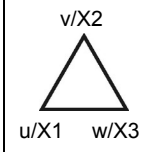
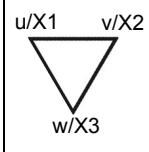
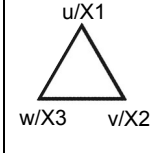
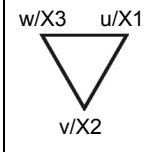
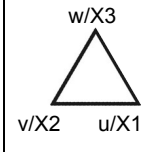
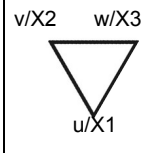
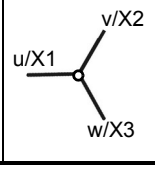
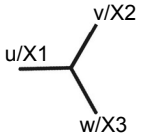
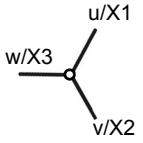
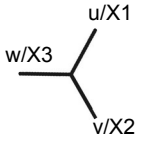
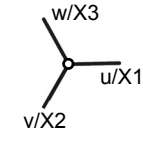
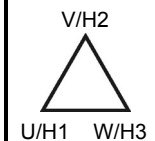
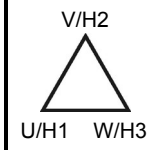
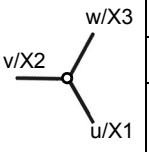
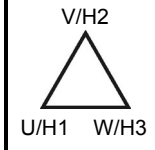
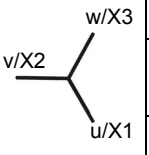
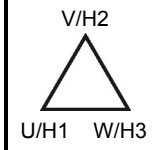
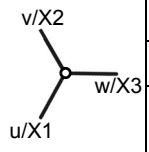
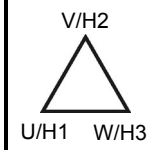
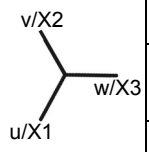
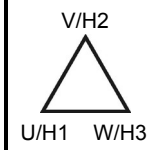
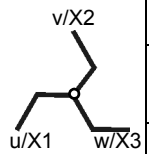
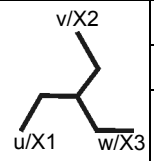
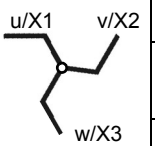
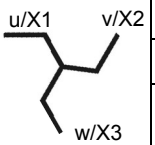
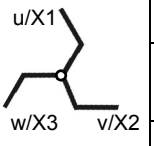
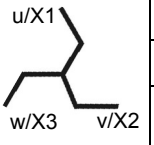
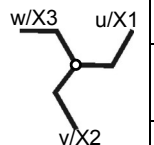
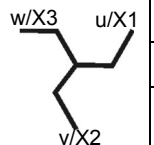
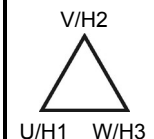
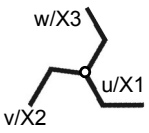
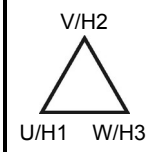
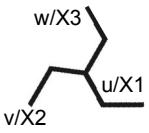
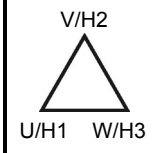
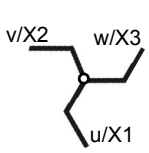
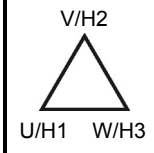
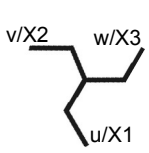
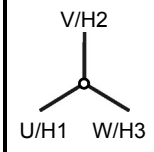
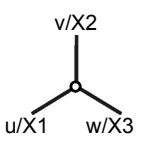
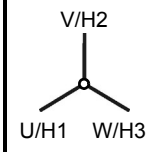
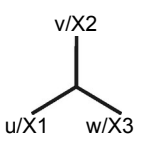
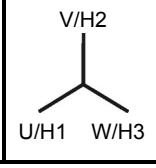
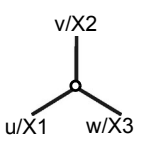
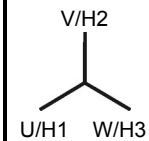
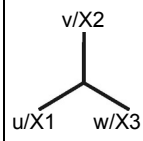
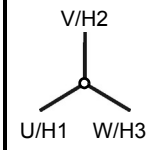
