CLAIMS:

1. A drive assembly with annularly arranged power transistors, comprising a housing, a motor controller, a rotor, and a stator, wherein

the housing is cylindrical, and is provided therein with a chamber along an axial direction of the housing; an inner wall of the housing is provided with a partition wall along a radial direction of the housing, the partition wall divides the chamber into a motor mounting chamber and a controller mounting chamber; the rotor is provided in the motor mounting chamber; the stator is provided in the motor mounting chamber, and is located outside the rotor; and the motor controller is provided in the controller mounting chamber;

an outer wall of the housing is provided with a liquid cooling channel; the liquid cooling channel comprises a motor cooling groove and a controller cooling groove that communicate with each other; and the motor cooling groove is located on an outer wall of the motor mounting chamber, and the controller cooling groove is located on an outer wall of the controller mounting chamber;

the motor controller comprises a circuit board assembly and multiple power transistors; the multiple power transistors are provided at an outer circumference of the circuit board assembly, and are electrically connected with the circuit board assembly; the multiple power transistors are evenly distributed along a circumferential direction of the controller mounting chamber; packages of the multiple power transistors are connected with an inner wall of the controller mounting chamber; and the controller cooling groove surrounds the power transistors;

the housing is provided with a ring wall in the controller mounting chamber; an annular power transistor mounting groove is formed between the ring wall and the inner wall of the controller mounting chamber; and the multiple power transistors are located in the power transistor mounting groove; and

the drive assembly further comprises a holding member; the holding member comprises an annular base portion and multiple holding portions; the multiple holding portions are distributed on the annular base portion in a circumferential direction of the annular base portion; the holding member is located in the power transistor mounting groove; and the holding portions abut between the ring wall and the power transistor mounting groove.

2. The drive assembly according to claim 1, wherein

the inner wall of the controller mounting chamber is provided with multiple heat-conducting surfaces, which are connected along a circumferential direction of the inner wall of the controller mounting chamber in sequence, and are respectively connected with the packages of the power transistors.

3. The drive assembly according to claim 2, wherein

a collision avoidance groove is provided between every two adjacent heat-conducting surfaces.

4. The drive assembly according to claim 2, wherein

heat-conducting sheets are located between the packages of the power transistors and the heat-conducting surfaces.

5. The drive assembly according to any one of claims 1 to 4, wherein

the drive assembly further comprises a positioning frame; the positioning frame comprises an annular base plate and multiple spacers; the multiple spacers are provided on the annular base plate, and extend along an axial direction of the positioning frame; the multiple spacers are distributed along a circumferential direction of the annular base plate; the positioning frame is located in the power transistor mounting groove; and every one spacer is located between two adjacent power transistors.

6. The drive assembly according to claim 5, wherein

the spacer is provided with a T-shaped radial section.

7. A vehicle, comprising the drive assembly according to any one of claims 1 to 6.

~~8. A drive assembly with a motor controller at a rear end in an axial direction of the drive assembly, comprising a housing, the motor controller, a bearing, a rotor, and a stator, wherein~~

~~the housing is cylindrical, and is provided therein with a chamber along the axial direction; an inner wall of the housing is provided with a partition wall along a radial direction of the housing, the partition wall divides the chamber into a motor mounting chamber and a controller mounting chamber; the bearing is provided on the partition wall; the rotor is provided in the motor mounting chamber, and is connected with the bearing; the stator is provided in the motor mounting chamber, and is located outside the rotor; and the motor controller is provided in the controller mounting chamber;~~

~~the drive assembly further comprises three single-phase terminals, which pass through the partition wall and are connected between the motor controller and the stator; and~~

~~projection planes of the three single-phase terminals perpendicular to the axial direction are located between a projection plane of the bearing perpendicular to the axial direction and a~~

projection plane of the stator perpendicular to the axial direction.

9. The drive assembly according to claim 8, wherein

the partition wall is provided with a mounting hole and a mounting ring wall extending toward the motor mounting chamber at an outer circumference of the mounting hole; the bearing is provided inside the mounting ring wall; and the three single-phase terminals are located at an outer circumference of the mounting ring wall.

10. The drive assembly according to claim 9, wherein

the three single-phase terminals are located at an outer circumferential wall of the mounting ring wall; and the outer circumferential wall of the mounting ring wall is provided with a first collision avoidance groove at each of the three single-phase terminals.

