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 5 6 7

3. vertex 3 adjacent to 1 5 6 7

4. vertex 4 adjacent to 1 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=72
Full group: $|Aut(polytope)| = 4608$
Restricted group: $|Aut(G) \times switch| = 4608$
Number of orbits for the full group : 3
List of orbits of facets for the full group: Total number of orbits $= 3$ Total number of facets $= 684$

1. Inequality 1 with incidence 48 and stabilizer of size 128. Orbit size is 36 nature: 3-cycle inequality, C=[4, 5, 1] F=[4, 5]

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

2. Inequality 2 with incidence 32 and stabilizer of size 64. Orbit size is 72 nature: 4-cycle inequality, C=[3, 6, 2, 7] F=[3, 6]

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

3. Inequality 3 with incidence 20 and stabilizer of size 8. Orbit size is 576 nature: unknown

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