

I-7083(D)

I-7083B(D)

3-axis, 32-bits Encoder Counter Input Module

Features

- 3-Axis Encoder Inputs
- 1 MHz Input Rate
- 32-bit Count Range
- 2500 Vrms Optical Isolation
- CW/CCW, Pulse/Dir, Quadrant
- Built-in Virtual Battery Backup For Encoder Counter
- Dual Watchdog
- Wide Operating Temperature Range: -25 ~ +75°C



Introduction

I-7083 is a 3-axis high speed encoder module. Its each axis can be independently configured as one of Quadrant, Pulse/Direction or CW/CCW input mode. The maximum input rate is 1 MHz. The high-end specifications of I-7083 and complete software support make it ideal for wide range applications in position measurement of motion systems for industrial and laboratory environment.

I-7083B is a 3-axis high speed encoder module. Its each axis can be independently configured as one of Quadrant, Pulse/Direction or CW/CCW input mode. The maximum input rate is 1 MHz. The high-end specifications of I-7083B and complete software support make it ideal for wide range applications in position measurement of motion systems for industrial and laboratory environment. I-7083B is improved version of I-7083 that add the virtual battery backup function for encoder counter.

Applications

Building Automation, Factory Automation, Machine Automation, Remote Maintenance, Remote Diagnosis, Testing Equipment.

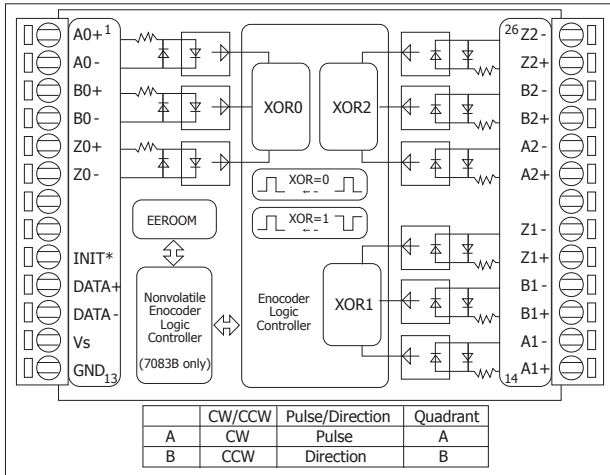
System Specifications

Models	I-7083	I-7083B	I-7083D	M-7083BD
Communication				
Interface	RS-485			
Format	N, 8, 1			
Baud Rate	1200 ~ 115200 bps			
Protocol	DCON		Modbus RTU, DCON	
Dual Watchdog	Yes, Module (1.6 Seconds), Communication (Programmable)			
LED Indicator/Display				
System LED Indicator	Yes, 1 LED as Power/Communication Indicator			
I/O LED Indicator	-			
7-Segment LED Display	-		Yes	
Isolation				
Intra-Module Isolation, Field-to-Logic	3000 Vdc			
EMS Protection				
ESD (IEC 61000-4-2)	+/-4 kV			
EFT (IEC 61000-4-4)	+/-4 kV			
Power				
Reverse Polarity Protection	Yes			
Input Range	10 ~ 30 Vdc			
Consumption	1 W		1.5 W	
Mechanical				
Dimensions (W x L x H)	72 mm x 123 mm x 35 mm			
Installation	DIN-Rail or Wall Mounting			
Environment				
Operating Temperature	-25 ~ +75°C			
Storage Temperature	-40 ~ +85°C			
Humidity	10 ~ 95% RH, Non-condensing			

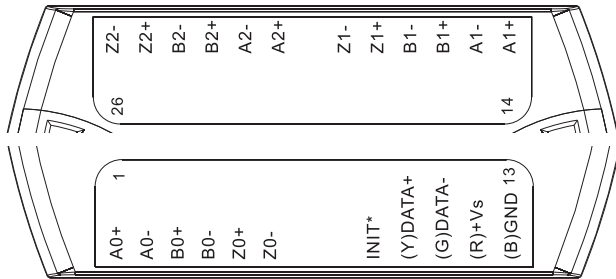
I/O Specifications

Models	I-7083	I-7083D	I-7083B	M-7083BD
Digital Input				
Channels	3			
Contact	Wet			
Sink/Source (NPN/PNP)	Sink			
On Voltage Level	Isolated	5 V: +3.5 ~ +5 Vdc 12 V with 1 kΩ External Resistor: +5 ~ +12 Vdc 24 V with 2 kΩ External Resistor: +7 ~ +24 Vdc		
	Non-isolated	-		
Off Voltage Level	+2 Vdc Max.			
Programmable Filter	-			
Programmable Threshold Voltage	-			
Counter/Encoder-bits	32-bit			
Counter Mode	-			
Encoder Mode	CW/CCW, Pulse/Dir., AB Phase			
Frequency Mode	-			
Virtual Battery Backup	-		Yes	
Frequency Accuracy	-			
Max. Speed	1 MHz			

Internal I/O Structure



Pin Assignments



Wire Connections

Input Type	ON State Readback as 1	OFF State Readback as 0
Relay Contact	Relay ON 	Relay Off
	Voltage > 4 V Logic Power Logic Level Low 	Voltage < 0.8 V Logic Power Logic Level High
NPN Output	Open Collector On 	Open Collector On
	PNP Output 	PNP Output

Ordering Information

I-7083-G CR	3-axis, 32-bits Encoder Counter Input Module with DCON Protocol (Gray Cover) (RoHS)
I-7083D-G CR	I-7083 with 7-Segment LED Display (Gray Cover) (RoHS)
I-7083B-G CR	3-axis, 32-bits Encoder Counter Input Module with DCON Protocol (Gray Cover) (RoHS)
I-7083BD-G CR	I-7083B with 7-Segment LED Display (Gray Cover) (RoHS)

Accessories

	tM-7520U CR	RS-232 to RS-485 converter (RoHS)
	tM-7561 CR	USB to RS-485 converter (RoHS)
	tM-SG4 CR	RS-485 Pull-high/Pull-low and Termination Resistor Module (RoHS)
	I-7514U CR	4-channel RS-485 Hub (RoHS)
	SG-770 CR	7 channel differential or 14 channel single-ended surge protector (RoHS)
	SG-3000 series	Signal Conditioning Modules for Thermocouple, RTD, DC Voltage, DC Current and Power Inputs