

The group G is isomorphic to the group labelled by [40, 12] in the Small Groups library.
 Ordinary character table of $G \cong C2 \times (C5 : C4)$:

	1a	5a	4a	2a	4b	2b	10a	4c	2c	4d
χ_1	1	1	1	1	1	1	1	1	1	1
χ_2	1	1	$E(4)$	-1	$-E(4)$	1	1	$E(4)$	-1	$-E(4)$
χ_3	1	1	-1	1	-1	1	1	-1	1	-1
χ_4	1	1	$-E(4)$	-1	$E(4)$	1	1	$-E(4)$	-1	$E(4)$
χ_5	4	-1	0	0	0	4	-1	0	0	0
χ_6	1	1	1	1	1	-1	-1	-1	-1	-1
χ_7	1	1	$E(4)$	-1	$-E(4)$	-1	-1	$-E(4)$	1	$E(4)$
χ_8	1	1	-1	1	-1	-1	-1	1	-1	1
χ_9	1	1	$-E(4)$	-1	$E(4)$	-1	-1	$E(4)$	1	$-E(4)$
χ_{10}	4	-1	0	0	0	-4	1	0	0	0

Trivial source character table of $G \cong C2 \times (C5 : C4)$ at $p = 5$:

Normalisers N_i	N_1							N_2								
	P_1							P_2								
p -subgroups of G up to conjugacy in G	1a	4a	2b	2a	4c	4b	2c	4d	1a	2a	4a	2b	4b	2c	4c	4d
Representatives $n_j \in N_i$																
$1 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 1 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10}$	5	1	5	1	1	1	1	1	0	0	0	0	0	0	0	0
$0 \cdot \chi_1 + 1 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 1 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10}$	5	$E(4)$	5	-1	$E(4)$	$-E(4)$	-1	$-E(4)$	0	0	0	0	0	0	0	0
$0 \cdot \chi_1 + 0 \cdot \chi_2 + 1 \cdot \chi_3 + 0 \cdot \chi_4 + 1 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10}$	5	-1	5	1	-1	-1	1	-1	0	0	0	0	0	0	0	0
$0 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 1 \cdot \chi_4 + 1 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10}$	5	$-E(4)$	5	-1	$-E(4)$	$E(4)$	-1	$E(4)$	0	0	0	0	0	0	0	0
$0 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 1 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 1 \cdot \chi_{10}$	5	1	-5	1	-1	1	-1	-1	0	0	0	0	0	0	0	0
$0 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 1 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 1 \cdot \chi_{10}$	5	$E(4)$	-5	-1	$-E(4)$	$-E(4)$	1	$E(4)$	0	0	0	0	0	0	0	0
$0 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 1 \cdot \chi_8 + 0 \cdot \chi_9 + 1 \cdot \chi_{10}$	5	-1	-5	1	1	-1	-1	1	0	0	0	0	0	0	0	0
$0 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 1 \cdot \chi_9 + 1 \cdot \chi_{10}$	5	$-E(4)$	-5	-1	$E(4)$	$E(4)$	1	$-E(4)$	0	0	0	0	0	0	0	0
$1 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10}$	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
$0 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 1 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10}$	1	1	-1	1	-1	1	-1	-1	1	-1	1	-1	-1	1	-1	-1
$0 \cdot \chi_1 + 0 \cdot \chi_2 + 1 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10}$	1	-1	1	1	-1	-1	1	-1	1	1	-1	1	-1	-1	-1	-1
$0 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 1 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10}$	1	-1	-1	1	1	-1	-1	1	1	-1	1	1	-1	-1	1	1
$0 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 1 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10}$	1	$-E(4)$	1	-1	$-E(4)$	$E(4)$	-1	$E(4)$	1	1	$-E(4)$	-1	$-E(4)$	-1	$E(4)$	$E(4)$
$0 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10}$	1	$E(4)$	1	-1	$E(4)$	$-E(4)$	-1	$-E(4)$	1	1	$E(4)$	-1	$E(4)$	-1	$-E(4)$	$-E(4)$
$0 \cdot \chi_1 + 1 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10}$	1	$E(4)$	1	-1	$E(4)$	$-E(4)$	-1	$-E(4)$	1	-1	$E(4)$	-1	$-E(4)$	1	$-E(4)$	$E(4)$
$0 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 1 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10}$	1	$E(4)$	-1	-1	$-E(4)$	$-E(4)$	1	$E(4)$	1	-1	$E(4)$	-1	$-E(4)$	1	$-E(4)$	$E(4)$
$0 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 1 \cdot \chi_9 + 0 \cdot \chi_{10}$	1	$-E(4)$	-1	-1	$E(4)$	$E(4)$	1	$-E(4)$	1	-1	$-E(4)$	-1	$E(4)$	1	$E(4)$	$-E(4)$

$P_1 = \text{Group}([()]) \cong 1$
 $P_2 = \text{Group}([(1, 5, 12, 20, 28)(2, 8, 16, 24, 32)(3, 10, 18, 26, 34)(4, 11, 19, 27, 35)(6, 14, 22, 30, 37)(7, 15, 23, 31, 38)(9, 17, 25, 33, 39)(13, 21, 29, 36, 40)]) \cong C5$

$N_1 = \text{Group}([(1, 2, 4, 7)(3, 6, 9, 13)(5, 16, 35, 31)(8, 19, 38, 20)(10, 22, 39, 36)(11, 23, 28, 24)(12, 32, 27, 15)(14, 25, 40, 26)(17, 29, 34, 30)(18, 37, 33, 21), (1, 3)(2, 6)(4, 9)(5, 10)(7, 13)(8, 14)(11, 17)(12, 18)(15, 21)(16, 22)(19, 25)(20, 26)(23, 29)(24, 30)(27, 33)(28, 34)(31, 36)(32, 37)(35, 39)(38, 40), (1, 4)(2, 7)(3, 9)(5, 35)(6, 13)(8, 38)(10, 39)(11, 28)(12, 27)(14, 40)(15, 32)(16, 31)(17, 34)(18, 33)(19, 20)(21, 37)(22, 36)(23, 24)(25, 26)(29, 30), (1, 5, 12, 20, 28)(2, 8, 16, 24, 32)(3, 10, 18, 26, 34)(4, 11, 19, 27, 35)(6, 14, 22, 30, 37)(7, 15, 23, 31, 38)(9, 17, 25, 33, 39)(13, 21, 29, 36, 40)]) \cong C2 \times (C5 : C4)$
 $N_2 = \text{Group}([(1, 5, 12, 20, 28)(2, 8, 16, 24, 32)(3, 10, 18, 26, 34)(4, 11, 19, 27, 35)(6, 14, 22, 30, 37)(7, 15, 23, 31, 38)(9, 17, 25, 33, 39)(13, 21, 29, 36, 40), (1, 2, 4, 7)(3, 6, 9, 13)(5, 16, 35, 31)(8, 19, 38, 20)(10, 22, 39, 36)(11, 23, 28, 24)(12, 32, 27, 15)(14, 25, 40, 26)(17, 29, 34, 30)(18, 37, 33, 21), (1, 3)(2, 6)(4, 9)(5, 10)(7, 13)(8, 14)(11, 17)(12, 18)(15, 21)(16, 22)(19, 25)(20, 26)(23, 29)(24, 30)(27, 33)(28, 34)(31, 36)(32, 37)(35, 39)(38, 40)]) \cong C2 \times (C5 : C4)$