

The group G is isomorphic to the group labelled by [40, 1] in the Small Groups library.
 Ordinary character table of $G \cong C5 : C8$:

	1a	8a	4a	2a	5a	8b	8c	4b	20a	10a	5b	8d	20b	20c	10b	20d
χ_1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
χ_2	1	-1	1	1	1	-1	-1	1	1	1	1	-1	1	1	1	1
χ_3	1	$-E(4)$	-1	1	1	$E(4)$	$-E(4)$	-1	-1	1	1	$E(4)$	-1	-1	1	-1
χ_4	1	$E(4)$	-1	1	1	$-E(4)$	$E(4)$	-1	-1	1	1	$-E(4)$	-1	-1	1	-1
χ_5	1	$-E(8)$	$E(4)$	-1	1	$-E(8)^3$	$E(8)$	$-E(4)$	$E(4)$	-1	1	$E(8)^3$	$-E(4)$	$E(4)$	-1	$-E(4)$
χ_6	1	$-E(8)^3$	$-E(4)$	-1	1	$-E(8)$	$E(8)^3$	$E(4)$	$-E(4)$	-1	1	$E(8)$	$E(4)$	$-E(4)$	-1	$E(4)$
χ_7	1	$E(8)^3$	$-E(4)$	-1	1	$E(8)$	$-E(8)^3$	$E(4)$	$-E(4)$	-1	1	$-E(8)$	$E(4)$	$-E(4)$	-1	$E(4)$
χ_8	1	$E(8)$	$E(4)$	-1	1	$E(8)^3$	$-E(8)$	$-E(4)$	$E(4)$	-1	1	$-E(8)^3$	$-E(4)$	$E(4)$	-1	$-E(4)$
χ_9	2	0	-2	2	$E(5)^2 + E(5)^3$	0	0	-2	$-E(5)^2 - E(5)^3$	$E(5)^2 + E(5)^3$	$E(5) + E(5)^4$	0	$-E(5)^2 - E(5)^3$	$-E(5) - E(5)^4$	$E(5) + E(5)^4$	$-E(5) - E(5)^4$
χ_{10}	2	0	-2	2	$E(5) + E(5)^4$	0	0	-2	$-E(5) - E(5)^4$	$E(5) + E(5)^4$	$E(5)^2 + E(5)^3$	0	$-E(5) - E(5)^4$	$-E(5)^2 - E(5)^3$	$E(5)^2 + E(5)^3$	$-E(5)^2 - E(5)^3$
χ_{11}	2	0	2	2	$E(5)^2 + E(5)^3$	0	0	2	$E(5)^2 + E(5)^3$	$E(5)^2 + E(5)^3$	$E(5) + E(5)^4$	0	$E(5)^2 + E(5)^3$	$E(5) + E(5)^4$	$E(5) + E(5)^4$	$E(5) + E(5)^4$
χ_{12}	2	0	2	2	$E(5) + E(5)^4$	0	0	2	$E(5) + E(5)^4$	$E(5) + E(5)^4$	$E(5)^2 + E(5)^3$	0	$E(5) + E(5)^4$	$E(5)^2 + E(5)^3$	$E(5)^2 + E(5)^3$	$E(5)^2 + E(5)^3$
χ_{13}	2	0	$-2 * E(4)$	-2	$E(5)^2 + E(5)^3$	0	0	$2 * E(4)$	$-E(20)^{13} - E(20)^{17}$	$-E(5)^2 - E(5)^3$	$E(5) + E(5)^4$	0	$E(20)^{13} + E(20)^{17}$	$-E(20) - E(20)^9$	$-E(5) - E(5)^4$	$E(20) + E(20)^9$
χ_{14}	2	0	$-2 * E(4)$	-2	$E(5) + E(5)^4$	0	0	$2 * E(4)$	$-E(20) - E(20)^9$	$-E(5) - E(5)^4$	$E(5)^2 + E(5)^3$	0	$E(20) + E(20)^9$	$-E(20)^{13} - E(20)^{17}$	$-E(5)^2 - E(5)^3$	$E(20)^{13} + E(20)^{17}$
χ_{15}	2	0	$2 * E(4)$	-2	$E(5)^2 + E(5)^3$	0	0	$-2 * E(4)$	$E(20)^{13} + E(20)^{17}$	$-E(5)^2 - E(5)^3$	$E(5) + E(5)^4$	0	$-E(20)^{13} - E(20)^{17}$	$E(20) + E(20)^9$	$-E(5) - E(5)^4$	$-E(20) - E(20)^9$
χ_{16}	2	0	$2 * E(4)$	-2	$E(5) + E(5)^4$	0	0	$-2 * E(4)$	$E(20) + E(20)^9$	$-E(5) - E(5)^4$	$E(5)^2 + E(5)^3$	0	$-E(20) - E(20)^9$	$E(20)^{13} + E(20)^{17}$	$-E(5)^2 - E(5)^3$	$-E(20)^{13} - E(20)^{17}$