11. The drive assembly according to claim 8, wherein

the partition wall is provided with three run-through connecting holes and three run-through fixing holes; the three connecting holes and the three fixing holes are distributed alternately and evenly at intervals along an outer circumference of the bearing; and one single-phase terminal passes through one connecting hole.

12. The drive assembly according to claim 11, wherein

a first end wall of the partition wall facing the motor mounting chamber is provided with second collision avoidance grooves, which extends from the respective connecting hole to the stator.

13. The drive assembly according to claim 9, wherein

the drive assembly further comprises a chamber cover, which covers the mounting hole.

14. The drive assembly according to claim 13, wherein

the fixing holes are provided on a second end wall of the partition wall facing the controller mounting chamber, and the chamber cover is located at a second end wall side, and is connected with the fixing holes.

15. The drive assembly according to any one of claims 8 to 14, wherein

the drive assembly comprises a three-phase terminal block; the three-phase terminal block comprises a terminal block body and the three single-phase terminals; the terminal block body is

cylindrical; the three single-phase terminals each are arranged along an axial direction of the terminal block body, and are arranged at an outer circumference of the terminal block body; the single-phase terminals each are provided with a first terminal portion and a second terminal portion, which are respectively located on two ends of the terminal block body along an axial direction thereof; and the first terminal portions are connected with the stator, and the second terminal portions are connected with the motor controller.

16. The drive assembly according to claim 15, wherein

an outer wall of the housing is provided with a liquid cooling channel; the liquid cooling channel comprises a motor cooling groove and a controller cooling groove that communicate with each other; and the motor cooling groove is located on an outer wall of the motor mounting chamber, and the controller cooling groove is located on an outer wall of the controller mounting chamber; and

the motor controller comprises a circuit board assembly and multiple power transistors; the multiple power transistors are provided at an outer circumference of the circuit board assembly, and are electrically connected with the circuit board assembly; and packages of the multiple power transistors are connected with an inner wall of the controller mounting chamber.

17. A vehicle, comprising the drive assembly according to any one of claims 8 to 16.

18. A laminated busbar assembly, comprising:

a circular main circuit board;

a circular positive electrode connection plate, an outer edge thereof being circumferentially provided with multiple positive electrode pins;

a circular negative electrode connection plate, an outer edge thereof being circumferentially provided with multiple negative electrode pins; and

a three-phase connection plate assembly, comprising three single-phase connection plates, which are fan-shaped or arcuate, and an outer edge of each of the three single-phase connection plates is provided with multiple single-phase pins in a circumferential direction of the each of the three single-phase connection plates; and

wherein, the main circuit board, the three-phase connection plate assembly, the negative electrode connection plate, and the positive electrode connection plate are laminated along a direction perpendicular to a plane of the positive electrode connection plate; the three single-phase connection plates are coplanar; and the multiple positive electrode pins, the multiple negative electrode pins, and the multiple single-phase pins pass through the main circuit board

and are electrically connected with the main circuit board.

19. The laminated busbar assembly according to claim 18, wherein

the multiple positive electrode pins, the multiple negative electrode pins and the multiple single-phase pins are arranged along a same circumferential direction.

20. The laminated busbar assembly according to claim 19, wherein

the outer edge of the negative electrode connection plate is provided with first pin collision avoidance grooves, and the outer edge of each of the single-phase connection plates is provided with second pin collision avoidance grooves; and the positive electrode pins pass through the first pin collision avoidance grooves and the second pin collision avoidance grooves, and the negative electrode pins pass through the second pin collision avoidance grooves.

21. The laminated busbar assembly according to claim 19, wherein

two adjacent single-phase pins form a single-phase bridge arm pin group; and one single-phase bridge arm pin group, one positive electrode pin, and one negative electrode pin are cyclically arranged in a circumferential direction of the laminated busbar assembly in sequence.

22. The laminated busbar assembly according to any one of claims 18 to 21, wherein

a center of the positive electrode connection plate is provided with a first collision avoidance hole and an inner edge of the positive electrode connection plate is provided with positive electrode connection terminals;

a center of the negative electrode connection plate is provided with a second collision avoidance hole and an inner edge of the negative electrode connection plate is provided with negative electrode connection terminals;

the three single-phase connection plates each are arcuate, and an inner edge of each of the three single-phase connection plates is provided with a single-phase connection terminal;

the first collision avoidance hole communicates with the second collision avoidance hole; projection planes of the positive electrode connection terminals, the negative electrode connection terminals, and the three single-phase connection terminals, which are perpendicular to an axial direction of the laminated busbar assembly, are located inside a projection plane of the second collision avoidance hole perpendicular to the axial direction; and the projection plane of the second collision avoidance hole is parallel to a plane of the negative electrode connection plate.

