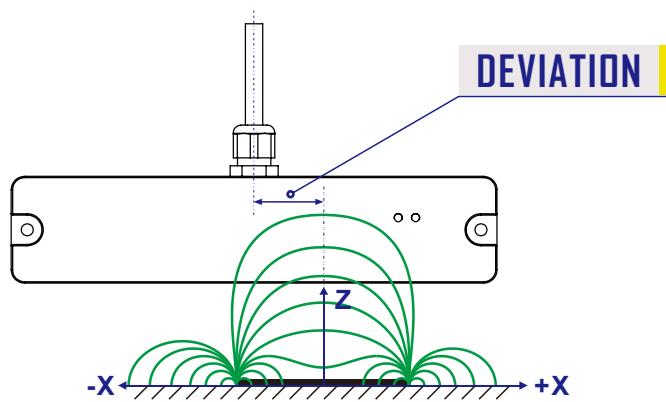




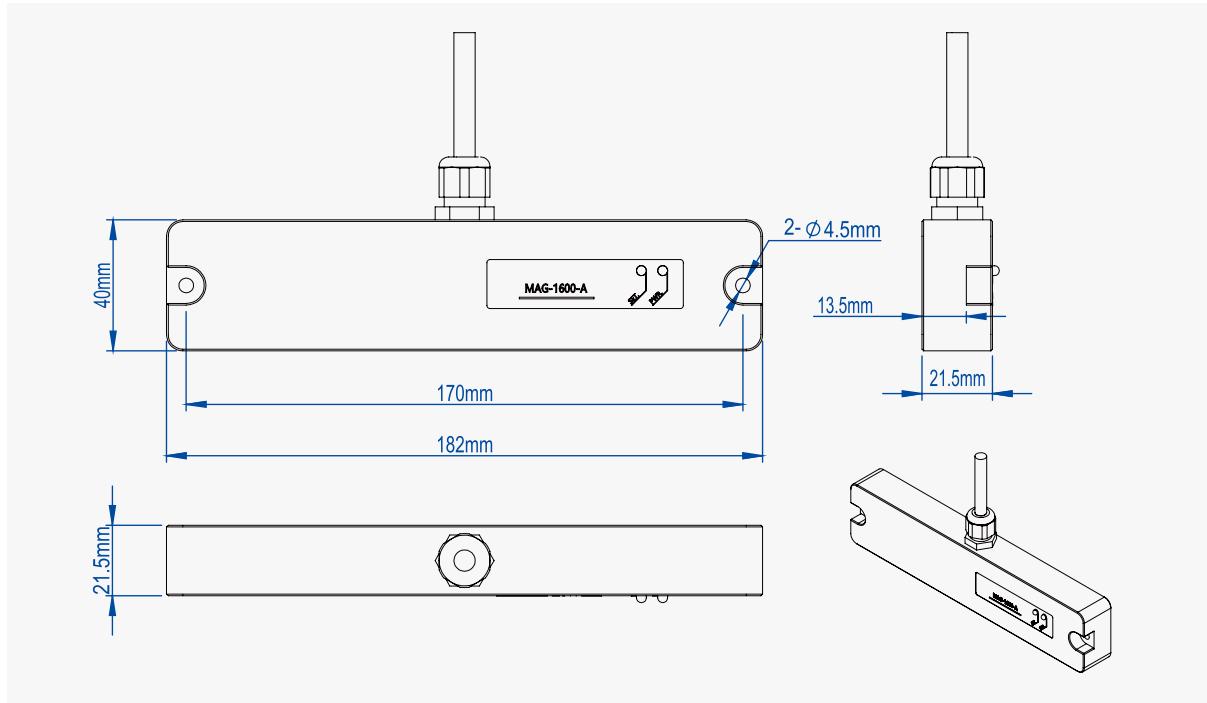
MAG-1600-A-User Manual

Function

This product can detect the intensity distribution of the magnetic field along the horizontal direction and accurately calculate the deviation between the center of the magnetic field by high-order fitting. The deviation information can be used to guide the AGV.

