

CONPROSYS Robust I/O Series
Modbus-TCP Ethernet Remote I/O
Thermocouple Input 10ch / 6ch DO
CPSR-ET7018ZS



* Specifications, color and design of the products are subject to change without notice.

Features

Built-in Web Server
Web HMI
Support for both Modbus TCP and Modbus UDP Protocols
Communication Access Control
Dual Watchdog
I/O Pair Connection
Built-in I/O
Thermocouple Input: 10 Channels
DO: 6 Channels

The product is specifically designed for extremely accurate thermocouple measurement and features automatic cold-junction compensation for each channel to ensure temperature output consistency and stable temperature output in the field. Current input and voltage input are both supported. Another feature is that its ten input channels can be individually configured for different kinds of analog input. Open thermocouple detection and ESD/EFT/Surge protection mechanisms are also included. The six digital output channels can be set as alarm outputs with short-circuit protection and overload protection.

- * The contents in this document are subject to change without notice.
- * Visit the CONTEC website to check the latest details in the document.
- * The information in the data sheets is as of June, 2025.

Specifications

System specification

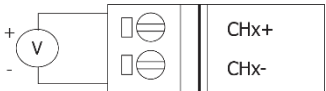
Model	Description
Software	
Built-in Web Server	Yes
CPU Module	
Watchdog Timer	Module, Communication (Programmable)
2-Way Isolation	
Ethernet	1500 VDC
I/O	2500 VDC
EMS Protection	
EFT (IEC 61000-4-4)	±4 kV for Power Line
ESD (IEC 61000-4-2)	±4 kV Contact for Each Terminal ±8 kV Air for Random Point
Surge (IEC 61000-4-5)	±0.5 kV for Power Line
LED Indicators	
Status	Run, Ethernet
Ethernet	
Ports	1 x RJ-45, 10/100 Base-TX
Access Control	ID, Password and IP Filter
Protocol	Modbus TCP, Modbus UDP
Power	
Reverse Polarity Protection	Yes
Consumption	2.0 W (Max.)
Powered from Terminal Block	+10 to +30 VDC
Mechanical	
Dimensions (mm)	CPSR-ET7018Z 72(W) x 116(L) x 35(H) CPSR-DB1820 65(W) x 78(L) x 22(H)
Installation	DIN-Rail Mounting
Environment	
Operating Temperature	-25 - +75 °C
Storage Temperature	-30 - +80 °C
Humidity	10 - 90% RH, Non-condensing
Standard	VCCI Class A, FCC Class A, CE Marking (EMC Directive Class A, RoHS Directive), UKCA

I/O specification

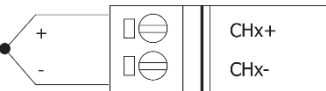
Item	Description
Analog Input	
Channels	10 (Differential)
Type	Voltage, Current, Thermocouple
Stable and Consistent Temperature Output	Yes
Range	$\pm 15\text{ mV}$, $\pm 50\text{ mV}$, $\pm 100\text{ mV}$, $\pm 500\text{ mV}$, $\pm 1\text{ V}$, $\pm 2.5\text{ V}$ $\pm 20\text{ mA}$, 0 to 20 mA, 4 to 20 mA (Requires Optional External 125 Ω Resistor) Thermocouple (J, K, T, E, R, S, B, N, C, L, M, and L _{PM43710})
Resolution	16-bit
Accuracy	$\pm 0.1\%$ of FSR or better
Sampling Rate	10 Hz (total channels)
Input Impedance	>300 k Ω
Over Voltage Protection	240 Vrms
Individual Channel Configuration	Yes
Open Wire Detection	Yes
Virtual Channel to Channel Isolation	$\pm 400\text{ VDC}$
Digital Output	
Channels	6
Type	Isolated Open Collector
Sink/Source (NPN/PNP)	Sink
Load Voltage	+5 to +50 VDC
Load Current	700 mA/channel
Overvoltage Protection	+60 VDC
Overload Protection	1.4 A
Short-circuit Protection	Yes
Power on Value	Programmable
Safe Value	Programmable

Wire Connections

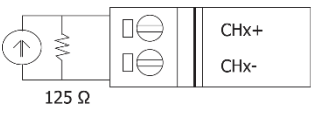
Voltage Input (Default)



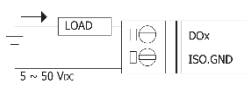
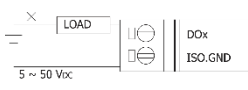
Thermocouple Input (Default)



Current Input

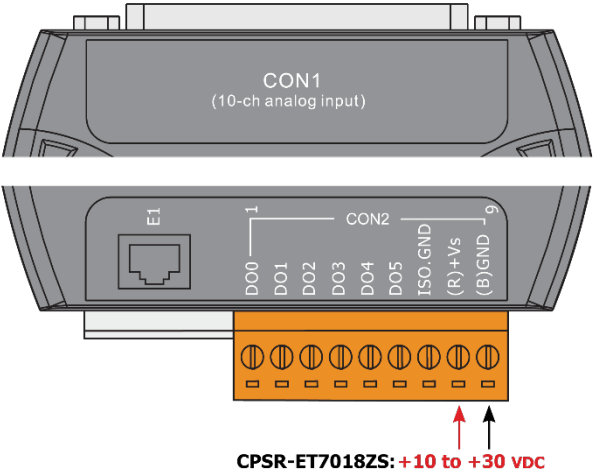


Note: When connecting to a current source, an optional external 125 Ω resistor is required.

Digital Output	ON State Readback as 1	OFF State Readback as 0
Open Collector (Sink)		

Pin Assignments

CPSR-ET7018ZS



CPSR-DB1820