23. A motor controller, comprising the laminated busbar assembly according to any one of claims 18 to 22.

24. The motor controller according to claim 23, wherein

the motor controller comprises multiple power transistors soldered at an outer circumference of the main circuit board; and the multiple power transistors are distributed circumferentially and are located outside the three phase connection plate assembly, the negative electrode connection plate, and the positive electrode connection plate along a radial direction thereof.

25. A drive assembly, comprising the motor controller according to claim 23 or 24.

26. The drive assembly according to claim 25, wherein

the drive assembly further comprises a housing, a bearing, a rotor, and a stator;

the housing is cylindrical, and is provided therein with a chamber along an axial direction of the housing; an inner wall of the housing is provided with a partition wall along a radial direction of the housing, the partition wall divides the chamber into a motor mounting chamber and a controller mounting chamber; the bearing is provided on the partition wall; the rotor is provided in the motor mounting chamber, and is connected with the bearing; the stator is provided in the motor mounting chamber, and is located outside the rotor; and the motor controller is provided in the controller mounting chamber; and

the drive assembly further comprises three single phase terminals, which pass through the partition wall and are connected between the motor controller and the stator.

27. A vehicle, comprising the drive assembly according to claim 25 or 26.

28. A motor controller with capacitors surrounded, comprising a laminated busbar assembly and multiple capacitors, wherein

the laminated busbar assembly comprises a main circuit board, a positive electrode connection plate, and a negative electrode connection plate; the positive electrode connection plate is a bottomed cylinder, which encloses a device accommodating space; an outer edge of the positive electrode connection plate is circumferentially provided with multiple positive electrode pins; the negative electrode connection plate is circular, and an outer edge thereof is circumferentially provided with multiple negative electrode pins; and the negative electrode connection plate covers the device accommodating space;

the main circuit board, the negative electrode connection plate, and the positive electrode

connection plate are laminated in sequence along an axial direction of the motor controller; and the multiple positive electrode pins and the multiple negative electrode pins pass through the main circuit board and are electrically connected with the main circuit board; and

the multiple capacitors are provided in the device accommodating space, and are connected between the positive electrode connection plate and the negative electrode connection plate.

29. The motor controller according to claim 28, wherein

the positive electrode connection plate is provided with a first collision avoidance hole at a center thereof, an inner ring wall at an outer circumference of the first collision avoidance hole, an outer ring wall surrounding an outer circumference of the inner ring wall, and a bottom ring wall located and connected between the inner ring wall and the outer ring wall of the positive electrode connection plate; and the inner ring wall, the outer ring wall and the bottom ring wall enclose the device accommodating space, in which the multiple capacitors are distributed circumferentially.

30. The motor controller according to claim 29, wherein

the bottom ring wall is provided with multiple first electrical contacts, which are circumferentially distributed, and are connected with positive electrodes of the capacitors, respectively; and

the negative electrode connection plate is provided with multiple second electrical contacts, which are circumferentially distributed, and are connected with negative electrodes of the capacitors, respectively.

31. The motor controller according to claim 29, wherein

a center of the negative electrode connection plate is provided with a second collision avoidance hole and an inner edge of the negative electrode connection plate is provided with negative electrode connection terminals; and the second collision avoidance hole communicates with the first collision avoidance hole; and

an end portion of the inner ring wall closer to the negative electrode connection plate is provided with supporting platforms; an inner edge of the positive electrode connection plate is provided with positive electrode connection terminals; the negative electrode connection plate is adjacent to the supporting platforms; and projection planes of the positive electrode connection terminals and the negative electrode connection terminals perpendicular to the axial direction are located inside a projection plane of the second collision avoidance hole perpendicular to the axial direction.

32. The motor controller according to any one of claims 28 to 31, wherein

the motor controller further comprises a mounting shell; the mounting shell is a bottomed cylinder, a bottom of which is provided with a positioning post assembly extending along the axial direction; the mounting shell encloses a mounting and accommodating space in which the positive electrode connection plate, the negative electrode connection plate, and the multiple capacitors are provided; the main circuit board covers the mounting and accommodating space; and the positioning post assembly passes through the positive electrode connection plate and the negative electrode connection plate, and fits with the main circuit board for position limiting.