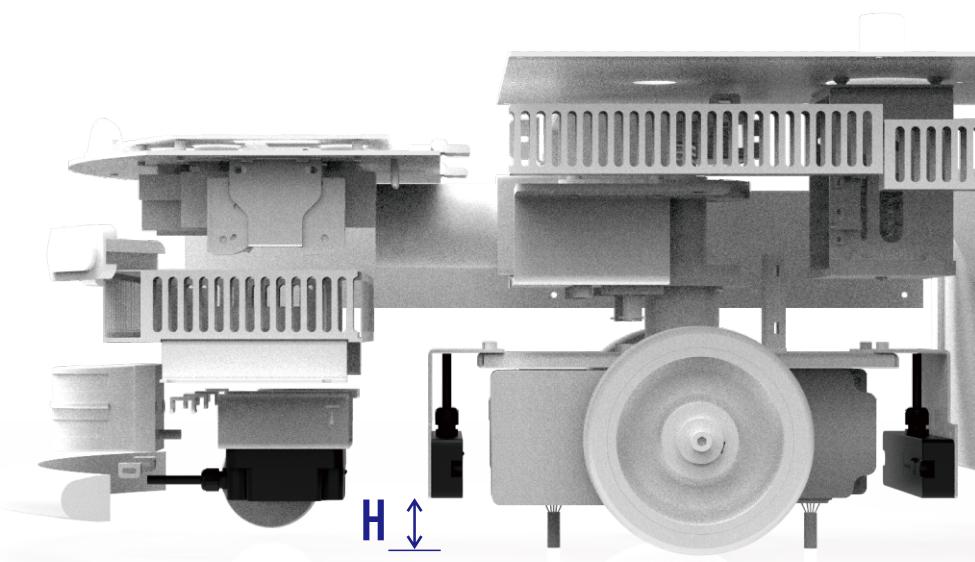


Installation



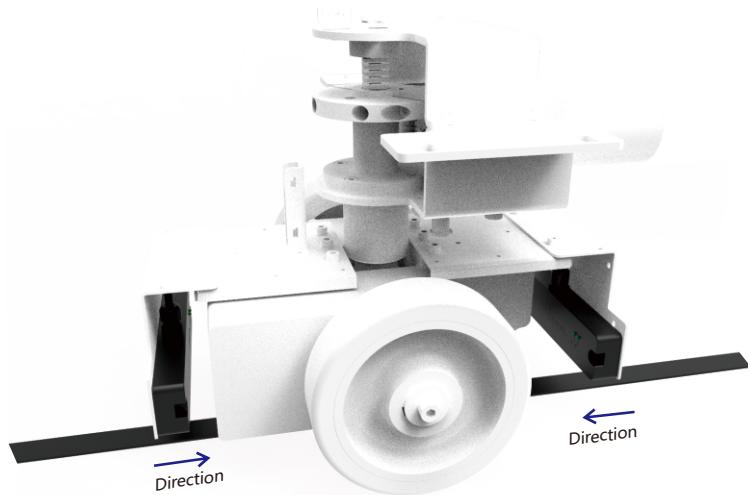
The 3D file can be download from www.huxitech.com.

Mount H



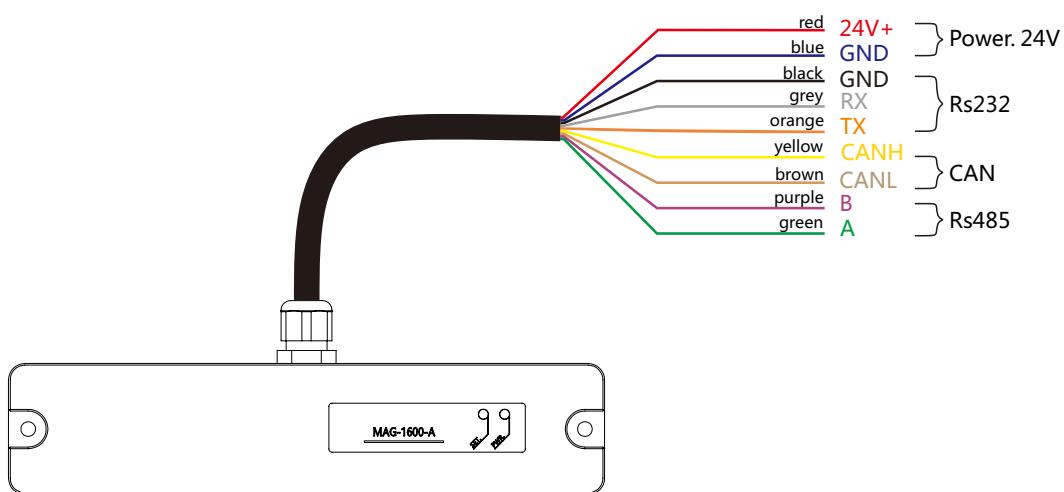
The bottom surface to the ground distance **H** should be around **35mm** for best performance.

