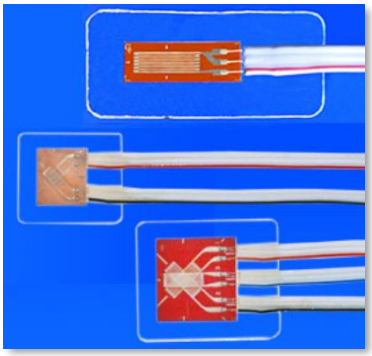
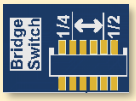
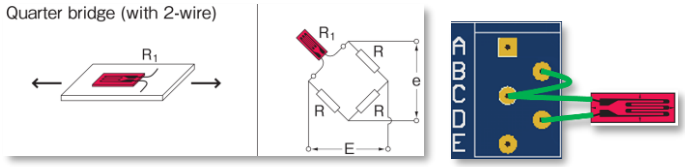
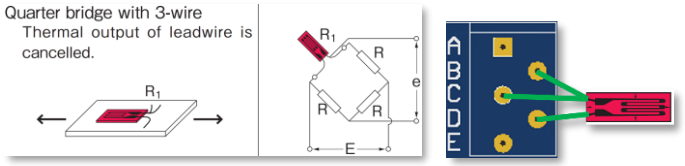
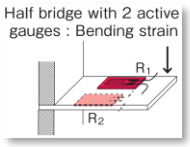
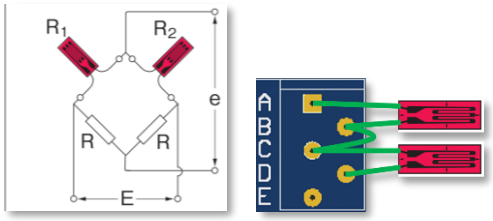
6B08 Type - 6-Channel 120Ω Quarter & Half Bridge Interface Node	
Basics	
Battery Power	Qty. x 2 (3.6V Lithium primary D-Cell ER34615)
Accuracy Stop Voltage	2.1VDC
Mesh Stop Voltage	2.1VDC
Battery Connection	Standard Aluminium Battery Holder
Local Storage	Min. 1500 Messages at Mesh3.0 Protocol
Dimension (L x W x H)	Interface Node: 180 x 140 x 60mm
Node Weight	1.27kg
External Sensor Size and Weight	Depending on the specific sensor connected
Cable Gland	Qty. 1 x EMC-CMA20 for a total of Qty. 6 external sensor connections (each through cable diameter, 2-4mm)
Wire Connection	Spring type wiring terminal
Primary Sensor	
Sensor Type	120Ω strain gauge A. Quarter Bridge 2-wire 120Ω (No wire resistance compensation); B. Quarter Bridge 3-wire 120Ω (With wire resistance compensation from the 3rd wire); C. Half Bridge 2-wire 120Ω.
No. of Inputs	6 Channels
Excitation Voltage	2.5V ± 0.05V
Range	±30000με
Accuracy	Better than 0.02%FS
Sensitivity	0.1με
Standard System Parameter	
Temperature	Range: -40 to 85°C; Accuracy: ±0.1°C; Resolution: ±0.1°C
Humidity	Range: 0 to 100%RH; Accuracy: ±1.5%RH
Voltage	Accuracy: ±0.1V
WSN Interface	
Mesh Wireless Interface	WisenMeshWAN® Protocol Mesh 3.0 ONLY
Industrial Standard	
Casing & Painting Materials	Aluminium-Alloy Die Castings 12 (Epoxy Polyester Powder Coating)
IP Rating	≥ IP66
Operating Temperature	-40 to 85°C
Fire Proof	Approved
Applications	
WisenMeshWAN® 6-Channel 120Ω Quarter & Half Bridge Interface Node is compatible with all different brands & types of high quality 120Ω strain gauges sensors, therefore it can be applied to most corresponding monitoring projects. Examples of sensors: https://tml.jp/eng/documents/Catalog/Straingauge2025-2026.pdf#page=46	

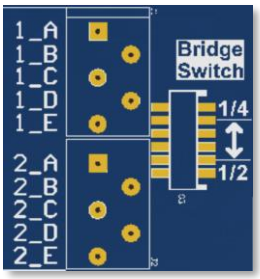


Node Connections

Bridge Switch 	5 Terminals (A to E) per Channel					Conversion Formula Unit: με
	A	**B**	**C**	**D**	**E****	
1/4 Bridge (2-Wire)	-	R1+	Shortcut to B	R1-	Shield	Unique formula for all 1/4 Bridge! ***4 x 1000 x (Node Reading) / K***
	Sampling Principle + Wiring: 					
1/4 Bridge (3-Wire)	-	R1+	Compensation	R1-	Shield	
	Sampling Principle + Wiring: 					
1/2 Bridge (2-Wire)	R1+	R1-& R2+	Shortcut to B	R2-	Shield	Installation specific! *** Example formula: **8 x 1000 x (Node Reading) / K** For the installation below: 
	Sampling Principle + Wiring: 					

Note:

1. Bridge Switch: there are 3 sets of Bridge Switches. Each is controlling 2 channels.



2. Each 120Ω strain gauge must be connected to a channel in a node, starting from Channel 1 to Channel 6, in

sequence;

3. Symbol "R" represents a 120Ω strain gauge, where:
   A. R1, R2, as shown in the table above, represent 2 individual strain gauges;
   B. Each gauge R has two wires ("R+" and "R-") coming out from the strain gauge. This is defined by the user for the consistence purposes for later data interpretation;
   C. If the sensor has a shielded wire, then it must be connected to terminal "E"**;
   D. K: Gauge Factor of strain gauge, is available in the calibration certification from the manufacturer.
4. Data Interpretation:
   A. Node Reading is in mV/V unit;
   B. By following the "Node Connection" Table above:
      a. Gauge in compression: When the value of reading in "mV/V" unit or "με" unit increases;
      b. Gauge in tension: When the value of reading in "mV/V" unit or "με" unit decreases.
5. ***Half Bridge owns various conversion formulas due to different installation arrangements! Please refer to the strain gauge specification from the manufacturer.

Product Photo

Figure. 6-Channel 120Ω Quarter & Half Bridge Interface Node with Qty. 6 x Quarter Bridge 120Ω Strain Gauge.

Battery Life in Months

T / min	Battery Life / Month
1	1.292079
5	6.350613
15	18.55176
30	36.80462
60	71.92282