Trivial source character table of $G \cong C5 : C8$ at $p = 2$:

Normalisers N_i	N_1			N_2			N_3			N_4
p -subgroups of G up to conjugacy in G	P_1			P_2			P_3			P_4
Representatives $n_j \in N_i$	1a	5a	5b	1a	5a	5b	1a	5a	5b	1a
$1 \cdot \chi_1 + 1 \cdot \chi_2 + 1 \cdot \chi_3 + 1 \cdot \chi_4 + 1 \cdot \chi_5 + 1 \cdot \chi_6 + 1 \cdot \chi_7 + 1 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10} + 0 \cdot \chi_{11} + 0 \cdot \chi_{12} + 0 \cdot \chi_{13} + 0 \cdot \chi_{14} + 0 \cdot \chi_{15} + 0 \cdot \chi_{16}$	8	8	8	0	0	0	0	0	0	0
$0 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 1 \cdot \chi_9 + 0 \cdot \chi_{10} + 1 \cdot \chi_{11} + 0 \cdot \chi_{12} + 1 \cdot \chi_{13} + 0 \cdot \chi_{14} + 1 \cdot \chi_{15} + 0 \cdot \chi_{16}$	8	$4 * E(5)^2 + 4 * E(5)^3$	$4 * E(5) + 4 * E(5)^4$	0	0	0	0	0	0	0
$0 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 1 \cdot \chi_{10} + 0 \cdot \chi_{11} + 1 \cdot \chi_{12} + 0 \cdot \chi_{13} + 1 \cdot \chi_{14} + 0 \cdot \chi_{15} + 1 \cdot \chi_{16}$	8	$4 * E(5) + 4 * E(5)^4$	$4 * E(5)^2 + 4 * E(5)^3$	0	0	0	0	0	0	0
$1 \cdot \chi_1 + 1 \cdot \chi_2 + 1 \cdot \chi_3 + 1 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10} + 0 \cdot \chi_{11} + 0 \cdot \chi_{12} + 0 \cdot \chi_{13} + 0 \cdot \chi_{14} + 0 \cdot \chi_{15} + 0 \cdot \chi_{16}$	4	4	4	4	4	4	0	0	0	0
$0 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 1 \cdot \chi_9 + 0 \cdot \chi_{10} + 1 \cdot \chi_{11} + 0 \cdot \chi_{12} + 0 \cdot \chi_{13} + 0 \cdot \chi_{14} + 0 \cdot \chi_{15} + 0 \cdot \chi_{16}$	4	$2 * E(5)^2 + 2 * E(5)^3$	$2 * E(5) + 2 * E(5)^4$	4	$2 * E(5)^2 + 2 * E(5)^3$	$2 * E(5) + 2 * E(5)^4$	0	0	0	0
$0 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 1 \cdot \chi_{10} + 0 \cdot \chi_{11} + 1 \cdot \chi_{12} + 0 \cdot \chi_{13} + 0 \cdot \chi_{14} + 0 \cdot \chi_{15} + 0 \cdot \chi_{16}$	4	$2 * E(5) + 2 * E(5)^4$	$2 * E(5)^2 + 2 * E(5)^3$	4	$2 * E(5) + 2 * E(5)^4$	$2 * E(5)^2 + 2 * E(5)^3$	0	0	0	0
$1 \cdot \chi_1 + 1 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10} + 0 \cdot \chi_{11} + 0 \cdot \chi_{12} + 0 \cdot \chi_{13} + 0 \cdot \chi_{14} + 0 \cdot \chi_{15} + 0 \cdot \chi_{16}$	2	2	2	2	2	2	2	2	2	0
$0 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10} + 0 \cdot \chi_{11} + 1 \cdot \chi_{12} + 0 \cdot \chi_{13} + 0 \cdot \chi_{14} + 0 \cdot \chi_{15} + 0 \cdot \chi_{16}$	2	$E(5) + E(5)^4$	$E(5)^2 + E(5)^3$	2	$E(5) + E(5)^4$	$E(5)^2 + E(5)^3$	2	$E(5) + E(5)^4$	$E(5)^2 + E(5)^3$	0
$0 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10} + 1 \cdot \chi_{11} + 0 \cdot \chi_{12} + 0 \cdot \chi_{13} + 0 \cdot \chi_{14} + 0 \cdot \chi_{15} + 0 \cdot \chi_{16}$	2	$E(5)^2 + E(5)^3$	$E(5) + E(5)^4$	2	$E(5)^2 + E(5)^3$	$E(5) + E(5)^4$	2	$E(5)^2 + E(5)^3$	$E(5) + E(5)^4$	0
$1 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10} + 0 \cdot \chi_{11} + 0 \cdot \chi_{12} + 0 \cdot \chi_{13} + 0 \cdot \chi_{14} + 0 \cdot \chi_{15} + 0 \cdot \chi_{16}$	1	1	1	1	1	1	1	1	1	1