Mount Direction



Standard Mount Direction should be Above. The front and rear sensor Direction should be opposite. You can change your mount direction, But you need to configure it right in [AGVStudio](#).

Pin Assignment



MAG-1600-A offer 3 ways to obtain the Sensor data.

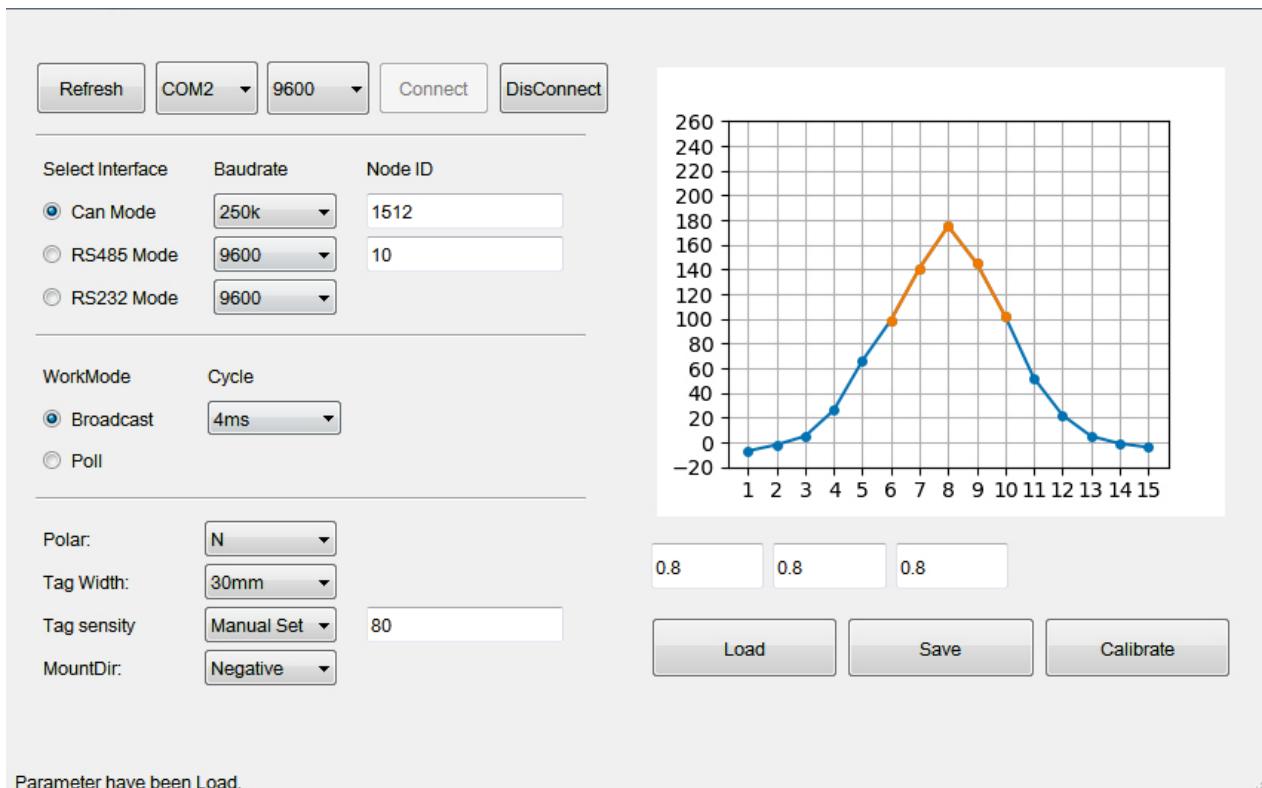
Software

Use the 'MagtoolCom.exe' to configure the sensor. MagToolCom is a free-installation software as below.