33. The motor controller according to claim 32, wherein

the mounting shell is provided with a third collision avoidance hole at a center thereof and connection and fixing platforms in the third collision avoidance hole; and the connection and fixing platforms each are provided with a positive electrode connection position and a negative electrode connection position.

34. The motor controller according to claim 32, wherein

the positioning post assembly comprises multiple first positioning posts and multiple second positioning posts; the multiple first positioning posts are distributed circumferentially; the multiple second positioning posts are distributed circumferentially, and are located outside the multiple first positioning posts; and the multiple first positioning posts and the multiple second positioning posts pass through the positive electrode connection plate and the negative electrode connection plate; and

two adjacent first positioning posts and two adjacent second positioning posts which are respectively adjacent to the two adjacent first positioning posts enclose a capacitor positioning space in which one capacitor is located.

35. The motor controller according to claim 34, wherein

a connecting line of one first positioning post and one second positioning post adjacent thereto passes through an axis of the mounting shell.

36. A drive assembly, comprising the motor controller according to any one of claims 28 to 35.

37. A vehicle, comprising the drive assembly according to claim 36.

38. A three-phase terminal block, comprising

a cylindrical terminal block body; and

three single-phase terminals, each arranged along an axial direction of the terminal block body, and arranged at an outer circumference of the terminal block body, wherein the single-phase terminals each are provided with a first terminal portion and a second terminal portion, which are respectively located on two ends along an axial direction of the terminal block body.

39. The three-phase terminal block according to claim 38, wherein

the terminal block body is provided therein with a wiring groove; and

on a projection plane of the terminal block body perpendicular to the axial direction, projection planes of the first terminal portions perpendicular to the axial direction are located at an outer circumference of a projection plane of the wiring groove perpendicular to the axial direction, and projection planes of the second terminal portions perpendicular to the axial direction are located inside the projection plane of the wiring groove perpendicular to the axial direction.

40. The three-phase terminal block according to claim 39, wherein

the terminal block body comprises a central ring portion, outer connecting portions and inner connecting portions; the central ring portion encircles the wiring groove; the inner connecting portions each extend in the wiring groove from the central ring portion; and the outer connecting portions each extend away from the wiring groove from the central ring portion; and

the single-phase terminals pass through the central ring portion, the first terminal portions are located at the outer connecting portions, and the second terminal portions are located at the inner connecting portions.

41. The three-phase terminal block according to claim 40, wherein

the outer connecting portions and the first terminal portions are located outside the central ring portion in the axial direction.

42. The three-phase terminal block according to claim 40, wherein

the three single-phase terminals are connected with the central ring portion, the outer connecting portions and the inner connecting portions through a secondary injection molding process.

43. The three-phase terminal block according to claim 40, wherein

each of the outer connecting portions is provided with a shielding wall at an outer circumference of each of the first terminal portions.

44. The three-phase terminal block according to claim 39, wherein

the wiring groove is further provided therein with mounting portions, which are respectively located beside the second terminal portions.

45. The three-phase terminal block according to any one of claims 38 to 44, wherein

a magnetic ring is further provided at the outer circumference of the terminal block body.

46. A drive assembly, comprising the three-phase terminal block according to any one of claims 38 to 45.

47. A vehicle, comprising the drive assembly according to claim 46.

48. An annular holding member, comprising an annular base portion and multiple holding portions, wherein the multiple holding portions are distributed on the annular base portion in a circumferential direction of the annular base portion; and

the holding portions each comprise a fixed portion and an abutting portion; the fixed portion is connected with the annular base portion; and the abutting portion protrudes from the fixed portion toward an outer side of the annular base portion.

49. The holding member according to claim 48, wherein

the annular base portion is sheet-like.

50. The holding member according to claim 48, wherein

the holding portions are arc-shaped.

51. The holding member according to claim 48, wherein

the abutting portion is arc-shaped, and protrudes toward the outer side of the annular base portion.

52. The holding member according to claim 51, wherein

the holding portions each further comprise a free portion; the abutting portion is located between the fixed portion and the free portion; and the fixed portion and the free portion are located at a side of the abutting portion closer to an inner side thereof.

