

(19)  
(12)

(KR)  
(A)

(51) 。 Int. Cl.<sup>7</sup>  
H04B 3/54

(11)  
(43)

2003-0053735  
2003 07 02

(21) 10-2001-0083695  
(22) 2001 12 22

(71) 4 873-29 4

(72) 329-1 105 1501

4 834-11

3 가 608

3 505

(74)

:

(54) 가

가

가

가

;

;

IC

가

4

PLC, , 가

1a 1b  
 ,  
 2a X-10 ,  
 2b 2a ,  
 3 가 (HA :  
 Home Automation) ,  
 4 가 ,  
 5 가 ,  
 6 가 ,  
 7 가 .

301 : 302 :  
 303, 530 : 가 304 : 가  
 305 : 306 :  
 300, 510 : 401 : IC  
 403 : 405 :  
 407 : 409 :  
 411 : 가 413 :  
 415 : 417 :  
 419 :  
 520 :

가 가 , ,  
 가



1a 1b

1a 1b 가 , ' ' , '0' , '1' , ,

'( : 10-2000-002198) '  
'( : 10-1999-053820)

'( : 10-2001-076335)

X-10

2a X-10 , 2b 2a

, 2a , X-10 'Start Code'가 2 , 'House Code'가 4  
, 'Number Code' 'Function Code'가 5  
, 'Start Code' 1110 , 1/2  
1 가 L1 , 1 0 가 , L0 , 0 1  
2b  
, L1 L0

가 가 '1', '2' , ' 1(L1)'  
가 가 1 0 , ' 0(L0)'  
가

0 1

, 2b , 'Start Code' '1110', 'House Code' 'L0,L0,L0,L1', 'Number/Function Code' 'L0,L0  
,L0,L1,L1'

가

3 가  
(HA : Home Automation)

가 (303), (300) 가 (304) (301), (302),  
(300) (305) 가  
(300) PSTN 가  
(301, 302, 303, 304, 305, 306)

3 , (300) 가 , 가  
, 가 (306)가 가  
(300) , 가 , 가  
가 가 ARS

(306)가

, FM

3

가

(304)가

가

(303)

4  
가

가

IC(401), PLC(Power Line Communication :

)

(413), (403)

(415), (405),

(417)

(407), (409),

가 (419)

(411),

(407)

(403) (405)

(405) PLC

DC

IC(40

1)

(403)

IC(401)  
가 220V

(409)

가

(411)

가

(419)

(409)

(417)

LED

가

(409)

가  
IC(401)  
(409)

IC(401)

가

IC(401)

(409)

IC(401)

(Trouble)

,가

가

IC(401)

(409) 가

IC(401)

(409)  
(Emergency)

,가  
,가

IC(401)가

5

'( : 10-2001-0076335)

5

(520)

(510) PSTN

가  
PC

가가

(510)

(510) DTMF

가

(530)가  
(530)

IC

가



;

IC

가

2.

1

DC

가

3.

1

가

4.

1

가

가

5.

1

가

가

가

6.

1

가

(Trouble)

가

IC

IC

가

7.

1

가

가

IC

(Emergency)

가

IC  
가

8.

7

IC가

가

,가

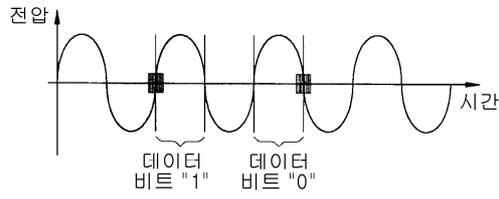
9.

1

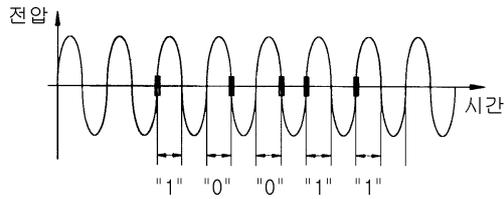
IC

가 .

