Number of vertices $n = 7$.
Adjacencies of Graph

1. vertex 1 adjacent to 2 3 4 5 6 7
2. vertex 2 adjacent to 1 3 4 5 6 7
3. vertex 3 adjacent to 1 2 5 6 7
4. vertex 4 adjacent to 1 2 5 6 7
5. vertex 5 adjacent to 1 2 3 4
6. vertex 6 adjacent to 1 2 3 4
7. vertex 7 adjacent to 1 2 3 4

Size of automorphism group of the graph=24
Full group: $|Aut(polytope)| = 1536$
Restricted group: $|Aut(G) \times switch| = 1536$
Number of orbits for the full group : 7
List of orbits of facets for the full group: Total number of orbits = 7 Total number of facets = 860

1. Inequality 1 with incidence 48 and stabilizer of size 32. Orbit size is 48 nature: 3-cycle inequality, C=[2, 3, 7] F=[2, 3]

(1,2) : 0	(1,3) : 0	(1,4) : 0	(1,5) : 0	(1,6) : 0	(1,7) : 0
(2,3) : -1	(2,4) : 0	(2,5) : 0	(2,6) : 0	(2,7) : 1	(3,5) : 0
(3,6) : 0	(3,7) : 1	(4,5) : 0	(4,6) : 0	(4,7) : 0	

2. Inequality 2 with incidence 48 and stabilizer of size 128. Orbit size is 12 nature: 3-cycle inequality, C=[2, 5, 1] F=[2, 5]

(1,2) : 1	(1,3) : 0	(1,4) : 0	(1,5) : 1	(1,6) : 0	(1,7) : 0
(2,3) : 0	(2,4) : 0	(2,5) : -1	(2,6) : 0	(2,7) : 0	(3,5) : 0
(3,6) : 0	(3,7) : 0	(4,5) : 0	(4,6) : 0	(4,7) : 0	

3. Inequality 3 with incidence 48 and stabilizer of size 192. Orbit size is 8 nature: 3-cycle inequality, C=[2, 4, 1] F=[2, 4]

(1,2) : 1	(1,3) : 0	(1,4) : 1	(1,5) : 0	(1,6) : 0	(1,7) : 0
(2,3) : 0	(2,4) : -1	(2,5) : 0	(2,6) : 0	(2,7) : 0	(3,5) : 0
(3,6) : 0	(3,7) : 0	(4,5) : 0	(4,6) : 0	(4,7) : 0	

4. Inequality 4 with incidence 32 and stabilizer of size 64. Orbit size is 24 nature: 4-cycle inequality, C=[3, 6, 4, 5] F=[3, 6]

(1,2) : 0	(1,3) : 0	(1,4) : 0	(1,5) : 0	(1,6) : 0	(1,7) : 0
(2,3) : 0	(2,4) : 0	(2,5) : 0	(2,6) : 0	(2,7) : 0	(3,5) : 1
(3,6) : -1	(3,7) : 0	(4,5) : 1	(4,6) : 1	(4,7) : 0	

5. Inequality 5 with incidence 28 and stabilizer of size 8. Orbit size is 192 nature: unknown

(1,2) : 1	(1,3) : -1	(1,4) : 1	(1,5) : 0	(1,6) : -1	(1,7) : 0
(2,3) : 1	(2,4) : -1	(2,5) : 0	(2,6) : 1	(2,7) : 0	(3,5) : 1
(3,6) : -1	(3,7) : 0	(4,5) : 1	(4,6) : 1	(4,7) : 0	

6. Inequality 6 with incidence 28 and stabilizer of size 8. Orbit size is 192 nature: unknown

(1,2) : 1	(1,3) : -1	(1,4) : 0	(1,5) : 1	(1,6) : 1	(1,7) : 0
(2,3) : 1	(2,4) : 0	(2,5) : -1	(2,6) : -1	(2,7) : 0	(3,5) : 1
(3,6) : 1	(3,7) : 0	(4,5) : -1	(4,6) : 1	(4,7) : 0	

7. Inequality 7 with incidence 20 and stabilizer of size 4. Orbit size is 384 nature: unknown

(1,2) : 0	(1,3) : 0	(1,4) : 0	(1,5) : -1	(1,6) : 1	(1,7) : 0
(2,3) : -1	(2,4) : 1	(2,5) : 1	(2,6) : 1	(2,7) : 0	(3,5) : 1
(3,6) : 1	(3,7) : 1	(4,5) : -1	(4,6) : -1	(4,7) : 1	