I-87018W ÿ I-87018RW

8-channel voltage/current/thermocouple input module

ÿFeatures

- ÿ 8 differential analog input channels
- ÿVoltage , current and thermocouple inputs
- ÿDual watchdog mechanism
- ÿ 3000 VDC module internal isolation protection
- ÿWire break detection
- ÿOvervoltage protection
- ÿContacts have 4 kV ESD protection

ÿIntroduction

The I-87018W/I-87018RW is a voltage, current and thermocouple input module that provides 8 differential signal input channels, dual watchdog mechanism and 16-bit resolution. Each channel

The voltage, current, and thermocouple inputs can be set independently, with input ranges of ±15 mV, ±50 mV, ±100 mV, ±500 mV, ±1 VDC, ±2.5 VDC, ±20 mA, and thermocouples (J, K, T, E, R, S, B, N, C, L, M, LDIN43710). In addition, the I-87018W/I-87018RW also incorporates various protection functions, including 4 kV ESD protection,

3000 VDC module internal isolation and ± 35 VDC/240 Vrms overvoltage protection enable it to provide better protection against noise interference in industrial environments.

When I-87018W/I-87018RW uses current measurement, an additional 125 ÿ resistor is required.

ÿSystem **Specifications**

model	I-87018W	I-87018RW
COM Port		
Ports	RS-485	
Data Format	N, 8, 1	
Baud Rate	1200 ~ 115200 bps	
Communication Protocol	DCON	
CPU module		
Watchdog timer	Module (1.6 seconds), communication (programmable)	
LED Light		
System LED Indicator	1	
I/O LED indicators	-	16
isolation		
Internal Isolation	3000 VDC	
EMS Protection		
ESD (IEC 61000-4-2)	Each terminal contact has ± 4 kV ±8 kV in air non-contact	
power supply		
Power consumption	Max. 0.8 W	Max. 0.6 W
mechanism		
Dimensions (W x L x H)	I-87018W: 32 mm × 117 mm × 96 mm I-87018RW: 30 mm × 115 mm × 102 mm	
environment		
Operating temperature	-25 ~ +75 °C	
Storage temperature	-40 ~ +85 °C	
humidity	10 ~ 95 % RH, non-condensing	

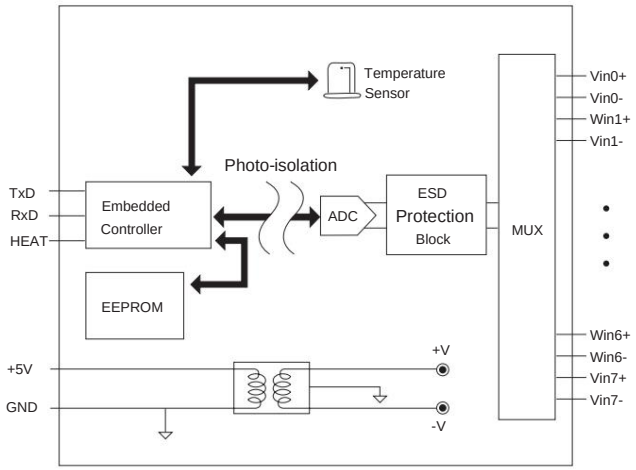
ÿ **I/O standards**

model	I-87018W	I-87018RW
Analog Input		
Number of channels	8	
type	Differential	
Sensor Type	±15 mV, ±50 mV, ±100 mV, ±500 mV, ±1 VDC, ±2.5 VDC	
	-20 mA ~ +20 mA (need to connect an external 125 ÿ resistor)	
	Thermocouples (J, K, T, E, R, S, B, N, C, L, M, LDIN43710)	
Resolution	16-bit	
Accuracy	±0.1 % FSR	
Sampling rate	10 Hz (all)	
bandwidth	15.7 Hz	
Zero drift	±0.5 ÿV/°C	±10 ÿV/°C
Span Drift	±25 ppm/°C	
Common Mode Rejection	150 dB	
Normal Mode Rejection	100 dB	
Input Impedance	> 400 Mÿ	
Disconnection detection	-	Yes (thermocouple)
Overvoltage protection	±35 VDC	240 Vrms

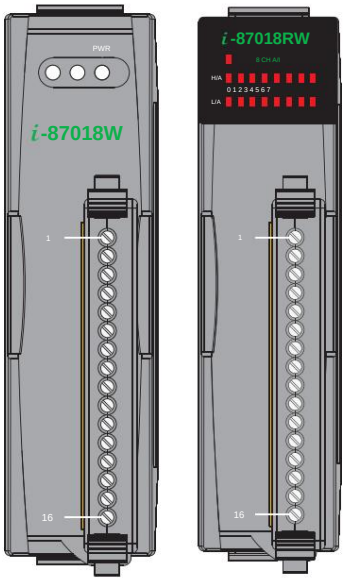
ÿApplication

- Building Automation
- Factory Automation
- Machine Automation
- Remote maintenance
- Remote diagnosis
- Test equipment

ÿ I/O internal structure



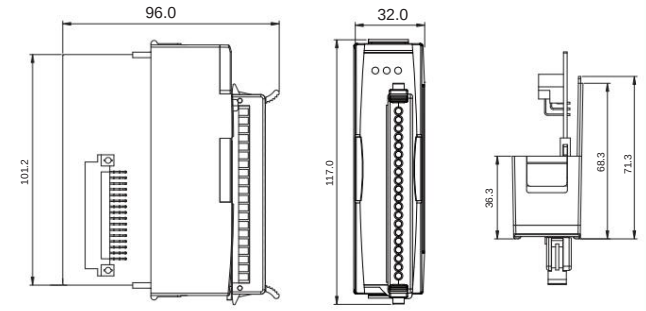
ÿPin Definition



Pin Number	Pin Definition
01	Vin0+
02	Vin0-
03	Win1+
04	Vin1-
05	Vin2+
06	Vin2-
07	Vin3+
08	Vin3-
09	Vin4+
10	Vin4-
11	Vin5+
12	Vin5-
13	Win6+
14	Win6-
15	Vin7+
16	Vin7-

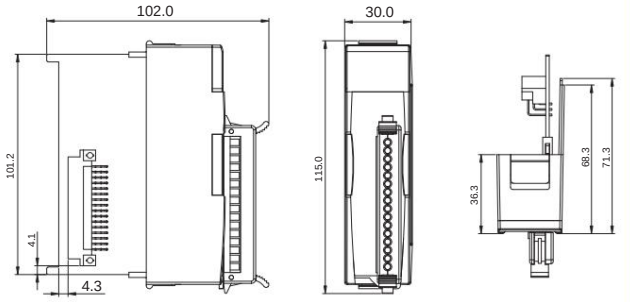
ÿDimensions

I-87018W



Left View | Front View | Top view

I-87018RW



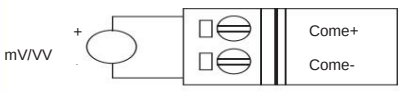
Left View | Front View | Top view

ÿThermocouple Type

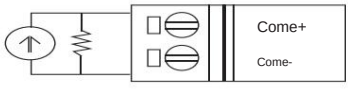
Type Code	Temperature range
J	-210 ~ +760 °C
K	-270 ~ +1372 °C
T	-270 ~ +400 °C
AND	-270 ~ +1000 °C
R	0 ~ +1768 °C
S	0 ~ +1768 °C
B	0 ~ +1820 °C
N	-270 ~ +1300 °C
C	0 ~ +2320 °C
L	-200 ~ + 800 °C
M	-200 ~ + 100 °C
LDIN43710	-200 ~ + 900 °C

ÿWiring Diagram

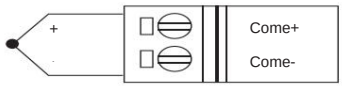
Voltage input



Current input



Thermocouple input



Note: When using current measurement, an additional 125 ÿ resistor is required

ÿOrder Information

I-87018W-G CR	8-channel voltage/current/thermocouple input module (RoHS)
I-87018RW-G CR	8-channel voltage/current/thermocouple input module, high overvoltage protection (RoHS)

ÿOptional Accessories

 **2AB125R CR**	DIP Resistors 125 ohm, 0.1%, 1/4W, MF, 50 ppm/ÿ u (RoHS)