53. The holding member according to any one of claims 48 to 52, wherein

a first slot extending along an axial direction of the holding member is provided between two adjacent holding portions.

54. The holding member according to claim 53, wherein

two adjacent holding portions form a device holding group; a second slot extending along the axial direction is provided between every two adjacent device holding groups; and a length of the second slot along the axial direction may be greater than a length of the first slot along the axial direction.

55. A drive assembly, comprising the holding member according to any one of claims 48 to 54.

56. A vehicle, comprising the drive assembly according to claim 55.

57. A motor controller with an annular circuit layout, comprising a laminated busbar assembly and multiple power transistors, wherein

the laminated busbar assembly comprises a main circuit board, a positive electrode connection plate, a negative electrode connection plate, and a three-phase connection plate assembly; the main circuit board, the positive electrode connection plate and the negative electrode connection plate are each circular; an outer edge of the positive electrode connection plate is provided with multiple positive electrode pins in a circumferential direction of the positive electrode connection plate, and an outer edge of the negative electrode connection plate is provided with multiple negative electrode pins in a circumferential direction of the negative electrode connection plate; the three-phase connection plate assembly comprises three single-phase connection plates, which are each arcuate; and an outer edge of each of the single-phase connection plates is provided with multiple single-phase pins in a circumferential direction of the each of the single-phase connection plates;

a center of the positive electrode connection plate is provided with a first collision avoidance hole and an inner edge of the positive electrode connection plate is provided with positive electrode connection terminals; a center of the negative electrode connection plate is provided

with a second collision avoidance hole and an inner edge of the negative electrode connection plate is provided with negative electrode connection terminals; and an inner edge of each of the single-phase connection plates is provided with a single-phase connection terminal;

the main circuit board, the three-phase connection plate assembly, the negative electrode connection plate and the positive electrode connection plate are laminated in sequence along an axial direction of the motor controller; and the three single-phase connection plates are coplanar;

the main circuit board is provided with a connection position, a control circuit position, a first soldering position, and a second soldering position; the connection position is located in a center of the main circuit board; the control circuit position surrounds the connection position; the first soldering position surrounds the control circuit position; and the second soldering position surrounds the first soldering position; and

projection planes of the positive electrode connection terminals, the negative electrode connection terminals, and the single-phase connection terminals, which are perpendicular to an axial direction of the motor controller, are located inside a projection plane of the connection position perpendicular to the axial direction; the multiple positive electrode pins, the multiple negative electrode pins and the multiple single-phase pins are electrically connected with the main circuit board at the first soldering position; and multiple power transistors surround the main circuit board, and are electrically connected with the main circuit board at the second soldering position.

58. The motor controller according to claim 57, wherein

the multiple power transistors are evenly distributed along a same circumferential direction of the main circuit board.

59. The motor controller according to claim 57, wherein

the multiple positive electrode pins, the multiple negative electrode pins and the multiple single-phase pins are arranged along a same circumferential direction of the main circuit board.

60. The motor controller according to claim 57, wherein

the motor controller comprises multiple capacitors, which are located and connected between the negative electrode connection plate and the positive electrode connection plate.

61. The motor controller according to claim 60, wherein

projection planes of the capacitors perpendicular to the axial direction are located inside a projection plane of the control circuit position perpendicular to the axial direction.

62. The motor controller according to any one of claims 57 to 61, wherein

the three single-phase connection terminals are circumferentially evenly distributed; and the motor controller further comprises three Hall elements, which are provided at the three single-phase connection terminals, respectively.

63. The motor controller according to claim 62, wherein

one positive electrode connection terminal and one negative electrode connection terminal are located between two adjacent single-phase connection terminals.

64. The motor controller according to claim 63, wherein

the positive electrode connection plate is provided with three positive electrode connection terminals, and the negative electrode connection plate is provided with three negative electrode connection terminals; and the positive electrode connection terminals and the negative electrode connection terminals are alternated circumferentially.

