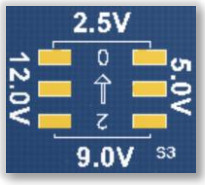
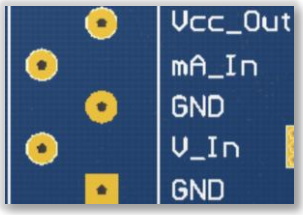
6C10 Type - WisenMeshWAN® 1-Channel 4-20mA/1-5V Interface Node	
Basics	
Battery Power	Qty. x 1 (3.6V Lithium primary D-Cell ER34615)
Accuracy Stop Voltage	2.1VDC
Mesh Stop Voltage	2.1VDC
Battery Connection	Standard Aluminium Battery Holder
Output Current / Voltage	Max. 50mA @ 2.5V / 5.0V / 9.0V / 12.0V ± 0.2V (Default @ 12V, Output Voltage Switch on board)
Local Storage	Min. 1500 Messages during Meshing at Mesh3.0 Protocol
Dimension (L x W x H)	Interface Node: 100 x 100 x 60mm
Node Weight	0.6kg
Cable Gland	Qty. 1 x EMC-CMA14 for external sensor connection (through cable diameter, 4-8mm)
Wire Connection	Spring type wiring terminal
Primary Sensor	
Sensor Type	A. 4-20mA Analogue Type; B. 1-5V Analogue Type; C. Resistive **Ratio** Type (e.g., LVDT Displacement Sensor) [Note: Must use **2.5V** Power Output Voltage].
No. of Inputs	1 Channel Hosting: single 4-20mA sensor, single 1-5V sensor, or single Resistive Ratio Type.
Sensor Power On Time	1.5s Note: this is the time designed to power an external sensor, so that stable reading can be achieved from the sensor. **However**, it may vary among different sensor makers. So, please do confirm on the sensor datasheet for this information.
Range	4-20mA / 1-5V
Accuracy	Better than 0.05%F.S.
Standard System Parameter	
Temperature	Range: -40 to 85°C; Accuracy: ±0.5°C; Resolution: 0.1°C
Voltage	Accuracy: ±0.1V
WSN Interface	
Mesh Wireless Interface	WiSenMeshWAN® Protocol
Industrial Standard	
Casing and Painting Materials	Aluminium-Alloy Die Castings 12 (Epoxy Polyester Powder Coating)
IP Rating	≥ IP66
Operating Temperature	-40 to 85°C
Applications	
WisenMeshWAN® 4-20mA/1-5V Interface Node is compatible with all different types of 4-20mA and 1-5V analogue sensors that can accept: - Power Voltage: between 2.5V and 12.0V; - Current Consumed: ≤ 50mA.	

Please ensure the following procedures are well completed before powering on a node.

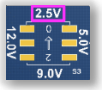
Voltage Output Switch	
	**This switch is used to select the power output voltage from a node (at "Vcc_Out" Terminal) to an external sensor.** 12V is set by default; Note: The Power Voltage to an external sensor **must be** correct. This information is contained in the sensor specification provided by the sensor maker.

Node Terminals	4-20mA Sensor Wiring Method	Vcc_Out	mA_In	GND	V_In	GND
	2 Wire version	Y	Y	-	-	-
	3 Wire version	Y	Y	Y	-	-
	4 Wire version	Y	Y	Y	-	Y
	1-5V Sensor Wiring Method	**Vcc_Out**	**mA_In**	**GND**	**V_In**	**GND**
	3 Wire version	Y	-	-	Y	Y
	4 Wire version	Y	-	Y	Y	Y
Vcc_Out: output Power to an external sensor; **GND**: for grounding; **mA_In**: read 4-20mA signal from an external sensor; **V_In**: read 1-5V signal from an external sensor.	3 or 4 Wire Version LVDT Displacement Sensor	Y	-	Y	Y	Y - Shield Wire

