

I-7080(D)



M-7080(D)



I-7080B(D)



M-7080B(D)

2-ch Counter/Frequency Input Module

Features

- 2 Counter/Frequency Inputs
- Supports 32-bit Counter
- Isolated or Non-isolated Input
- Programmable Alarm Output, Digital Filter and Threshold Voltage Level
- Maximum Frequency of up to 100 kHz
- I-7080B(D), M-7080B(D)
  - Built-in Virtual Battery Backup to Preserve Counter Values
- Built-in Dual Watchdog

Introduction

The 7080 series offers 2 high speed counter or frequency input channels and 2 digital output channels. Two types of digital input are provided, one for isolated input, and the other is for non-isolated input. The isolated input provides 3750 V_{rms} isolation voltage and the non-isolated input provides programmable threshold voltage level. The built-in digital filter is valid for both non-isolated and isolated input and can filter out noise where the high/low pulse width is smaller than the minimum high/low width of the digital filter. The maximum count is up to 32-bit and the maximum frequency is up to 100 kHz. The module also provides programmable alarm output with non-isolated open collectors.

System Specifications

Model	I-7000 M-7000	7080 / 7080D	7080B / 7080BD
CPU Module			
Watchdog Timer		Module, Communication (Programmable)	
Display			
Type	7080D/80BD	5-Digit 7 Segment LED Display	
Memory			
Battery Backup		-	Yes
Isolation			
Intra-module Isolation		3000 VDC	
EMS Protection			
EFT (IEC 61000-4-4)		±4 kV for Power Line	
ESD (IEC 61000-4-2)		±4 kV Contact for Each Terminal	
Surge (IEC 61000-4-5)		±0.5 kV for Power Line	
LED Indicators			
Status		1 x Power and Communication	
COM Ports			
Ports		1 x RS-485	
Baud Rate		1200 ~ 115200 bps	
Data Format		(N, 8, 1), (N, 8, 2), (E, 8, 1), (O, 8, 1)	
Protocol		I-7000: DCON M-7000: Modbus RTU, DCON	
Power			
Reverse Polarity Protection		Yes	
Input Range		+10 ~ +30 VDC	+24 ~ +30 VDC
Consumption		2.0 W	
		2.2 W	
Mechanical			
Dimensions (mm)		72 x 123 x 35 (W x L x H)	
Installation		DIN-Rail Mounting	

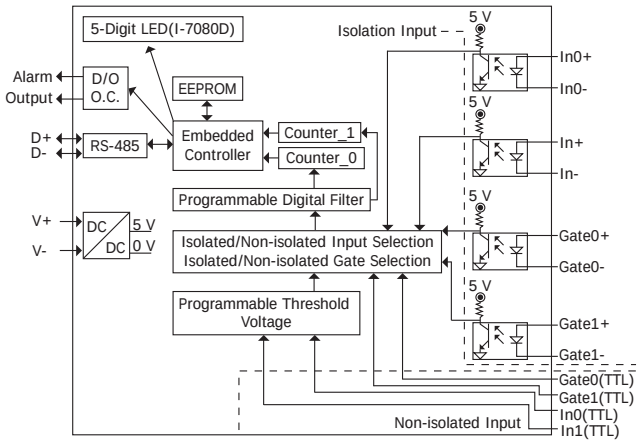
I/O Specifications

Model	I-7000 M-7000	7080 / 7080D	7080B / 7080BD
Digital Input			
Programmable Threshold Voltage		+0.1 ~ +5 VDC	
Digital Output			
Channels		2	
Type		Open Collector	
Sink/Source (NPN/PNP)		Sink	
Load Voltage		+3.5 ~ +30 VDC	
Load Current		30 mA/Channel	
Counter/Frequency/Encoder Input			
Channels		2	
Type		Counter, Frequency	
Counter Mode		Up	
Frequency Mode		Yes	
Counter/Encoder Bits		32-bit	
Sink/Source (NPN/PNP)		Sink	
ON Voltage Level		Isolated: +3.5 ~ +30 VDC	
		Non-isolated: +2.4 ~ +5 VDC	
OFF Voltage Level		+1 VDC Max.	
Frequency Accuracy		1 Hz or 10 Hz	
Individual Channel Configuration		No	
Max. Speed		100 KHz	
Low Pass Filter		2 μs to 65 ms	