Software ICON

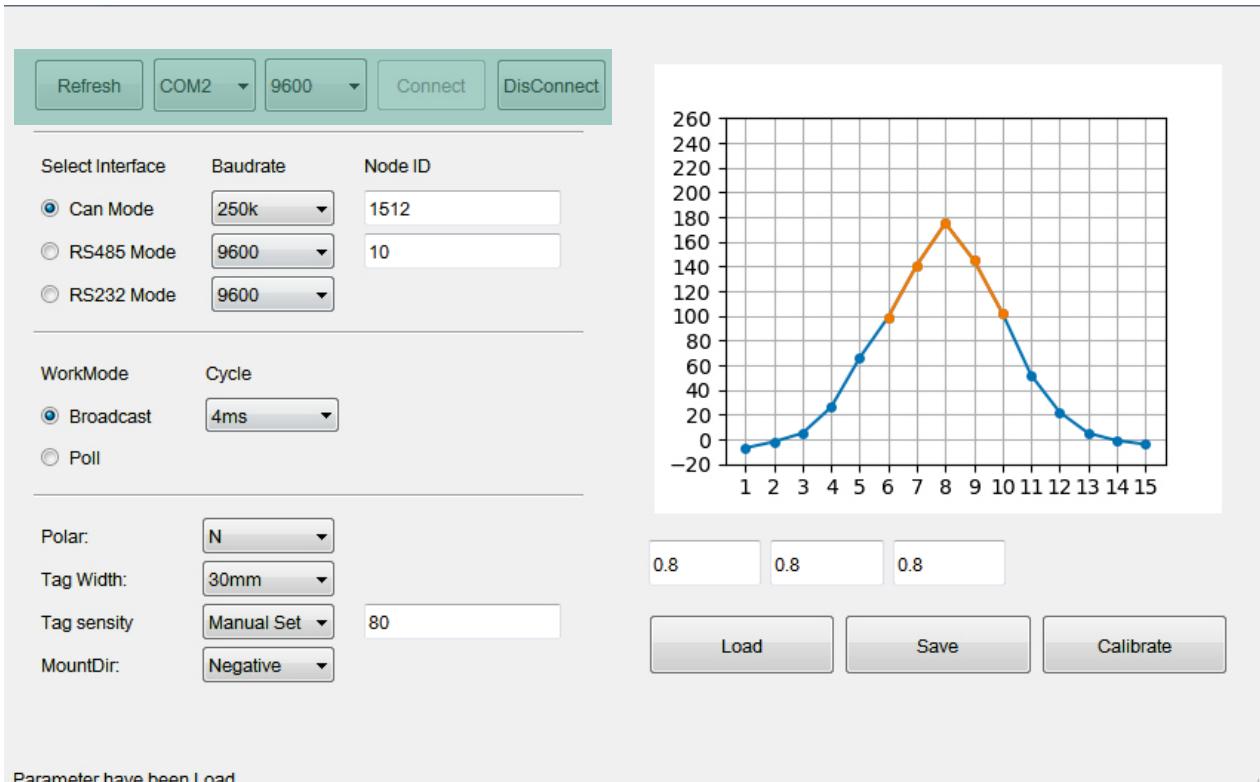


Software Interface



Software

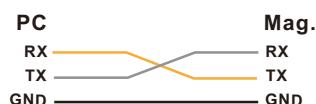
Connection



We can connect to the sensor by Rs232 all the time. The default communicate parameter is as below

