MSG No. 171.124 P_c6_2 [Type IV, hexagonal]

* symmetry operation

Table 1: Symmetry operations for 3d polar vector.

No.	tag	matrix (polar)	det	TR
1	$\{1\|0\}$	$\begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & 0 \end{bmatrix}$	1	1
2	$\{6^+_{001}\|00\frac{1}{3}\}$	$\begin{bmatrix} 1 & -1 & 0 & 0 \\ 1 & 0 & 0 & 0 \\ 0 & 0 & 1 & \frac{1}{3} \end{bmatrix}$	1	1
3	$\{3^+_{001}\|00\frac{2}{3}\}$	$\begin{bmatrix} 0 & -1 & 0 & 0 \\ 1 & -1 & 0 & 0 \\ 0 & 0 & 1 & \frac{2}{3} \end{bmatrix}$	1	1
4	$\{2_{001}\|0\}$	$\begin{bmatrix} -1 & 0 & 0 & 0 \\ 0 & -1 & 0 & 0 \\ 0 & 0 & 1 & 0 \end{bmatrix}$	1	1
5	$\{3^-_{001}\|00\frac{1}{3}\}$	$\begin{bmatrix} -1 & 1 & 0 & 0 \\ -1 & 0 & 0 & 0 \\ 0 & 0 & 1 & \frac{1}{3} \end{bmatrix}$	1	1
6	$\{6^-_{001}\|00\frac{2}{3}\}$	$\begin{bmatrix} 0 & 1 & 0 & 0 \\ -1 & 1 & 0 & 0 \\ 0 & 0 & 1 & \frac{2}{3} \end{bmatrix}$	1	1
7	$\{1'\|00\frac{1}{2}\}$	$\begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & \frac{1}{2} \end{bmatrix}$	1	−1
8	$\{6^+_{001}'\|00\frac{5}{6}\}$	$\begin{bmatrix} 1 & -1 & 0 & 0 \\ 1 & 0 & 0 & 0 \\ 0 & 0 & 1 & \frac{5}{6} \end{bmatrix}$	1	−1
9	$\{3^+_{001}'\|00\frac{1}{6}\}$	$\begin{bmatrix} 0 & -1 & 0 & 0 \\ 1 & -1 & 0 & 0 \\ 0 & 0 & 1 & \frac{1}{6} \end{bmatrix}$	1	−1
10	$\{2_{001}'\|00\frac{1}{2}\}$	$\begin{bmatrix} -1 & 0 & 0 & 0 \\ 0 & -1 & 0 & 0 \\ 0 & 0 & 1 & \frac{1}{2} \end{bmatrix}$	1	−1
11	$\{3^-_{001}'\|00\frac{5}{6}\}$	$\begin{bmatrix} -1 & 1 & 0 & 0 \\ -1 & 0 & 0 & 0 \\ 0 & 0 & 1 & \frac{5}{6} \end{bmatrix}$	1	−1
12	$\{6^-_{001}'\|00\frac{1}{6}\}$	$\begin{bmatrix} 0 & 1 & 0 & 0 \\ -1 & 1 & 0 & 0 \\ 0 & 0 & 1 & \frac{1}{6} \end{bmatrix}$	1	−1