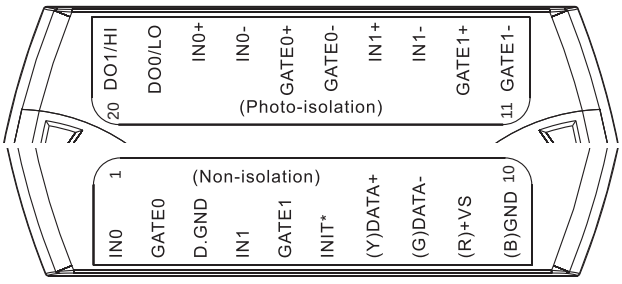
Environment	
Operating Temperature	-25 ~ +75°C
Storage Temperature	-40 ~ +85°C
Humidity	10 ~ 95% RH, Non-condensing

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Internal I/O Structure



Pin Assignments

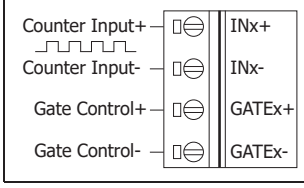
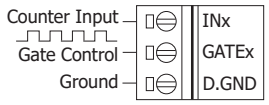


Applications

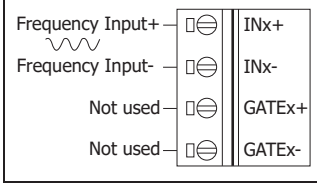
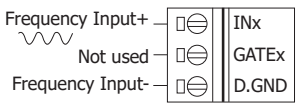
- Building Automation
- Factory Automation
- Machine Automation
- Remote Maintenance
- Remote Diagnosis
- Testing Equipment

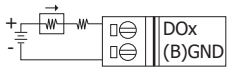
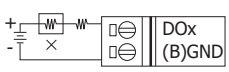
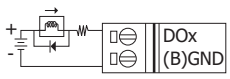
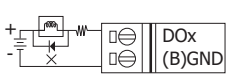
Wire Connections

Counter Type

Isolation	Non-isolation
	

Frequency Type

Isolation	Non-isolation
	

Output Type	ON State Readback as 1	OFF State Readback as 0
Resistance Load		
Inductance Load		

Ordering Information

I-7080 CR	2-ch Counter/Frequency Input Module using DCON Protocol (Blue Cover) (RoHS)
I-7080-G CR	2-ch Counter/Frequency Input Module using DCON Protocol (Gray Cover) (RoHS)
I-7080D CR	2-ch Counter/Frequency Input Module with LED Display using DCON Protocol (Blue Cover) (RoHS)
I-7080B-G CR	2-ch Counter/Frequency Input Module with Virtual Battery Backup using DCON Protocol (Gray Cover) (RoHS)
I-7080BD-G CR	2-ch Counter/Frequency Input Module with Virtual Battery Backup and LED Display using DCON Protocol (Gray Cover) (RoHS)
M-7080-G CR	2-ch Counter/Frequency Input Module using DCON and Modbus Protocols (Gray Cover) (RoHS)
M-7080D-G CR	2-ch Counter/Frequency Input Module with LED Display, using DCON and Modbus Protocols (Gray Cover) (RoHS)
M-7080B-G CR	2-ch Counter/Frequency Input Module with Virtual Battery Backup using DCON and Modbus Protocols (Gray Cover) (RoHS)
M-7080BD-G CR	2-ch Counter/Frequency Input Module with Virtual Battery Backup and LED Display, using DCON and Modbus Protocols (Gray Cover) (RoHS)

Accessories

SG-770 CR		7/14 channel Surge Protector (RoHS)

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