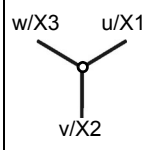
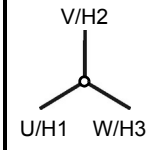
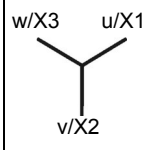
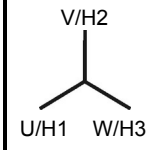
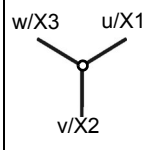
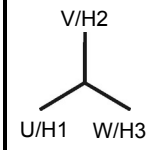
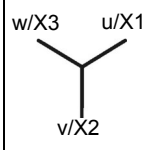
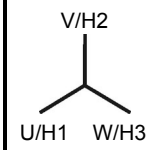
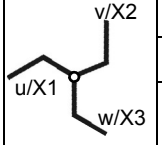
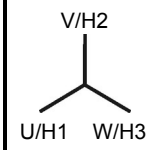
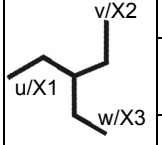
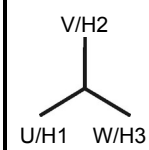
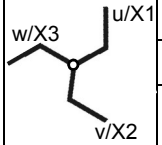
IEC 60076 vector group	Winding connection		Measurement	Trans-former high-voltage side	Trans-former low-voltage side	Measured turn ratio
	HV / H	LV /X				
Dd0			A	U-V / H1-H2	u-v / X1-X2	1
			B	V-W / H2-H3	v-w / X2-X3	
			C	W-U / H3-H1	w-u / X3-X1	
Dd2			A	U-V / H1-H2	w-v / X3-X2	1
			B	V-W / H2-H3	u-w / X1-X3	
			C	W-U / H3-H1	v-u / X2-X1	
Dd4			A	U-V / H1-H2	w-u / X3-X1	1
			B	V-W / H2-H3	u-v / X1-X2	
			C	W-U / H3-H1	v-w / X2-X3	
Dd6			A	U-V / H1-H2	v-u / X2-X1	1
			B	V-W / H2-H3	w-v / X3-X2	
			C	W-U / H3-H1	u-w / X1-X3	
Dd8			A	U-V / H1-H2	v-w / X2-X3	1
			B	V-W / H2-H3	w-u / X3-X1	
			C	W-U / H3-H1	u-v / X1-X2	
Dd10			A	U-V / H1-H2	u-w / X1-X3	1
			B	V-W / H2-H3	v-u / X2-X1	
			C	W-U / H3-H1	w-v / X3-X2	
Dyn1			A	U-V / H1-H2	n-v / X0-X2	1*√3
			B	V-W / H2-H3	n-w / X0-X3	
			C	W-U / H3-H1	n-u / X0-X1	

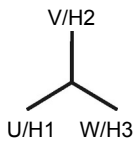
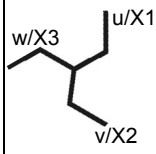
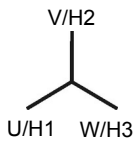
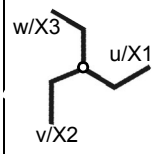
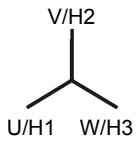
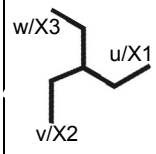
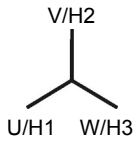
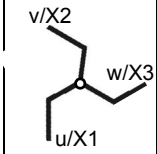
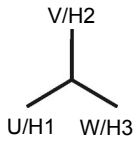
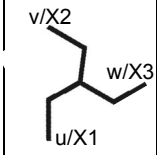
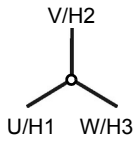
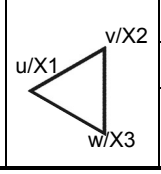
IEC 60076 vector group	Winding connection		Measurement	Trans-former high-voltage side	Trans-former low-voltage side	Measured turn ratio
