

1.4.3 USB-2026



The USB-2026 is a multifunction module that includes 5 analog input channels, 2 analog output channels, 2 digital input channels, 2 digital output channels and compatibles with USB 2.0 full-speed. It equips small size, portable, USB bus powered, various input type features to help user build up own project easily and quickly. The USB-2026 provides a programmable input range on all analog input (± 150 mV, ± 500 mV, ± 1 V, ± 5 V, ± 10 V, ± 20 mA or $0 \sim +20$ mA), analog outputs are 12-bit at ± 5 V, ± 10 V, $0 \sim +20$ mA or $+4 \sim +20$ mA. Each analog input can be configured for an individual range and provides a high overvoltage protection of 240 Vrms.

Multifunction		
Analog Input		
Channels		5 Differential
Range		Voltage: ± 1 V, ± 2.5 V, ± 5 V, ± 10 V
		Current: ± 20 mA, $0 \sim 20$ mA, $4 \sim 20$ mA
Resolution	Normal Mode	14-bit
	Fast Mode	12-bit
Sampling Rate	Normal Mode	10 Hz total
	Fast Mode	200 Hz total
Accuracy	Normal Mode	± 0.1 % FSR
	Fast Mode	± 0.5 % FSR
Zero Drift		± 20 μ V/ $^{\circ}$ C
Span Drift		± 25 ppm/ $^{\circ}$ C
Input Impedance	Voltage	20 M Ω
	Current	135 Ω
Overvoltage Protection	Voltage	120 VDC
	Current	N/A
Overcurrent Protection	Voltage	N/A
	Current	Yes, 50 mA at 110 VDC
Analog Output		
Channels		2
Range (Jumper Selectable)		Voltage: $+0 \sim +5$ VDC, $+0 \sim +10$ VDC, ± 5 VDC, ± 10

		VDC,
		Current: +0~+20 mA, +4~+20 mA
Resolution		12-bit
Accuracy		±0.1% of FSR
Output Capacity Voltage Output Capability		10 V @ 20 mA
Open Wire Detection		Yes, for 4 ~ 20 mA only
Power On Value		Yes
Safety Value		Yes
Digital Input		
Channel		2
Type		Dry Contact (Source)
On Voltage Level		Close to GND
Off Voltage Level		Open
Input Impedance		10 KΩ, 0.5 W
Counters	Channels	2
	Max. Count	4,294,967,285 (32-bit)
	Max. Input Frequency	100 Hz
	Min. Plus Width	10 ms
Overvoltage Protection		±57 VDC
Digital Output		
Channels		2
Type		Isolation Open Collector (Sink)
Max. Load Current		700mA/Channel
Load Voltage		+3.5 ~ 50 VDC
Overvoltage Protection		±60 VDC
Overload Protection		1.4 A (with short-circuit protection)
Short Circuit Protection		Yes
Power-on Value		Yes, Programmable
Safe Value		Yes, Programmable
Communication		
Interface		USB 2.0 Full-Speed
Watchdog		1 Hardware watchdog (1.6 second)
		1 Software watchdog (Programmable)
LED Indicators		

System LED Indicators	3 LED as Power, Run and Error
EMS Protection	
ESD (IEC 61000-4-2)	4 kV contact for each terminal
	8 kV air for random point
Mechanical	
Dimensions	33mm × 78mm × 107mm
Environment	
Operating Temperature	-25 ~ +75°C
Storage Temperature	-40 ~ +85°C
Humidity	10 ~ 95% RH, non-condensing