE CONNECTION



SPEED	L1	L2	L3		TYPICAL CONN.
HIGH	2W	2U	2V	1U&1V&1W JOIN	2 WYE
LOW	1U	1V	1W	2U-2V-2W OPEN	1 WYE