	HV / H	LV /X				
Dy1			A	U-(V+W) / H1-(H2+H3)	u-v / X1-X2	√3/2
			B	V-(U+W) / H2-(H1+H3)	v+w / X2-X3	
			C	W-(U+V) / H3-(H1+H2)	w-u / X3-X1	
Dyn3			A	U-V / H1-H2	w-n / X3-X0	1*√3
			B	V-W / H2-H3	u-n / X1-X0	
			C	W-U / H3-H1	v-n / X2-X0	
Dy3			A	U-(V+W) / H1-(H2+H3)	w-v / X3-X2	√3/2
			B	V-(U+W) / H2-(H1+H3)	u-w / X1-X3	
			C	W-(U+V) / H3-(H1+H2)	v-u / X2-X1	
Dyn5			A	U-V / H1-H2	n-u / X0-X1	1*√3
			B	V-W / H2-H3	n-v / X0-X2	
			C	W-U / H3-H1	n-w / X0-X3	
Dy5			A	U-(V+W) / H1-(H2+H3)	w-u / X3-X1	√3/2
			B	V-(U+W) / H2-(H1+H3)	u-v / X1-X2	
			C	W-(U+V) / H3-(H1+H2)	v-w / X2-X3	
Dyn7			A	U-V / H1-H2	v-n/ X2-X0	√3
			B	V-W / H2-H3	w-n / X3-X0	
			C	W-U / H3-H1	u-n / X1-X0	

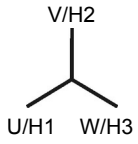
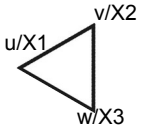
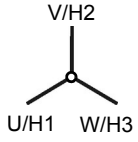
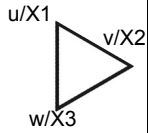
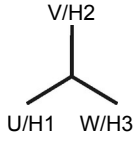
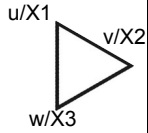
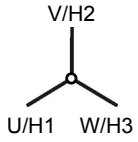
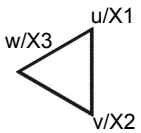
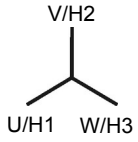
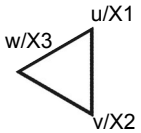
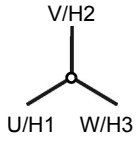
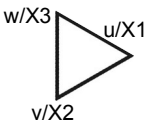
IEC 60076 vector group	Winding connection		Measurement	Trans-former high-voltage side	Trans-former low-voltage side	Measured turn ratio
	HV / H	LV /X				
Dy7			A	U-(V+W) / H1-(H2+H3)	v-u / X2-X1	1*√3/2
			B	V-(U+W) / H2-(H1+H3)	w-v / X3-X2	
			C	W-(U+V) / H3-(H1+H2)	u-w / X1-X3	
Dyn9			A	U-V / H1-H2	n-w / X0-X3	√3
			B	V-W / H2-H3	n-u / X0-X1	
			C	W-U / H3-H1	n-v / X0-X2	
Dy9			A	U-(V+W) / H1-(H2+H3)	v-w / X2-X3	1*√3/2
			B	V-(U+W) / H2-(H1+H3)	w-u / X3-X1	
			C	W-(U+V) / H3-(H1+H2)	u-v / X1-X2	
Dyn11			A	U-V / H1-H2	u-n / X1-X0	√3
			B	V-W / H2-H3	v-n / X2-X0	
			C	W-U / H3-H1	w-n / X3-X0	
Dy11			A	U-(V+W) / H1-(H2+H3)	u-w / X1-X3	1*√3/2
