



I-87024DW

4-channel 14-bit Analog Output Module

Introduction

The I-87024DW is a serial interface and 4-channel analog output module. The programmable analog outputs are 14-bit resolution and support an output range of 0 ~ 5 V, ± 5 V, 0 ~ 10 V, ± 10 V, 0 ~ +20 mA, or +4 ~ +20 mA.

Features

- 4-channel Analog Output
- D-Sub 37-Pin Connector
- 4 kV ESD Protection
- Dual Watchdog
- Configurable Power-on Value
- Configurable Safe Value
- 3000 VDC Intra-module Isolation, Field-to-Logic
- Open Daughter Board Detection
- RF Immunity
- RoHS Compliant
- Wide Operating Temperature Range: -25 to +75°C



Applications

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

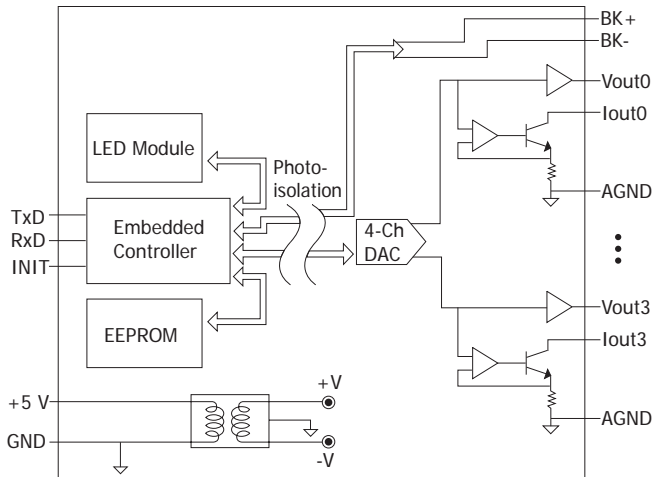
System Specifications

Communication		
Interface	RS-485	
Format	N, 8, 1	
Baud Rate	1200 to 115200 bps	
Protocol	DCON	
Dual Watchdog	Yes, Module (1.6 Seconds), Communication (Programmable)	
LED Indicators/Display		
System LED Indictors	Yes, 1 as Power/Communication Indicator	
I/O LED Indicators	16 as High/Low Alarm Signals	
Isolation		
Intra-module Isolation, Field-to-Logic	3000 VDC	
EMS Protection		
ESD (IEC 61000-4-2)	±4 kV Contact for each Terminal	
RS (IEC 61000-4-3)	3 V/m, 80 MHz ~ 1 GHz	
Power		
Power	Typical	1.3 W
Consumption	Maximum	3.1 W (4-channel Output 20 mA at 10 V)
Mechanical		
Dimensions (L × W × H)	115 mm × 30 mm × 85 mm	
Environment		
Operating Temperature	-25 to +75°C	
Storage Temperature	-40 to +85°C	
Humidity	10 to 95% RH, Non-condensing	

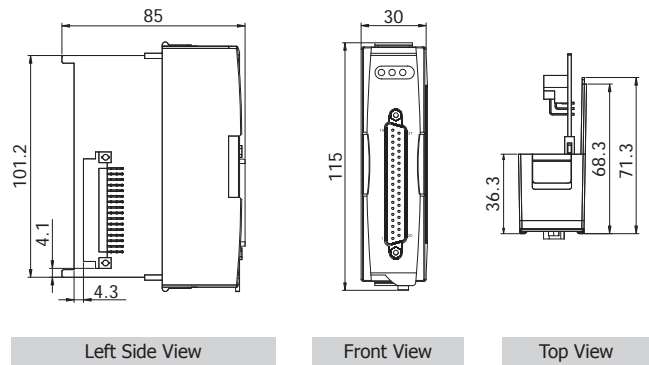
I/O Specifications

Analog Output		
Channels	4	
Current Output Wiring	Sink	
Range	0 ~ +5 VDC, ± 5 VDC, 0 ~ +10 VDC, ± 10 VDC, 0 ~ +20 mA, +4 ~ +20 mA	
Resolution	14-bit	
Accuracy	$\pm 0.1\%$ of FSR	
Zero Drift	Voltage	± 30 μ V/°C
	Current	± 0.2 μ A/°C
Span Drift	± 20 ppm/°C	
DA Output Response Time	10 ms per channel	
ESD Protection	4 kV (Contact for each channel)	
Programmable Output Slope	0.125 ~ 2048 mA/Second	
	0.0625 ~ 1024 V/Second	
Output Capacity	Voltage	10 VDC @ 20 mA
	Current	External +24 VDC @ 1050 Ω
Open Wire Detection	Yes	
Short Circuit Protection	Yes	
Power-on Value	Yes	
Safe Value	Yes	
Open Daughter Board Detection	Yes	

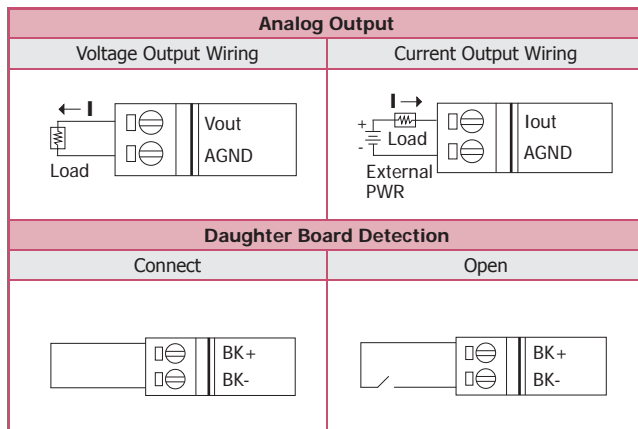
Internal I/O Structure



Dimensions (Units: mm)



Wire Connections



Pin Assignments

Pin Assignment	Terminal	No.	Pin Assignment
N/A	19	37	BK+
N/A	18	36	N/A
AGND	17	35	N/A
Vout3	16	34	N/A
AGND	15	33	N/A
Vout2	14	32	N/A
AGND	13	31	N/A
Vout1	12	30	N/A
AGND	11	29	N/A
Vout0	10	28	N/A
AGND	09	27	N/A
Iout3	08	26	N/A
AGND	07	25	N/A
Iout2	06	24	N/A
AGND	05	23	N/A
Iout1	04	22	N/A
AGND	03	21	N/A
Iout0	02	20	N/A
BK-	01		

37-pin Male D-Sub Connector

Ordering Information

I-87024DW-G CR	4-channel 14-bit Analog Output Module (Gray Cover) (RoHS)
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Accessories

	DN-37-A	I/O Connector Block with DIN-Rail Mounting and 37-pin D-sub Connector (pitch: 5.08 mm)
	DN-37-381-A	I/O Connector Block with DIN-Rail Mounting and 37-pin D-sub Connector (pitch: 3.81 mm)
	CA-3705A	Male-Female D-sub Cable 0.5 m
	CA-3710A	Male-Female D-sub Cable 1 m
	CA-3715A	Male-Female D-sub Cable 1.5 m
	SG-770 CR	7-channel Differential or 14-channel Single-ended Surge Protector (RoHS)