

## Features

- 2-channel Analog Output
- Software Selectable Current or Voltage Output
- Power-on Value Setting
- Safe Value Setting
- Open Wire Detection for Current Output
- Readback Voltage or Current
- 2 kV Channel to Channel Isolation
- 3000 Vdc Intra-module Isolation
- Programmable Output Slope
- Dual Watchdog
- Wide Operating Temperature Range: -25 to +75°C



## Introduction

The I-7022 is a 12-bit, 2-channel Analog Output module that is designed for both voltage and current output using the DCON protocol. The I-7022 features 3000 VDC intra-module isolation, and the power source for the current output can be selected as either internal or external via a jumper. Options are also provided to allow power-on and safe values to be set. The M-7022 and M-7022A supports both the Modbus RTU and the DCON protocols which can be configured via software, and all hardware specifications are the same as the I-7022.

## Applications

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

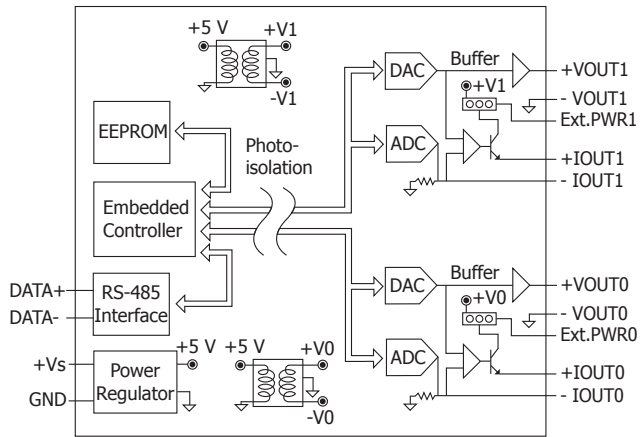
## System Specifications

Model	I-7022	M-7022	M-7022A
<b>Communication</b>			
Interface	RS-485		
Bias Resistor	No (Usually supplied by the RS-485 Master. Alternatively, add a tM-SG4 or SG-785.)		
Format	(N, 8, 1) (N, 8, 2) (E, 8, 1) (O, 8, 1)		
Baud Rate	1200 to 115200 bps		
Protocol	DCON	Modbus RTU, DCON	
Dual Watchdog	Yes, Module (1.6 Seconds), Communication (Programmable)		
<b>LED Indicators/Display</b>			
System LED Indicator	Yes, 1 as Power/Communication Indicator		
I/O LED Indicators	-		
7-segment LED Display	-		
<b>Isolation</b>			
Intra-module Isolation, Field-to-Logic	3000 Vdc		
<b>EMS Protection</b>			
ESD (IEC 61000-4-2)	±4 kV Contact for each Terminal		
EFT (IEC 61000-4-4)	±4 kV to Power Line		
Surge (IEC 61000-4-5)	±0.5 kV for Power Line		
<b>Power</b>			
Reverse Polarity Protection	Yes		
Input Range	+10 ~ +30 Vdc		
Consumption	3.0 W		
<b>Mechanical</b>			
Dimensions (L x W x H)	123 mm x 72 mm x 35 mm		
Installation	DIN-Rail or Wall Mounting		
<b>Environment</b>			
Operating Temperature	-25 to +75°C		
Storage Temperature	-40 to +85°C		
Humidity	10 to 95% RH, Non-condensing		