			B	V-(U+W) / H2-(H1+H3)	v-u / X2-X1	
			C	W-(U+V) / H3-(H1+H2)	w-v / X3-X2	
Dzn0			A	U-(V+W) / H1-(H2+H3)	u-n / X1-X0	1.5
			B	V-(U+W) / H2-(H1+H3)	v-n / X2-X0	
			C	W-(U+V) / H3-(H1+H2)	w-n / X3-X0	

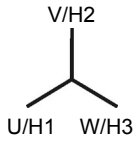
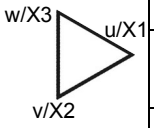
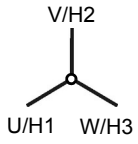
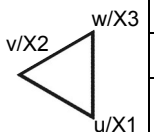
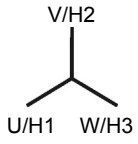
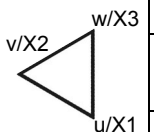
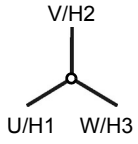
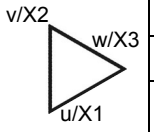
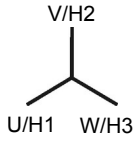
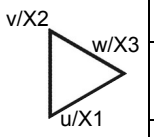
IEC 60076 vector group	Winding connection		Measurement	Trans-former high-voltage side	Trans-former low-voltage side	Measured turn ratio
	HV / H	LV /X				
Dz0			A	U-V / H1-H2	u-v / X1-X2	1
			B	V-W / H2-H3	v-w / X2-X3	
			C	W-U / H3-H1	w-u / X3-X1	
Dzn2			A	U-(V+W) / H1-(H2+H3)	n-v / X0-X2	1.5
			B	V-(U+W) / H2-(H1+H3)	n-w / X0-X3	
			C	W-(U+V) / H3-(H1+H2)	n-u / X0-X1	
Dz2			A	U-V / H1-H2	w-v / X3-X2	1
			B	V-W / H2-H3	u-w / X1-X3	
			C	W-U / H3-H1	v-u / X2-X1	
Dzn4			A	U-(V+W) / H1-(H2+H3)	w-n / X3-X0	1.5
			B	V-(U+W) / H2-(H1+H3)	u-n / X1-X0	
			C	W-(U+V) / H3-(H1+H2)	v-n / X2-X0	
Dz4			A	U-V / H1-H2	w-u / X3-X1	1
			B	V-W / H2-H3	u-v / X1-X2	
			C	W-U / H3-H1	v-w / X2-X3	
Dzn6			A	U-(V+W) / H1-(H2+H3)	n-u / X0-X1	1.5
			B	V-(U+W) / H2-(H1+H3)	n-v / X0-X2	
			C	W-(U+V) / H3-(H1+H3)	n-w/ X0-X3	
Dz6			A	U-V / H1-H2	v-u / X2-X1	1
			B	V-W / H2-H3	w-v / X3-X2	
			C	W-U / H3-H1	u-w / X1-X3	

IEC 60076 vector group	Winding connection		Measurement	Trans-former high-voltage side	Trans-former low-voltage side	Measured turn ratio
	HV / H	LV /X				
Dzn8			A	U-(V+W) / H1-(H2+H3)	v-n / X2-X0	1.5
			B	V-(U+W) / H2-(H1+H3)	w-n / X3-X0	
			C	W-(U+V) / H3-(H1+H2)	u-n / X1-X0	
Dz8			A	U-V / H1-H2	v-w / X2-X3	1
			B	V-W / H2-H3	w-u / X3-X1	
			C	W-U / H3-H1	u-v / X1-X2	
Dzn10			A	U-(V+W) / H1-(H2+H3)	n-w / X0-X3	1.5
			B	V-(U+W) / H2-(H1+H3)	n-u / X0-X1	
			C	W-(U+V) / H3-(H1+H2)	n-v / X0-X2	
Dz10			A	U-V / H1-H2	u-w / X1-X3	1
			B	V-W / H2-H3	v-u / X2-X1	
			C	W-U / H3-H1	w-v / X3-X2	
YNyn0			A	U-N / H1-H0	u-n / X1-X0	1
			B	V-N / H2-H0	v-n / X2-X0	
			C	W-N / H3-H0	w-n / X3-X0	
YNy0			A	U-V / H1-H2	u-v / X1-X2	1
			B	V-W / H2-H3	v-w / X2-X3	
			C	W-U / H3-H1	w-u / X3-X1	
Yyn0			A	U-V / H1-H2	u-v / X1-X2	1
			B	V-W / H2-H3	v-w / X2-X3	
			C	W-U / H3-H1	w-u / X3-X1	

IEC 60076 vector group	Winding connection		Measurement	Trans-former high-voltage side	Trans-former low-voltage side	Measured turn ratio
	HV / H	LV /X				
Yy0			A	U-V / H1-H2	u-v / X1-X2	1
			B	V-W / H2-H3	v-w / X2-X3	
			C	W-U / H3-H1	w-u / X3-X1	
YNyn6			A	U-N / H1-H0	n-u / X0-X1	1
			B	V-N / H2-H0	n-v / X0-X2	
			C	W-N / H3-H0	n-w / X0-X3	
YNy6			A	U-V / H1-H2	v-u / X2-X1	1
			B	V-W / H2-H3	w-v / X3-X2	
			C	W-U / H3-H1	u-w / X1-X3	
Yyn6			A	U-V / H1-H2	v-u / X2-X1	1
			B	V-W / H2-H3	w-v / X3-X2	
			C	W-U / H3-H1	u-w / X1-X3	
Yy6			A	U-V / H1-H2	v-u / X2-X1	1
			B	V-W / H2-H3	w-v / X3-X2	
			C	W-U / H3-H1	u-w / X1-X3	
Yzn1			A	U-V / H1-H2	n-v / X0-X2	1*√3
			B	V-W / H2-H3	n-w / X0-X3	
			C	W-U / H3-H1	n-u / X0-X1	
Yz1			A	U-(V+W) / H1-(H2+H3)	u-v / X1-X2	√3/2
			B	V-(U+W) / H2-(H1+H3)	v-w / X2-X3	
			C	W-(U+V) / H3-(H1+H2)	w-u / X3-X1	
Yzn5			A	U-V / H1-H2	n-u / X0-X1	1*√3
			B	V-W / H2-H3	n-v / X0-X2	
			C	W-U / H3-H1	n-w / X0-X3	

IEC 60076 vector group	Winding connection		Measurement	Trans-former high-voltage side	Trans-former low-voltage side	Measured turn ratio
	HV / H	LV /X				
Yz5			A	U-(V+W) / H1-(H2+H3)	w-u / X3-X1	√3/2
			B	V-(U+W) / H2-(H1+H3)	u-v / X1-X2	
			C	W-(U+V) / H3-(H1+H2)	v-w / X2-X3	
Yzn7			A	U-V / H1-H2	v-n / X2-X0	√3
			B	V-W / H2-H3	w-n / X3-X0	
			C	W-U / H3-H1	u-n / X1-X0	
Yz7			A	U-(V+W) / H1-(H2+H3)	v-u / X2-X1	1*√3/2
			B	V-(U+W) / H2-(H1+H3)	w-v / X3-X2	