data bit : 8
parity bit : 1
parity mode : None
baud rate : 9600bps

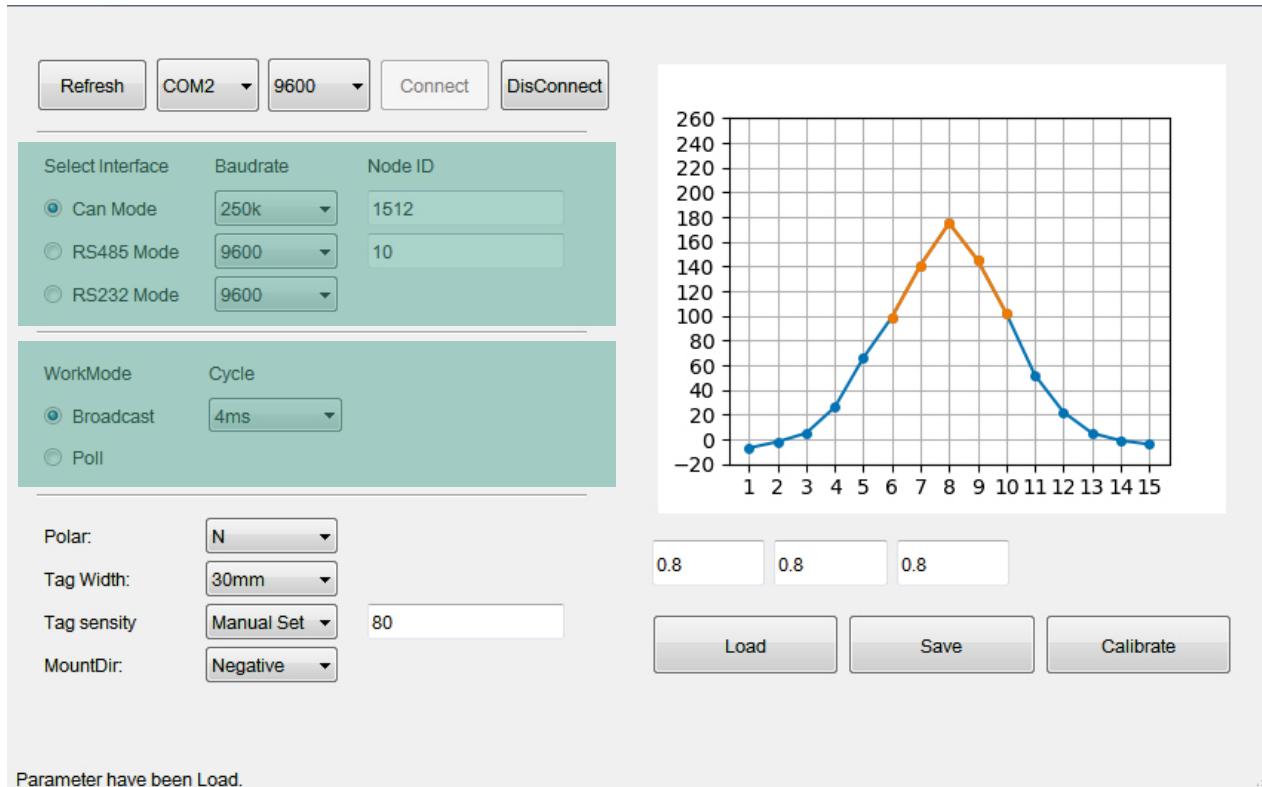
Check your connect diagram if you can not connect to the sensor.



Note: You need to 'save' the configuration to the sensor by pressing Save button.
You can also read out the configuration out of the sensor.

