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

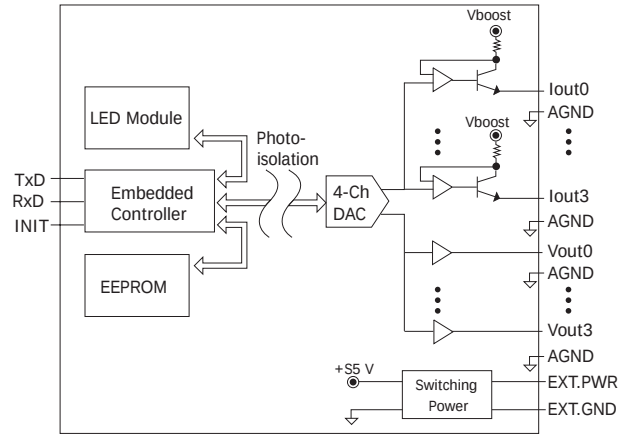
Model	I-97024U	I-97028U
Communication		
Interface	RS-485	
Format	N, 8, 1	
Baud Rate	1200 to 115200 bps	
Protocol	DCON	
Dual Watchdog	Yes, Module (1.6 Seconds), Communication (Programmable)	
LED Display		
System LED Indicator	1 LED as Power Indicator	
I/O LED Indicator	8 LEDs as Analog Output Fault Indications	16 LEDs as Analog Output Fault Indications
Isolation		
Intra-module Isolation, Field-to-Logic	3000 VDC	
EMS Protection		
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	
Power		
Power Consumption	0.3 W Max.	
Mechanical		
Dimensions (W x L x H)	31 mm x 134 mm x 144 mm	
Environment		
Operating Temperature	-25 ~ +75 °C	
Storage Temperature	-40 ~ +85 °C	
Humidity	10 ~ 90% RH, Non-condensing	

I/O Specifications

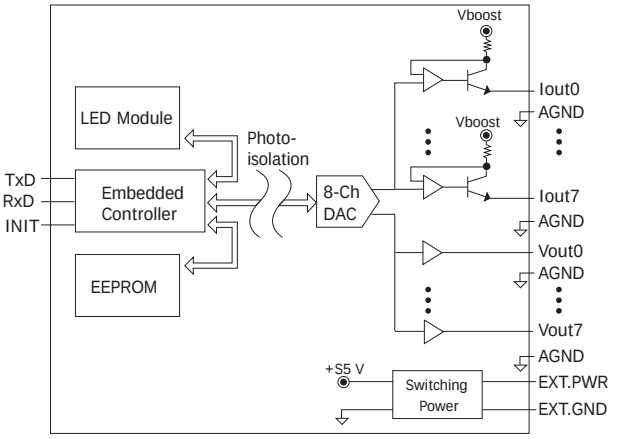
Model		I-97024U	I-97028U
Analog Output			
Channels		4	8
Current Output Wiring		Source	
Range		0 to +5 VDC, ±5 VDC, 0 to +10 VDC, ±10 VDC, 0 to +20 mA, +4 to +20 mA	
Resolution		16-bit	
Accuracy		±0.02% of FSR	
Zero Drift		±0.2 μV/°C	
Span Drift		±25 ppm/°C	
DA Output Response Time		10 ms per channel	
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	
External Power Requirements			
Reverse Polarity Protection		Yes	
Powered from Terminal Block		Yes, 15 ~ 30 VDC	
Consumption		4 W	7 W

Internal I/O Structure

I-97024U

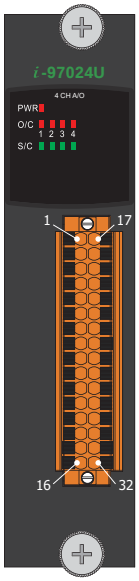


I-97028U



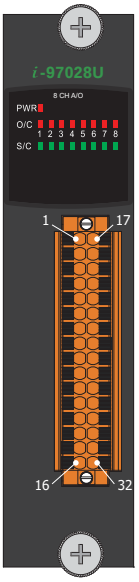
Pin Assignments

I-97024U



Pin Assignment	Terminal No.		Pin Assignment
Vout0	01	17	Vout1
Iout0	02	18	Iout1
AGND	03	19	AGND
Vout2	04	20	Vout3
Iout2	05	21	Iout3
AGND	06	22	AGND
-	07	23	-
-	08	24	-
-	09	25	-
-	10	26	-
-	11	27	-
-	12	28	-
EXT.PWR	13	29	EXT.PWR
EXT.PWR	14	30	EXT.PWR
EXT.GND	15	31	EXT.GND
EXT.GND	16	32	EXT.GND

I-97028U



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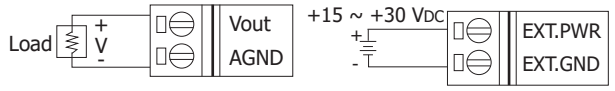
AGND	03	19	AGND
Vout2	04	20	Vout3
Iout2	05	21	Iout3
AGND	06	22	AGND
Vout4	07	23	Vout5
Iout4	08	24	Iout5
AGND	09	25	AGND
Vout6	10	26	Vout7
Iout6	11	27	Iout7
AGND	12	28	AGND
EXT.PWR	13	29	EXT.PWR
EXT.PWR	14	30	EXT.PWR
EXT.GND	15	31	EXT.GND
EXT.GND	16	32	EXT.GND

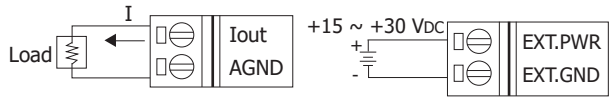
Wire Connections

I-97024U/I-97028U

Voltage Output Wiring

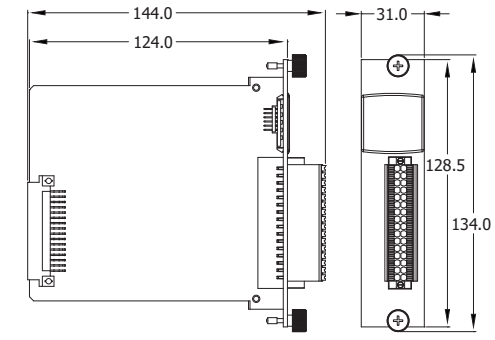


Current Output Wiring



Dimensions (Units: mm)

I-97024U/I-97028U



Left View | Front View

Ordering Information

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

Accessories

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