			C	W-(U+V) / H3-(H1+H2)	u-w / X1-X3	
Yzn11			A	U-V / H1-H2	u-n / X1-X0	√3
			B	V-W / H2-H3	v-n / X2-X0	
			C	W-U / H3-H1	w-n / X3-X0	
Yz11			A	U-(V+W) / H1-(H2+H3)	u-w / X1-X3	1*√3/2
			B	V-(U+W) / H2-(H1+H3)	v-u / X2-X1	
			C	W-(U+V) / H3-(H1+H2)	w-v / X3-X2	
YNd1			A	U-N / H1-H0	u-v / X1-X2	1/√3
			B	V-N / H2-H0	v-w / X2-X3	
			C	W-N / H3-H0	w-u / X3-X1	

IEC 60076 vector group	Winding connection		Measurement	Trans-former high-voltage side	Trans-former low-voltage side	Measured turn ratio
	HV / H	LV /X				
Yd1			A	U-(V+W) / H1-(H2+H3)	u-v / X1-X2	√3/2
			B	V-(U+W) / H2-(H1+H3)	v-w / X2-X3	
			C	W-(U+V) / H3-(H1+H2)	w-u / X3-X1	
YNd3			A	U-N / H1-H0	w-v / X3-X2	1/√3
			B	V-N / H2-H0	u-w / X1-X3	
			C	W-N / H3-H0	v-u / X2-X1	
Yd3			A	U-(V+W) / H1-(H2+H3)	w-v / X3-X2	√3/2
			B	V-(U+W) / H2-(H1+H3)	u-w / X1-X3	
			C	W-(U+V) / H3-(H1+H2)	v-u / X2-X1	
YNd5			A	U-N / H1-H0	w-u / X3-X1	1/√3
			B	V-N / H2-H0	u-v / X1-X2	
			C	W-N / H3-H0	v-w / X2-X3	
Yd5			A	U-(V+W) / H1-(H2+H3)	w-u / X3-X1	√3/2
			B	V-(U+W) / H2-(H1+H3)	u-v / X1-X2	
			C	W-(U+V) / H3-(H1+H2)	v-w / X2-X3	
YNd7			A	U-N / H1-H0	v-u / X2-X1	1/√3
			B	V-N / H2-H0	w-v / X3-X2	
			C	W-N / H3-H0	u-w / X1-X3	

IEC 60076 vector group	Winding connection		Measurement	Trans-former high-voltage side	Trans-former low-voltage side	Measured turn ratio
	HV / H	LV /X				
Yd7			A	U-(V+W) / H1-(H2+H3)	v-u / X2-X1	1*√3/2
			B	V-(U+W) / H2-(H1+H3)	w-v / X3-X2	
			C	W-(U+V) / H3-(H1+H2)	u-w / X1-X3	
YNd9			A	U-N / H1-H0	v-w / X2-X3	1/√3
			B	V-N / H2-H0	w-u / X3-X1	
			C	W-N / H3-H0	u-v / X1-X2	
Yd9			A	U-(V+W) / H1-(H2+H3)	v-w / X2-X3	1*√3/2
			B	V-(U+W) / H2-(H1+H3)	w-u / X3-X1	
			C	W-(U+V) / H3-(H1+H2)	u-v / X1-X2	
YNd11			A	U-N / H1-H0	u-w / X1-X3	1/√3
			B	V-N / H2-H0	v-u / X2-X1	
			C	W-N / H3-H0	w-v / X3-X2	
Yd11			A	U-(V+W) / H1-(H2+H3)	u-w / X1-X3	1*√3/2
			B	V-(U+W) / H2-(H1+H3)	v-u / X2-X1	
			C	W-(U+V) / H3-(H1+H2)	w-v / X3-X2	