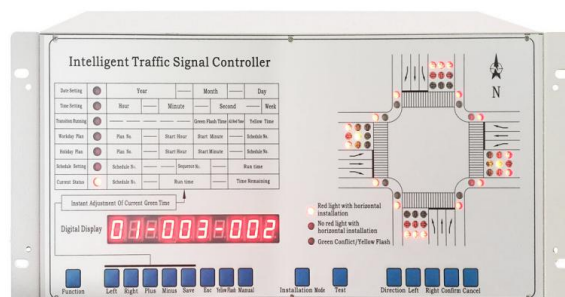


Controlador de semáforos de período fijo

Modelo: FM10D-CN

Manual de instrucciones



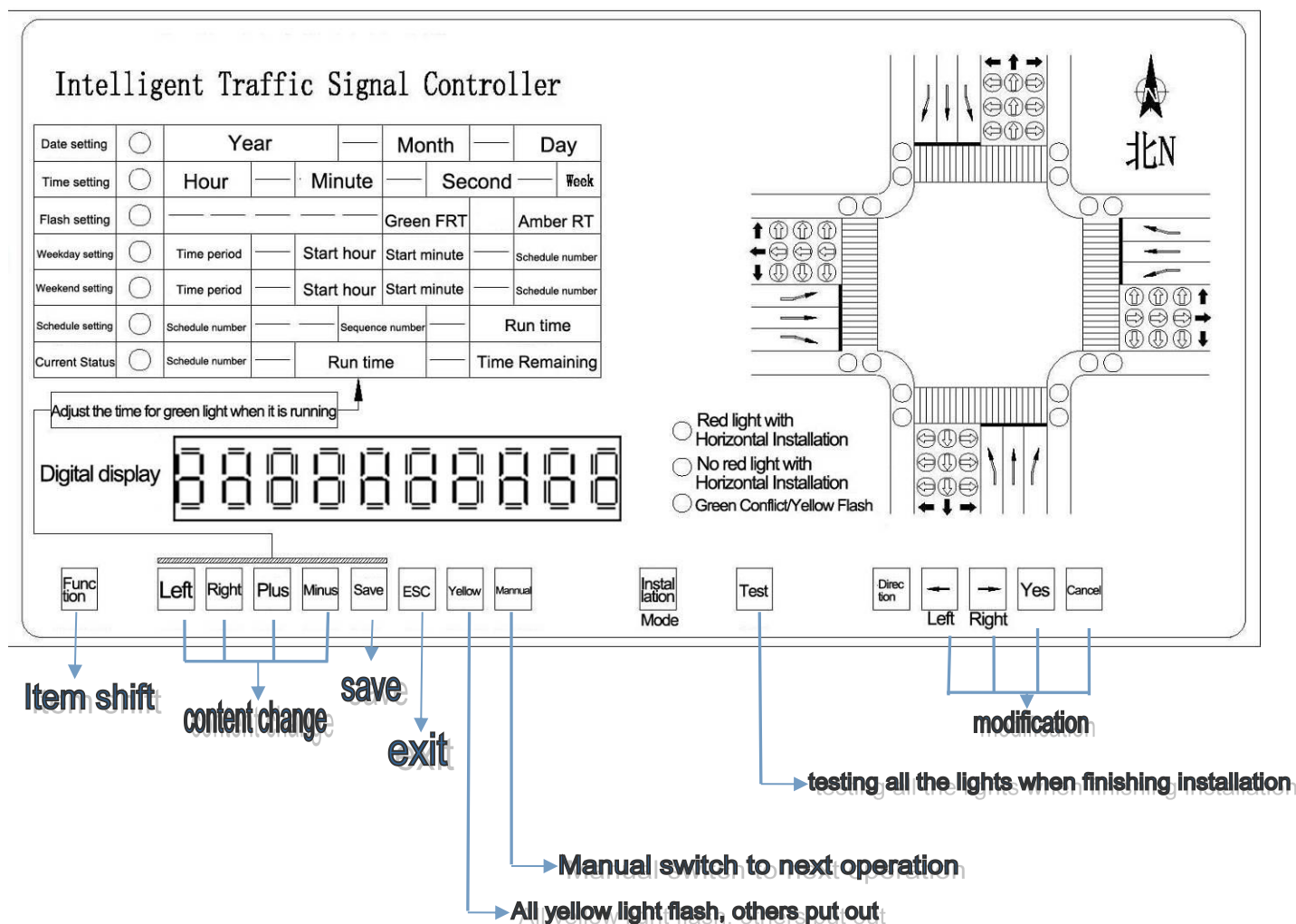
1. Funciones del producto y características técnicas:

- 1) Sistema de control central integrado para garantizar la estabilidad del trabajo
- 2) 2*48 períodos de trabajo para configuración de días laborables y festivos
- 3) Fácil mantenimiento y ampliación de funciones gracias a su diseño modular
- 4) Entrada CA 110 V y CA 220 V
- 5) Se puede preconfigurar el parpadeo amarillo o el apagado
- 6) 32 menús de trabajo utilizados para cualquier período (se pueden configurar entre 1 y 30 números según elección)
- 7) Se puede configurar o ajustar el estado de parpadeo, la frecuencia y el tiempo de cada luz de señal verde
- 8) Puede modificar el ritmo actual del tiempo de funcionamiento en el estado de funcionamiento de forma inmediata
- 9) Parpadeo rojo completo, amarillo, manual paso a paso, salto en el manual
- 10) La parte de salida adopta la tecnología de prueba cero, el cambio de estado se realiza bajo el interruptor de estado cero en la comunicación, lo que hace que el accionamiento sea más seguro y fiable
- 11) Cada salida tiene un circuito de protección contra rayos independiente
- 12) Equipado con capacidades de prueba de instalación y se puede utilizar para comprobar si cada luz está instalada correctamente
- 13) Se pueden utilizar 30 menús para copia de seguridad y recuperación

2. Parámetros técnicos:

Elementos	Parámetros técnicos
Estándar ejecutivo	GB25280-2010
Voltaje de trabajo	AC110V/220V±20%
Frecuencia de trabajo	47Hz~63Hz
Potencia sin carga	≤15W
Potencia de carga nominal de todo el controlador	2200W
Secuencia de funcionamiento de semáforos para vehículos	Todo rojo (se puede configurar) → luz verde → destello verde (se puede configurar) → luz amarilla → luz roja
Secuencia de funcionamiento de señales para peatones	Todo rojo (se puede configurar) → luz verde → destello verde (se puede configurar) → luz roja
Corriente de accionamiento nominal en cada sentido	3A
Sobrecorriente en cada sentido	≥100A
Canales de salida independientes máximos	16
Fase independiente máxima	16
Menús ajustables	32
Número de menús de configuración	30
El mayor número de cada menú	24
El mayor número de períodos de trabajo en cada día	24
Tiempo de funcionamiento en cada paso	1~255
Tiempo de luz roja completa	0~5S
Tiempo de luz amarilla	1~9S
Tiempo de parpadeo verde	0~9S
Rango de temperatura de funcionamiento	-40℃~+80℃
Humedad relativa	<95%
Hora de ahorro de configuración (se cortó la electricidad)	10 años
Error de tiempo	Error/año<2,5 minutos
Dimensiones del gabinete interior	L425mm *W220mm *H250mm
Dimensiones del gabinete exterior	L550mm *W400mm* H950mm

3. Operation Panel button function introduction



4. Setting Instructions

4.1 Date Setting

Press Function button to date setting and the digital tube will display the current date. Press the Plus and Minus, the cursor will be moved to the digital which you want to modify. Press SAVE to save the plane after the completion of the modified, if press Exist, the current setting cannot be saved.

4.2 Time Setting:

Press Function to time setting. When the indicator light is on, the digital tube will display the current time (Hour, minute, second, day of the week).

Press the Plus and Minus to change the flashing digital, Press SAVE to save the plane after the completion of the modified, if press Exist, the current setting cannot be saved.

4.3 Transition state parameter Setting

Press Function to enter into the transition state parameter Settings. Here we can set the green flashing time, the transition time of full red and yellow, after the indicator light is on, The digital tube will display the current flash time. Press the Plus and Minus to modify the flashing time, Press SAVE to save the setting after the completion of the modified, if press Exist, the current setting cannot be saved.

Note: we can set the lights expected to be on the right simulated intersection.

4.4 Weekday scheme setting

Press Function button to enter the weekday scheme settings, The running time scheme can be set from every Monday to Friday. We can

choose any schedule number that is set by “schedule setting”. 48 time periods can be set every day. After the indicator is on, the digits tube will display the current flashing time. We can modify the flashing digital through the Plus and Minus button, and press the left and right button can move the cursor to modify the digital.