$$P_1 = \text{Group}([(1)]) \cong 1$$

$$P_2 = \text{Group}([(1, 4)(2, 7)(3, 9)(5, 11)(6, 13)(8, 15)(10, 17)(12, 19)(14, 21)(16, 23)(18, 25)(20, 27)(22, 29)(24, 31)(26, 33)(28, 35)(30, 36)(32, 38)(34, 39)(37, 40)]) \cong C2$$

$$P_3 = \text{Group}([(1, 4)(2, 7)(3, 9)(5, 11)(6, 13)(8, 15)(10, 17)(12, 19)(14, 21)(16, 23)(18, 25)(20, 27)(22, 29)(24, 31)(26, 33)(28, 35)(30, 36)(32, 38)(34, 39)(37, 40), (1, 3, 4, 9)(2, 6, 7, 13)(5, 10, 11, 17)(8, 14, 15, 21)(12, 18, 19, 25)(16, 22, 23, 29)(20, 26, 27, 33)(24, 30, 31, 36)(28, 34, 35, 39)(32, 37, 38, 40)]) \cong C4$$

$$P_4 = \text{Group}([(1, 4)(2, 7)(3, 9)(5, 11)(6, 13)(8, 15)(10, 17)(12, 19)(14, 21)(16, 23)(18, 25)(20, 27)(22, 29)(24, 31)(26, 33)(28, 35)(30, 36)(32, 38)(34, 39)(37, 40), (1, 3, 4, 9)(2, 6, 7, 13)(5, 10, 11, 17)(8, 14, 15, 21)(12, 18, 19, 25)(16, 22, 23, 29)(20, 26, 27, 33)(24, 30, 31, 36)(28, 34, 35, 39)(32, 37, 38, 40), (1, 2, 3, 6, 4, 7, 9, 13)(5, 32, 10, 37, 11, 38, 17, 40)(8, 34, 14, 35, 15, 39, 21, 28)(12, 24, 18, 30, 19, 31, 25, 36)(16, 26, 22, 27, 23, 33, 29, 20)]) \cong C8$$