65. A drive assembly, comprising the motor controller according to any one of claims 57 to 64.

66. A vehicle, comprising the drive assembly according to claim 65.

67. A drive assembly that a portion thereof passes through a circumferential wall thereof in a radial direction thereof, comprising a housing, a motor controller, a rotor, and a stator, wherein

the housing is cylindrical, and is provided therein with a chamber along an axial direction of the housing; an inner wall of the housing is provided with a partition wall along the radial direction, the partition wall divides the chamber into a motor mounting chamber and a controller mounting chamber; the rotor is provided in the motor mounting chamber; the stator is provided in the motor mounting chamber, and is located outside the rotor; and the motor controller is provided in the controller mounting chamber, and is connected with the stator; and

a circumferential wall of the housing located at the controller mounting chamber is provided with a run-through connecting hole along the radial direction; the drive assembly further comprises a connecting assembly; the connecting assembly comprises a positive electrode connecting plate and a negative electrode connecting plate; both an inner connecting terminal portion of the positive electrode connecting plate and an inner connecting terminal portion of the negative electrode connection plate are connected with the motor controller; the positive

electrode connecting plate and the negative electrode connection plate pass through the connecting hole; and the positive electrode connecting plate and the negative electrode connecting plate each are provided with an outer connecting terminal portion on an outer circumferential wall of the housing.

68. The drive assembly according to claim 67, wherein

the positive electrode connecting plate and/or the negative electrode connecting plate are sheet-like.

69. The drive assembly according to claim 67, wherein

the motor controller is provided with three positive electrode connection terminals and three negative electrode connection terminals, the positive electrode connection terminals and the negative electrode connection terminals are alternated circumferentially; and

the inner connecting terminal portion of the positive electrode connecting plate comprises three positive electrode connecting portions, which are connected with the three positive electrode connection terminals, respectively; and the inner connecting terminal portion of the negative electrode connecting plate comprises three negative electrode connecting portions, which are connected with the three negative electrode connection terminals, respectively.

70. The drive assembly according to claim 69, wherein

the inner connecting terminal portion of the positive electrode connecting plate further comprises a positive electrode connecting base portion, and the three positive electrode connecting portions are connected with and circumferentially evenly distributed on an outer edge of the positive electrode connecting base portion; and

the inner connecting terminal portion of the negative electrode connecting plate further comprises a negative electrode connecting base portion, and the three negative electrode connecting portions are connected with and circumferentially evenly distributed on an outer edge of the negative electrode connecting base portion.

71. The drive assembly according to claim 70, wherein

the positive electrode connecting base portion and the negative electrode connecting base portion are laminated on the motor controller along an axial direction of the housing.

72. The drive assembly according to claim 71, wherein

the three positive electrode connection terminals and the three negative electrode connection

terminals are located on a same radial plane;

the negative electrode connecting base portion is located between the positive electrode connecting base portion and the motor controller; and the positive electrode connecting base portion and positive electrode connecting portions form a first collision avoidance recess where the negative electrode connecting base portion is located;

alternatively, the positive electrode connecting base portion is located between the negative electrode connecting base portion and the motor controller, and the negative electrode connecting base portion and negative electrode connecting portions form a second collision avoidance recess where the positive electrode connecting base portion is located.

73. The drive assembly according to claim 67, wherein

the connecting assembly further comprises a connecting sleeve, which is located in the controller mounting chamber, and covers the positive electrode connecting plate and the negative electrode connecting plate.

74. The drive assembly according to any one of claims 67 to 73, wherein

the connecting assembly further comprises a connecting box, which is connected with the outer circumferential wall of the housing located at the controller mounting chamber; an interior of the connecting box communicates with the controller mounting chamber through the connecting hole; and both the outer connecting terminal portion of the positive electrode connecting plate and the outer connecting terminal portion of the negative electrode connecting plate extend into the connecting box.

75. The drive assembly according to any one of claims 67 to 73, wherein

the drive assembly is provided with a mounting orientation; and in a vertical direction of the mounting orientation, the housing comprises a top portion and a bottom portion; and

the connecting hole is located between the top portion and the bottom portion of the housing.

76. A vehicle, comprising the drive assembly according to any one of claims 67 to 75.

77. A drive assembly with a motor end sealed by potting, comprising a housing, a motor controller, a bearing, a rotor, and a stator, wherein

the housing is provided therein with a chamber along an axial direction of the housing; an inner wall of the housing is provided with a partition wall along a radial direction of the housing, the partition wall divides the chamber into a motor mounting chamber and a controller mounting

chamber; the bearing is provided on the partition wall; the rotor is provided in the motor mounting chamber, and is connected with the bearing; the stator is provided in the motor mounting chamber, and is located outside the rotor; and the motor controller is provided in the controller mounting chamber;

the drive assembly further comprises three single-phase terminals; the single-phase terminals each are provided with a first terminal portion at one end in the motor mounting chamber and a second terminal portion at one end in the controller mounting chamber; and the first terminal portions are connected with the stator, and the second terminal portions are connected with the motor controller; and

an end surface of the partition wall facing the motor mounting chamber is filled with potting glue, which covers the first terminal portions.