Note : we can't modify the setting time at the first period time, when the time was set to 24:00, that means the period time has been finished. After modification, , press the save button to save it. If you press the Exist button, the current setting won't be saved. Press the function key to enter the next state of holidays scheme settings.

4.5 Weekend scheme settings

Press the function button to enter the holidays scheme settings, the period time scheme can be set from Saturday and Sunday (you can set up to 48 period time at most) after the indicator lightens, The digits tube will display the current flashing time. We can modify the flashing digital through the Plus and Minus button, and press the left and right button can move the cursor to modify the digital. Note : we can't modify the setting time at the first period time, when the time was set to 24:00, that means the period time has been finished. After modification, , press the save button to save it. If you press the Exist button to exit current settings (non-preservation), Press the function key to enter the next state of holidays scheme settings.

4.6 Schedule Setting

Press the Function button to enter the schedule setting. The digits tube will be displays the digital presentation from left to right. Menu number (we can set up to 30 sets programs at most). Step (set up to 24 steps at most), and the current steps duration, when setting this items, we can set the green light for performed requirements as per the right side of simulated intersection, Direction, left and right are choose to the corresponding light, Yes means selected the light, By setting the current time step continuously, which can be set the running time for traffic signal light, after finished that, press save key to enter the next step settings by automatically, the same setting methods as above, and so on. When the steps time is set up to 0, press save key, and the current menu will be automatic end, then it will be back to the current operating state.

After changed the menu, we can modify the other menu, Please kindly see the notes as below,

- 1, If the traffic signal light have conflict on release, such as green conflict /yellow flashing lights at this time, which can't be saved, you need to choose the release traffic signal light again.
- 2, The total of menu number is 32 , you can set up it by yourself from 1-30, and the number of 31 is fixed yellow flashing time, the Number of 32 menu means the off menu, while the number 31 and number 32 menu can be exchanged between weekday scheme settings and holidays scheme settings.

The first step:

Press the left and right buttons to modify the digital as your needs, and press the plus and minus button to choose any digital what you want. For example, you can change the original set time 9s to 8s or others. After set as the picture (the digital indicate the numbers), we can move on next setup.

1) to set Schedule 01 as follows

Intelligent Traffic Signal Controller

Date setting	☐	Year	—	Month	—	Day
Time setting	☐	Hour	—	Minute	—	Second
Flash setting	☐			Green FRT	Amber RT	
Weekday setting	☐	Time period	—	Start hour	Start minute	Schedule number
Weekend setting	☐	Time period	—	Start hour	Start minute	Schedule number
Schedule setting	☒	schedule number		sequence number		Run time
Current Status	☐	Schedule number		Run time		Time Remaining

Adjust the time for green light when it is running

Digital display 01--01-008

Function | Left | Right | Plus | Minus | Save | ESC | Yellow | Manual

Installation Mode | Test

Direction | ← | → | Yes | Cancel

Left Right

First step:
Press the left and right buttons to modify the digital as your needs, and press the plus and minus button to choose any digital what you want. Forexample, you can change the original setted time 9s to 8s or others. After setted as the picture (the digital indicate the numbers), we can move on next setup

Third step:
After finished the second step for green light release state settings, please refer to the picture , then pressing the save key. And the series number will be add 1 by automatically. Then move on next step.

Second step:
Through the direction keys on the panel to choose east, south ,west and north, and pressing the ←→ button to choose the direction for green light, press the YES or No key to modify whether the green light lighten on or not . but just need to set up the green light

Intelligent Traffic Signal Controller

Date setting	☐	Year	—	Month	—	Day
Time setting	☐	Hour	—	Minute	—	Second
Flash setting	☐			Green FRT	Amber RT	
Weekday setting	☐	Time period	—	Start hour	Start minute	Schedule number
Weekend setting	☐	Time period	—	Start hour	Start minute	Schedule number
Schedule setting	☒	schedule number		sequence number		Run time
Current Status	☐	Schedule number		Run time		Time Remaining

Adjust the time for green light when it is running

Digital display 01--02-008

Function | Left | Right | Plus | Minus | Save | ESC | Yellow | Manual

Installation Mode | Test

Direction | ← | → | Yes | Cancel

Left Right

Intelligent Traffic Signal Controller

Date setting	☐	Year	—	Month	—	Day
Time setting	☐	Hour	—	Minute	—	Second — Week
Flash setting	☐	Green FRT		Amber RT		
Weekday setting	☐	Time period	—	Start hour	Start minute	Schedule number
Weekend setting	☐	Time period	—	Start hour	Start minute	Schedule number
Schedule setting	☒	Schedule number	—	Sequence number	Run time	
Current Status	☐	Schedule number	—	Run time	Time Remaining	

