Number of vertices $n = 8$.
Adjacencies of Graph

1. vertex 1 adjacent to 3 4 5 6 7 8
2. vertex 2 adjacent to 3 4 5 6 7 8
3. vertex 3 adjacent to 1 2
4. vertex 4 adjacent to 1 2
5. vertex 5 adjacent to 1 2
6. vertex 6 adjacent to 1 2
7. vertex 7 adjacent to 1 2
8. vertex 8 adjacent to 1 2

Size of automorphism group of the graph=1440
Full group: $|Aut(polytope)| = 4246732800$
Restricted group: $|Aut(G) \times switch| = 184320$
Number of orbits for the full group : 1
List of orbits of facets for the full group: Total number of orbits = 1 Total number of facets = 144

1. Inequality 1 with incidence 64 and stabilizer of size 29491200. Orbit size is 144 nature: edge inequality e=[1, 8]

(1,3) : 0	(1,4) : 0	(1,5) : 0	(1,6) : 0	(1,7) : 0	(1,8) : 1
(2,3) : 0	(2,4) : 0	(2,5) : 0	(2,6) : 0	(2,7) : 0	(2,8) : 0

Number of orbits for the restricted group : 2
List of orbits of facets for the restricted group: Total number of orbits = 2 Total number of facets = 144

1. Inequality 1 with incidence 64 and stabilizer of size 7680. Orbit size is 24 nature: edge inequality e=[1, 8]

(1,3) : 0	(1,4) : 0	(1,5) : 0	(1,6) : 0	(1,7) : 0	(1,8) : 1
(2,3) : 0	(2,4) : 0	(2,5) : 0	(2,6) : 0	(2,7) : 0	(2,8) : 0

2. Inequality 2 with incidence 64 and stabilizer of size 1536. Orbit size is 120 nature: 4-cycle inequality, C=[2, 7, 1, 8] F=[2, 7]

(1,3) : 0 (2,3) : 0	(1,4) : 0 (2,4) : 0	(1,5) : 0 (2,5) : 0	(1,6) : 0 (2,6) : 0	(1,7) : 1 (2,7) : -1	(1,8) : 1 (2,8) : 1