

1

1

2 1 1 4

3 1 2 3

4 1 2 3

<

101: , 111 115: 1 5

121 123: 1 3 , 124:

N1 N3: 1 3 , L1a L11:

C1 C3: , 211,311 313,411 413:

, 3 4

(PLC; Power Line Communication)

[kHz]

가 , [MHz]

가

(Impedance)

가 .

3 4
(Neutral Line)

(Core)

,
(Inductance)

가 ,

; 3 2 1 3 ; 1 3 ; 3 1 3 ; 2
 3 , , 1 3 , 4 5 ; 1
 , 1 4 1 3
 , 3 2 4 1
 ; 2 5 1 2 ; 3 1
 3 , 1 2 , 1 3 , 3 4 가
 ,

1 3 ; 2 4 5 7 ; 1 3 ; 1 2 4
 , ; 3 4 5 7 ; 5 7 1 3

11 1, 8 3 ; 2 4 1 3 ; 5 7 3 9
 1 3 ; 1 3

7, 2 4 1, 5
 8

, 1 3 9 11

, 2 4 1 3
 5 7 1 3

3 1 (121 123), (124), 1 5 1 (111 115) 1 (101) 1 (N1 N3)
 3

1 3 (121 123) (124) 110 220
 4 (114) ()가

1 (111) 가 1 (111) 가
 (111) 1 (111) 가 1 (111) 1
 1 (111) 1 3 (121 123) (L1a L1c)

2 (112) 1 (111) 2 (112)
 1 3 (121 123) (L2 L4) (L2 L4) 1
 (111) (L1a L1c)

1 3 (N1 N3) 1 3 (121 123) 2 (112)

3 (113) 1 3 (N1 N3)
 3 (113) 1 3 (121 123) (L5 L7) (L5
 L7) 4 (114) (L8a L8c)

4 (114) 3 (113)

14) , 가 , 4 (114) 가 , 4 (101) (101) 4 (114) (114) 1 3 (121 123) ((L8a L8c)

5 (115) 1 3 (N1 N3) (124) , (L9 L11) 1
 . 5 (115) 1 3 (C1 C3)
 (C1) (L9) , 1 (N1) (124) . 2
 (C2) (L10) , 2 (N2) (124) . 3 (C
 3) (L11) , 3 (N3) (124)

1 (111), 2 (112), 1 3 (N1 N3), 3 (113) 4 (114)

2 1 1 (111) 4 (114) . 2 , 1
 (111) 4 (114) 1 3 (121 123) (211)
 , 1 (111) 4 (114)
 (211)

3 1 2 (112) 3 (113) . 3
 , 2 (112) 3 (113) 1 3 (121 123)
 (311 313) . (311 313) 1 3 (121 123)
 가 . (311 313) (1 101)

4 1 2 (112) 3 (113) . 4
 , 2 (112) 3 (113) 1 3 (121 123)
 (411 413) . (411 413) 1 3 (121 123)
 (L2 L4 L5 L7) 가 가 , 가 가 (L2 L4 L5 L7)
 가 . , 2 (112) 3 (113) 가 , 가
 1 101) 가 .

가

가가

3 4 , (101) 1 5 (111 115)
 , 가 ,
 (111 115) (L1a L11) 가 , 1 5
 (121 124) (101) 가 ,
 .

(57)

1.

1 3 ;

, 1 ;

1 , 2 ;

2 , 1 3 1 3 ;

1 3 , 3 ;

3 ,

4 ;

1 3 , 5

2.

1 , 1 4 1 3

3.

2 , 2 1

4.

2 , 3 4

5.

1 , 5

1 1 ;

2 2 ;

3 3

6.

1 , 1 , 2 , 1 3 , 3 4 가

7.

1 3 ;

1 ;

1 3

1 2 4 , ;

1 3

2 4 5 7 , ;

1 3

5 7 1 3 , 8 ;

2 4 1 3 ; 5 7 , 1 3

1 3 1 3 ;

1 3 9 11

8.

7 , 2 4 1

9.

7 , 5 7 8

10.

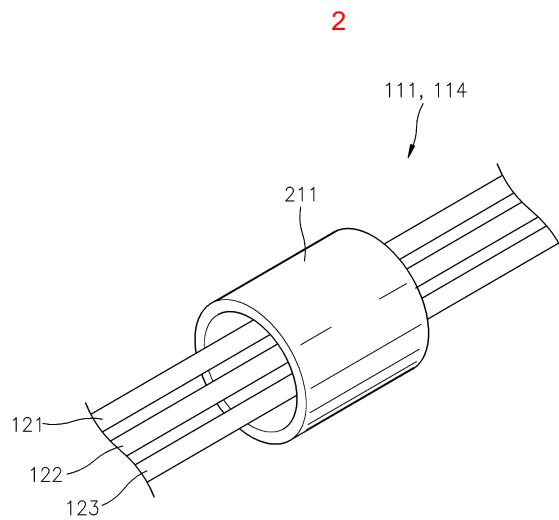
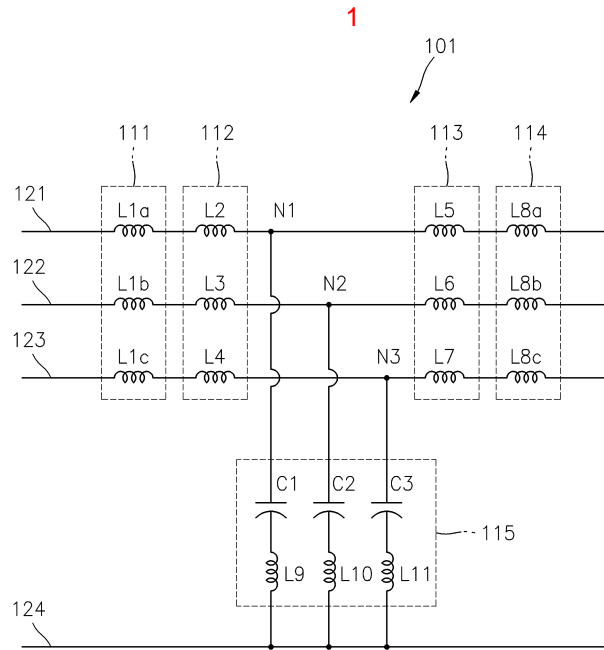
7 , 1 3 9 11

11.

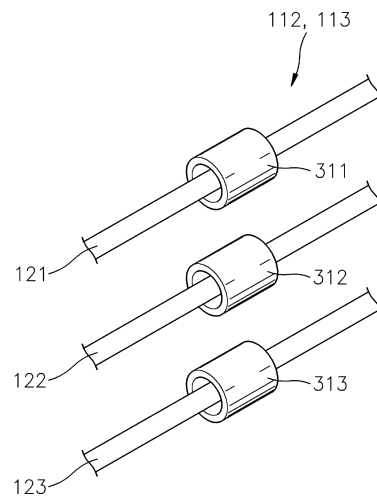
7 , 2 4 1 3

12.

7 , 5 7 1 3



3



4