78. The drive assembly according to claim 77, wherein

projection planes of the three first terminal portions perpendicular to the axial direction are located between a projection plane of the bearing perpendicular to the axial direction and a projection plane of the stator perpendicular to the axial direction.

79. The drive assembly according to claim 78, wherein

the partition wall is provided with a mounting hole and a mounting ring wall extending toward the motor mounting chamber at an outer circumference of the mounting hole; the bearing is provided inside the mounting ring wall; and the three single phase terminals are located at an outer circumference of the mounting ring wall; and

the potting glue is filled between the mounting ring wall, the partition wall and the inner wall of the housing.

80. The drive assembly according to claim 79, wherein

the three single-phase terminals are located at an outer circumferential wall of the mounting ring wall; and the outer circumferential wall of the mounting ring wall is provided with a first collision avoidance groove at each of the three single-phase terminals.

81. The drive assembly according to claim 77, wherein

the partition wall is provided with three run-through connecting holes and three run-through inserting holes; the three connecting holes and the three inserting holes are distributed alternately and evenly at intervals along an outer circumference of the bearing; and one single-phase terminal passes through one connecting hole; and

the potting glue covers the three connecting holes and the three inserting holes.

82. The drive assembly according to claim 81, wherein

a first end wall of the partition wall facing the motor mounting chamber is provided with second collision avoidance grooves, which extends from the respective connecting holes to the stator; and

terminals of the stator are located in the second collision avoidance grooves, and are connected with the first terminal portions, such that the potting glue covers the terminals of the stator.

83. The drive assembly according to claim 77, wherein

the stator comprises a winding; and the potting glue covers an end portion of the winding closer to the partition wall.

84. The drive assembly according to any one of claims 77 to 83, wherein

the drive assembly comprises a three phase terminal block; the three phase terminal block comprises a terminal block body and the three single-phase terminals; the terminal block body is cylindrical; the three single phase terminals each are arranged along an axial direction of the terminal block body, and are arranged at an outer circumference of the terminal block body; the single-phase terminals each are provided with a first terminal portion and a second terminal portion, which are respectively located on two ends along an axial direction of the terminal block body; and the first terminal portions are connected with the stator, and the second terminal portions are connected with the motor controller.

85. The drive assembly according to any one of claims 77 to 83, wherein

an outer wall of the housing is provided with a liquid cooling channel; and the partition wall is provided with partition cooling grooves, each of which communicates with the liquid cooling channel.

86. A vehicle, comprising the drive assembly according to any one of claims 77 to 85.

87. A drive assembly with a partition wall for liquid cooling, comprising a housing, a motor controller, a bearing, a rotor, and a stator, wherein

the housing is provided therein with a chamber along an axial direction of the housing; an inner wall of the housing is provided with the partition wall along a radial direction of the

housing, the partition wall divides the chamber into a motor mounting chamber and a controller mounting chamber; the bearing is provided on the partition wall; the rotor is provided in the motor mounting chamber, and is connected with the bearing; the stator is provided in the motor mounting chamber, and is located outside the rotor; the motor controller is provided in the controller mounting chamber; and the drive assembly further comprises three single-phase terminals, which pass through the partition wall and are connected between the motor controller and the stator; and

an outer wall of the housing is provided with a liquid cooling channel; and the partition wall is provided with a partition cooling groove, which communicates with the liquid cooling channel.

88. The drive assembly according to claim 87, wherein

the partition wall is provided with multiple partition cooling grooves which are distributed in a circumferential direction of the partition wall.

89. The drive assembly according to claim 87, wherein

the partition cooling groove is provided with a guide baffle, which extends inwards.

90. The drive assembly according to claim 89, wherein

an outer end of the partition cooling groove is provided with a mounting groove; and the guide baffle is provided with locking portions, which are located in the mounting groove.

91. The drive assembly according to claim 89, wherein

the guide baffle is provided with a guide groove close to an outer end of the partition cooling groove.

92. The drive assembly according to claim 89, wherein

the guide baffle is provided with a through hole at a center thereof.

93. The drive assembly according to any one of claims 87 to 92, wherein

the outer end of the partition cooling groove has a circumferential length greater than a circumferential length of an inner end of the partition cooling groove.

94. The drive assembly according to any one of claims 87 to 92, wherein

the outer end of the partition cooling groove and an outer end of the liquid cooling channel

are open; and the drive assembly further comprises a casing, which covers the outer wall of the housing, and is located outside the partition cooling groove and the liquid cooling channel.

95. The drive assembly according to claim 94, wherein

the liquid cooling channel comprises a motor cooling groove and a controller cooling groove; the motor cooling groove is located on an outer wall of the motor mounting chamber, and the controller cooling groove is located on an outer wall of the controller mounting chamber; and the partition cooling groove communicates with the motor cooling groove and the controller cooling groove, and are located therebetween.

96. A vehicle, comprising the drive assembly according to any one of claims 87 to 95.

97. A drive assembly with a compact resolver, comprising a housing, a motor controller, a cover, a bearing, a rotor, and a stator, wherein

the housing is provided therein with a chamber along an axial direction of the housing; an inner wall of the housing is provided with a partition wall along a radial direction of the housing, the partition wall divides the chamber into a motor mounting chamber and a controller mounting chamber; the partition wall is provided with a mounting hole, in which the bearing is provided; the rotor is provided in the motor mounting chamber, and is connected with the bearing; the stator is provided in the motor mounting chamber, and is located outside the rotor; and the motor controller is provided in the controller mounting chamber; and

the drive assembly further comprises a resolver; the resolver is provided in the mounting hole, and is located at a side of the bearing closer to the controller mounting chamber; and the resolver is connected with a rotating shaft of the rotor, and is electrically connected with the motor controller.

98. The drive assembly according to claim 97, wherein

the drive assembly further comprises a chamber cover, which covers the mounting hole and is connected with the partition wall; and the chamber cover covers the resolver at a controller mounting chamber side.

99. The drive assembly according to claim 98, wherein

the chamber cover is provided with a signal connection terminal, which is connected with the resolver.

100. The drive assembly according to claim 99, wherein

the motor controller comprises a main circuit board; and the main circuit board is provided with a signal connection socket, which is connected with the signal connection terminal.

101. The drive assembly according to claim 97, wherein

the drive assembly further comprises a three-phase terminal block; the three-phase terminal block is connected with the partition wall, and is located on one end of the mounting hole closer to the controller mounting chamber; the three-phase terminal block comprises a terminal block body and three single-phase terminals; the terminal block body is cylindrical; and the three single-phase terminals each are arranged along an axial direction of the terminal block body, and are arranged at an outer circumference of the terminal block body; and

the three-phase terminal block is provided on one end of the mounting hole in the motor mounting chamber; and the three single-phase terminals pass through the partition wall and are connected between the motor controller and the stator.

102. The drive assembly according to claim 101, wherein

the partition wall is provided with a mounting ring wall extending toward the motor mounting chamber at an outer circumference of the mounting hole; and the bearing is provided inside the mounting ring wall; and

the single-phase terminals each are provided with a first terminal portion and a second terminal portion, which are respectively located on two ends along an axial direction of the terminal block body; and the first terminal portions of the three single-phase terminals are located at an outer circumference of the mounting ring wall.

103. The drive assembly according to claim 102, wherein

the terminal block body is provided therein with a wiring groove; and

on a projection plane of the terminal block body perpendicular to the axial direction, projection planes of the first terminal portions perpendicular to the axial direction are located at an outer circumference of a projection plane of the wiring groove perpendicular to the axial direction, and projection planes of the second terminal portions perpendicular to the axial direction are located inside the projection plane of the wiring groove perpendicular to the axial direction; and

the resolver is located in the wiring groove.

104. The drive assembly according to any one of claims 97 to 103, wherein

~~an outer wall of the housing is provided with a liquid cooling channel; and the partition wall is provided with partition cooling grooves, each of which communicates with the liquid cooling channel.~~

~~105. The drive assembly according to any one of claims 97 to 103, wherein~~

~~an end surface of the partition wall facing the motor mounting chamber is filled with potting glue.~~

~~106. A vehicle, comprising the drive assembly according to any one of claims 97 to 105.~~