Software

Interface & work mode

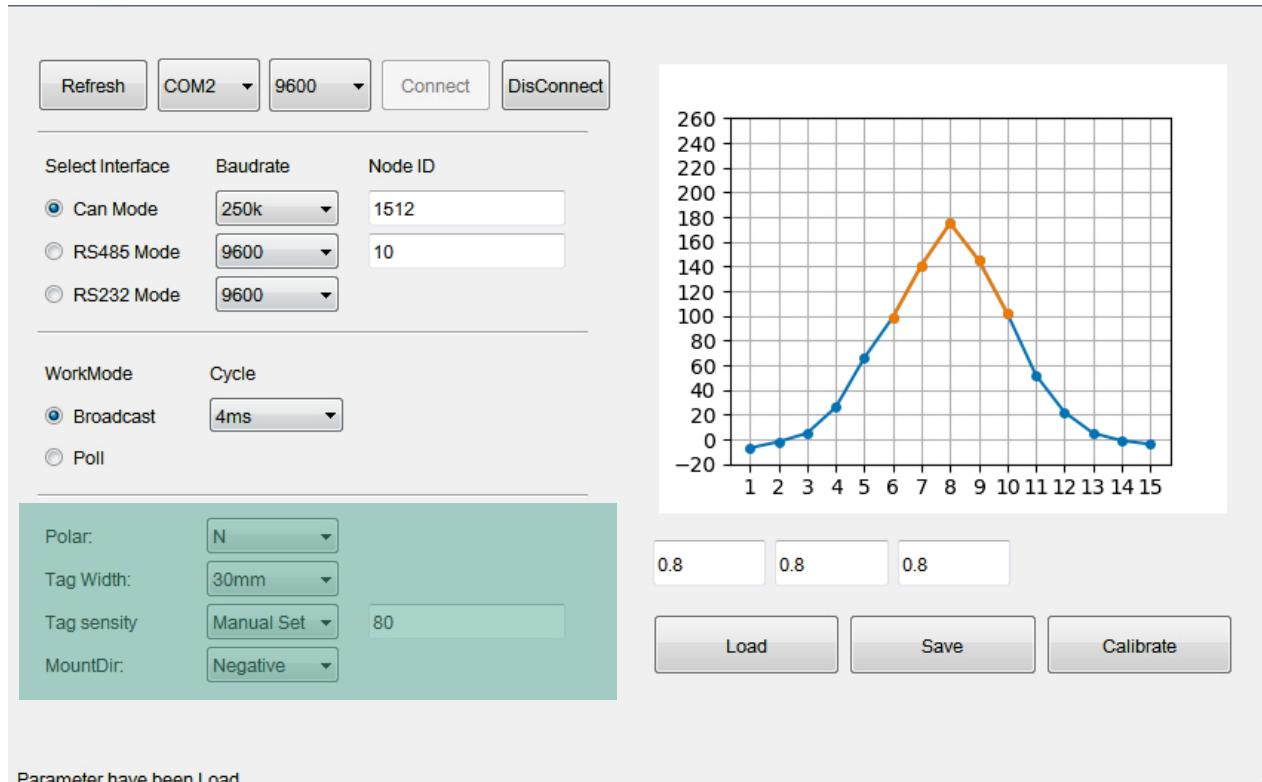


As what we show above. You can configure the sensor work mode to broadcast or Poll by Master. The respond interface can be one of Can Rs232 or Rs485.

Note: You need to 'save' the configuration to the sensor by pressing Save button. You can also read out the configuration out of the sensor.

Software

Sensor key parameter

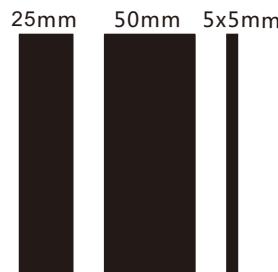


Polar:



Depends on which type of magnetic taps you use.

Tap Width:



Depends on which type of magnetic taps you use.

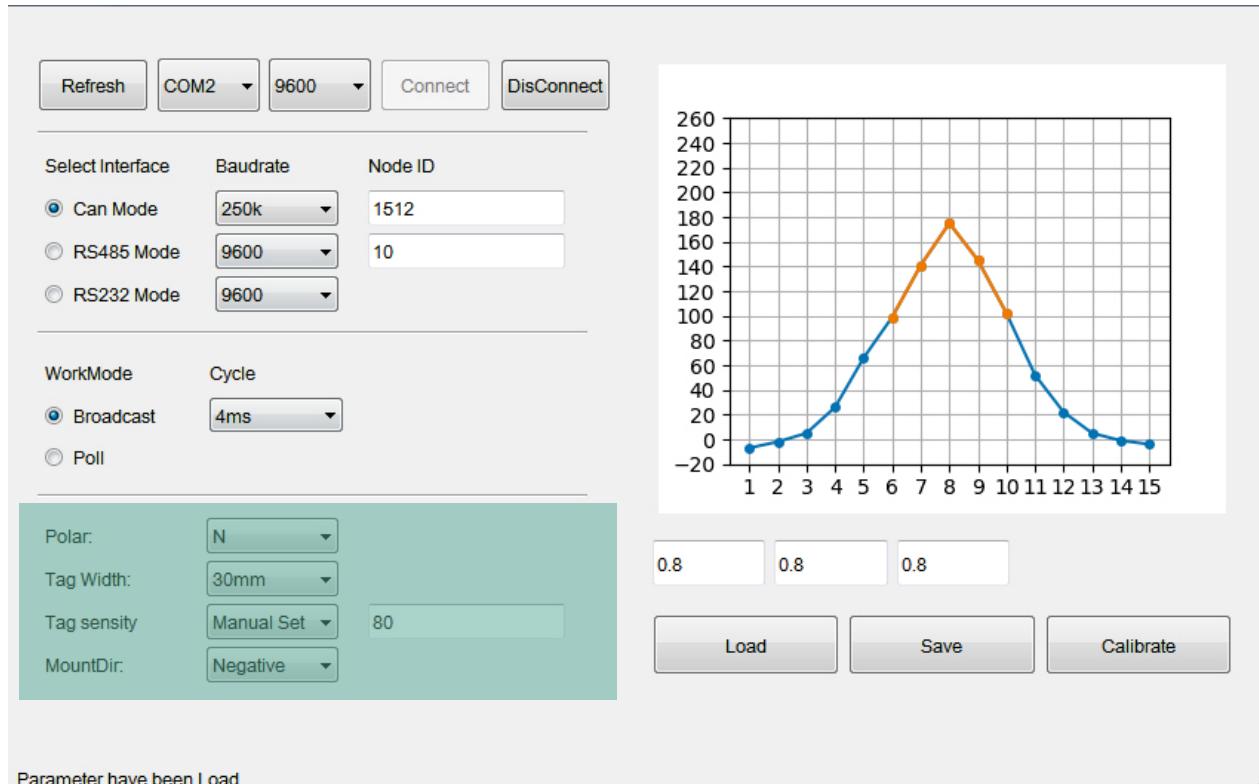
Mount Dir:

Never change it unless you can not change the direction in AGVStudio.

Note: You need to 'save' the configuration to the sensor by pressing Save button. You can also read out the configuration out of the sensor.

Software

Sensor key parameter

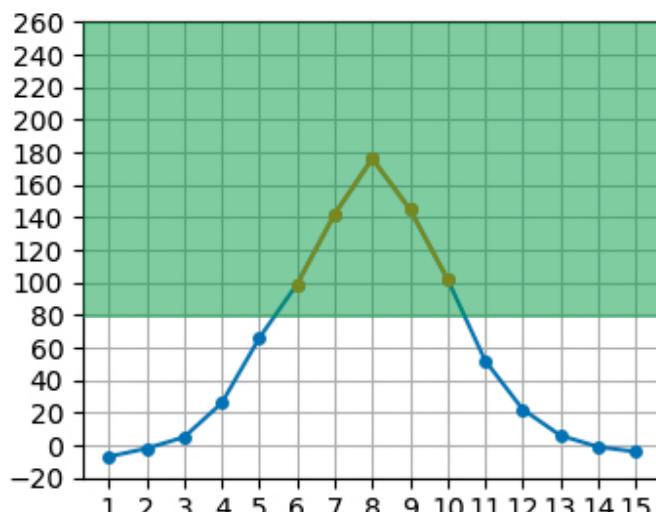


Tap Sensity:

The sensor use this value to recognize if there is Taps occurs when the actual density is greater than the configure value.

When you configure the value to be 80, Because the density of sensor cell (total 15 cells) 6~10 are greater than 80 and they will light up in the figure.

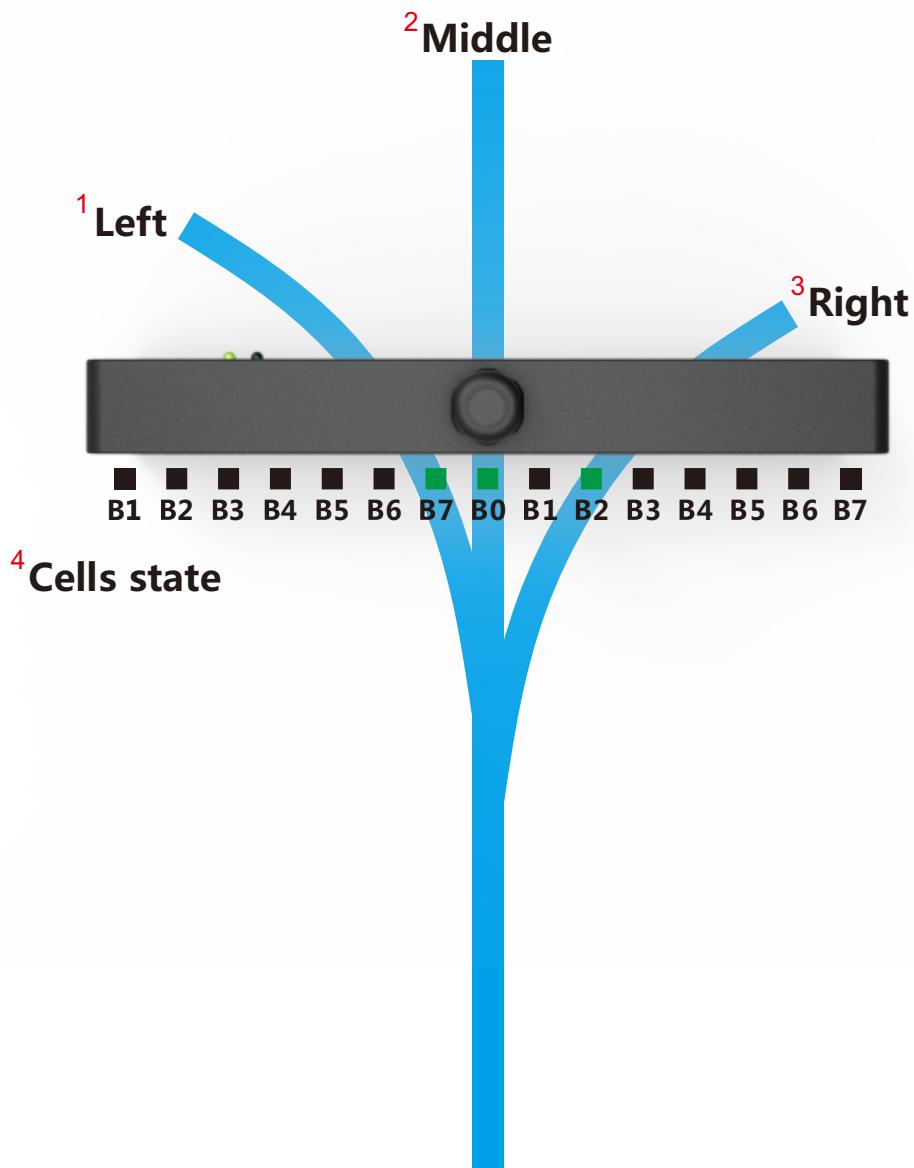
To note that the interval of the cell is 10mm. So you need to make sure the value you configure is reasonable. For example: If the tap is 30mm width. So cell 10 - cell 6 = 4 interval(within 40mm) is reasonable.