Adjust the time for green light when it is running

Digital display

01--03-008

Function

Left

Right

Plus

Minus

Save

ESC

Yellow

Manual

Installation
Mode

Test

Direction

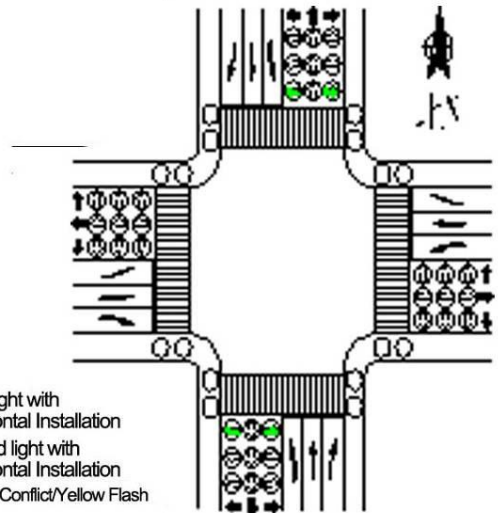
Left

Right

Yes

Cancel

- ☐ Red light with Horizontal Installation
- ☐ No red light with Horizontal Installation
- ☐ Green Conflict/Yellow Flash



Intelligent Traffic Signal Controller

Date setting	☐	Year	—	Month	—	Day
Time setting	☐	Hour	—	Minute	—	Second — Week
Flash setting	☐	Green FRT		Amber RT		
Weekday setting	☐	Time period	—	Start hour	Start minute	Schedule number
Weekend setting	☐	Time period	—	Start hour	Start minute	Schedule number
Schedule setting	☒	Schedule number	—	Sequence number	Run time	
Current Status	☐	Schedule number	—	Run time	Time Remaining	

Adjust the time for green light when it is running

Digital display

01--04-008

Function

Left

Right

Plus

Minus

Save

ESC

Yellow

Manual

Installation
Mode

Test

Direction

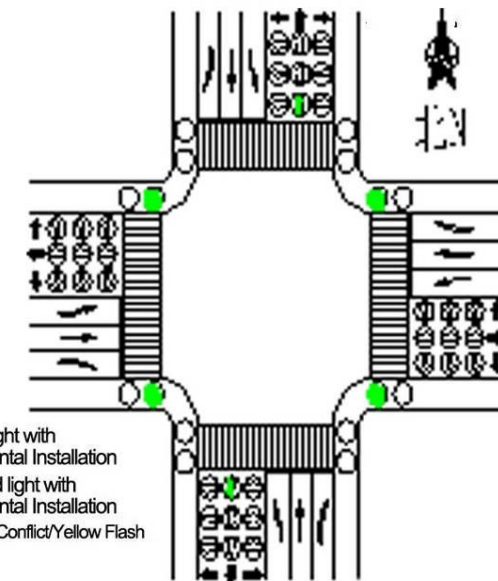
Left

Right

Yes

Cancel

- ☐ Red light with Horizontal Installation
- ☐ No red light with Horizontal Installation
- ☐ Green Conflict/Yellow Flash



2) To set Schedule 02 as follows

Intelligent Traffic Signal Controller

Data setting	☐	Year	—	Month	—	Day
Time setting	☐	Hour	—	Minute	—	Second
Flash setting	☐			Green FRT	Amber RT	
Weekday setting	☐	Time period	—	Start hour	Start minute	Schedule number
Weekend setting	☐	Time period	—	Start hour	Start minute	Schedule number
Subroute setting	☒	sequence number		sequence number	Run time	
Current Status	☐	Schedule number	—	Run time	Time Remaining	

