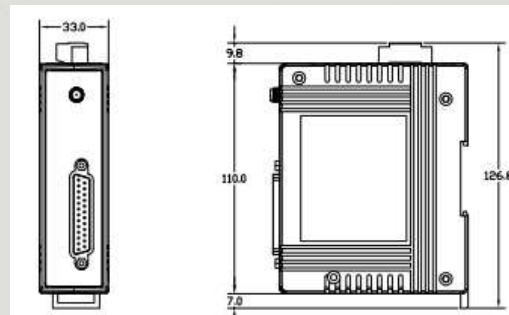




## Wi-Fi Data Acquisition I/O Module (10 Universal AI)



WF-2019



Unit: mm

Dimensions

The WF-2019 is a 10-channel universal analog input module with voltage and current input types. It provides extremely accurate thermocouple measurement and automatically cold-junction compensation for each channel. In addition, the WF-2019 has WLAN connection complies with the IEEE802.11b/g standards. With the popularity of 802.11 network infrastructure, the WF-2019 makes an easy way to incorporate wireless connectivity into monitoring and control systems. The WF-2019 also supports Modbus/TCP and UDP protocols and the network encryption configuration, which makes perfect integration to SCADA software and offer easy and safe access for users from anytime and anywhere.

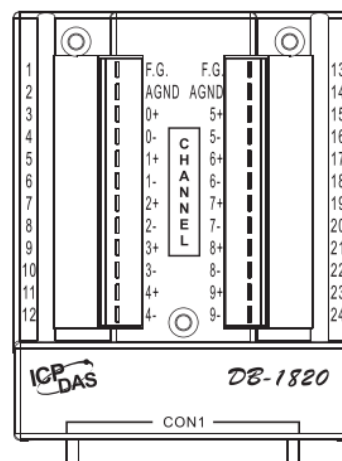
## Features

- 10 Differential Universal Analog Input Channels
- Supports thermocouple devices with J, K, T, E, R, S, B, N, C types
- Compatible with IEEE 802.11b/g standards
- Support WEP, WPA and WPA2 wireless encryption
- Support Modbus/TCP and UDP protocols
- Support DHCP network configuration
- Wide Operating Temperature Range
- Built-in Watchdog

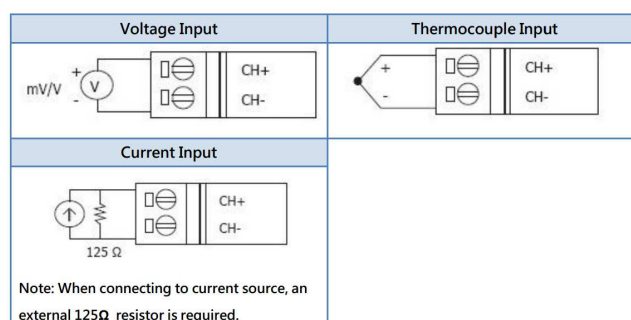
## Pin Assignment

Pin Assignment	Terminal	No.	Pin Assignment
+5V	01	14	AGND
CJC	02	15	CH 0+
CH 0-	03	16	CH 1+
CH 1-	04	17	CH 2+
CH 2-	05	18	CH 3+
CH 3-	06	19	CH 4+
CH 4-	07	20	CH 5+
CH 5-	08	21	CH 6+
CH 6-	09	22	CH 7+
CH 7-	10	23	CH 8+
CH 8-	11	24	CH 9+
CH 9-	12	25	N.C.
N.C.	13	Shield	F.G.

25-pin Female D-Sub Connector



## Wire Connection



## Hardware Specifications

Analog Input	
Channels	10
Input Type	Voltage : $\pm 15\text{ mV}$ , $\pm 50\text{ mV}$ , $\pm 100\text{ mV}$ , $\pm 500\text{ mV}$ , $\pm 1\text{ V}$ , $\pm 2.5\text{ V}$ , $\pm 5\text{ V}$ , $\pm 10\text{ V}$
	Current : $\pm 20\text{ mA}$ (External resistor is required)
	Thermocouple : J, K, T, E, R, S, B, N, C
Resolution	16 bit
Accuracy	$\pm 0.1\%$ FSR
Sampling Rate	10 Hz (Total)
Zero Drift	$\pm 20\text{ }\mu\text{V}/^\circ\text{C}$
Span Drift	$\pm 25\text{ ppm}/^\circ\text{C}$
Common Mode Rejection	86 dB Min.
Normal Mode Rejection	100 dB
Input Impedance	Voltage Input: $>400\text{ k}\Omega$ , Current Input: $125\text{ }\Omega$
Intra-Module Isolation, Field-to-Logic	3000 VDC
Overvoltage protection	240 Vrms
Individual Channel Configuration	Yes
Open Thermocouple Detection	Yes (Software programmable)
Wi-Fi Interface	
Antenna	5 dBi (Omni-Directional)
Output Power	8 dBm @ 11Mbps
Receive Sensitivity	-83 dBm @ 11Mbps
Standard Supported	IEEE 802.11b/g
Wireless Mode	Infrastructure & Ad-hoc
Encryption	WEP, WPA and WPA2
Transmission Range	100 meters (LOS)
Power	
Input Voltage Range	10V ~ 30V
Power Consumption	2.2W
Mechanism	
Installation	DIN-Rail
Dimensions	110mm x 90mm x 33mm (H x W x D)
Environment	
Operating Temperature	$-25^\circ\text{C} \sim +75^\circ\text{C}$
Storage Temperature	$-30^\circ\text{C} \sim +80^\circ\text{C}$
Humidity	10% ~ 90%

## Applications



## Ordering Information

**WF-2019/S CR**

10-channel Universal Analog Input Wi-Fi I/O Module with DB-1820 Daughter Board (RoHS)