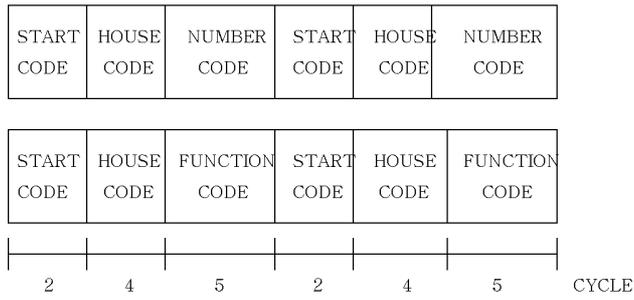
1a



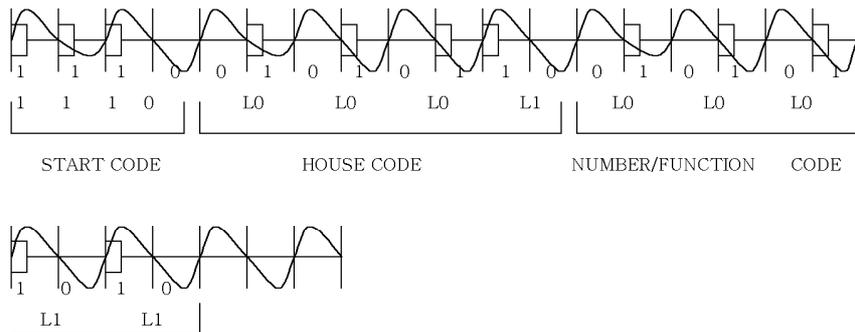
1b



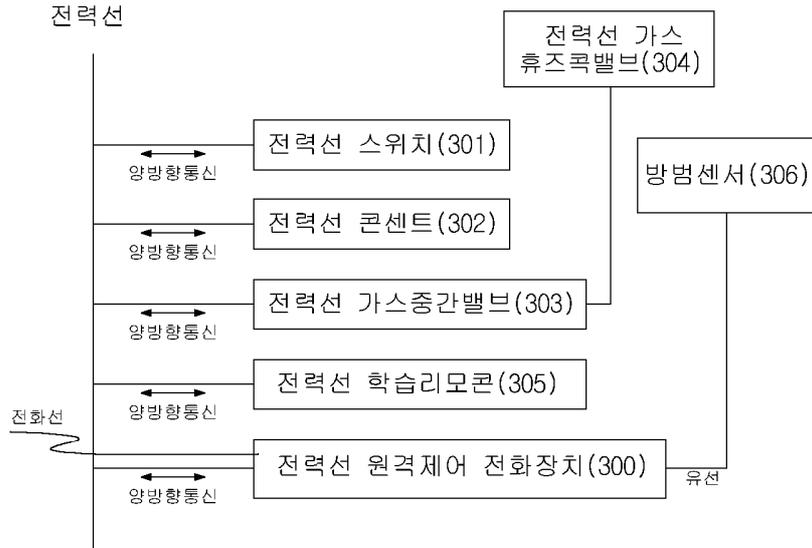
2a



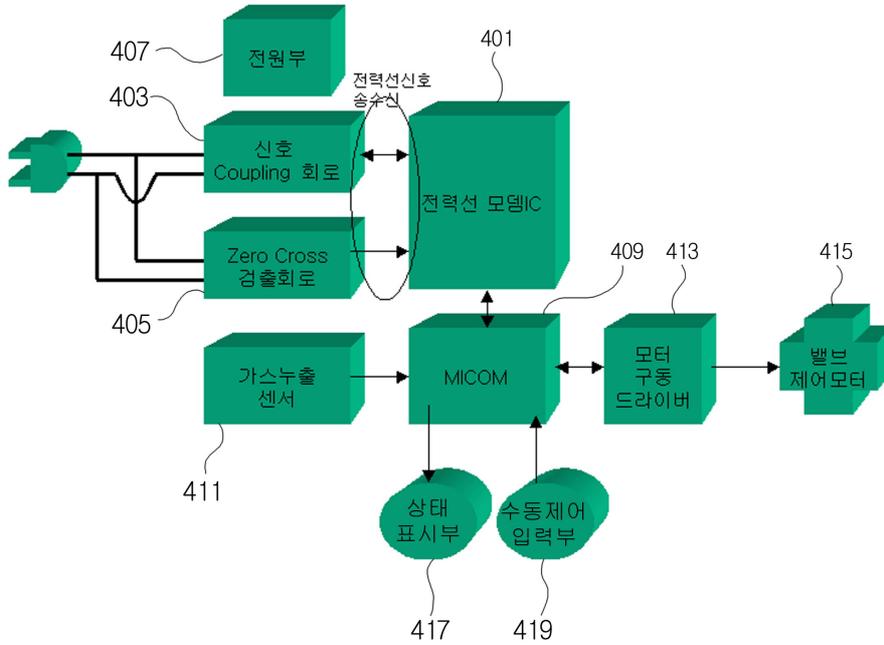
2b

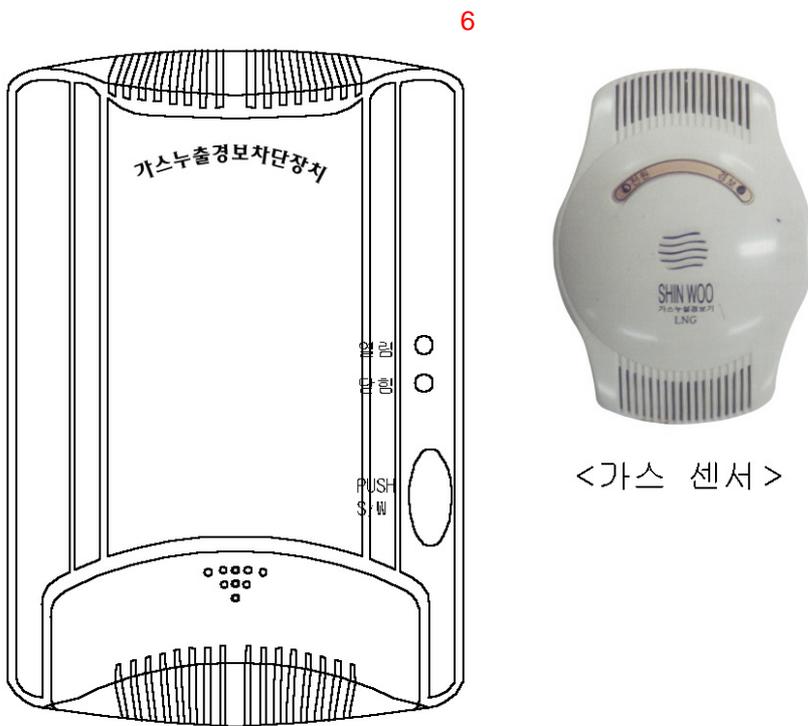
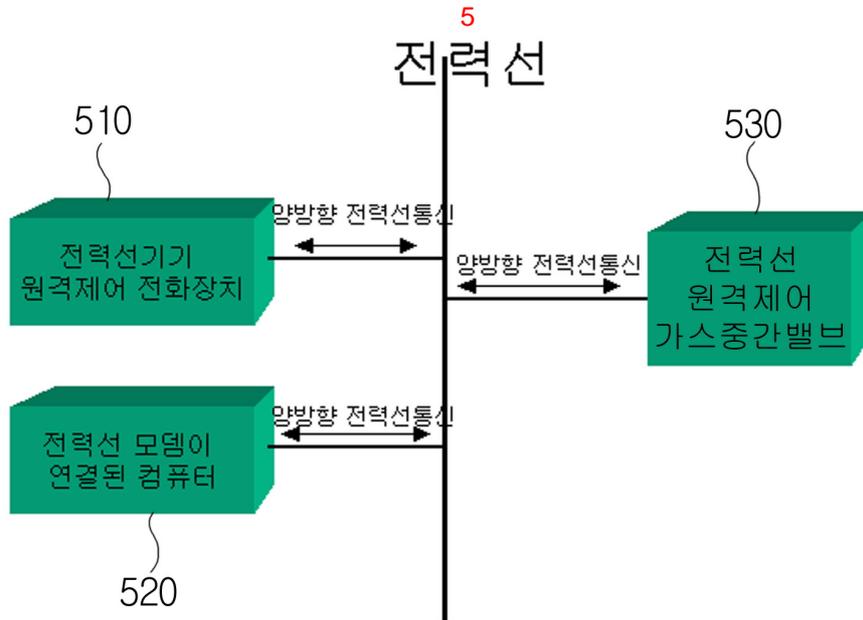


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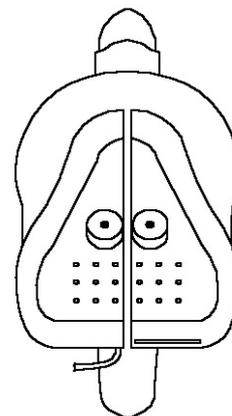
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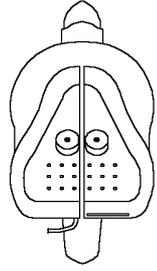
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<밸브 제어부>

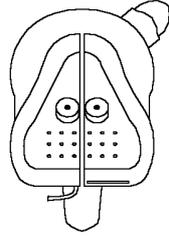


<밸브 구동부>

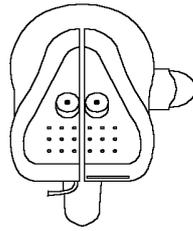
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<밸브 열린상태>



<잠기는 동작중>



<잠긴상태>