$$N_1 = \text{Group}([(1, 2, 3, 6, 4, 7, 9, 13)(5, 32, 10, 37, 11, 38, 17, 40)(8, 34, 14, 35, 15, 39, 21, 28)(12, 24, 18, 30, 19, 31, 25, 36)(16, 26, 22, 27, 23, 33, 29, 20), (1, 3, 4, 9)(2, 6, 7, 13)(5, 10, 11, 17)(8, 14, 15, 21)(12, 18, 19, 25)(16, 22, 23, 29)(20, 26, 27, 33)(24, 30, 31, 36)(28, 34, 35, 39)(32, 37, 38, 40), (1, 4)(2, 7)(3, 9)(5, 11)(6, 13)(8, 15)(10, 17)(12, 19)(14, 21)(16, 23)(18, 25)(20, 27)(22, 29)(24, 31)(26, 33)(28, 35)(30, 36)(32, 38)(34, 39)(37, 40), (1, 5, 12, 20, 28)(2, 8, 16, 24, 32)(3, 10, 18, 26, 34)(4, 11, 19, 27, 35)(6, 14, 22, 30, 37)(7, 15, 23, 31, 38)(9, 17, 25, 33, 39)(13, 21, 29, 36, 40)]) \cong C5 : C8$$

$$N_2 = \text{Group}([(1, 2, 3, 6, 4, 7, 9, 13)(5, 32, 10, 37, 11, 38, 17, 40)(8, 34, 14, 35, 15, 39, 21, 28)(12, 24, 18, 30, 19, 31, 25, 36)(16, 26, 22, 27, 23, 33, 29, 20), (1, 3, 4, 9)(2, 6, 7, 13)(5, 10, 11, 17)(8, 14, 15, 21)(12, 18, 19, 25)(16, 22, 23, 29)(20, 26, 27, 33)(24, 30, 31, 36)(28, 34, 35, 39)(32, 37, 38, 40), (1, 4)(2, 7)(3, 9)(5, 11)(6, 13)(8, 15)(10, 17)(12, 19)(14, 21)(16, 23)(18, 25)(20, 27)(22, 29)(24, 31)(26, 33)(28, 35)(30, 36)(32, 38)(34, 39)(37, 40), (1, 5, 12, 20, 28)(2, 8, 16, 24, 32)(3, 10, 18, 26, 34)(4, 11, 19, 27, 35)(6, 14, 22, 30, 37)(7, 15, 23, 31, 38)(9, 17, 25, 33, 39)(13, 21, 29, 36, 40)]) \cong C5 : C8$$

$$N_3 = \text{Group}([(1, 3, 4, 9)(2, 6, 7, 13)(5, 10, 11, 17)(8, 14, 15, 21)(12, 18, 19, 25)(16, 22, 23, 29)(20, 26, 27, 33)(24, 30, 31, 36)(28, 34, 35, 39)(32, 37, 38, 40), (1, 4)(2, 7)(3, 9)(5, 11)(6, 13)(8, 15)(10, 17)(12, 19)(14, 21)(16, 23)(18, 25)(20, 27)(22, 29)(24, 31)(26, 33)(28, 35)(30, 36)(32, 38)(34, 39)(37, 40), (1, 2, 3, 6, 4, 7, 9, 13)(5, 32, 10, 37, 11, 38, 17, 40)(8, 34, 14, 35, 15, 39, 21, 28)(12, 24, 18, 30, 19, 31, 25, 36)(16, 26, 22, 27, 23, 33, 29, 20), (1, 5, 12, 20, 28)(2, 8, 16, 24, 32)(3, 10, 18, 26, 34)(4, 11, 19, 27, 35)(6, 14, 22, 30, 37)(7, 15, 23, 31, 38)(9, 17, 25, 33, 39)(13, 21, 29, 36, 40)]) \cong C5 : C8$$

$$N_4 = \text{Group}([(1, 2, 3, 6, 4, 7, 9, 13)(5, 32, 10, 37, 11, 38, 17, 40)(8, 34, 14, 35, 15, 39, 21, 28)(12, 24, 18, 30, 19, 31, 25, 36)(16, 26, 22, 27, 23, 33, 29, 20), (1, 3, 4, 9)(2, 6, 7, 13)(5, 10, 11, 17)(8, 14, 15, 21)(12, 18, 19, 25)(16, 22, 23, 29)(20, 26, 27, 33)(24, 30, 31, 36)(28, 34, 35, 39)(32, 37, 38, 40), (1, 4)(2, 7)(3, 9)(5, 11)(6, 13)(8, 15)(10, 17)(12, 19)(14, 21)(16, 23)(18, 25)(20, 27)(22, 29)(24, 31)(26, 33)(28, 35)(30, 36)(32, 38)(34, 39)(37, 40)]) \cong C8$$