Note: You need to 'save' the configuration to the sensor by pressing Save button. You can also read out the configuration out of the sensor.

CanData

Data on sensor



1. Left - The left fork Position;
2. Middle - The middle fork Position;
3. Right - The right fork Position;
4. Cells state - The sensor-cells' status, depends on the Tag sensity you configure.

CanData

Can Data payload

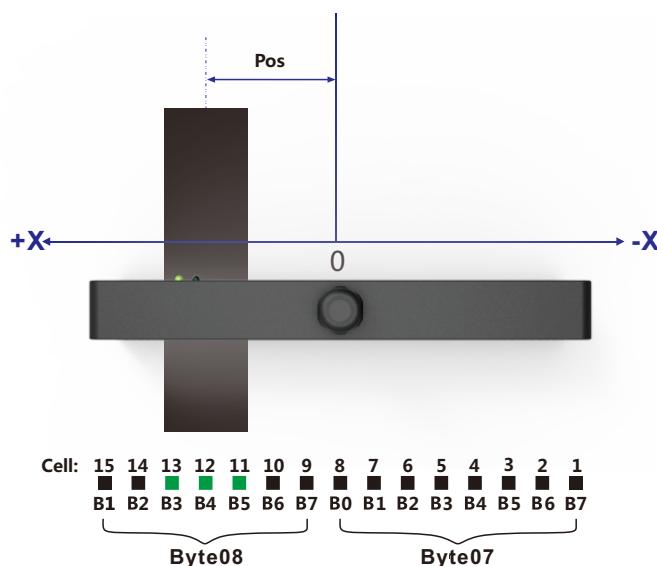
There are 8 bytes for the data. **Can frame : DLC=8, RTR=DATA, IDE=STANDARD.**

Byte01	Byte02	Byte03	Byte04	Byte05	Byte06	Byte07	Byte08
H	L	H	L	H	L	H	L
3 Right		2 Middle		1 Left		4 Cells state	

Pos data

It is 0.1mm/unit. For example 200 means the deviation is 20mm, when there is no taps detected, the data respond would be 0x8000;

Be care of the signs of the data. It base on the coordinate below.



Note : When there are no taps, all 3 pos data value is 0x8000. When only one fork, all 3 pos data are the same. When two forks, right and middle data are the same.

Cells state

There are 15 cells in one sensor. So there total 15bits to express their states. As what you see above.

1. Left - The left fork Position;
2. Middle - The middle fork Position;
3. Right - The right fork Position;
4. Cells state - The sensor-cells' status, depends on the Tag sensity you configure.