Number of vertices $n = 6$.
Adjacencies of Graph

1. vertex 1 adjacent to 2 4 5 6
2. vertex 2 adjacent to 1 3 5 6
3. vertex 3 adjacent to 2 4 5 6
4. vertex 4 adjacent to 1 3 5 6
5. vertex 5 adjacent to 1 2 3 4 6
6. vertex 6 adjacent to 1 2 3 4 5

Size of automorphism group of the graph=16
Full group: $|Aut(polytope)| = 512$
Restricted group: $|Aut(G) \times switch| = 512$
Number of orbits for the full group : 4
List of orbits of facets for the full group: Total number of orbits = 4 Total number of facets = 184

1. Inequality 1 with incidence 24 and stabilizer of size 16. Orbit size is 32
   nature: 3-cycle inequality, C=[2, 6, 1] F=[2, 6]

(1,2) : 1 (2,6) : -1 (5,6) : 0	(1,4) : 0 (3,4) : 0	(1,5) : 0 (3,5) : 0	(1,6) : 1 (3,6) : 0	(2,3) : 0 (4,5) : 0	(2,5) : 0 (4,6) : 0

2. Inequality 2 with incidence 24 and stabilizer of size 32. Orbit size is 16
   nature: 3-cycle inequality, C=[5, 6, 1] F=[5, 6]

(1,2) : 0 (2,6) : 0 (5,6) : -1	(1,4) : 0 (3,4) : 0	(1,5) : 1 (3,5) : 0	(1,6) : 1 (3,6) : 0	(2,3) : 0 (4,5) : 0	(2,5) : 0 (4,6) : 0

3. Inequality 3 with incidence 16 and stabilizer of size 64. Orbit size is 8
   nature: 4-cycle inequality, C=[1, 2, 3, 4] F=[1, 2]

(1,2) : -1 (2,6) : 0 (5,6) : 0	(1,4) : 1 (3,4) : 1	(1,5) : 0 (3,5) : 0	(1,6) : 0 (3,6) : 0	(2,3) : 1 (4,5) : 0	(2,5) : 0 (4,6) : 0

4. Inequality 4 with incidence 14 and stabilizer of size 4. Orbit size is 128
   nature: unknown

(1,2) : -1 (2,6) : 0 (5,6) : 1	(1,4) : 1 (3,4) : 1	(1,5) : 1 (3,5) : 1	(1,6) : -1 (3,6) : -1	(2,3) : 1 (4,5) : -1	(2,5) : 0 (4,6) : 1