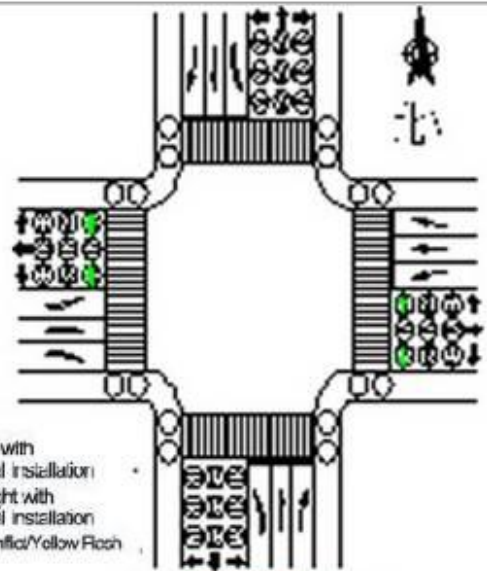
Adjust the time for green light when it is running

Digital display 02--01-010

Function Left Right Plus Minus Save ESC Yellow Manual

Installation Mode Test

Direction Left Right Yes Cancel



Intelligent Traffic Signal Controller

Data setting	☐	Year	—	Month	—	Day
Time setting	☐	Hour	—	Minute	—	Second
Flash setting	☐			Green FRT	Amber RT	
Weekday setting	☐	Time period	—	Start hour	Start minute	Schedule number
Weekend setting	☐	Time period	—	Start hour	Start minute	Schedule number
Subroute setting	☒	sequence number		sequence number	Run time	
Current Status	☐	Schedule number	—	Run time	Time Remaining	

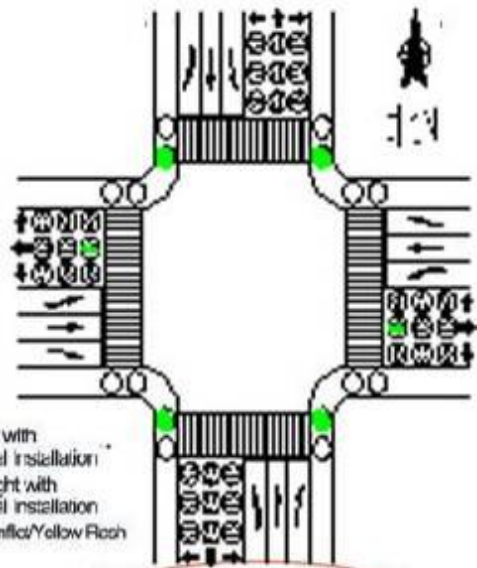
Adjust the time for green light when it is running

Digital display 02--02-010

Function Left Right Plus Minus Save ESC Yellow Manual

Installation Mode Test

Direction Left Right Yes Cancel



Intelligent Traffic Signal Controller

Date setting	☐	Year	Month	Day
Time setting	☐	Hour	Minute	Second
Flash setting	☐	Green FRT	Amber RT	
Weekday setting	☐	Time period	Start hour	Start minute
Weekend setting	☐	Time period	Start hour	Start minute
Schedule setting	☒	schedule number	sequence number	Run time
Current Status	☐	Schedule number	Run time	Time Remaining

Adjust the time for green light when it is running

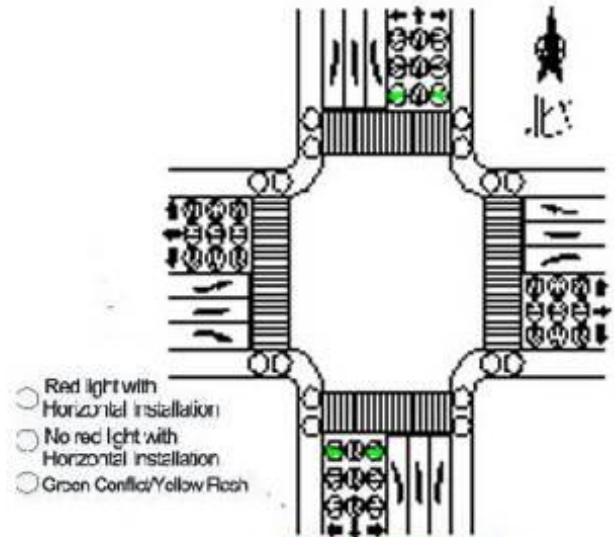
Digital display 02--03-010

function Left Right Plus Minus Save ESC Yellow Manual

Installation Mode

Test

Direction Left Right Yes Cancel



Intelligent Traffic Signal Controller

Date setting	☐	Year	Month	Day
Time setting	☐	Hour	Minute	Second
Flash setting	☐	Green FRT	Amber RT	
Weekday setting	☐	Time period	Start hour	Start minute
Weekend setting	☐	Time period	Start hour	Start minute
Schedule setting	☒	schedule number	sequence number	Run time
Current Status	☐	Schedule number	Run time	Time Remaining

