



Description of the dimming output of CIS charge controller

1 Dimming Interface

High impedance, linear voltage output

Impedance: 5.7 kOhm || 100 nF

Voltage relative to battery negative: 0 V ... 10 V +/- 5%

2 Dimming Output Voltage

Output voltage is relative to dimming setting.

0 % =>	0.0 V
10 % =>	1.0 V
20 % =>	2.0 V
30 % =>	3.0 V
40 % =>	4.0 V
50 % =>	5.0 V
60 % =>	6.0 V
70 % =>	7.0 V
80 % =>	8.0 V
90 % =>	9.0 V
100 % =>	10.0 V

3 Behaviour

3.1 Timer

This settings can be done for load and dimming output independently.

Setting	Behaviour
Night Light Off	On (100%)
Dusk to Dawn	Off (dim) at day, on (100%) at night
Morning / Evening hours	Off (dim) at day, on (100%) while evening, off (dim) at night, on (100%) at morning

For further details see CU / CIS manual

3.2 LVD / SOC

This settings can be done for load and dimming output independently.

An LVD / SOC event occurs, if the battery voltage or state of charge goes below the chosen value.

If an LVD / SOC event occurs while the Load is switched on, it switches off and will stay off until the battery voltage rises above 12.8 V.

If an LVD / SOC event occurs while DIM is on 100%, it switches to the chosen dimming level and stay there until the battery voltage rises above 12.8 V.

For further details see CU / CIS manual.

3.3 Dimming Output Logic

If Load is switched off, dimming output is 0%

If Load is on, dimming is controlled by the second timer / LVD

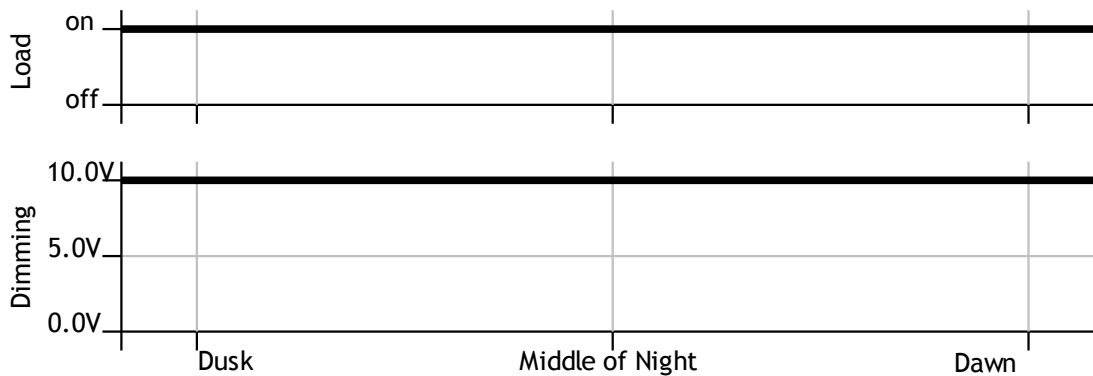
4 Examples

4.1 Nightlight off

Settings:

L1		L2/DIM		Test	
OFF		OFF		Send	
Evening (h)		Evening (h)			
OFF		OFF			
Morning (h)		Morning (h)		Timer Reference	
4		4		L1 L2	
SOC LVD (V)		SOC LVD (V)		Middle of Night	
8		50		Dusk & Dawn	
Night Det. (V)		Dimming (%)		Flooded A	
				Sealed B	

Behaviour:

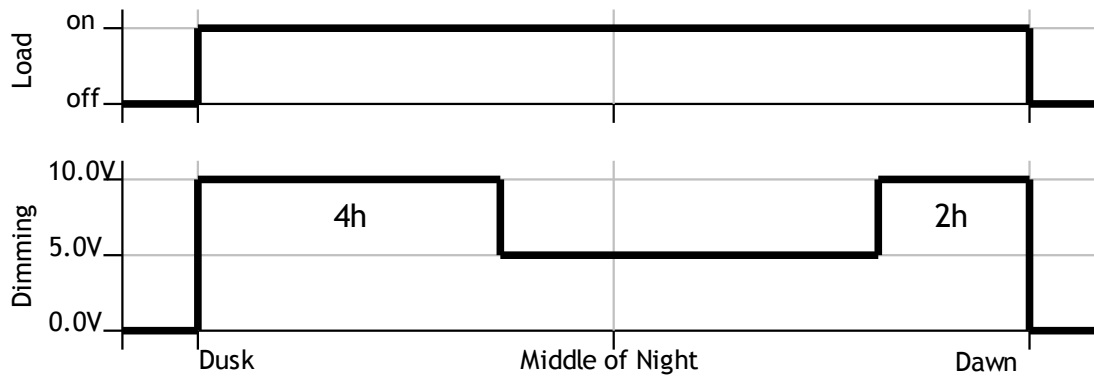


4.2 Nightlight 1

Settings:



L1		L2/DIM		Test	Send
OFF		4			
Evening (h)		Evening (h)			
D2D		2			
Morning (h)		Morning (h)			
4		4			
SOC	LVD (V)	SOC	LVD (V)	Timer Reference L1 L2 Middle of Night 	
8	50	Dusk & Dawn		Flooded A 	
Night Det. (V)		Dimming (%)		Sealed B 	

Behaviour:











4.3 Nightlight 2

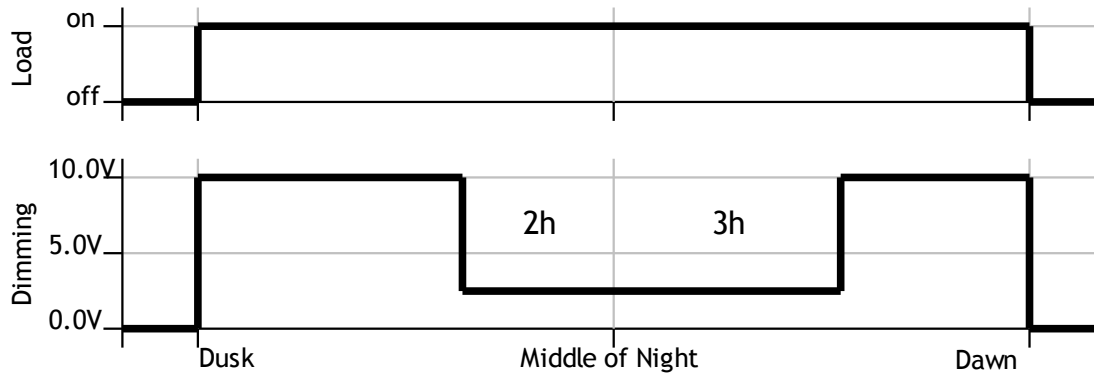
Settings:

L1		L2/DIM		 
OFF		2		
Evening (h)		Evening (h)		
D2D		3		
Morning (h)		Morning (h)		
4		4		
SOC LVD (V)		SOC LVD (V)		
8		20		
Night Det. (V)		Dimming (%)		

Timer Reference



L1	L2
	
Middle of Night	
	
Dusk & Dawn	
Flooded	A
	
Sealed	B
	

Behaviour:

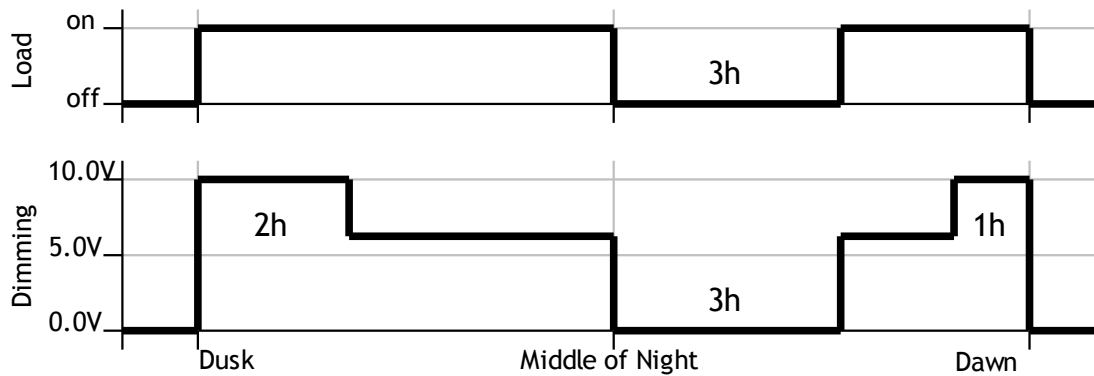


4.4 Nightlight 3

Settings:


L1		L2/DIM		Test	Send
OFF		2			
Evening (h)		Evening (h)			
3		1			
Morning (h)		Morning (h)			
4		4			
SOC	LVD (V)	SOC	LVD (V)	Timer Reference L1 L2 Middle of Night 	
8		70		Flooded A 	
Night Det. (V)		Dimming (%)			

Behaviour:

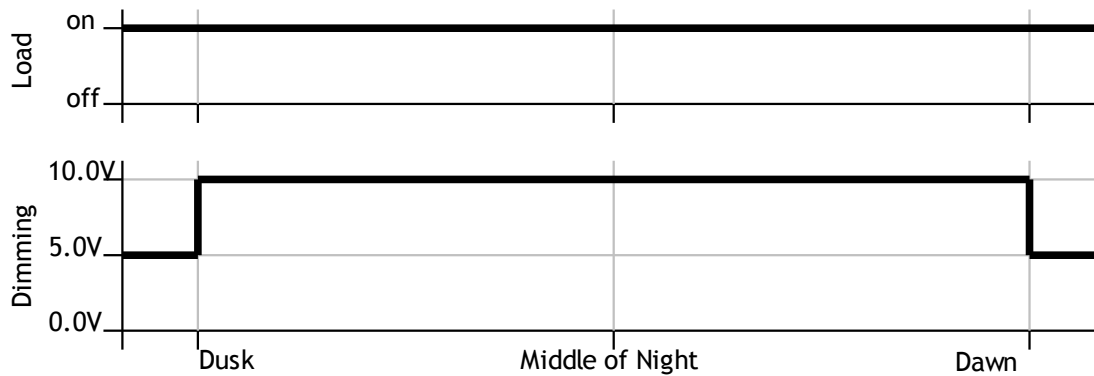


4.5 Nightlight 4

Settings:

L1		L2/DIM			
OFF		OFF		Test	
Evening (h)		Evening (h)		Send	
OFF		D2D		Timer Reference L1 L2 Middle of Night 	
Morning (h)		Morning (h)			
4		4			
SOC LVD (V)		SOC LVD (V)			
8		50		Flooded A	
Night Det. (V)		Dimming (%)		Sealed B	

Behaviour:



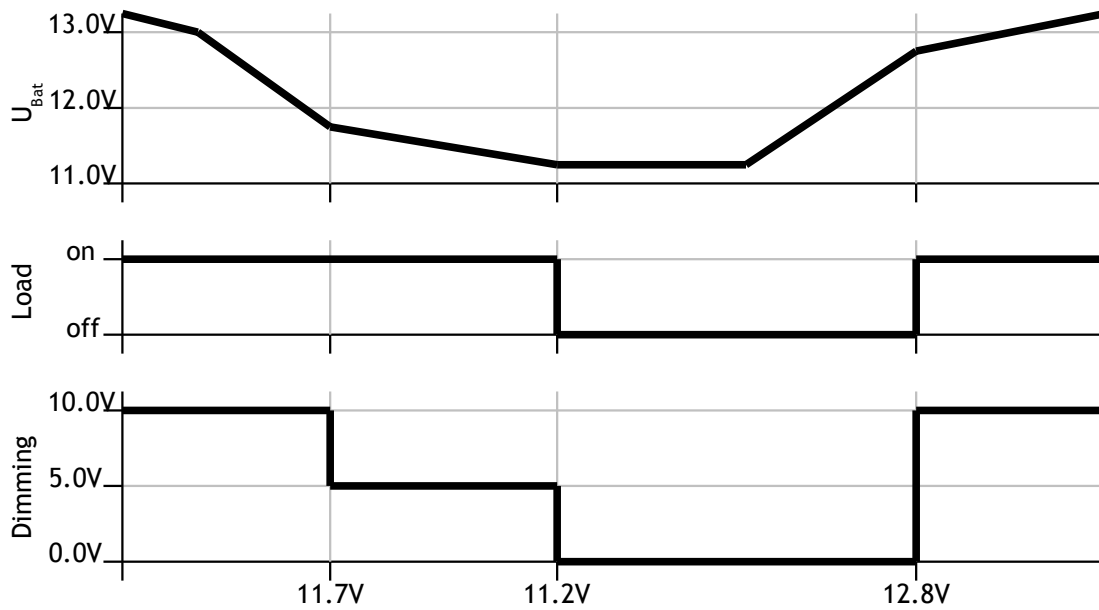
4.6 LVD

Settings:

L1		L2/DIM		Test	Send
OFF	OFF	OFF	OFF		
Evening (h)	Evening (h)	Evening (h)	Evening (h)		
OFF	OFF	OFF	OFF		
Morning (h)	Morning (h)	Morning (h)	Morning (h)		
11.2	11.7	11.2	11.7		
SOC LVD (V)	SOC LVD (V)	SOC LVD (V)	SOC LVD (V)		
8	50	8	50		
Night Det. (V)	Dimming (%)	Night Det. (V)	Dimming (%)		

Timer Reference	
L1	L2
Middle of Night	Middle of Night
Dusk & Dawn	Dusk & Dawn
Flooded	A
Sealed	B

Behaviour:



4.7 Nightlight / LVD

Settings:

L1		L2/DIM		<input type="button" value="Test"/> <input type="button" value="Send"/>
OFF		1		
Evening (h)		Evening (h)		
D2D		8		
Morning (h)		Morning (h)		
11.2		11.7		
SOC LVD (V)		SOC LVD (V)		
8		50		
Night Det. (V)		Dimming (%)		

Timer Reference

L1	L2
Middle of Night	
<input type="checkbox"/>	<input type="checkbox"/>
Dusk & Dawn	
<input type="checkbox"/>	<input type="checkbox"/>
Flooded	A
<input type="checkbox"/>	<input type="checkbox"/>
Sealed	B

Behaviour:

