



## I-97024U

4-channel Isolated Voltage or Current Output Module



## I-97028U

8-channel Isolated Voltage or Current Output Module

### Features

- 4-/8-channel Voltage or Current Output
- Individual Channel Configuration
- Short Circuit Protection
- Power-on Value
- Safe Value
- 4 kV ESD Protection
- 3000 VDC Intra-module Isolation
- Wide Operating Temperature Range: -25 to +75 °C



### Introduction

The I-97024U and I-97028U are source type analog output modules, which offer 4 and 8 single-ended analog output channels. Every channel can be programmed to an individual output range of 0 to 5 V, ±5 V, 0 to 10 V, ±10 V, +4 to +20 mA or 0 to +20 mA. Open wire detection is provided for +4 to +20 mA output. Options for configuring power-on and safe values are also included.

The I-97024U and I-97028U provide RF immunity level matching that defined by IEC 61000-4-3 standard, together with 4 kV ESD protection as well as 3000 VDC intra-module isolation.

### Applications

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

### System Specifications

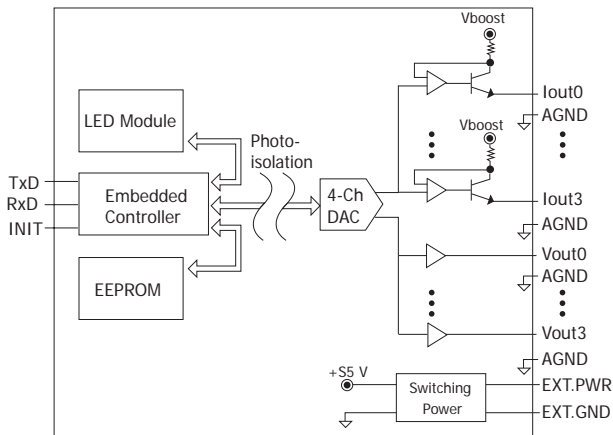
Model	I-97024U	I-97028U
<b>Communication</b>		
Interface	RS-485	
Format	N, 8, 1	
Baud Rate	1200 to 115200 bps	
Protocol	DCON	
Dual Watchdog	Yes, Module (1.6 Seconds), Communication (Programmable)	
<b>LED Display</b>		
System LED Indicator	1 LED as Power Indicator	
I/O LED Indicator	8 LEDs as Analog Output Fault Indications	16 LEDs as Analog Output Fault Indications
<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 ±8 kV Air for Random Point	
RS Immunity (IEC 61000-4-3)	3 V/m, 80 MHz to 1 GHz	
<b>Power</b>		
Power Consumption	0.3 W Max.	
<b>Mechanical</b>		
Dimensions (W x L x H)	31 mm x 134 mm x 144 mm	
<b>Environment</b>		
Operating Temperature	-25 ~ +75 °C	
Storage Temperature	-40 ~ +85 °C	
Humidity	10 ~ 90% RH, Non-condensing	

### I/O Specifications

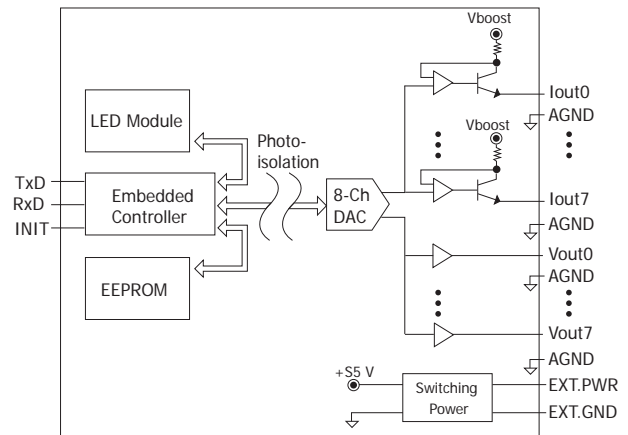
Model	I-97024U	I-97028U
<b>Analog Output</b>		
Channels	4	8
Current Output Wiring	Source	
Range	0 to +5 VDC, ±5 VDC, 0 to +10 VDC, ±10 VDC, 0 to +20 mA, +4 to +20 mA	
Resolution	16-bit	
Accuracy	±0.02% of FSR	
Zero Drift	±0.2 μV/°C	
Span Drift	±25 ppm/°C	
DA Output Response Time	10 ms per channel	
Programmable Output Slope	Voltage	0.0625 to 512 V/Second
	Current	0.125 to 1024 mA/Second
Output Capacity	1000 Ω	
Open Wire Detection	Yes, +4 to +20 mA	
Short Circuit Protection	Yes	
Power-on Value	Yes	
Safe Value	Yes	
<b>External Power Requirements</b>		
Reverse Polarity Protection	Yes	
Powered from Terminal Block	Yes, 15 ~ 30 VDC	
Consumption	4 W	7 W

## Internal I/O Structure

I-97024U



I-97028U



## Pin Assignments

I-97024U

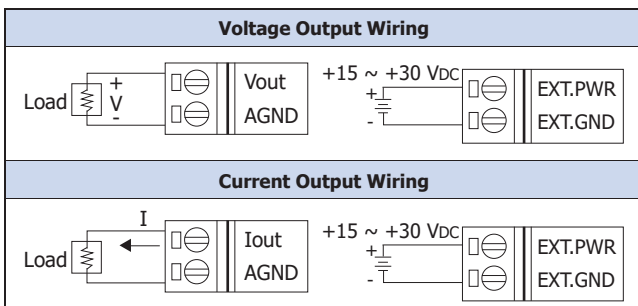
Pin Assignment	Terminal No.	Pin Assignment
Vout0	01	Vout1
Iout0	02	Iout1
AGND	03	AGND
Vout2	04	Vout3
Iout2	05	Iout3
AGND	06	AGND
-	07	-
-	08	-
-	09	-
-	10	-
-	11	-
-	12	-
EXT.PWR	13	EXT.PWR
EXT.PWR	14	EXT.PWR
EXT.GND	15	EXT.GND
EXT.GND	16	EXT.GND

I-97028U

Pin Assignment	Terminal No.	Pin Assignment
Vout0	01	Vout1
Iout0	02	Iout1
AGND	03	AGND
Vout2	04	Vout3
Iout2	05	Iout3
AGND	06	AGND
Vout4	07	Vout5
Iout4	08	Iout5
AGND	09	AGND
Vout6	10	Vout7
Iout6	11	Iout7
AGND	12	AGND
EXT.PWR	13	EXT.PWR
EXT.PWR	14	EXT.PWR
EXT.GND	15	EXT.GND
EXT.GND	16	EXT.GND

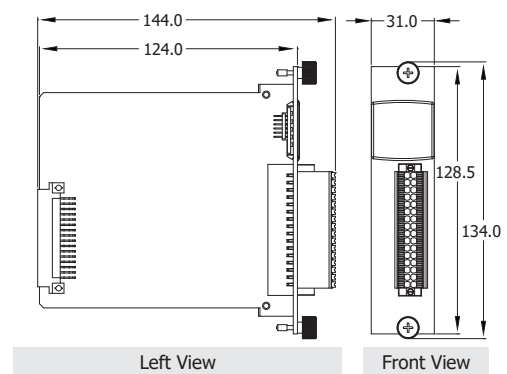
## Wire Connections

I-97024U/I-97028U



## Dimensions (Units: mm)


I-97024U/I-97028U



## Ordering Information

<b>I-97024U CR</b>	4-channel 16-bit Isolated Source Type Voltage or Current Output Module (RoHS)
<b>I-97028U CR</b>	8-channel 16-bit Isolated Source Type Voltage or Current Output Module (RoHS)

## Accessories

 <b>SG-770 CR</b>	7-channel Differential or 14-channel Single-ended Surge Protector (RoHS)
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