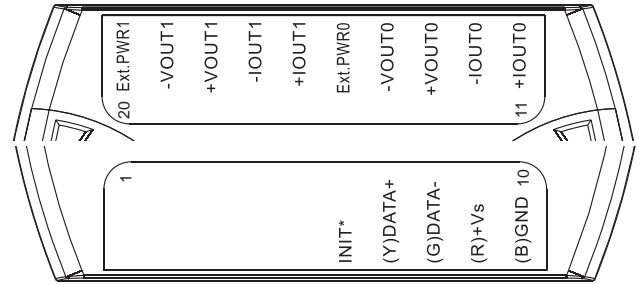
## I/O Specifications

Model	I-7022	M-7022	M-7022A
<b>Analog Output</b>			
Channels	2		
Range	Voltage	0 ~ +5 V, 0 ~ +10 V,	0 ~ +5 V, 0 ~ +10 V, ±5 V, ±10 V
	Current	0 ~ +20 mA, +4 ~ +20 mA	
Resolution	12-bit		
Accuracy	0.1%		
Readback Accuracy	±0.5% of FSR		
DA Output Response Time	10 ms		
Programmable Output Slope	Voltage	0.0625 ~ 1024.0 V/Second	
	Current	0.125 ~ 2048 mA/Second	
Current Load Resistance	Internal Power: 500 Ω		
	External Power: 1050 Ω		
Open Wire Detection (for current only)	Yes		
Channel-to-Channel Isolation	Yes, 2 kV		
Short Circuit Protection	Yes		
Power-on Value	Yes		
Safe Value	Yes		

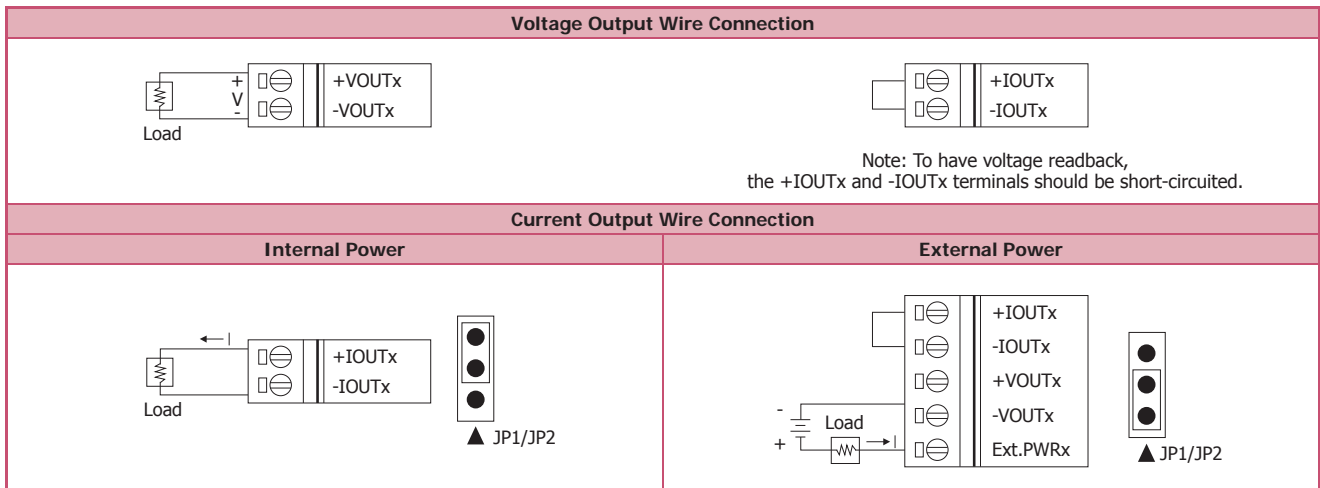
## Internal I/O Structure



## Pin Assignments



## Wire Connections



## Ordering Information

<b>I-7022 CR</b>	2-channel Analog Output Module using the DCON Protocol (Channel-to-Channel Isolation) (Blue Cover) (RoHS) Art. No. 113316
<b>I-7022-G CR</b>	2-channel Analog Output Module using the DCON Protocol (Channel-to-Channel Isolation) (Gray Cover) (RoHS)
<b>M-7022-G CR</b>	2-channel Analog Output Module using the DCON and Modbus Protocols (Channel-to-Channel Isolation) (Gray Cover) (RoHS) Art. No. 113151
<b>M-7022A-G CR</b>	2-channel Analog Output Module using the DCON and Modbus Protocols (Channel-to-Channel Isolation) (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 Bias 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 Input Transformers