Adjust the time for green light when it is running

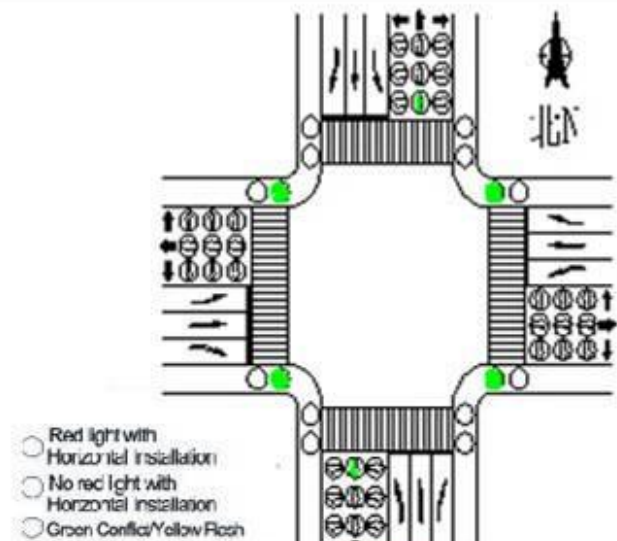
Digital display 02--04-010

function Left Right Plus Minus Save ESC Yellow Manual

Installation Mode

Test

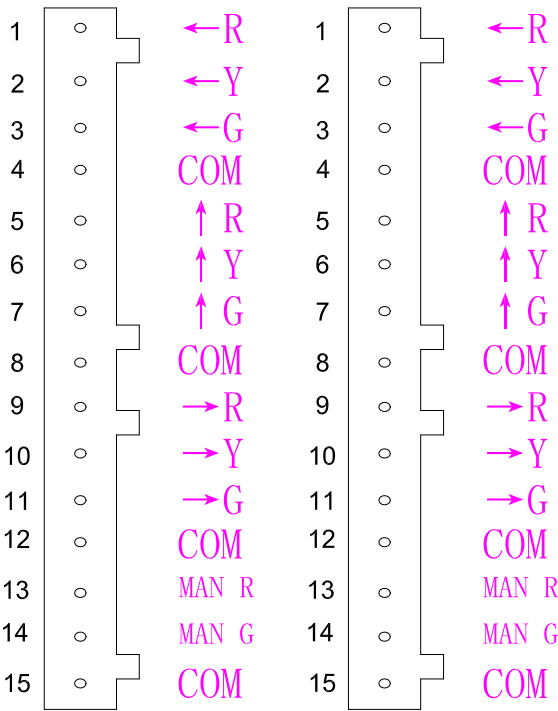
Direction Left Right Yes Cancel



5. Solutions to Common Problems

Item	Failure phenomena	Solutions scheme
1	The controller doesn't work and has no power .	The fuse may be cut off. Users need to use a fuse of 5A or main fuse of 10A to change it. Main fuse is in the power socket.
2	The signal lights in the road intersection keep flashing amber and it is because of setting.	The reason may lie in the phase setting, and there happen green conflicts (the panel green conflict indicated light). You need to reset the phase program again.

6. Output port corresponding graph :



The digital returns the interface definition (notes: The same definition for 4pcs driver interface.)

Item	1	2	3	4	5	6	7
Description	Turn Left Red light	Left turn yellow light	Turn Left green light	Common Port	Go Straight Red light	Go straight Yellow light	Go straight green light
8	9	10	11	12	13	14	15
Common port	No operation	No operation	No operation	Common Port	Pedestrian red light	Pedestrian green light	Common Port

Acerca de la base del gabinete externo del controlador:

Es mejor elegir un lugar alto para evitar que el agua se desborde debido a las fuertes lluvias.
Es mejor elegir lugares con sombra para evitar que entre demasiado sol.
El gabinete exterior debe estar a 1,5 metros de la carretera en caso de colisión de vehículos.
Asegúrese de que haya suficiente espacio alrededor para abrir fácilmente el gabinete exterior y el cableado.
Después de configurar todos los parámetros y conectar todos los cables, asegúrese de sellar la parte inferior del gabinete con pegamento de espuma para evitar que entren humedad y pequeños animales.
Asegúrese de mantener el gabinete conectado a tierra de manera confiable.