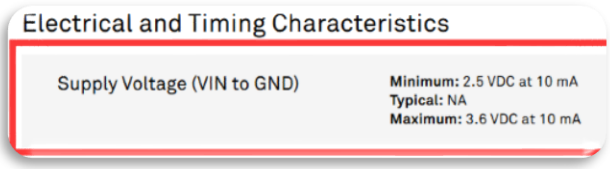
4-20mA Sensor Example:

Micro-Epsilon temperature sensor

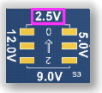
1-5V Sensor example:

High precision moisture Sensor: (Power Voltage **must be** set at 2.5V )

https://www.metergroup.com/environment/products/ec-5-soil-moisture-sensor

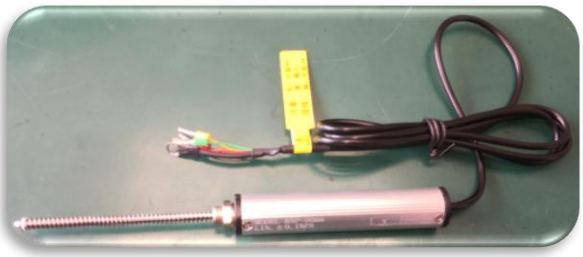


Set "Voltage Output Switch" to 2.5V.

Resistive Ratio Type example: (Power Voltage at 2.5V )

Miran Displacement Sensor (KSP Micro Displacement Sensor, 5kΩ, 50mm Range):

http://www.miransensor.com/english/cpzx/32/list_1633.html



Product Photo

Figure. Photos of 4-20mA / 1-5V Interface Node.

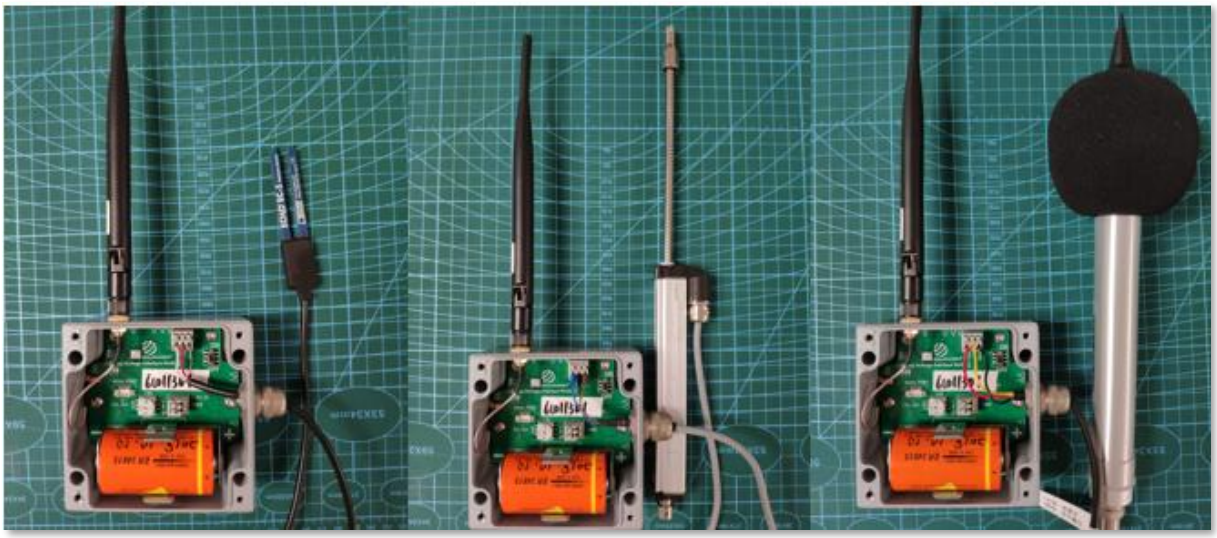


Figure. Voltage Node (From left to right: EC-5 Soil Moisture in %, Displacement in mm, Noise Level in dB).

Battery Life Table

T/min	Months
1	1.1
5	4.9
15	13.5
30	30.6
60	53.5