



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

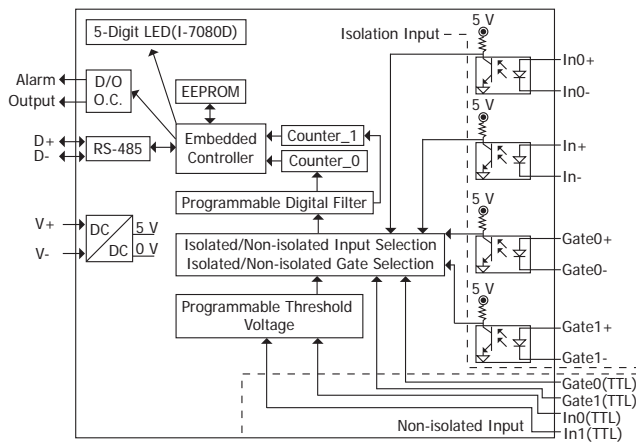
Model	I-7000 M-7000	7080 7080D	7080B 7080BD
CPU Module			
Watchdog Timer	Module, Communication (Programmable)		
Display			
Type	7080D/80BD	5-Digit 7 Segment LED Display	
Memory			
Battery Backup	-	Yes	
Isolation			
Intra-module Isolation	3000 VDC		
EMS Protection			
EFT (IEC 61000-4-4)	±4 kV for Power 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

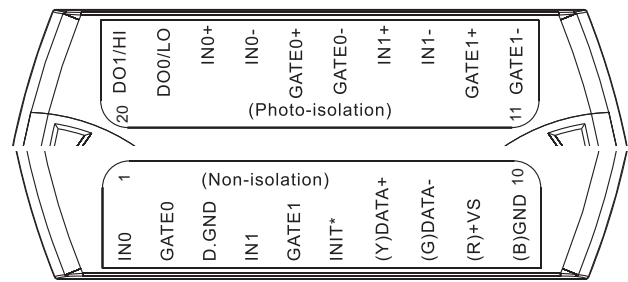
Model	I-7000 M-7000	7080 7080D	7080B 7080BD
Digital Input			
Programmable Threshold Voltage	+0.1 ~ +5 VDC		
Digital Output			
Channels	2		
Type	Open Collector		
Sink/Source (NPN/PNP)	Sink		
Load Voltage	+3.5 ~ +30 VDC		
Load Current	30 mA/Channel		
Counter/Frequency/Encoder Input			
Channels	2		
Type	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

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
Counter Input+ INx+	Counter Input INx
Counter Input- INx-	Gate Control GATEx
Gate Control+ GATEx+	Ground D.GND
Gate Control- GATEx-	

Frequency Type	
Isolation	Non-isolation
Frequency Input+ INx+	Frequency Input+ INx
Frequency Input- INx-	Not used GATEx
Not used GATEx+	Frequency Input- D.GND
Not used GATEx-	

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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